

LICENCE NO: DIR066
LICENCE HOLDER: Monsanto Australia Limited
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2013 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines
REPORTING PERIOD: 1 June 2012 – 1 June 2013
(covering 2012/13 cotton growing season)
DATE: 3 July, 2013

PREPARED BY:

[REDACTED]
[REDACTED]

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SECTION 1. LICENCE HOLDER DETAILS

Name: Monsanto Australia Limited

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St Kilda rd Central
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Telephone: (03)9522 7122

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Accreditation
Number: ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR066 commercial licence covering Roundup Ready® Cotton, Roundup Ready Flex® Cotton and the Bollgard II® trait issues to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007, 15 April 2009 and 20 June, 2013.

This report covers the period of time from 1 June 2012 to 1 June 2013, including the 2012/13 cotton planting season.

SECTION 2. LICENCE CONDITIONS

Condition 1. Duration of Licence

DIR066 has not been suspended, cancelled or surrendered.

Condition 2. Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

Conditions 3 and 4. Project Supervisor

██████████ is the project supervisor as per attachment A of the licence. This licence was varied 15 April 2009 to reflect the change of contact details.

Condition 5. No dealings with GMOs except as authorized by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

Conditions 6 and 7. Location

The licence allows for dealings with GMOs to be conducted anywhere in Australia. This licence supersedes any previous licences regarding location.

Conditions 8 and 9. Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

Conditions 10 and 11. Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons.

Monsanto Australia Limited informed all persons covered by the DIR066 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program, which includes information on regulatory obligations as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready (no longer sold commercially), Roundup Ready Flex and Bollgard II cotton crops to undergo training.

Condition 12. Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet the conditions of the DIR066 licence.

Condition 13. Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide information within a time period stipulated by the Regulator.

Condition 14. People dealing with the GMOs must allow auditing and monitoring if the dealing

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

Condition 15. Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

Conditions 16 - 19 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by this licence; or of any unintended effects of the dealings authorized by this licence.

Condition 20. Compliance Management Plan

A Compliance Management Plan was provided to the Regulator on issuance of the DIR066 licence. A copy of the current Resistance Management Plans showing compliance metrics is in Appendix A and B.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR066 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRF and BGII technology. Roundup Ready Cotton is no longer sold in Australia. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Commercial Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w [REDACTED] ha | Total ha |
|-----------------|-------------|-------------|------------------|--------------|-------------------|----------------------|-------------------|
| Belyando | 0.00 | 0.00 | 0.00 | 0.00 | 134.00 | 0.00 | 134.00 |
| Bourke | 0.00 | 0.00 | 64.70 | 0.00 | 9,081.87 | 0.00 | 9,146.57 |
| Darling Downs | 0.00 | 0.00 | 3,388.26 | 0.00 | 34,267.96 | 90.70 | 37,746.92 |
| Dawson/Callide | 0.00 | 0.00 | 279.74 | 0.00 | 6,005.00 | 148.36 | 6,433.10 |
| Dirranbandi | 0.00 | 0.00 | 0.00 | 0.00 | 31,418.84 | 0.00 | 31,418.84 |
| Emerald | 0.00 | 0.00 | 0.00 | 0.00 | 14,771.26 | 0.00 | 14,771.26 |
| Gwydir | 0.00 | 0.00 | 4,550.37 | 0.00 | 73,997.69 | 0.00 | 78,548.06 |
| Lachlan | 0.00 | 0.00 | 393.81 | 0.00 | 12,868.65 | 526.29 | 13,788.75 |
| Lower Namoi | 0.00 | 0.00 | 845.80 | 0.00 | 46,037.15 | 3.00 | 46,885.95 |
| MacIntyre | 0.00 | 0.00 | 699.87 | 0.00 | 45,569.44 | 61.30 | 46,330.61 |
| Macquarie | 0.00 | 0.00 | 227.19 | 0.00 | 42,370.80 | 1,038.50 | 43,636.49 |
| McKenzie River | 0.00 | 0.00 | 0.00 | 0.00 | 418.71 | 0.00 | 418.71 |
| Mungindi | 0.00 | 0.00 | 3,116.25 | 0.00 | 19,603.85 | 0.00 | 22,720.10 |
| Murrumbidgee | 0.00 | 0.00 | 731.01 | 0.00 | 25,801.89 | 27.97 | 26,560.87 |
| St George | 0.00 | 0.00 | 141.37 | 0.00 | 28,311.19 | 310.95 | 28,763.51 |
| Tandou | 0.00 | 0.00 | 11.30 | 0.00 | 6,660.56 | 0.00 | 6,671.86 |
| Upper Namoi | 0.00 | 0.00 | 362.28 | 0.00 | 16,928.56 | 78.48 | 17,369.32 |
| Walgett | 0.00 | 0.00 | 41.85 | 0.00 | 9,849.03 | 0.00 | 9,890.88 |
| Total ha | 0.00 | 0.00 | 14,853.80 | 0.00 | 424,096.45 | 2,285.55 | 441,235.80 |

| | |
|--|----------------|
| Total Bollgard II ha planted | 426,248 |
| Total Roundup Ready Flex ha planted | 438,816 |

Note – Total Bollgard II figure includes Bollgard II, Bollgard II/Roundup Ready Flex and Bollgard II/[REDACTED]. Total Roundup Ready Flex figure includes Roundup Ready Flex and Bollgard II/Roundup Ready Flex.

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfgagn, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimgan, Blair Athol and Pasha.

































































Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha |
|-------|---------|-------|--------|--------------|---------------|-------------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 134.00 | 0.00 |

Valley: Bourke

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.





































Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|--|--|--|--|--|---|---|
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|  |  |  |  |  |  |  |
| Total | 0.00 | 0.00 | 64.70 | 0.00 | 9,081.87 | 0.00 |

Valley: Darling Downs

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |
| 121869 | 0.00 | 0.00 | 101.00 | 0.00 | 0.00 | 0.00 |



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

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DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, with a single white square at the intersection of the 5th column and the 15th row.



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

A 20x20 grid with 8 vertical black bars of varying heights, creating a barcode-like pattern. The bars are located at columns 1, 3, 5, 7, 9, 11, 13, and 15. The heights of the bars are: Column 1: 18 units; Column 3: 15 units; Column 5: 12 units; Column 7: 10 units; Column 9: 18 units; Column 11: 15 units; Column 13: 12 units; Column 15: 10 units. The remaining cells are white.



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

The image consists of a 20x20 grid of white squares. Eight vertical black bars are positioned at regular intervals across the grid. The bars vary in width and height, creating a barcode-like pattern. The bars are located at columns 1, 3, 5, 7, 9, 11, 13, and 15. The heights of the bars are as follows: Bar 1 (column 1) is 18 units high; Bar 2 (column 3) is 18 units high; Bar 3 (column 5) is 18 units high; Bar 4 (column 7) is 18 units high; Bar 5 (column 9) is 18 units high; Bar 6 (column 11) is 18 units high; Bar 7 (column 13) is 18 units high; Bar 8 (column 15) is 18 units high.

























































































































































































































































DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

[illegible]

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Volumes:






































































































































| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
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Valley: Dirranbandi

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Volumes:

































































































































| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
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Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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
























































































































































































**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

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| ████ | ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ | ████ |

Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

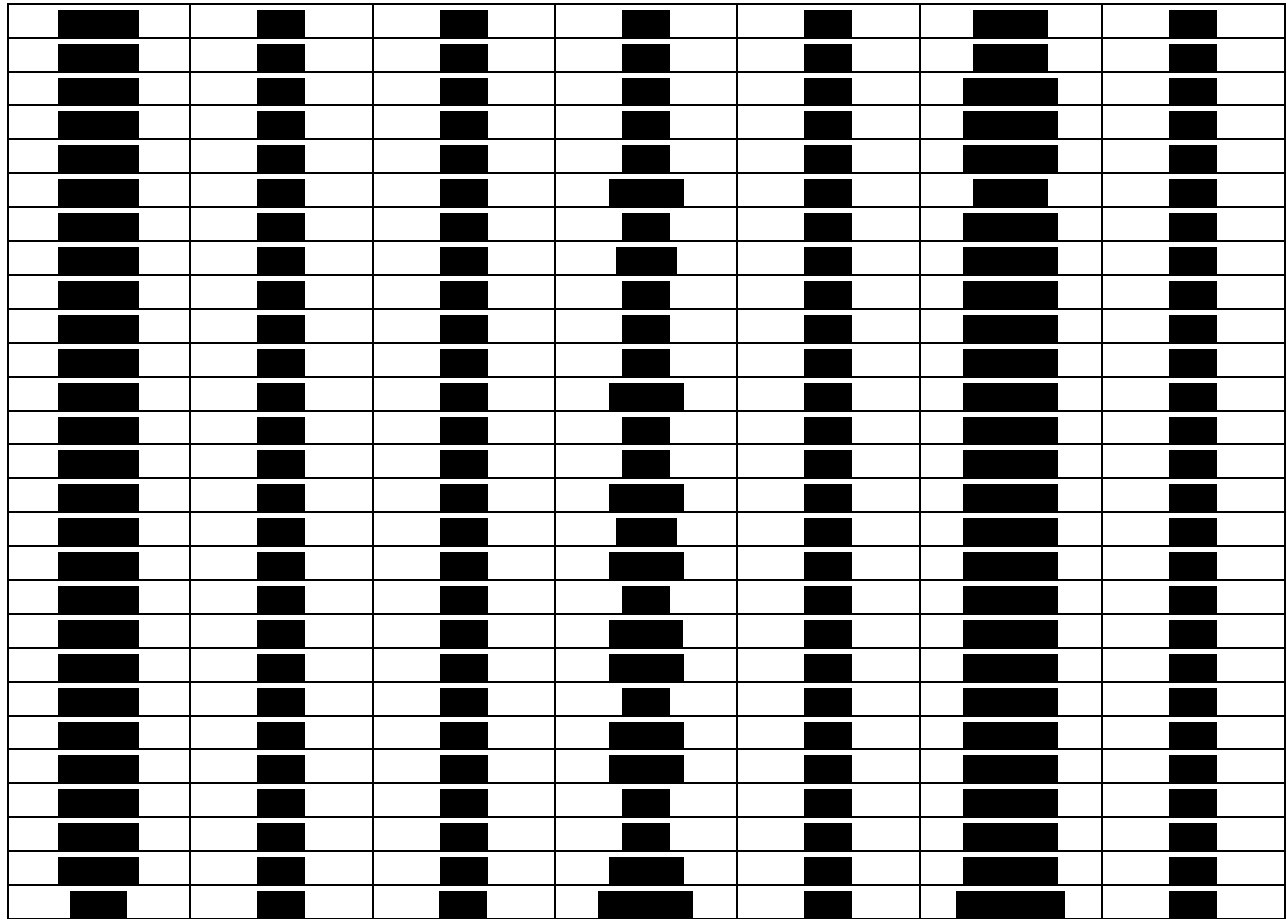
Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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DIR066 OGTR ANNUAL REPORT 2012/13 SEASON






















































































[illegible]

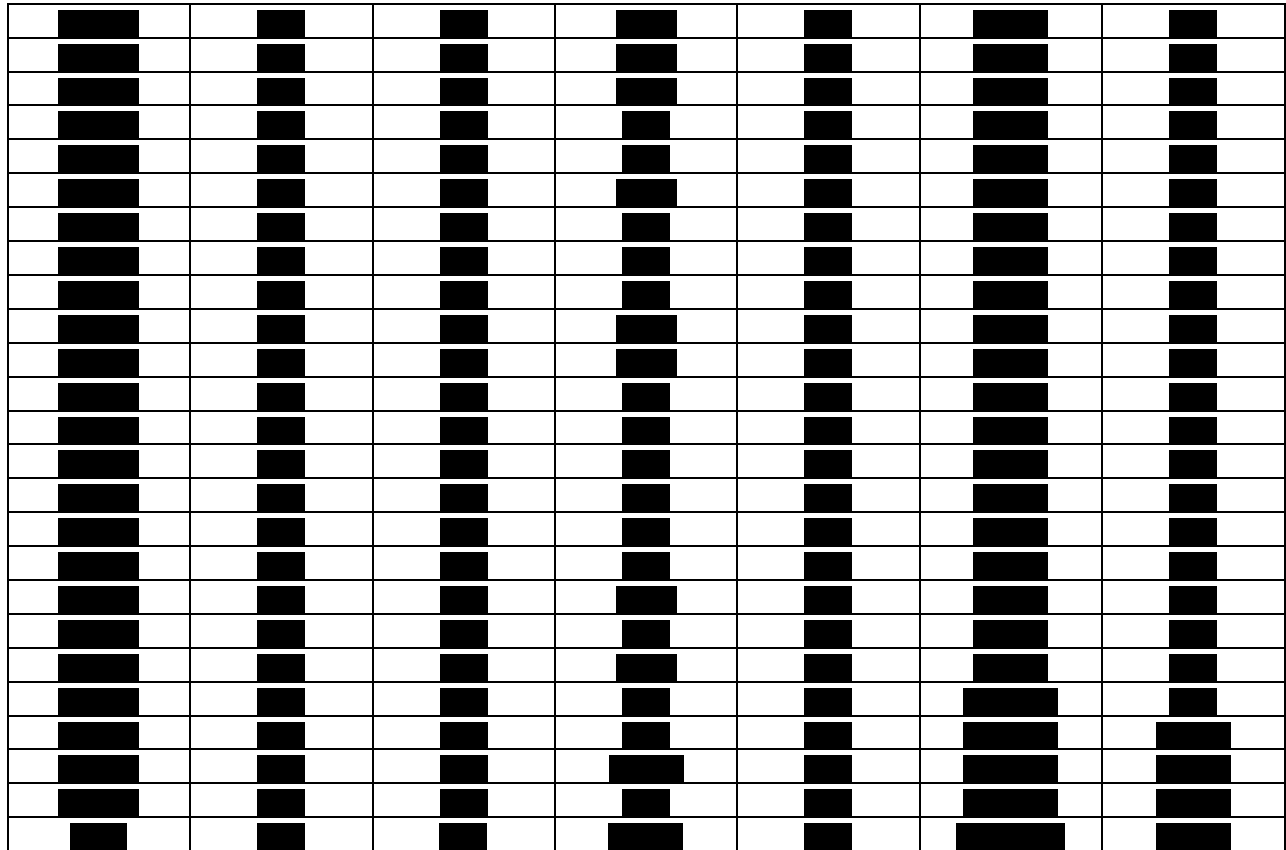
**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**A 20x20 grid with black bars forming a repeating pattern. The pattern consists of vertical lines and diagonal stripes. The vertical lines are located at columns 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19. The diagonal stripes are located at columns 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20. The diagonal stripes are formed by black bars that are 1 unit wide and 1 unit high, arranged in a diagonal pattern. The vertical lines are formed by black bars that are 1 unit wide and 1 unit high, arranged in a vertical pattern. The pattern repeats every 2 units in both the horizontal and vertical directions.



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

A 20x20 grid with 8 vertical black bars of varying heights, creating a barcode-like pattern. The bars are located at columns 1, 3, 5, 7, 9, 11, 13, and 15. The heights of the bars are: Column 1: 18 units high; Column 3: 15 units high; Column 5: 18 units high; Column 7: 12 units high; Column 9: 18 units high; Column 11: 18 units high; Column 13: 18 units high; Column 15: 15 units high. The grid is composed of 20 rows and 20 columns. The bars are black, and the background is white. The bars are separated by one or two empty columns. The heights of the bars vary, with some reaching the top of the grid and others being shorter. The pattern is symmetrical around the center of the grid.



































































































































DIR066 OGTR ANNUAL REPORT 2012/13 SEASON



Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

[illegible]

**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**[illegible]

Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Volumes:[illegible]



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

A 20x20 grid with 8 vertical black bars of varying heights, creating a barcode-like pattern. The bars are located at columns 1, 3, 5, 7, 9, 11, 13, and 15. The heights of the bars are as follows:

| Column | Height (Number of Rows) |
|--------|-------------------------|
| 1 | 19 |
| 3 | 18 |
| 5 | 19 |
| 7 | 17 |
| 9 | 19 |
| 11 | 18 |
| 13 | 19 |
| 15 | 17 |



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

The image displays a 20x20 grid where each cell is either black or white. The pattern is periodic, repeating every 4 columns and 16 rows. The columns are grouped into four sets of four columns each. Within each set, the first two columns have a solid black bar from row 1 to row 16. The next two columns have a solid black bar from row 17 to row 32. This pattern repeats across the entire grid.

**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**[illegible]

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

































































Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha |
|-----|---------|-------|--------|--------------|---------------|-------------|
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Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Volumes:




































































































| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
|---|---|---|---|---|---|---|
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




























































































































































































**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**[illegible]

Valley: St George

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
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**DIR066 OGTR ANNUAL REPORT 2012/13 SEASON**

The image displays a 20x20 grid. Each column contains a vertical stack of black bars of different heights, creating a barcode-like pattern. The heights of the bars vary across the columns, with some columns having bars that reach the top of the grid and others having shorter bars. The bars are solid black and are separated by thin white gaps.

Valley: Tandou

Boundaries: surrounds Menindee shire. North of Mildure and west of the SA border

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ha |
|--|--|--|--|--|--|--|
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Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Volumes:

[illegible]



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

Volumes:

| TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha |
|-----|---------|-------|--------|--------------|---------------|-------------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ |

3.4 Trial/Research Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha | Total ha |
|----------|---------|-------|--------|--------------|---------------|-------------|----------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Total ha | 17.50 | 0.00 | 58.68 | 0.00 | 202.51 | 0.00 | 278.69 |

APPENDIX A -

Resistance Management Plan for Bollgard II® Cotton 2012/2013

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges



DIR066 OGTR ANNUAL REPORT 2012/13 SEASON

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp. Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage. An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.

- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando: All Bollgard II crops are to be planted into moisture or watered-up in the period between October 10 and November 20, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). |

- * A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.
- ** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

APPENDIX B

Resistance Management Plan for Bollgard II® Cotton 2012/2013 - Ord River Irrigation and Burdekin Bowen Basin Areas

Ord River Irrigation, Burdekin Bowen Basin and Richmond Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland
- **Richmond Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|---------------------|--|------------------|-------------------|
| Conventional Cotton | Irrigated, unsprayed conventional cotton | 10 | All Regions |
| Pigeon pea | Fully irrigated, unsprayed | 5 | All Regions |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge.

If the viability of an unsprayed refuge is at risk due to early or late season pressure by *Helicoverpa* spp., or any other caterpillar species, contact Monsanto immediately. With prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II unless a sufficient buffer is in place to prevent insecticide drift.

Sprayed crops and unsprayed refuges that are planted in adjacent fields must also be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

(a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Ord River Irrigation Area

It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Burdekin Bowen and Richmond Areas

Refuges must be sown within the 2 weeks prior to planting any Bollgard II. This timing attempts to mitigate wet season planting risks.

- (b) Group J legume inoculant should be used to treat pigeon pea planting seed just prior to sowing to ensure effective root zone colonisation by nitrogen fixing rhizobium bacteria
- (c) Once the Bollgard II cotton begins to flower the corresponding refuge must not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Slashing of plants within the refuge should only be carried out after Bollgard II cotton lint removal has been completed. Soil disturbance of refuge crops can only occur 2 weeks after Bollgard II cotton plants have been harvested.
- (i) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended "Bollgard II Planting Window Variation Notice".

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

Richmond Area: December 1 and April 1.

5. Refuge

Unsprayed Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season.

6. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

| Table 2. End of season chick pea trap crop requirements Criterion | End of season chick pea trap crop |
|---|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m x 24m wide. |
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. The trap crop must be planted into an area where it can receive the additional irrigation required to ensure the trap crop remains attractive to <i>Helicoverpa</i> spp. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks after defoliation of the Bollgard II cotton crop, but not before 3 weeks (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). All Bollgard II cotton and associated trap crops must be destroyed by: Burdekin Bowen Basin/Richmond Area – August 31 Ord River Irrigation Area – December 10 |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

LICENCE NO: DIR066
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2011 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines
REPORTING PERIOD: 26 October 2010 – 26 October 2011
(covering 2010/11 cotton growing season)
DATE: 19 December, 2011

PREPARED BY: [REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorized to disclose such data and information without written permission from Monsanto Australia Limited.

SECTION 1. LICENCE HOLDER DETAILS

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Facsimilie: (03)9522 6122

Contact email: [REDACTED]

**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR066 commercial licence covering Roundup Ready Cotton, Roundup Ready Flex Cotton and the Bollgard II trait issues to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007 and 15 April 2009.

This report covers the period of time from 26 October 2010 to 26 October 2011, including the 2010/11 cotton growing season.

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SECTION 2. GENERAL CONDITIONS

2.1 Duration of Licence

DIR066 has not been suspended, cancelled or surrendered.

2.2 Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

2.3 Project Supervisor

[REDACTED] is the project supervisor as per attachment A of the licence. This licence was varied 15 April 2009 to reflect the change of contact details.

2.4 No dealings with GMOs except as authorized by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

2.5 Location

The licence allows for dealings with GMOs to be conducted anywhere in Australia. This licence supersedes any previous licences regarding location.

2.6 Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

2.7 Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons 2006/07, 2007/08, 2008/09 and 2009/10.

Monsanto Australia Limited informed all persons covered by the DIR066 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program and the information course, which includes information on regulatory obligations as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready, Roundup Ready Flex and Bollgard II cotton crops to undergo training.

2.8 Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet the conditions of the DIR066 licence.

2.9 Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide information within a time period stipulated by the Regulator.

2.10 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by this licence; or of any unintended effects of the dealings authorized by this licence.

2.11 People dealing with the GMOs must allow auditing and monitoring if the dealing

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

2.12 Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR066 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Cotton (RRC), Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II stacked with [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRC, RRF and BGII technology. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w [REDACTED] ha | Total ha |
|-----------------|---------------|-------------|------------------|--------------|------------------|----------------------|-------------------|
| Belyando | 0.00 | 0.00 | 458.16 | 0.00 | 3,211.06 | 0.00 | 3,669.22 |
| Bourke | 0.00 | 0.00 | 198.37 | 0.00 | 10,092.77 | 0.00 | 10,291.14 |
| Burdekin | 0.00 | 0.00 | 25.06 | 0.00 | 293.68 | 0.00 | 318.88 |
| Darling Downs | 110.35 | 0.00 | 4,967.99 | 0.00 | 76,913.01 | 796.43 | 83,159.60 |
| Dawson/Callide | 0.00 | 0.00 | 456.56 | 0.00 | 3,569.67 | 9.74 | 4,035.97 |
| Dirranbandi | 0.00 | 0.00 | 0.00 | 0.00 | 31,816.71 | 0.00 | 31,816.71 |
| Emerald | 0.00 | 0.00 | 974.1 | 0.00 | 21,872.46 | 440.57 | 23,287.13 |
| Gwydir | 0.00 | 0.00 | 15,435.03 | 0.00 | 79,359.46 | 268.94 | 95,346.30 |
| Lachlan | 0.00 | 0.00 | 200.74 | 0.00 | 6,771.58 | 0.00 | 6,987.92 |
| Lower Namoi | 100.00 | 0.00 | 1,958.9 | 0.00 | 50,398.12 | 0.00 | 52,618.64 |
| MacIntyre | 193.56 | 0.00 | 3,608.33 | 0.00 | 59,990.82 | 513.16 | 64,504.14 |
| Macquarie | 0.00 | 0.00 | 419.21 | 0.00 | 15,197.78 | 21 | 15,885.16 |
| McKenzie River | 0.00 | 0.00 | 111.05 | 0.00 | 1,672.7 | 0.00 | 1,783.75 |
| Mungindi | 363.63 | 0.00 | 8,153.58 | 0.00 | 16,950.95 | 0.00 | 29,166.43 |
| Murrumbidgee | 0.00 | 0.00 | 521.5 | 0.00 | 15,573.15 | 0.00 | 16,132.65 |
| St George | 0.00 | 0.00 | 808.08 | 0.00 | 26,957.53 | 0.00 | 27,972.01 |
| Tandou | 0.00 | 0.00 | 449 | 0.00 | 3,141.38 | 0.00 | 4,028.08 |
| The Ord | 54.8 | 0.00 | 104.46 | 0.00 | 776.93 | 0.00 | 940.79 |
| Upper Namoi | 0.00 | 0.00 | 721.56 | 0.00 | 24,066.3 | 74.54 | 24,862.4 |
| Walgett | 0.00 | 0.00 | 657.05 | 0.00 | 8,518.44 | 0.00 | 9,175.49 |
| Total ha | 822.34 | 0.00 | 40,228.73 | 0.00 | 457,144.5 | 2,124.38 | 50,5982.41 |

| | |
|--|------------|
| Total Bollgard II ha planted | 460,091.22 |
| Total Roundup Ready Flex ha planted | 497,373.23 |

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**

****Denotes trial/research site**

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfgagn, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimban, Blair Athol and Pasha.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
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Valley: Bourke

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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DIR066 OGTR ANNUAL REPORT 2010/11 SEASON

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| 106 | 107 | 108 | 109 | 110 | 111 | 112 |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 |
| 120 | 121 | 122 | 123 | 124 | 125 | 126 |
| 127 | 128 | 129 | 130 | 131 | 132 | 133 |
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| 470 | 471 | 472 | 473 | 474 | 475 | 476 |
| 477 | 478 | 479 | 480 | 481 | 482 | |

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**

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Valley: Dirranbandi

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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| 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| 87 | 87 | 87 | 87 | 87 | 87 | 87 |
| 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|----|----|----|----|----|----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 |

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]



DIR066 OGTR ANNUAL REPORT 2010/11 SEASON

| | | | | | | |
|------|------|------|--------|------|--------|--------|
| ████ | ████ | ████ | ████ | ████ | ██████ | ████ |
| ████ | ████ | ████ | ██████ | ████ | ██████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ██████ | ████ |
| ████ | ████ | ████ | ██████ | ████ | ██████ | ██████ |

Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]



DIR066 OGTR ANNUAL REPORT 2010/11 SEASON

[illegible]

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 1 | 1 | 1 |

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]



Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| 87 | 87 | 87 | 87 | 87 | 87 | 87 |
| 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 |

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]



Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]



DIR066 OGTR ANNUAL REPORT 2010/11 SEASON

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|----|----|----|----|----|----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 |

Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| 87 | 87 | 87 | 87 | 87 | 87 | 87 |
| 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| 98 | 98 | 98 | 98 | 98 | 98 | 98 |
| 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 |

**DIR066 OGTR ANNUAL REPORT 2010/11 SEASON**[illegible]

Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 |
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DIR066 OGTR ANNUAL REPORT 2010/11 SEASON

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Valley: St George

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Volumes:

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Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Volumes:

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

























































































Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

Volumes:

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3.4 Research Trial Site Locations

| Valley | TUA | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha |
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| Total | | 154.80 | 0.00 | 35.13 | 0.00 | 294.46 | 0.00 |

Appendix A - Resistance Management Plan for Bollgard II® Cotton 2010/2011

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage. An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed

refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.

- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando: All Bollgard II crops are to be planted into moisture or watered-up in the period between October 10 and November 20, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). |

* A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.

** The planting rate is a recommendation based on a minimum of 85% seed germination.



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NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

Appendix B - Resistance Management Plan for Bollgard II® Cotton 2010/2011 - Ord River Irrigation and Burdekin Bowen Basin Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|---------------------|--|------------------|---------------------------|
| Conventional Cotton | Irrigated, unsprayed conventional cotton | 10 | Ord River, Burdekin Bowen |
| Pigeon pea | Fully irrigated, unsprayed | 5 | Ord River |
| Chick pea | Fully irrigated, unsprayed | 5 | Ord River |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge.

If the viability of an unsprayed conventional refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

General conditions for all refuges:

- (b) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once the Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Slashing of plants within the refuge should only be carried out after Bollgard II cotton lint removal has been completed. Soil disturbance of refuge crops can only occur 2 weeks after Bollgard II cotton plants have been harvested.
- (i) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended “Bollgard II Planting Window Variation Notice”.

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

5. Refuge

Unsprayed Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season.

6. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

Table 2. End of season chick pea trap crop requirements

| Criterion | End of season chick pea trap crop |
|---------------------------|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m x 24m wide. |
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. The trap crop must be planted into an area where it can receive the additional irrigation required to ensure the trap crop remains attractive to <i>Helicoverpa</i> spp. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks after defoliation of the Bollgard II cotton crop, but not before 3 weeks (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.



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9/04/13

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DIR091 ANNUAL REPORT 2012

Since the issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

Regards,

[Redacted signature block]

LICENCE No: DIR 066/2006
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2010 Annual Report for Commercial
release of GM herbicide tolerant and/or
insect resistant cotton lines.
REPORTING PERIOD: 26 October 2009 – 26 October 2010
(Covering 2009/10 cotton growing season)
DATE: 9 December 2010

PREPARED BY: [REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

SECION 1. LICENCE HOLDER DETAILS

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**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 066/2006 commercial licence covering Roundup Ready Cotton, Roundup Ready Flex Cotton and the Bollgard II trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR 066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007 and 15 April 2009.

The report covers the period of time from 26 October 2009 to 26 October 2010, including the 2009/10 cotton growing season.

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SECTION 2. GENERAL CONDITIONS

2.1 Duration of Licence

DIR066/2006 (DIR066) has not been suspended, cancelled or surrendered.

2.2 Holder of Licence

Monsanto Australia Ltd (Monsanto) remains the holder of the licence.

2.3 Project Supervisor

██████████ is the project supervisor as per Attachment A of the licence. The licence was varied 15 April 2009 to reflect the change of contact details.

2.4 No dealings with GMOs except as authorised by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

2.5 Location

The licence allows for dealings with GMOs to be conducted anywhere within Australia. This licence supersedes any previous licences regarding location.

2.6 Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

2.7 Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons in 2006/07, 2007/08 2008/09 and 2009/10.

Monsanto Australia Limited informed all persons covered by the DIR066/2006 licence of the obligations imposed on them as a result of the conditions of this licence. This was primarily achieved through the Monsanto accreditation program and information course which includes information on regulatory obligations, as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready, Roundup Ready Flex and Bollgard II cotton crops, to undergo training.

2.8 Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or a foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of the licence that would affect the capacity of Monsanto to meet the conditions of the DIR 066 licence.

2.9 Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide the information within a time period stipulated by the Regulator.

2.10 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence; or of any unintended effects of the dealings authorised by the licence.

2.11 People dealing with GMOs must allow auditing and monitoring of the dealing

Monsanto acknowledges that if a person is authorised by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorised by the Regulator, to enter premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

2.12 Remaining an Accredited organisation

At all times, Monsanto remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR 066/2006 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Cotton (RRC), Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II stacked with [REDACTED] [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRC, RRF and BGII technology. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Crop Location and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w LL ha | Total ha |
|----------------|----------|--------|-----------|-----------------|------------------|-----------------|------------|
| Bourke | - | - | - | - | 5,792.14 | 123.00 | 5,915.14 |
| Darling Downs | 261.30 | - | 1,522.29 | 182.95 | 24,843.97 | 349.04 | 27,159.55 |
| Dawson/Callide | 149.20 | - | 274.38 | - | 4,770.84 | - | 5,194.42 |
| Dirranbandi | - | - | - | - | 2,189.58 | - | 2,189.58 |
| Emerald | 8.46 | - | 435.11 | - | 16,158.84 | 214.98 | 16,817.39 |
| Gwydir | 94.65 | 2.67 | 8,966.24 | 168.00 | 19,781.74 | - | 29,013.30 |
| Lachlan | - | - | - | 117.00 | 2,027.23 | - | 2,144.23 |
| Lower Namoi | 136.31 | 121.32 | 2,246.49 | 476.82 | 23,144.04 | 186.00 | 26,310.98 |
| MacIntyre | 2,231.75 | - | 1,331.22 | - | 21,039.16 | 147.63 | 24,749.76 |
| Macquarie | - | - | 727.04 | 429.88 | 4,754.58 | - | 5,911.50 |
| Mungindi | 344.36 | - | 4,517.27 | - | 6,486.40 | 15.80 | 11,363.83 |
| Murrumbidgee | - | - | - | - | 1,164.74 | - | 1,164.74 |
| St George | 129.03 | - | 315.42 | - | 8,318.90 | 75.07 | 8,838.42 |
| Upper Namoi | - | 13.29 | 115.68 | 885.99 | 8,940.62 | 30.20 | 9,985.78 |
| Walgett | - | - | - | - | 3,429.47 | - | 3,429.47 |
| Burdekin | - | - | 55.49 | - | 585.26 | - | 640.75 |
| The Ord W.A. | - | - | - | - | 3.90 | - | 3.90 |
| Grand Total | 3,355.06 | 137.28 | 20,506.63 | 2,260.64 | 153,431.41 | 1,141.72 | 180,832.74 |

Total Bollgard II Hectares planted:

160,188.83 Ha






















Total Roundup Ready/Roundup Ready Flex Hectares planted:

176,335.96 Ha

Valley: Ord (WA)

Boundaries: Area north of 22° south in Western Australia.

























































Crop Location:

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Valley: Burdekin (QLD)

Boundaries: Area north of 22° South in Queensland.

Crop Locations:

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|  |  |  |  |  |  |  |

Note: Yellow highlight indicates research trial sites

Crop Locations:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 75 | 76 | 77 | 78 | 79 | 80 | 81 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 |
| 77 | 78 | 79 | 80 | 81 | 82 | 83 |
| 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 79 | 80 | 81 | 82 | 83 | 84 | 85 |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 |
| 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| 87 | 88 | 89 | 90 | 91 | 92 | 93 |
| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |

[illegible]

Valley: Dawson/Callide (QLD)

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Crop Locations:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
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| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
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| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
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| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
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| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
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| 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 34 | 35 | 36 | 37 | 38 | 39 | 40 |
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| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
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| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 75 | 76 | 77 | 78 | 79 | 80 | 81 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 |
| 77 | 78 | 79 | 80 | 81 | 82 | 83 |
| 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 79 | 80 | 81 | 82 | 83 | 84 | 85 |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 |
| 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| 87 | 88 | 89 | 90 | 91 | 92 | 93 |
| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 95 | 96 | 97 | 98 | 99 | 100 | 101 |
| 96 | 97 | 98 | 99 | 100 | 101 | 102 |
| 97 | 98 | 99 | 100 | 101 | 102 | 103 |
| 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 100 | 101 | 102 | 103 | 104 | 105 | 106 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 |
| 102 | 103 | 104 | 105 | 106 | 107 | 108 |
| 103 | 104 | 105 | 106 | 107 | 108 | 109 |
| 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 105 | 106 | 107 | 108 | 109 | 110 | 111 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 |
| 107 | 108 | 109 | 110 | 111 | 112 | 113 |
| 108 | 109 | 110 | 111 | 112 | 113 | 114 |
| 109 | 110 | 111 | 112 | 113 | 114 | 115 |
| 110 | 111 | 112 | 113 | 114 | 115 | 116 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 |
| 112 | 113 | 114 | 115 | 116 | 117 | 118 |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 |
| 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 115 | 116 | 117 | 118 | 119 | 120 | 121 |
| 116 | 117 | 118 | 119 | 120 | 121 | 122 |
| 117 | 118 | 119 | 120 | 121 | 122 | 123 |
| 118 | 119 | 120 | 121 | 122 | 123 | 124 |
| 119 | 120 | 121 | 122 | 123 | 124 | 125 |
| 120 | 121 | 122 | 123 | 124 | 125 | 126 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 |
| 122 | 123 | 124 | 125 | 126 | 127 | 128 |
| 123 | 124 | 125 | 126 | 127 | 128 | 129 |
| 124 | 125 | 126 | 127 | 128 | 129 | 130 |
| 125 | 126 | 127 | 128 | 129 | 130 | 131 |
| 126 | 127 | 128 | 129 | 130 | 131 | 132 |
| 127 | 128 | 129 | 130 | 131 | 132 | 133 |
| 128 | 129 | 130 | 131 | 132 | 133 | 134 |
| 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| 130 | 131 | 132 | 133 | 134 | 135 | 136 |
| 131 | 132 | 133 | 134 | 135 | 136 | 137 |
| 132 | 133 | 134 | 135 | 136 | 137 | 138 |
| 133 | 134 | 135 | 136 | 137 | 138 | 139 |
| 134 | 135 | 136 | 137 | 138 | 139 | 140 |
| 135 | 136 | 137 | 138 | 139 | 140 | 141 |
| 136 | 137 | 138 | 139 | 140 | 141 | 142 |
| 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| 138 | 139 | 140 | 141 | 142 | 143 | 144 |
| 139 | 140 | 141 | 142 | 143 | 144 | 145 |
| 140 | 141 | 142 | 143 | 144 | 145 | 146 |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 |
| 142 | 143 | 144 | 145 | 146 | 147 | 148 |
| 143 | 144 | 145 | 146 | 147 | 148 | 149 |
| 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 145 | 146 | 147 | 148 | 149 | 150 | 151 |
| 146 | 147 | 148 | 149 | 150 | 151 | 152 |
| 147 | 148 | 149 | 150 | 151 | 152 | 153 |
| 148 | 149 | 150 | 151 | 152 | 153 | 154 |
| 149 | 150 | 151 | 152 | 153 | 154 | 155 |
| 150 | 151 | 152 | 153 | 154 | 155 | 156 |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 |
| 152 | 153 | 154 | 155 | 156 | 157 | 158 |
| 153 | 154 | 155 | 156 | 157 | 158 | 159 |
| 154 | 155 | 156 | 157 | 158 | 159 | 160 |
| 155 | 156 | 157 | 158 | 159 | 160 | 161 |
| 156 | 157 | 158 | 159 | 160 | 161 | 162 |
| 157 | 158 | 159 | 160 | 161 | 162 | 163 |
| 158 | 159 | 160 | 161 | 162 | 163 | 164 |
| 159 | 160 | 161 | 162 | 163 | 164 | 165 |
| 160 | 161 | 162 | 163 | 164 | 165 | 166 |
| 161 | 162 | 163 | 164 | 165 | 166 | 167 |
| 162 | 163 | 164 | 165 | 166 | 167 | 168 |
| 163 | 164 | 165 | 166 | 167 | 168 | 169 |
| 164 | 165 | 166 | 167 | 168 | 169 | 170 |
| 165 | 166 | 167 | 168 | 169 | 170 | 171 |
| 166 | 167 | 168 | 169 | 170 | 171 | 172 |
| 167 | 168 | 169 | 170 | 171 | 172 | 173 |
| 168 | 169 | 170 | 171 | 172 | 173 | 174 |
| 169 | 170 | 171 | 172 | 173 | 174 | 175 |
| 170 | 171 | 172 | 173 | 174 | 175 | 176 |
| 171 | 172 | 173 | 174 | 175 | 176 | 177 |
| 172 | 173 | 174 | 175 | 176 | 177 | 178 |
| 173 | 174 | 175 | 176 | 177 | 178 | 179 |
| 174 | 175 | 176 | 177 | 178 | 179 | 180 |
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Valley: Darling Downs (QLD)

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Crop Locations:

| █ | █ | █ | █ | █ | █ | █ |
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[illegible]



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| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
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| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
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| 217 | 218 | 219 | 220 | 221 | 222 | 223 |
| 218 | 219 | 220 | 22 | | | |

[illegible]

Valley: St George (QLD)

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

[illegible]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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| 194 | 195 | 196 | 197 | 198 | 199 | 200 |
| 195 | 196 | 197 | 198 | 199 | 200 | 201 |
| 196 | 197 | 198 | 199 | 200 | 201 | 202 |
| 197 | 198 | 199 | 200 | 201 | 202 | 203 |
| 198 | 199 | 200 | 201 | 202 | 203 | 204 |
| 199 | 200 | 201 | 202 | 203 | 204 | 205 |
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| 207 | 208 | 209 | 210 | 211 | 212 | 213 |
| 208 | 209 | 210 | 211 | 212 | 213 | 214 |
| 209 | 210 | 211 | 212 | 213 | 214 | 215 |
| 210 | 211 | 212 | 213 | 214 | 215 | 216 |
| 211 | 212 | 213 | 214 | 215 | 216 | 217 |
| 212 | 213 | 214 | 215 | 216 | 217 | 218 |
| 213 | 214 | 215 | 216 | 217 | 218 | 219 |
| 214 | 215 | 216 | 217 | 218 | 219 | 220 |
| 215 | 216 | 217 | 218 | 219 | 220 | 221 |
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Crop Locations:

Valley: Dirranbandi (QLD)

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Crop Locations:

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Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaro and Coolatai.

Crop Locations:

[illegible]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
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| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 95 | 96 | 97 | 98 | 99 | 100 | 101 |
| 96 | 97 | 98 | 99 | 100 | 101 | 102 |
| 97 | 98 | 99 | 100 | 101 | 102 | 103 |
| 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 100 | 101 | 102 | 103 | 104 | 105 | 106 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 |
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| 103 | 104 | 105 | 106 | 107 | 108 | 109 |
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| 107 | 108 | 109 | 110 | 111 | 112 | 113 |
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| 113 | 114 | 115 | 116 | 117 | 118 | 119 |
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| 121 | 122 | 123 | 124 | 125 | 126 | 127 |
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| 123 | 124 | 125 | 126 | 127 | 128 | 129 |
| 124 | 125 | 126 | 127 | 128 | 129 | 130 |
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| 131 | 132 | 133 | 134 | 135 | 136 | 137 |
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| 136 | 137 | 138 | 139 | 140 | 141 | 142 |
| 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| 138 | 139 | 140 | 141 | 142 | 143 | 144 |
| 139 | 140 | 141 | 142 | 143 | 144 | 145 |
| 140 | 141 | 142 | 143 | 144 | 145 | 146 |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 |
| 142 | 143 | 144 | 145 | 146 | 147 | 148 |
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| 187 | 188 | 189 | 190 | 191 | 192 | 193 |
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| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
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| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
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| 35 | 36 | 37 | 38 | 39 | 40 | 41 |
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| 38 | 39 | 40 | 41 | 42 | 43 | 44 |
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| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
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| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 |
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| 81 | 82 | 83 | 84 | 85 | 86 | 87 |
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| 86 | 87 | 88 | 89 | 90 | 91 | 92 |
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| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Valley: Mungindi (NSW/QLD)

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Crop Locations:

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Valley: Gwydir (NSW)

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Crop Locations:

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Valley: Walgett (NSW)

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

Crop Locations:

| ████ | ████ | ████ | ████ | ████ █ | ████ ████ | ████ █ |
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Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

Valley: Upper Namoi (NSW)

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Crop Locations:



| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
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| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
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| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
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| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 75 | 76 | 77 | 78 | 79 | 80 | 81 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 |
| 77 | 78 | 79 | 80 | 81 | 82 | 83 |
| 78 | 79 | 80 | 81 | 82 | 83 | 84 |
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| 81 | 82 | 83 | 84 | 85 | 86 | 87 |
| 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| 84 | 85 | 86 | 87 | 88 | 89 | 90 |
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| 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| 87 | 88 | 89 | 90 | 91 | 92 | 93 |
| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |

[illegible]

Valley: Lower Namoi (NSW)

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Crop Locations:

[illegible]

[illegible]



| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
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| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
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| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
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| 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 |
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| 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 45 | 46 | 47 | 48 | 49 | 50 | 51 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 52 | 53 | 54 | 55 | 56 | 57 | 58 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 |
| 62 | 63 | 64 | 65 | 66 | 67 | 68 |
| 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 75 | 76 | 77 | 78 | 79 | 80 | 81 |
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| 77 | 78 | 79 | 80 | 81 | 82 | 83 |
| 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 79 | 80 | 81 | 82 | 83 | 84 | 85 |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 |
| 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| 87 | 88 | 89 | 90 | 91 | 92 | 93 |
| 88 | 89 | 90 | 91 | 92 | 93 | 94 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| 94 | 95 | 96 | 97 | 98 | 99 | 100 |

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Valley: Macquarie (NSW)

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Crop Locations:

[illegible]

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Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Crop Locations:

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Valley: Murrumbidgee (NSW)

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Crop Locations:

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Research Trial Site Locations:

| Valley | TUA# | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha |
|-----------------|------|-------------|-------------|--------------|-----------------|------------------|----------------|
| ■■■■■■■■■■ | ■■■■ | ■■ | ■■ | ■■ | ■■ | ■■ | ■■ |
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| Subtotal | | 4.40 | 0.00 | 23.97 | 0.00 | 167.59 | 28.53 |

3.4 Resistance Management Plan for Bollgard II 2009/10

SCHEDULE A -

Resistance Management Plan for Bollgard II[®] Cotton 2009/2010

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Irrigated, unsprayed | 5 |
| Sorghum | Irrigated, unsprayed – conditions apply, see box below | 15 |
| Corn | Irrigated, unsprayed – conditions apply, see box below | 20 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Irrigated, unsprayed pigeon pea | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

Irrigated sorghum or corn.

NB: The following special conditions apply to growers who wish to grow sorghum or corn as refuges.

- A plan indicating how either of these refuges will be managed must be submitted to, and approved by, the local Accounts & Stewardship Specialist before planting either of these two options. A farm map must be included with the plan.

Either refuge option requires three sequential plantings of the same variety. The initial planting date should be determined by the time taken to flower for the varieties chosen for use in each particular area so that the need for part of the refuge to be in flower from January 15 is satisfied. Subsequent plantings should follow at 2-weekly intervals so that some of the refuge is continuously in flower until February 28.

- A single planting of mixed maturity varieties is not acceptable.
- Each planting should be one third of the total area required for that refuge type, as described in Table 1 or Table 2. If there is no sprayed conventional cotton on the same farm unit the refuge must be a minimum of 24 metres wide. However, if there is sprayed conventional cotton on the same farm unit the refuge must be a minimum of 48 metres wide (see also clause (f) below).
- These refuge options will be closely monitored during the season to ensure that all such refuges are managed appropriately and are effective and attractive from January 15 to February 28.
- Corn refuges may be harvested after complete cob maturity.
- Sorghum refuges may be harvested after complete head maturity.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties. It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.
- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is the requirement for germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once the Bollgard II crops begin flowering, and are highly attractive to *Helicoverpa* spp. moths, cultivation of refuges (e.g. for weed control, row formation etc) must be matched by cultivation of the associated Bollgard II field(s).
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject

to clause (f) below all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.

- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. In Central Queensland soil disturbance of refuge crops can only occur after Bollgard II cotton plants have been removed. In all regions, destruction of refuges other than corn and sorghum should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

All unsprayed refuges should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Accounts & Stewardship Specialist.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando: All Bollgard II crops are to be planted into moisture or watered-up in the period between October 10 and November 20, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3

shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Accounts & Stewardship Specialist for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings are required.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop** |
|---|---|
| Minimum area & dimension (Requirement) | A trap crop of 1% of planted Bollgard II crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop must be planted between November 20 and December 20. |
| Planting rate *** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift. |
| Irrigation | Irrigation of the trap crop must be the same as for cotton, plus one additional irrigation after cotton is finished. |
| Weed control | The trap crop must be kept free of weeds. |
| Crop destruction | The trap crop must be destroyed 2 to 4 weeks after defoliation of Bollgard II cotton (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). |

** A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before mid-November) or too late (e.g. January) is not adequate for cotton crops planted during September through to October.

*** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Accounts & Stewardship Specialist.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide

SCHEDULE A -

Resistance Management Plan for Bollgard II® Cotton 2009/2010

Ord River Irrigation and Burdekin Bowen Basin Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|------------|--|------------------|---------------------------|
| Cotton | Irrigated, unsprayed conventional cotton | 10 | Ord River, Burdekin Bowen |
| Pigeon pea | Irrigated, unsprayed | 5 | Ord River |
| Chick pea | Irrigated, unsprayed | 5 | Ord River |
| Corn | Irrigated, unsprayed – conditions apply, see box below | 10 | Ord River |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge.

If the viability of an unsprayed refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

Irrigated corn

NB: The following special conditions apply to growers who wish to grow corn as a refuge.

- A plan indicating how the refuge will be managed must be submitted to, and approved by, the local Accounts & Stewardship Specialist before planting. A farm map must be included with the plan.
- Corn refuge option requires three sequential plantings of the same variety. The initial planting date should be determined by the time taken to flower for the varieties chosen for use in each particular area so that the chosen variety is to flower simultaneously with the Bollgard II crop in the region. Subsequent plantings should follow at 2-weekly intervals so that some of the refuge is continuously in flower during this period.
- A single planting of mixed maturity varieties is not acceptable.

- Each planting should be one third of the total area required for that refuge type. If there is no sprayed conventional cotton on the same farm unit, the refuge must be a minimum of 24 metres wide.
- This refuge option will be closely monitored during the season to ensure that all such refuges are managed appropriately and are effective and attractive whilst the Bollgard II cotton crop is flowering.
- Corn refuges may be harvested after complete cob maturity.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties. It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting occur after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.
- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17 °C, which is the requirement for germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once the Bollgard II crops begin flowering, and are highly attractive to *Helicoverpa* moths, cultivation of refuges (e.g. for weed control, row formation etc) must be matched by cultivation of the associated Bollgard II field(s).
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable efforts should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Soil disturbance of refuge crops can only occur after Bollgard II cotton plants have been removed. Destruction of refuges other than corn should only be carried out after

Bollgard II cotton lint removal has been completed.

- (j) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended "Bollgard II Planting Window Variation Notice".

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

5. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

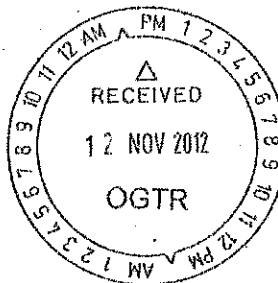
Table 2. End of season chick pea trap crop requirements

| Criterion | End of season chick pea trap crop |
|---------------------------|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m wide. |
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. |
| Weed control | The trap crop must be kept free of weeds. |
| Crop destruction | The trap crop must be destroyed 2 to 4 weeks after defoliation of Bollgard II cotton (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Accounts & Stewardship Specialist.

Bayer CropScience

BioScience



1 November 2012

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Attention: Application Entry Point

Dear Sir/Madam,

Annual Report for DIR062/2005 for the year 8 August 2011 to 7 August 2012

I refer to the requirements of the above licence (*viz.* Condition No. 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period of 8 August 2011 to 7 August 2012, commercial quantities of approximately 3,000 green ha (single row configuration) of cotton containing Liberty Link technology were planted in Australia. There were no seed production plantings conducted during the reporting period.

During the reporting period, no adverse effects were observed or reported to us as a result of dealings with Liberty Link or LLCotton25/Bollgard II cotton under licence DIR062/2005.

Yours sincerely,
Bayer CropScience



Regulatory Affairs Manager
BioScience

LICENCE Number: DIR 022/2002 and DIR 023/2002
LICENSE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
Accreditation No: ACCR 034/2002

SUBMISSION: Annual Report for INGARD® and Roundup Ready® Cotton 2006

REPORTING PERIOD: July 2005 - June 2006
("2005/06 Cotton Growing Season")

DATE: 14 September 2006

PREPARED BY: [REDACTED]
Compliance Manager

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**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 022/2002 ("The commercial release of insecticidal (INGARD® event 531) cotton") and DIR 023/2002 ("Commercial release of herbicide tolerant (Roundup Ready® event 1445) and herbicide tolerant / insecticidal (Roundup Ready® / INGARD® event 531) cotton) licences issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 of both DIR 022/2002 and DIR 023/2002.



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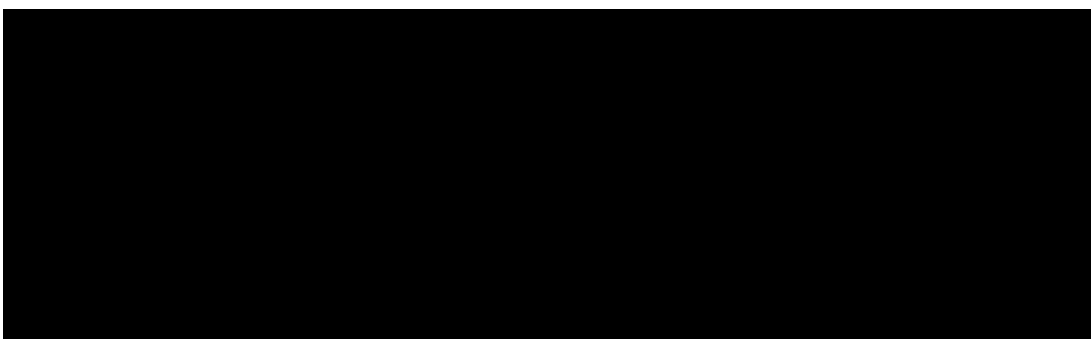
1. General Conditions

a. Informing people of their obligations

There was no INGARD® (Ingard) planted under the licence DIR 022/2002 (DIR022) in the 2005/06 season, therefore there were no persons covered by the licence.

Monsanto Australia Limited (Monsanto) informed all Roundup Ready® cotton (Roundup Ready) growers and cotton gins covered by DIR 023/2002 (DIR023), of the obligations imposed on them as a result of the conditions in the licence. This was achieved primarily through the Monsanto Accreditation program and information course which includes information on regulatory obligations, as well as management of the crop.

Roundup Ready Accreditation programs require all persons having management responsibility for Roundup Ready crops, to undergo training and pass a test on the content of the training. Growers are only required to attend these courses and pass the accreditation test once, and 1,799 growers and consultants had been accredited prior to the 2005/06 season.



b. Reporting

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment associated with the dealings authorised by either DIR022 or DIR023, or of any contraventions of the above licences by a person covered by the licences, or any unintended effects of the dealings authorised by the licences.

c. Material changes in circumstances

During the reporting period, Monsanto did not become aware of any relevant conviction occurring after the commencement of these licences; any revocation or suspension of a licence or permit held by Monsanto under a law of the Commonwealth, a State or a foreign country, being a law related to the health and safety of people or the environment; or any event or circumstances occurring after the commencement of these licences that would affect the capacity of Monsanto to meet the conditions in these licences.



d. Remaining an accredited organisation

At all times, Monsanto remained an accredited organisation in accordance with the Act and complied with all conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

During the reporting period, there were no changes to any of the contact details of the Project Supervisor for either DIR022 or DIR023.

2. Specific Conditions

a. Restrictions on growing of the GMOs

There was no Ingard grown in the 2005/06 season.

Monsanto did not enter into a Technology User's Agreement (TUA) or any other agreement that permitted Roundup Ready to be grown outside the traditional cotton-growing areas of New South Wales and Queensland. The tables below show where Roundup Ready was grown in the 2005/06 season.

The tables are divided into the traditional growing areas or "Valleys" and show the TUA Number, Farm Unit name, names of Fields in which the Roundup Ready was grown and the total area of Roundup Ready, in hectares, per TUA.

Valley: Bourke (NSW / QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 372.0 |

Valley: Darling Downs (QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 35.0 |
| | | | 118.5 |
| | | | 25.7 |
| | | | 4.3 |
| | | | 12.5 |
| | | | 53.0 |
| | | | 2.7 |
| | | | 13.0 |
| | | | 14.6 |
| | | | 44.5 |
| | | | 40.0 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|--------------------------------|-----------|
| | | | 53.3 |
| | | | 21.6 |
| | | | - |
| | | | 1.5 |
| | | | 21.2 |
| | | | |
| | | | 33.4 |
| | | | 12.6 |
| | | | 5.4 |
| | | | 40.7 |
| | | | 15.0 |
| | | | 33.0 |
| | | | 3.4 |
| | | | 52.5 |
| | | | 42.8 |
| | | | 31.6 |
| | | | 9.3 |
| | | | 6.0 |
| | | | 2.0 |
| | | | 23.7 |
| | | | |
| | | | 149.0 |
| | | | 10.2 |
| | | | 39.7 |
| | | | 56.3 |
| | | | 8.0 |
| | | | 3.1 |
| | | | 65.3 |
| | | | 9.5 |
| | | | 25.1 |
| | | | 60.8 |
| | | | 7.3 |
| | | | 3.0 |
| | | | 63.4 |
| | | | 46.8 |
| | | | |
| | | | 14.3 |
| | | | |
| | | | 45.7 |
| | | | |
| | | | 157.3 |
| | | | |
| | | | 11.8 |
| | | | 61.9 |
| | | | 28.7 |
| | | | 10.5 |
| | | | 130.2 |
| | | | 24.1 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 8.2 |
| | | | 7.2 |
| | | | 4.2 |
| | | | 2.1 |
| | | | 3.0 |
| | | | 4.8 |
| | | | 5.4 |
| | | | 5.3 |
| | | | 5.8 |
| | | | 11.2 |
| | | | |

Valley: Dawson/Callide (QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 3.3 |
| | | | 2.0 |

Valley: Emerald (QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 137.5 |
| | | | 44.1 |
| | | | 39.2 |

Valley: Gwydir (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 53.0 |
| | | | 675.3 |
| | | | 74.0 |
| | | | 18.5 |
| | | | 217.9 |
| | | | 188.6 |
| | | | 177.8 |
| | | | 8.6 |
| | | | 26.5 |
| | | | 173.5 |
| | | | 950.6 |
| | | | 586.0 |
| | | | 588.2 |
| | | | |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 755.8 |
| | | | 440.2 |
| | | | 73.0 |
| | | | 6.9 |
| | | | 100.1 |
| | | | 185.9 |
| | | | 460.8 |
| | | | 190.0 |
| | | | 644.5 |
| | | | 430.0 |
| | | | 460.0 |
| | | | 96.1 |
| | | | 17.5 |
| | | | 50.5 |
| | | | 18.9 |
| | | | 4.4 |
| | | | 8.7 |
| | | | 18.2 |
| | | | 233.5 |
| | | | 4.3 |
| | | | 138.2 |
| | | | |
| | | | 21.3 |
| | | | 4.7 |
| | | | 0.8 |
| | | | 224.7 |
| | | | 362.2 |
| | | | 101.9 |
| | | | 90.7 |
| | | | 186.0 |
| | | | 753.6 |
| | | | |
| | | | 44.9 |
| | | | 29.9 |
| | | | 416.8 |
| | | | 22.4 |
| | | | 22.9 |
| | | | 9.3 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 196.5 |
| | | | 72.5 |
| | | | 15.7 |
| | | | 143.3 |
| | | | 10.4 |
| | | | 7.0 |
| | | | 237.8 |
| | | | 4.9 |
| | | | 14.2 |
| | | | 19.3 |
| | | | 174.8 |
| | | | 8.2 |
| | | | 7.8 |
| | | | 3.4 |

Valley: Lachlan (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 120.0 |

Valley: Lower Namoi (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 17.9 |
| | | | 10.0 |
| | | | 11.8 |
| | | | 8.0 |
| | | | 6.6 |
| | | | 32.5 |
| | | | 18.4 |
| | | | 99.5 |
| | | | 28.8 |
| | | | 42.4 |
| | | | 1,274.4 |
| | | | 46.0 |
| | | | 195.0 |
| | | | 11.5 |
| | | | 4.0 |
| | | | 70.5 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 56.3 |
| | | | 11.5 |
| | | | 7.0 |
| | | | 4.0 |
| | | | 41.8 |
| | | | 44.8 |
| | | | 29.5 |
| | | | 15.4 |
| | | | 256.9 |
| | | | 62.8 |
| | | | 5.7 |
| | | | 1.2 |
| | | | 1.9 |
| | | | 19.8 |
| | | | 224.7 |
| | | | 37.5 |
| | | | 91.2 |
| | | | 4.0 |
| | | | 58.5 |

Valley: Macintyre (NSW / QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 305.6 |
| | | | 21.9 |
| | | | 34.8 |
| | | | 51.0 |
| | | | 38.0 |
| | | | 9.5 |
| | | | 113.5 |
| | | | 5.7 |
| | | | 6.0 |
| | | | 53.0 |
| | | | 9.6 |
| | | | 17.1 |
| | | | 22.5 |
| | | | 106.0 |
| | | | 7.2 |
| | | | 28.1 |
| | | | 36.6 |
| | | | 210.9 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 2.0 |
| | | | 33.0 |
| | | | 10.8 |
| | | | 48.4 |
| | | | 22.3 |
| | | | 10.8 |

Valley: Macquarie (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 9.8 |
| | | | 9.1 |
| | | | 127.7 |
| | | | 131.8 |
| | | | 48.6 |
| | | | 55.7 |
| | | | 433.4 |
| | | | 49.0 |
| | | | 738.6 |
| | | | 69.3 |
| | | | 42.6 |
| | | | 20.0 |
| | | | 89.0 |
| | | | 4.0 |
| | | | 599.0 |
| | | | 86.5 |
| | | | 6.3 |
| | | | 4.3 |
| | | | 635.7 |

Valley: Mungindi (NSW / QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 1,275.0 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 52.4 |
| | | | 102.3 |
| | | | 443.4 |
| | | | 151.6 |
| | | | 202.9 |
| | | | 0.3 |
| | | | 4.7 |
| | | | 20.9 |
| | | | 13.0 |
| | | | 13.2 |

Valley: Murrumbidgee (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 115.0 |
| | | | 293.3 |
| | | | 121.5 |

Valley: St George (QLD)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 500.5 |
| | | | 10.0 |
| | | | 51.6 |
| | | | 130.8 |
| | | | 205.5 |

Valley: Tandou (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 696.5 |

Valley: Upper Namoi (NSW)

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 50.8 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 5.6 |
| | | | 3.6 |
| | | | 9.0 |
| | | | 4.0 |
| | | | 5.4 |
| | | | 26.0 |
| | | | 13.3 |
| | | | 1.33 |

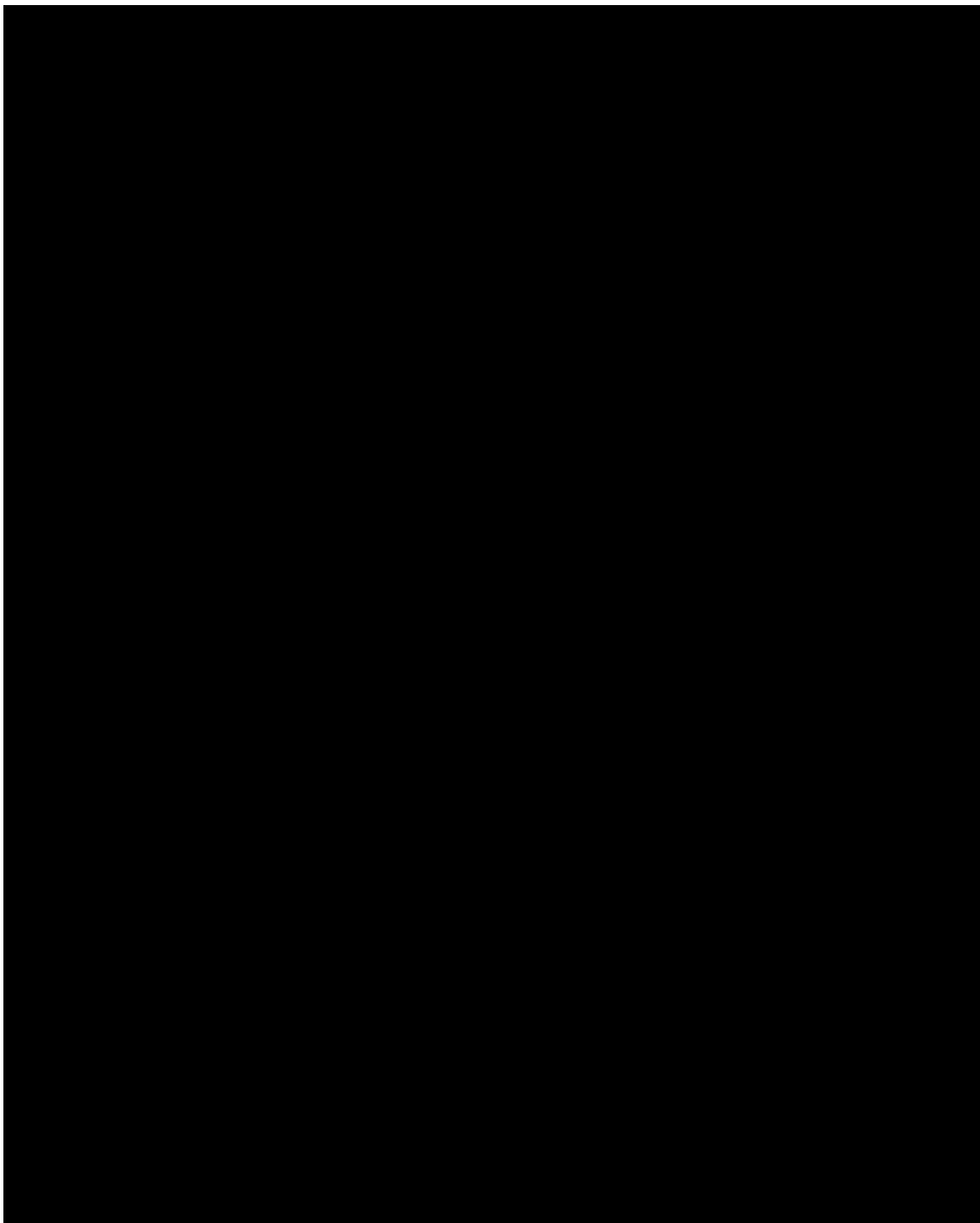
Valley: Walgett (NSW)

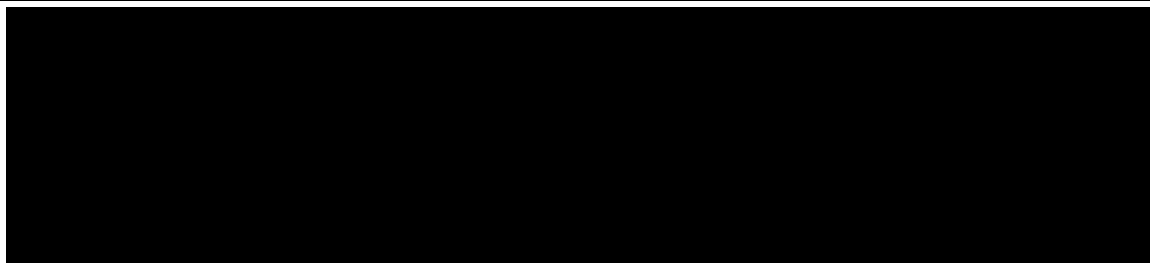
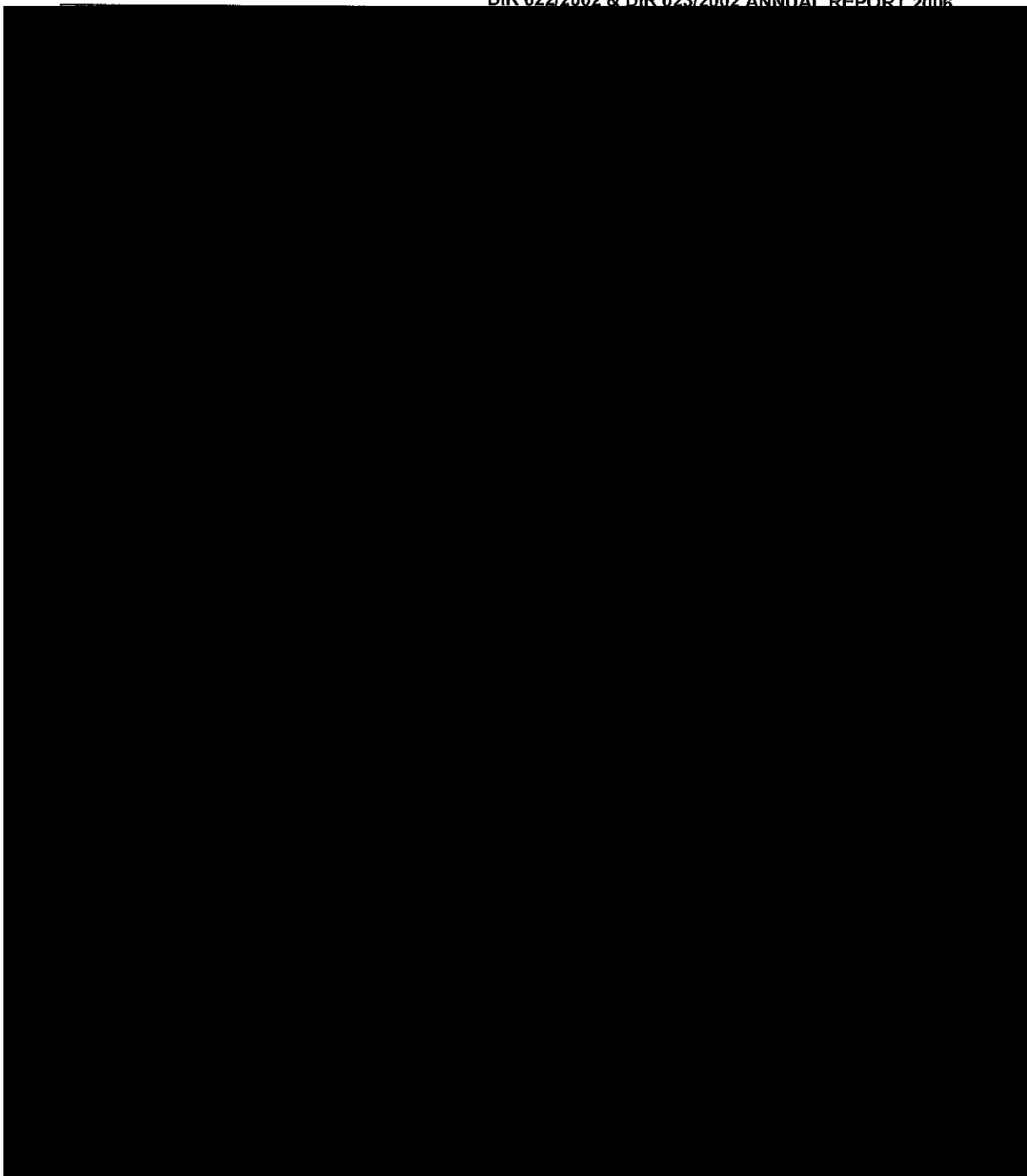
| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 1,481.0 |
| | | | 16.0 |
| | | | 65.0 |
| | | | 10.0 |

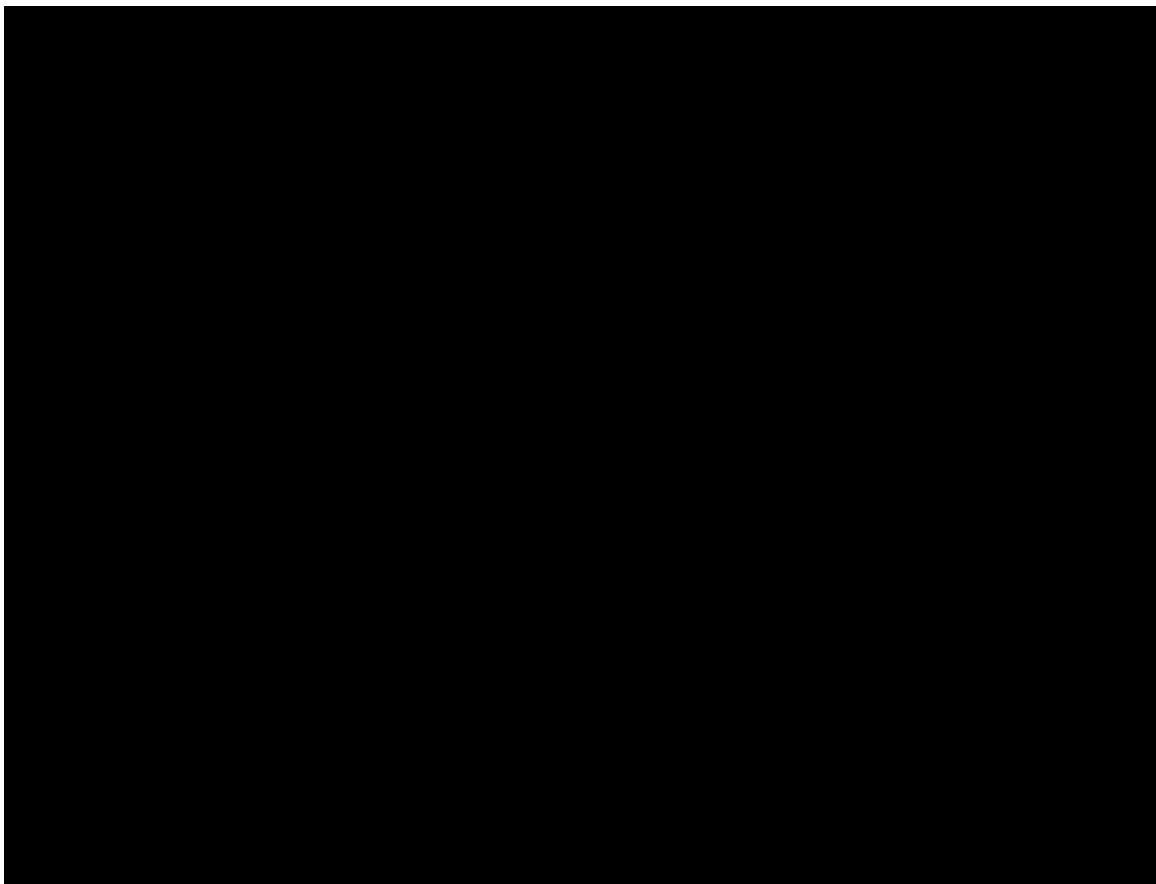
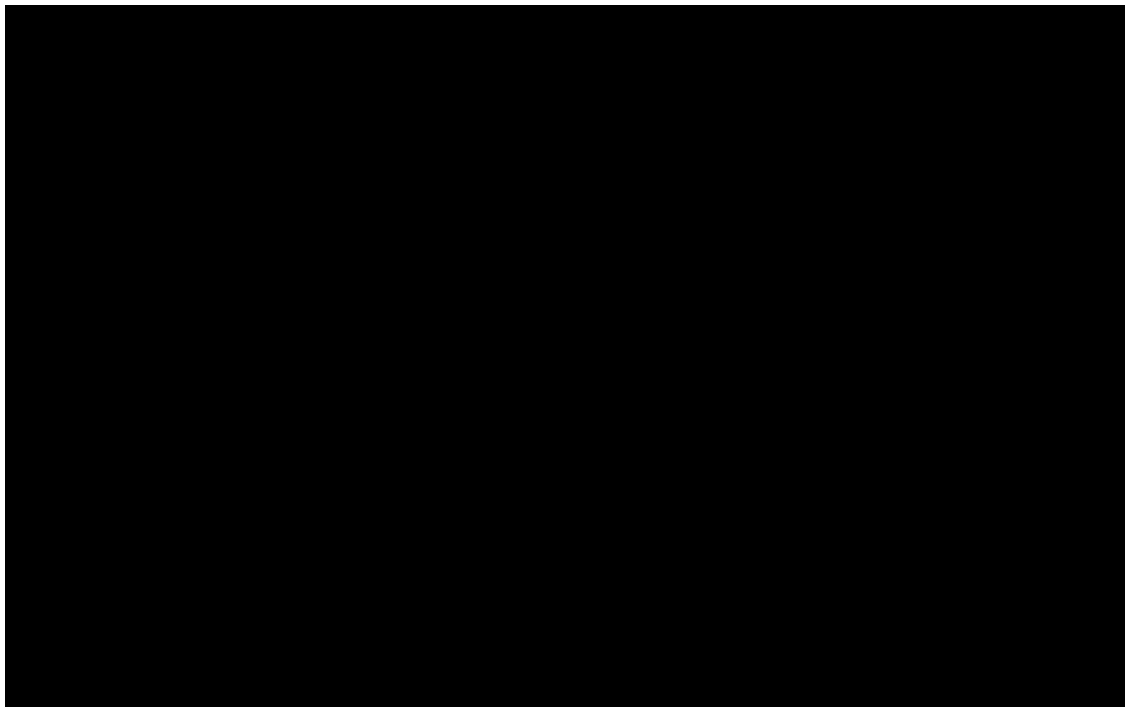


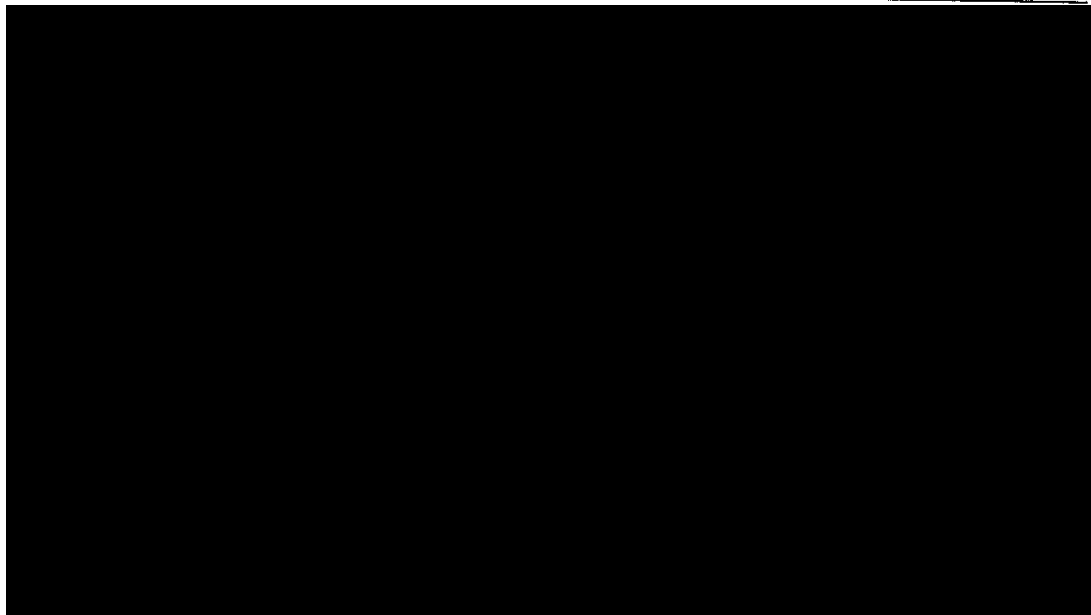
b. Transport of GM whole cotton seed *into* the Restricted Zone

Monsanto provided written notification to all commercial cotton gins in Australia in December 2005, stating the requirements for transportation of GM whole cotton seed into the Restricted Zone.









e. Compliance Management Plan

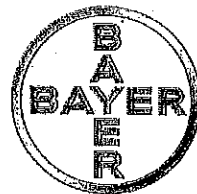
A written Compliance Management Plan, for both Ingard and Roundup Ready, was provided to the Regulator prior to planting of the GMOs.

f. Testing Methodology

A written Testing Methodology, for both Ingard and Roundup Ready, was provided to the Regulator within 30 days of planting of the GMOs.



Bayer CropScience
BioScience



KT

Office of the Gene Technology Regulator
MDP 54
PO Box 100
WODEN ACT 2606

Attention: Applications Entry Point

10 October 2007

DIR 062/2005
Annual Report
Filing

Dear Dr Meek,

Subject: Annual Report, Licence No. DIR 062/2005

I refer to the requirements of the above licence, (viz. condition No 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period of 8th of August 2006 to the 7th of August 2007, only small scale commercial activities were undertaken with Liberty Link cotton in Australia. The first year of a larger commercial program is scheduled for 2007.

During the period from August 2006 through to August 2007, no adverse effects had been noticed at any of the locations where Liberty Link cotton has been planted. No unexpected adverse effects have been reported to us resulting from dealings with Liberty Link cotton approved under Licence No. DIR 062/2005.

Recently, activities conducted under DIR 056/2004 were added to DIR 062/2005. These activities include the stacking of Liberty Link cotton and Bollgard II. As the time of including the DIR 56 activities in DIR 62, two locations were in the post harvest monitoring phase. No adverse affects have been observed at either of these two sites.

Yours sincerely,

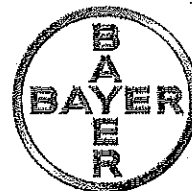
[Redacted signature]

[Redacted name]

Senior Regulatory Affairs Associate
BioScience

Bayer CropScience Pty Ltd
391-393 Tooronga Road
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Tel. +61 3 9248 6888
Fax +61 3 9248 6680
A.B.N. 87 000 226 022
www.bayercropscience.com.au

OK
[Handwritten mark]



19 October 2011

Office of the Gene Technology Regulator
MDP 54, GPO Box 9848
CANBERRA
ACT 2601

Bayer CropScience Pty Ltd
391-393 Tooronga Road
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Australia
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Fax +61 3 9248 6800
A.B.N. 87 000 226 022
www.bayercropscience.com.au

Attention: Application Entry Point

Dear Sir/Madam,

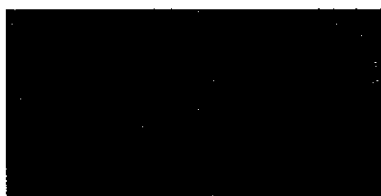
Annual Report for DIR062/2005 for the year 8 August 2010 to 7 August 2011

I refer to the requirements of the above licence (v/z. Condition No. 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period of 8 August 2010 to 7 August 2011, commercial quantities of approximately 2,635 green ha (single row configuration) of cotton containing Liberty Link technology were planted in Australia. Seed production plantings equalled 19.6 green ha and small-scale field trials of 1.27 green ha were conducted by CSIRO.

During the reporting period, no adverse effects were observed or reported to us as a result of dealings with Liberty Link or LLCotton25/Bollgard II cotton under licence DIR062/2005.

Yours sincerely,
Bayer CropScience



Regulatory Affairs Manager
BioScience

MONSANTO



LICENCE Number:

DIR 022/2002 and DIR 023/2003

LICENSE HOLDER:

Monsanto Australia Limited

PROJECT SUPERVISOR:



Accreditation No:

ACCR 034/2002

SUBMISSION:

Annual Report for Roundup Ready[®] Cotton and
INGARD[®] 2004

REPORTING PERIOD:

21 June 2003 - 20 June 2004
("2003/04 Cotton Growing Season")

DATE:

15 October 2004

PREPARED BY:



Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

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1. General Conditions

a. Informing people of their obligations

Monsanto Australia Limited informed all cotton growers and cotton gins covered by the DIR 022 (INGARD) and DIR 023 (Roundup Ready cotton) licences of the obligations imposed on them as a result of the conditions of these licences. This was achieved primarily through Monsanto Accreditation programs and information courses.

Roundup Ready[®] cotton Accreditation programs require all persons having management responsibility for Roundup Ready[®] Cotton crops, to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once, and therefore may have attended these courses prior to the 2003/04 cotton season. 1,293 growers were accredited in regulatory obligations and conditions, and management of Roundup Ready[®] cotton technology for the 2002/03 season. A further 208 cotton growers attended Roundup Ready[®] accreditation programs in the 2003/04 season.

Previous to 2002, INGARD[®] information sessions were offered in which training to conduct dealings with INGARD[®] according to licence conditions and obligations was an integral component. In 2002, INGARD[®] information sessions were replaced with Bollgard II[®] Accreditation programs due to the intended phasing out of INGARD[®] in the 2003/04 season. However, the key components of the Bollgard II[®] program pertaining to compliance with conditions of the licence would also enable the growers to comply with conditions of the DIR 022 / 2002 licence. In the 2003/04 season, 961 people attended the Bollgard II Accreditation program.

Gins known to transport cotton seed into the restricted zone were notified by letter that they were permitted to transport seed north of 22° south provided they adhered to all conditions and obligations associated with the use of cotton seed within the restricted zone.

b. Reporting

During the reporting period, the licence holder did not become aware of any additional information related to any risks to the health and safety of people, or to the environment associated with the dealings authorised by either the INGARD[®] or the Roundup Ready[®] cotton licence, or of any unintended effects of the dealings authorised by the licence.

During the reporting period, the licence holder did not become aware of any contraventions of either DIR 022 / 2002 or DIR 023 / 2003 by a person covered by the licence.

c. Material changes in circumstances

During the 2003/04 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence of permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of either the DIR 022 / 2002 or DIR 023 / 2002 licences.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.



e. Changes to details

During the 2003/04 reporting period, Monsanto Australia Limited notified the Office of the Gene Technology Regulator of a change in project supervisor. On 18 February 2004, [REDACTED] as project supervisor in Attachment A of both DIR 022 / 2003 and DIR 023 / 2002.

2. Restrictions on growing of the GMO

The licence holder must not enter into a Technology User's Agreement or any other agreement which would permit the GMO to be grown outside of the traditional cotton-growing areas of New South Wales and Queensland south of latitude 22° south or north of 22° south.

Roundup Ready® cotton and INGARD® were only grown in the traditional cotton-growing regions of NSW and Queensland. More information on the locations where all Roundup Ready® cotton and INGARD® cotton crops were grown during the 2003/04 cotton growing season are given in **Parts 2a** and **2b**.

a. Crop plantings of INGARD® cotton

i) Conditions for Growing Crop

In the 2003-04 cotton growing season, Bollgard II was introduced into the market, while plans for the phase-out of INGARD were put in place. Therefore in 2003-04, there were significant plantings of both varieties. The TMS Technical Panel formulated a resistance management plan for the 2003-04 season which aimed at limiting the amount of INGARD planted, while encouraging cotton growers to adopt Bollgard II.

The "25% / 40% Rule" was implemented for the 2003-04 cotton season. Growers were able to:

- Plant cotton containing the INGARD gene to a total area of 25% of total cotton grown on that farm unit.
- Plant cotton containing either the INGARD gene, or the Bollgard II gene to a total area of 40% of total cotton grown on that farm unit (the area of cotton containing the INGARD gene must not exceed 25% of total cotton).
- Plant cotton containing the Bollgard II gene to a total area of 40% of total cotton grown on that farm unit.

(Where total cotton is defined as all emerged and viable commercial cotton being grown in a valley and includes all INGARD, Bollgard II, Roundup Ready cotton and conventional varieties, including sprayed and unsprayed cotton refuges.)

Sales and planting of INGARD® were undertaken under a Technology User Agreement (TUA), which sets out the conditions for planting and growing the crop. In order to be eligible to sign such an agreement, a grower was required to attend an INGARD® or Bollgard II® accreditation program, and pass a test based on the material covered in the accreditation program.



ii) Crop Locations

The first audit involved the identification of all fields in which INGARD® was grown. These are listed below (by TUA and Farm Unit). In total, **30,399.30 Ha** of INGARD® was grown during the 2003-04 cotton season.

Note that locations are sorted by valley, with the approximate boundary of each valley, described at the start of each listing and illustrated below.

Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 76.5 |
| | | | 31.3 |

Valley: Darling Downs (QLD)

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine and Roma. South-west boundary is Surat.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 30.0 |
| | | | 48.8 |
| | | | 31.5 |
| | | | 26.3 |
| | | | 60.3 |
| | | | 25.0 |
| | | | 7.8 |
| | | | 28.5 |
| | | | 46.2 |
| | | | 22.0 |
| | | | 20.0 |
| | | | 27.0 |
| | | | 41.0 |
| | | | 45.1 |
| | | | 43.0 |
| | | | 32.0 |
| | | | 47.8 |
| | | | 38.7 |
| | | | 17.0 |
| | | | 99.0 |
| | | | 42.0 |
| | | | 20.0 |
| | | | 26.6 |
| | | | 103.5 |
| | | | 31.0 |
| | | | 27.8 |



95

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|--------------------------------|-----------|
| | | | 12.0 |
| | | | 34.7 |
| | | | 46.5 |
| | | | 29.7 |
| | | | 45.0 |
| | | | 56.5 |
| | | | 31.0 |
| | | | |
| | | | 66.9 |
| | | | 36.0 |
| | | | 16.7 |
| | | | 93.3 |
| | | | 10.0 |
| | | | 12.6 |
| | | | 25.8 |
| | | | 33.0 |
| | | | 36.4 |
| | | | 10.3 |
| | | | 14.7 |
| | | | 19.6 |
| | | | 27.3 |
| | | | 12.4 |
| | | | 8.0 |
| | | | 9.5 |
| | | | 93.7 |
| | | | 117.0 |
| | | | 31.3 |
| | | | 43.0 |
| | | | 34.8 |
| | | | 55.2 |
| | | | 6.1 |
| | | | |
| | | | 39.5 |
| | | | |
| | | | 65.9 |
| | | | |
| | | | 95.9 |
| | | | 84.2 |
| | | | |
| | | | 73.4 |
| | | | |
| | | | 50.5 |
| | | | 60.6 |
| | | | |
| | | | 173.0 |
| | | | 28.5 |
| | | | 70.0 |
| | | | 11.0 |
| | | | |
| | | | 56.1 |
| | | | 16.8 |
| | | | 50.0 |
| | | | 35.3 |
| | | | 52.0 |
| | | | 21.4 |
| | | | 29.1 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 42.5 |
| | | | 9.5 |
| | | | 18.8 |
| | | | 74.5 |
| | | | 43.5 |
| | | | 62.6 |
| | | | 47.8 |
| | | | 19.0 |
| | | | 102.0 |
| | | | 8.3 |
| | | | 20.5 |
| | | | 56.0 |
| | | | 43.2 |
| | | | 14.0 |
| | | | 40.0 |
| | | | 63.9 |
| | | | 25.3 |
| | | | 75.8 |
| | | | 39.9 |
| | | | 62.0 |
| | | | 13.2 |
| | | | 57.3 |
| | | | 17.7 |
| | | | 182.0 |
| | | | 18.5 |
| | | | 80.0 |
| | | | 47.4 |
| | | | 17.8 |
| | | | 41.0 |
| | | | 30.5 |
| | | | 42.7 |
| | | | 32.4 |
| | | | 27.7 |
| | | | 21.9 |
| | | | 21.3 |
| | | | 49.0 |
| | | | 39.5 |
| | | | 47.9 |
| | | | 22.6 |
| | | | 33.5 |
| | | | 6.0 |
| | | | 171.0 |
| | | | 138.8 |
| | | | 110.6 |
| | | | 23.6 |



| TVA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|--------------------------------|-----------|
| | | | 71.6 |
| | | | 24.2 |
| | | | 9.6 |
| | | | 29.0 |
| | | | 15.0 |
| | | | 119.6 |
| | | | 22.1 |
| | | | 10.0 |
| | | | 10.5 |
| | | | 21.0 |
| | | | 16.0 |
| | | | 42.3 |
| | | | 24.3 |
| | | | 4.8 |
| | | | 47.0 |
| | | | 22.7 |
| | | | 6.7 |
| | | | 63.0 |
| | | | 17.1 |
| | | | 9.1 |
| | | | 8.5 |
| | | | 28.1 |
| | | | 4.3 |
| | | | 28.6 |
| | | | 38.4 |
| | | | 66.7 |
| | | | 11.0 |
| | | | 20.9 |
| | | | 94.7 |
| | | | 105.6 |
| | | | 67.6 |
| | | | 25.5 |
| | | | 28.7 |
| | | | 30.2 |
| | | | 79.0 |
| | | | 22.0 |
| | | | 8.2 |
| | | | 4.8 |
| | | | 54.6 |
| | | | 262.2 |
| | | | 16.1 |
| | | | 10.7 |
| | | | 22.0 |
| | | | 38.7 |
| | | | 6.6 |
| | | | 26.6 |
| | | | 24.0 |
| | | | 16.0 |
| | | | 10.0 |
| | | | 8.0 |
| | | | 20.0 |
| | | | 6.0 |
| | | | 60.8 |
| | | | 21.5 |
| | | | 21.5 |



| PUA number | Farm Unit Name | Fields in which crops grown | Area (Hect) |
|------------|----------------|-----------------------------|-------------|
| | | | 25.0 |
| | | | 68.2 |
| | | | 16.9 |
| | | | 11.0 |
| | | | 17.0 |
| | | | 24.8 |
| | | | 25.0 |
| | | | 95.2 |
| | | | 70.0 |
| | | | 29.0 |
| | | | 14.0 |
| | | | 12.0 |
| | | | 39.3 |
| | | | 42.1 |
| | | | 16.2 |
| | | | 18.8 |
| | | | 29.3 |
| | | | 74.5 |
| | | | 261.9 |
| | | | 20.0 |
| | | | 32.7 |
| | | | 47.9 |
| | | | 34.0 |
| | | | 13.8 |
| | | | 15.0 |
| | | | 16.0 |
| | | | 22.7 |



Valley: Dawson/Callide (QLD)
Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.
Crop Locations:

| IBRA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-------------|----------------|-----------------------------|-----------|
| | | | 75.0 |
| | | | 106.0 |
| | | | 30.0 |
| | | | 56.2 |
| | | | 19.0 |
| | | | 39.6 |
| | | | 38.9 |
| | | | 71.4 |
| | | | 54.6 |
| | | | 50.2 |
| | | | 19.3 |
| | | | 41.3 |
| | | | 91.5 |
| | | | 85.4 |
| | | | 148.9 |

Valley: Dirranbandi (QLD)
Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to NSW border.
Crop Locations:

| IBRA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-------------|----------------|-----------------------------|-----------|
| | | | 28.3 |
| | | | 13.0 |
| | | | 1.2 |

Valley: Emerald (QLD)
Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.
Crop Locations:

| IBRA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-------------|----------------|-----------------------------|-----------|
| | | | 49.2 |
| | | | 98.7 |
| | | | 55.8 |
| | | | 135.9 |
| | | | 17.5 |
| | | | 21.0 |
| | | | 87.1 |
| | | | 86.5 |
| | | | 31.0 |
| | | | 69.2 |



| HA Number | Farm Unit Name | Fields in which crops are sown | Area (Ha) |
|-----------|----------------|-----------------------------------|-----------|
| | | | 39.7 |
| | | | 44.2 |
| | | | 37.2 |
| | | | 21.3 |

Valley: Gwydir (NSW)

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is the southern boundary.

Crop Locations:

| HA Number | Farm Unit Name | Fields in which crops are sown | Area (Ha) |
|-----------|----------------|-----------------------------------|-----------|
| | | | 128.4 |
| | | | 54.7 |
| | | | 56.0 |
| | | | 163.0 |
| | | | 51.5 |
| | | | 50.0 |
| | | | 70.0 |
| | | | 160.4 |
| | | | 40.2 |
| | | | 67.9 |
| | | | 123.4 |
| | | | 69.5 |
| | | | 17.0 |
| | | | 30.2 |
| | | | 60.0 |
| | | | 211.0 |
| | | | 445.6 |
| | | | 103.4 |
| | | | 93.2 |
| | | | 125.0 |
| | | | 56.9 |
| | | | 71.2 |
| | | | 42.8 |
| | | | 49.4 |
| | | | 14.1 |
| | | | 40.0 |
| | | | 626.4 |
| | | | 33.8 |
| | | | 39.0 |
| | | | 86.8 |
| | | | 58.9 |
| | | | 99.4 |
| | | | 20.1 |
| | | | 33.4 |
| | | | 140.0 |
| | | | 31.6 |
| | | | 79.3 |
| | | | 7.3 |
| | | | 40.8 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 12.3 |
| | | | 14.3 |
| | | | 7.5 |
| | | | 71.5 |
| | | | 10.0 |

Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road from Booligal through to Gunbar and then follows the Great Western Hwy through to West Wyalong.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 171.0 |
| | | | 49.8 |
| | | | 274.5 |
| | | | 40.0 |
| | | | 23.7 |
| | | | 21.4 |
| | | | 35.0 |
| | | | 28.0 |
| | | | 33.0 |
| | | | 63.0 |
| | | | 646.0 |

Valley: Lower Namoi (NSW)

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 14.6 |
| | | | 21.1 |
| | | | 12.5 |
| | | | 39.7 |
| | | | 15.7 |
| | | | 80.8 |
| | | | 57.4 |
| | | | 41.6 |
| | | | 72.4 |
| | | | 53.2 |
| | | | 18.3 |
| | | | 69.6 |
| | | | 18.1 |
| | | | 61.1 |
| | | | 47.0 |
| | | | 33.9 |
| | | | 81.2 |
| | | | 42.0 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 66.9 |
| | | | 202.6 |
| | | | 16.5 |
| | | | 19.8 |
| | | | 84.5 |
| | | | 47.5 |
| | | | 48.5 |
| | | | 100.0 |
| | | | 28.0 |
| | | | 130.1 |
| | | | 23.7 |
| | | | 38.0 |
| | | | 31.4 |
| | | | 128.0 |
| | | | 96.8 |
| | | | 72.0 |
| | | | 100.9 |
| | | | 69.4 |
| | | | 166.0 |
| | | | 30.4 |
| | | | 95.0 |
| | | | 56.9 |
| | | | 6.0 |
| | | | 41.3 |
| | | | 57.6 |
| | | | 15.9 |
| | | | 61.0 |
| | | | 57.1 |
| | | | 21.0 |
| | | | 39.5 |
| | | | 41.2 |
| | | | 49.5 |
| | | | 151.0 |
| | | | 40.0 |
| | | | 39.3 |
| | | | 41.1 |
| | | | 10.0 |
| | | | 169.9 |
| | | | 15.0 |
| | | | 49.1 |
| | | | 45.1 |
| | | | 51.5 |
| | | | 64.3 |
| | | | 41.6 |
| | | | 9.5 |
| | | | 318.0 |
| | | | 12.3 |
| | | | 29.9 |
| | | | 65.2 |
| | | | 29.9 |
| | | | 29.0 |
| | | | 26.7 |
| | | | 159.5 |
| | | | 74.0 |
| | | | 91.0 |

| TDA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 14.0 |
| | | | 26.4 |
| | | | 80.2 |
| | | | 33.0 |
| | | | 40.0 |
| | | | 38.6 |
| | | | 16.7 |
| | | | 42.9 |
| | | | 14.0 |
| | | | 26.0 |
| | | | 57.1 |
| | | | 40.5 |

Valley: Macintyre (NSW / QLD)

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north to include Moonie and east to include Texas. Southern boundary is Foxes Lane, which runs Garah back to the Newell Hwy and then along to Croppa Creek, Yallaroi and Coolatai.

Crop Locations:

| TDA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 72.9 |
| | | | 33.4 |
| | | | 11.0 |
| | | | 46.0 |
| | | | 26.0 |
| | | | 19.1 |
| | | | 21.8 |
| | | | 42.0 |
| | | | 14.8 |
| | | | 46.6 |
| | | | 16.1 |
| | | | 26.5 |
| | | | 61.0 |
| | | | 39.1 |
| | | | 31.4 |
| | | | 30.2 |
| | | | 42.2 |
| | | | 119.1 |
| | | | 34.3 |
| | | | 40.4 |
| | | | 29.1 |
| | | | 52.2 |
| | | | 109.6 |
| | | | 63.5 |
| | | | 81.7 |
| | | | 102.5 |
| | | | 177.0 |
| | | | 86.8 |
| | | | 25.0 |
| | | | 73.2 |
| | | | 28.5 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 8.5 |
| | | | 50.7 |
| | | | 136.0 |
| | | | 42.0 |
| | | | 527.3 |

Valley: Macquarie (NSW)

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire to Pilliga and then south back to Dubbo via Coonabarabran.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 14.4 |
| | | | 47.8 |
| | | | 48.7 |
| | | | 16.5 |
| | | | 20.7 |
| | | | 57.6 |
| | | | 41.6 |
| | | | 37.3 |
| | | | 118.1 |
| | | | 18.7 |
| | | | 16.0 |
| | | | 31.9 |
| | | | 21.0 |
| | | | 90.3 |
| | | | 164.8 |
| | | | 18.5 |
| | | | 55.8 |
| | | | 39.3 |
| | | | 213.0 |
| | | | 96.0 |
| | | | 44.0 |
| | | | 47.6 |
| | | | 94.7 |
| | | | 25.0 |
| | | | 58.2 |
| | | | 15.7 |
| | | | 101.0 |
| | | | 73.4 |
| | | | 23.9 |
| | | | 76.0 |
| | | | 59.0 |
| | | | 38.2 |
| | | | 34.6 |
| | | | 68.9 |
| | | | 32.4 |
| | | | 26.0 |
| | | | 16.0 |
| | | | 8.1 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 34.3 |
| | | | 44.0 |
| | | | 47.5 |
| | | | 35.0 |
| | | | 76.0 |
| | | | 58.4 |
| | | | 9.9 |
| | | | 57.2 |
| | | | 23.0 |
| | | | 46.9 |
| | | | 273.0 |
| | | | 40.1 |

Valley: Mungindi (NSW / QLD)

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 45.7 |
| | | | 12.0 |
| | | | 20.0 |
| | | | 349.0 |
| | | | 43.0 |
| | | | 28.4 |
| | | | 60.0 |
| | | | 10.0 |
| | | | 25.2 |

Valley: Murrumbidgee (NSW)

Boundaries: Northern boundary is the Great Western Hwy from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 397.0 |
| | | | 196.2 |
| | | | 325.7 |
| | | | 377.0 |



Valley: St George (QLD)

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 94.6 |
| | | | 167.9 |
| | | | 22.0 |
| | | | 91.7 |
| | | | 83.6 |
| | | | 12.0 |
| | | | 55.3 |
| | | | 50.0 |
| | | | 52.5 |
| | | | 95.7 |
| | | | 38.6 |
| | | | 44.0 |
| | | | 34.3 |
| | | | 136.4 |
| | | | 36.0 |
| | | | 45.0 |
| | | | 24.0 |
| | | | 25.0 |
| | | | 97.0 |
| | | | 63.2 |
| | | | 122.2 |
| | | | 41.4 |
| | | | 60.0 |

Valley: Upper Namoi (NSW)

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 21.5 |
| | | | 58.5 |
| | | | 12.0 |
| | | | 113.3 |
| | | | 137.0 |
| | | | 81.6 |
| | | | 64.0 |
| | | | 59.0 |
| | | | 26.5 |
| | | | 80.4 |
| | | | 30.0 |
| | | | 26.1 |
| | | | 78.4 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 88.7 |
| | | | 37.6 |
| | | | 70.0 |
| | | | 89.3 |
| | | | 51.8 |
| | | | 44.9 |
| | | | 143.0 |
| | | | 40.0 |
| | | | 98.7 |
| | | | 59.0 |
| | | | 86.3 |
| | | | 55.0 |
| | | | 12.8 |
| | | | 10.0 |
| | | | 14.1 |
| | | | 50.2 |

Valley: Walgett (NSW)

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 39.0 |
| | | | 27.5 |

b. Crop plantings of Roundup Ready® cotton

i) Conditions for Growing Crop

Sales and planting of Roundup Ready® Cotton were undertaken under a Technology User Agreement (TUA), which sets out the conditions for planting and growing the crop. In order to be eligible to sign such an agreement, a grower was required to attend a Roundup Ready® Cotton accreditation program, and pass a test based on the material covered in the accreditation program.

As a part of the agreement, growers were required to fulfil certain obligations, including undergoing two audits:

- Firstly, an audit of the seed variety, and area of Roundup Ready® Cotton crop planted, undertaken by a Technology Service Provider (TSP) on behalf of Monsanto.
- Secondly, completing an audit of the weed control program, satisfaction levels and weeds surviving Roundup Ready Herbicide applications, completed by the grower.

ii) **Roundup Ready® growers and valleys**

The first audit involved the identification of all fields in which Roundup Ready® cotton was grown. These are listed below (by TUA and Farm Unit). In total, **84,230 Ha** of Roundup Ready® Cotton was grown during the 2003/04 cotton season (an 8% decrease from the previous season due to continued drought conditions). Despite this, of the growers with valid TUAs, **68%** grew Roundup Ready® cotton this season, a 2% increase over last season. the Chart below provides a breakdown of Roundup Ready® cotton hectares by valley, and the percentage of Roundup Ready® cotton grown.

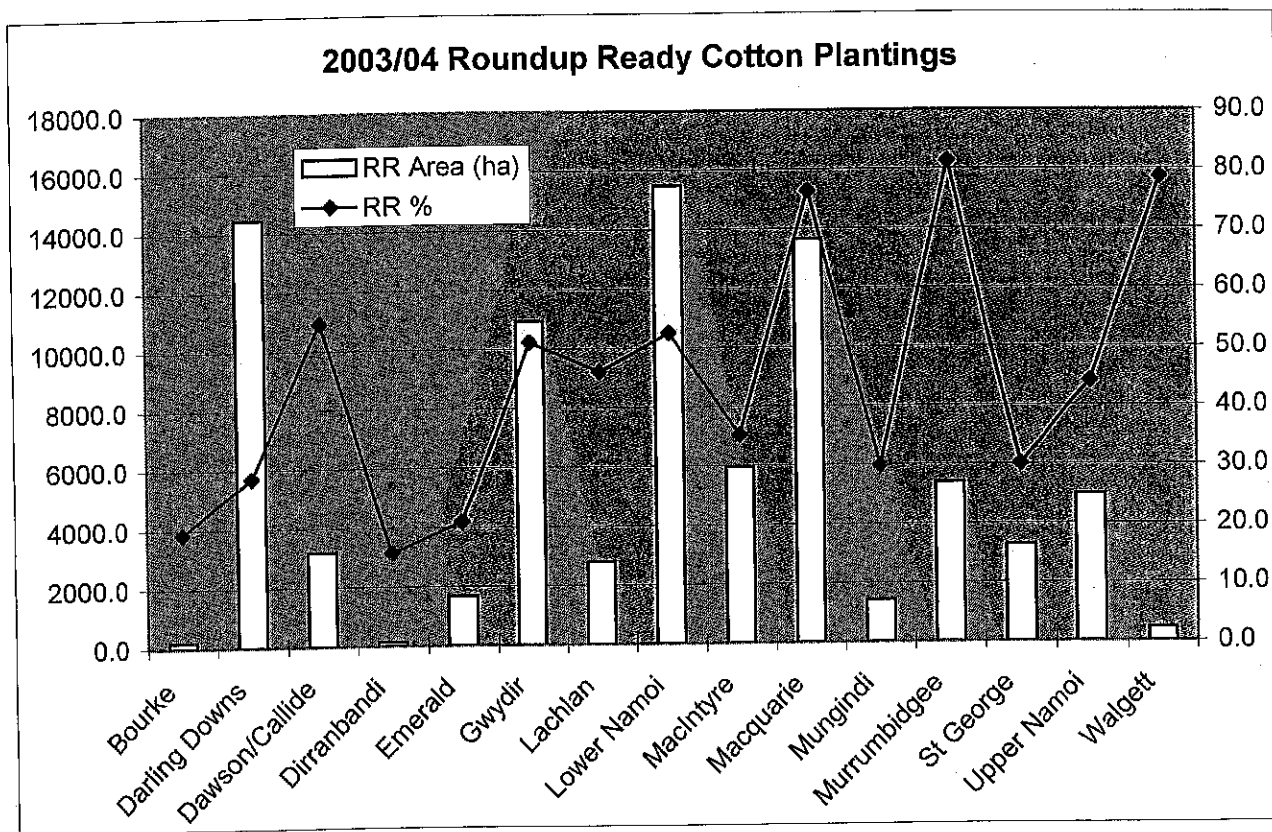


Figure 1. Roundup Ready® cotton hectares and growers per valley.



iii) Crop Locations

In the tables below, all fields in which Roundup Ready[®] cotton was grown are listed by TUA and Farm Unit. Note that locations are sorted by valley, with the approximate boundary of each valley, described at the start of each listing.

Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 35.8 |
| | | | 36.9 |
| | | | 124.8 |

Valley: Darling Downs (QLD)

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine and Roma. South-west boundary is Surat.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|------------|
| | | | 19 |
| | | | 30 |
| | | | 37.6 |
| | | | 23.35 |
| | | | 136.5 |
| | | | 93 |
| | | | 102.7 |
| | | | 303.948533 |
| | | | 47.8 |
| | | | 228 |
| | | | 88.666 |
| | | | 55 |
| | | | 66.1684003 |
| | | | 98 |
| | | | 81.5 |
| | | | 66.7350203 |
| | | | 103.5 |
| | | | 142.433 |
| | | | 28 |
| | | | 6.9 |
| | | | 49.55 |
| | | | 15.35 |
| | | | 87.55 |
| | | | 34.306 |
| | | | 85.5 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|------------|
| | | | 38 |
| | | | 95 |
| | | | 55 |
| | | | 135.4 |
| | | | 173 |
| | | | 157.8 |
| | | | 21 |
| | | | 266.2 |
| | | | 153.93433 |
| | | | 263.3 |
| | | | 31.725 |
| | | | 212 |
| | | | 147.9 |
| | | | 483.4 |
| | | | 28.5 |
| | | | 52.5 |
| | | | 294.548062 |
| | | | 67.7 |
| | | | 225.1 |
| | | | 35.3 |
| | | | 74 |
| | | | 149.3 |
| | | | 11.6672501 |
| | | | 4.25 |
| | | | 79.9382 |
| | | | 189.341 |
| | | | 47.8 |
| | | | 102 |
| | | | 8.3 |
| | | | 36 |
| | | | 58 |
| | | | 14 |
| | | | 62.96 |
| | | | 75 |
| | | | 66.95 |
| | | | 88.1434 |
| | | | 40.85 |
| | | | 286.1 |
| | | | 32.5349603 |
| | | | 98.0022004 |



| TUA number | Farm Unit Name | Fields law/illegal crops destroyed | Area (Ha) |
|------------|----------------|---------------------------------------|------------|
| | | | 43.3 |
| | | | |
| | | | 697 |
| | | | 60.8 |
| | | | 102 |
| | | | 28.0014002 |
| | | | 29.1 |
| | | | 45.4689404 |
| | | | 81.3374007 |
| | | | 48 |
| | | | |
| | | | 141.940431 |
| | | | 149 |
| | | | 174.8 |
| | | | 40.1 |
| | | | |
| | | | 226.3 |
| | | | 113.2 |
| | | | |
| | | | 506.6 |
| | | | |
| | | | 110.06964 |
| | | | 46 |
| | | | 52 |
| | | | 65 |
| | | | 58 |
| | | | 105 |
| | | | 42 |
| | | | |
| | | | 261 |
| | | | 82 |
| | | | |
| | | | 67 |
| | | | |
| | | | 86 |
| | | | 118.672601 |
| | | | 11 |
| | | | |
| | | | 160.26782 |
| | | | |
| | | | 103.5 |
| | | | 67.5367106 |
| | | | 45.5349103 |
| | | | 32.25 |
| | | | 79 |
| | | | 54.6 |
| | | | |
| | | | 1072.15436 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|------------|
| | | | |
| | | | 72.5 |
| | | | 43.7355204 |
| | | | 38.6686003 |
| | | | 40 |
| | | | 94.4014502 |
| | | | 20 |
| | | | 53 |
| | | | 30 |
| | | | 69 |
| | | | |
| | | | 238.3 |
| | | | 21.5 |
| | | | 25 |
| | | | 130.903921 |
| | | | 58.4029205 |
| | | | 66 |
| | | | 118.6694 |
| | | | 61.7364205 |
| | | | |
| | | | 126.7 |
| | | | 264.384432 |
| | | | 20.435 |
| | | | 42 |
| | | | 11.5 |
| | | | 53 |
| | | | 97.3 |
| | | | 16.2 |
| | | | 74.5 |
| | | | 74.5 |
| | | | |
| | | | 338.680102 |
| | | | 69.1 |
| | | | |
| | | | 130.673201 |
| | | | |
| | | | 185.8 |
| | | | 34 |
| | | | 38 |
| | | | |
| | | | 65 |

Valley: Dawson/Callide (QLD)

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 269 |
| | | | |
| | | | 155.5 |
| | | | |
| | | | 205 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 97 |
| | | | 163 |
| | | | 94.3 |
| | | | 130.2 |
| | | | 243.3 |
| | | | 151.7 |
| | | | 280.2 |
| | | | 87.7 |
| | | | 207.9 |
| | | | 195.2 |
| | | | 162.8 |
| | | | 47.6 |
| | | | 149.4 |
| | | | 50 |
| | | | 206.6 |
| | | | 150.6 |
| | | | 225 |
| | | | 14 |

Valley: Dirranbandi (QLD)

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to NSW border.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 56 |
| | | | 60 |
| | | | 30.2 |



Valley: Emerald (QLD)

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Crop Locations:

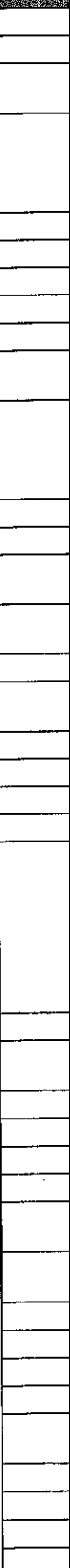
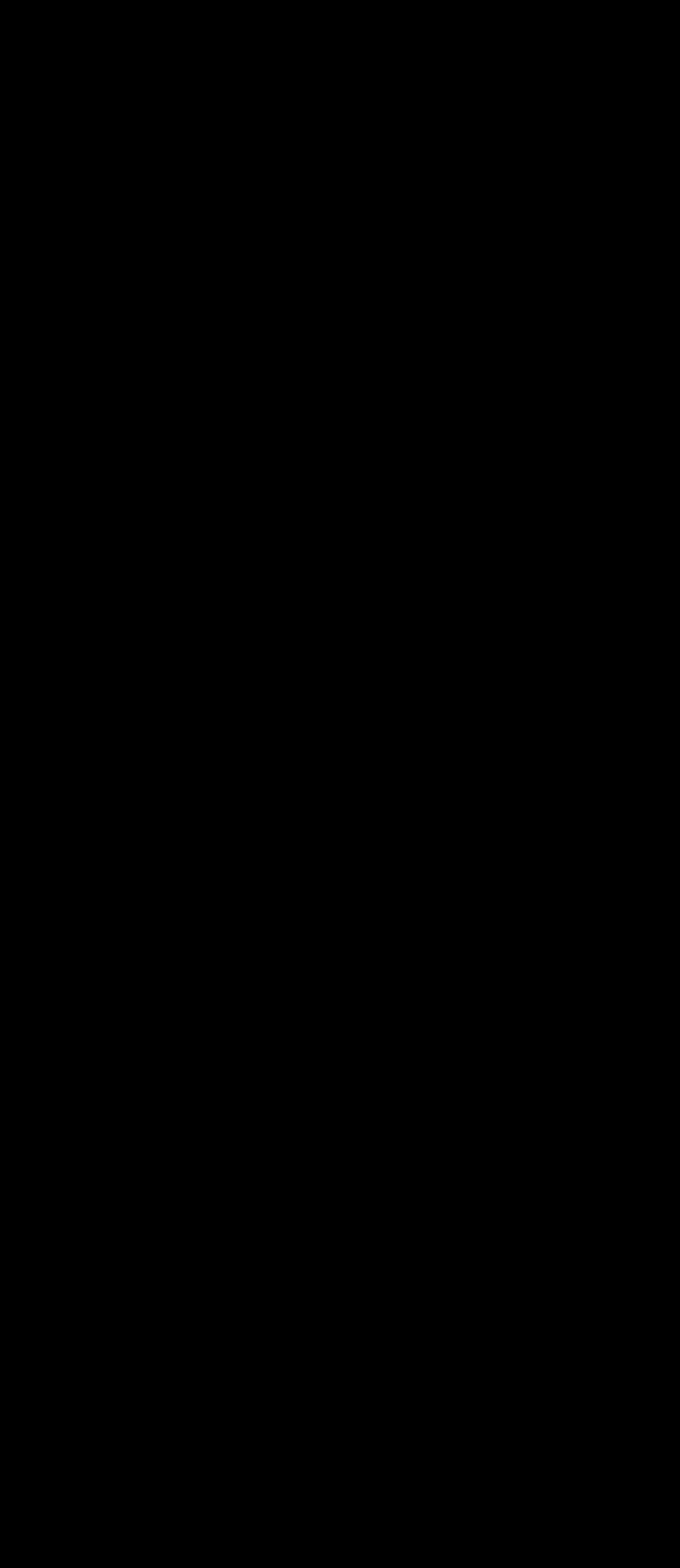
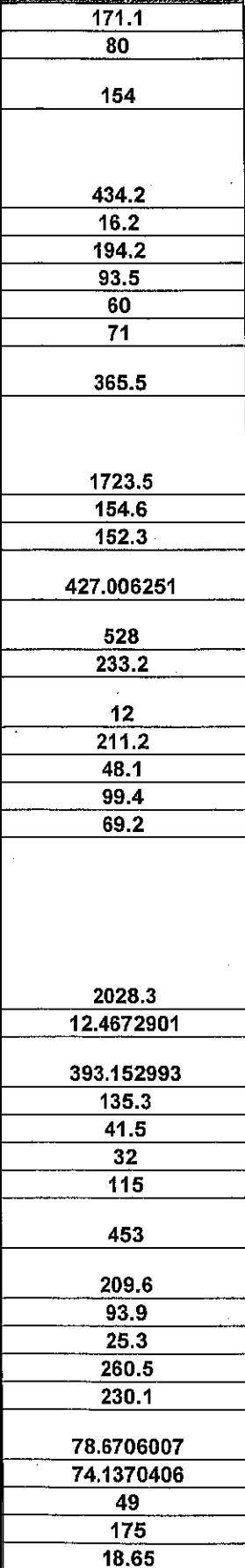
| TUA Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 121.8 |
| | | | 4.6 |
| | | | 2.3 |
| | | | |
| | | | 90.7 |
| | | | 17.5 |
| | | | 21 |
| | | | 29.3 |
| | | | 34.4 |
| | | | 135.5 |
| | | | 57.1 |
| | | | 30 |
| | | | 48.3 |
| | | | 247 |
| | | | 12 |
| | | | |
| | | | 229.1 |
| | | | 99.2 |
| | | | |
| | | | 150.6 |
| | | | 60 |
| | | | 50.3 |
| | | | 167.6 |
| | | | 46.8 |
| | | | 21.25 |

Valley: Gwydir (NSW)

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is the southern boundary.

Crop Locations:

| TUA Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 303.5 |
| | | | |
| | | | 331.75 |
| | | | 162.6 |
| | | | 142 |
| | | | 148.8 |
| | | | 461 |

| Field Number | Farm Unit Name | Field in which crops grown | Area (Ht) |
|--|---|--|------------|
|  |  |  | 171.1 |
| | | | 80 |
| | | | 154 |
| | | | 434.2 |
| | | | 16.2 |
| | | | 194.2 |
| | | | 93.5 |
| | | | 60 |
| | | | 71 |
| | | | 365.5 |
| | | | 1723.5 |
| | | | 154.6 |
| | | | 152.3 |
| | | | 427.006251 |
| | | | 528 |
| | | | 233.2 |
| | | | 12 |
| | | | 211.2 |
| | | | 48.1 |
| | | | 99.4 |
| | | | 69.2 |
| | | | 2028.3 |
| | | | 12.4672901 |
| | | | 393.152993 |
| | | | 135.3 |
| | | | 41.5 |
| | | | 32 |
| | | | 115 |
| | | | 453 |
| | | | 209.6 |
| | | | 93.9 |
| | | | 25.3 |
| | | | 260.5 |
| | | | 230.1 |
| | | | 78.6706007 |
| | | | 74.1370406 |
| | | | 49 |
| | | | 175 |
| | | | 18.65 |



| PUA number | Farmer Unit Name | Fields in which crops are grown | Area (Ha) |
|------------|------------------|---------------------------------|------------|
| | | | 23.45 |
| | | | 30 |
| | | | 54 |
| | | | 63.9365305 |
| | | | 13.75 |

Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road from Booligal through to Gunbar and then follows the Great Western Hwy through to West Wyalong.

Crop Locations:

| | | |
|--|--|-------|
| | | 498 |
| | | 129.9 |
| | | |
| | | 466 |
| | | 132 |
| | | 88 |
| | | 104.5 |
| | | 95 |
| | | 86 |
| | | 140 |
| | | 37.7 |
| | | 64 |
| | | 135 |
| | | 195 |
| | | |
| | | 1122 |

Valley: Lower Namoi (NSW)

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Crop Locations:

| PUA number | Farmer Unit Name | Fields in which crops are grown | Area (Ha) |
|------------|------------------|---------------------------------|-----------|
| | | | 64.4 |
| | | | 87.5 |
| | | | 46.4 |
| | | | 158.8 |
| | | | 63.2 |
| | | | 473.9 |
| | | | |
| | | | 293.4 |
| | | | 172.5 |
| | | | 72.4 |
| | | | |
| | | | 153.2 |
| | | | 250 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|------------|
| | | | 32.2016103 |
| | | | 67.7 |
| | | | 137.9 |
| | | | 52.1 |
| | | | 175.1 |
| | | | 655.4 |
| | | | 122 |
| | | | 27 |
| | | | 60.8 |
| | | | 189.6 |
| | | | 47.4690404 |
| | | | 140.5 |
| | | | 118.4 |
| | | | 58.8 |
| | | | 294.1 |
| | | | 96.4 |
| | | | 132 |
| | | | 195 |
| | | | 141 |
| | | | 562.2 |
| | | | 295.4 |
| | | | 482 |
| | | | 162.5 |
| | | | 91.5 |
| | | | 61 |
| | | | 101 |
| | | | 125 |
| | | | 63.6 |
| | | | 440 |
| | | | 202.5 |
| | | | 16 |
| | | | 172.770181 |
| | | | 160 |
| | | | 41.2 |
| | | | 49.5 |
| | | | 117 |
| | | | 474.9 |
| | | | 42 |
| | | | 28.7 |
| | | | 95.1 |
| | | | 563.2 |
| | | | 184.9 |
| | | | 265.3 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|------------|
| | | | 166.5 |
| | | | 44.5 |
| | | | 222.1 |
| | | | 434 |
| | | | 2241.6 |
| | | | 32.9 |
| | | | 48.4 |
| | | | 133.6 |
| | | | 60 |
| | | | 98.6 |
| | | | 0.160008 |
| | | | 626.7 |
| | | | 47 |
| | | | 271 |
| | | | 56.8 |
| | | | 330.149843 |
| | | | 97 |
| | | | 200 |
| | | | 123.2 |
| | | | 72.1 |
| | | | 42.9 |
| | | | 12.5 |
| | | | 26 |
| | | | 115.4 |
| | | | 80.8 |
| | | | 22.2 |
| | | | 37.3 |
| | | | 20.0010002 |



Valley: Macintyre (NSW / QLD)

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north to include Moonie and east to include Texas. Southern boundary is Foxes Lane, which runs Garah back to the Newell Hwy and then along to Croppa Creek, Yallaroi and Coolatai.

Crop Locations:

| TUA number | Farm Unit Name | Field in which crops grown | Area (Ha) |
|------------|----------------|----------------------------|------------|
| | | | 16 |
| | | | 35.5 |
| | | | 230 |
| | | | 131 |
| | | | 81.45 |
| | | | 283.2 |
| | | | |
| | | | 99.4 |
| | | | 42 |
| | | | 79.8 |
| | | | 21.35 |
| | | | 87.95 |
| | | | 86.8 |
| | | | 133.35 |
| | | | 18.1 |
| | | | |
| | | | 386.839151 |
| | | | 37.85 |
| | | | 198.5 |
| | | | 75.15 |
| | | | |
| | | | 448.3 |
| | | | 194.3 |
| | | | 126.4 |
| | | | 164.8 |
| | | | 80.3 |
| | | | 57.0028505 |
| | | | 67.5 |
| | | | 257.8 |
| | | | 301.4 |
| | | | |
| | | | 142.65 |
| | | | 113.5 |
| | | | 4 |
| | | | 4.1 |
| | | | 18.0009001 |
| | | | |
| | | | 465 |
| | | | 502.8 |
| | | | 181.7 |
| | | | 152 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | |
| | | | 586.5 |
| | | | 21.1 |

Valley: Macquarie (NSW)

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire to Pilliga and then south back to Dubbo via Coonabarabran.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 86 |
| | | | 472.8 |
| | | | 165 |
| | | | 96.2 |
| | | | 16.5 |
| | | | 48.8 |
| | | | 149.8 |
| | | | 102.9 |
| | | | 239.3 |
| | | | 119.99 |
| | | | 188 |
| | | | 120.2 |
| | | | 591 |
| | | | 33.9 |
| | | | 118.6 |
| | | | 178.6 |
| | | | 157.4 |
| | | | 130.6 |
| | | | 199.5 |
| | | | 58 |
| | | | 84 |
| | | | 432.2 |
| | | | 543.8 |
| | | | 66 |
| | | | 112.5 |
| | | | 76.4 |
| | | | 286 |
| | | | 63 |
| | | | 679 |
| | | | 289 |
| | | | 115 |



| PUA number | Farm Unit Name | Fields in which crops grown | Area (Hect) |
|------------|----------------|--------------------------------|-------------|
| | | | 44 |
| | | | 342.9 |
| | | | 144.3 |
| | | | 114.7 |
| | | | 109 |
| | | | 79.7 |
| | | | 269.6 |
| | | | 64.7 |
| | | | 69.3 |
| | | | 361 |
| | | | 136.3 |
| | | | 97.5 |
| | | | 245.5 |
| | | | 236.2 |
| | | | 183.7 |
| | | | 201.8 |
| | | | 335.7 |
| | | | 195.8 |
| | | | 52.7 |
| | | | 209.6 |
| | | | 126.1 |
| | | | 123.9 |
| | | | 77.7 |
| | | | 172.3 |
| | | | 169.7 |
| | | | 76.7 |
| | | | 149 |
| | | | 147.3 |
| | | | 177 |
| | | | 199.2 |
| | | | 61 |
| | | | 182.6 |
| | | | 76 |
| | | | 245.9 |
| | | | 40.9 |
| | | | 230 |
| | | | 191 |
| | | | 59.2 |
| | | | 681 |
| | | | 66.7 |
| | | | 52.9 |
| | | | 215.7 |
| | | | 39.5 |
| | | | 39 |



| IRDA number | Field Name | Field Name (Crop) | Area (Ha) |
|-------------|------------|-------------------|-----------|
| | | | 198 |
| | | | 196.3 |
| | | | 18 |
| | | | 116.7 |

Valley: Mungindi (NSW / QLD)

Boundaries: West of Garah and Boom Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Crop Locations:

| IRDA number | Field Name | Field Name (Crop) | Area (Ha) |
|-------------|------------|-------------------|-----------|
| | | | 298 |
| | | | 111.5 |
| | | | 412.7 |
| | | | 12 |
| | | | 88 |
| | | | 25 |
| | | | 314 |
| | | | 36.6 |
| | | | 57 |
| | | | 22 |
| | | | 41.7 |

Valley: Murrumbidgee (NSW)

Boundaries: Northern boundary is the Great Western Hwy from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Crop Locations:

| IRDA number | Field Name | Field Name (Crop) | Area (Ha) |
|-------------|------------|-------------------|-----------|
| | | | 1225.0005 |
| | | | 784.1 |
| | | | 1411.7 |
| | | | 1473.5 |

Valley: St George (QLD)
Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.
Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 1078.4 |
| | | | 70.9 |
| | | | 173.2 |
| | | | 49.5 |
| | | | 282.2 |
| | | | 112.1 |
| | | | 72.1 |
| | | | |
| | | | 200 |
| | | | 92.1 |
| | | | |
| | | | 132.8 |
| | | | 77.1 |
| | | | 20 |
| | | | 24 |
| | | | 25 |
| | | | |
| | | | 132.3 |
| | | | |
| | | | 304.6 |
| | | | 40 |
| | | | 19.26 |
| | | | 127.3 |
| | | | |
| | | | 250 |

Valley: Upper Namoi (NSW)
Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.
Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 95.7 |
| | | | 48 |
| | | | 21.7 |
| | | | |
| | | | 292.8 |
| | | | 35.2 |
| | | | |
| | | | 173.7 |
| | | | |
| | | | 424 |



| Area number | Farm Unit Name | Fields in Watch groups grown | Area (Ha) |
|-------------|----------------|---------------------------------|------------|
| | | | 81.6 |
| | | | 130.8 |
| | | | 124.3362 |
| | | | 219.9 |
| | | | 17.4 |
| | | | 138.4 |
| | | | 52.3 |
| | | | 171.3 |
| | | | 124 |
| | | | 14.5 |
| | | | 268.2 |
| | | | 243.7 |
| | | | 71.6 |
| | | | 146.6 |
| | | | 68.7 |
| | | | 58.2 |
| | | | 184.1 |
| | | | 386.9 |
| | | | 64 |
| | | | 332.8 |
| | | | 59 |
| | | | 51.3 |
| | | | 152.1 |
| | | | 171.5 |
| | | | 18.8 |
| | | | 52 |
| | | | 55 |
| | | | 79.5 |
| | | | 65.4 |
| | | | 13.4673401 |
| | | | 279.5 |



Valley: Walgett (NSW)

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

Crop Locations:

| General Use Name | Fields (any Walgett Group grown) | Area (Ha) |
|------------------|----------------------------------|-----------|
| | | 28.6 |
| | | 63 |
| | | 114 |
| | | 76 |
| | | 169.8 |

3. Transport and use of GM whole cotton seed in the Restricted Zone

i) Background

On 12 August 2003, both the Roundup Ready cotton and INGARD licences (DIR 023 / 2002 and DIR 022 / 2002) were varied to incorporate a communication strategy. The objective of the communication strategy was to develop a method for the dispersal of information regarding both the use and transport of ginned GM whole cotton seed into and within the restricted zone; and to provide information to end users of cotton seed regarding the need to monitor and control volunteer cotton within the restricted zone.

Newly introduced conditions relating to the *transport of GM whole cotton seed into the restricted zone* require that Monsanto Australia Limited 1) provide written notification to cotton gins from which GM whole cotton seed will be transported into the Restricted Zone stating the requirements for transportation *into* the Restricted zone, and notification to cotton gins that they must notify transporters of GM whole cotton seed into the Restricted Zone of the transport requirements; and 2) provision to these gins sufficient copies of a sign to accompany each shipment of cotton seed into the Restricted Zone.

Conditions relating to the *use of GM whole cotton seed within the Restricted Zone* require Monsanto Australia Limited to take all reasonable steps to distribute a document to 1) recipients of GM whole cotton seed within the Restricted Zone, 2) cotton gins from which GM whole cotton seed is sourced for transport into and within the Restricted Zone, and 3) transporters of GM whole cotton seed into and within the Restricted Zone, conveying the importance of appropriate control of cotton volunteers.

ii) Preparation of Strategy

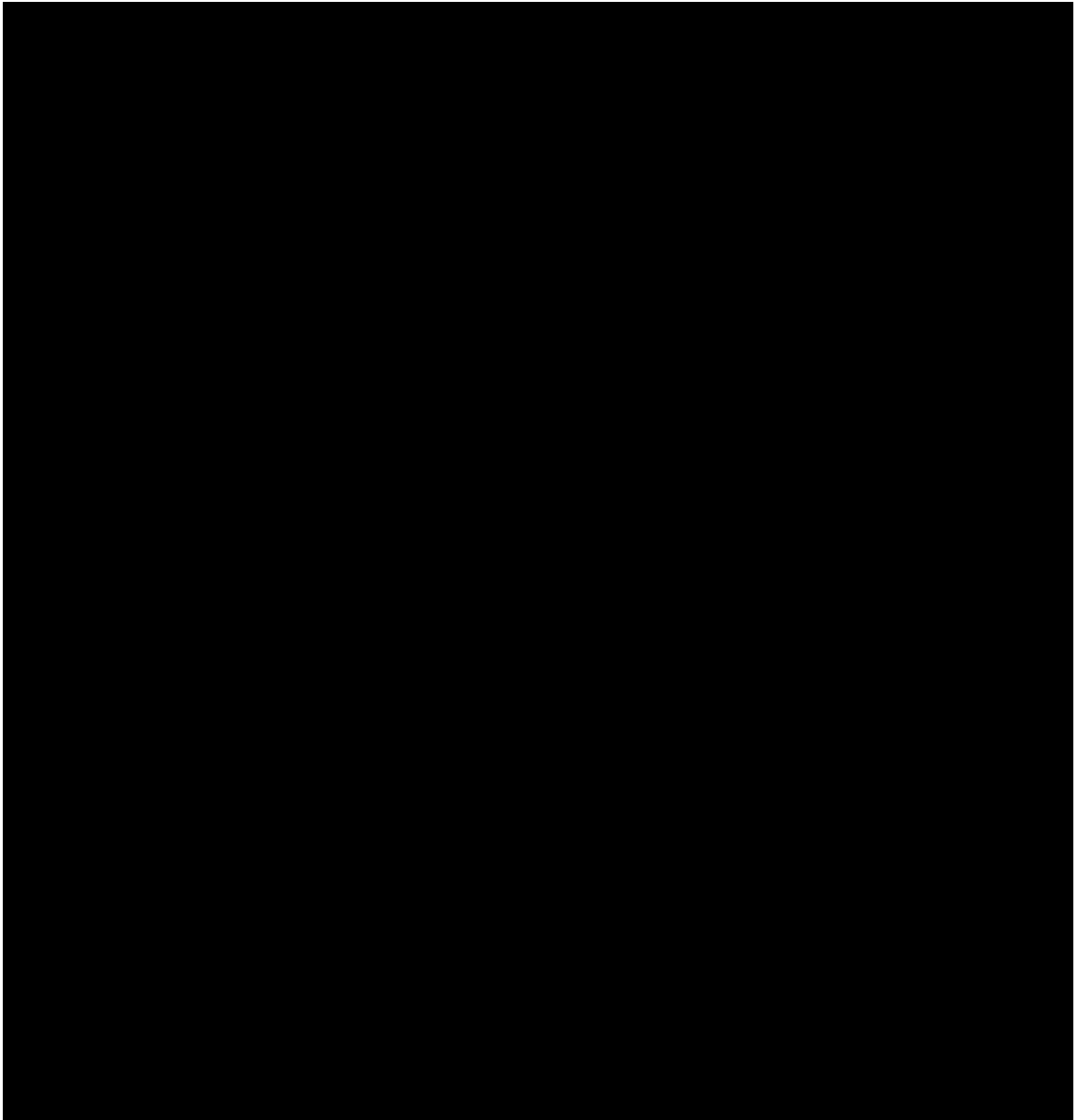
An information sheet, or 'tech topic' was prepared that carried the 'key messages' of the communication strategy, i.e. the importance of monitoring and controlling volunteer cotton within the Restricted Zone.

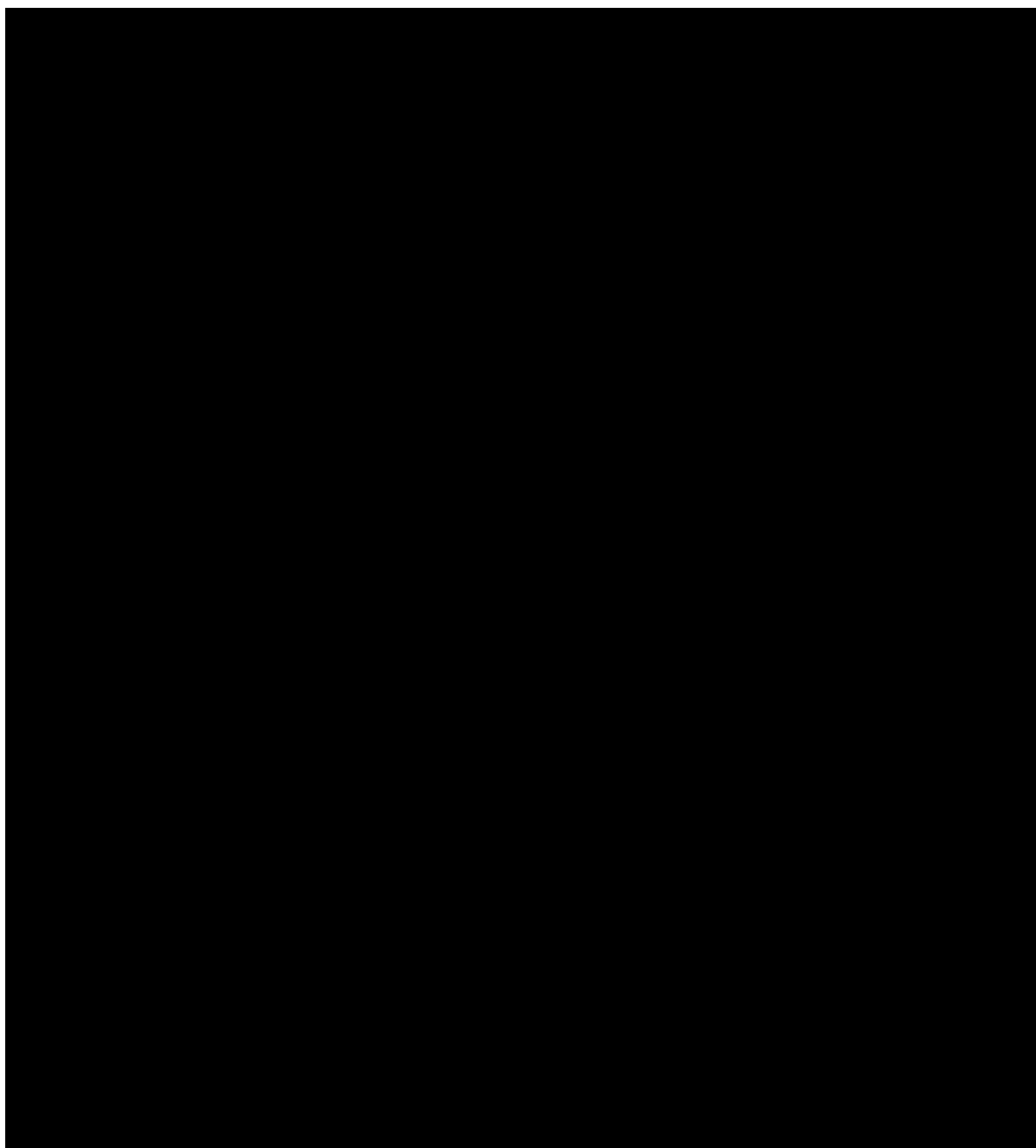
Notices for transporters of ginned GM whole cotton seed into the Restricted Zone were developed to inform transporters of their responsibilities, and signs to attach to loads of cotton seed were printed giving phone numbers to call in case of spillage or misdirection of cotton seed.



iii) Consultation / informing people of conditions and their responsibilities

The following is a summary of all meeting, letters, emails and phone calls to inform people of conditions and responsibilities associated with the use and transport of ginned GM whole cotton seed within the Restricted Zone.





**Cotton gins in Australia**

Action All cotton gins in cotton growing regions in Queensland and New South Wales were sent a letter informing them of the conditions relating to the use and transport of ginned GM whole cotton seed in the Restricted Zone. Cotton gins were requested to contact Monsanto if they were involved in the transport of cotton seed into the Restricted Zone.

Cotton gins that were sent letter

| Name | Location |
|---|----------|
|  | |



4. Research

i) Survey of feral cotton populations in Queensland (INGARD licence: DIR 022 / 2002)

*The licence holder must, in consultation with the OGTR, conduct a survey of feral cotton populations in Queensland and determine their distance from cotton production locations. The survey locations must be based on, but need not be limited to, existing herbarium records of *Gossypium hirsutum* and *Gossypium barbadense*. The results of the survey must be reported to the Regulator in the first annual report to the Regulator prepared in relation to this licence.*

In response to conditions of the DIR 022 / 2002 licence (INGARD) to provide further information of naturalised populations of *Gossypium hirsutum* and *Gossypium barbadense* in Queensland, please find the following information in **Table 1**:

- Botanical name of naturalised cotton population
- Region Name
- District Name
- Locality
- Latitude / Longitude

These populations of *Gossypium hirsutum* and *Gossypium barbadense* have been mapped according to GPS coordinates given in Queensland herbarium records (see **Figures 2 and 3**).

It is very difficult to determine the distances between the feral cotton populations documented in the Queensland herbarium records, and cotton production locations as GPS coordinates of areas of cotton productions locations have not been recorded. However, **Figure 4** indicates the shires that feral cotton populations occur in (orange) as compared to shires of cotton production (blue). As can be seen (**Figure 4**) documented feral cotton populations occur in only 3 shires where cotton production occurs, and one shire adjacent to a cotton production shire. It is undetermined however, exactly how much distance is between commercial fields of cotton and the feral cotton populations and it is possible that this might be hundreds of kilometres apart. Furthermore, documented populations of feral cotton in northern Queensland (i.e. north of 22° south) indicate that these shires are significantly isolated from shires where commercial cotton production occurs.

Table 1 Herbarium data for *Gossypium hirsutum* and *Gossypium barbadense* in Queensland

| Botanical Name | Region Name | District Name | Locality | Latitude | Longitude |
|-----------------------------|-------------|---------------------------|---|--------------|---------------|
| <i>Gossypium barbadense</i> | Queensland | Wide Bay (Cooloolo Shire) | Gympie | S26 10 27.00 | E152 40 15.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Cooktown | S15 29 53.00 | E145 13 33.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Cooktown Airport | S15 27 03.00 | E145 11 11.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Cooktown Botanic Gardens | S15 28 17.00 | E145 15 22.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Cooktown Airport | S15 27 02.00 | E145 11 13.00 |
| <i>Gossypium barbadense</i> | Queensland | North Kennedy | Rita Island, Mouth of Burdekin River | S19 35 | E147 35 |
| <i>Gossypium barbadense</i> | Queensland | Cook | South of Endeavour River, North Cooktown | S15 28 30.00 | E145 14 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Leichhardt | 43 km north of Dingo, towards Nebo | S23 17 51.00 | E149 11 19.00 |
| <i>Gossypium barbadense</i> | Queensland | Darling Downs | 15km east of Goondiwindi to Yelarbon | S28 29 49.00 | E150 24 40.00 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | Warrego Highway Southern Side Footpath, 2 km East of Piepers Road Marburg | S27 34 30.00 | E152 35 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Near Musgrave Station | S14 45 | E143 35 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Musgrave Snt River Crossing Cape York Peninsula | S14 45 | E143 35 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Kamerunga (North - North West of Cairns) | S16 55 | E145 55 |
| <i>Gossypium barbadense</i> | Queensland | Bourke | Ernest Henry Environmental Research Facility, Cloncurry Shire | S20 26 49.79 | E140 4 01.20 |
| <i>Gossypium barbadense</i> | Queensland | South Kennedy | Bucasia Beach, Mackay | S21 02 30.00 | E149 09 30.00 |
| <i>Gossypium barbadense</i> | Queensland | South Kennedy | Mackay | S21 13 30.00 | E149 10 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Mabuiag Island Torres Strait (Between airstrip and village) | S9 57 18.00 | E142 11 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Darnley Island Torres Strait | S9 35 58.00 | E143 45 48.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Musgrave Roadhouse | S14 46 57.00 | E143 30 06.00 |
| <i>Gossypium barbadense</i> | Queensland | Bourke | Doomadgee Township | S17 56 42.00 | E138 49 42.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Kubin Village, Moa Island, Torres Strait | S10 14 06.00 | E142 12 54.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Mabuiag Island, Torres Strait | S9 57 12.00 | E142 11 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Cook | Cooktown Airport | S15 26 53.34 | E145 11 10.62 |



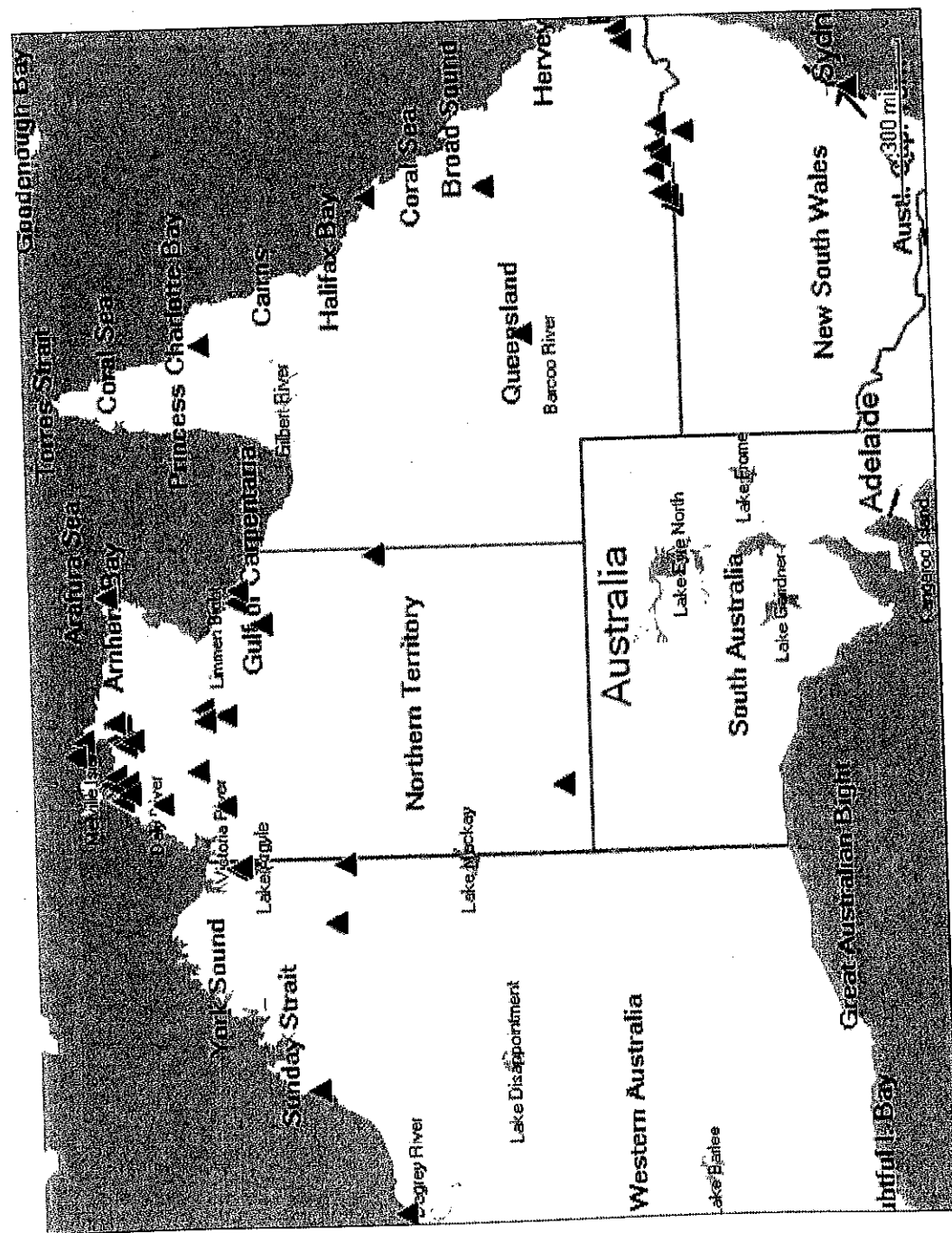
| Botanical Name | Region Name | District Name | Locality | Latitude | Longitude |
|------------------------------|-------------|---------------|--|--------------|---------------|
| <i>Gossypium barbadense</i> | Queensland | Port Curtis | 1 km East of Edungalba Turnoff, Capricorn Highway | S23 45 30.00 | E149 51 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Leichhardt | 4 km from Comet on Emerald Road | S23 36 23.00 | E148 30 24.00 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | Flinders Park, 25 km south of Ipswich near head of Sandy Creek | S27 48 30.00 | E152 48 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | Flinders Peak Crossing, 20 km south of Ipswich | S27 49 30.00 | E152 49 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Wide Bay | Gympie | S26 11 30.00 | E152 39 30.00 |
| <i>Gossypium barbadense</i> | Queensland | South Kennedy | Mackay | S21 05 | E149 15 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | Mt Flinders | S27 45 | E152 45 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | Flinders Park, South of Ipswich | S27 49 30.00 | E152 49 30.00 |
| <i>Gossypium barbadense</i> | Queensland | Moreton | 1 km north of Swanbank Powerhouse Raceview, Ipswich | S27 37 30.00 | E152 47 30.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Darling Downs | 20 kms west of Goondiwindi on St George Road | S28 30 08.00 | E150 13 25.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Maranoa | 4 kms north of Hebel on road to Dirranbandi | S28 57 45.00 | E147 49 36.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Maranoa | 34 kms north of Hebel on road to Dirranbandi | S28 48 28.00 | E148 06 13.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Maranoa | 1.4 kms along Cubby Road from Dirranbandi-Bollon Road, 8 km west of Dirranbandi | S28 35 41.00 | E148 09 23.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Maranoa | 23 kms north of Thallon along road (Canarvon Highway) to St George | S28 26 21.00 | E148 49 37.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Maranoa | Well River Crossing, Hungerford Bridge, 4.7 kms east from Talwood along Barwon Highway towards Goondiwindi | S28 28 34.00 | E149 30 31.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Moreton | Hagslea, 1 km west on Brisbane-Toowoomba Highway | S27 34 30.00 | E152 38 30.00 |
| <i>Gossypium hirsutum</i> L. | Queensland | Cook | Fairview Station | S15 05 | E144 05 |



Figure 2 Distribution of Feral *Gossypium barbadense* populations in Australia (populations denoted by red squares).



MONSANTO



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Figure 3 Distribution of Feral *Gossypium hirsutum* populations in Australia (denoted by blue triangles)

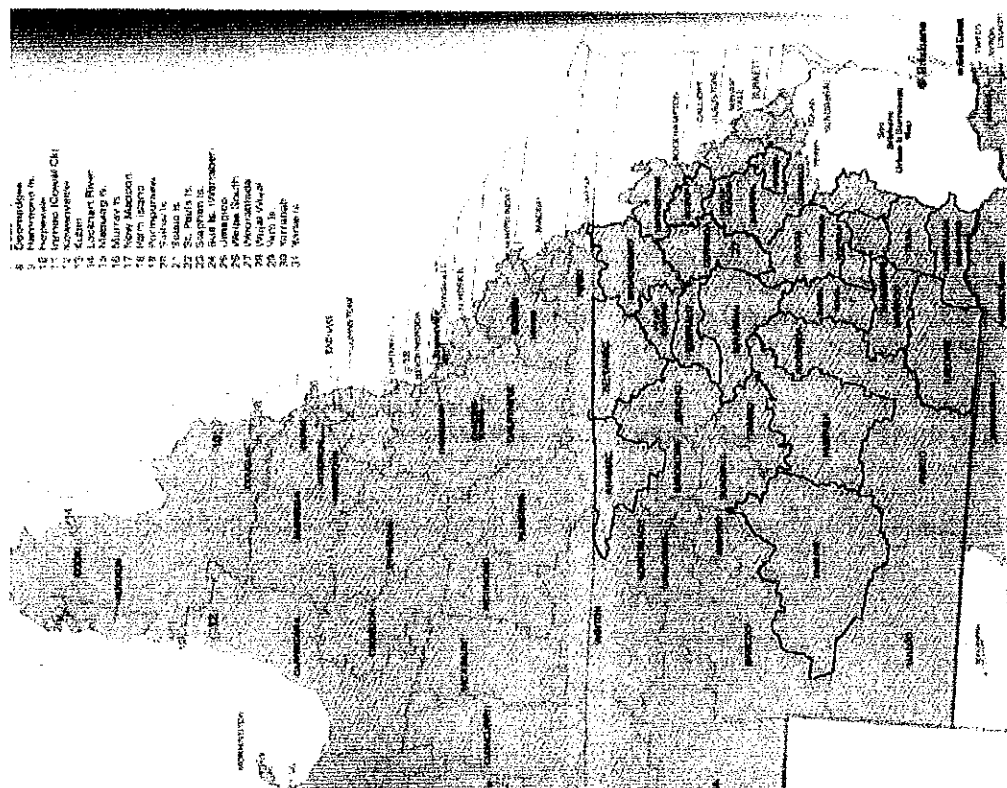


Figure 4 Shires where feral cotton populations have been recorded (orange) compared to shires where commercial cotton grown (blue)



ii) Findings of Annual Survey within the Restricted Zone of incidence of volunteer cotton

In order to satisfy licence conditions involving an annual survey of the use and transport of ginned cotton seed as a feed supplement north of 22° south, a survey has been developed that:

- 1) Assesses the incidence of volunteer cotton in areas where stock were fed cotton seed;
- 2) Assesses the incidence of volunteer cotton in areas where stock graze after being fed cotton seed; and
- 3) Assesses the extent to which the document "Stockfeed and Volunteer Cotton in Northern Australia" was effective in its key messages and its distribution.

Please see Stockfeed and Volunteer Cotton in Northern Australia Questionnaire in **Attachment 1**.

Communication with government personnel in the Northern Territory and northern Western Australia has indicated that from the 2002-03 cotton season, there were no known users of cotton seed as a feed supplement and therefore the survey was only conducted in the areas of the Atherton Tablelands, and Eungella in Queensland.

The strategy involved a number of approaches to survey as many people as possible in regions where livestock may have been fed cottonseed.

People involved in the dairy or beef industry as extension officers, field service officers and business managers were asked to forward the survey on to people who were known to feed cottonseed to their livestock. Only about 5 surveys were distributed as 'key personnel' could only identify as many who fed cottonseed to their livestock.

From this mail out, only two surveys were returned. Both surveys indicated that they used cottonseed to feed livestock, and that they had noticed volunteer cotton plants in areas where they fed livestock however in both cases they indicated that volunteer cotton plants were never observed to reach maturity, flower or set seed. One of these people returning the survey had received "Stockfeed and volunteer control in northern Australia" while the other had not.

In order to reach a wider audience, a phone survey was conducted in the Atherton Tablelands and Eungella regions in Queensland of all those in the Yellow Pages who were listed as farmers. This included a search on all of the following post codes: 4883, 4872, 4885, and 4886. Of 89 phone numbers dialled, there were 40 'no answers'. Of the 49 people who were contacted, 4 people were unwilling to participate in a phone survey, 5 had retired from farming, and 13 did not have livestock. Of the 27 remaining participants, 20 had livestock but did not use cottonseed and 6 had used cottonseed previously but not in the past 12 months. Only one person was recorded as having used cottonseed for livestock feed.

The one person who did feed cottonseed to their livestock had been using cottonseed for approximately 10-15 years. They typically source approximately 20 tonnes from [REDACTED] Despite using cottonseed for such a long period of time, they indicated that the small number of volunteer cotton plants that they observed germinating didn't continue to grow to maturity and they had never seen flowering cotton in areas where livestock had been fed cottonseed.



| | |
|--|----|
| Numbers dialled | 89 |
| No answers | 40 |
| Using cottonseed | 1 |
| Used cottonseed previously (not in last 12 months) | 6 |
| Don't use cottonseed | 20 |
| No livestock | 13 |
| Retired from farming | 5 |
| Not willing to participate | 4 |
| Total surveyed | 49 |

Therefore, results from the annual survey of the incidence of volunteer cotton in areas where stock are fed whole cottonseed and areas where stock graze after being fed whole cottonseed indicate that very little cottonseed is used as stock feed for livestock. Where cottonseed was fed to livestock, it was never observed to be problematic, or even reach maturity.

5. Compliance Management Plan

A Compliance Management Plan for both INGARD® and Roundup Ready® Cotton were provided to the OGTR following issue of the licences and before planting of the GMOs.

6. Testing Methodology

Testing Methodologies for both INGARD® and Roundup Ready® Cotton has been provided.



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2/1/2014

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(MDP54)
GPO Box 9848
Canberra ACT 2601

DIR091 ANNUAL REPORT 2013

Since the issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

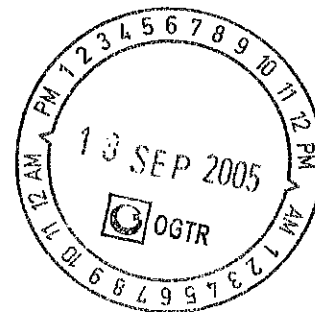
As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

Regards,

[Redacted signature block]

MONSANTO



LICENCE Number: DIR 022/2002 and DIR 023/2003
LICENSE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
Accreditation No: ACCR 034/2002

SUBMISSION: Annual Report for Roundup Ready® Cotton and
INGARD® 2005
REPORTING PERIOD: 21 June 2004 - 20 June 2005
("2004/05 Cotton Growing Season")
DATE: 8 September 2005

PREPARED BY: [REDACTED]
Regulatory Product Manager

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

® Registered trademark of Monsanto Technology LLC

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**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 022 / 2002 ("The commercial release of insecticidal (INGARD® event 531) cotton") and DIR 023 / 2002 ("Commercial release of herbicide tolerant (Roundup Ready® event 1445) and herbicide tolerant / insecticidal (Roundup Ready® / INGARD® event 531) cotton) licences issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 of both DIR 022 / 2002 and DIR 023 / 2003.

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Attachment 1

Monsanto Australia Limited. 2004. Roundup Ready cotton: Environmental Monitoring Program. Roadside Monitoring Report.



1. General Conditions

a. Informing people of their obligations

The introduction of Bollgard II into the market in 2002, saw the 'phase-out' of INGARD over a period of two years. The period between 21 June 2004 and 20 June 2005 was the first season in which no Technology User Agreements for INGARD were given, nor was any INGARD seed distributed. Growers were informed that INGARD would not be permitted through the Bollgard II / Roundup Ready cotton Technology User Agreement which stated in Clause 3.3 "The Grower must not exploit INGARD technology and/or plant INGARD cotton seed, in compliance with Clause 1(f) of the Licence".

As there was no INGARD planted under the licence DIR 023 / 2002, there were no 'persons covered by this licence' and therefore no persons were informed of conditions of the licence.

Monsanto Australia Limited informed all cotton growers and cotton gins covered by DIR 023 (Roundup Ready cotton) licence of the obligations imposed on them as a result of the conditions this licence. This was achieved primarily through the Monsanto Accreditation program and information course which includes information on regulatory obligations, as well as management of the crop.

Roundup Ready® cotton Accreditation programs require all persons having management responsibility for Roundup Ready® Cotton crops, to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once, and therefore may have attended these courses prior to the 2004/05 cotton season. 1,293 growers were accredited in regulatory obligations and conditions, and management of Roundup Ready cotton technology in the 2002/2003 season. A further 208 cotton growers attended Roundup Ready accreditation programs in the 2003/04 season and 298 growers and consultants attended Roundup Ready accreditation programs in the 2004/05 season.

Gins known to transport cotton seed into the restricted zone were notified by letter that they were permitted to transport seed north of 22° south provided they adhered to all conditions and obligations associated with the use of cotton seed within the restricted zone.

b. Reporting

During the reporting period, the licence holder did not become aware of any additional information related to any risks to the health and safety of people, or to the environment associated with the dealings authorised by either the INGARD® or the Roundup Ready® cotton licence, or of any unintended effects of the dealings authorised by the licence.

During the reporting period, the licence holder did not become aware of any contraventions of either DIR 022 / 2002 or DIR 023 / 2003 by a person covered by the licence.

c. Material changes in circumstances

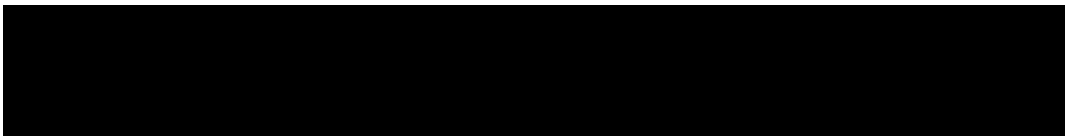
During the 2004/05 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence or permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of either Dir 022 / 2002 or DIR 023 / 2002 licences.



d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details



2. Restrictions on growing of the GMO

The licence holder must not enter into a Technology User's Agreement or any other agreement which would permit the GMO to be grown outside of the traditional cotton-growing areas of New South Wales and Queensland south of latitude 22° south or north of 22° south.

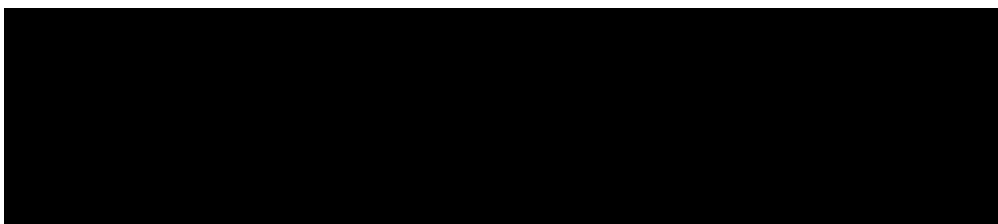
INGARD cotton was not grown in the 2005/05 season.

Roundup Ready® cotton was only grown in the traditional cotton-growing regions of NSW and Queensland. More information on the locations where all Roundup Ready® cotton was grown during the 2004/05 cotton growing season are given in **Part 2a**.

a. Crop plantings of Roundup Ready® cotton

i) Conditions for Growing Crop

Sales and planting of Roundup Ready® Cotton were undertaken under a Technology User Agreement (TUA), which sets out the conditions for planting and growing the crop. In order to be eligible to sign such an agreement, a grower was required to attend a Roundup Ready® Cotton accreditation program, and pass a test based on the material covered in the accreditation program.





II) Crop Locations

In the tables below, all fields in which Roundup Ready[®] cotton was grown are listed by TUA and Farm Unit. Note that locations are sorted by valley, with the approximate boundary of each valley, described at the start of each listing.

Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 36.8 |
| | | | 210.6 |
| | | | 370.3 |
| | | | 294.4 |
| | | | 227 |
| | | | 653.5 |
| | | | 159.3 |
| | | | 867.9 |
| | | | 86.5 |
| | | | 484 |
| | | | 484.9 |
| | | | 28.6 |
| | | | 202.5 |
| | | | 163.1 |
| | | | 86.7 |

Valley: Darling Downs (QLD)

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine and Roma. South-west boundary is Surat.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 39.6 |
| | | | 35.5 |
| | | | 67.7 |
| | | | 277 |
| | | | 191 |
| | | | 199 |
| | | | 85.3 |
| | | | 42.5 |
| | | | 183 |
| | | | 67.5 |
| | | | 78.2 |
| | | | 16.3 |
| | | | 99.9 |
| | | | 16.1 |
| | | | 25.9 |
| | | | 140 |
| | | | 168.8 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|--------------------------------|-----------|
| | | | 20.2 |
| | | | 70 |
| | | | 107.2 |
| | | | 314 |
| | | | 218.4 |
| | | | 13 |
| | | | 70.6 |
| | | | 241 |
| | | | 56.5 |
| | | | 55.8 |
| | | | 121.2 |
| | | | 38 |
| | | | 56.7 |
| | | | 61.1 |
| | | | 133.1 |
| | | | 84 |
| | | | 25.5 |
| | | | 167 |
| | | | 160.8 |
| | | | 40.4 |
| | | | 46.4 |
| | | | 90.9 |
| | | | 122.1 |
| | | | 76 |
| | | | 146.4 |
| | | | 234.8 |
| | | | 90.1 |
| | | | 341.9 |
| | | | 77 |
| | | | 36 |
| | | | 82.7 |
| | | | 42 |
| | | | 27 |
| | | | 44 |
| | | | 40 |
| | | | 101.7 |
| | | | 439 |
| | | | 96.2 |
| | | | 132.1 |
| | | | 64 |
| | | | 42 |
| | | | 20 |
| | | | 142.5 |
| | | | 110.5 |
| | | | 43.1 |
| | | | 3.6 |
| | | | 95 |
| | | | 40 |

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| FOA number | Parent Unit Name | Field Name/Field drops known | Area (H) |
|------------|------------------|------------------------------|----------|
| | | | 42 |
| | | | 336.5 |
| | | | 75 |
| | | | |
| | | | 39.2 |
| | | | 79.7 |
| | | | 156 |
| | | | 110 |
| | | | 117 |
| | | | 41 |
| | | | 125.7 |
| | | | 48 |
| | | | 52 |
| | | | 63 |
| | | | |
| | | | 435.3 |
| | | | 95.5 |
| | | | 29 |
| | | | |
| | | | 118.4 |
| | | | 50.5 |
| | | | 120.8 |
| | | | 187.6 |
| | | | |
| | | | 147.5 |
| | | | 28 |
| | | | 12 |
| | | | 52 |
| | | | 56 |
| | | | 48.8 |
| | | | 21.5 |
| | | | 54 |
| | | | |
| | | | 135 |
| | | | 42.1 |
| | | | |
| | | | 817.6 |
| | | | 119.5 |
| | | | 98.5 |
| | | | |
| | | | 44.2 |
| | | | |
| | | | 180.8 |
| | | | 4.8 |
| | | | |
| | | | 136 |
| | | | 30.4 |
| | | | 54.4 |
| | | | 449 |
| | | | 134.4 |
| | | | |
| | | | 136 |
| | | | 117 |
| | | | 66 |
| | | | 58 |
| | | | 78 |
| | | | 48.7 |



| UVA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 208 |
| | | | 38.5 |
| | | | 91.9 |
| | | | 243.9 |
| | | | 271.8 |
| | | | 45.5 |
| | | | 144.1 |
| | | | 39 |
| | | | |
| | | | 101.9 |
| | | | 111.2 |
| | | | 125 |
| | | | 23 |
| | | | 71.2 |
| | | | 187.2 |
| | | | 125 |
| | | | 26 |
| | | | 123.3 |
| | | | 38 |
| | | | 18 |
| | | | 68.3 |
| | | | 127.7 |
| | | | 26.5 |
| | | | 155 |
| | | | |
| | | | 368 |
| | | | 81.6 |
| | | | 134.7 |
| | | | 25.9 |
| | | | 62.6 |
| | | | |
| | | | 52 |



Valley: Dawson/Callide (QLD)

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 85.8 |
| | | | 46.8 |
| | | | 201.2 |
| | | | 158.2 |
| | | | 145.6 |
| | | | 155.7 |
| | | | 188 |
| | | | 224 |
| | | | 209.9 |
| | | | 295.7 |
| | | | 128.1 |
| | | | 247 |
| | | | 216 |
| | | | 382.4 |
| | | | 35 |
| | | | 84.4 |
| | | | 8.5 |
| | | | 251 |
| | | | 106.9 |
| | | | 79.3 |
| | | | 30.2 |
| | | | 105 |
| | | | 20 |
| | | | 36 |
| | | | 242.7 |
| | | | 240.2 |
| | | | 24.5 |



Valley: Dirranbandi (QLD)

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to NSW border.

Crop Locations:

| TVA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 9615 |
| | | | 946.7 |
| | | | 430 |
| | | | 231.1 |
| | | | 603.6 |
| | | | 94 |
| | | | 235.8 |
| | | | 228 |
| | | | 290 |
| | | | 78.7 |
| | | | 307.4 |

Valley: Emerald (QLD)

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Crop Locations:

| TVA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | T3, T4, P, T2, M, J2 | 358.5 |
| | | | 112 |
| | | | 70.2 |
| | | | 70.4 |
| | | | 87.1 |
| | | | 337 |
| | | | 150 |
| | | | 51 |
| | | | 498 |
| | | | 70.6 |
| | | | 191 |
| | | | 13.5 |
| | | | 57.5 |
| | | | 222.2 |
| | | | 367.1 |
| | | | 171.8 |

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| TUA number | Farm Unit Name | Field (ha) with crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 229.8 |
| | | | 350 |
| | | | 294.6 |
| | | | 207 |
| | | | 229.5 |
| | | | 136.3 |
| | | | 61.6 |
| | | | 39.4 |
| | | | 48.6 |
| | | | 617.8 |
| | | | 145.3 |
| | | | 253.9 |
| | | | 200.9 |
| | | | 181.9 |
| | | | 41.1 |
| | | | 235.4 |
| | | | 63 |
| | | | 76 |
| | | | 92 |
| | | | 27 |
| | | | 263.6 |
| | | | 167.3 |
| | | | 351.3 |
| | | | 92.5 |
| | | | 477 |

Valley: Gwydir (NSW)

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is the southern boundary.

Crop Locations:

| TUA number | Farm Unit Name | Field (ha) with crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 102.2 |
| | | | 37 |
| | | | 194.9 |
| | | | 207.9 |
| | | | 63.7 |
| | | | 137.7 |
| | | | 151.1 |
| | | | 20 |
| | | | 297 |
| | | | 718.8 |
| | | | 710 |
| | | | 235.1 |
| | | | 84.5 |



| Field Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|--------------|----------------|-----------------------------|-----------|
| | | | 635 |
| | | | 64 |
| | | | 128.7 |
| | | | 142.9 |
| | | | 78.4 |
| | | | 329 |
| | | | 510.2 |
| | | | 78.4 |
| | | | 158.7 |
| | | | 273 |
| | | | 222.2 |
| | | | 842.9 |
| | | | 134.3 |
| | | | 183.1 |
| | | | 35.7 |
| | | | 198 |
| | | | |
| | | | 1317 |
| | | | 78.7 |
| | | | 668.2 |
| | | | 67.4 |
| | | | 126 |
| | | | 601 |
| | | | 518 |
| | | | 177.4 |
| | | | |
| | | | 1010 |
| | | | 12.8 |
| | | | 233.2 |
| | | | |
| | | | 783.5 |
| | | | 230 |
| | | | |
| | | | 1337.9 |
| | | | 1109 |
| | | | 27 |
| | | | |
| | | | 238.4 |
| | | | 108 |
| | | | 200.8 |
| | | | 439.6 |
| | | | |
| | | | 373.7 |
| | | | 65 |
| | | | 352.1 |
| | | | 328 |
| | | | |
| | | | 678.3 |
| | | | 186.2 |
| | | | 142.9 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 245.6 |
| | | | 441 |
| | | | 297 |
| | | | 166.4 |
| | | | 261.4 |
| | | | 404 |
| | | | 644 |
| | | | 210.7 |
| | | | 99 |
| | | | 173.3 |
| | | | 370.5 |
| | | | 218.9 |
| | | | 181 |
| | | | 111.5 |
| | | | 82 |
| | | | 141.5 |
| | | | 389.4 |
| | | | 84 |
| | | | 1404.2 |
| | | | 254.1 |
| | | | 172.9 |
| | | | 84.3 |
| | | | 308.2 |
| | | | 262.2 |
| | | | 252.4 |
| | | | 227 |
| | | | 189 |
| | | | 75 |
| | | | 129 |
| | | | 150.5 |
| | | | 178 |
| | | | 715.4 |
| | | | 263.7 |
| | | | 359 |
| | | | 49.2 |

Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road from Booligal through to Gunbar and then follows the Great Western Hwy through to West Wyalong.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 188 |
| | | | 299 |
| | | | 147.8 |
| | | | 121.6 |
| | | | 31.2 |
| | | | 2603 |



| DIR 022 DIR 023 | |
|-----------------|-------|
| | 100 |
| | 162.9 |
| | 187 |
| | 117.5 |
| | 61 |
| | 354 |

Valley: Lower Namoi (NSW)

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road.
Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Crop Locations:

| UAV number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 169.2 |
| | | | 115.3 |
| | | | 87.8 |
| | | | 92.6 |
| | | | 121.5 |
| | | | 152.2 |
| | | | 101.7 |
| | | | 86.8 |
| | | | 44.2 |
| | | | 227.8 |
| | | | 107.6 |
| | | | 120.6 |
| | | | 178.3 |
| | | | 60.8 |
| | | | 48.4 |
| | | | 115.1 |
| | | | 358.6 |
| | | | 144.3 |
| | | | 247.7 |
| | | | 177.6 |
| | | | 81 |
| | | | 221 |
| | | | 293.5 |
| | | | 232 |
| | | | 132 |
| | | | 93.6 |
| | | | 188.6 |
| | | | 200 |
| | | | 186 |
| | | | 389.9 |
| | | | 79.9 |
| | | | 396.5 |
| | | | 198 |
| | | | 203.3 |



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| TUA number | Farm/Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 409.1 |
| | | | 92.7 |
| | | | 230.2 |
| | | | 175 |
| | | | 308 |
| | | | 850.9 |
| | | | 104.9 |
| | | | 92.3 |
| | | | 118.7 |
| | | | 56 |
| | | | 244.7 |
| | | | 45 |
| | | | 305.7 |
| | | | 331.1 |
| | | | 129.2 |
| | | | 161.1 |
| | | | 39.9 |
| | | | 212.6 |
| | | | 255.9 |
| | | | 209.4 |
| | | | 55.1 |
| | | | 48.3 |
| | | | 103.7 |
| | | | 3407.9 |
| | | | 250 |
| | | | 136.6 |
| | | | 81.5 |
| | | | 66 |
| | | | 54.4 |
| | | | 186.8 |
| | | | 57.9 |
| | | | 153.9 |
| | | | 183.3 |
| | | | 215 |
| | | | 33 |
| | | | 85.8 |
| | | | 82.3 |
| | | | 129.8 |
| | | | 365.1 |
| | | | 227.6 |
| | | | 185.1 |
| | | | 28.2 |
| | | | 100 |
| | | | 100 |
| | | | 642 |
| | | | 184.5 |
| | | | 258.9 |



| RU Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-----------|----------------|--------------------------------|-----------|
| | | | 101.4 |
| | | | 69.7 |
| | | | 212.3 |
| | | | 203.2 |
| | | | 204 |
| | | | 319 |
| | | | 507.2 |
| | | | 236.5 |
| | | | 251.5 |
| | | | 96.9 |
| | | | 602.7 |
| | | | 43.9 |
| | | | 67.4 |
| | | | 101.5 |
| | | | 75 |
| | | | 719 |
| | | | 169.5 |
| | | | 42.3 |
| | | | 67 |
| | | | 6.2 |
| | | | 30.1 |
| | | | 22 |
| | | | 85.3 |
| | | | 102.1 |
| | | | 37.3 |
| | | | 101.4 |
| | | | 111.7 |
| | | | 137 |
| | | | 144.4 |
| | | | 127.2 |
| | | | 42.6 |
| | | | 27.5 |
| | | | 45.1 |
| | | | 90.7 |
| | | | 70.2 |
| | | | 28 |
| | | | 230 |
| | | | 157.3 |
| | | | 40 |
| | | | 248.4 |
| | | | 159.2 |
| | | | 294.2 |
| | | | 61.4 |
| | | | 62.4 |
| | | | 54.1 |
| | | | 381 |
| | | | 440 |

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| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 280.5 |
| | | | 76.4 |
| | | | 106.4 |
| | | | 759.2 |
| | | | 290.5 |
| | | | 307 |
| | | | 30 |

Valley: Macintyre (NSW / QLD)

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north to include Moonie and east to include Texas. Southern boundary is Foxes Lane, which runs Garah back to the Newell Hwy and then along to Croppa Creek, Yallaroi and Coolatal.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 104.2 |
| | | | 95 |
| | | | 97 |
| | | | 65.3 |
| | | | 123.6 |
| | | | 158.2 |
| | | | 390.9 |
| | | | 920.3 |
| | | | 267.2 |
| | | | 268.8 |
| | | | 584 |
| | | | 174 |
| | | | 451.3 |
| | | | 567 |
| | | | 55 |
| | | | 115.2 |
| | | | 64.2 |
| | | | 601.8 |
| | | | 748 |
| | | | 937.7 |
| | | | 42 |
| | | | 326.6 |
| | | | 574.8 |



| TU Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-----------|----------------|-----------------------------|-----------|
| | | | 576.2 |
| | | | 140.6 |
| | | | 1233.9 |
| | | | 303.6 |
| | | | 374 |
| | | | 79.5 |
| | | | 16.1 |
| | | | 499.8 |
| | | | 493.4 |
| | | | 293.9 |
| | | | 765 |
| | | | 94 |
| | | | 78 |
| | | | 398.2 |
| | | | 95.1 |
| | | | 225.9 |
| | | | 503.2 |
| | | | 823 |
| | | | 90 |
| | | | 396.4 |

Valley: Macquarie (NSW)

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire to Pilliga and then south back to Dubbo via Coonabarabran.

Crop Locations:

| TU Number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|-----------|----------------|-----------------------------|-----------|
| | | 2 3 4 5 6 7 8 12 | 908.9 |
| | | | 87.7 |
| | | | 132.9 |
| | | | 174 |
| | | | 353.2 |
| | | | 291.8 |
| | | | 327.5 |
| | | | 50.4 |
| | | | 101.7 |
| | | | 174.3 |
| | | | 78 |
| | | | 456.5 |
| | | | 69.3 |
| | | | 126 |

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| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 76.5 |
| | | | 37.7 |
| | | | 110 |
| | | | 154.3 |
| | | | 179.2 |
| | | | 70.4 |
| | | | 198.6 |
| | | | 329.9 |
| | | | 93.8 |
| | | | 147 |
| | | | 45 |
| | | | 161.8 |
| | | | 246.2 |
| | | | 81.2 |
| | | | 46.6 |
| | | | 71.1 |
| | | | 184.8 |
| | | | 82 |
| | | | 42 |
| | | | 490 |
| | | | 342.2 |
| | | | 90.1 |
| | | | 158.7 |
| | | | 238.2 |
| | | | 98 |
| | | | 34 |
| | | | 29.9 |
| | | | 50 |
| | | | 118 |
| | | | 57.5 |

Valley: Mungindi (NSW / QLD)

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 243.2 |
| | | | 100.5 |
| | | | 440.7 |
| | | | 1825 |
| | | | 1108.7 |
| | | | 630.6 |
| | | | 293.7 |
| | | | 419.3 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 99.4 |
| | | | 267 |
| | | | 105.9 |
| | | | 268.3 |
| | | | 94 |
| | | | 185 |
| | | | 748.5 |
| | | | 683.1 |
| | | | 217.9 |
| | | | 86 |
| | | | 37 |
| | | | 204.4 |
| | | | 232 |
| | | | 577.4 |
| | | | 152 |
| | | | 84 |

Valley: Murrumbidgee (NSW)

Boundaries: Northern boundary is the Great Western Hwy from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Crop Locations:

| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 795 |
| | | | 628 |
| | | | 529.2 |
| | | | 124.7 |
| | | | 115 |
| | | | 125.7 |



Valley: St George (QLD)

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Crop Locations:

| TUA number | Farm Unit Name | Plants In which crop grown | Area (Ha) |
|------------|----------------|----------------------------|-----------|
| | | | 162.2 |
| | | | 393.6 |
| | | | 224.1 |
| | | | 360.3 |
| | | | 256.5 |
| | | | 131.3 |
| | | | 33 |
| | | | 324.7 |
| | | | 70.9 |
| | | | 182.5 |
| | | | 32 |
| | | | 26.9 |
| | | | 37.2 |
| | | | 209.3 |
| | | | 71.2 |
| | | | 74 |
| | | | 245.9 |
| | | | 121.6 |
| | | | 282.1 |
| | | | 79 |
| | | | 95.6 |
| | | | 312.6 |
| | | | 247.3 |
| | | | 278.2 |
| | | | 200 |
| | | | 20 |
| | | | 241.4 |
| | | | 204.5 |
| | | | 156 |
| | | | 105 |
| | | | 134.3 |
| | | | 253.5 |
| | | | 33 |
| | | | 29.7 |
| | | | 83 |
| | | | 145.7 |
| | | | 104.5 |



Valley: Tandou (NSW)
Boundaries: Farms based on Lake Tandou.
Crop Locations:

| UDA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 480 |

Valley: Upper Namoi (NSW)
Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.
Crop Locations:

| UDA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 510.6 |
| | | | 173.3 |
| | | | |
| | | | 502.5 |
| | | | 295.6 |
| | | | |
| | | | 333.4 |
| | | | 173 |
| | | | 572.7 |
| | | | 222.2 |
| | | | 144.6 |
| | | | |
| | | | 718.9 |
| | | | 43.8 |
| | | | 152 |
| | | | 215.2 |
| | | | |
| | | | 309.7 |
| | | | 159.8 |
| | | | 175 |
| | | | 71.8 |
| | | | |
| | | | 405.9 |
| | | | 83.5 |
| | | | 22.1 |
| | | | 232.6 |
| | | | |
| | | | 178 |
| | | | 26.4 |
| | | | 125.5 |
| | | | 114.5 |
| | | | 460.2 |
| | | | 220 |
| | | | 145.6 |
| | | | 391.6 |
| | | | 31.8 |
| | | | 88.1 |



| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 258.1 |
| | | | 102 |
| | | | 135.2 |
| | | | 39.4 |
| | | | 245.3 |
| | | | 375.3 |
| | | | 219.6 |
| | | | 68.3 |
| | | | |
| | | | 1334.5 |
| | | | 150.8 |
| | | | 40.5 |
| | | | 109.3 |
| | | | 205.5 |
| | | | 108.6 |
| | | | 58.6 |
| | | | 273.7 |
| | | | 39 |
| | | | 32.4 |
| | | | 81.5 |
| | | | 114.7 |
| | | | |
| | | | 134.5 |
| | | | 29.5 |
| | | | 63.7 |
| | | | 34 |

Valley: Walgett (NSW)

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

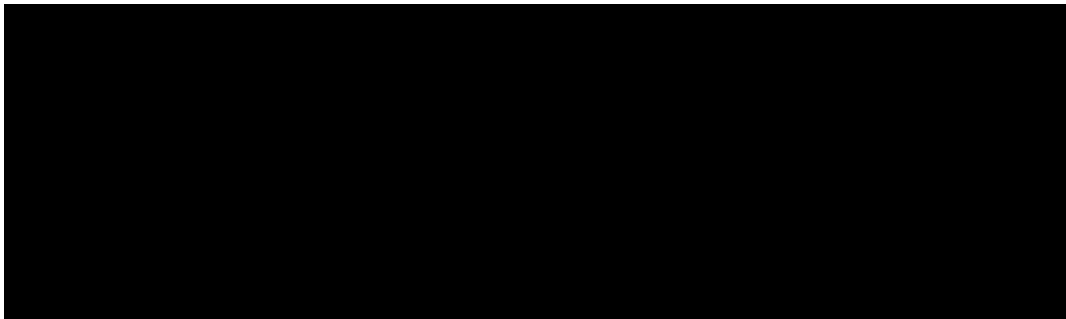
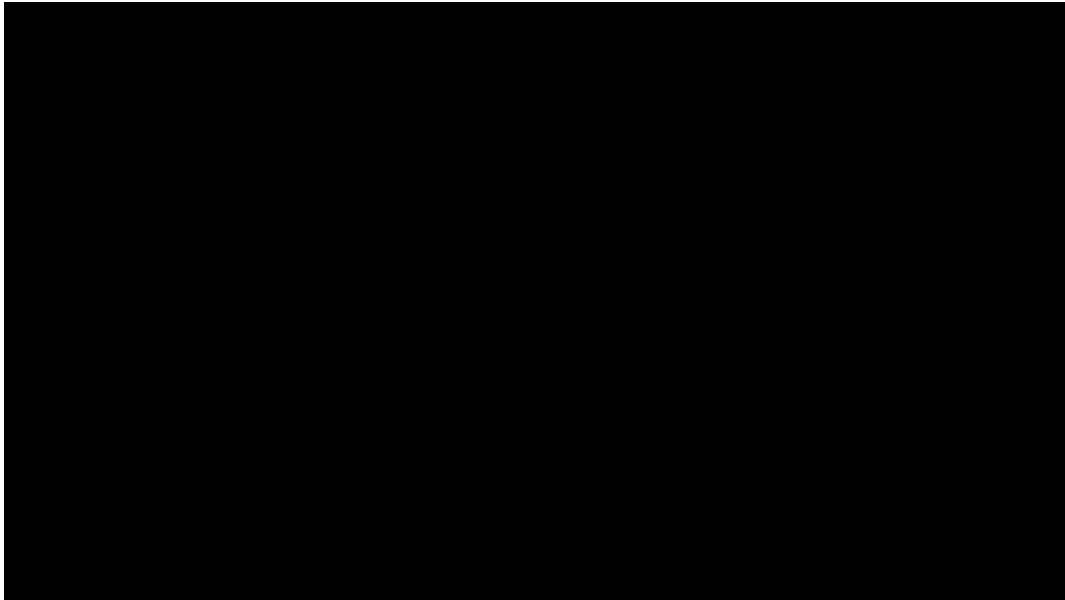
Crop Locations:

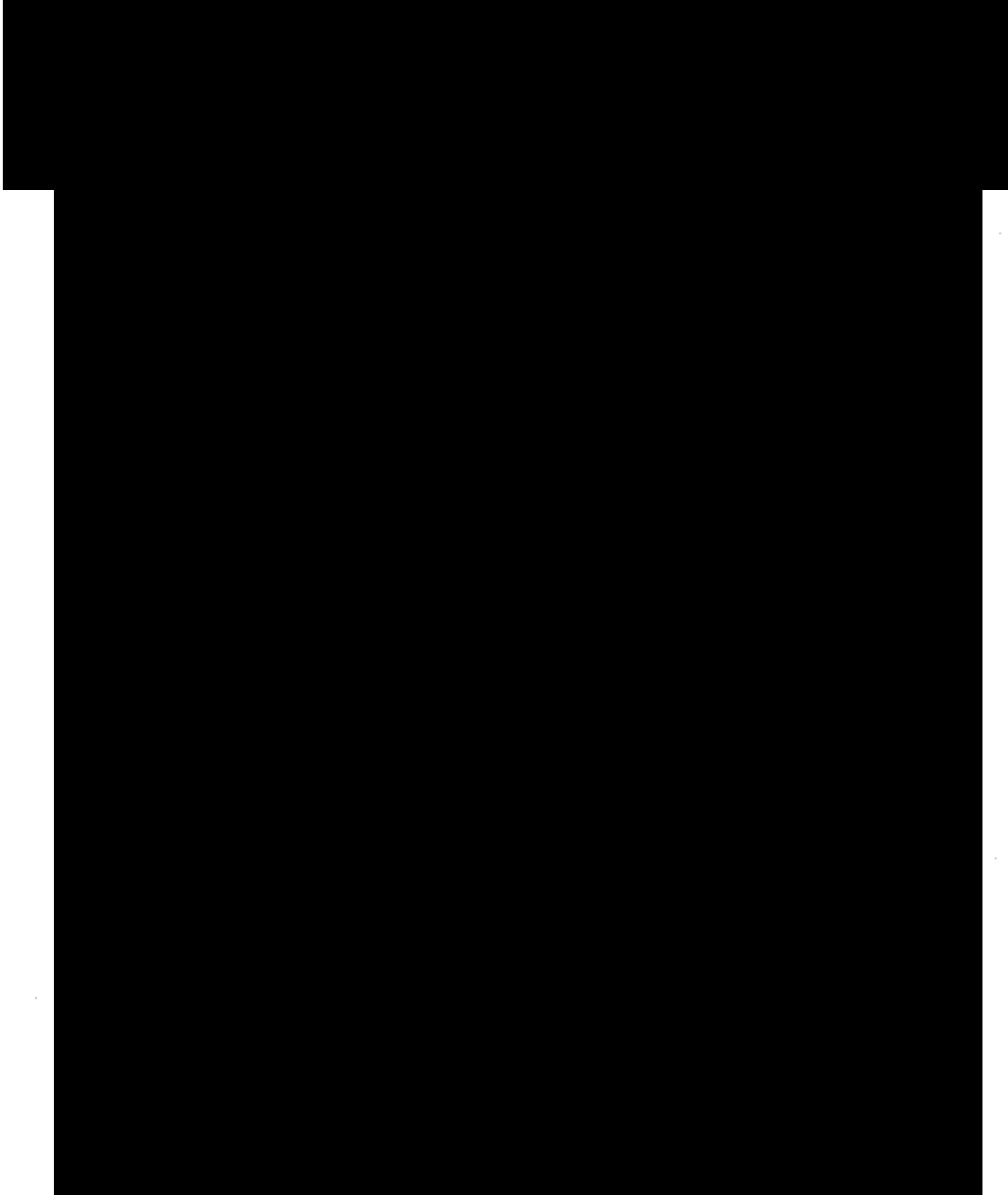
| TUA number | Farm Unit Name | Fields in which crops grown | Area (Ha) |
|------------|----------------|-----------------------------|-----------|
| | | | 413 |
| | | | 117.7 |
| | | | 319.1 |
| | | | 154.3 |
| | | | |
| | | | 2406.2 |
| | | | 220 |
| | | | 114.9 |
| | | | 72.8 |
| | | | |
| | | | 153.6 |
| | | | 74.3 |
| | | | 109.2 |
| | | | 297 |
| | | | 303 |

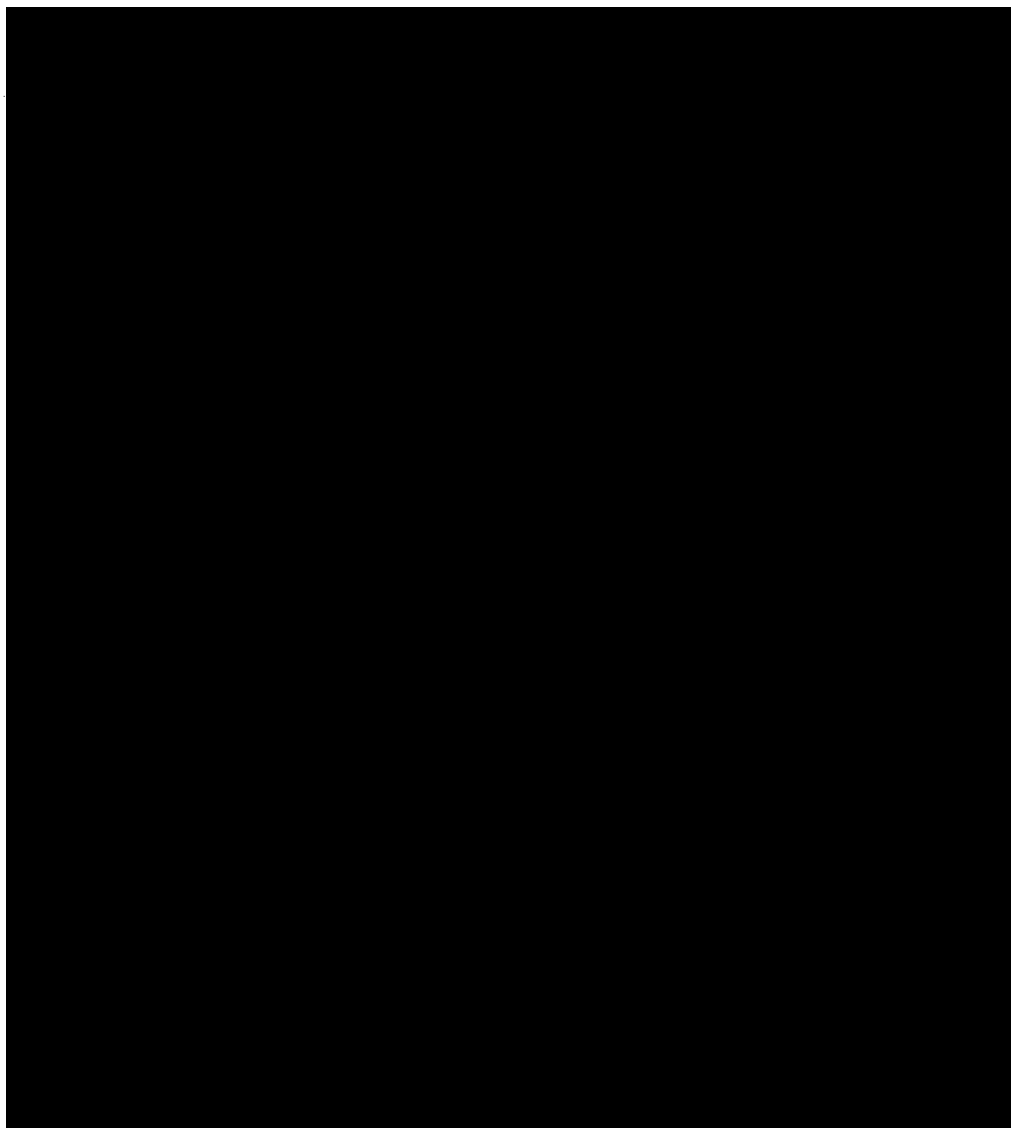


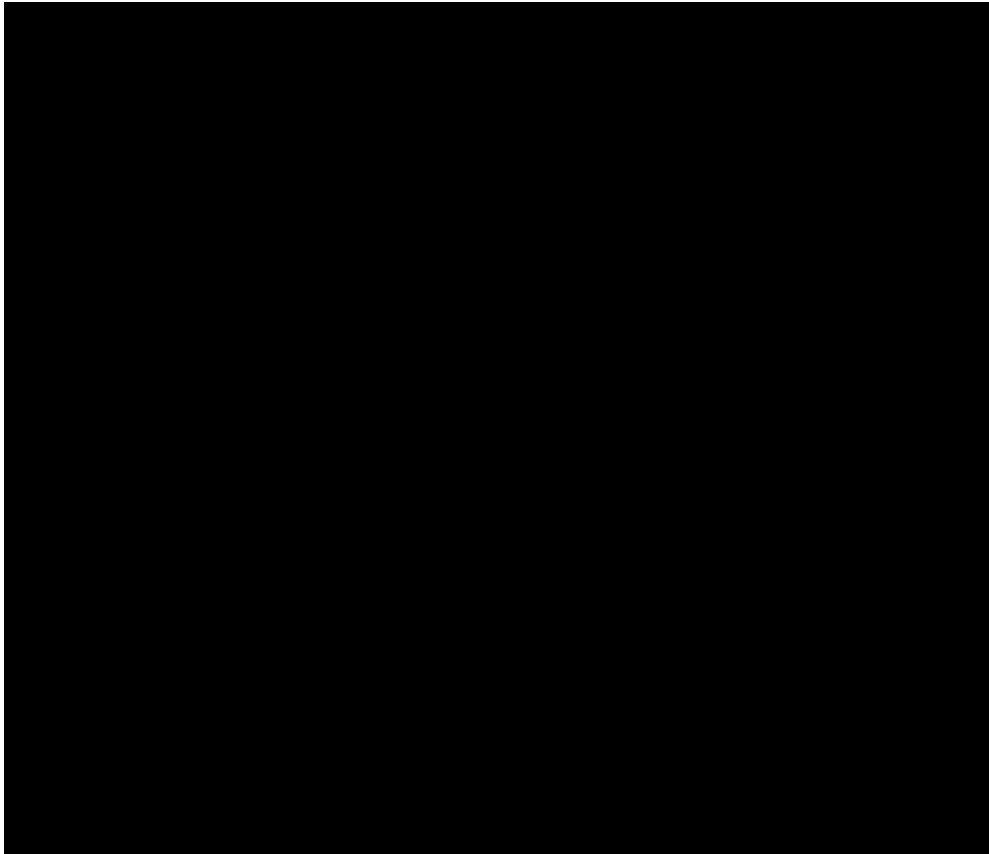
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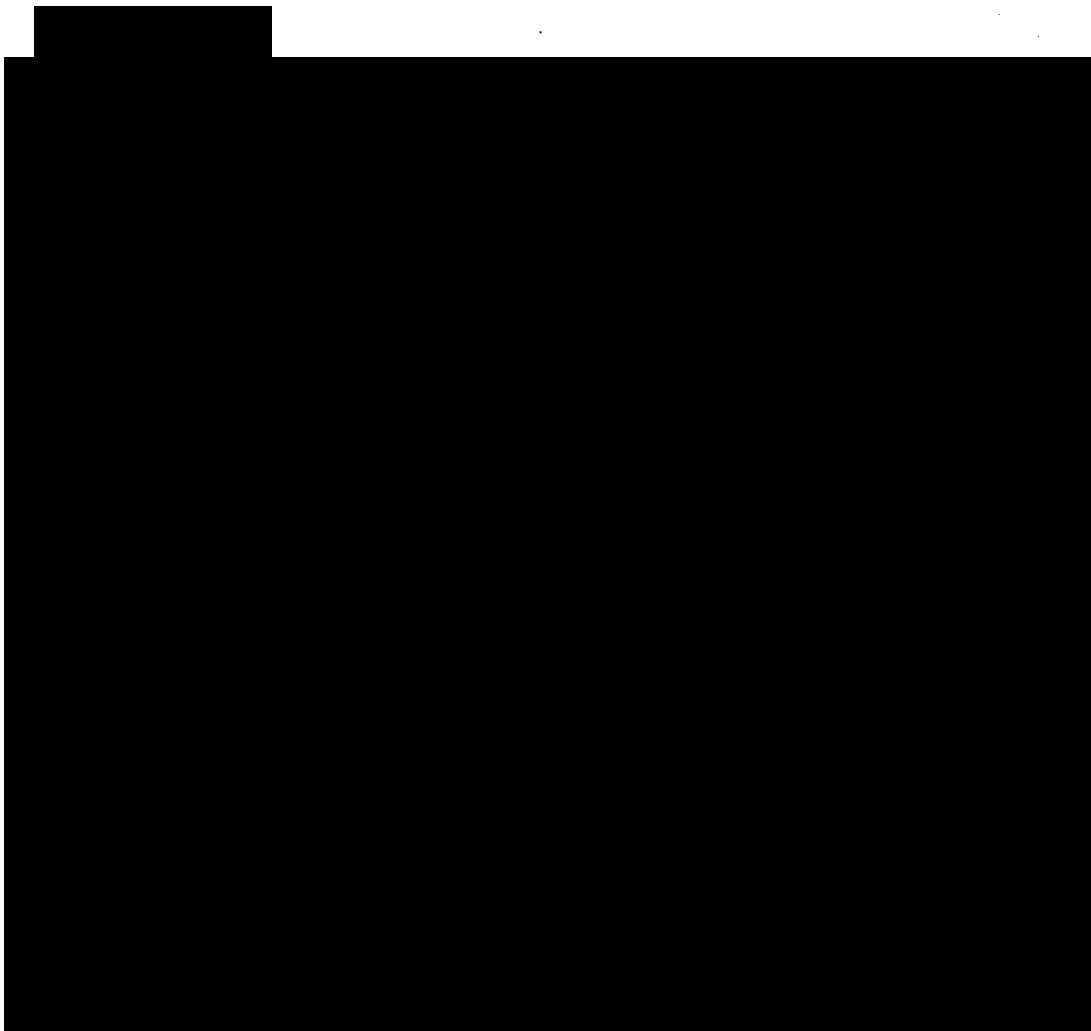
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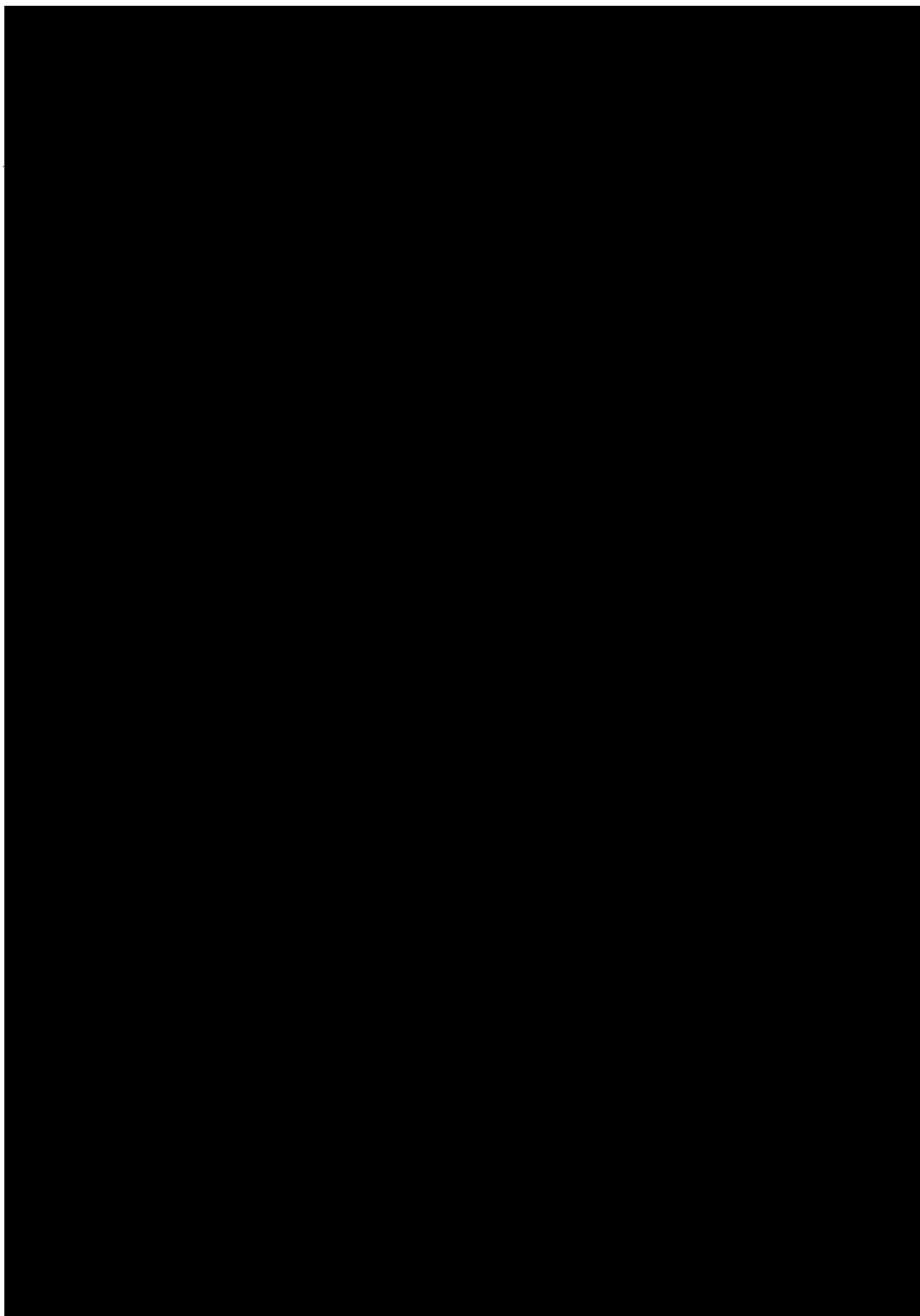


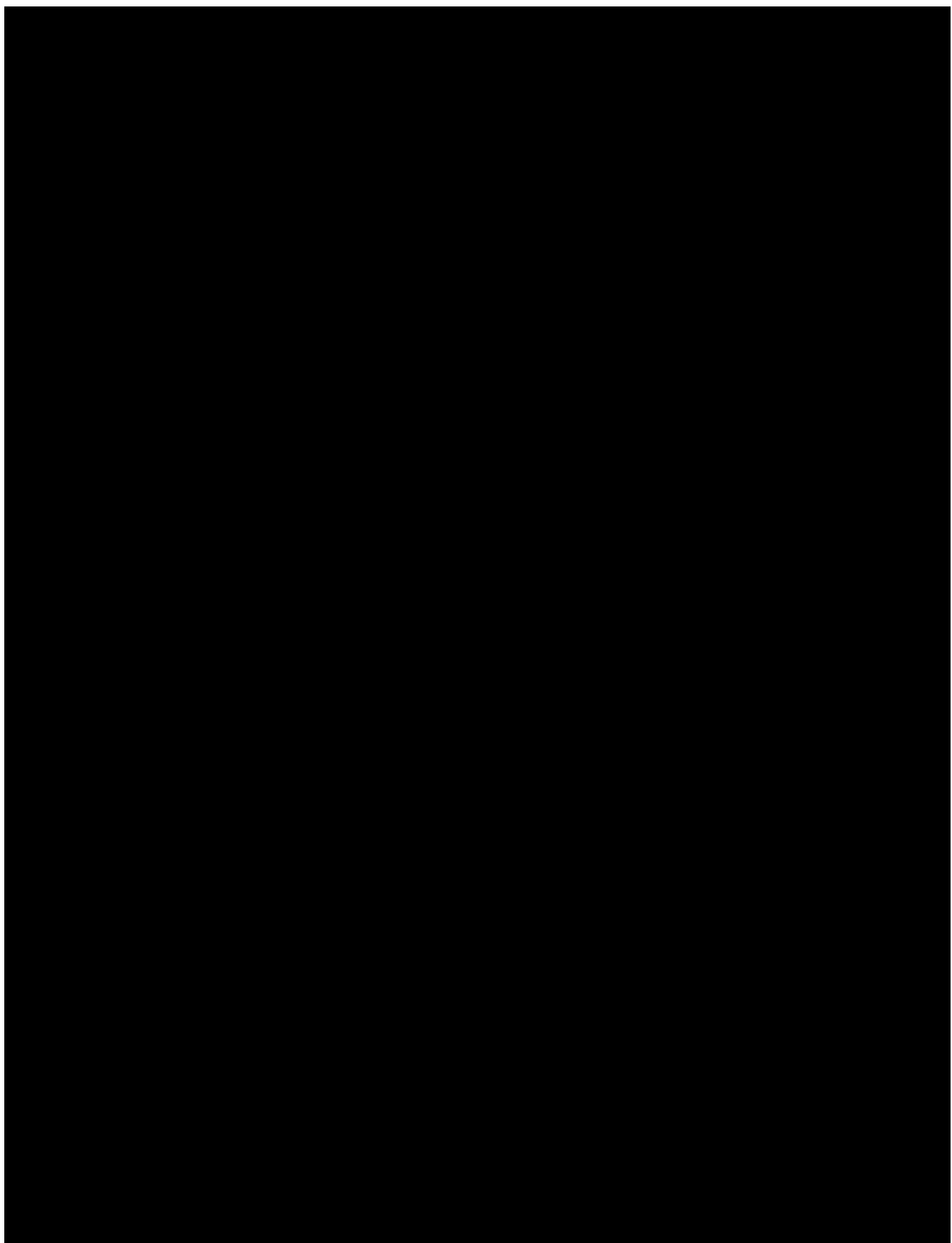


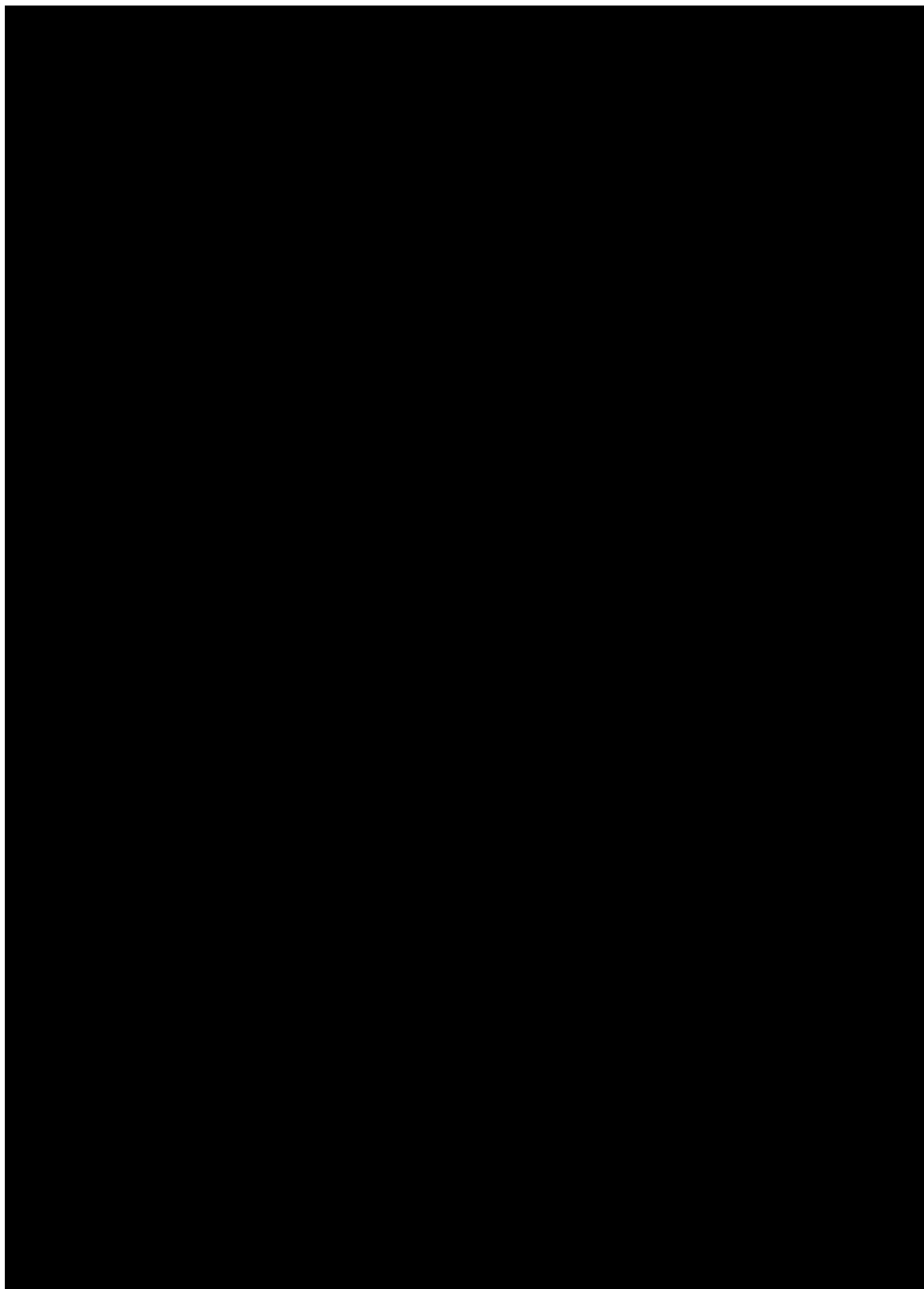


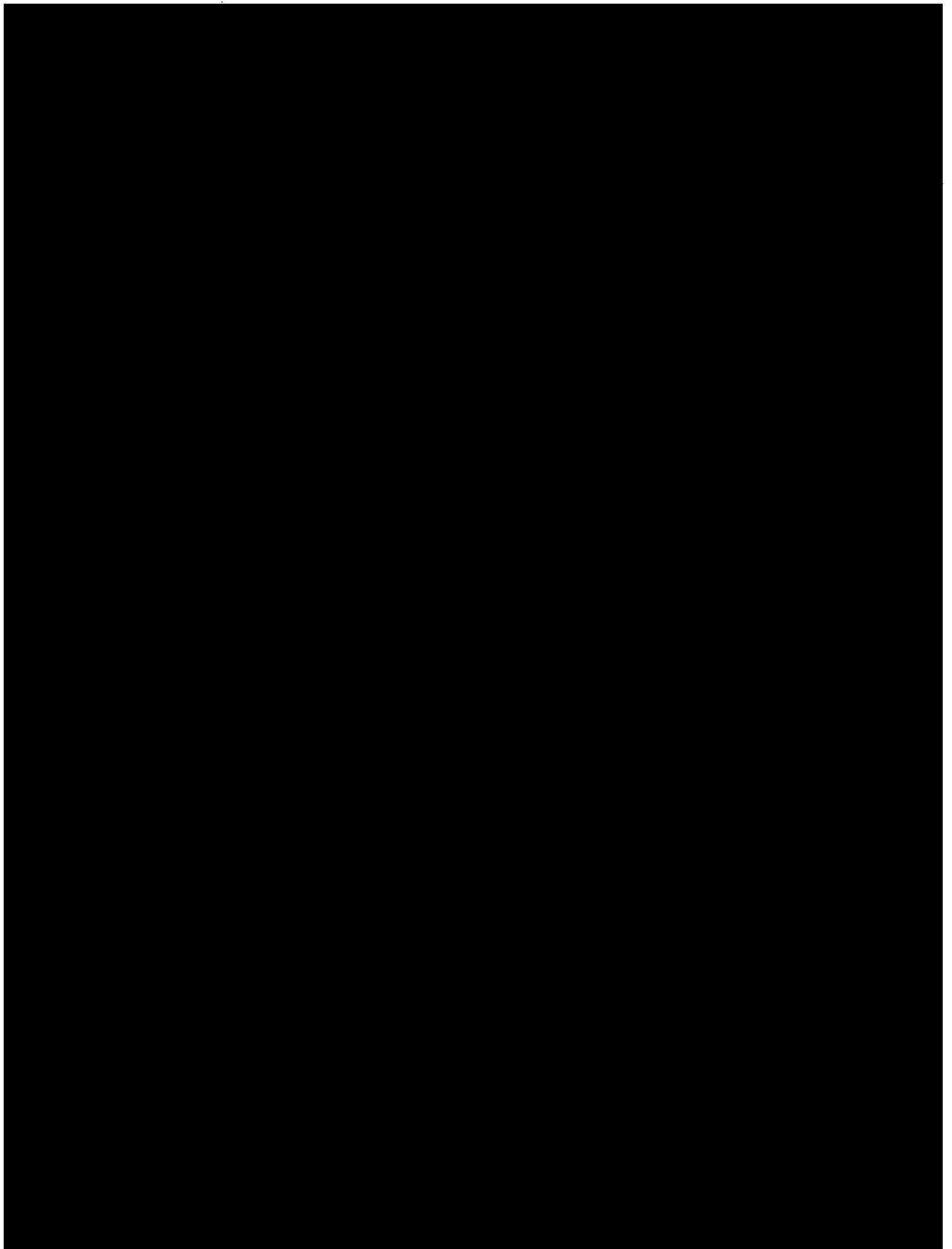


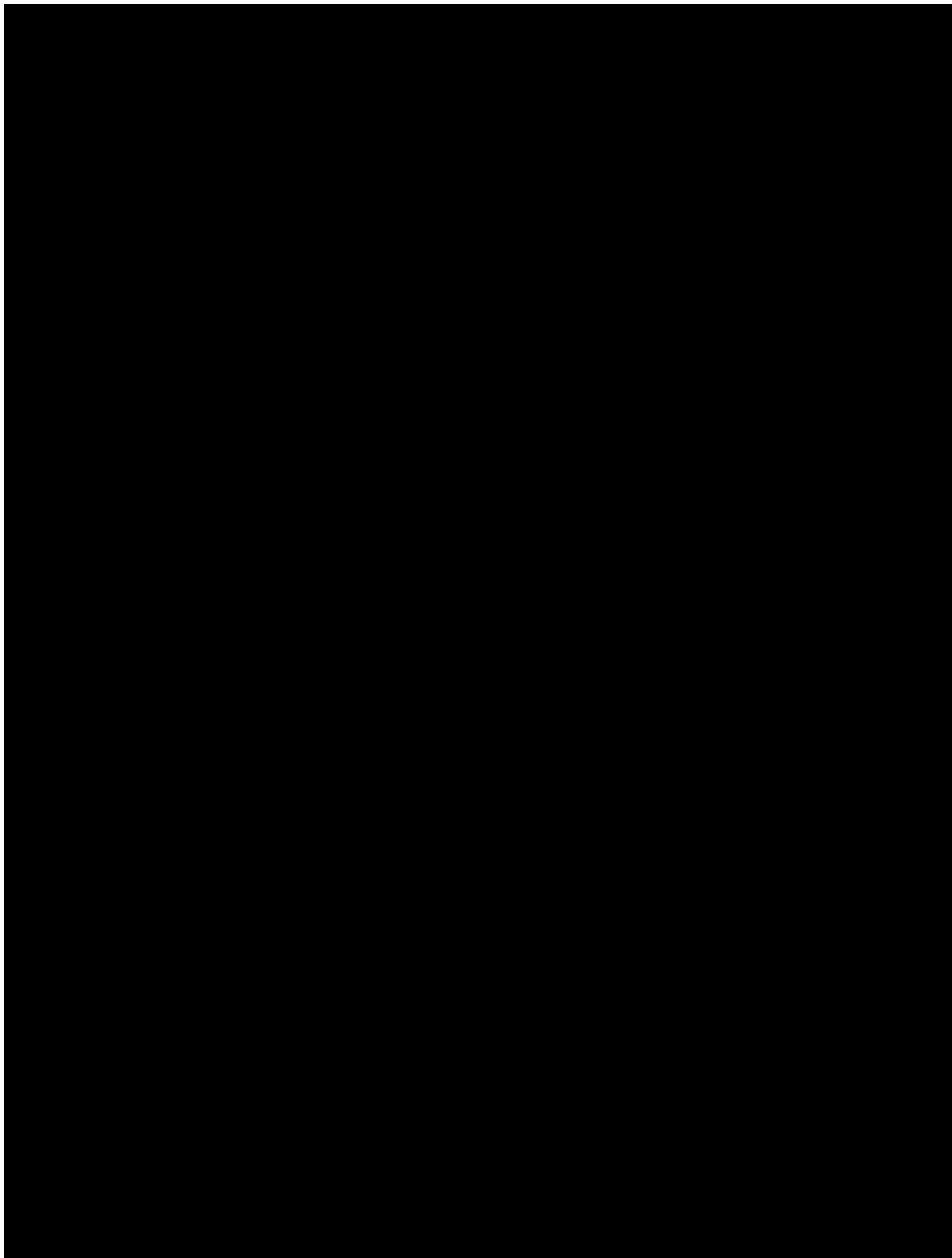


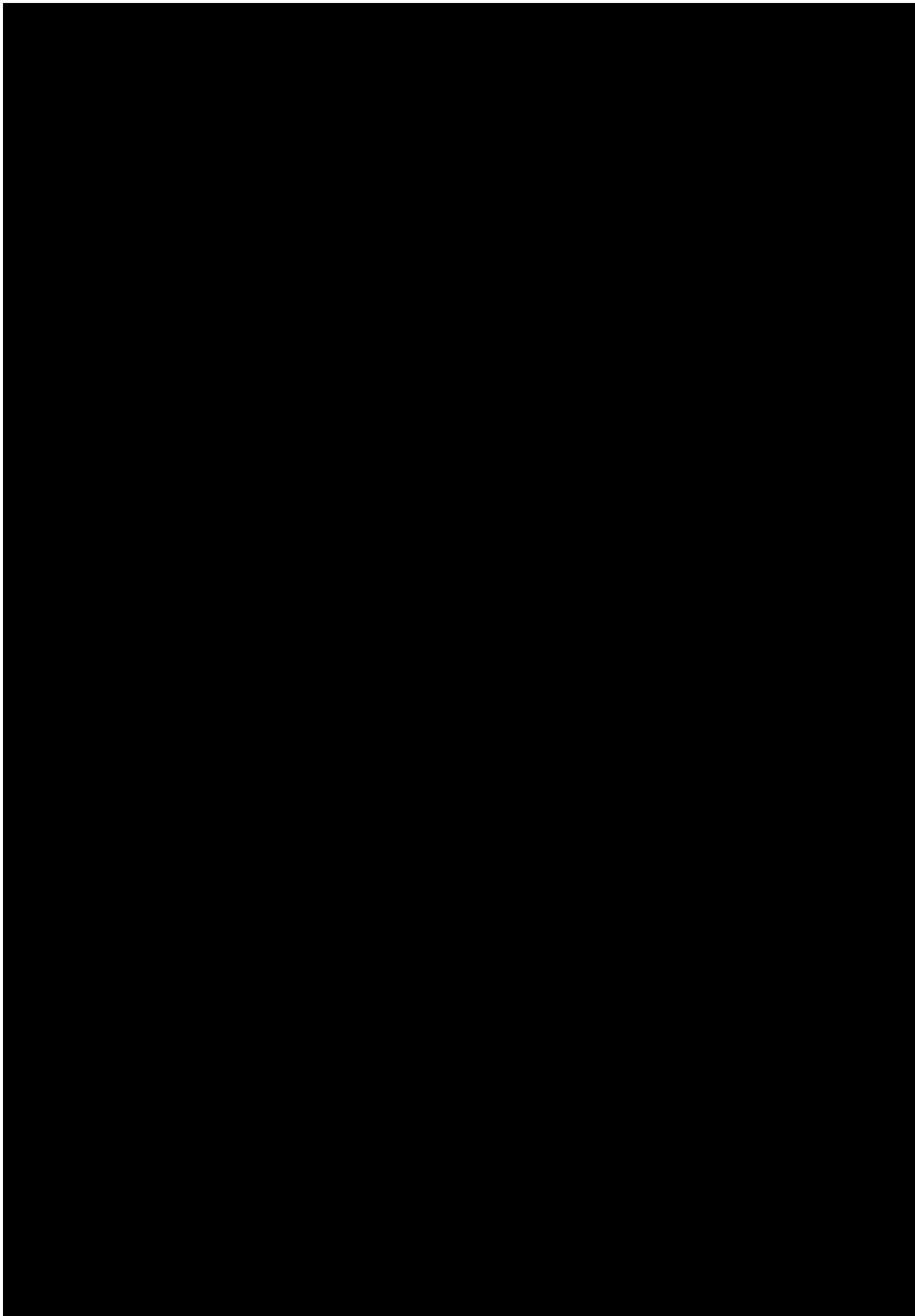


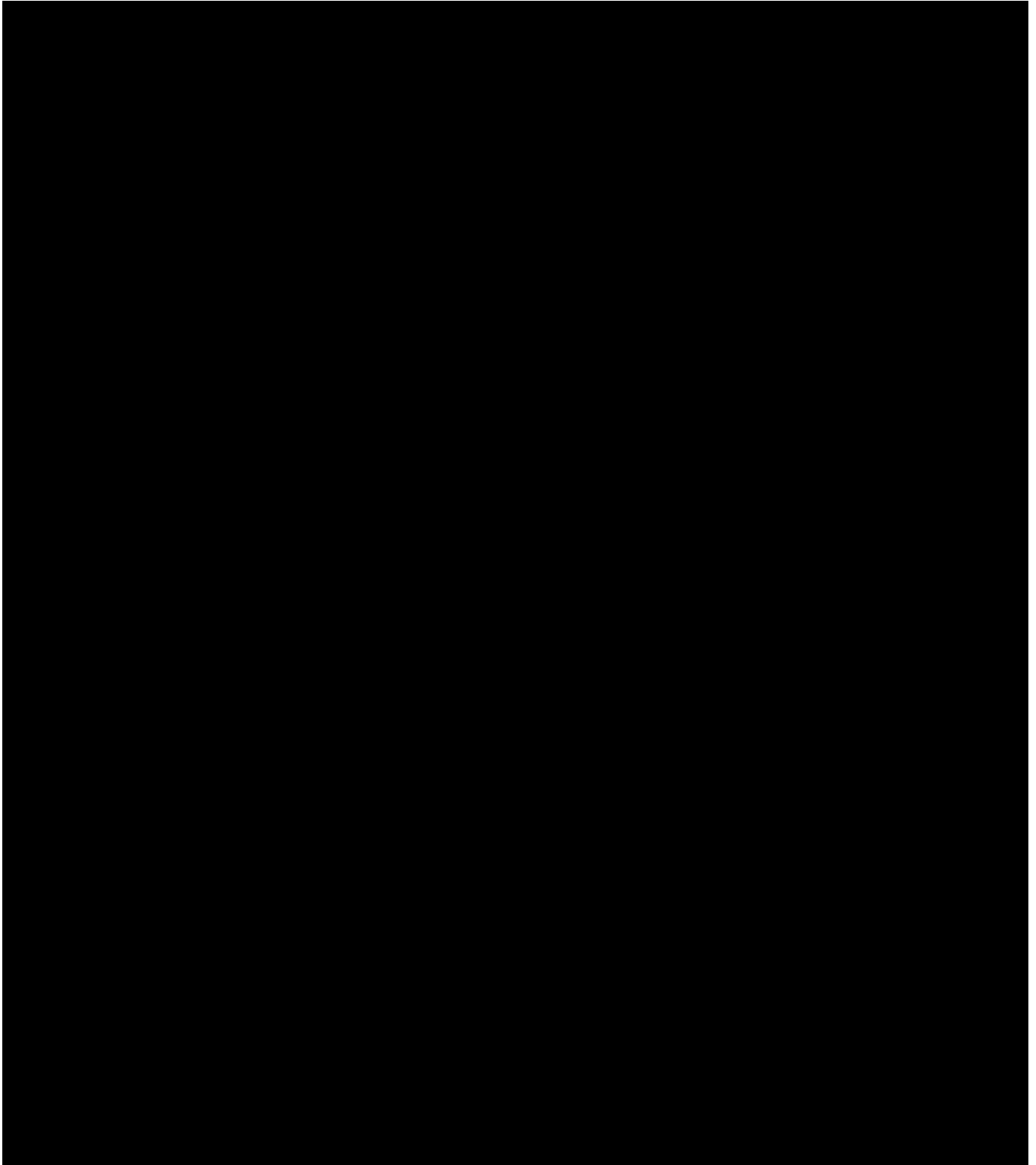


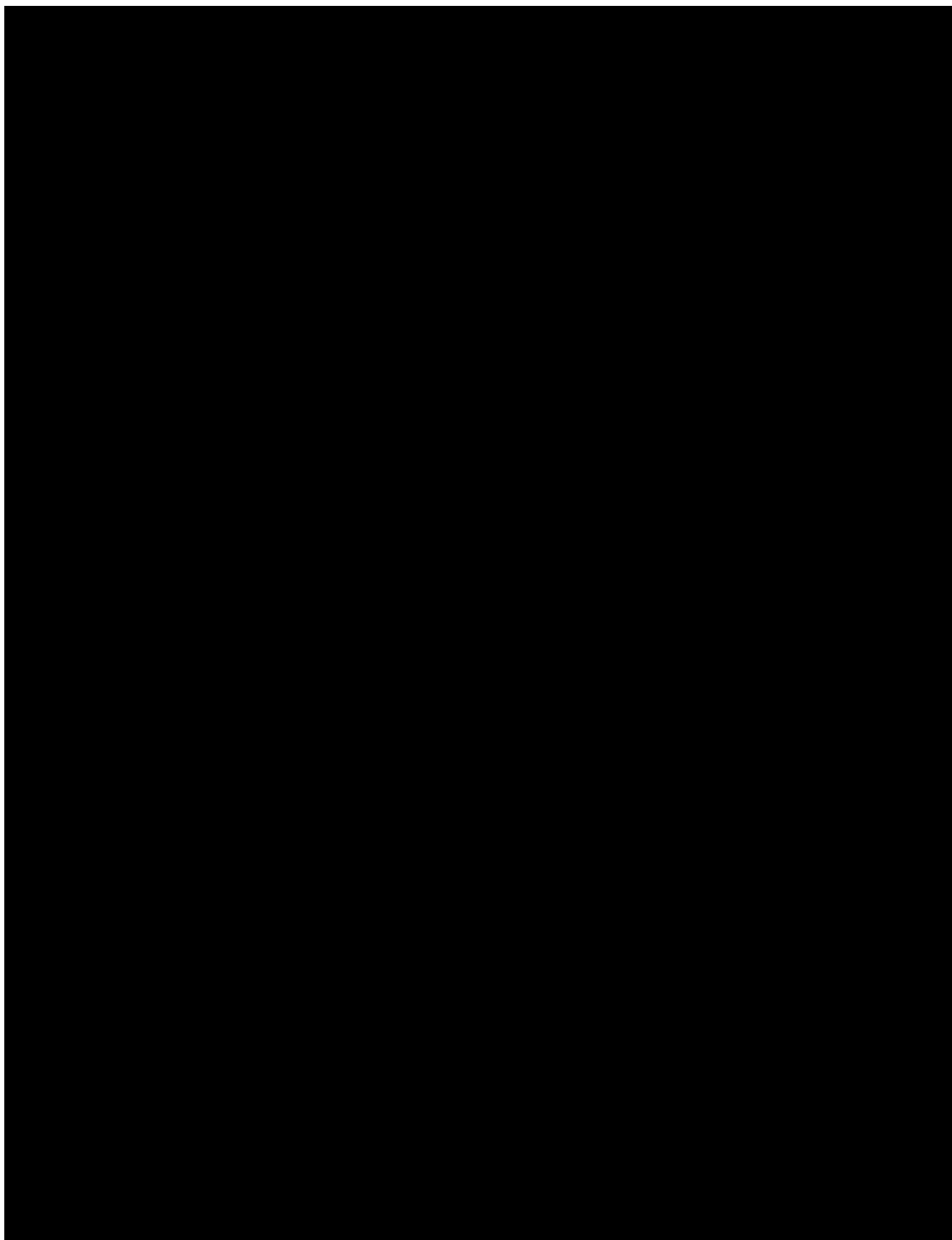


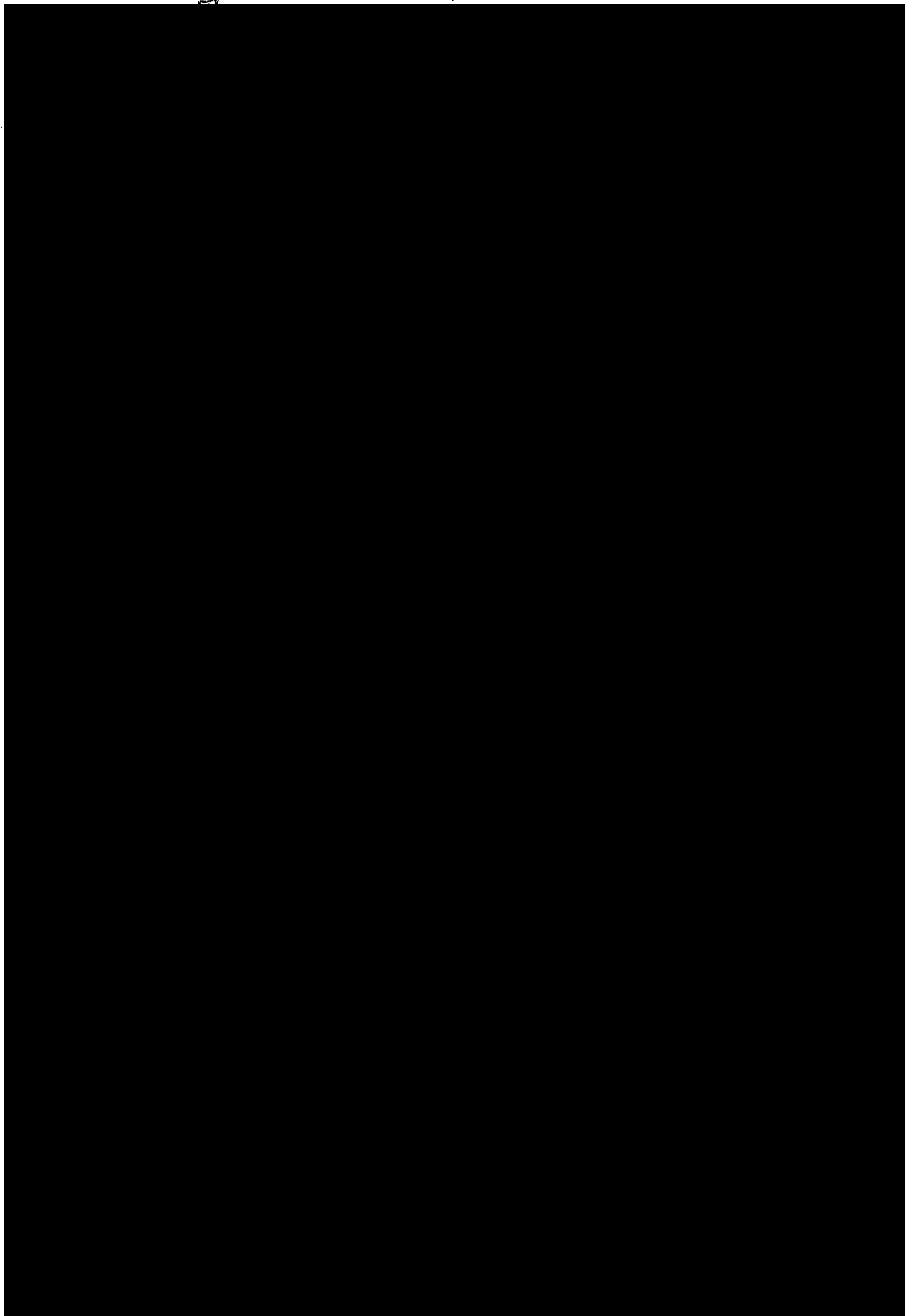


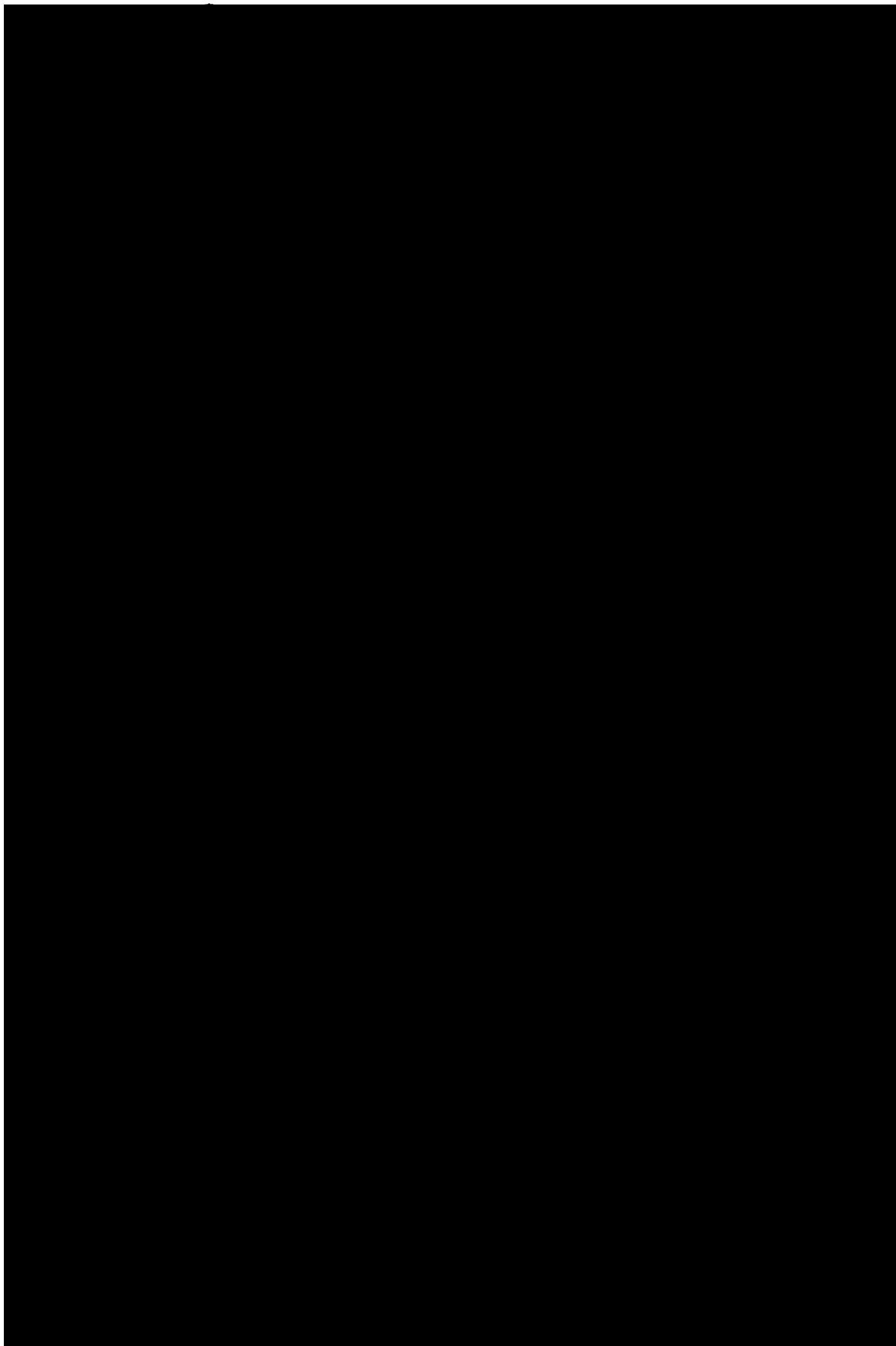


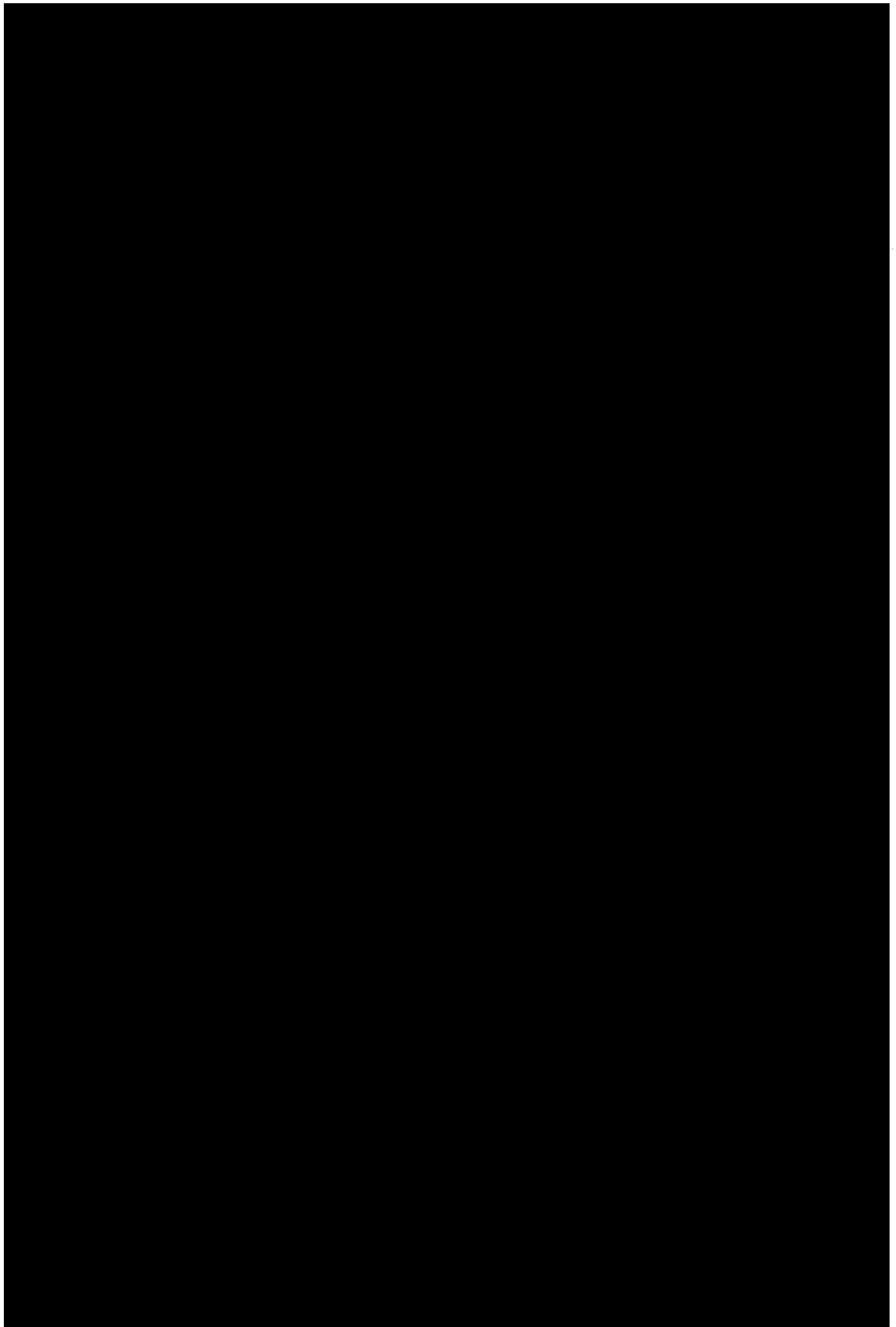


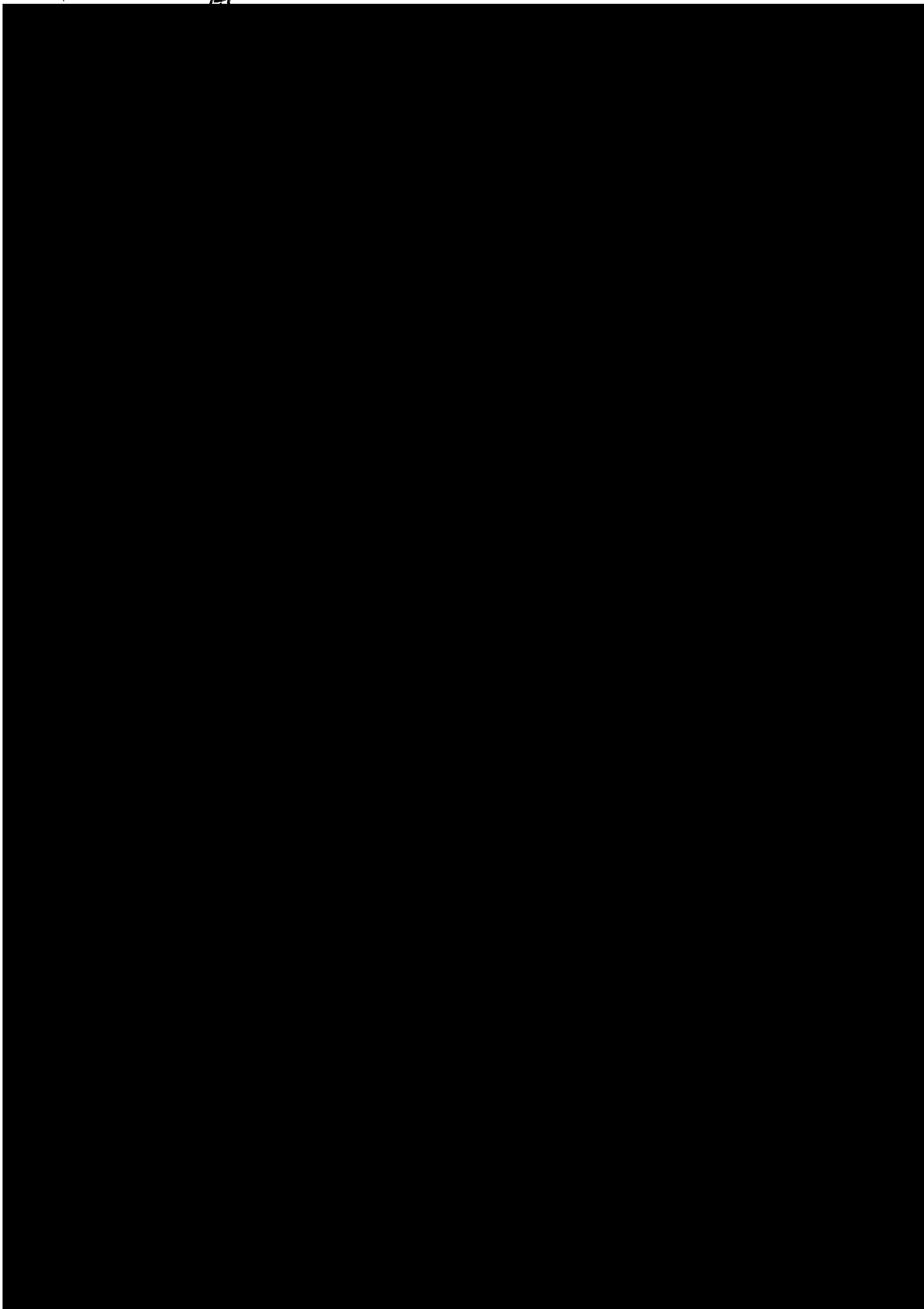


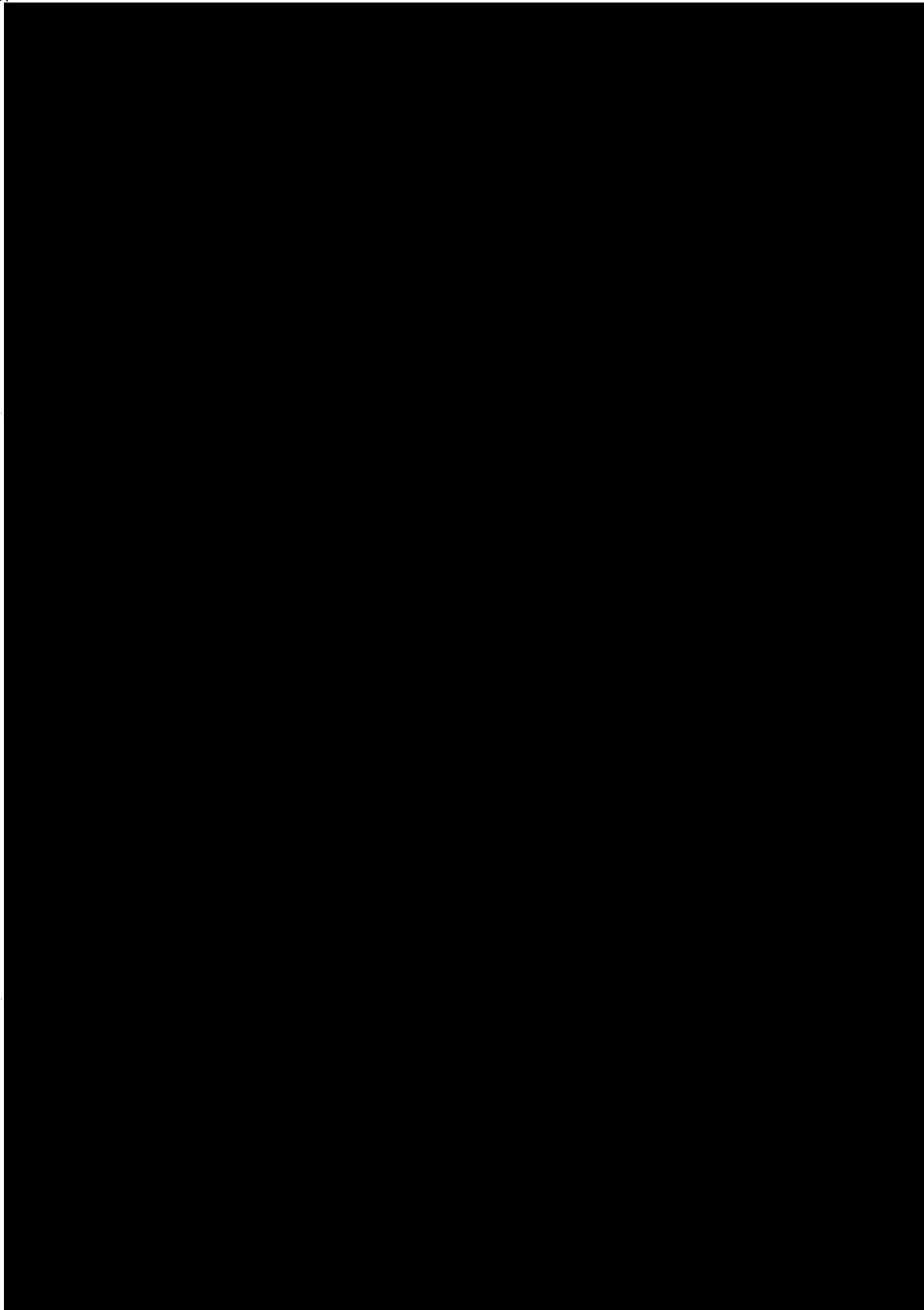


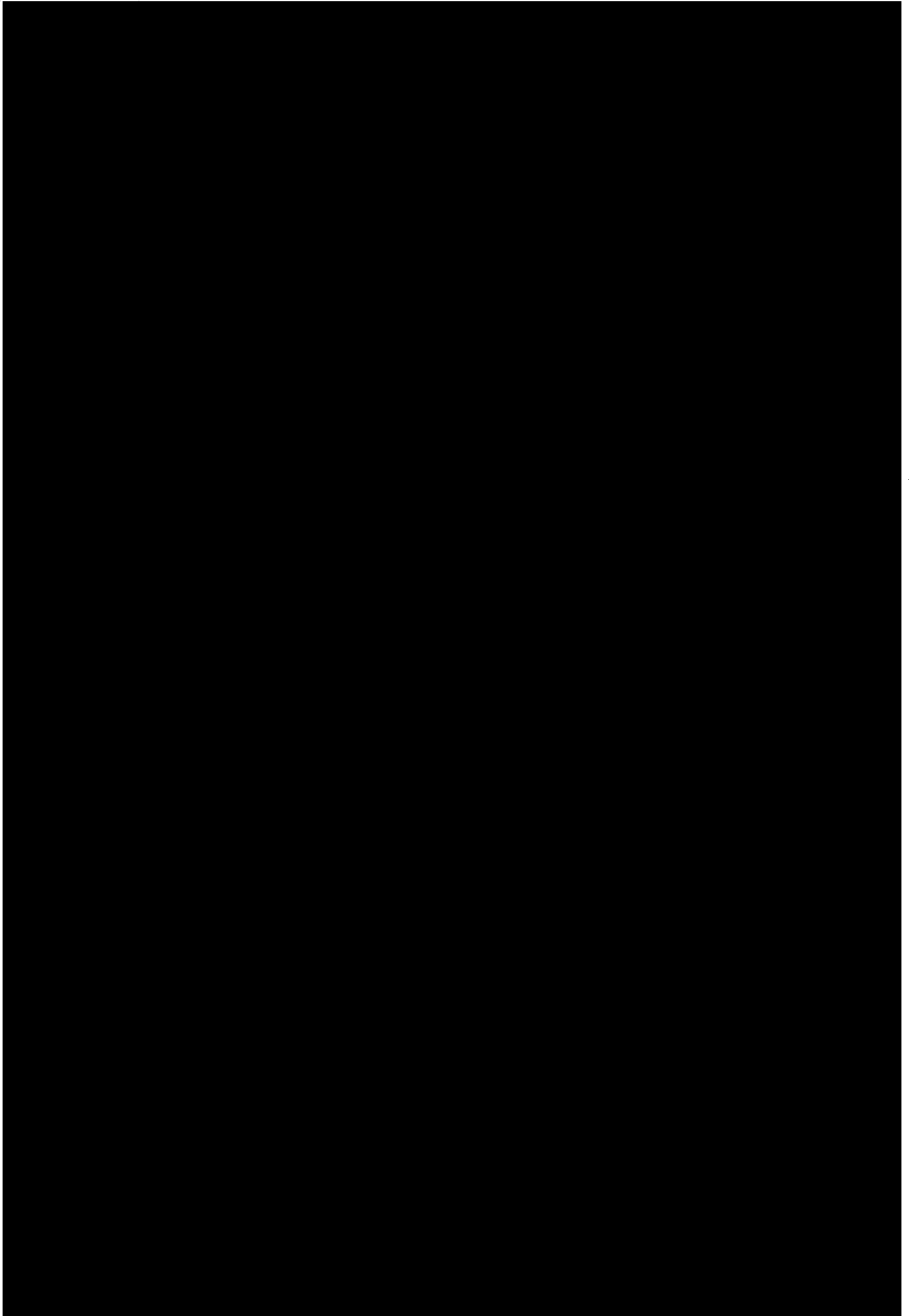


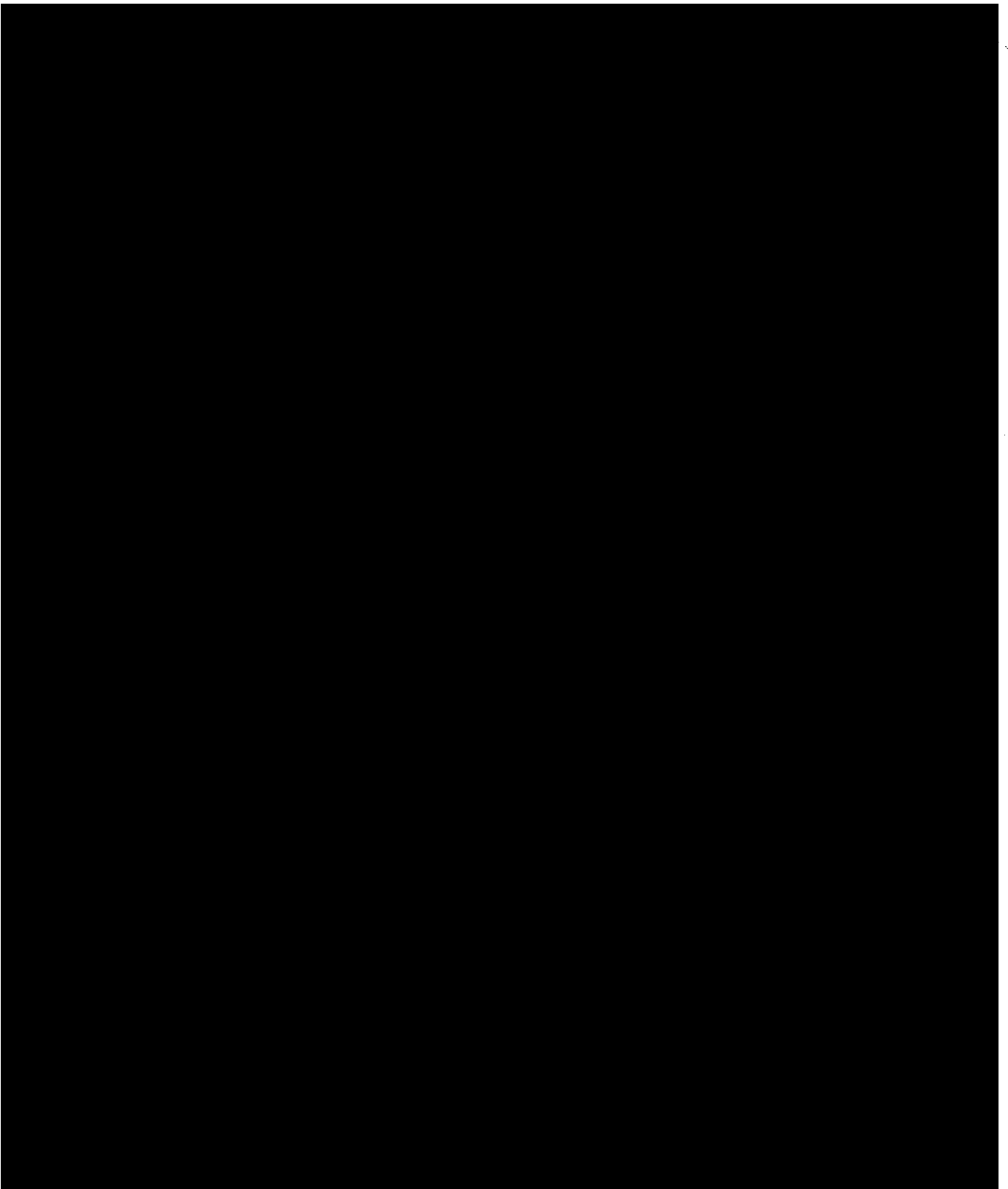


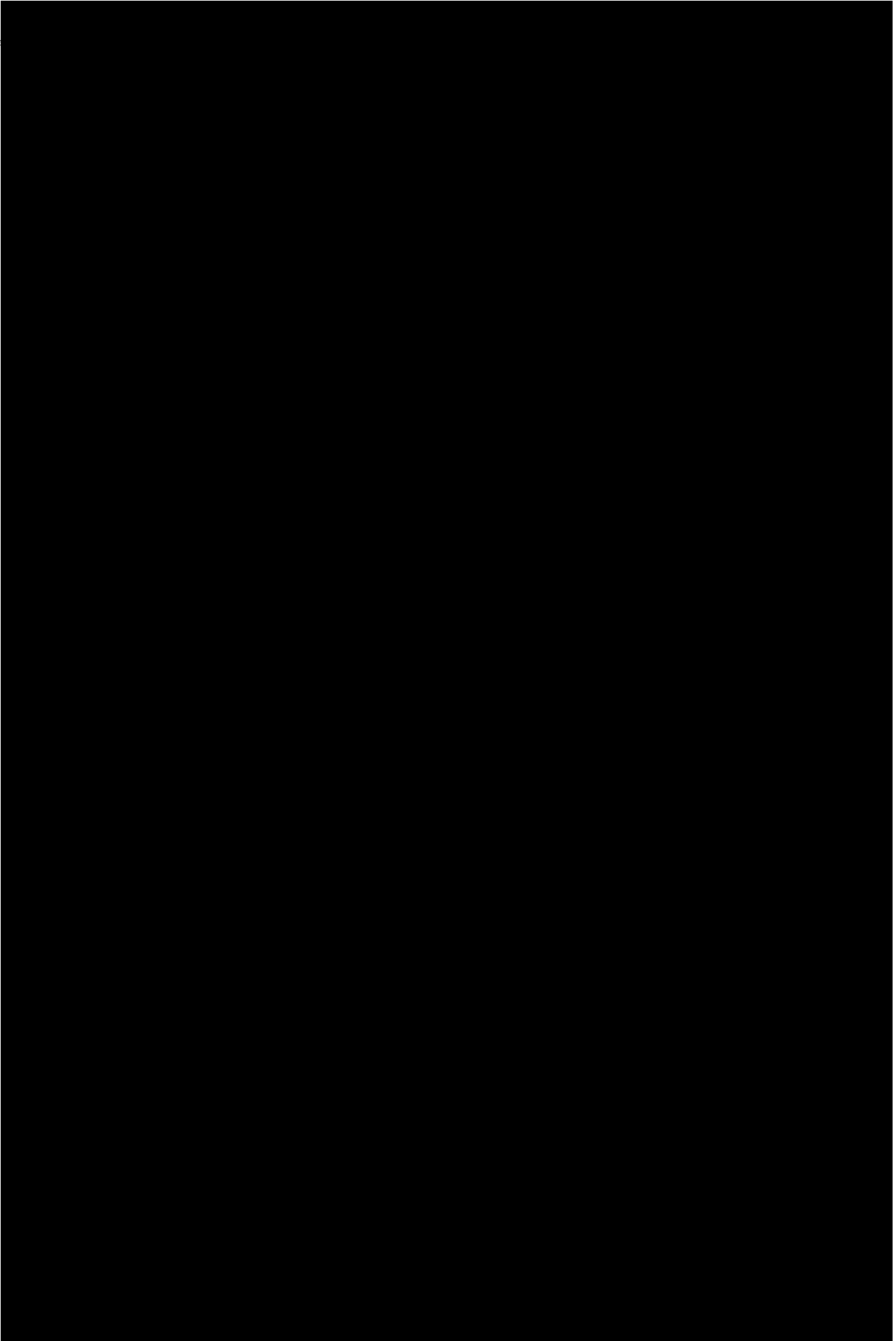


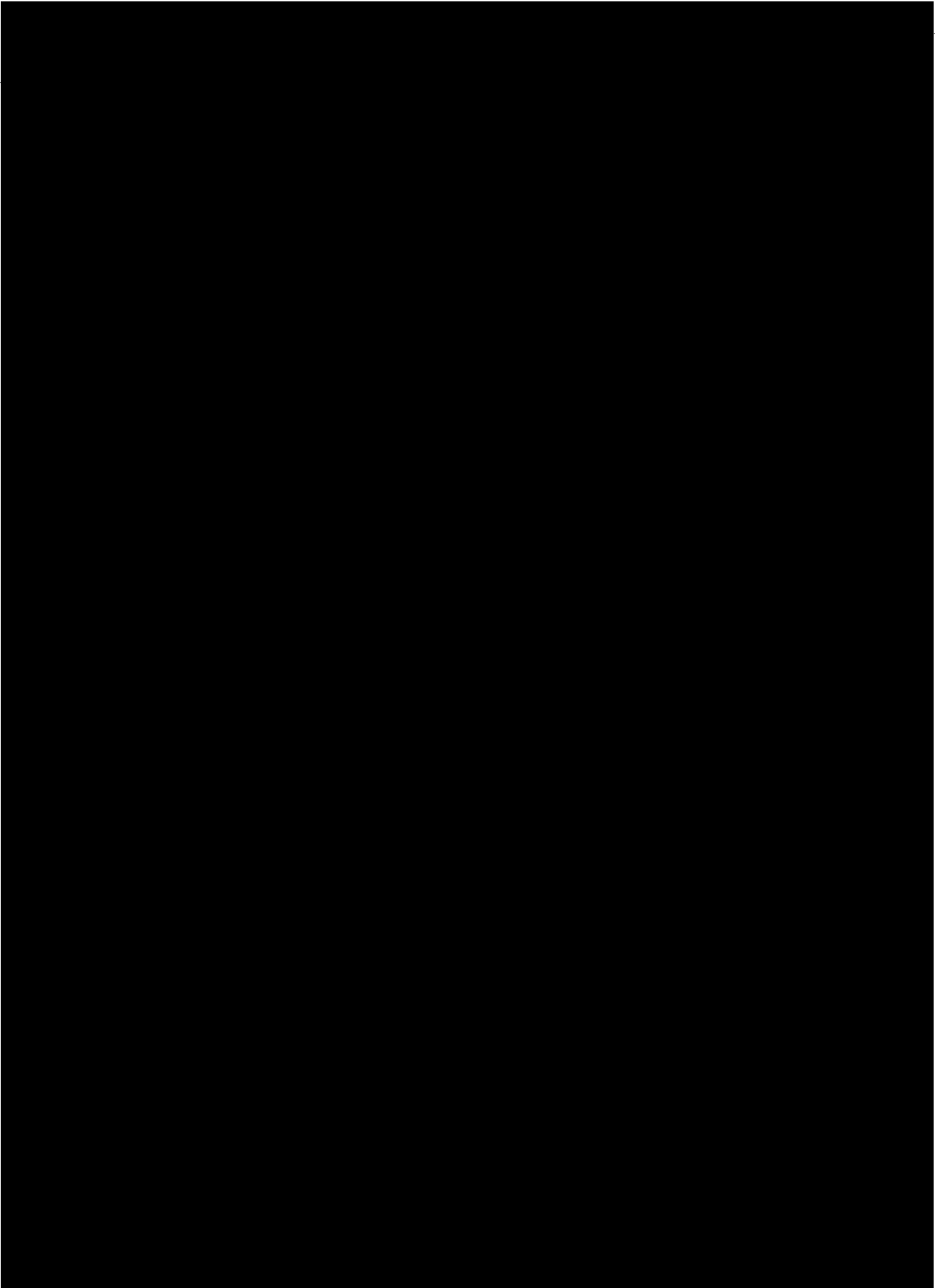


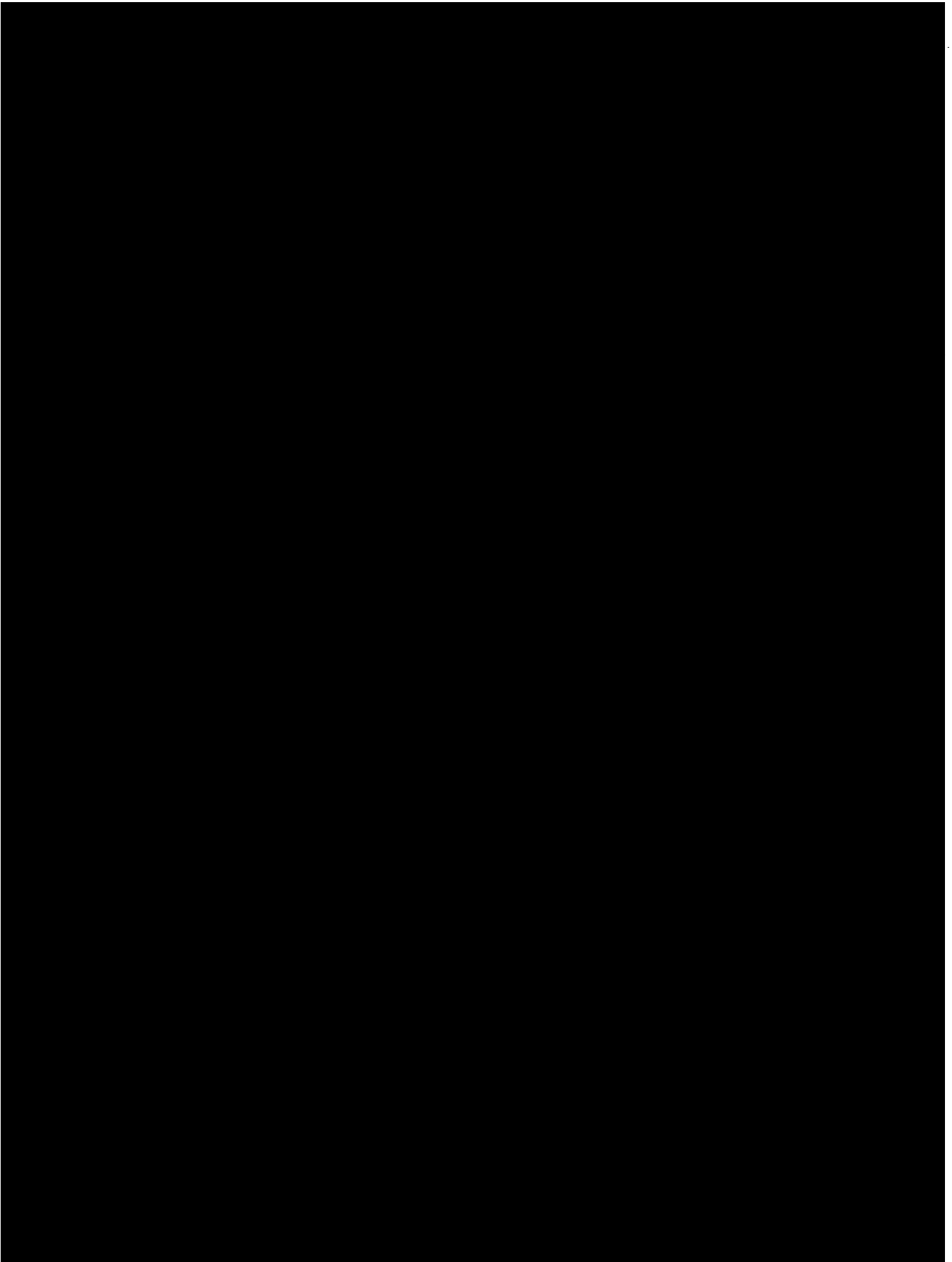


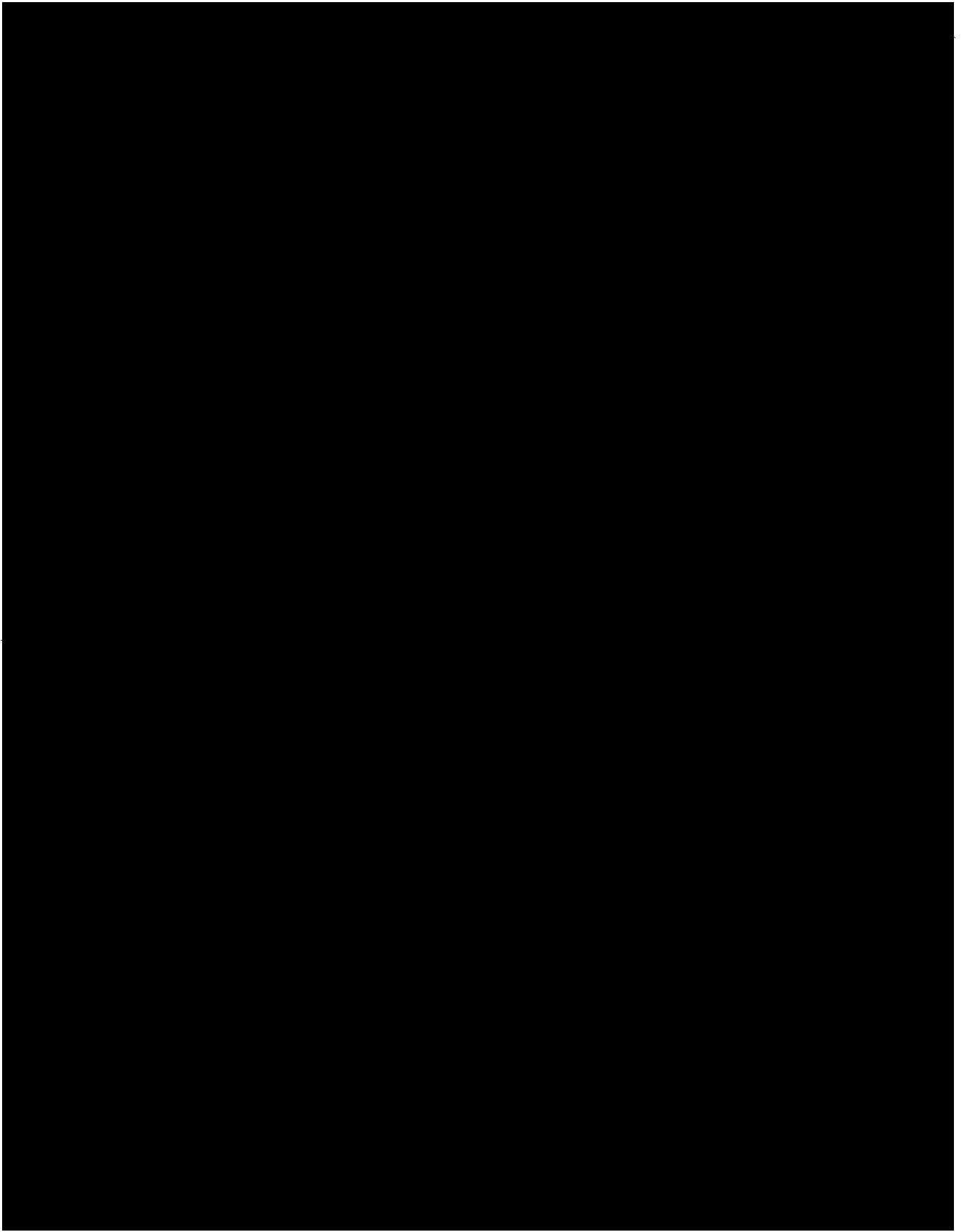


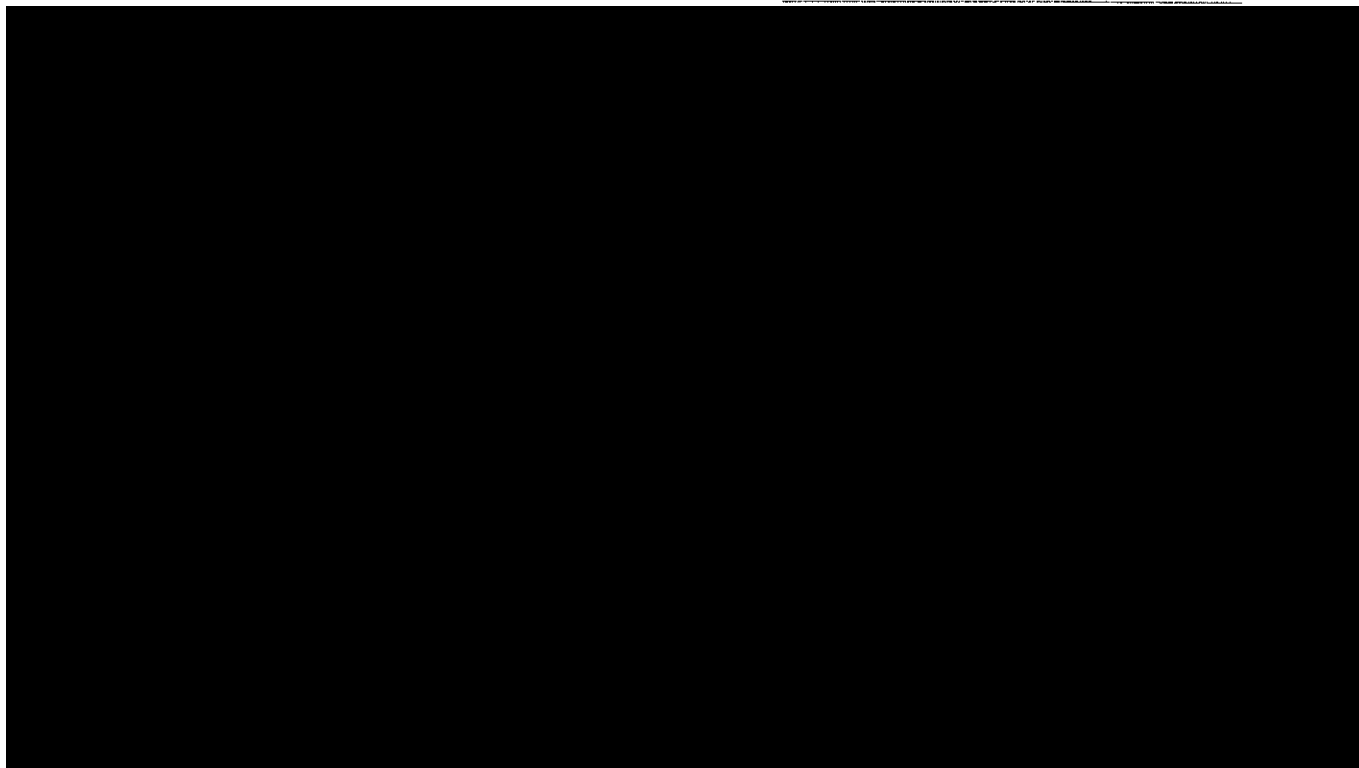
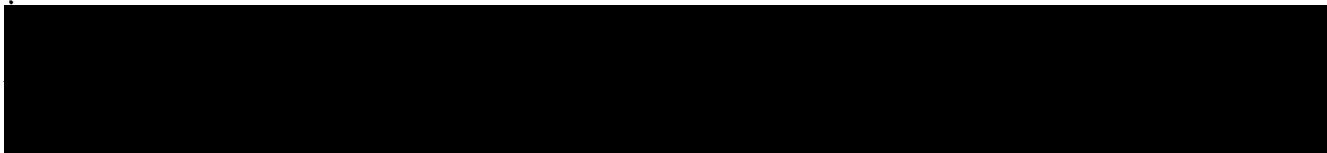


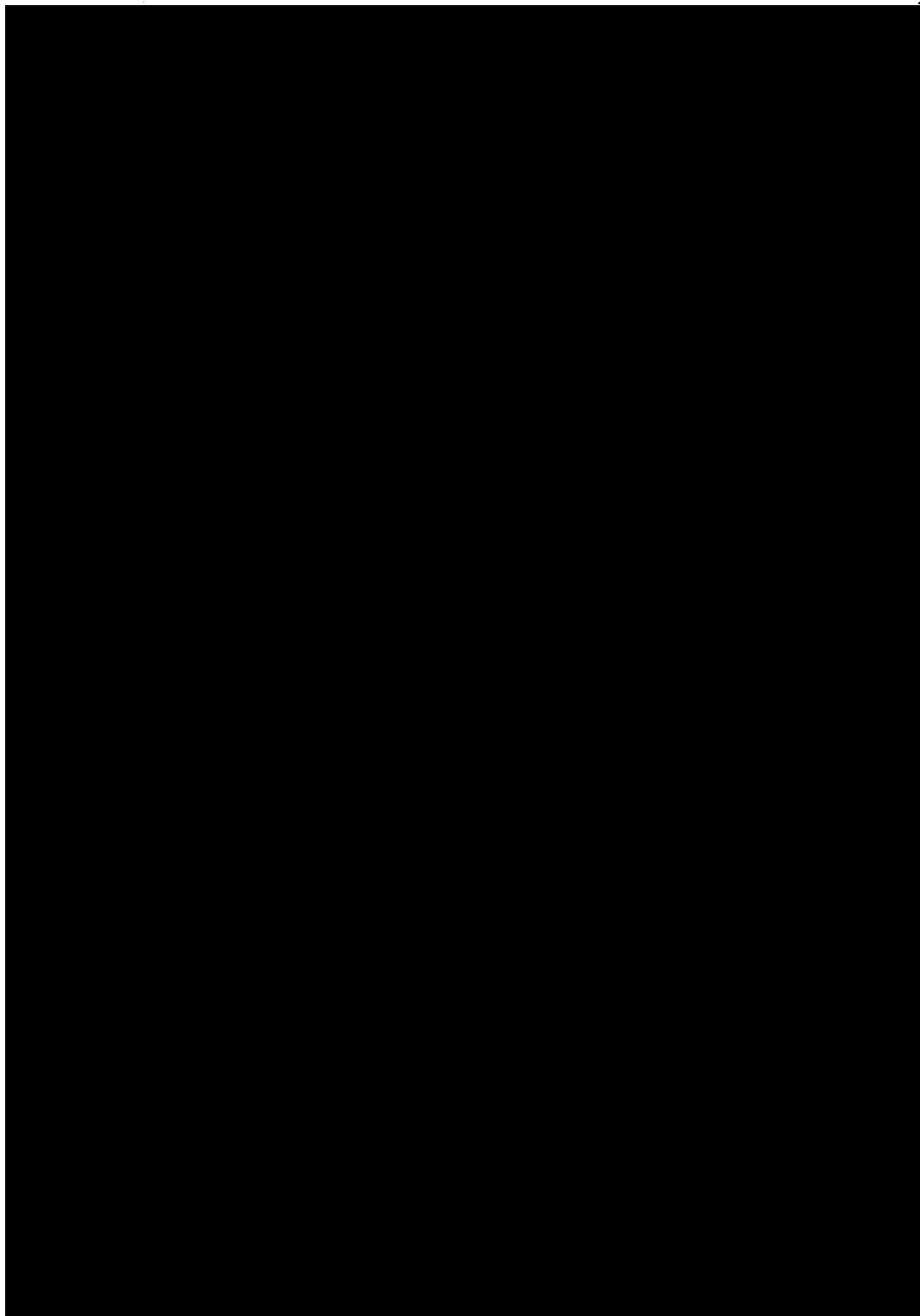


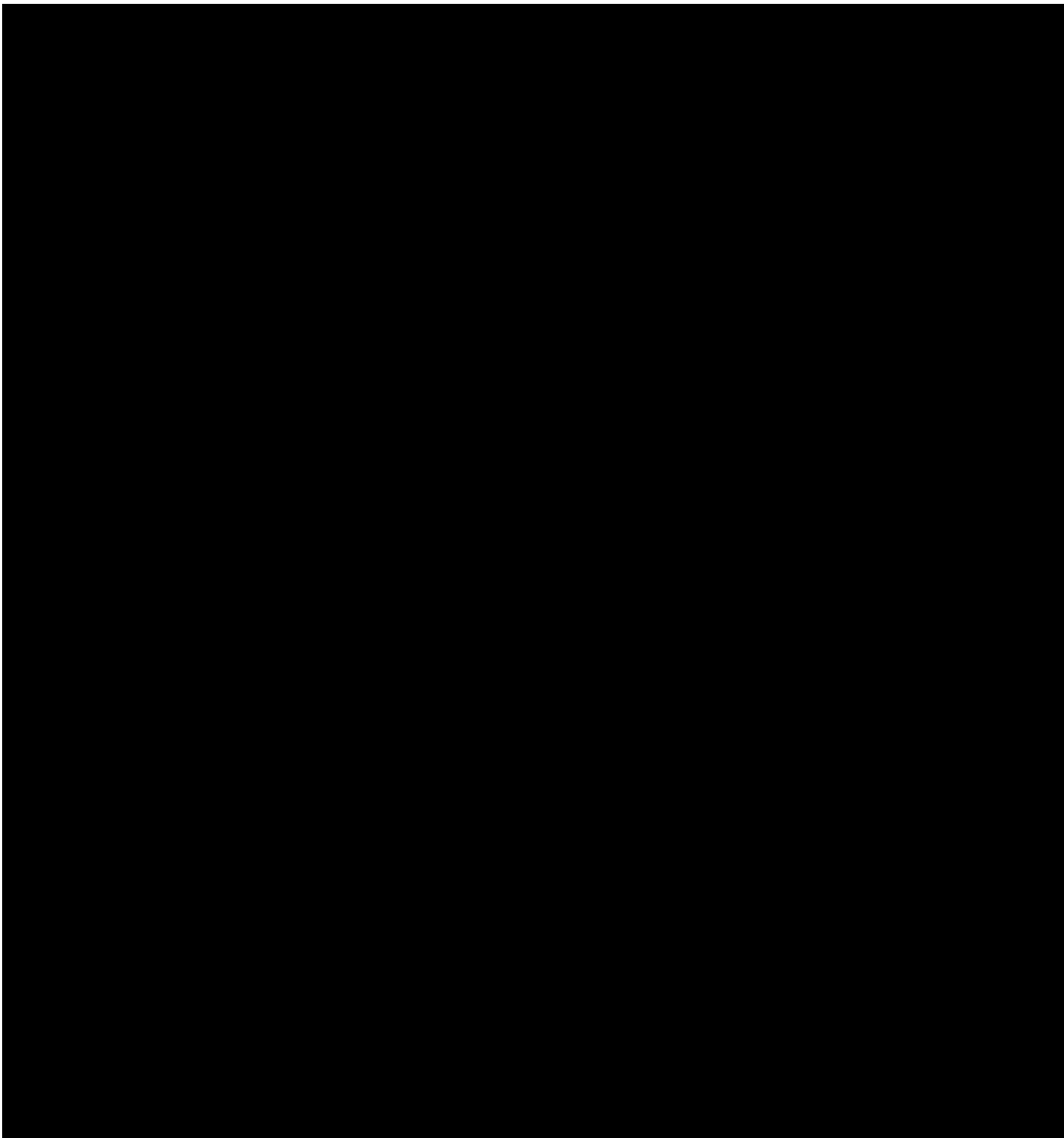


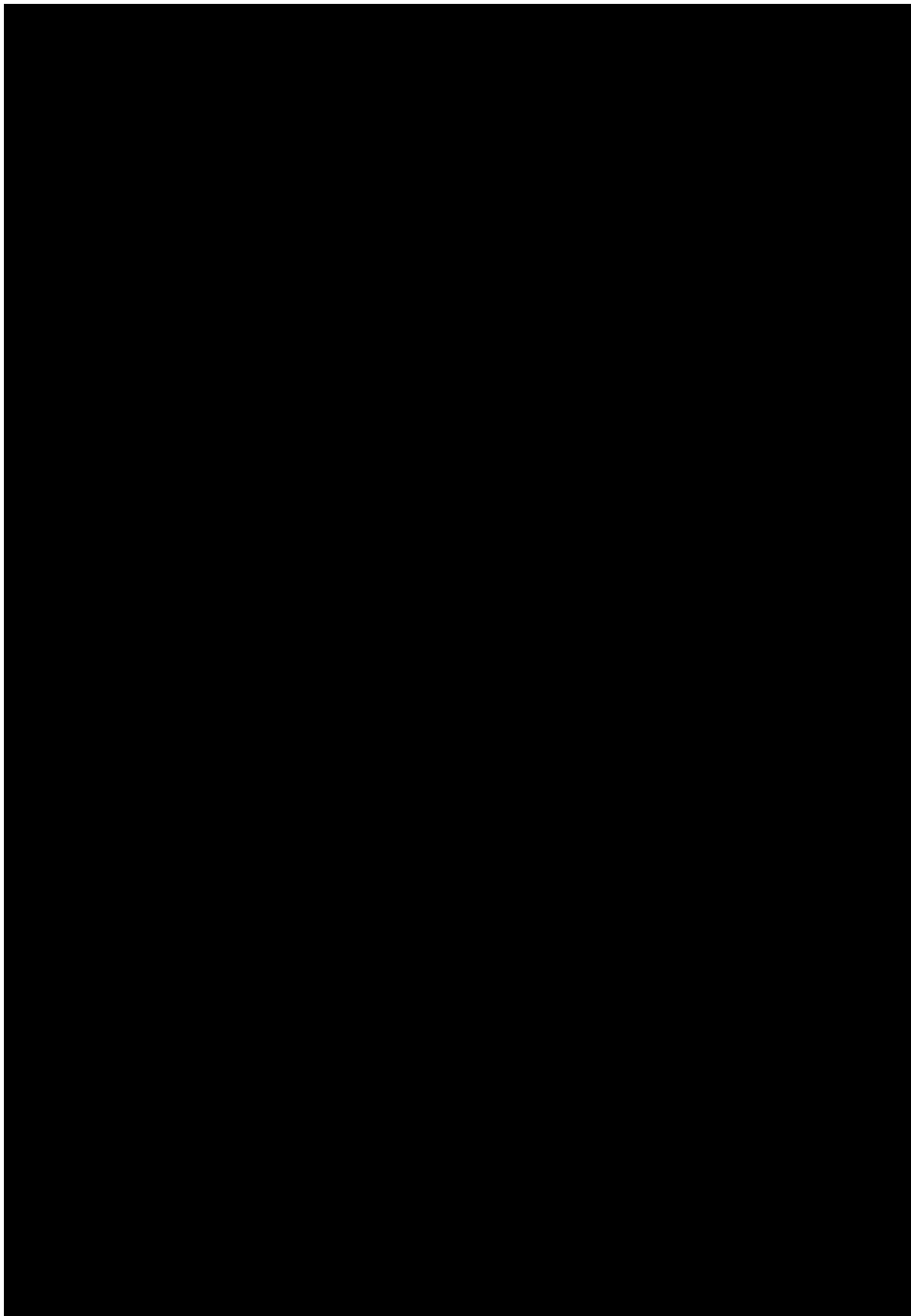


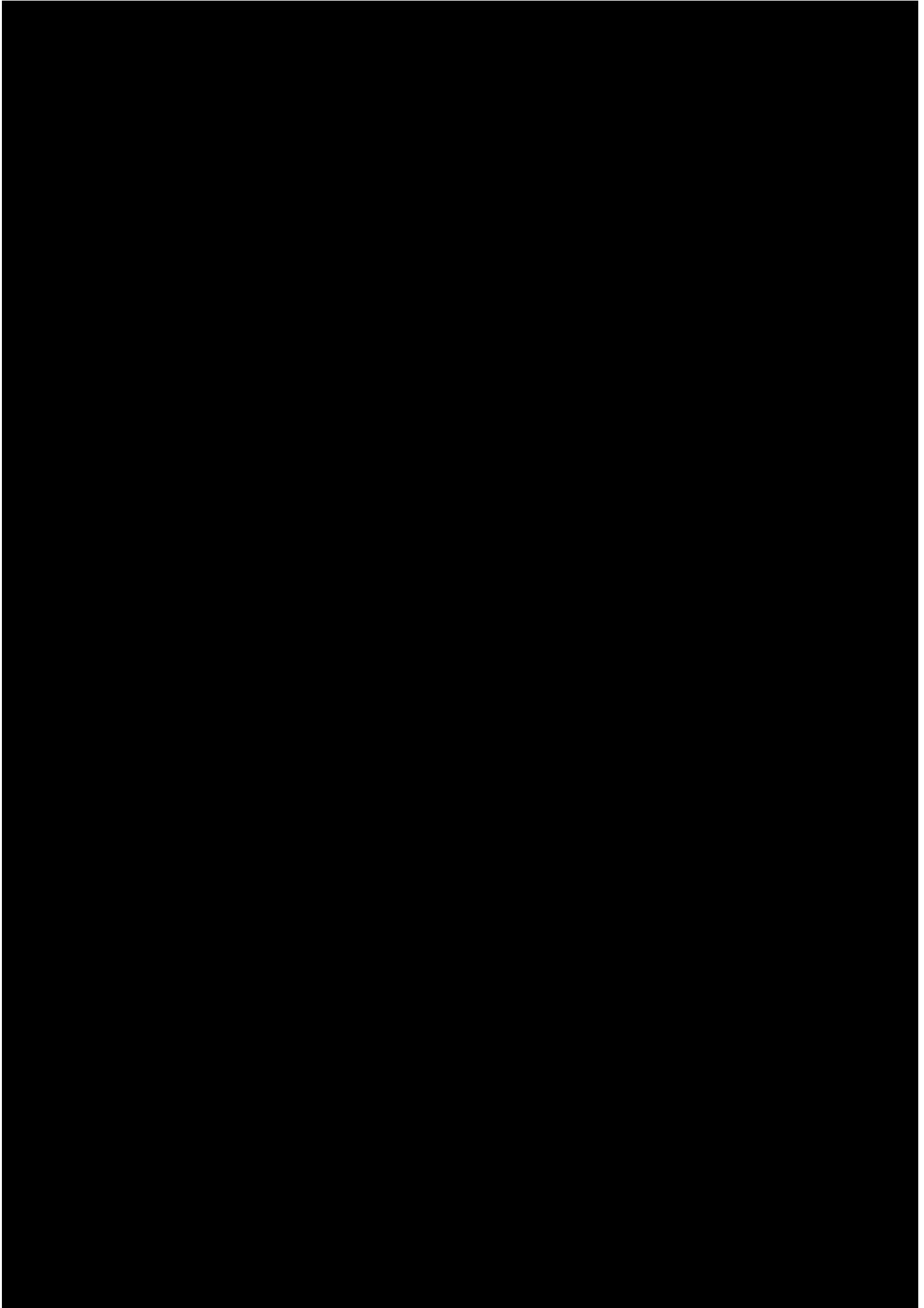


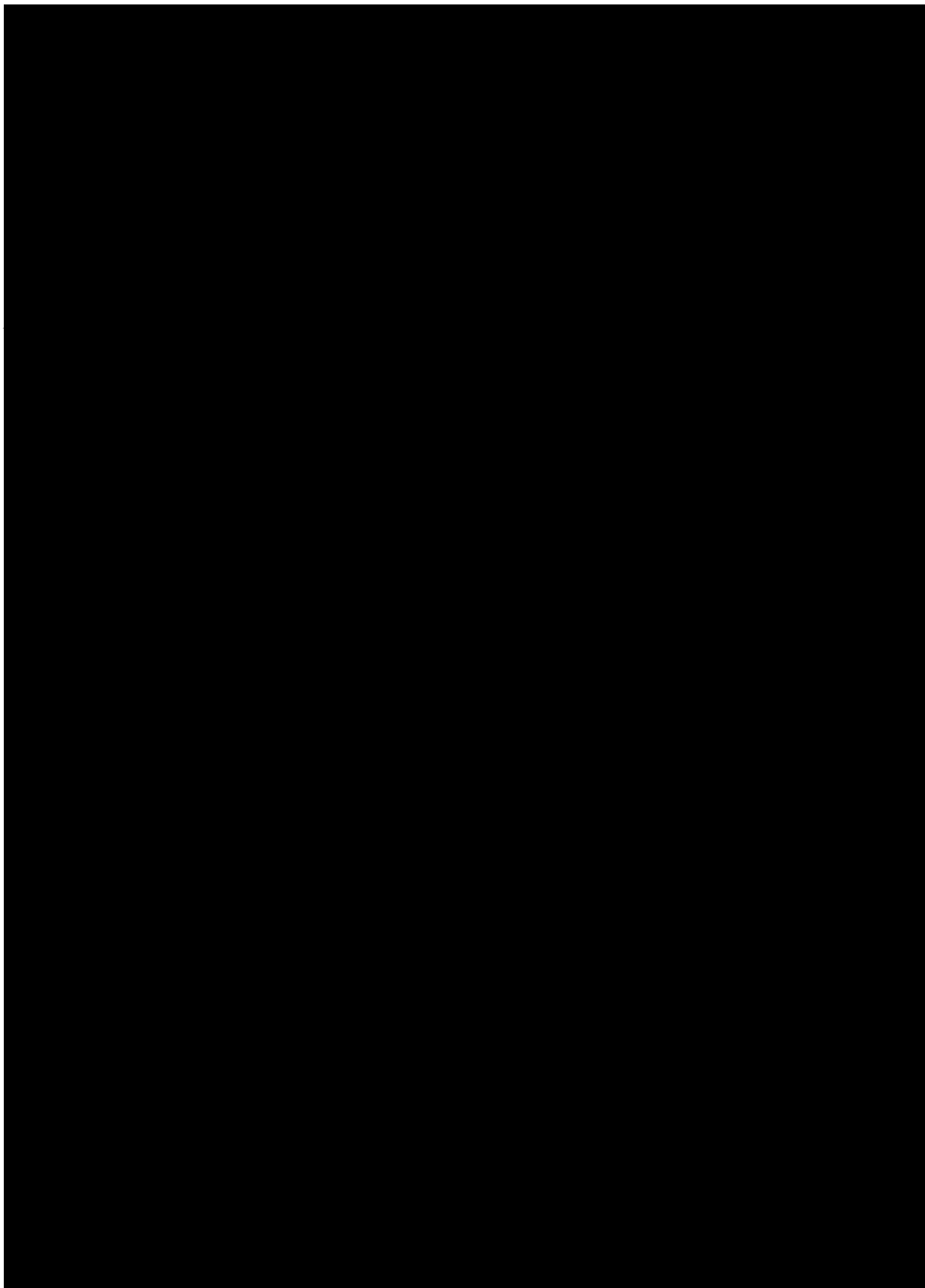


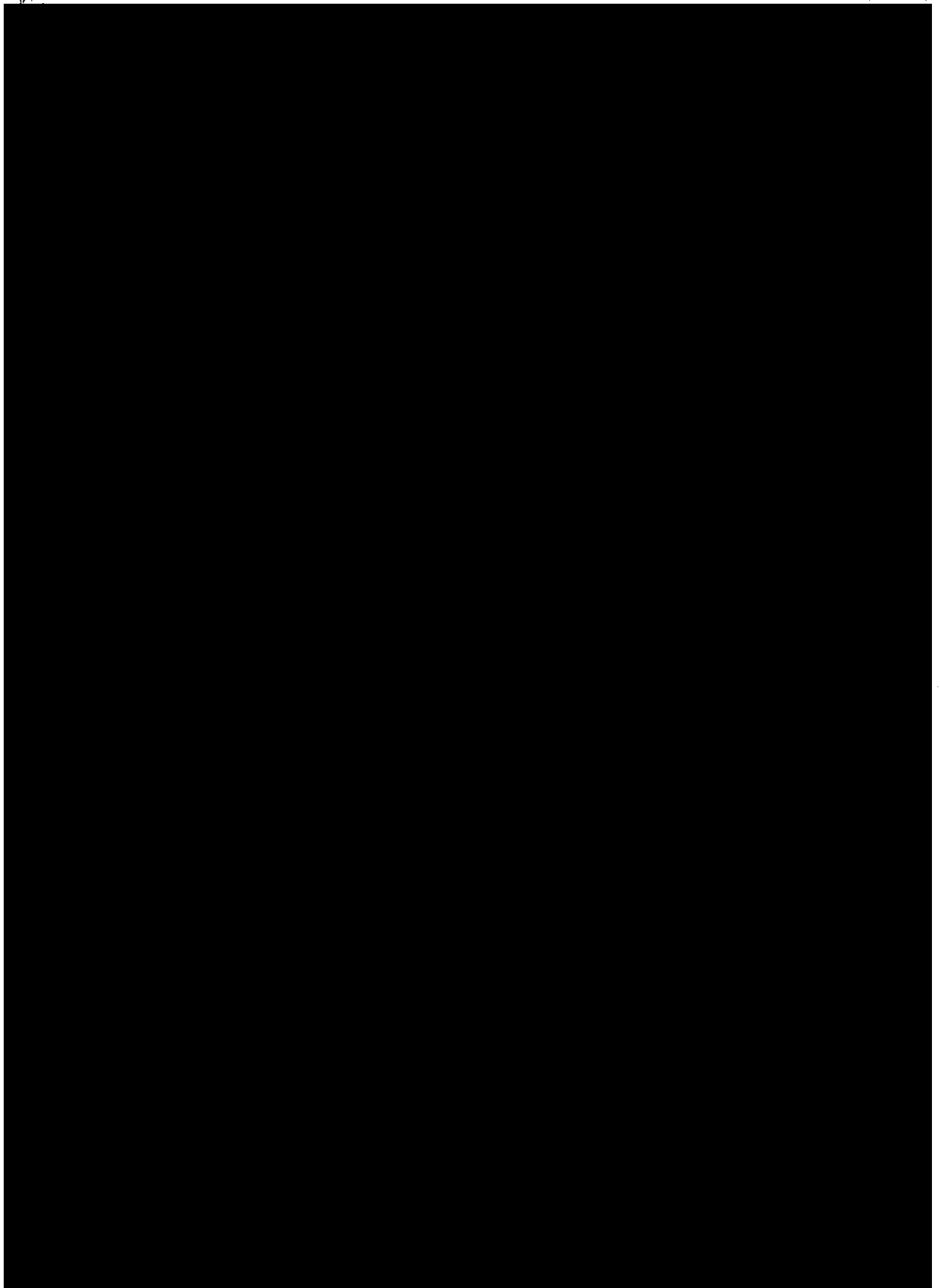


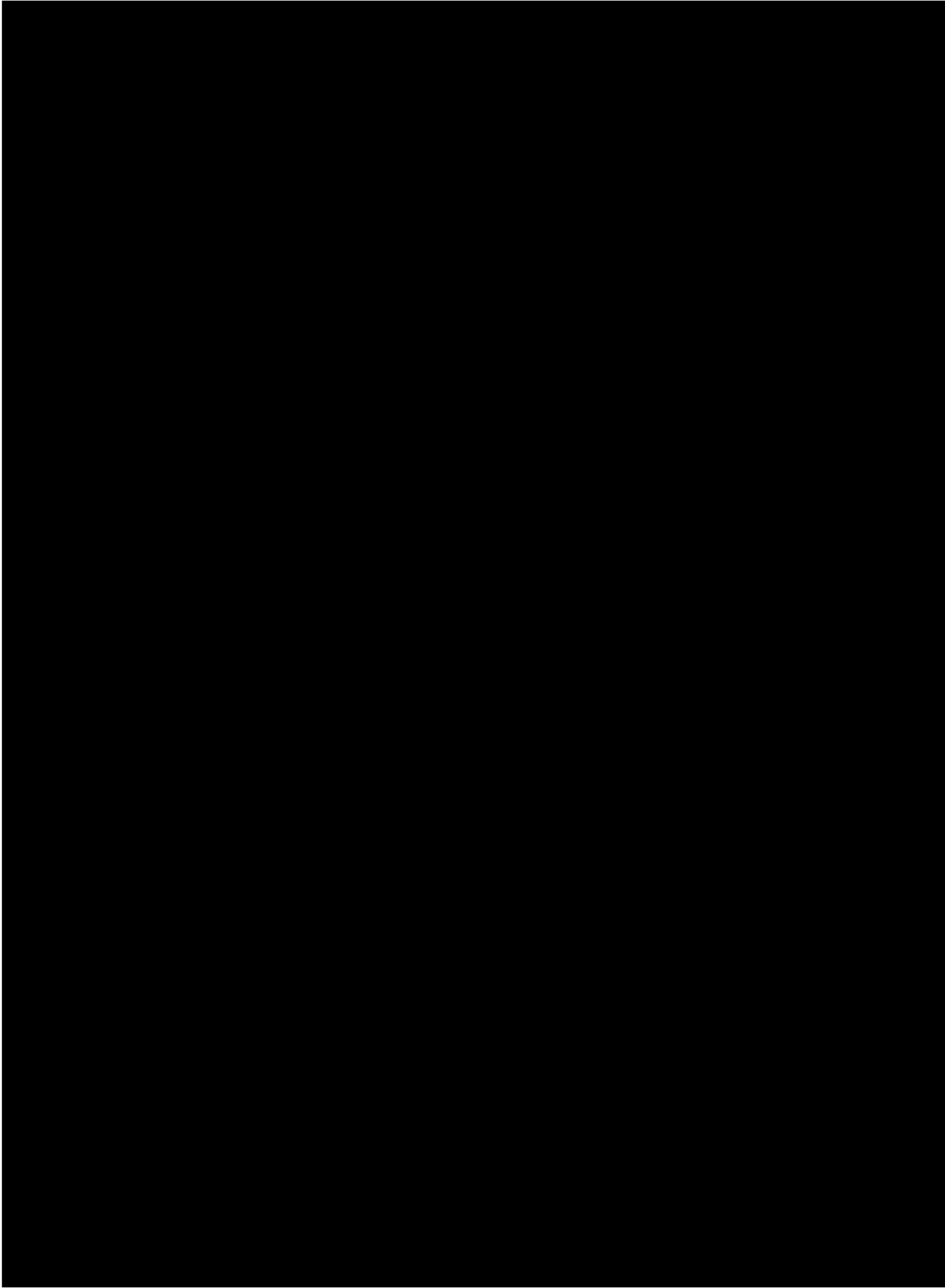


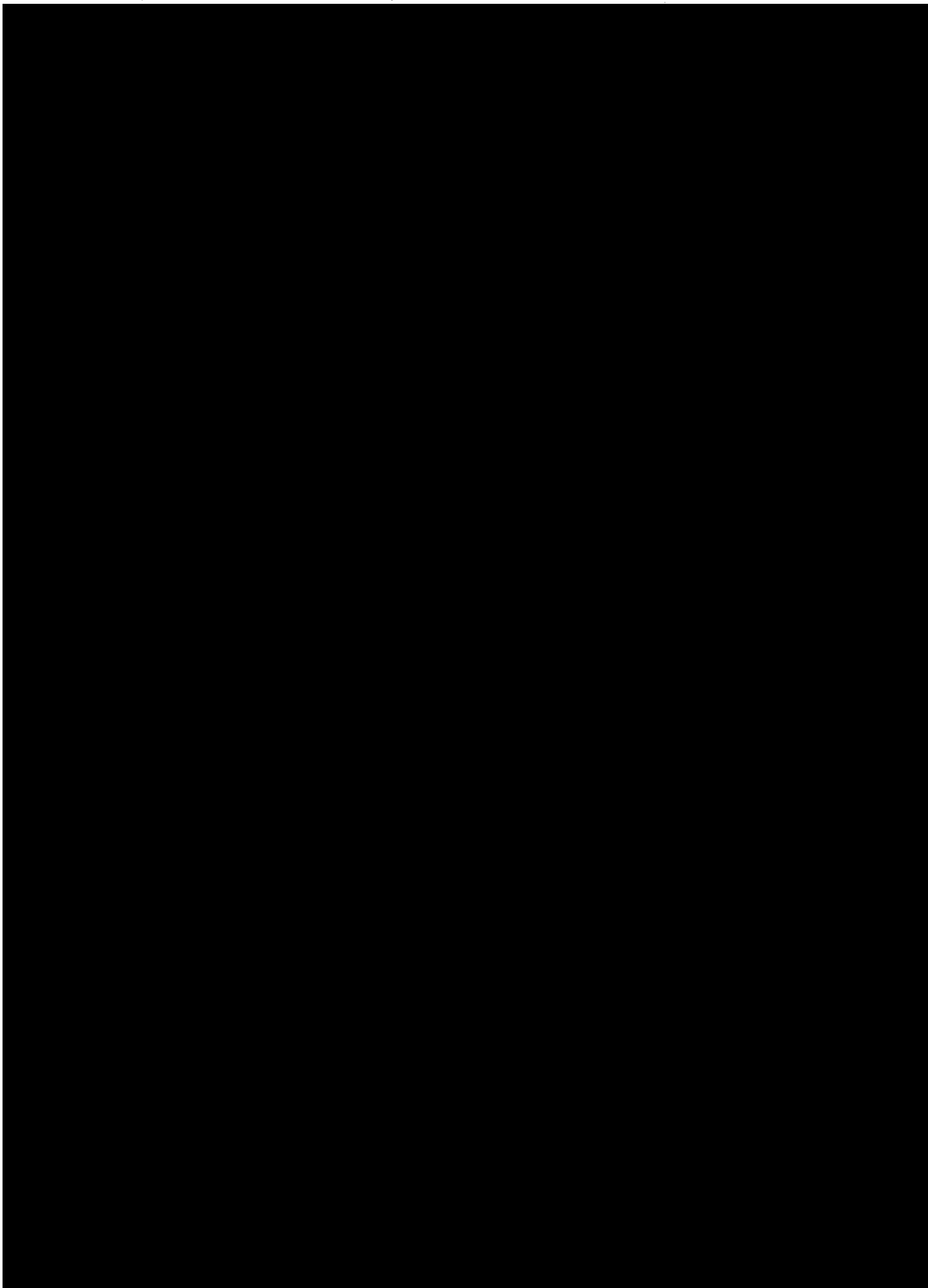


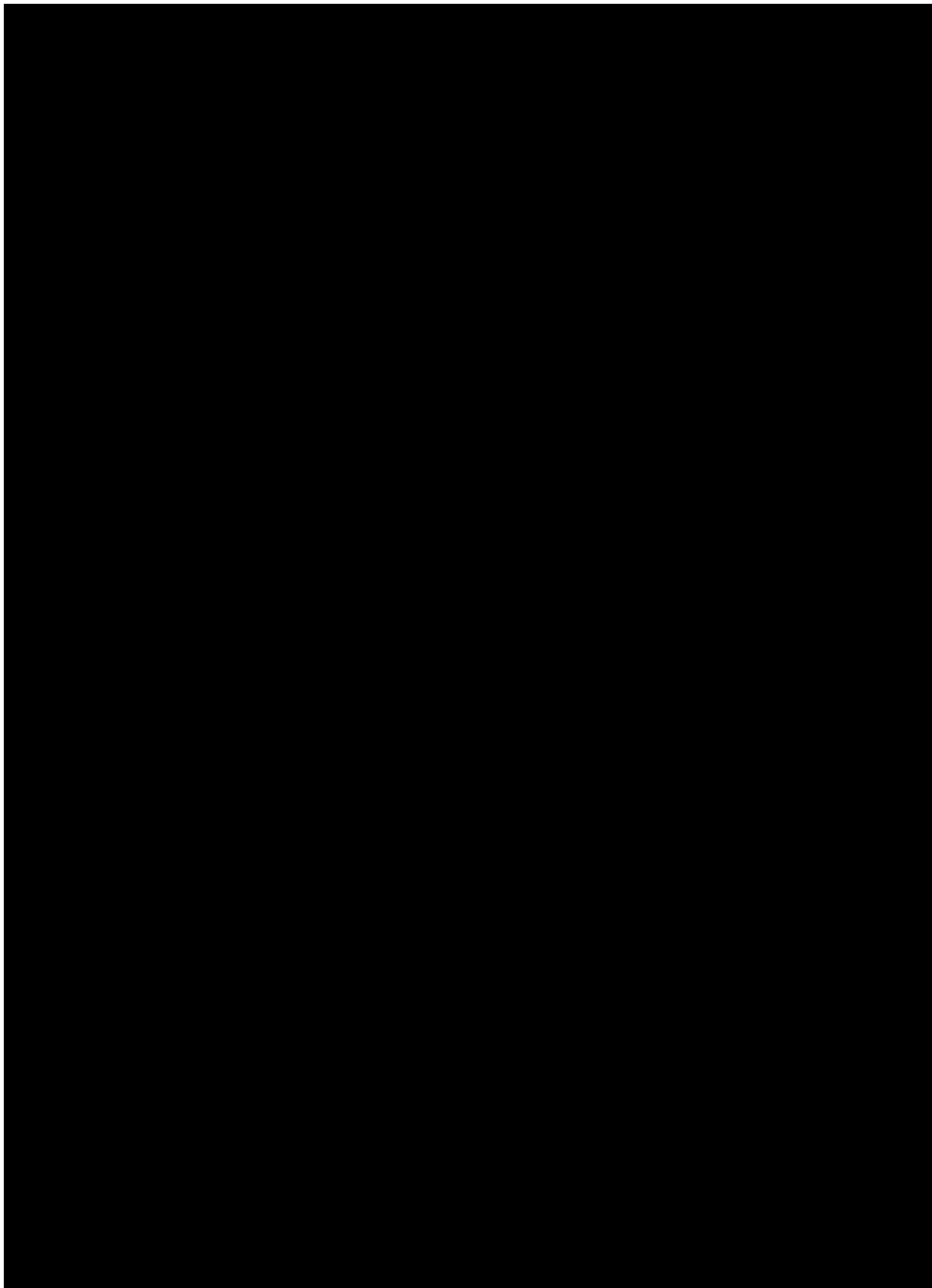


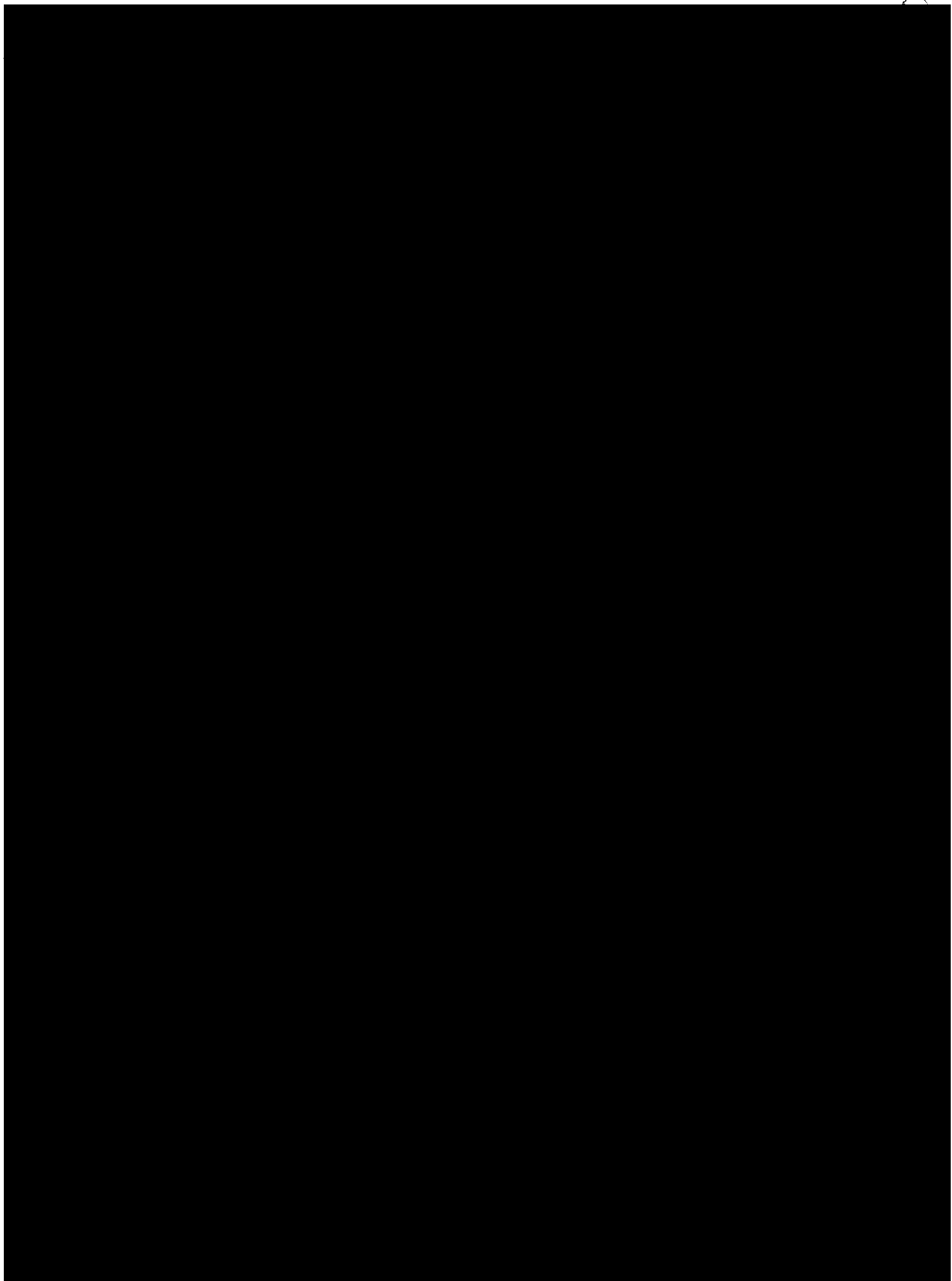


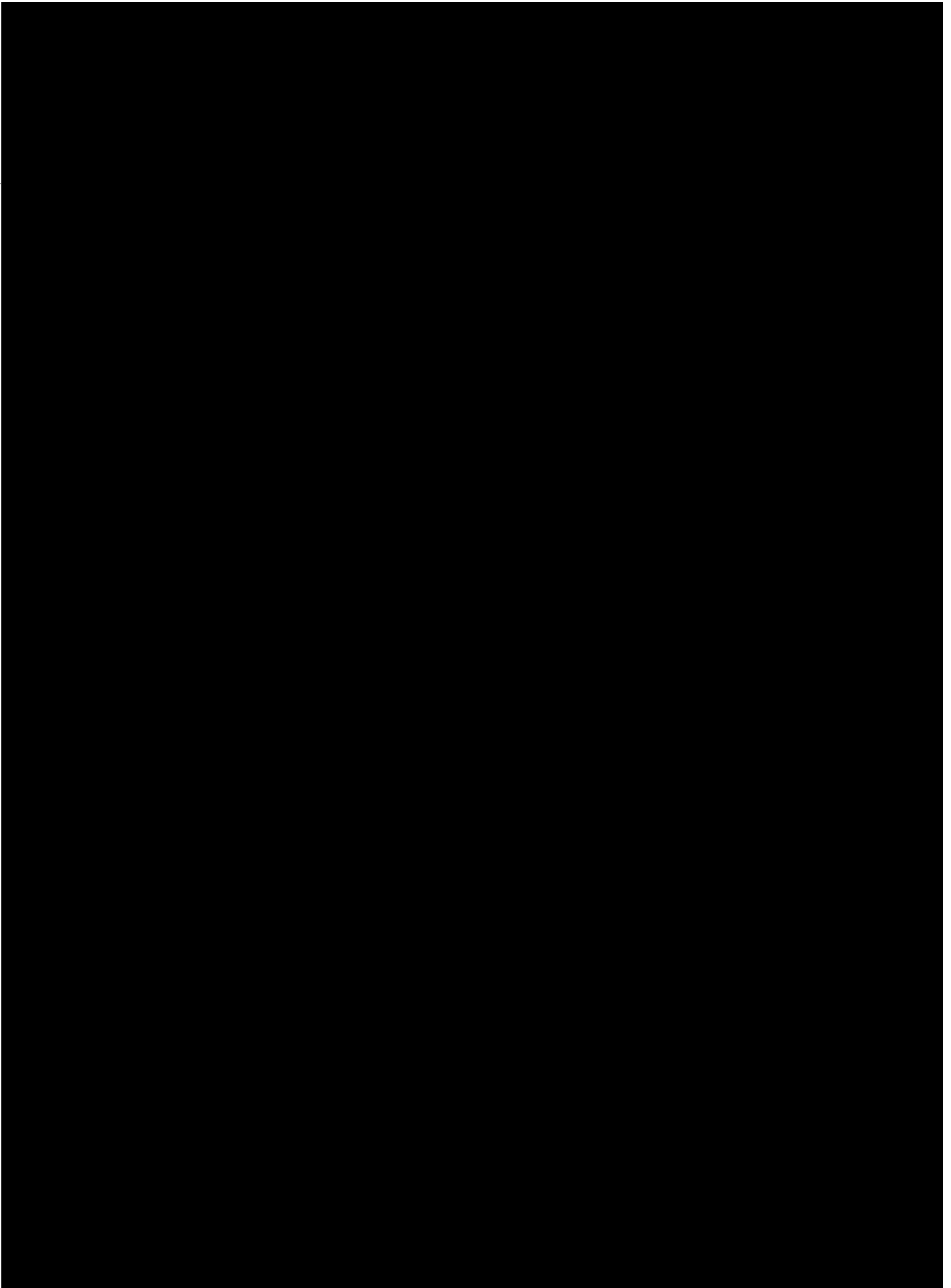


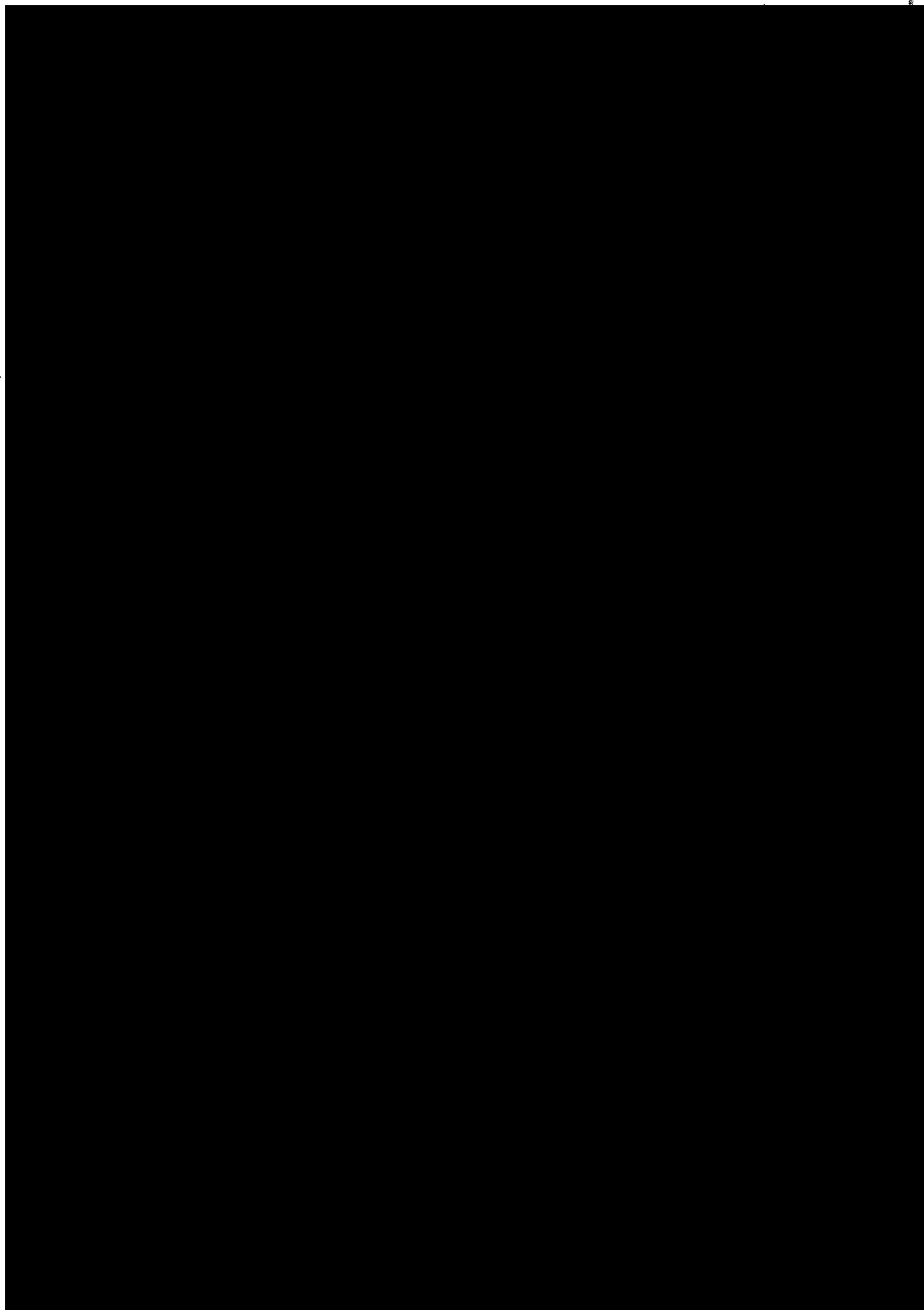


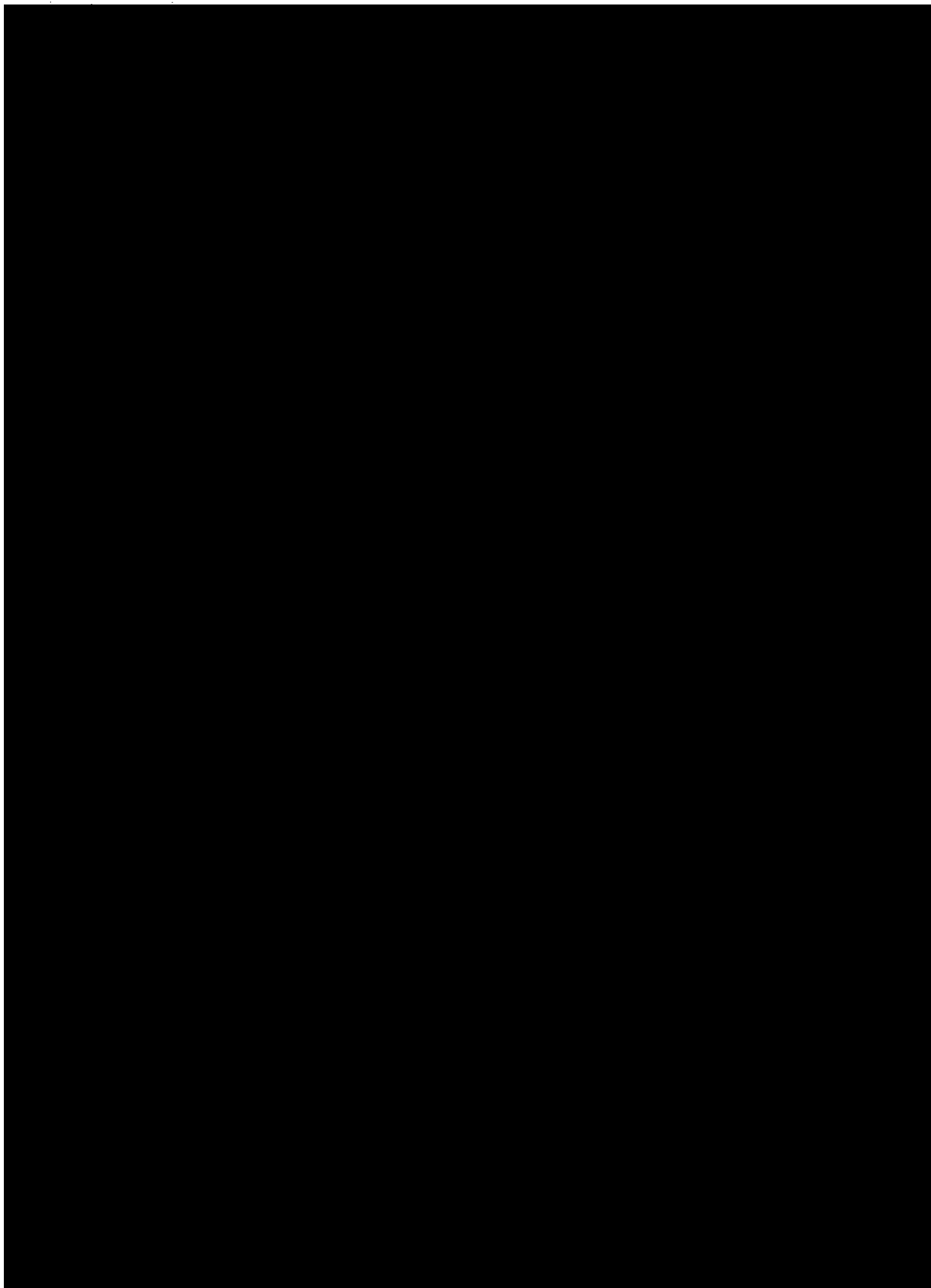


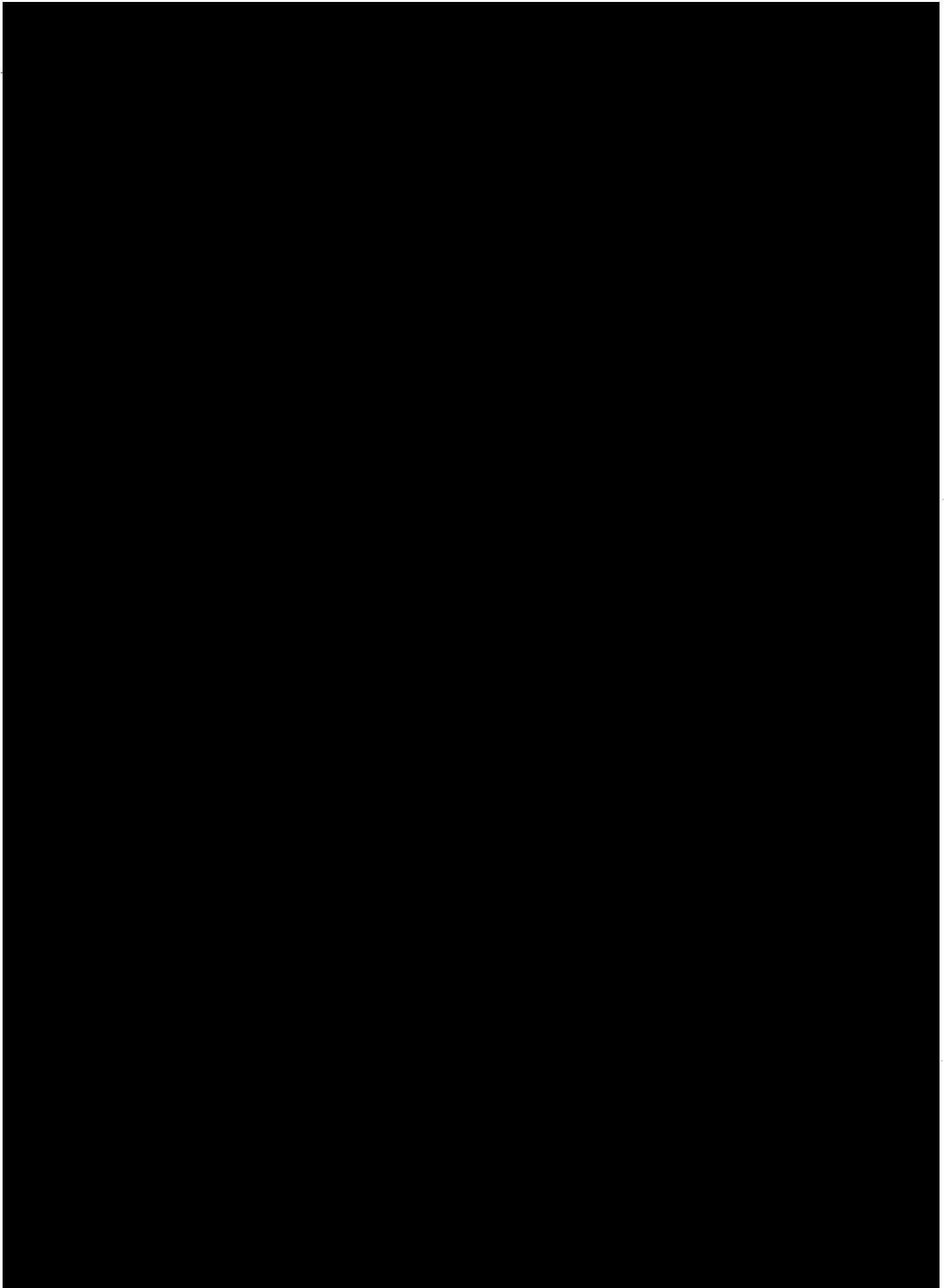


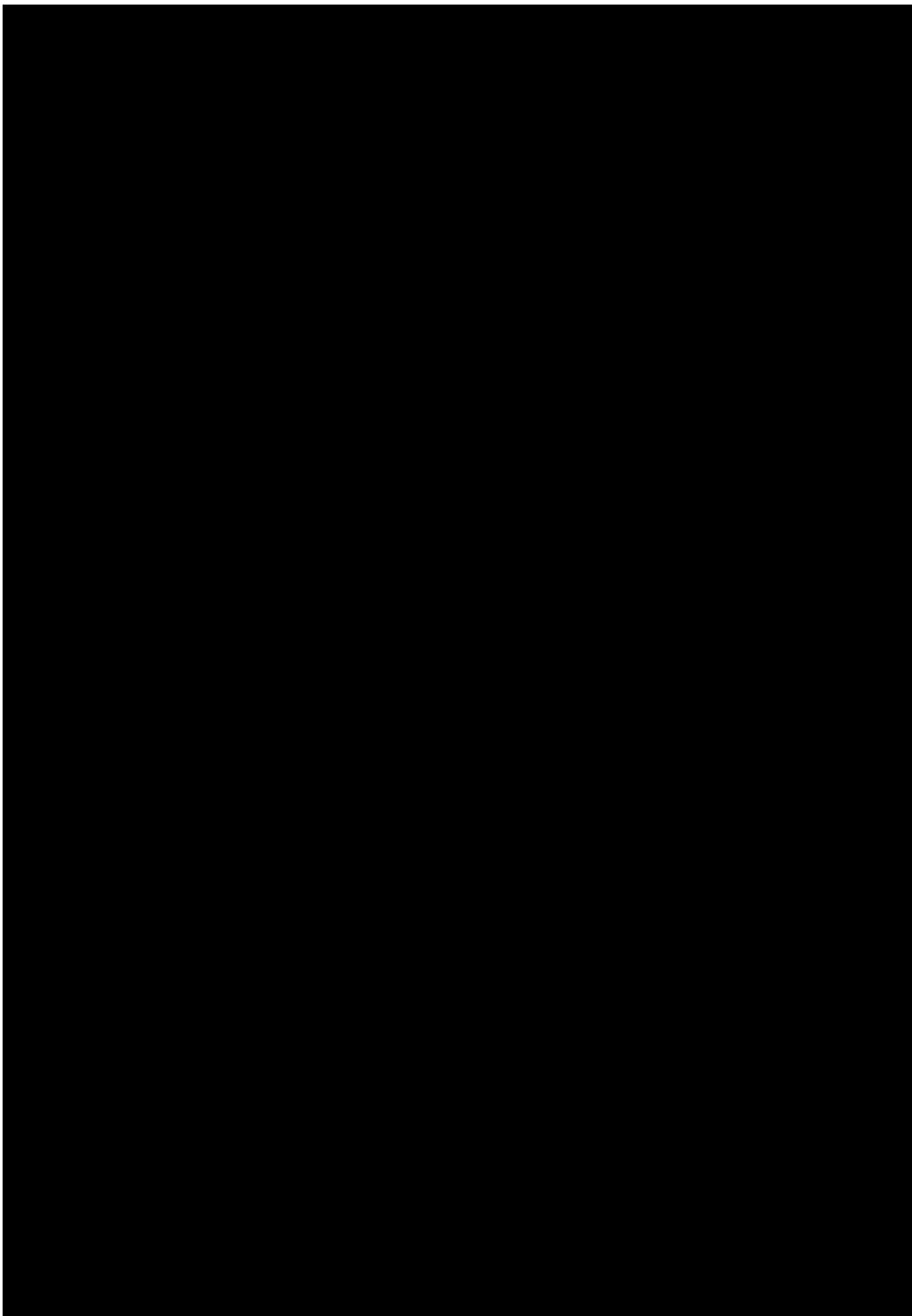


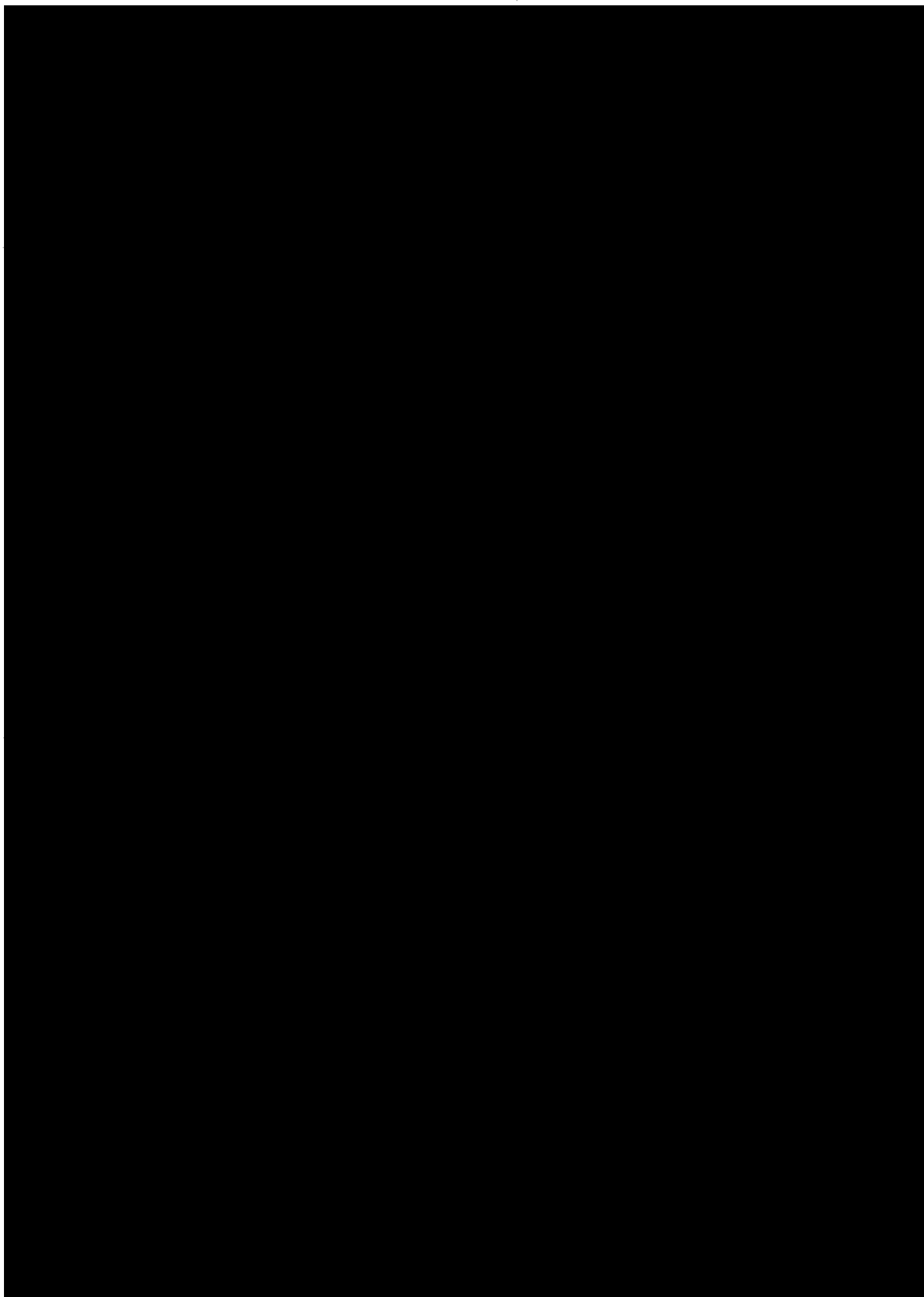


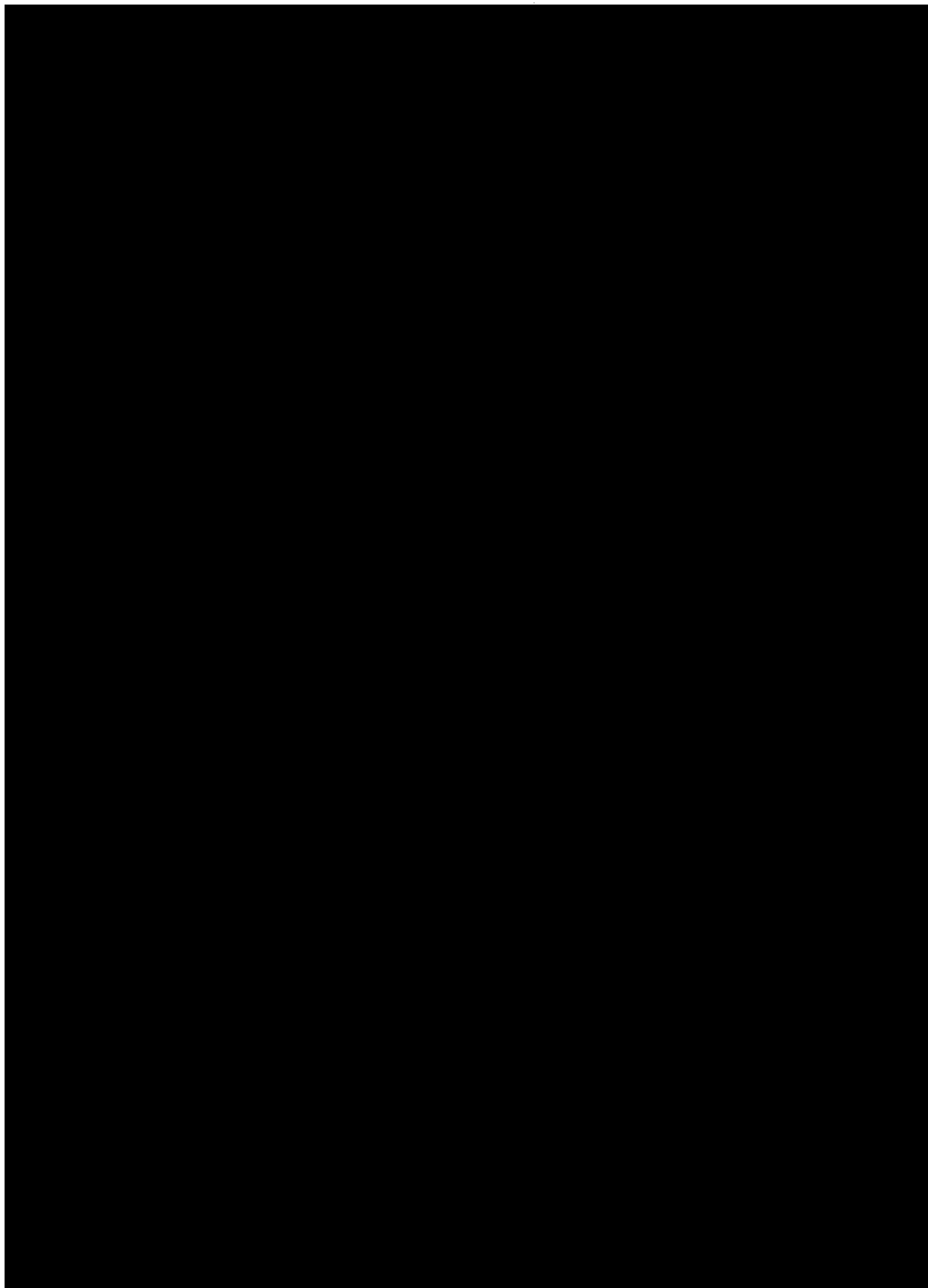


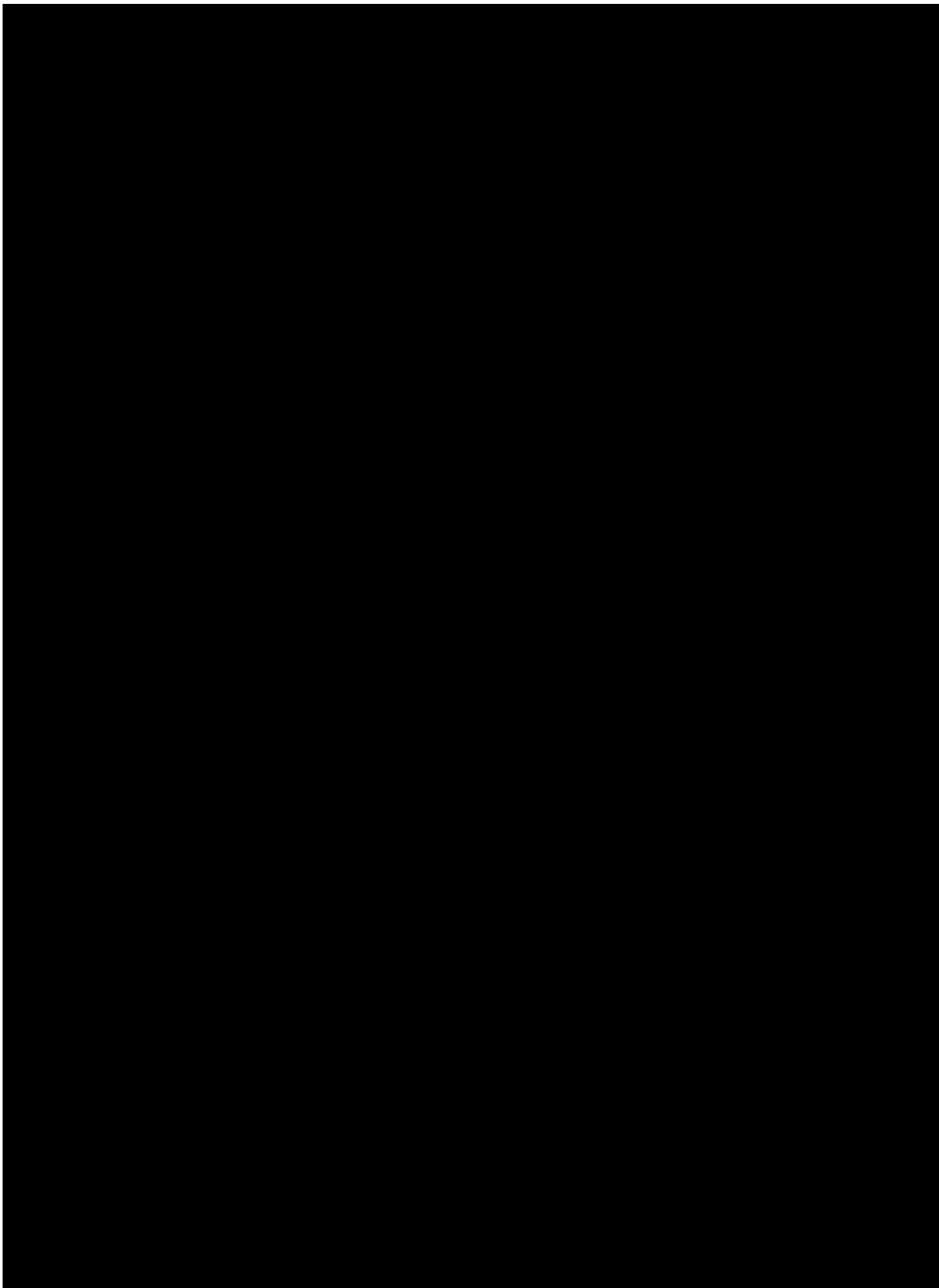


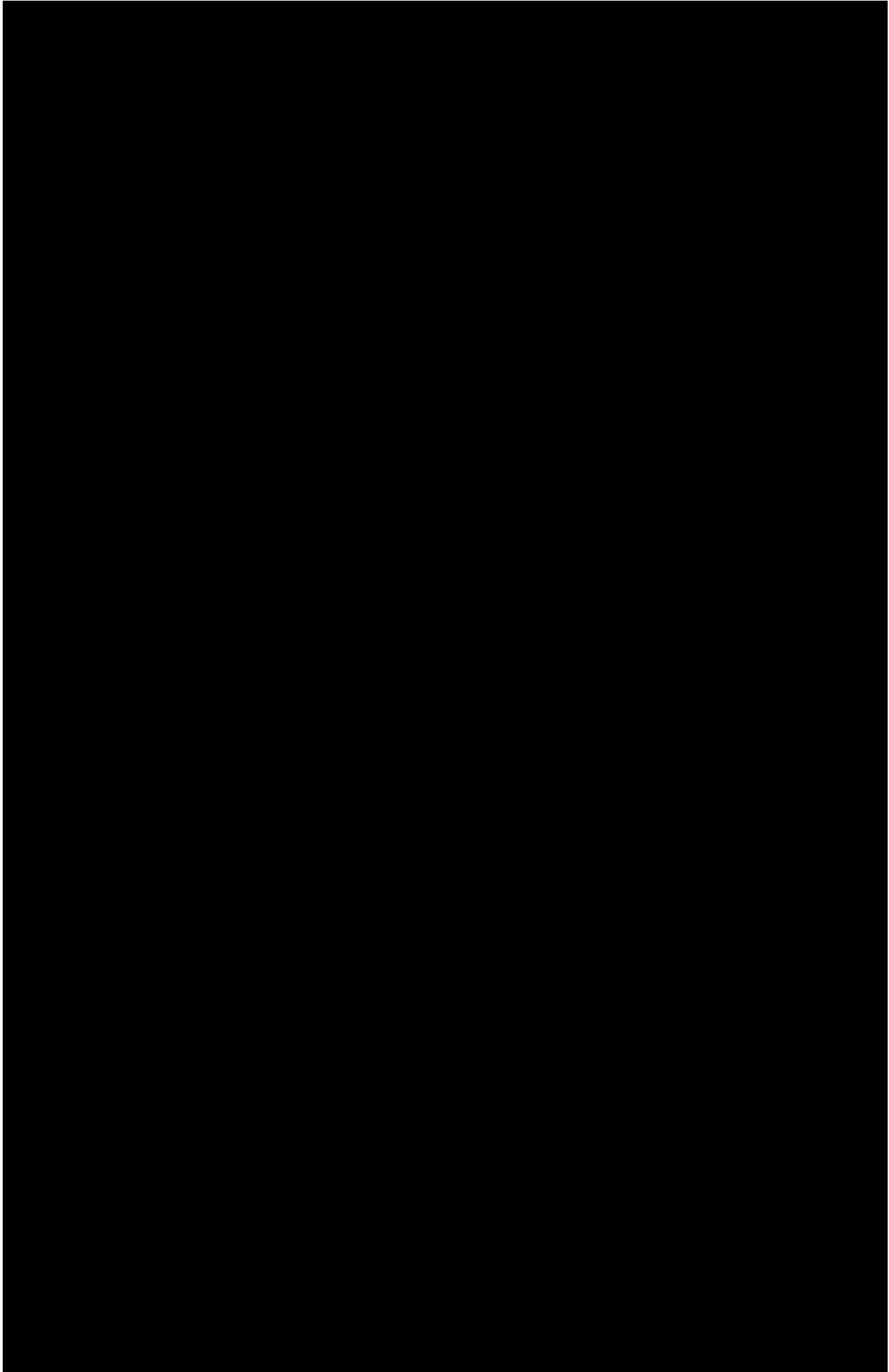














| | |
|-----------------------------|---|
| Licence Number | DIR118 |
| Licence Holder | Monsanto Australia Ltd |
| Accreditation Number | ACCR 034/2002 |
| <hr/> | |
| Submission | 2015 Annual Report for the Commercial Release of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton in Australia |
| Reporting Period | 1 June 2014 – 1 June 2015 |
| <hr/> | |
| Date | 30 June, 2015 |
| Prepared By | <div style="background-color: black; width: 100px; height: 1.2em; margin-bottom: 2px;"></div> <div style="background-color: black; width: 175px; height: 1.2em;"></div> |

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Section 1 – Licence Holder Details

| | |
|-----------------------------|---|
| Name | Monsanto Australia Limited |
| Address | Level 12 600 St Kilda rd Melbourne Victoria 3004 |
| Telephone | (03)9522 7122 |
| Facsimile | (03)9522 6122 |
| Contact email | [REDACTED] |
| Accreditation Number | ACR 034/2002 |

Scope of the Report –

This report addresses the annual reporting conditions of the DIR118 commercial licence for the release of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton in Australia, issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator (OGTR).

This report details compliance with the general and specific conditions of sections 2 and 3 of the DIR118 licence as issued to Monsanto on the 16 August 2013.

This report covers the period of time between the 1 July 2014 and 30 June 2015, which includes the 2014/15 cotton growing season.

Section 2 – General Conditions

Duration of the Licence

DIR118 has not been cancelled, suspended or surrendered.

Holder of the Licence

Monsanto Australia Limited (Monsanto) is the holder of the licence.

Project Supervisor

██████████ is the project supervisor.

Persons covered by this licence

All persons covered by this licence are all persons in Australia.

Informing people of their obligations

Monsanto Australia Limited informs all GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton growers covered by the DIR118 licence of the obligations imposed on them as a result of the conditions of this licence. This is primarily achieved through Monsanto grower training which includes information on regulatory obligations.

Licence holder to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a state or a foreign country, being law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of the licence that would affect the capacity of Monsanto to meet the conditions of the DIR118 licence.

Monsanto acknowledges that it must provide information related to their ongoing suitability to hold a licence when requested to do so in writing by the regulator and must provide the information within a time frame stipulated by the regulator.

People dealing with the GMO must allow auditing and monitoring of the dealing

Monsanto acknowledges that if a person is authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator to enter premises where the dealing is being undertaken for the purposes of auditing or monitoring the dealing.

Remaining an accredited organization

At all times, Monsanto remained an accredited organization and complied with the conditions of the accreditation as set out in the OGTR guidelines for accreditation of organizations.

Additional Information given to the Regulator

During the reporting period, Monsanto did not become aware of additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by the licence; or of any unintended effects of the dealings authorized by the licence.

Monsanto was not requested by the Regulator, during the reporting period, to collect or provide additional information about any matter to do with the progress of the dealings authorised by DIR118.

Section 3 – Growing the GMO

3.1 GMOs covered by this Licence

The only dealings with GMOs under this licence were those with the GMO described in attachment A of the DIR118 licence

3.2 Permitted Dealings

During the period of this report, only dealings with the GMO authorized were permitted

3.3 Commercial Volumes of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in each State and Territory

3.3.1 Total commercial GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in the period 1 July 2014 to 1 July 2015 – Summary

| STATE | Total ha |
|-------------------|----------|
| Victoria | 0 |
| New South Wales | 0 |
| Western Australia | 0 |
| Queensland | 0 |
| Total ha | 0 |

3.4 Trial Volumes of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in each State and Territory

3.4.1 Total trial GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton planted in the period 1 July 2014 to 1 July 2015 – Summary

| STATE | Total ha |
|-------------------|----------|
| Victoria | 0 |
| New South Wales | 0 |
| Western Australia | 0 |
| Queensland | 0 |
| Total ha | 0 |

3.4 Annual Surveys

No other information on the progress of the release of the GMO, including annual surveys, was required to be submitted during this annual reporting period under specific condition 17(d) of DIR118.

Bayer CropScience

BioScience



18 November 2010

Office of the Gene Technology Regulator
MDP 54, GPO Box 9848
CANBERRA
ACT 2601

Attention: Application Entry Point

Dear Sir/Madam,

Bayer CropScience Pty Ltd
391-393 Tooronga Road
East Hawthorn Vic 3123
Australia
Tel. +61 3 9248 6888
Fax +61 3 9248 6800
A.B.N. 87 000 226 022
www.bayercropscience.com.au

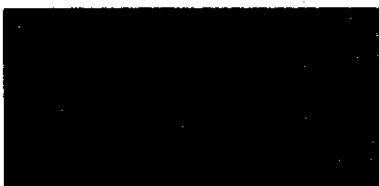
Annual Report for DIR062/2005 for the year 8 August 2009 to 7 August 2010

I refer to the requirements of the above licence (v/z. Condition No. 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period of 8 August 2009 to 7 August 2010, commercial quantities of approximately 1,965 ha of cotton containing Liberty Link technology were planted in Australia. Seed production plantings equalled 50.4 ha and small-scale field trials of 1.17 ha total were conducted by CSIRO.

During the reporting period, no adverse effects were observed or reported to us as a result of dealings with Liberty Link or LLCotton25/Bollgard II cotton under licence DIR062/2005.

Yours sincerely,
Bayer CropScience



Regulatory Affairs Manager
BioScience



Dow AgroSciences

Dow AgroSciences Australia Ltd

Level 5, 20 Rodborough Road, Frenchs Forest NSW 2086, Australia

Tel: +61 2 9776 3400 Fax: +61 2 9776 3435 Toll Free: 1800 700 096

Postal: Locked Bag 502, Frenchs Forest NSW 2086, Australia

www.dowagrosiences.com.au

ABN 24 003 771 659

17 February 2016

Office of the Gene Technology Regulator
(MDP54)
GPO Box 9848
Canberra ACT 2601

DIR091 ANNUAL REPORT 2015

Since the issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

Regards,

[Redacted signature block]

MONSANTO



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LICENCE No: DIR 012/2002
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2003 Annual Report for Bollgard II®
(Commercial Release)
REPORTING PERIOD: 2002/03 Cotton Growing Season
DATE: 22 December 2003

PREPARED BY: [REDACTED]
Regulatory Affairs Associate

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**LICENCE HOLDER DETAILS**

Name: Monsanto Australia Limited
Address: 600 St Kilda Road, Melbourne 3004
PO Box 6051
St Kilda Road Central,
Melbourne Victoria 8008
Telephone: 03 9522 7102
Facsimile: 03 9522 6102
Contact email: [REDACTED]
**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 012 commercial release licence for Bollgard II® issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of the DIR 012 licence as issued to Monsanto Australia Limited on 23 September 2002, and varied in June and September 2003.

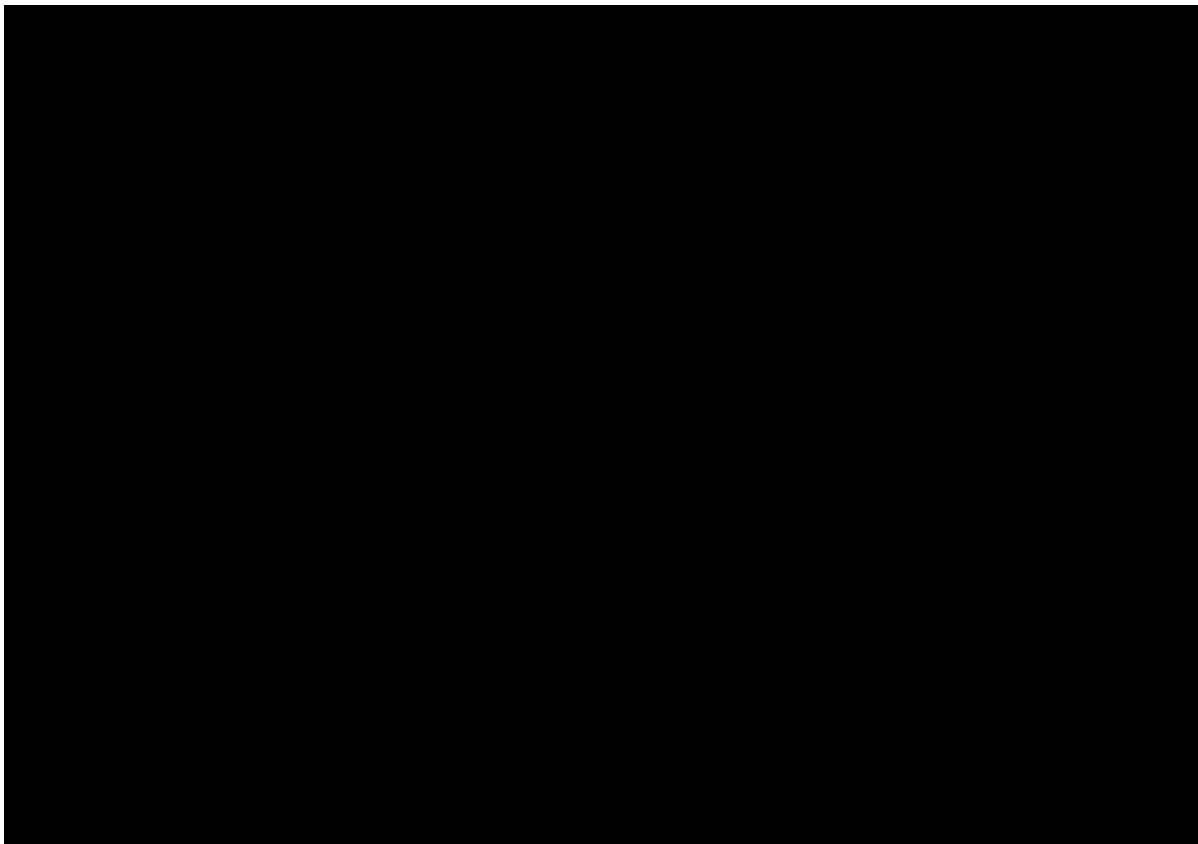


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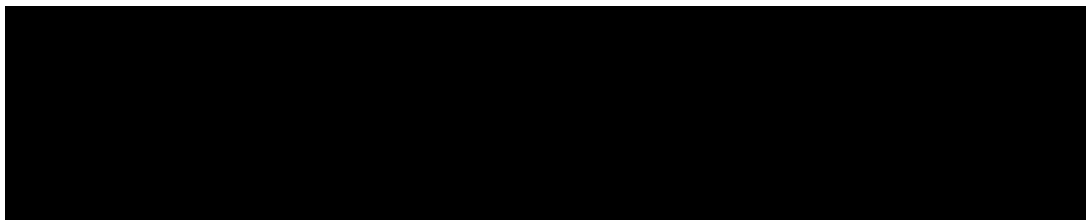
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**1. General Conditions****a. Informing people of their obligations**

In the 2002/03 cotton growing season, Monsanto Australia Limited informed all cotton growers, cotton gins, and site compliance managers covered by the DIR 012 licence of the obligations imposed on them as a result of the conditions of this licence.

**b. Reporting**

During the reporting period, the licence holder did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence, or of any unintended effects of the dealings authorised by the licence.





c. Material changes in circumstances

During the 2002/03 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence or permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of the DIR 012 licence.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

The contact details of the Project Supervisor did not change during the reporting period.

f. Testing methodology

Under conditions of the licence, Monsanto Australia Limited was required to provide the Regulator with a method capable of reliably detecting the presence of the GMO. [REDACTED]

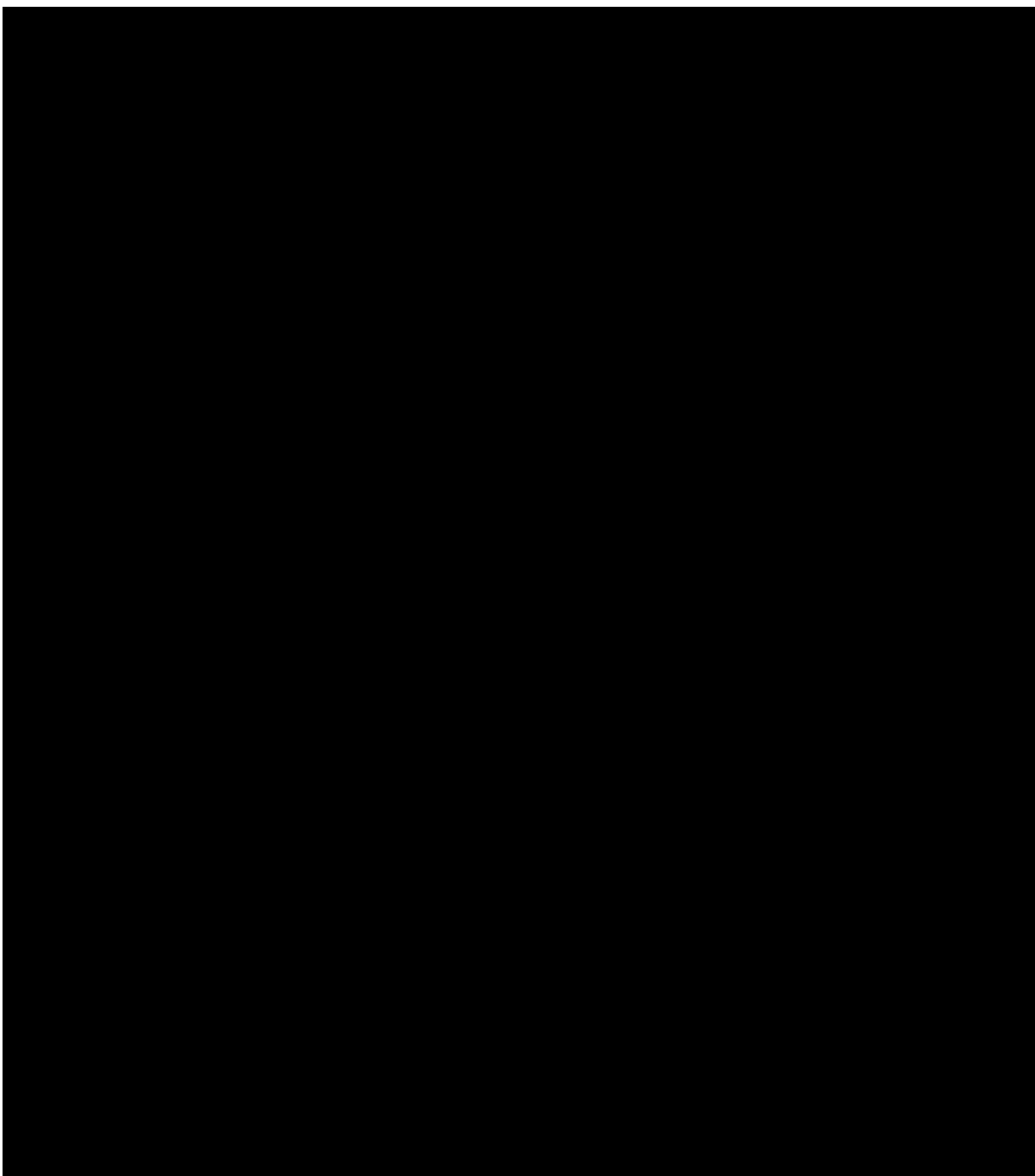


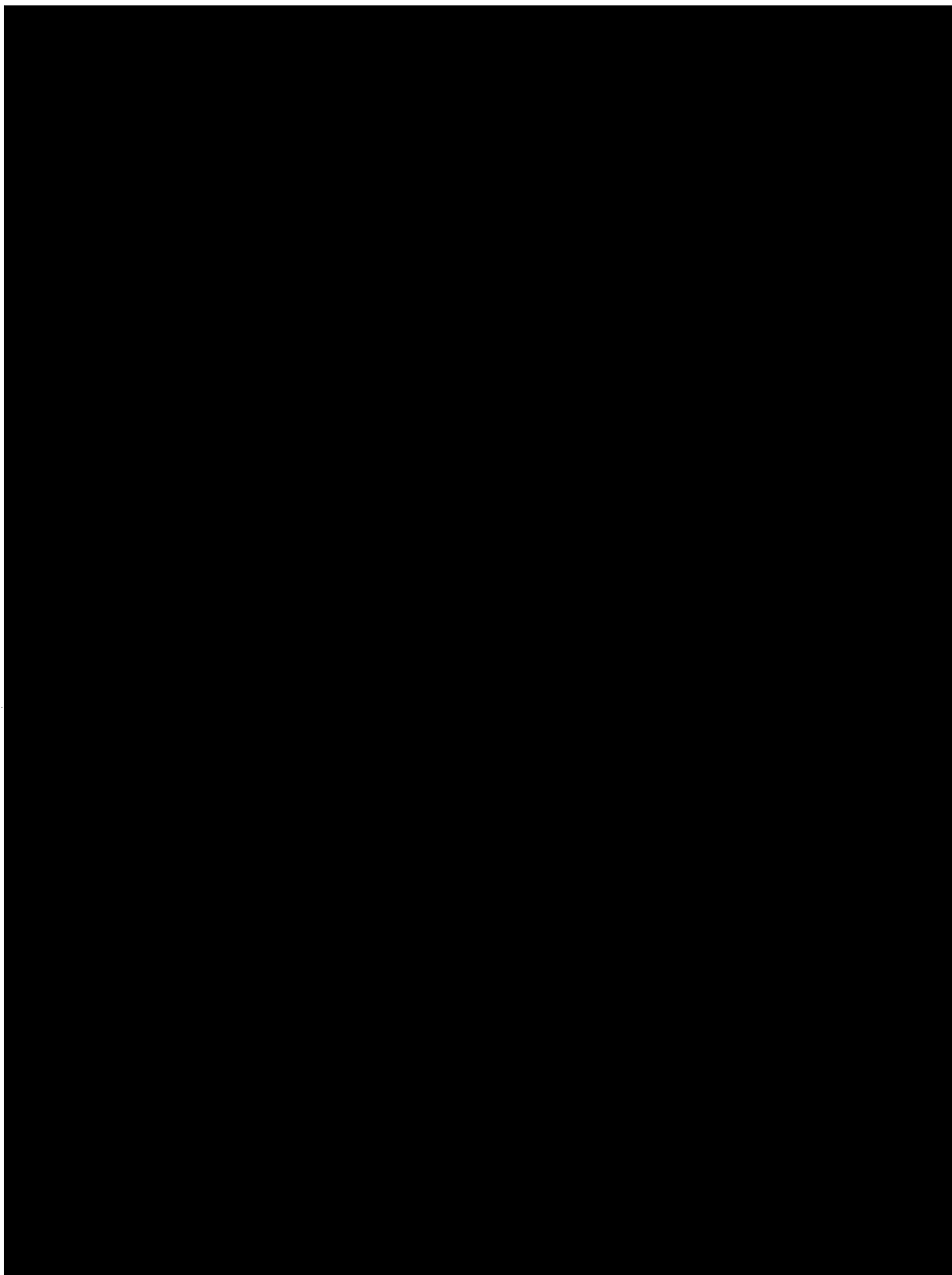
2. Release of Bollgard II® south of latitude 22° south (outside the Restricted Zone)

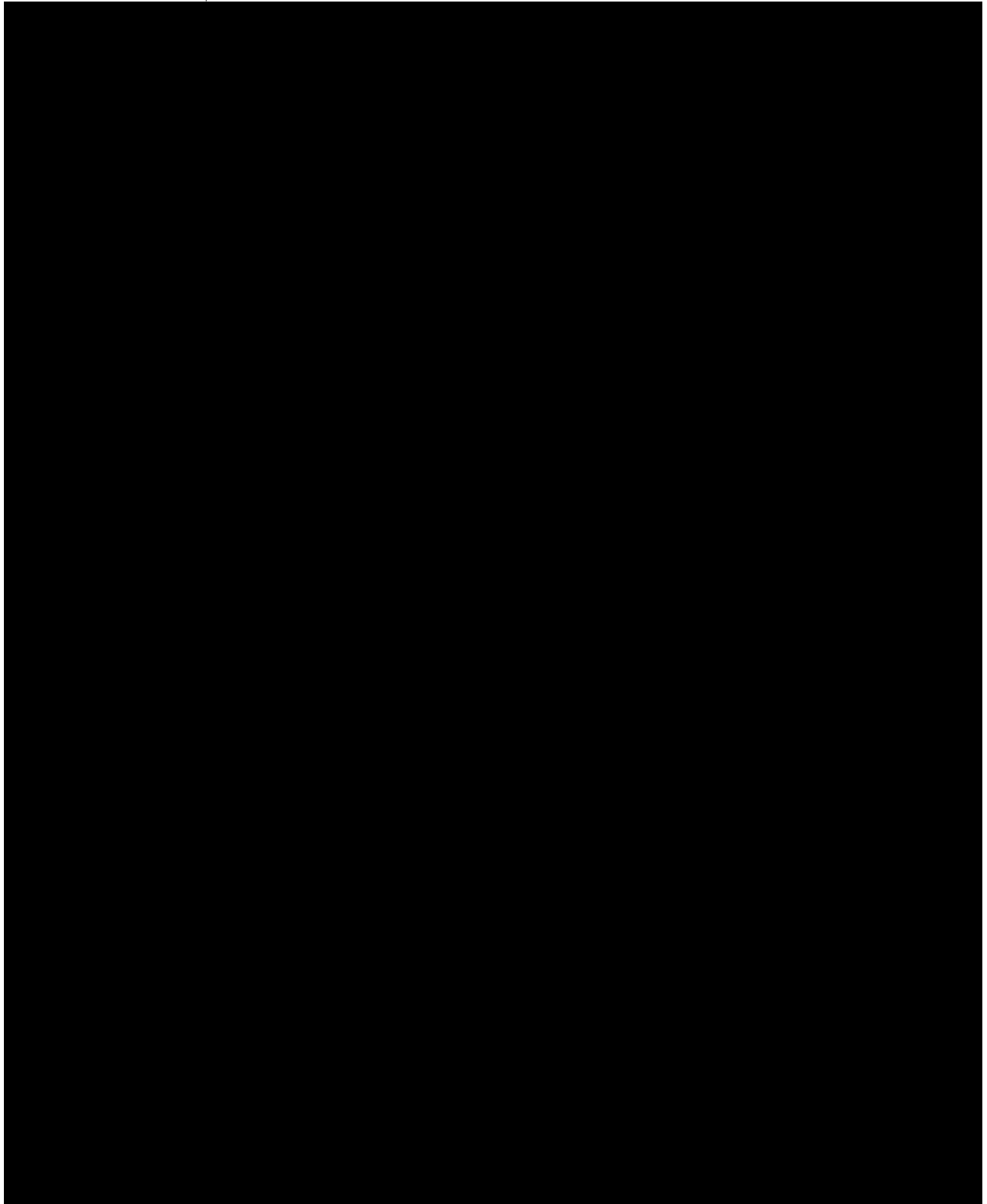
Monsanto Australia Limited was granted a licence to commercially release Bollgard II in areas south of latitude 22° south on 23 September 2002. However, in the 2002/03 cotton growing season, only eighty commercial Bollgard II sites were planted in areas south of 22° south due to the need to obtain regulatory approval from the Australian Pesticides and Veterinary Medicines Authority (APVMA) (formerly the NRA) before a wide scale release was possible. (Sites planted in the 2002/03 season were planted under APVMA permit number PER5707.)

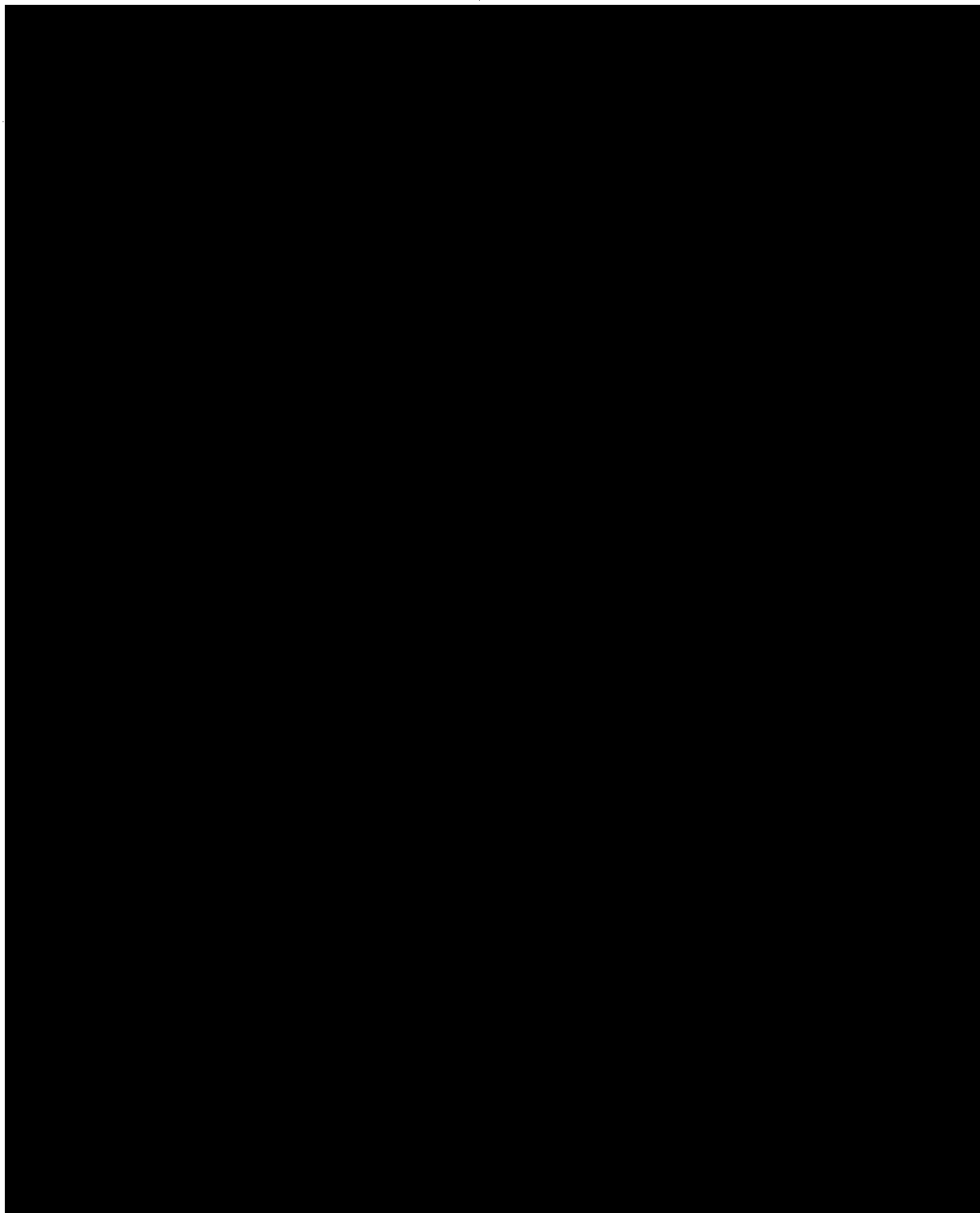
3. Release of Bollgard II® north of latitude 22° south (within the Restricted Zone)

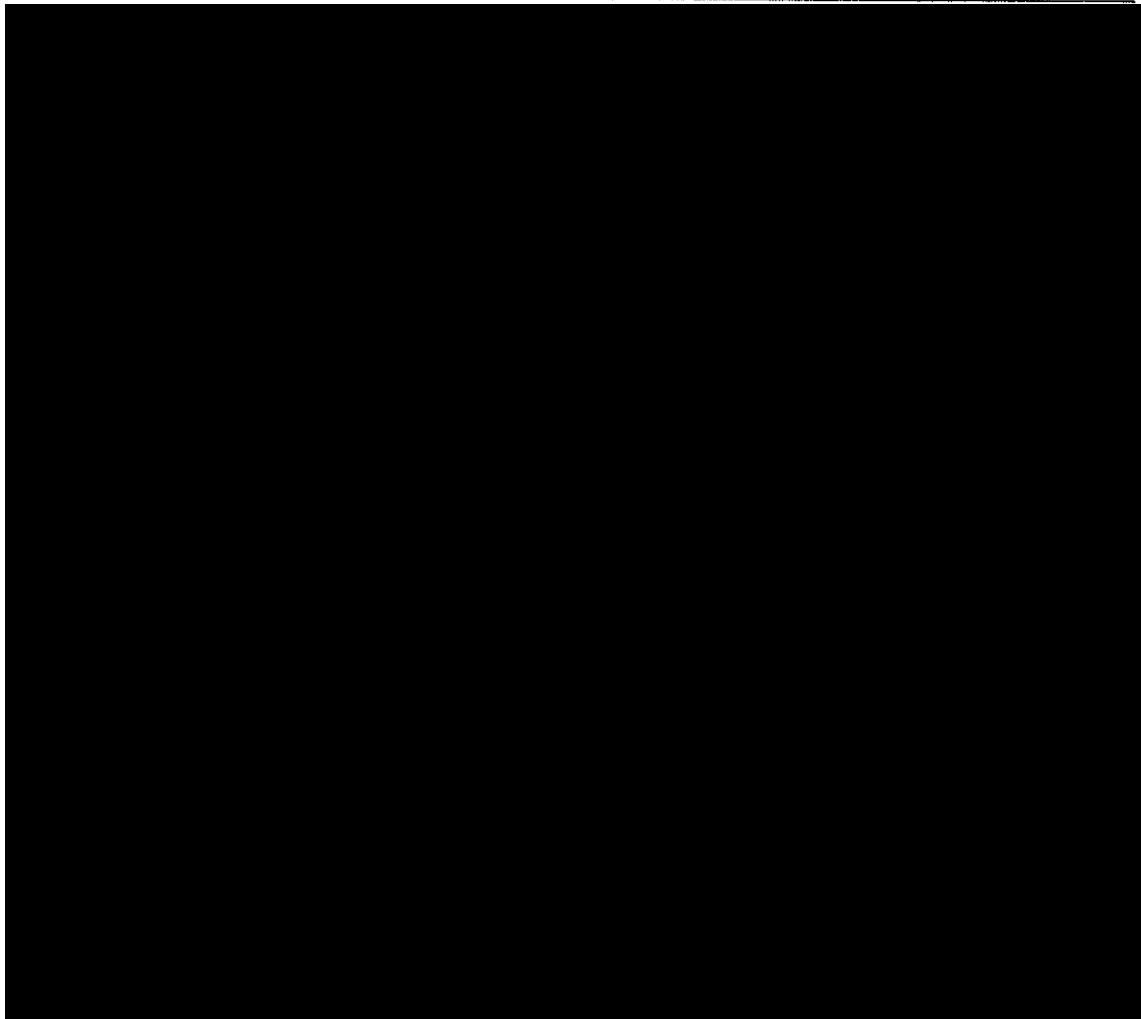


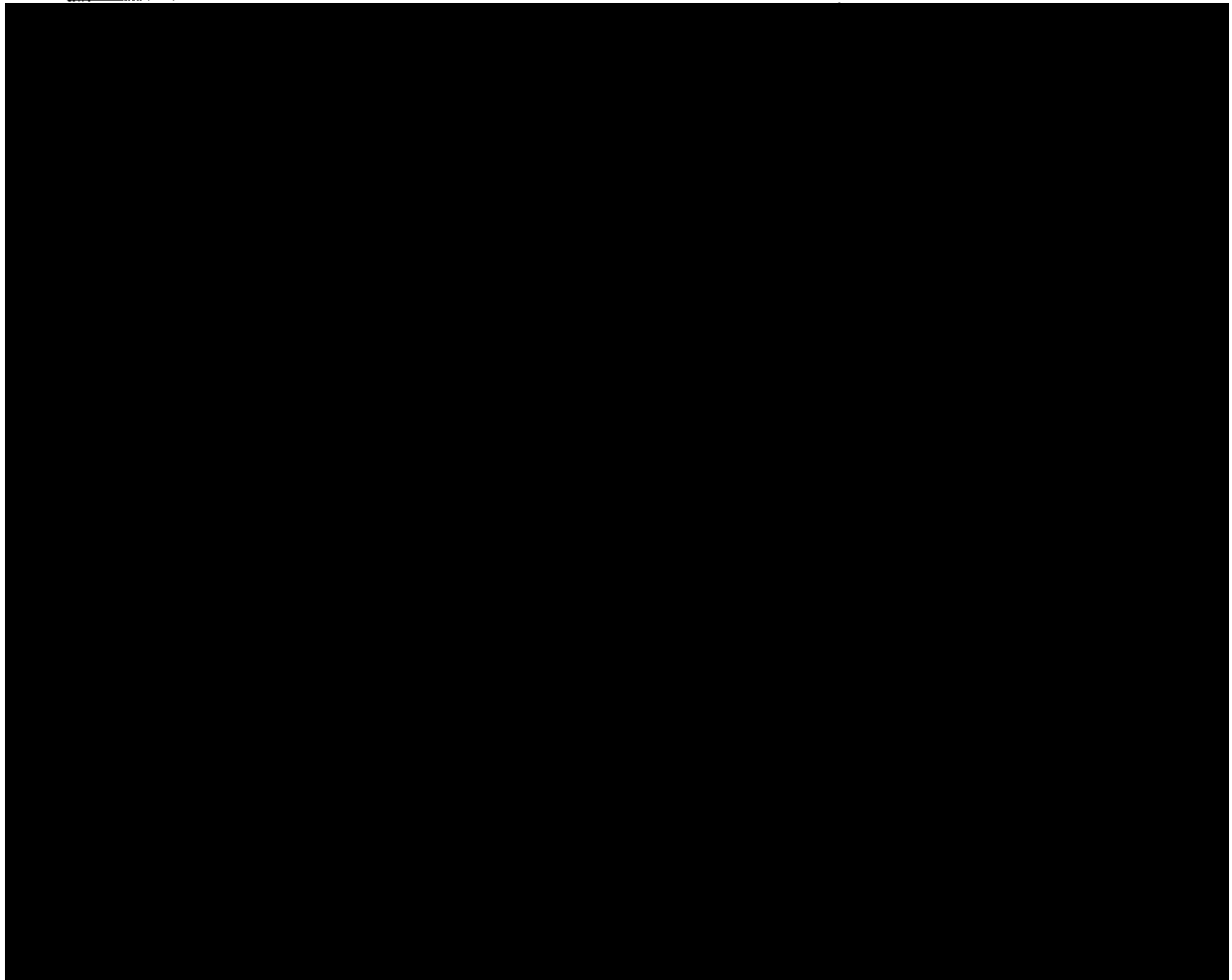




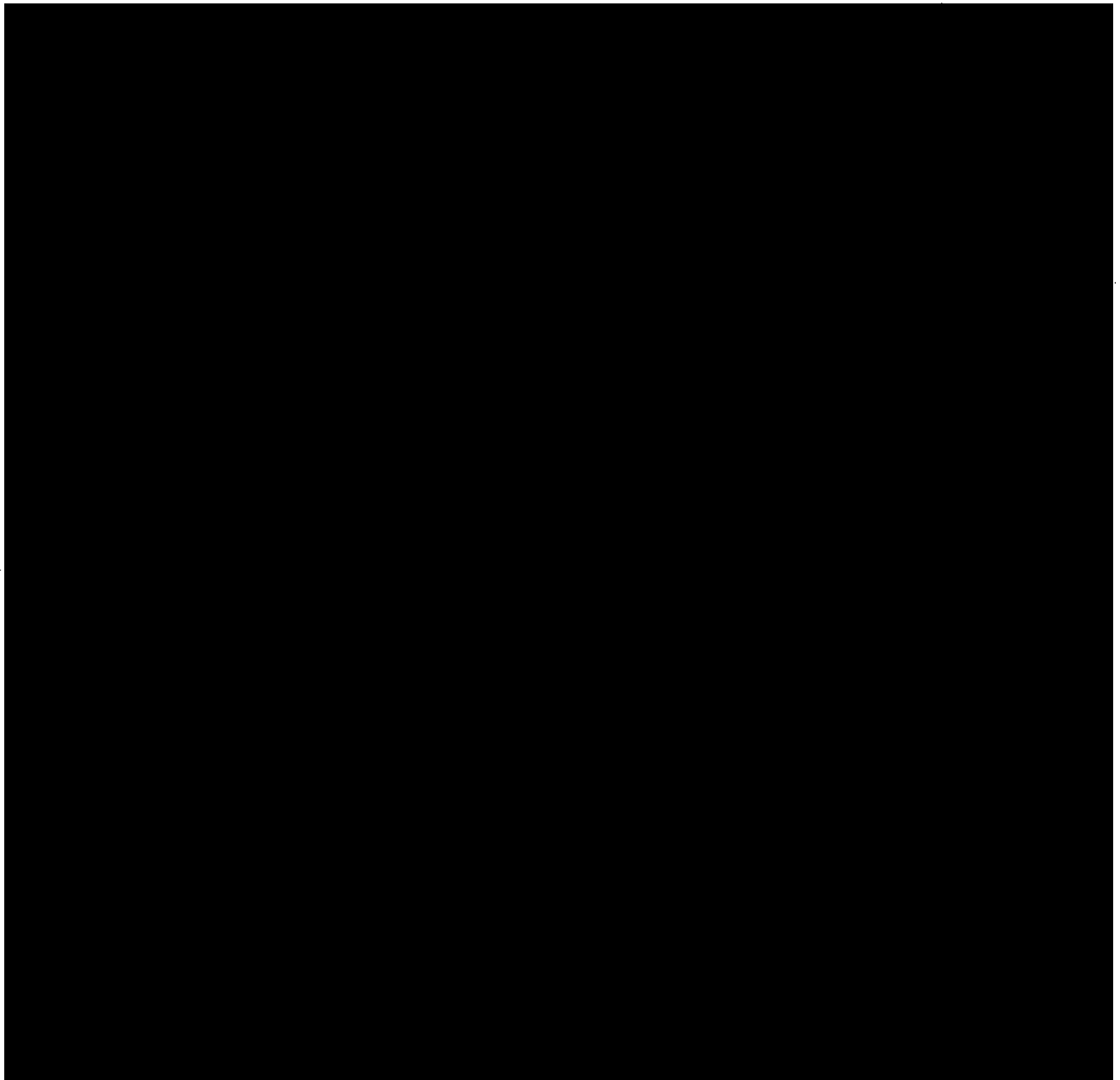


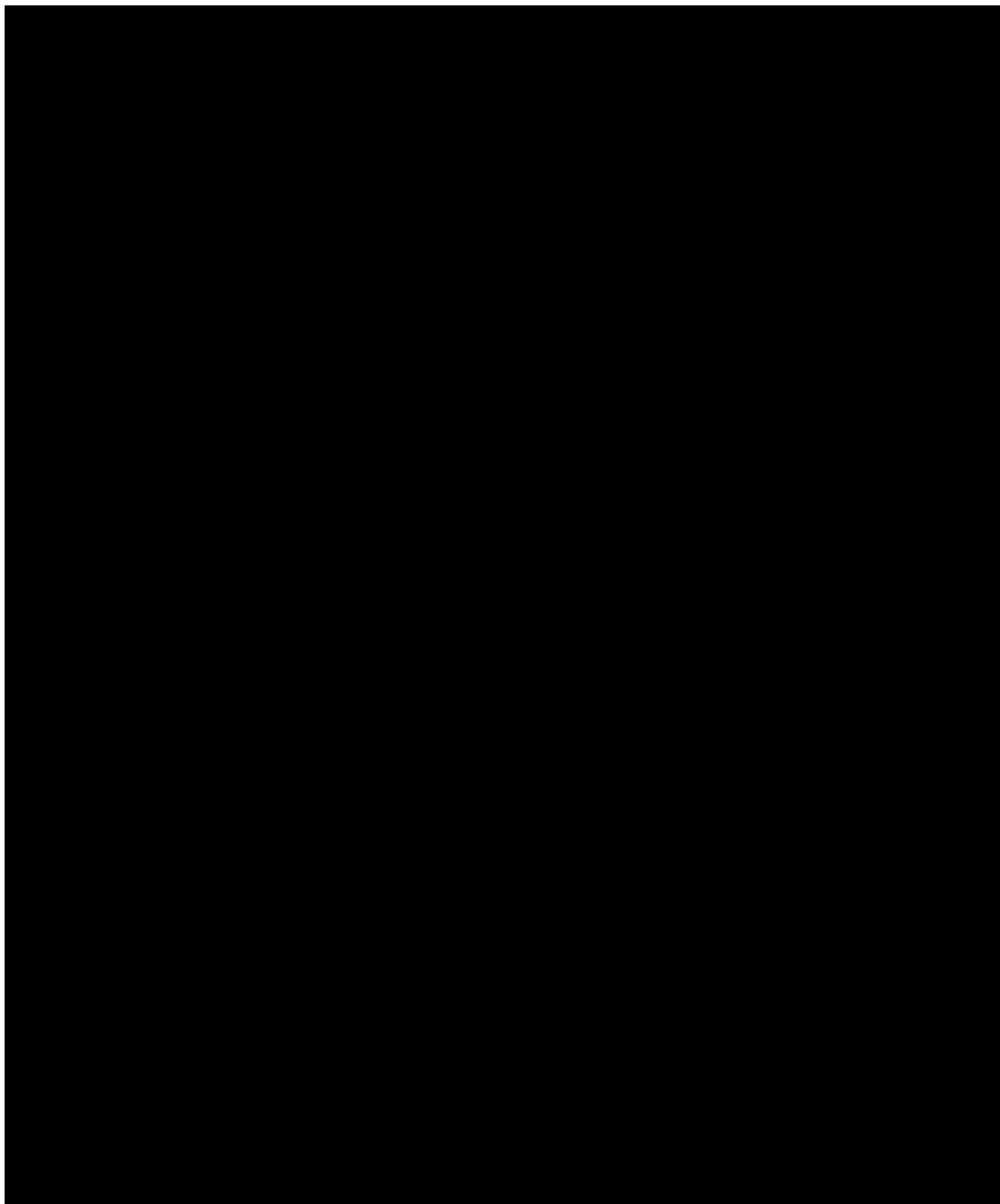


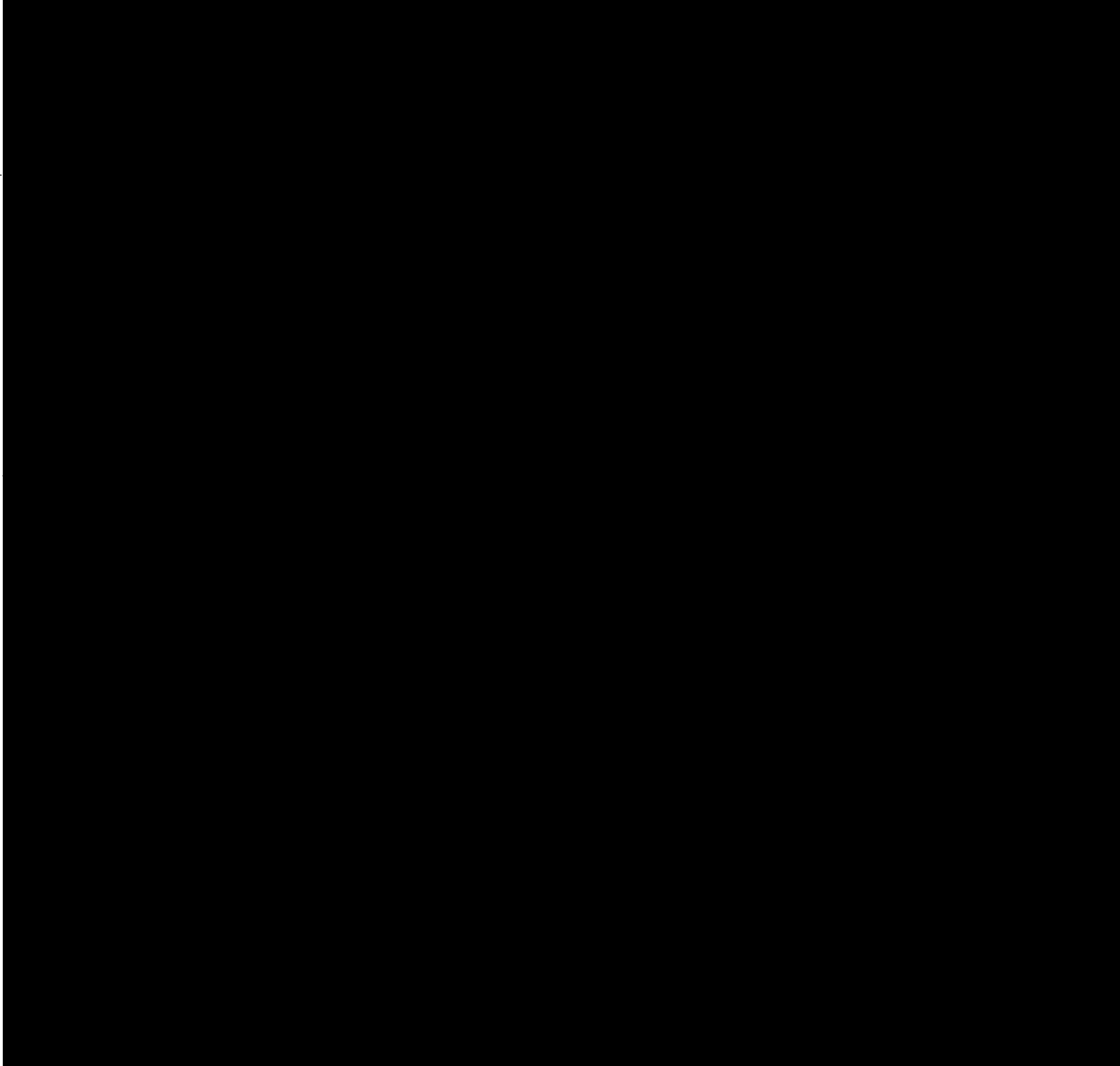


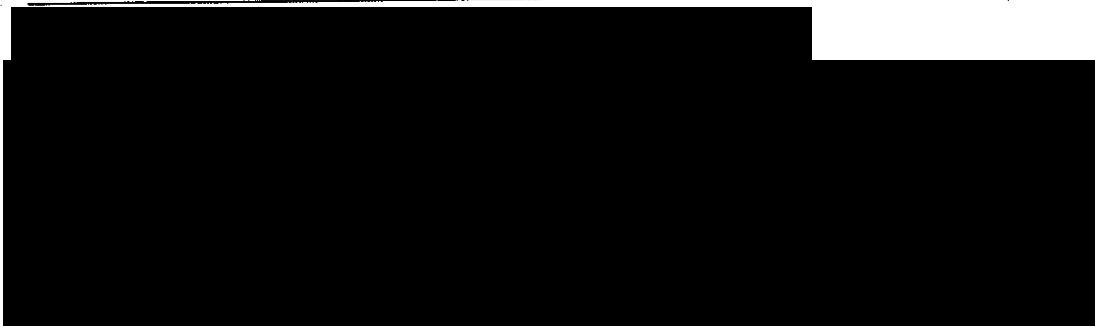


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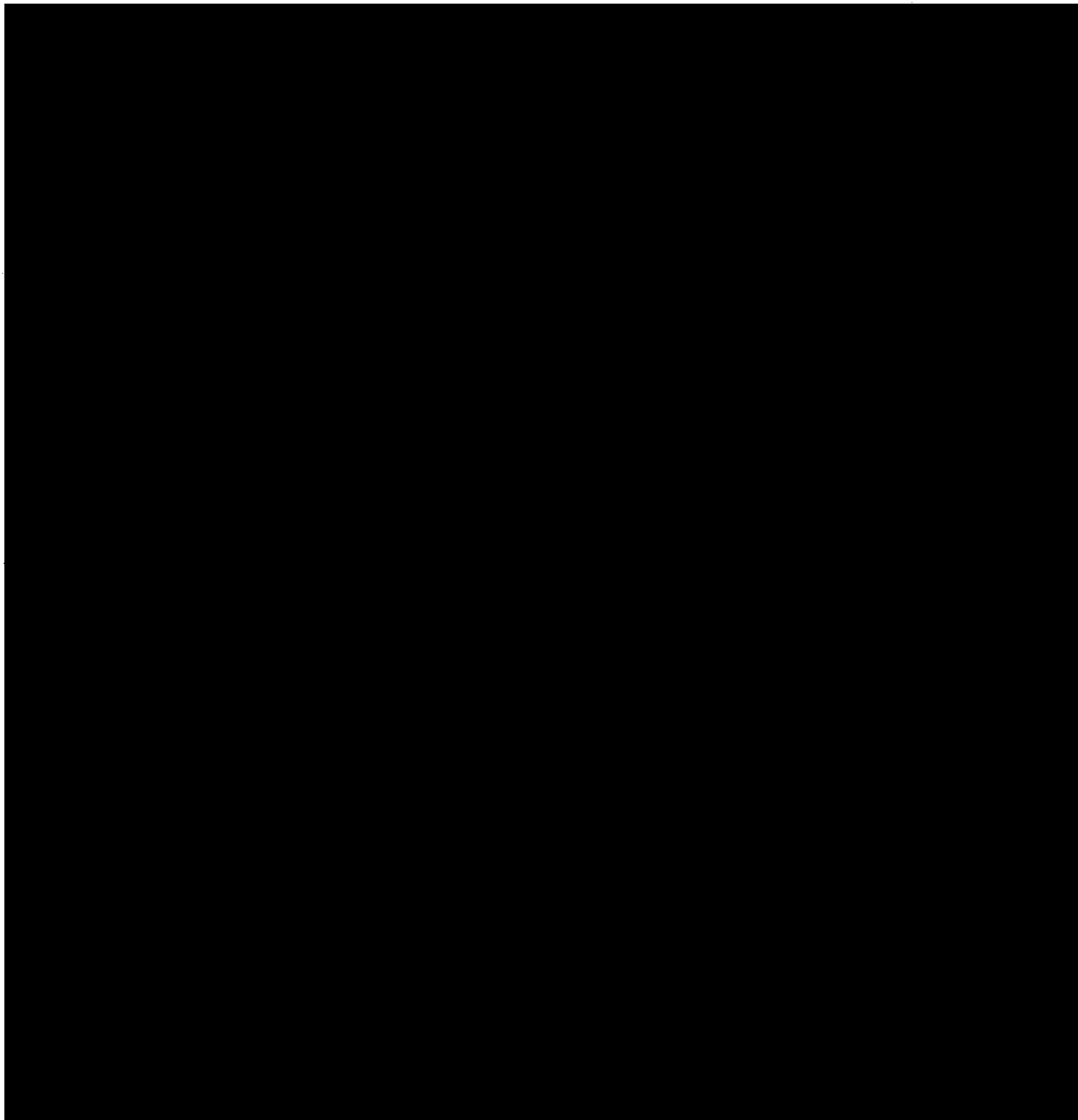


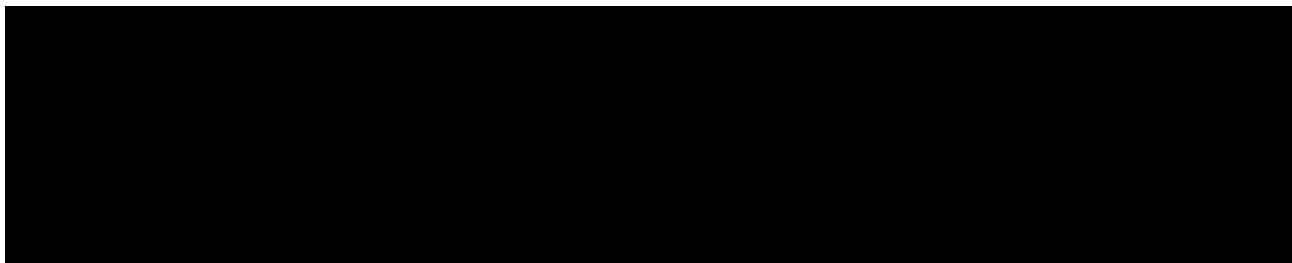


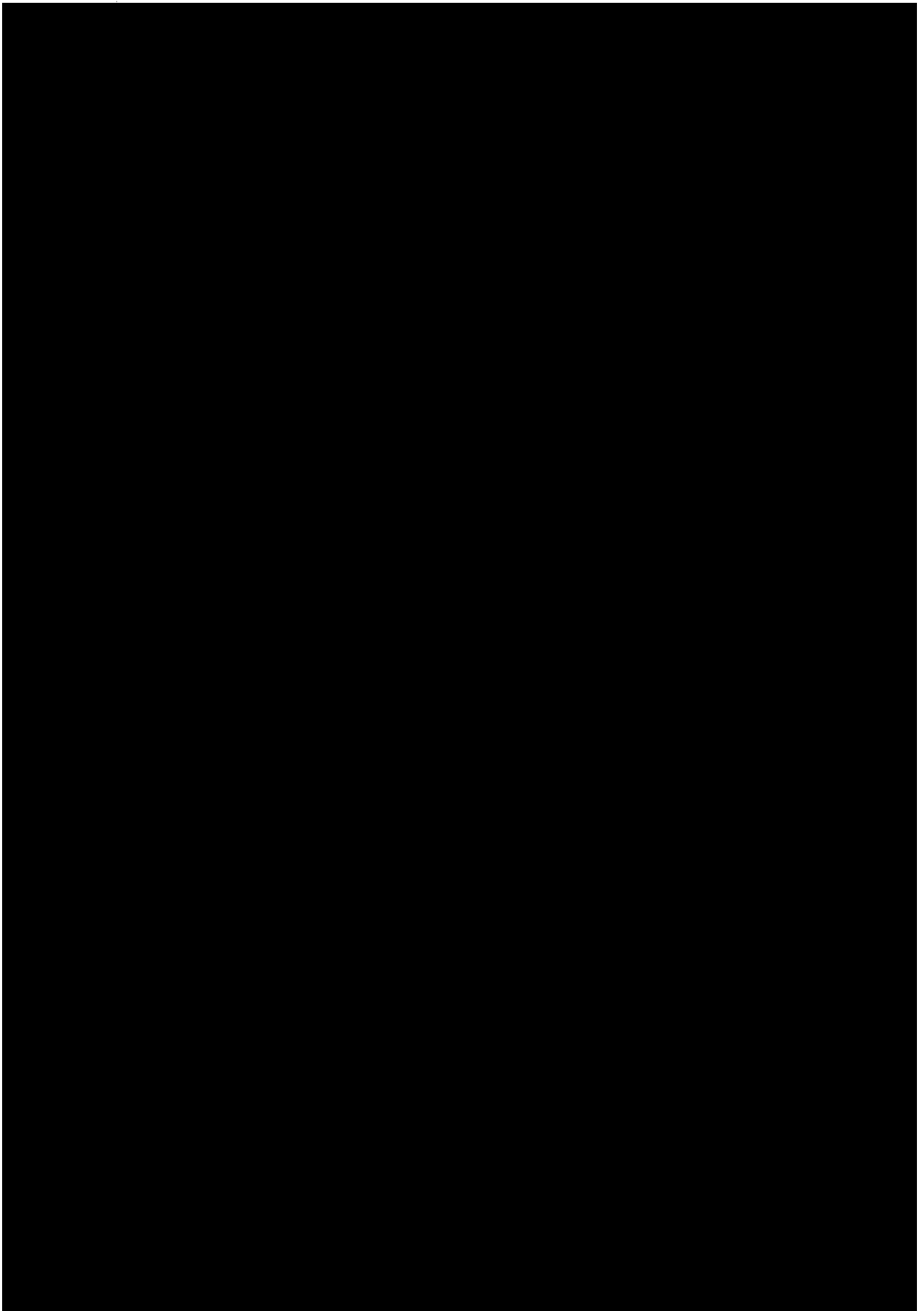


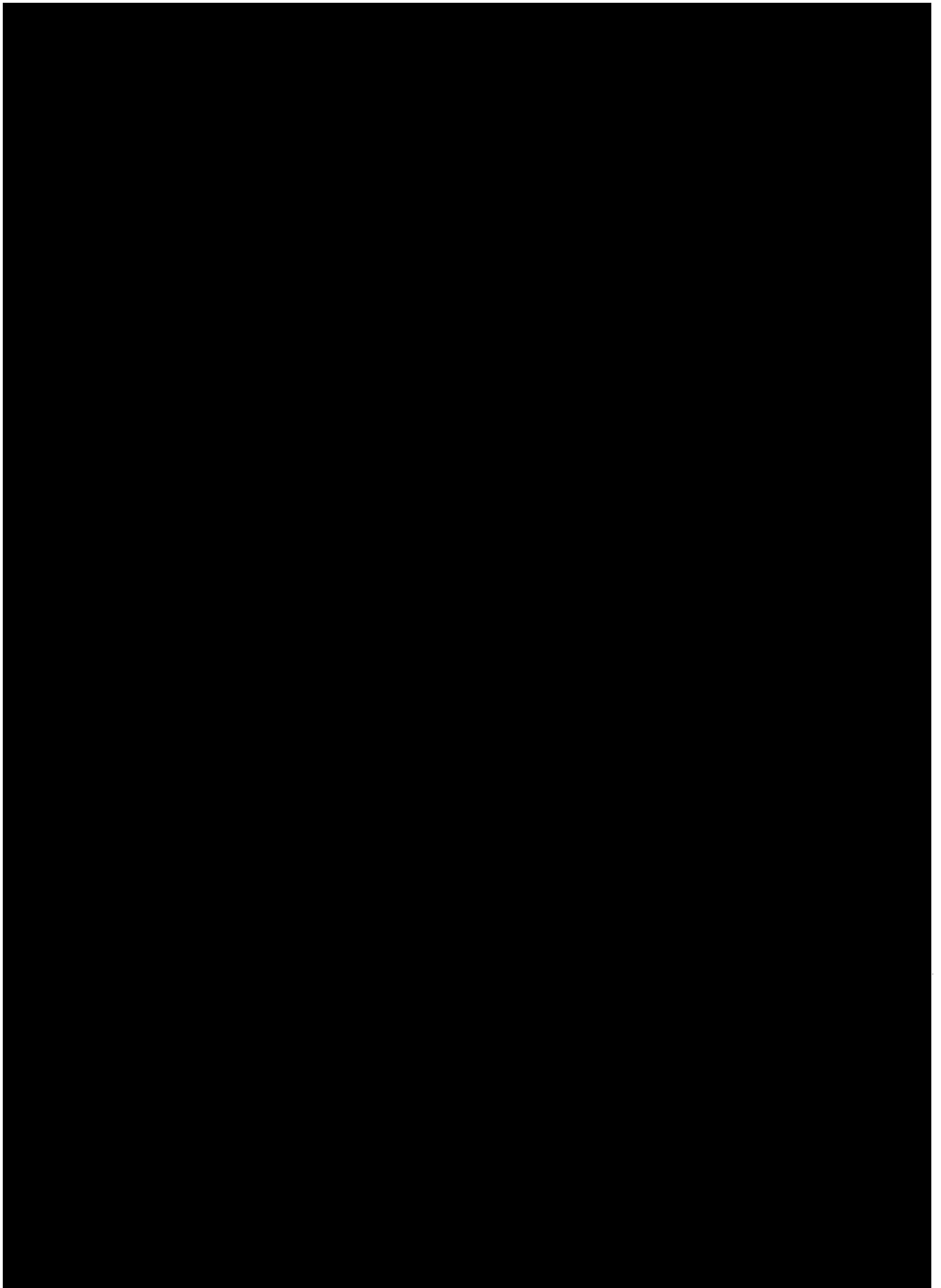


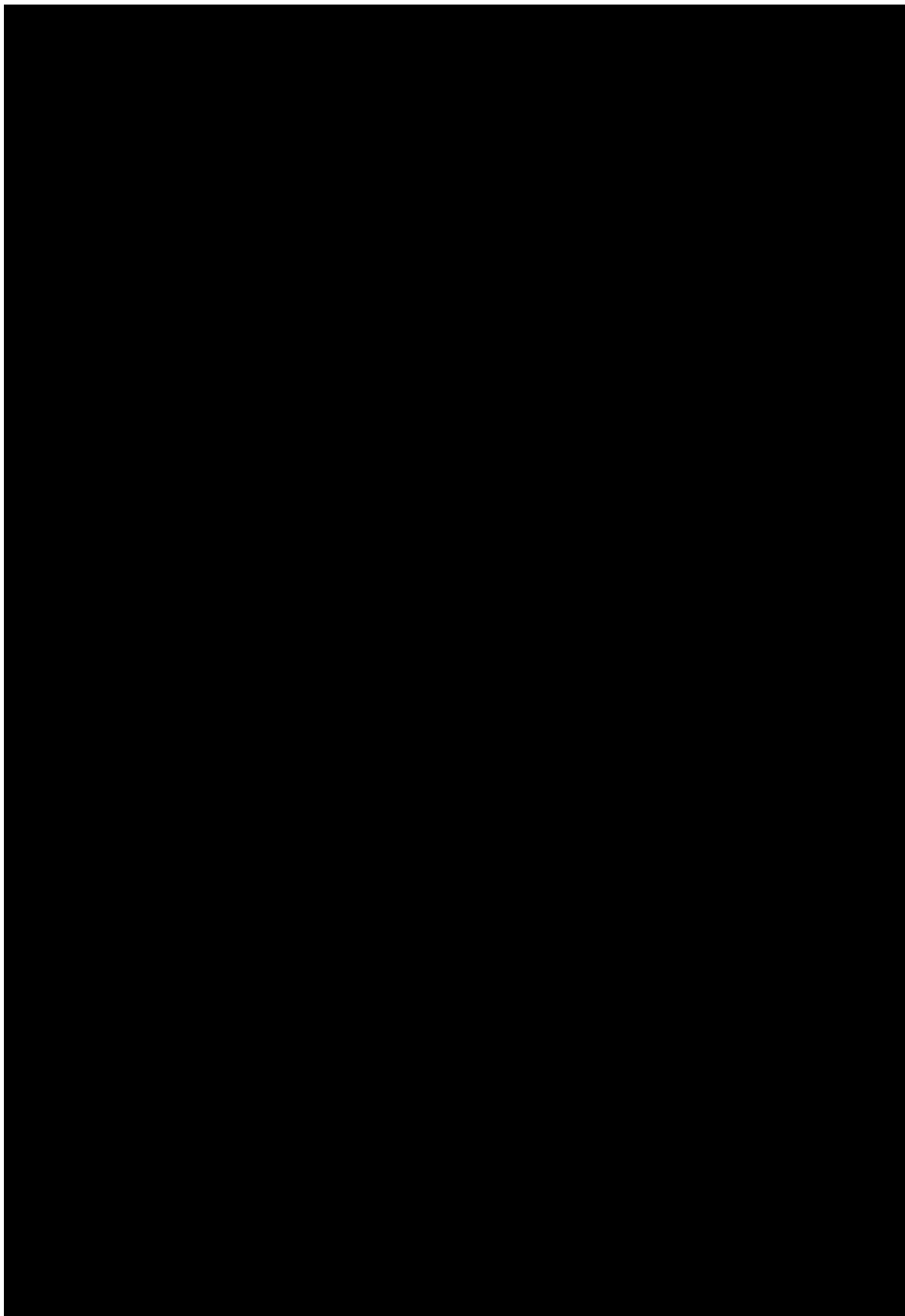


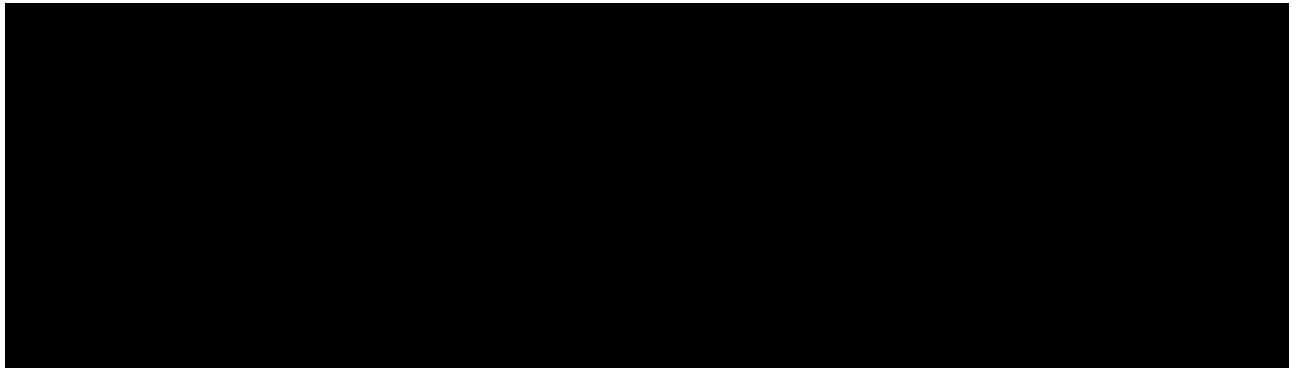


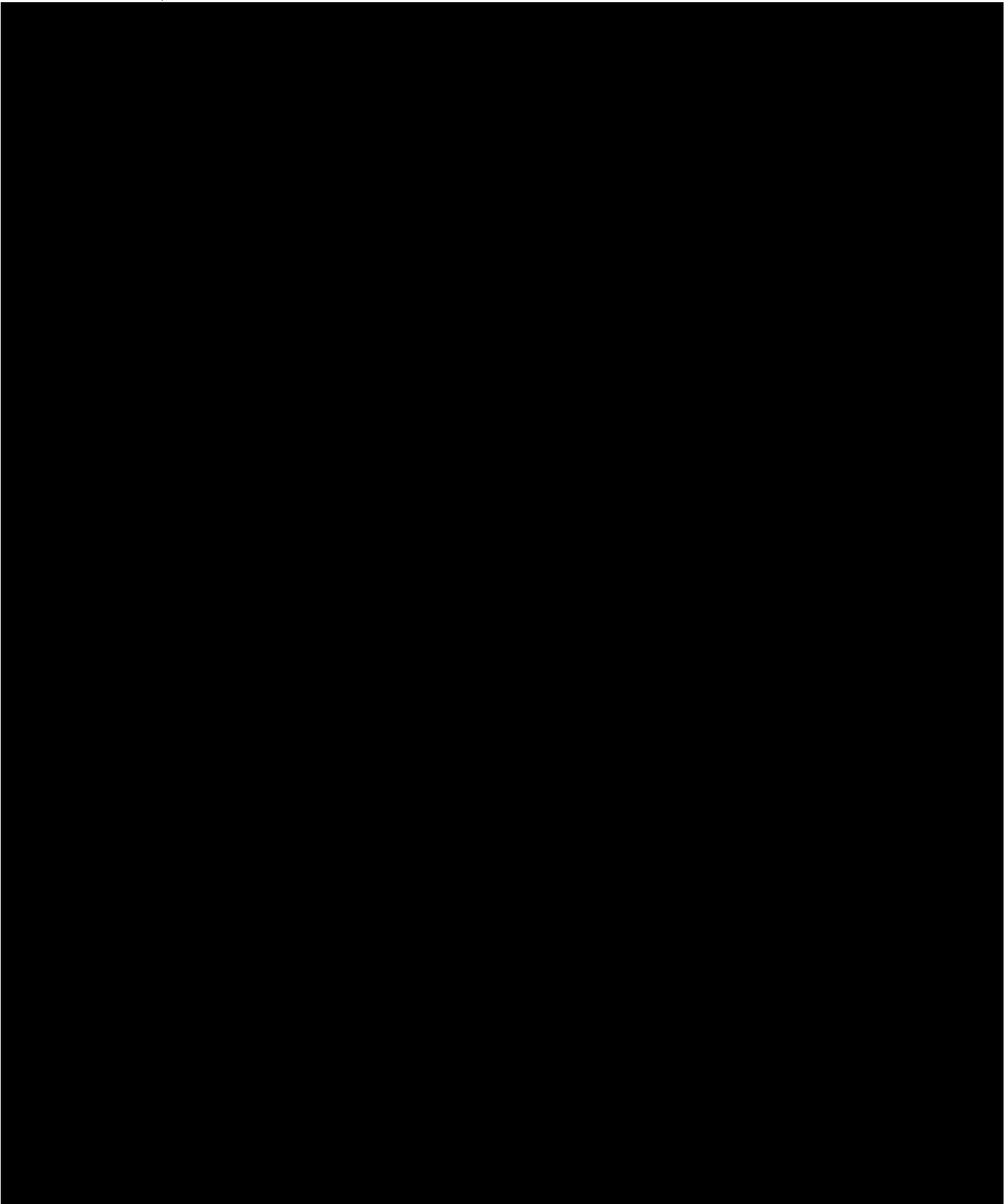


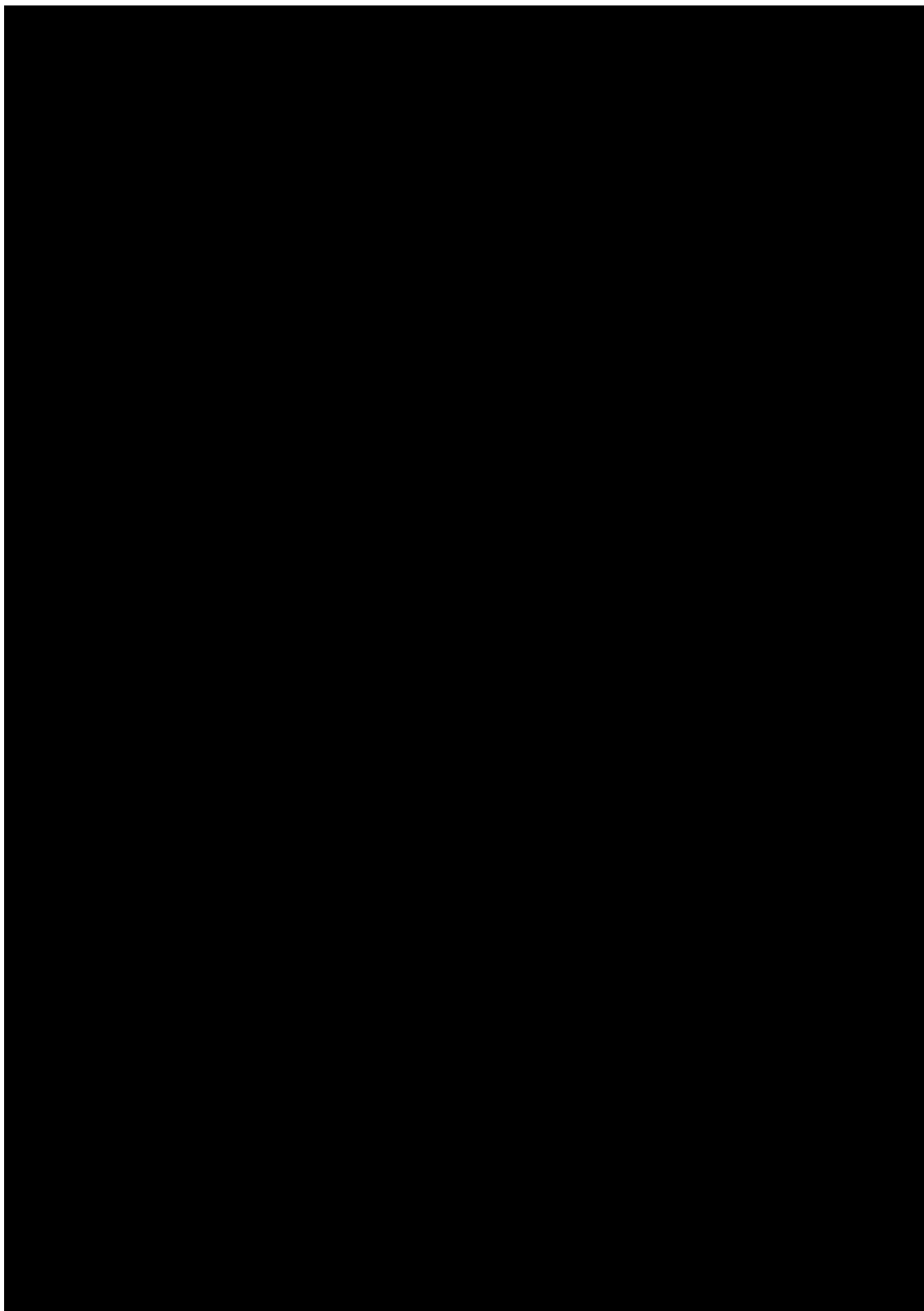


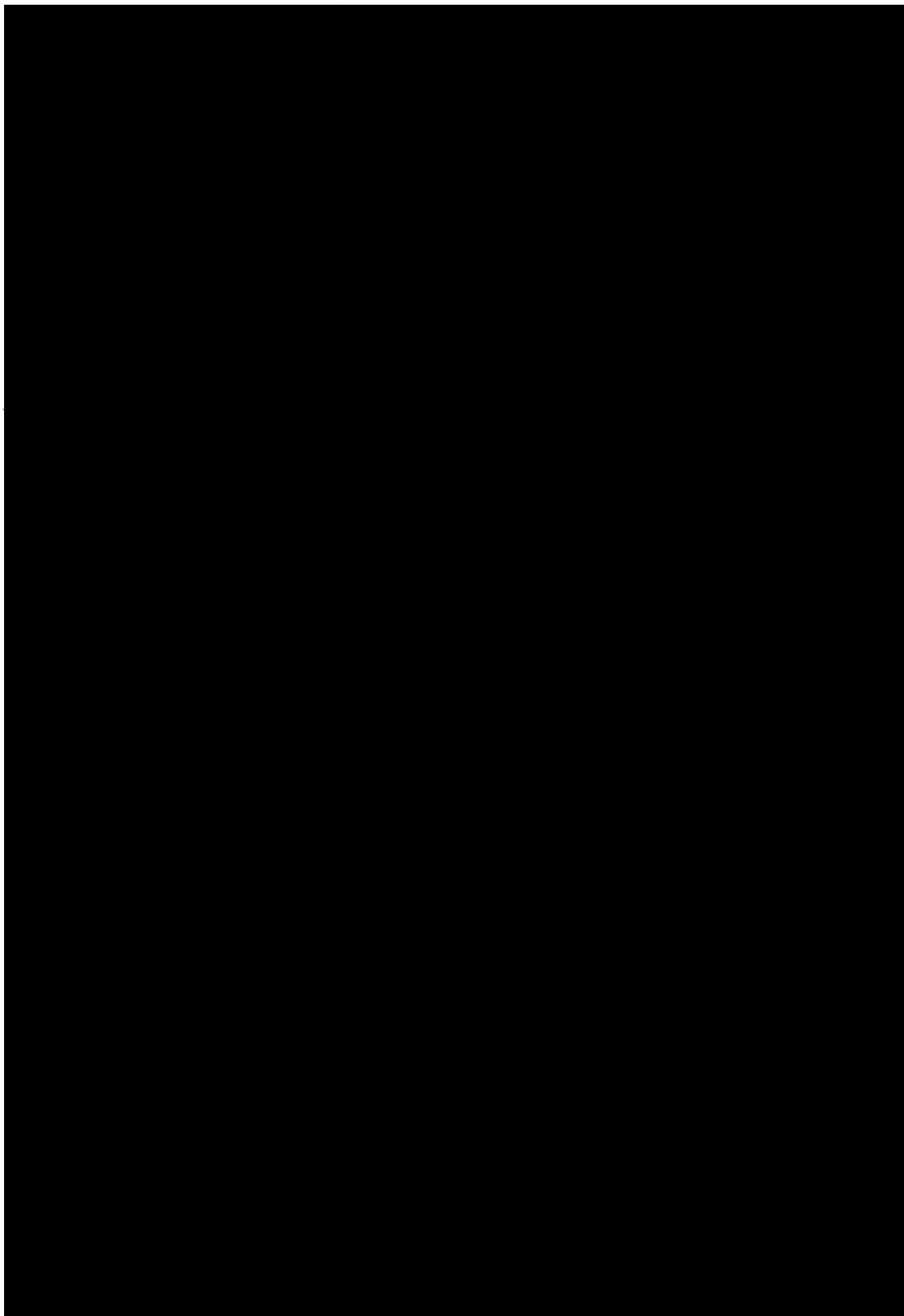


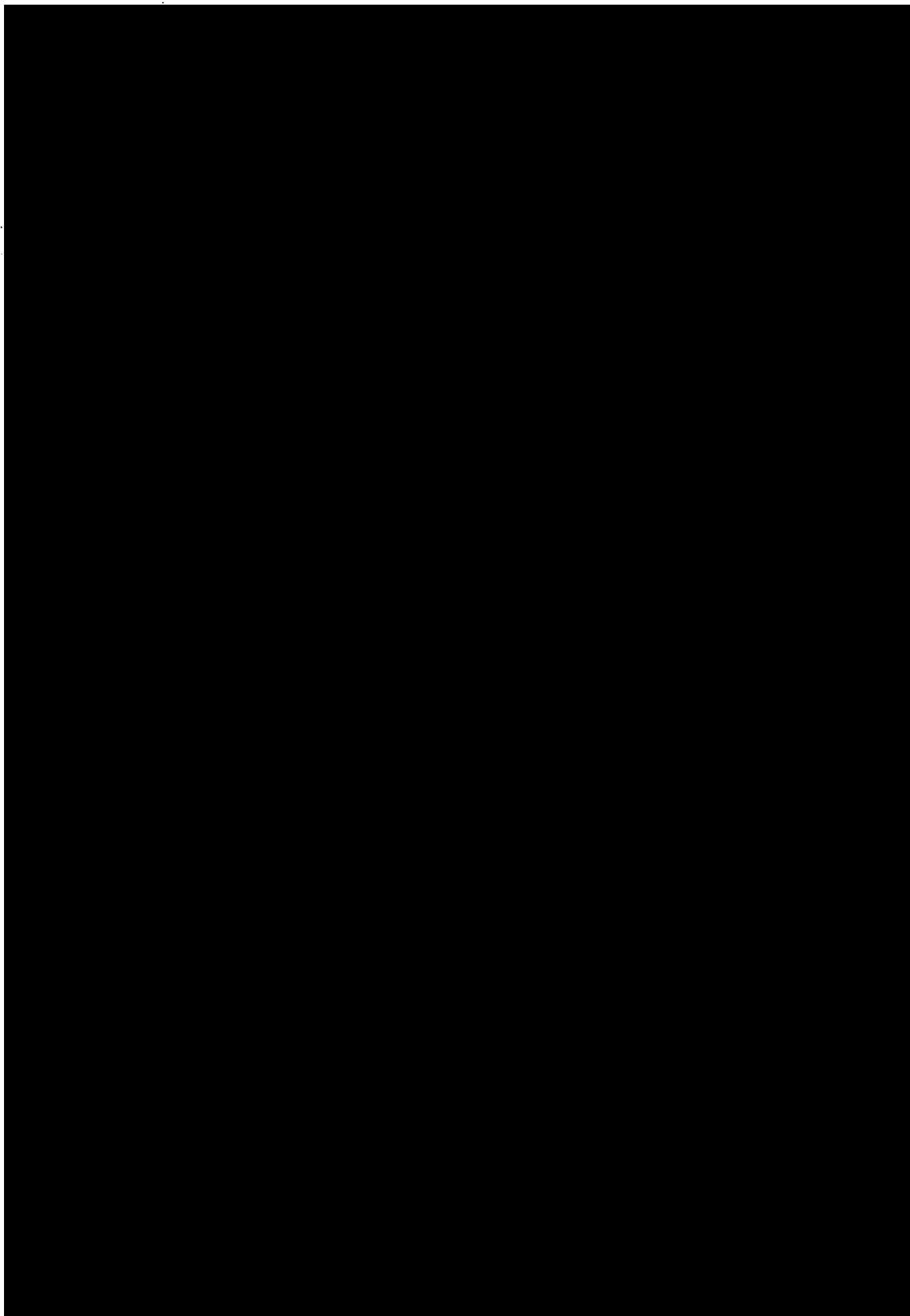


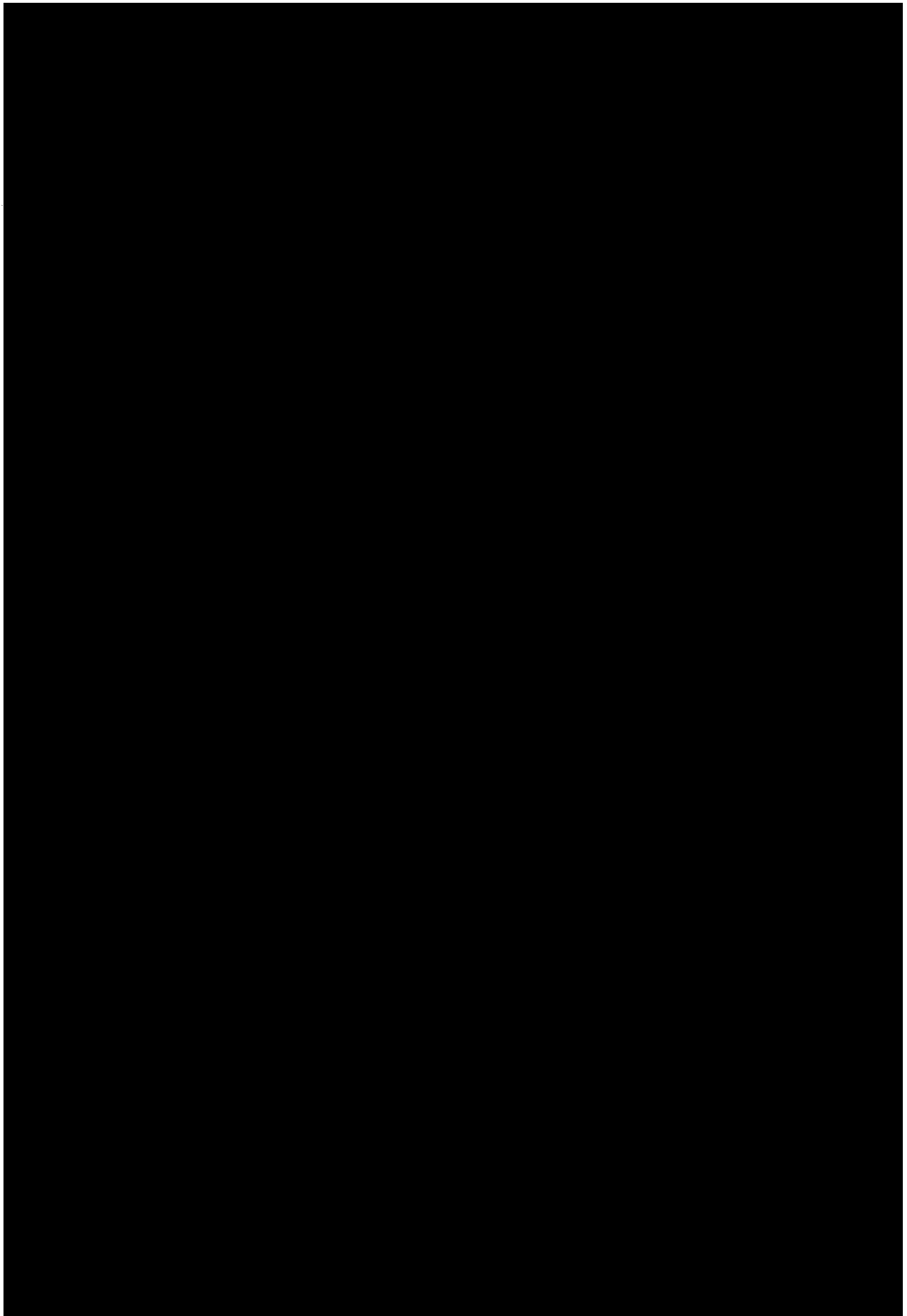


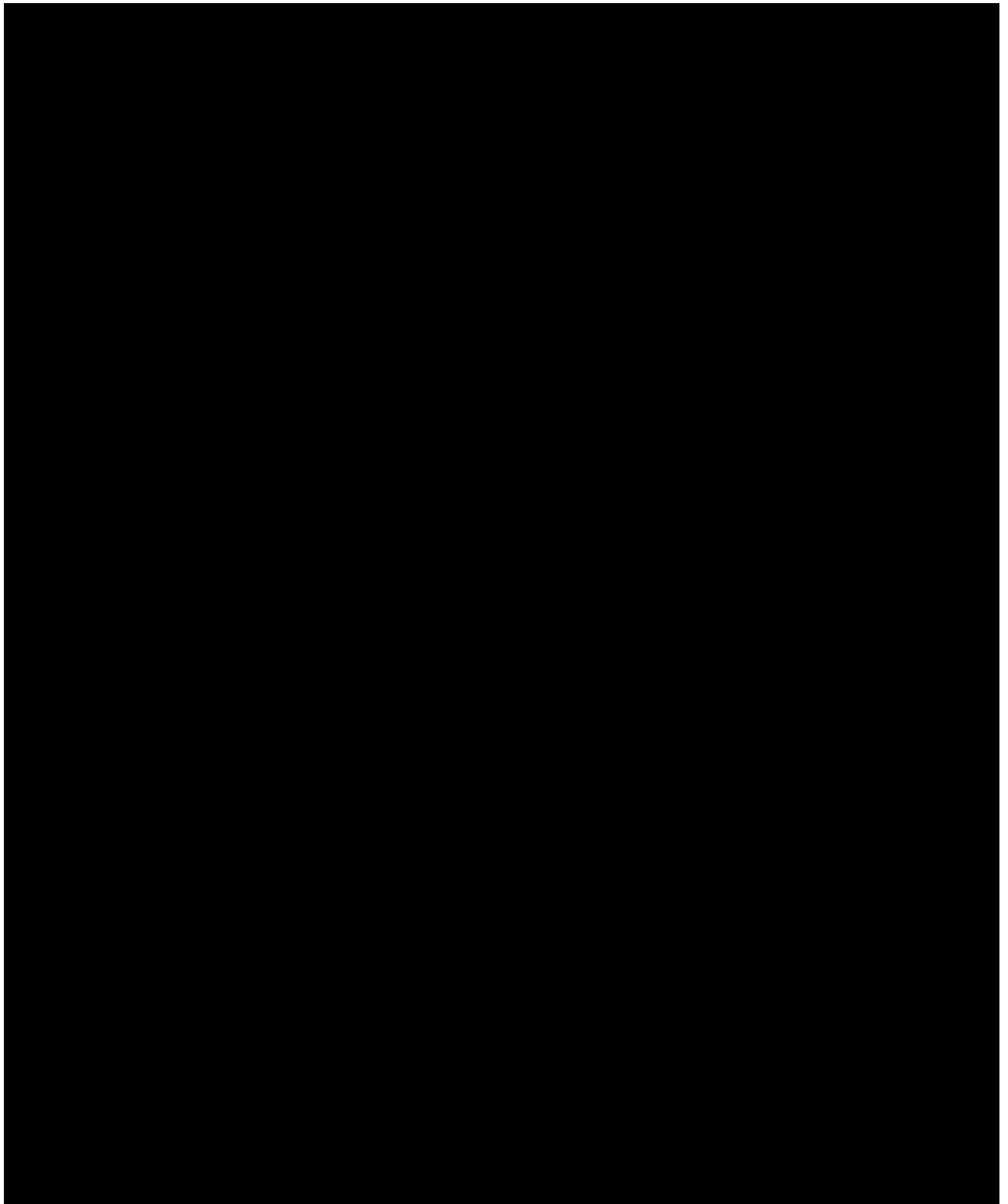


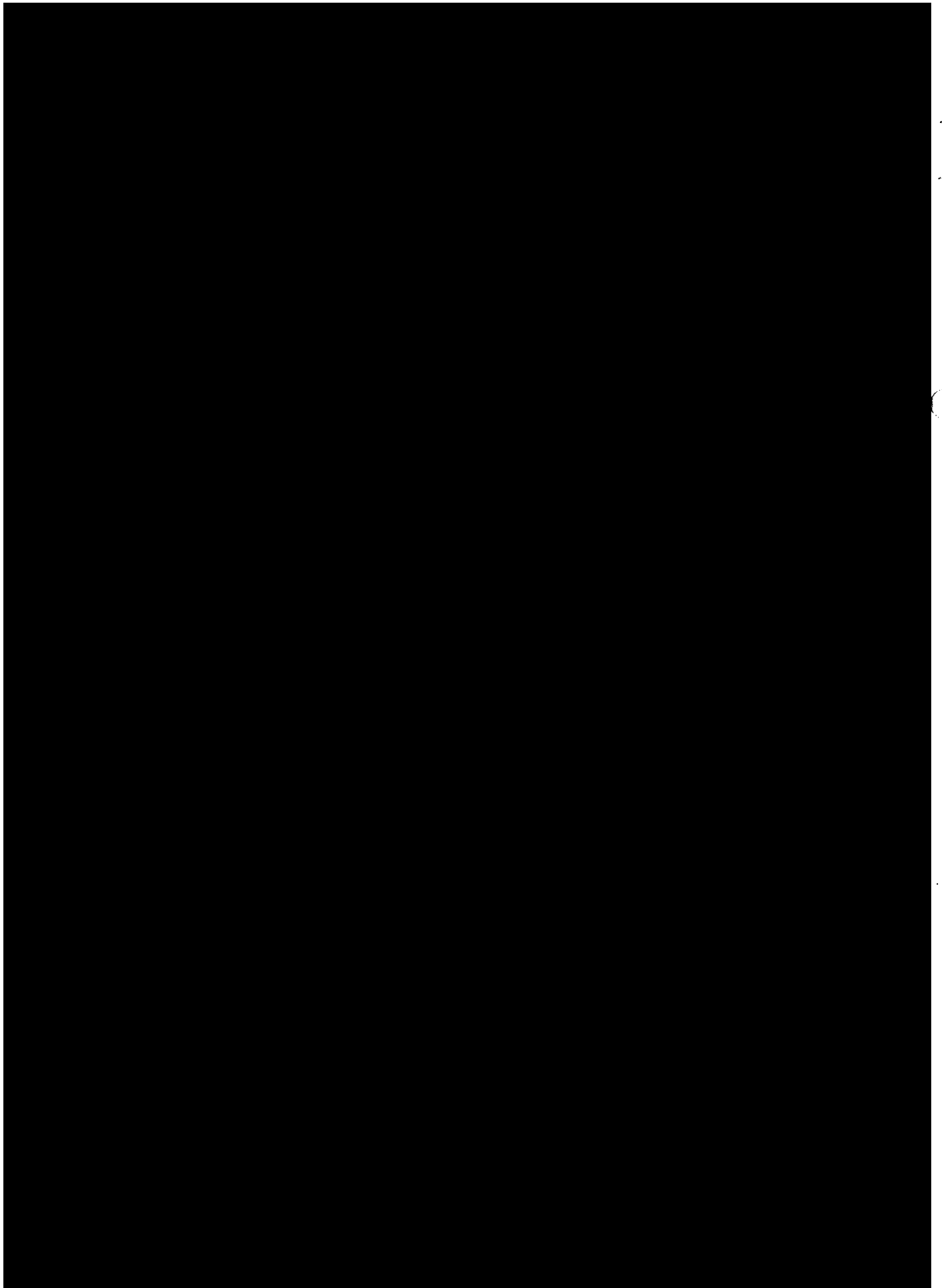


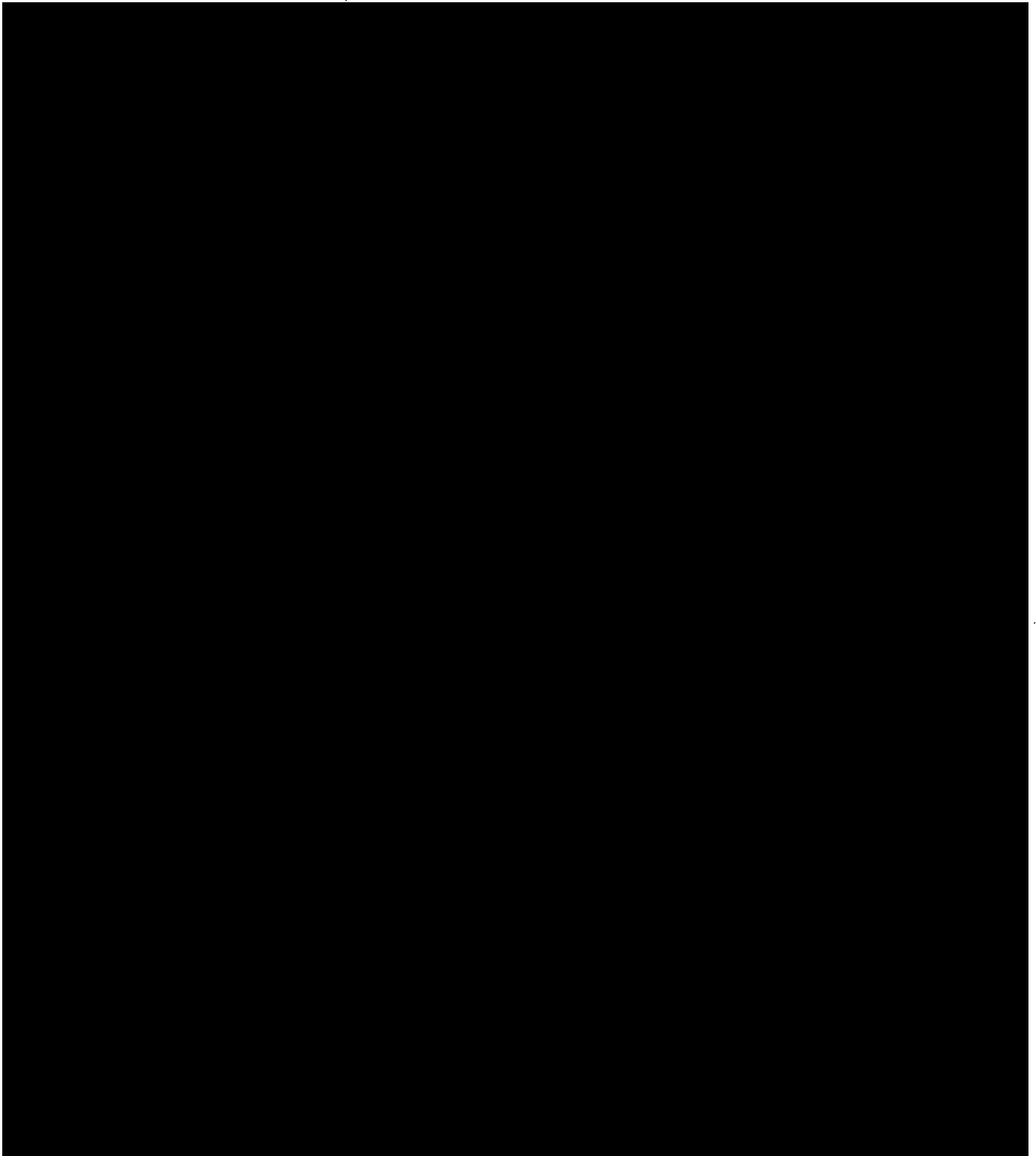


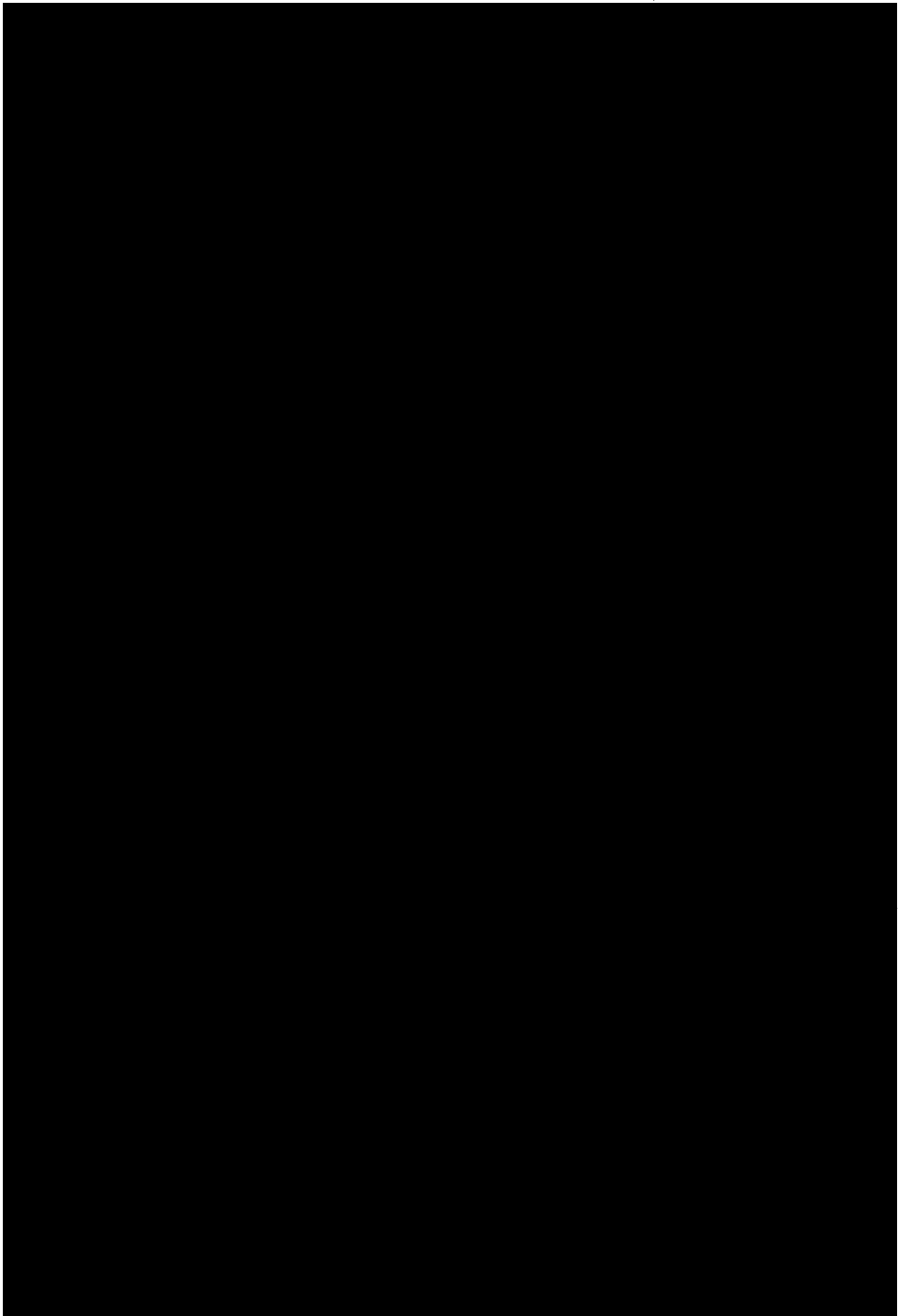


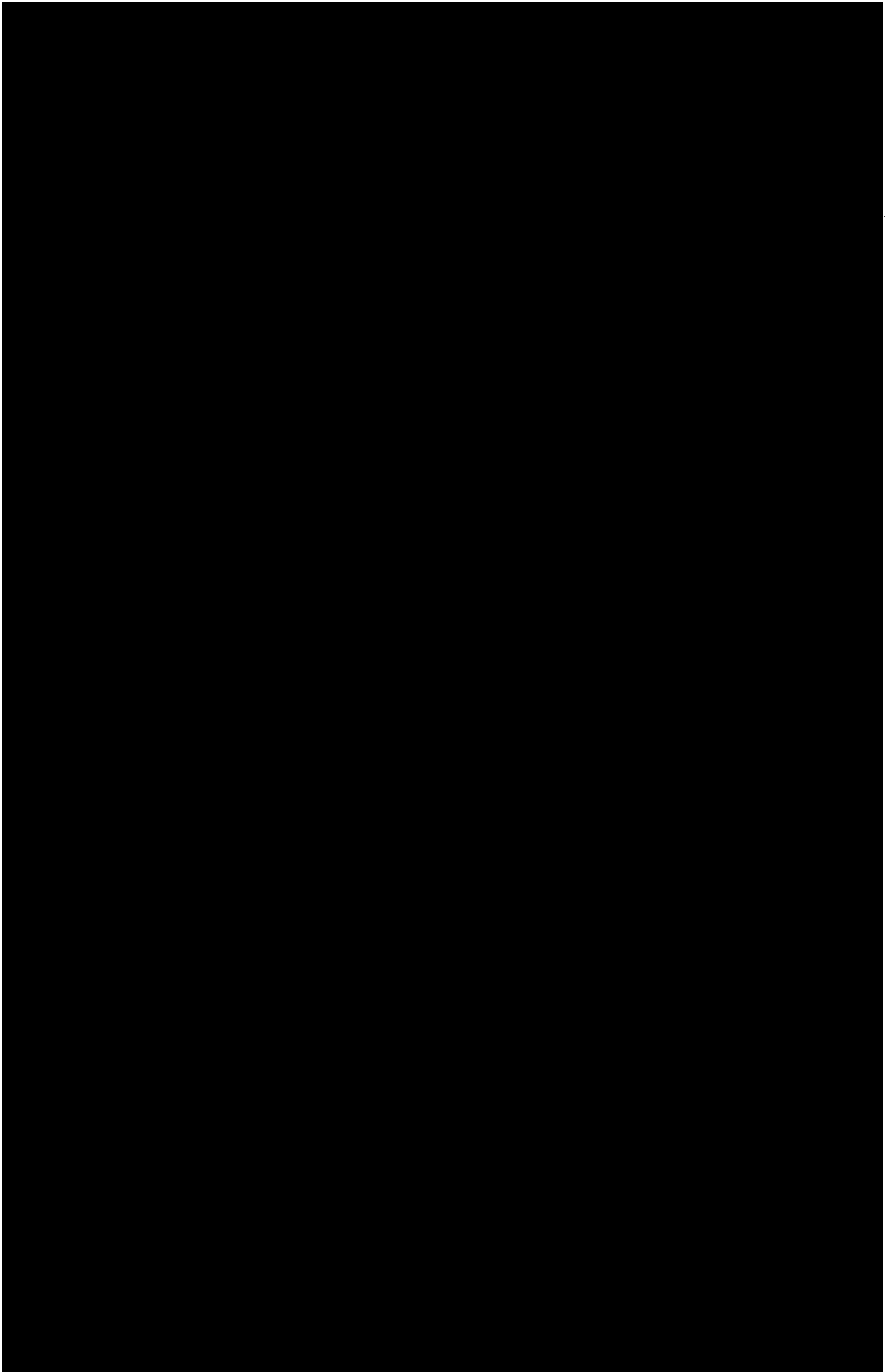


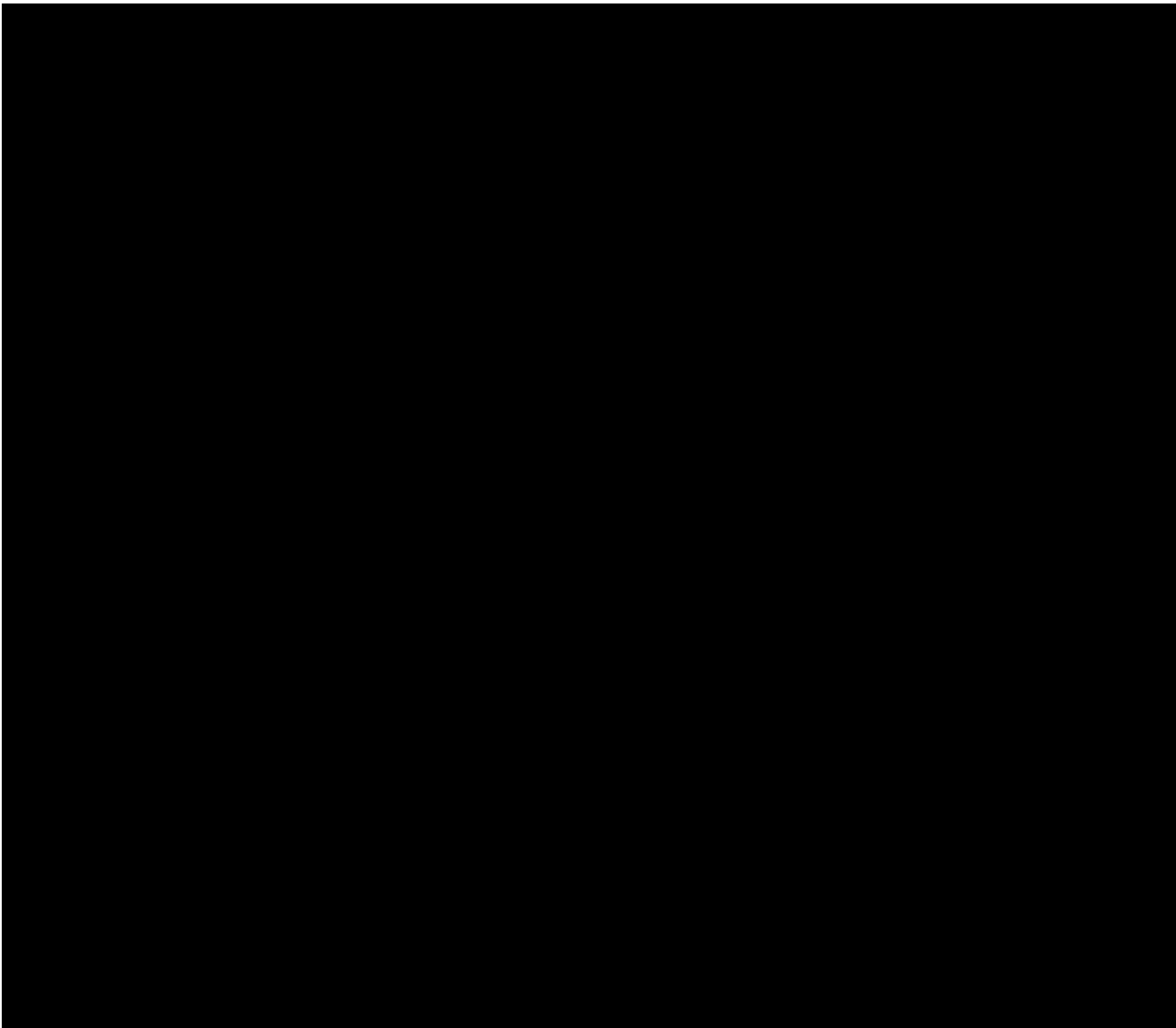






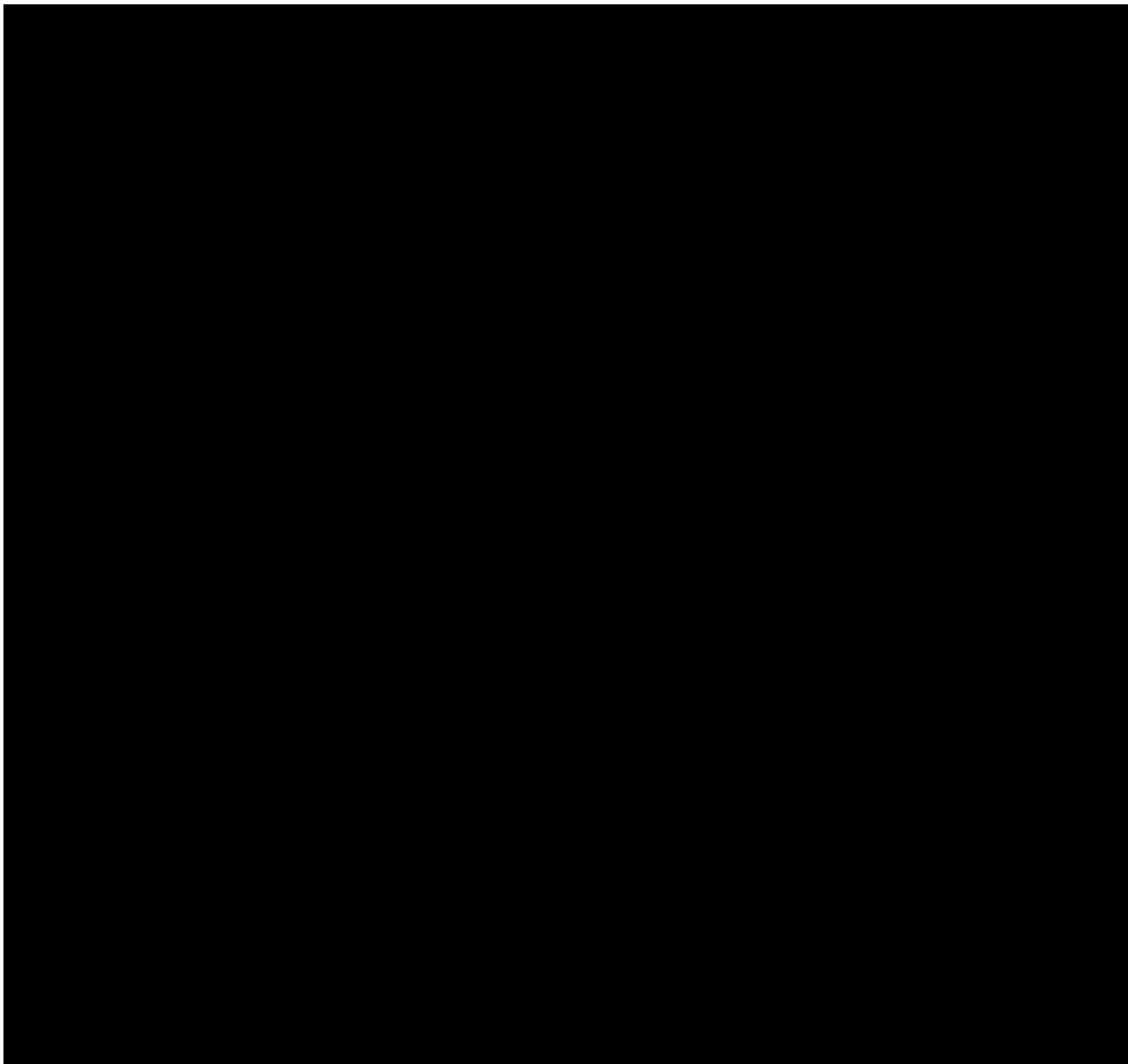




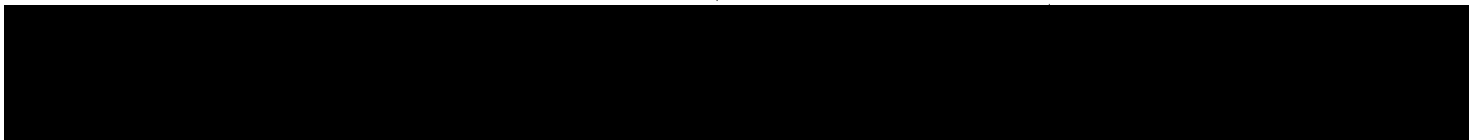
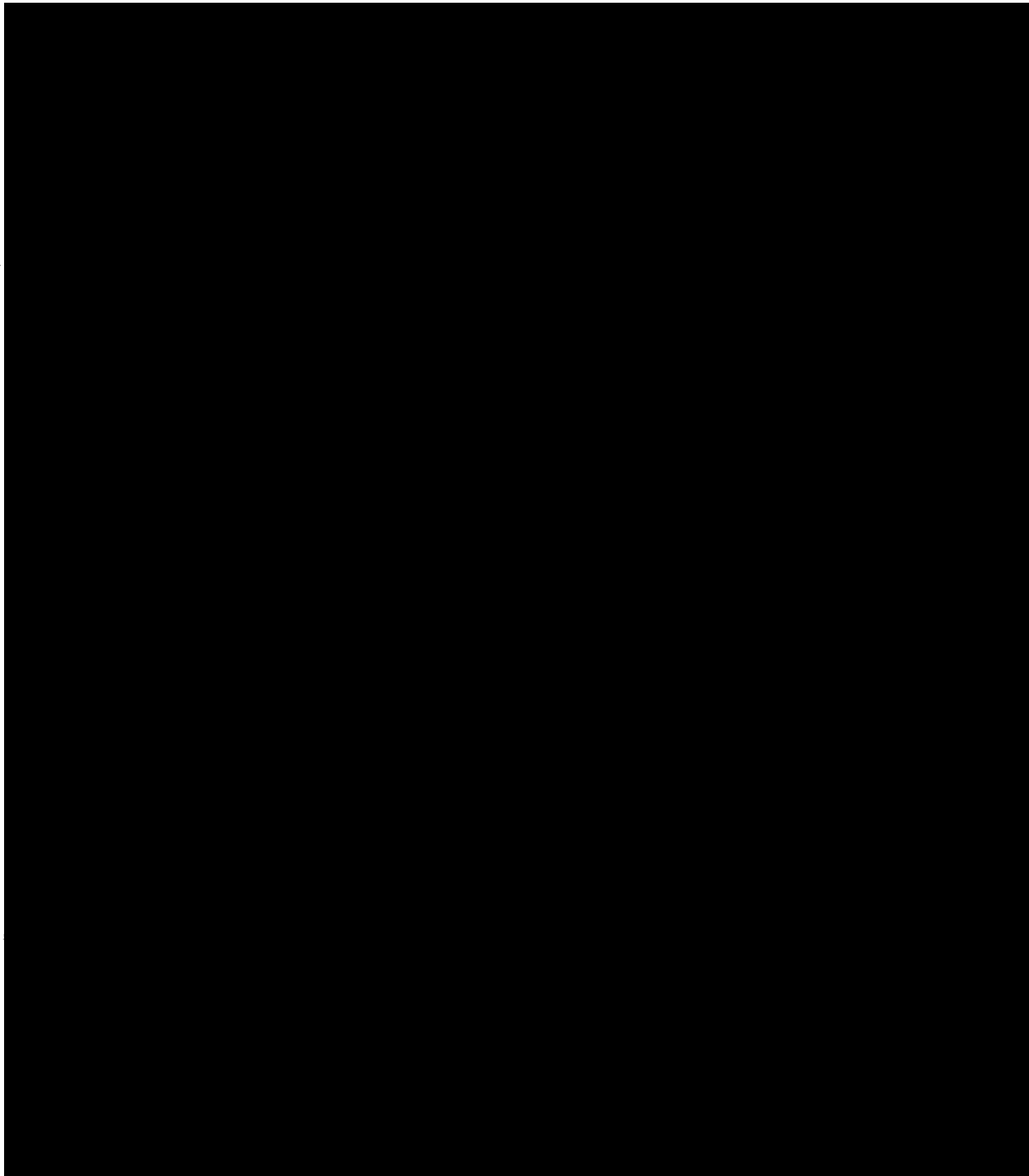


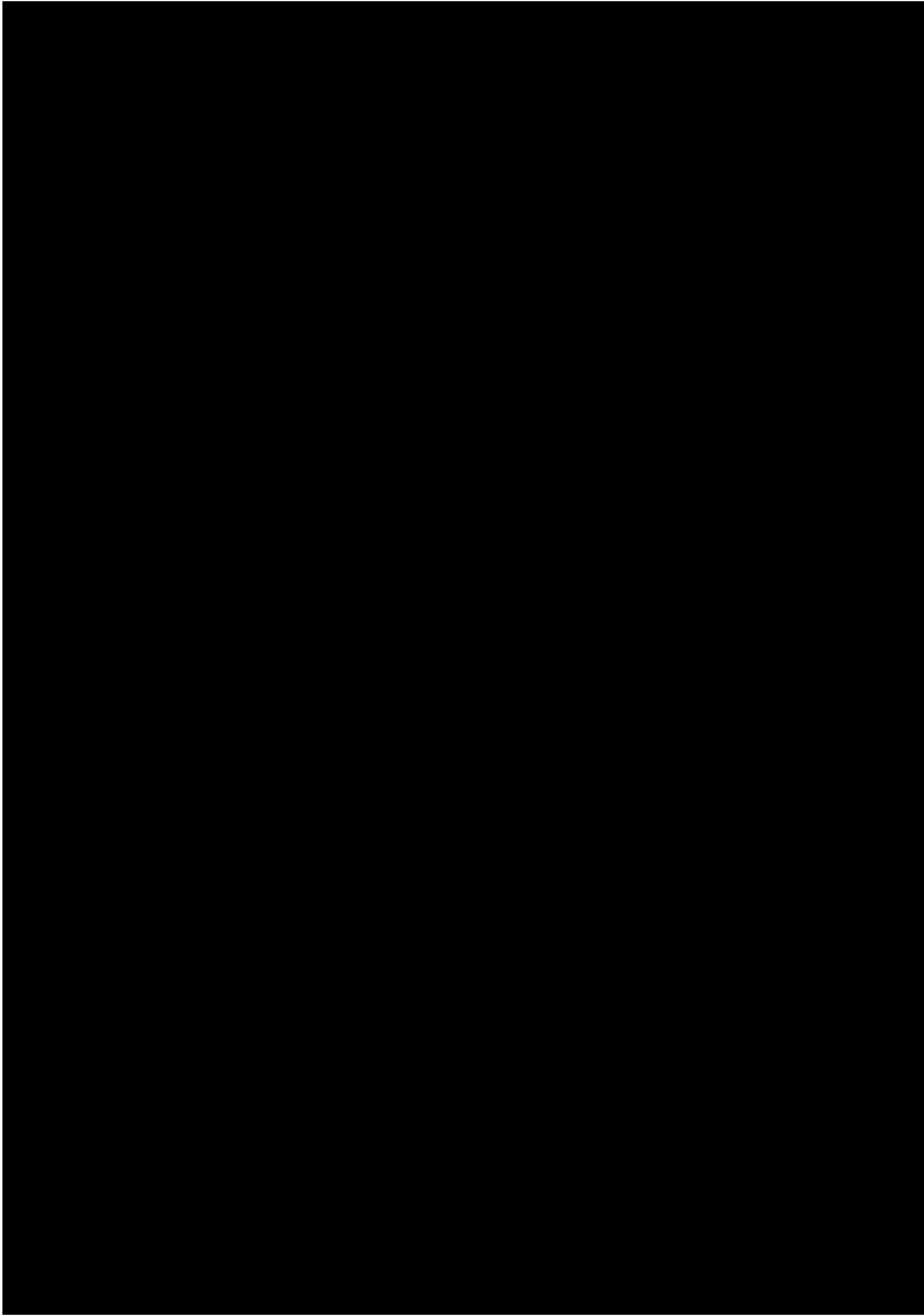
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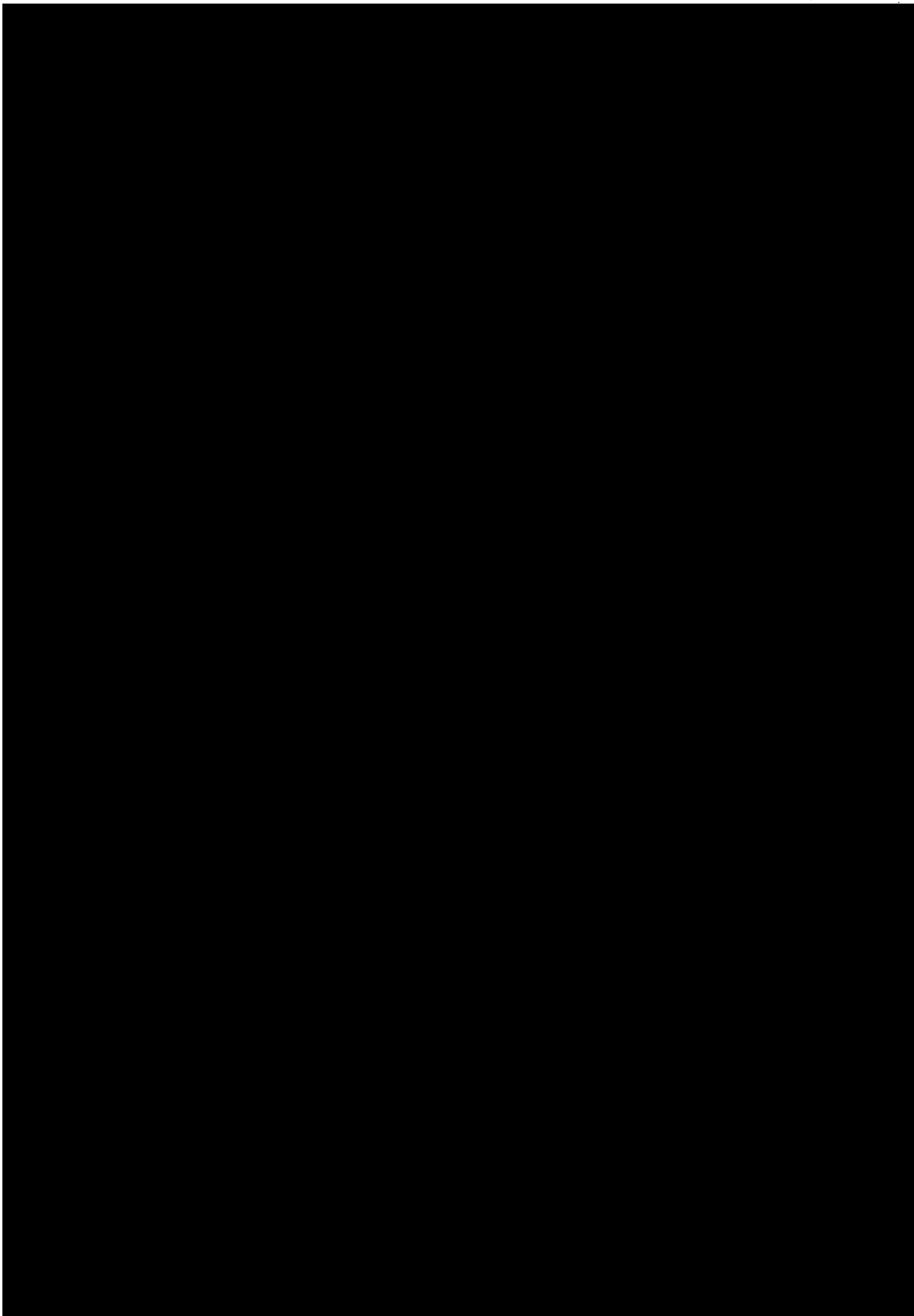
ATTACHMENT 3

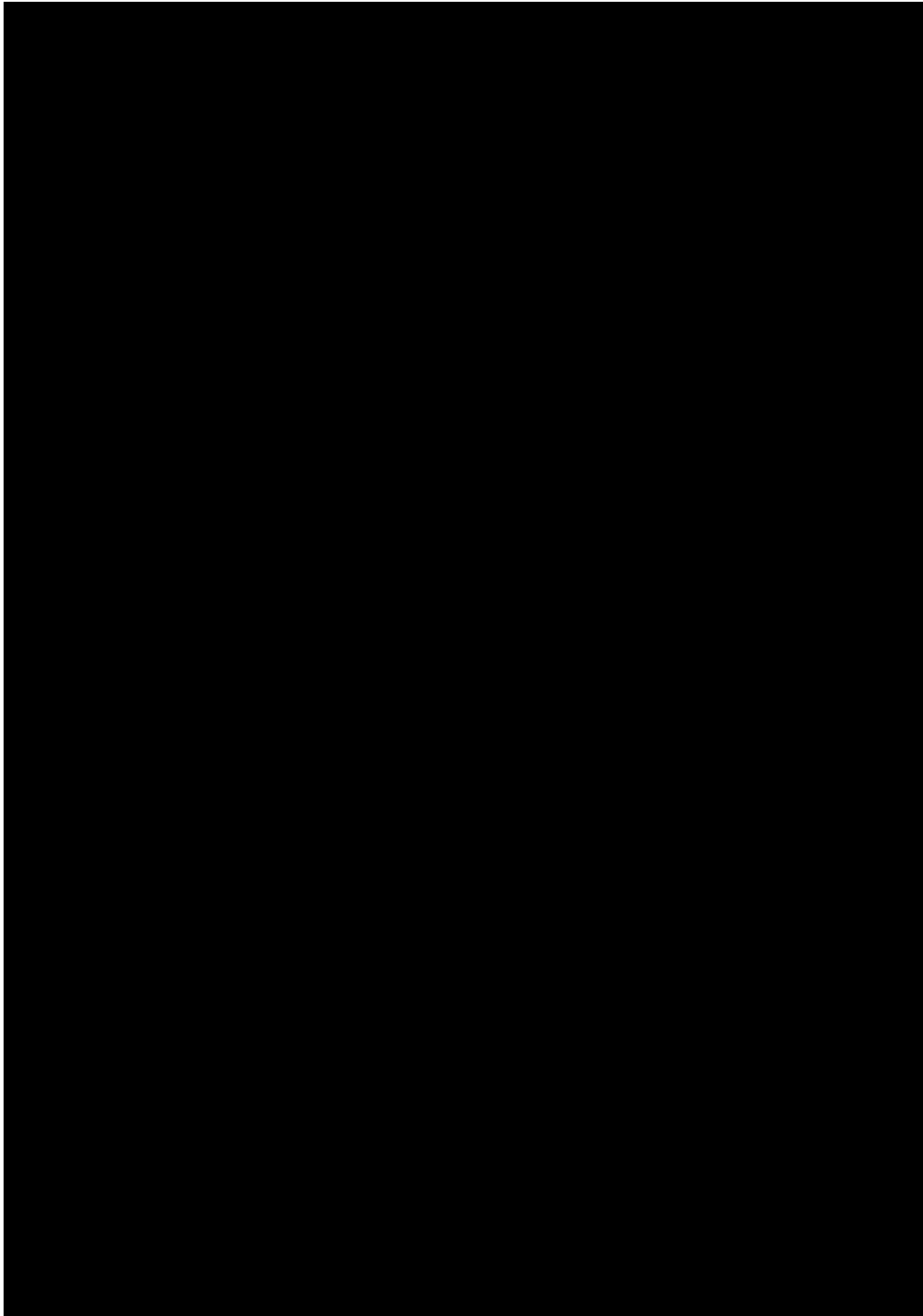














| | |
|-----------------------------|---|
| Licence Number | DIR118 |
| Licence Holder | Monsanto Australia Ltd |
| Accreditation Number | ACCR 034/2002 |
| <hr/> | |
| Submission | 2014 Annual Report for the Commercial Release of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton in Australia |
| Reporting Period | 1 June 2013 – 1 June 2014 |
| <hr/> | |
| Date | 30 June, 2014 |
| Prepared By | <div>██████████</div> <div>████████████████████</div> |

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In Confidence

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| 3.3.1 Total GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton planted in the period 1 July 2013 to 30 June 2014 – Summary | 6 |
| 3.4 Annual Surveys | 7 |

Section 1 – Licence Holder Details

| | |
|-----------------------------|---|
| Name | Monsanto Australia Limited |
| Address | Level 12 600 St Kilda rd Melbourne Victoria 3004 |
| Telephone | (03)9522 7122 |
| Facsimile | (03)9522 6122 |
| Contact email | [REDACTED] |
| Accreditation Number | ACR 034/2002 |

Scope of the Report –

This report addresses the annual reporting conditions of the DIR118 commercial licence for the release of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton in Australia, issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator (OGTR).

This report details compliance with the general and specific conditions of sections 2 and 3 of the DIR118 licence as issued to Monsanto on the 16 August 2013.

This report covers the period of time between the 1 July 2013 and 30 June 2014.

Section 2 – General Conditions

Duration of the Licence

DIR118 has not been cancelled, suspended or surrendered.

Holder of the Licence

Monsanto Australia Limited (Monsanto) is the holder of the licence.

Project Supervisor

██████████ is the project supervisor. This change of project supervisor was made and details were provided to the OGTR in January, 2014.

Persons covered by this licence

All persons covered by this licence are all persons in Australia.

Informing people of their obligations

Monsanto Australia Limited informs all GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton growers covered by the DIR118 licence of the obligations imposed on them as a result of the conditions of this licence. This is primarily achieved through Monsanto grower training which includes information on regulatory obligations.

Licence holder to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a state or a foreign country, being law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of the licence that would affect the capacity of Monsanto to meet the conditions of the DIR118 licence.

Monsanto acknowledges that it must provide information related to their ongoing suitability to hold a licence when requested to do so in writing by the regulator and must provide the information within a time frame stipulated by the regulator.

People dealing with the GMO must allow auditing and monitoring of the dealing

Monsanto acknowledges that if a person is authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator to enter premises where the dealing is being undertaken for the purposes of auditing or monitoring the dealing.

Remaining an accredited organization

At all times, Monsanto remained an accredited organization and complied with the conditions of the accreditation as set out in the OGTR guidelines for accreditation of organizations.

Additional Information given to the Regulator

During the reporting period, Monsanto did not become aware of additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by the licence; or of any unintended effects of the dealings authorized by the licence.

Monsanto was not requested by the Regulator, during the reporting period, to collect or provide additional information about any matter to do with the progress of the dealings authorised by DIR118.

Section 3 – Growing the GMO

3.1 GMOs covered by this Licence

The only dealings with GMOs under this licence were those with the GMO described in attachment A of the DIR118 licence

3.2 Permitted Dealings

During the period of this report, only dealings with the GMO authorized were permitted

3.3 Commercial Volumes of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in each State and Territory in the 2014 growing season

3.3.1 Total commercial GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in the period 1 July 2013 to 1 July 2014 – Summary

| STATE | Total ha |
|-------------------|----------|
| Victoria | 0 |
| New South Wales | 0 |
| Western Australia | 0 |
| Queensland | 0 |
| Total ha | 0 |

3.4 Trial Volumes of GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton grown in each State and Territory in the 2014 growing season

3.4.1 Total trial GM herbicide tolerant (Roundup Ready Flex® MON 88913) pima cotton planted in the period 1 July 2013 to 1 July 2014 – Summary

| STATE | Total ha |
|-------------------|--------------|
| Victoria | 0 |
| New South Wales | 0.067 |
| Western Australia | 0 |
| Queensland | 0 |
| Total ha | 0.067 |

3.4 Annual Surveys

No other information on the progress of the release of the GMO, including annual surveys, was required to be submitted during this annual reporting period under specific condition 17(d) of DIR118.

DIR-062

2013, 2014 and 2015 Annual reports

Compilation of information provided to OGTR by Bayer CropScience under the annual reporting obligations for DIR062/2005

Reported hectares for both Liberty Link (LL25) cotton and LL25/Bollgard II (LL x BGII) cotton grown under DIR-062:

2014-15:

| <u>GMO</u> | <u>Broadacre Ha</u> | <u>Green Ha</u> |
|------------|---------------------|-----------------|
| 70BL | 11.5 | 11.5 |
| 80L | 57.16 | 48.21 |

2013-2014

| <u>GMO</u> | <u>Broadacre Ha</u> | <u>Green Ha</u> |
|------------|---------------------|-----------------|
| 70BL | 498.4 | 498.4 |
| 80L | 355.84 | 352.882 |
| V-18BL | 267.58 | 173.931 |

2012-2013

| <u>GMO</u> | <u>Broadacre Ha</u> | <u>Green Ha</u> |
|------------|---------------------|-----------------|
| 70BL | 3807.17 | 1860.125 |
| 80L | 1033.55 | 388.6 |
| V-18BL | 1742.13 | 493.11 |

No adverse effects were reported as a result of dealings under licence DIR 062 during 2012-2015.

Explanatory notes:

Bayer codes: "L" refers to the LL25 cotton seed sold and planted, and "BL" refers to LL25 x Bollgard II.

Reported hectares for both LL25 cotton and LL x BGII cotton grown under DIR062.

The date references, e.g. 2012 – 2013, refer to the cotton season which commenced in September/October 2012 and was harvested in March/April 2013. The same format is the case for 2013 – 2014 and 2014 – 2015.



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DIR091 ANNUAL REPORT 2010

Since the issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

Regards,

[Redacted signature block]

LICENCE NO: DIR066
LICENCE HOLDER: Monsanto Australia Limited
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2014 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines
REPORTING PERIOD: 1 June 2013 – 1 June 2014
(covering 2013/14 cotton growing season)
DATE: 30 June 2014

PREPARED BY:

[REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorized to disclose such data and information without written permission from Monsanto Australia Limited.

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SECTION 1. LICENCE HOLDER DETAILS

Name: Monsanto Australia Limited

Address: 600 St Kilda rd, Melbourne 3004
PO Box 6051
St Kilda rd Central
Victoria, 8008

Telephone: (03)9522 7122

Facsimilie: (03)9522 6122

Contact email: [REDACTED]

Accreditation
Number: ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR066 commercial licence covering Roundup Ready® cotton, Roundup Ready Flex® cotton and the Bollgard II® trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007, 15 April 2009 and 20 June, 2013.

This report covers the period of time from 1 June 2013 to 1 June 2014, including the 2013/14 cotton planting season.

SECTION 2. LICENCE CONDITIONS

Condition 1. Duration of Licence

DIR066 has not been suspended, cancelled or surrendered.

Condition 2. Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

Conditions 3 and 4. Project Supervisor

The project supervisor has been changed from [REDACTED] to [REDACTED]

Condition 5. No dealings with GMOs except as authorized by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

Conditions 6 and 7. Location

The licence allows for dealings with GMOs to be conducted anywhere in Australia. This licence supersedes any previous licences regarding location.

Conditions 8 and 9. Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

Conditions 10 and 11. Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons.

Monsanto Australia Limited informed all persons covered by the DIR066 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program, which includes information on regulatory obligations as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready (no longer sold commercially), Roundup Ready Flex and Bollgard II cotton crops to undergo training.

Condition 12. Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet the conditions of the DIR066 licence.

Condition 13. Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide information within a time period stipulated by the Regulator.

Condition 14. People dealing with the GMOs must allow auditing and monitoring if the dealing

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

Condition 15. Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

Conditions 16 - 19 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by this licence; or of any unintended effects of the dealings authorized by this licence.

Condition 20. Compliance Management Plan

A Compliance Management Plan was provided to the Regulator on issuance of the DIR066 licence. A copy of the current Resistance Management Plans showing compliance metrics is in Appendix A and B.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR066 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRF and BGII technology. Roundup Ready cotton has been removed from the market in Australia. In order to be eligible to sign such an agreement, a grower is required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Commercial Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w LL ha | Total ha |
|-----------------|--------------|-------------|------------------|--------------|-------------------|---------------|-------------------|
| Belyando | 0.00 | 0.00 | 0.00 | 0.00 | 200.00 | 0.00 | 200.00 |
| Bourke | 0.00 | 0.00 | 65.95 | 0.00 | 6078.44 | 0.00 | 6144.39 |
| Darling Downs | 16.04 | 0.00 | 4523.36 | 0.00 | 40249.95 | 94.75 | 44884.10 |
| Dawson/Callide | 0.00 | 0.00 | 47.05 | 0.00 | 4672.61 | 0.00 | 4719.66 |
| Dirranbandi | 0.00 | 0.00 | 31.55 | 0.00 | 29515.74 | 0.00 | 29547.29 |
| Emerald | 0.00 | 0.00 | 0.00 | 0.00 | 14756.44 | 0.00 | 14756.44 |
| Gwydir | 4.48 | 0.00 | 4738.24 | 0.00 | 63750.60 | 0.00 | 68493.32 |
| Lachlan | 0.00 | 0.00 | 374.29 | 0.00 | 12780.40 | 412.00 | 13566.69 |
| Lower Namoi | 0.00 | 0.00 | 1676.82 | 0.00 | 46286.33 | 0.00 | 47963.15 |
| MacIntyre | 0.00 | 0.00 | 1277.78 | 0.00 | 43086.20 | 0.00 | 44363.98 |
| Macquarie | 0.00 | 0.00 | 320.42 | 0.00 | 52779.91 | 0.00 | 53100.33 |
| McKenzie River | 0.00 | 0.00 | 0.00 | 0.00 | 360.95 | 0.00 | 360.95 |
| Mungindi | 0.00 | 0.00 | 2996.13 | 0.00 | 18053.61 | 0.00 | 21049.74 |
| Murrumbidgee | 0.00 | 0.00 | 1147.05 | 0.00 | 31247.63 | 0.00 | 32394.68 |
| St George | 0.00 | 0.00 | 547.51 | 0.00 | 21901.19 | 0.00 | 22448.70 |
| Tandou | 0.00 | 0.00 | 386.20 | 0.00 | 7100.42 | 0.00 | 7486.62 |
| Upper Namoi | 0.00 | 0.00 | 726.17 | 0.00 | 18073.80 | 165.59 | 18965.56 |
| Walgett | 0.00 | 0.00 | 87.64 | 0.00 | 5137.80 | 0.00 | 5225.44 |
| Total ha | 20.52 | 0.00 | 18,946.16 | 0.00 | 389,032.02 | 672.34 | 408,671.04 |

| | |
|--|-------------------|
| Total Bollgard II ha planted | 389,724.88 |
| Total Roundup Ready Flex ha planted | 407,978.18 |

Note – Total Bollgard II figure includes Bollgard II, Bollgard II/Roundup Ready Flex and Bollgard II/[REDACTED]. Total Roundup Ready Flex figure includes Roundup Ready Flex and Bollgard II/Roundup Ready Flex.

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfgagn, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimgan, Blair Athol and Pasha.

Valley: Bourke

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Valley: Darling Downs

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Valley: Dirranbandi

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Valley: St George

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Valley: Tandou

Boundaries: surrounds Menindee shire. North of Mildure and west of the SA border

Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

3.4 Trial/Research Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ■ ha | Total ha |
|-----------------|-------------|-------------|--------------|--------------|---------------|-------------|---------------|
| ■ | 0.00 | 0.00 | 15.47 | 0.00 | 187.09 | 0.00 | 202.56 |
| ■ | 0.00 | 0.00 | 3.90 | 0.00 | 39 | 0.00 | 42.9 |
| Total ha | 0.00 | 0.00 | 19.37 | 0.00 | 226.09 | 0.00 | 245.46 |

APPENDIX A -

Resistance Management Plan for Bollgard II® Cotton 2013/2014

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.



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All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied. An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in

adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.

- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando - Clermont: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Mackenzie: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift, except where a pigeon pea refuge is converted to a trap crop. In this case the full 5% pigeon pea refuge area managed to become the late summer trap crop can only be sprayed with virus after the first defoliation of Bollgard II cotton. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. When using the full 5% pigeon pea trap crop option, weed control must not be carried out by cultivation once flowering of the associated Bollgard II cotton crop has commenced |

| | |
|------------------|--|
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). All Bollgard II and associated trap crops must be destroyed by July 31. |
|------------------|--|

* A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.

** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

APPENDIX B

Resistance Management Plan for Bollgard II® cotton 2013/2014 - Ord River Irrigation and Burdekin Bowen Basin Areas

Ord River Irrigation, Burdekin Bowen Basin and Richmond Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland
- **Richmond Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|---------------------|--|------------------|-------------------|
| Conventional Cotton | Irrigated, unsprayed conventional cotton | 10 | All Regions |
| Pigeon pea | Fully irrigated, unsprayed | 5 | All Regions |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp. Bt products must not be applied to any refuge.

If the viability of an unsprayed refuge is at risk due to early or late season pressure by *Helicoverpa* spp., or any other caterpillar species, contact Monsanto immediately. With prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II unless a sufficient buffer is in place to prevent insecticide drift.

Sprayed crops and unsprayed refuges that are planted in adjacent fields must also be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

(a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Ord River Irrigation Area

It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Burdekin Bowen and Richmond Areas

Refuges must be sown within the 2 weeks prior to planting any Bollgard II. This timing attempts to mitigate wet season planting risks.

(b) Group J legume inoculant should be used to treat pigeon pea planting seed just prior to sowing to ensure effective root zone colonisation by nitrogen fixing rhizobium bacteria

(c) Once the Bollgard II cotton begins to flower the corresponding refuge must not be cultivated.

(d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.

(e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.

- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Slashing of plants within the refuge should only be carried out after Bollgard II cotton lint removal has been completed. Soil disturbance of refuge crops can only occur 2 weeks after Bollgard II cotton plants have been harvested.
- (i) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended "Bollgard II Planting Window Variation Notice".

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

Richmond Area: December 1 and April 1.

5. Refuge

Unsprayed Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season.

6. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

| Table 2. End of season chick pea trap crop requirements Criterion | End of season chick pea trap crop |
|---|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m x 24m wide. |

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| | |
|------------------|---|
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. The trap crop must be planted into an area where it can receive the additional irrigation required to ensure the trap crop remains attractive to <i>Helicoverpa</i> spp. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks after defoliation of the Bollgard II cotton crop, but not before 3 weeks (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). All Bollgard II cotton and associated trap crops must be destroyed by: Burdekin Bowen Basin/Richmond Area – August 31 Ord River Irrigation Area – December 10 |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.



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6/1/2015

Office of the Gene Technology Regulator

(MDP54)

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DIR091 ANNUAL REPORT 2014

Since the issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

Regards,

[Redacted signature block]

MONSANTO



LICENCE No: DIR 012/2002
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2004 Annual Report for Bollgard II®
(Commercial Release)
REPORTING PERIOD: 2003/04 Cotton Growing Season
DATE: 22 December 2004

PREPARED BY: [REDACTED]
Regulatory Affairs Associate

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**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

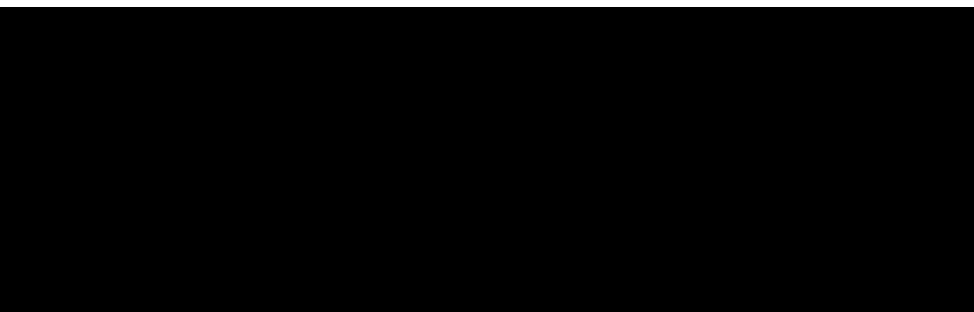
This report addresses the annual reporting condition of the DIR 012 commercial release licence for Bollgard II® issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 and 4 of the DIR 012 licence as issued to Monsanto Australia Limited on 23 September 2002, and varied in June, September and December 2003 and March, May, October and December 2004.



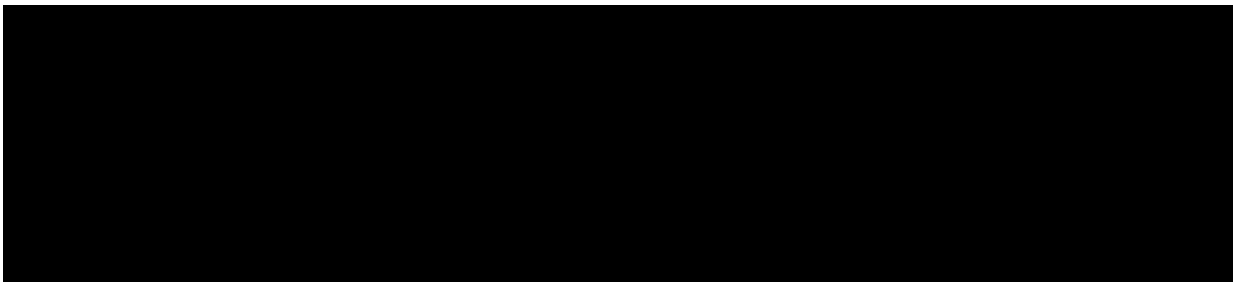
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**1. General Conditions****a. Informing people of their obligations**

Monsanto Australia Limited informed all cotton growers and cotton gins covered by the DIR 012 / 2002 licence of the obligations imposed on them as a result of the conditions of these licences. This was achieved primarily through Monsanto Accreditation programs and information courses.

**b. Reporting**

During the reporting period, the licence holder did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence, or of any unintended effects of the dealings authorised by the licence.



c. Material changes in circumstances

During the 2003/04 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence or permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of the DIR 012 licence.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

During the 2003/04 reporting period, Monsanto Australia Limited notified the Office of the Gene Technology Regulator of a change in project supervisor. 


**f. Testing methodology**

Under conditions of the licence, Monsanto Australia Limited was required to provide the Regulator with a method capable of reliably detecting the presence of the GMO. [REDACTED]

[REDACTED]



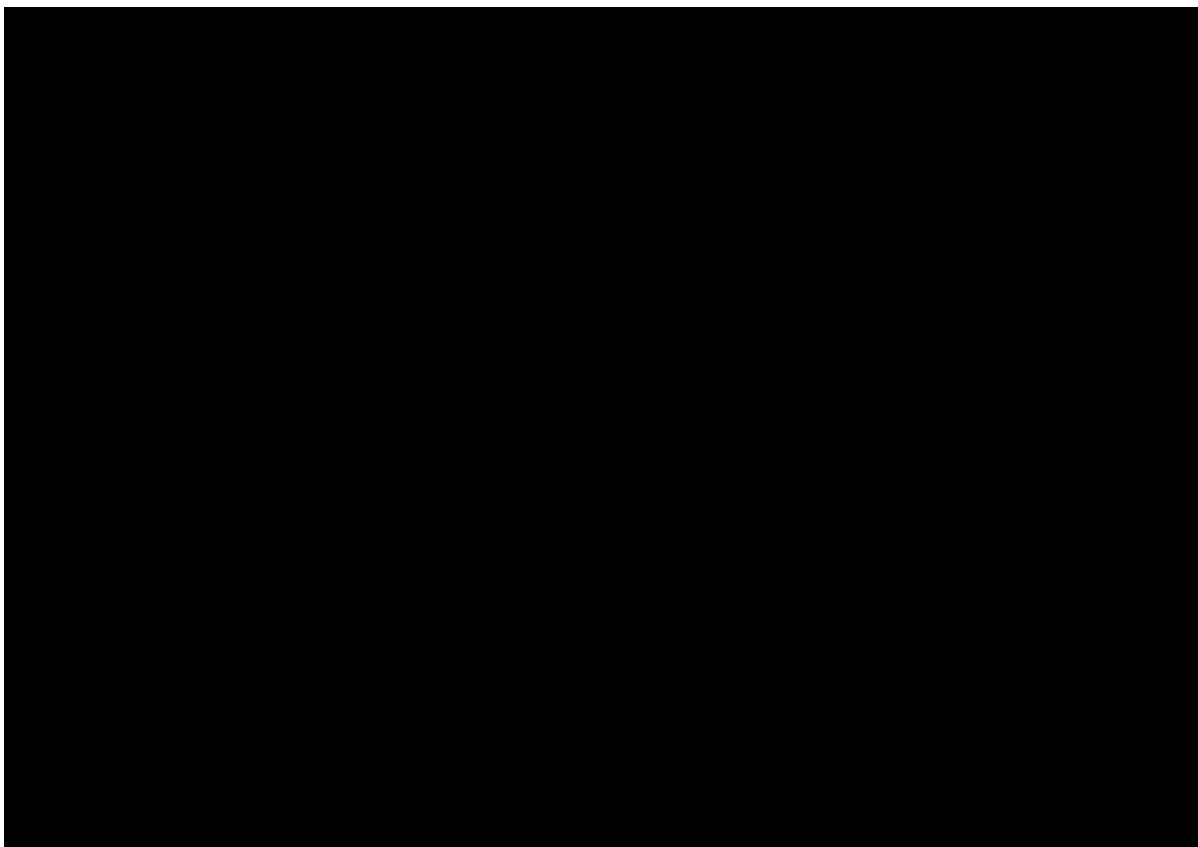
2. Release of Bollgard II® south of latitude 22° south (outside the Restricted Zone)

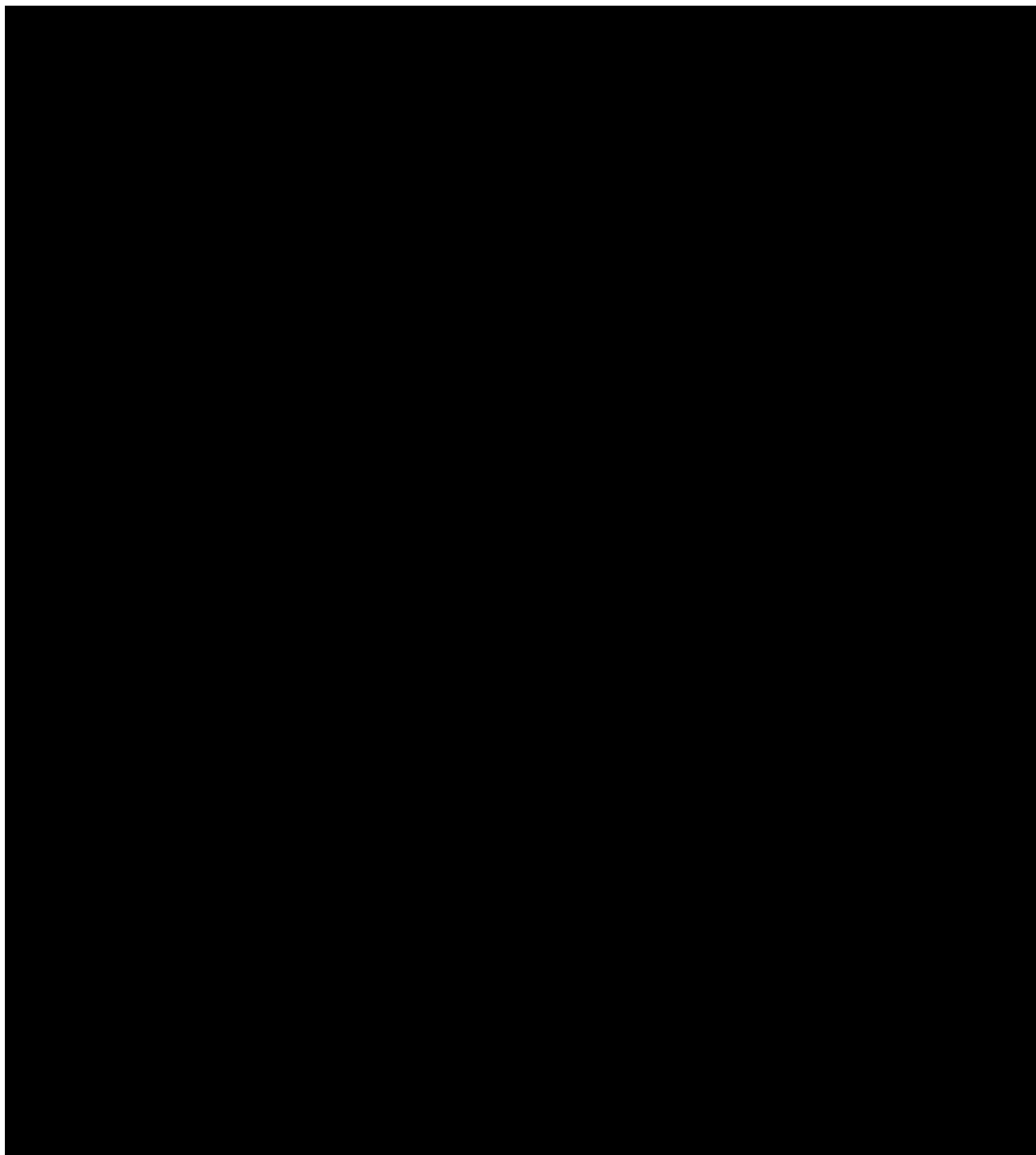
The licence holder may conduct dealings with the GMOs south of latitude 22 degrees south.

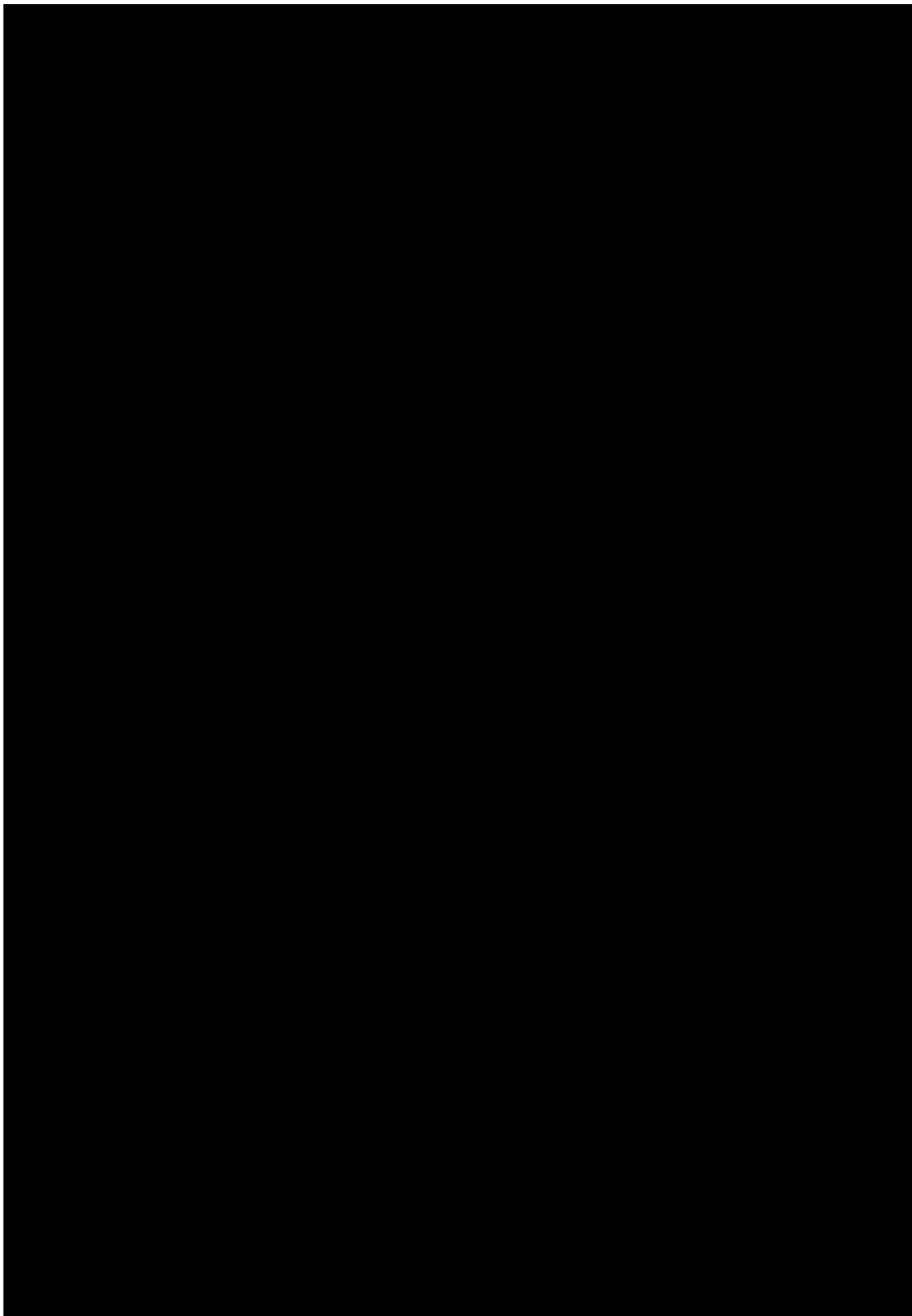
In the 2003/04 reporting period, Bollgard II cotton was grown in the traditional cotton-growing regions south of latitude 22° south in NSW and Queensland. More information on the locations where all Bollgard II cotton crops were grown during the 2003/04 cotton growing season are given in **Part 2a**.

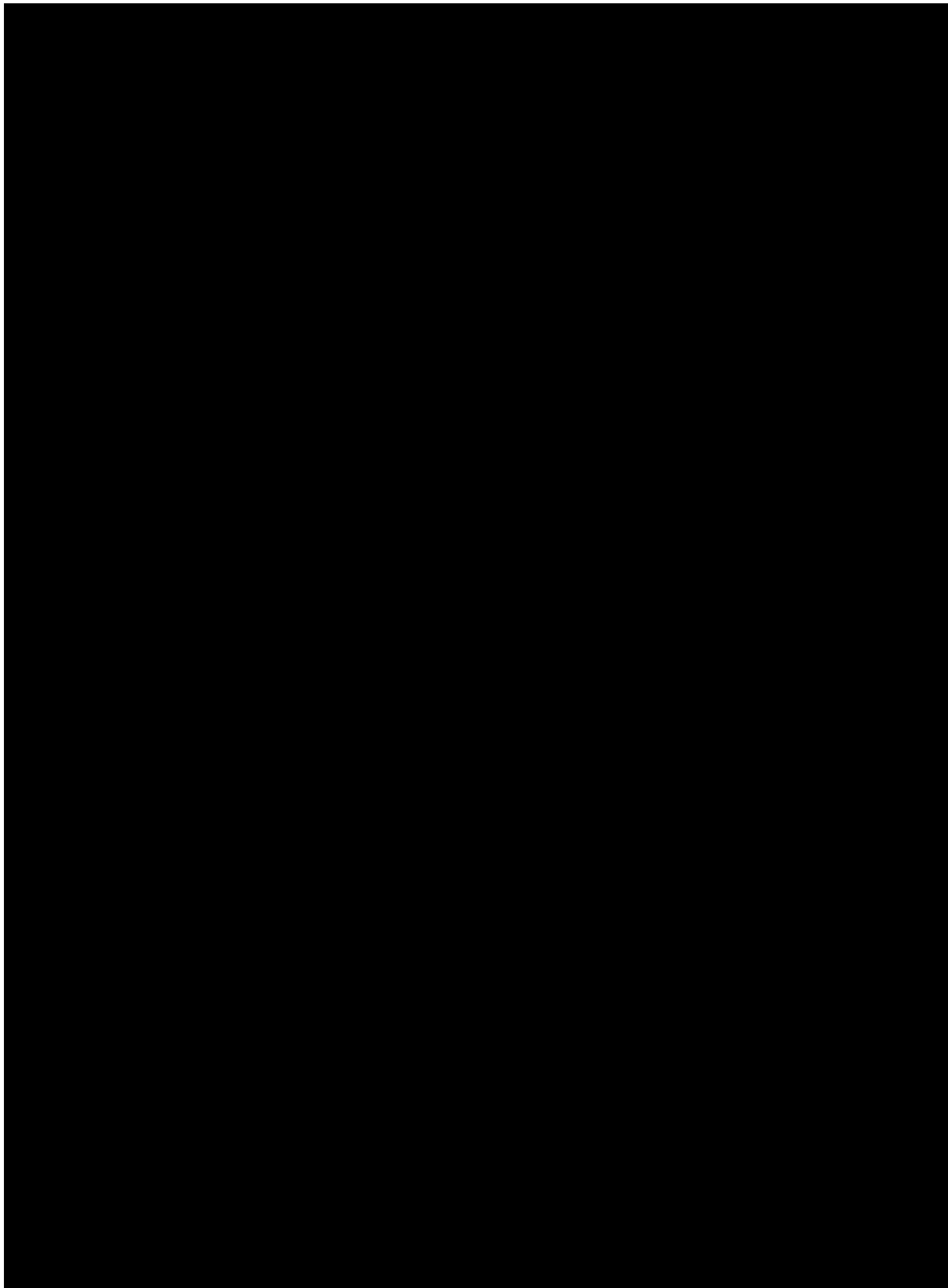
a. Crop plantings of Bollgard II® cotton

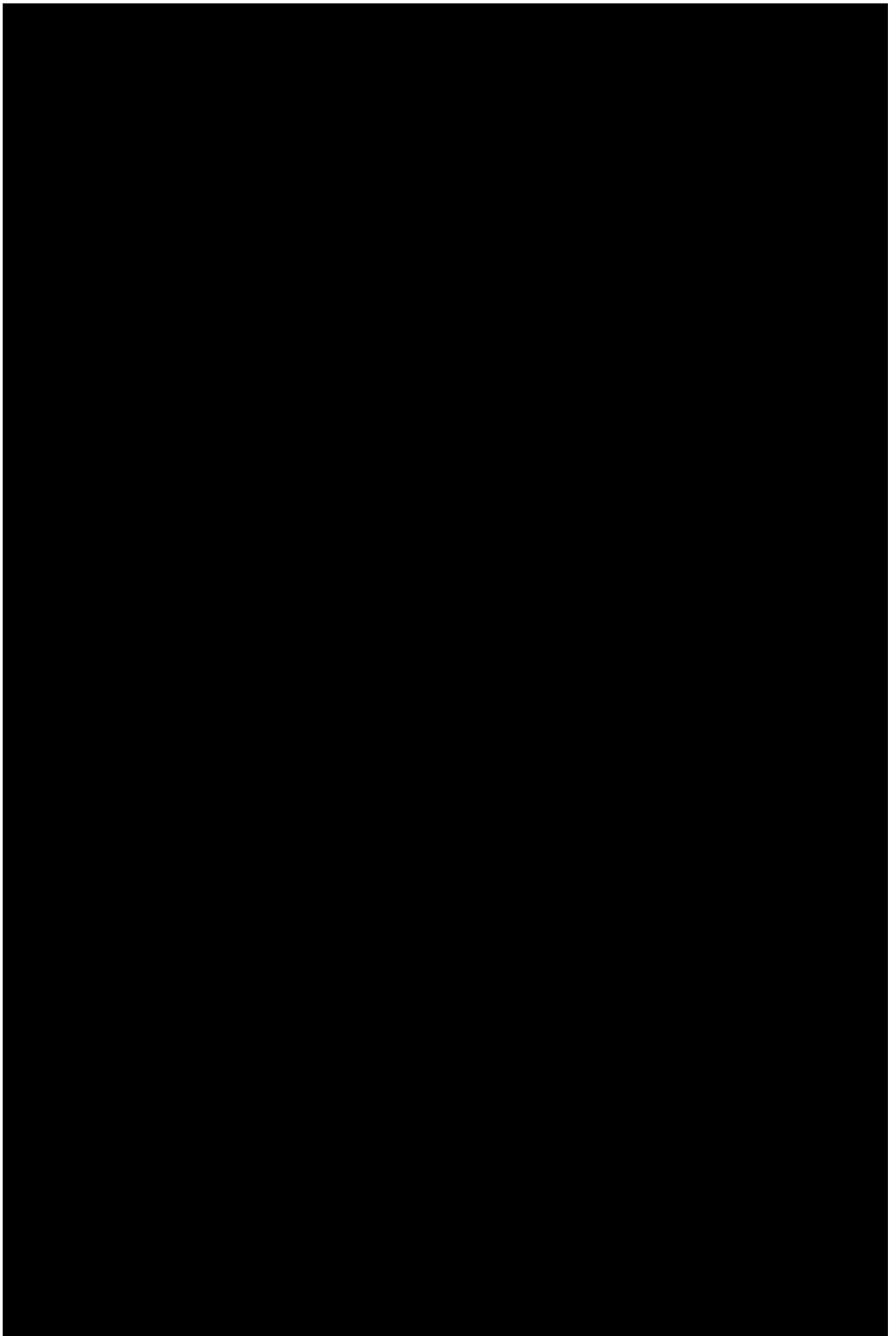
i) Conditions for Growing Crop

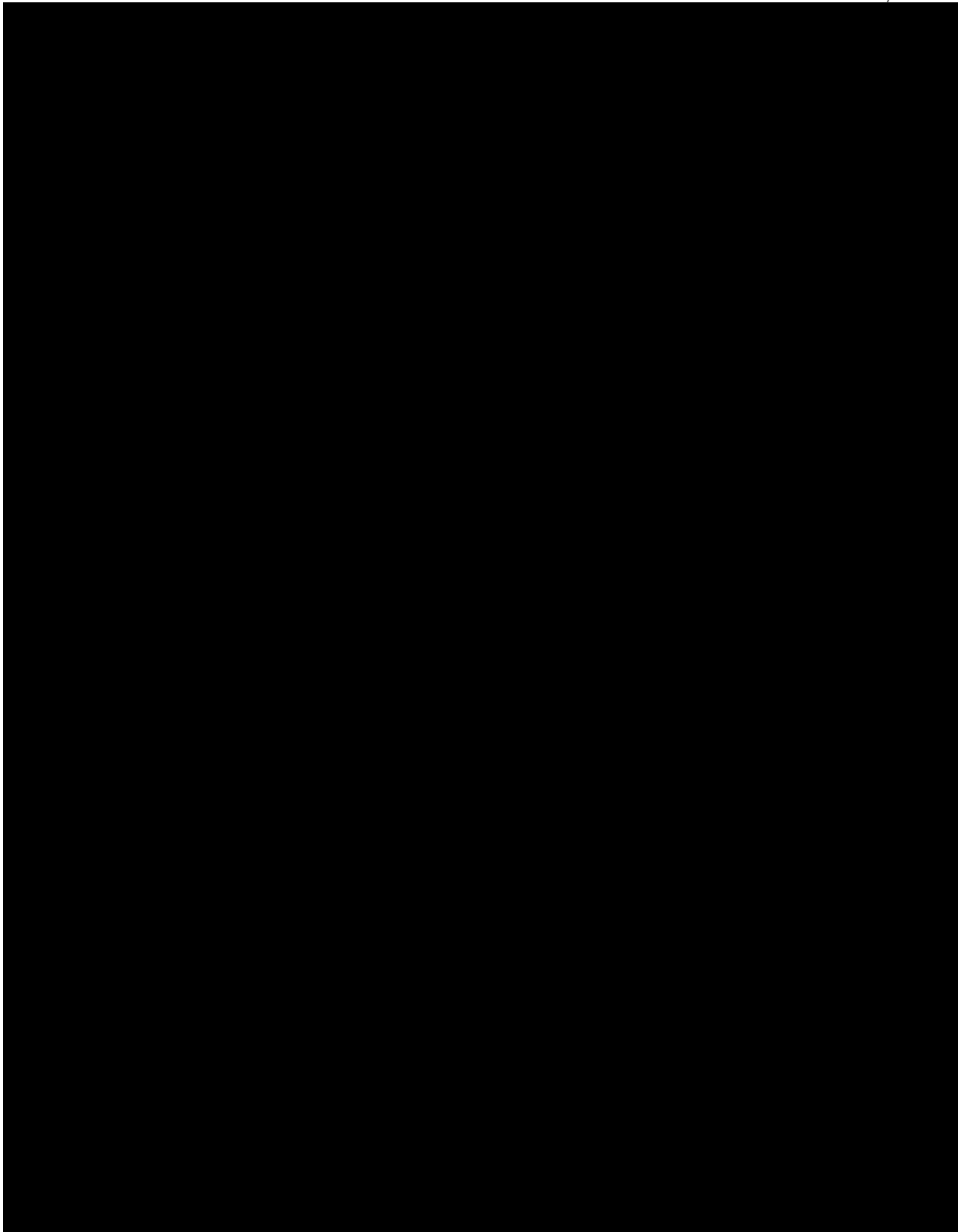


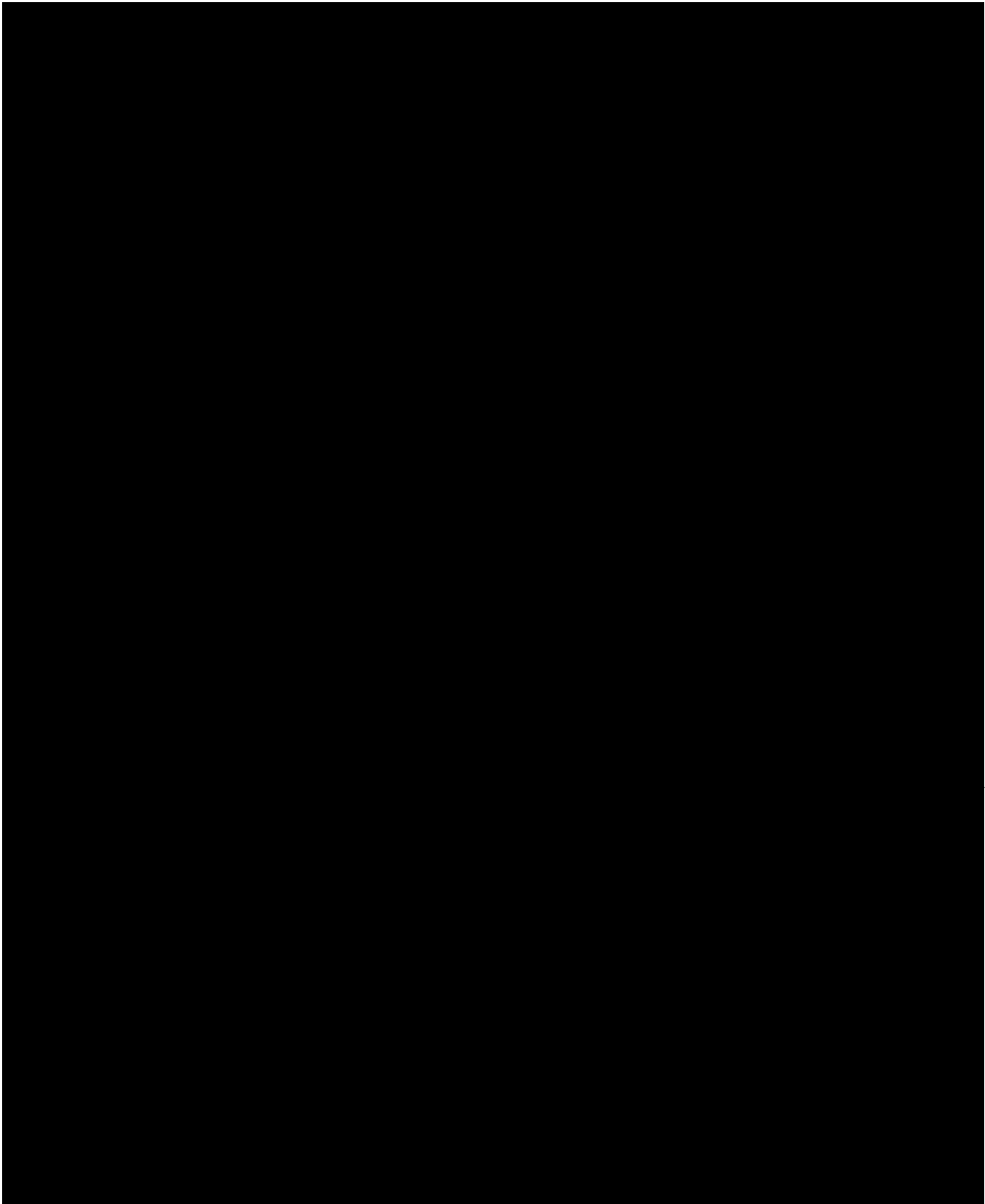


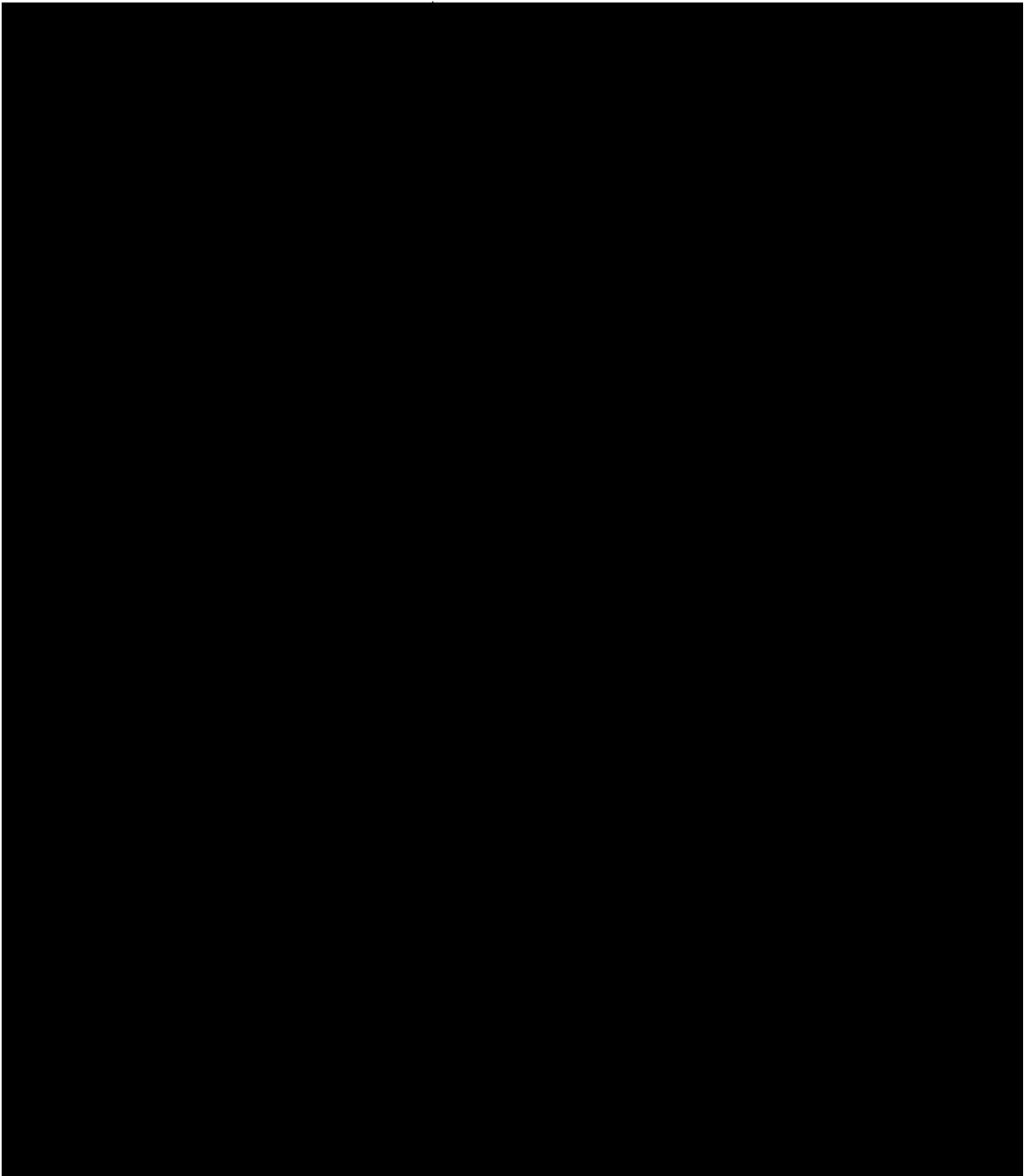


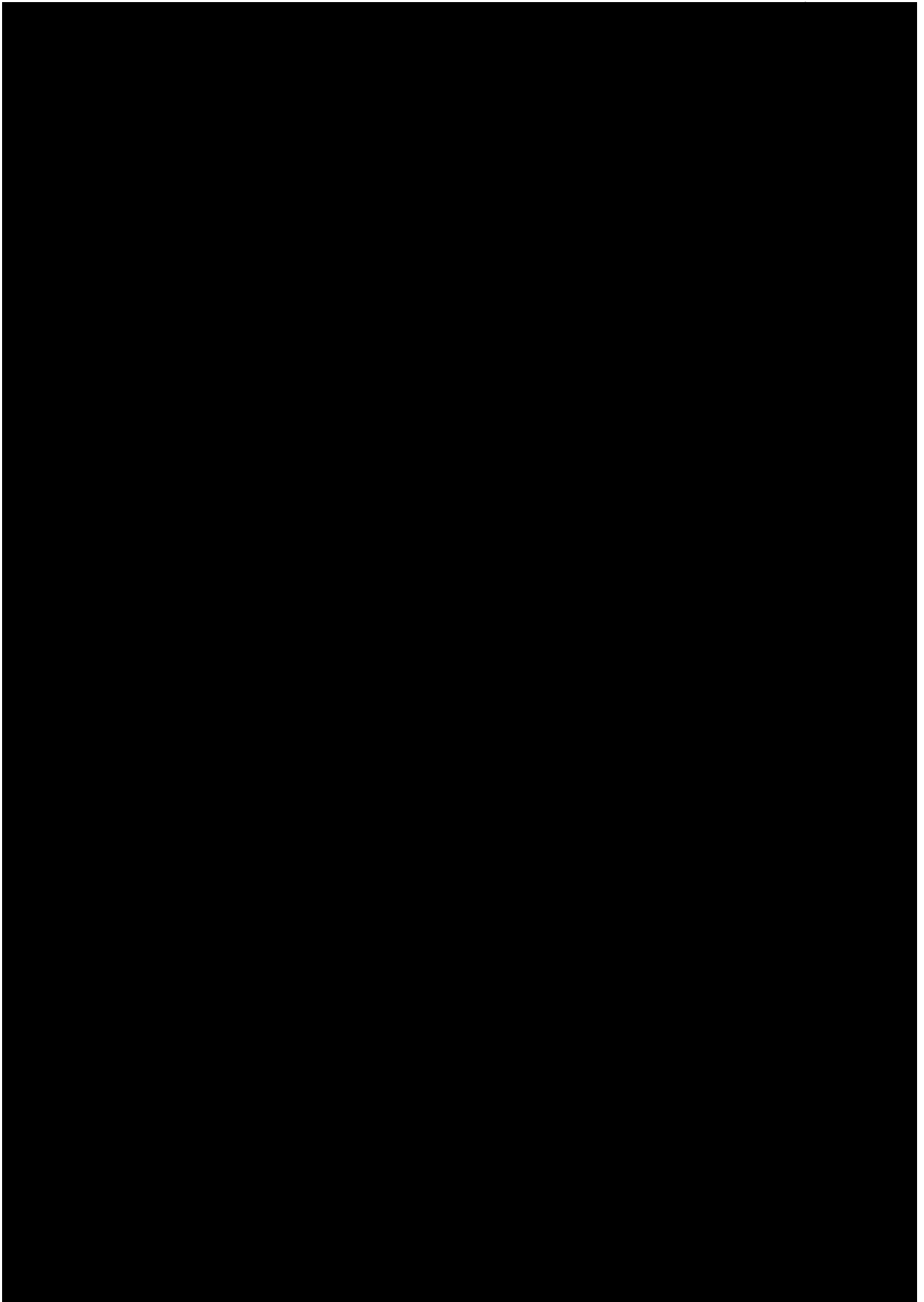


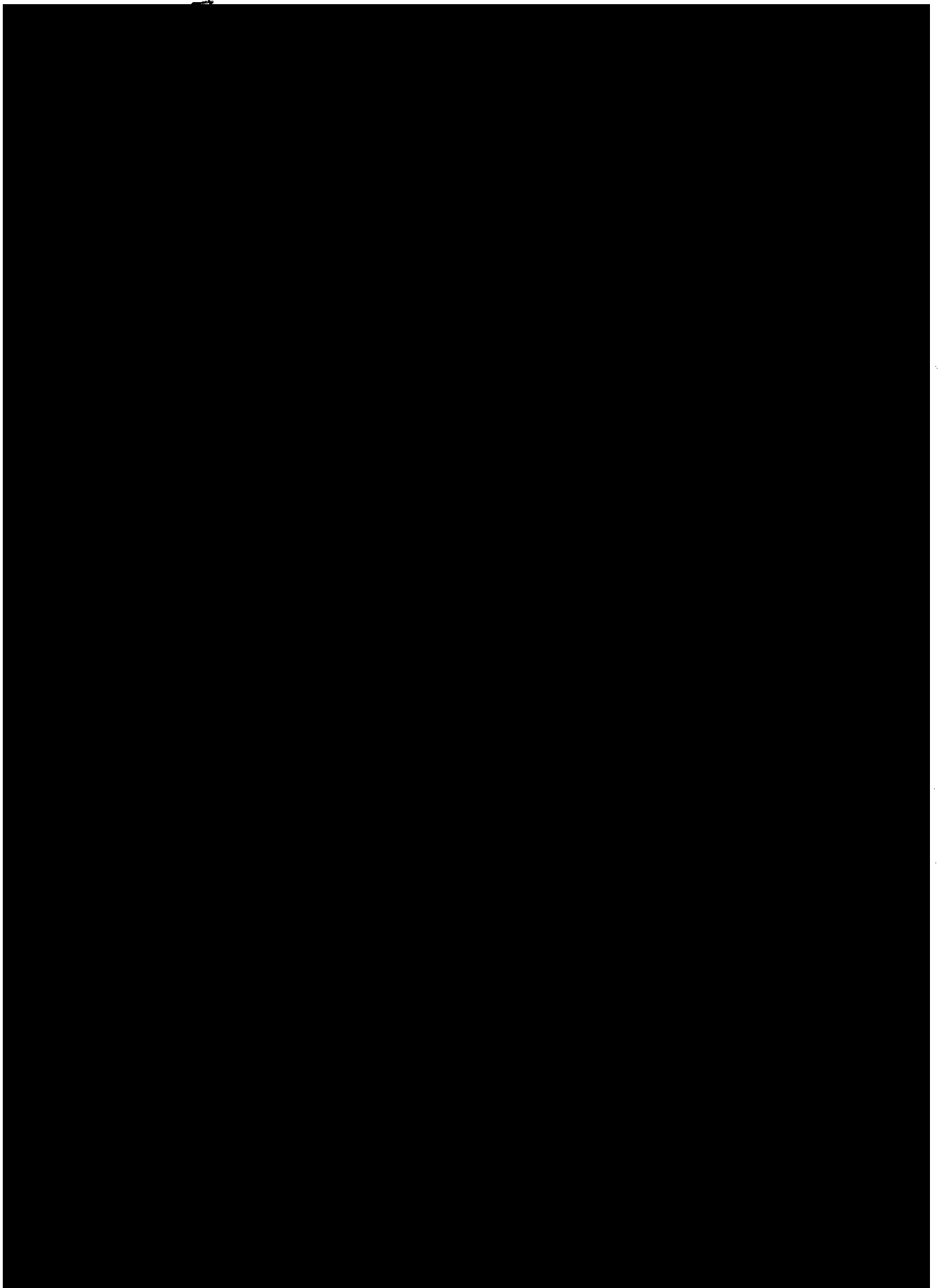


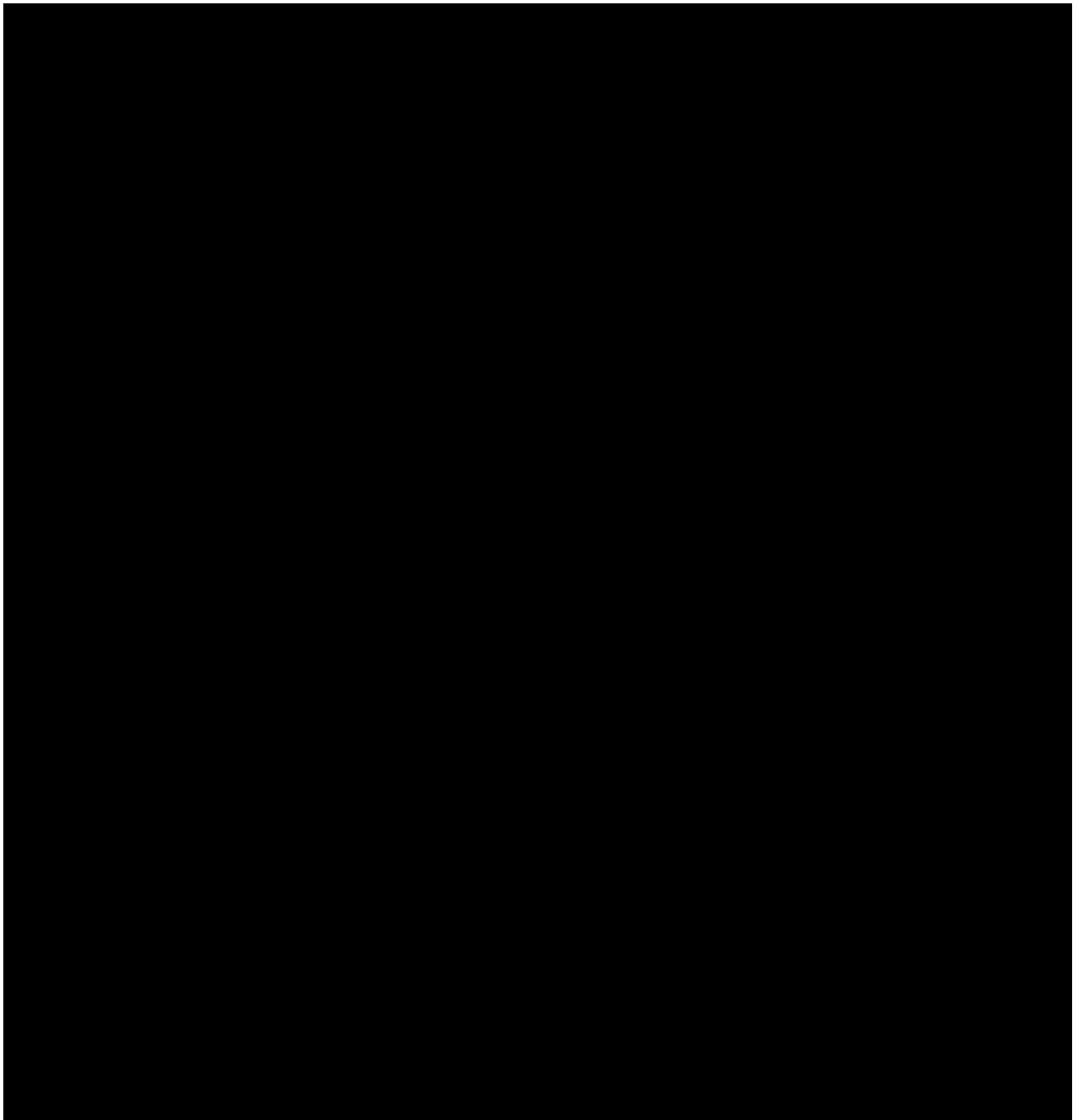


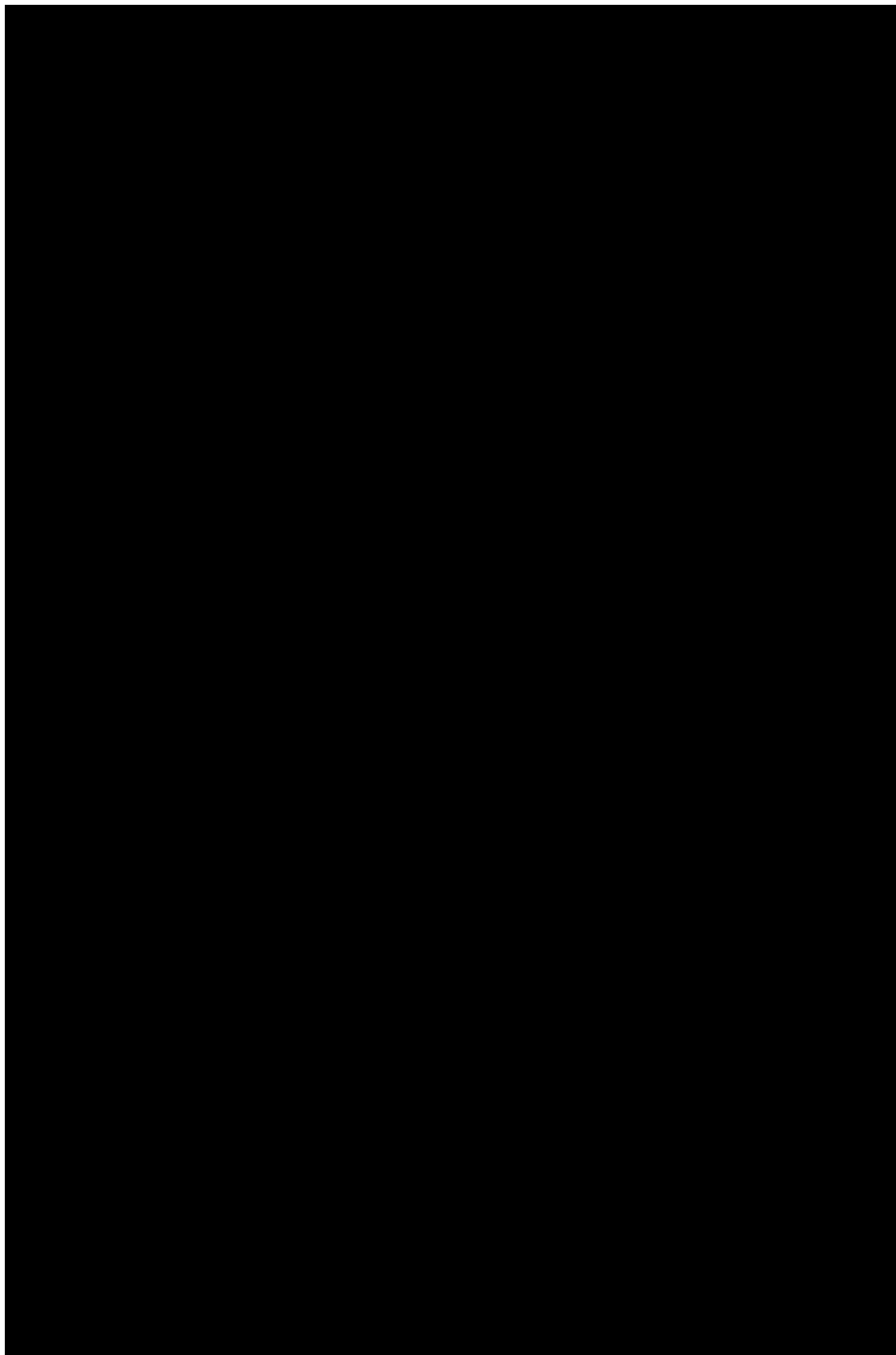




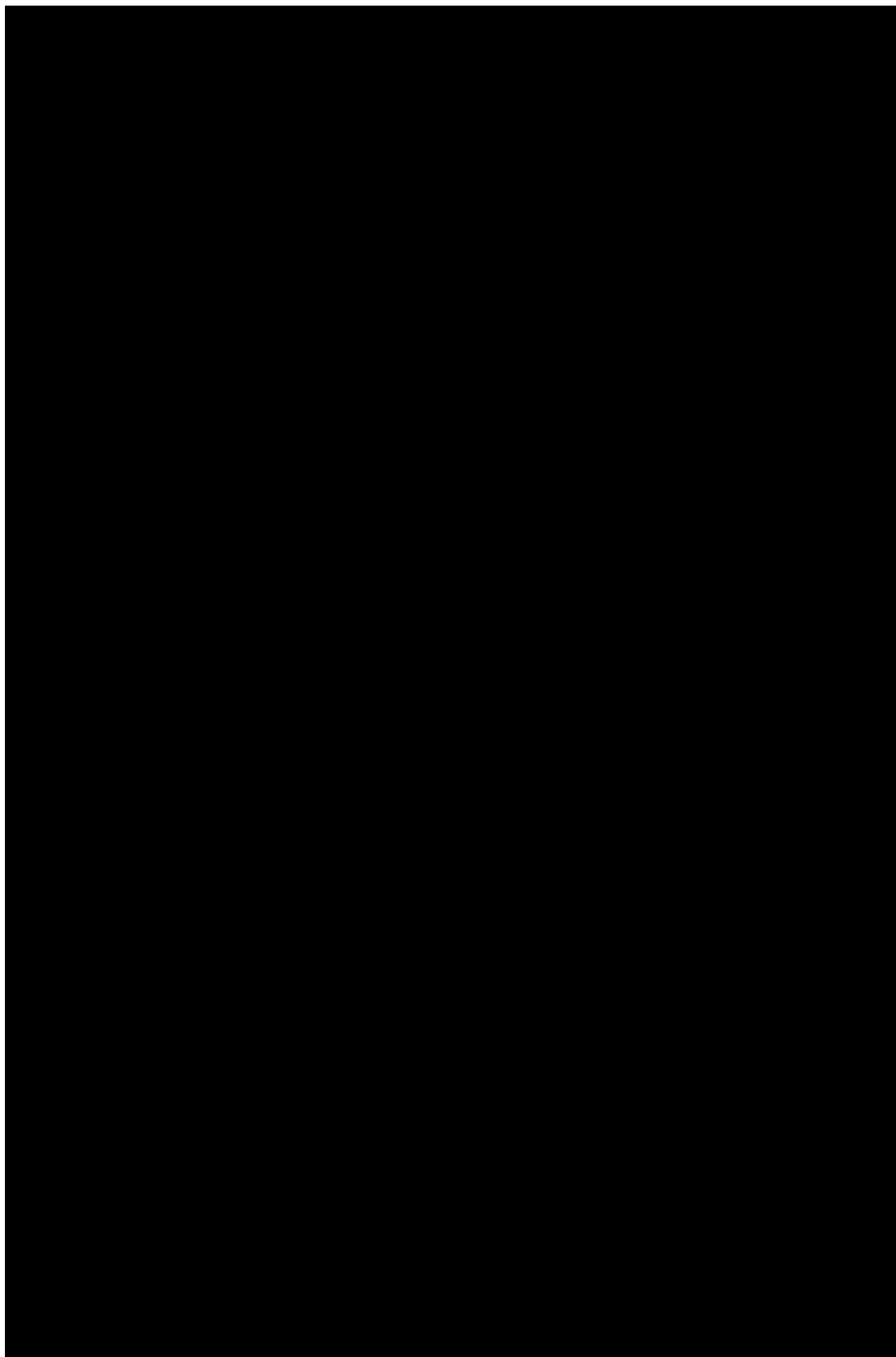


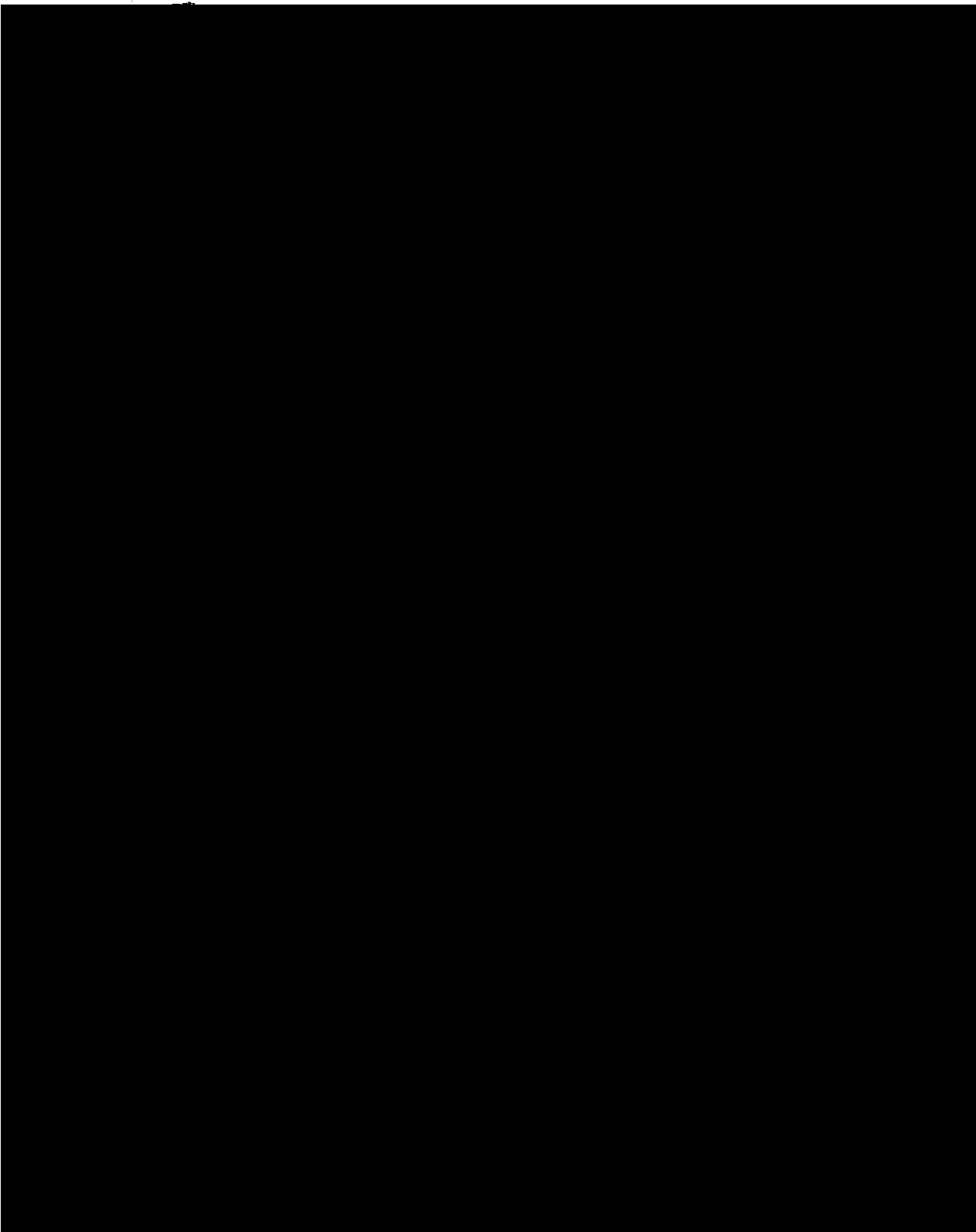




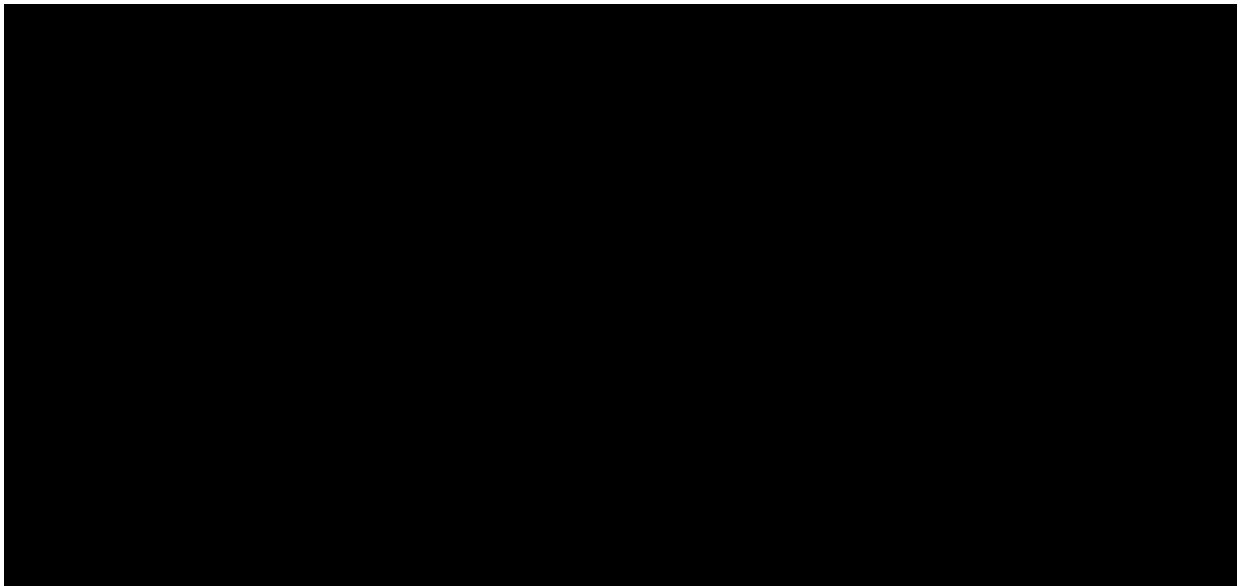














The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights the need for researchers to be sensitive to the values and beliefs of the communities they are studying. This is particularly important in the field of education, where cultural differences can significantly impact learning outcomes.

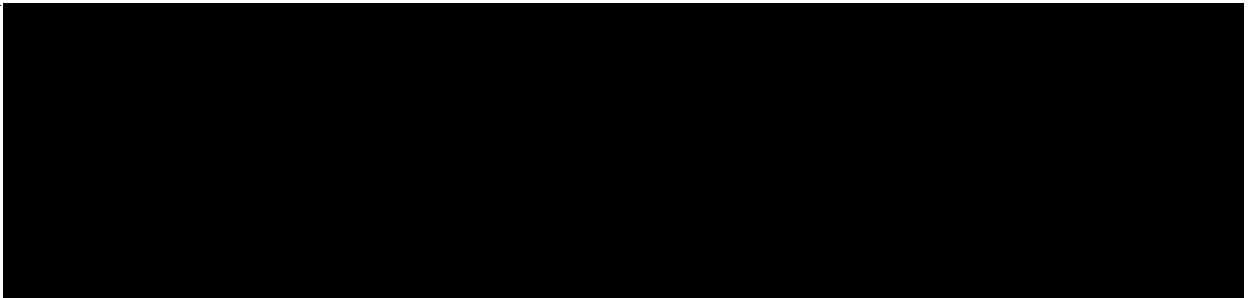
The second part of the paper focuses on the methodology used in the study. It describes the process of selecting participants, collecting data, and analyzing the results. The authors emphasize the importance of using a mixed-methods approach to gain a comprehensive understanding of the research topic.

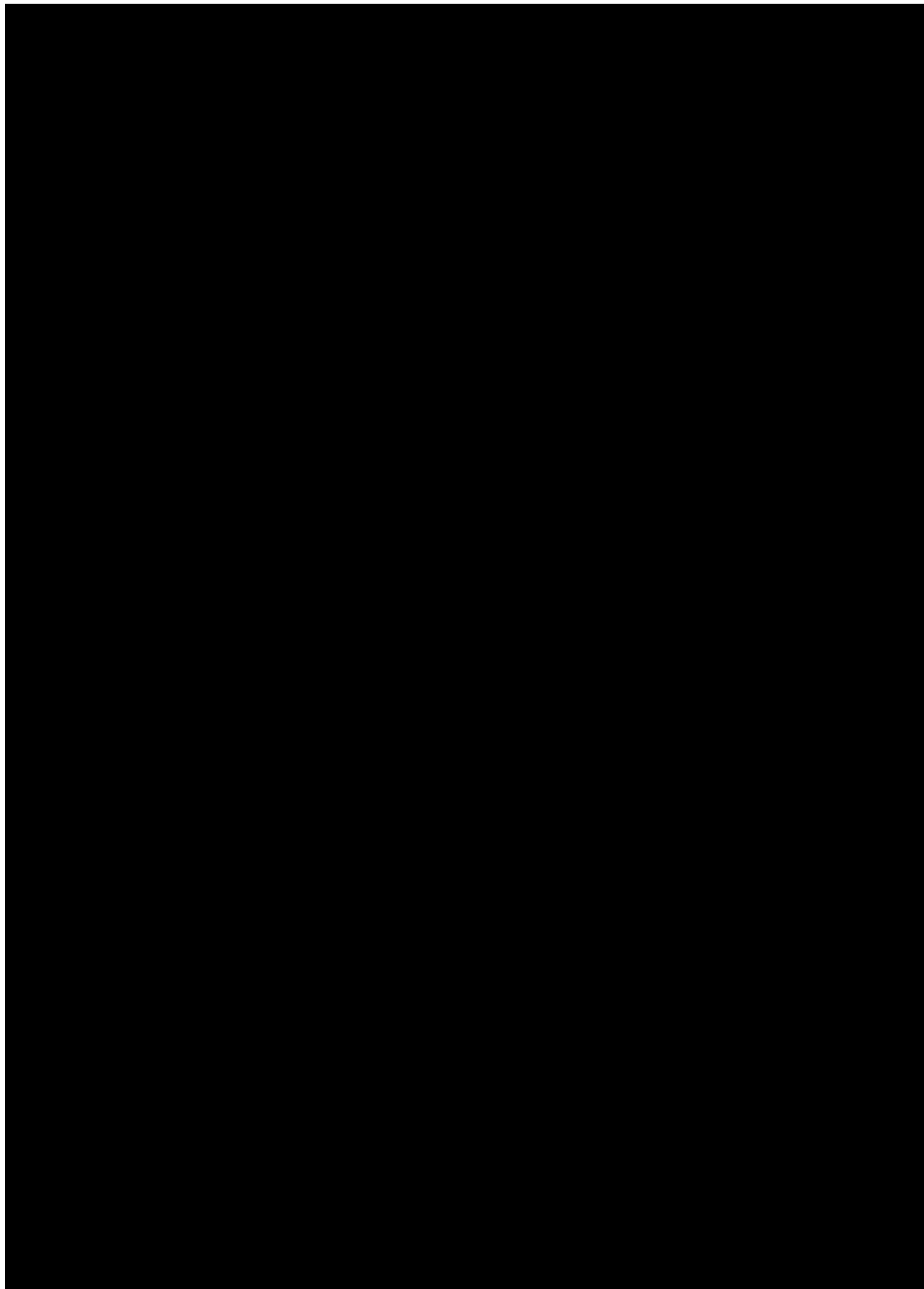
The third part of the paper presents the findings of the study. It discusses the results of the quantitative data analysis and the insights gained from the qualitative interviews. The authors conclude that there are significant cultural differences in the way that students learn and that these differences should be taken into account when designing educational programs.

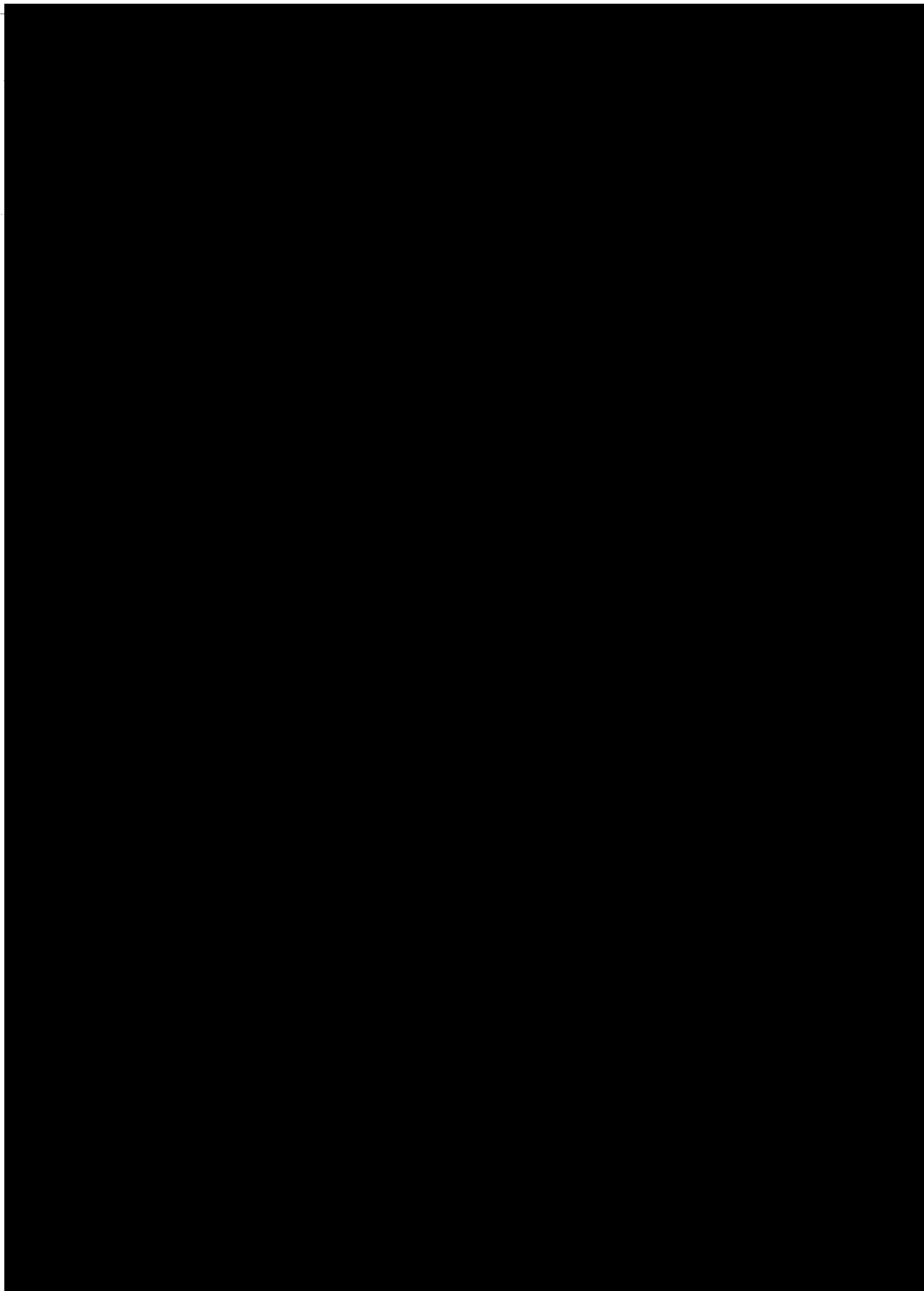
The final part of the paper discusses the implications of the findings for future research and practice. It suggests that further studies should be conducted to explore the cultural factors that influence learning outcomes. Additionally, it recommends that educators should be trained to recognize and respond to the cultural needs of their students.

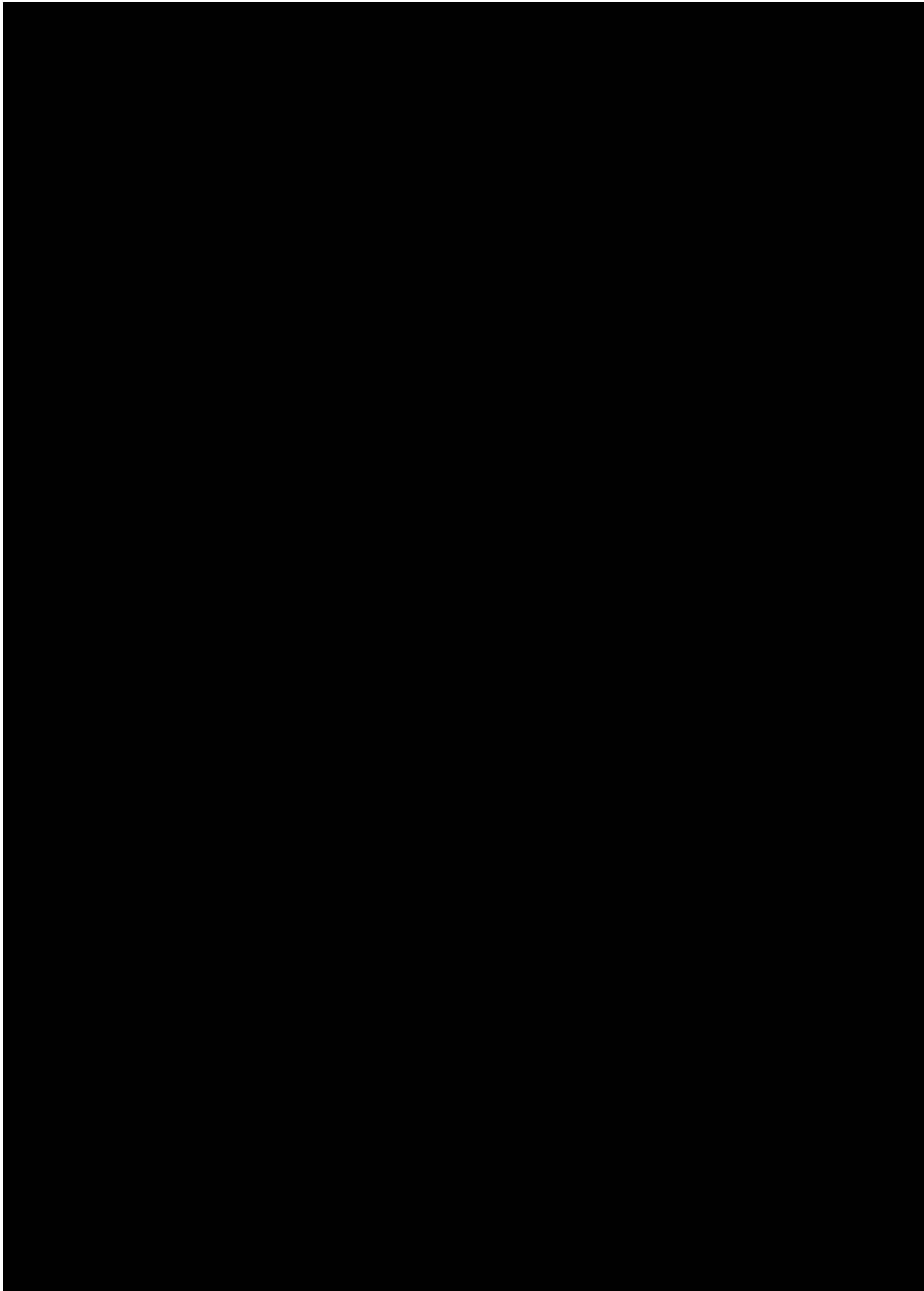
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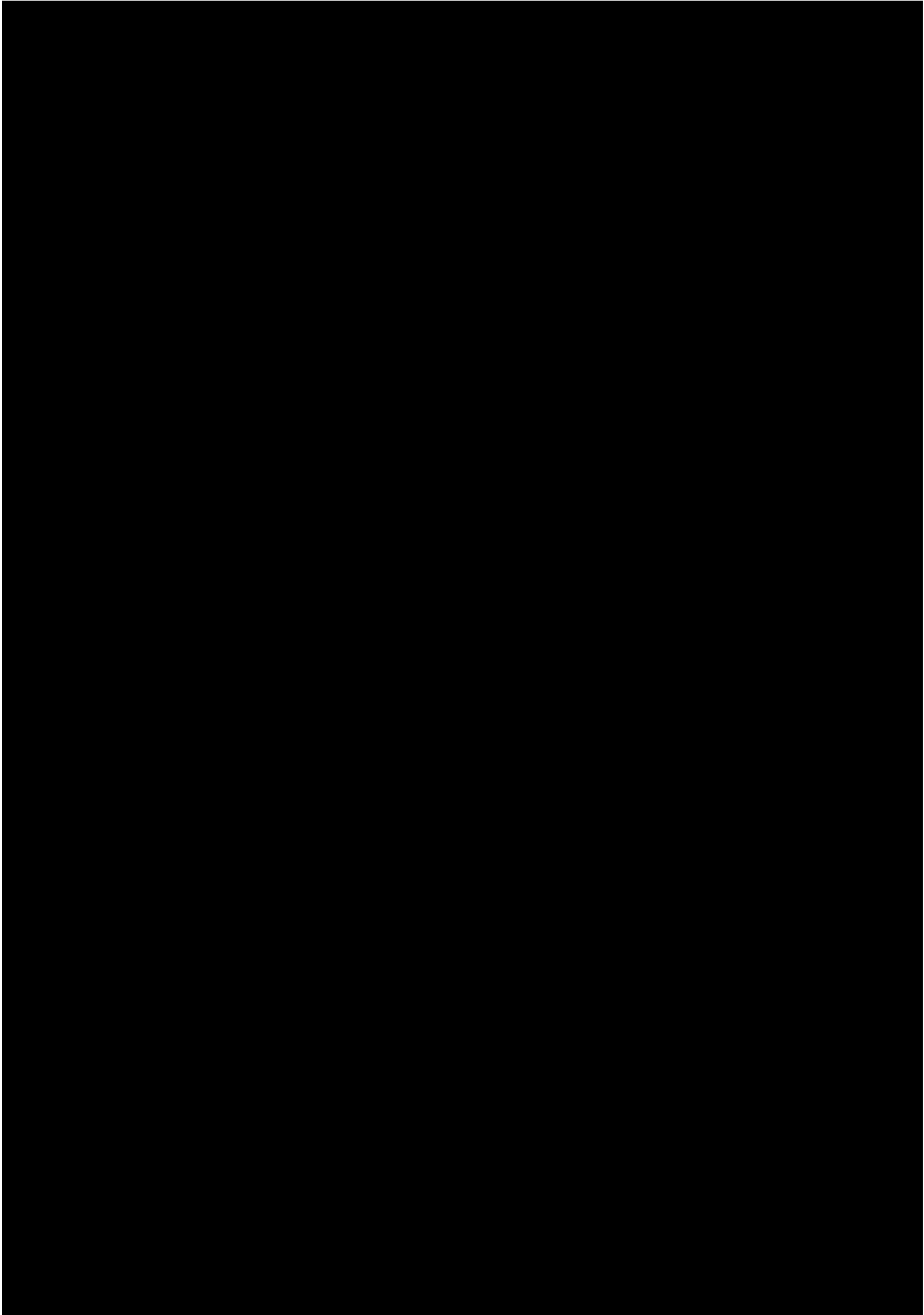
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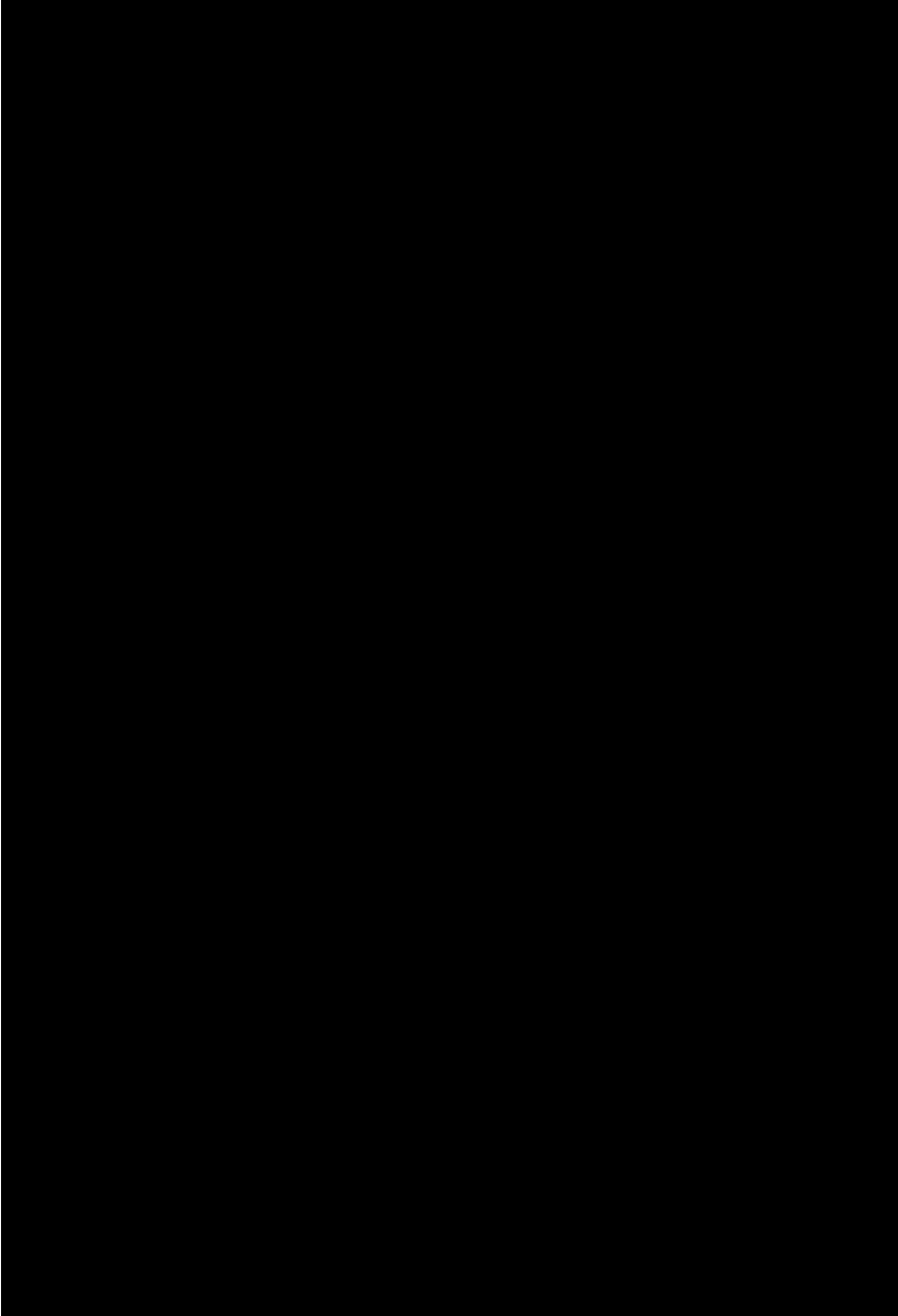


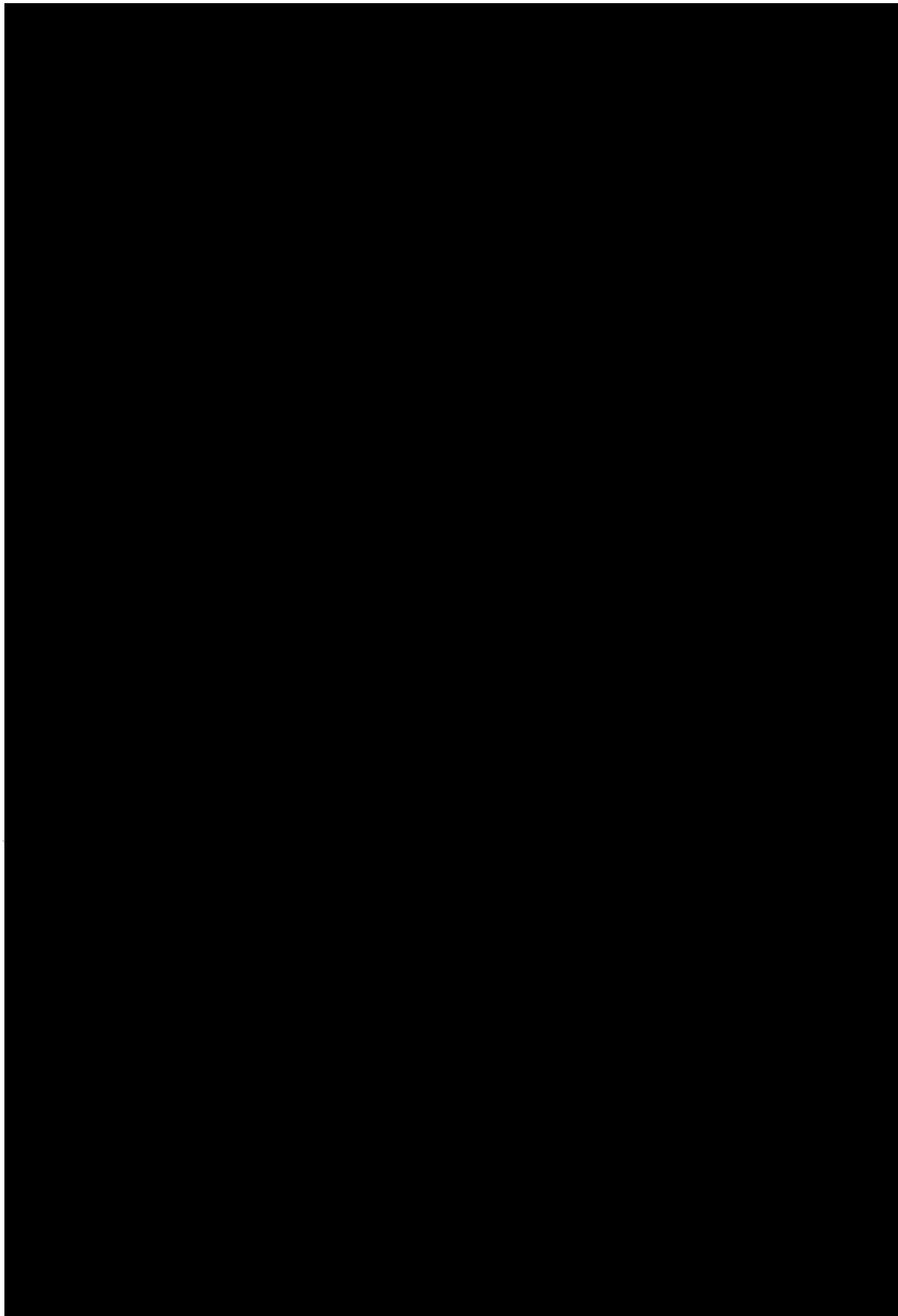


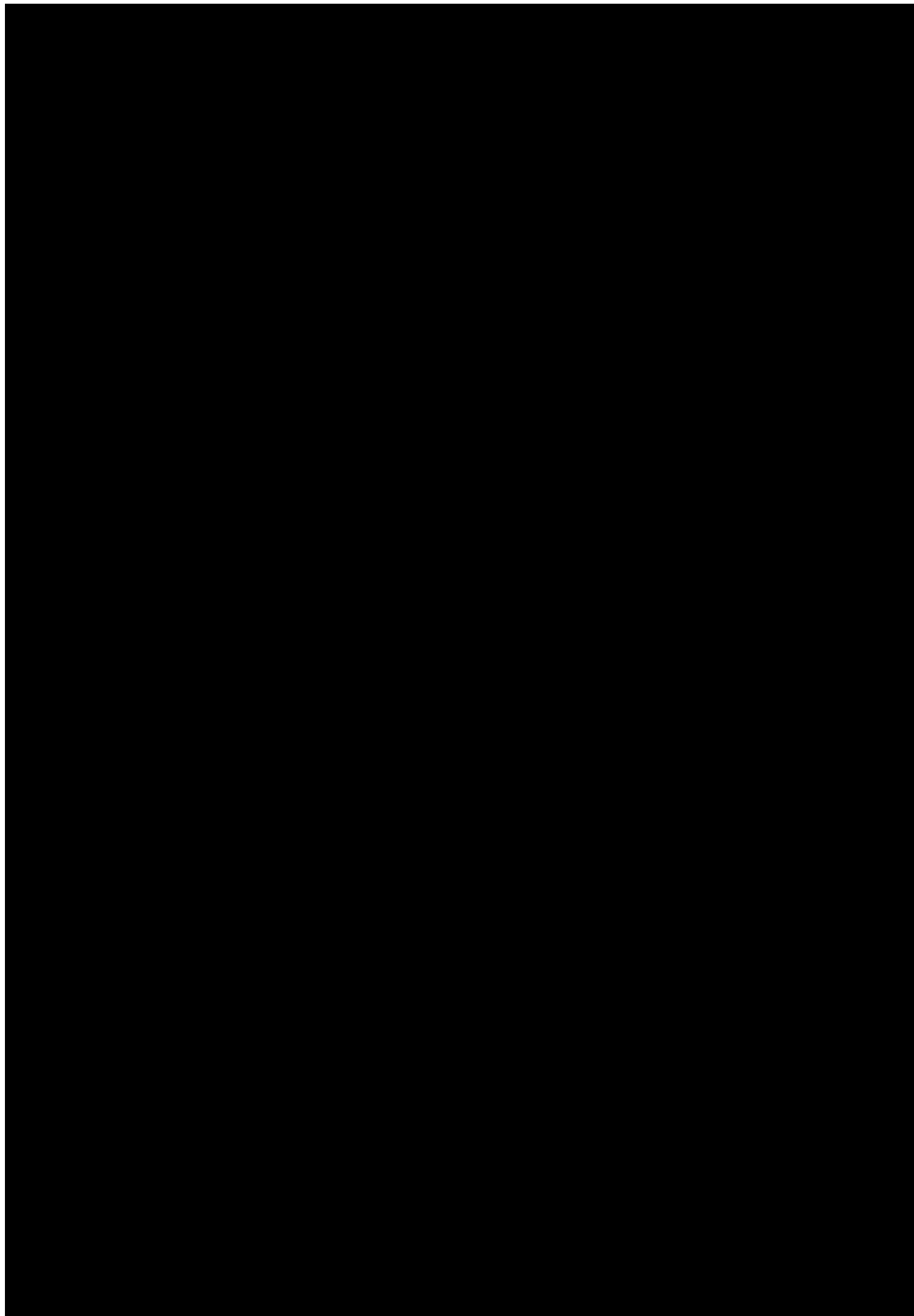


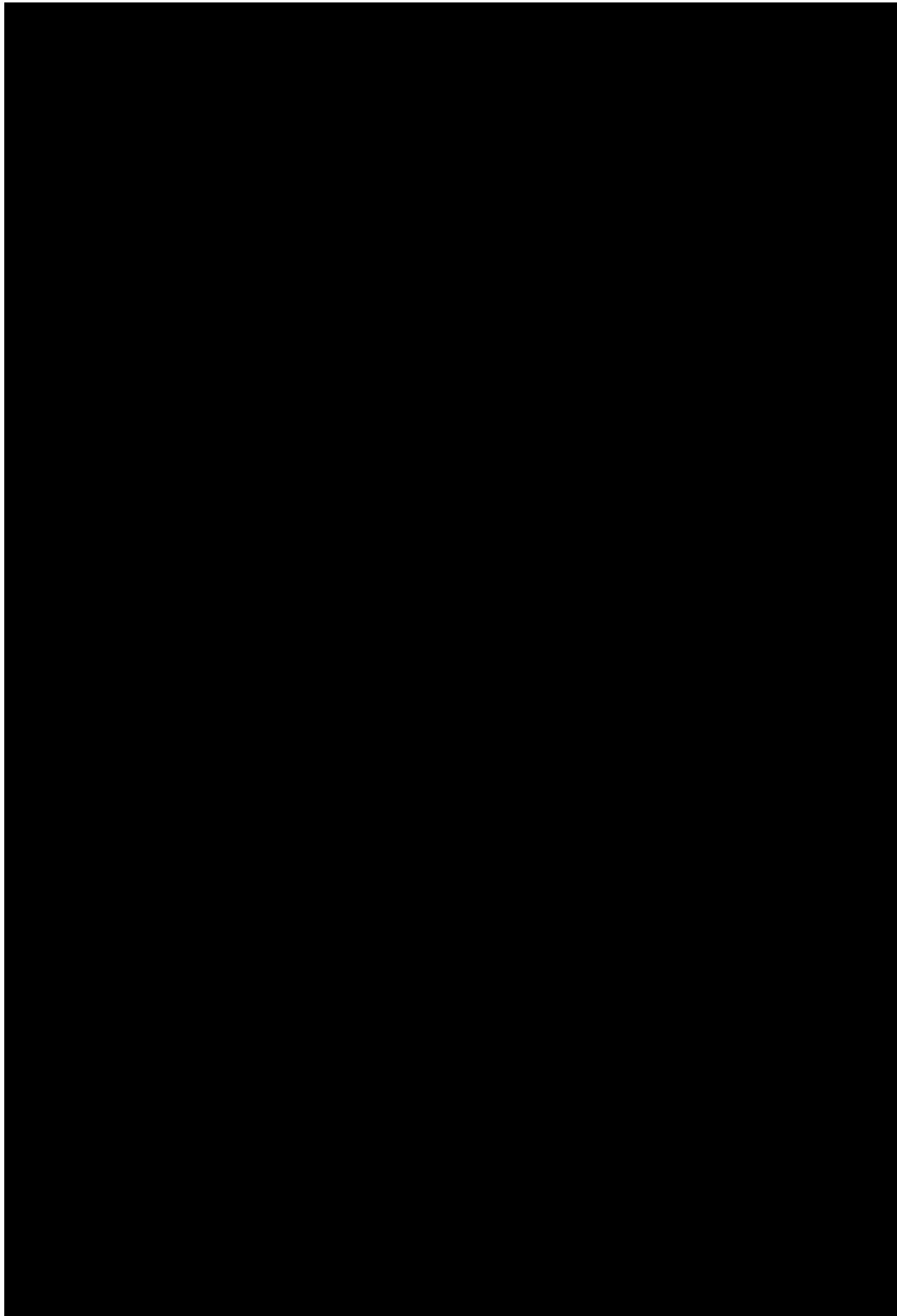


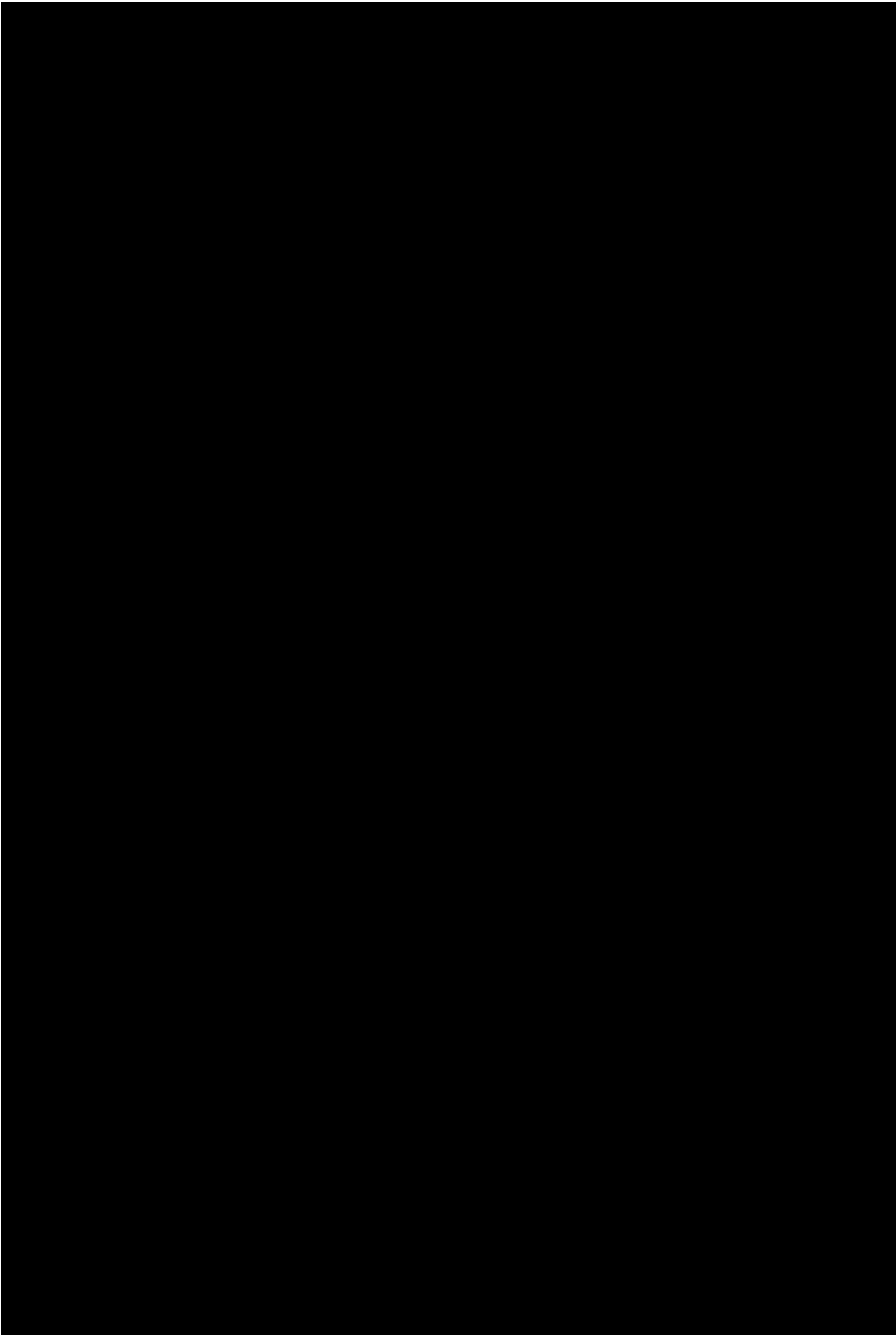


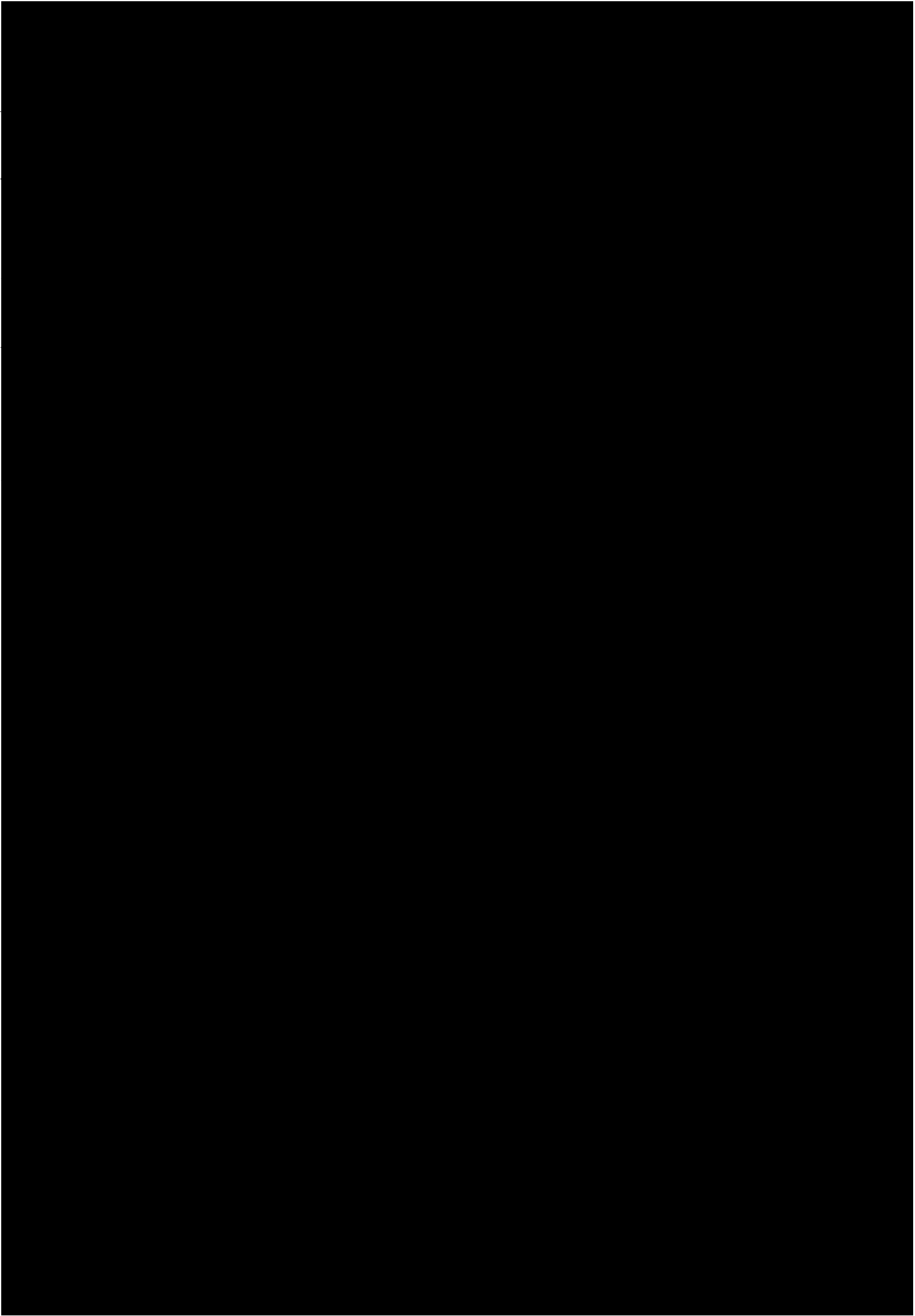


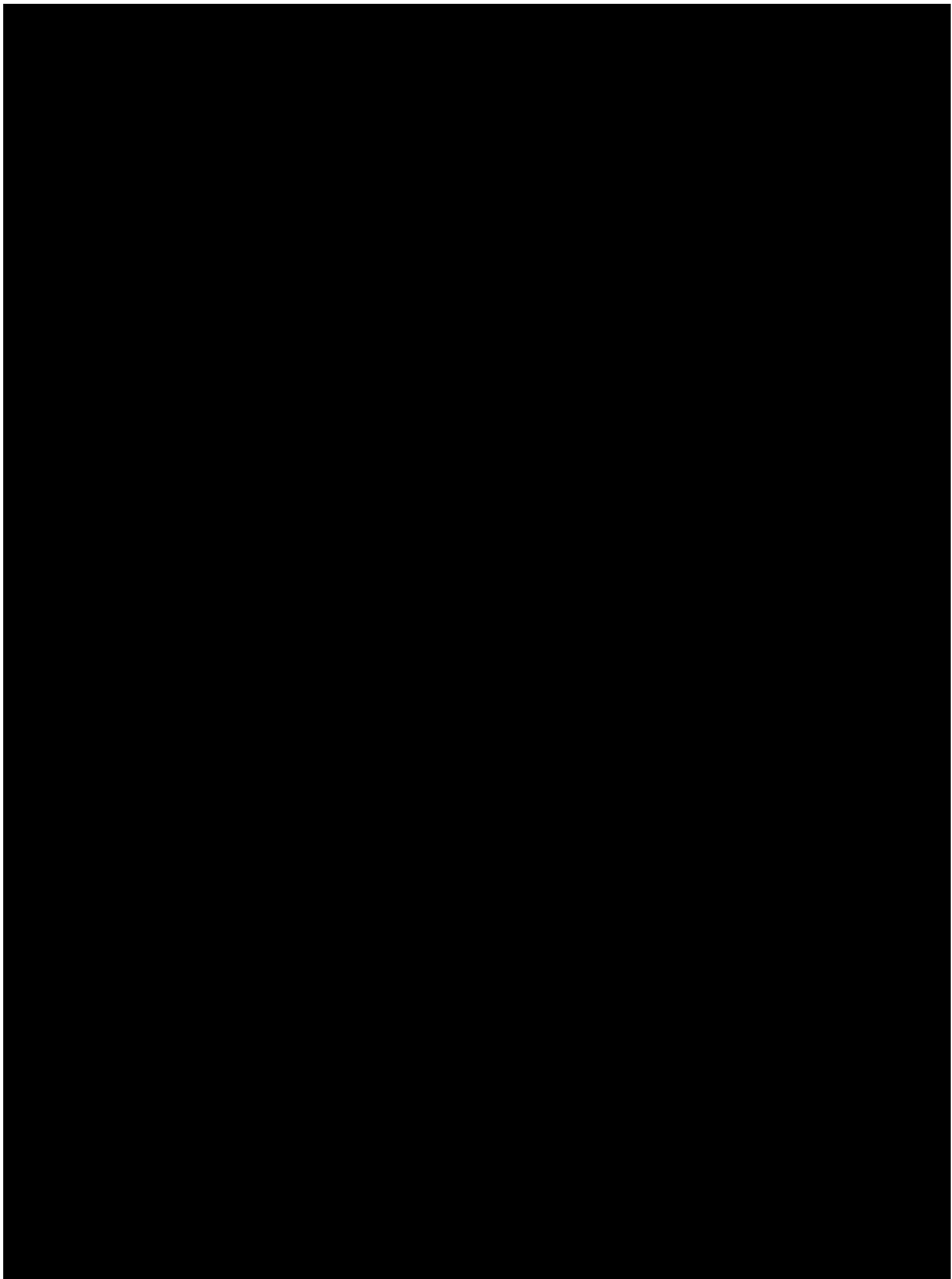


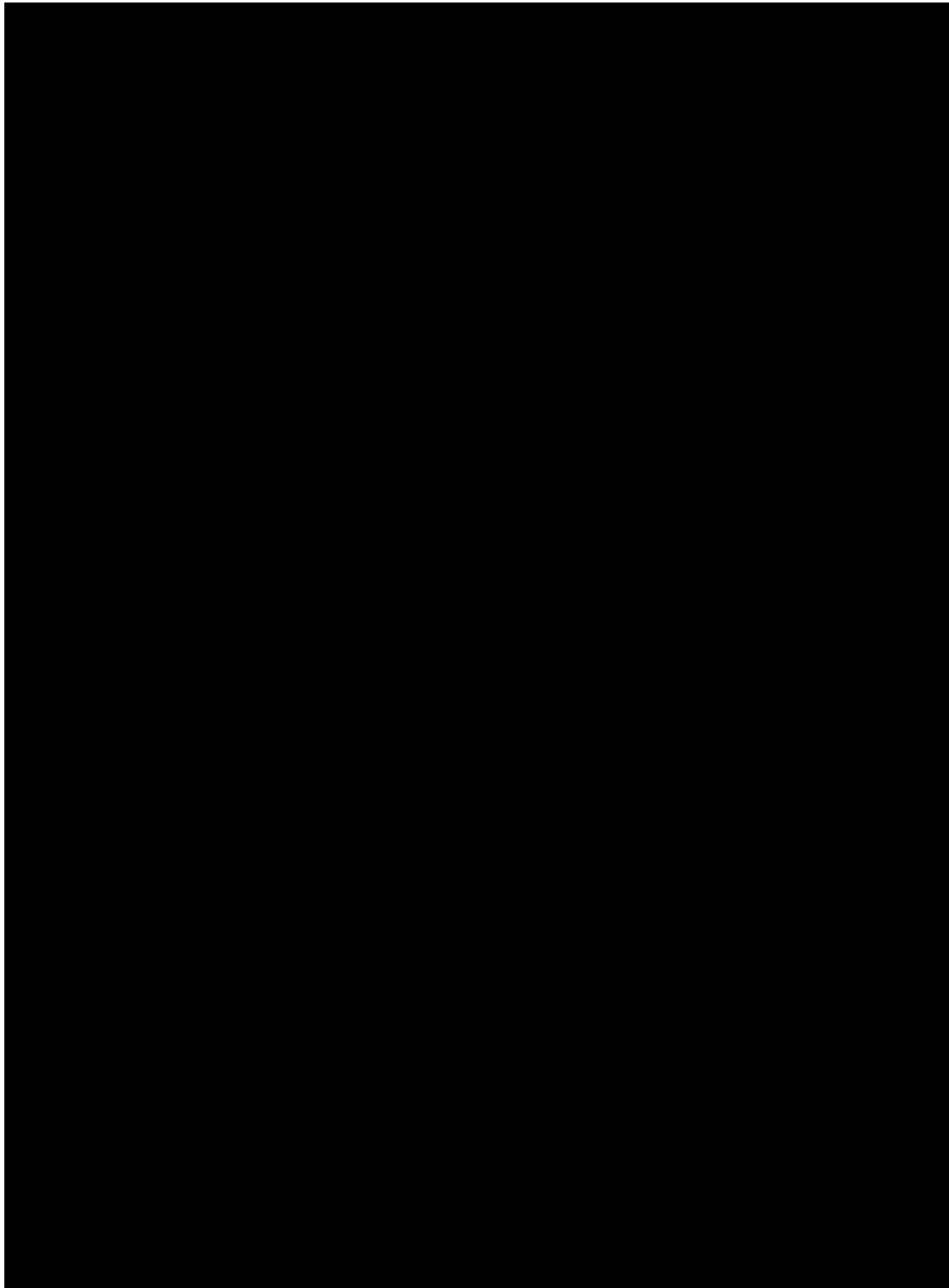


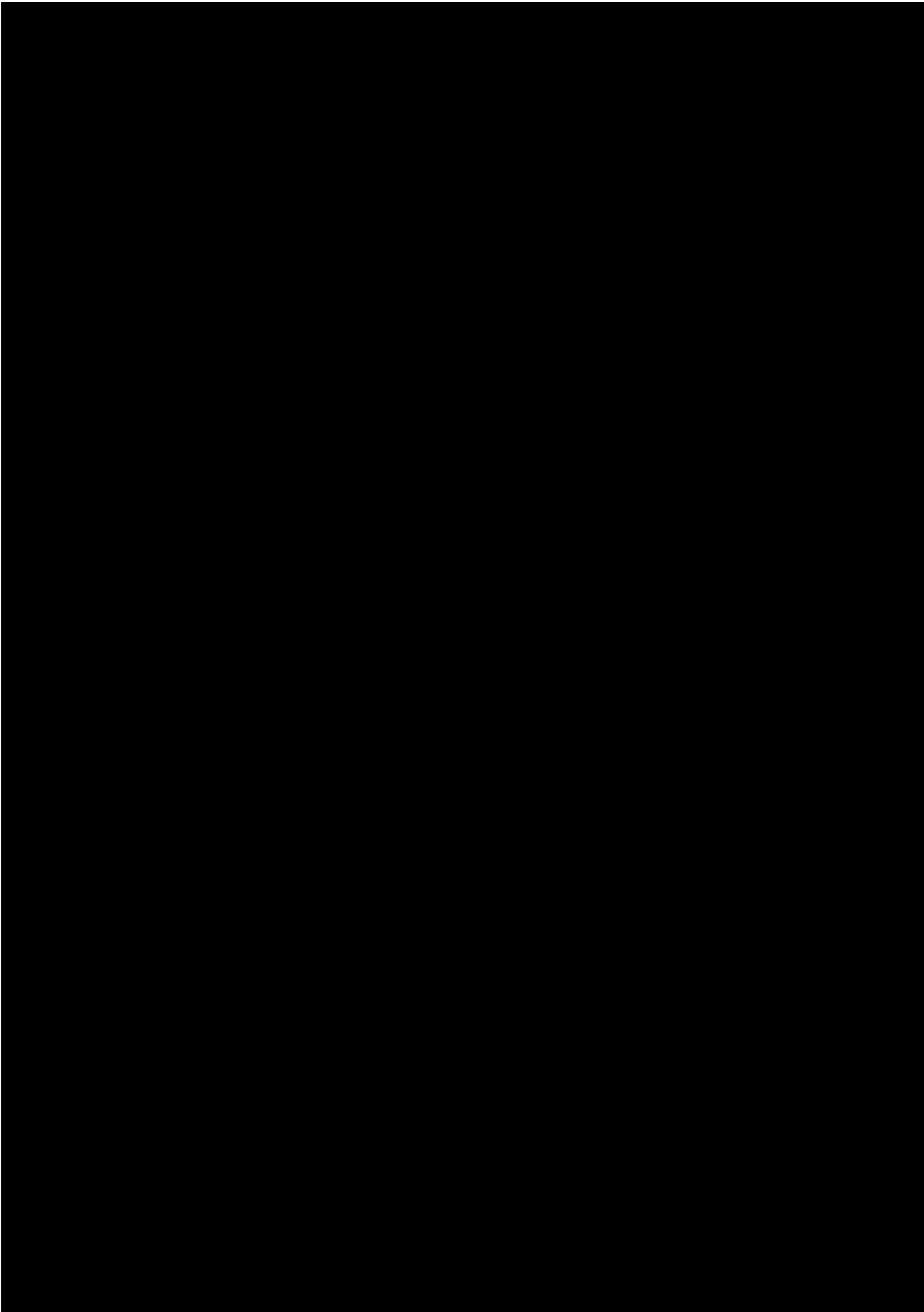


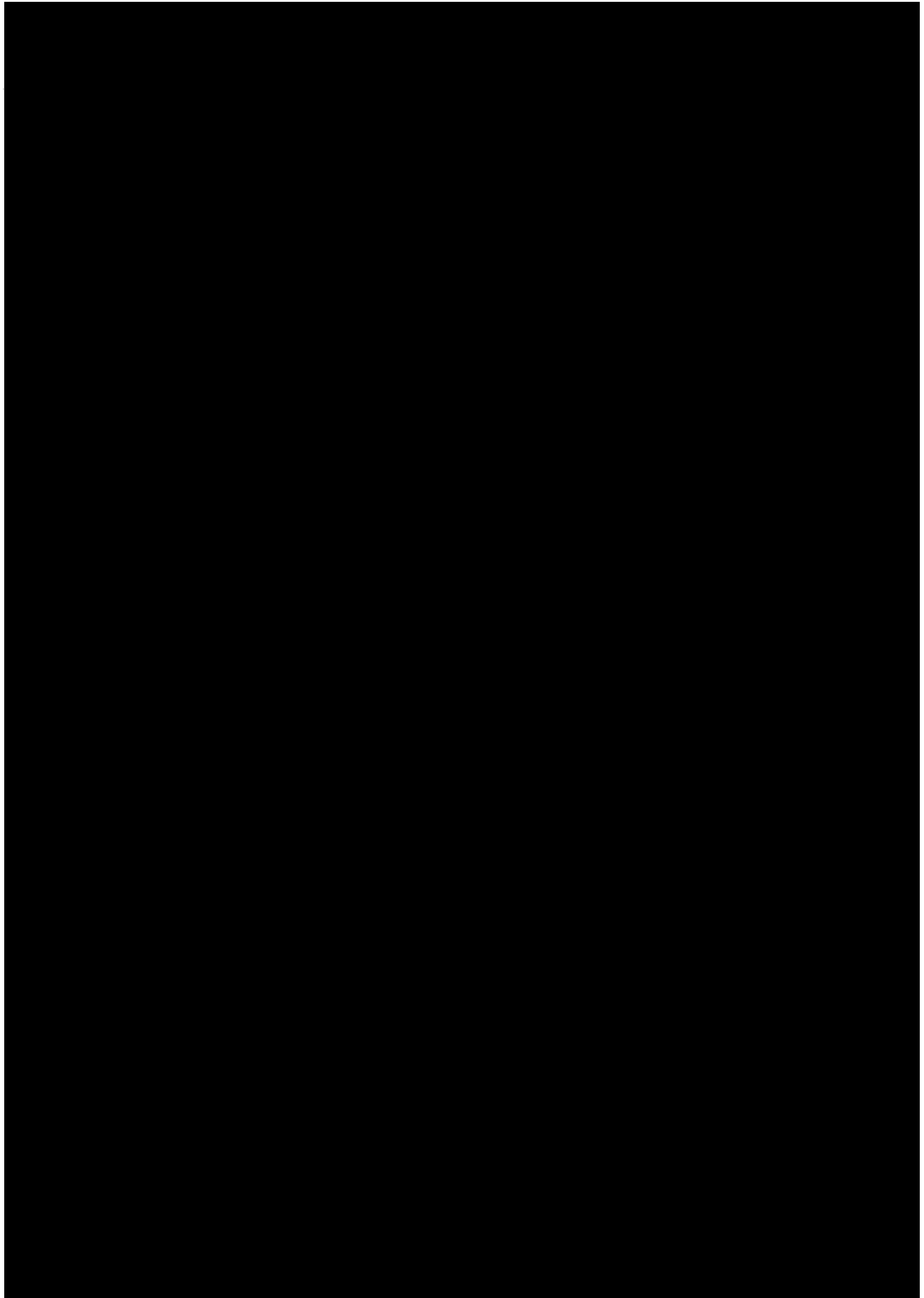


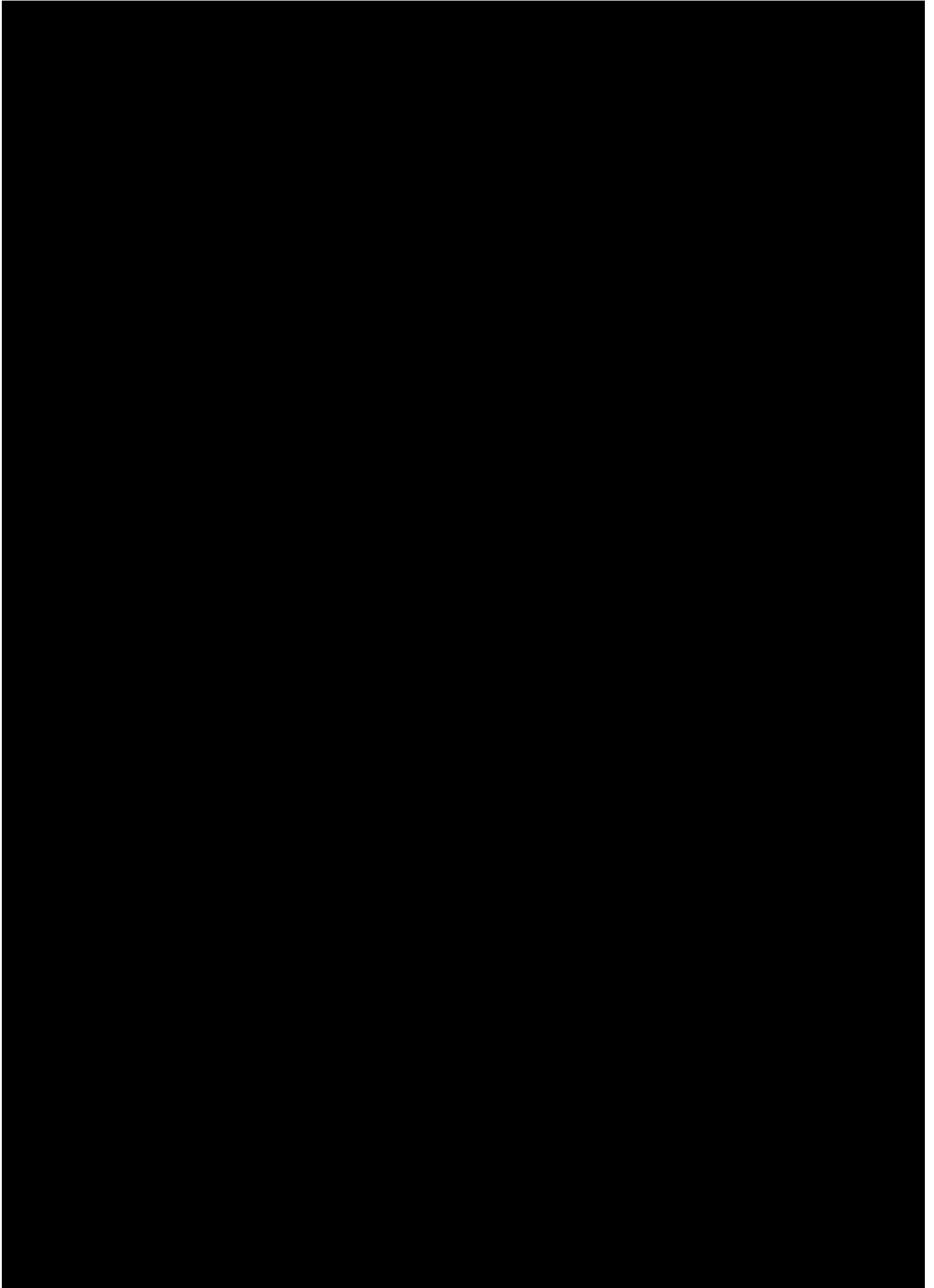


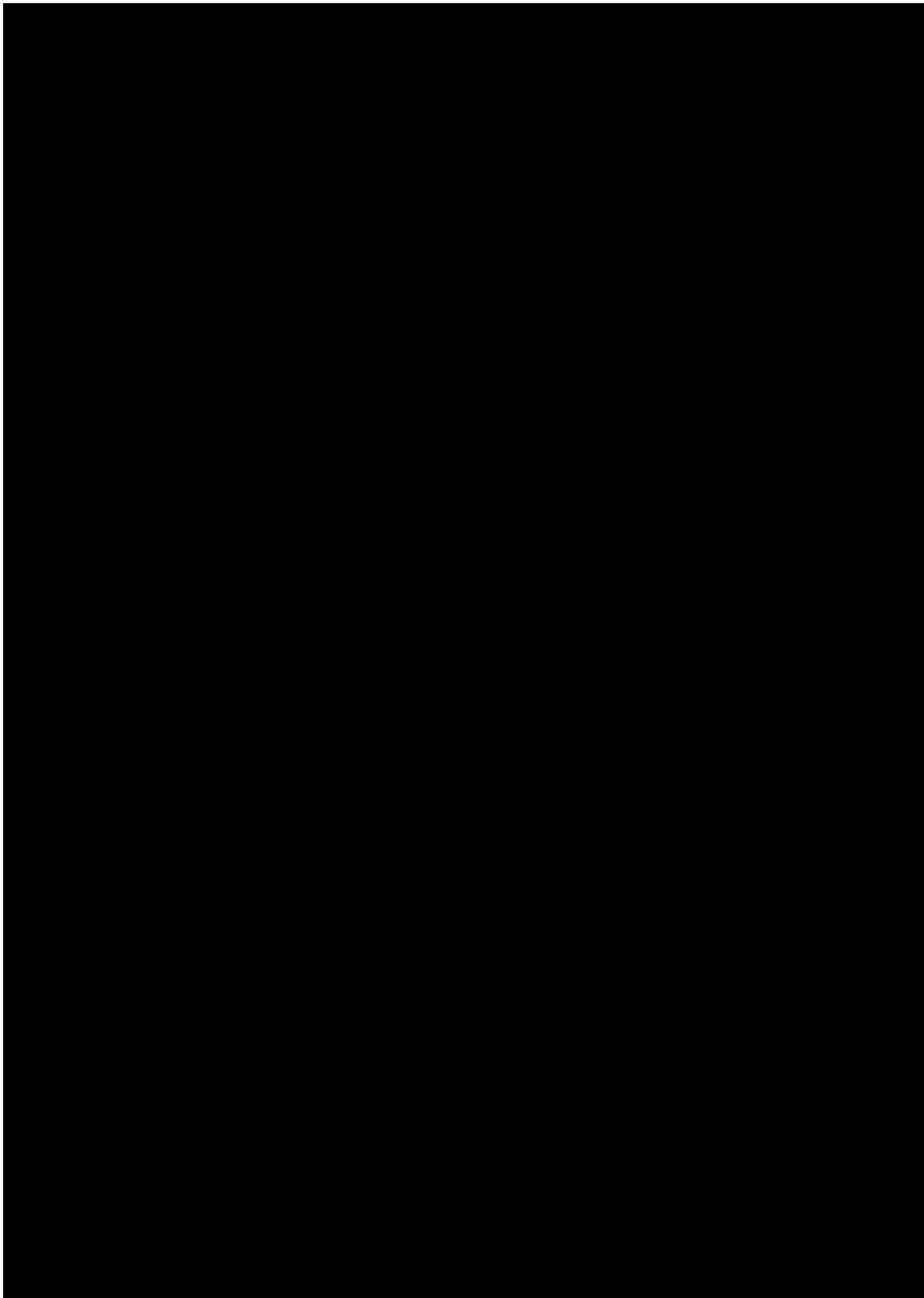


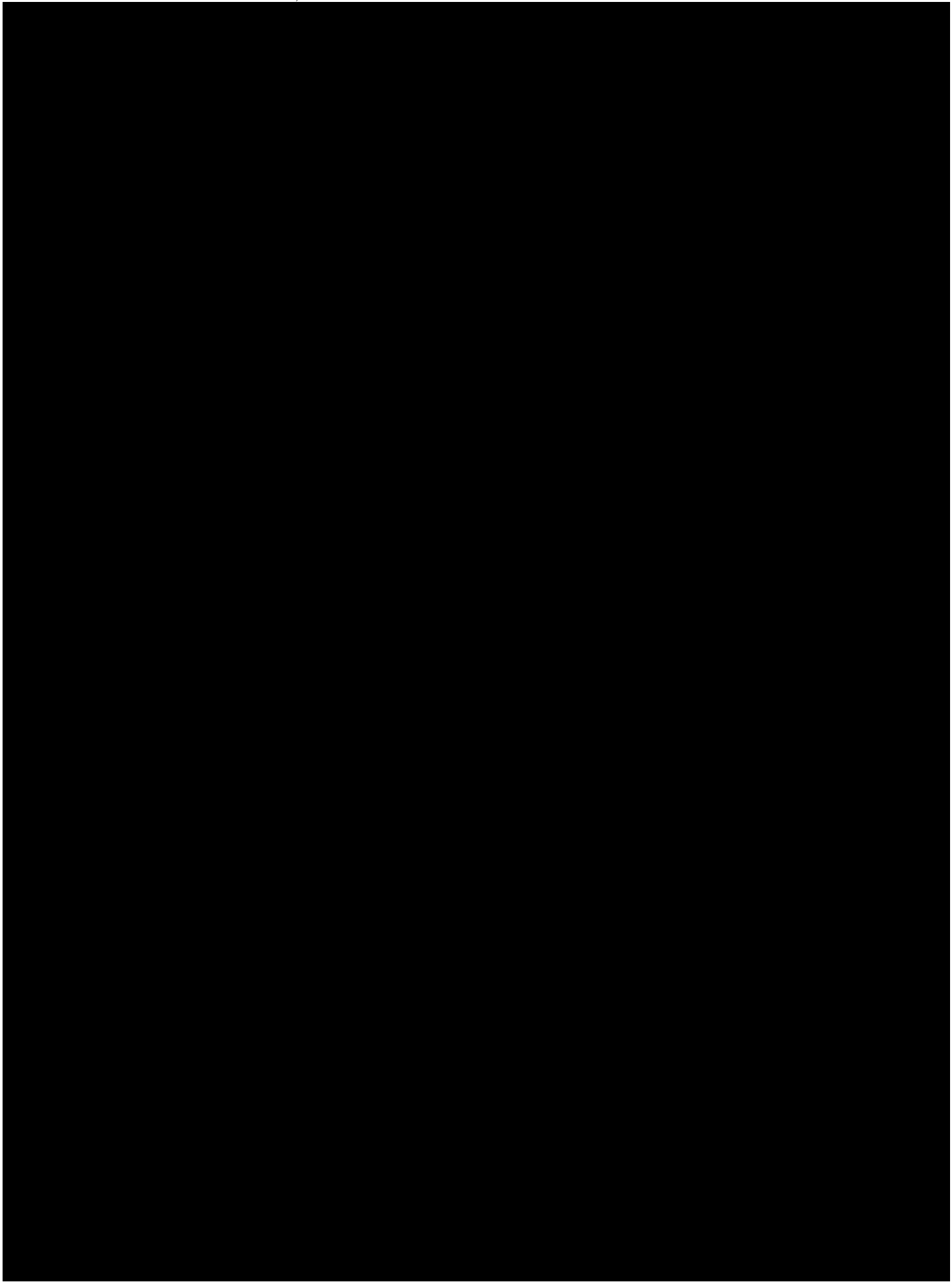


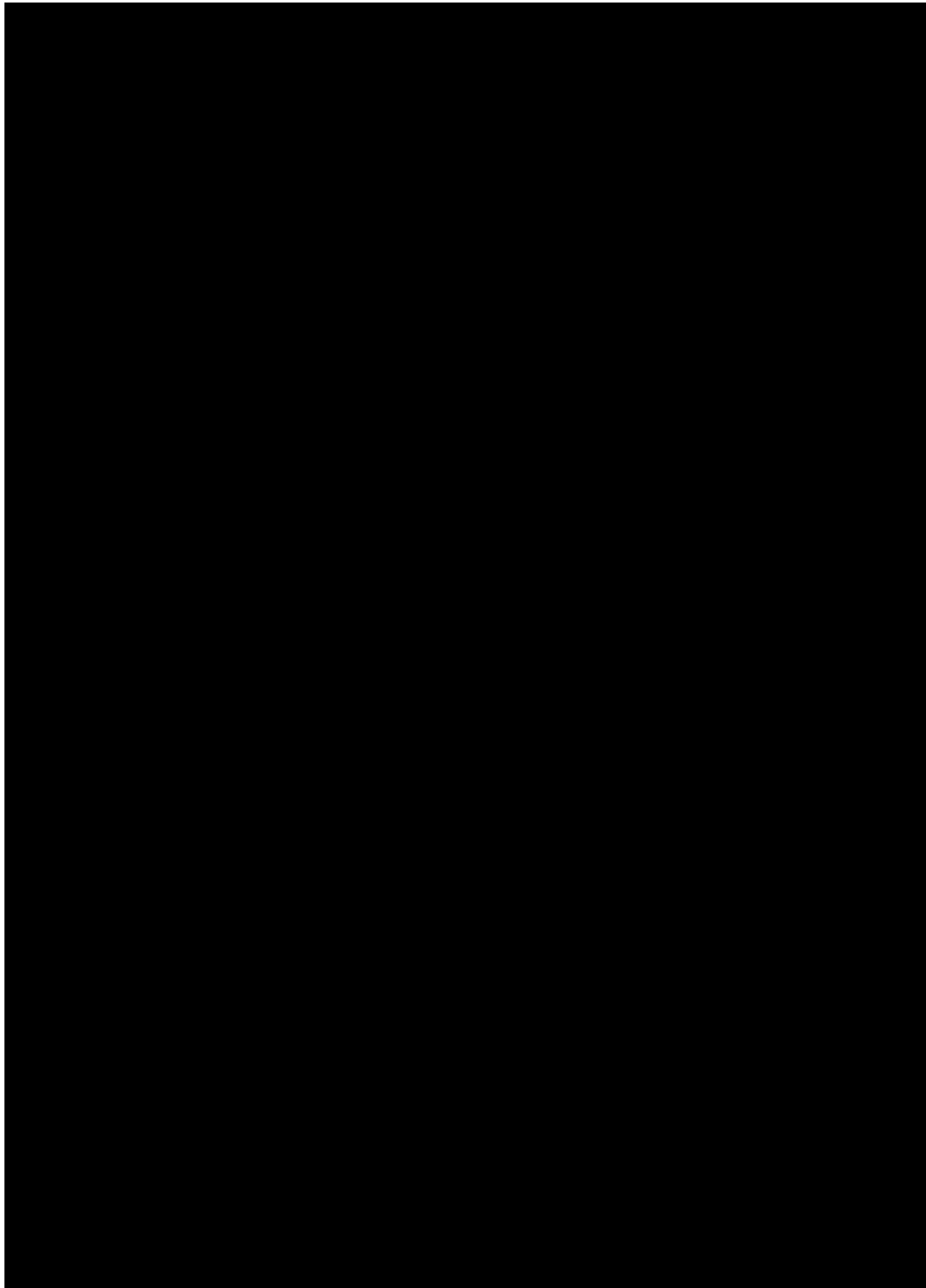


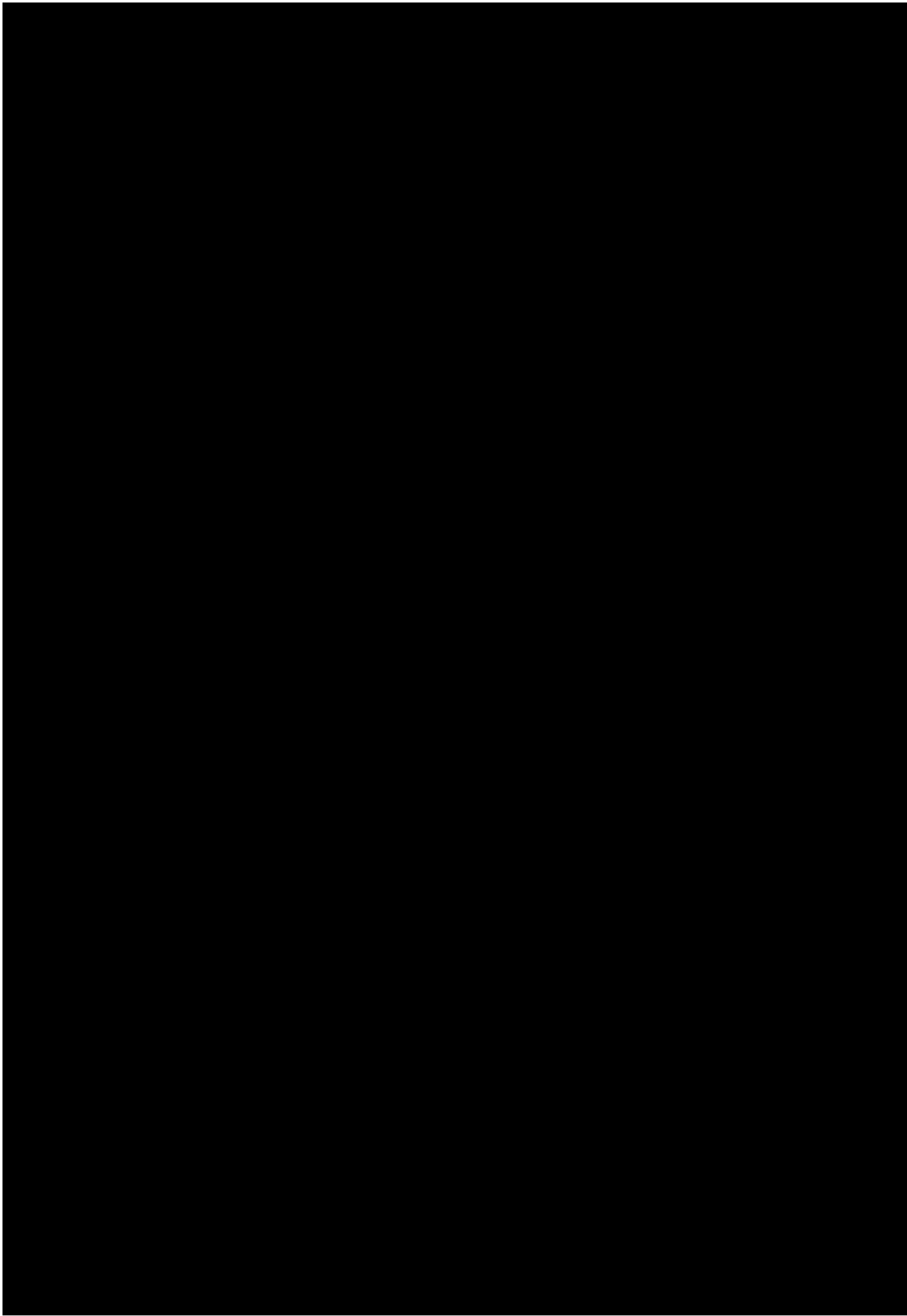


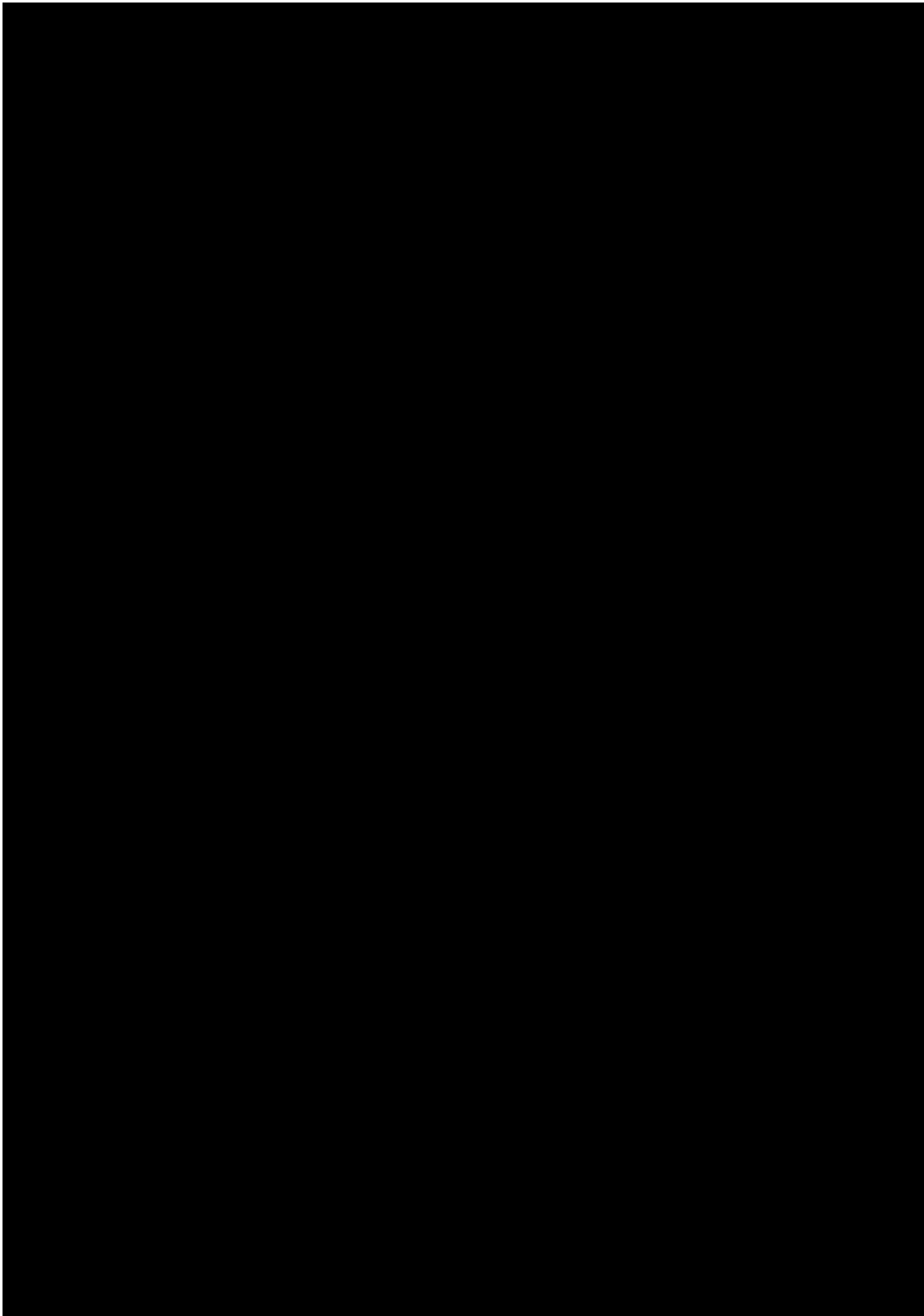


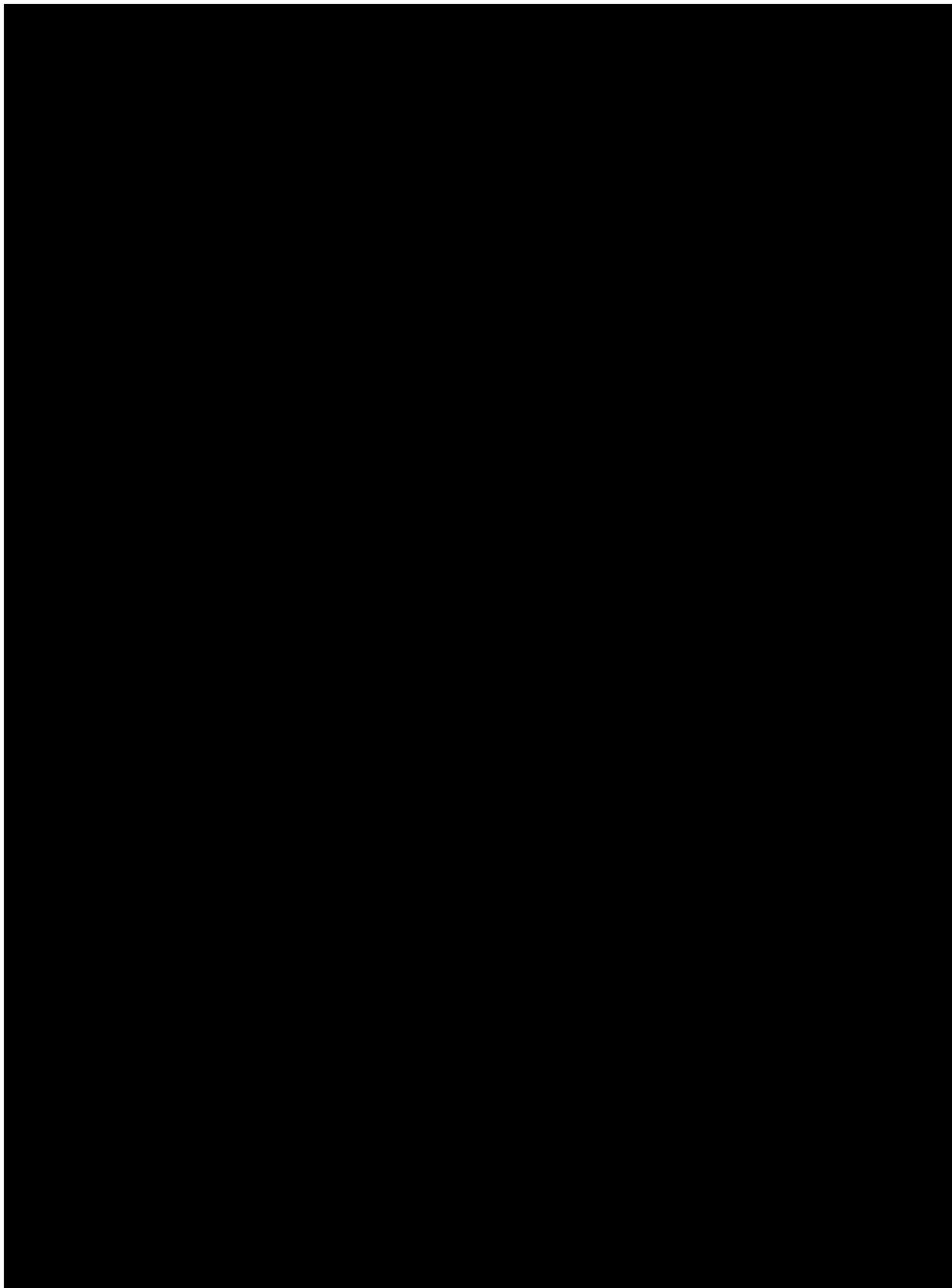


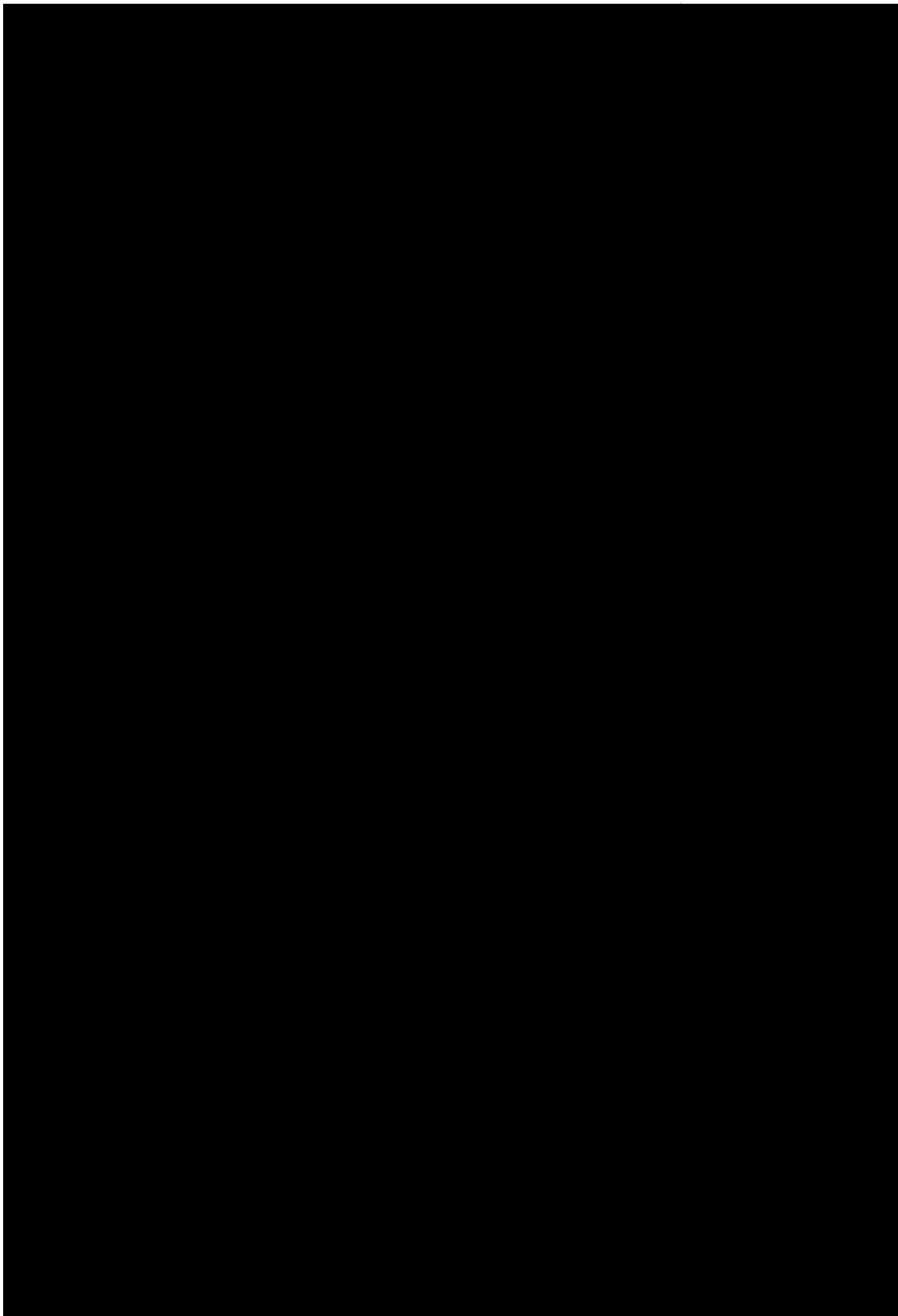


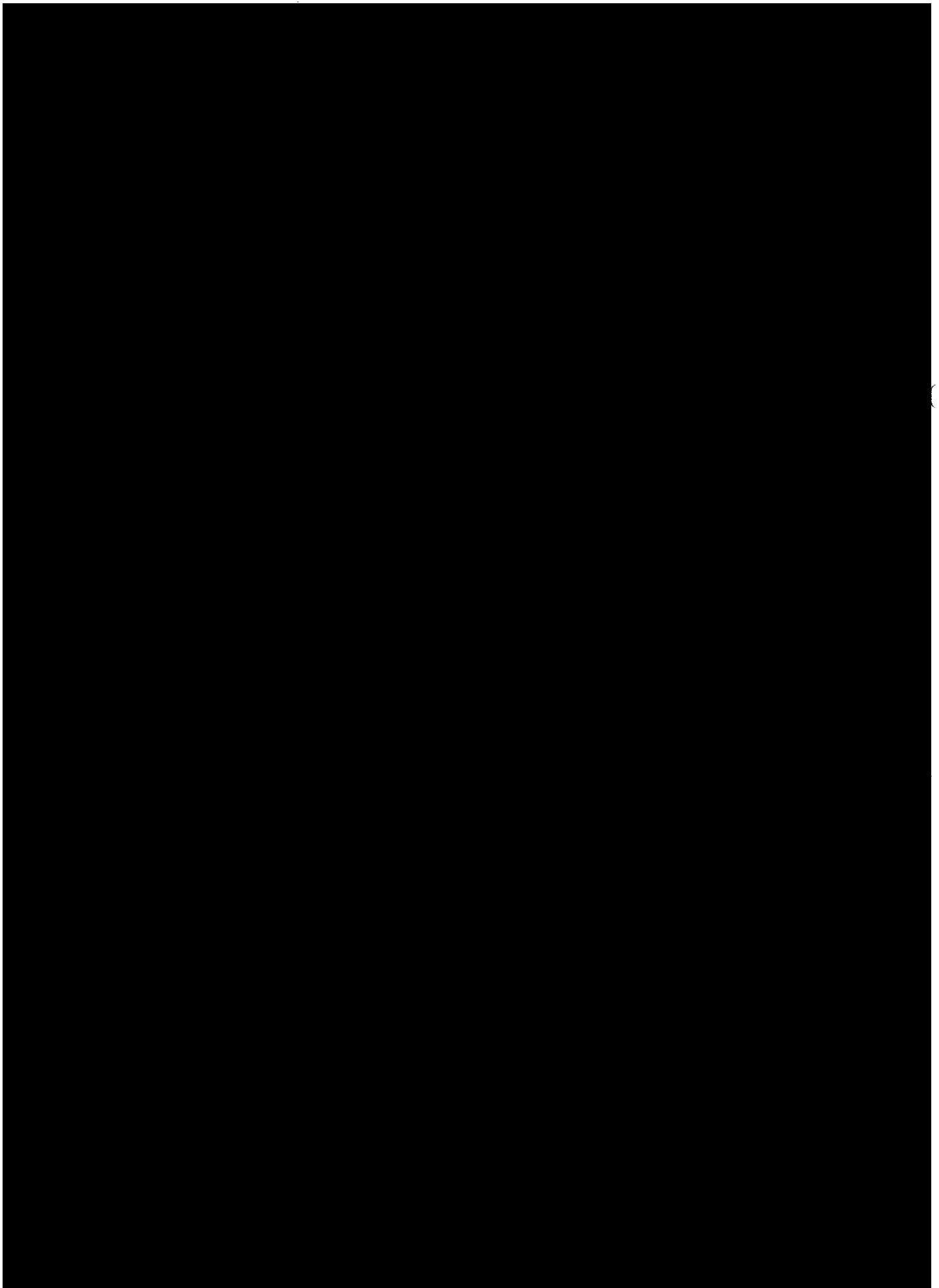


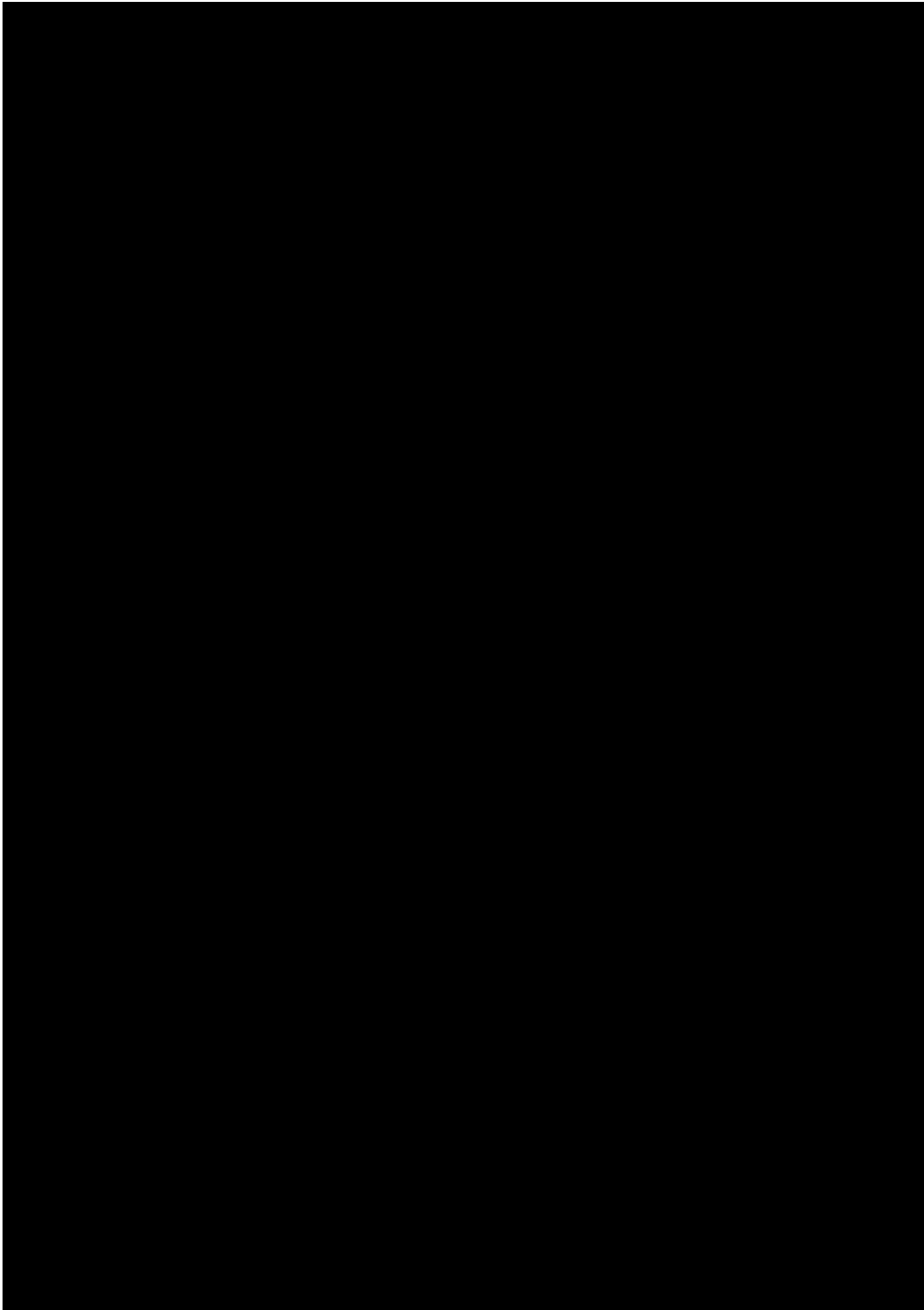


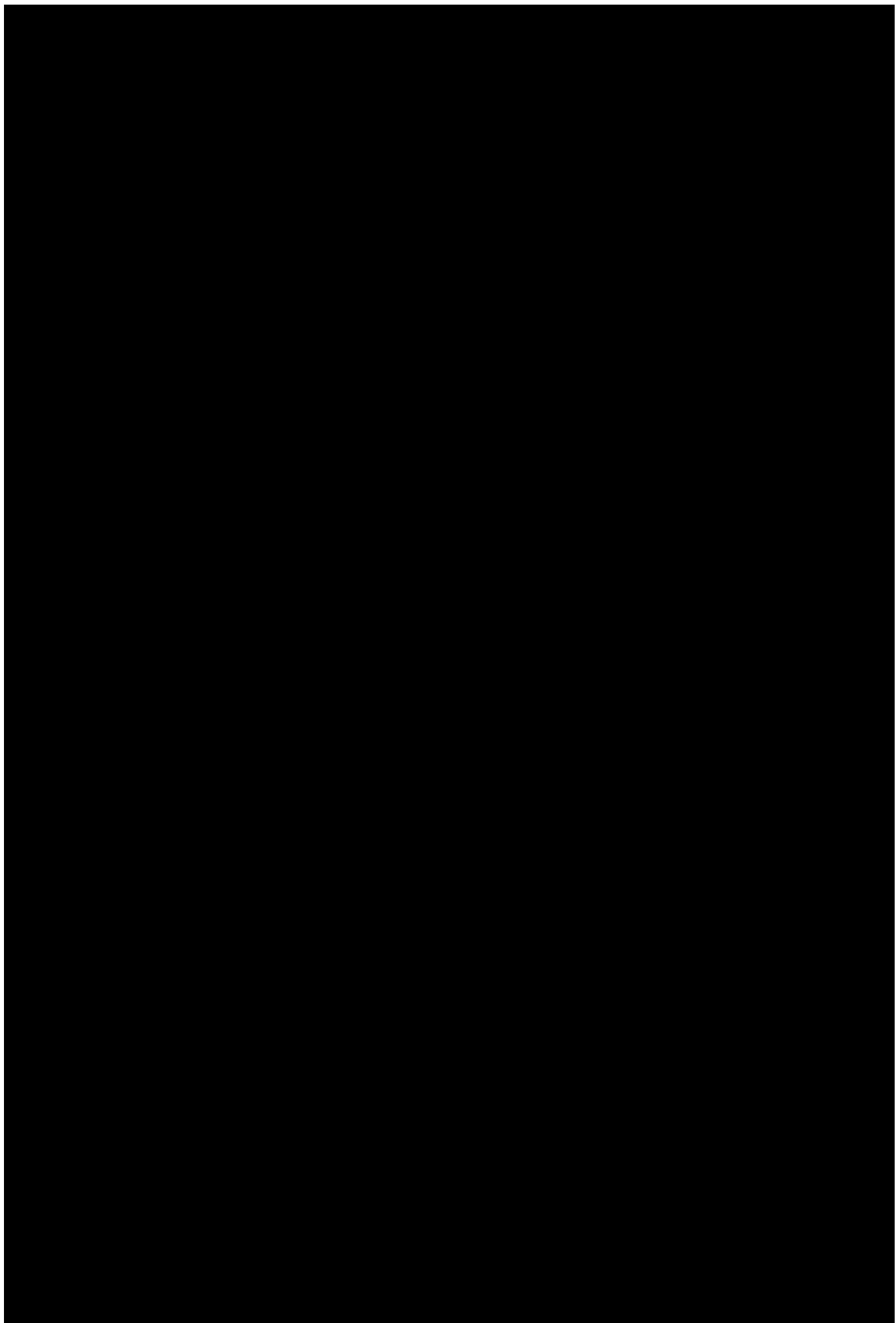






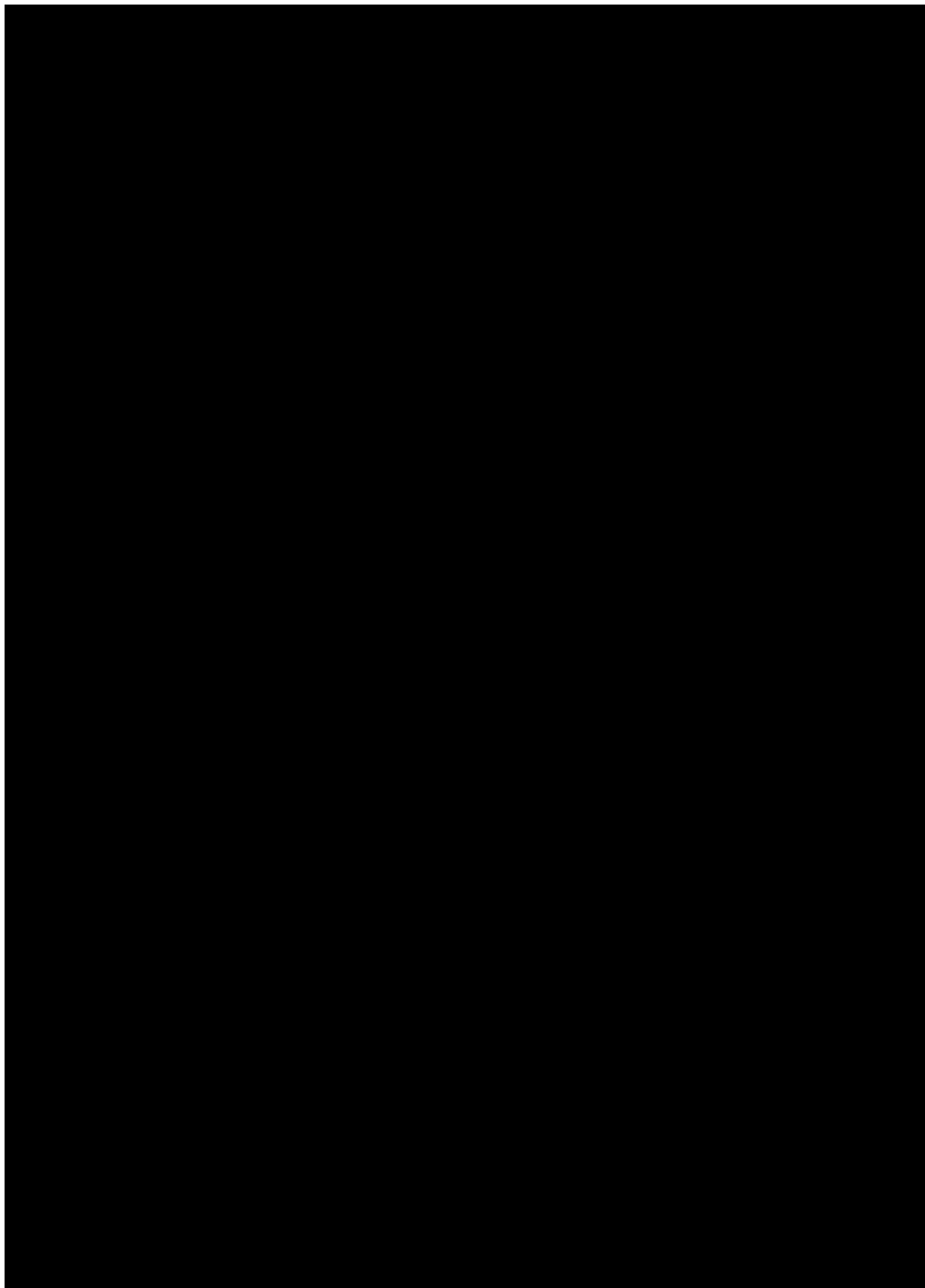


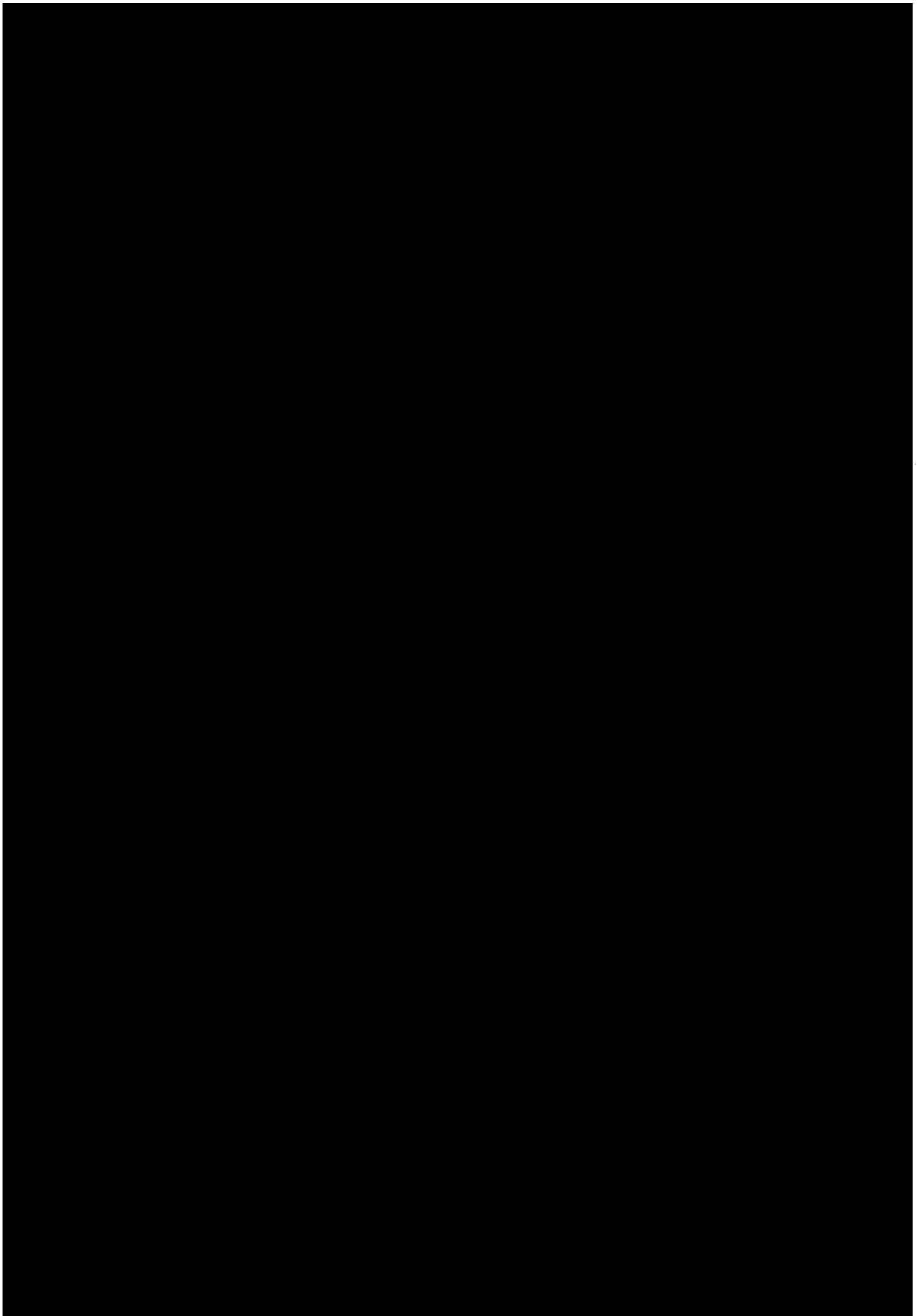


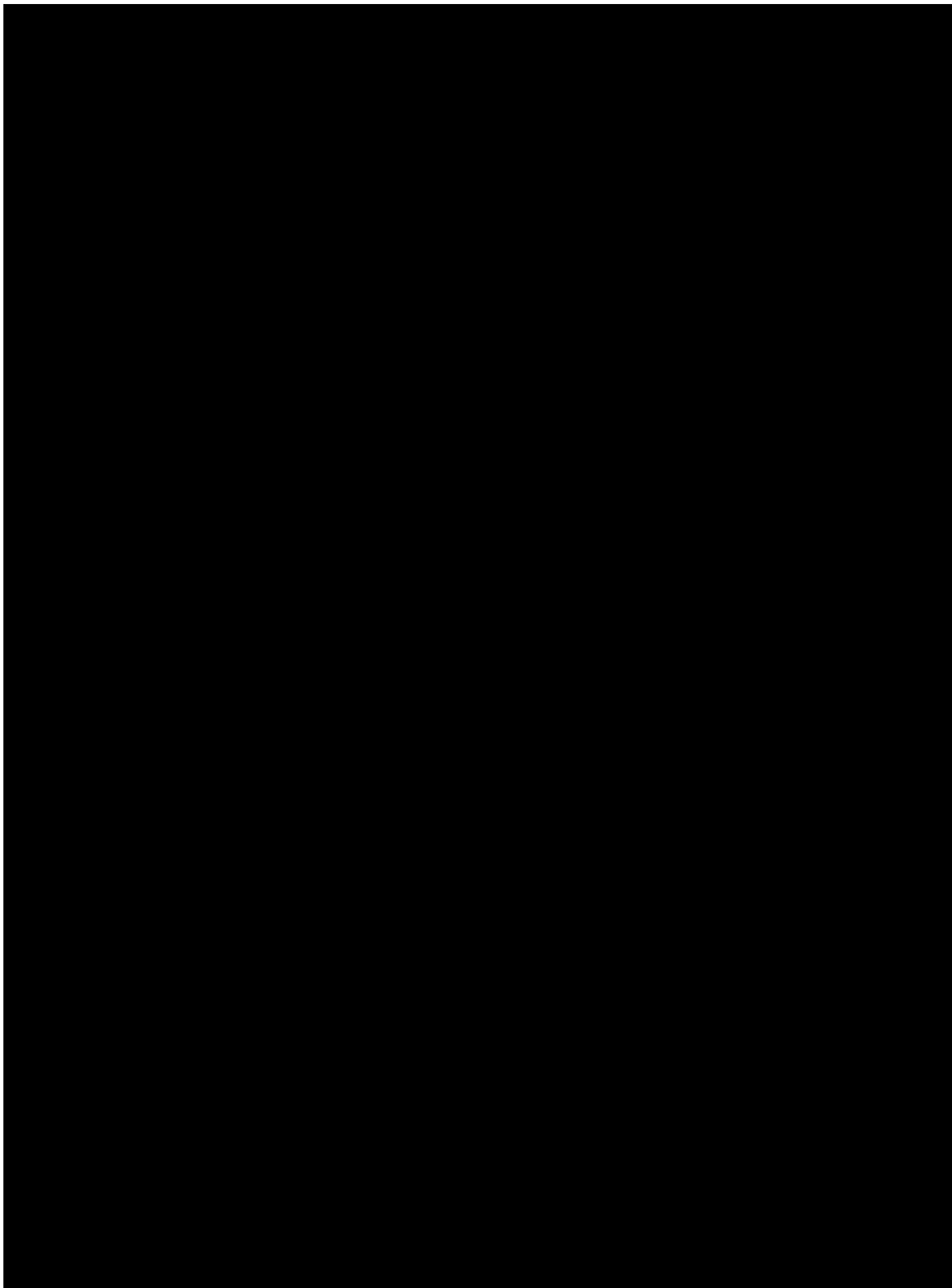


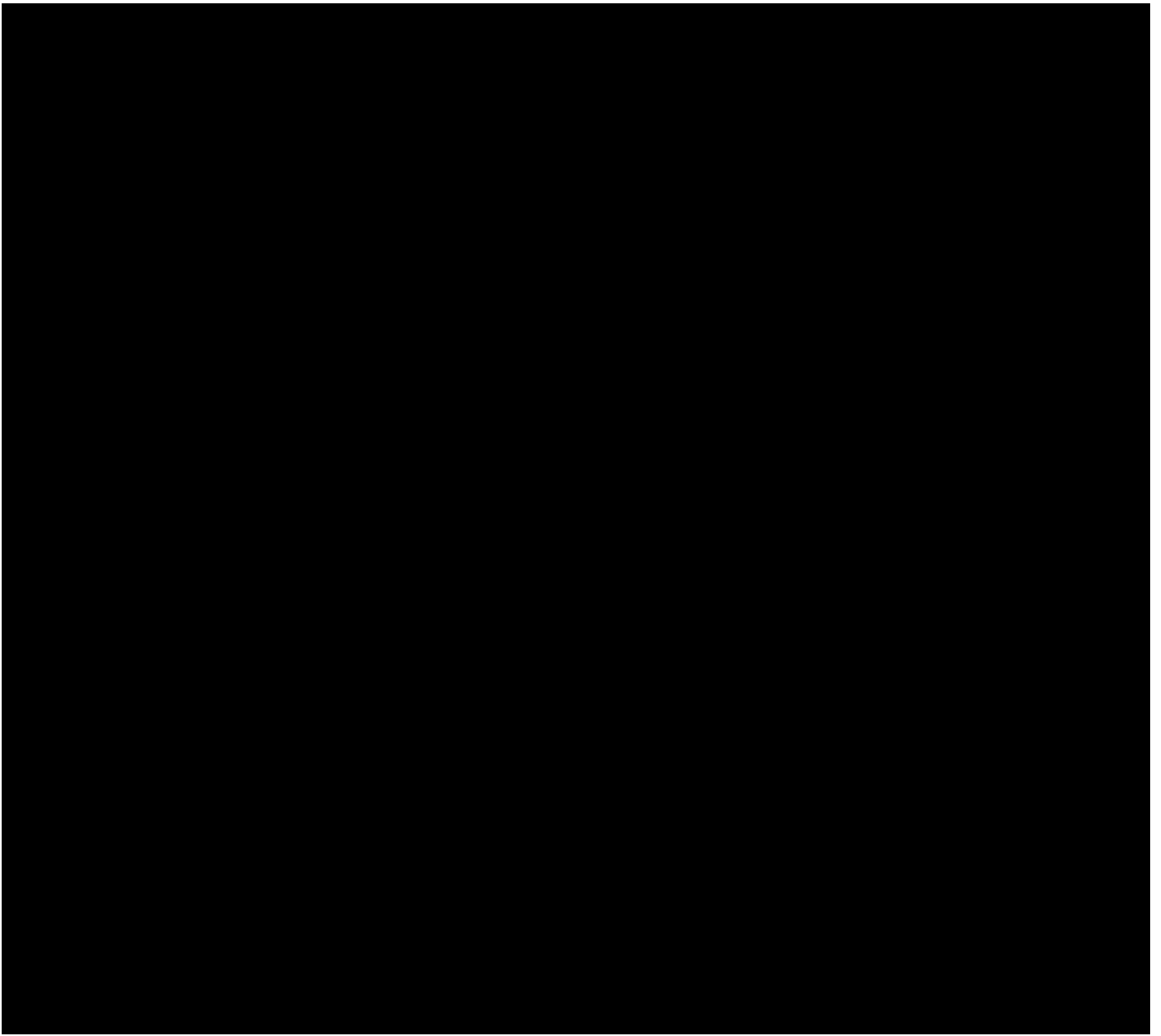
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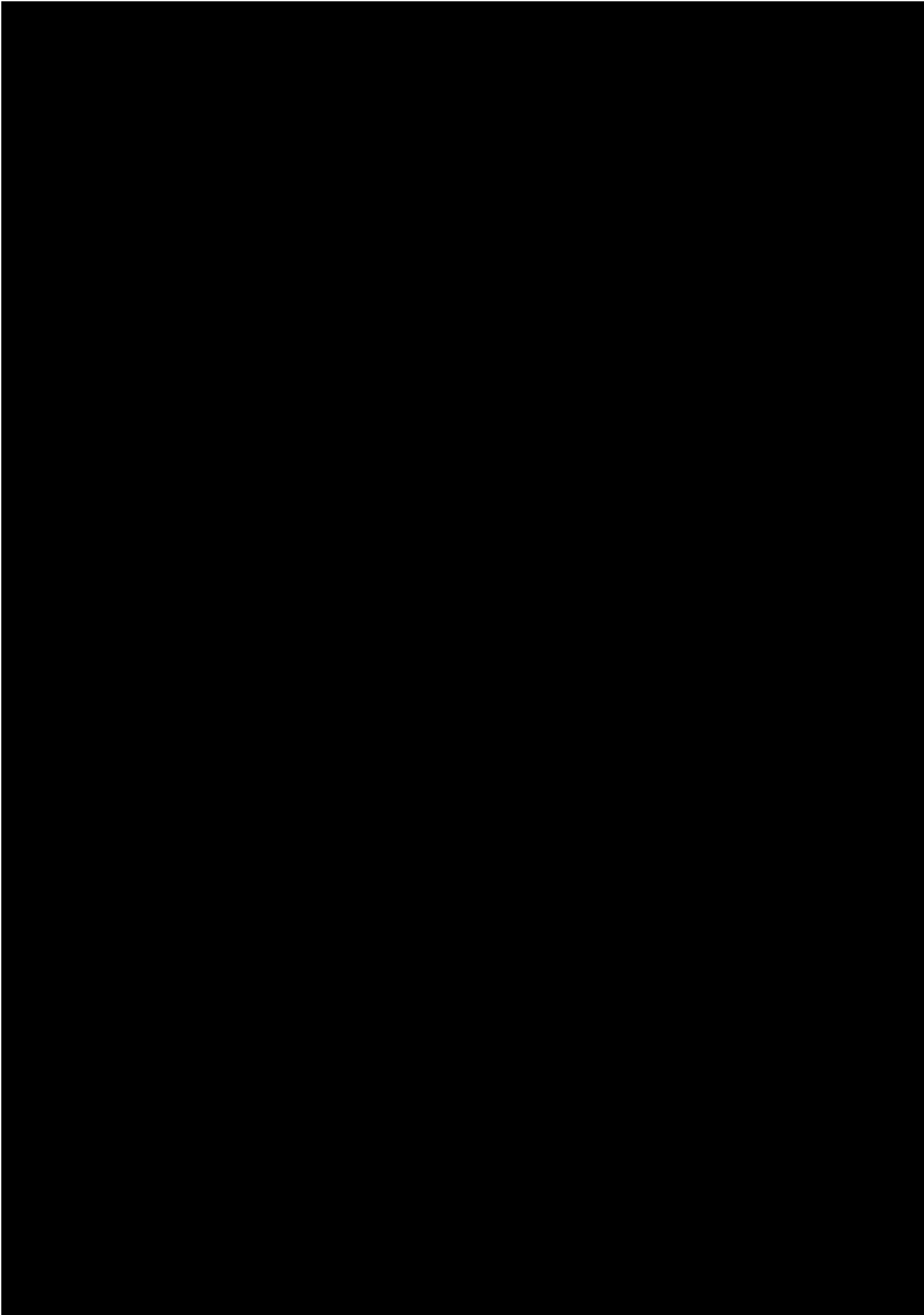
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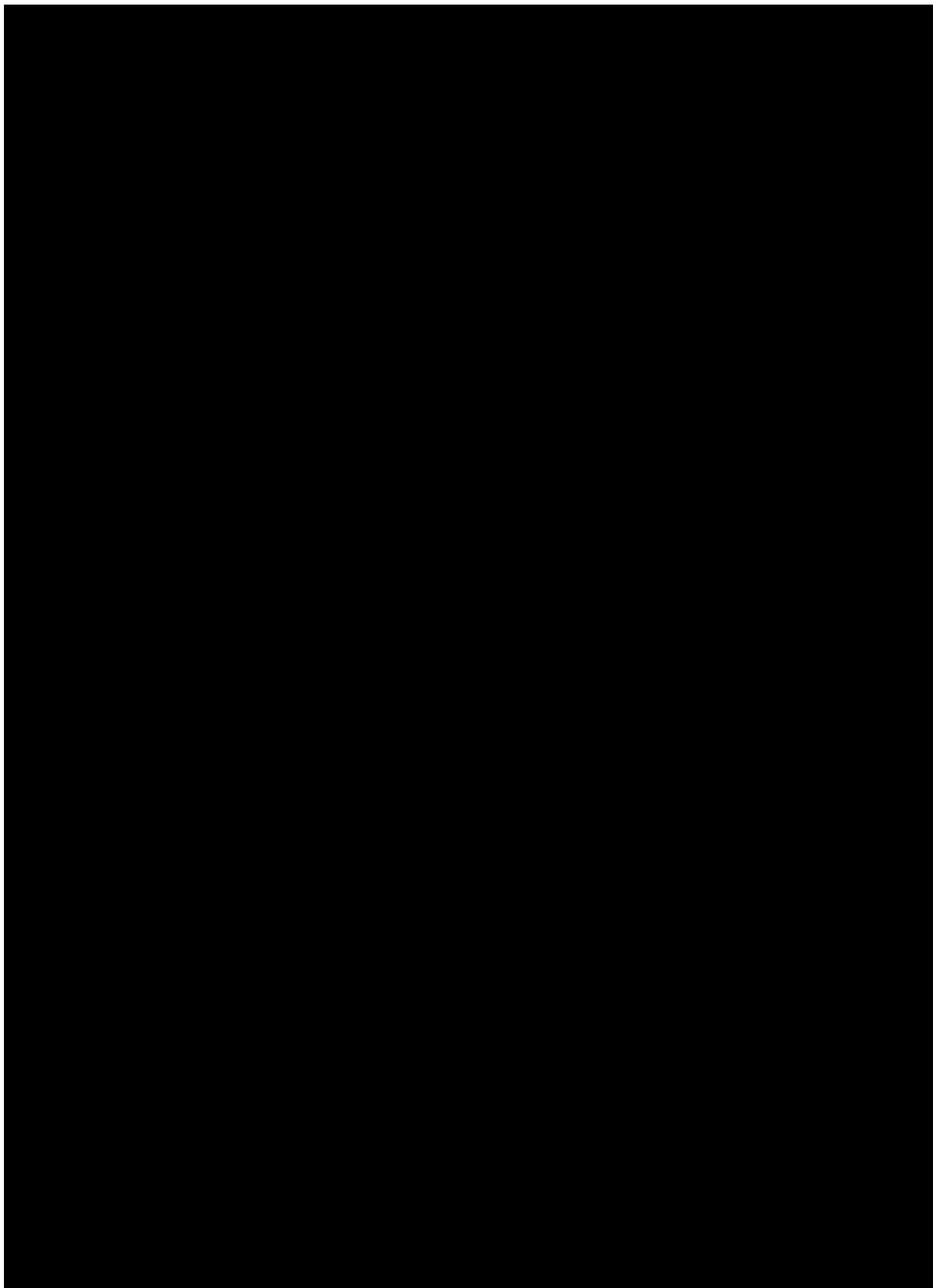


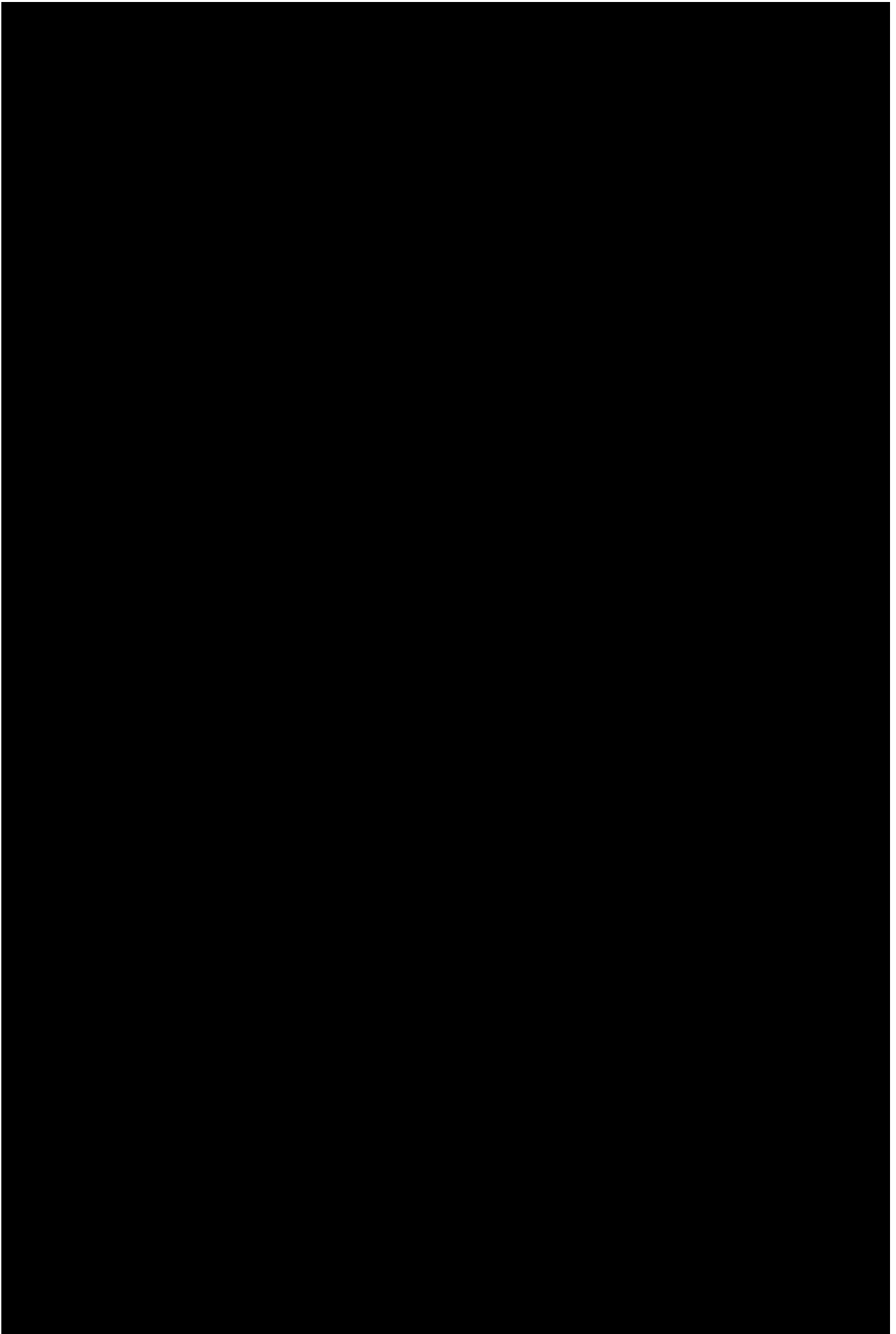


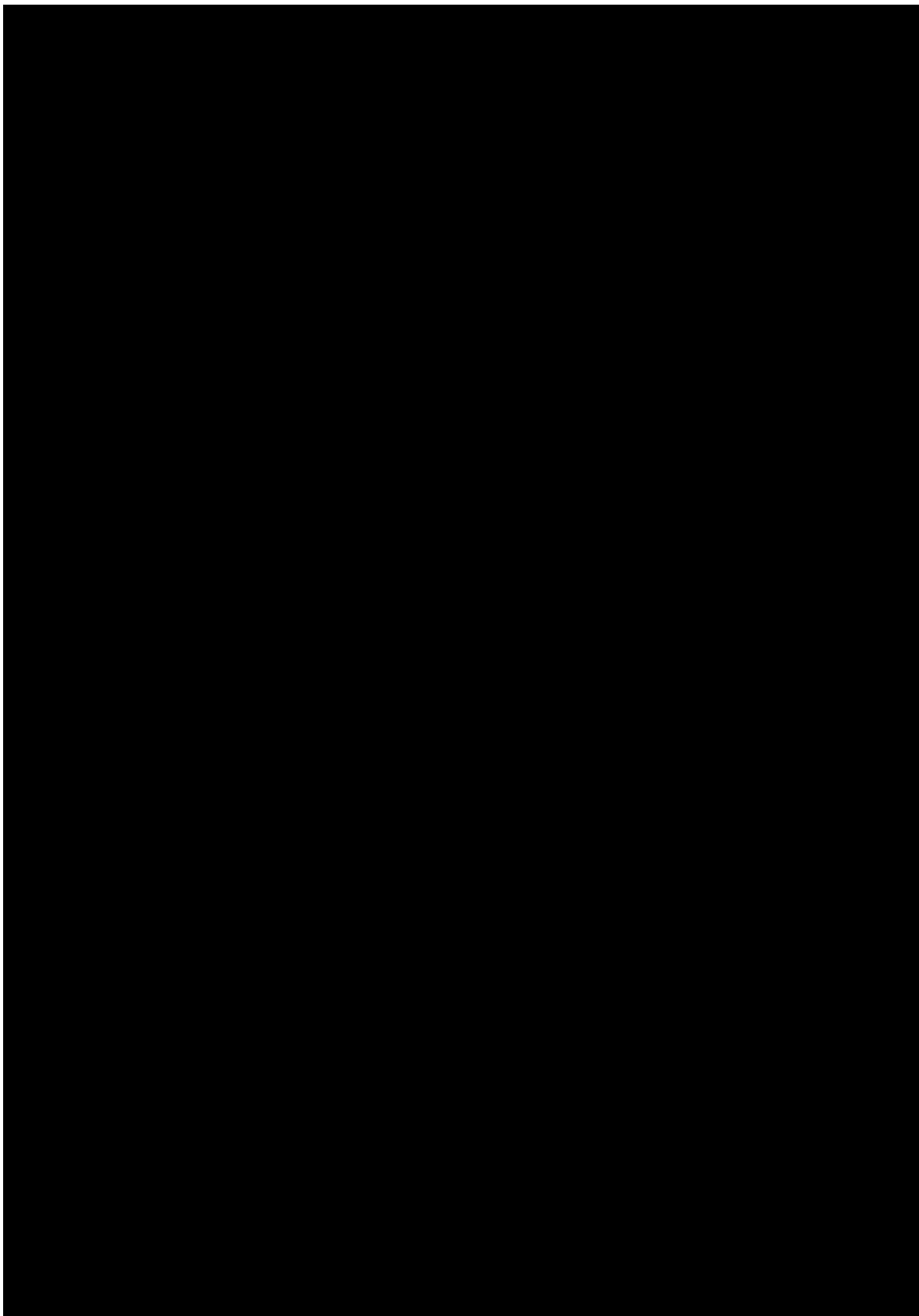


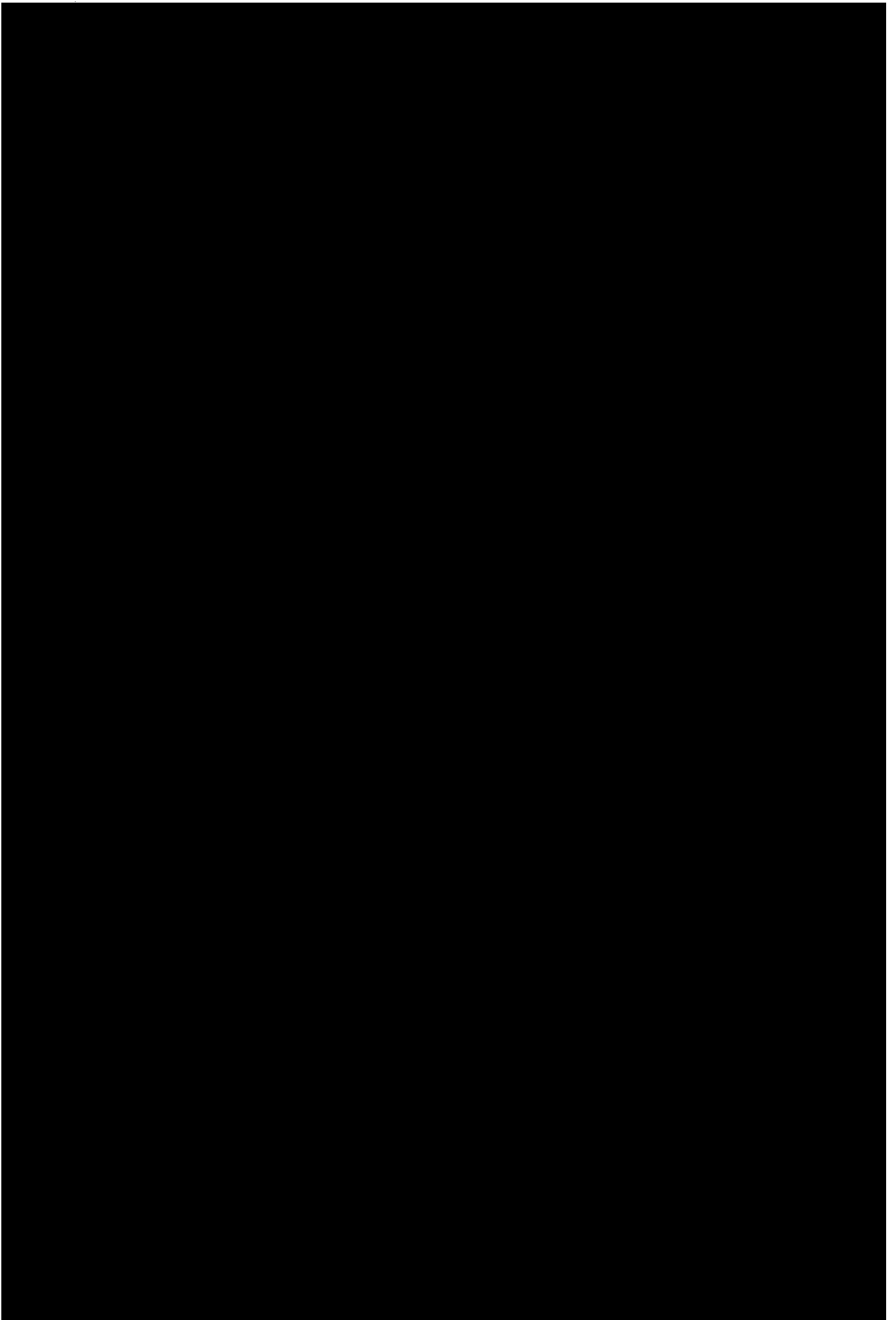


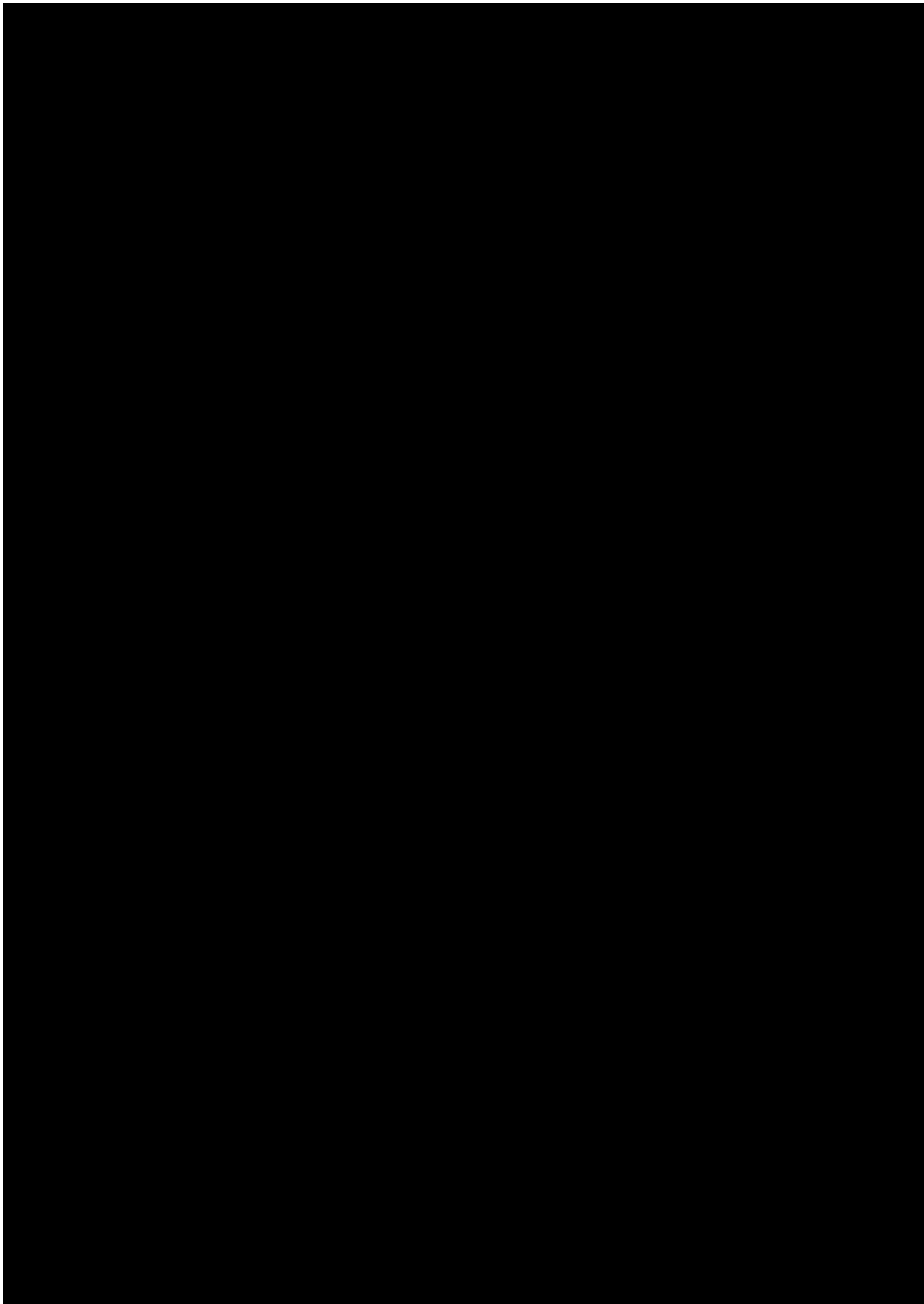


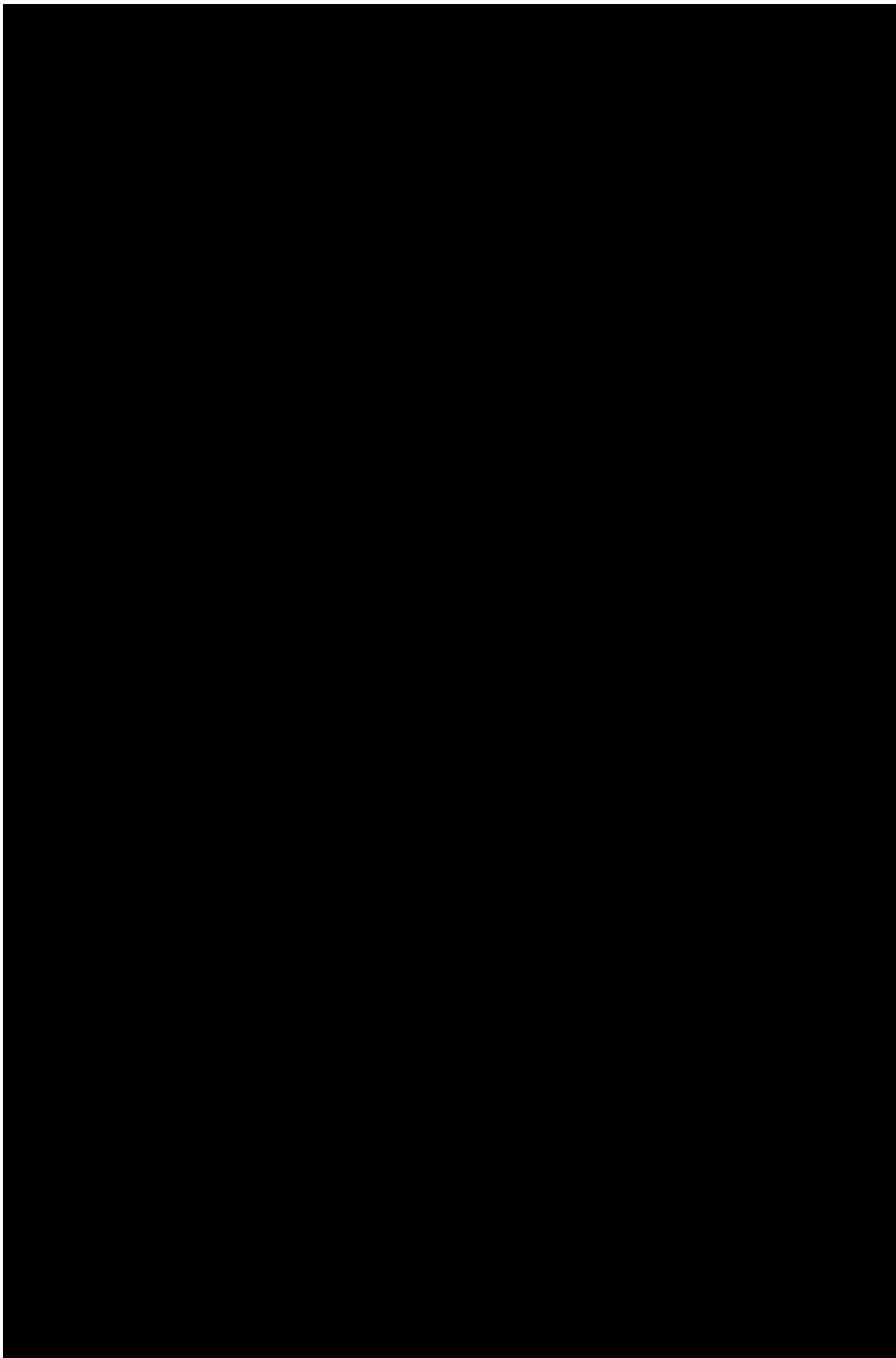


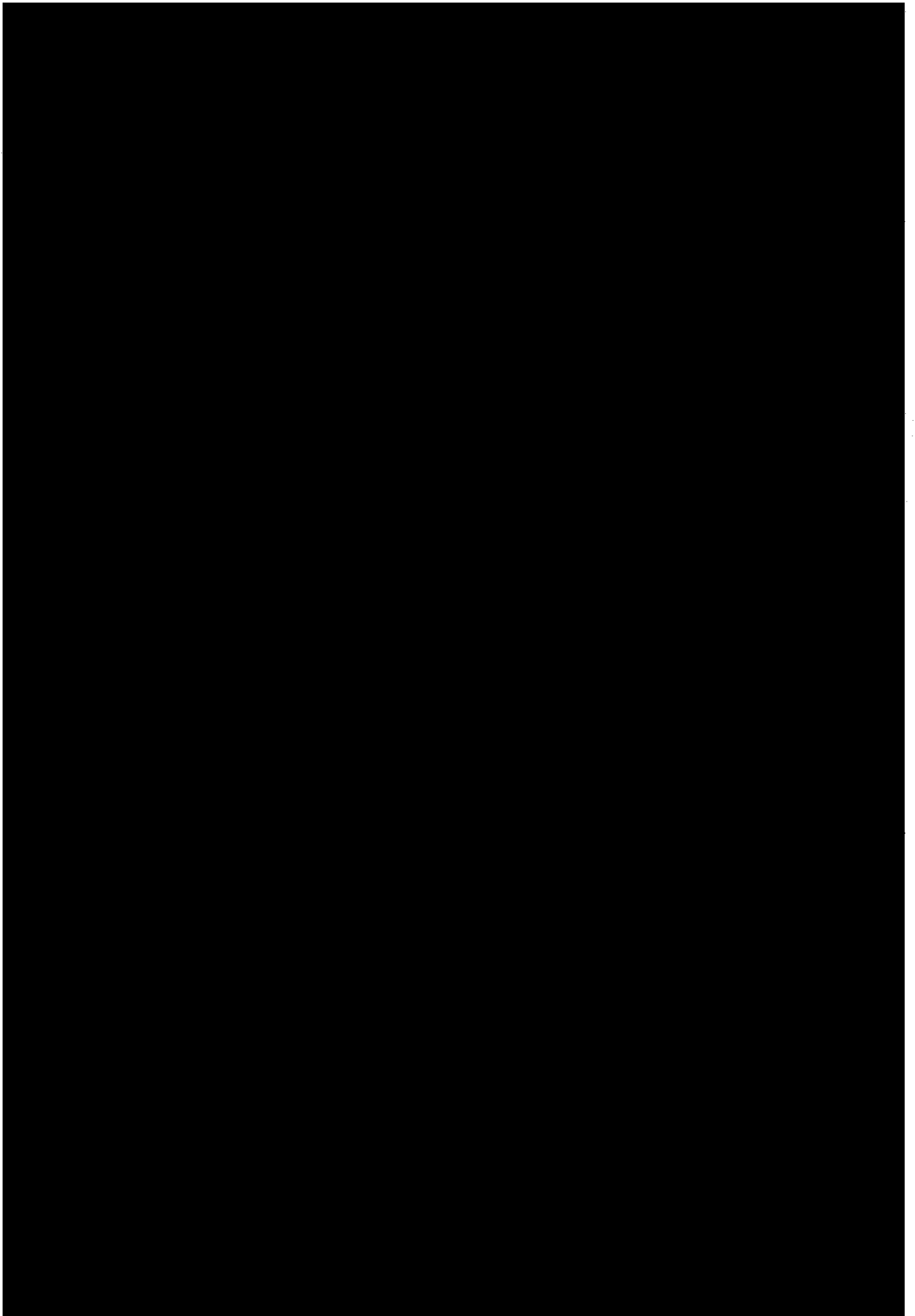


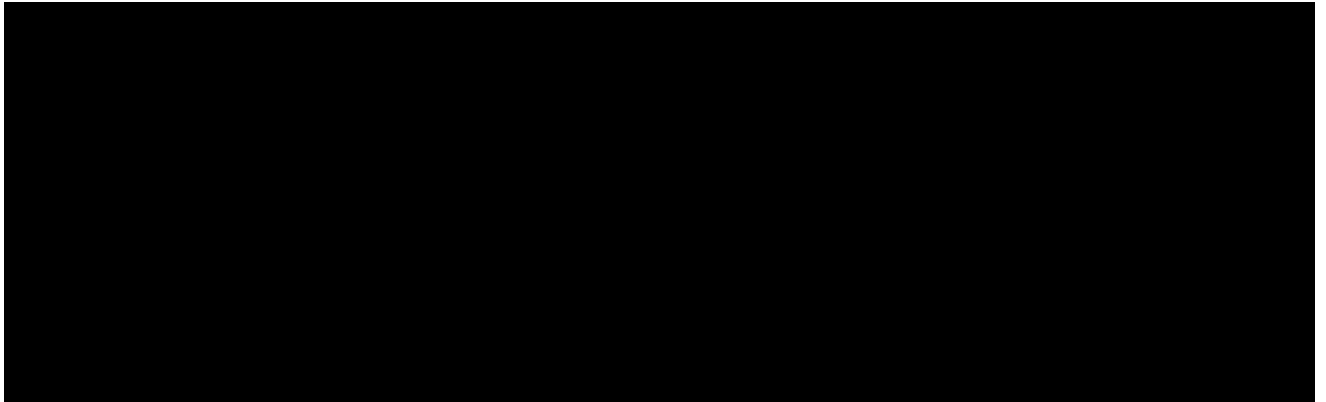


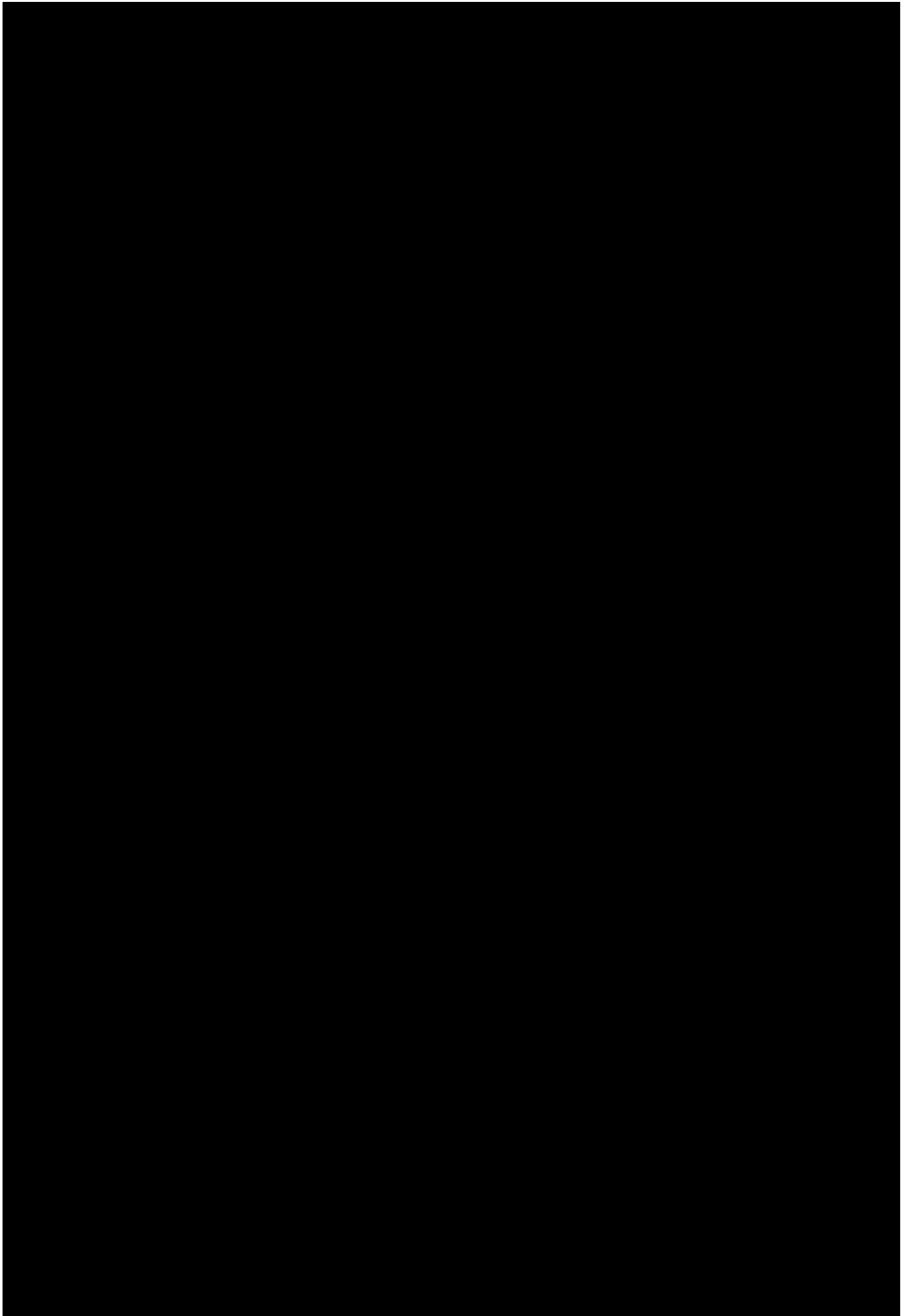


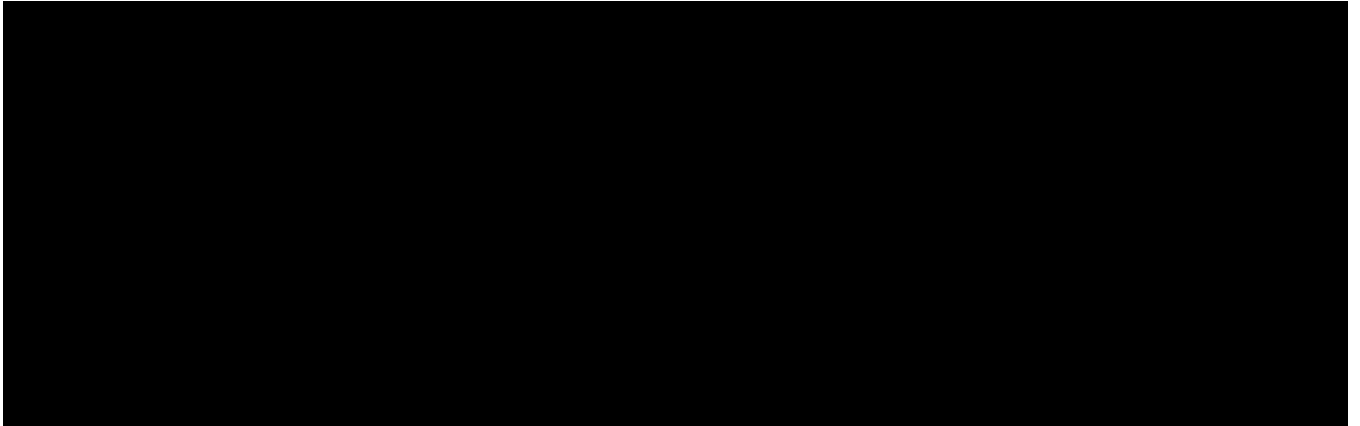


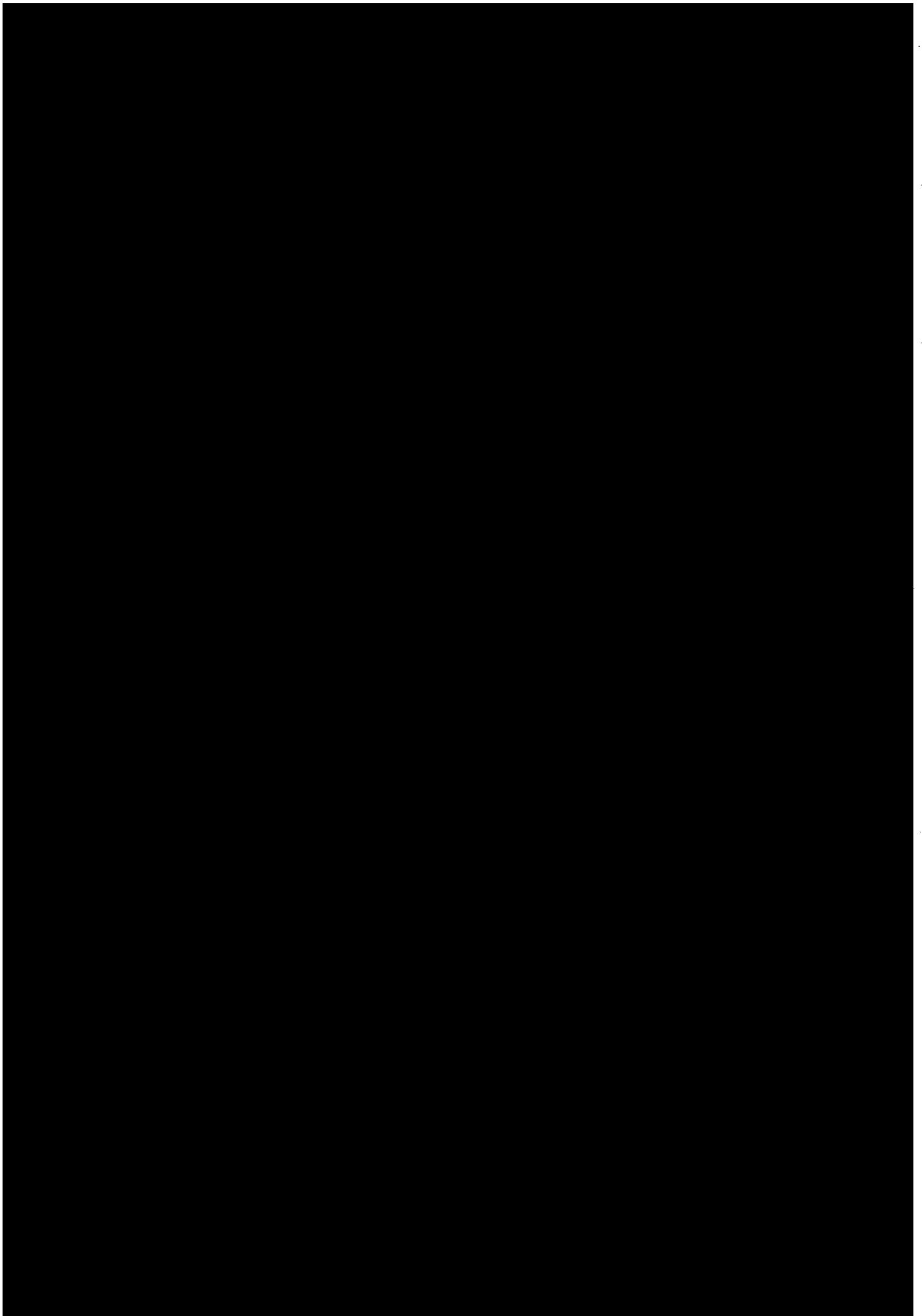


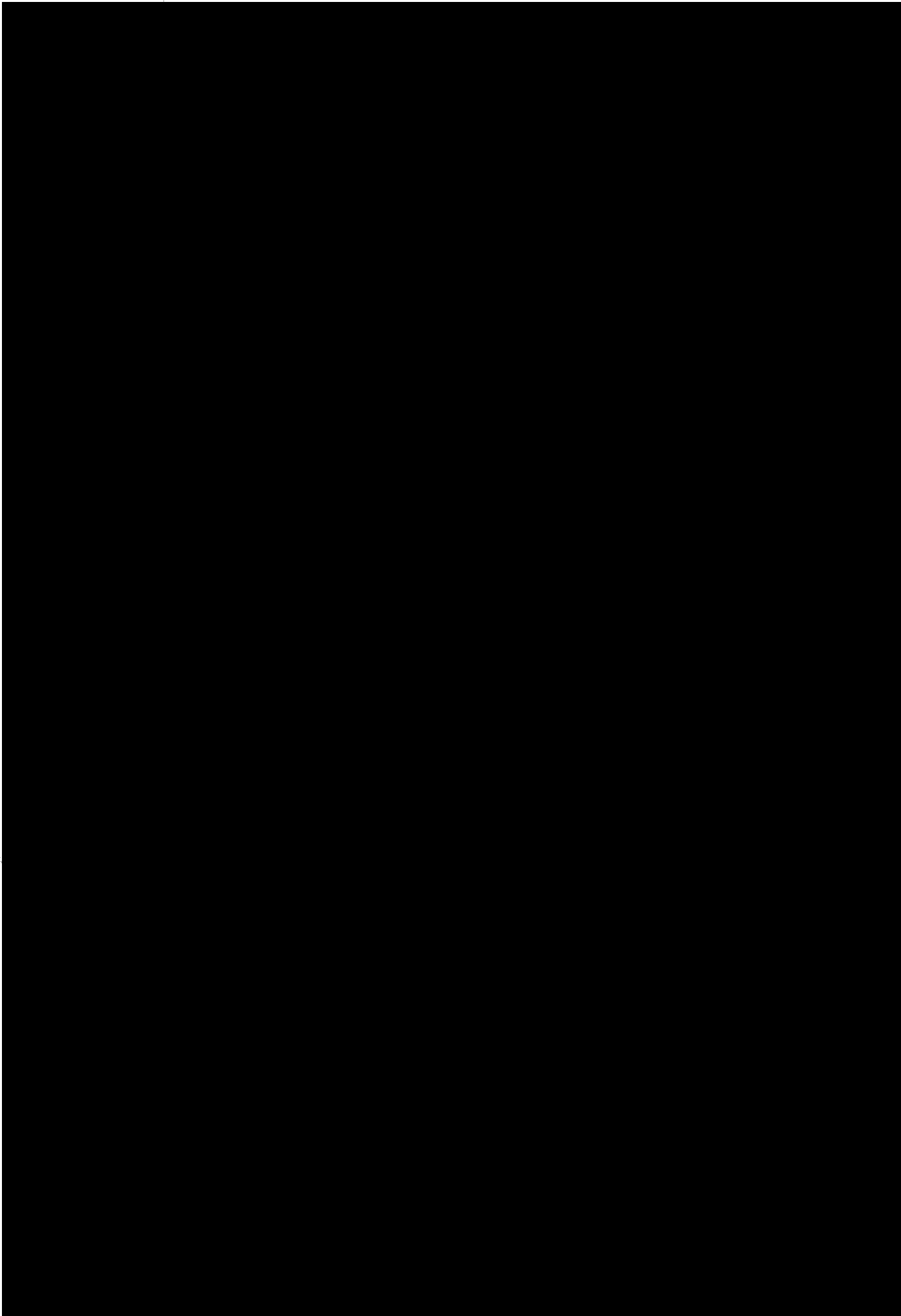


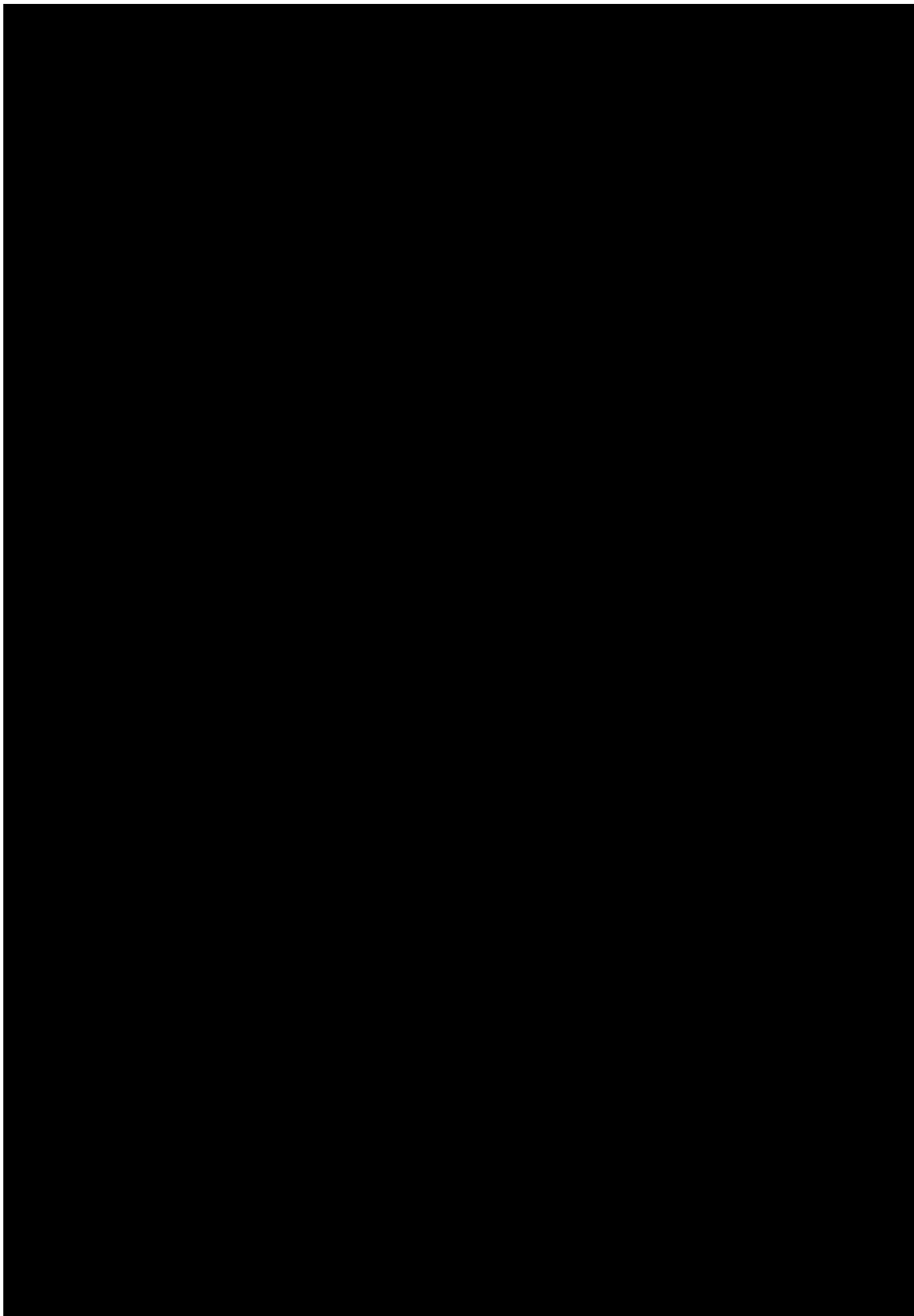


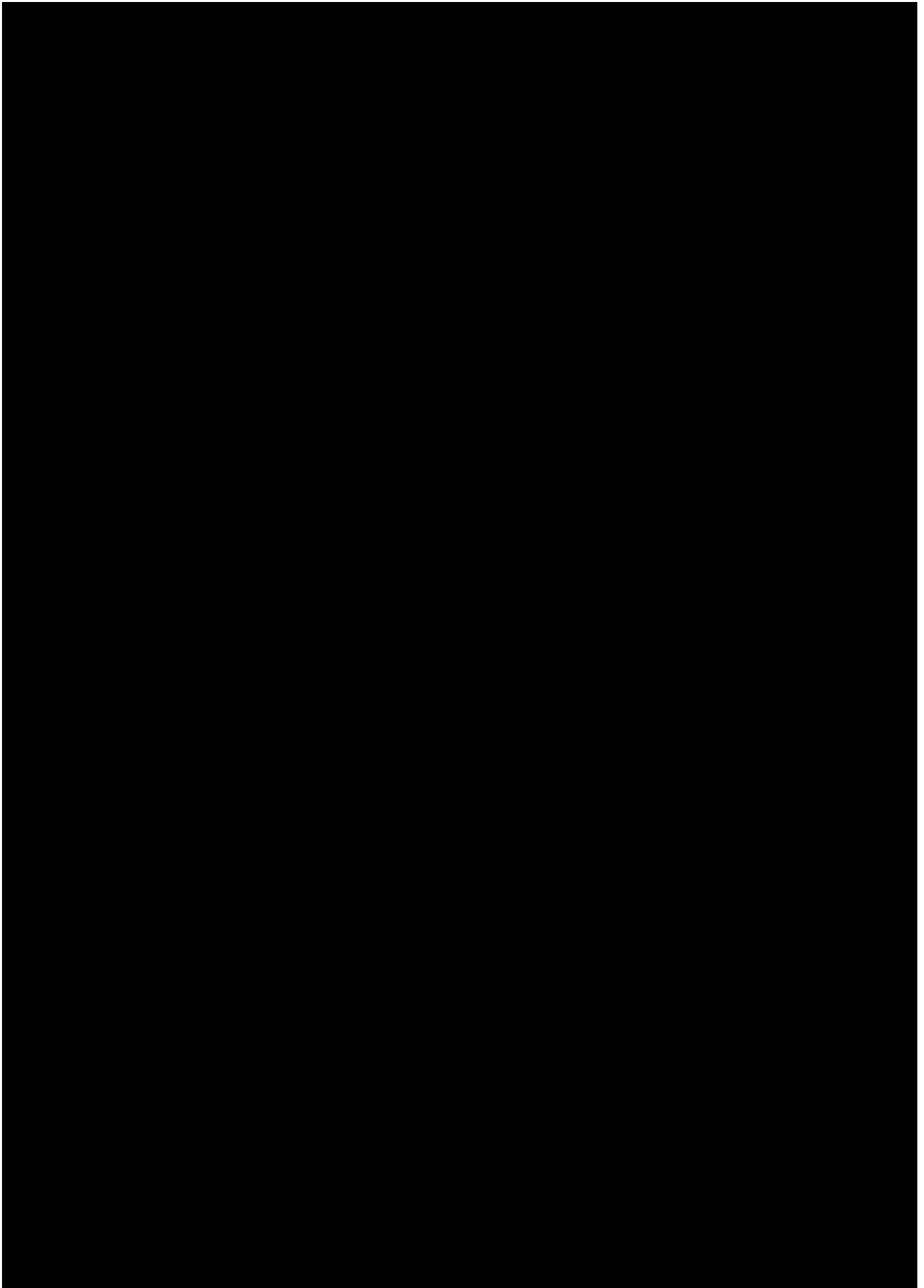


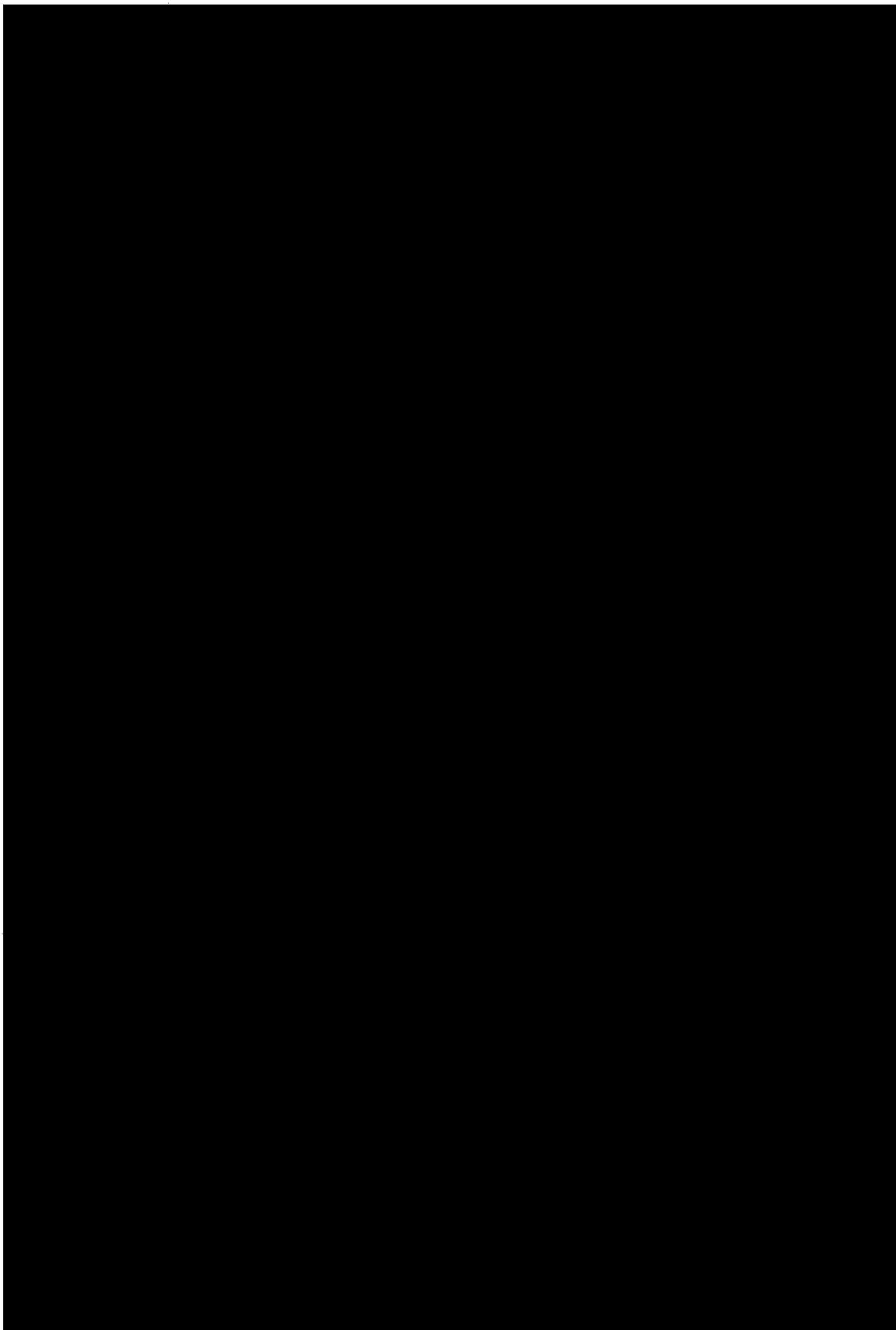


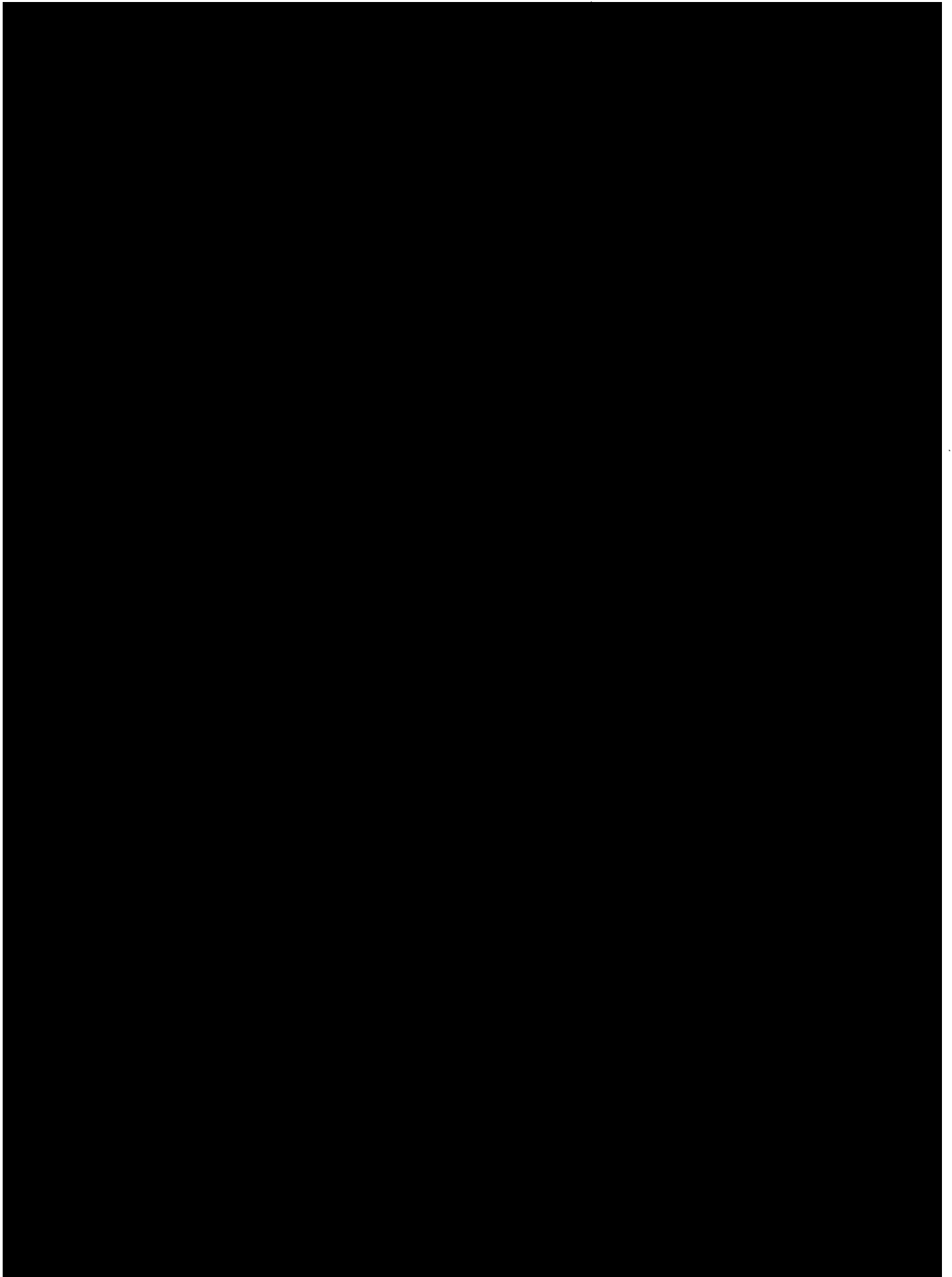


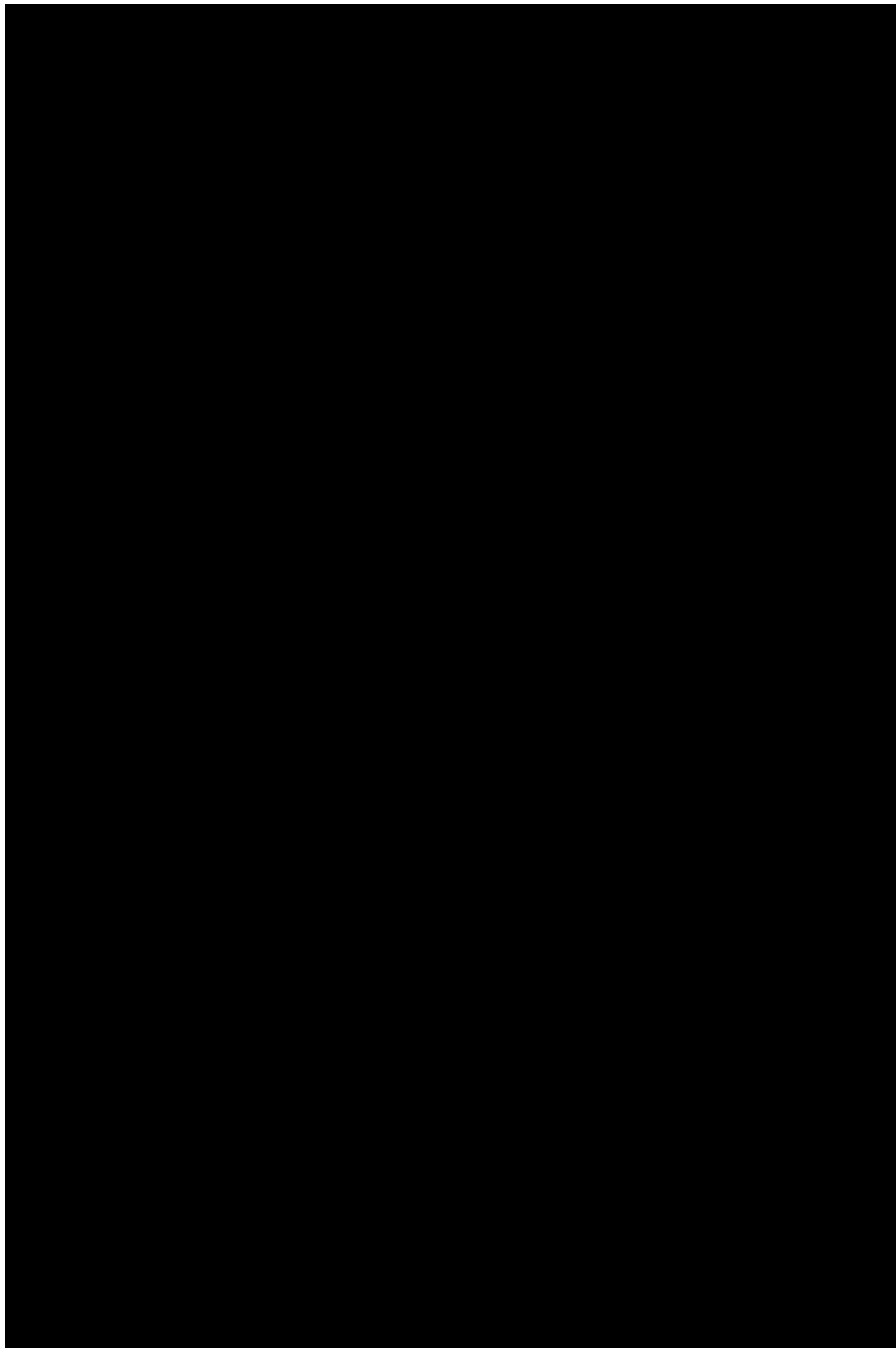


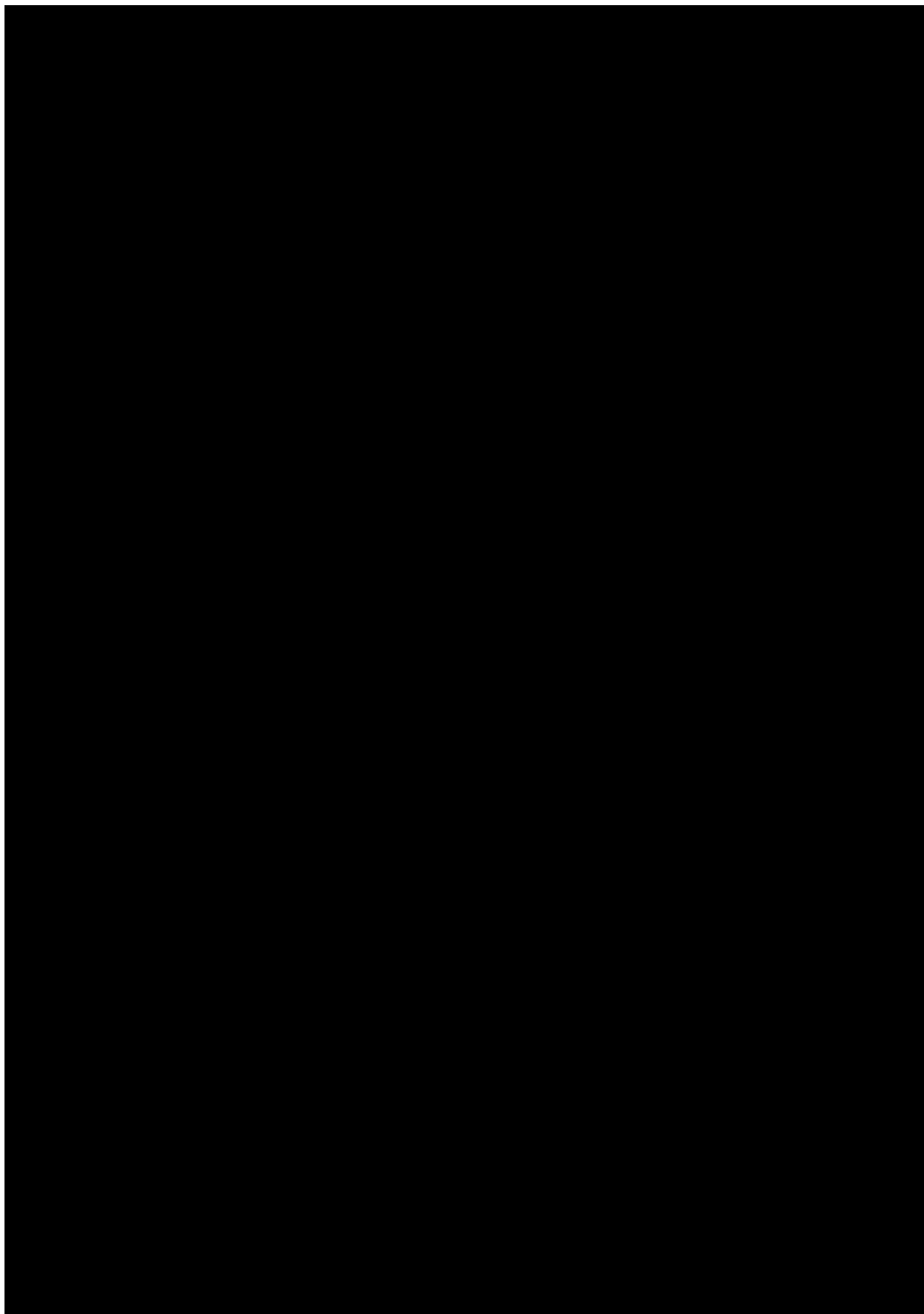


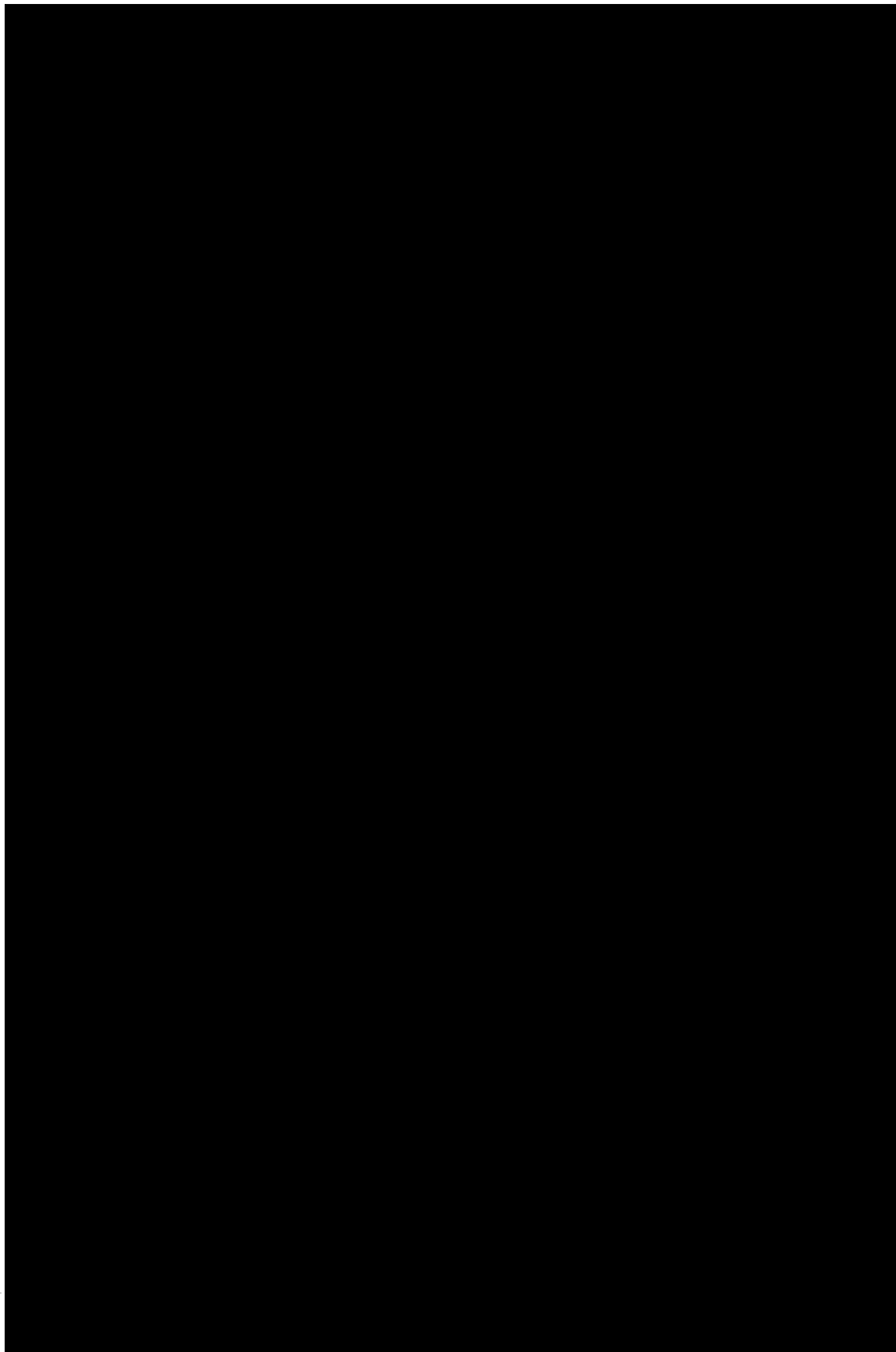


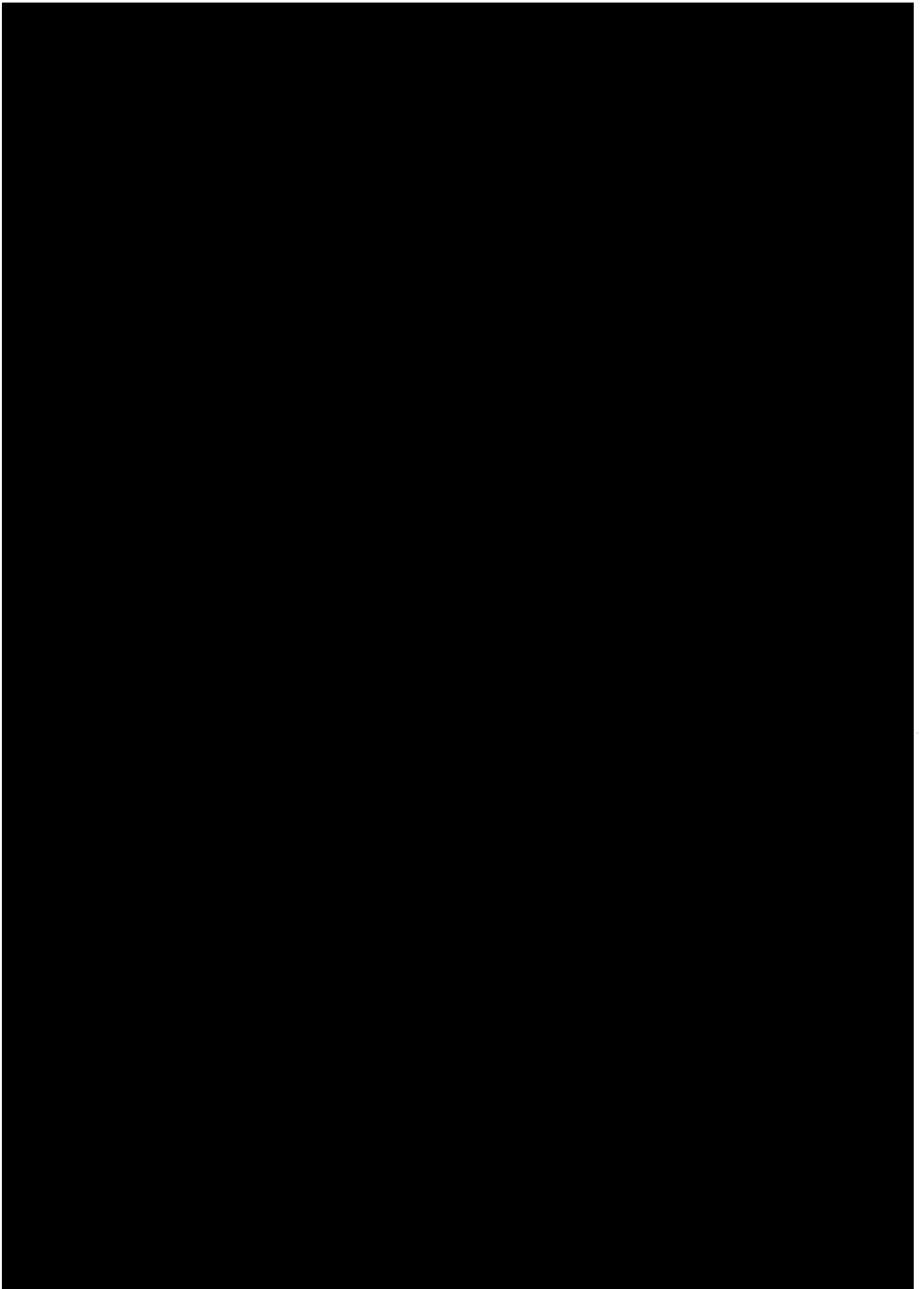


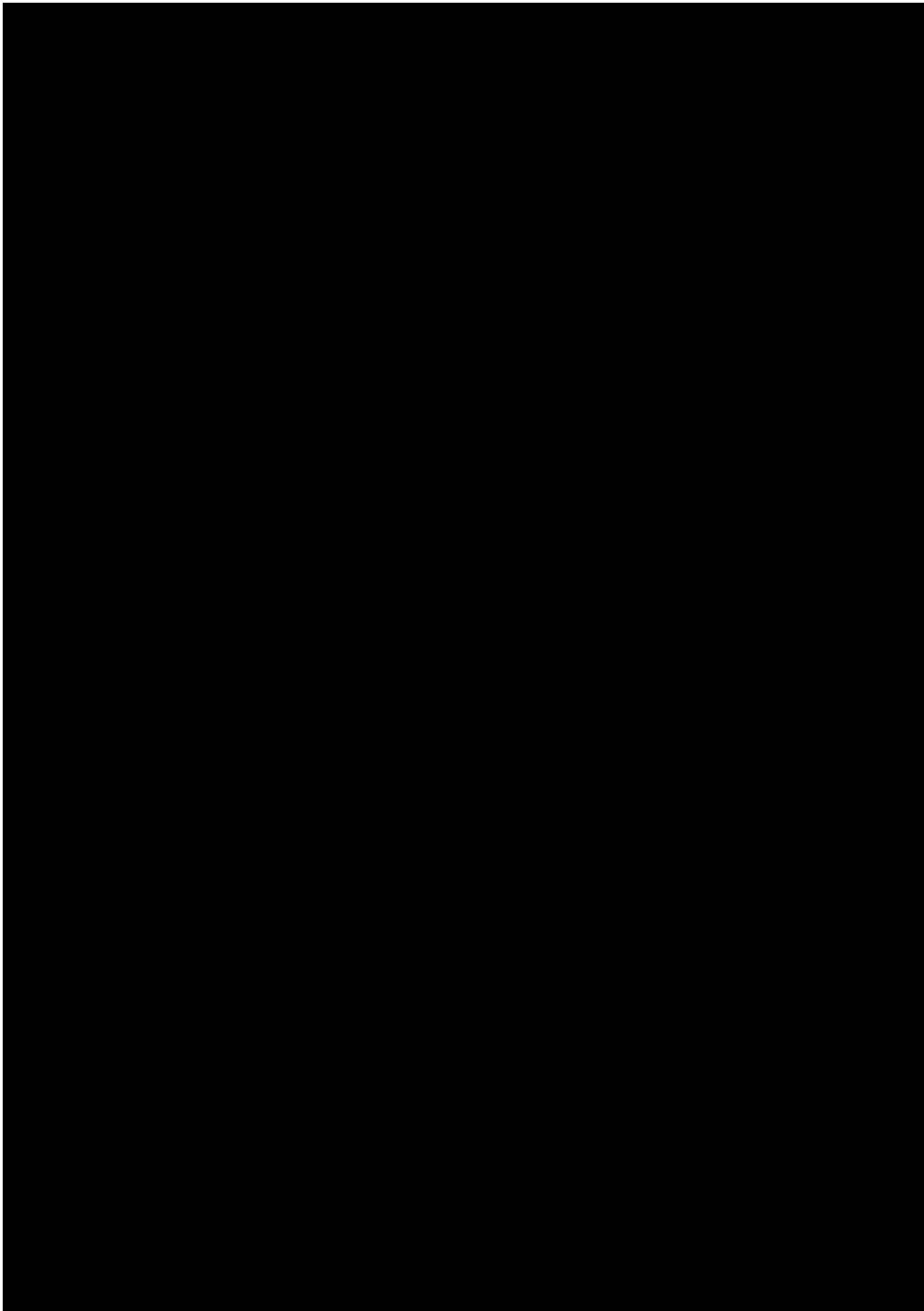


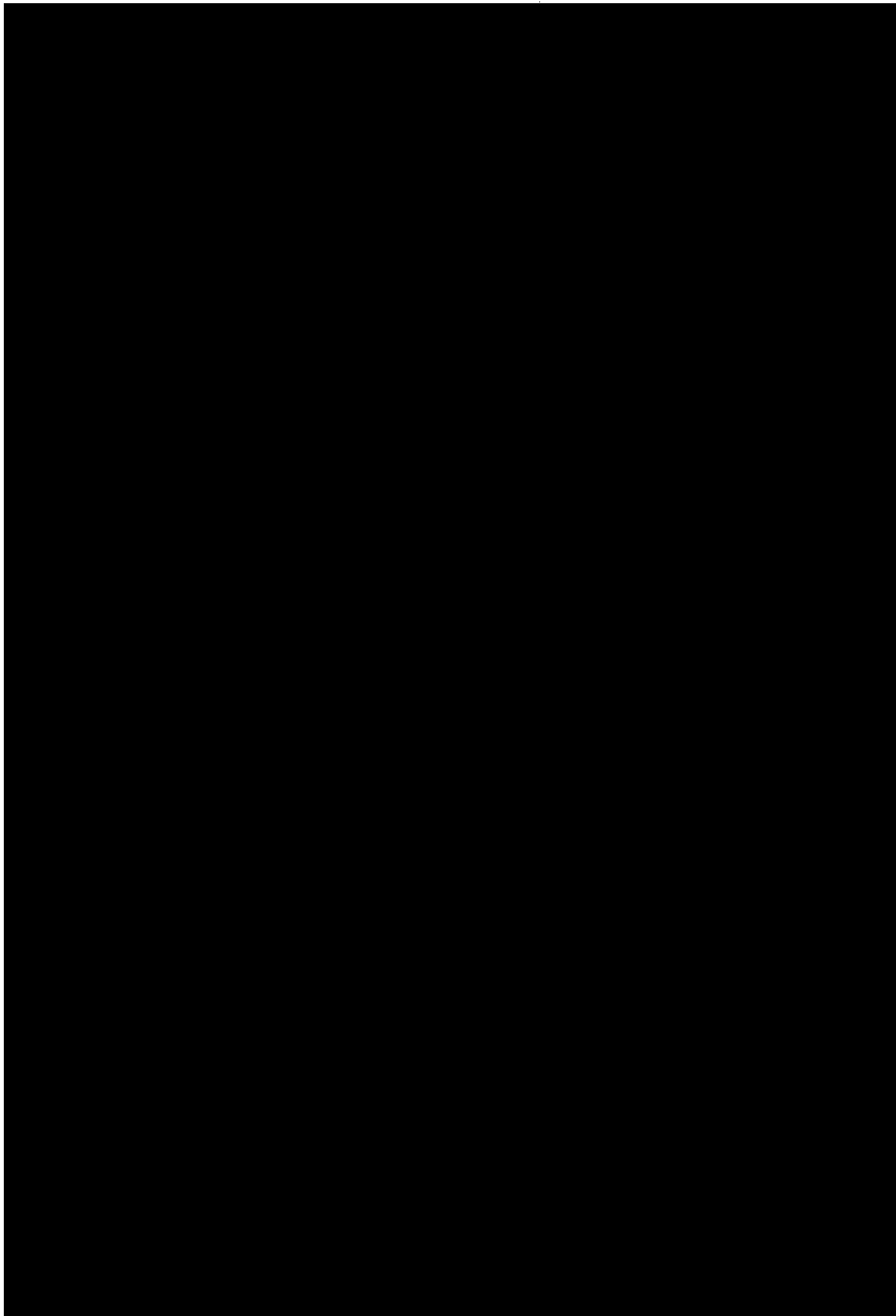


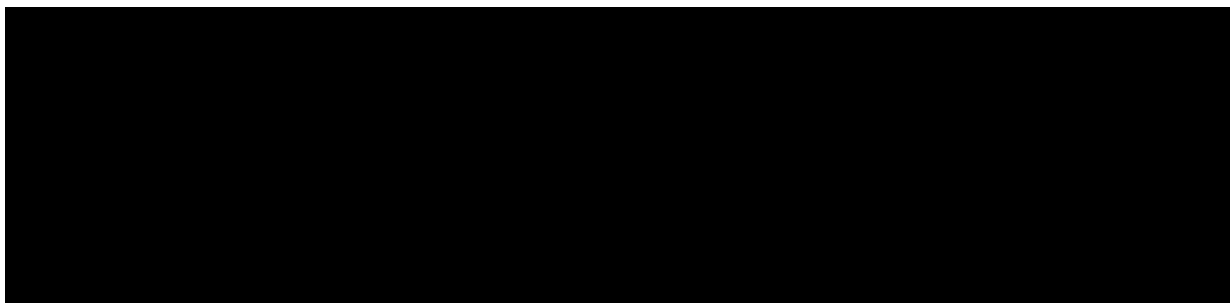


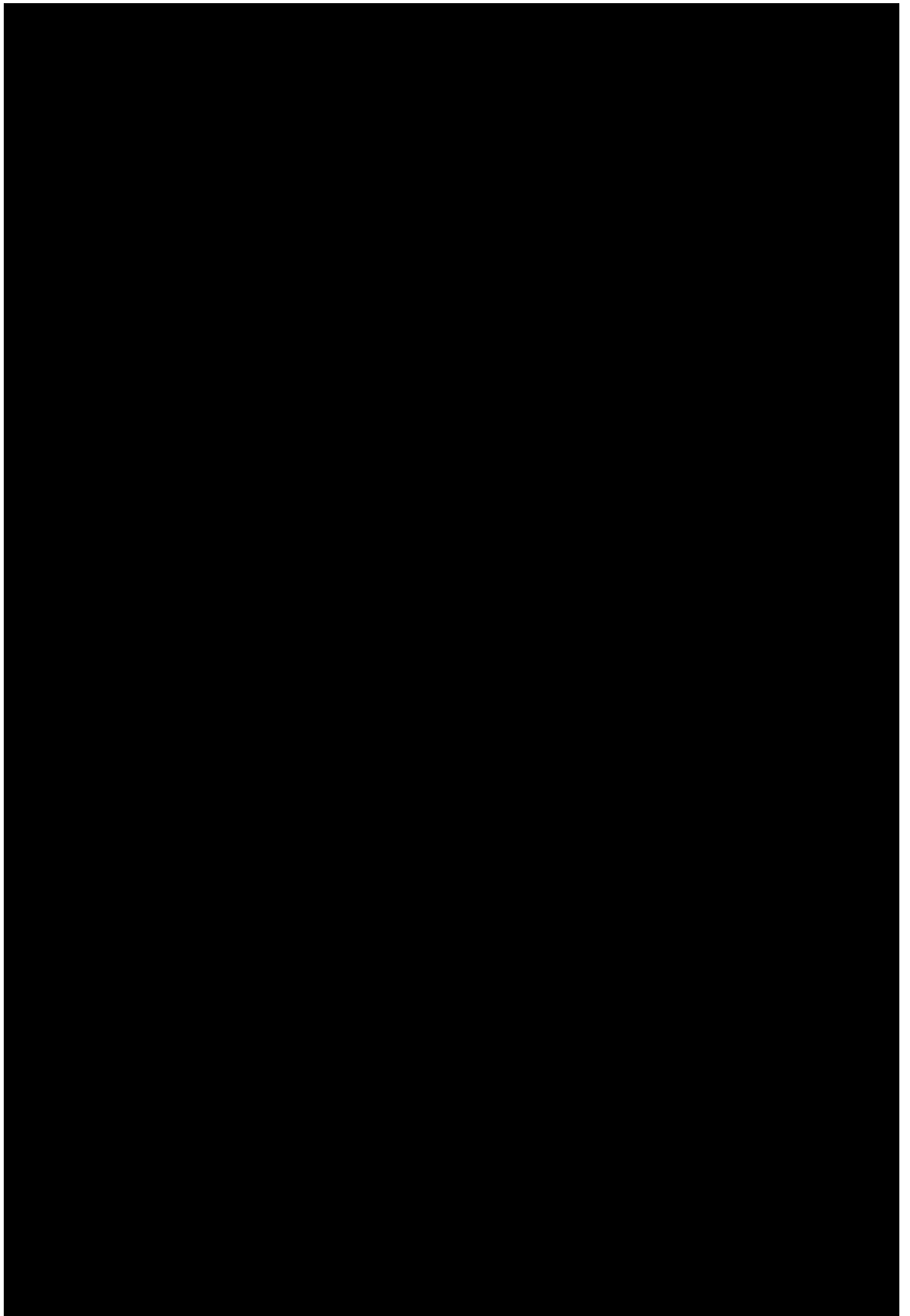


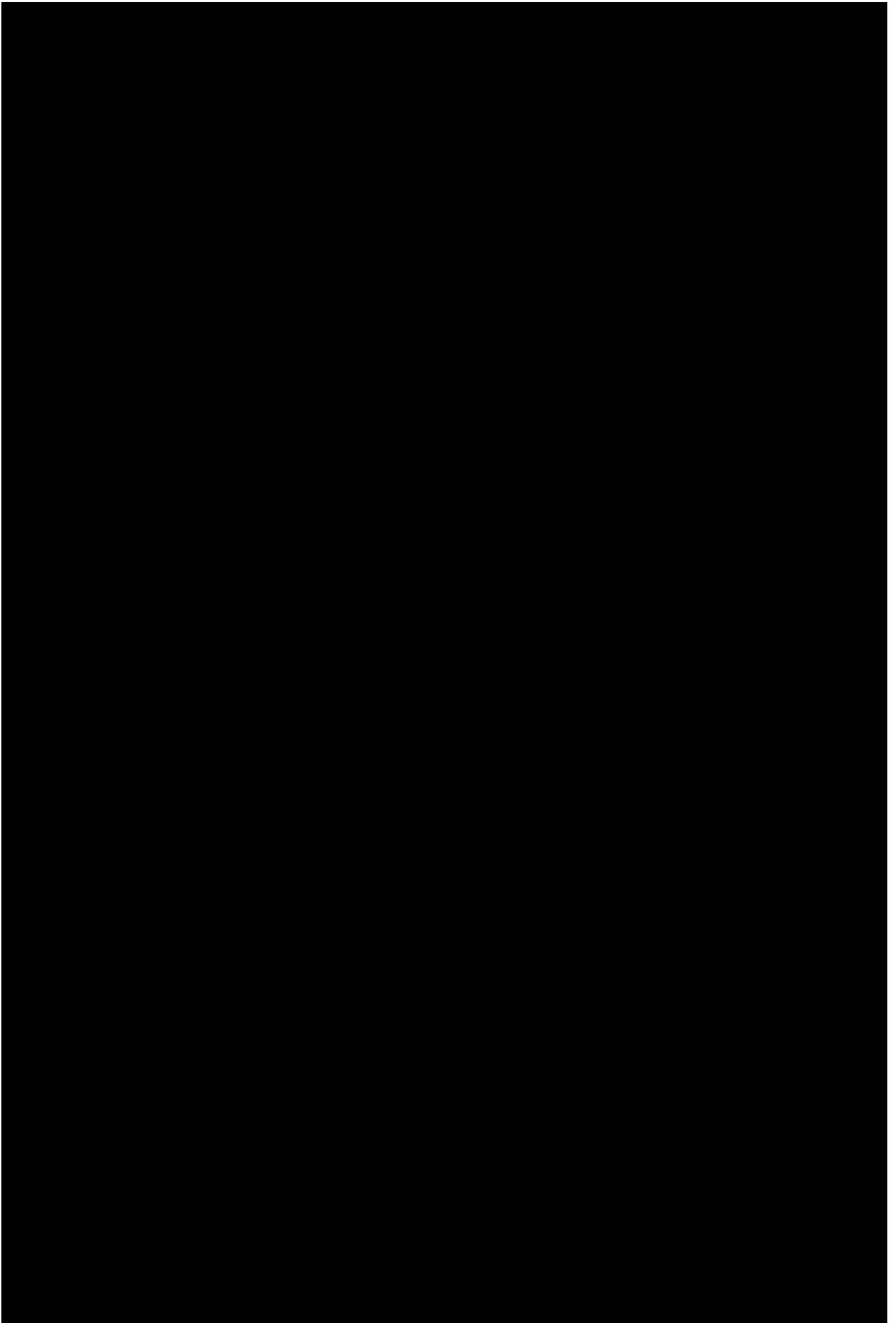


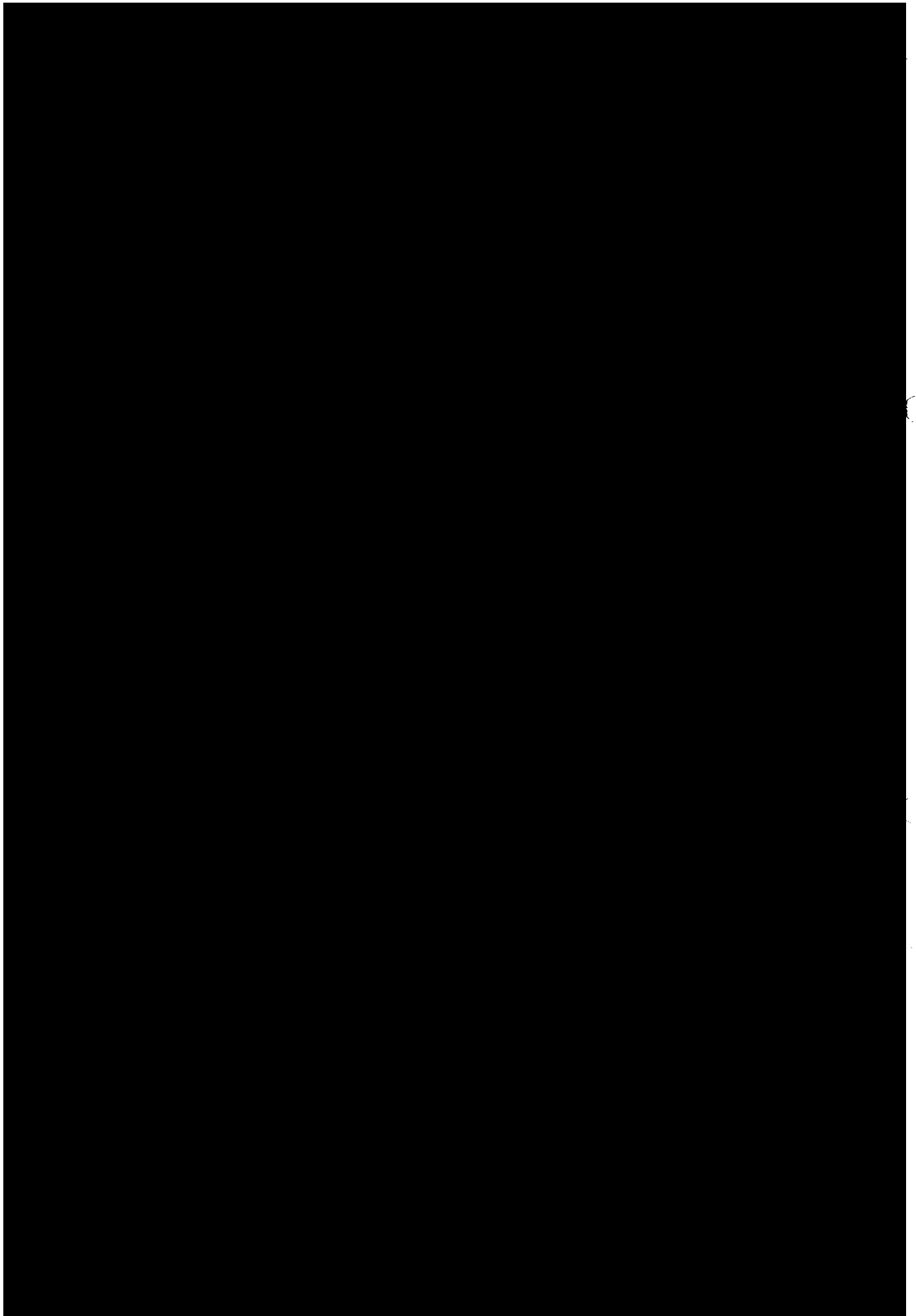


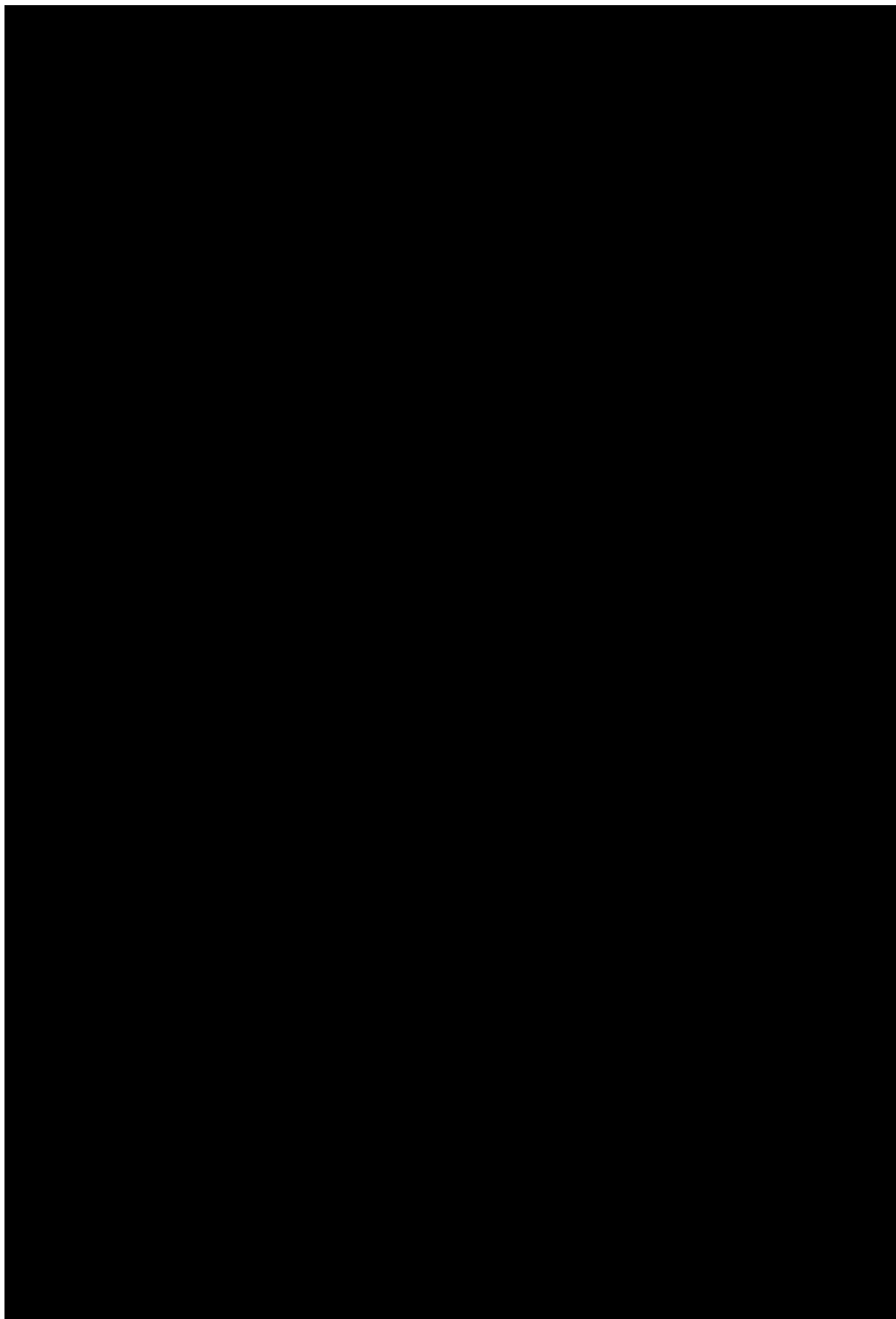


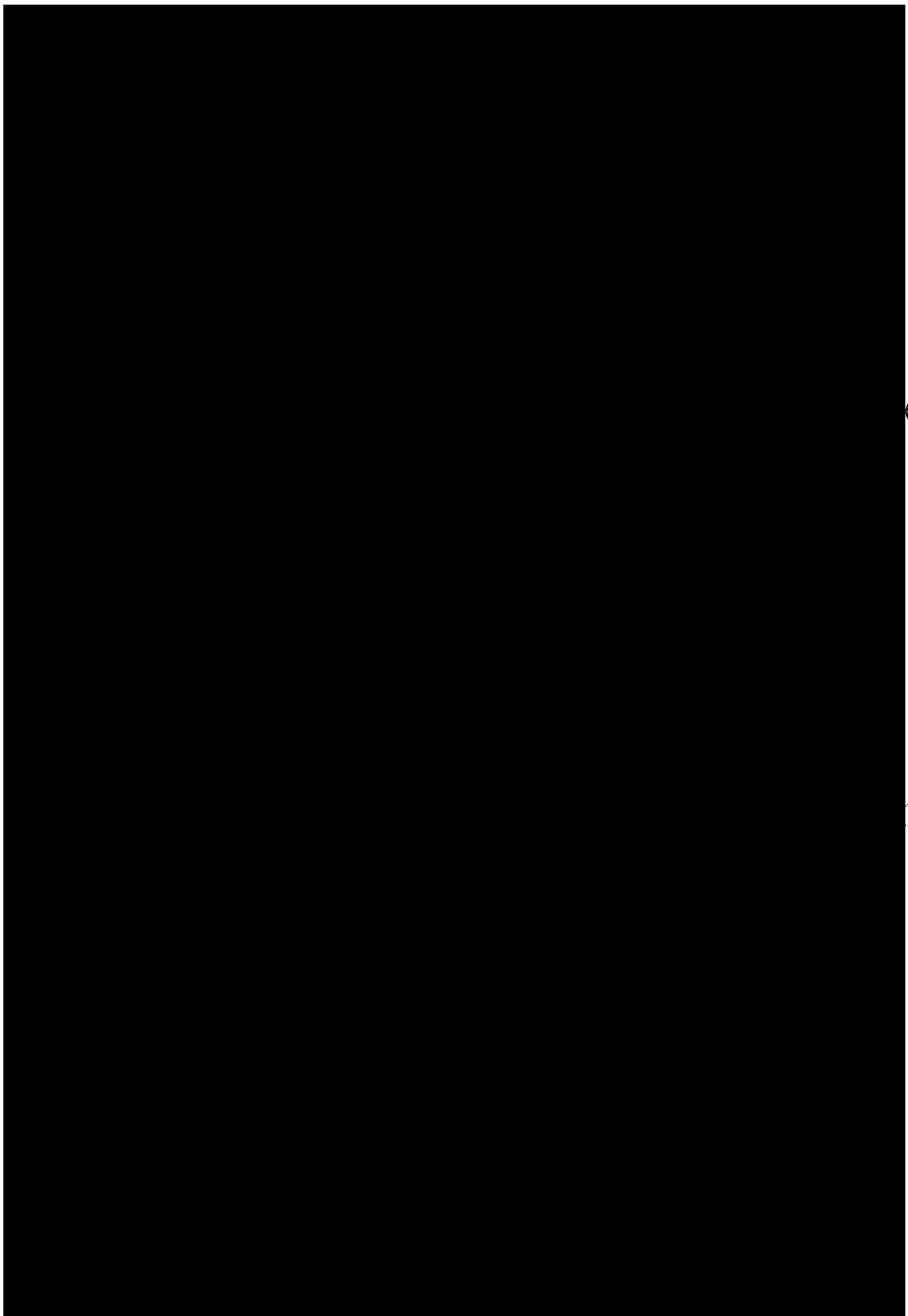


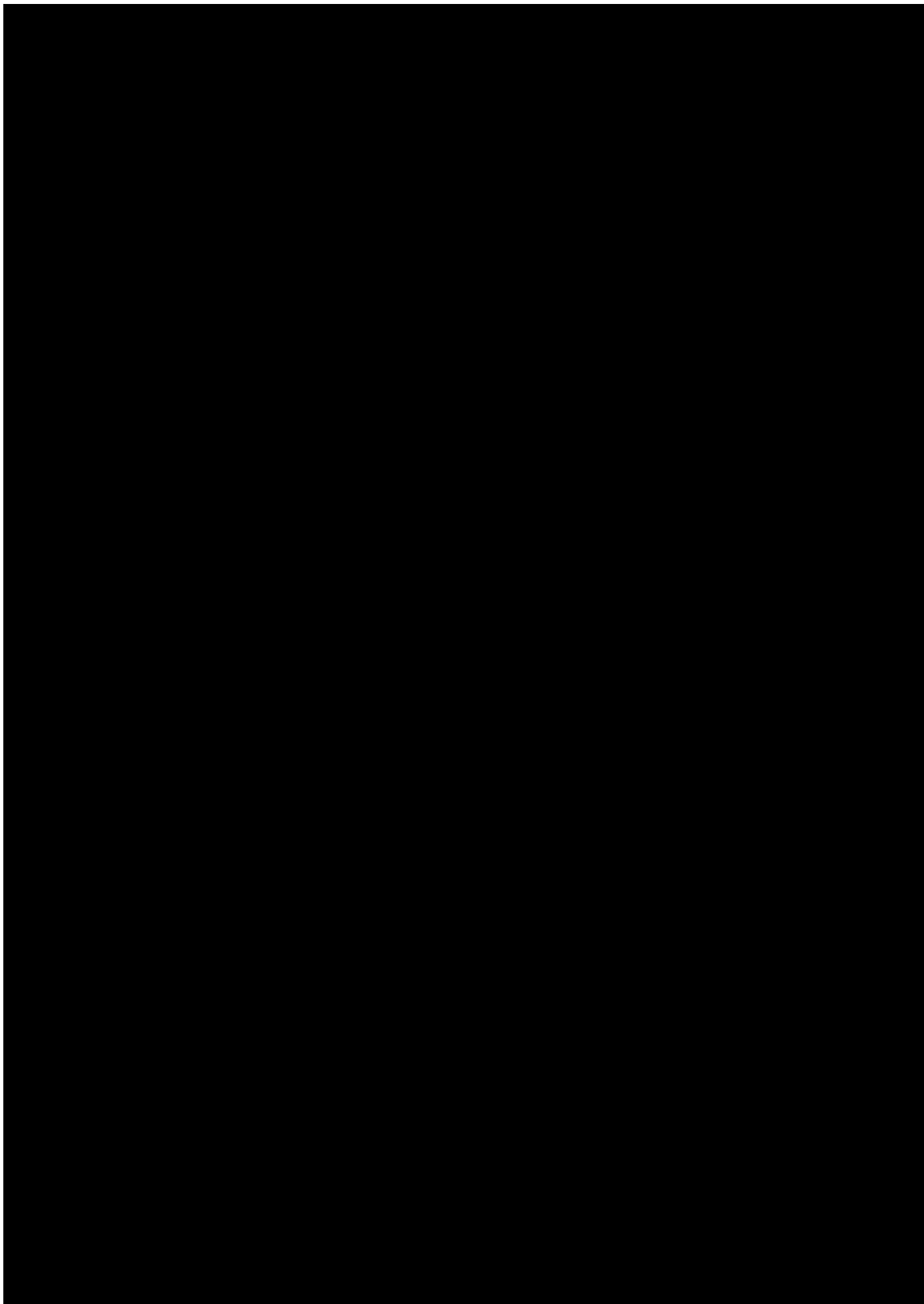


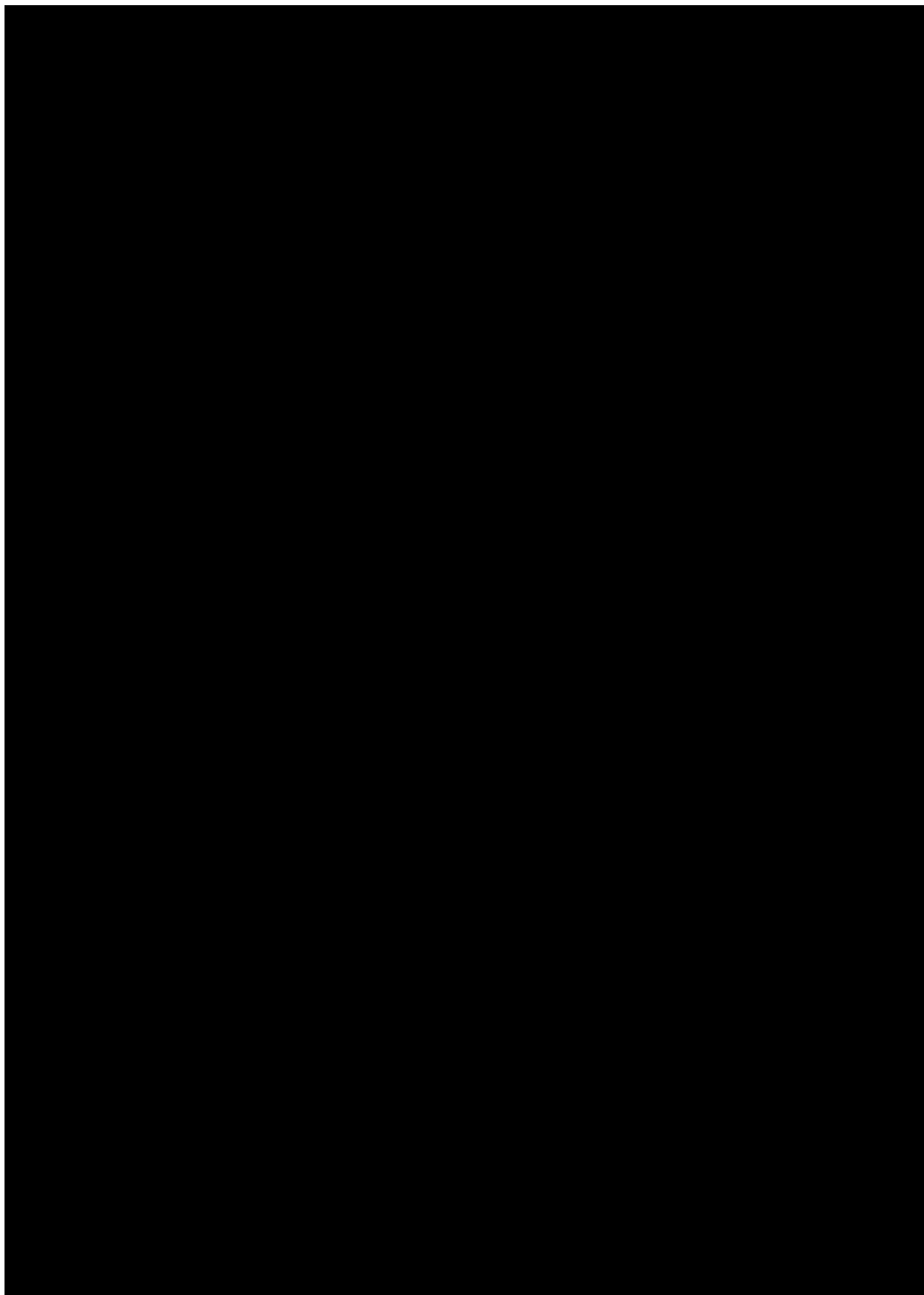


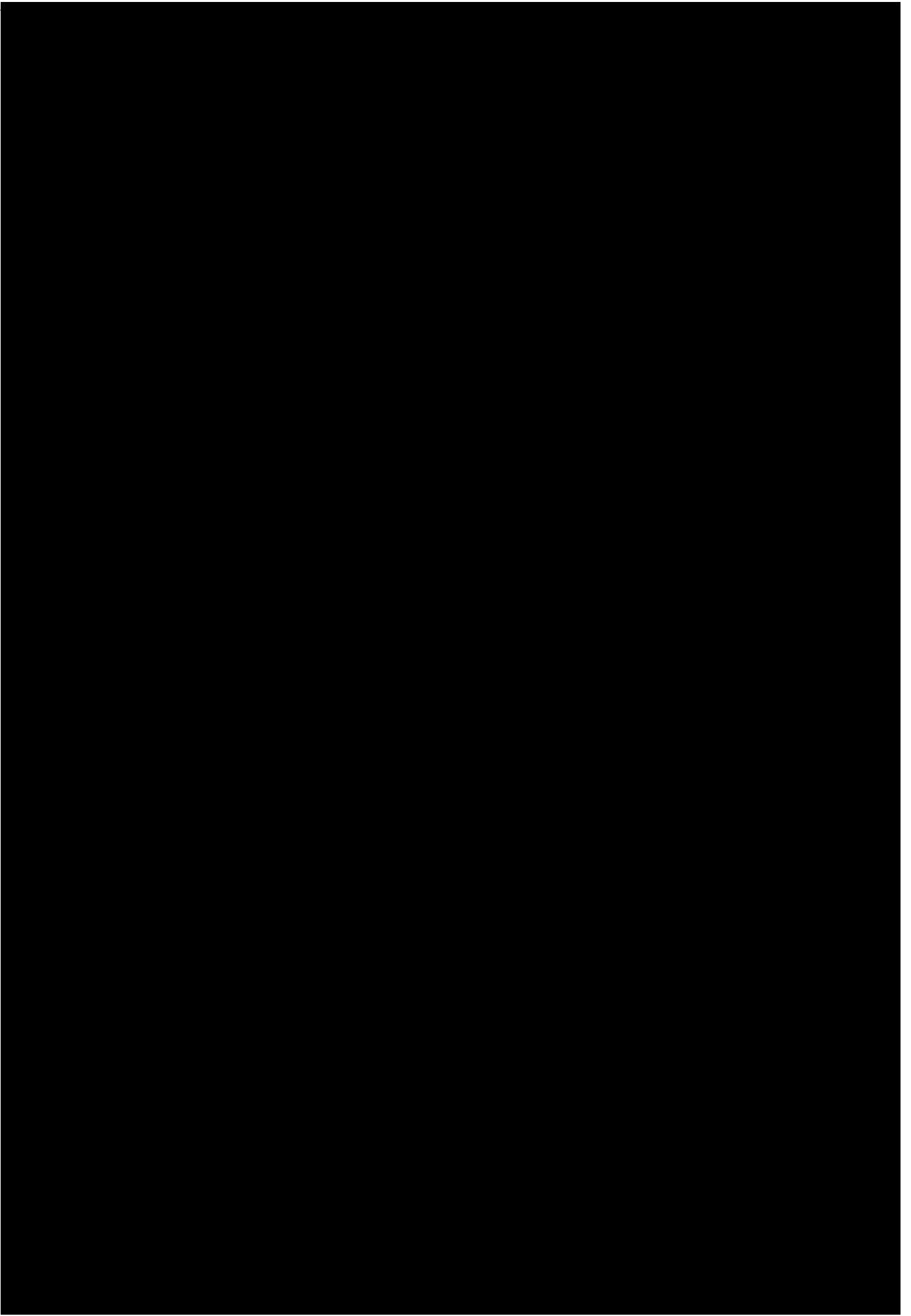


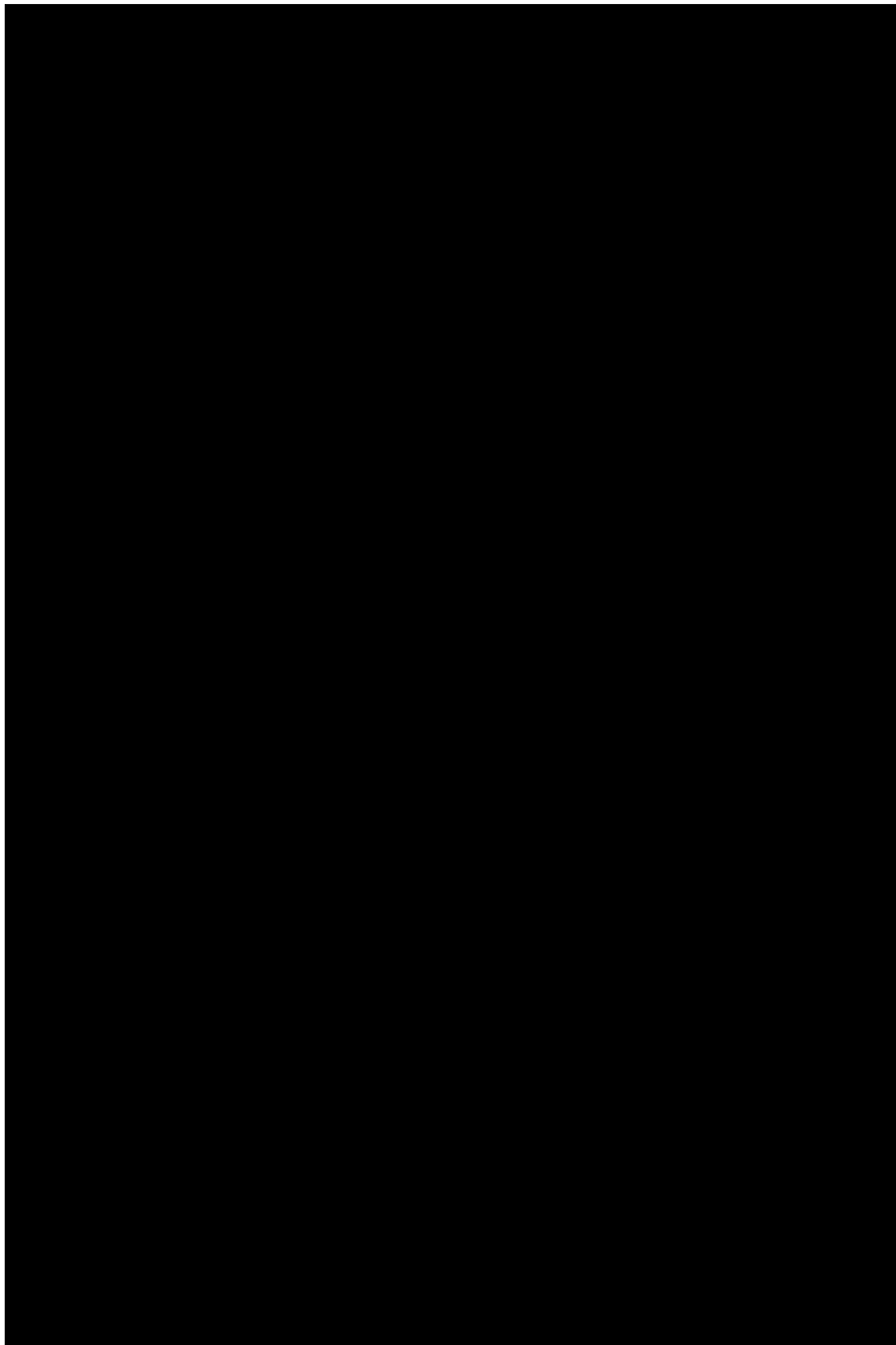


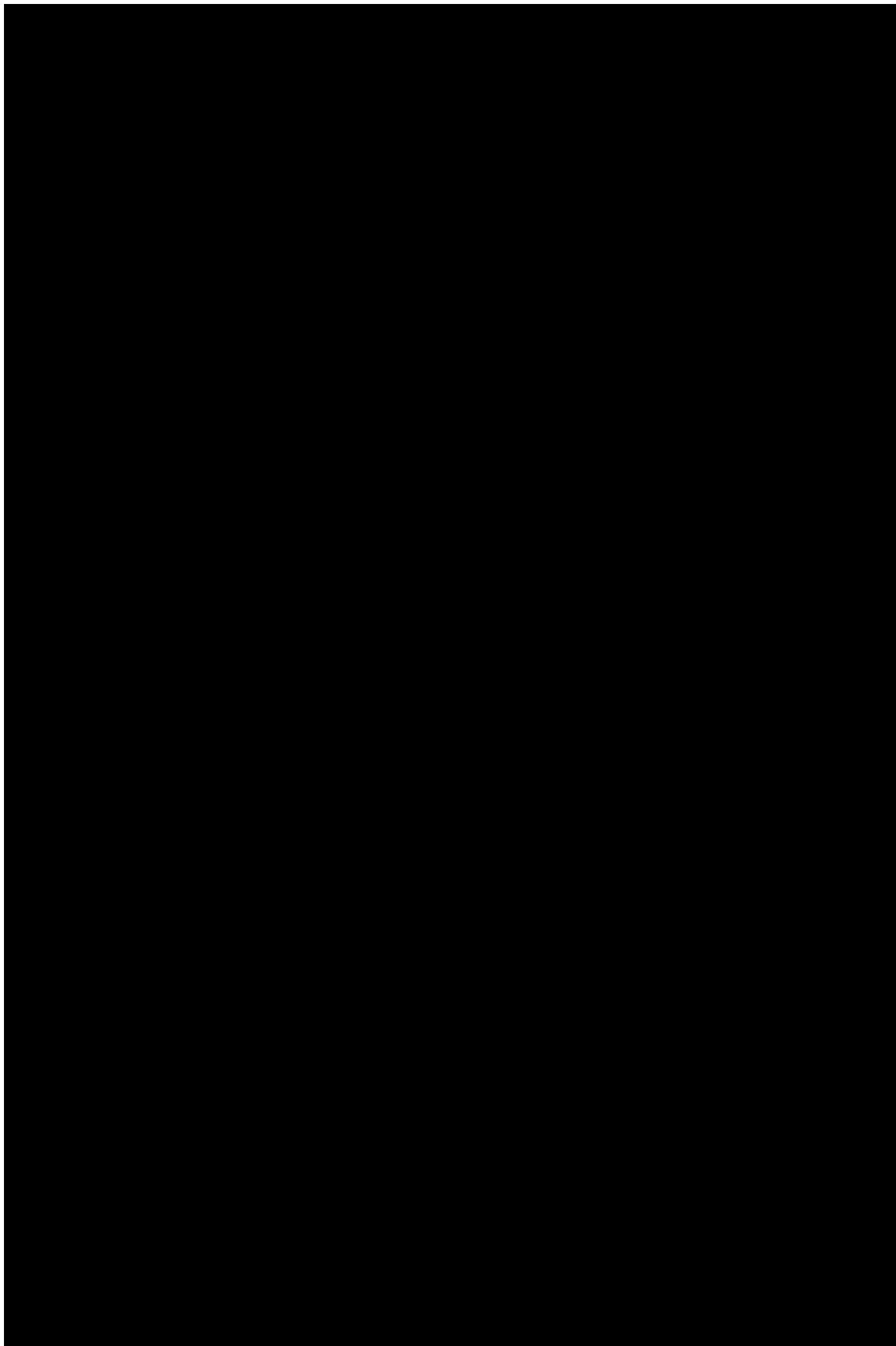


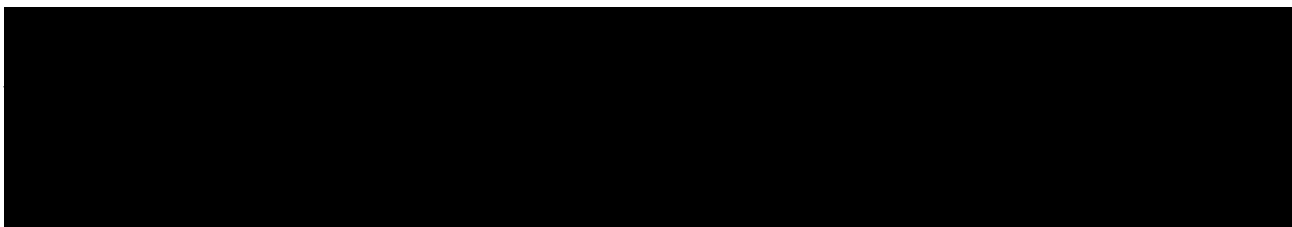


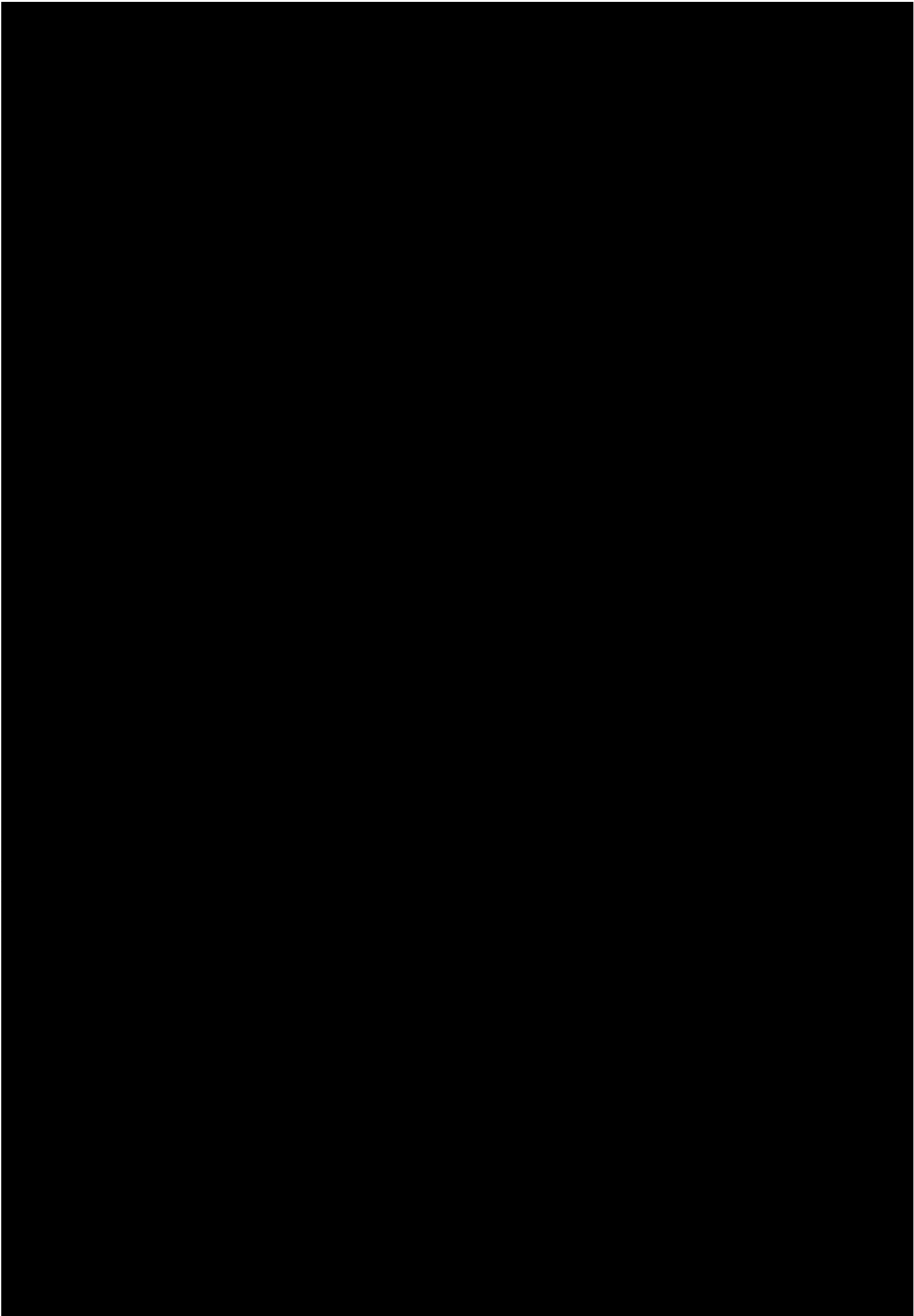


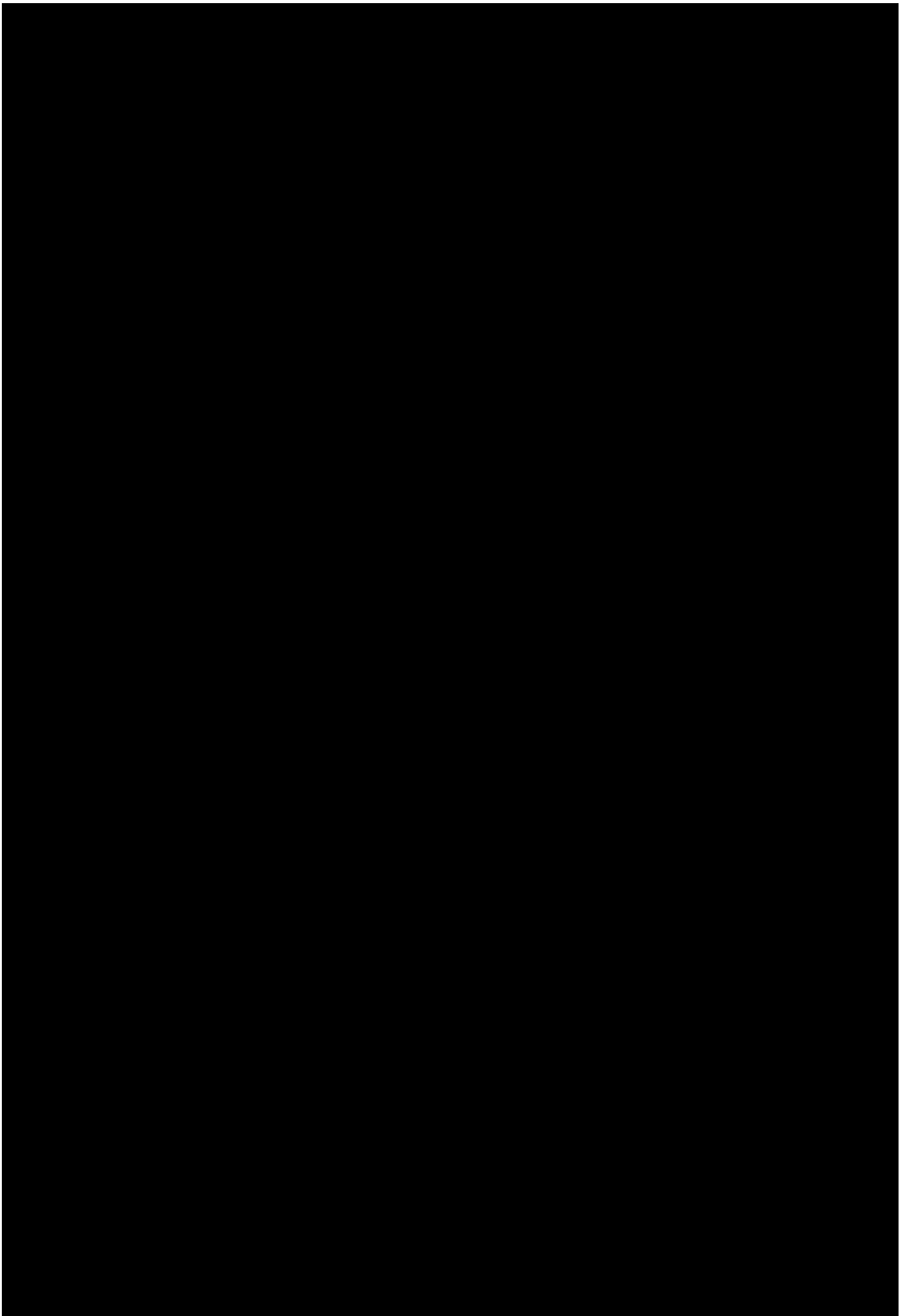


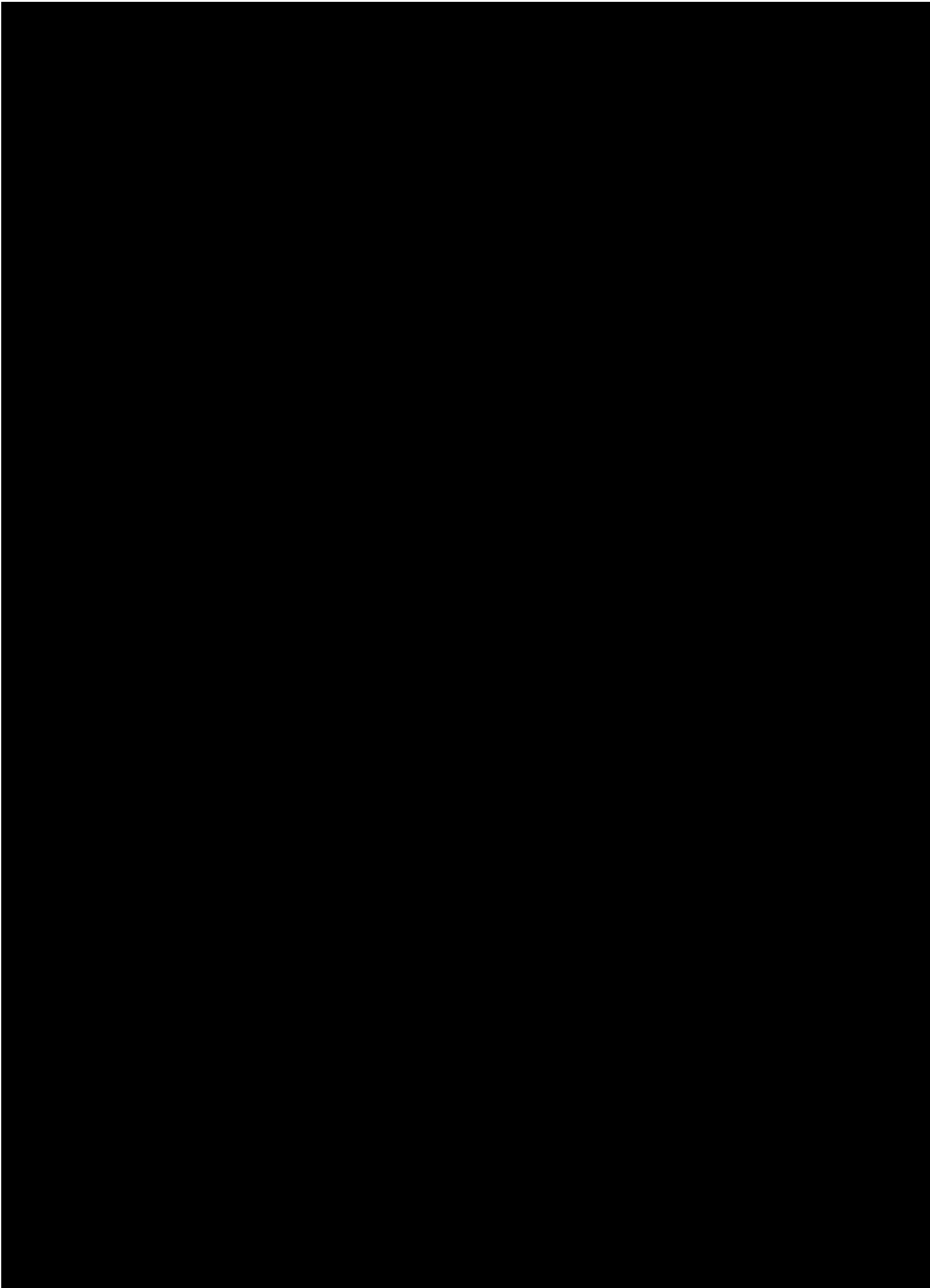


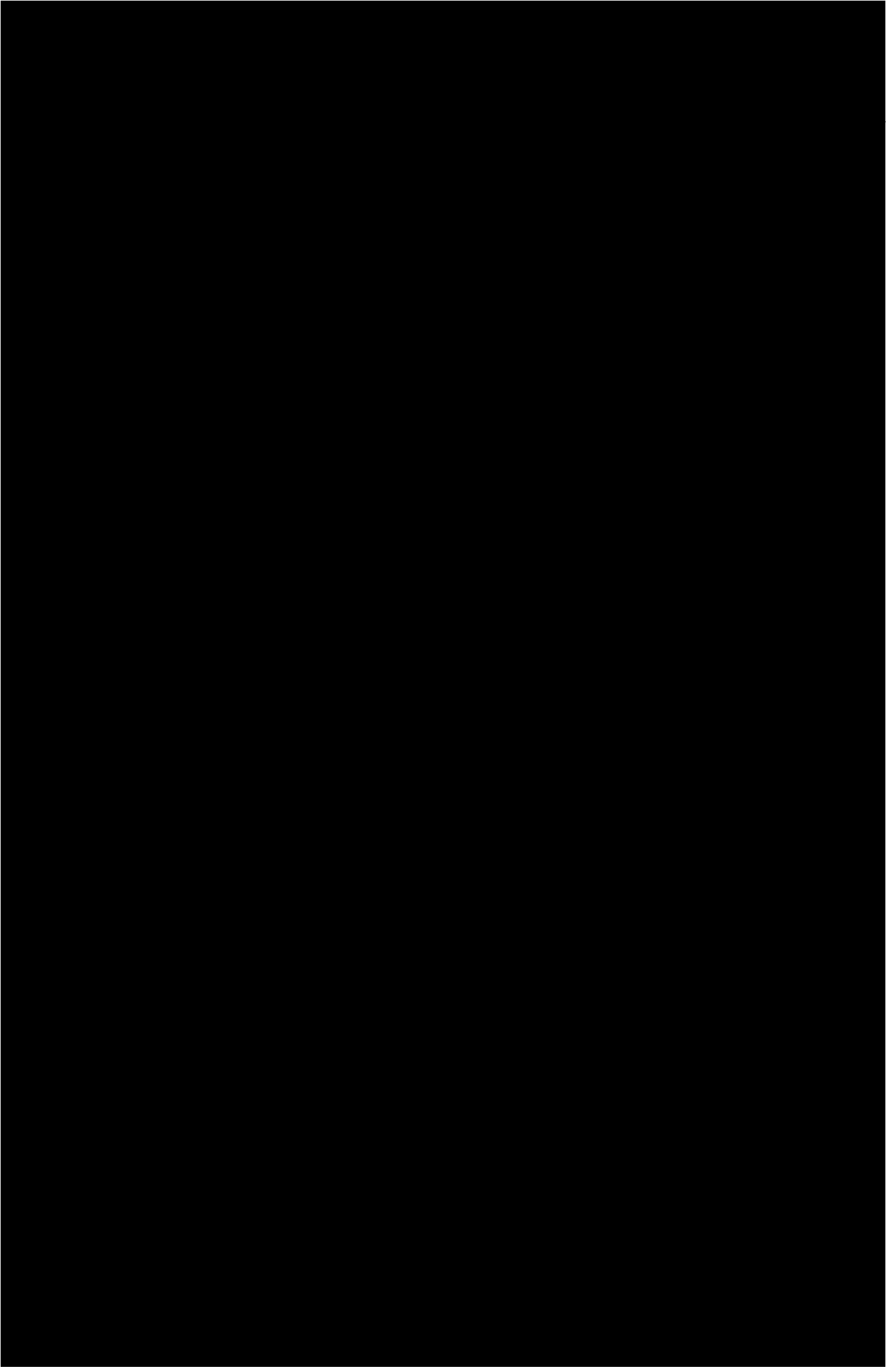












MONSANTO



LICENCE No: DIR 012/2002
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2005 Annual Report for Bollgard II®
(Commercial Release)
REPORTING PERIOD: 2004/05 Cotton Growing Season
DATE: 22 December 2005

PREPARED BY: [REDACTED]
Regulatory Product Manager

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**Accreditation
Number:** ACCR 034/2002

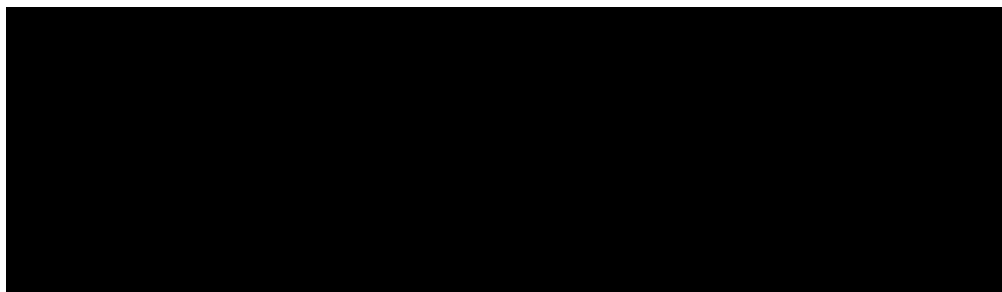
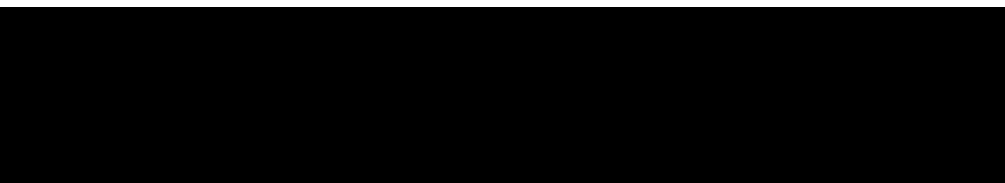
SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 012 commercial release licence for Bollgard II® issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 and 4 of the DIR 012 licence as issued to Monsanto Australia Limited on 23 September 2002, and varied in June, September and December 2003; March, May, October and December 2004; and February, June, July, August, October, November and December 2005.

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**1. General Conditions****a. Informing people of their obligations**

Monsanto Australia Limited informed all cotton growers and cotton gins covered by the DIR 012 / 2002 licence of the obligations imposed on them as a result of the conditions of these licences. This was achieved primarily through Monsanto Accreditation programs and information courses and mail outs.

Bollgard II® cotton Accreditation programs require all persons having management responsibility for Bollgard II crops to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once.

Gins known to transport cotton seed into the restricted zone were notified by letter that they were permitted to transport seed north of 22° south provided they adhered to all conditions and obligations associated with the use of cotton seed within the restricted zone.

b. Reporting

During the reporting period, the licence holder did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence, or of any unintended effects of the dealings authorised by the licence.

c. Material changes in circumstances

During the 2004/05 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence or permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of the DIR 012 licence.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

During the 2004/05 reporting period, there were no changes to contact details of the Project Supervisor.

f. Testing methodology

Under conditions of the licence, Monsanto Australia Limited was required to provide the Regulator with a method capable of reliably detecting the presence of the GMO. This advice was emailed to Deborah Maguire and Neil Ellis of the OGTR on 15 October 2002.



2. Release of Bollgard II® south of latitude 22° south (outside the Restricted Zone)

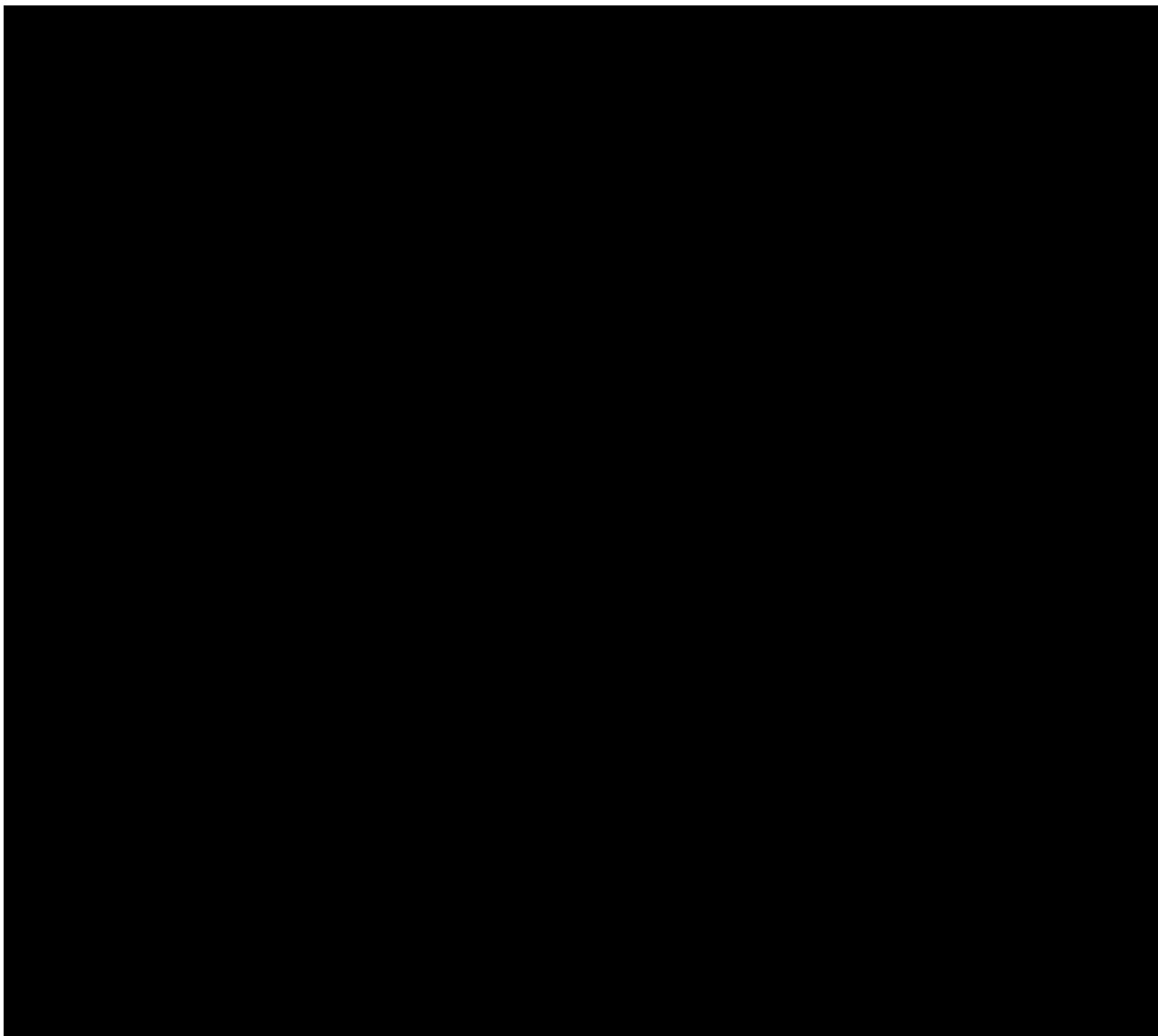
The licence holder may conduct dealings with the GMOs south of latitude 22 degrees south.

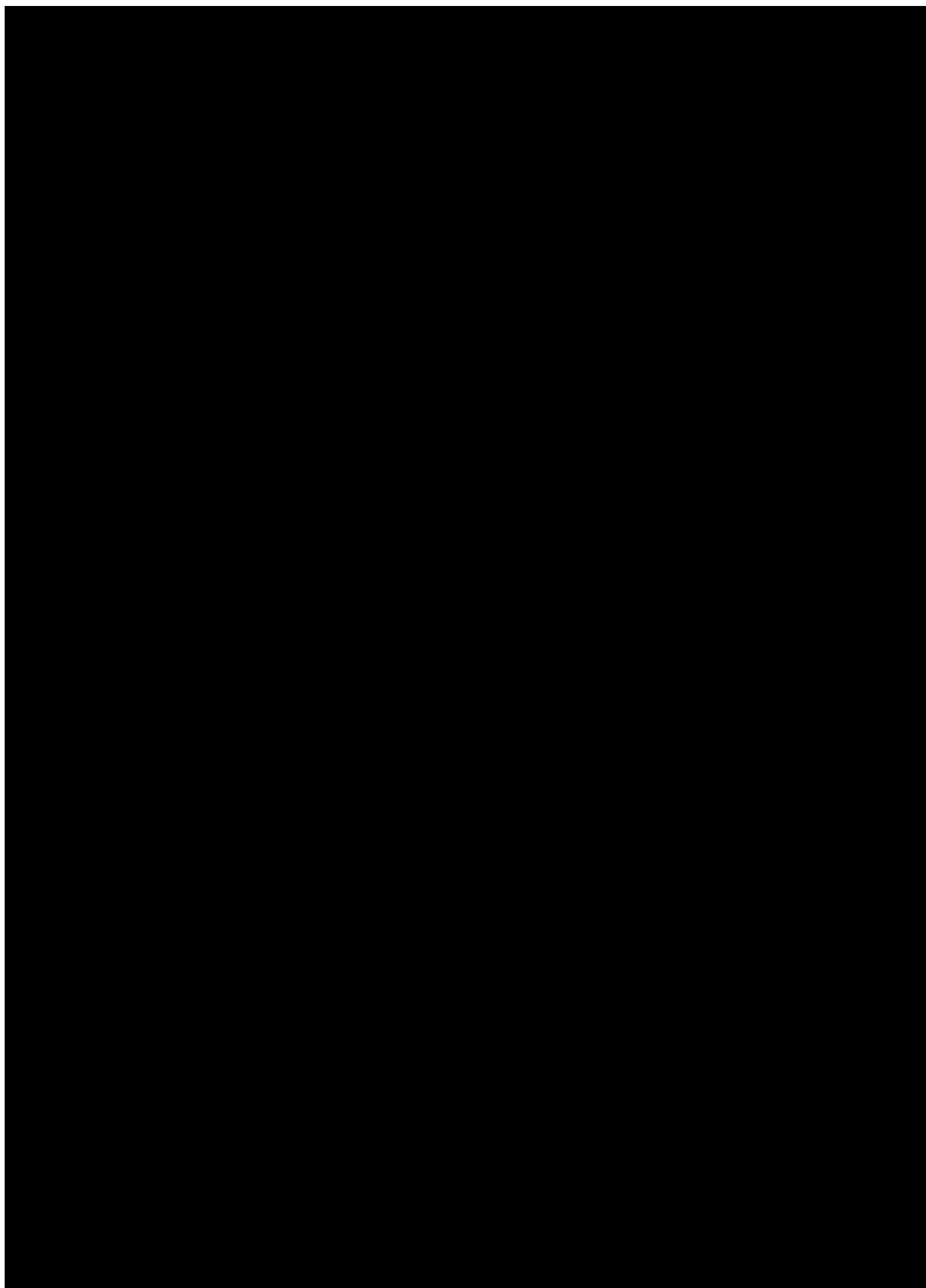
In the 2004/05 reporting period, Bollgard II cotton was grown in the traditional cotton-growing regions south of latitude 22° south in NSW and Queensland. More information on the locations where all Bollgard II cotton crops were grown during the 2004/05 cotton growing season are given in **Part 2a**.

a. Crop plantings of Bollgard II® cotton

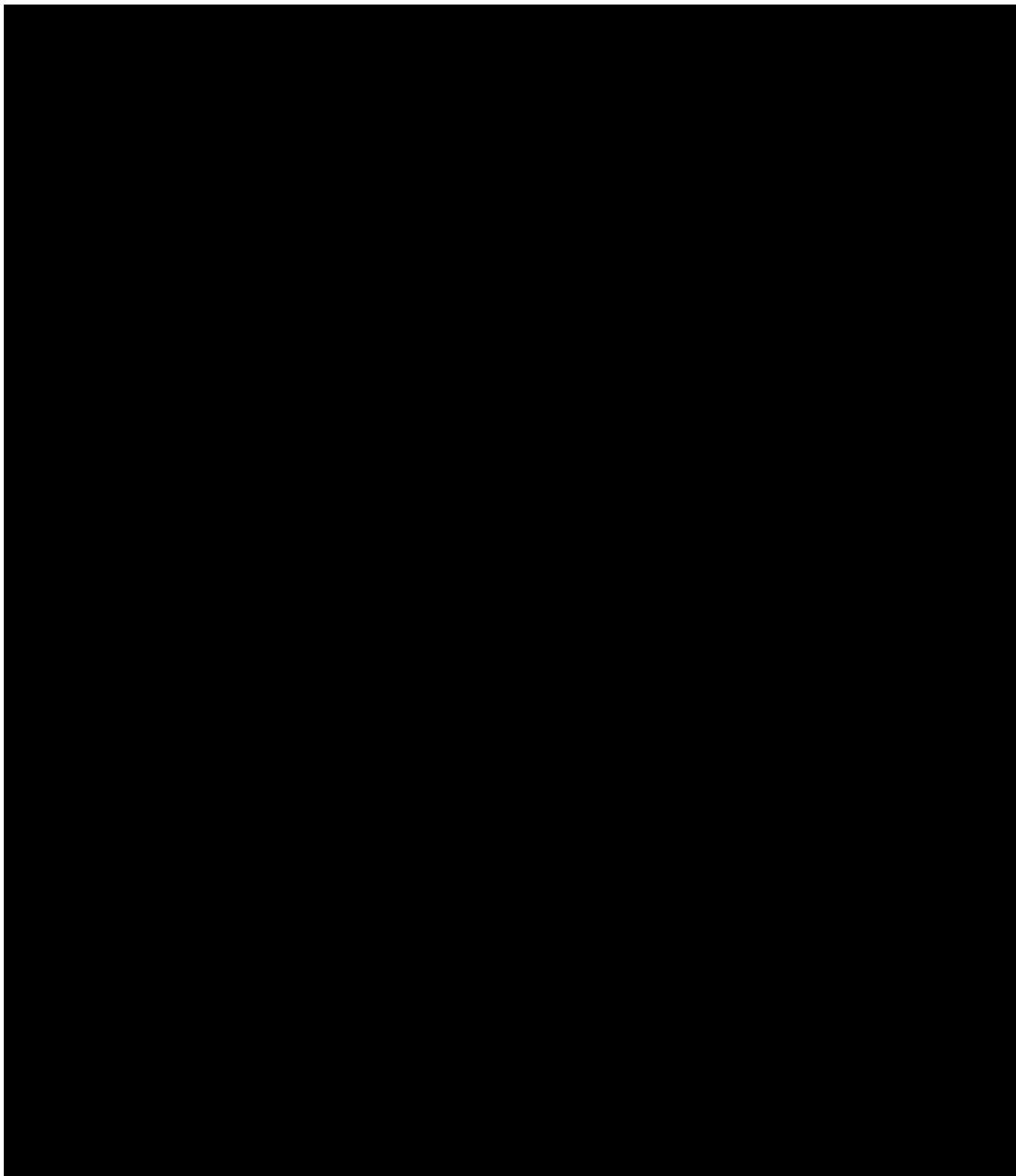
i) Conditions for Growing Crop

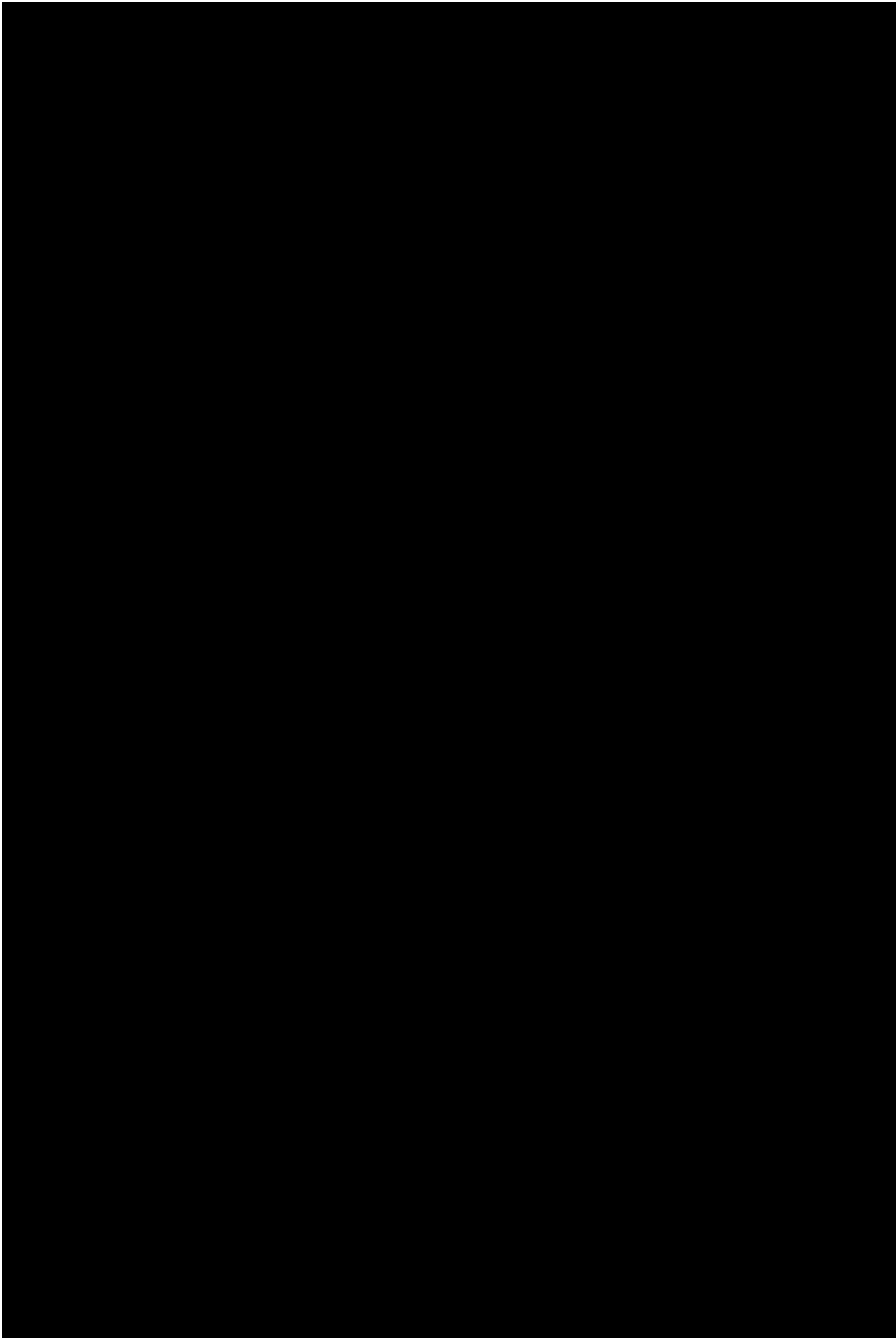
Sales and planting of Bollgard II were undertaken under a Technology User Agreement (TUA), which sets out the conditions for planting and growing a cotton crop containing Bollgard II technology. In order to be eligible to sign such an agreement, a grower was required to attend a Bollgard II accreditation program, and pass a test based on the material covered in the accreditation program.





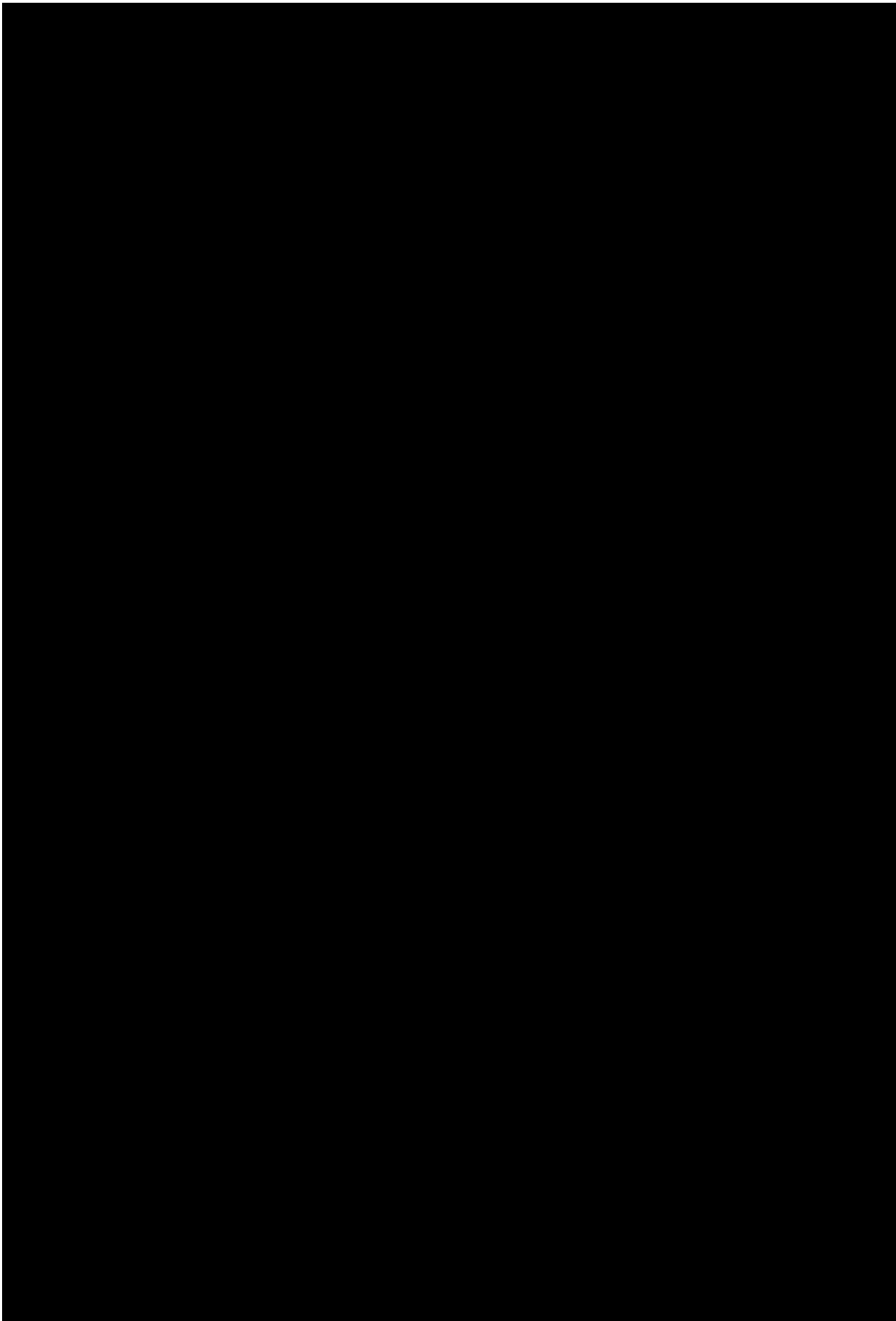


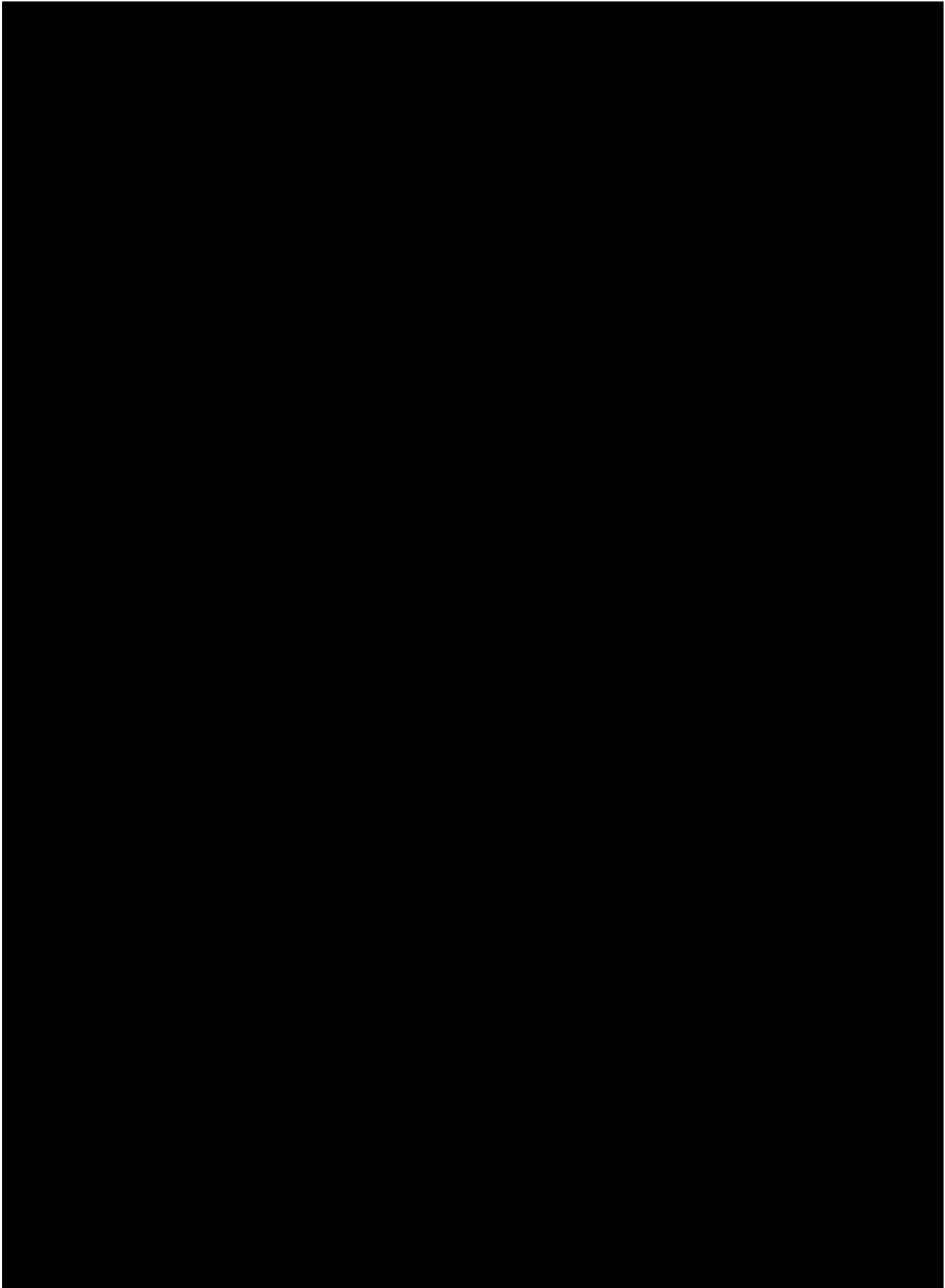


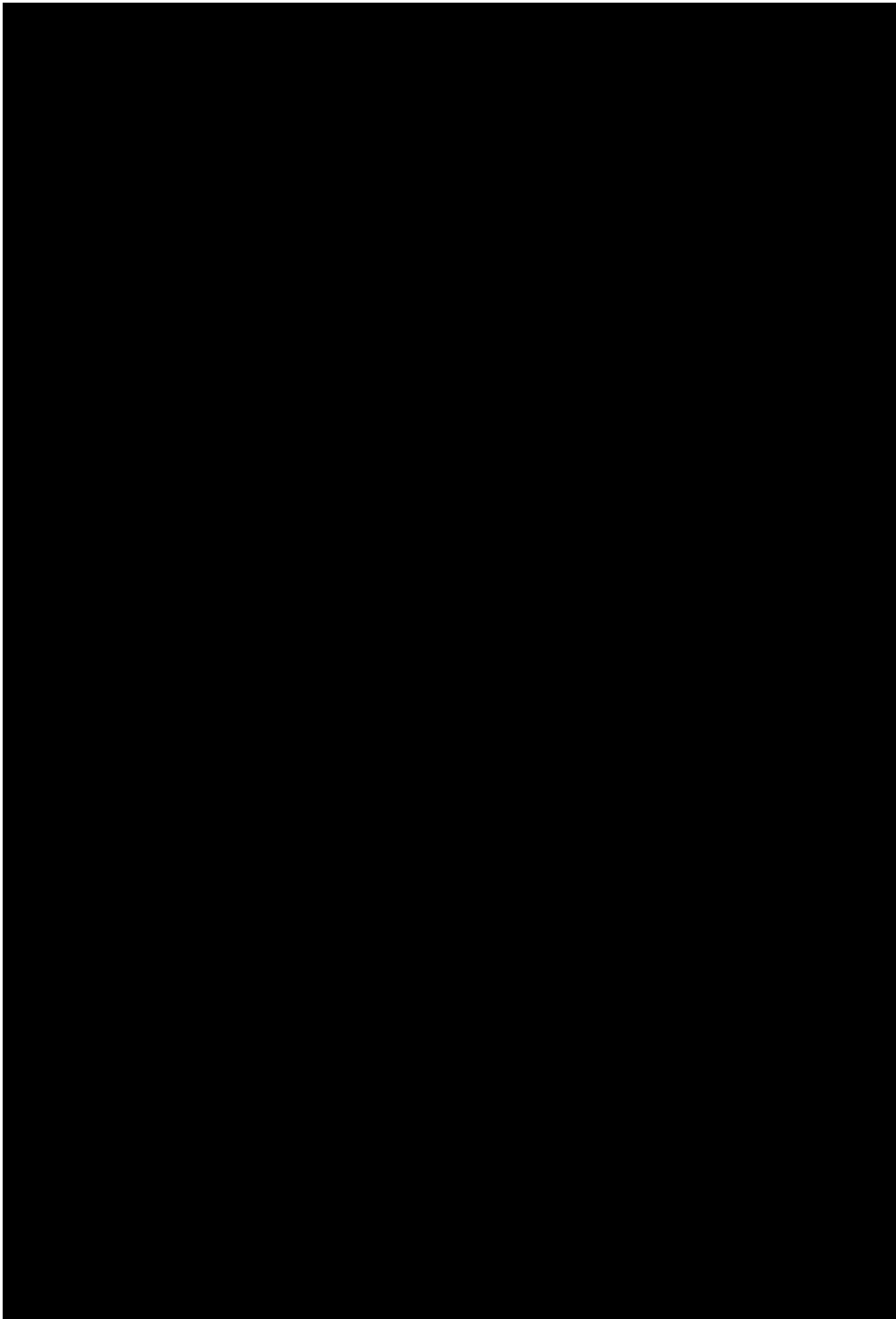


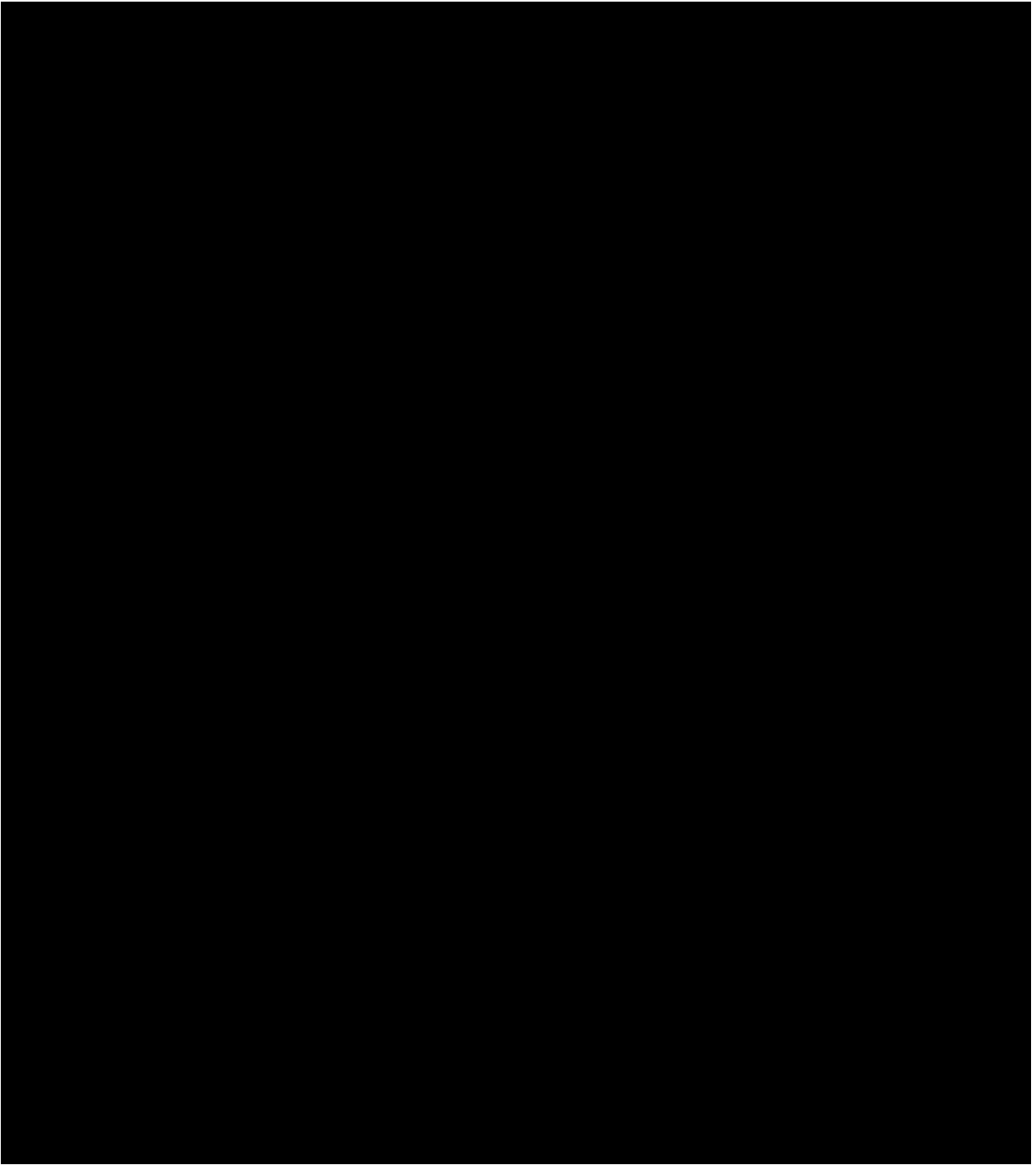
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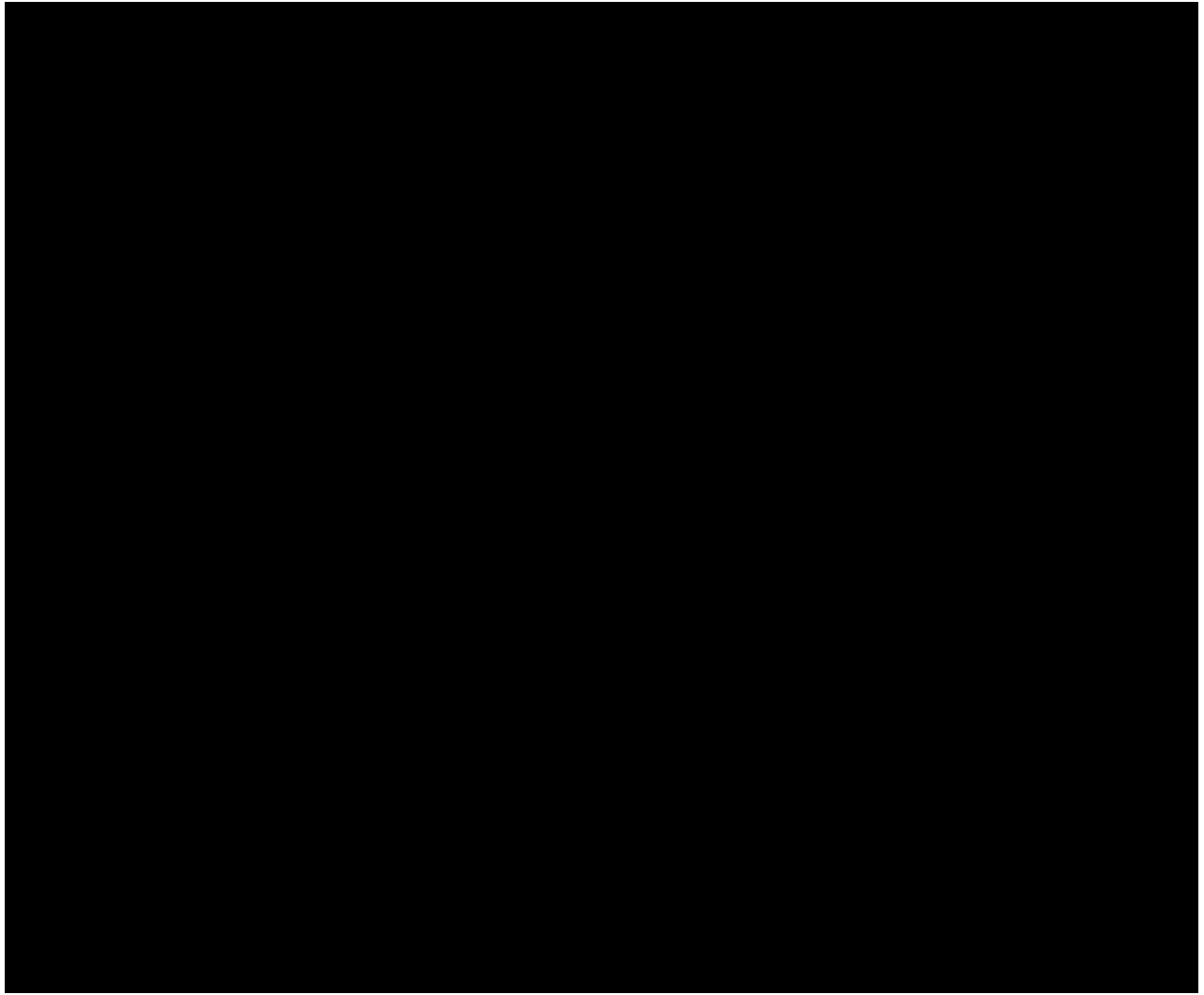
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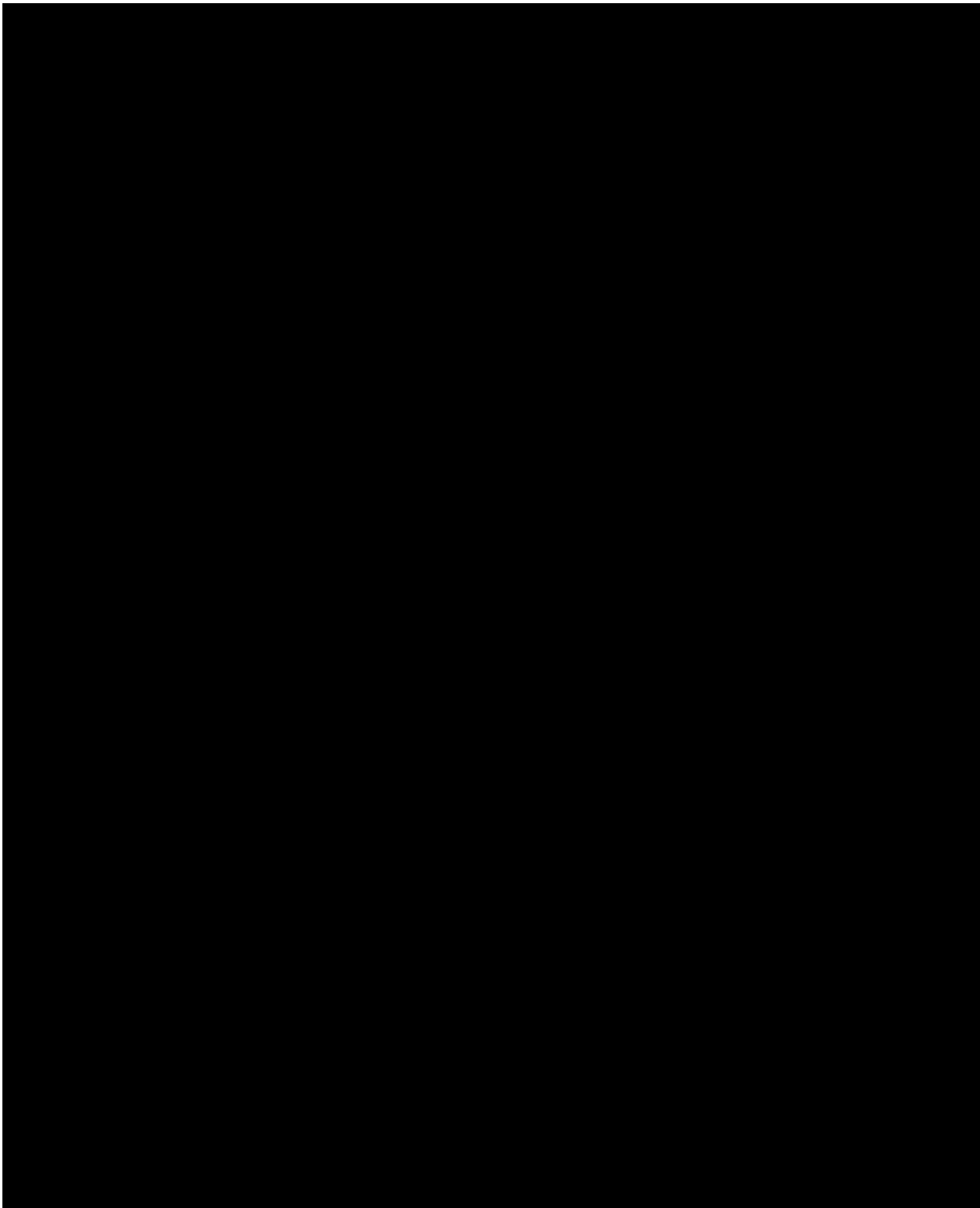


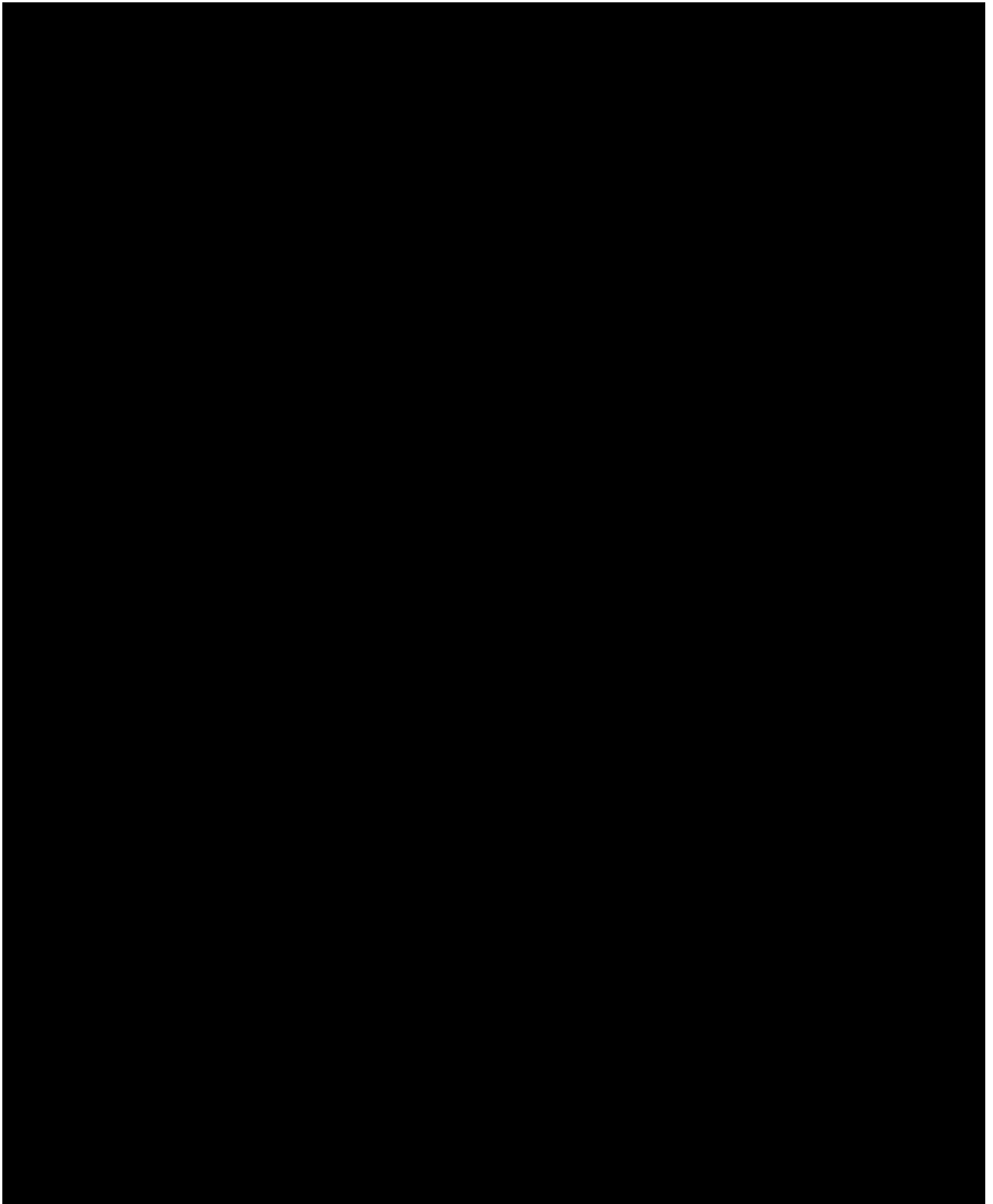


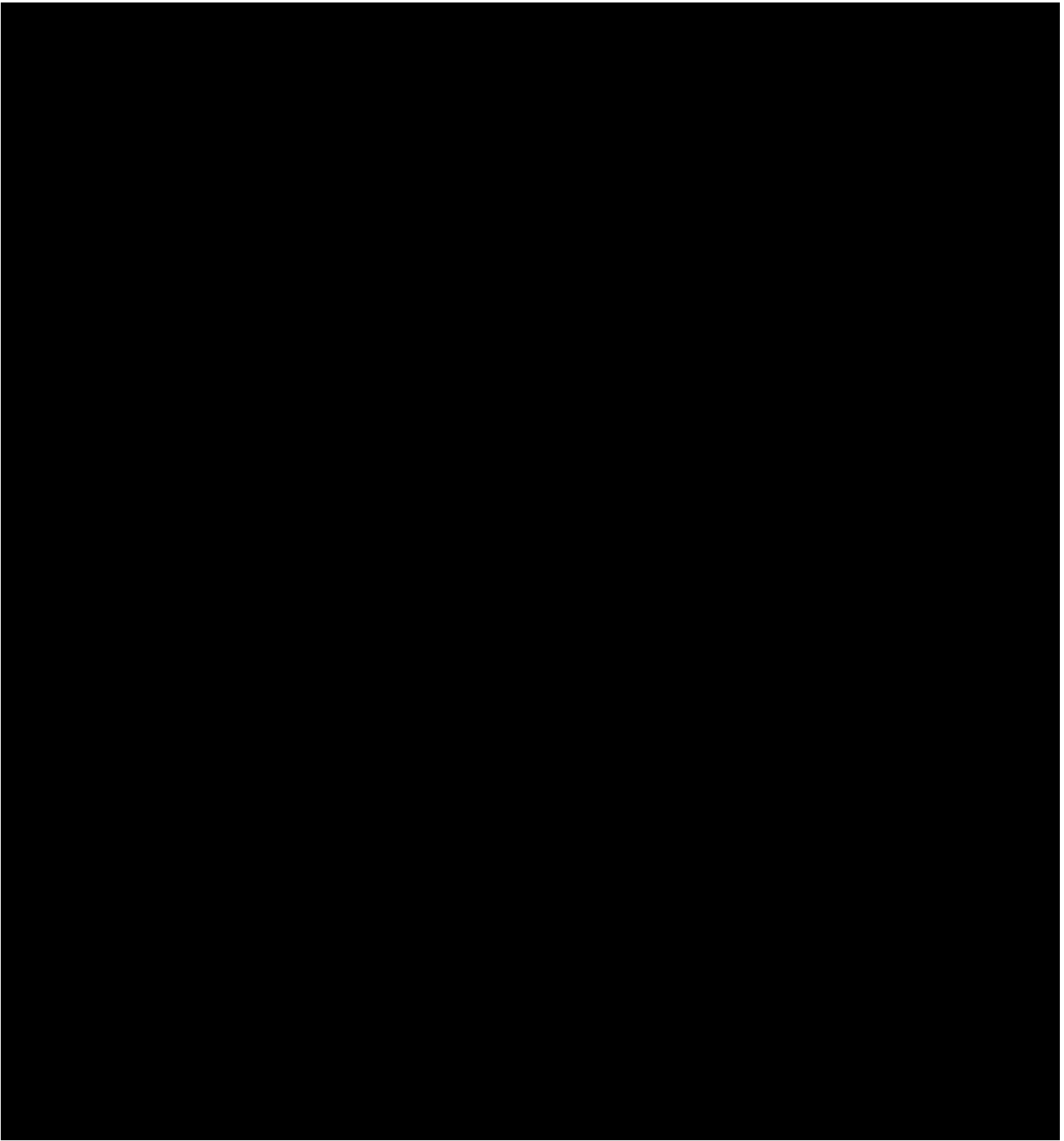


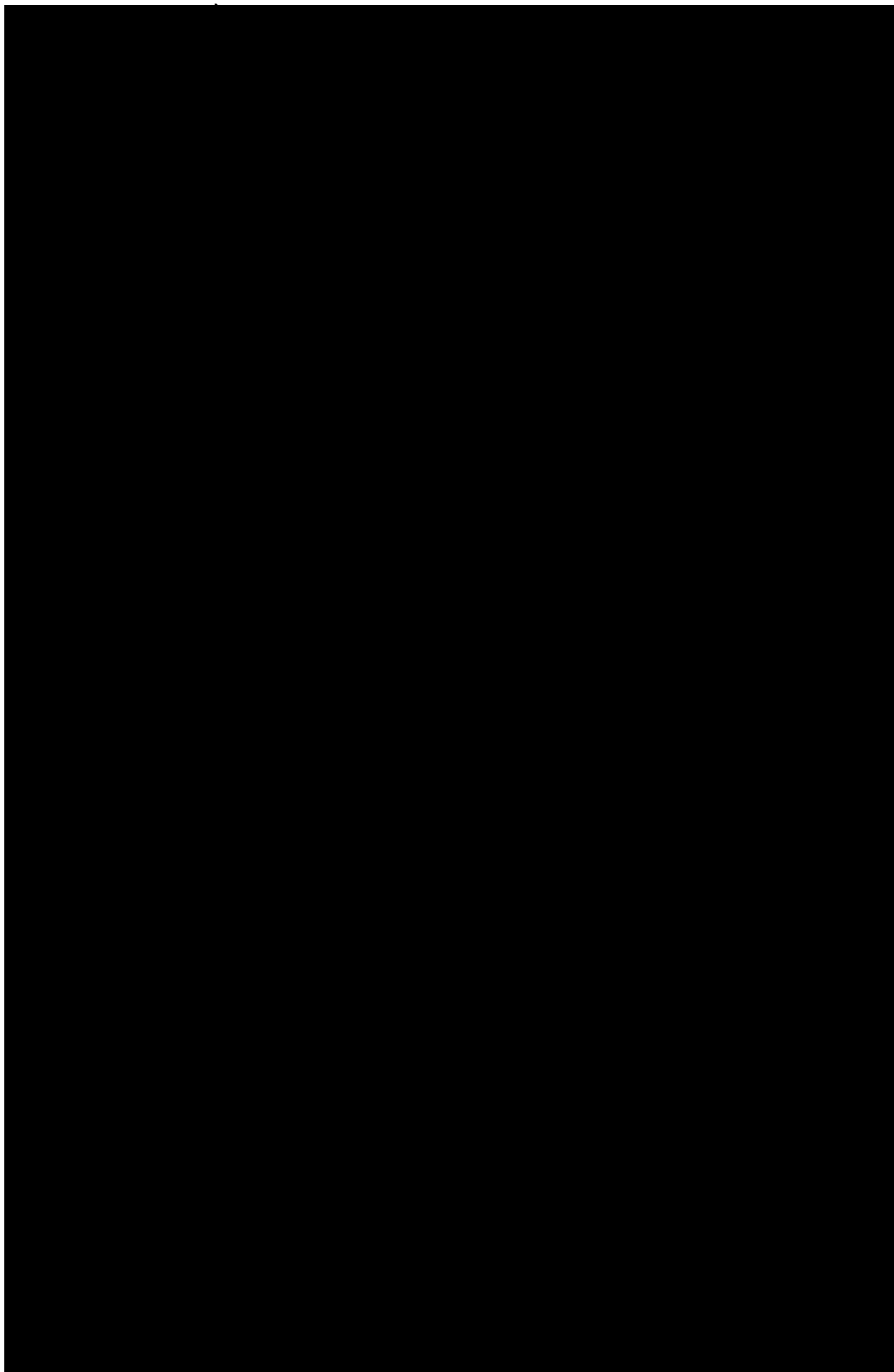


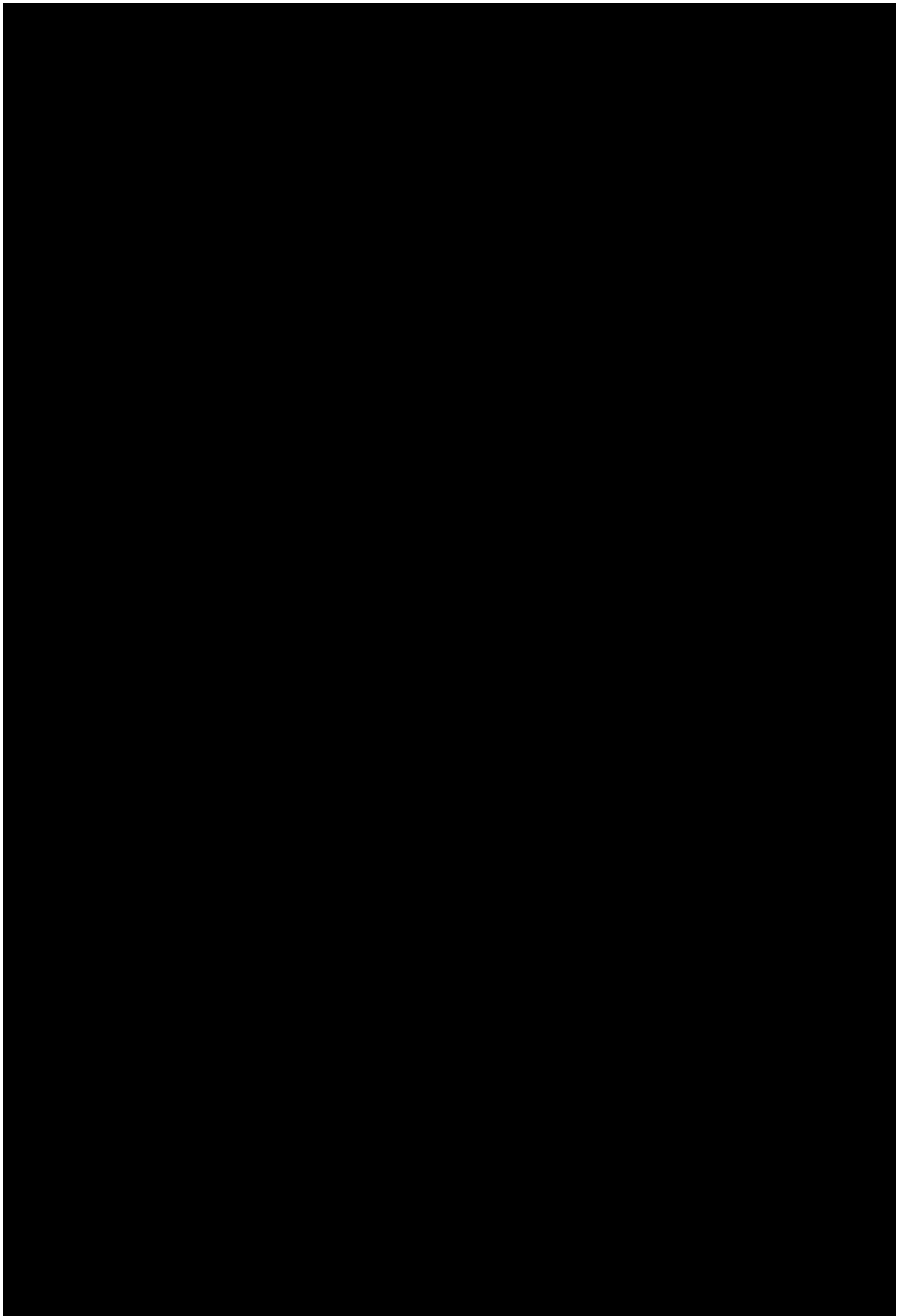


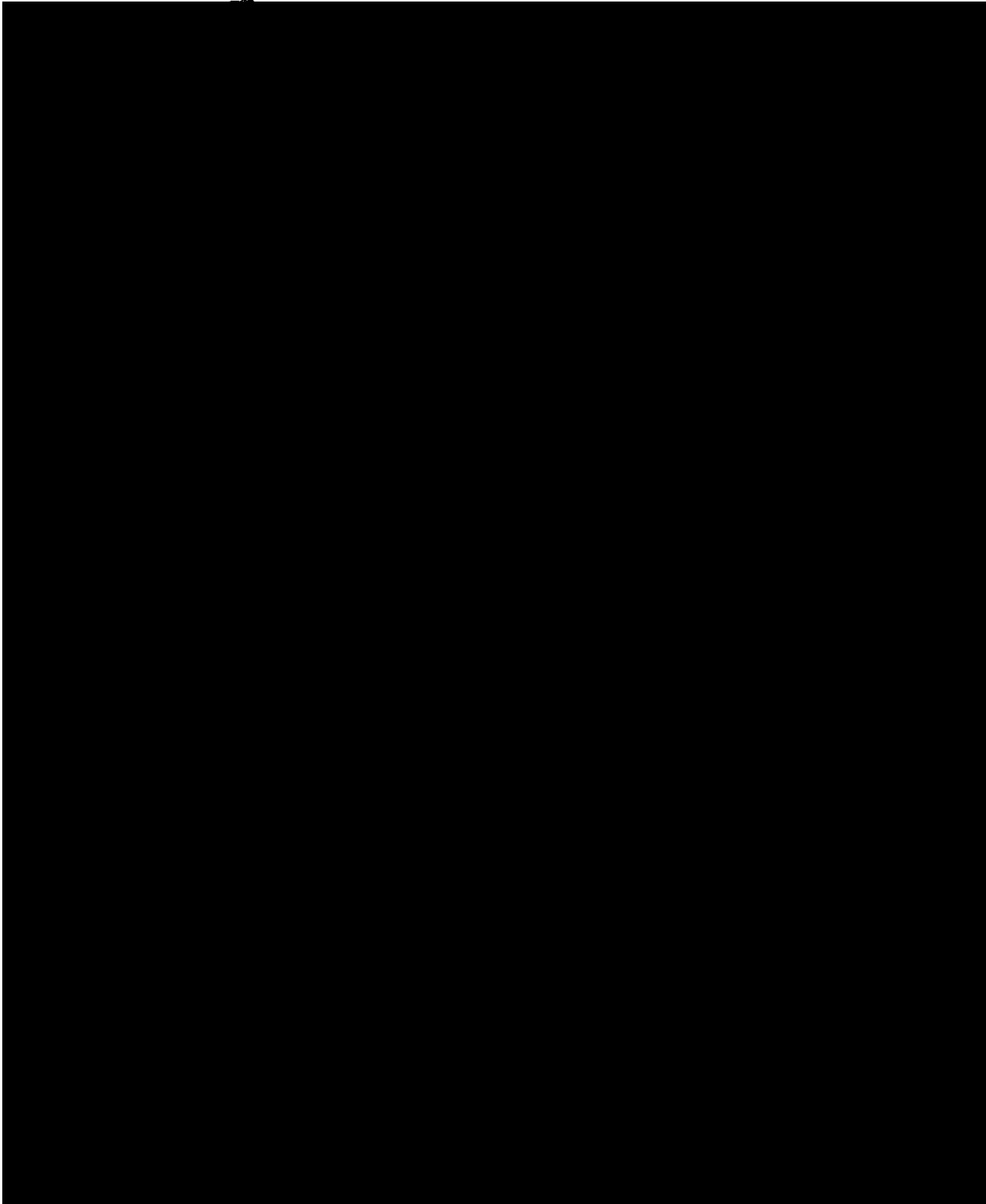


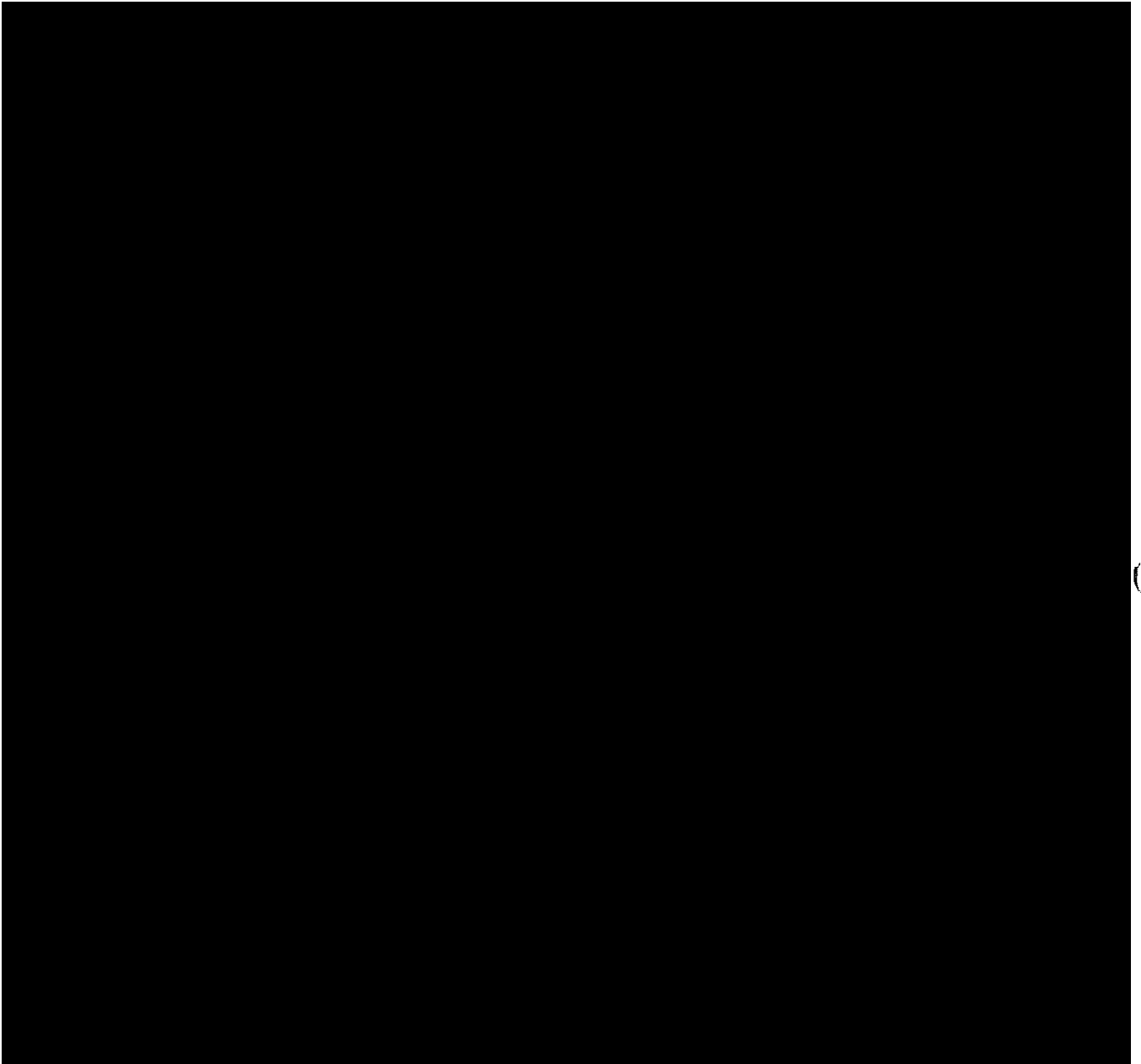


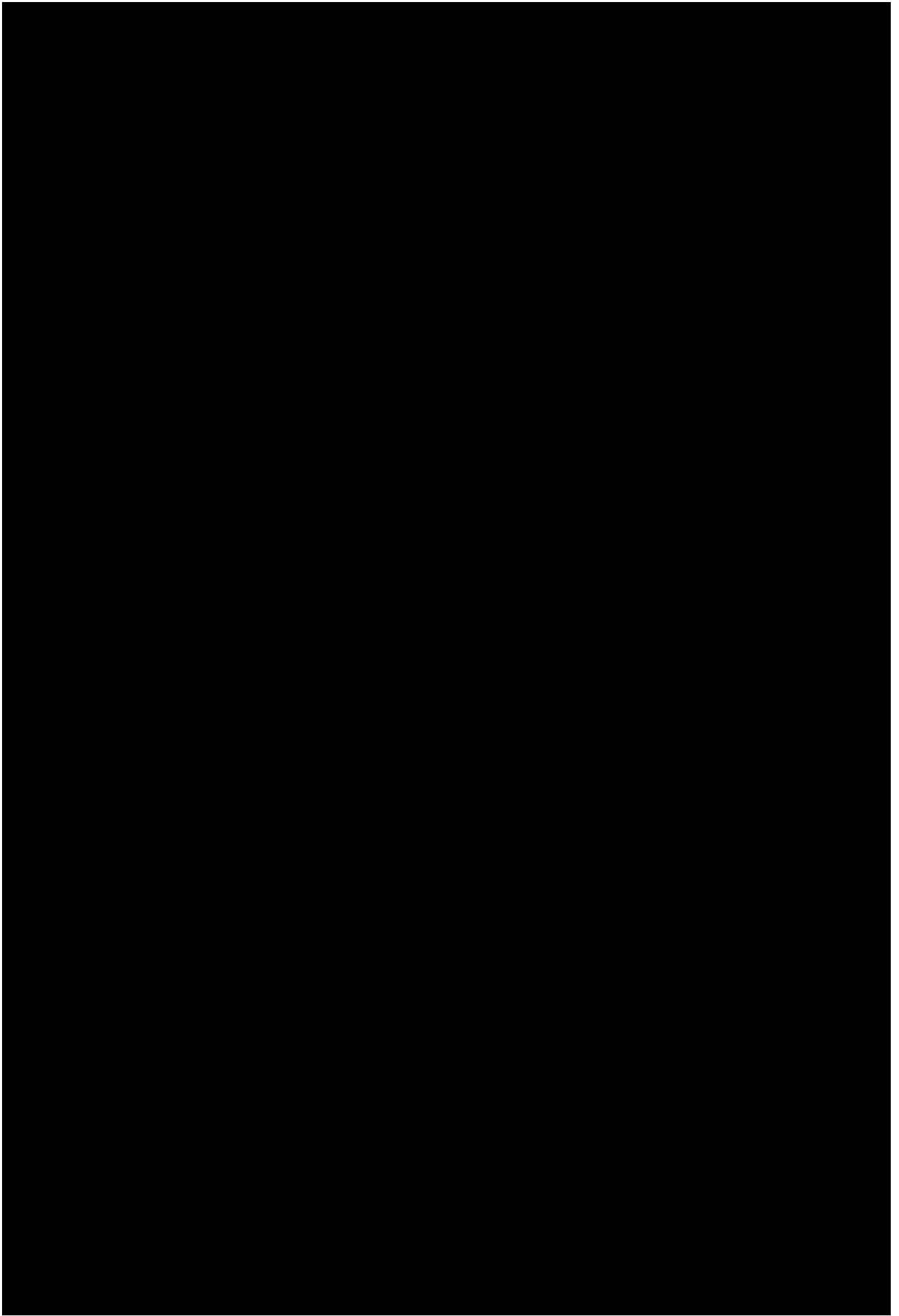


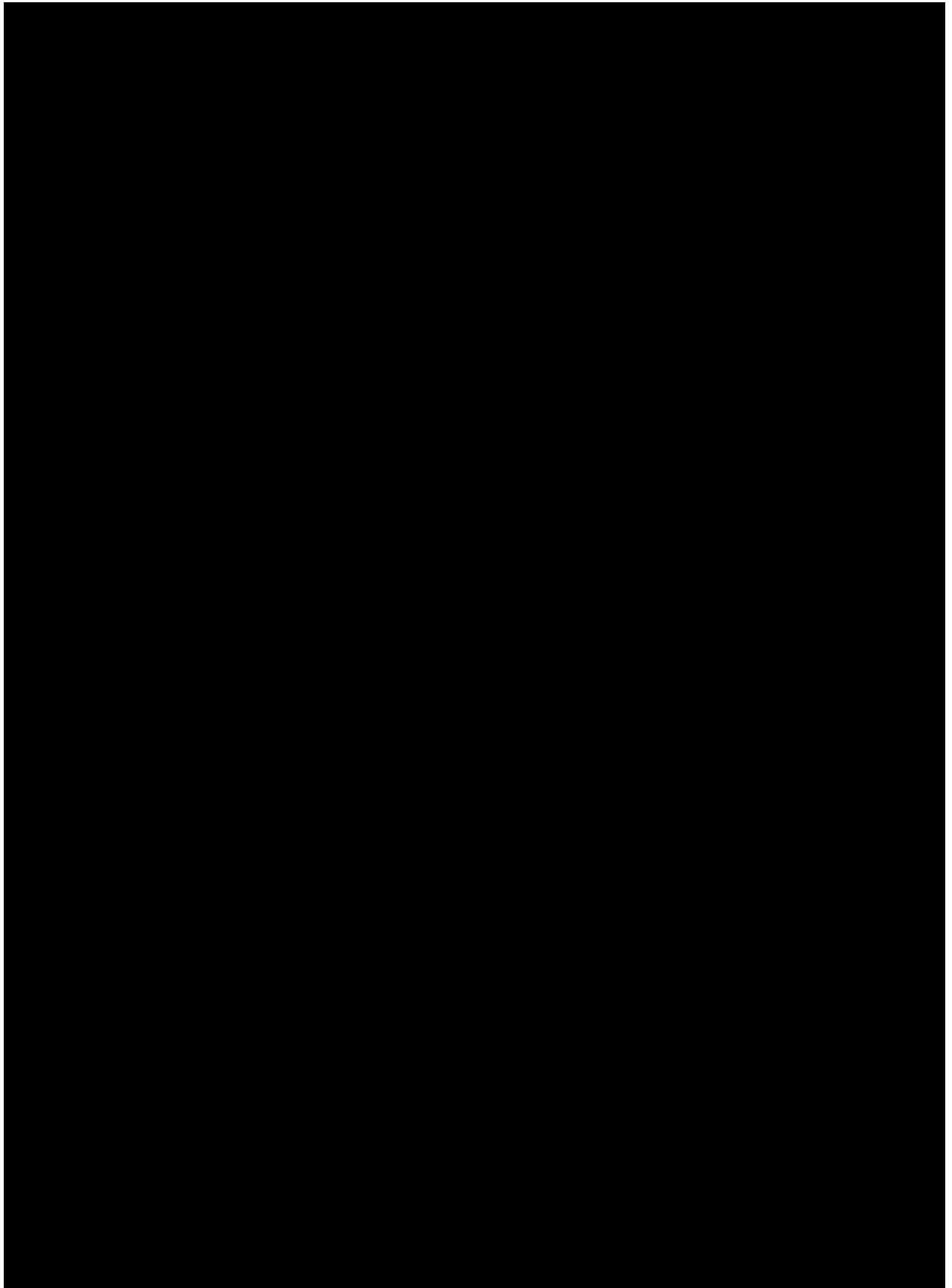












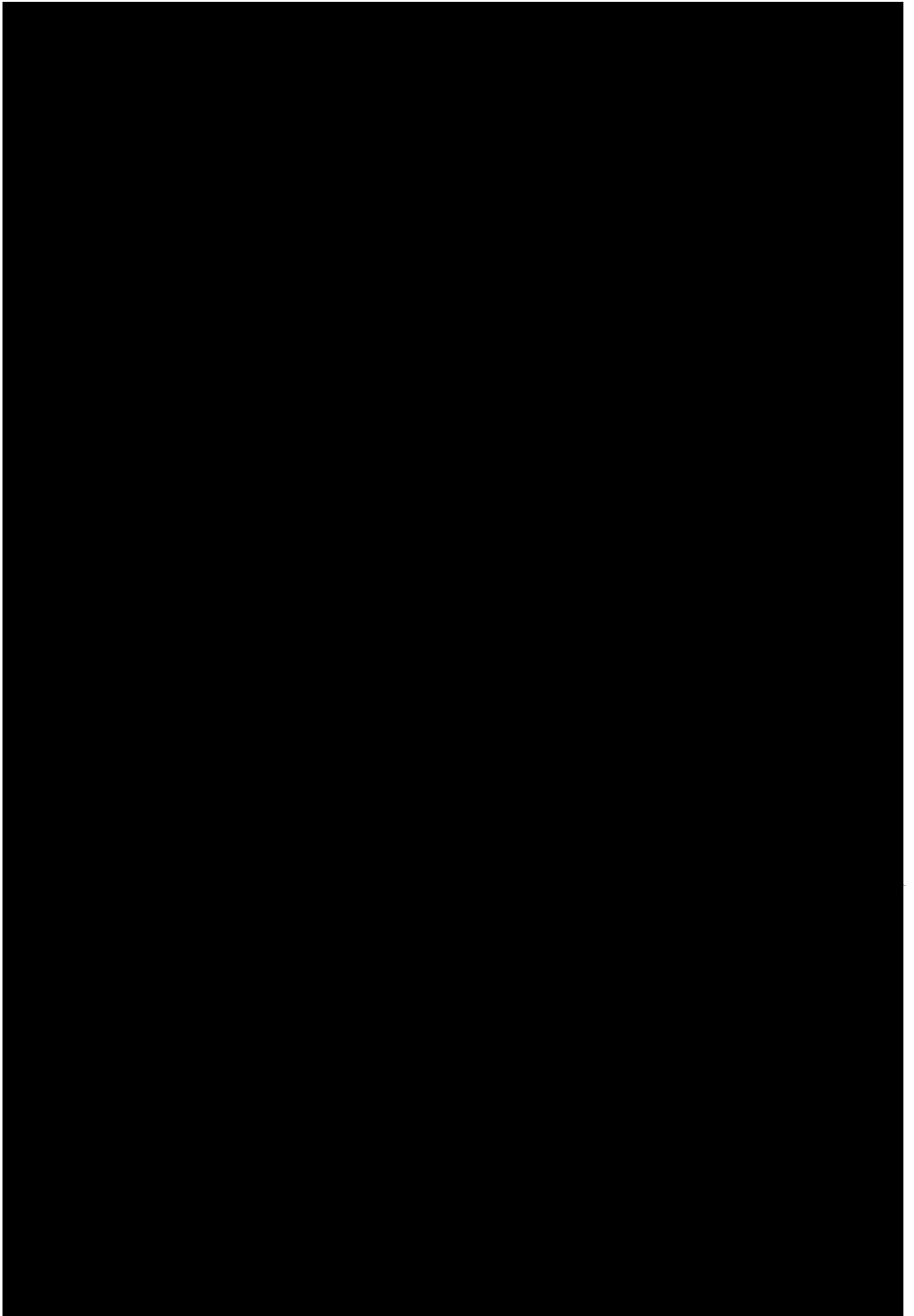


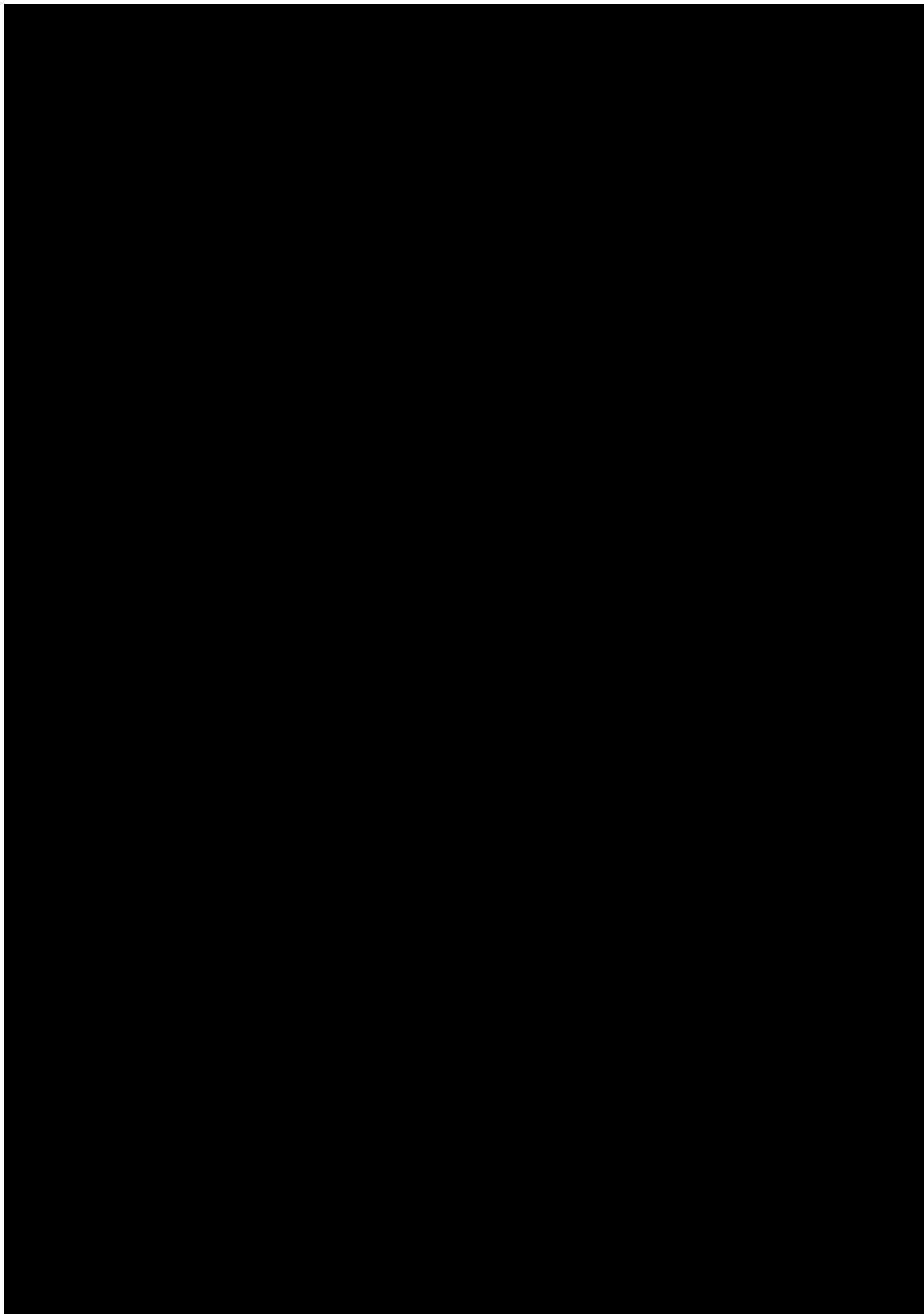


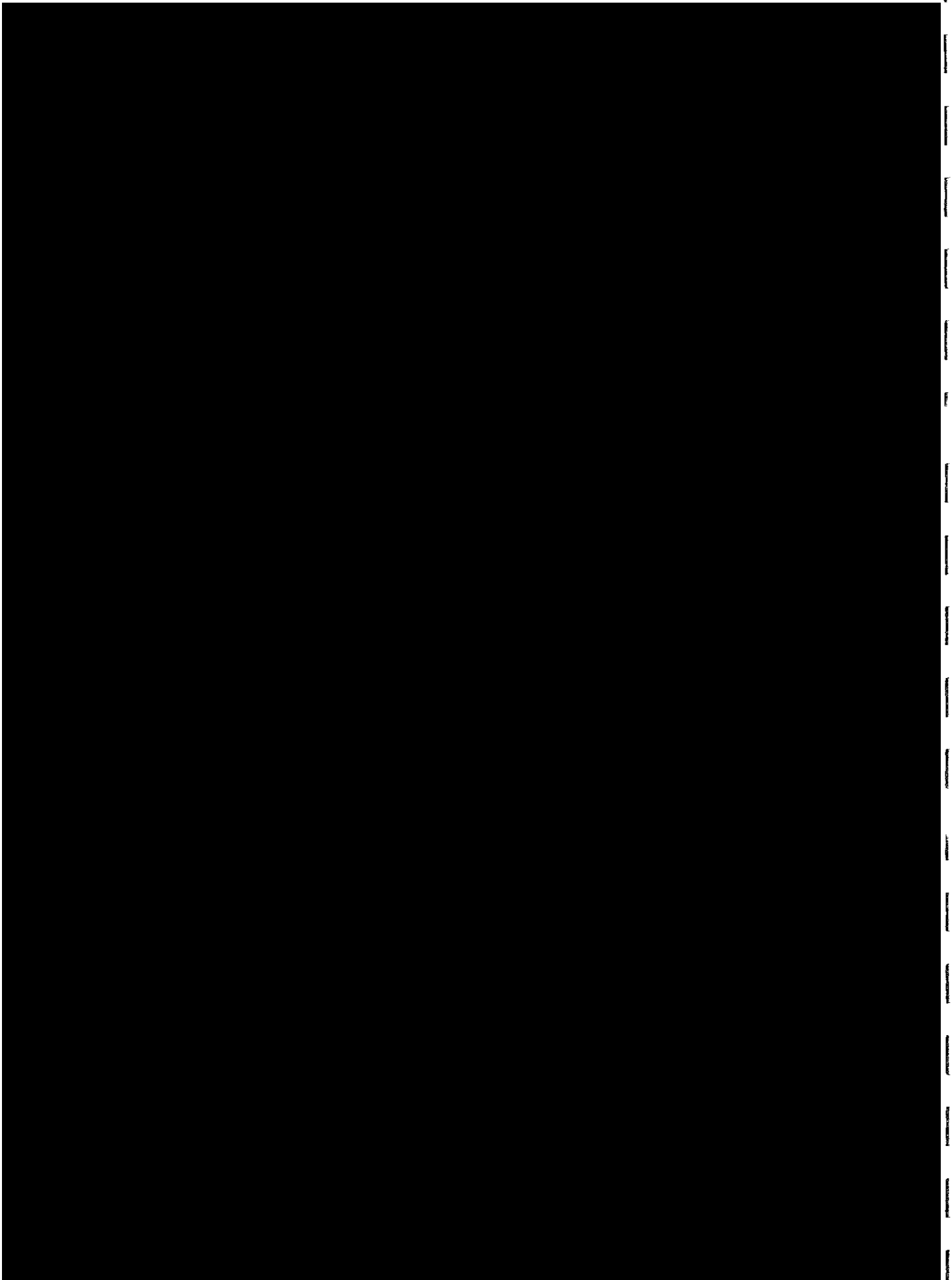




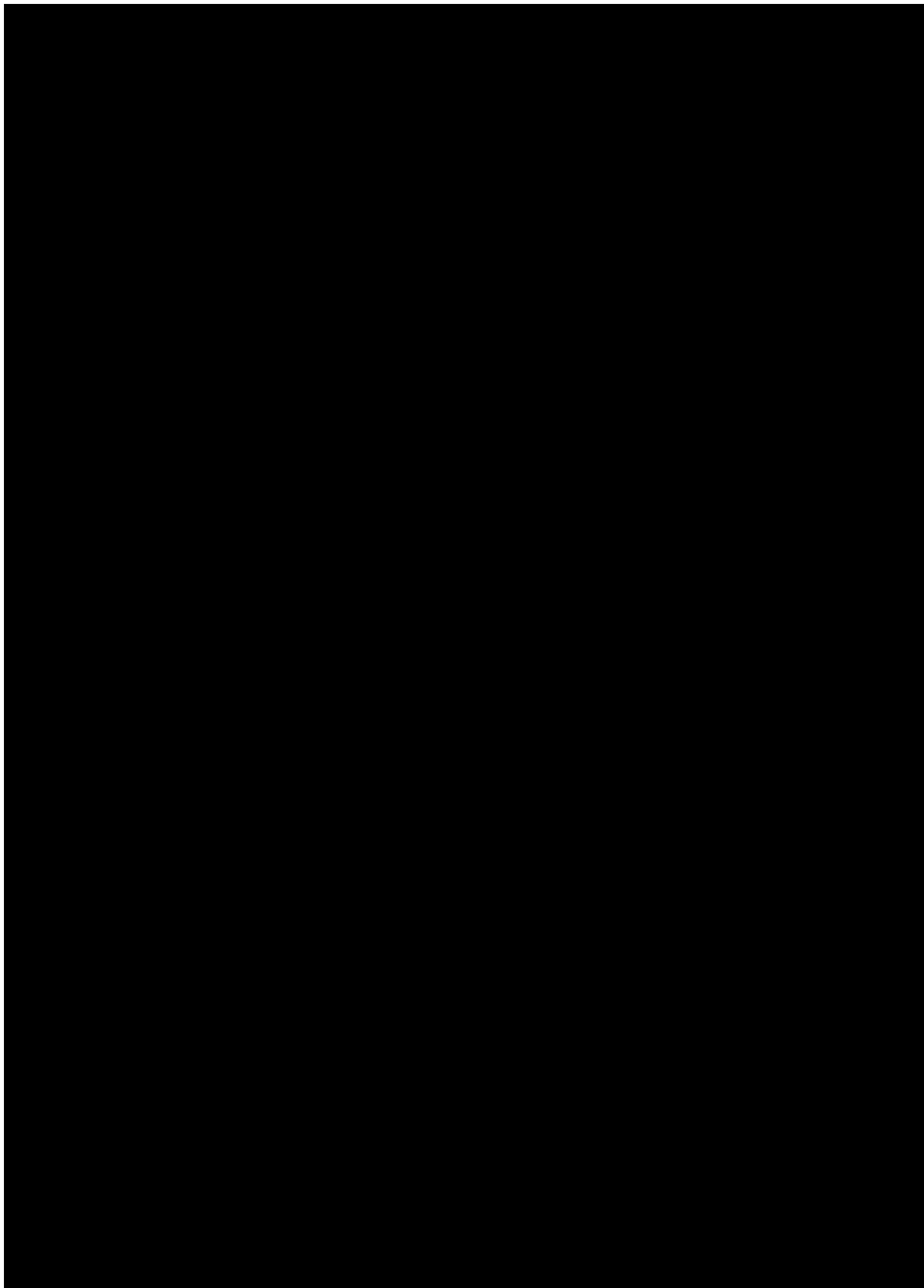
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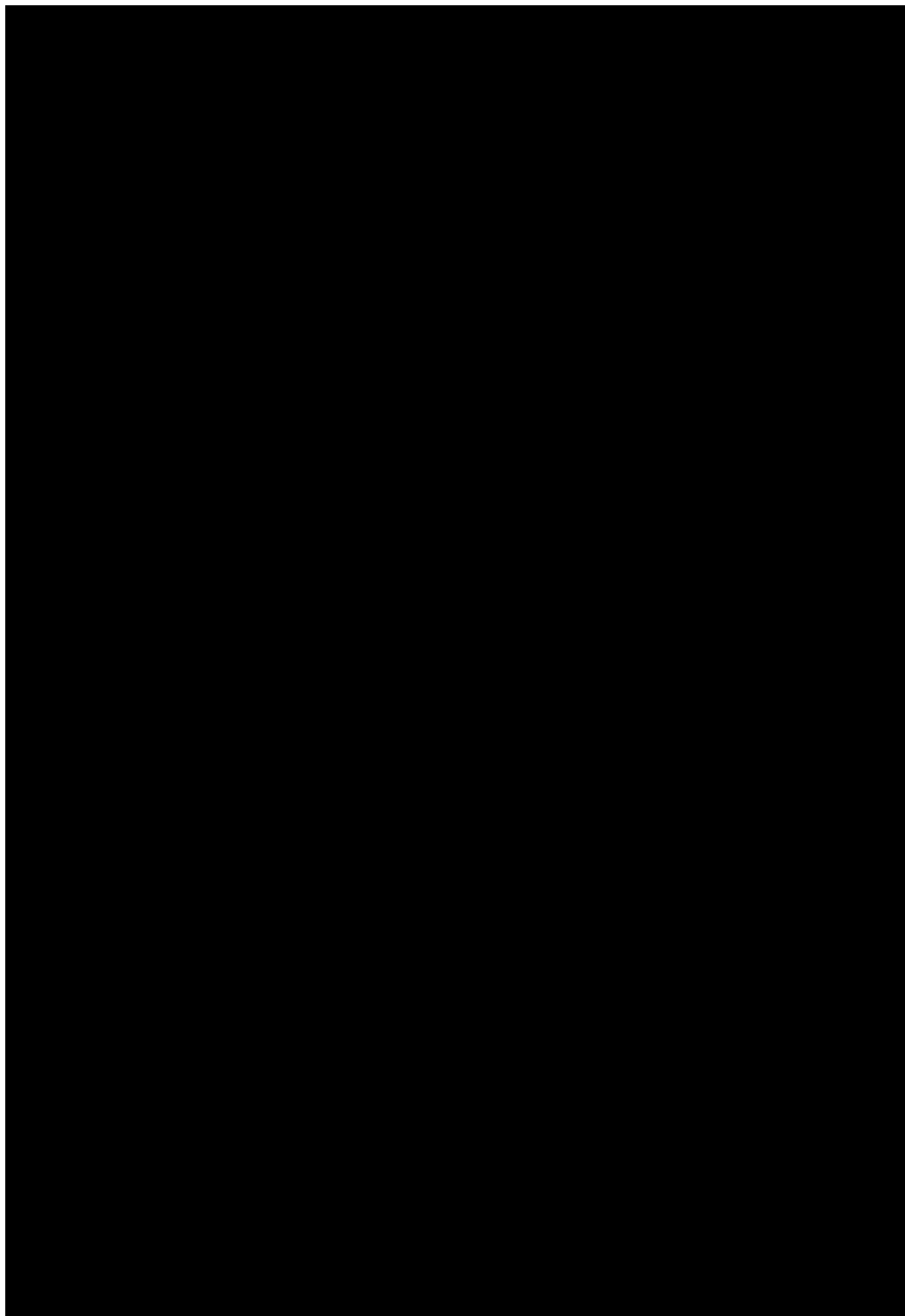




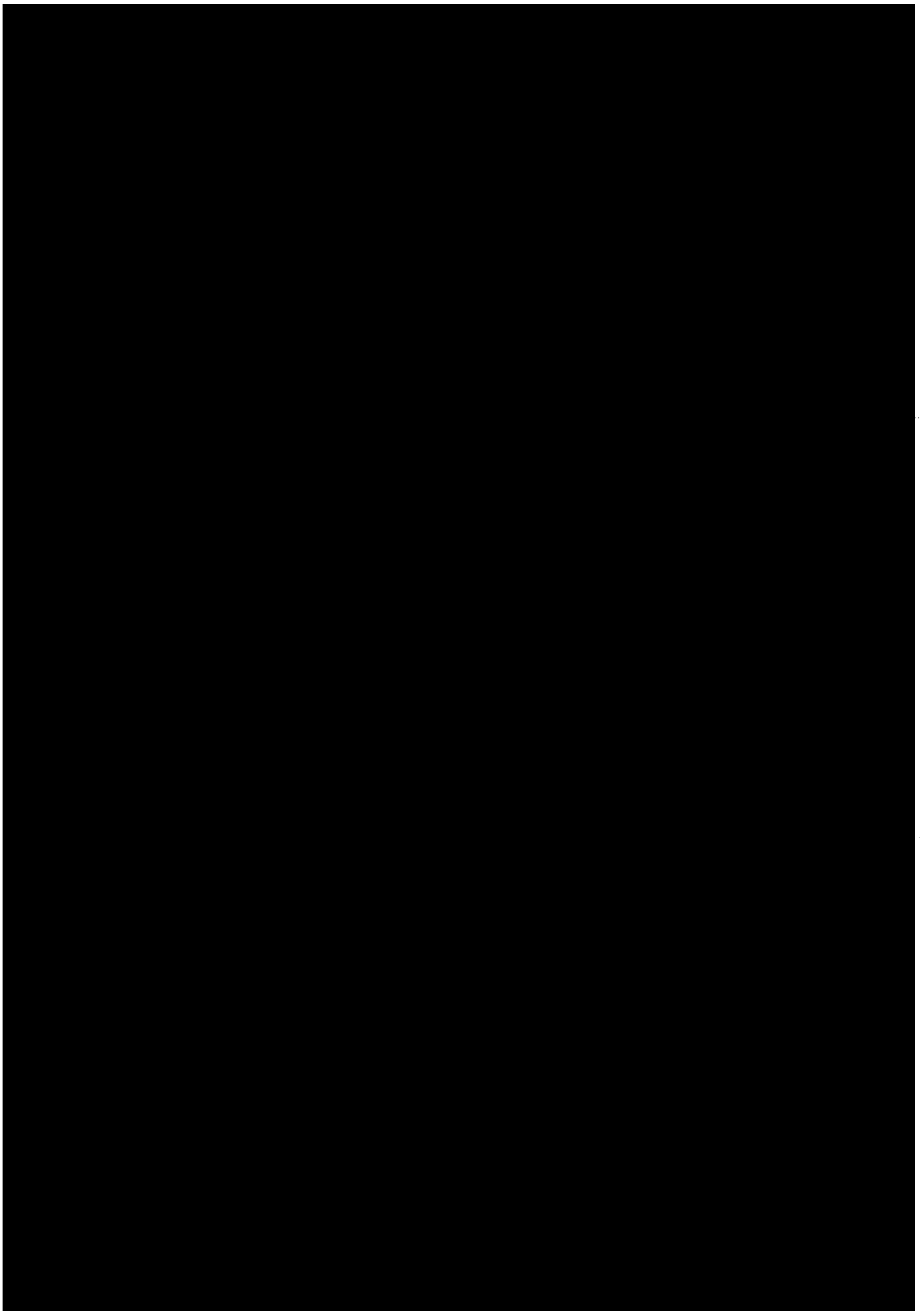
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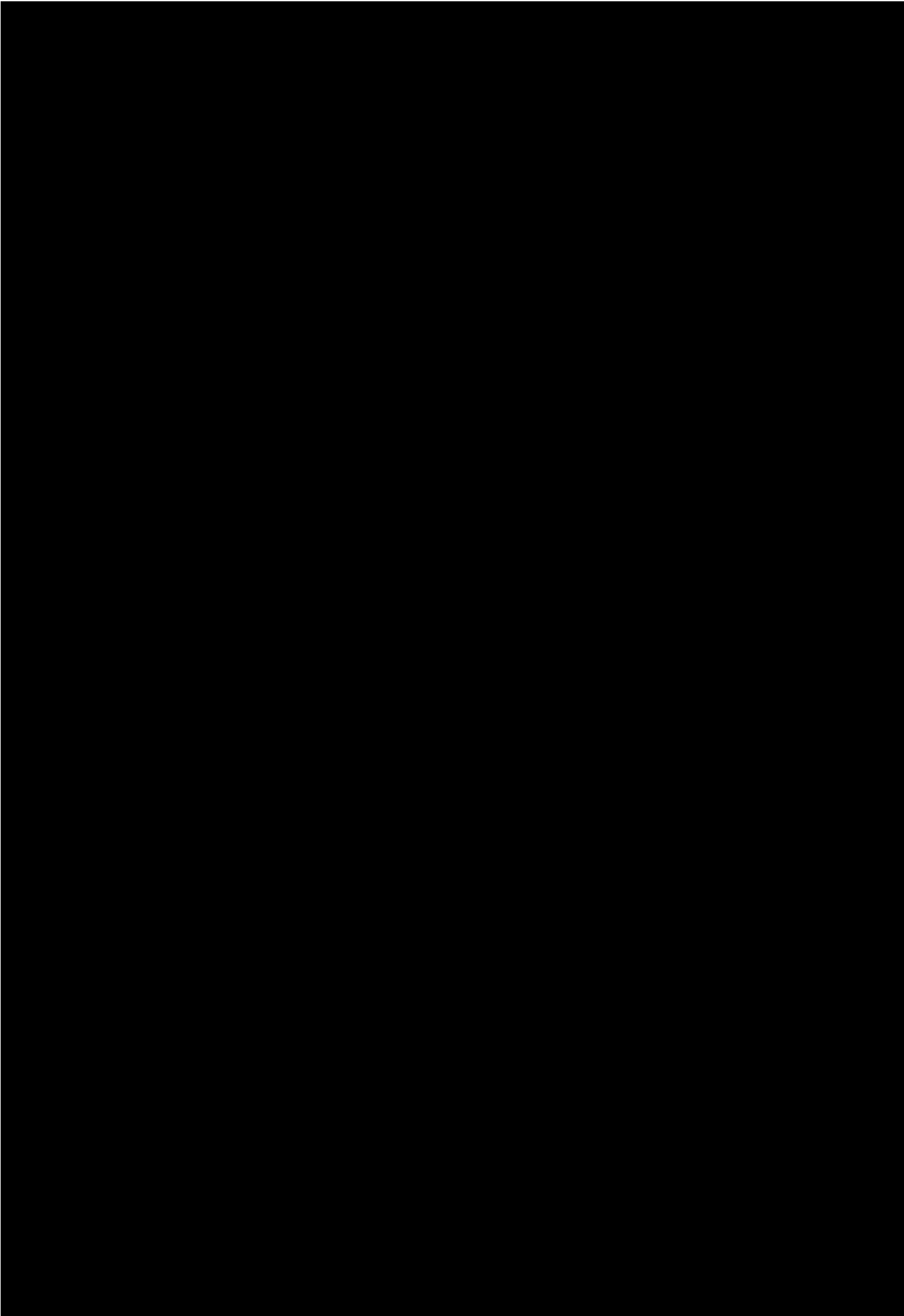
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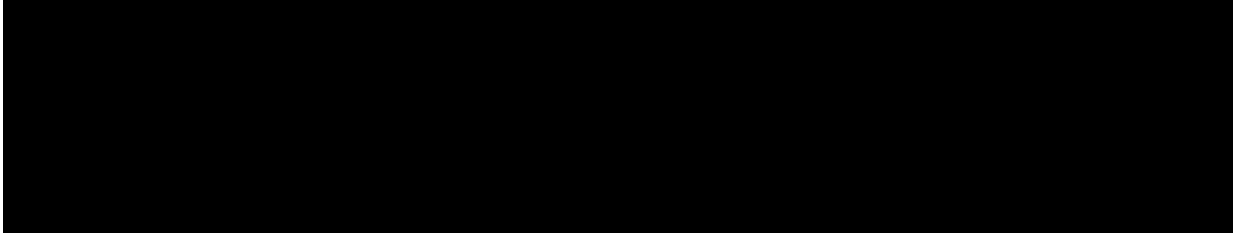
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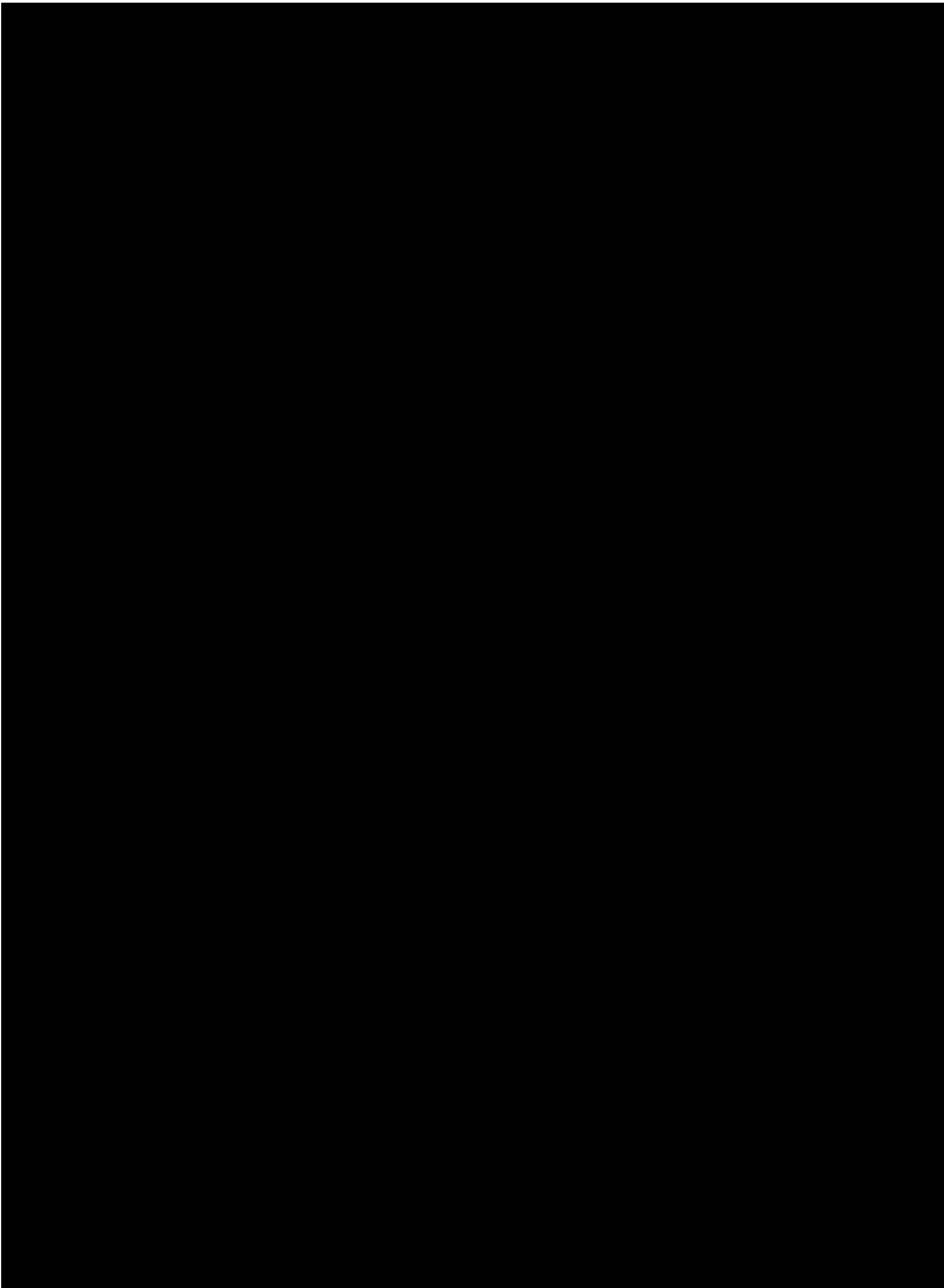
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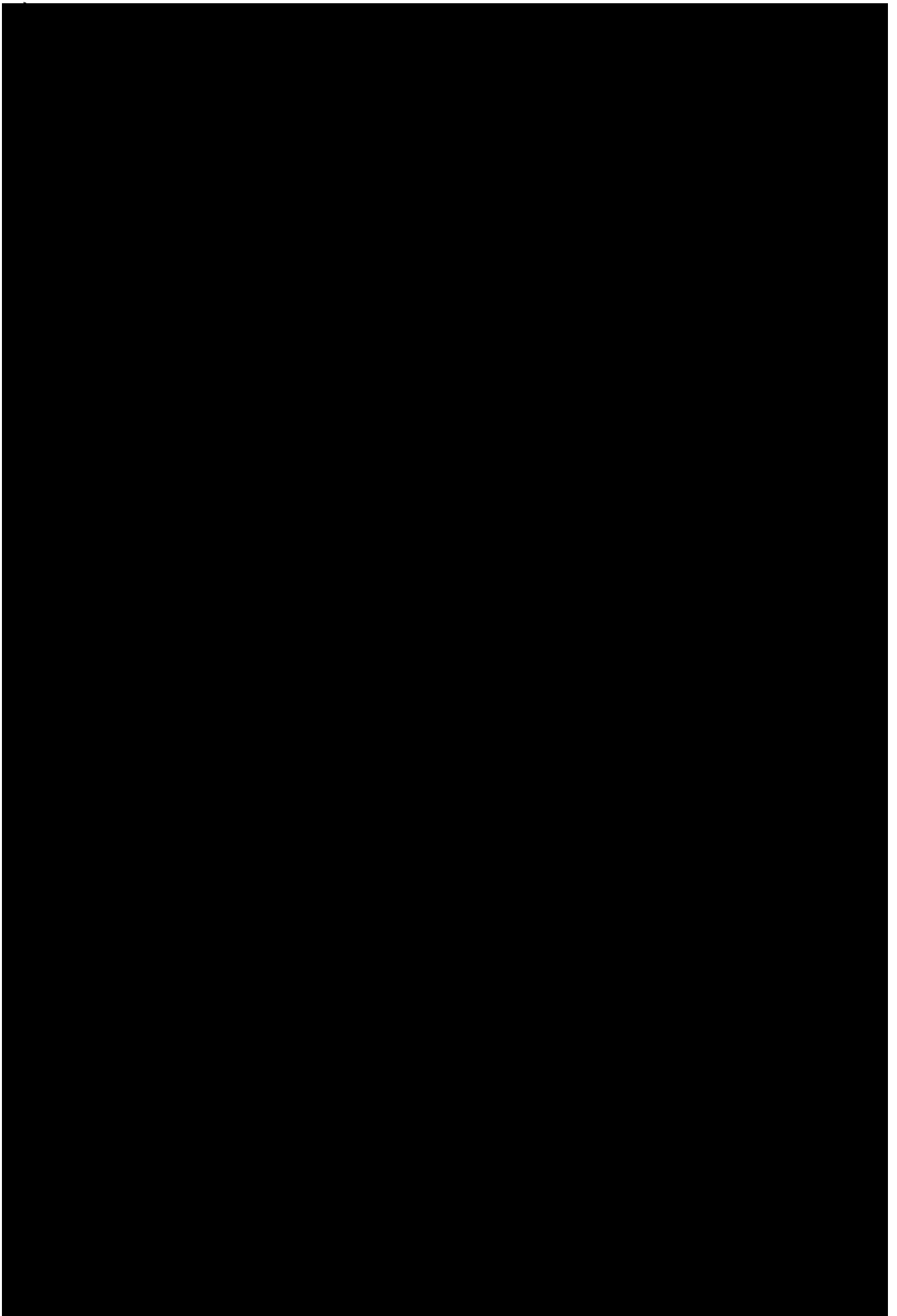


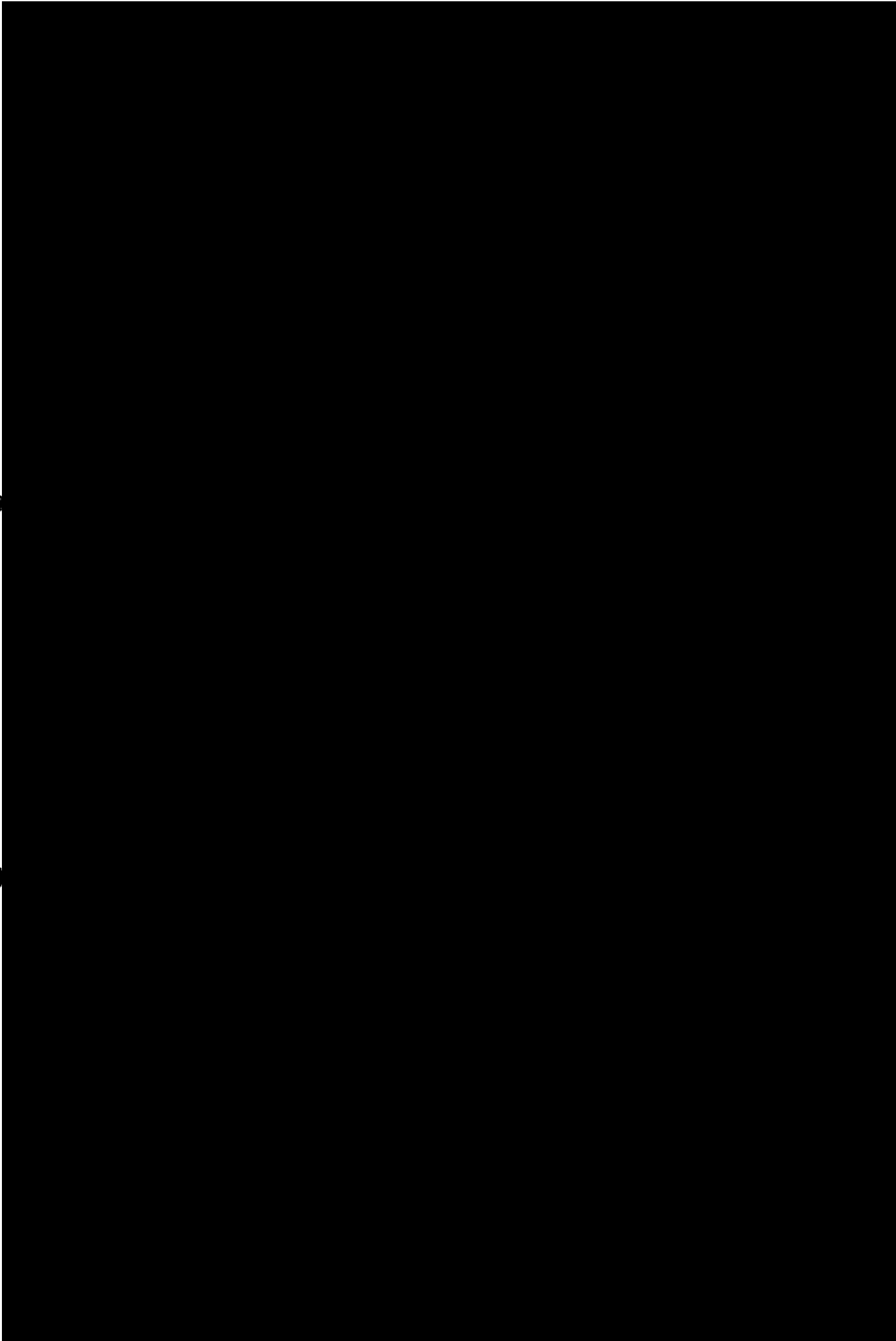
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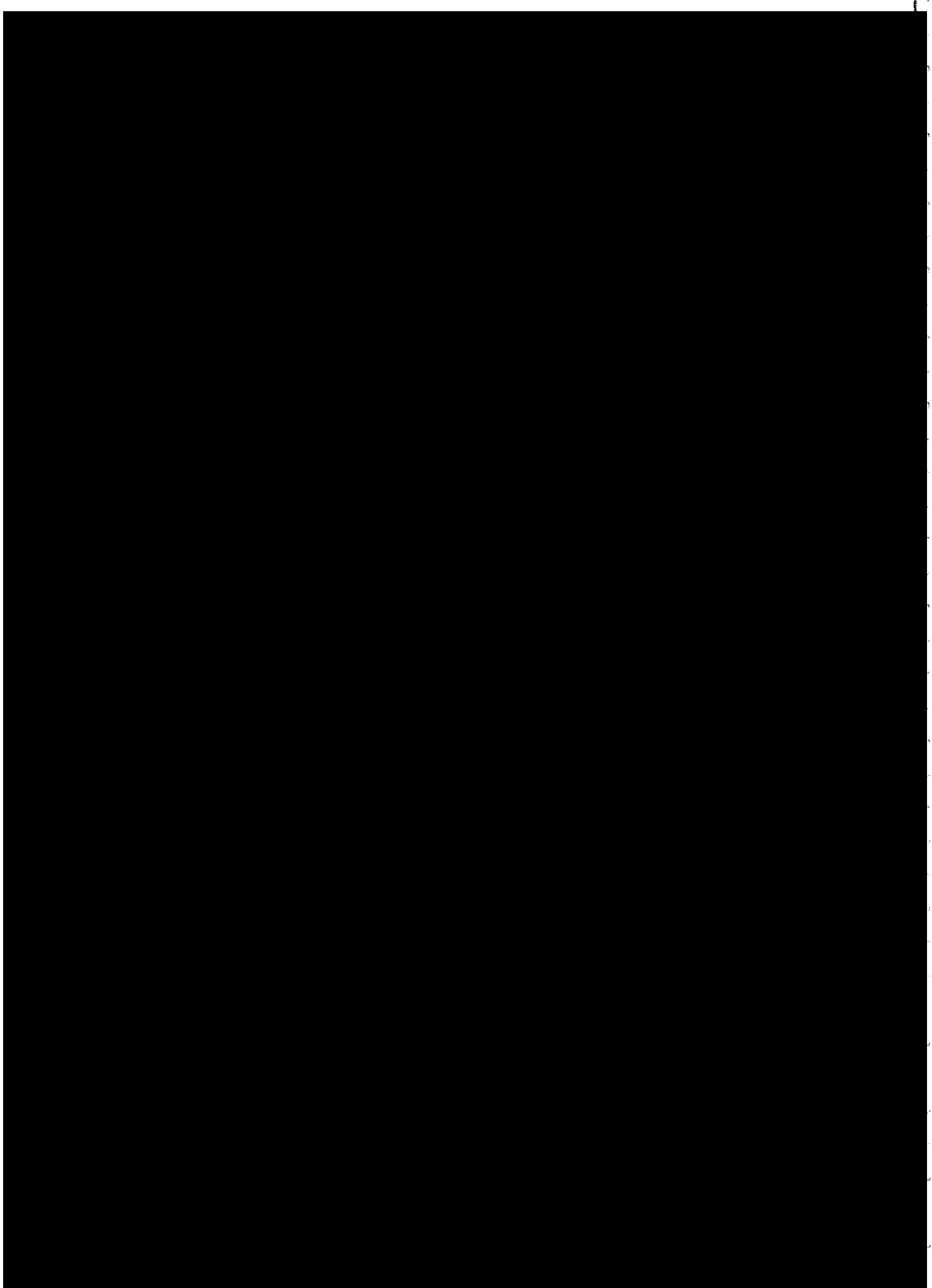




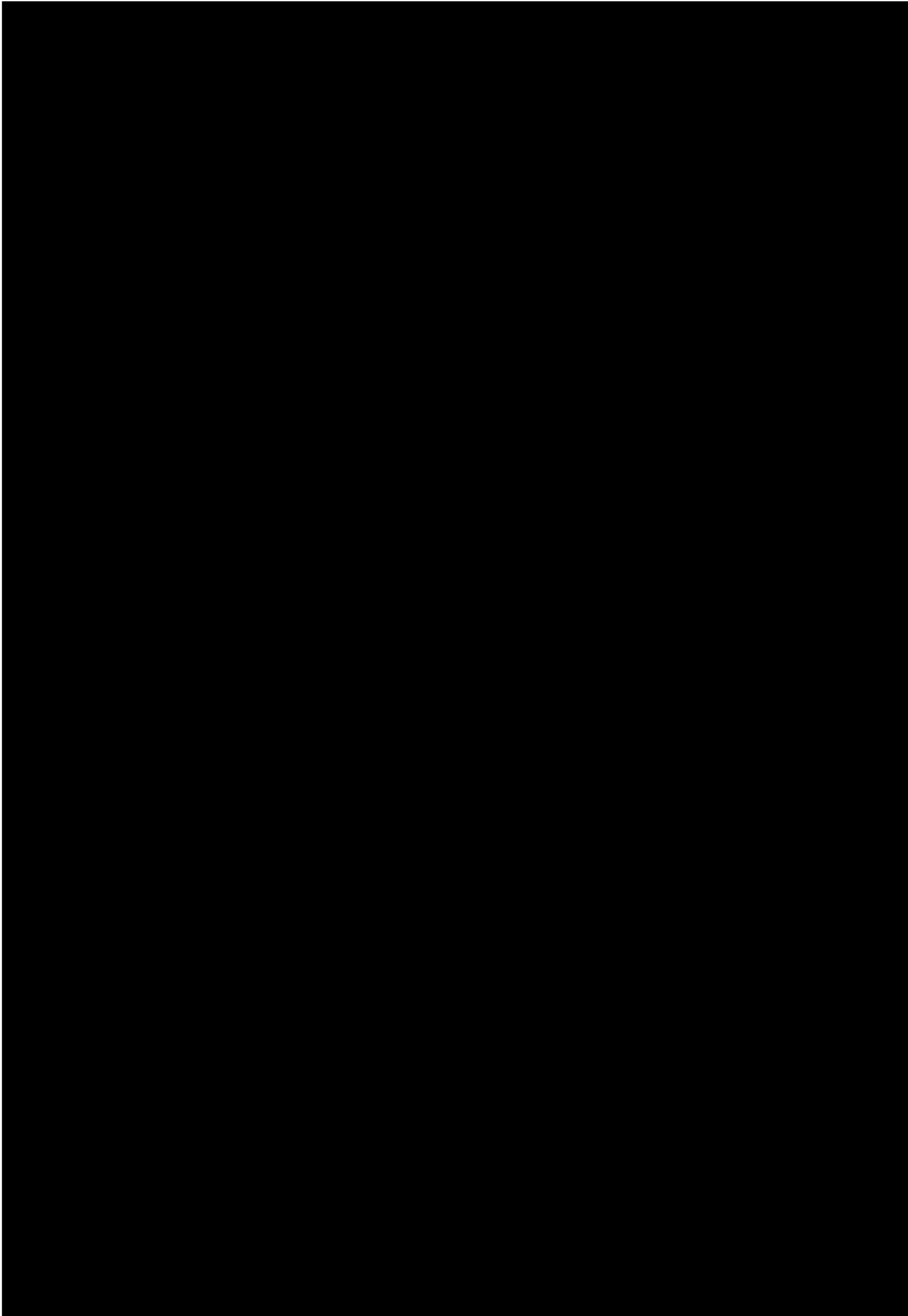


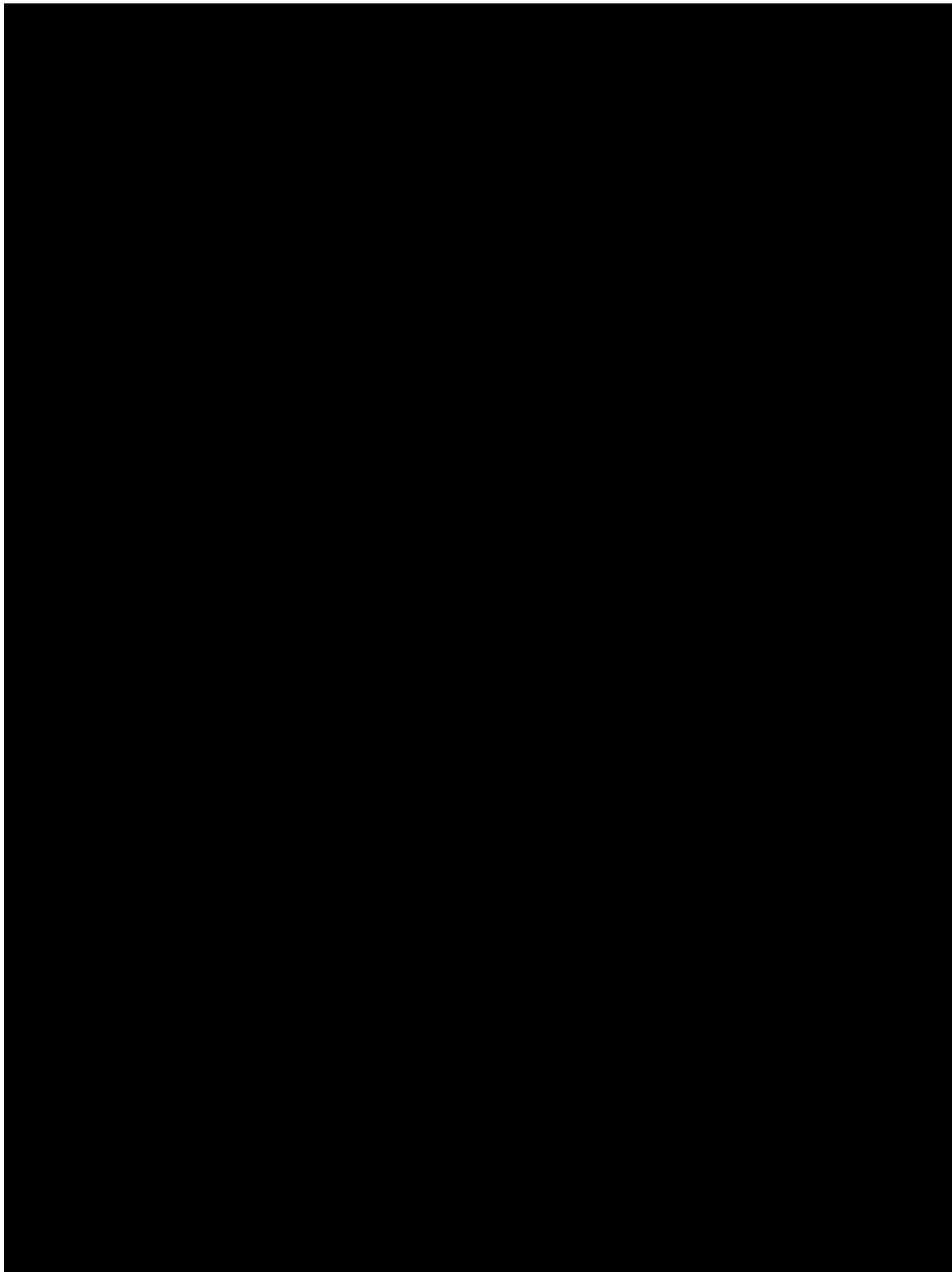
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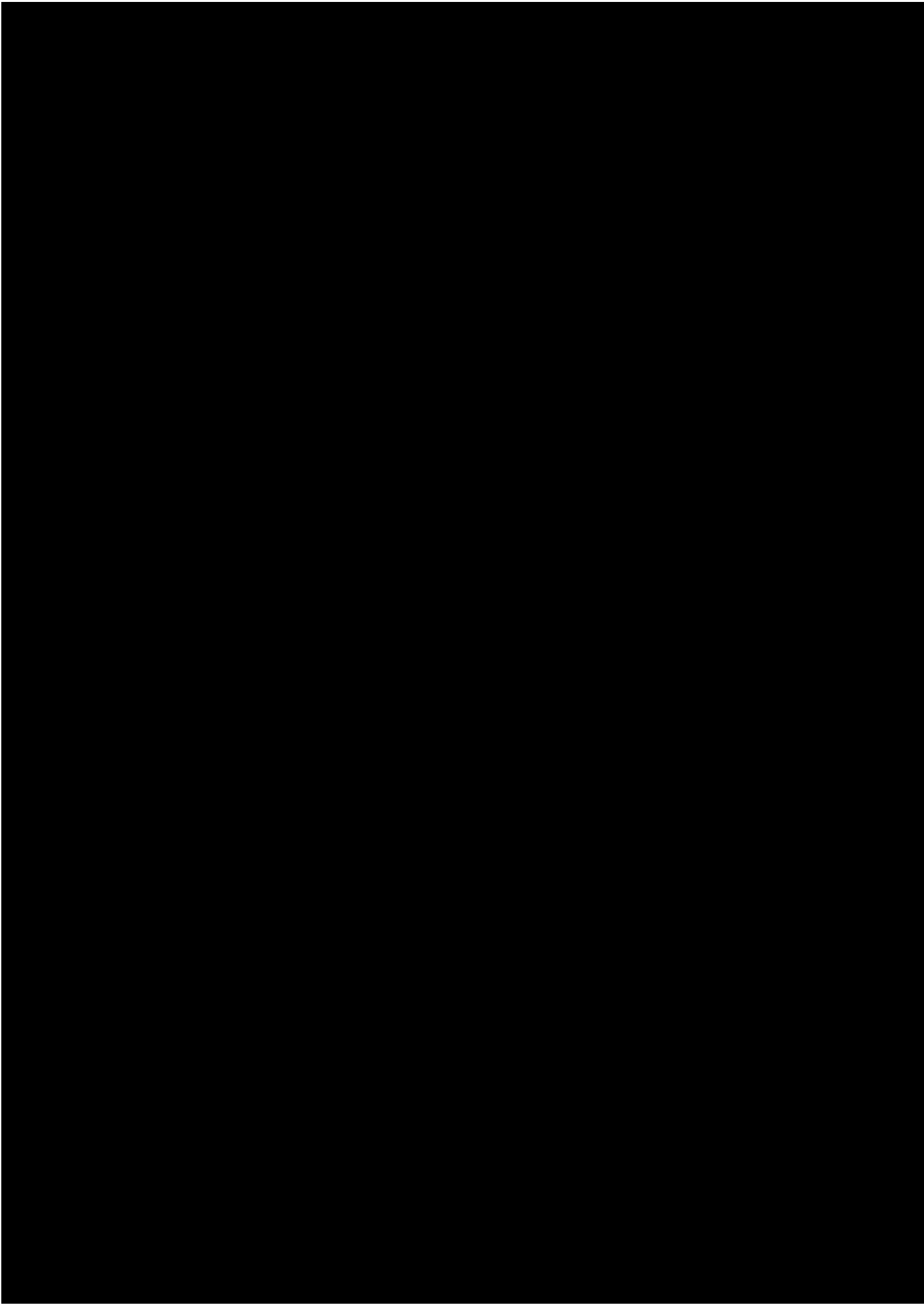


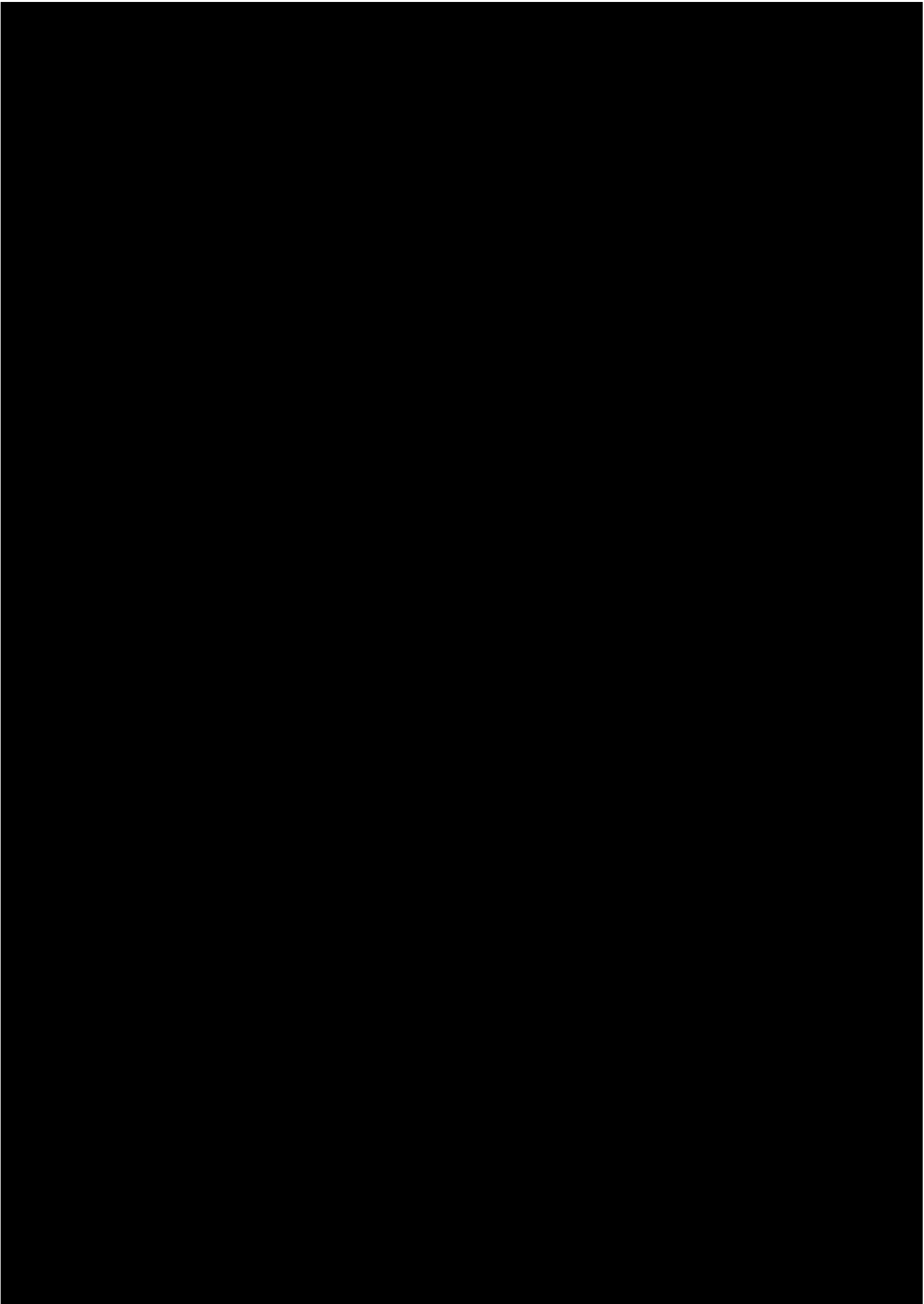
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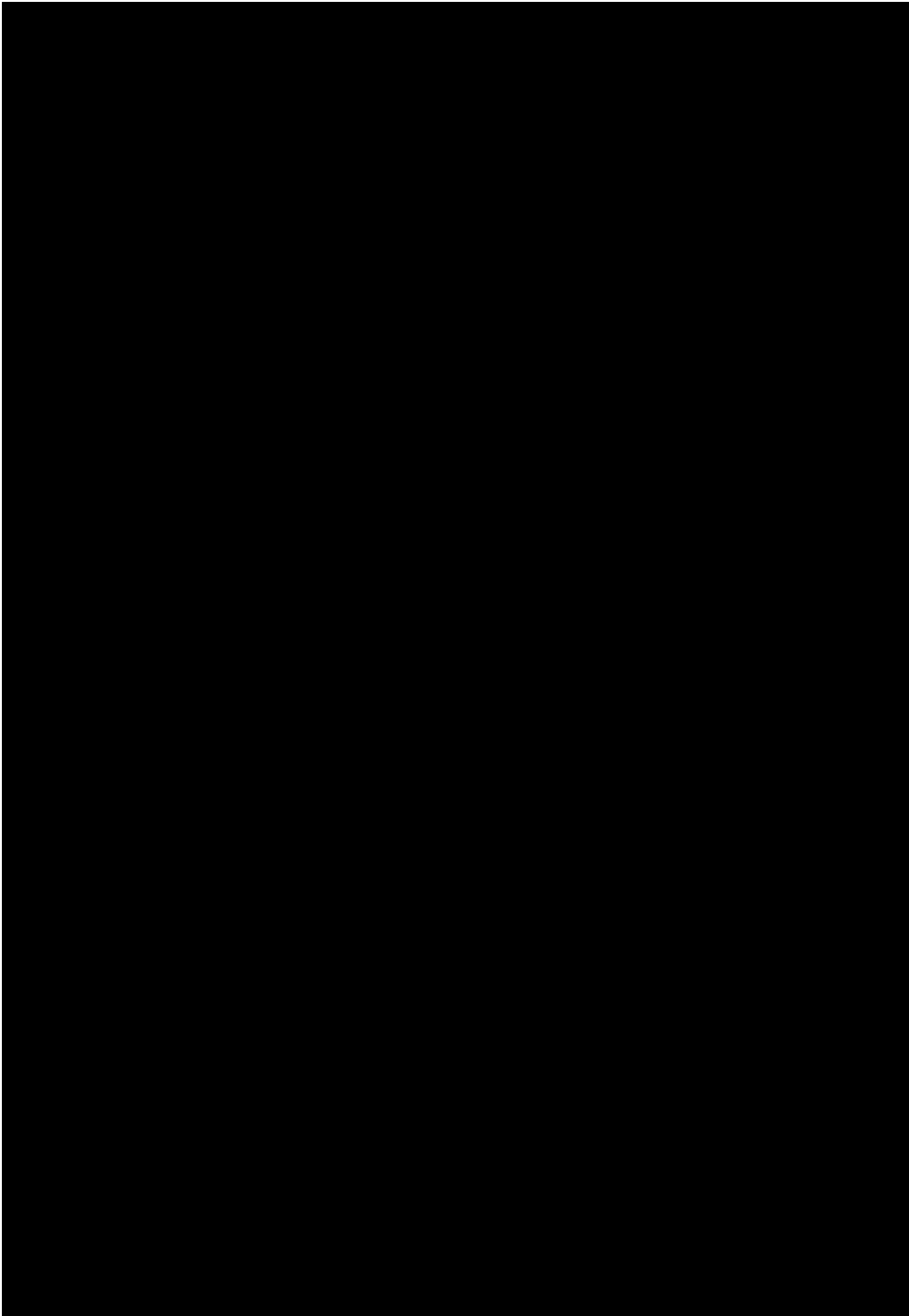


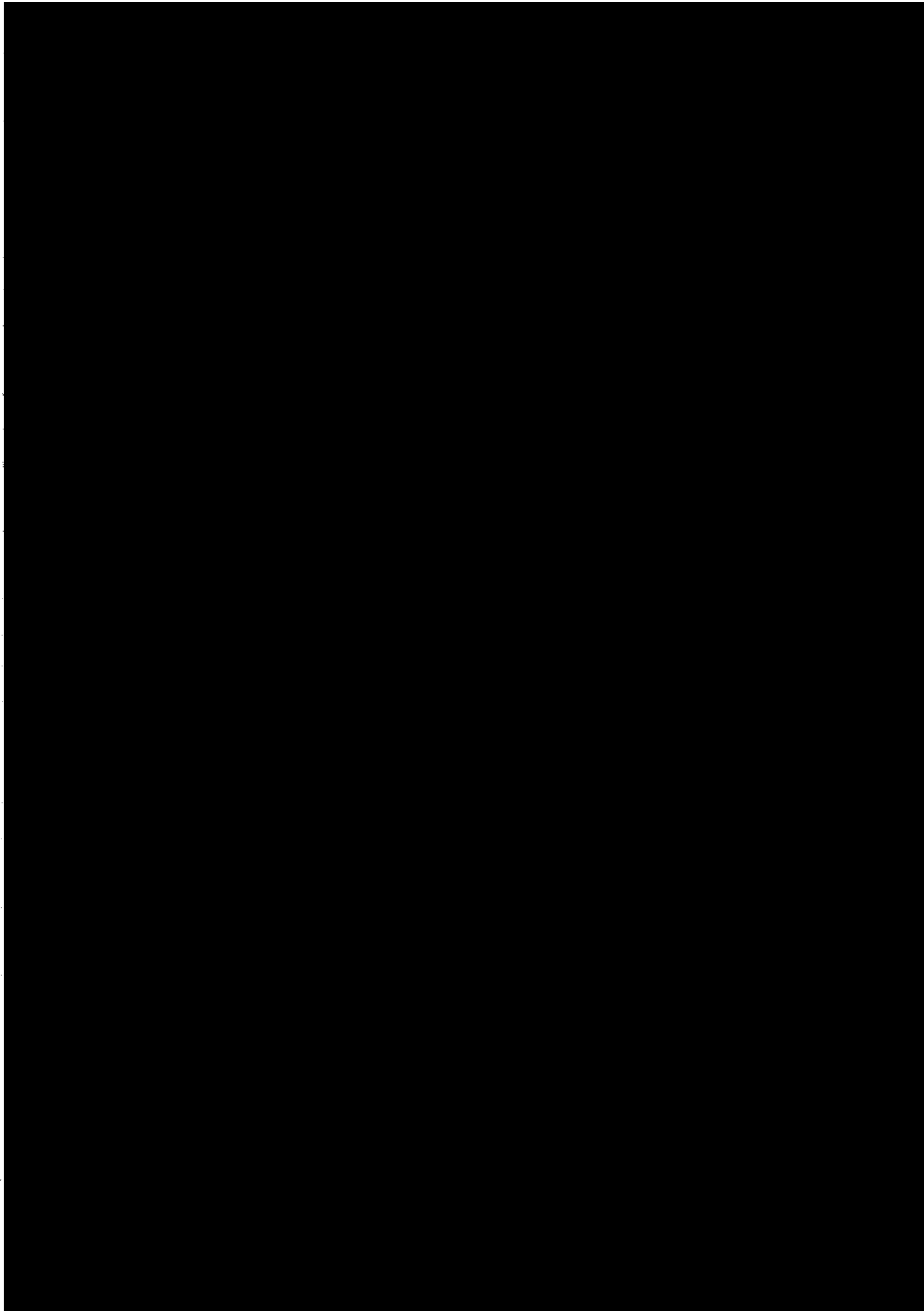


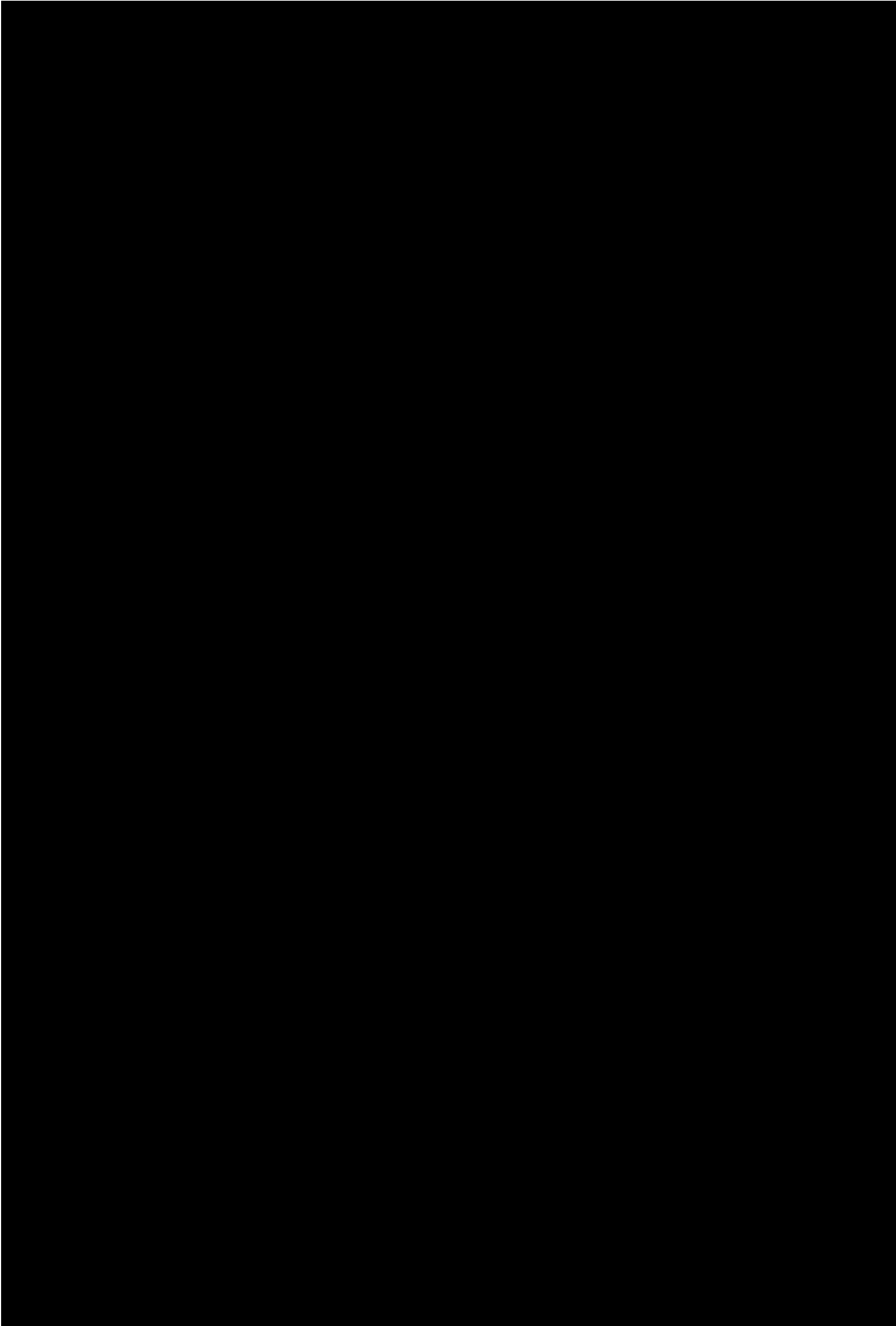


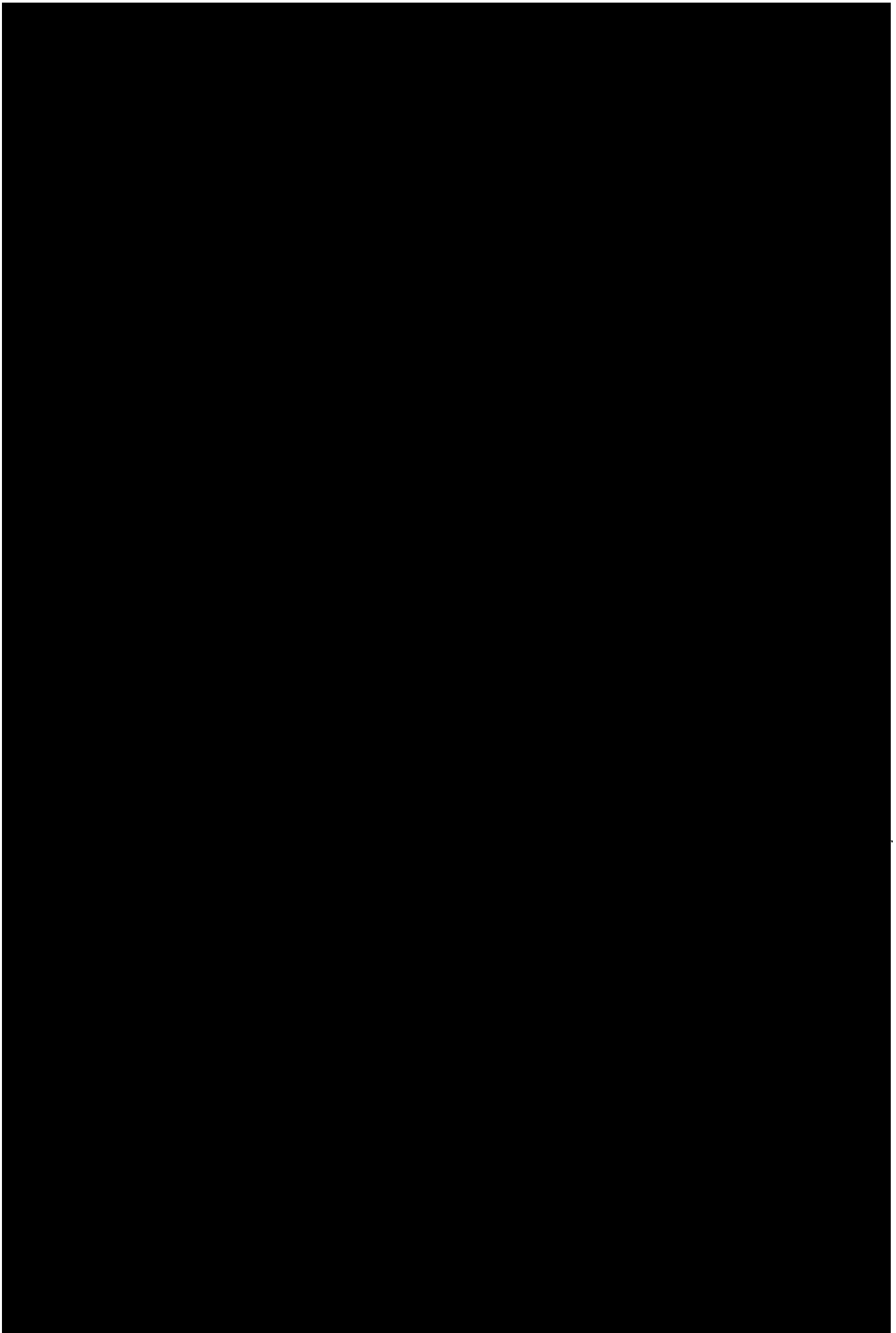


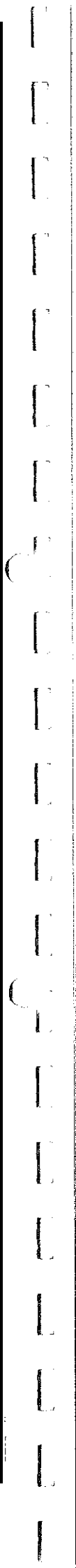
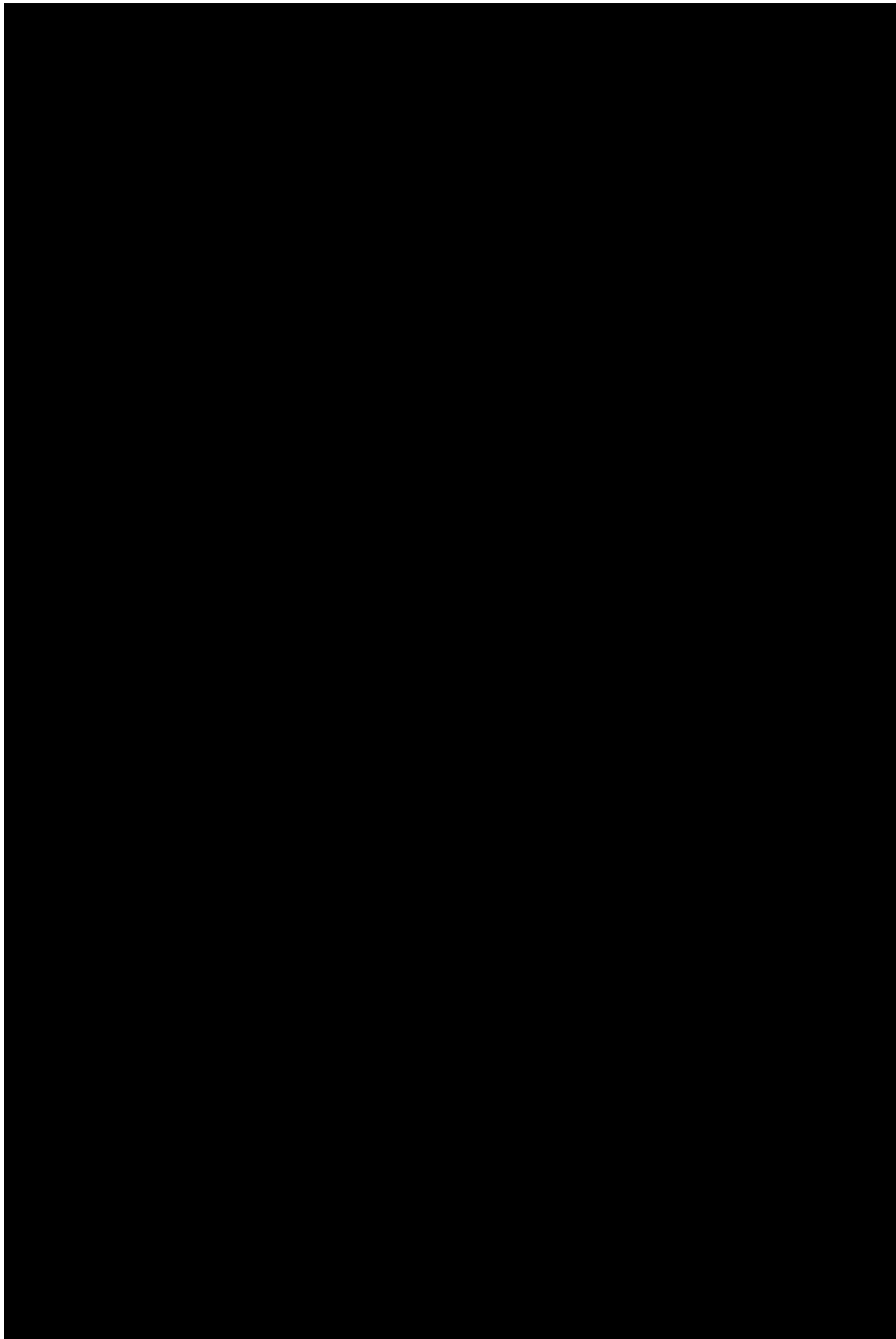




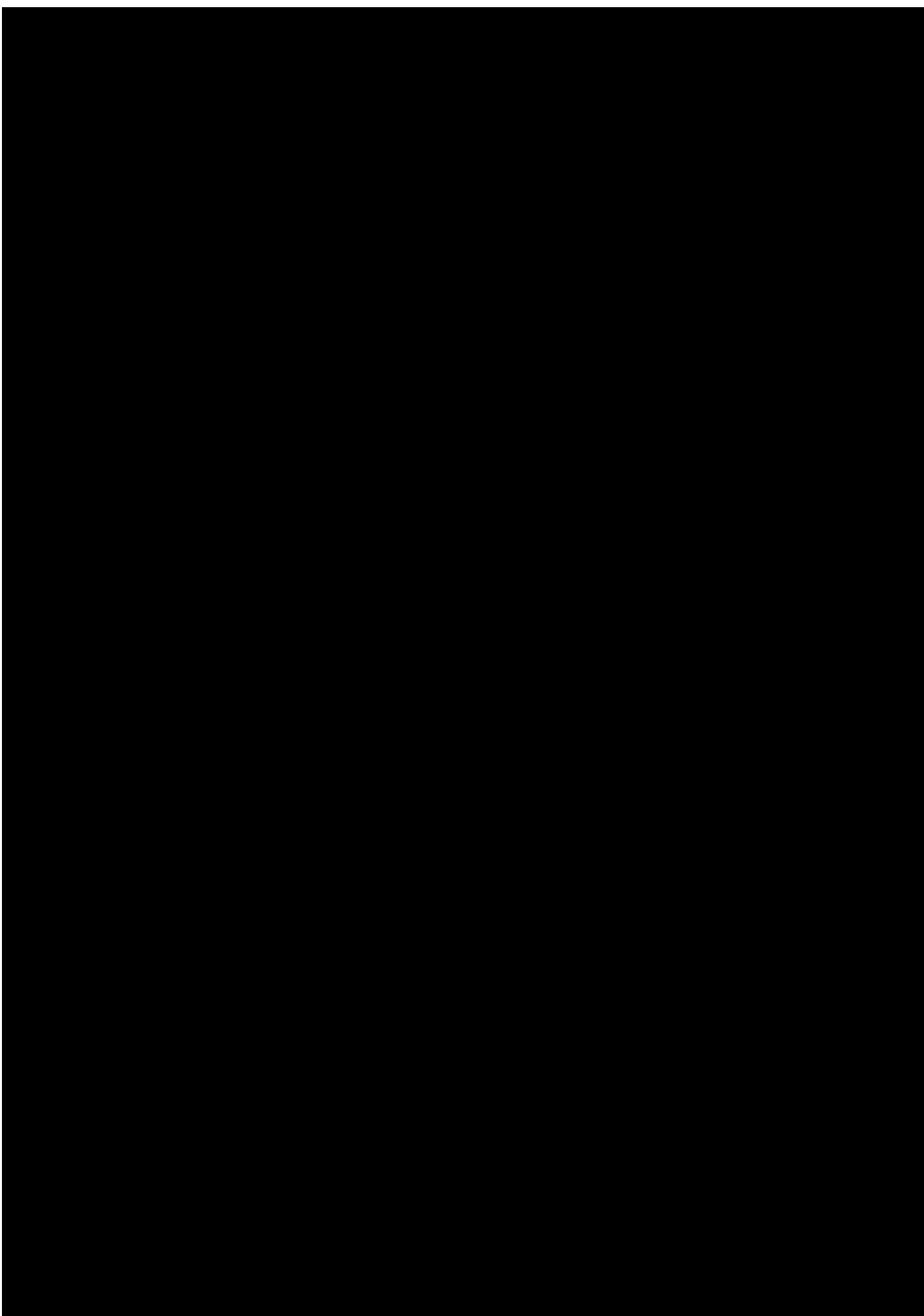


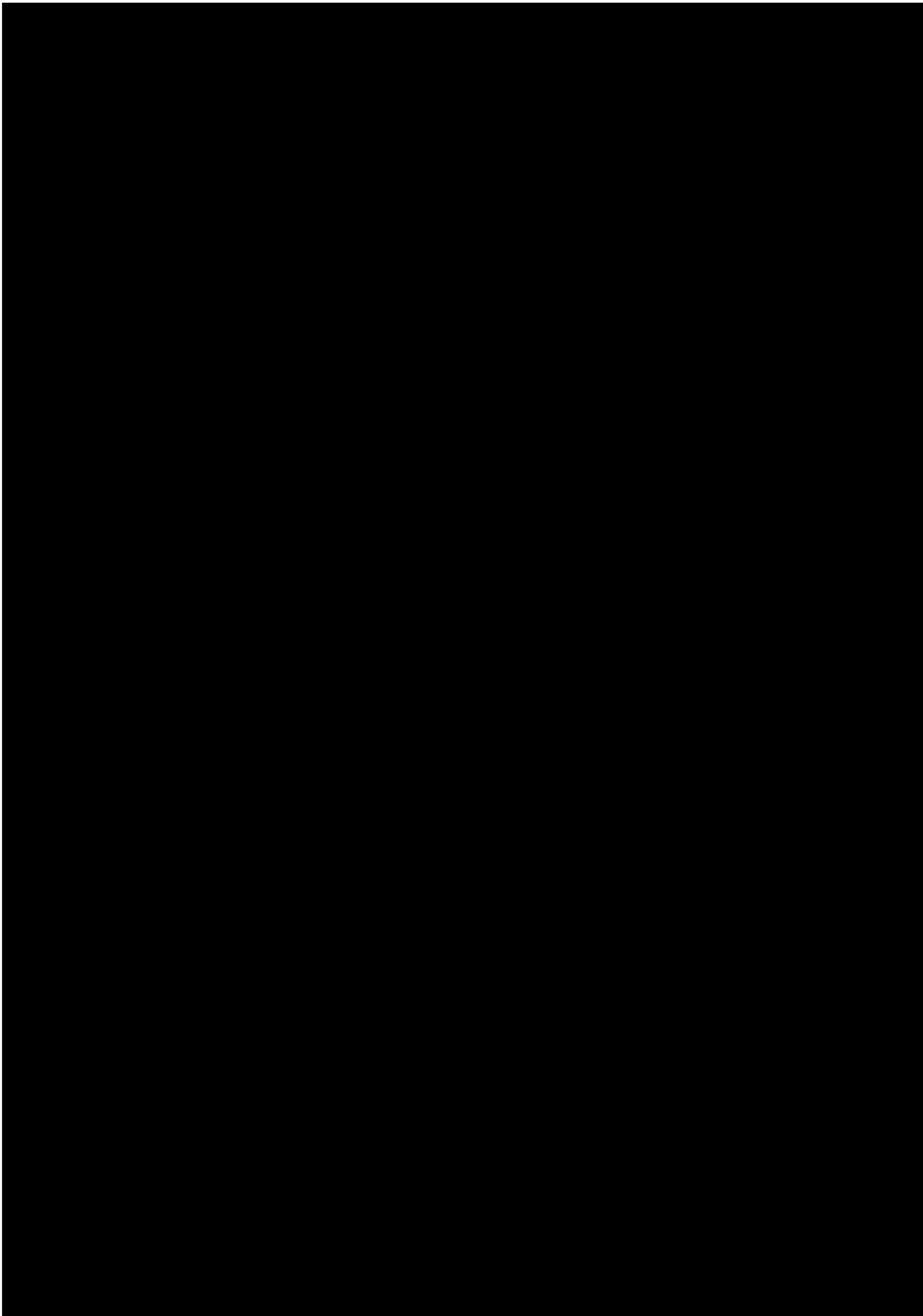






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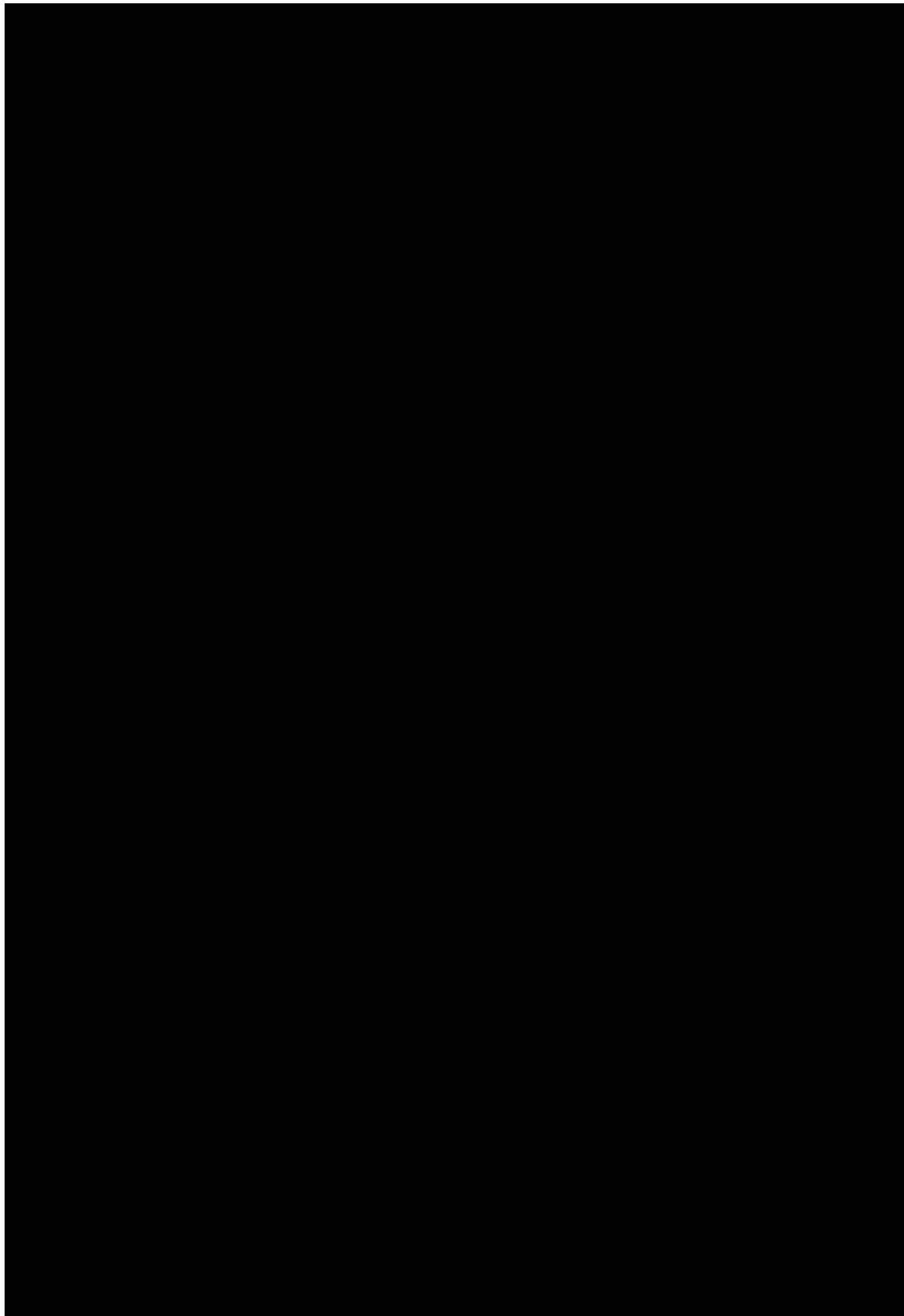


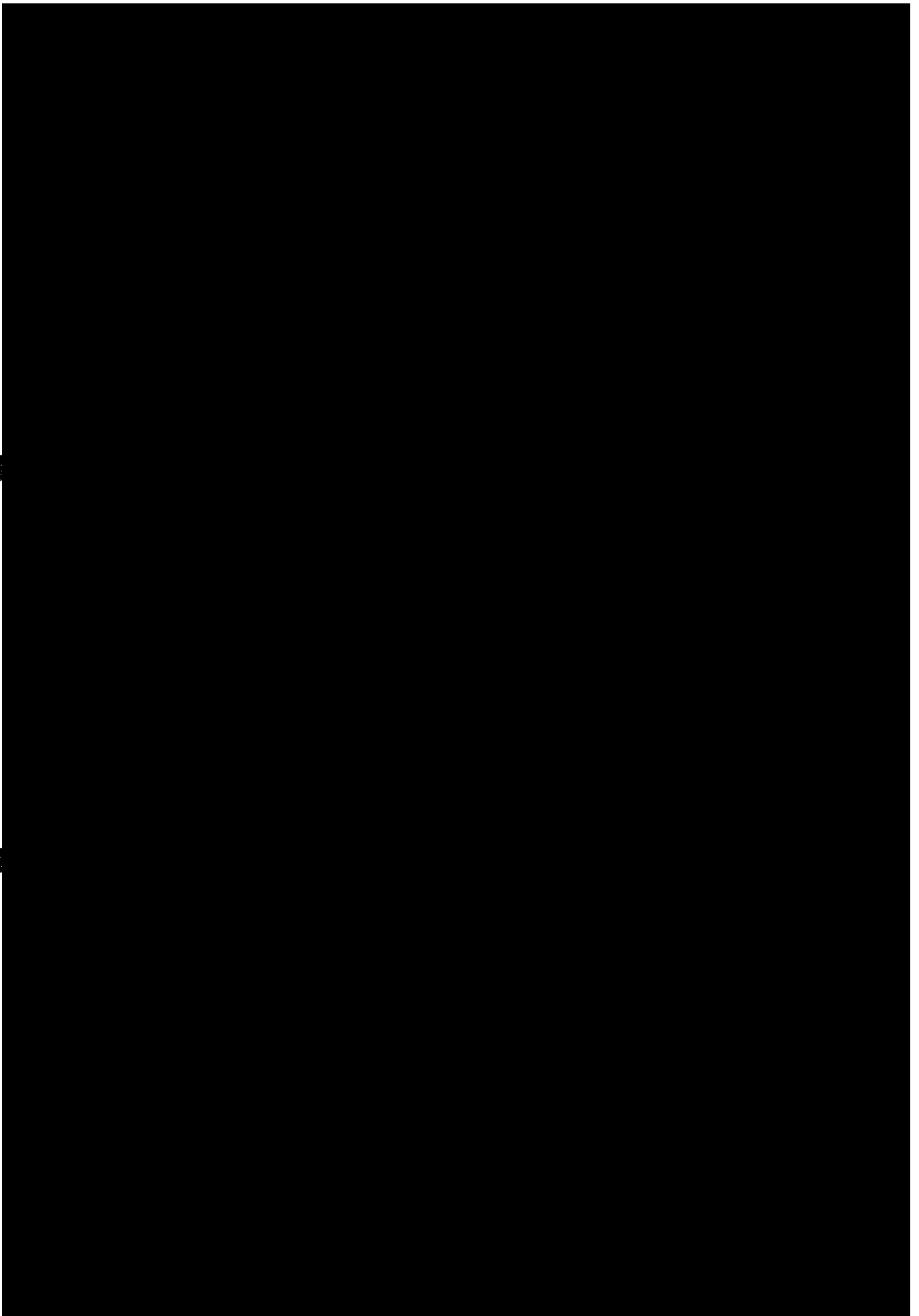


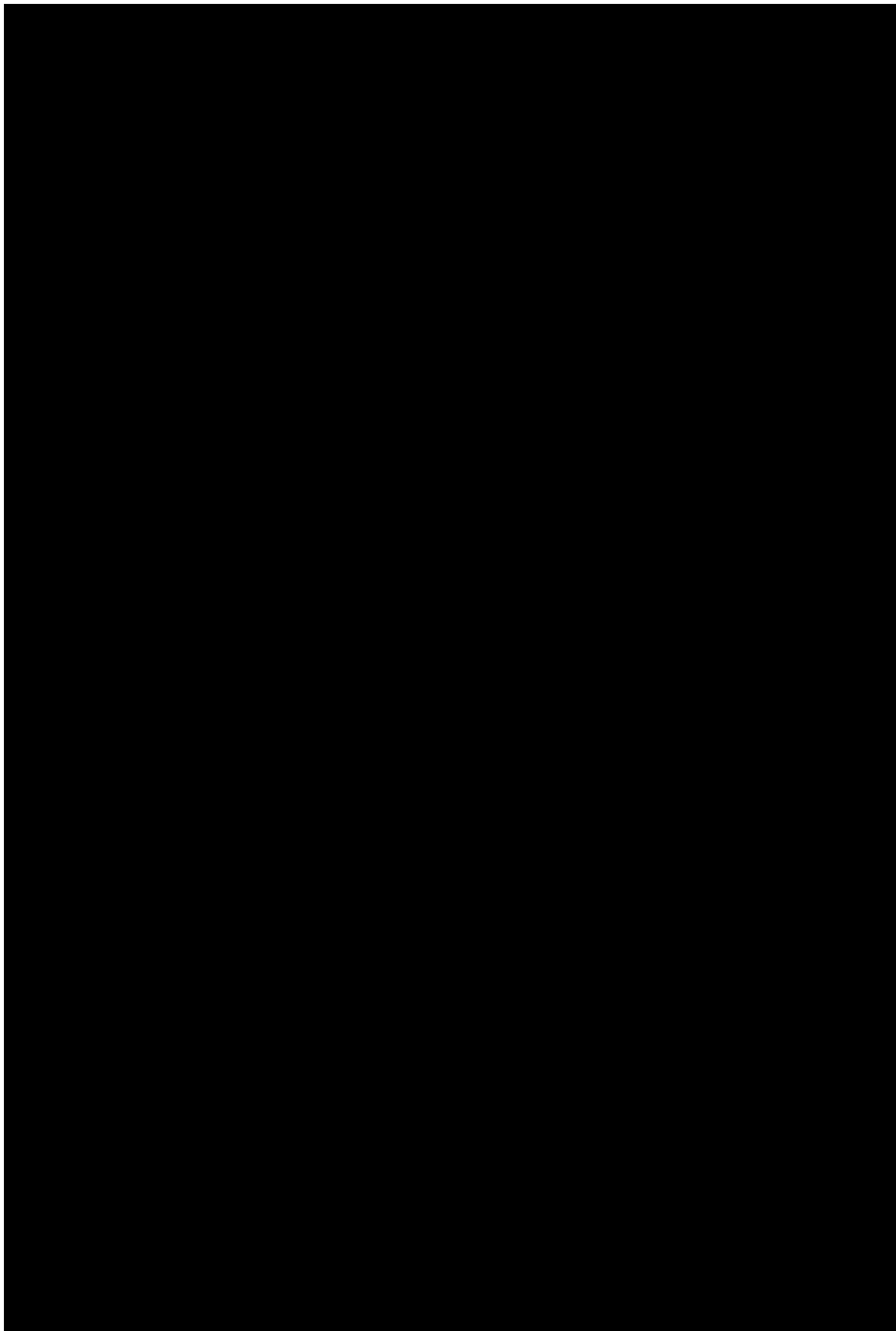
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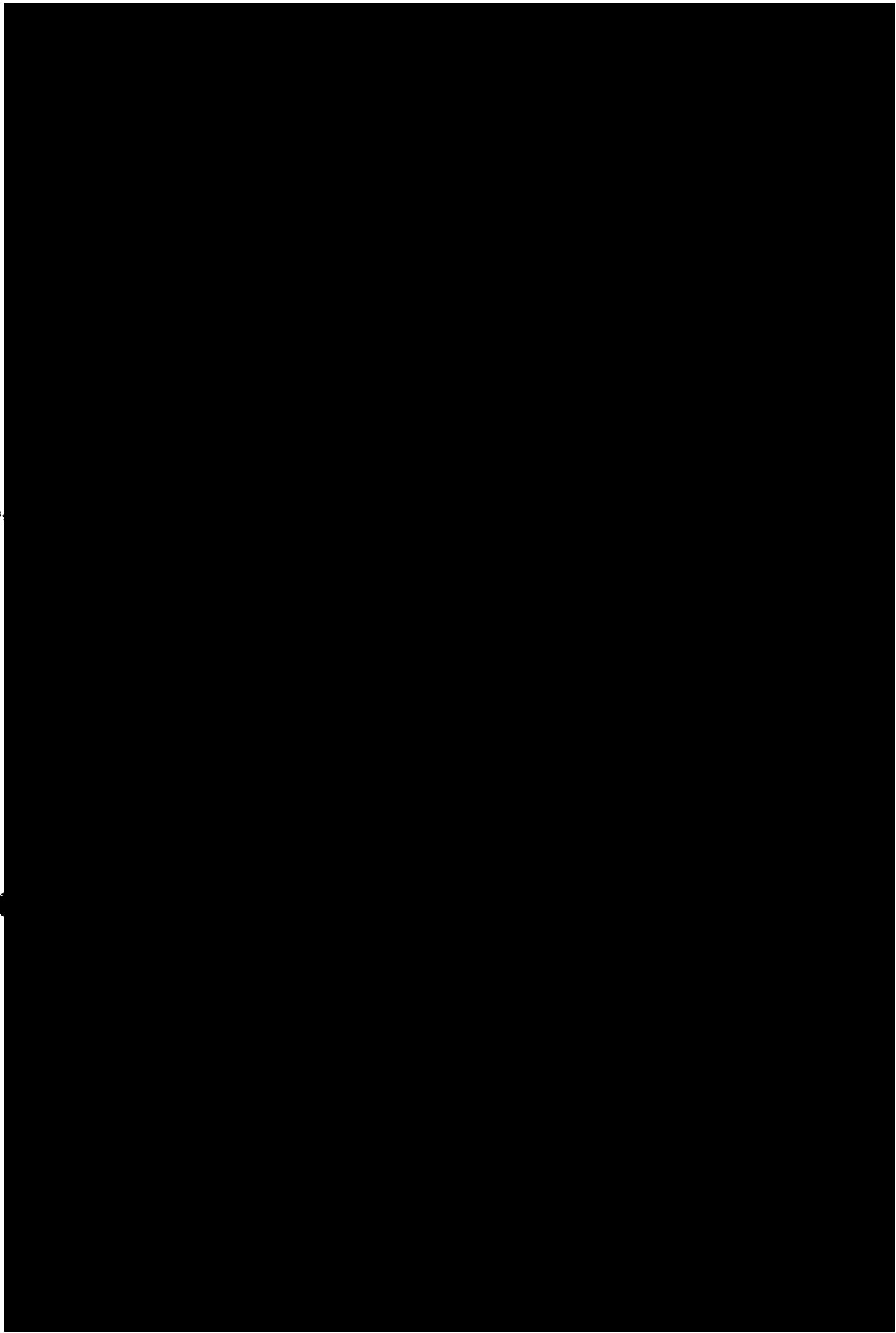


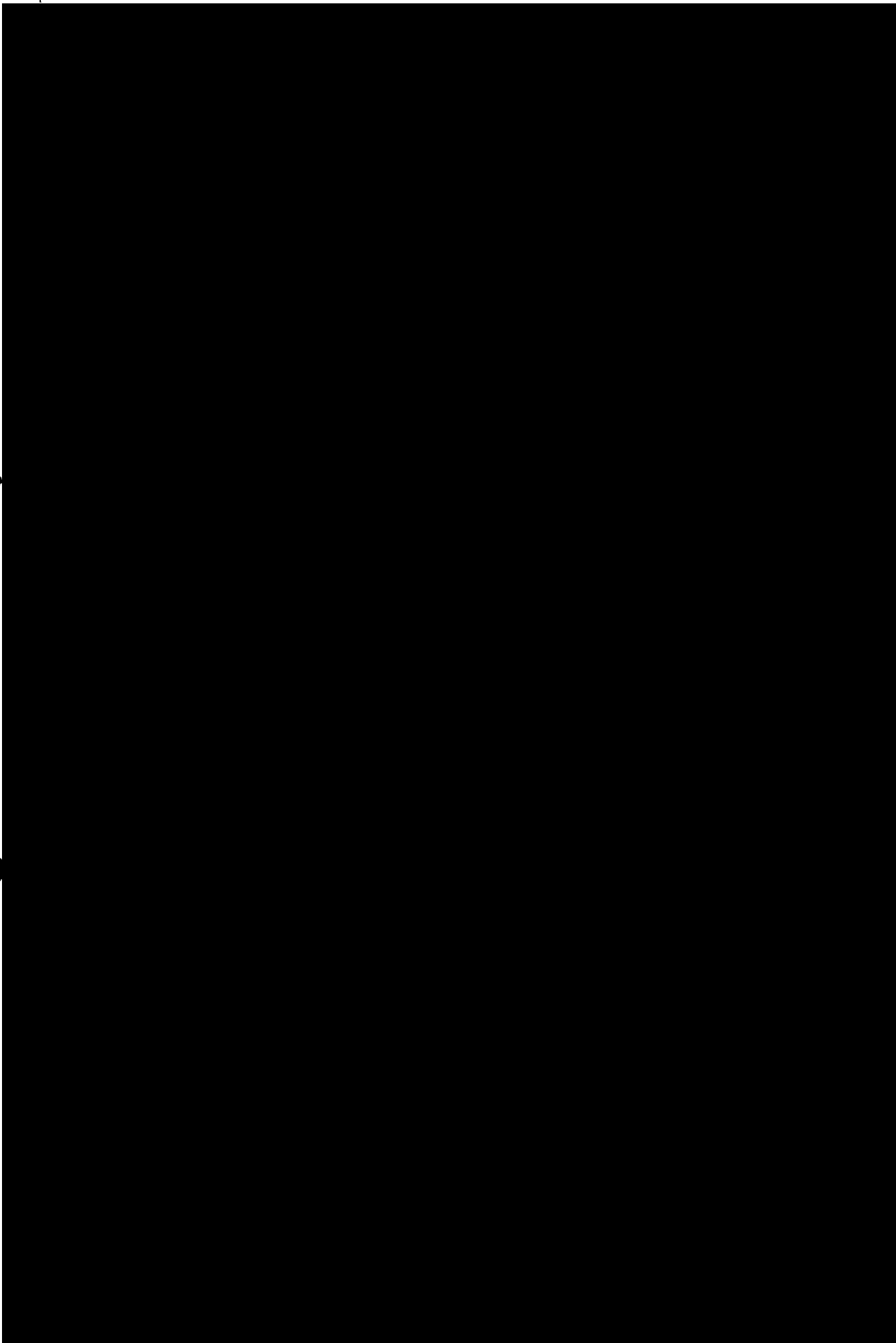
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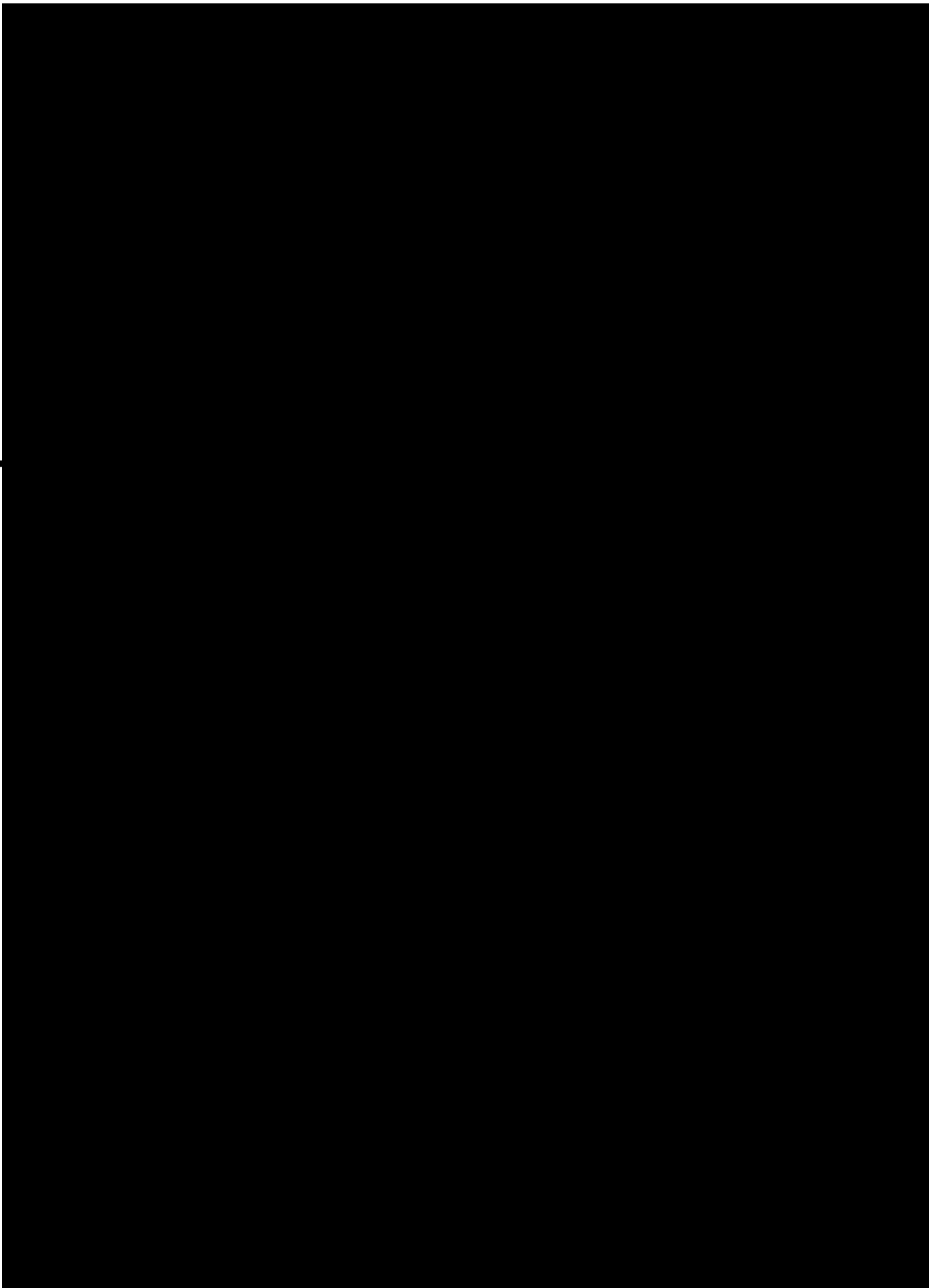




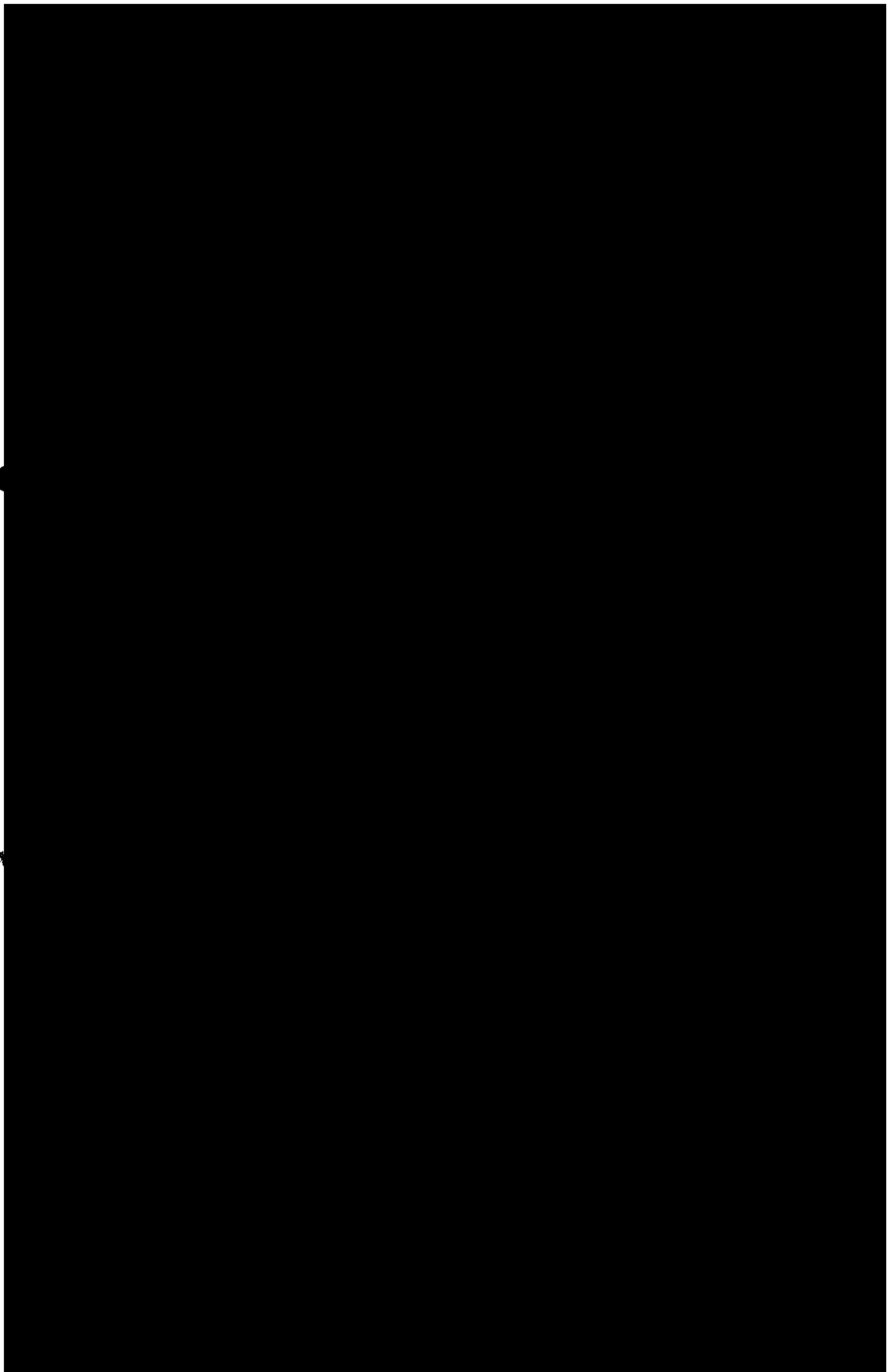


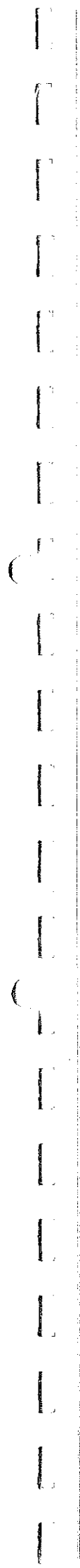
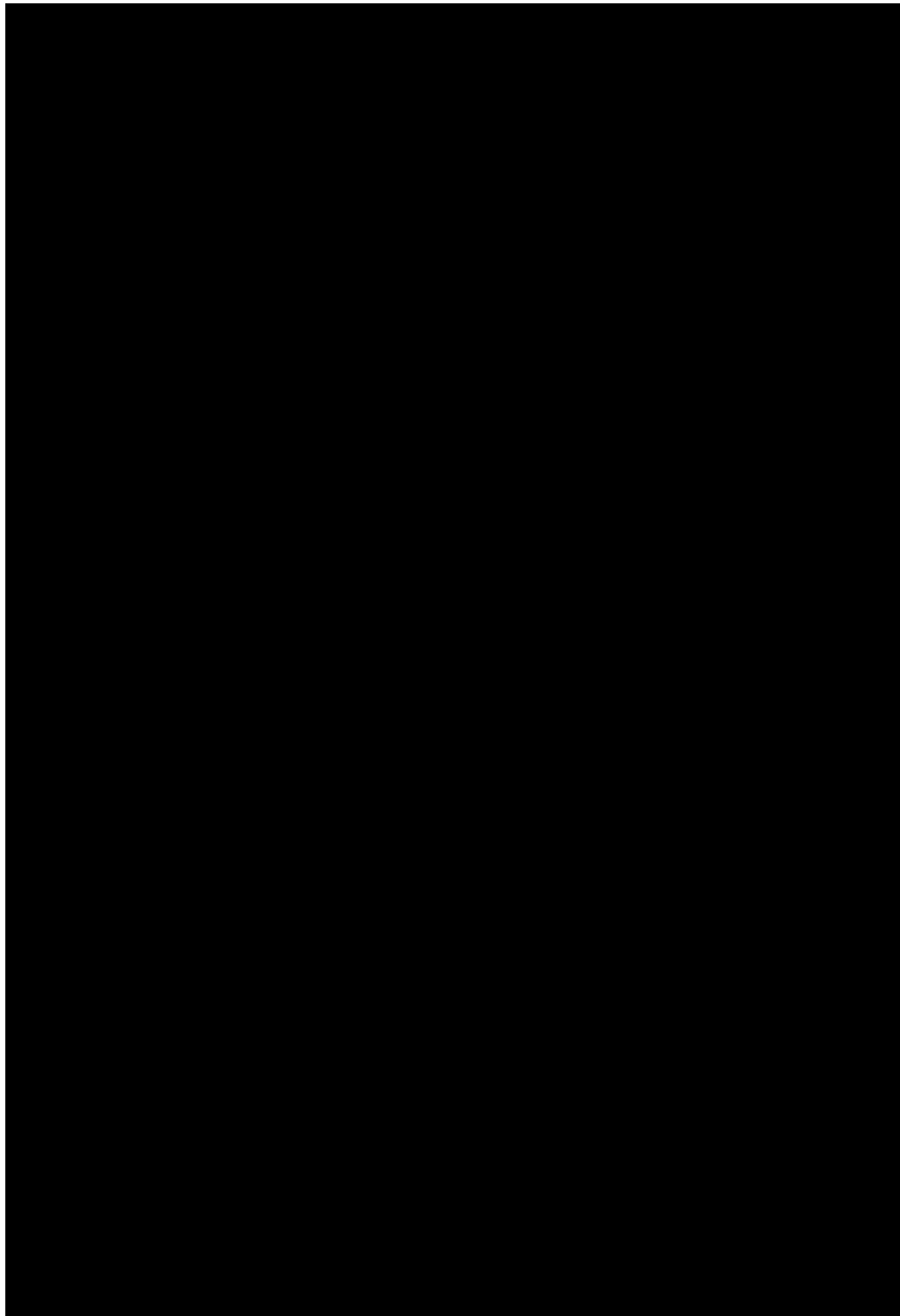




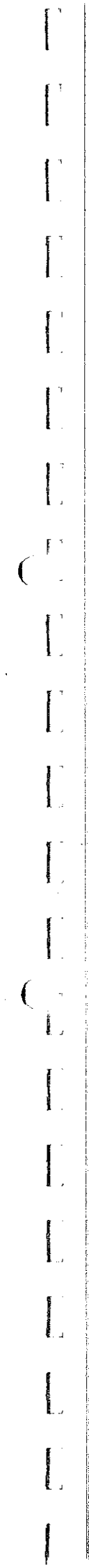
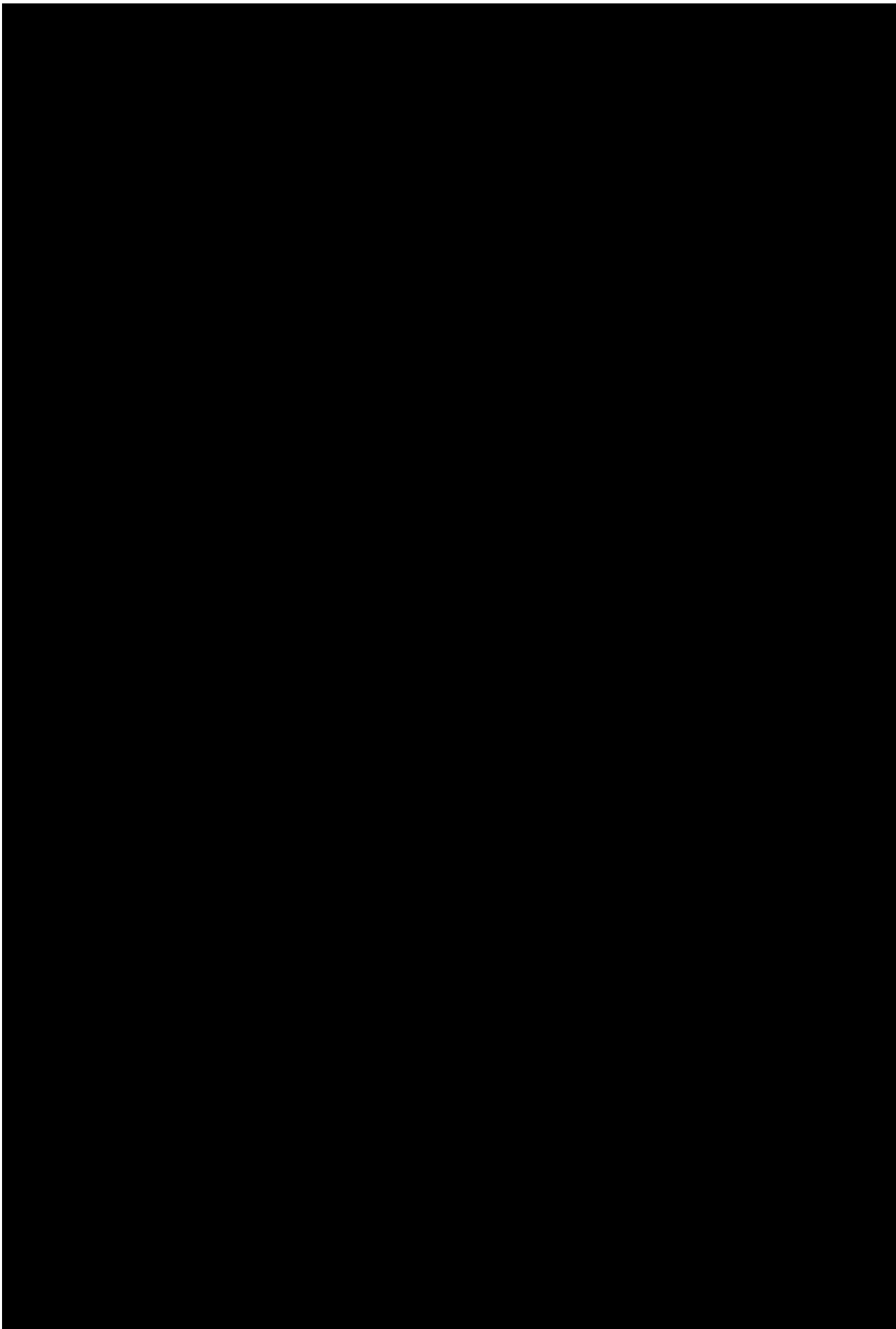


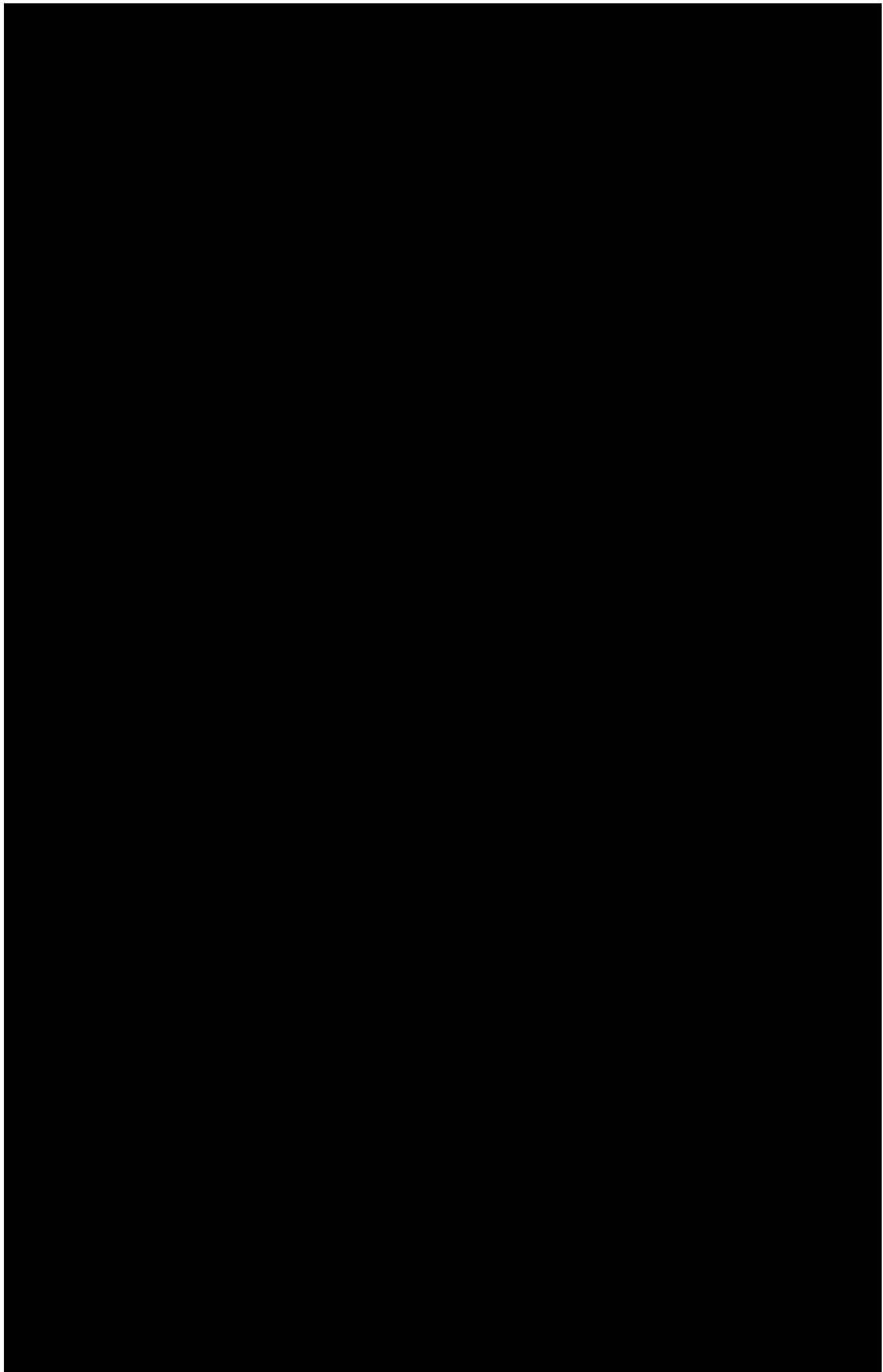


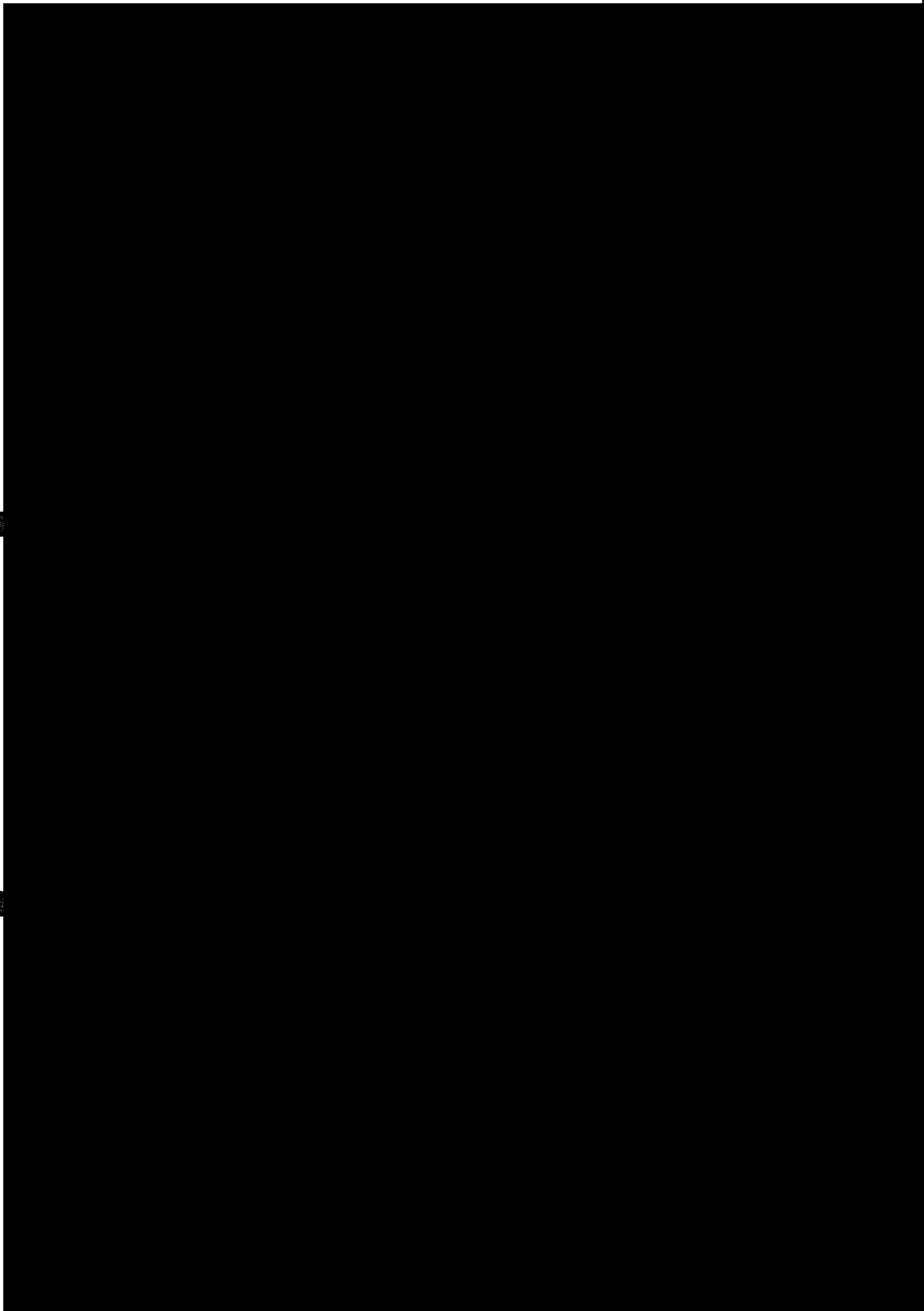


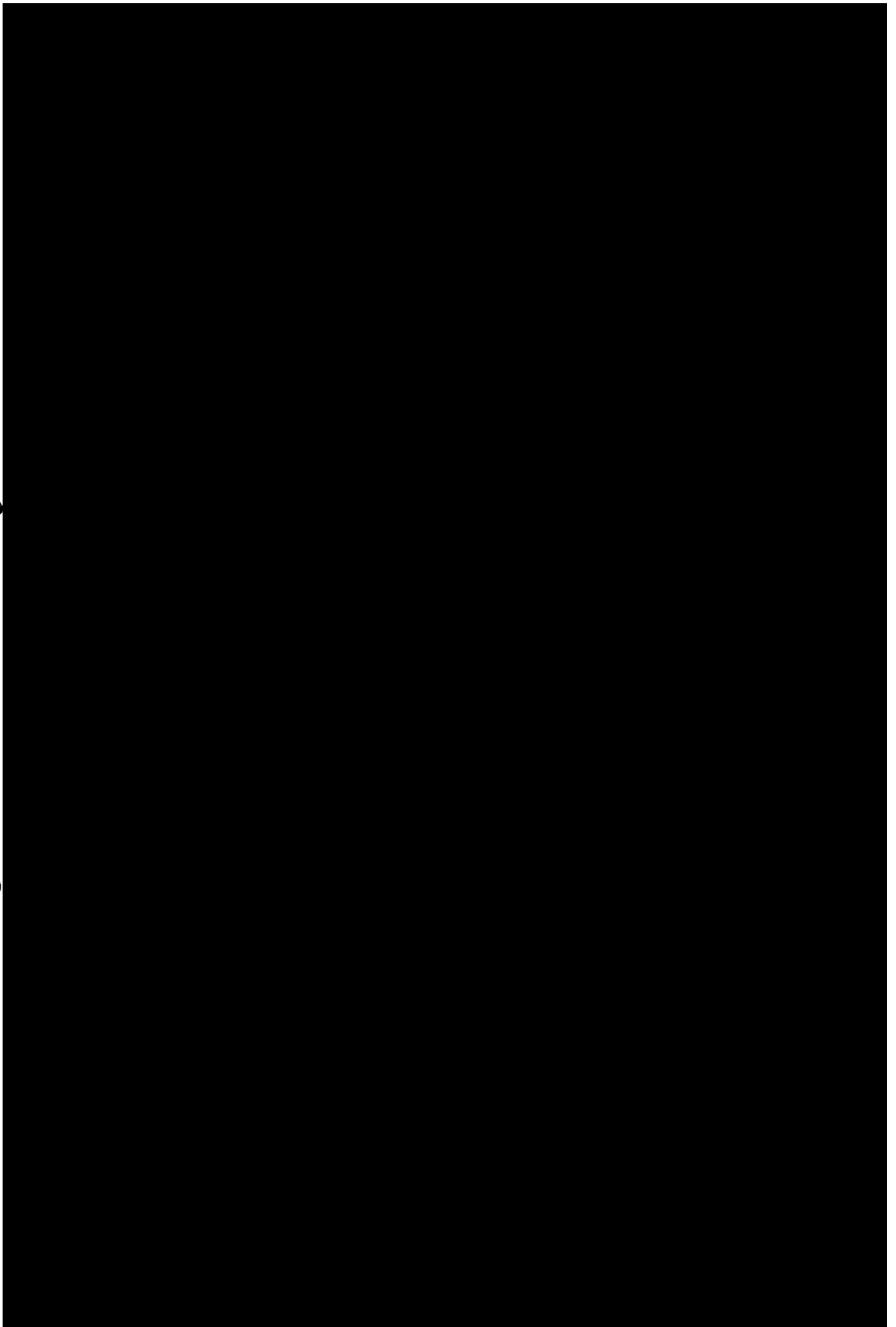




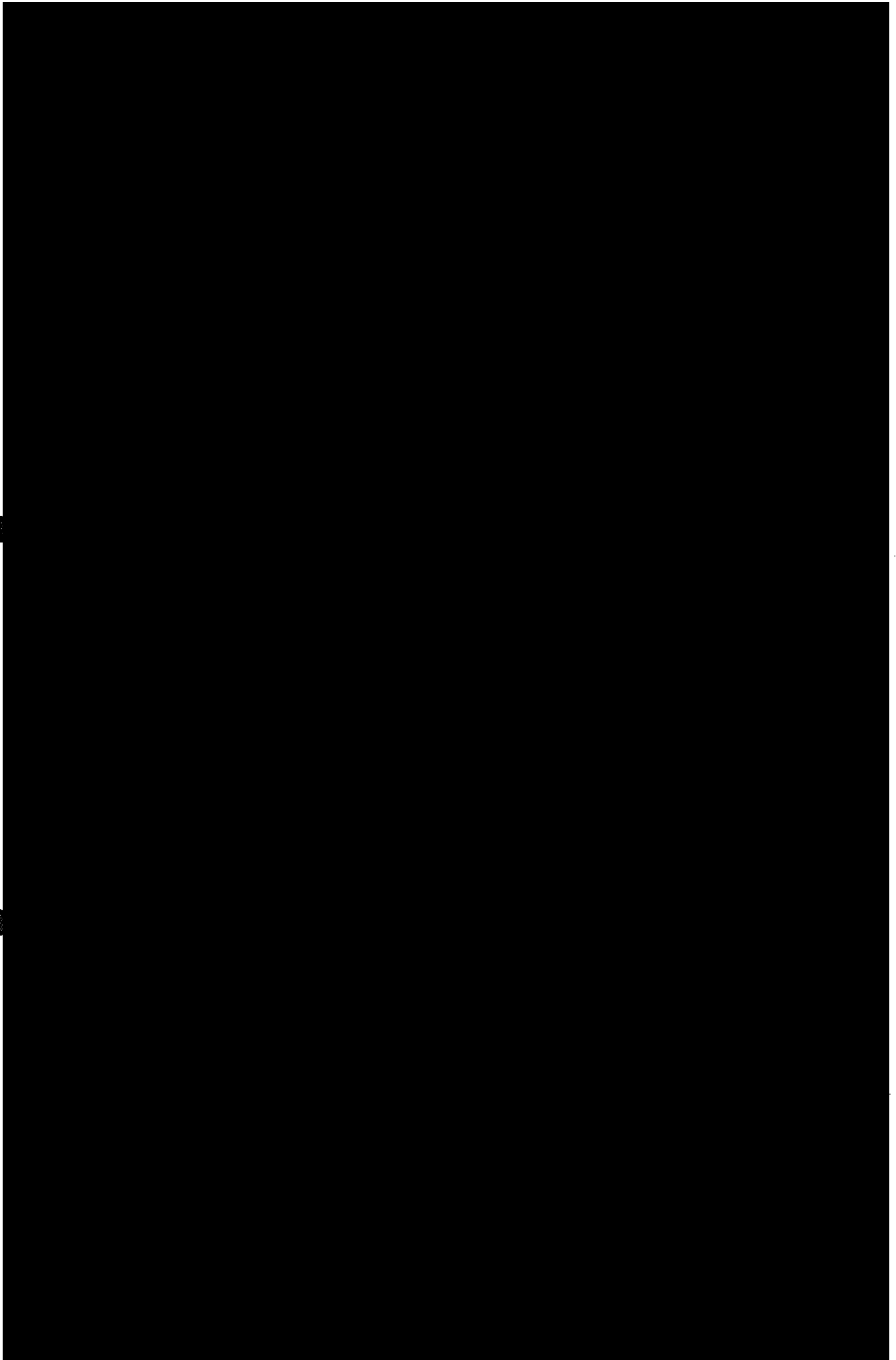


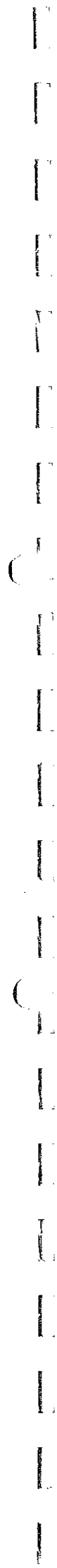
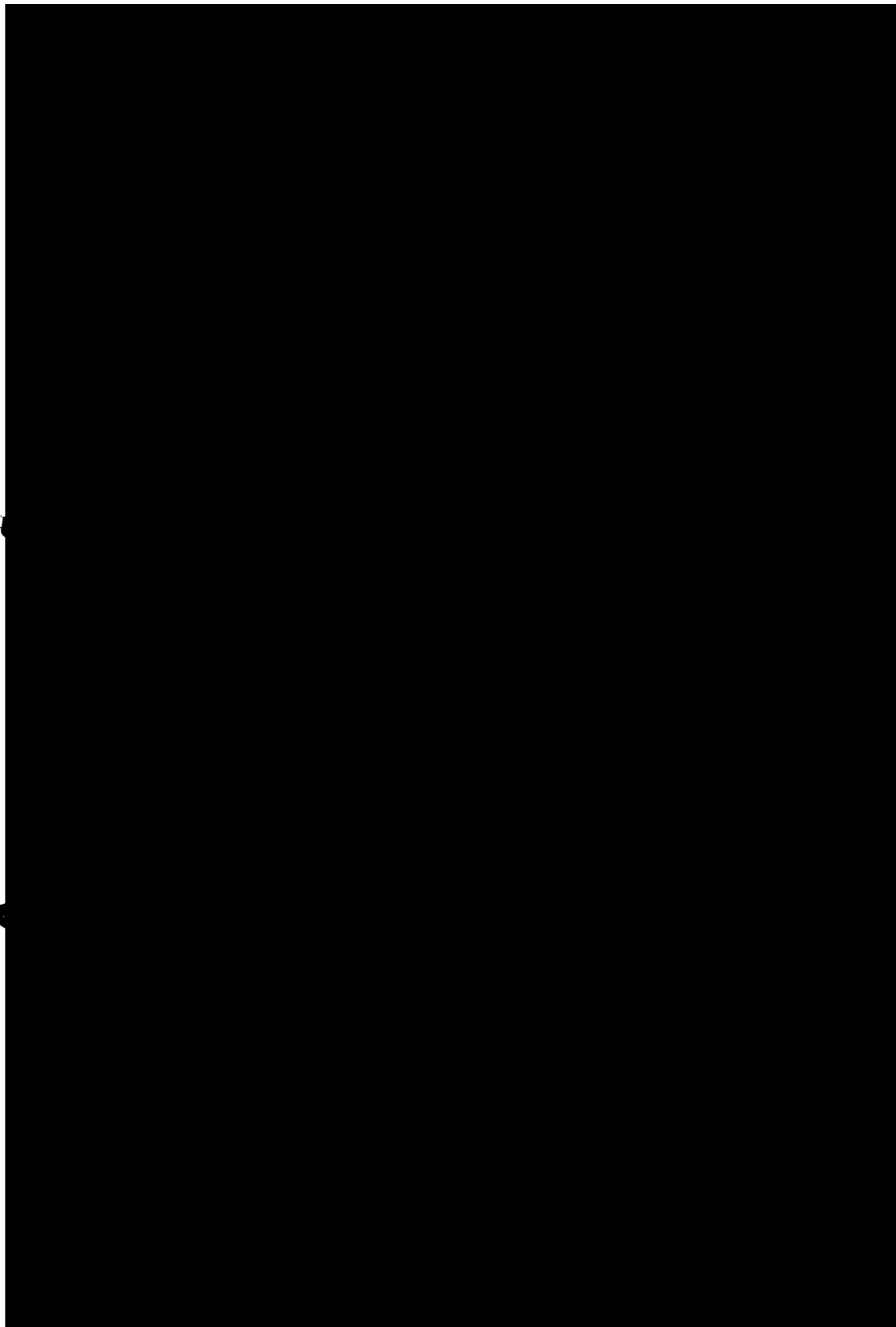


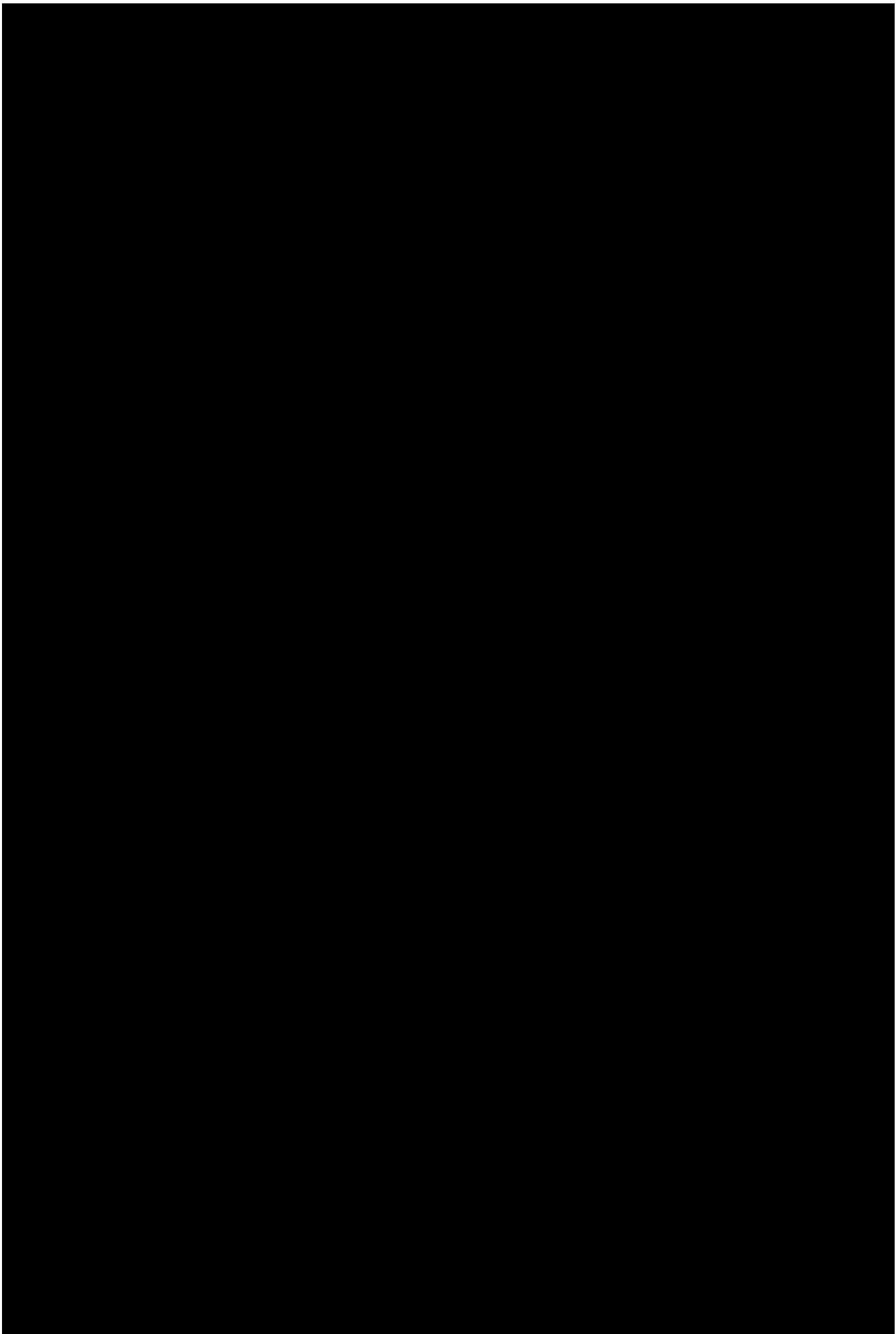


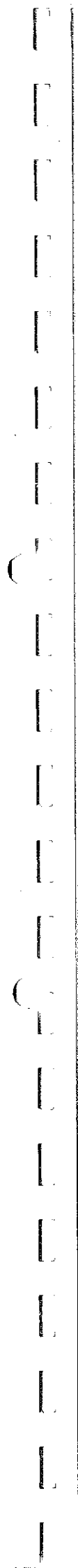
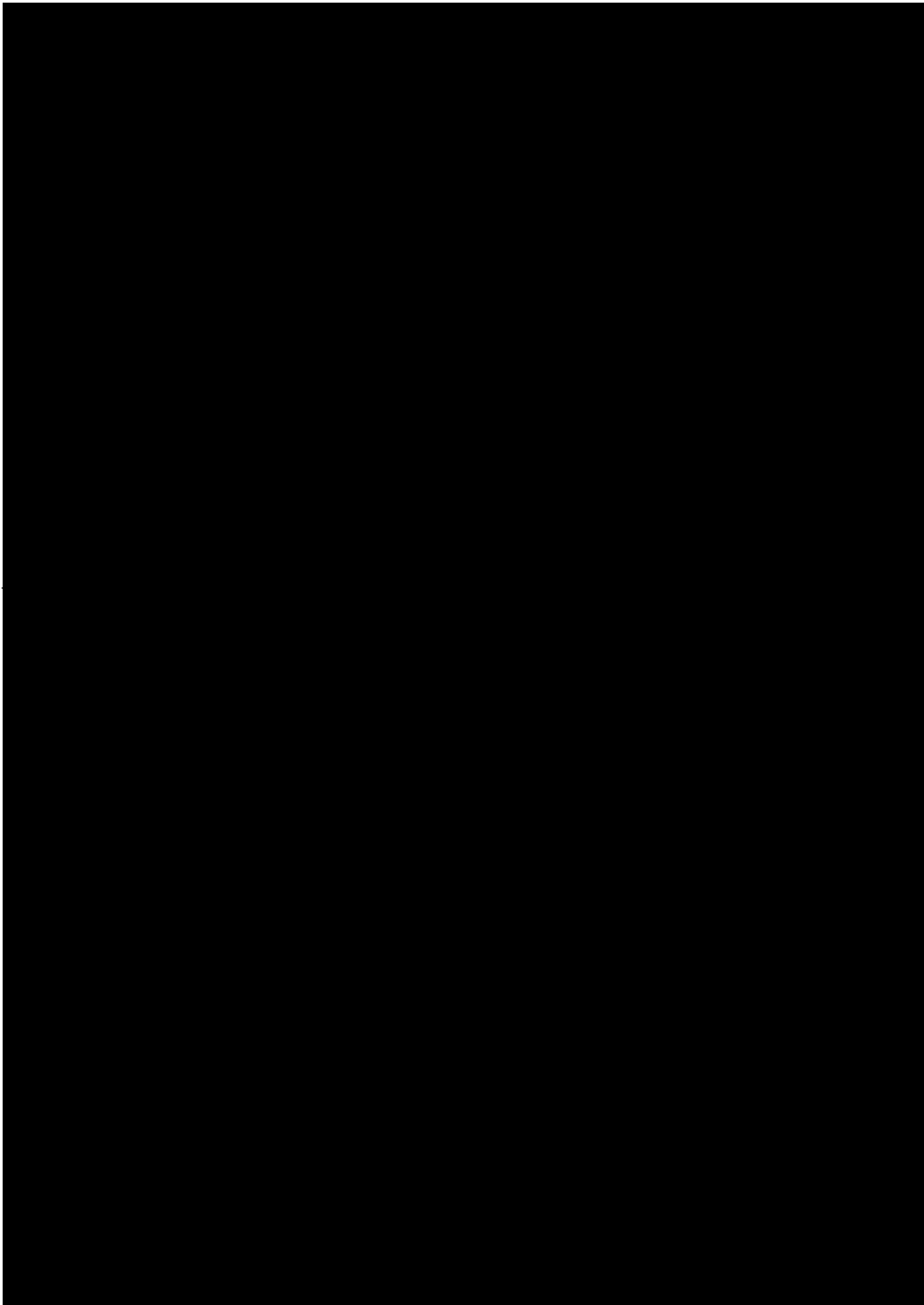


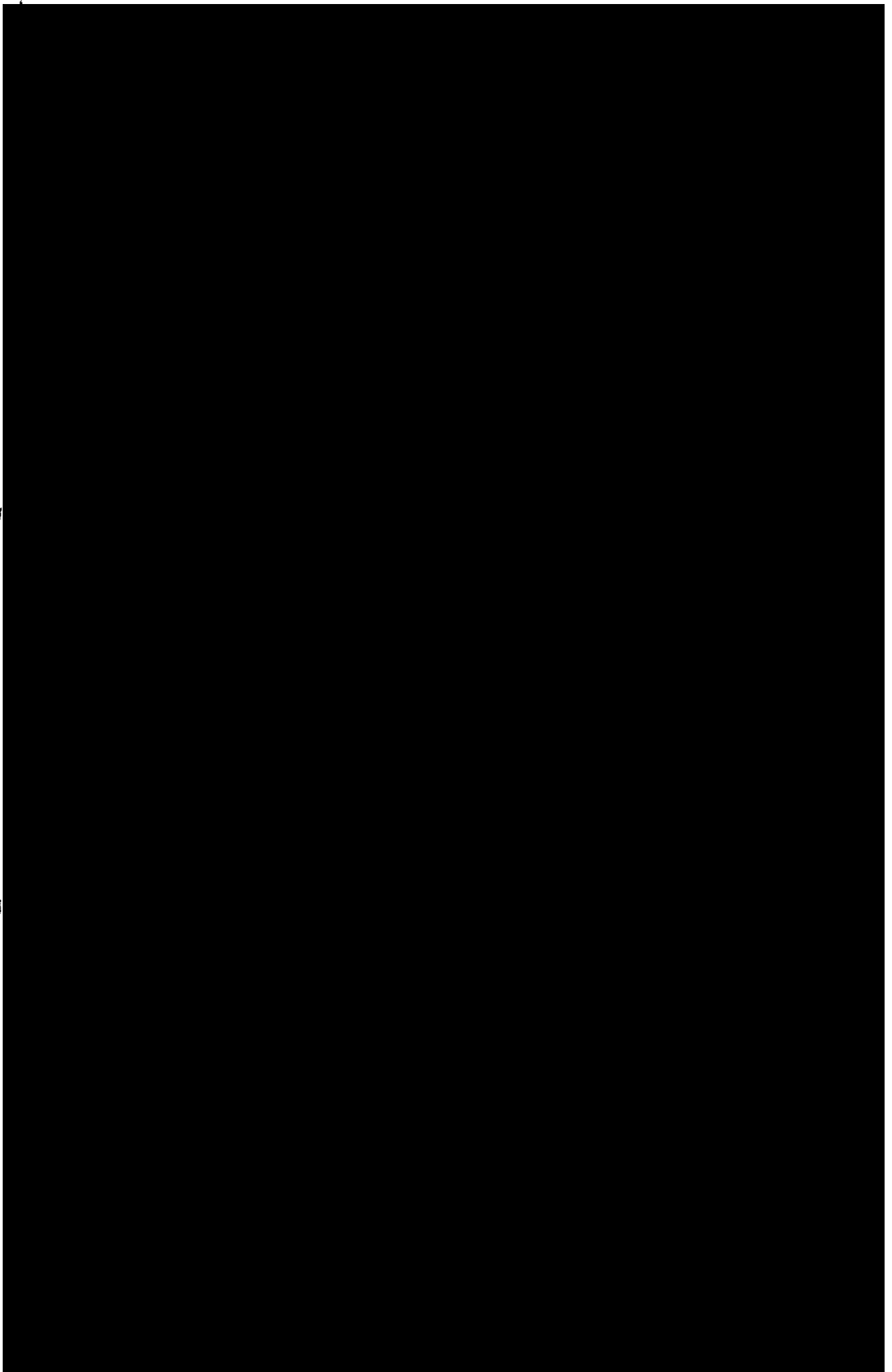
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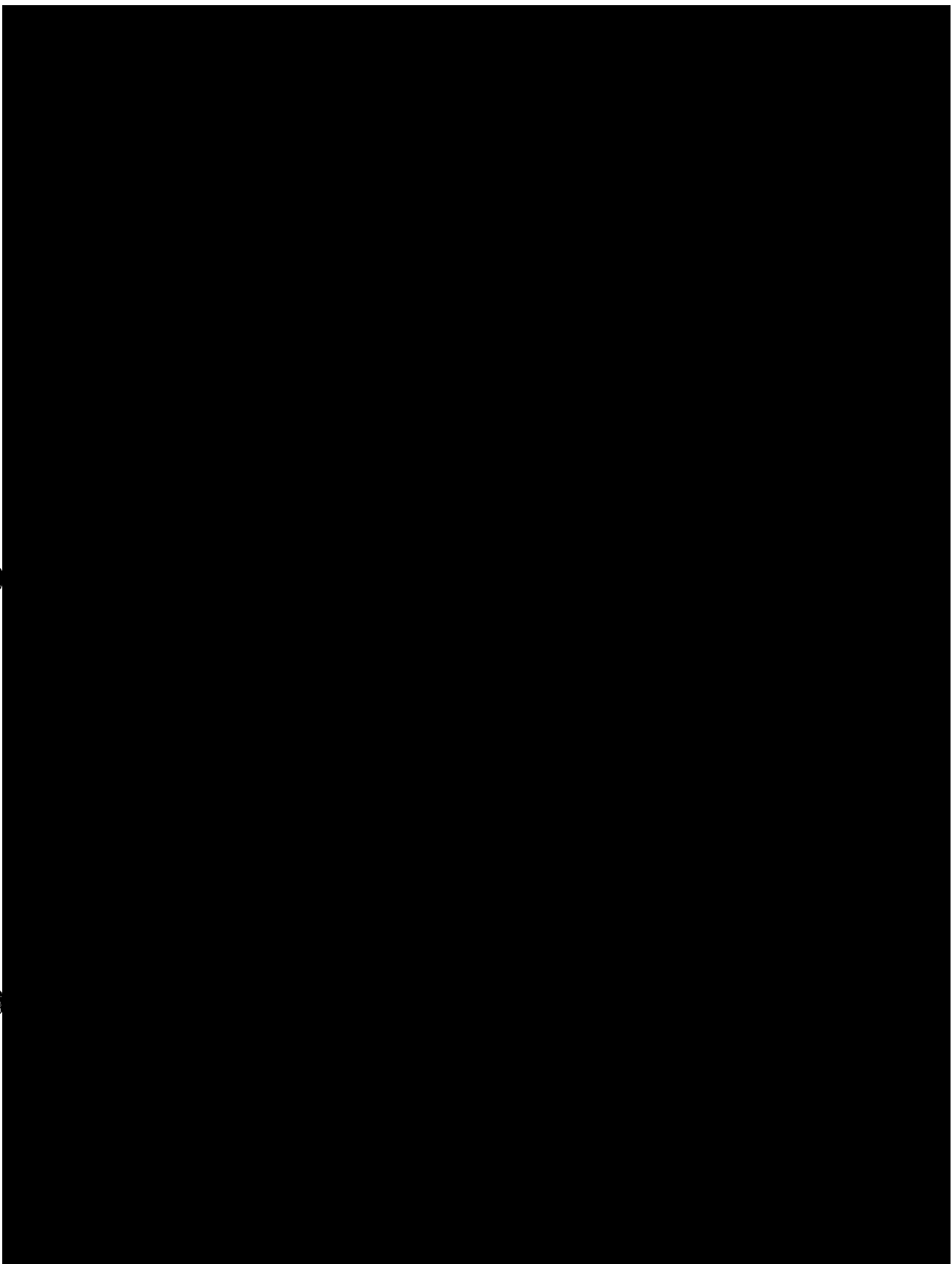


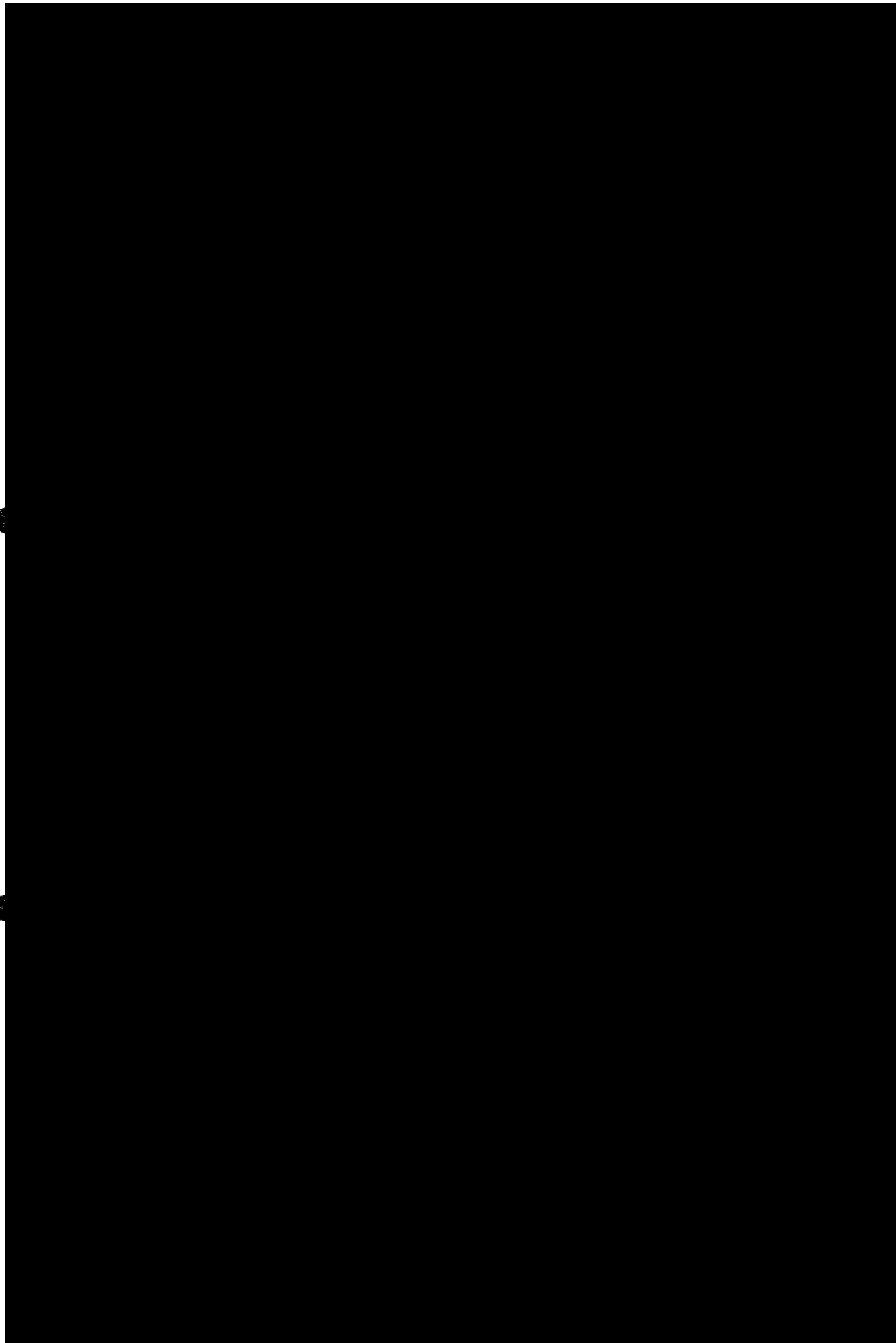


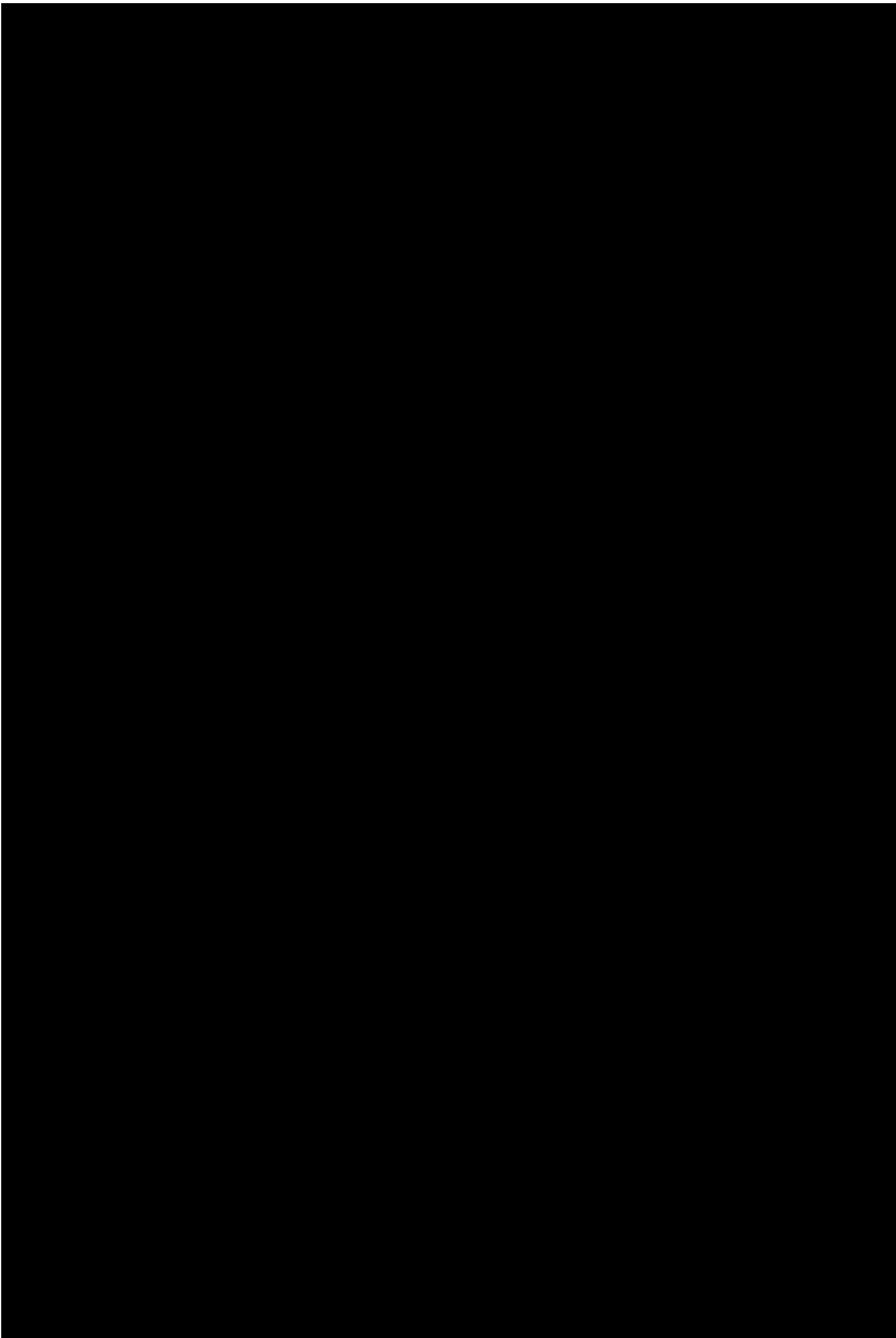


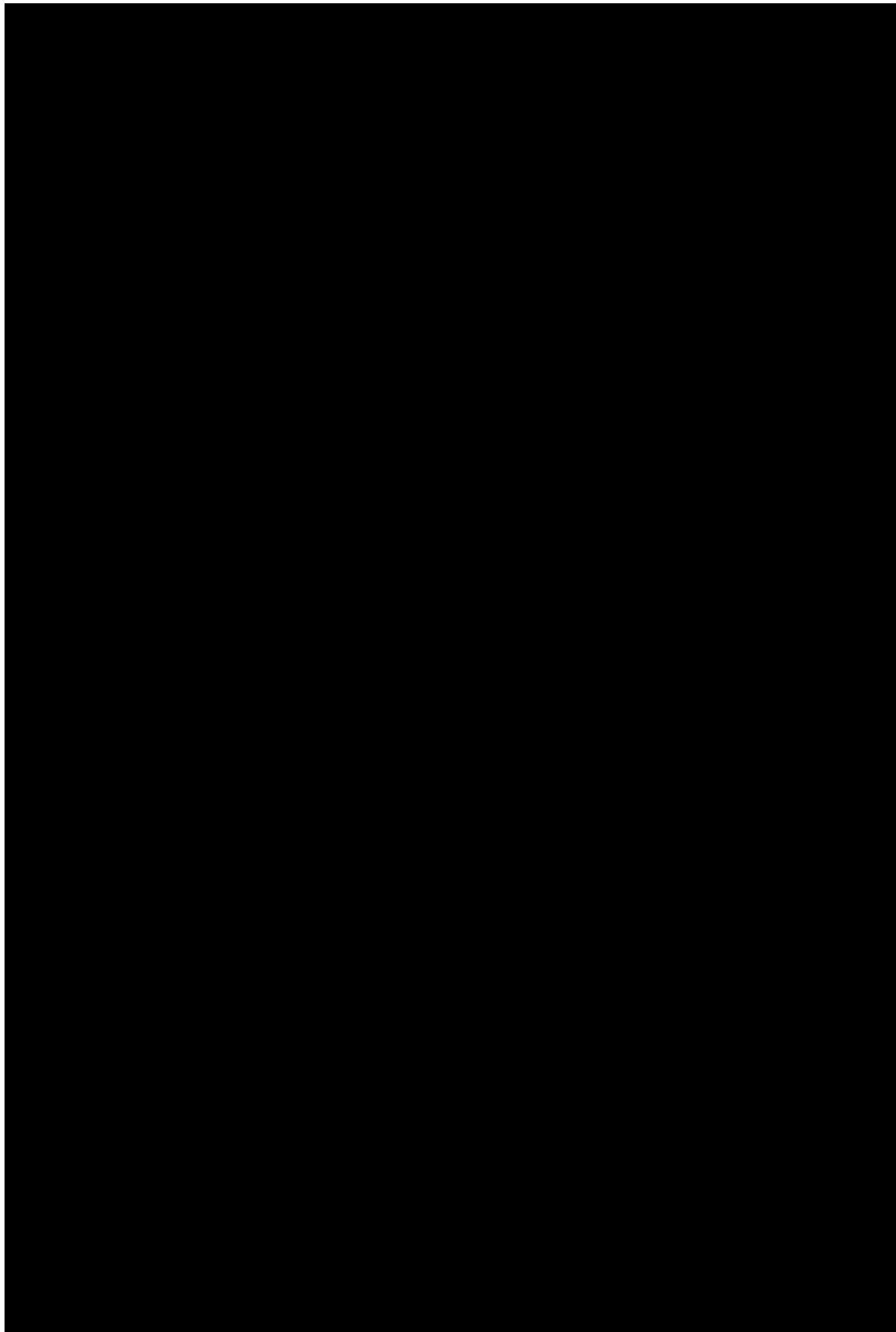


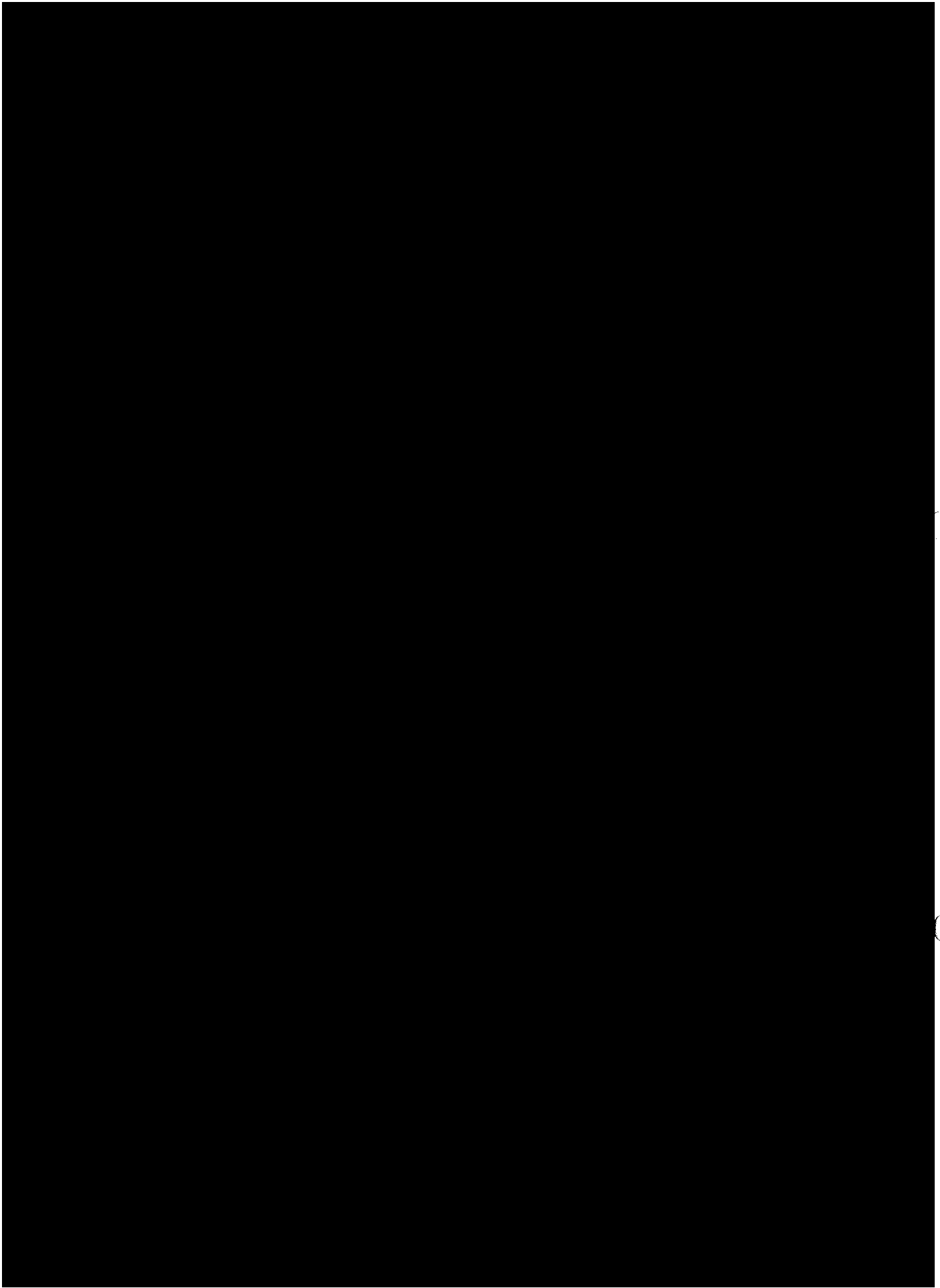


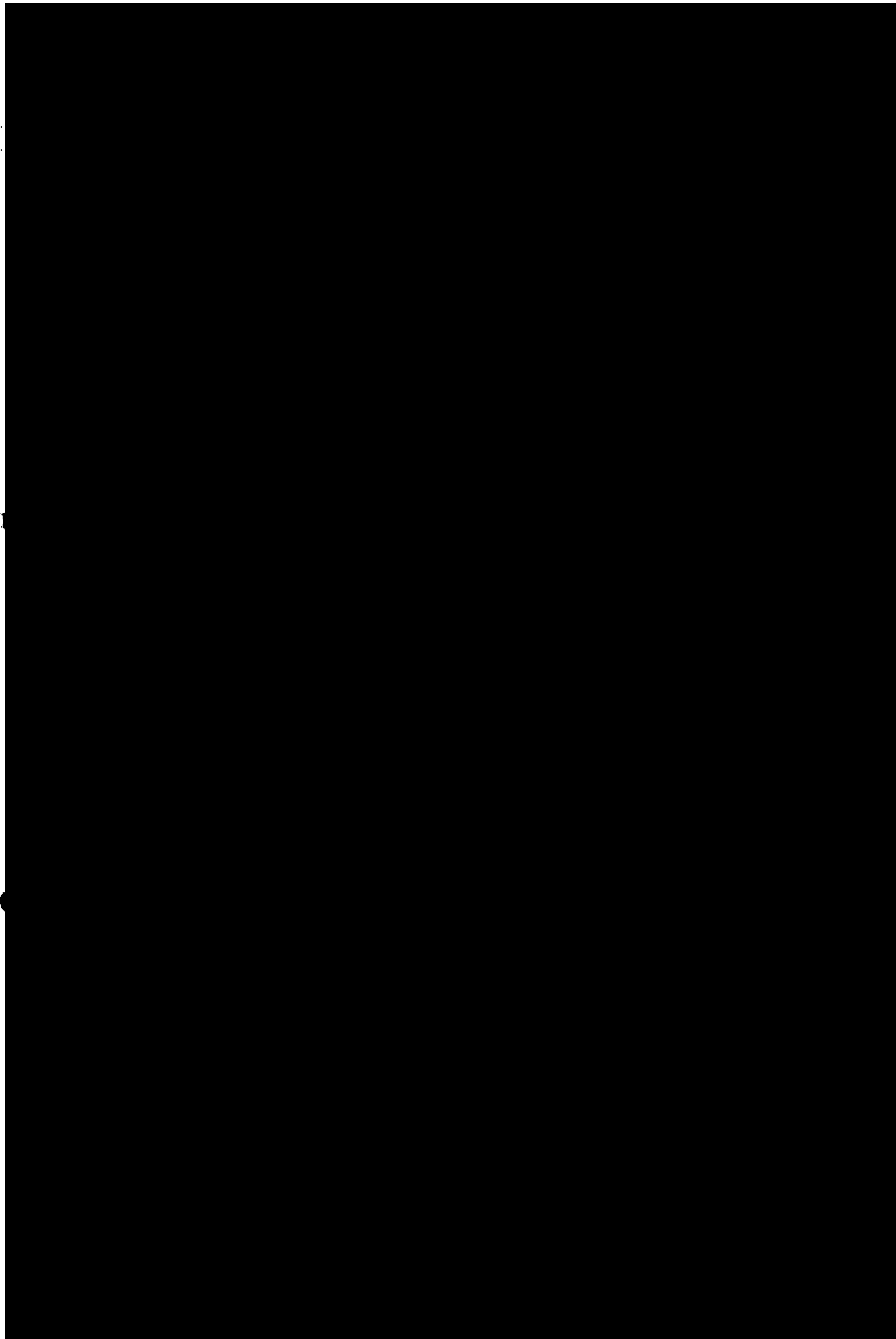


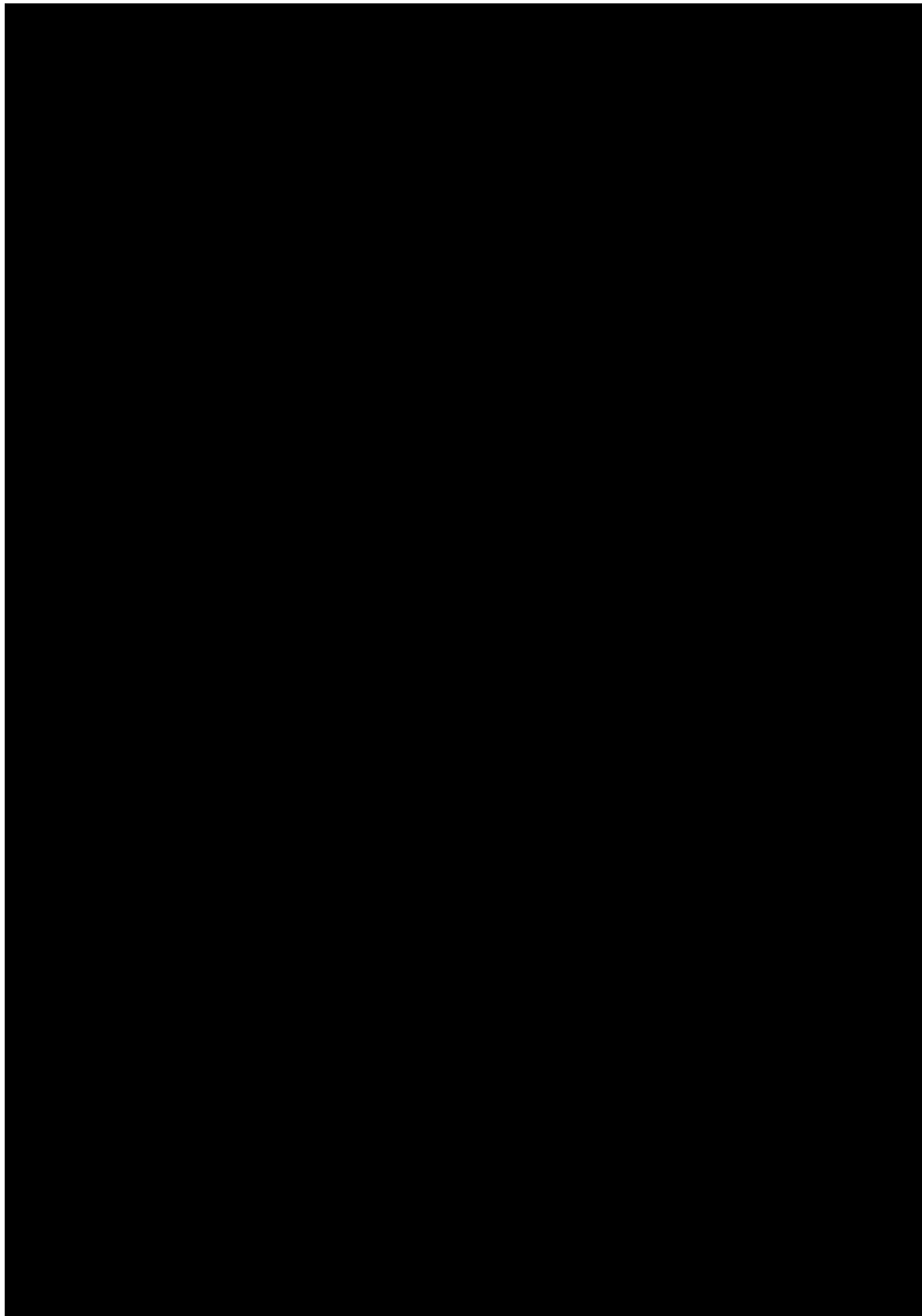




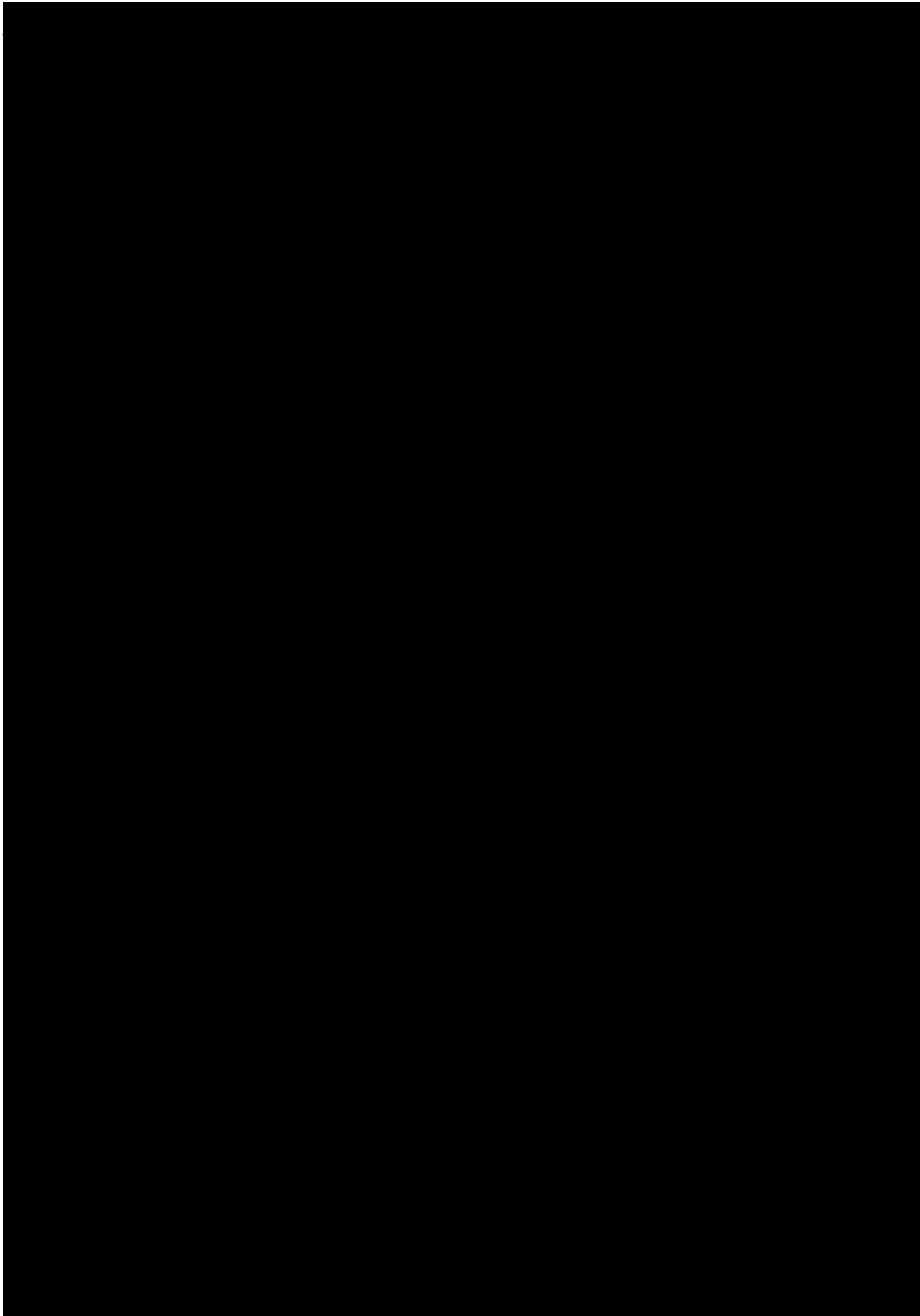




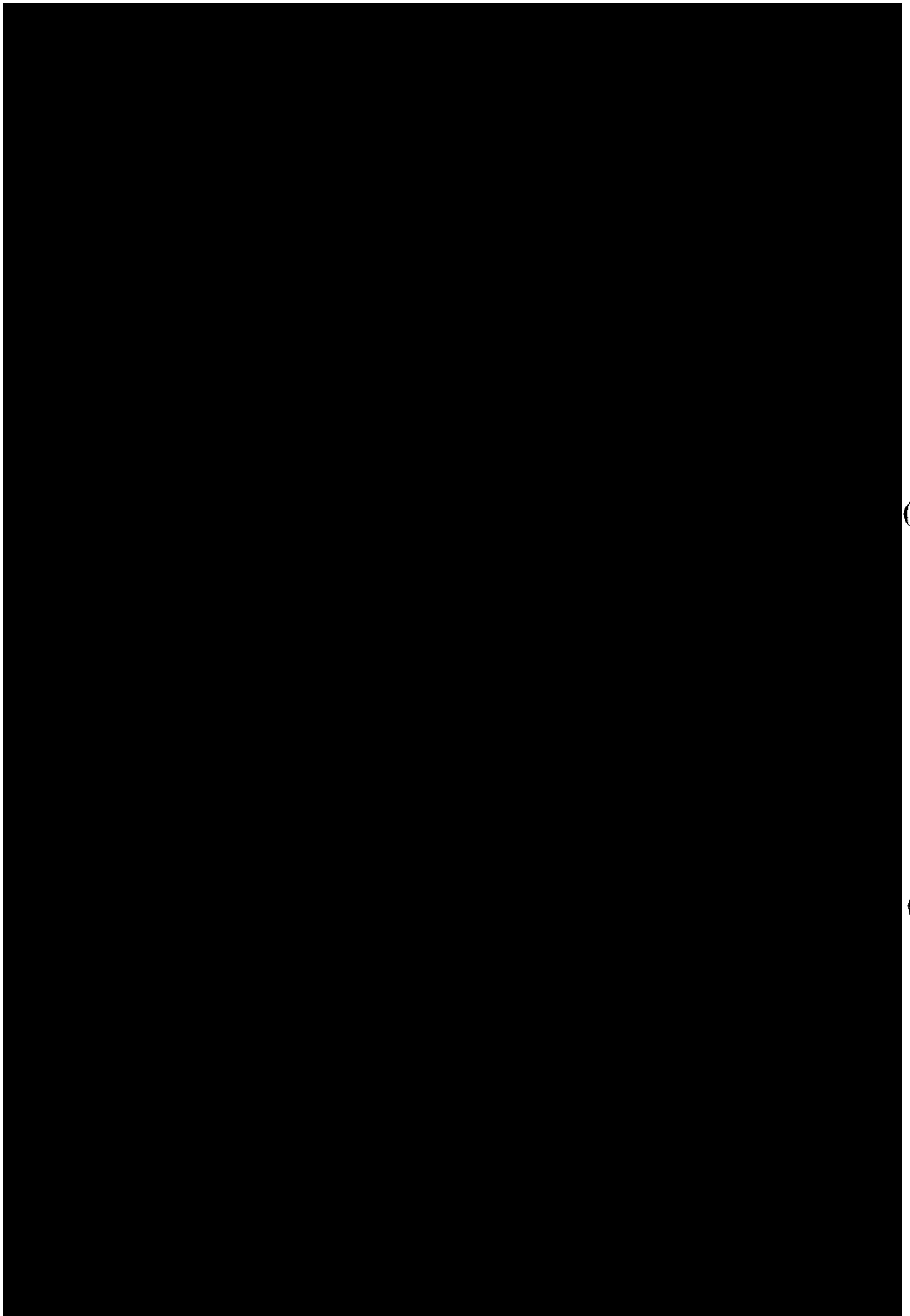




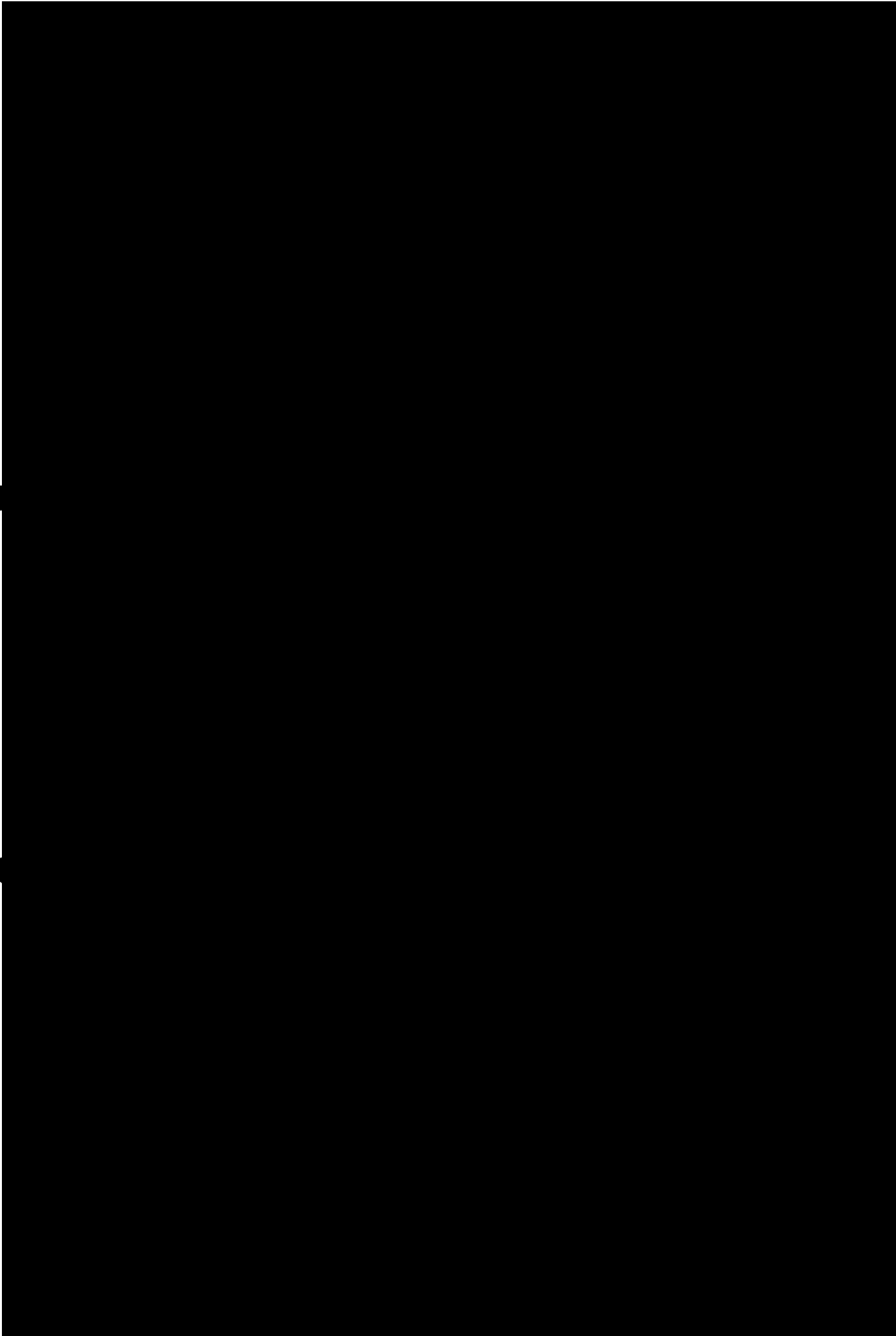
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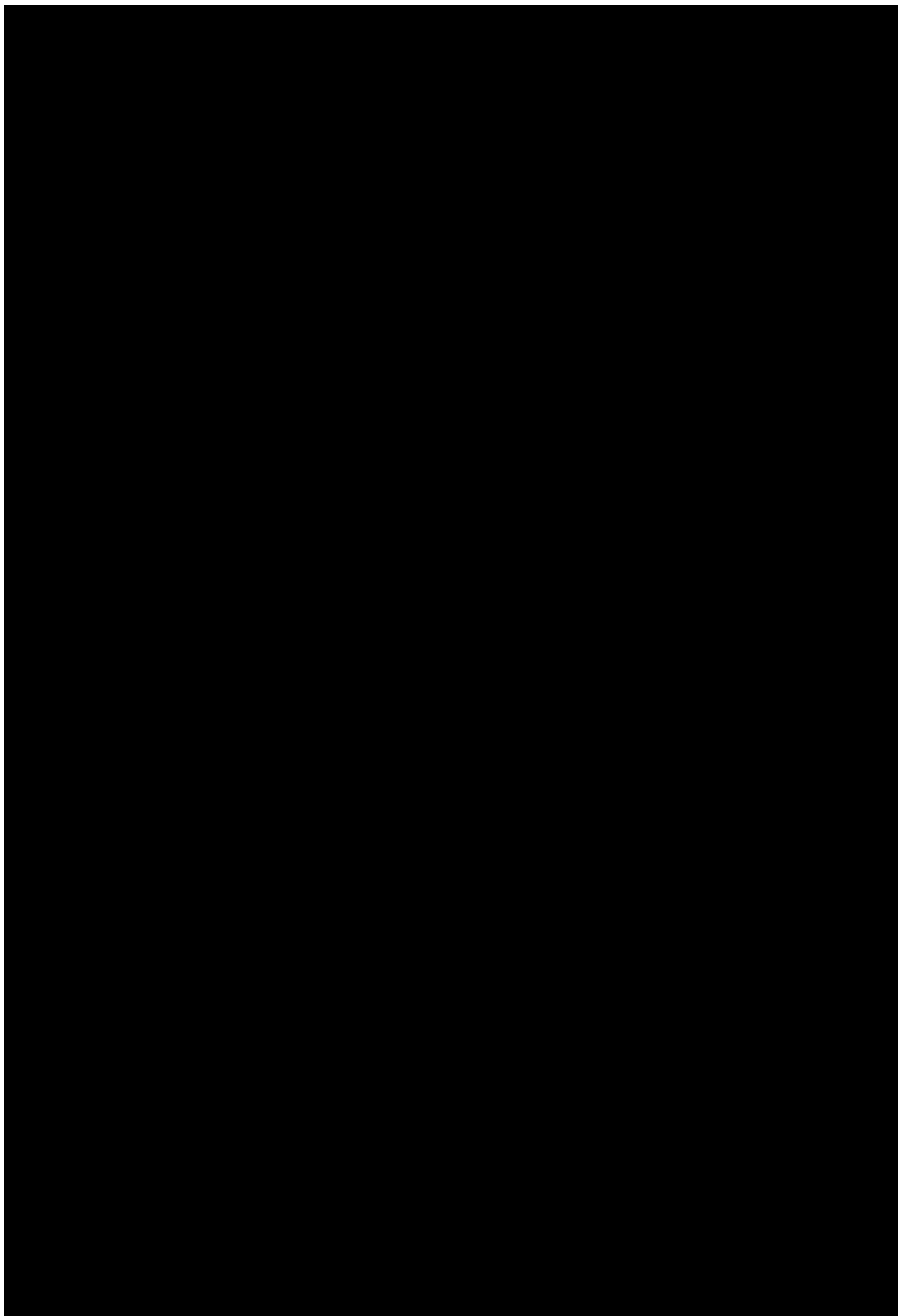


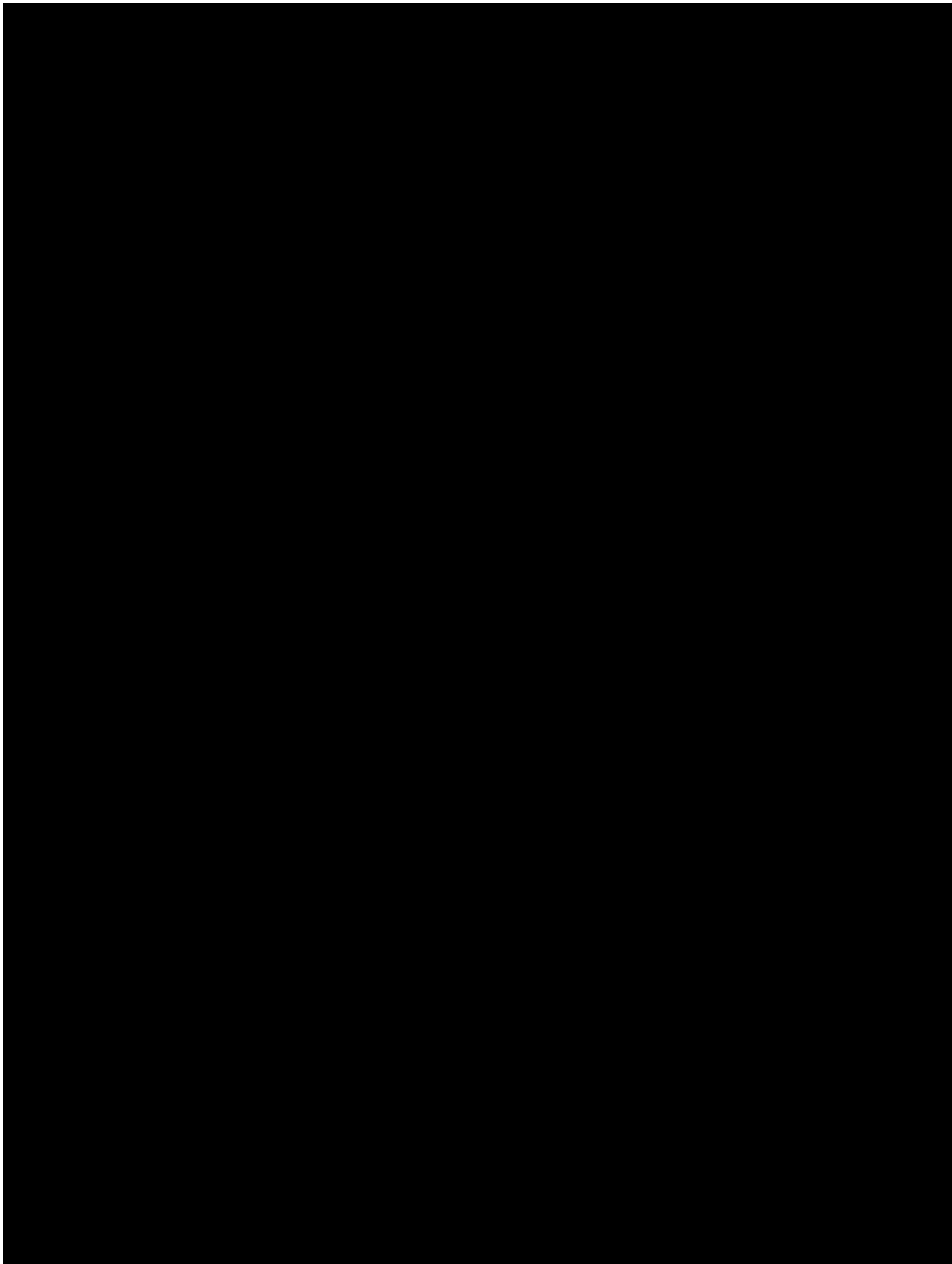
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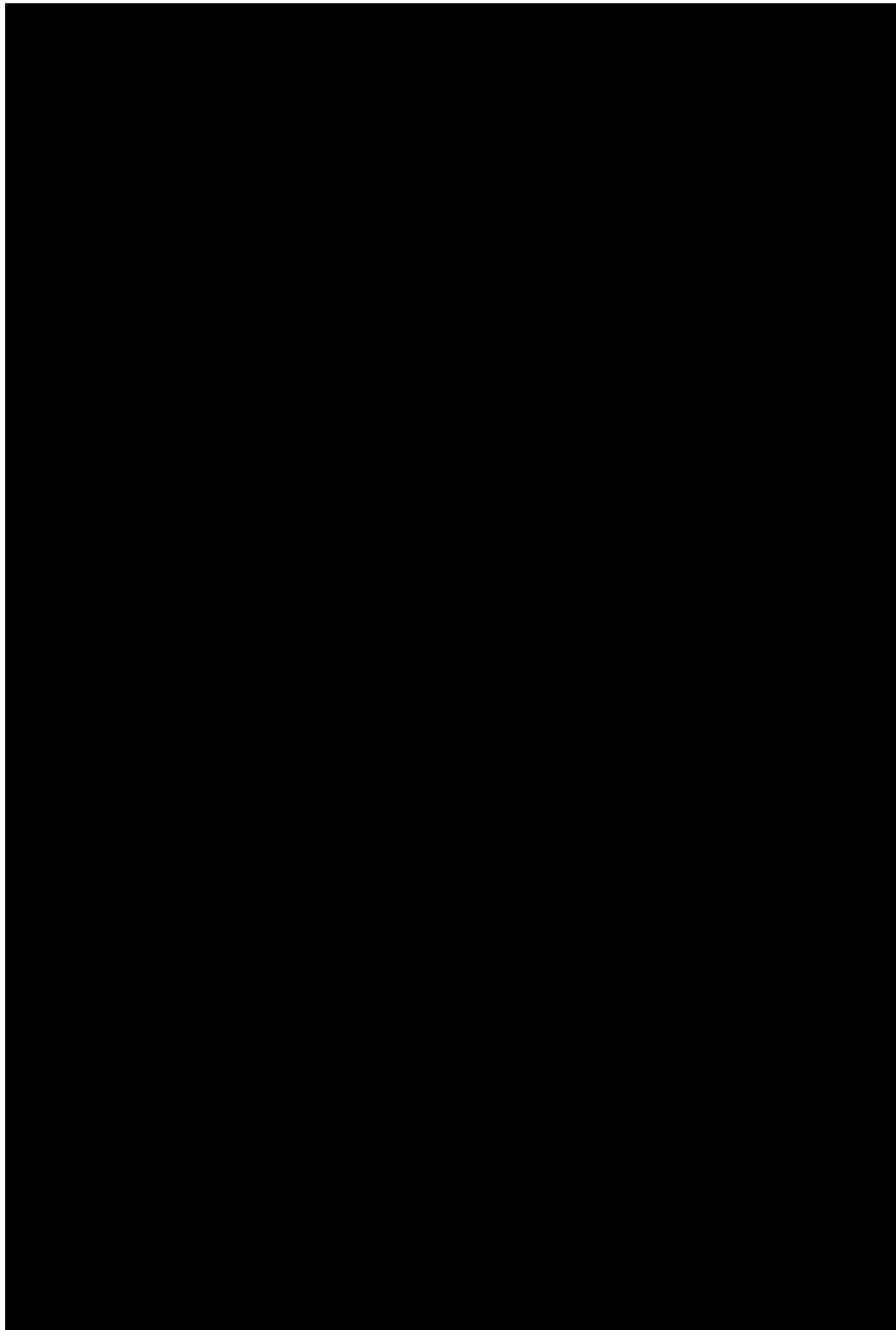


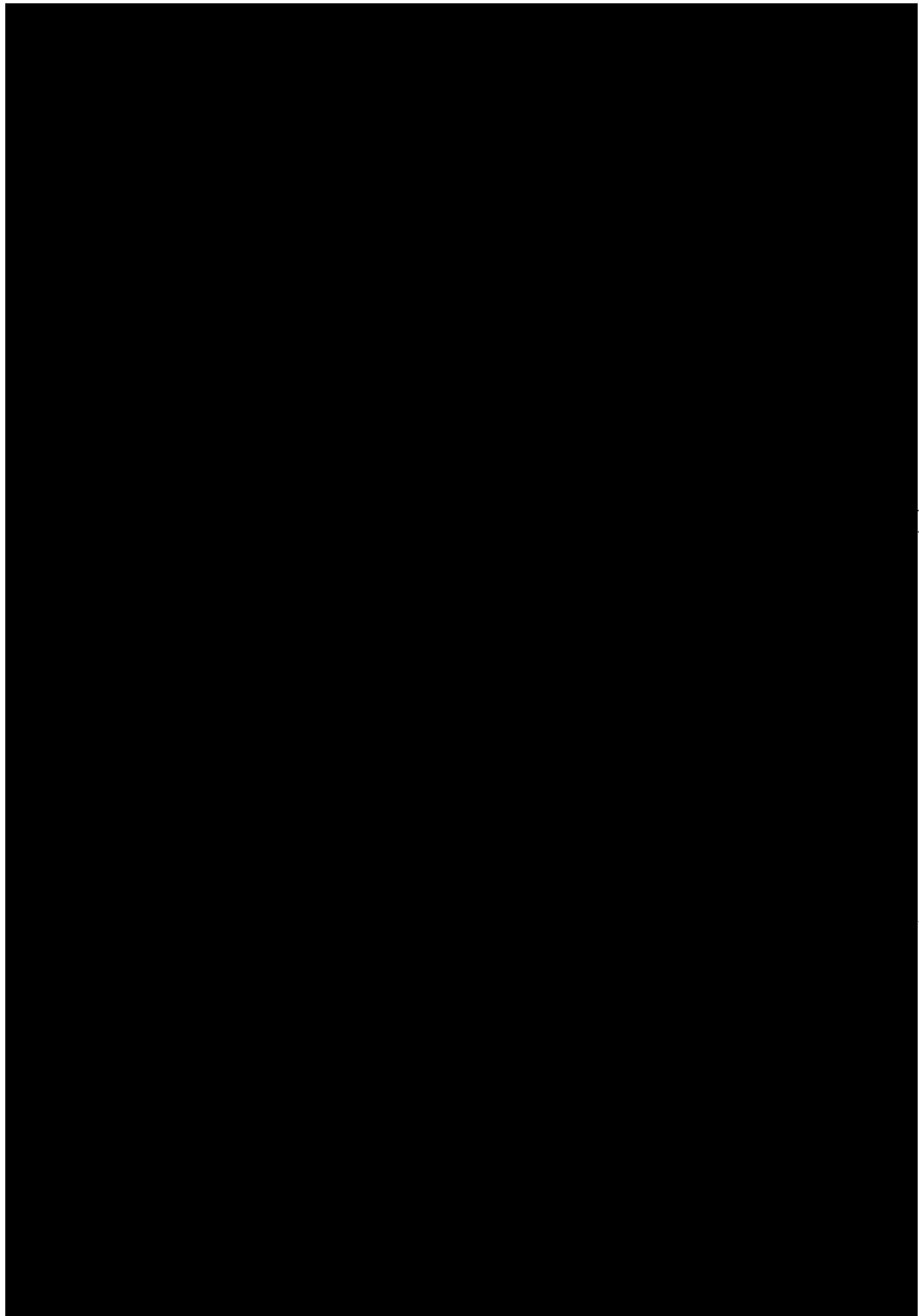




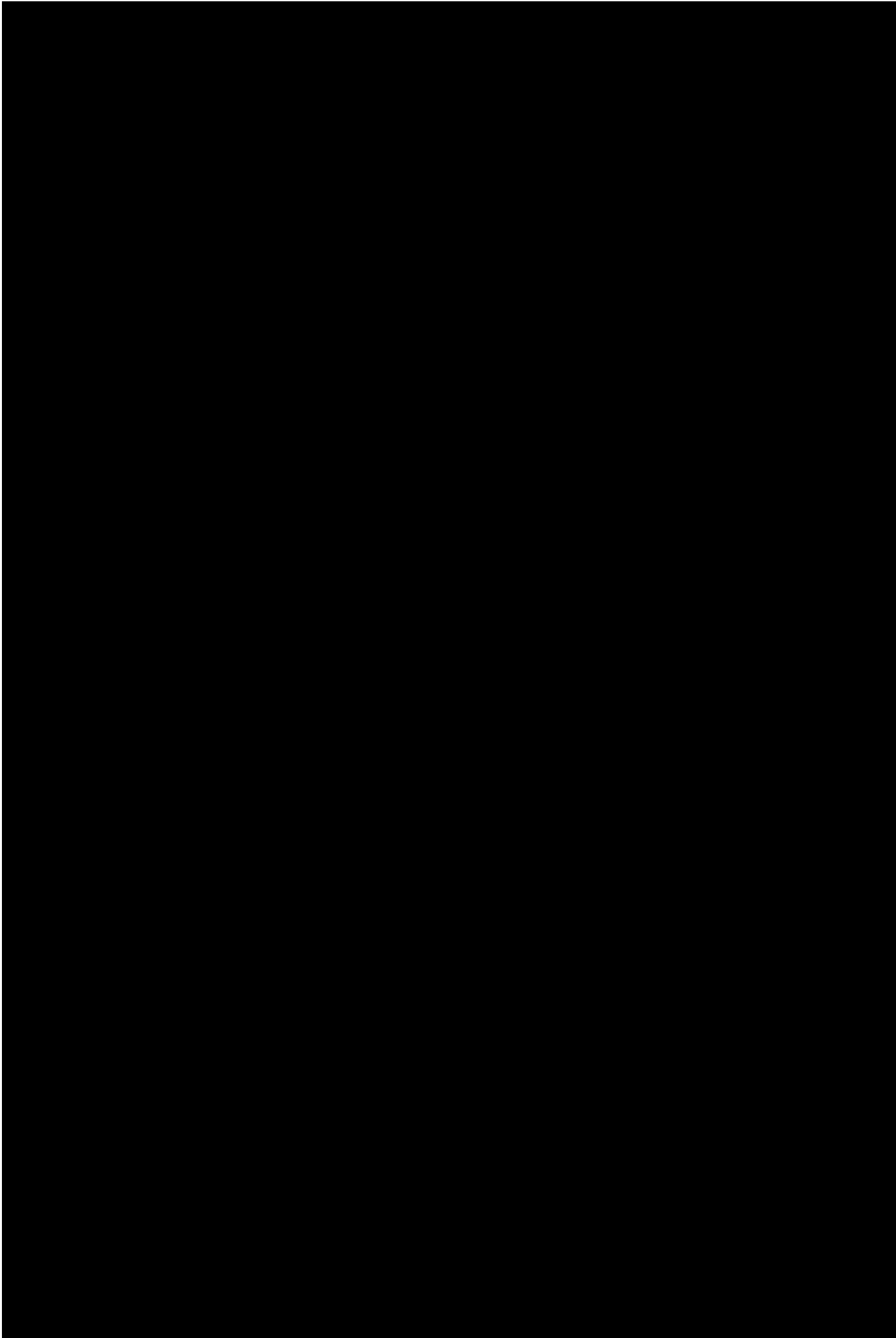


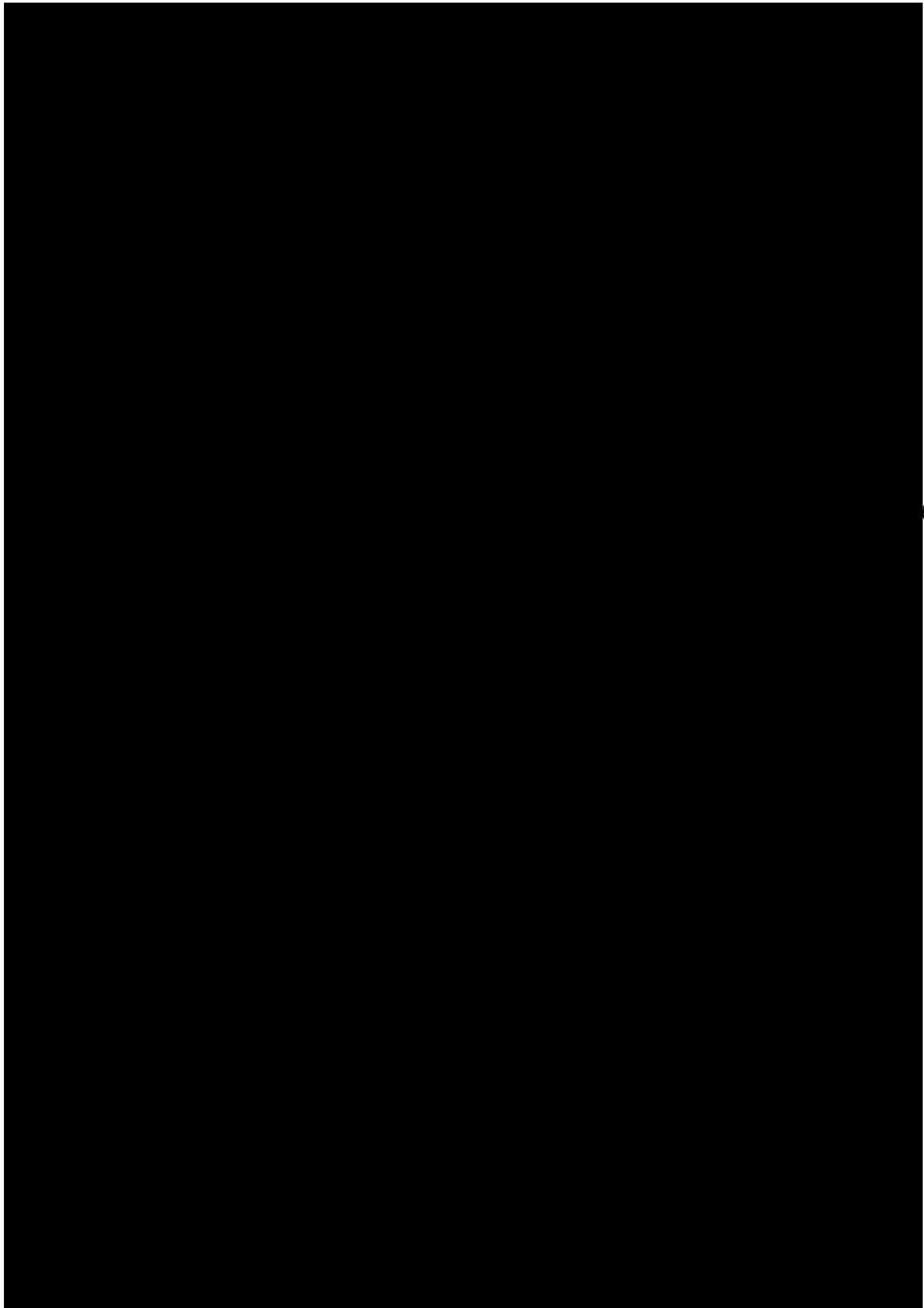


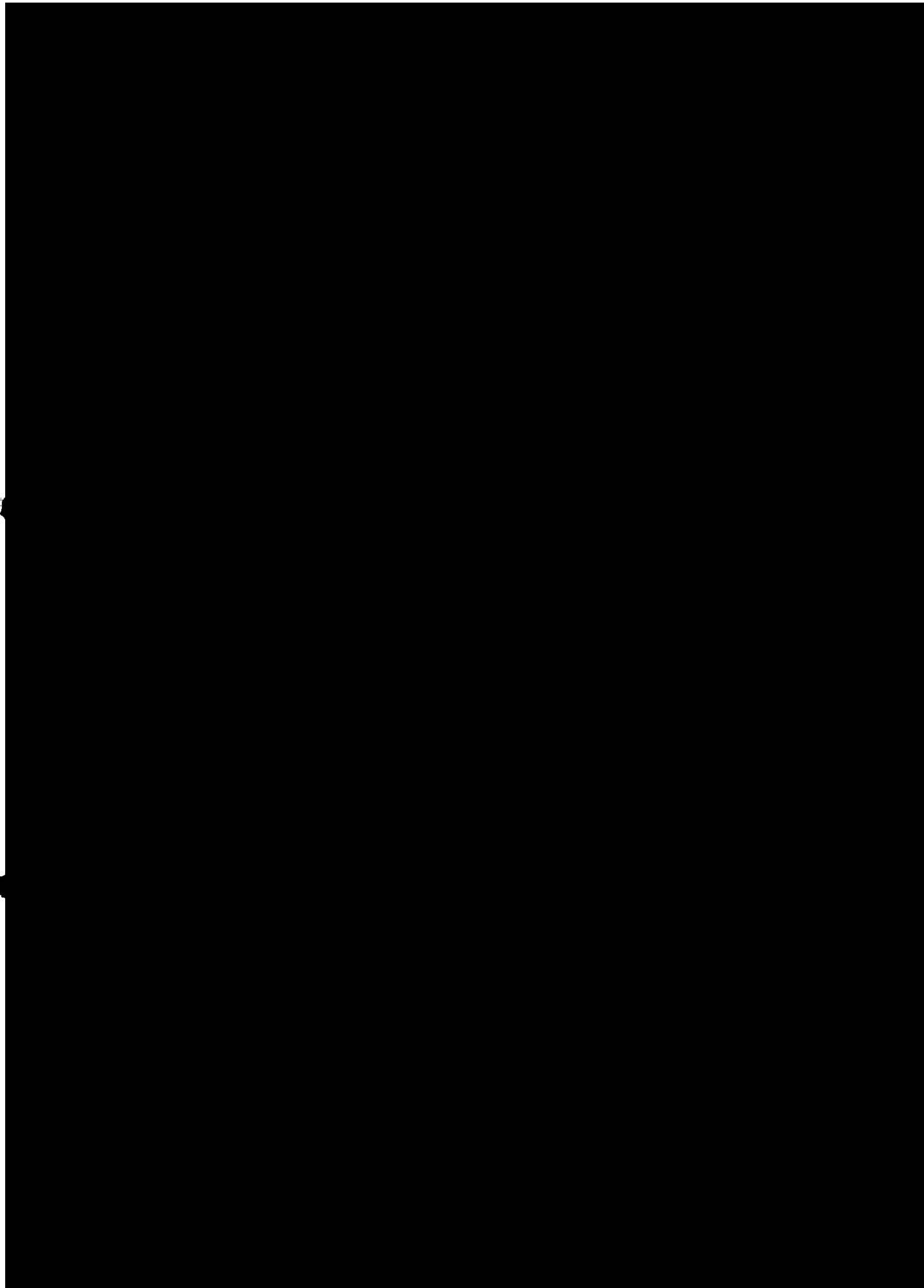


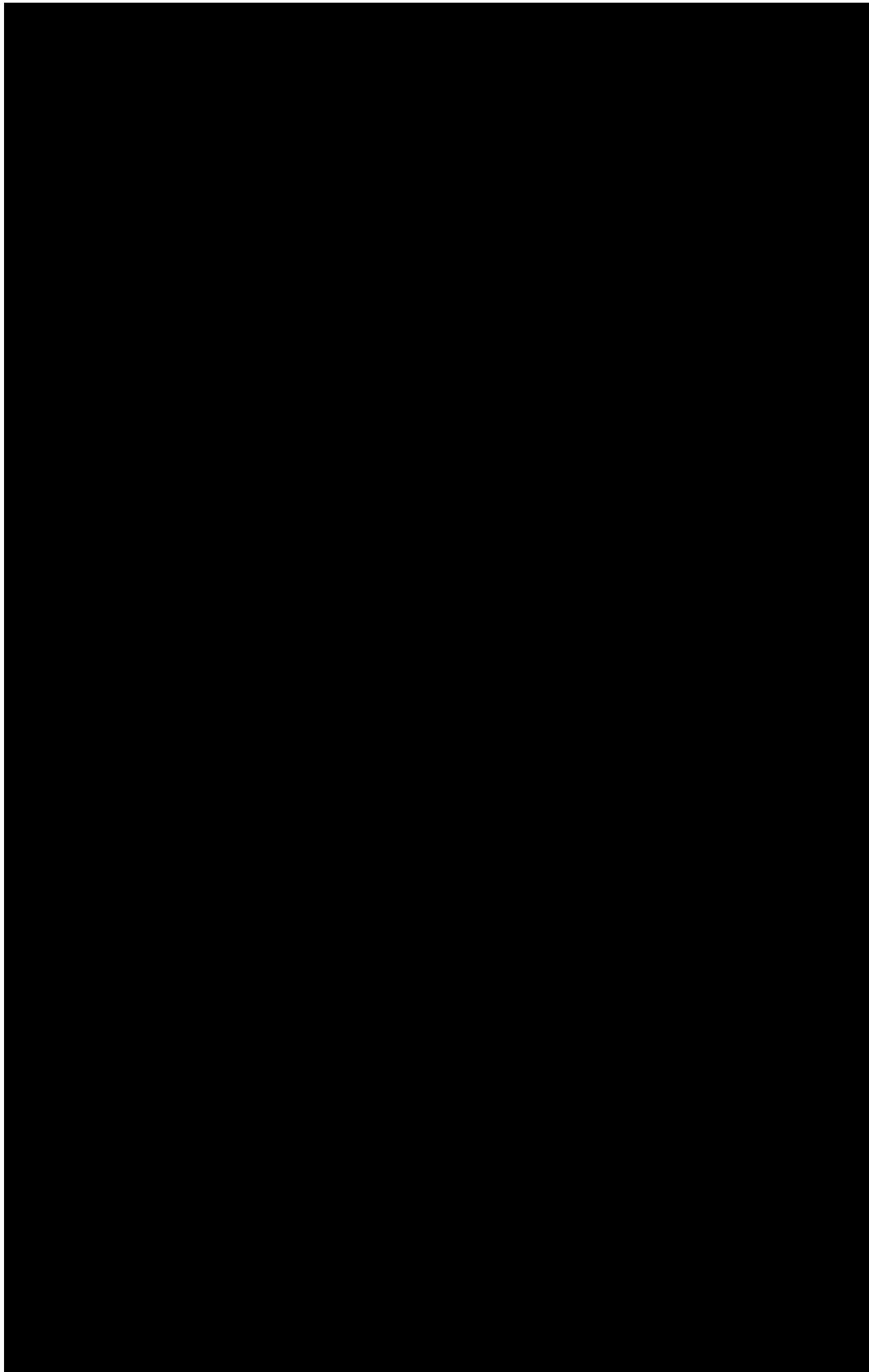


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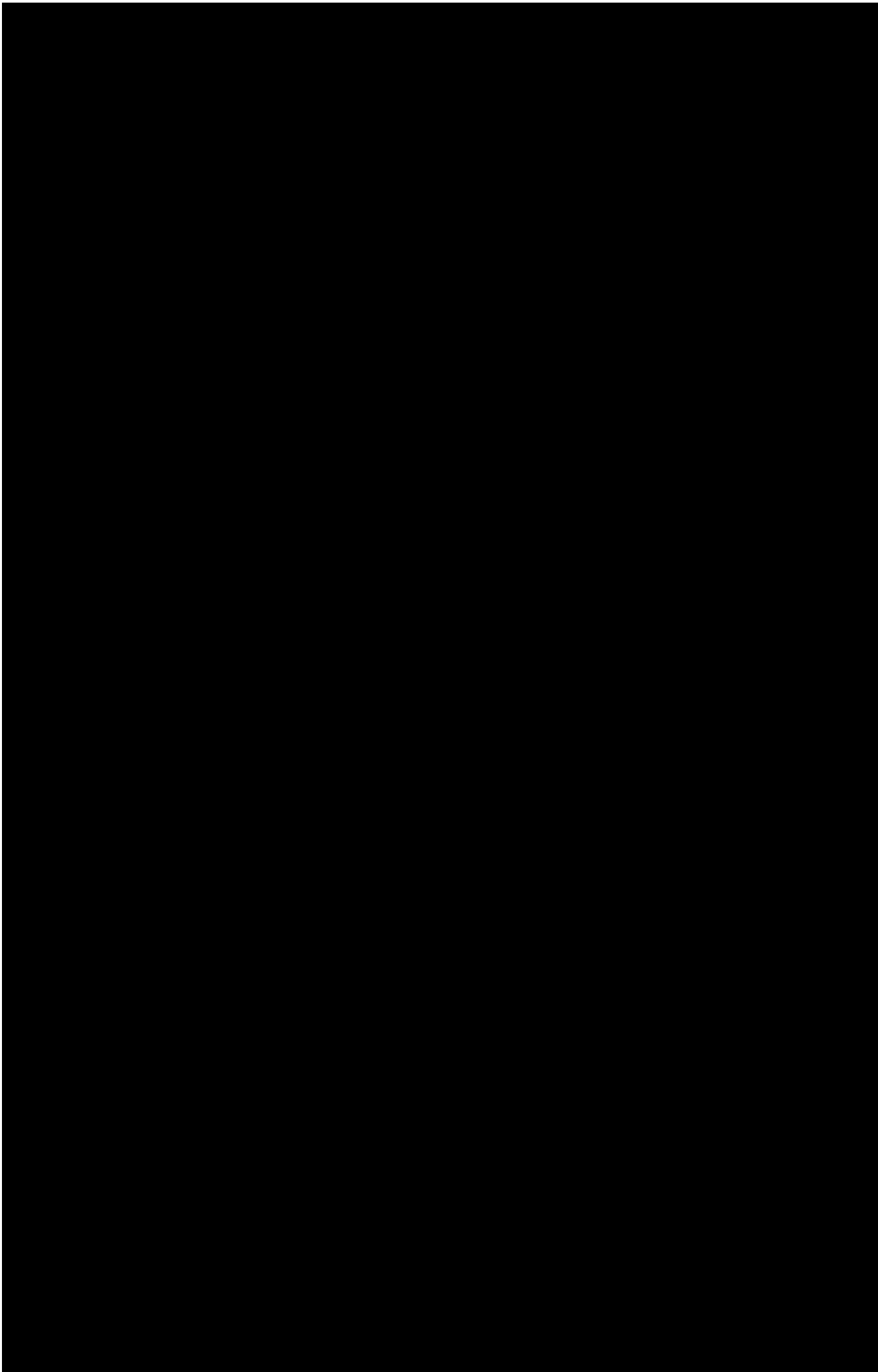


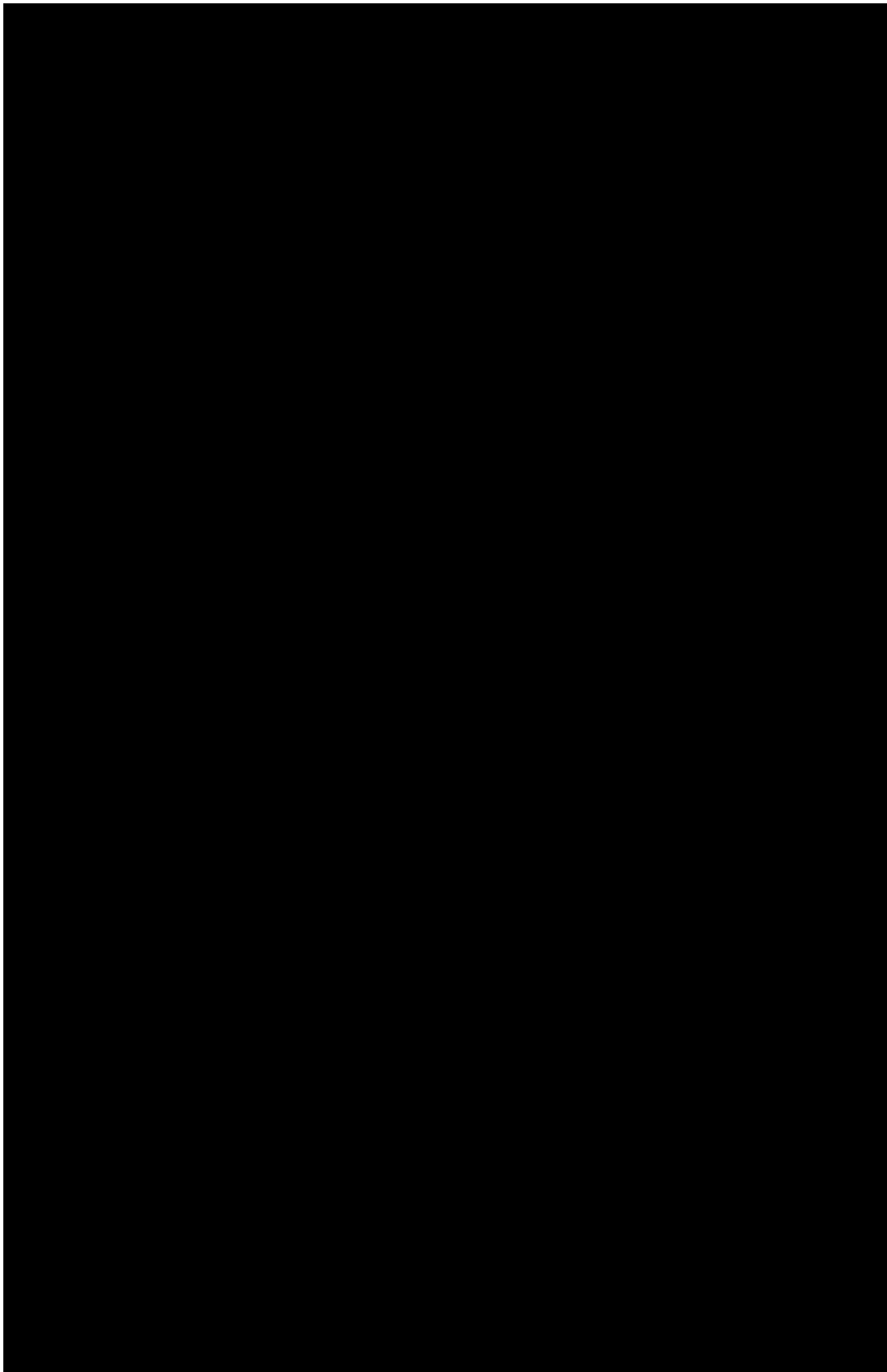


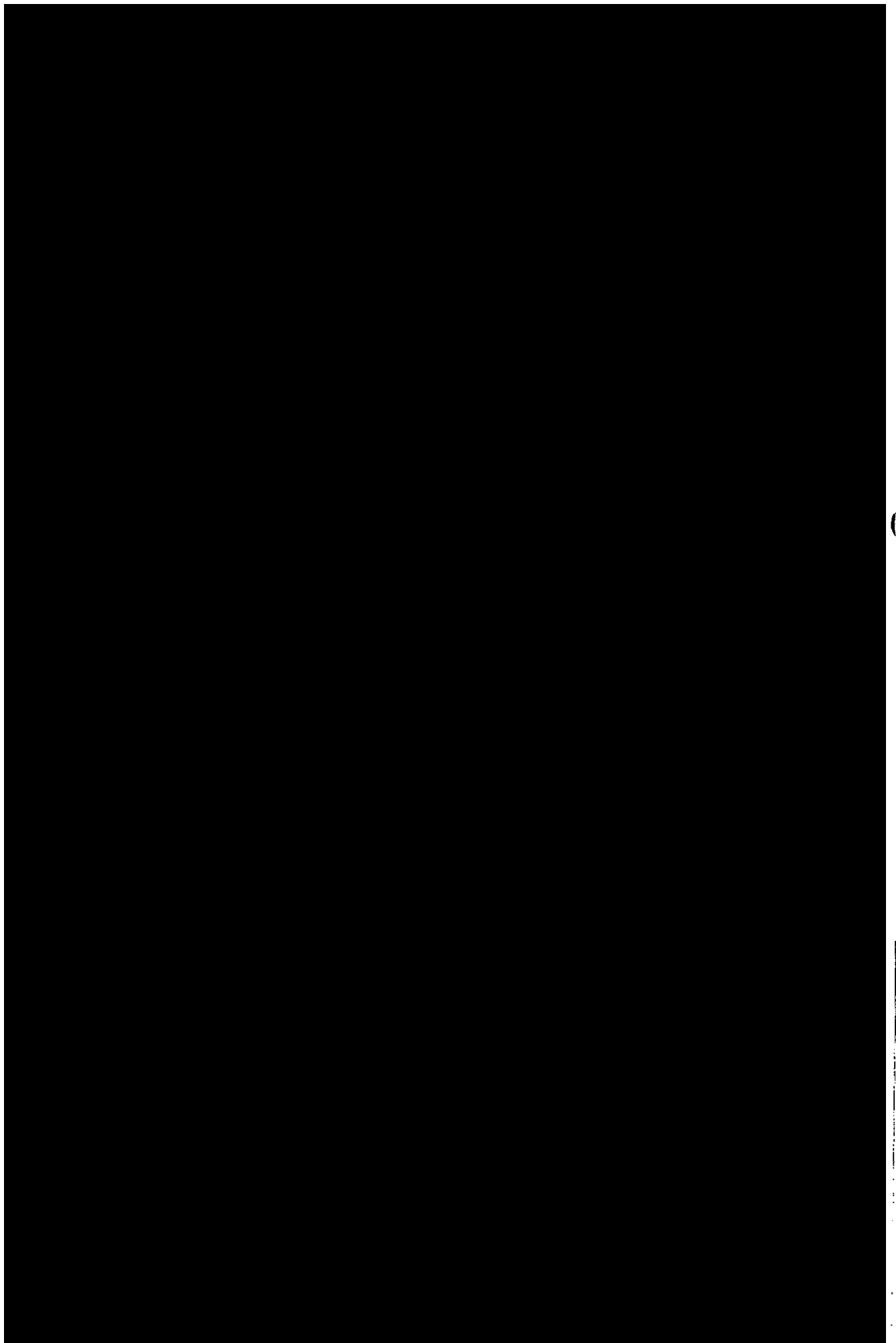


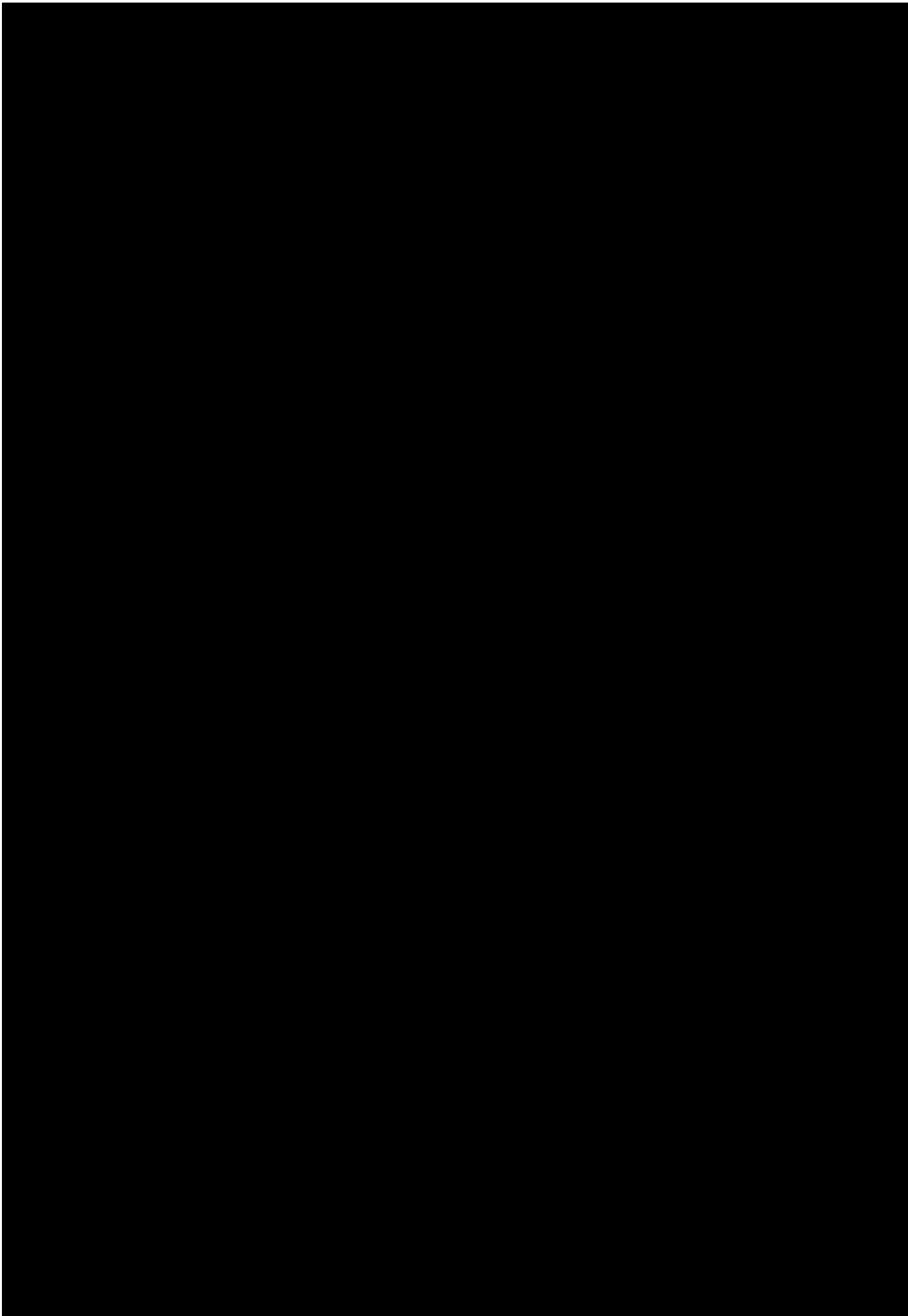
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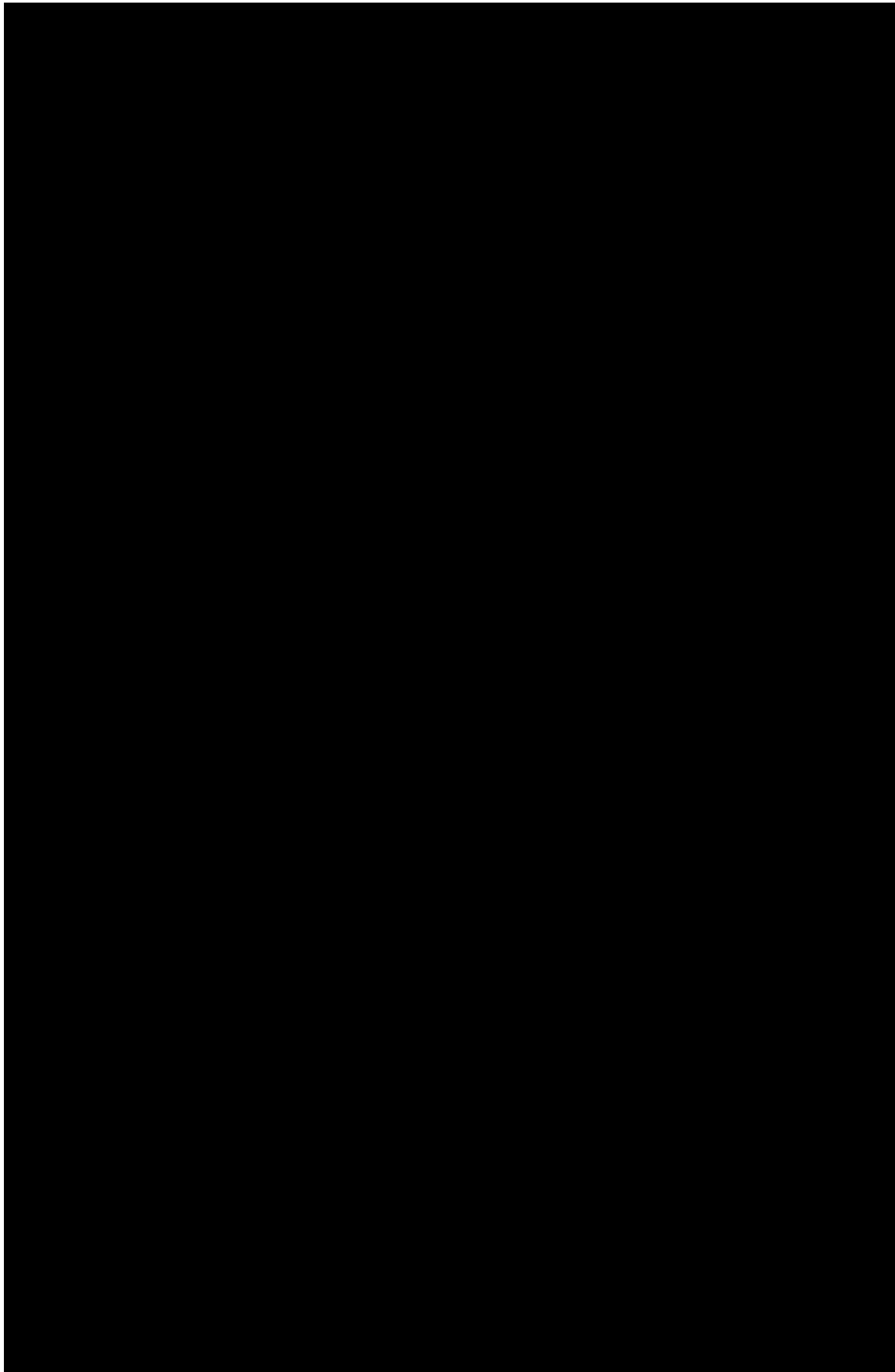


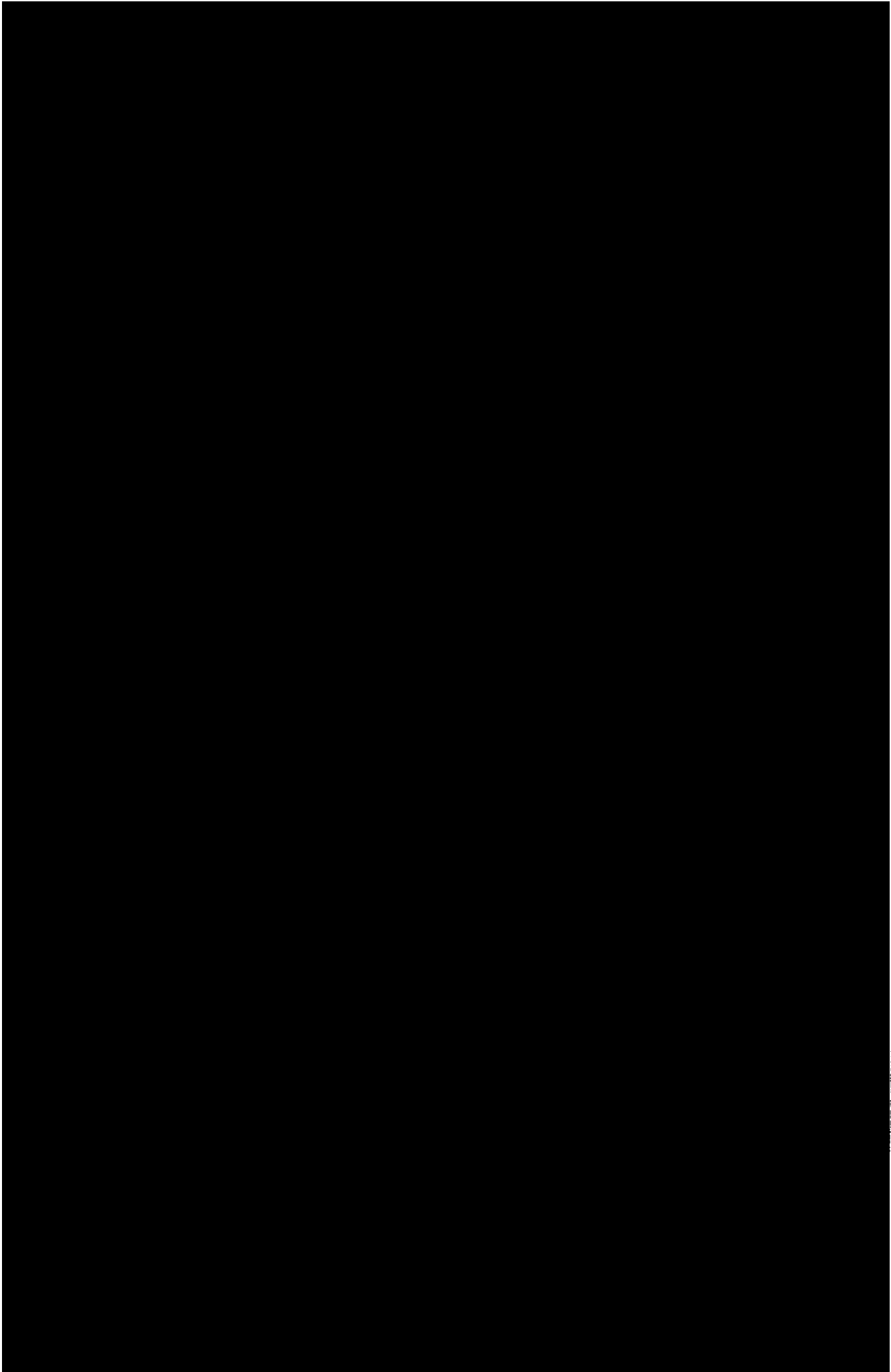


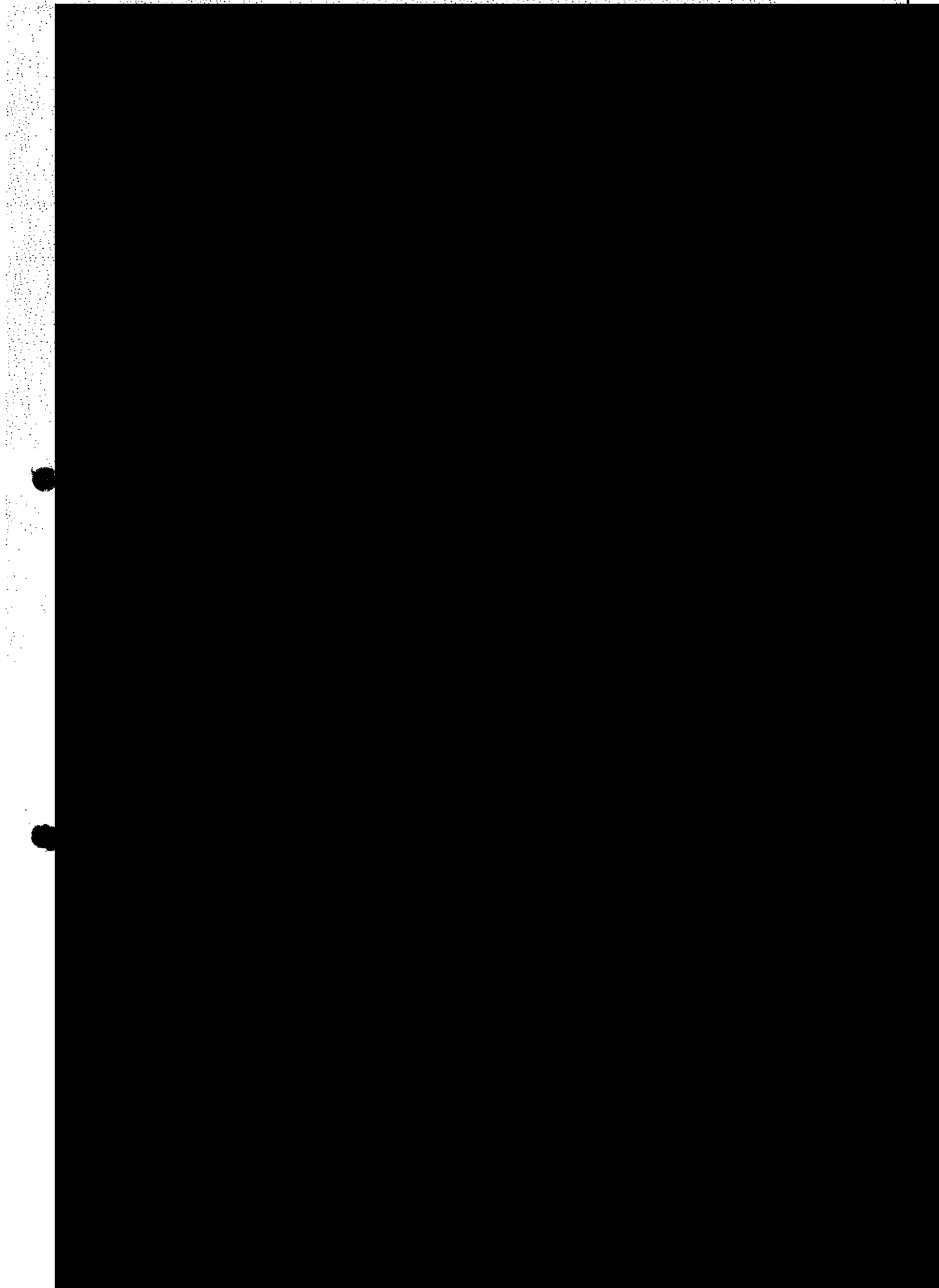


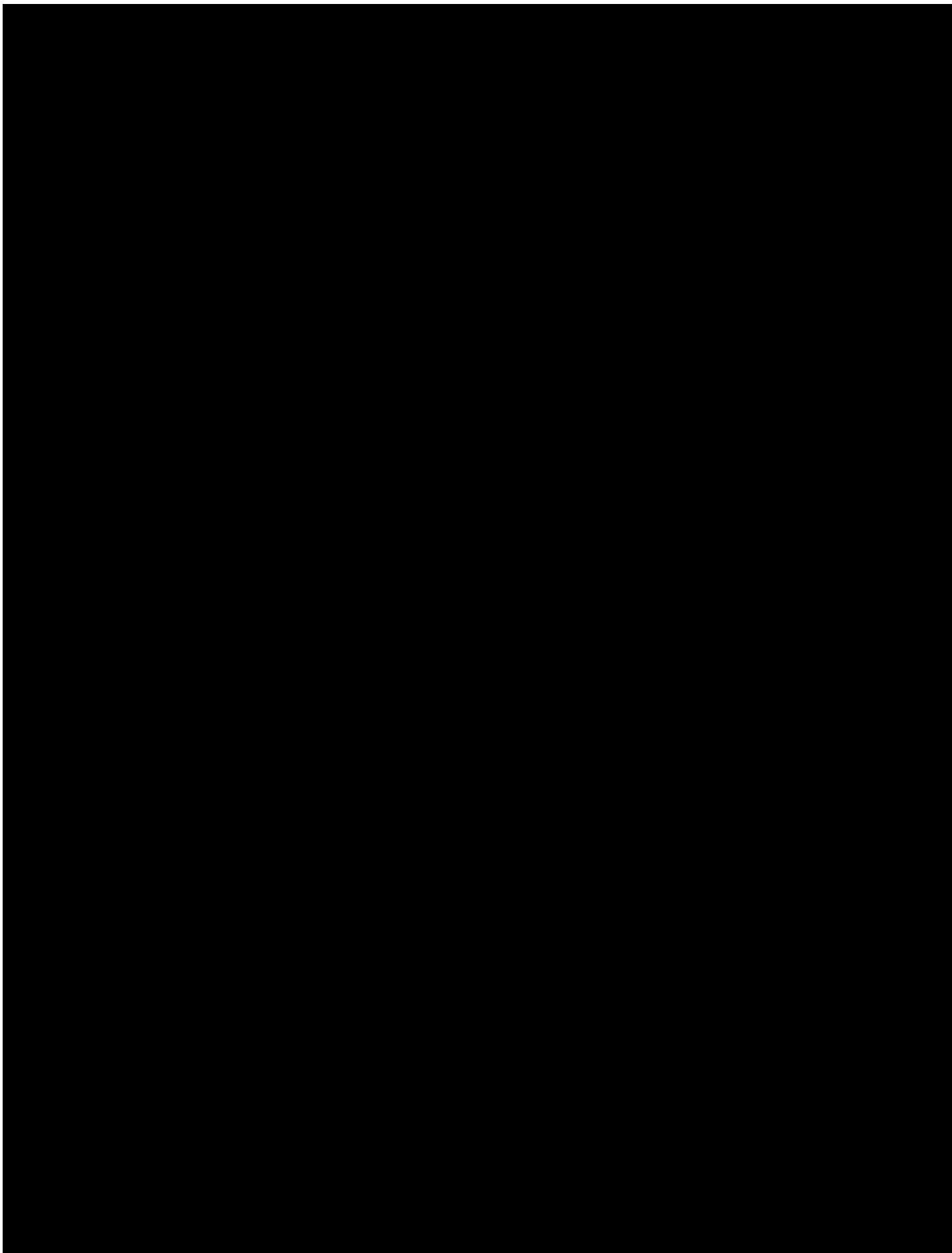


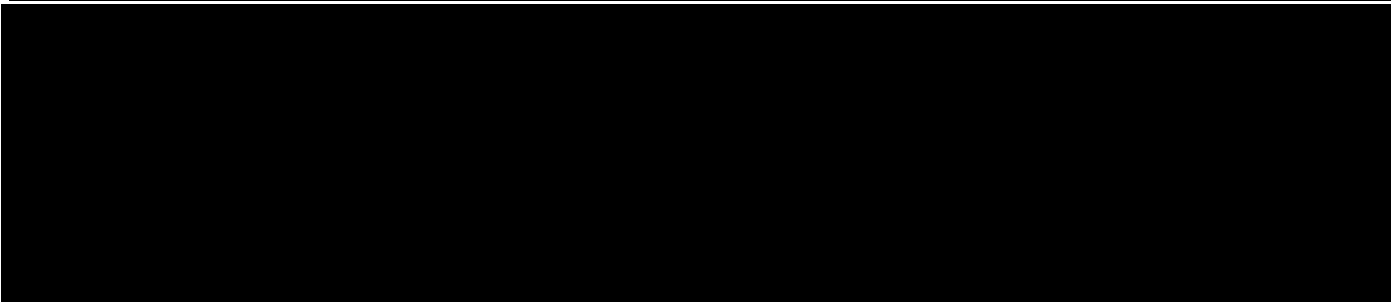
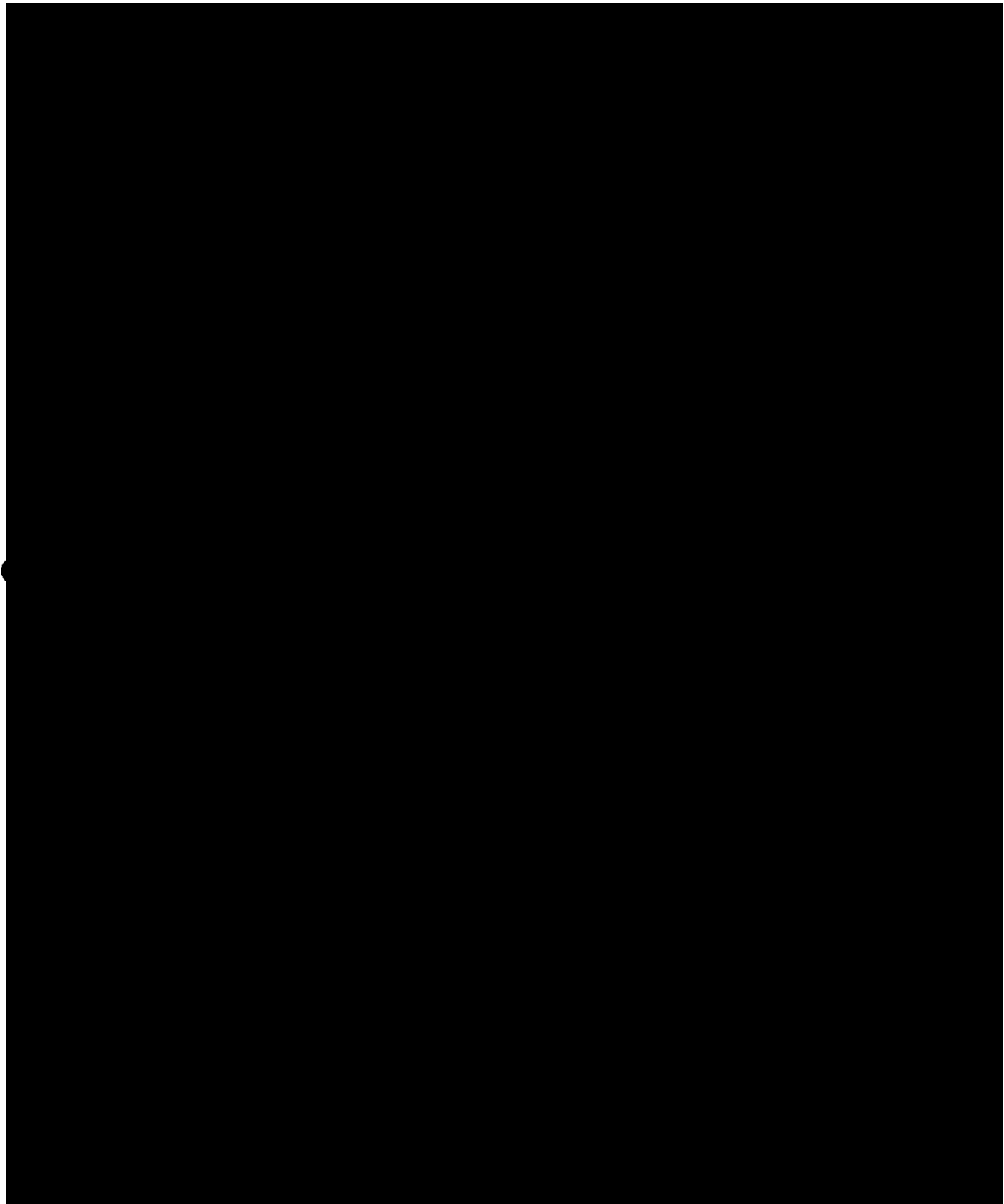




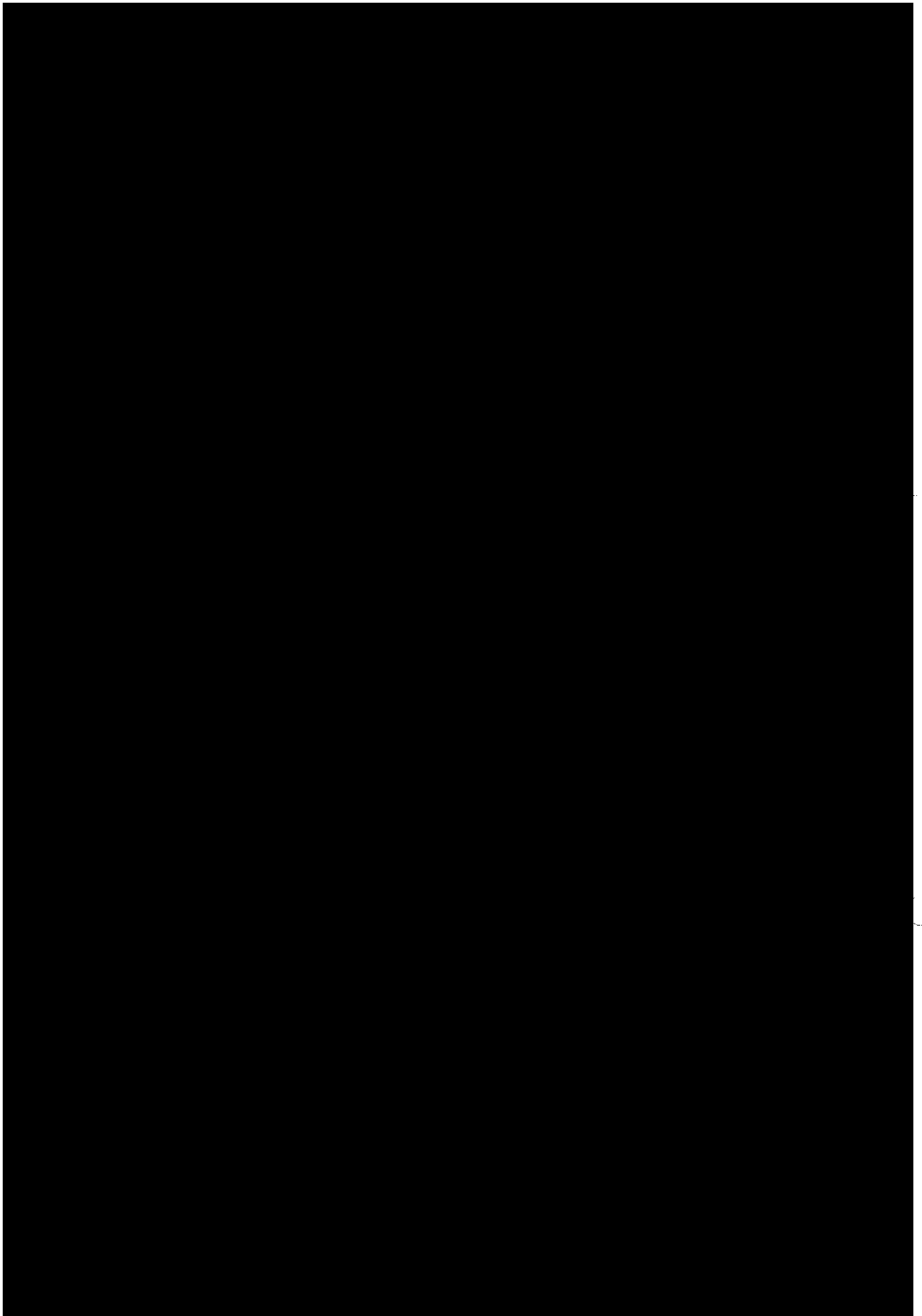


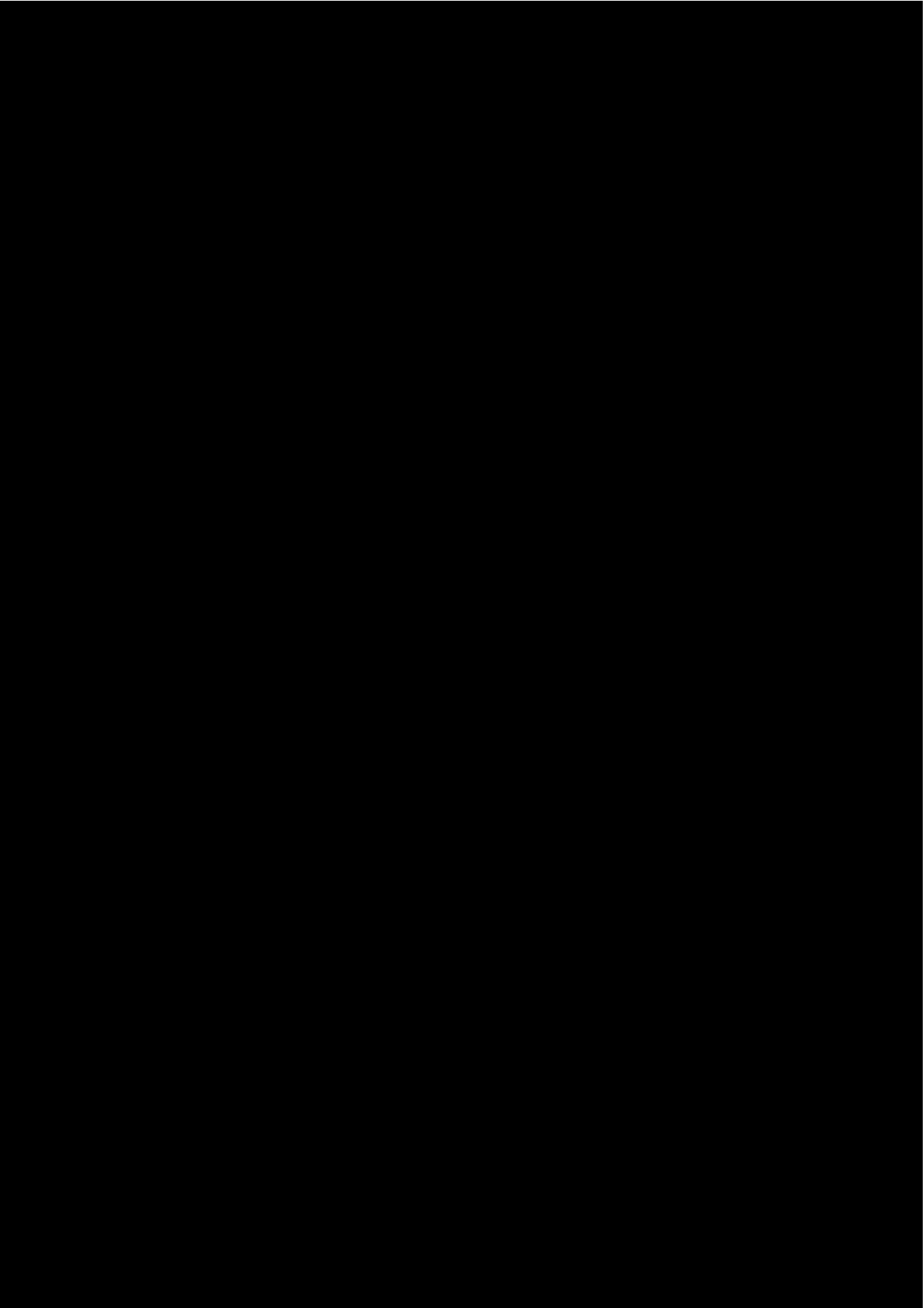


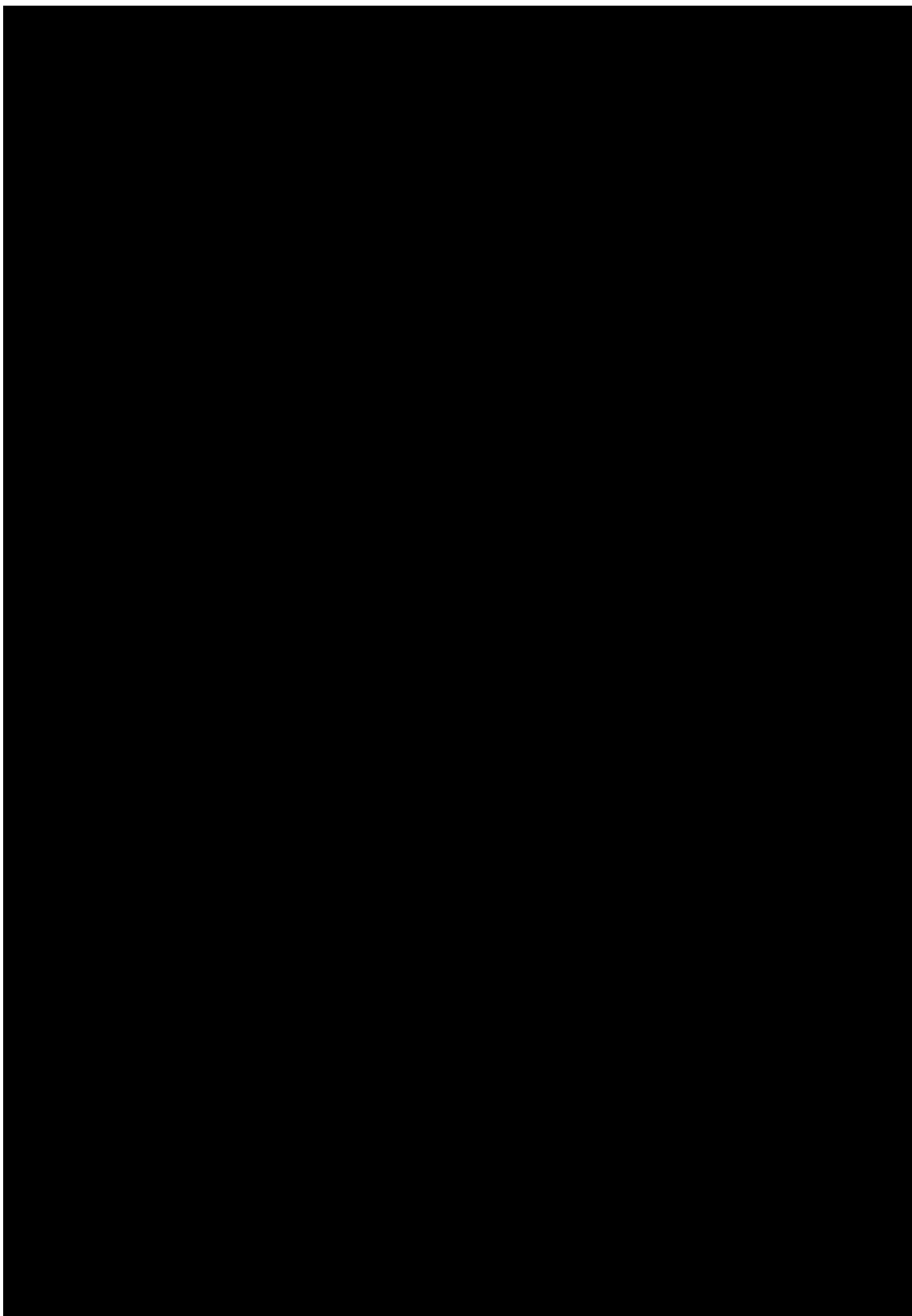


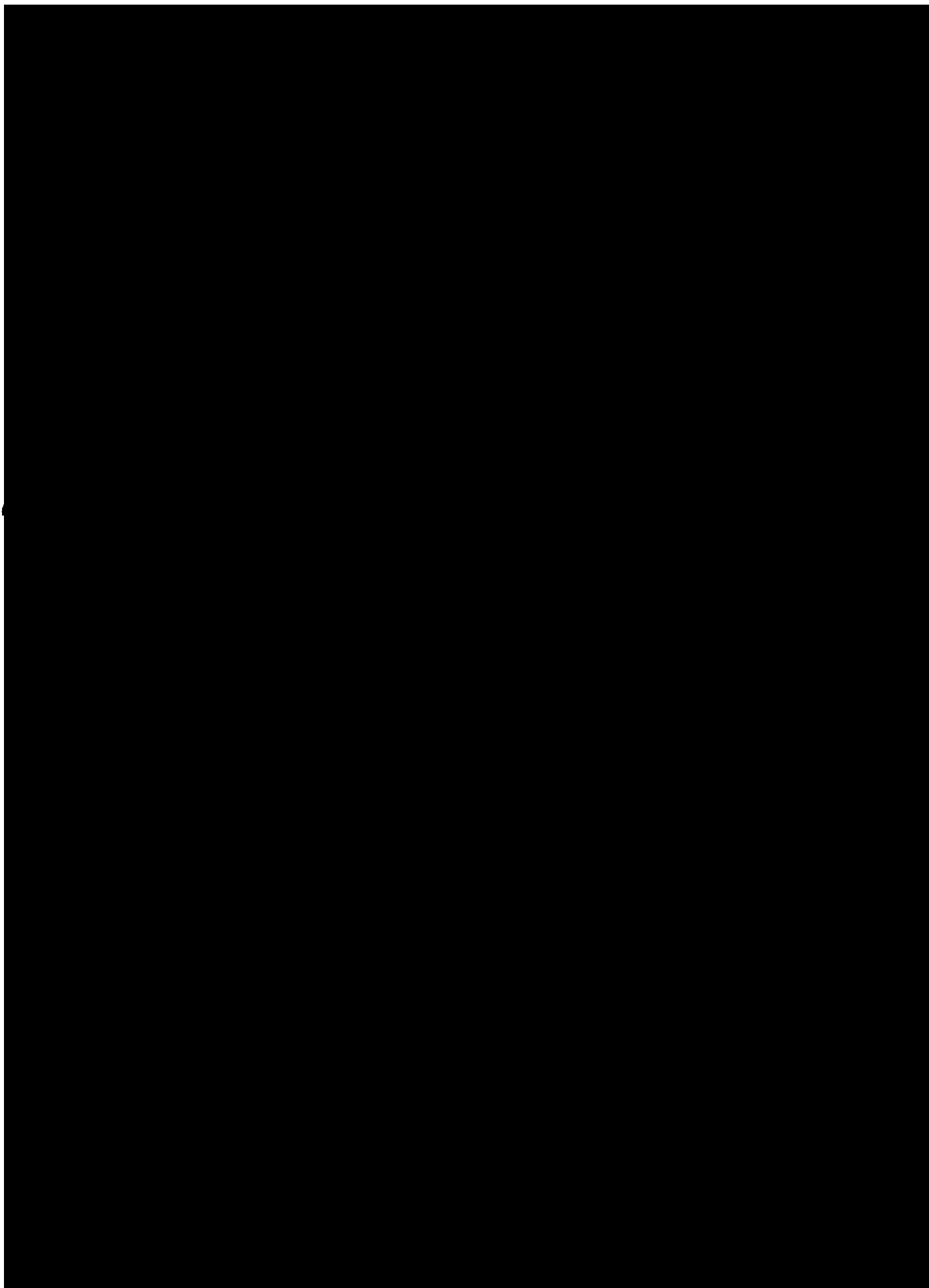


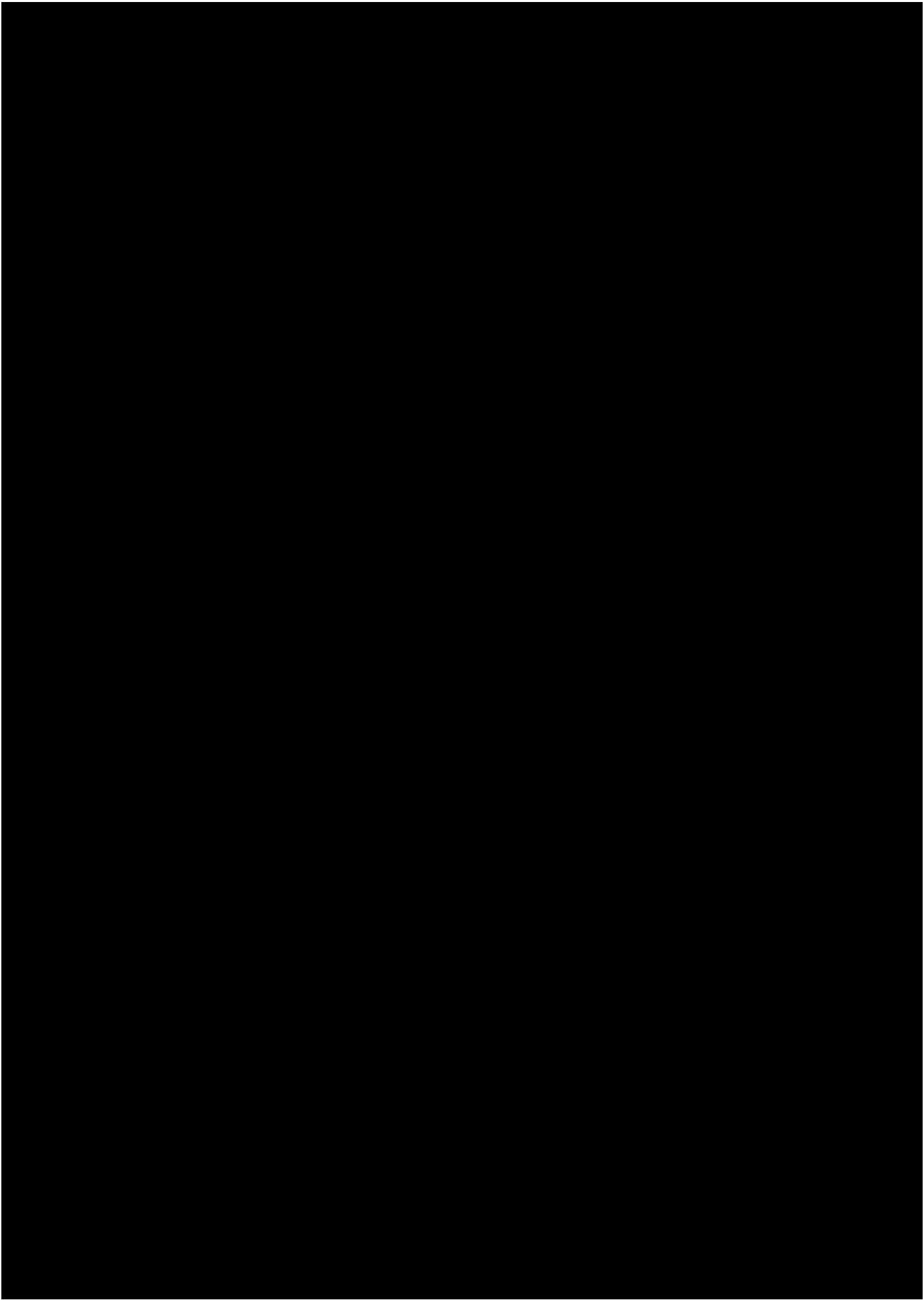
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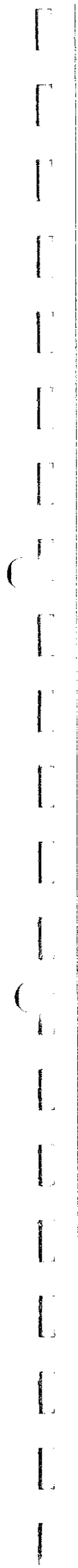
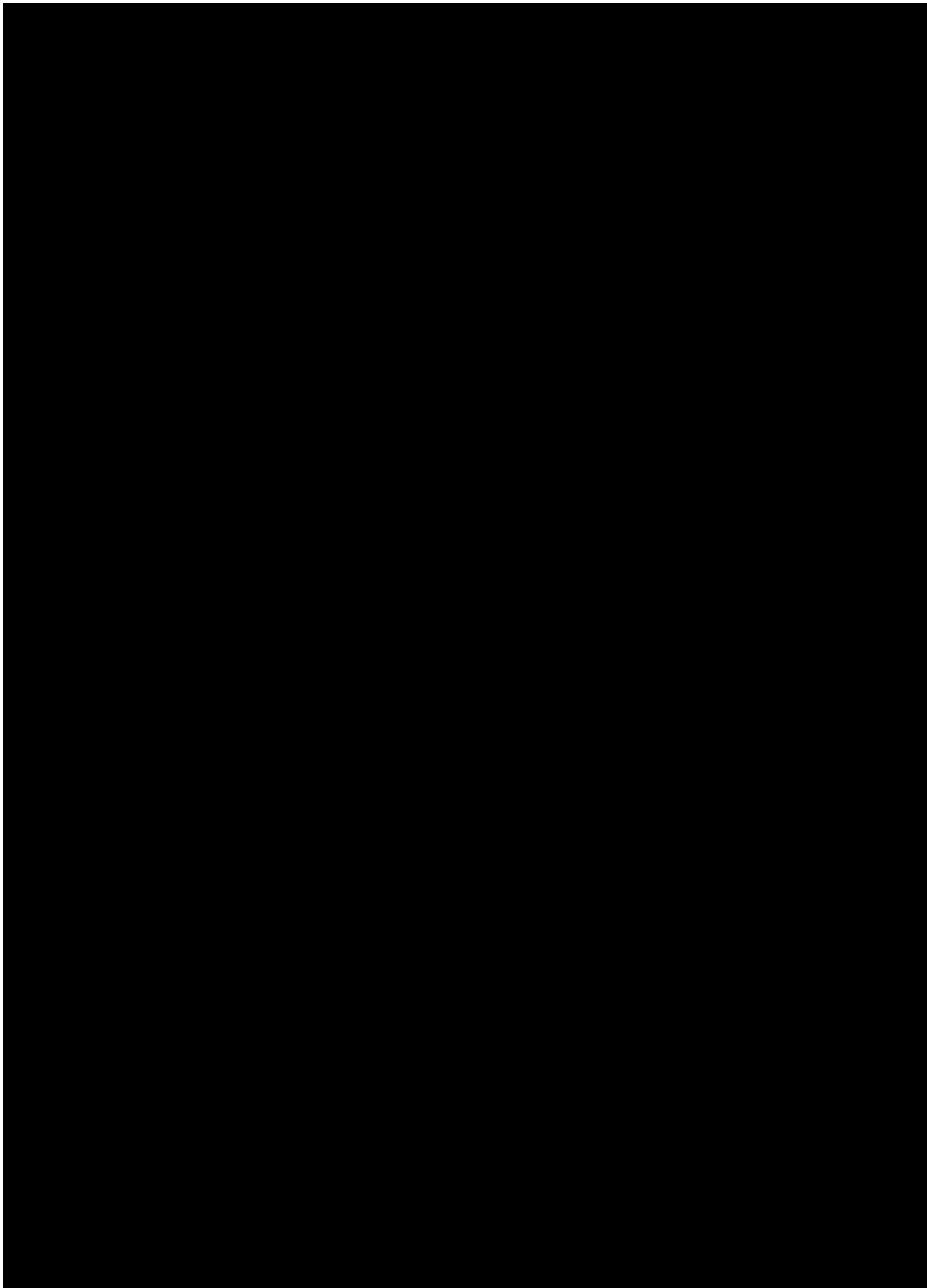


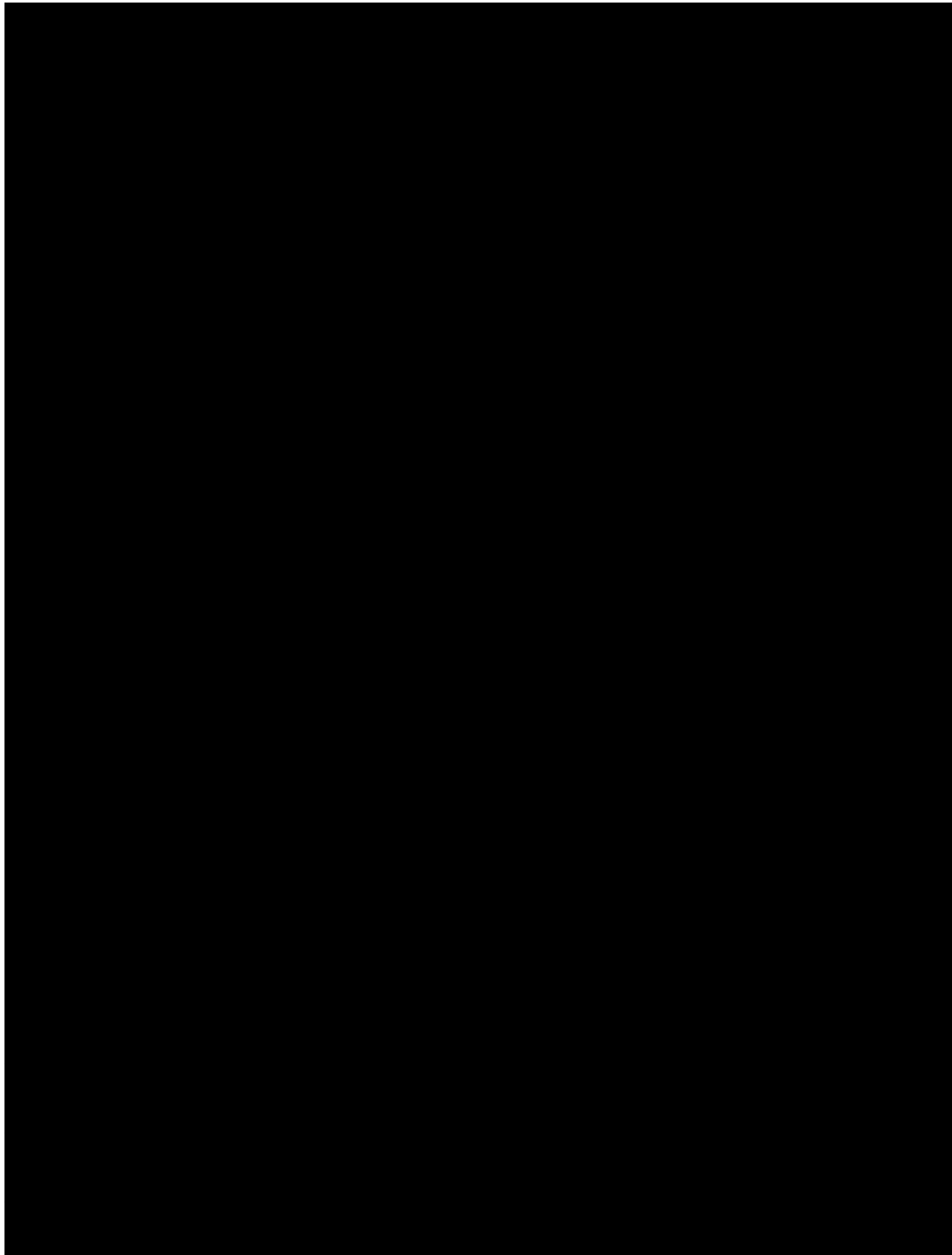


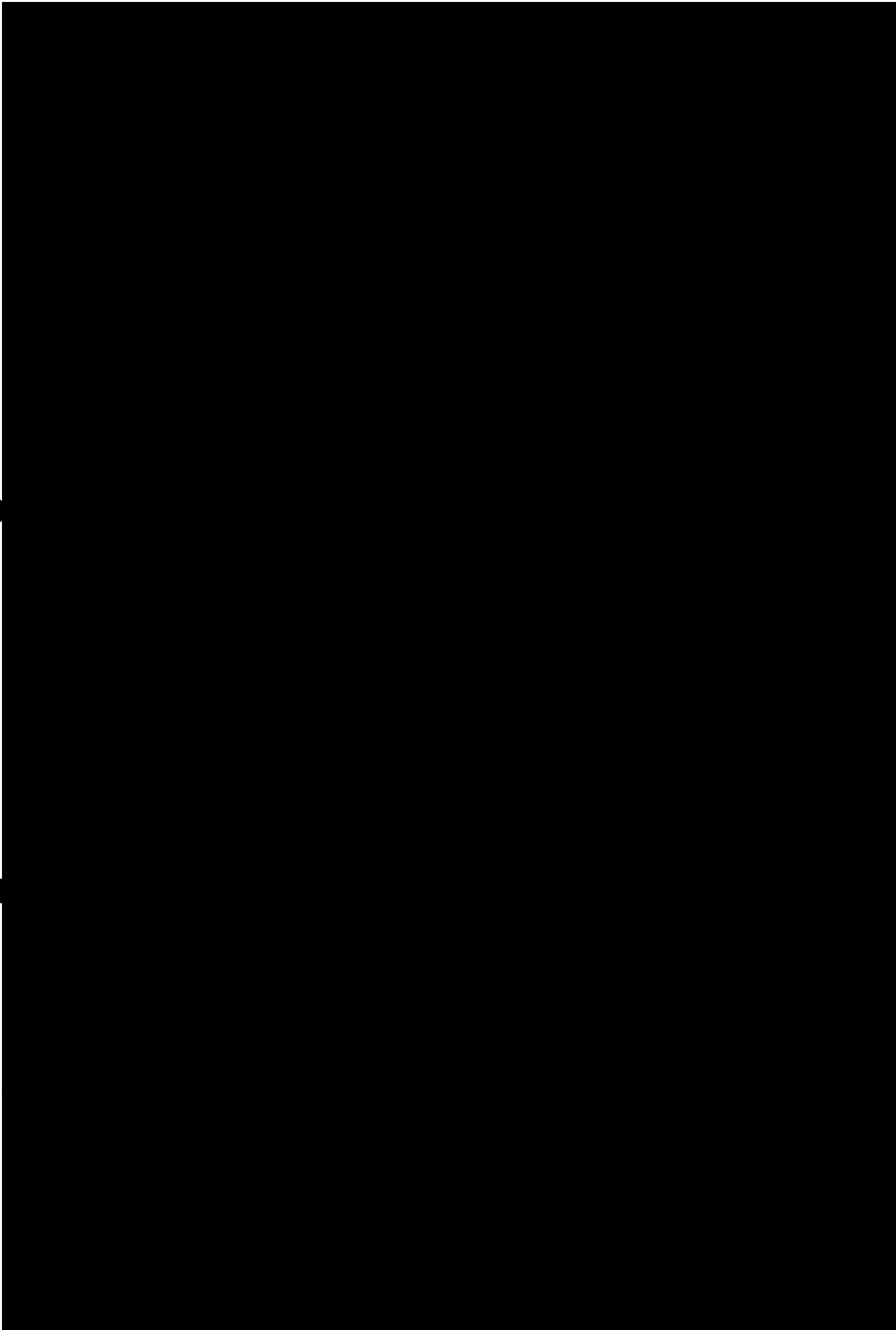


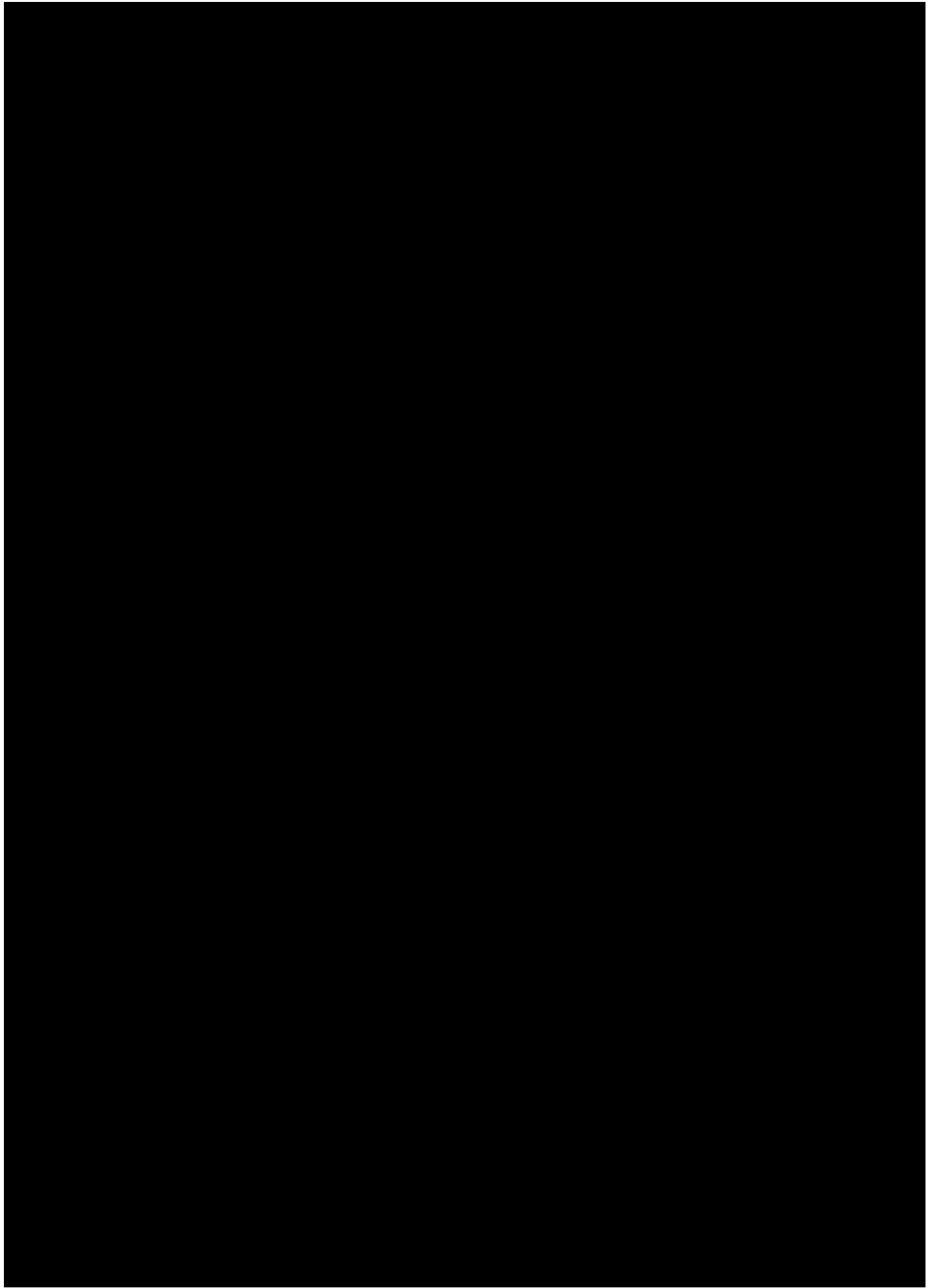




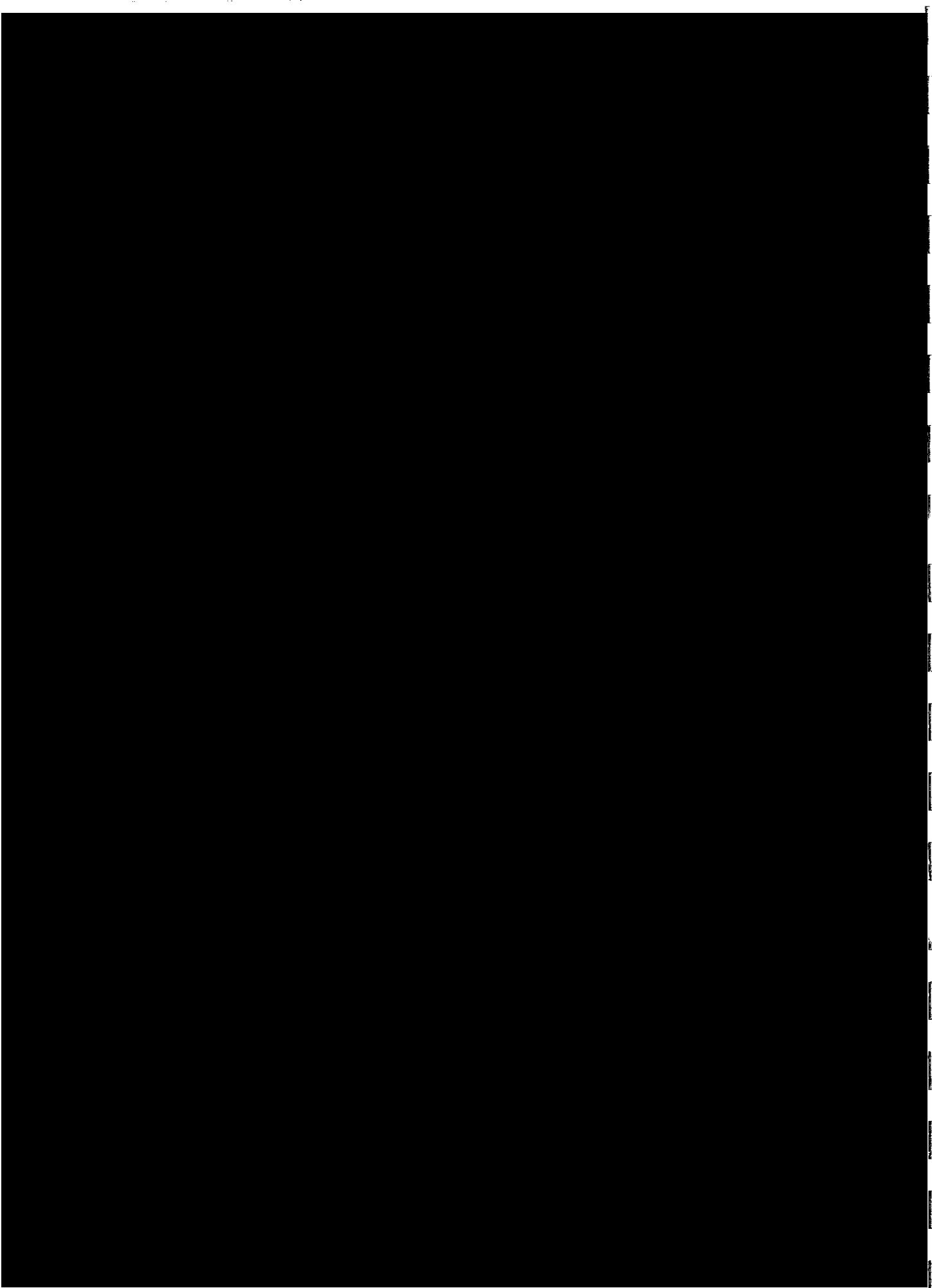




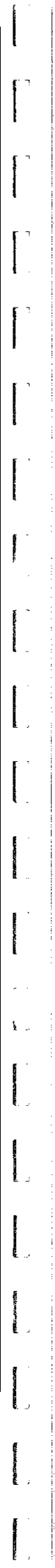
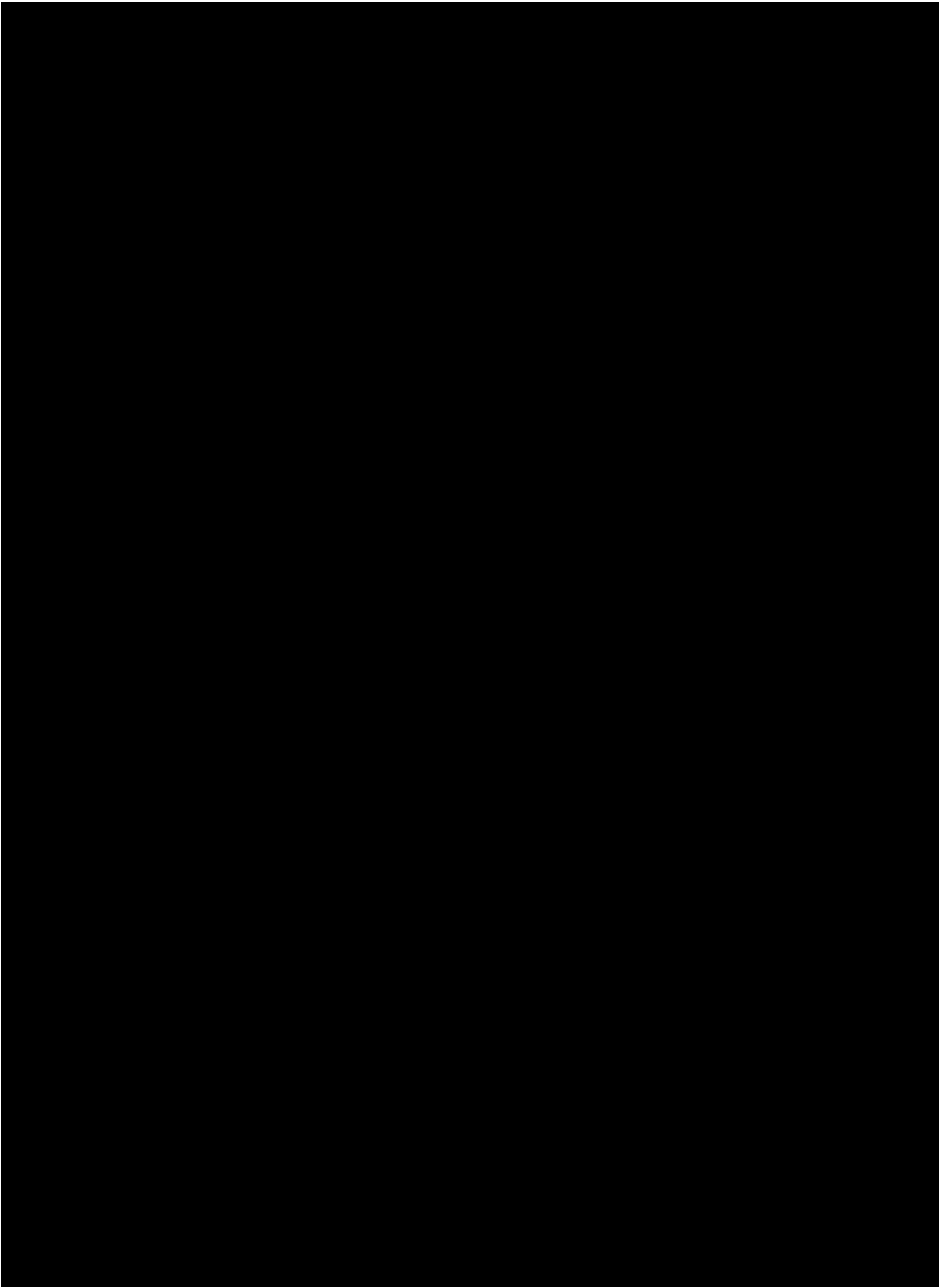


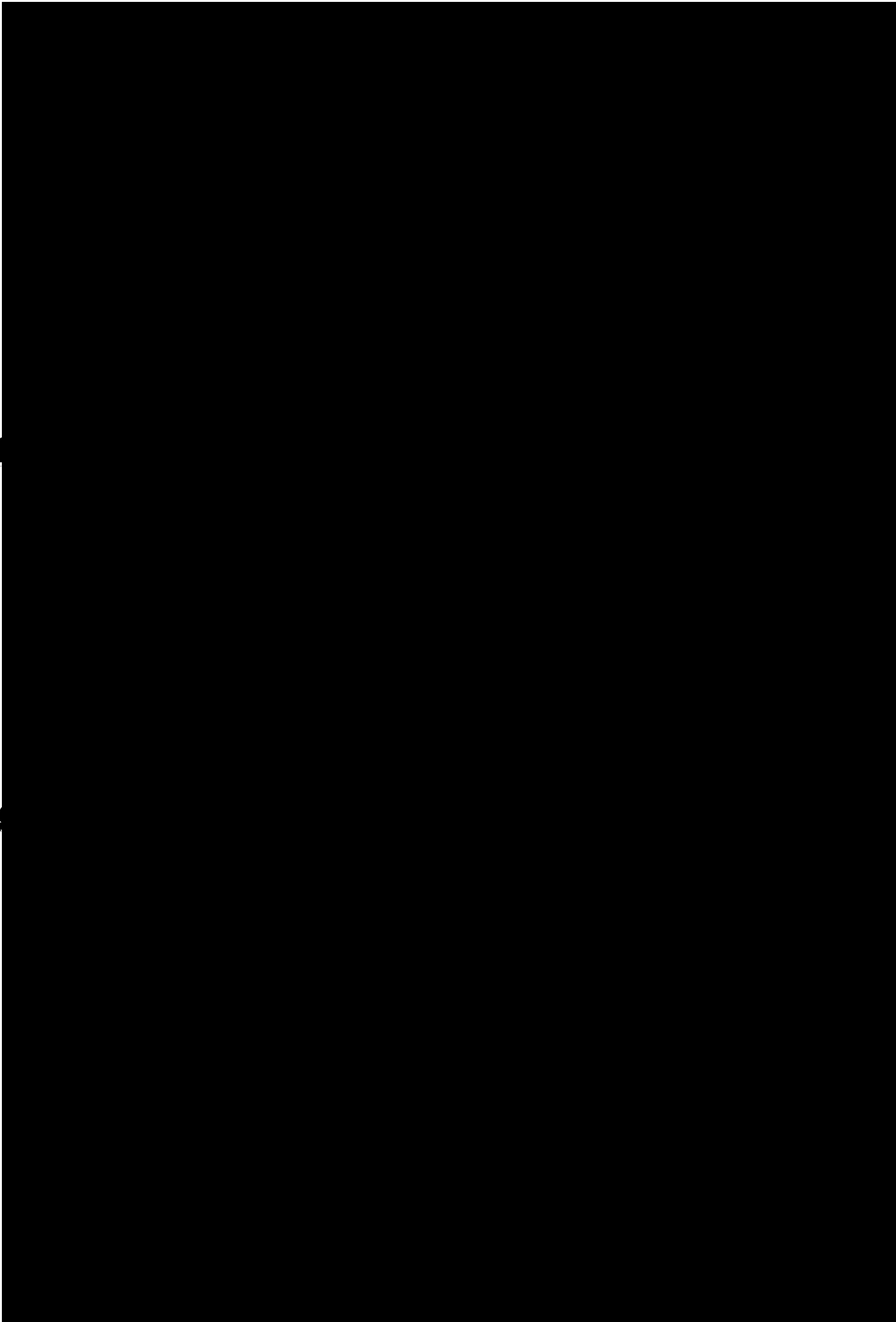


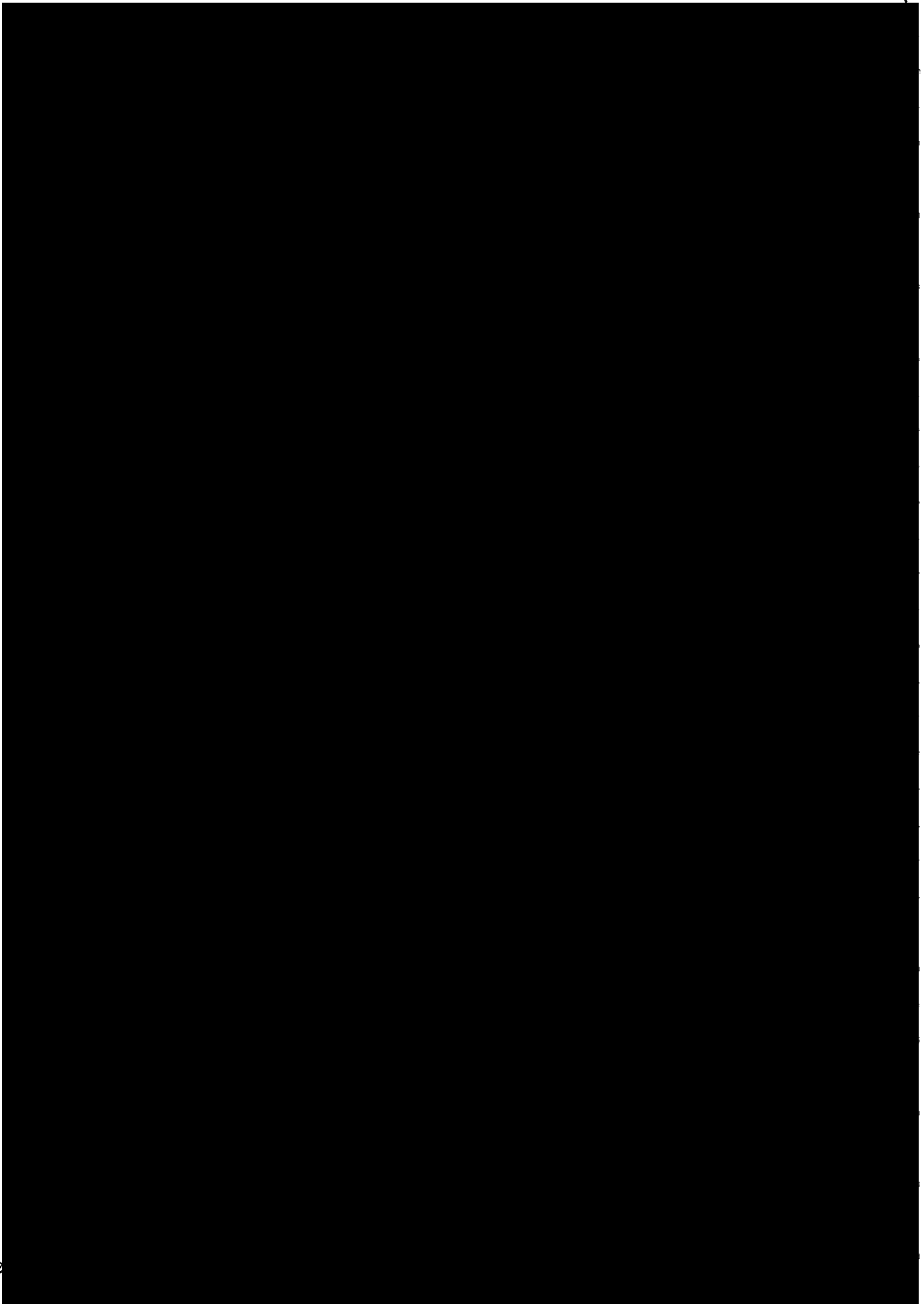
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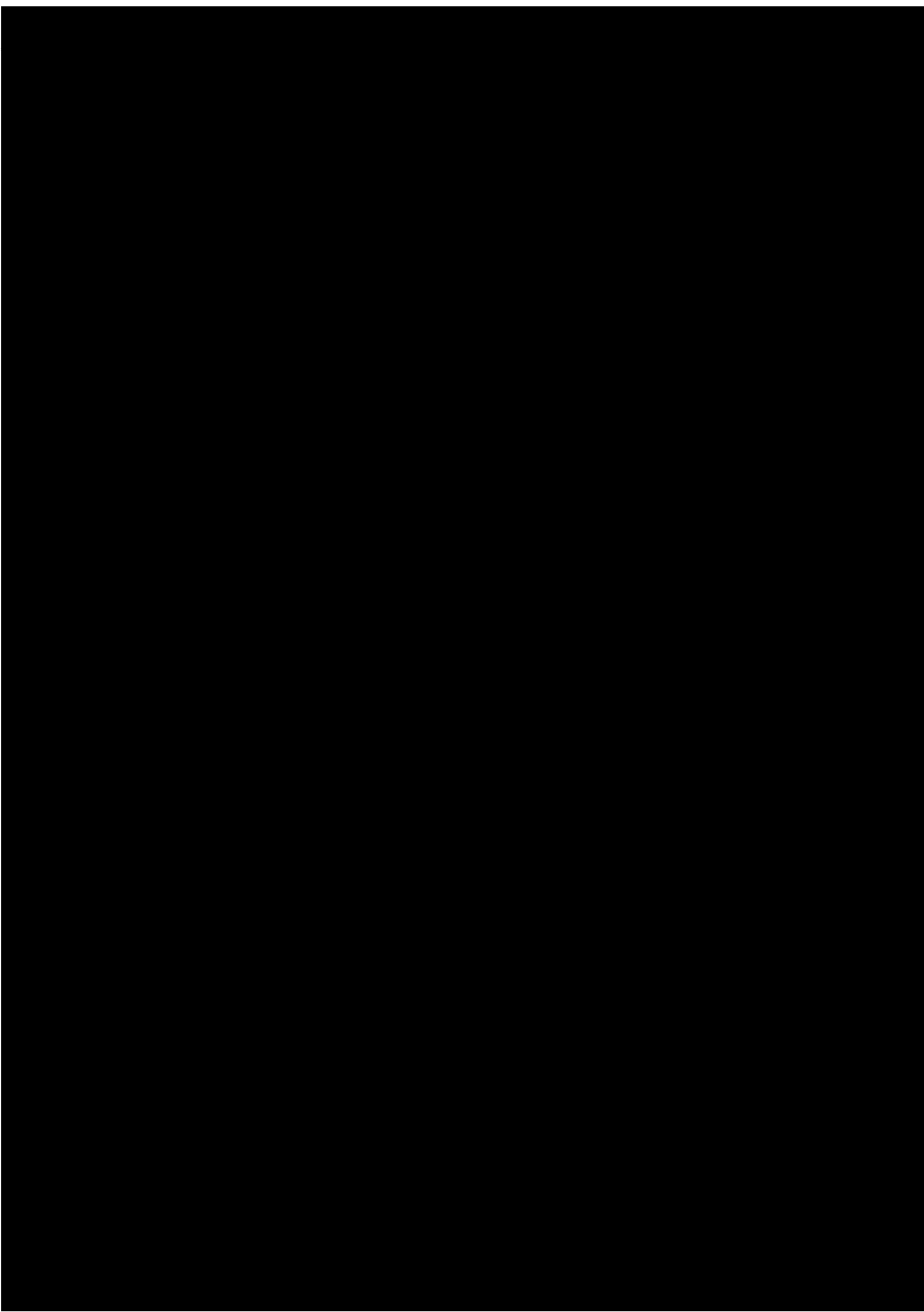
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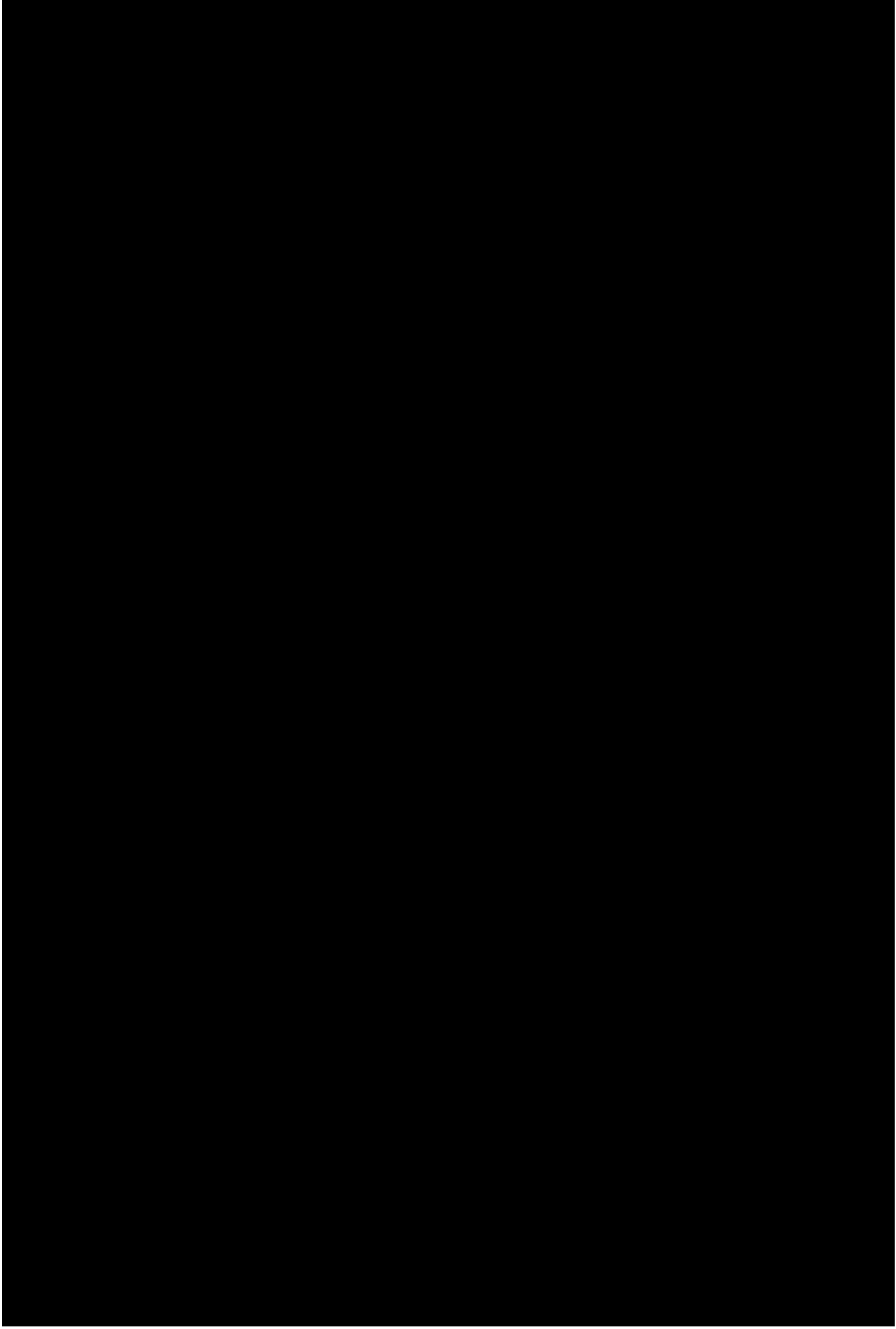


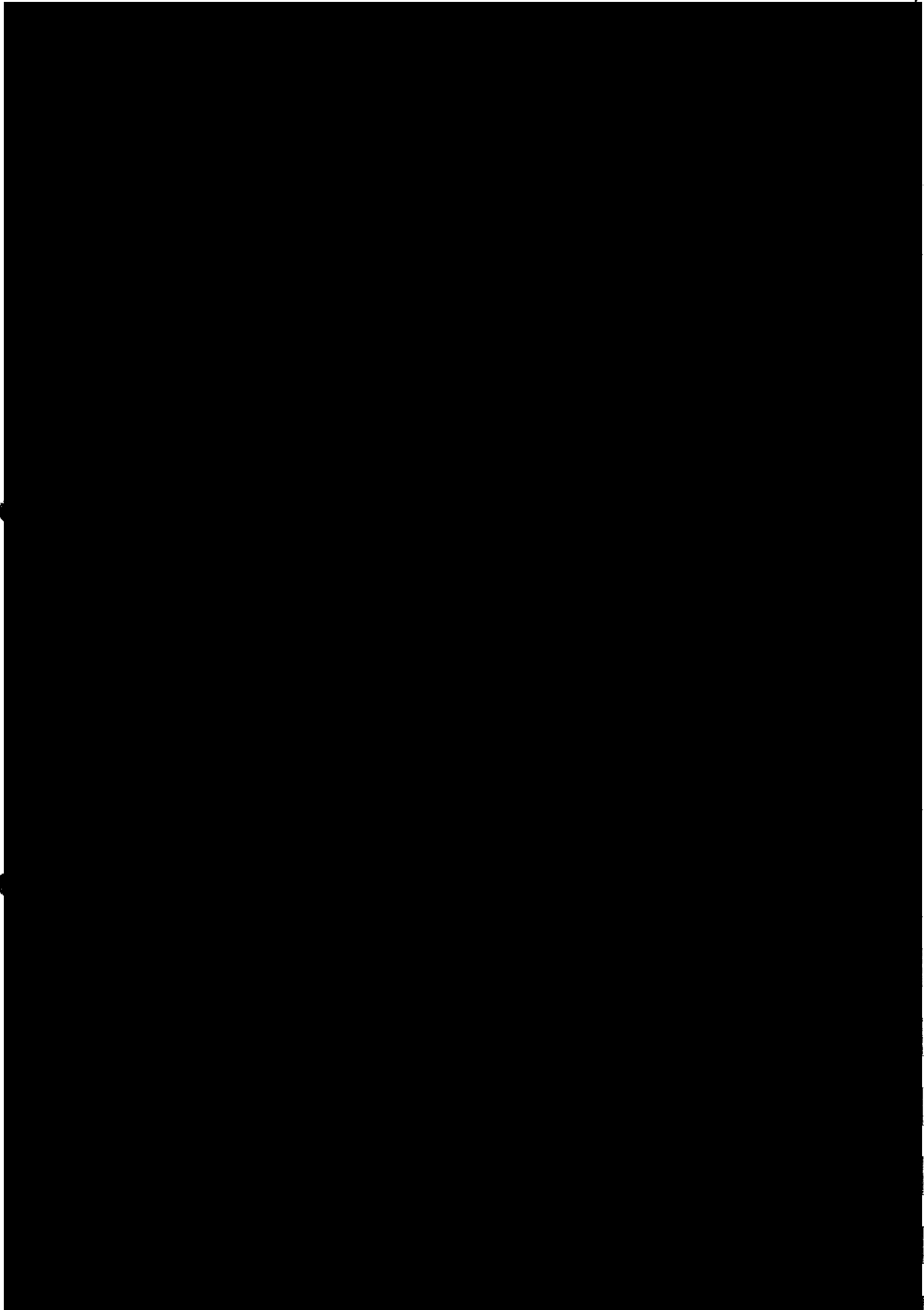


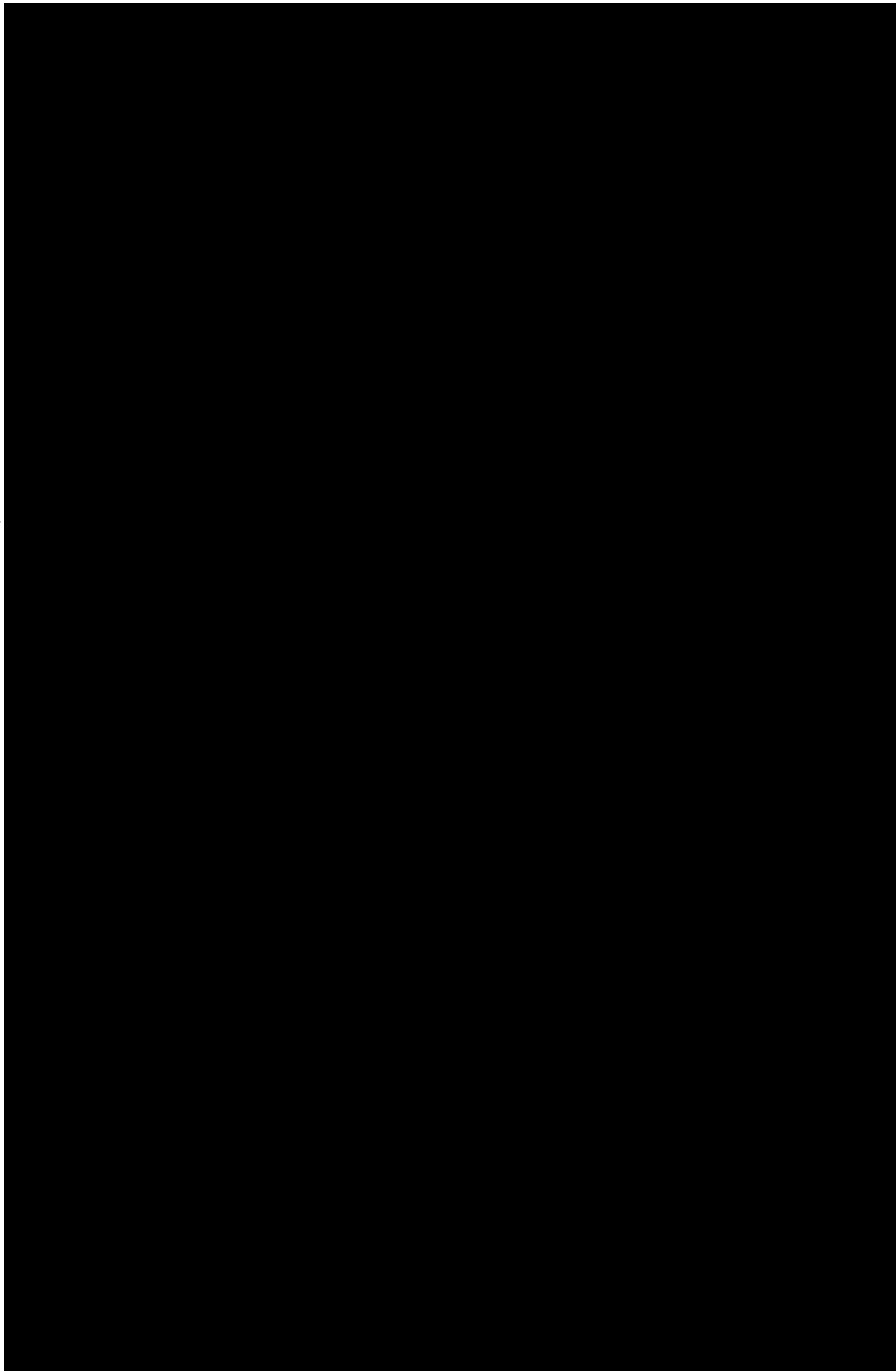
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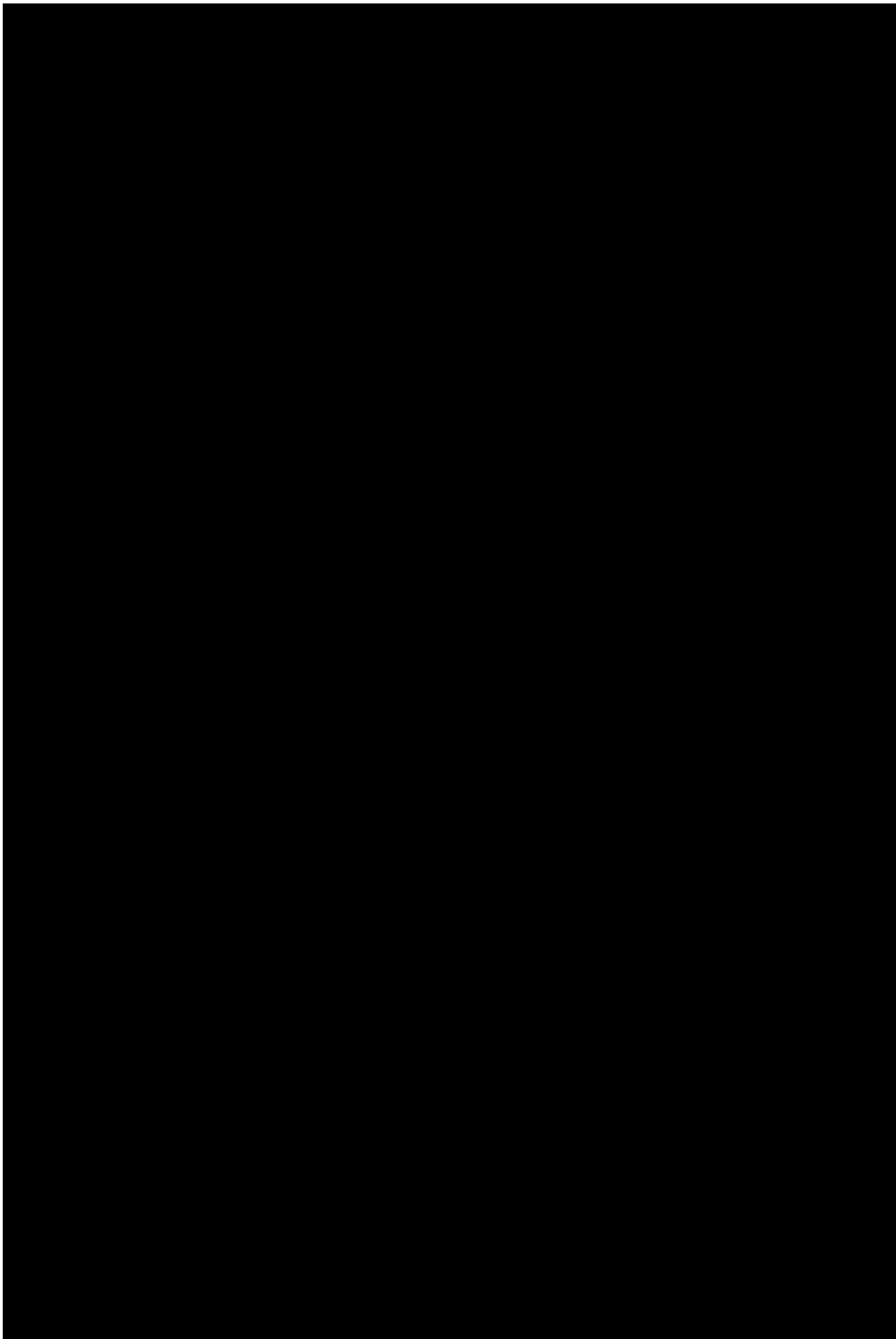


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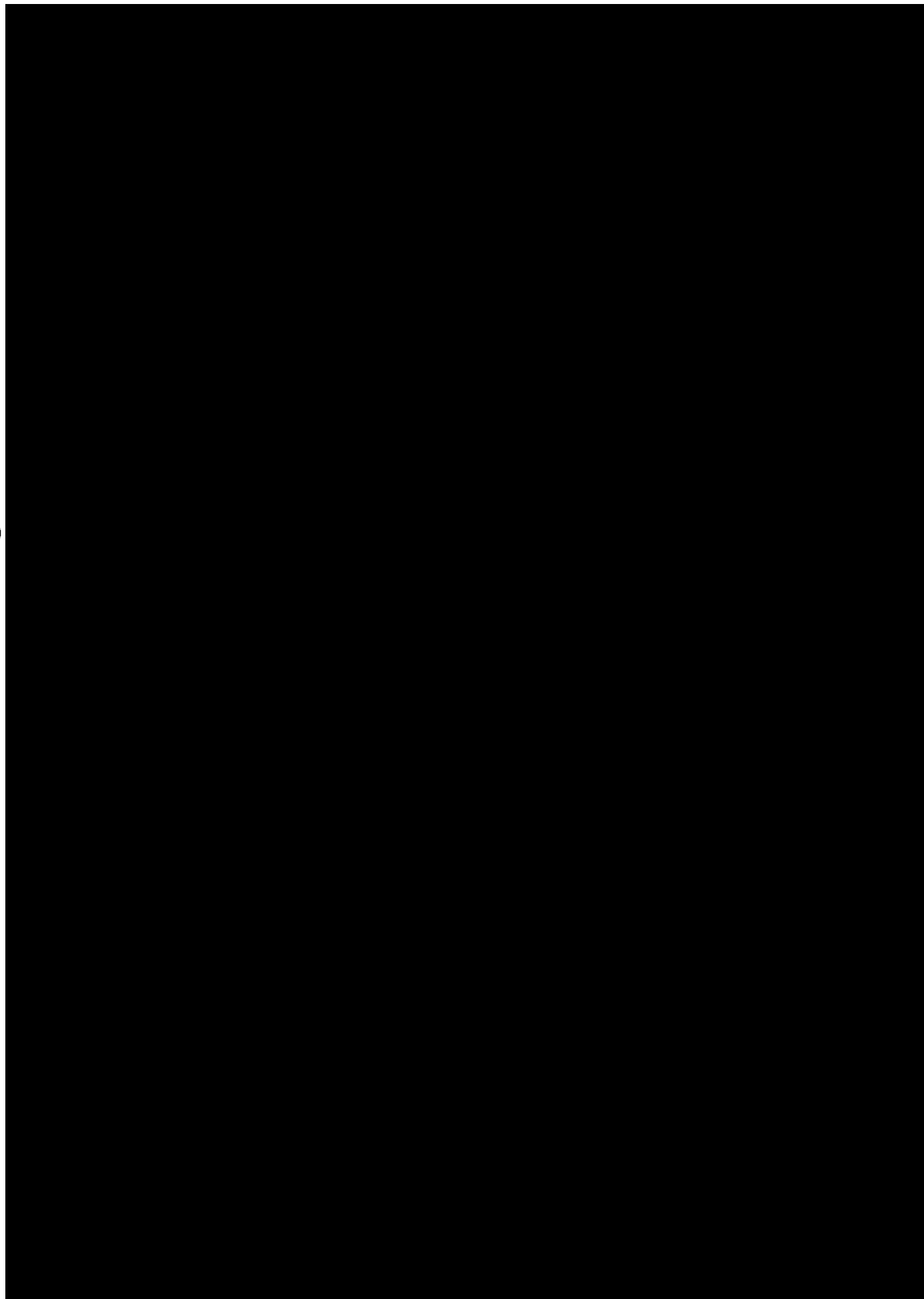


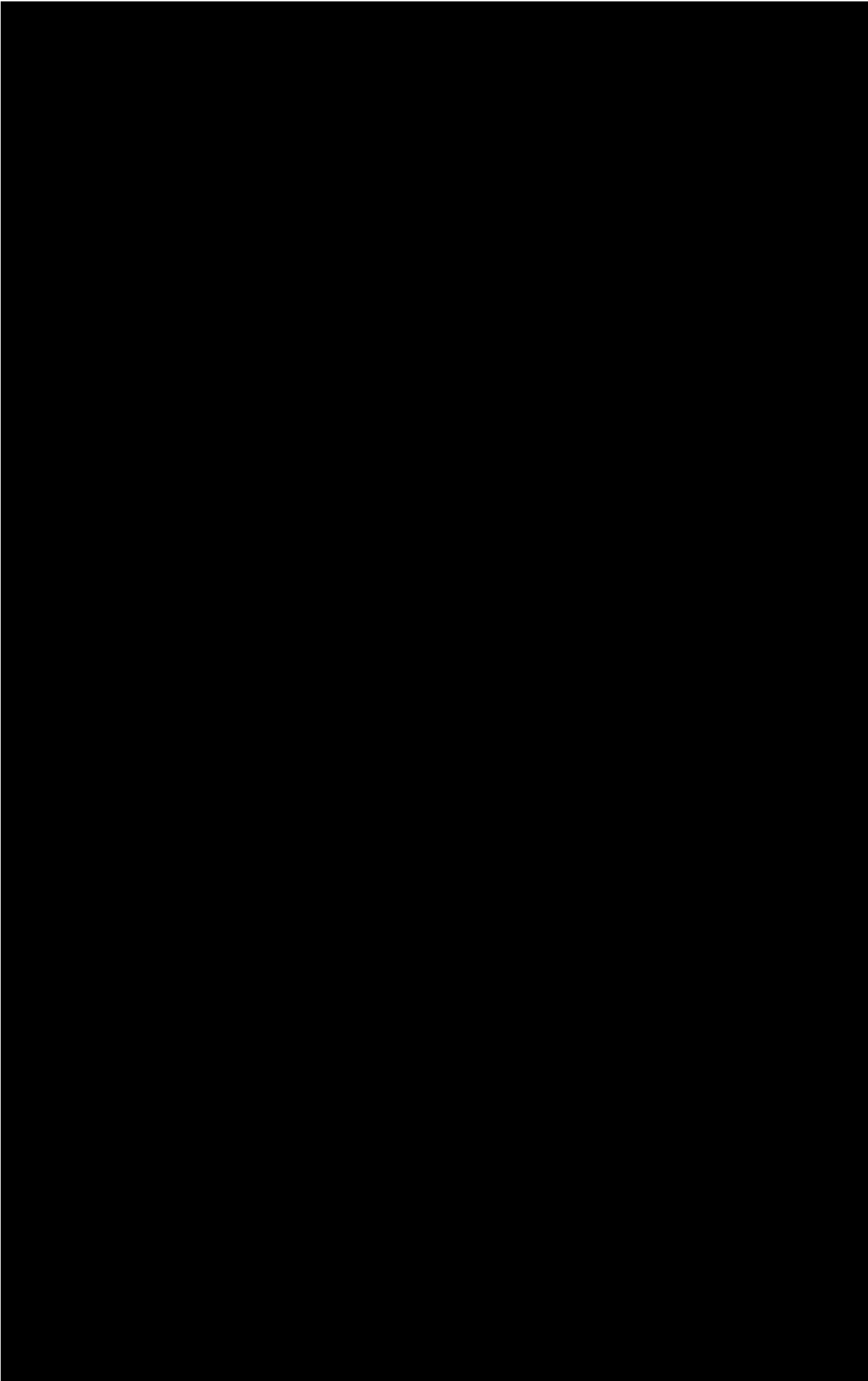




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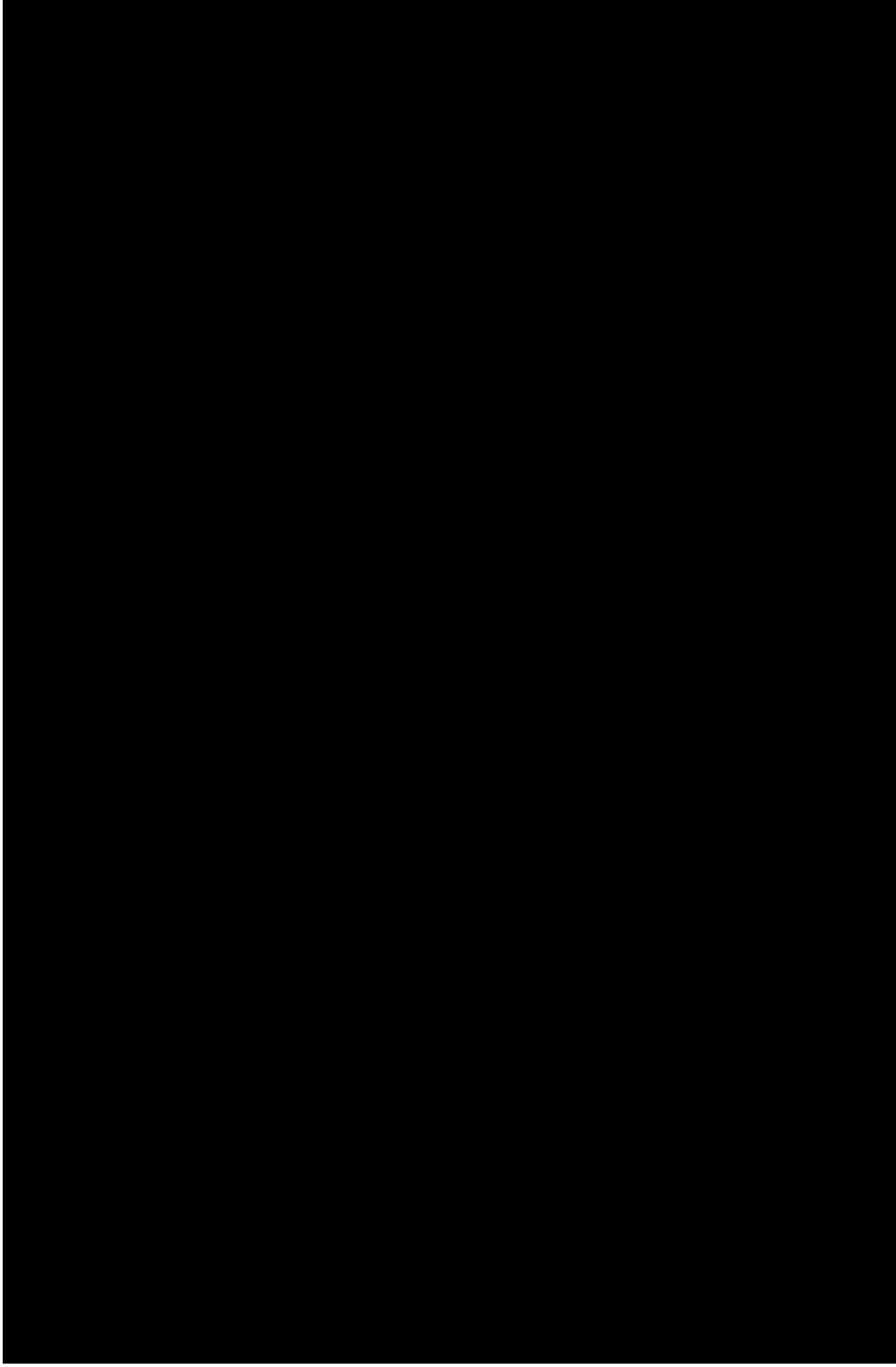


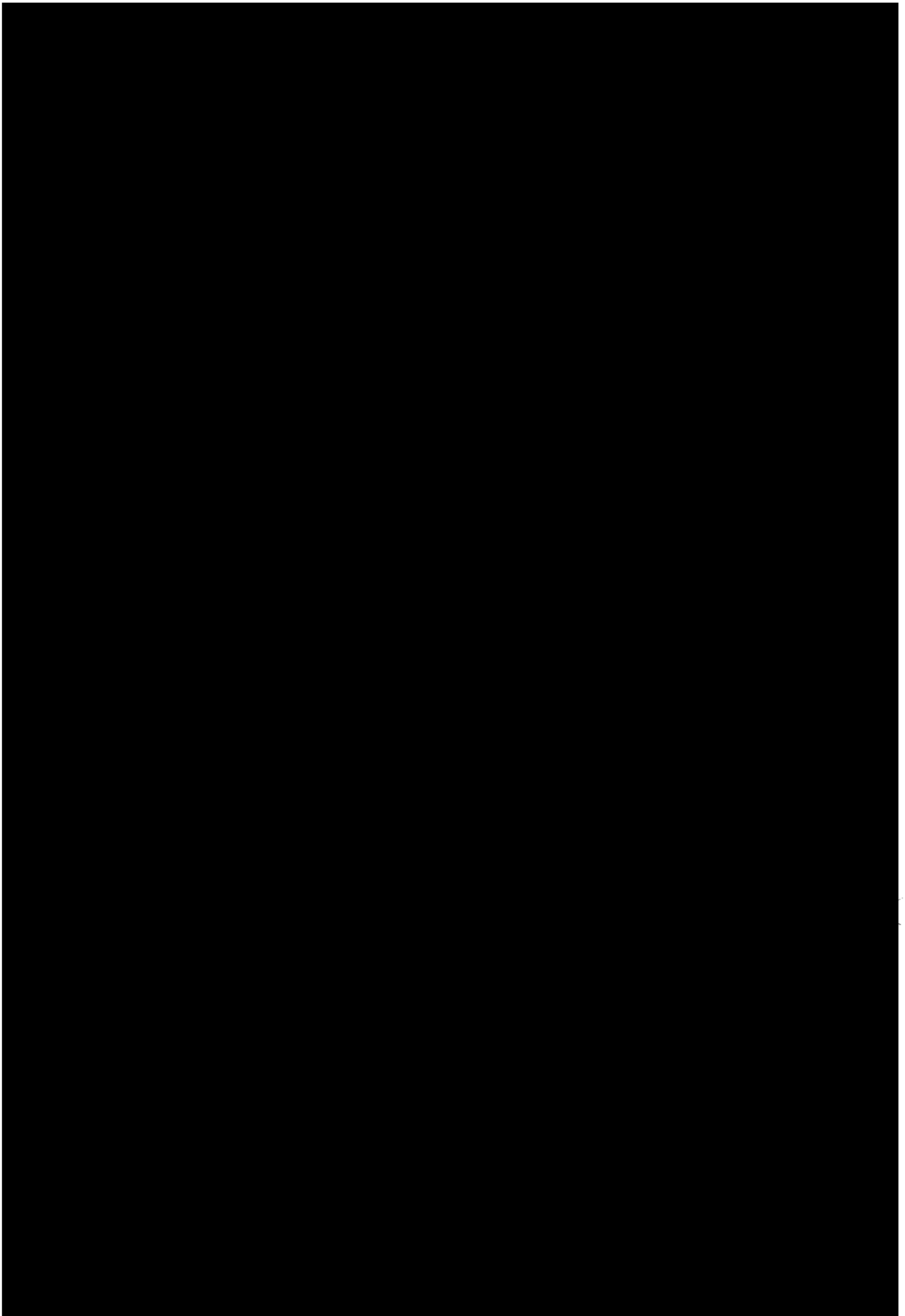


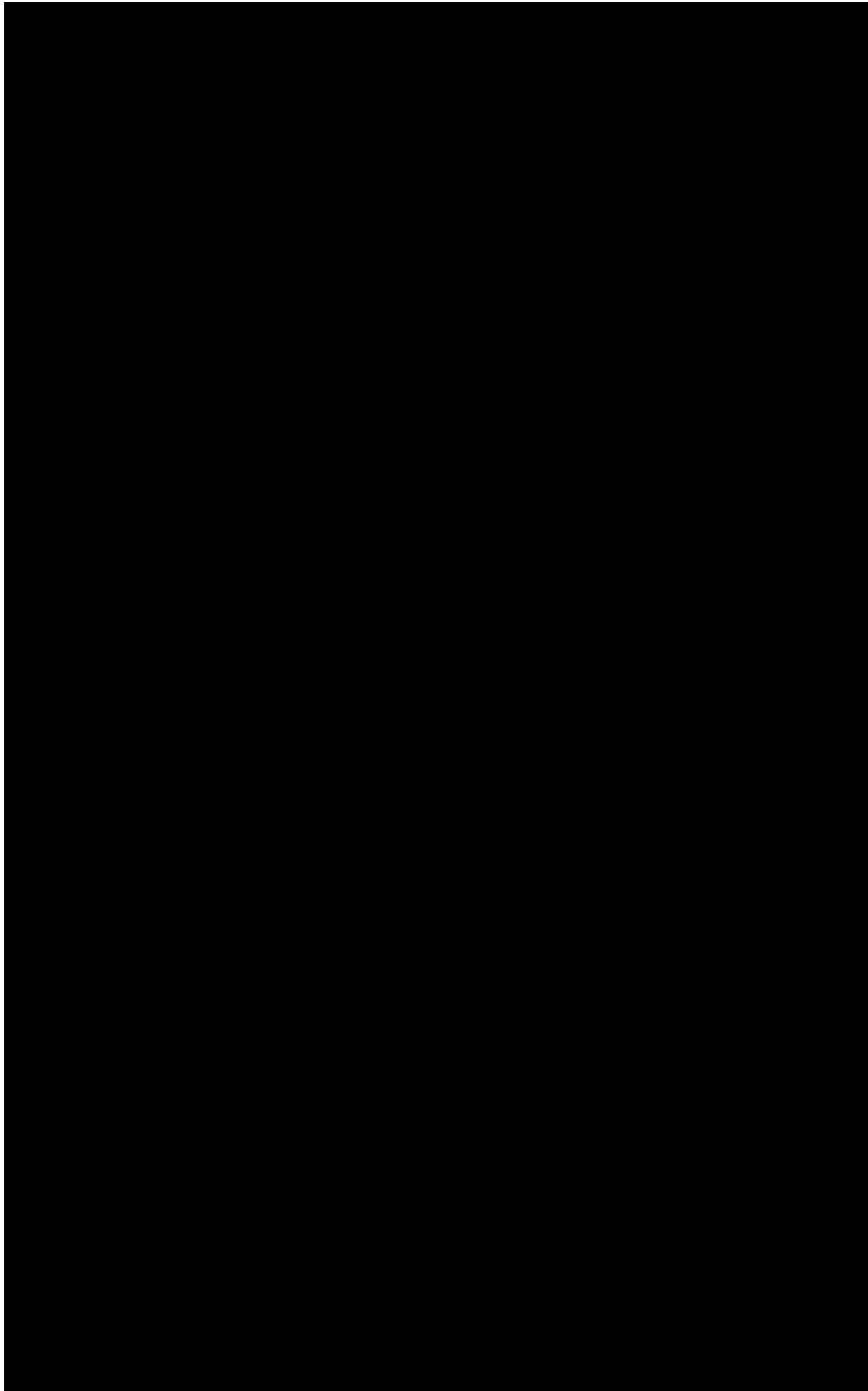


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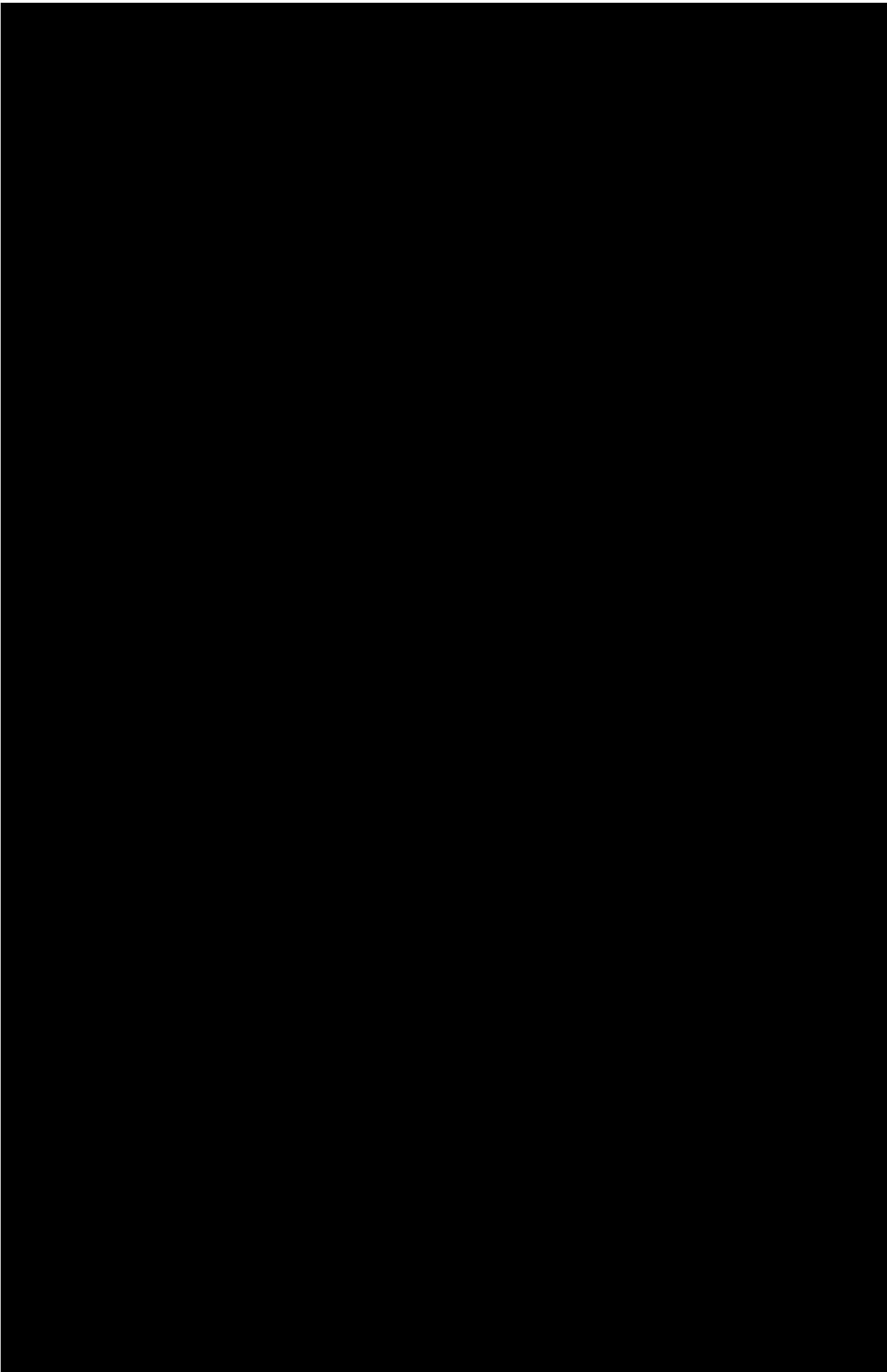




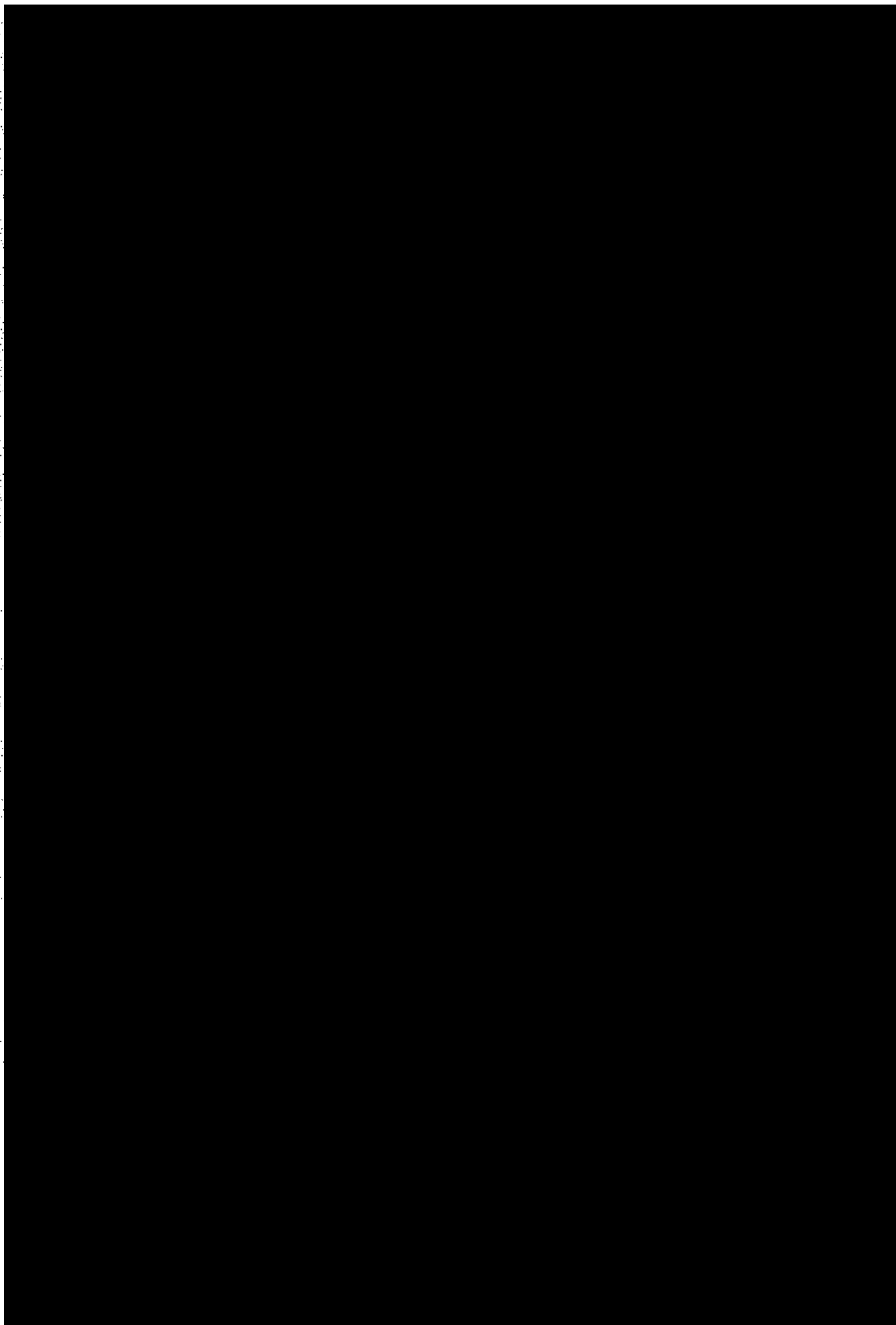


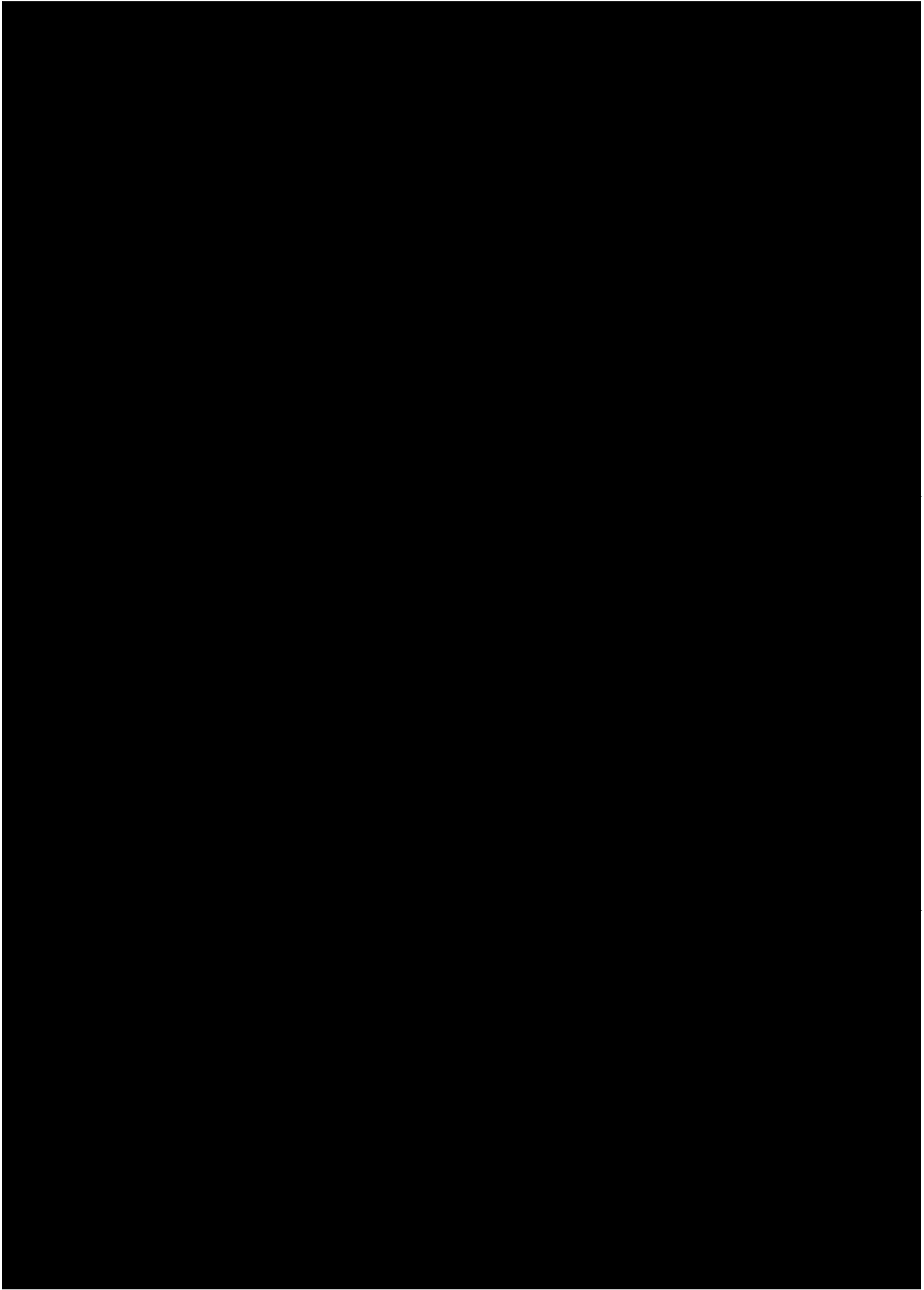


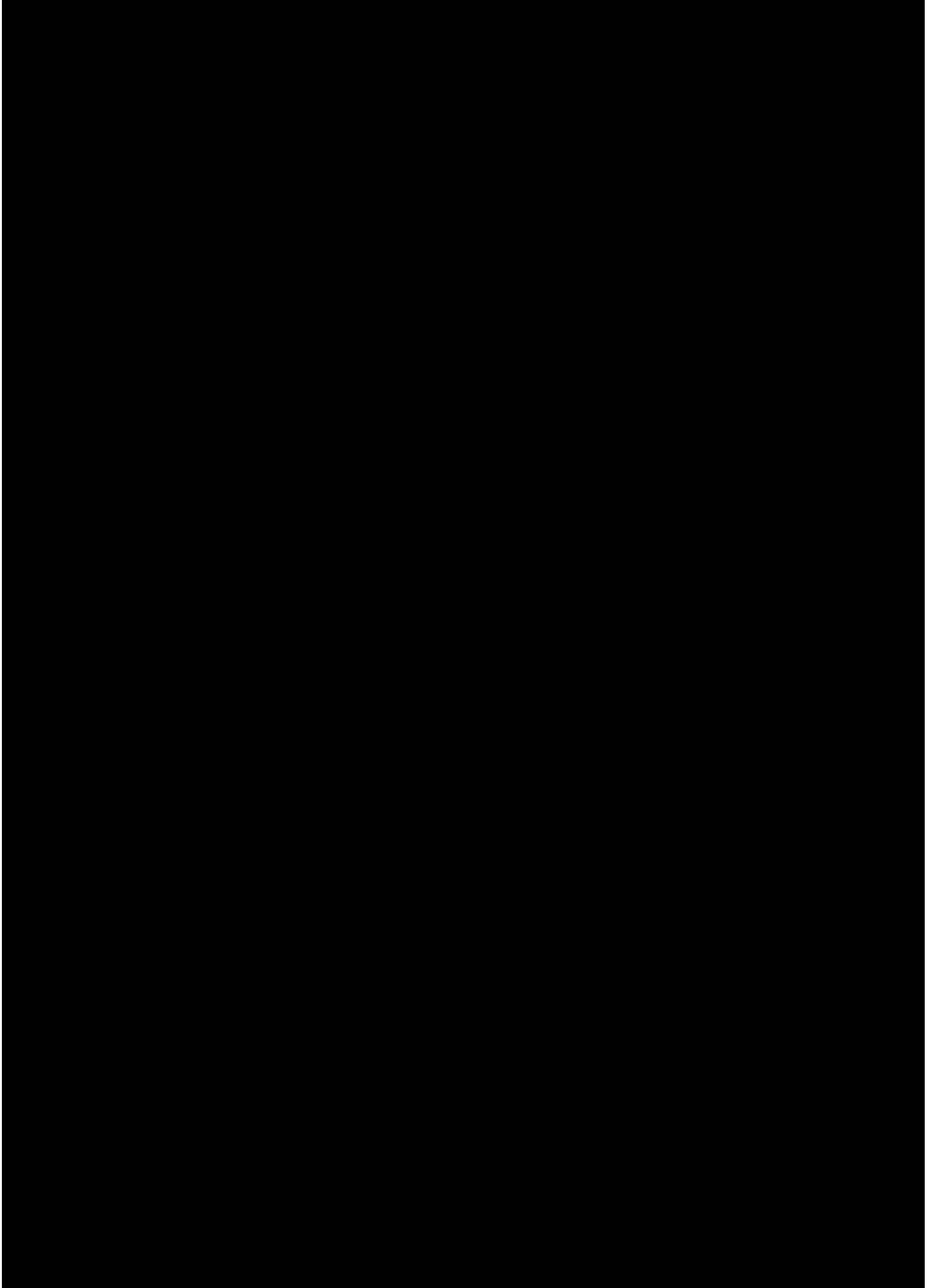
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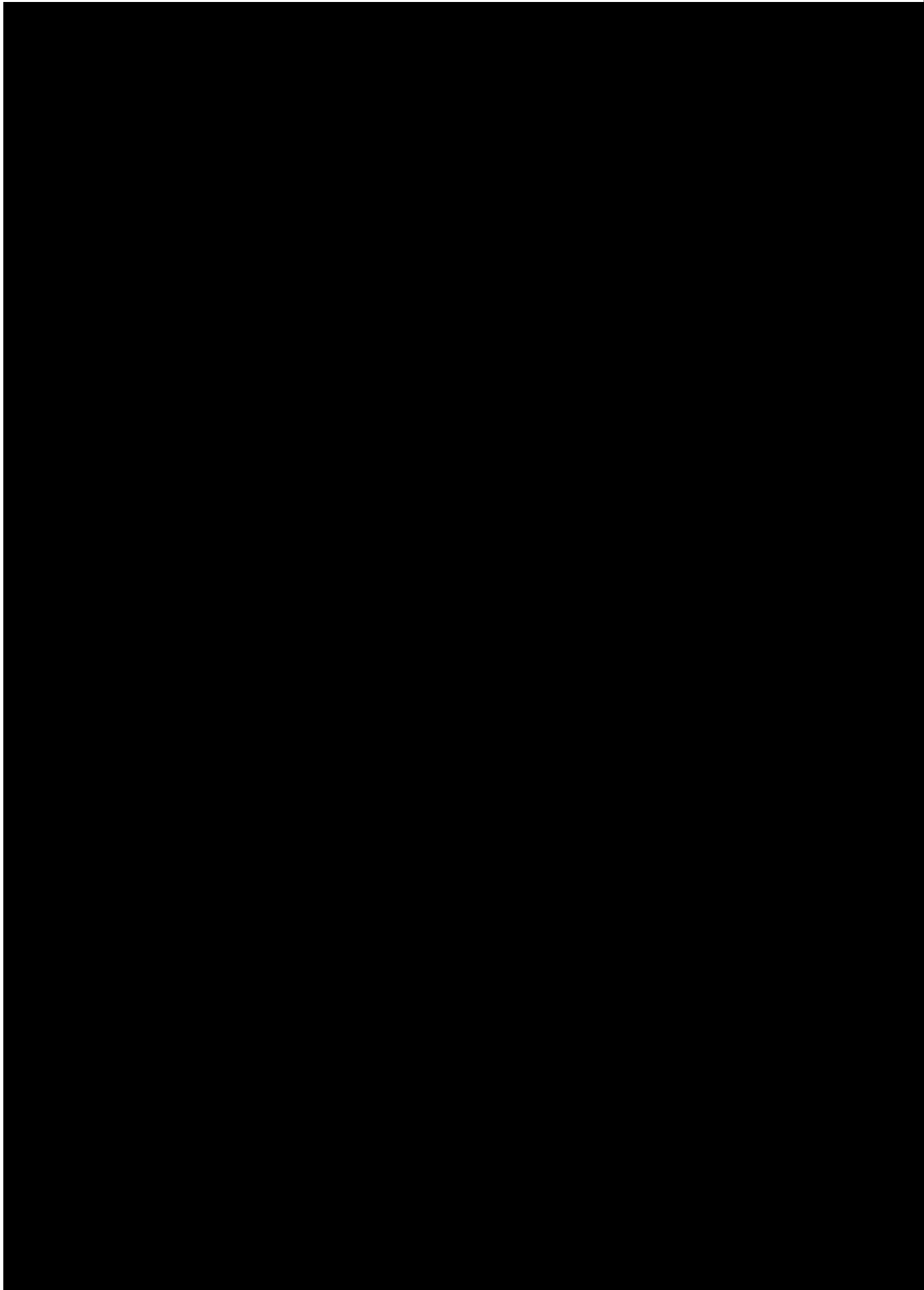


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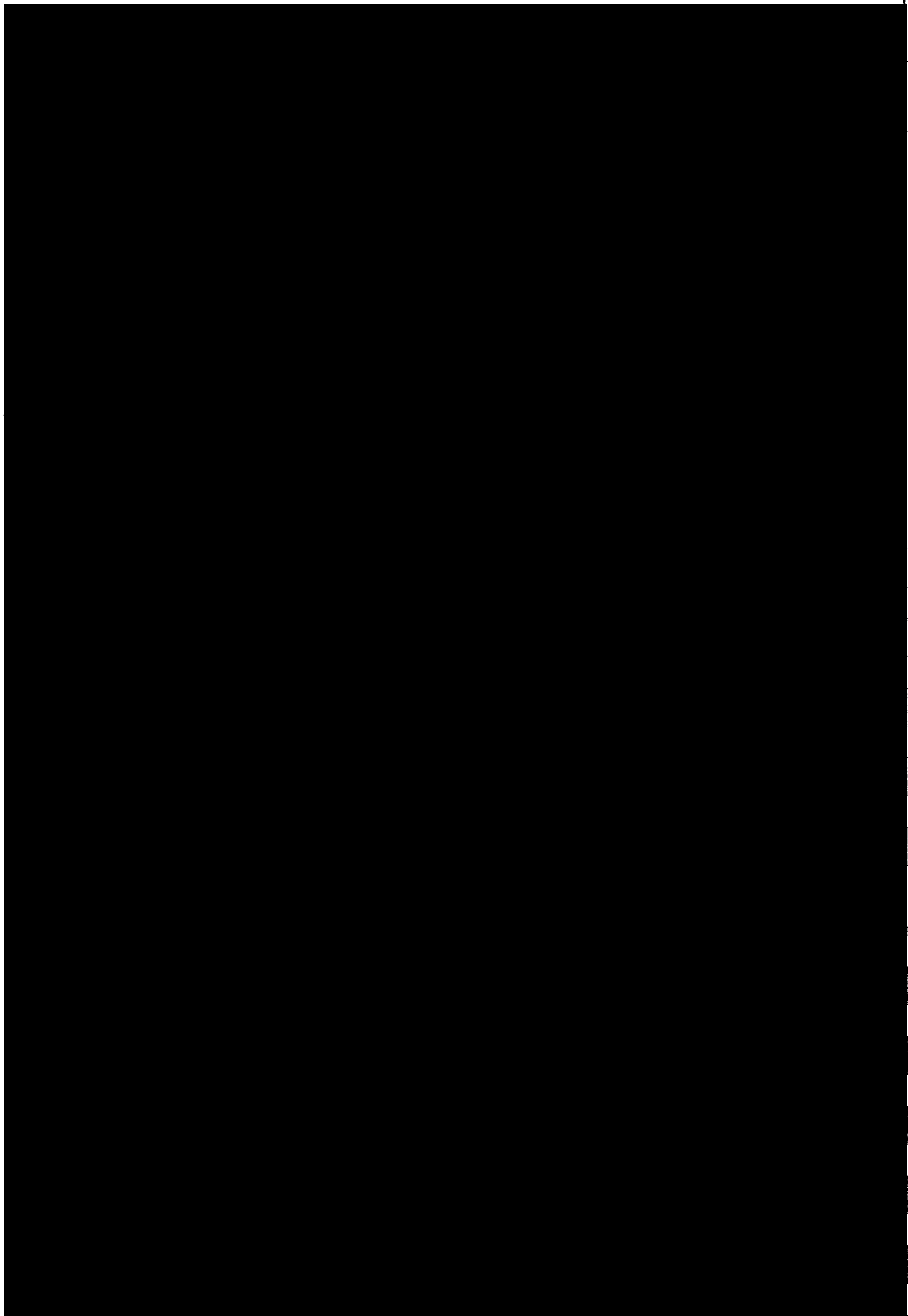


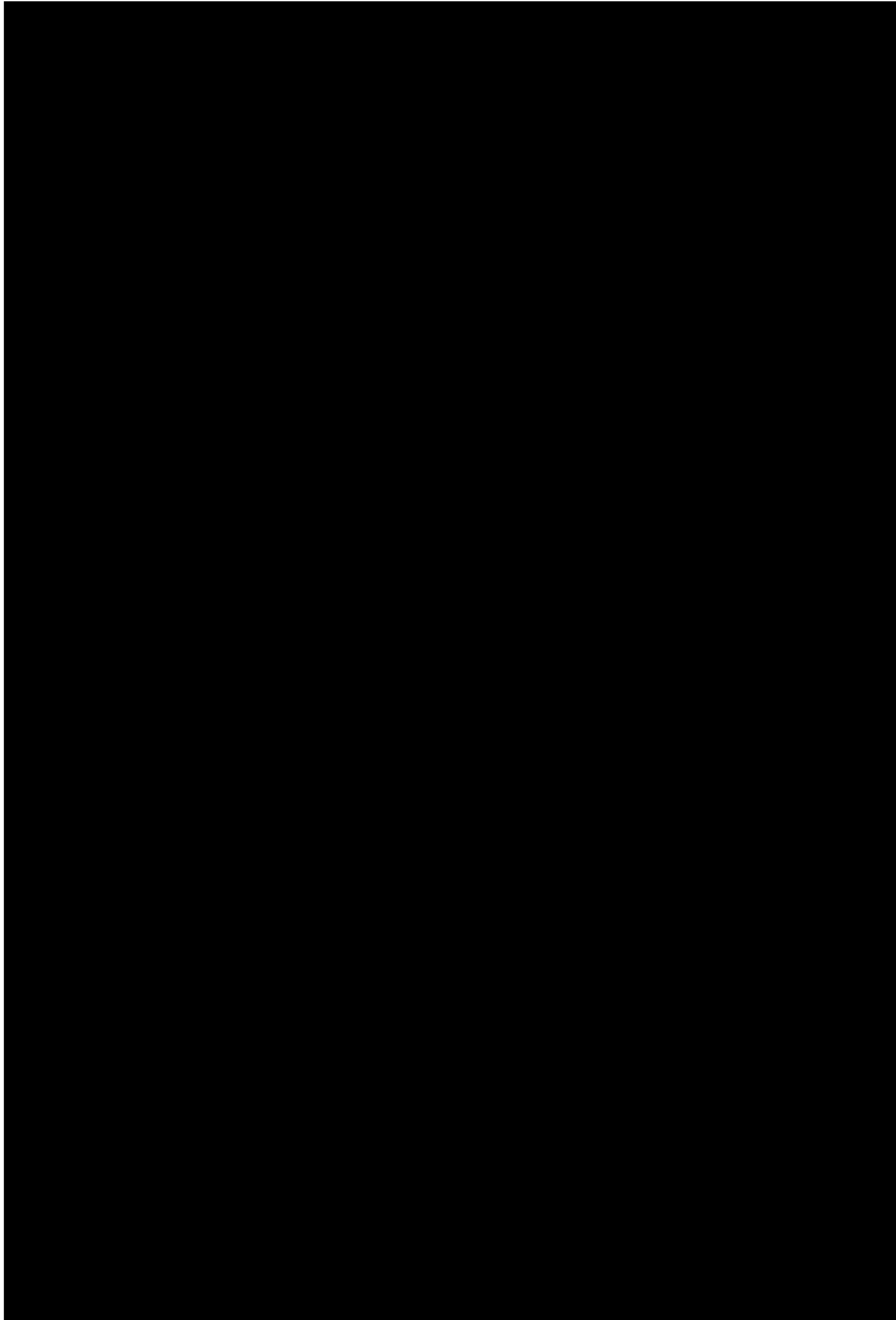


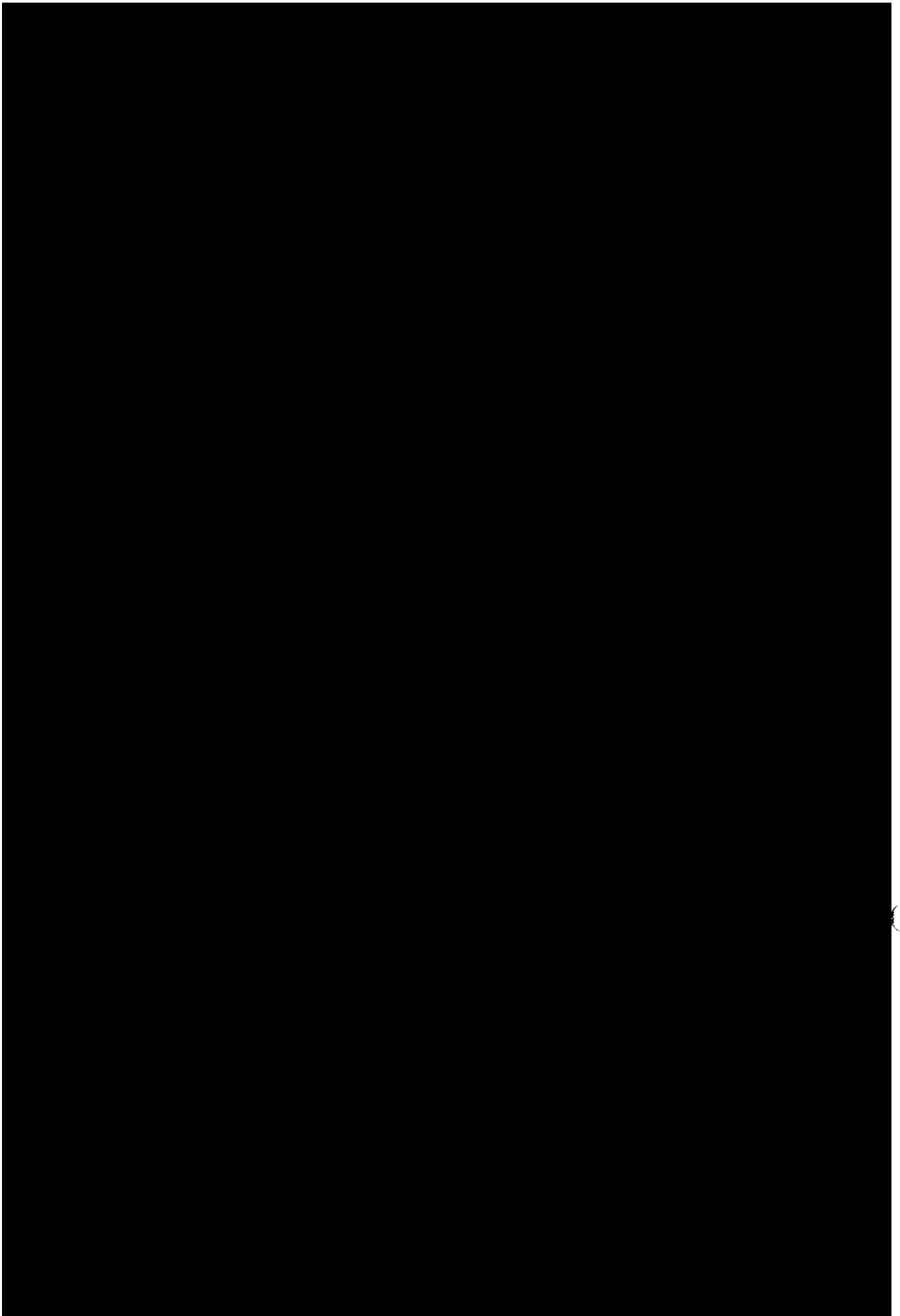




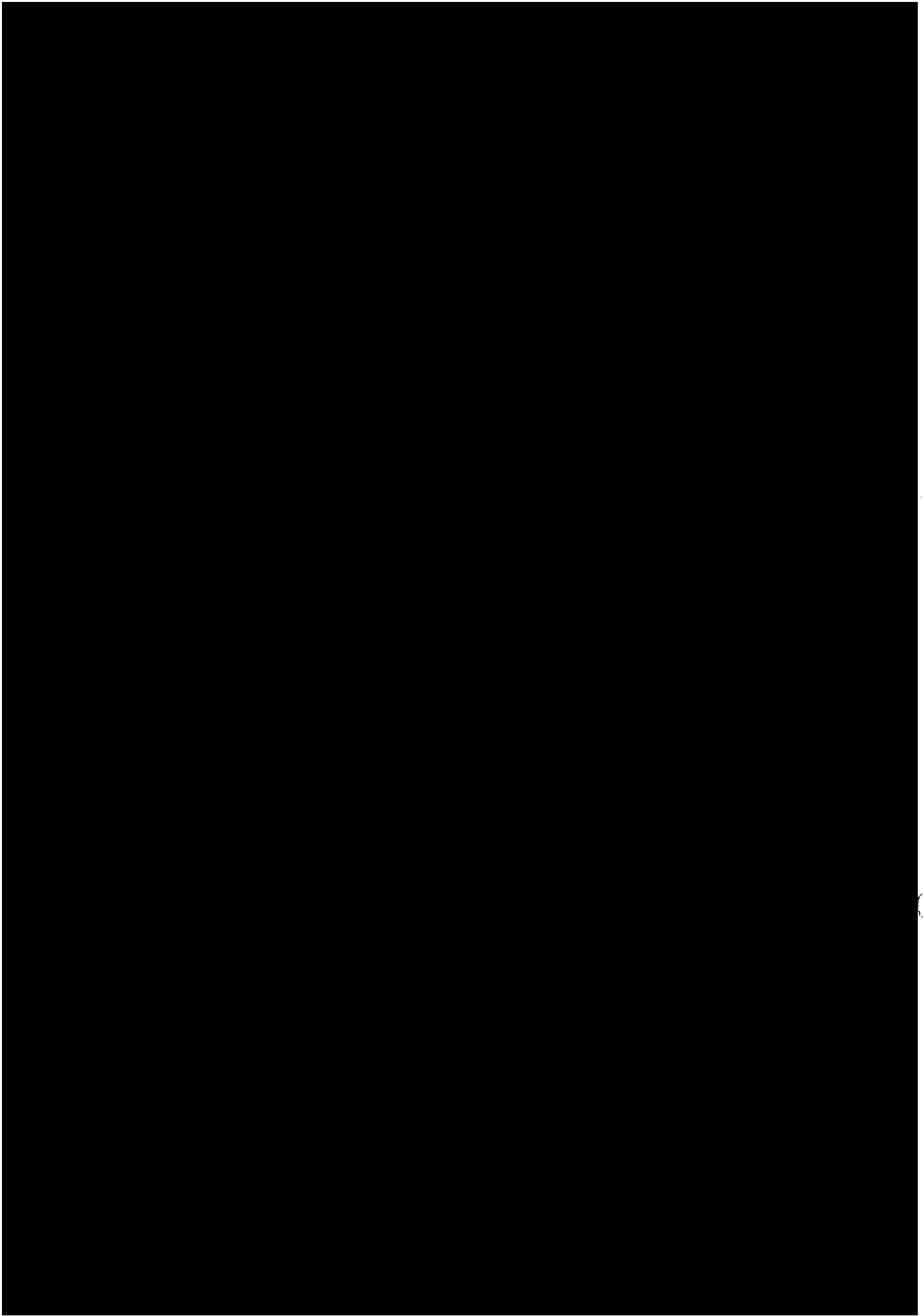
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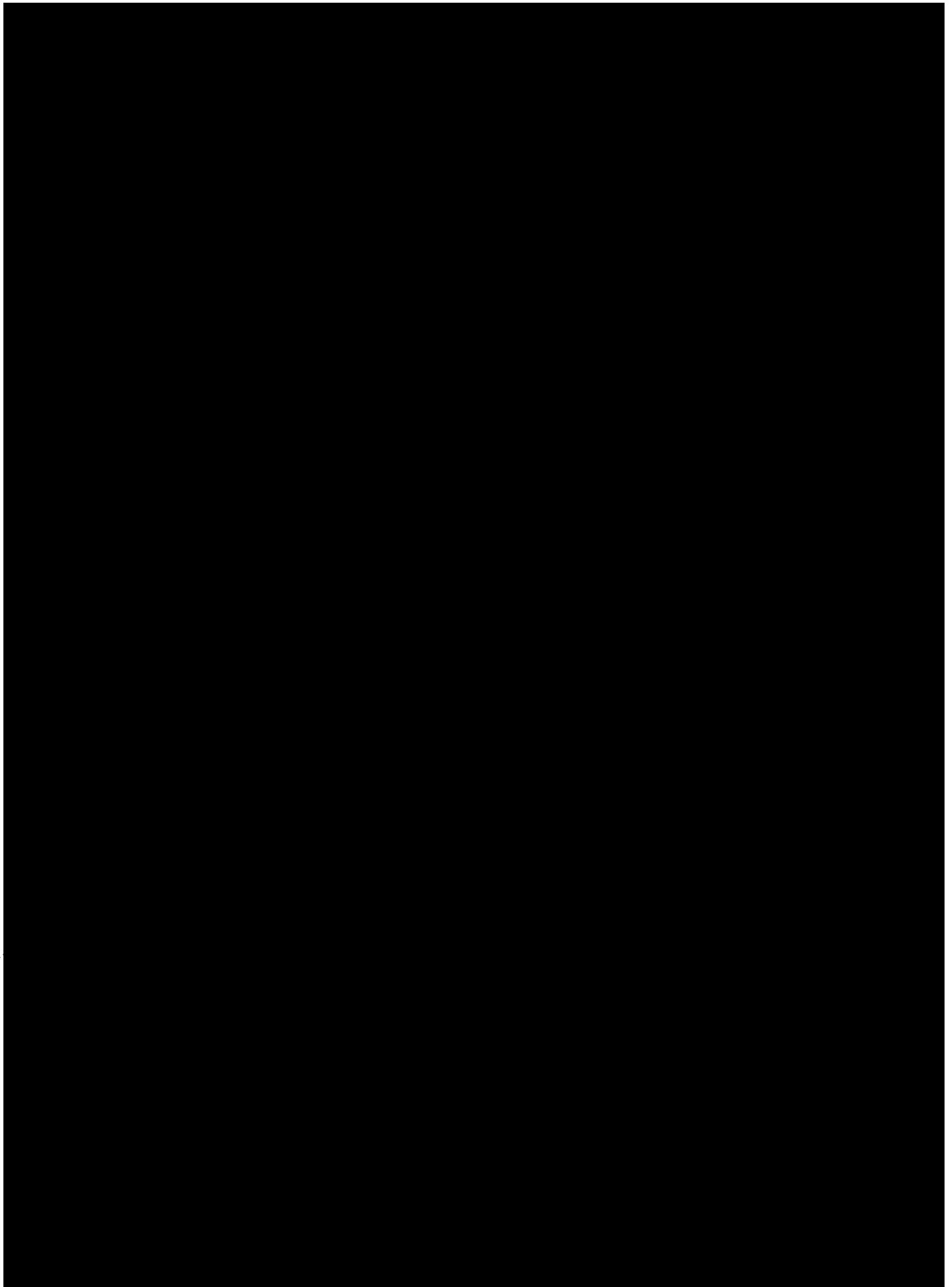


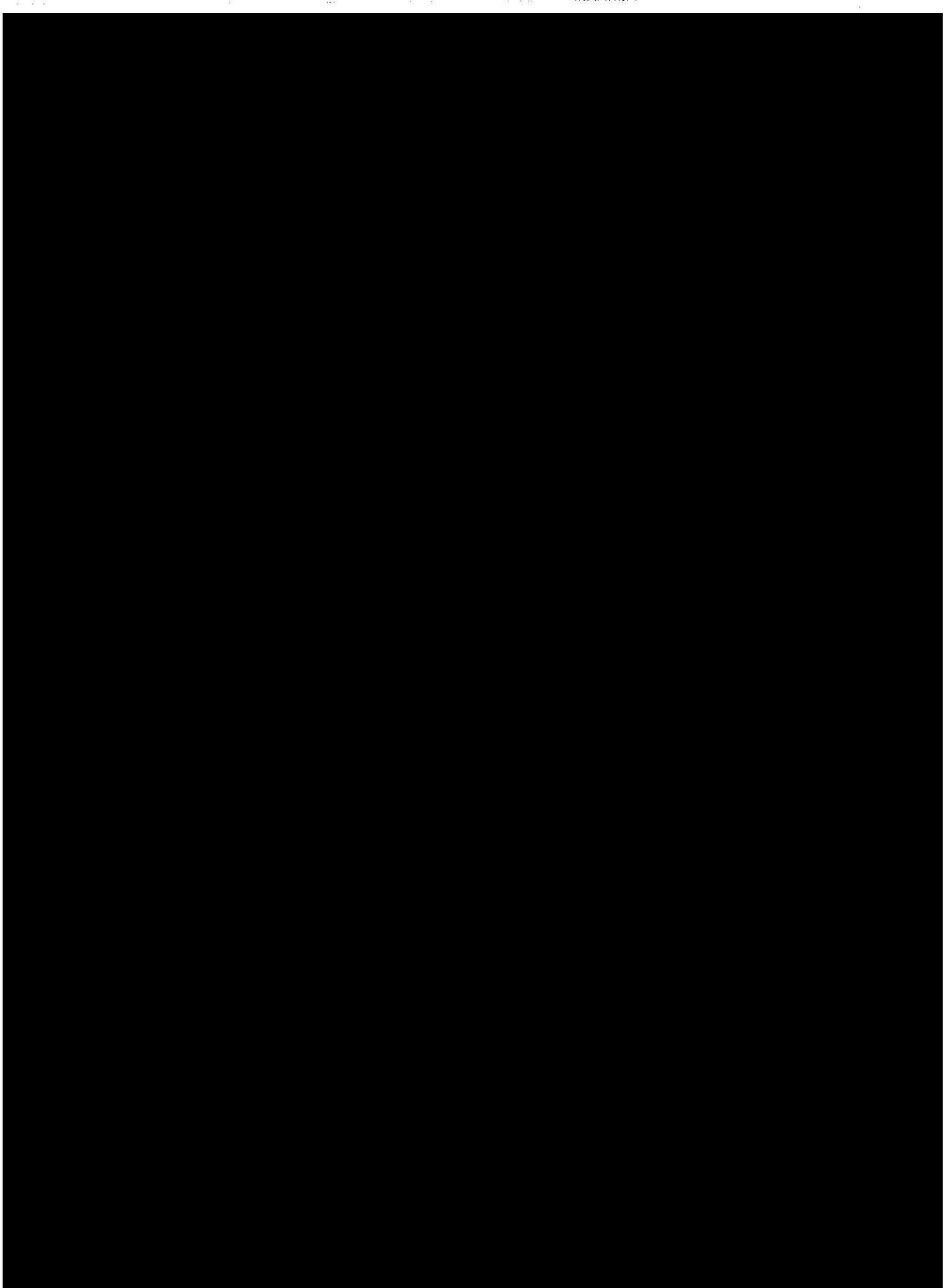




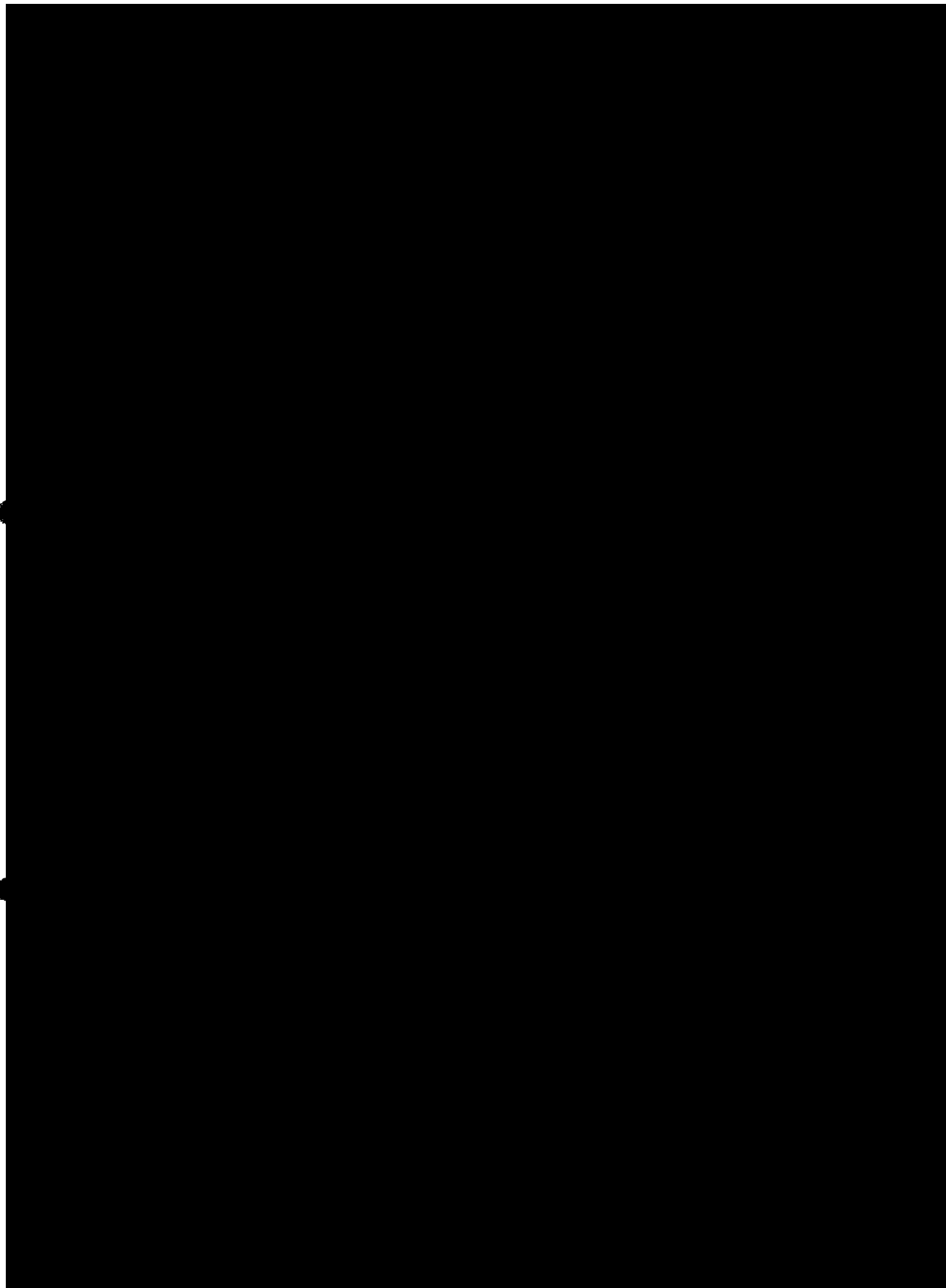
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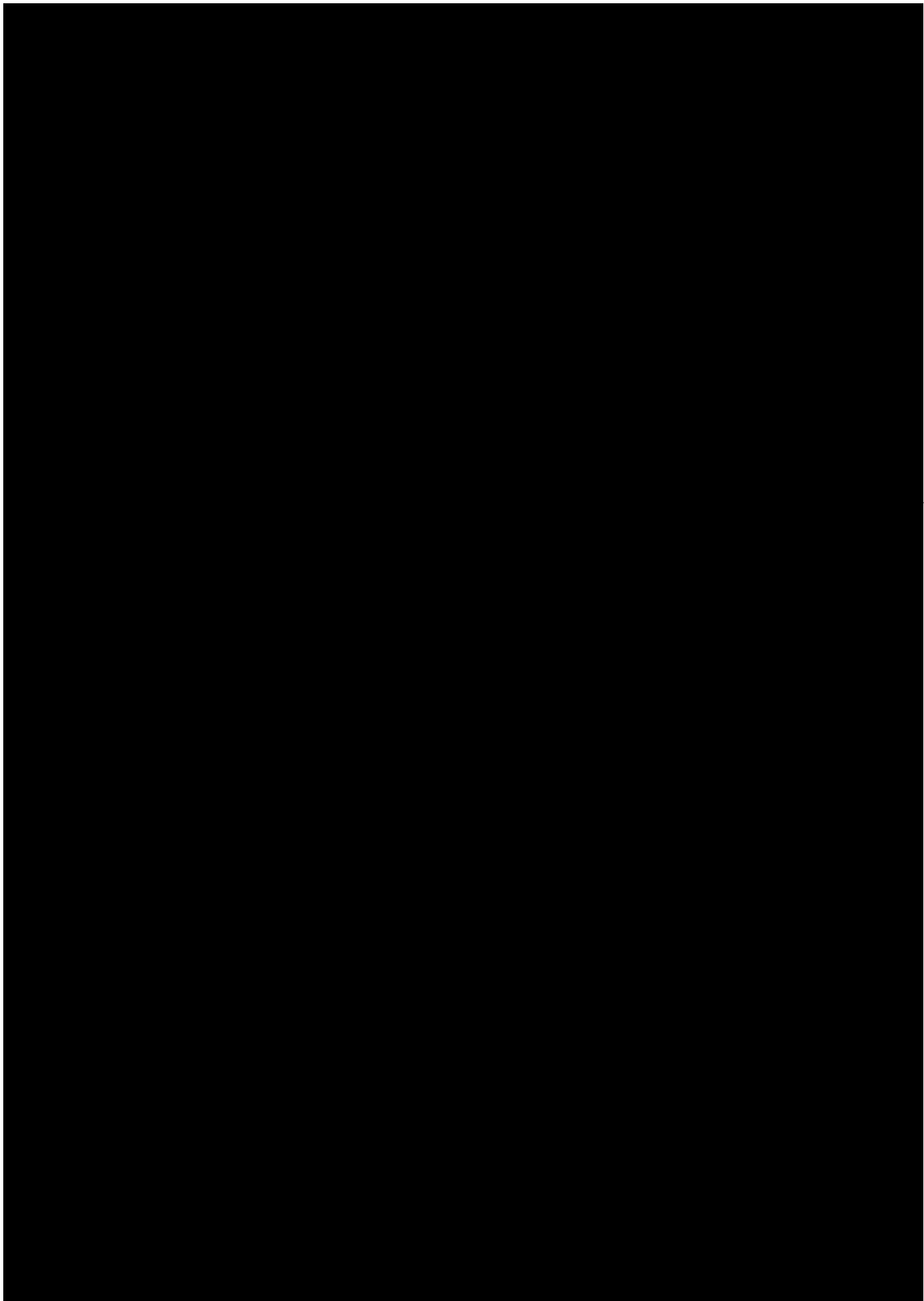


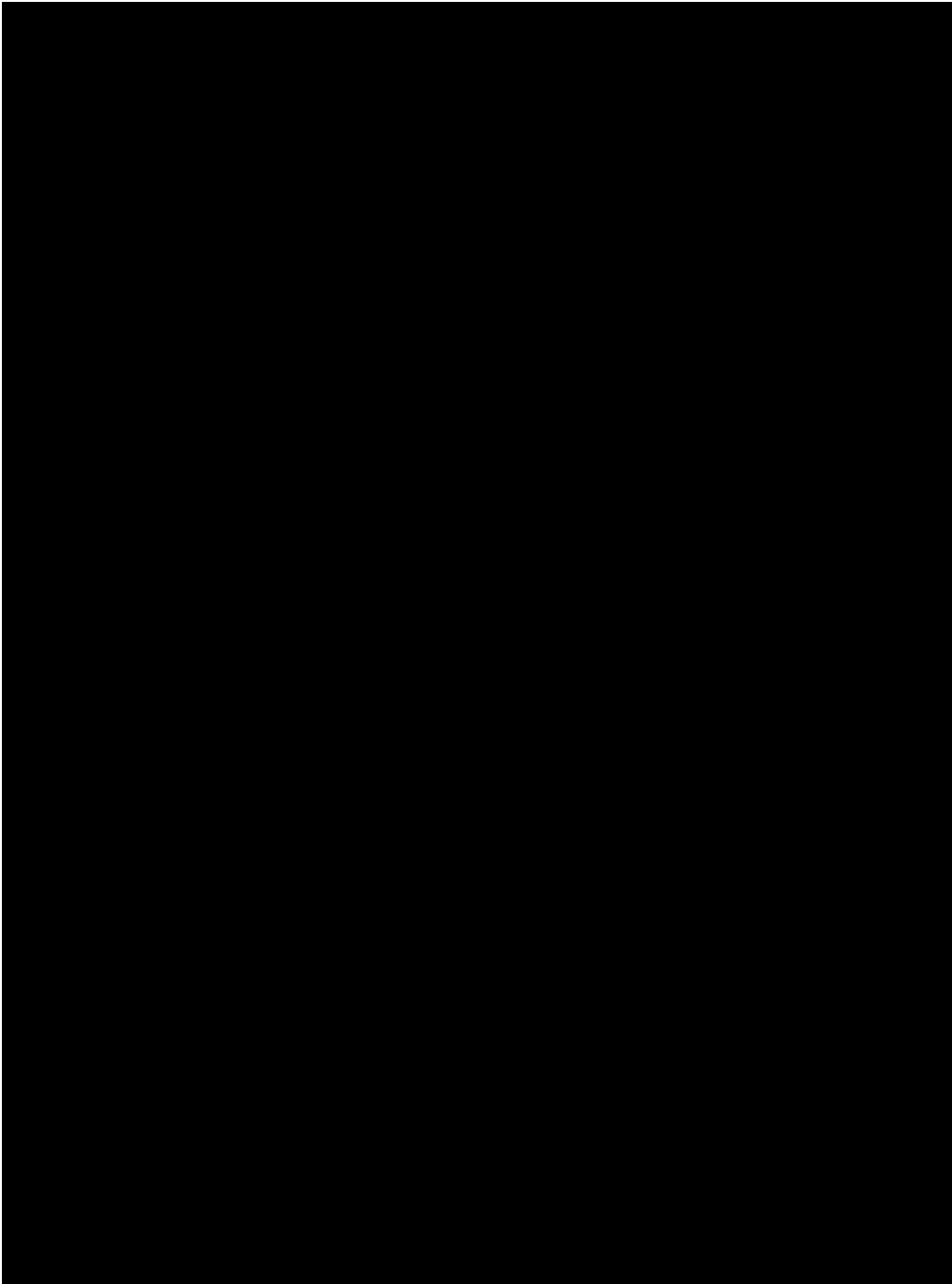




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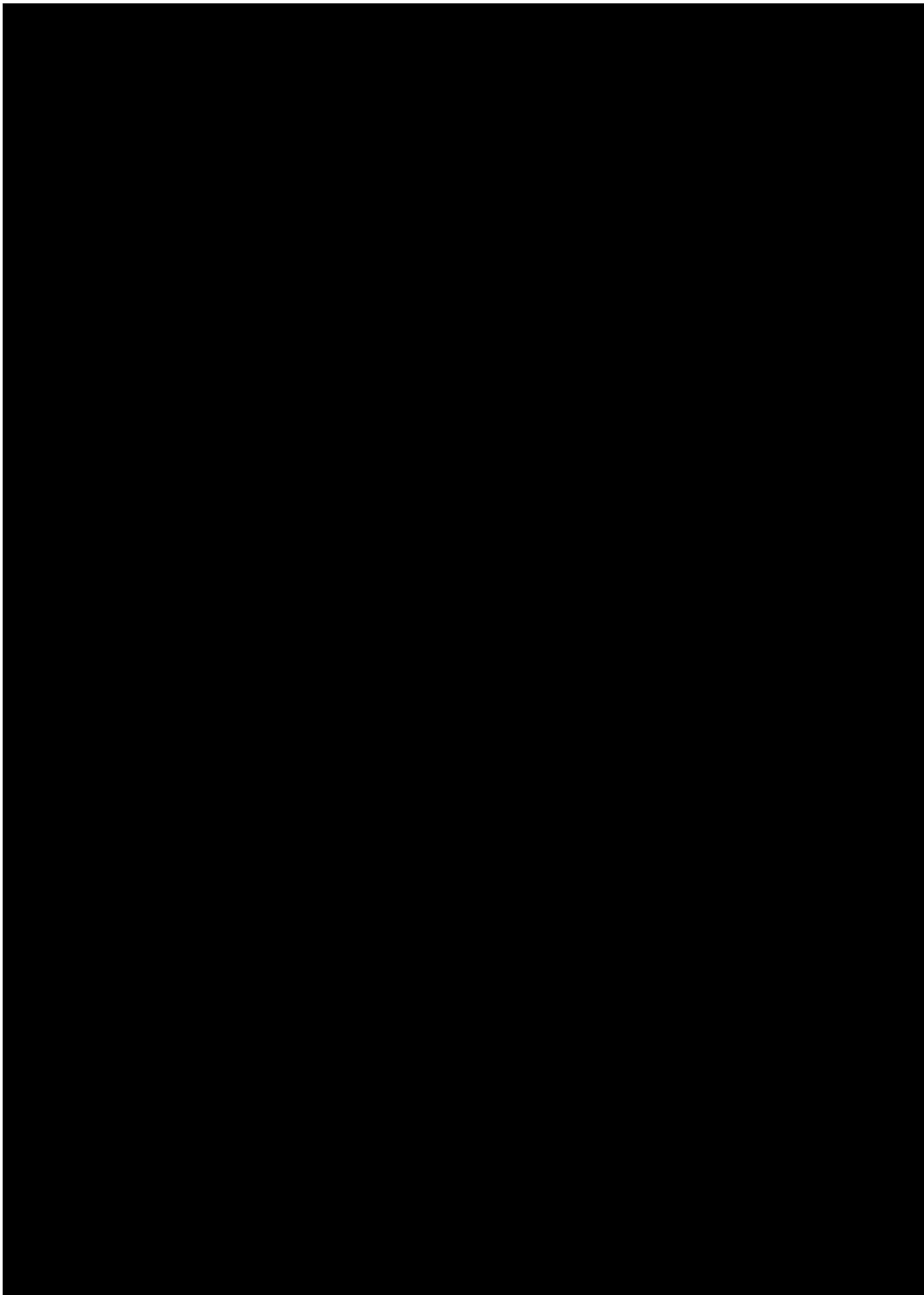


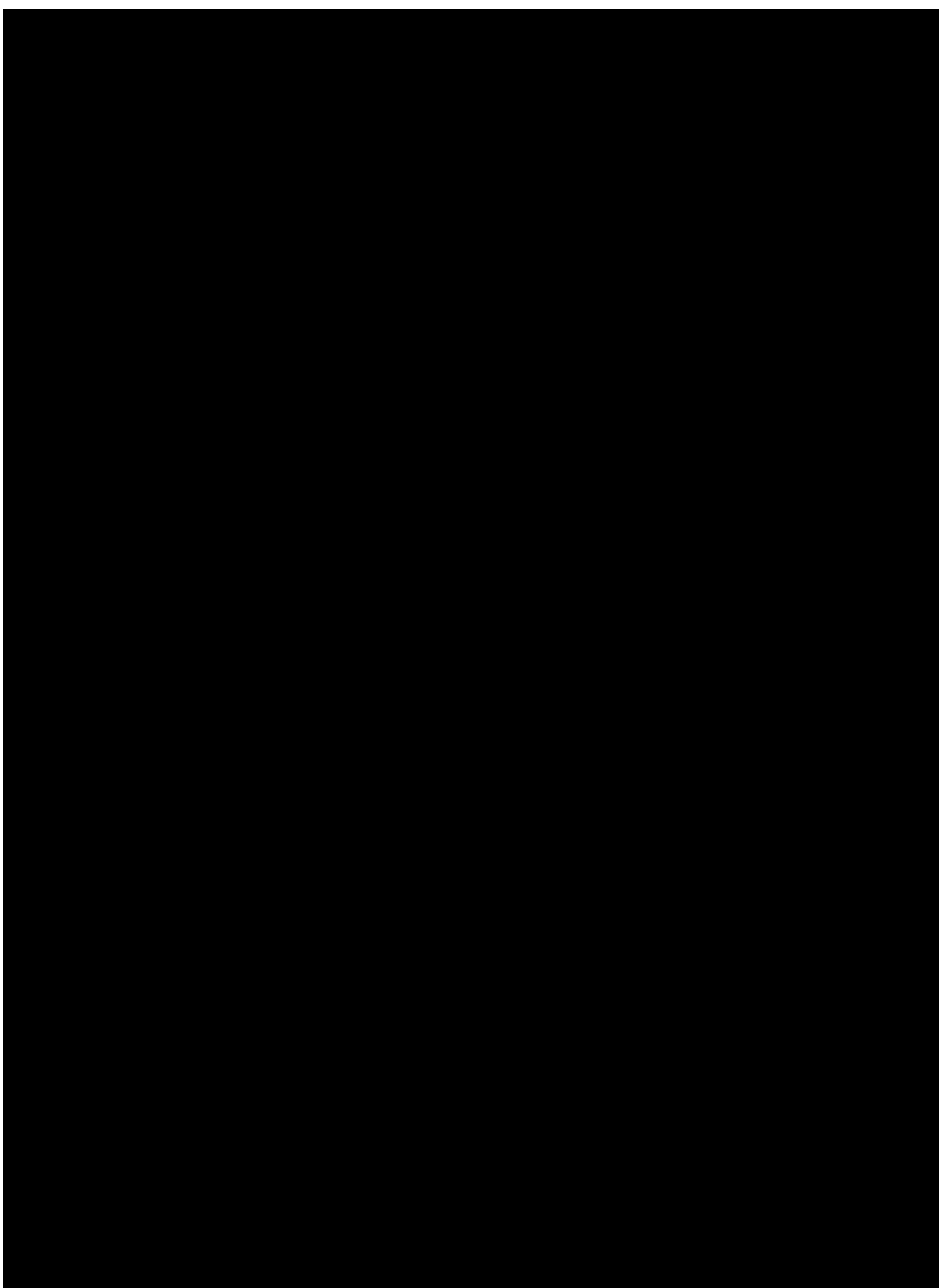


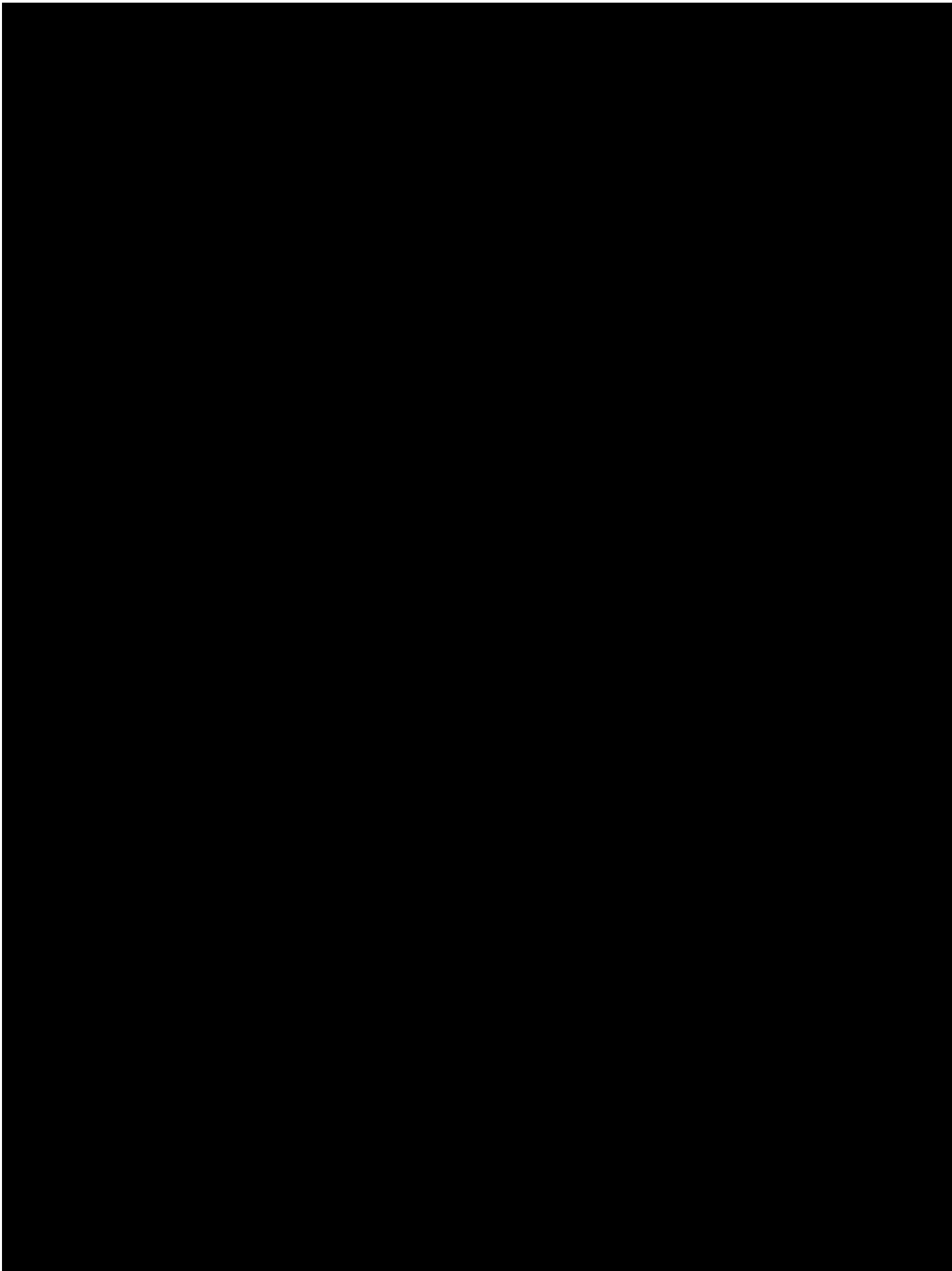


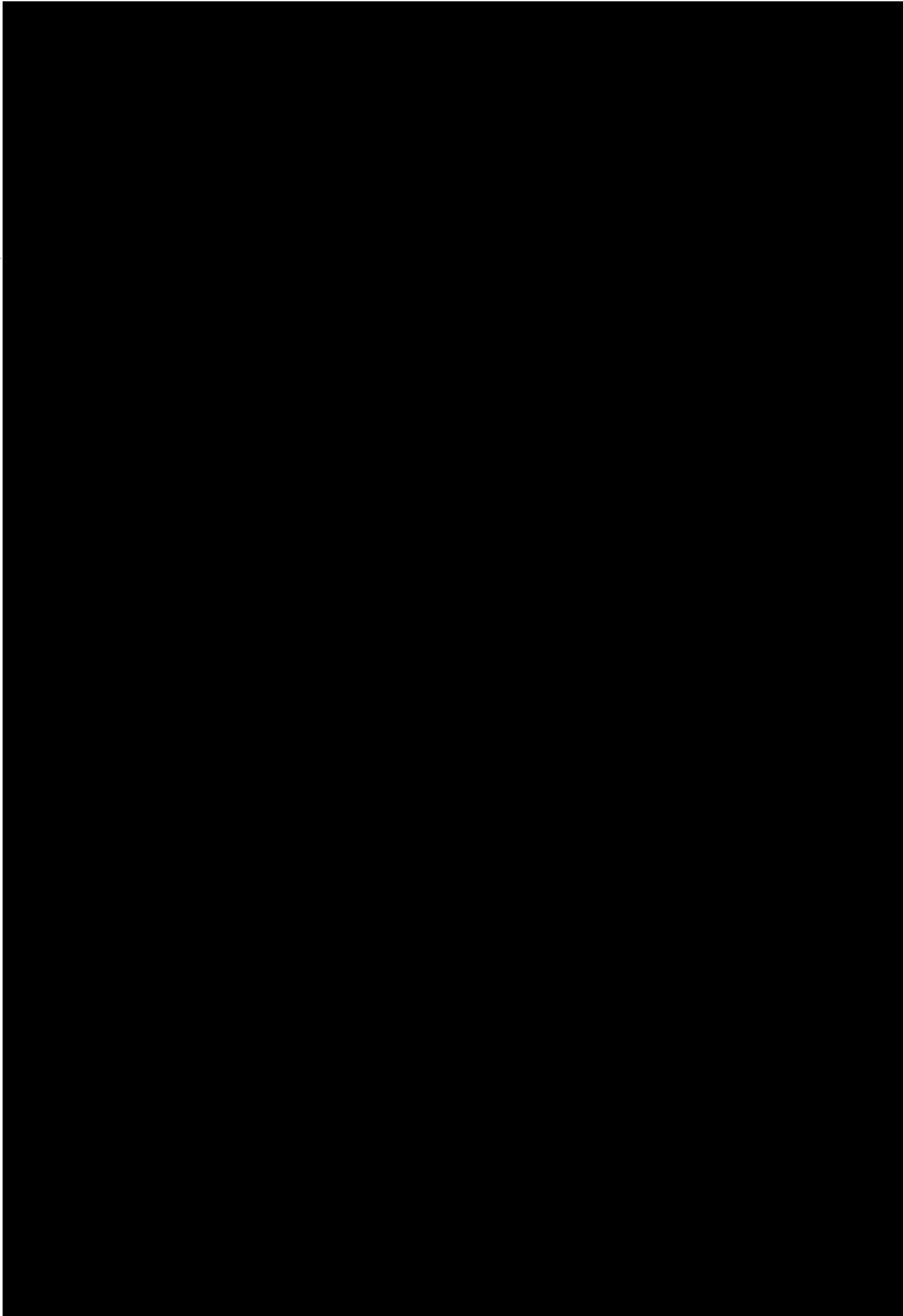


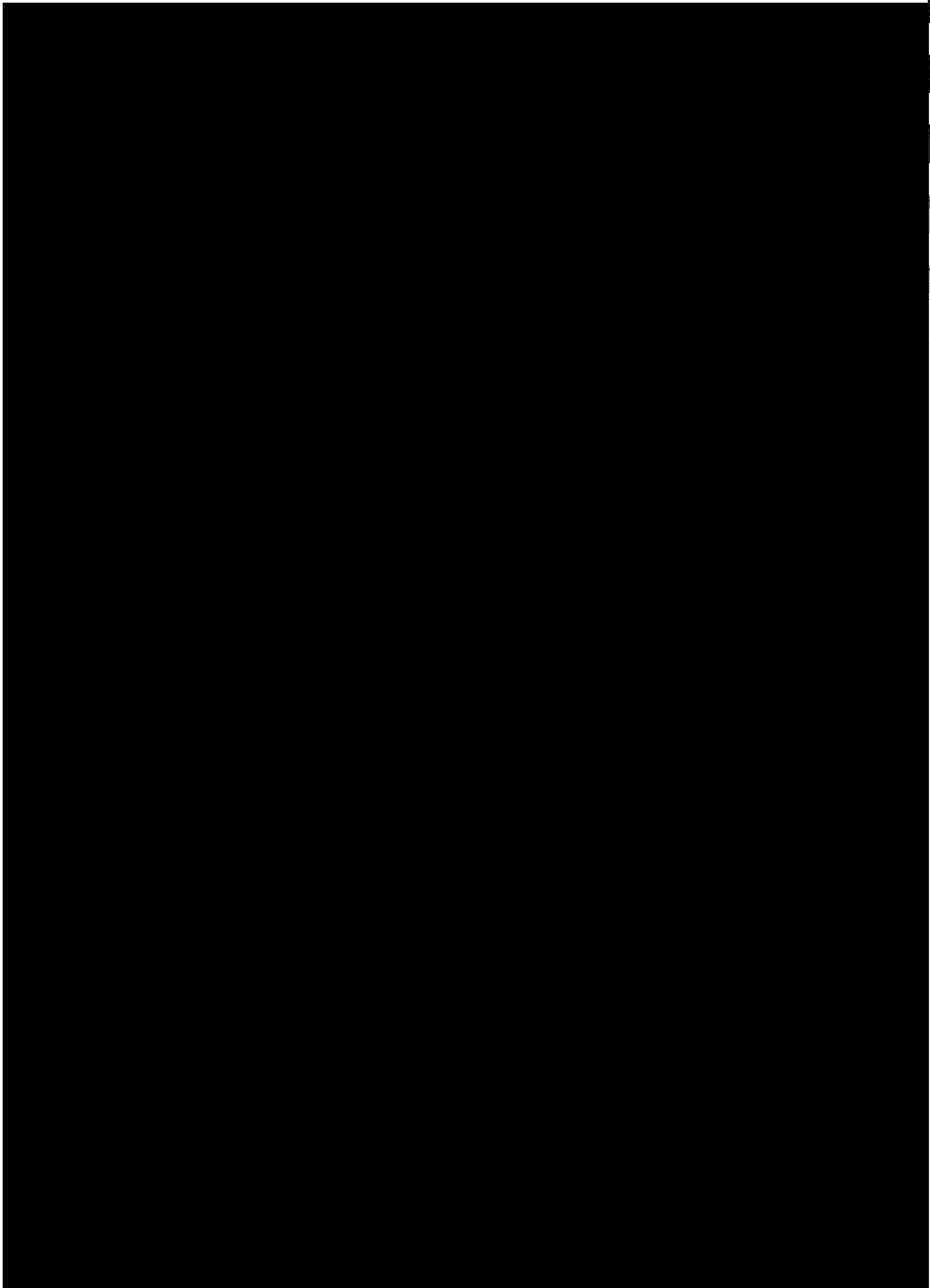




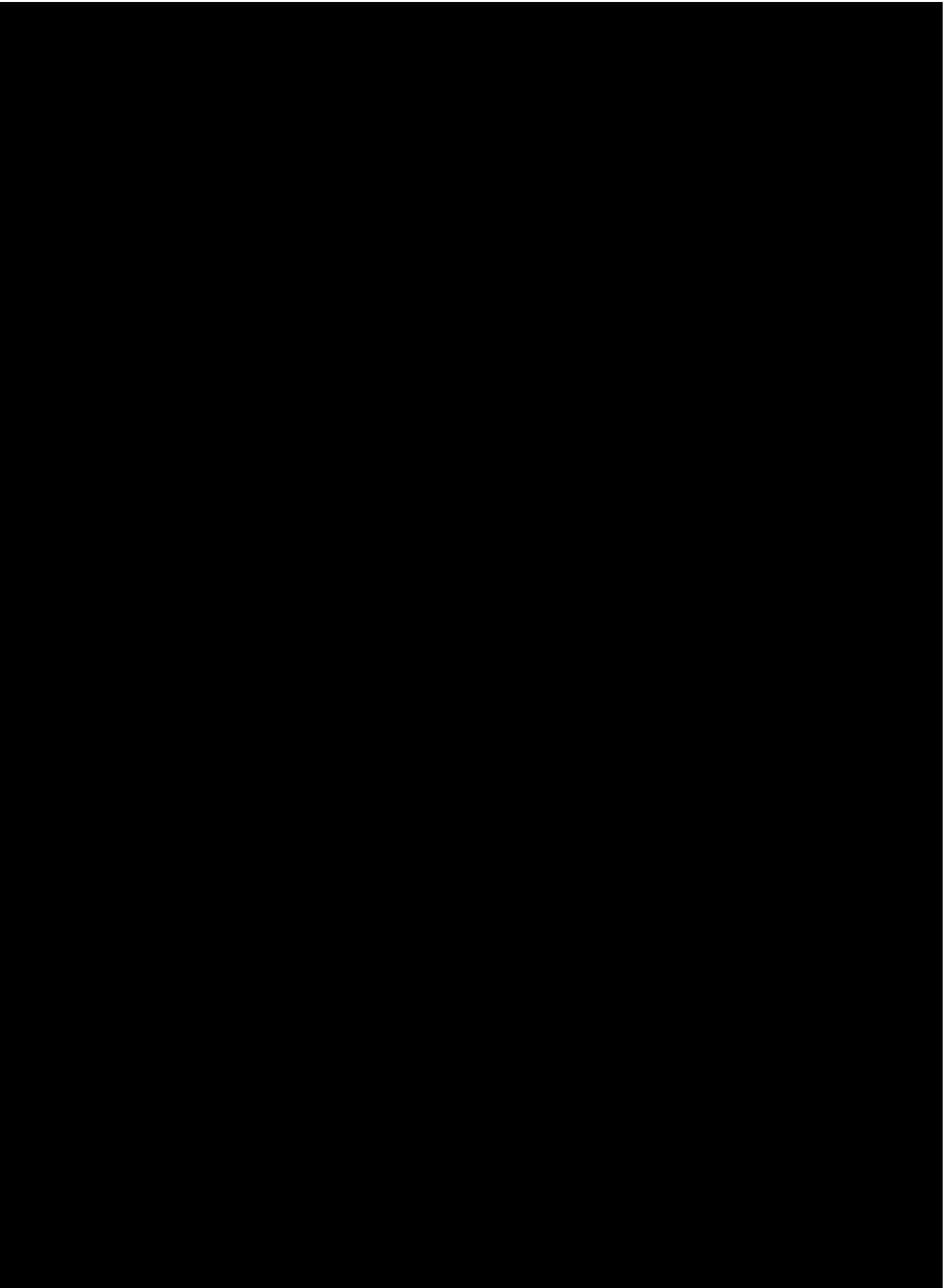


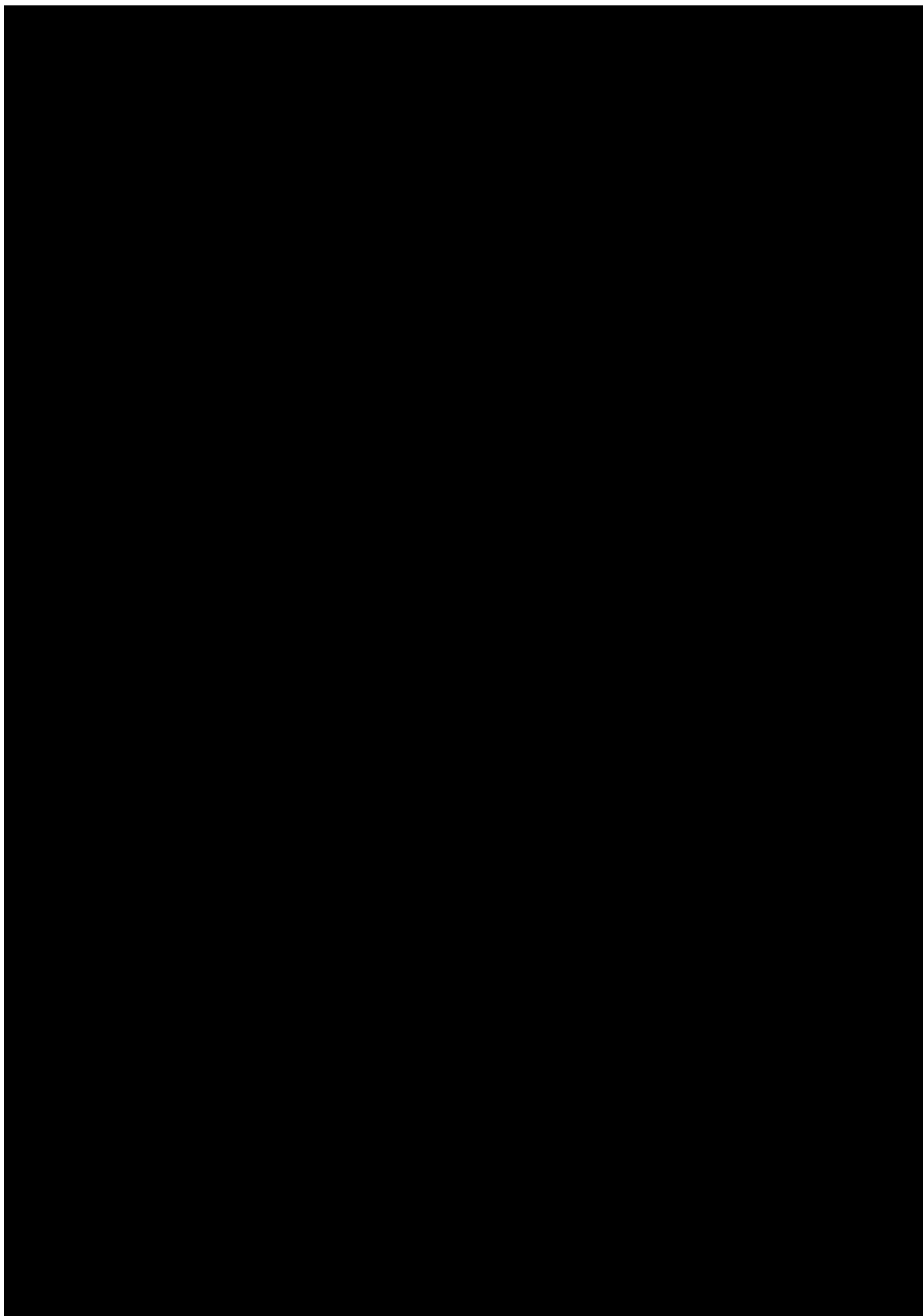


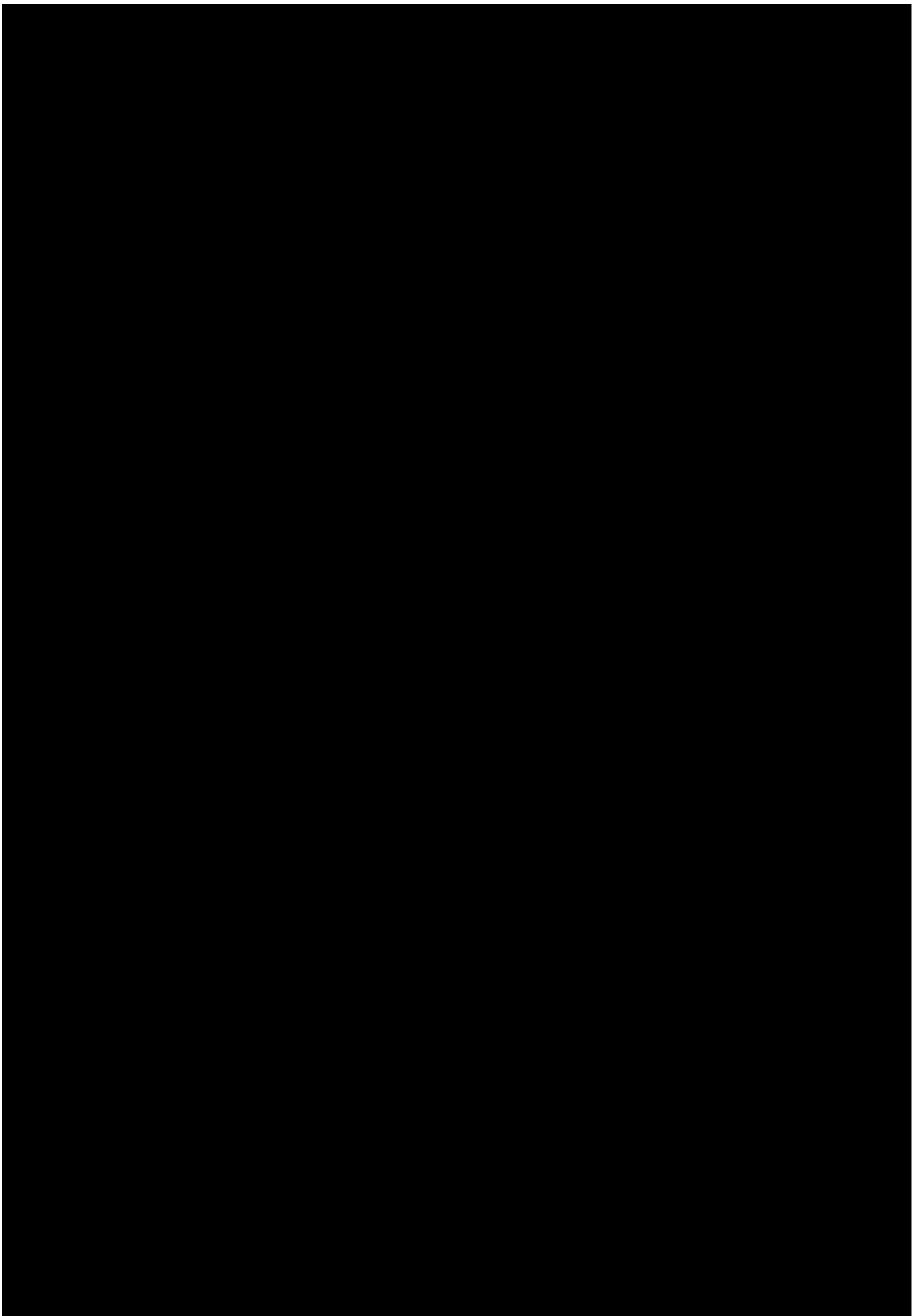




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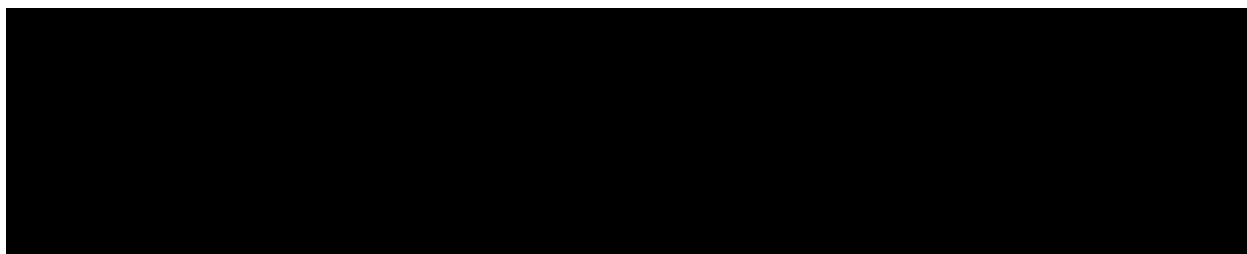




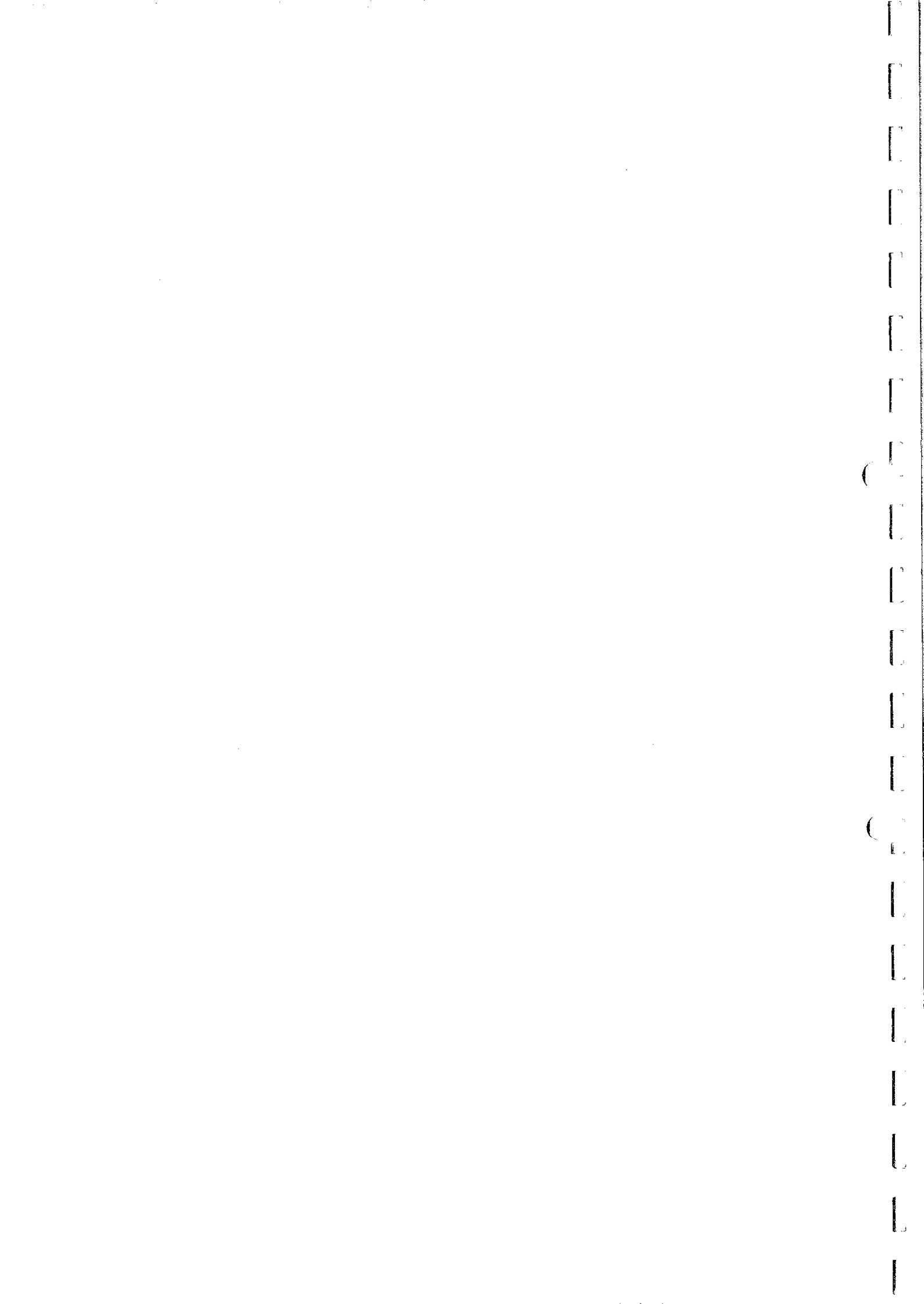
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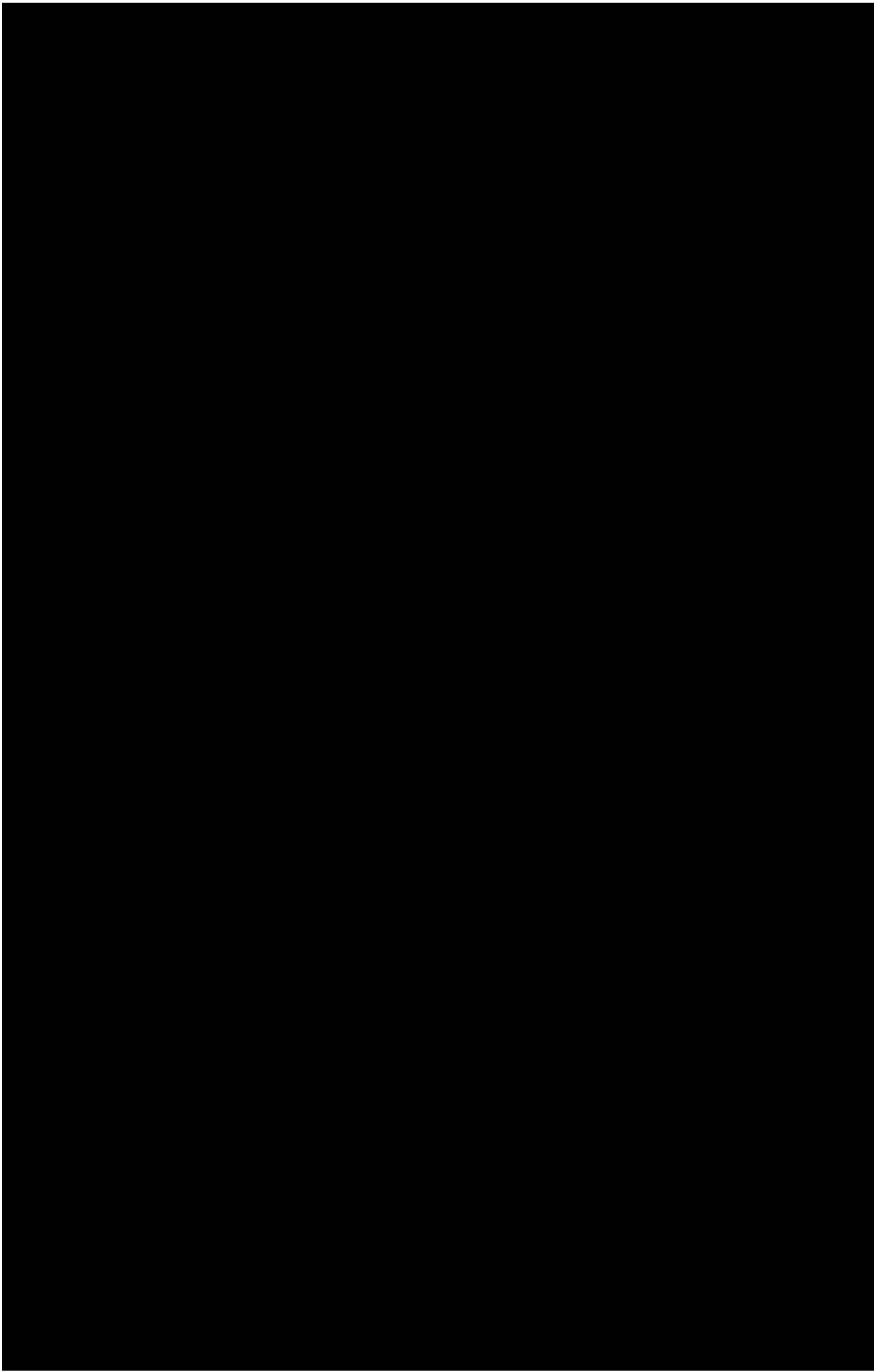


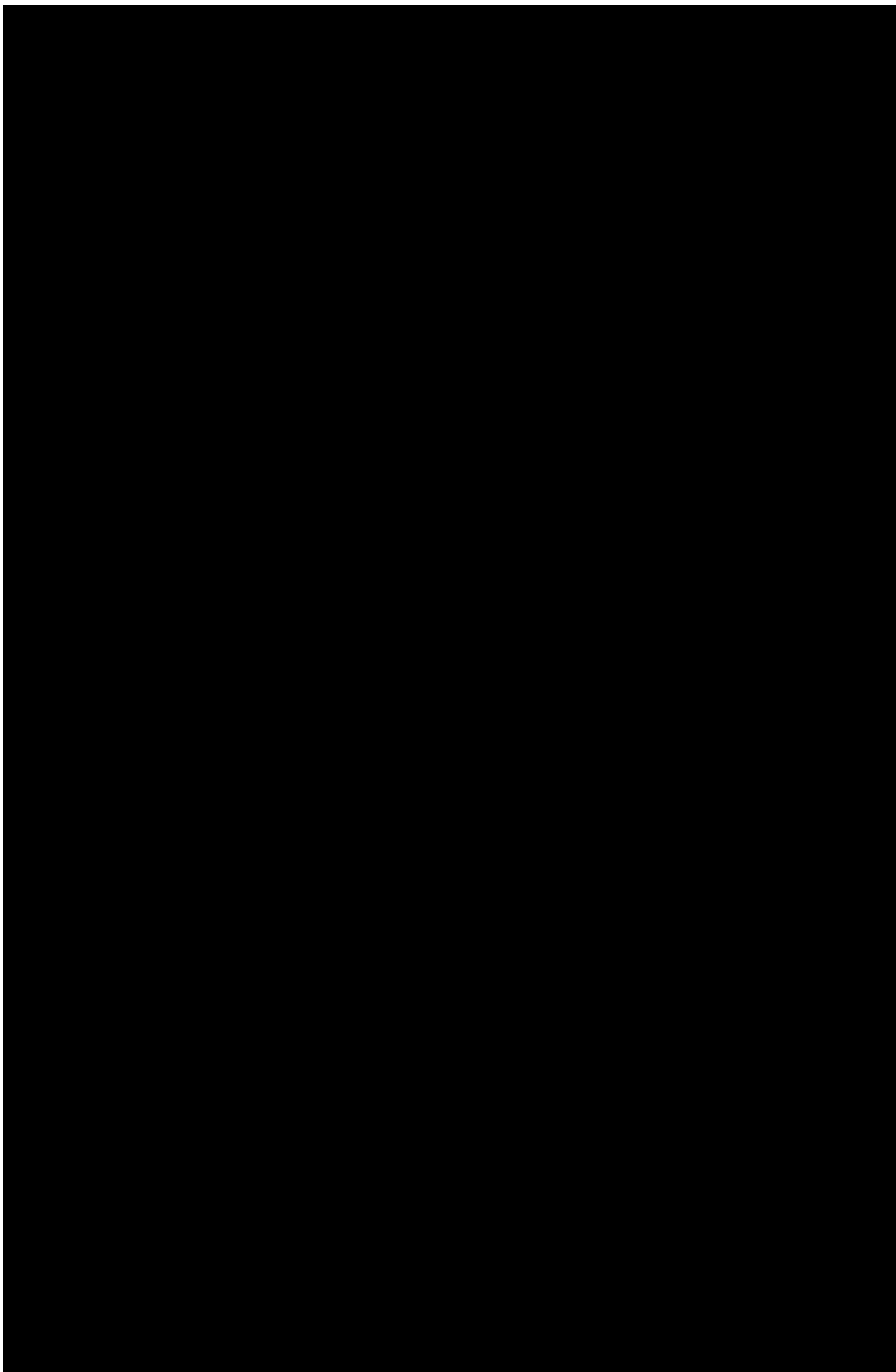
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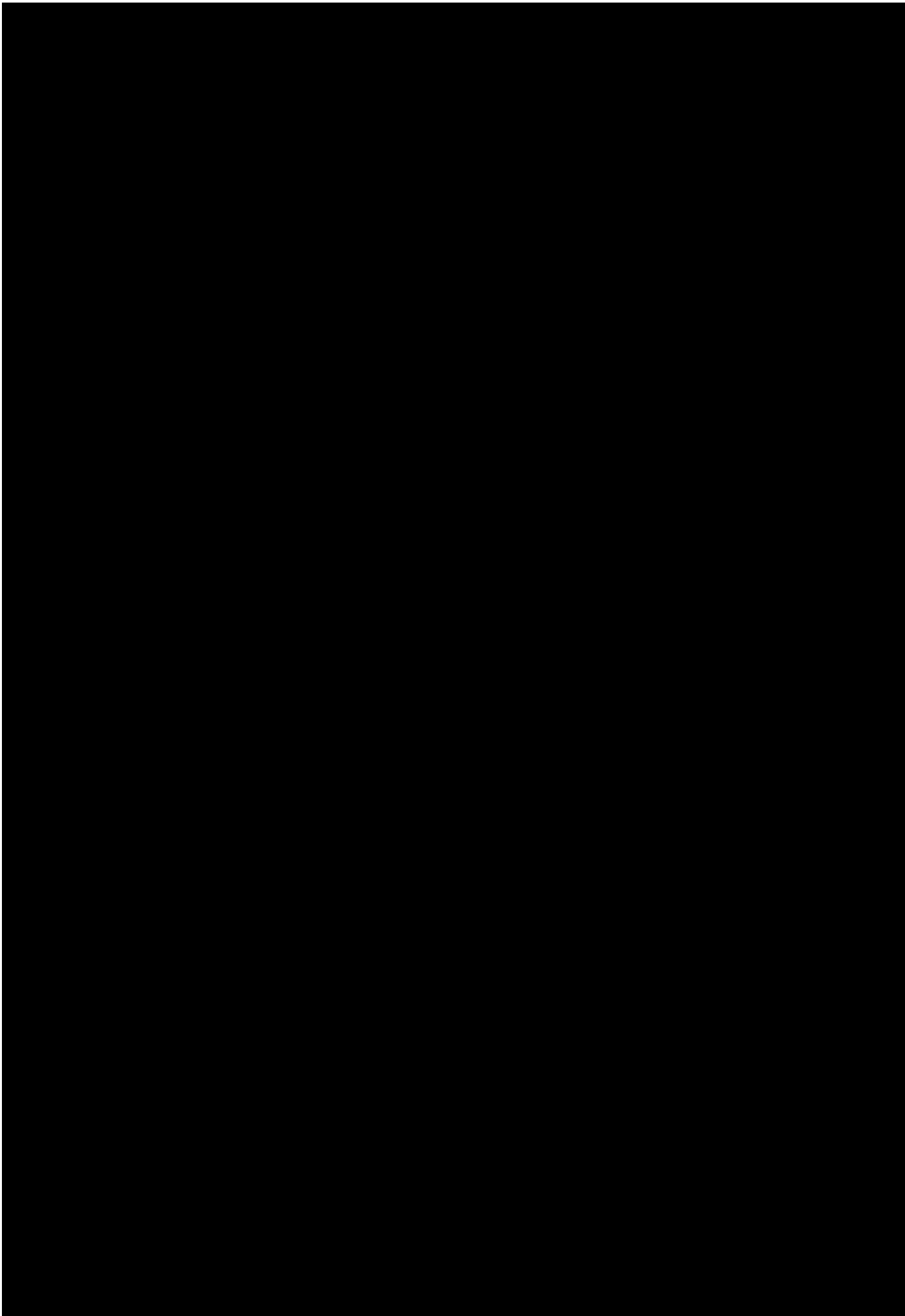


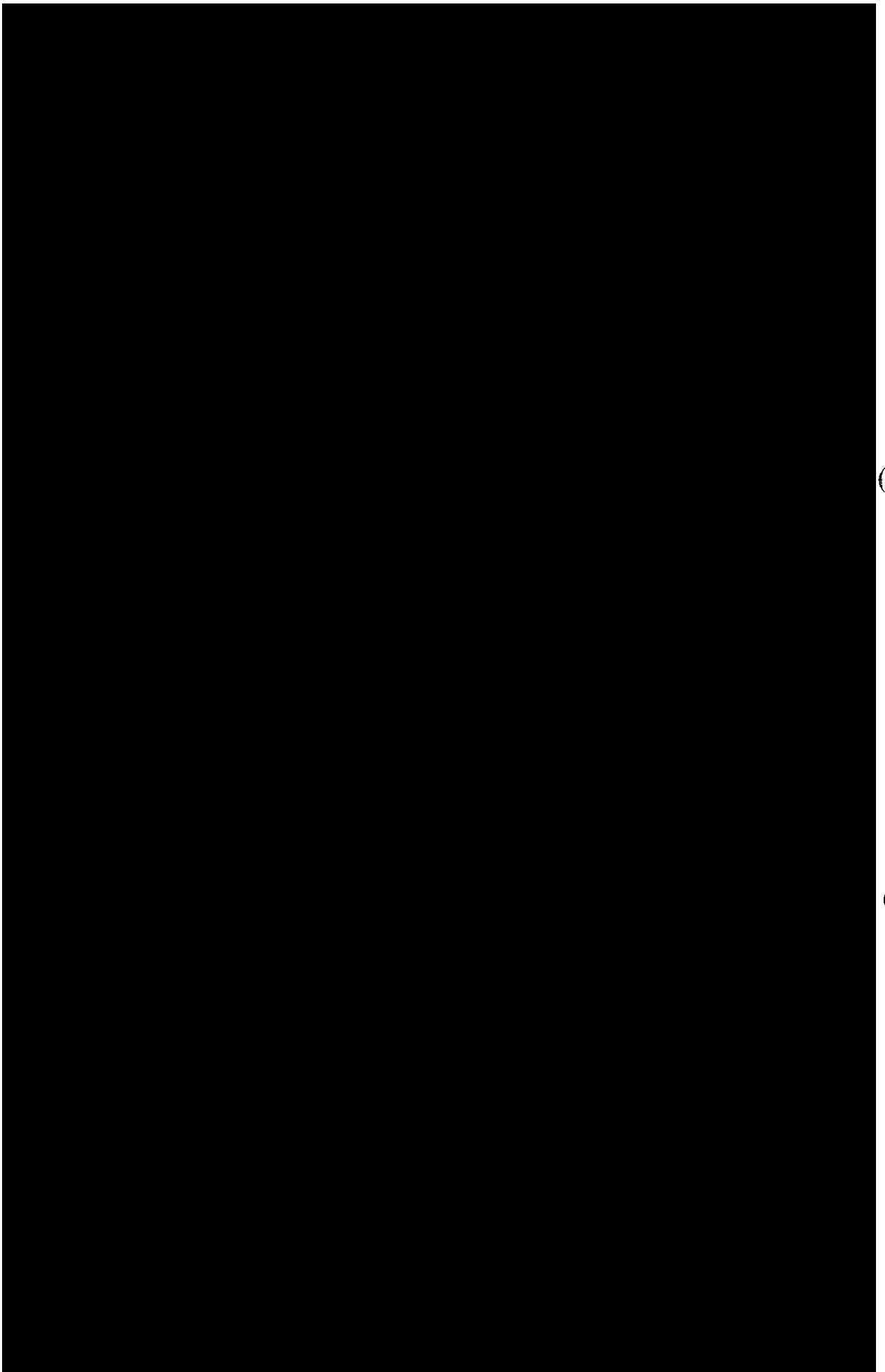


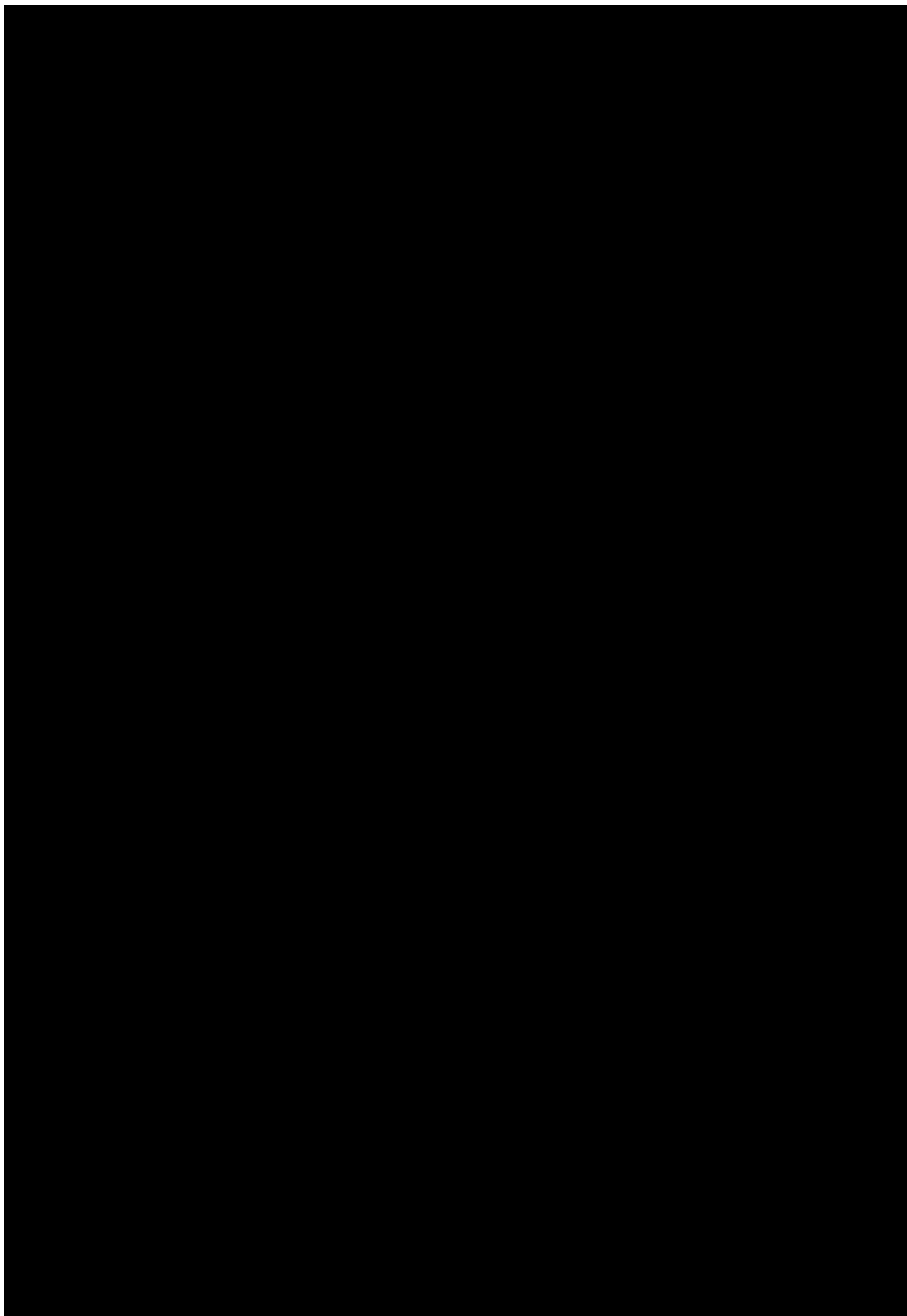


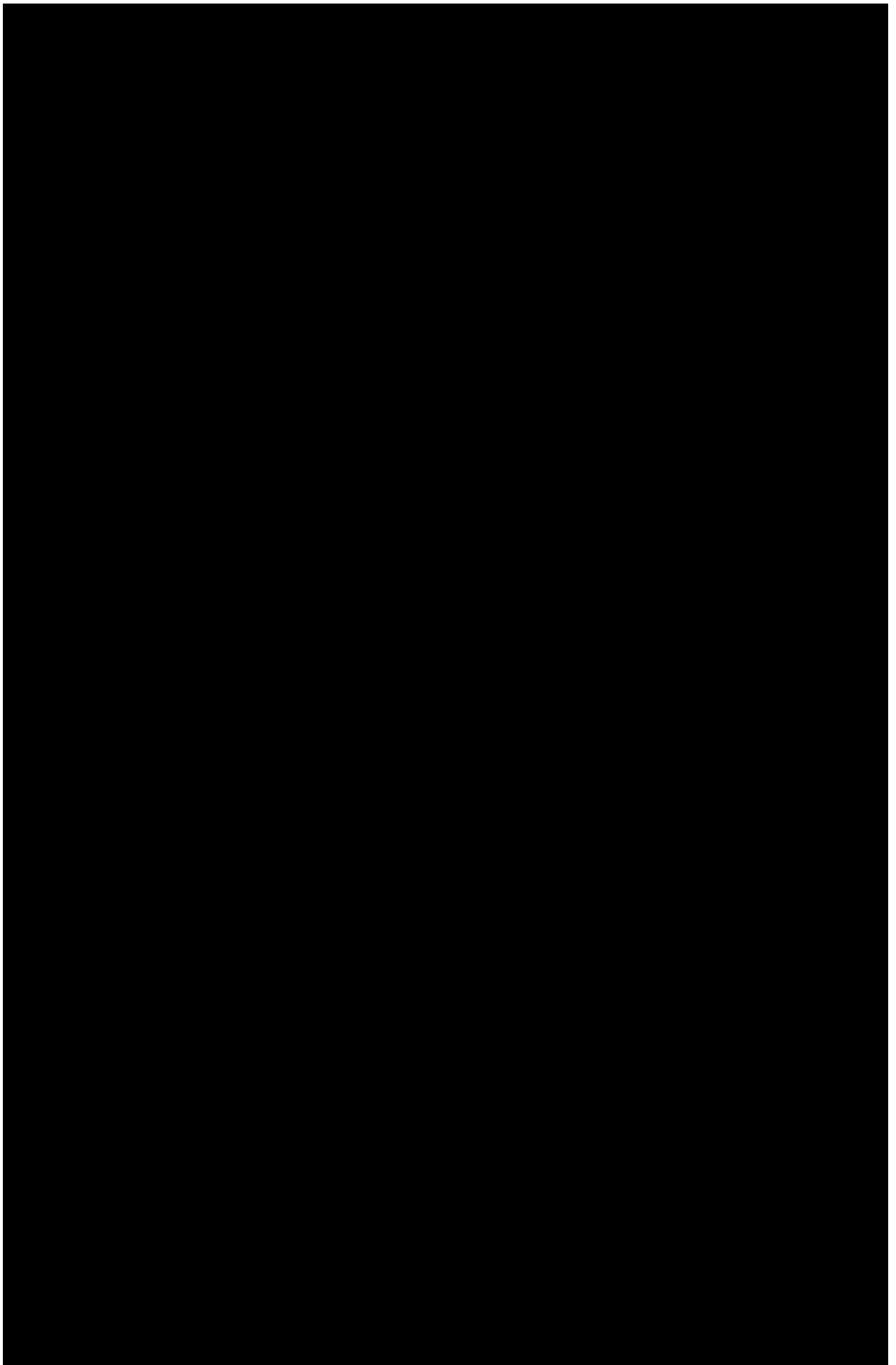
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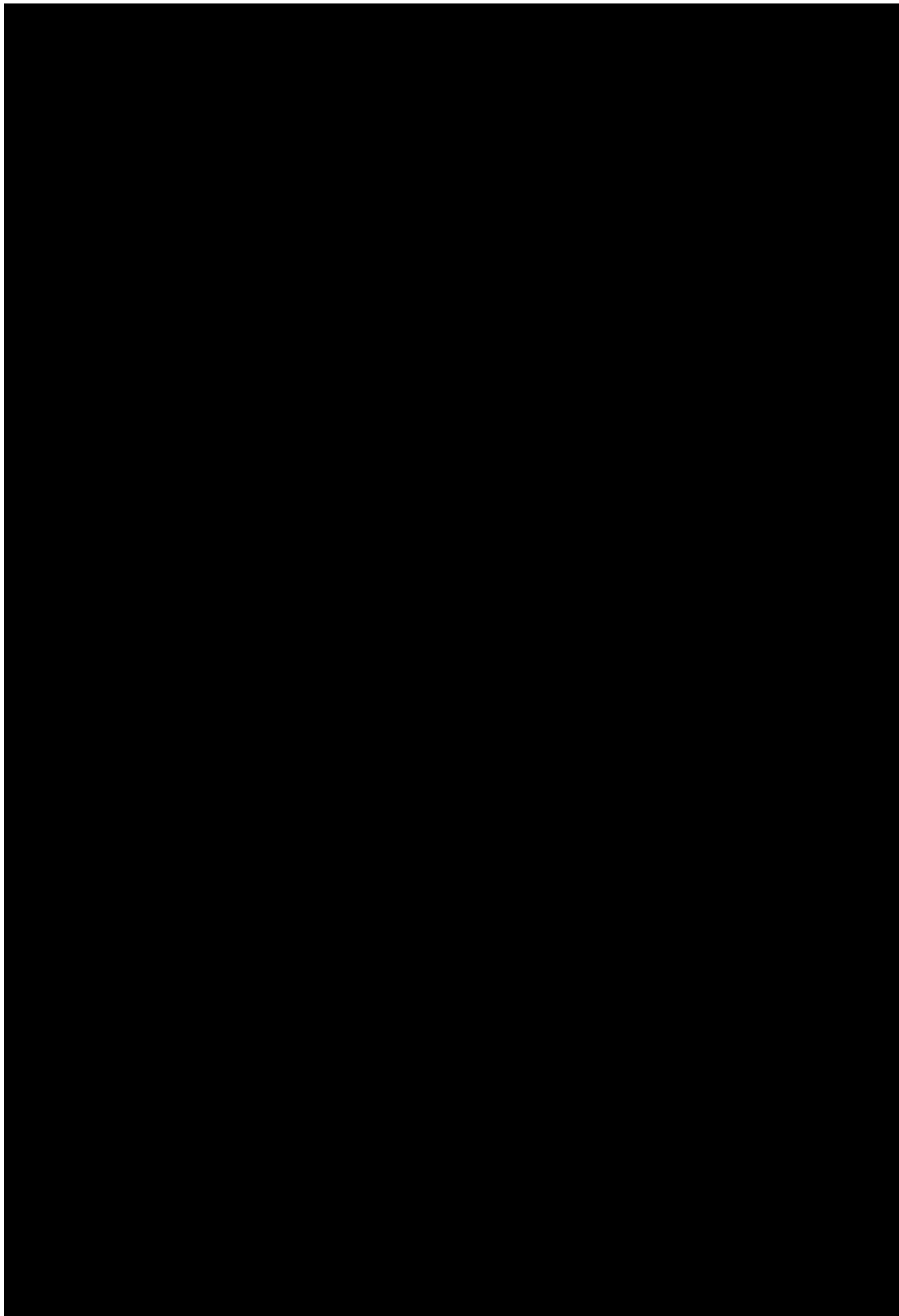


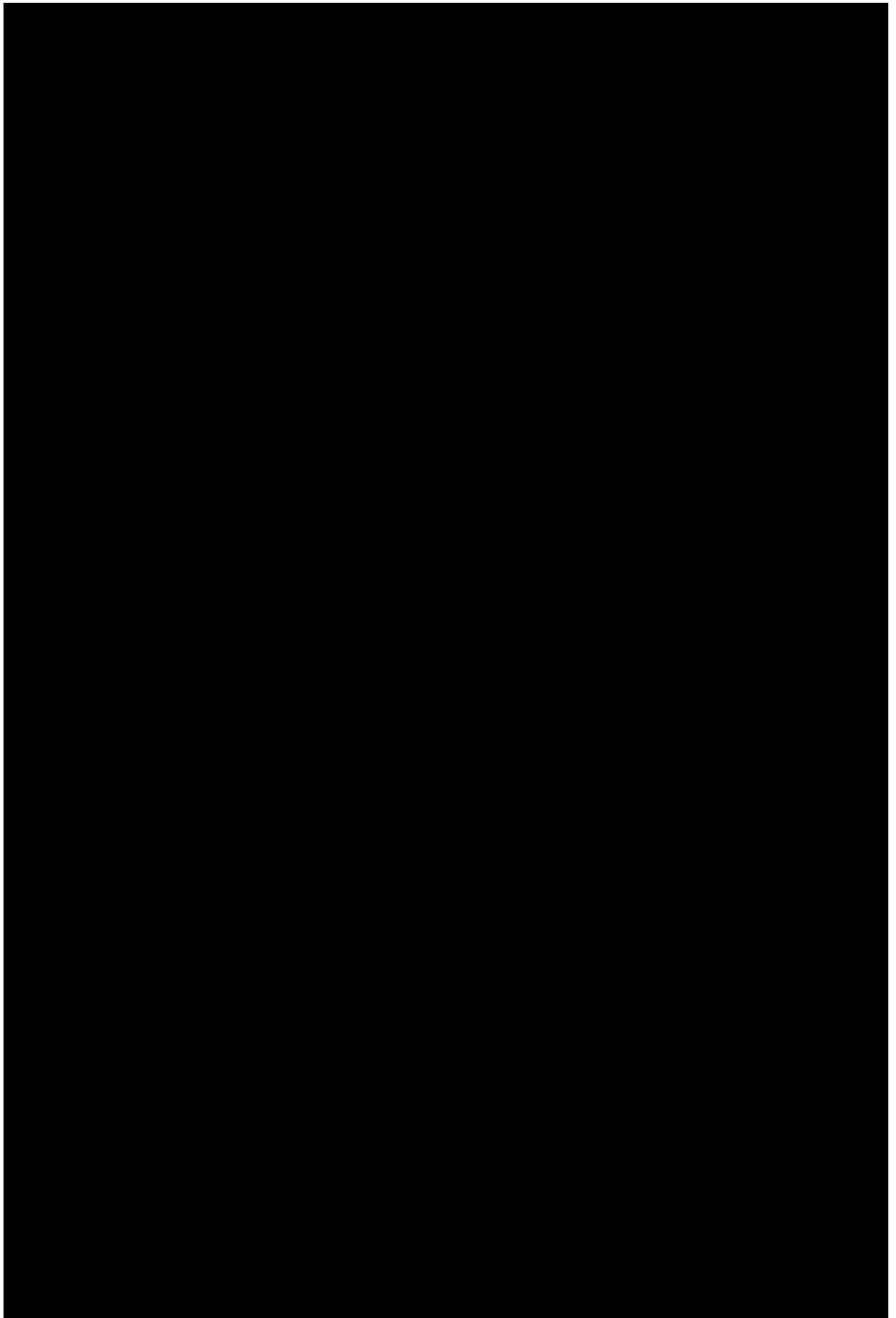




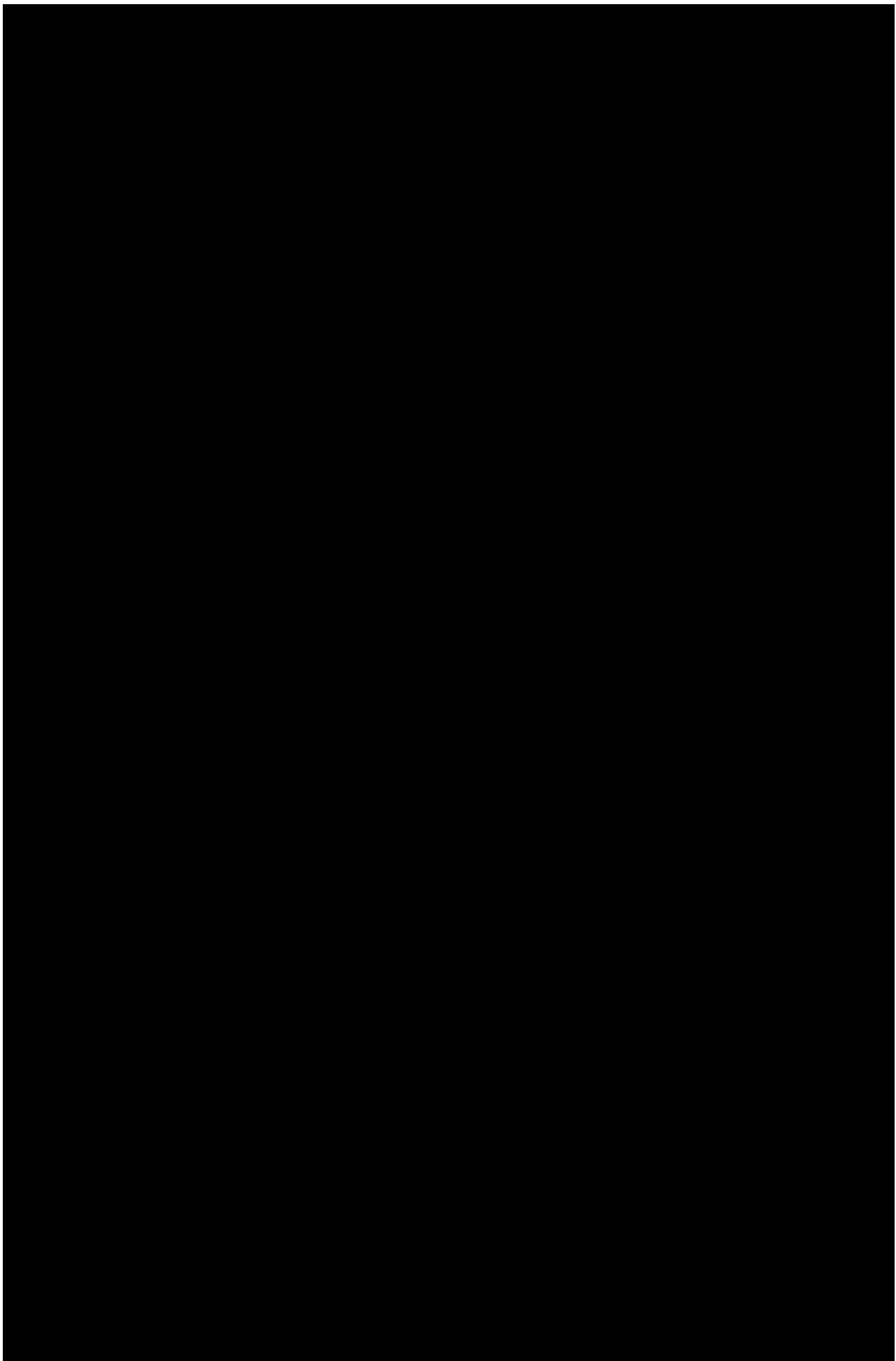


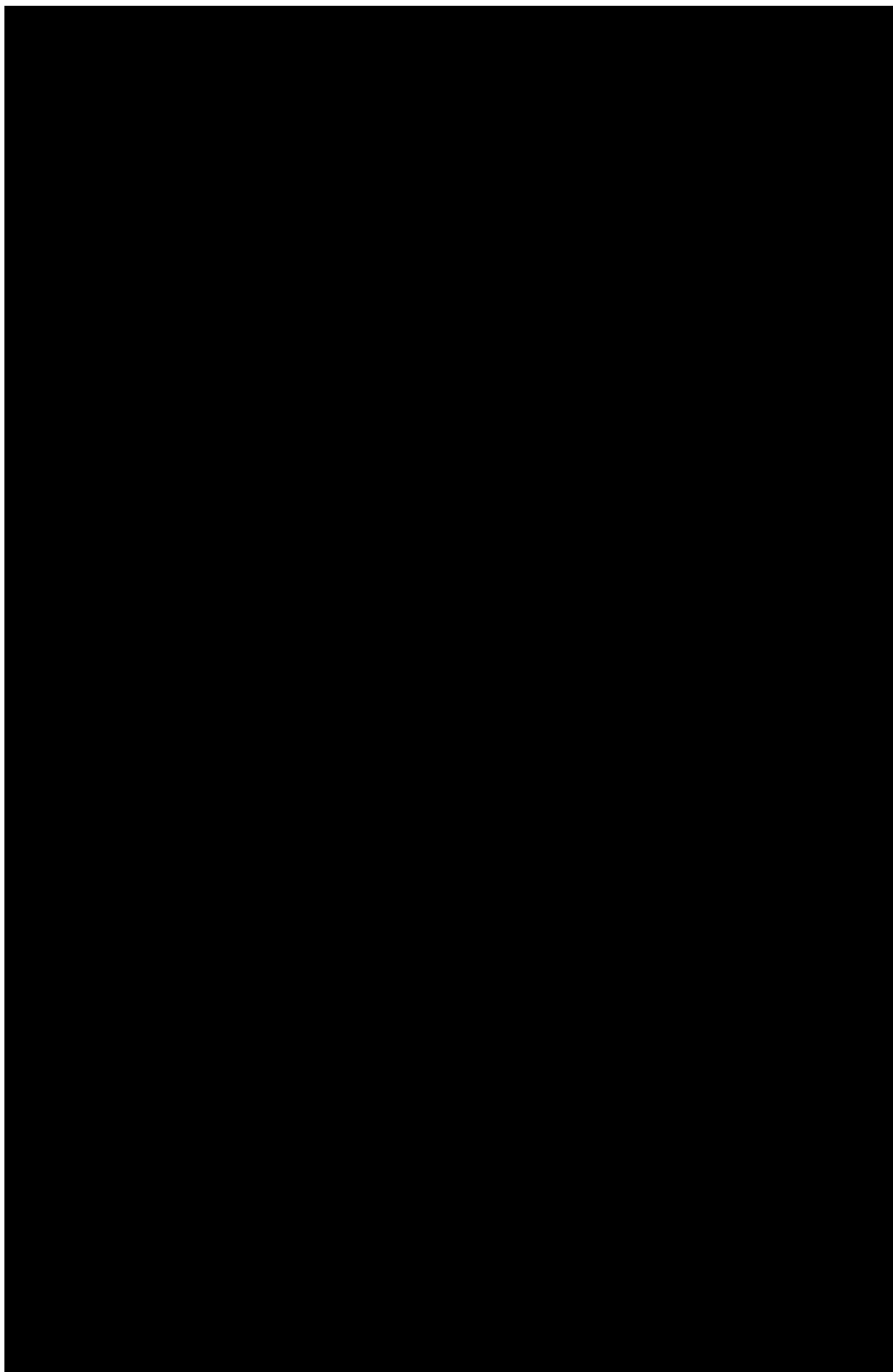
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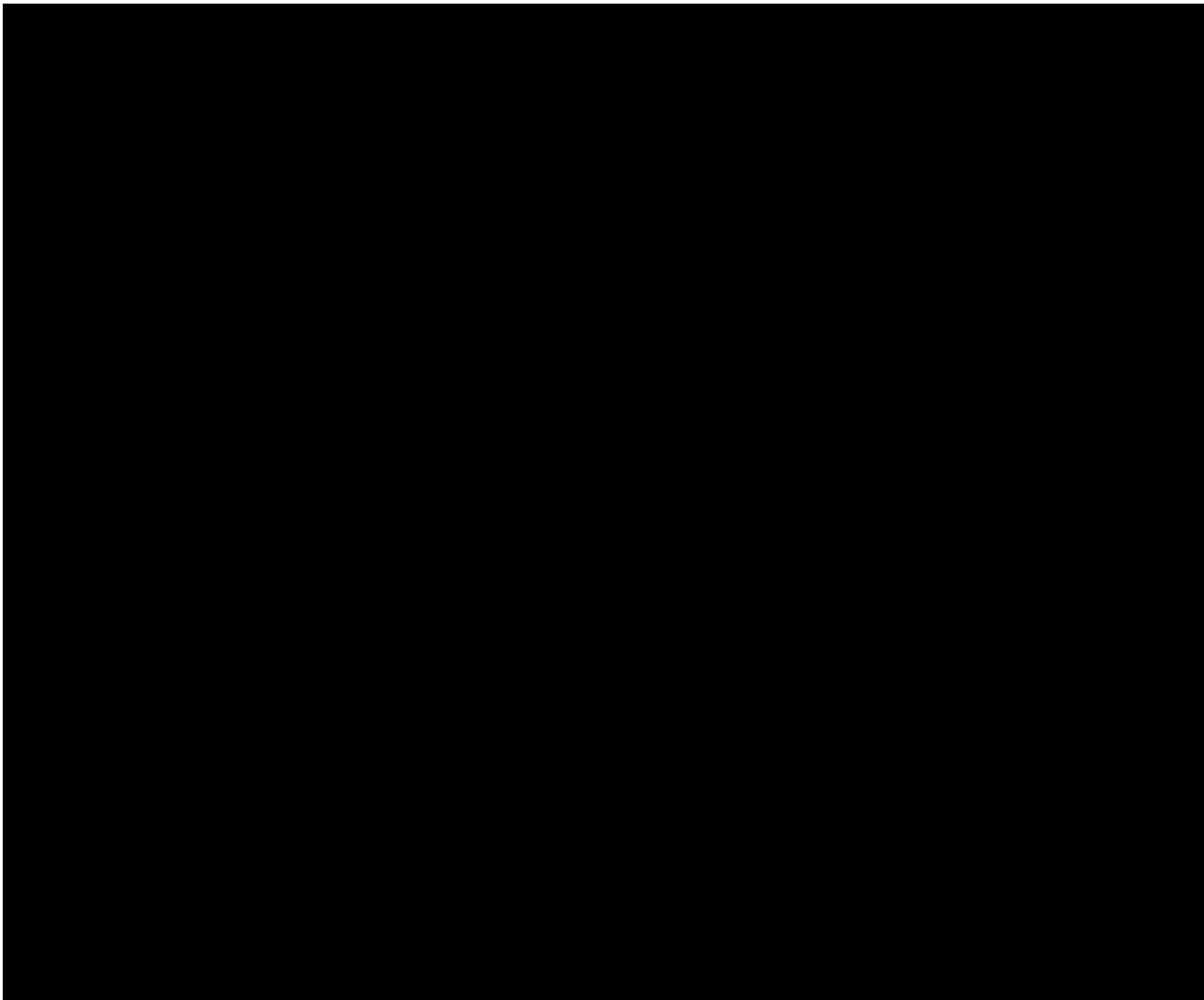


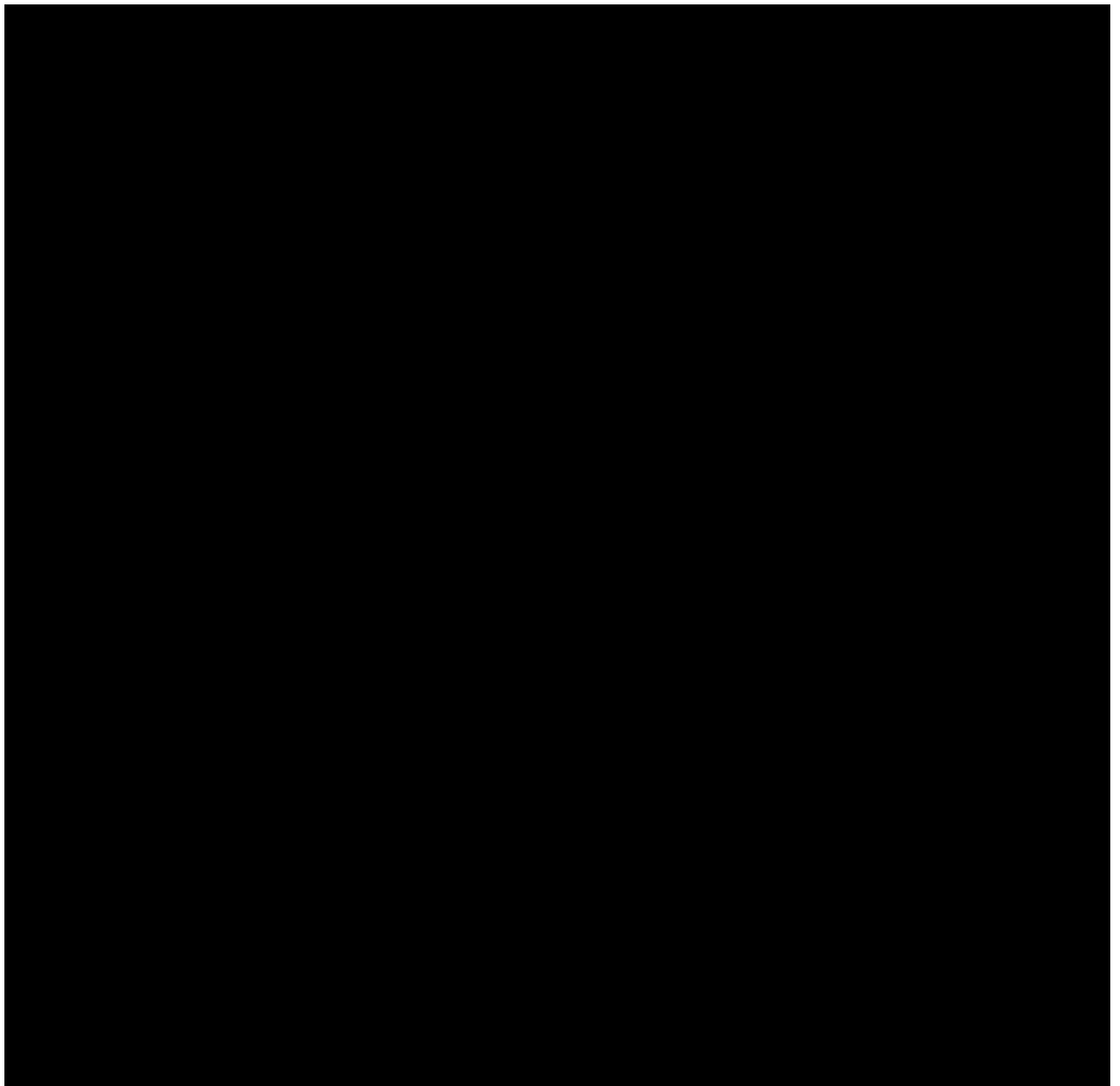
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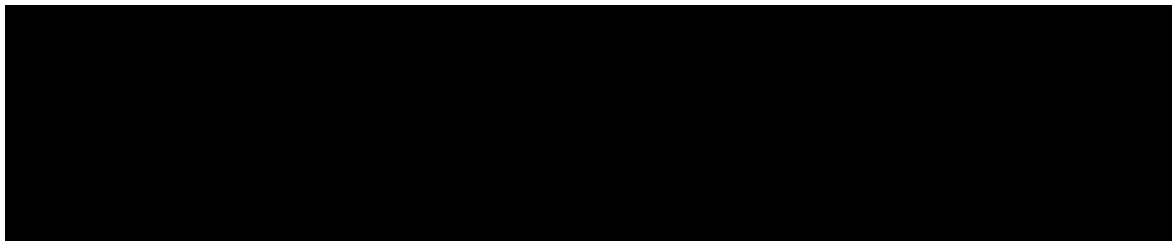




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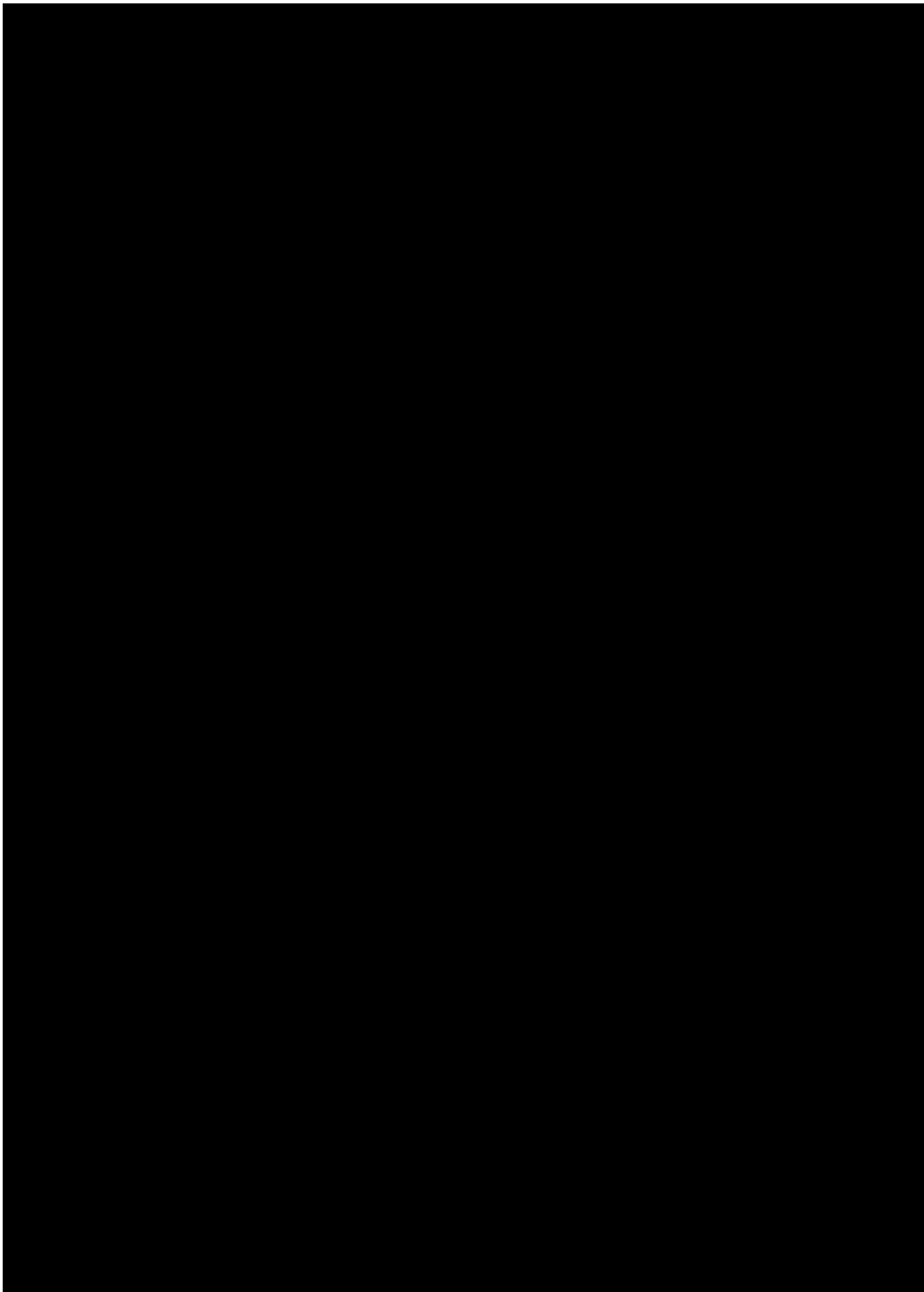


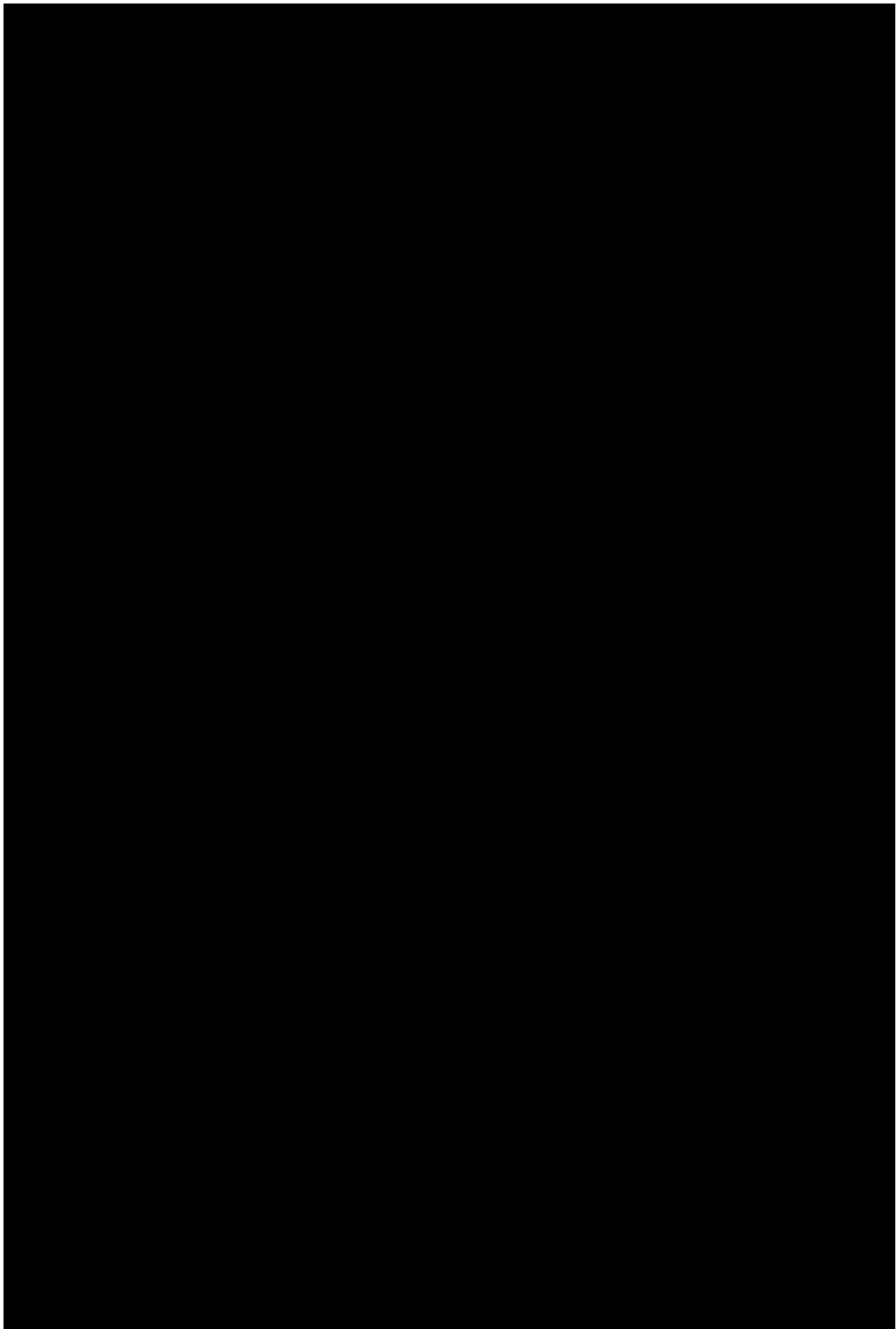
DIR 012 ANNUAL REPORT 2005



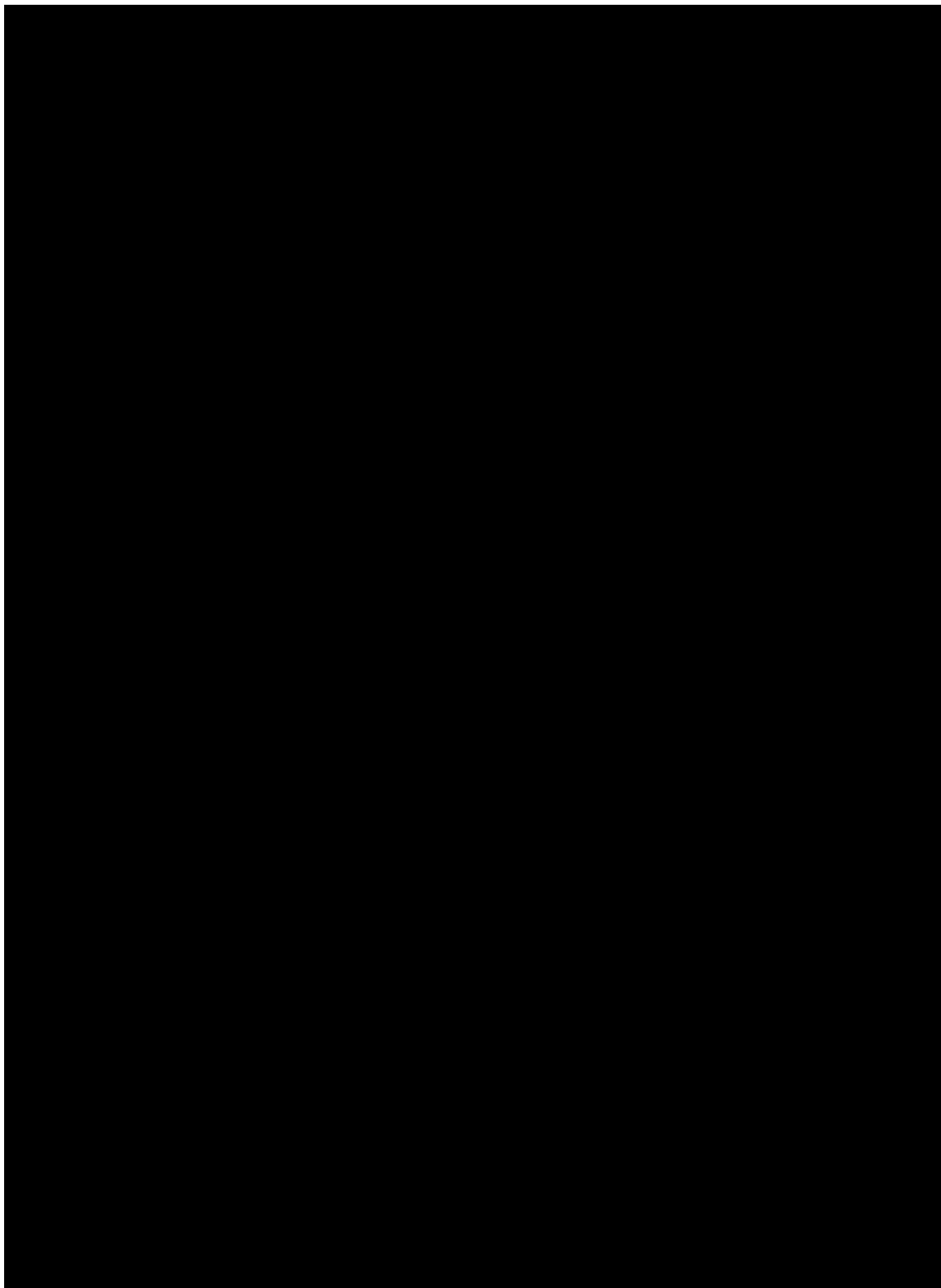
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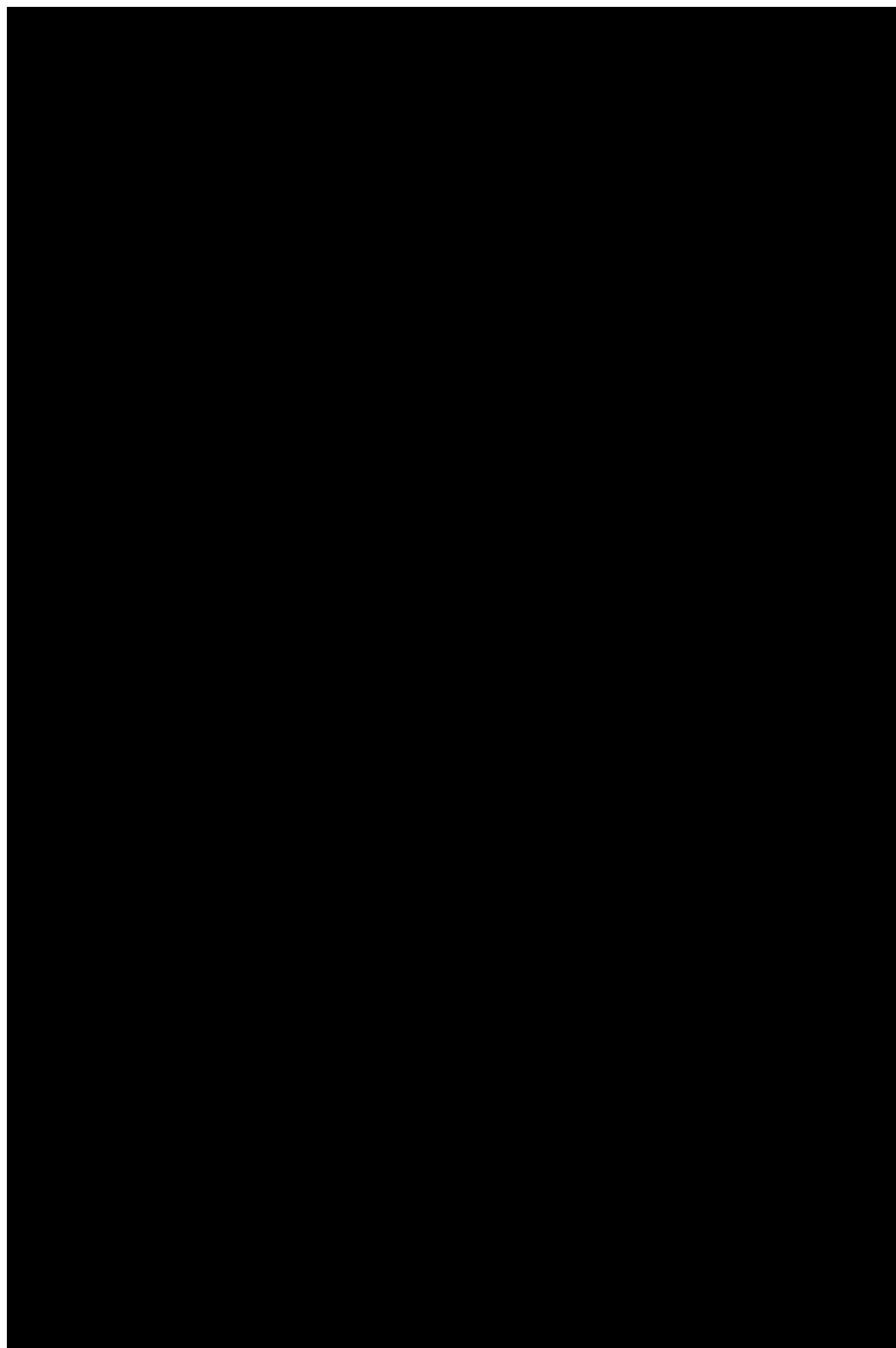
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WASHINGTON, D.C.
20315





CONFIDENTIAL



LICENCE No: DIR 012/2002
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2007 Annual Report for Bollgard II®
(Commercial Release)
REPORTING PERIOD: 2006/07 Cotton Growing Season
DATE: 22 December 2007

PREPARED BY: [REDACTED]
Compliance & Stewardship Manager

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

**LICENCE HOLDER DETAILS**

Name: Monsanto Australia Limited
Address: 600 St Kilda Road, Melbourne 3004
PO Box 6051
St Kilda Road Central,
Melbourne Victoria 8008
Telephone: 03 9522 7102
Facsimile: 03 9522 6102
Contact email: [REDACTED]
**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 012 commercial release licence for Bollgard II® issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 and 4 of the DIR 012 licence as issued to Monsanto Australia Limited on 23 September 2002, and varied in June, September and December 2003; March, May, October and December 2004; and February, June, July, August, October, November and December 2005.



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1. General Conditions

a. Informing people of their obligations

Monsanto Australia Limited informed all cotton growers and cotton gins covered by the DIR 012 / 2002 licence of the obligations imposed on them as a result of the conditions of these licences. This was achieved primarily through Monsanto Accreditation programs and information courses and mail outs.

Bollgard II® cotton Accreditation programs require all persons having management responsibility for Bollgard II crops to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once.

b. Reporting

During the reporting period, the licence holder did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence, or of any unintended effects of the dealings authorised by the licence.

c. Material changes in circumstances

During the 2006/07 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licence holder occurring after the commencement of this licence; any revocation or suspension of a licence or



permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of the DIR 012 licence.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

During the 2006/07 reporting period, there were no changes to contact details of the Project Supervisor.

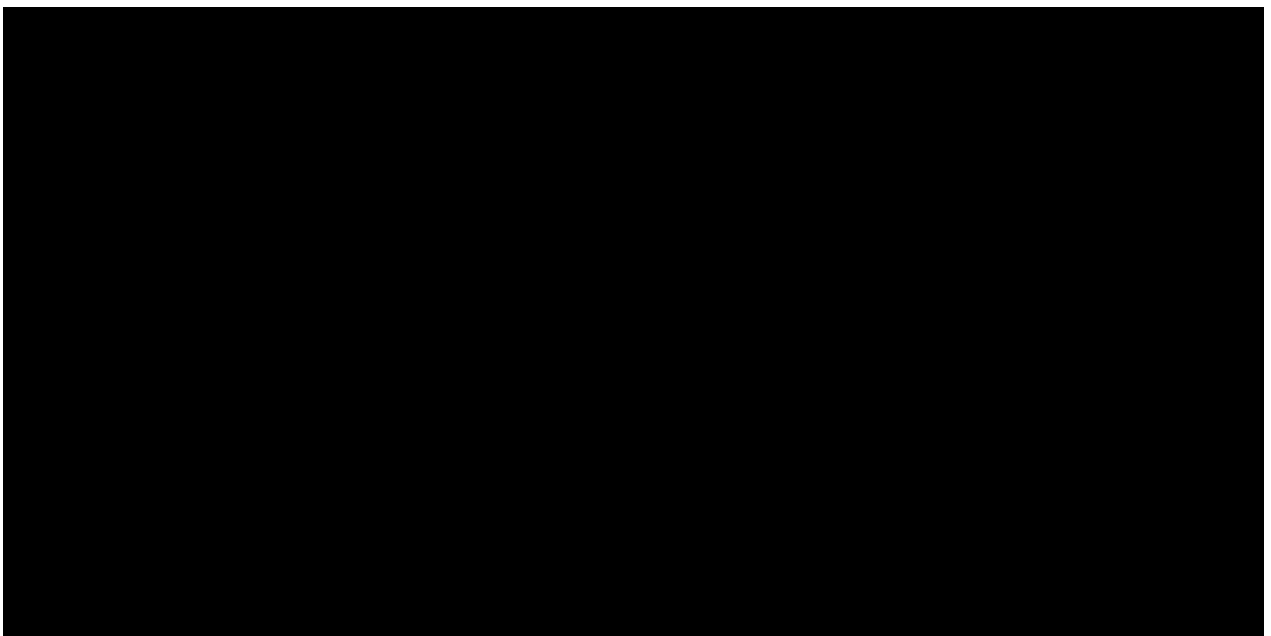
f. Testing methodology

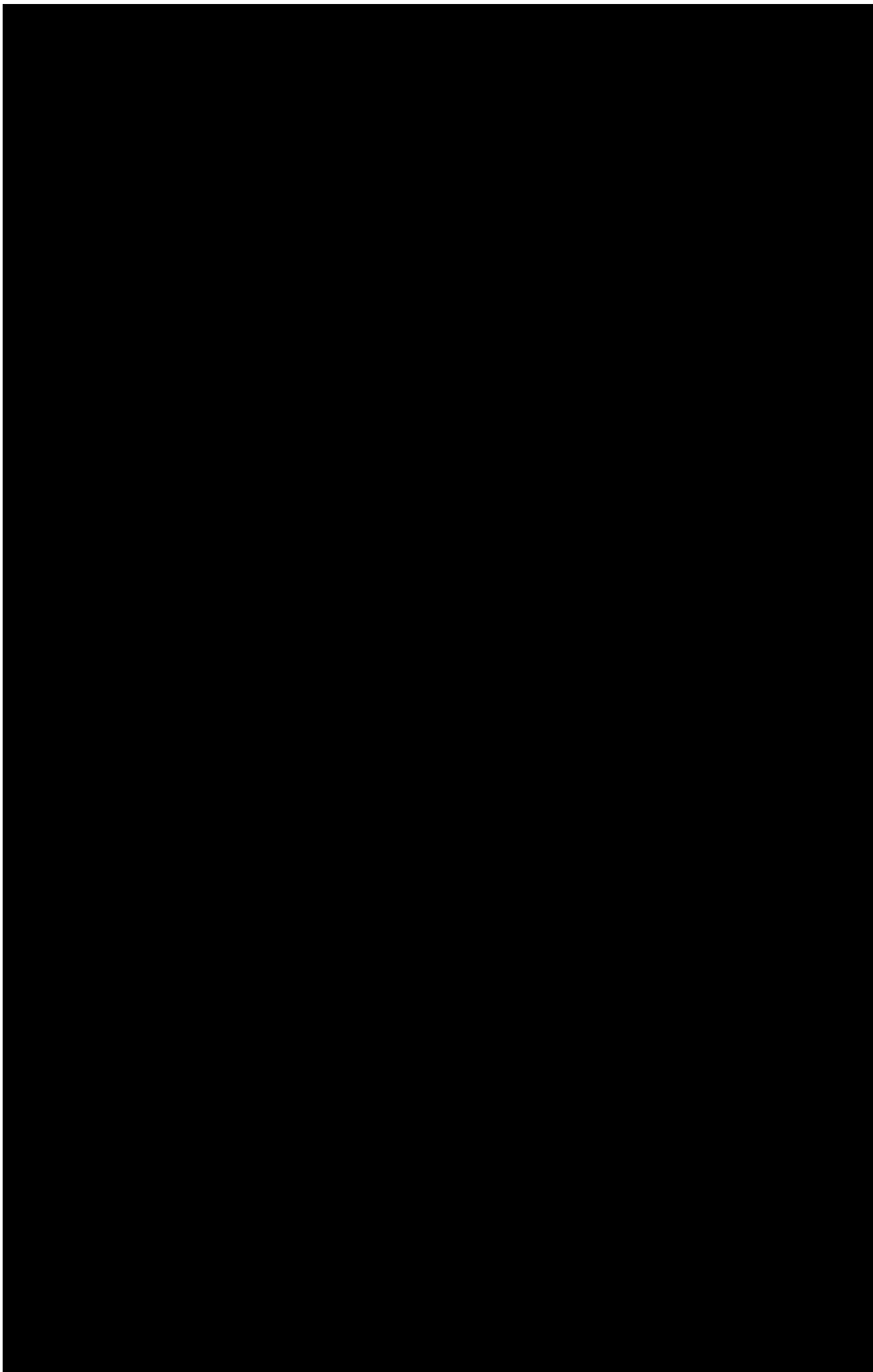
Under conditions of the licence, Monsanto Australia Limited was required to provide the Regulator with a method capable of reliably detecting the presence of the GMO. This advice was emailed to Deborah Maguire and Neil Ellis of the OGTR on 15 October 2002.

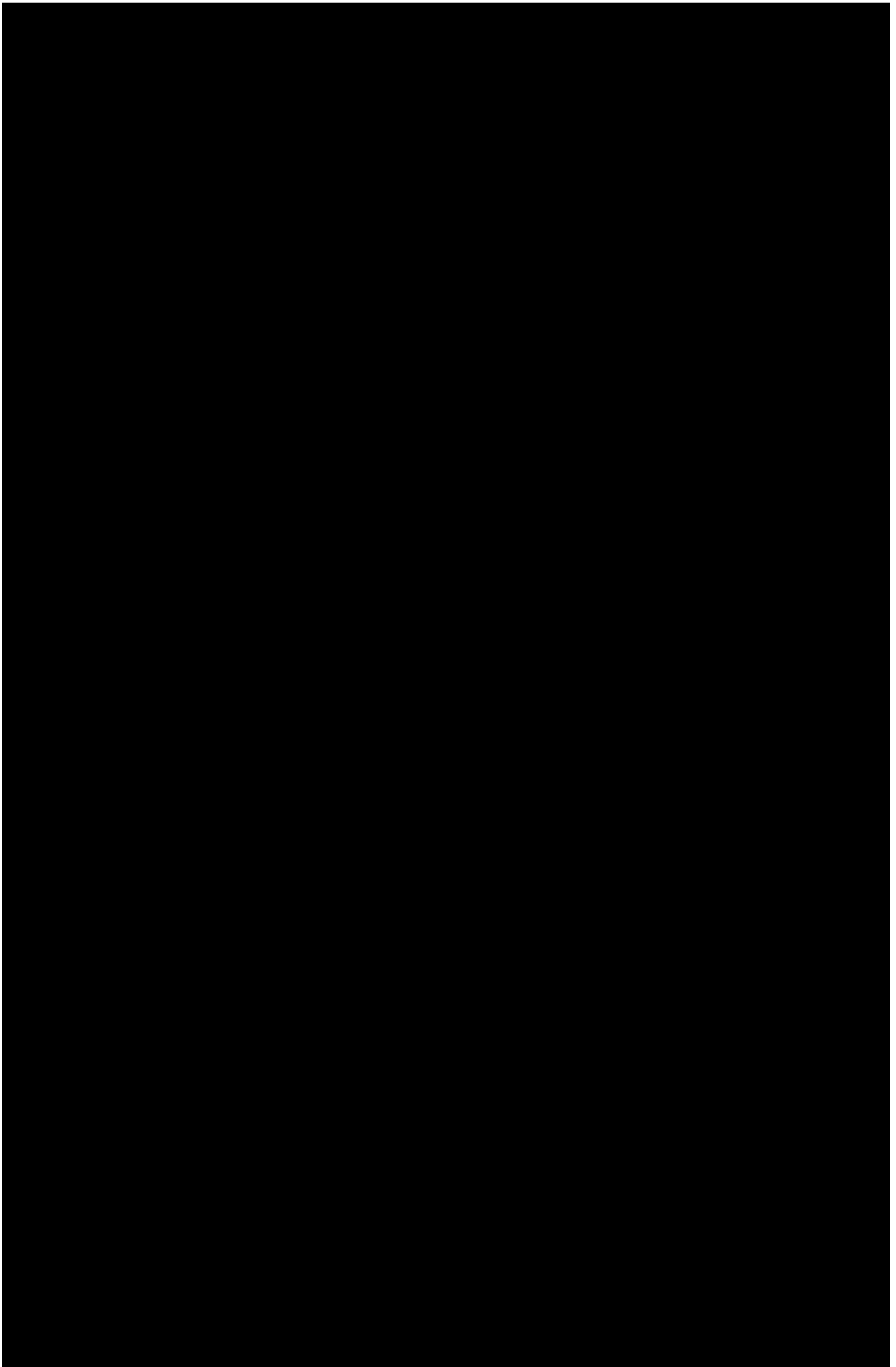
2. Release of Bollgard II® south of latitude 22° south (outside the Restricted Zone)

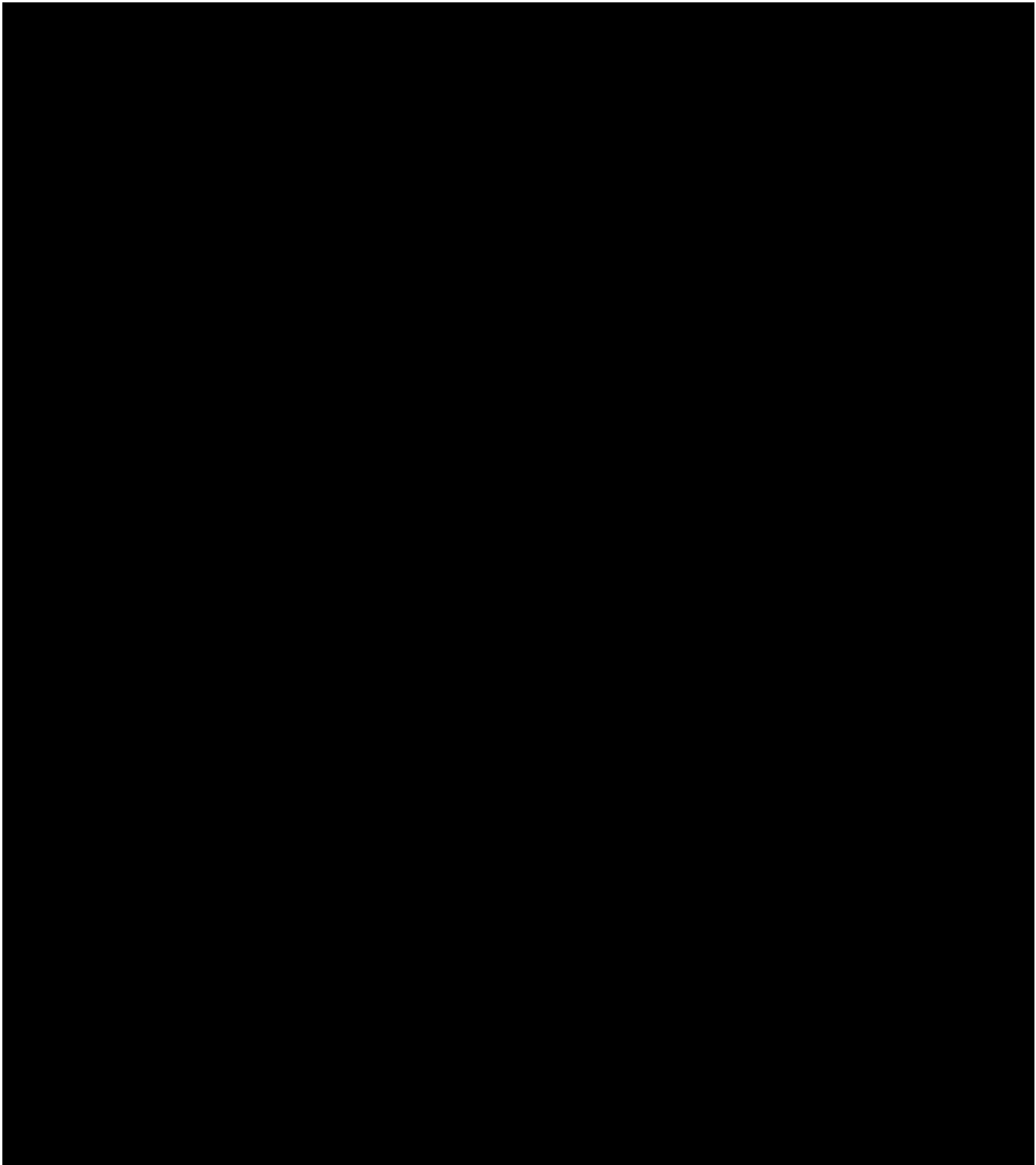
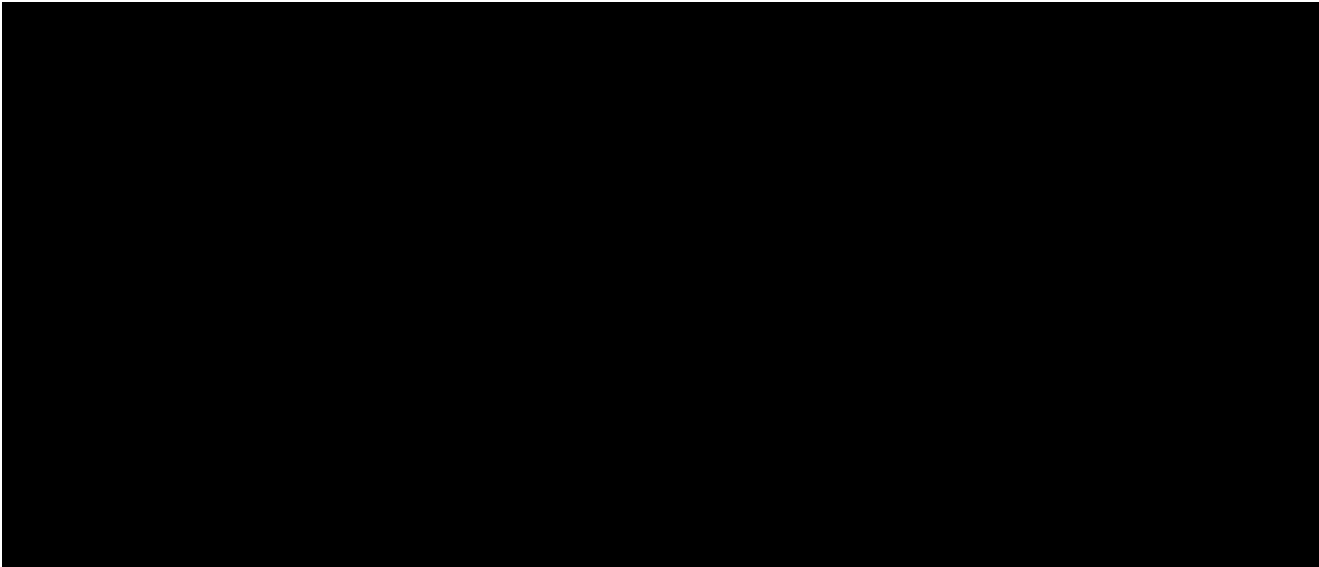
The licence holder may conduct dealings with the GMOs south of latitude 22 degrees south.

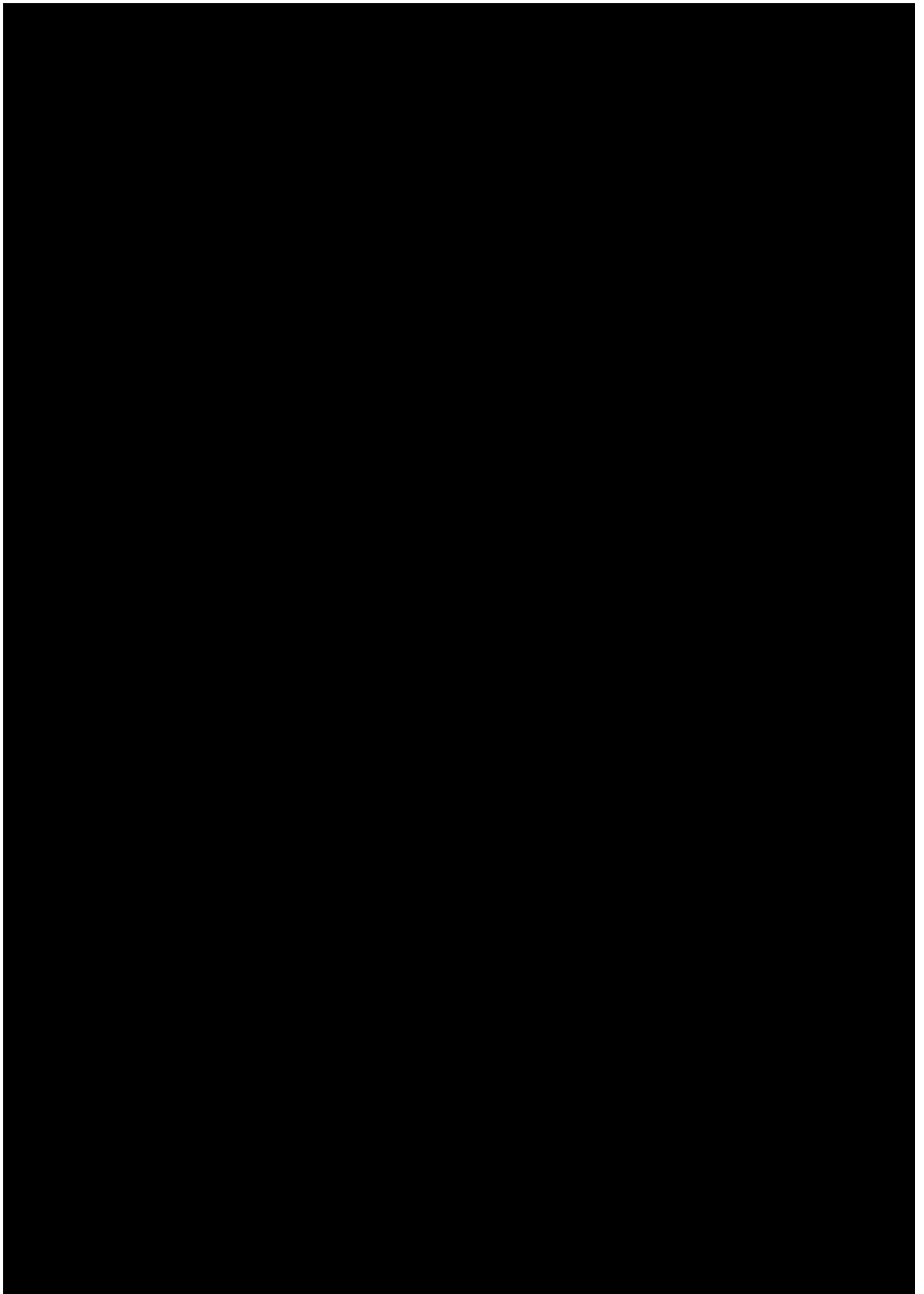
In the 2006/07 reporting period, Bollgard II cotton was grown in the traditional cotton-growing regions south of latitude 22° south in NSW and Queensland. More information on the locations where all Bollgard II cotton crops were grown during the 2006/07 cotton growing season are given in **Part 2a**.

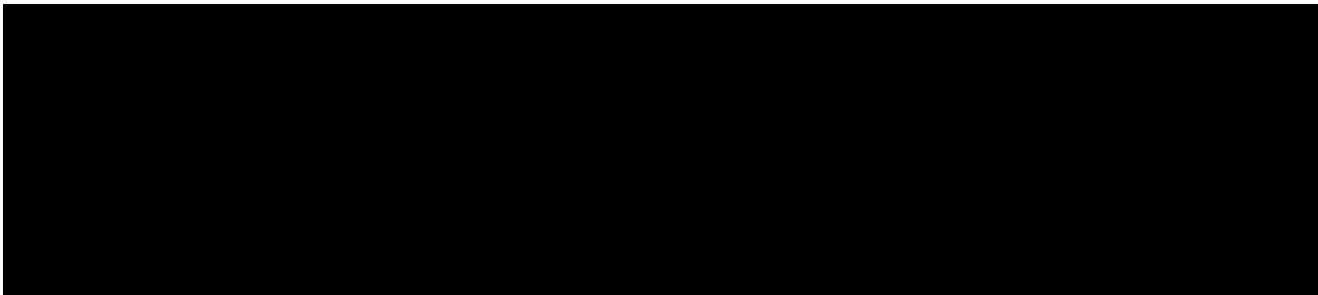
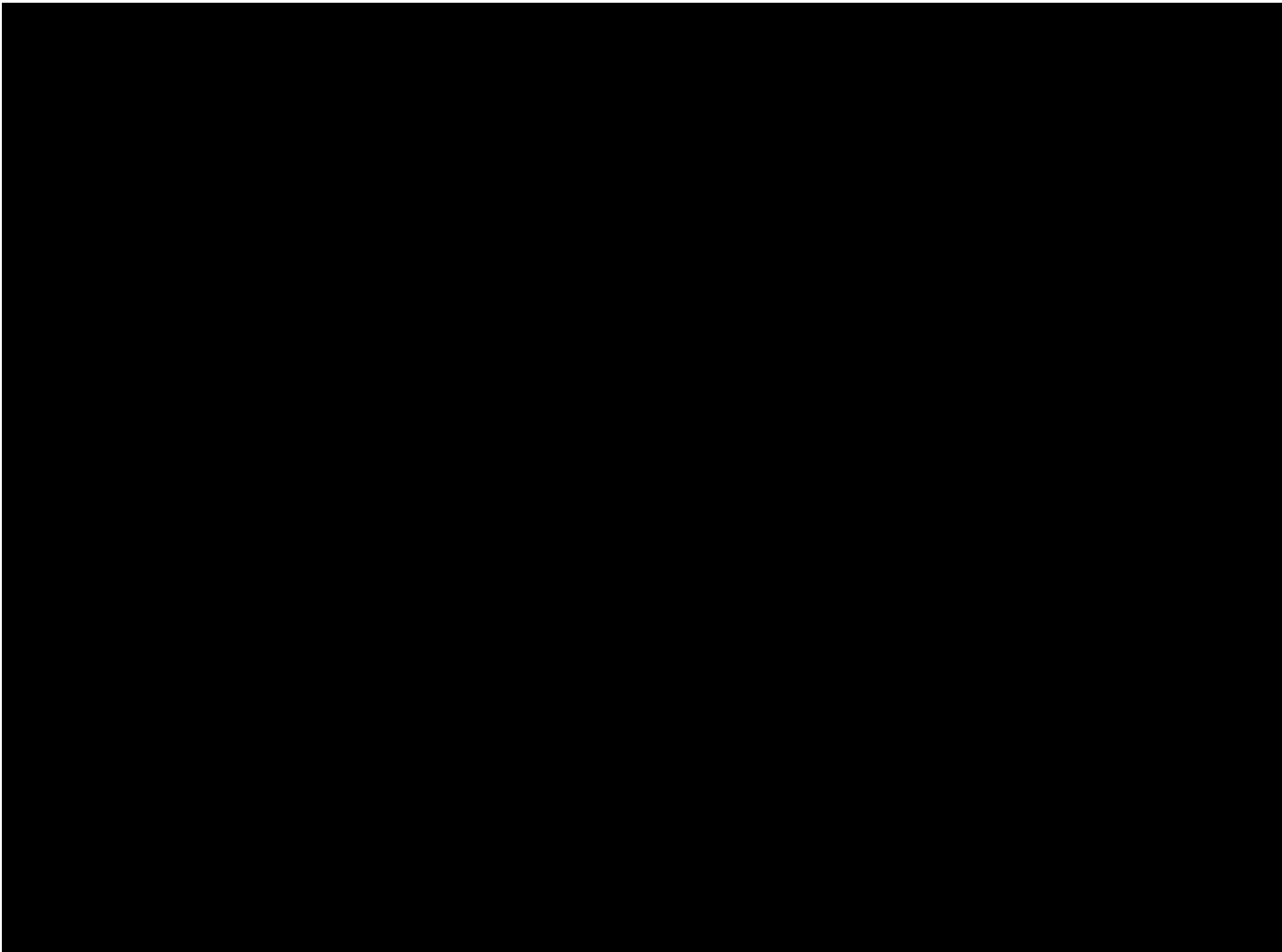


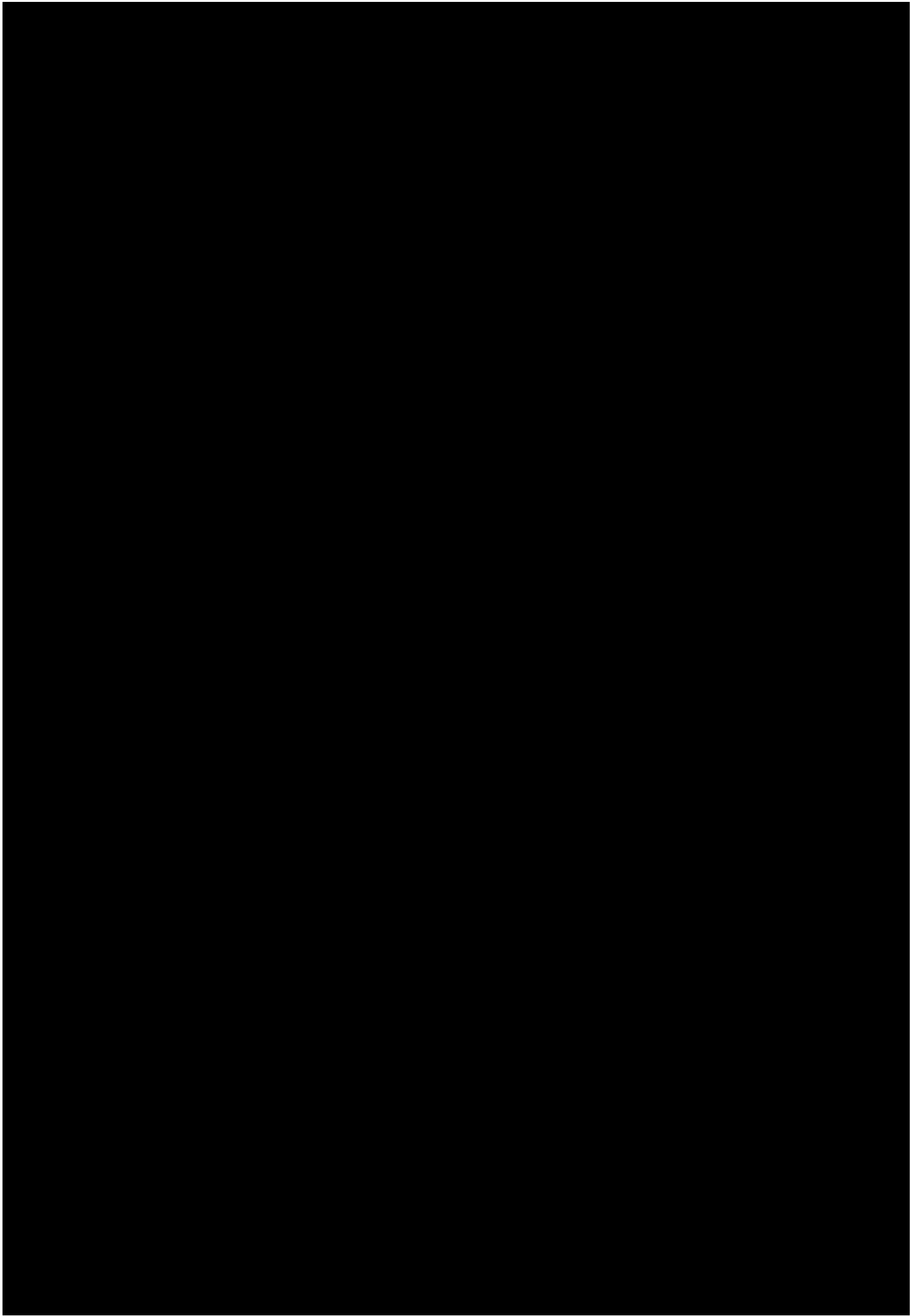


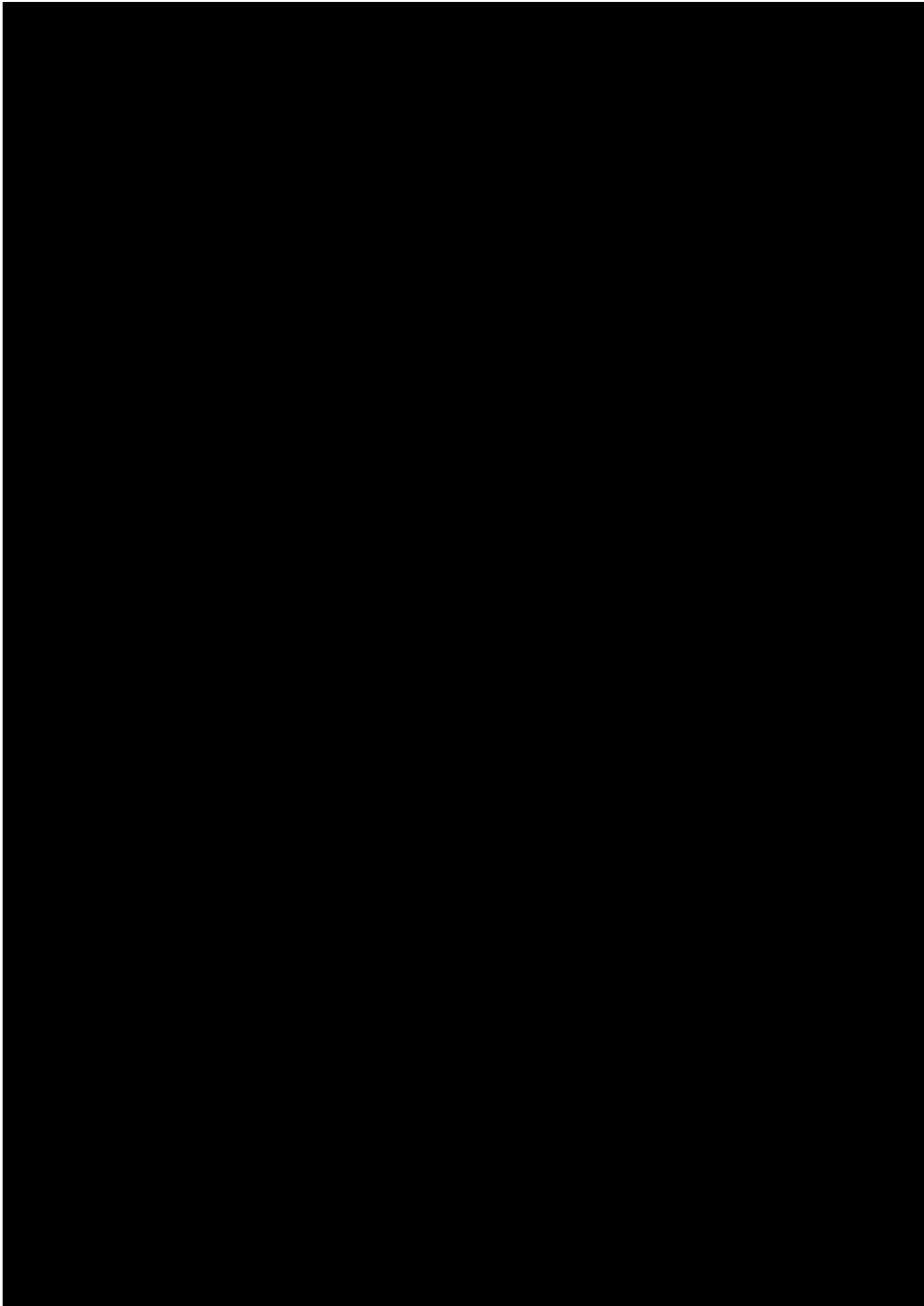






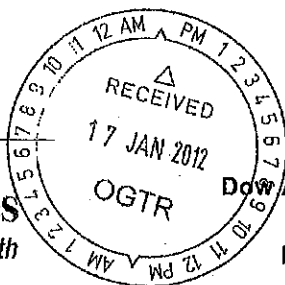








Dow AgroSciences
Science for growth



Dow AgroSciences Australia Ltd.

ABN 24 003 771 659

Level 5, 20 Rodborough Road

Frenchs Forest NSW 2086

12/01/12

Telephone General Office (02) 9776 3400

Fax (02) 9776 3199

Office of the Gene Technology Regulator

Toll Free 1 800 700 096

MDP54

Postal Address

GPO Box 9848

Locked Bag 502

Canberra ACT 2601

Frenchs Forest NSW 2086

www.dowagrosciences.com.au

DIR091 ANNUAL REPORT 2011

Since the Issuing of Licence No.: DIR 091 by the OGTR on the 25 November 2009, Dow AgroSciences Australia Ltd has had nil dealings with WideStrike™ Insect Protection Cotton in Australia.

As per licence condition 32, the following statements are made:

- (a) No adverse impacts, unintended effects or new information relating to risks to human health and safety or the environment have been caused by or found in relation to WideStrike™ Insect Protection Cotton
- (b) WideStrike™ Insect Protection Cotton has not been produced commercially in any state or territory in Australia since the issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (c) WideStrike™ Insect Protection Cotton has not been produced for experimental purposes in any state or territory in Australia since the Issuing of Licence No.: DIR 091 by the OGTR on the 25th November 2009.
- (d) Nil WideStrike™ Insect Protection Cotton has been fed to livestock north of latitude 22° South in Australia.
- (e) No research of the effects of WideStrike™ Insect Protection Cotton on non-target insect(s) has been conducted.
- (f) No research on volunteer incidence of WideStrike™ Insect Protection Cotton in areas north of latitude 22° South after livestock feeding has been conducted.

[REDACTED]

[REDACTED]

[REDACTED]

LICENCE No: DIR 012/2002
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2006 Annual Report for Bollgard II®
(Commercial Release)
REPORTING PERIOD: 2005/06 Cotton Growing Season
DATE: 22 December 2006

PREPARED BY: [REDACTED]
Compliance & Stewardship Manager

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

**LICENCE HOLDER DETAILS**

Name: Monsanto Australia Limited
Address: 600 St Kilda Road, Melbourne 3004
PO Box 6051
St Kilda Road Central,
Melbourne Victoria 8008
Telephone: 03 9522 7102
Facsimile: 03 9522 6102
Contact email: [REDACTED]
**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 012 commercial release licence for Bollgard II® issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Part 3 and 4 of the DIR 012 licence as issued to Monsanto Australia Limited on 23 September 2002, and varied in June, September and December 2003; March, May, October and December 2004; and February, June, July, August, October, November and December 2005.



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1. General Conditions

a. Informing people of their obligations

Monsanto Australia Limited informed all cotton growers and cotton gins covered by the DIR 012 / 2002 licence of the obligations imposed on them as a result of the conditions of these licences. This was achieved primarily through Monsanto Accreditation programs and information courses and mail outs.

Bollgard II® cotton Accreditation programs require all persons having management responsibility for Bollgard II crops to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once.

Gins known to transport cotton seed into the restricted zone were notified by letter that they were permitted to transport seed north of 22° south provided they adhered to all conditions and obligations associated with the use of cotton seed within the restricted zone.

b. Reporting

During the reporting period, the licensee holder did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence, or of any unintended effects of the dealings authorised by the licence.

c. Material changes in circumstances

During the 2005/06 reporting period, Monsanto Australia Limited did not become aware of any relevant conviction of the licensee holder occurring after the commencement of this licence; any revocation or suspension of a licence or permit held by Monsanto Australia Limited; or any event or circumstance that would affect the capacity of Monsanto Australia Limited to meet the conditions of the DIR 012 licence.

d. Remaining an accredited organisation

At all times, Monsanto Australia Limited remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

e. Changes to details

During the 2005/06 reporting period, there were no changes to contact details of the Project Supervisor.

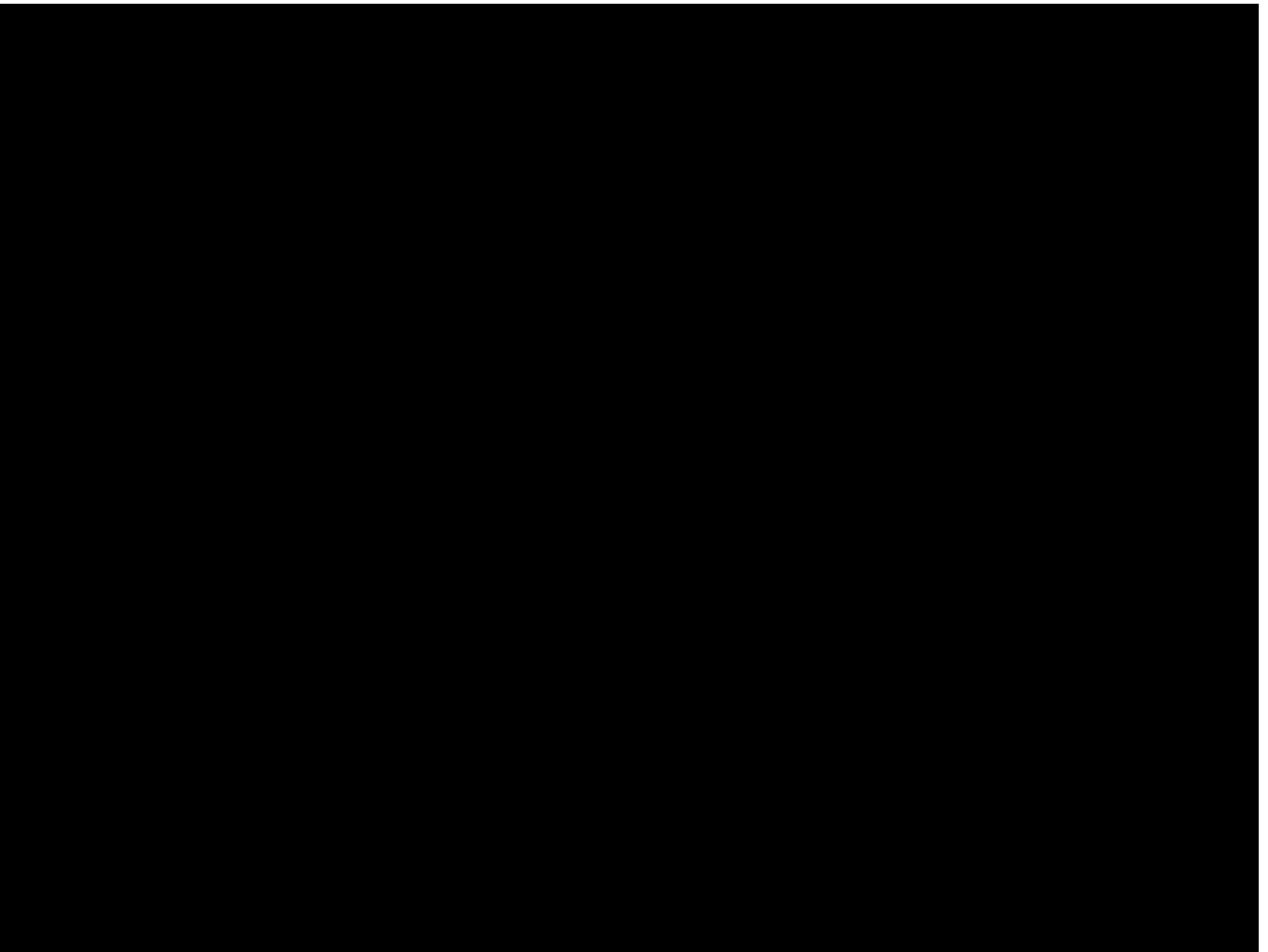
2. Release of Bollgard II® south of latitude 22° south (outside the Restricted Zone)

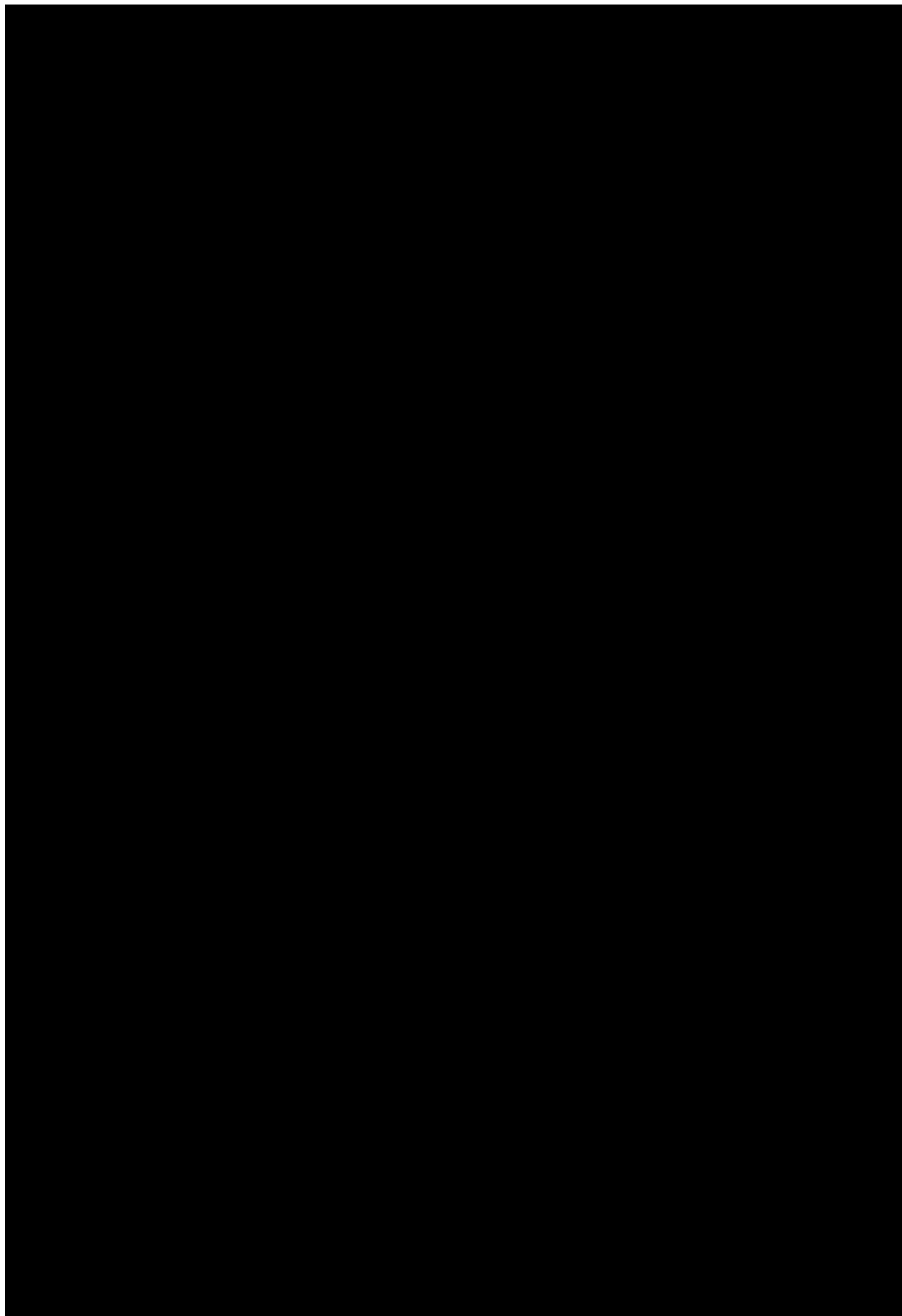
The licensee holder may conduct dealings with the GMOs south of latitude 22 degrees south.

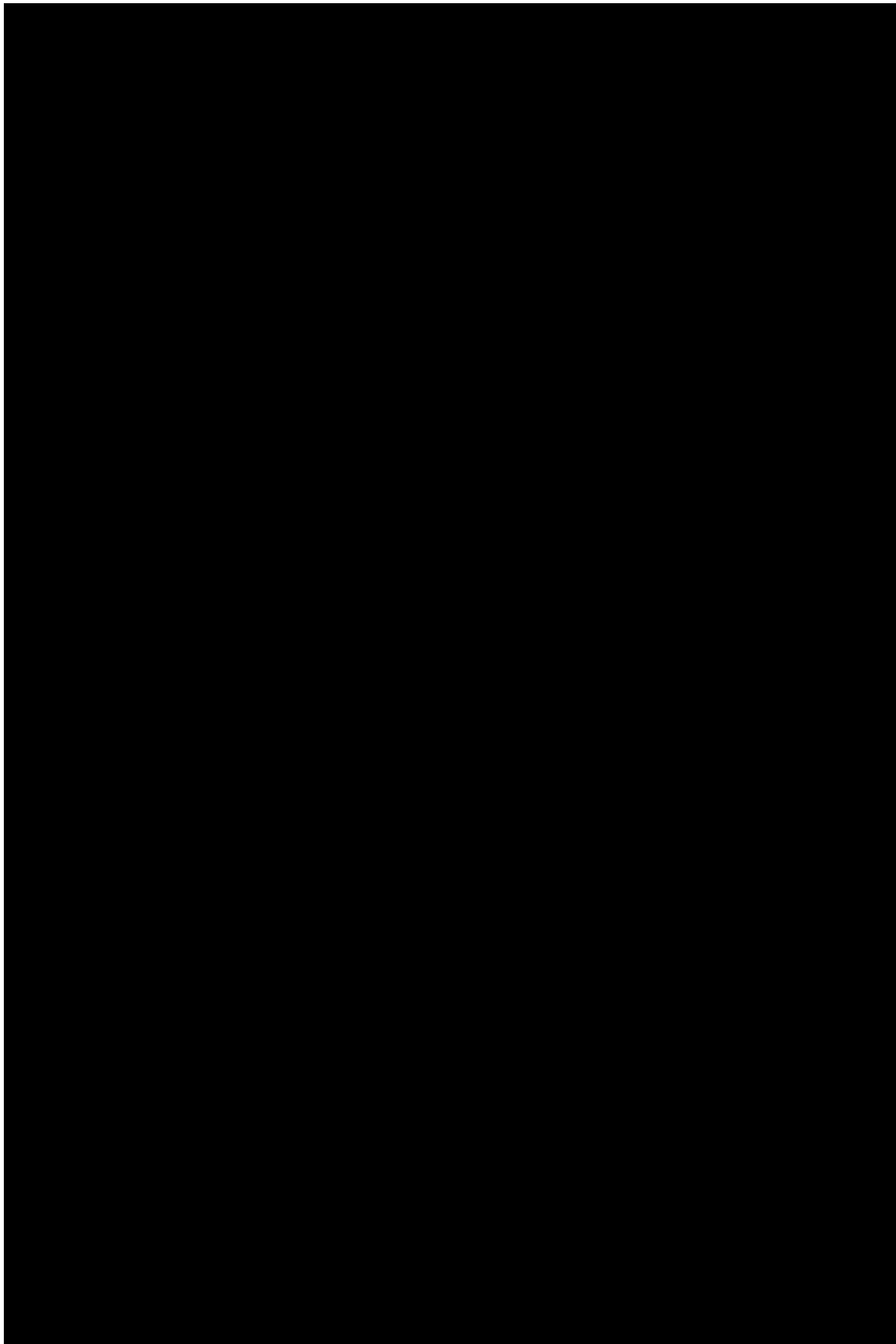
In the 2005/06 reporting period, Bollgard II cotton was grown in the traditional cotton-growing regions south of latitude 22° south in NSW and Queensland. More information on the locations where all Bollgard II cotton crops were grown during the 2005/06 cotton growing season are given in Part 2a.

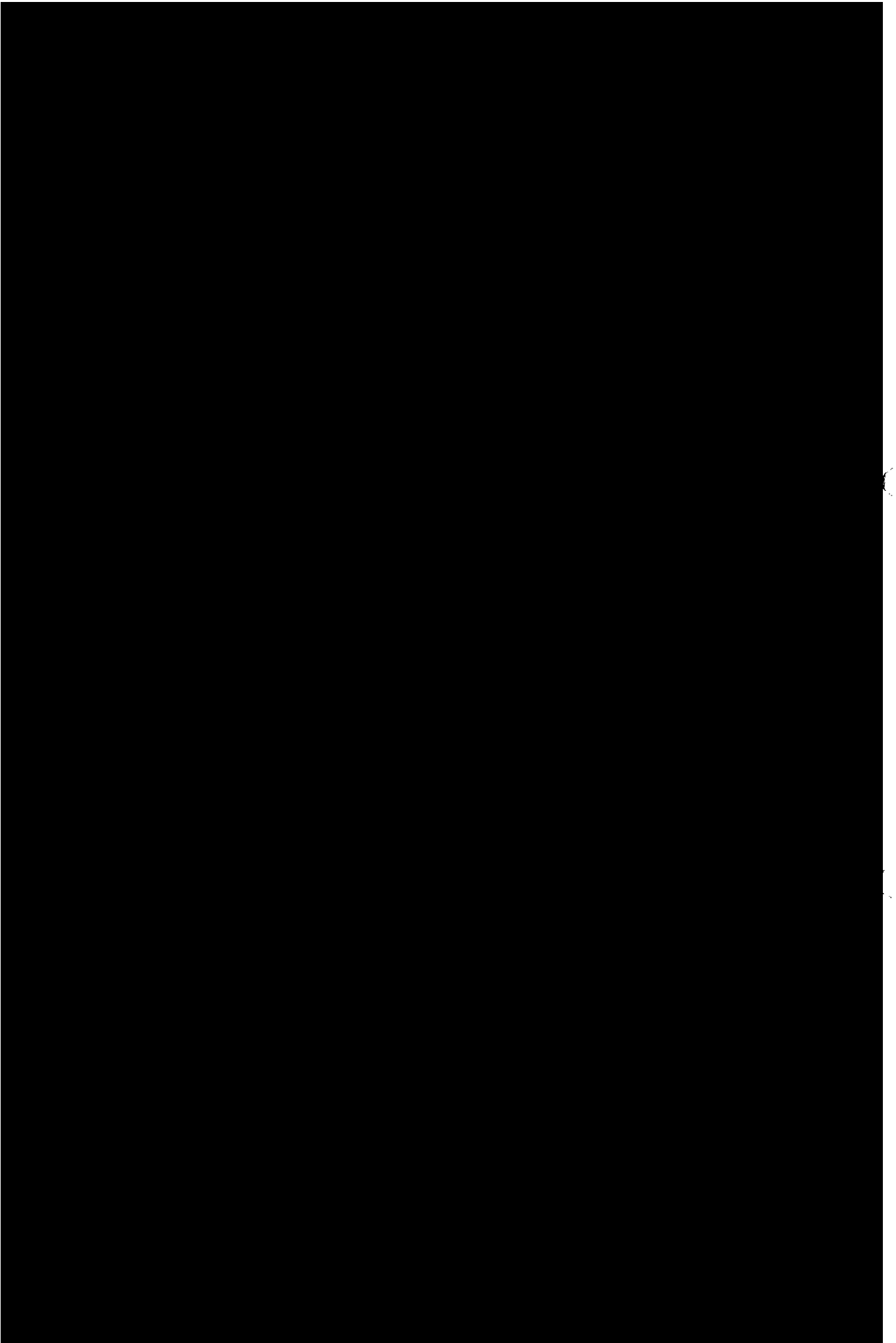
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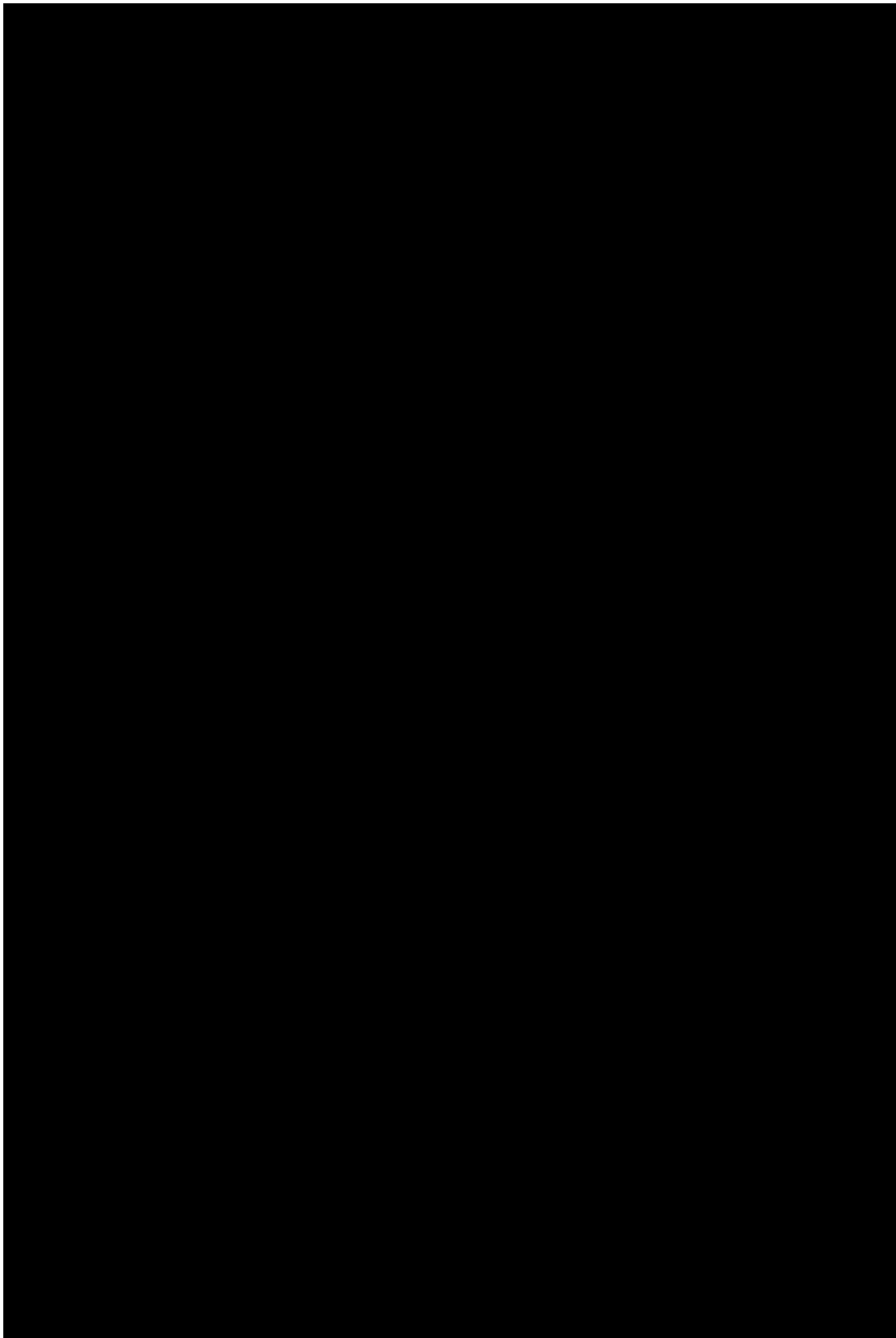
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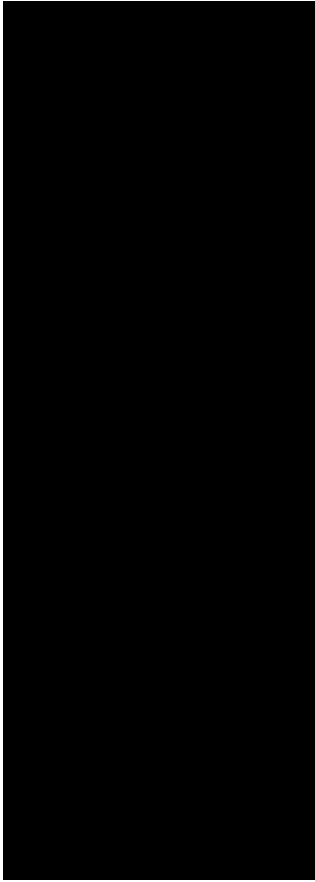










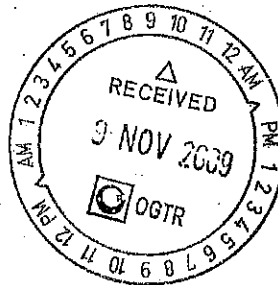


 Bayer CropScience

BioScience

06 November 2009

Office of the Gene Technology Regulator
MDP 54
GPO Box 9848
CANBERRA ACT 2601



Attention: Applications Entry Point
The Regulator

Dear Dr Smith,

**Annual Report for DIR 062/2005 for the year 8 August 2008
to 7 August 2009**

Bayer CropScience Pty Ltd
391-393 Tooronga Road
East Hawthorn Vic 3123
Australia
Tel. +61 3 9248 6888
Fax +61 3 9248 6680
A.B.N. 87 000 226 022
www.bayercropscience.com.au

I refer to the requirements of the above licence (viz. condition No. 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period of 8 August 2008 to 7 August 2009, commercial quantities of less than 450 ha of Liberty Link cotton (also known as LLCotton25) were planted in Australia. Approximately 15.7 ha of Liberty Link cotton was planted in field trials by Cotton Seed Distributors (CSD).

There were no commercial plantings of LLCotton25/Bollgard II cotton in Australia during the reporting period. Small-scale field trials were conducted by the CSIRO (approximately 4.6 ha) and CSD (approximately 33 ha).

During the reporting period, no adverse effects were observed or reported to us as a result of dealings with Liberty Link or LLCotton25/Bollgard II cotton under licence DIR 062/2005.

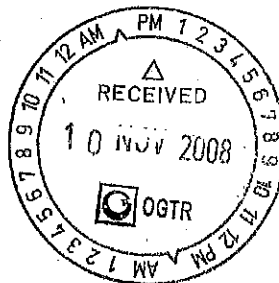
Yours sincerely,
Bayer CropScience



Regulatory Affairs Manager
BioScience

Bayer CropScience

BioScience



5 November 2008

Office of the Gene Technology Regulator
MDP 54
PO Box 100
WODEN ACT 2606

Attention: Applications Entry Point

Dear Ms Flynn,

**Amended Annual Report for DIR 062/2005, for the year
8 August 2007 to 7 August 2008**

Bayer CropScience Pty Ltd
391-393 Tooronga Road
East Hawthorn Vic 3123
Australia
Tel. +61 3 9248 6888
Fax +61 3 9248 6680
A.B.N. 87 000 226 022
www.bayercropscience.com.au

I refer to the requirements of the above licence (viz. condition No. 20), to provide the OGTR with an annual report within 90 days of the licence issue date anniversary.

During the period 8 August 2007 to 7 August 2008, small commercial quantities of less than 500 ha of Liberty Link cotton (also known as LLCotton25) were planted in Australia. It is anticipated that this area will increase in the 2008-09 season.

On 20 September 2007, the OGTR approved a variation to DIR 062/2005 to include the commercial release of LLCotton/Bollgard II® (Mon 15985). This variation added the activities of licence DIR 056/2004, where Liberty Link and Bollgard II were combined, to DIR 062/2005. Licence DIR056/2004 was surrendered 7 December 2007.

During the current reporting period, there were no commercial plantings of LLCotton25/Bollgard II cotton in Australia. Small-scale plantings were conducted by the CSIRO for field trials, and Cotton Seed Distributors (CSD) for seed increase.

The CSIRO conducted three field trials of LLCotton25/Bollgard II on a total area of 5.94 hectares. Two of these were conducted at Narrabri in NSW (1.29 and 4.35 ha), and the third was conducted at Pampas, near Toowoomba in QLD (0.30 ha). For seed increase, CSD assessed ten nurseries of 0.144 ha each, from which five selections were made for planting in the 2008-09 season.

During the period from August 2007 through to August 2008, no adverse effects were observed or reported to us as a result of dealings with Liberty Link or LL Cotton 25/Bollgard II cotton under licence DIR 062/2005.

Yours sincerely,

[Redacted Signature]

[Redacted Name]

Regulatory Affairs Manager
BioScience

LICENCE NO: DIR066
LICENCE HOLDER: Monsanto Australia Limited
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2015 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines
REPORTING PERIOD: 1 June 2014 – 1 June 2015
(covering 2014/15 cotton growing season)
DATE: 30 June 2015

PREPARED BY:

[REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorized to disclose such data and information without written permission from Monsanto Australia Limited.

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SECTION 1. LICENCE HOLDER DETAILS

Name: Monsanto Australia Limited

Address: 600 St Kilda rd, Melbourne 3004
PO Box 6051
St Kilda rd Central
Victoria, 8008

Telephone: (03)9522 7122

Facsimilie: (03)9522 6122

Contact email: [REDACTED]

Accreditation
Number: ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR066 commercial licence covering Roundup Ready® cotton, Roundup Ready Flex® cotton and the Bollgard II® trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007, 15 April 2009 and 20 June, 2013.

This report covers the period of time from 1 June 2014 to 1 June 2015, including the 2014/15 cotton planting season.

SECTION 2. LICENCE CONDITIONS

Condition 1. Duration of Licence

DIR066 has not been suspended, cancelled or surrendered.

Condition 2. Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

Conditions 3 and 4. Project Supervisor

The project supervisor is [REDACTED]

Condition 5. No dealings with GMOs except as authorized by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

Conditions 6 and 7. Location

The licence allows for dealings with GMOs to be conducted anywhere in Australia. This licence supersedes any previous licences regarding location.

Conditions 8 and 9. Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

Conditions 10 and 11. Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons.

Monsanto Australia Limited informed all persons covered by the DIR066 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program, which includes information on regulatory obligations as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready (no longer sold commercially), Roundup Ready Flex and Bollgard II cotton crops to undergo training.

Condition 12. Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet the conditions of the DIR066 licence.

Condition 13. Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide information within a time period stipulated by the Regulator.

Condition 14. People dealing with the GMOs must allow auditing and monitoring if the dealing

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

Condition 15. Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

Conditions 16 - 19 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by this licence; or of any unintended effects of the dealings authorized by this licence.

Condition 20. Compliance Management Plan

A Compliance Management Plan was provided to the Regulator on issuance of the DIR066 licence. A copy of the current Resistance Management Plans showing compliance metrics is in Appendix A and B.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR066 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II [REDACTED] [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRF and BGII technology. Roundup Ready cotton has been removed from the market in Australia. In order to be eligible to sign such an agreement, a grower is required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Commercial Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w [REDACTED] ha | Total ha |
|-----------------|--------------|-------------|------------------|--------------|-------------------|----------------------|-------------------|
| Belyando | 0.00 | 0.00 | 126.84 | 0.00 | 1171.70 | 0.00 | 1298.54 |
| Bourke | 0.00 | 0.00 | 61.00 | 0.00 | 1566.15 | 0.00 | 1627.15 |
| Darling Downs | 11.10 | 0.00 | 2249.63 | 0.00 | 19926.51 | 0.00 | 22187.24 |
| Dawson/Callide | 0.00 | 0.00 | 56.03 | 0.00 | 3037.04 | 0.00 | 3093.07 |
| Dirranbandi | 0.00 | 0.00 | 11.45 | 0.00 | 11214.67 | 0.00 | 11226.12 |
| Emerald | 0.00 | 0.00 | 0.00 | 0.00 | 10585.18 | 0.00 | 10585.18 |
| Gwydir | 0.00 | 0.00 | 5200.57 | 0.00 | 21594.50 | 0.00 | 26795.07 |
| Lachlan | 0.00 | 0.00 | 67.22 | 0.00 | 11252.30 | 0.00 | 11319.52 |
| Lower Namoi | 0.00 | 0.00 | 3782.29 | 0.00 | 20884.49 | 0.00 | 24666.78 |
| MacIntyre | 0.00 | 0.00 | 98.76 | 0.00 | 11069.82 | 0.00 | 11168.58 |
| Macquarie | 0.00 | 0.00 | 202.35 | 0.00 | 10061.97 | 0.00 | 10264.32 |
| McKenzie River | 0.00 | 0.00 | 9.13 | 0.00 | 429.83 | 0.00 | 438.96 |
| Mungindi | 0.00 | 0.00 | 145.80 | 0.00 | 2211.14 | 0.00 | 2356.94 |
| Murrumbidgee | 0.00 | 0.00 | 769.44 | 0.00 | 33245.97 | 0.00 | 34015.41 |
| St George | 0.00 | 0.00 | 340.44 | 0.00 | 10011.80 | 0.00 | 10352.24 |
| Tandou | 0.00 | 0.00 | 345.23 | 0.00 | 3366.29 | 0.00 | 3711.52 |
| Upper Namoi | 0.00 | 0.00 | 1340.80 | 0.00 | 19420.17 | 0.00 | 20760.97 |
| Walgett | 0.00 | 0.00 | 0.00 | 0.00 | 894.97 | 0.00 | 894.97 |
| Total ha | 11.10 | 0.00 | 14,806.98 | 0.00 | 191,944.50 | 0.00 | 206,762.60 |

| | |
|--|-------------------|
| Total Bollgard II ha planted | 191,955.60 |
| Total Roundup Ready Flex ha planted | 206,751.50 |

Note – Total Bollgard II figure includes Bollgard II, Bollgard II/Roundup Ready Flex and Bollgard II/[REDACTED]. Total Roundup Ready Flex figure includes Roundup Ready Flex and Bollgard II/Roundup Ready Flex.

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfgagn, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimgan, Blair Athol and Pasha.

Valley: Bourke

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Valley: Darling Downs

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Valley: Dirranbandi

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Valley: St George

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Valley: Tandou

Boundaries: surrounds Menindee shire. North of Mildura and west of the SA border










































Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

3.4 Trial/Research Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w  ha | Total ha |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Total ha | 0.00 | 0.00 | 55.23 | 0.00 | 192.16 | 11.50 | 258.89 |

APPENDIX A -

Resistance Management Plan for Bollgard II® Cotton 2014/2015

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied. An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in

adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.

- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando - Clermont: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Mackenzie: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift, except where a pigeon pea refuge is converted to a trap crop. In this case the full 5% pigeon pea refuge area managed to become the late summer trap crop can only be sprayed with virus after the first defoliation of Bollgard II cotton. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. When using the full 5% pigeon pea trap crop option, weed control must not be carried out by cultivation once flowering of the associated Bollgard II cotton crop has commenced |

| | |
|------------------|--|
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). All Bollgard II and associated trap crops must be destroyed by July 31. |
|------------------|--|

* A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.

** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

APPENDIX B

Resistance Management Plan for Bollgard II® cotton 2014/2015 - Ord River Irrigation and Burdekin Bowen Basin Areas

Ord River Irrigation, Burdekin Bowen Basin and Richmond Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland
- **Richmond Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|---------------------|--|------------------|-------------------|
| Conventional Cotton | Irrigated, unsprayed conventional cotton | 10 | All Regions |
| Pigeon pea | Fully irrigated, unsprayed | 5 | All Regions |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp. Bt products must not be applied to any refuge.

If the viability of an unsprayed refuge is at risk due to early or late season pressure by *Helicoverpa* spp., or any other caterpillar species, contact Monsanto immediately. With prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II unless a sufficient buffer is in place to prevent insecticide drift.

Sprayed crops and unsprayed refuges that are planted in adjacent fields must also be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

(a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Ord River Irrigation Area

It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Burdekin Bowen and Richmond Areas

Refuges must be sown within the 2 weeks prior to planting any Bollgard II. This timing attempts to mitigate wet season planting risks.

(b) Group J legume inoculant should be used to treat pigeon pea planting seed just prior to sowing to ensure effective root zone colonisation by nitrogen fixing rhizobium bacteria

(c) Once the Bollgard II cotton begins to flower the corresponding refuge must not be cultivated.

(d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.

(e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.

- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Slashing of plants within the refuge should only be carried out after Bollgard II cotton lint removal has been completed. Soil disturbance of refuge crops can only occur 2 weeks after Bollgard II cotton plants have been harvested.
- (i) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended "Bollgard II Planting Window Variation Notice".

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

Richmond Area: December 1 and April 1.

5. Refuge

Unsprayed Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season.

6. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

| Table 2. End of season chick pea trap crop requirements Criterion | End of season chick pea trap crop |
|---|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m x 24m wide. |

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| | |
|------------------|---|
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. The trap crop must be planted into an area where it can receive the additional irrigation required to ensure the trap crop remains attractive to <i>Helicoverpa</i> spp. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks after defoliation of the Bollgard II cotton crop, but not before 3 weeks (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). All Bollgard II cotton and associated trap crops must be destroyed by: Burdekin Bowen Basin/Richmond Area – August 31 Ord River Irrigation Area – December 10 |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

LICENCE No: DIR 066/2006
LICENCE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: **ACCR 034/2002**

SUBMISSION: 2009 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines.
REPORTING PERIOD: 26 October 2008 – 26 October 2009
(Covering 2007/08 cotton growing season)
DATE: 26 November 2009

PREPARED BY: [REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

SECION 1. LICENCE HOLDER DETAILS

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Address: 600 St Kilda Road, Melbourne 3004
PO Box 6051
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Melbourne Victoria 8008
Telephone: 03 9522 7121
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Contact email: [REDACTED]
**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 066/2006 commercial licence covering Roundup Ready Cotton, Roundup Ready Flex Cotton and the Bollgard II trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR 066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007 and 15 April 2009.

The report covers the period of time from 26 October 2008 to 26 October 2009, including the 2008/09 cotton growing season.

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SECTION 2. GENERAL CONDITIONS

2.1 Duration of Licence

DIR066/2006 (DIR066) has not been suspended, cancelled or surrendered.

2.2 Holder of Licence

Monsanto Australia Ltd (Monsanto) remains the holder of the licence.

2.3 Project Supervisor

██████████ is the project supervisor as per Attachment A of the licence. The licence was varied 15 April 2009 to reflect the change of contact details.

2.4 No dealings with GMOs except as authorised by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

2.5 Location

The licence allows for dealings with GMOs to be conducted anywhere within Australia. This licence supersedes any previous licences regarding location.

2.6 Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

2.7 Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons in 2006/07, 2007/08 and 2008/09.

Monsanto Australia Limited informed all persons covered by the DIR066/2006 licence of the obligations imposed on them as a result of the conditions of this licence. This was primarily achieved through the Monsanto accreditation program and information course which includes information on regulatory obligations, as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready, Roundup Ready Flex and Bollgard II Cotton crops, to undergo training.

2.8 Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or a foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of the licence that would affect the capacity of Monsanto to meet the conditions of the DIR 066 licence.

2.9 Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide the information within a time period stipulated by the Regulator.

2.10 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the licence; or of any unintended effects of the dealings authorised by the licence.

2.11 People dealing with GMOs must allow auditing and monitoring of the dealing

Monsanto acknowledges that if a person is authorised by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorised by the Regulator, to enter premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

2.12 Remaining an Accredited organisation

At all times, Monsanto remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR 066/2006 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Cotton (RRC), Roundup Ready Flex (RRF) and Bollgard II (BGII) were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRC, RRF and BGII technology. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Crop Location and Volumes

| Valley | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------------------|-----------------|-----------------|-----------------|------------------|------------------|
| Bourke | 106.16 | - | - | - | 1,743.25 |
| Burdekin | - | - | 86.50 | - | 805.20 |
| Darling Downs | 1,469.49 | 407.07 | 665.36 | 1,592.13 | 16,489.32 |
| Dawson/Callide | 366.96 | 31.44 | 167.14 | 217.78 | 4,416.37 |
| Dirranbandi | - | - | - | - | 12,248.50 |
| Emerald | 23.20 | - | 256.27 | 312.00 | 10,966.76 |
| Gwydir | 516.46 | 3,688.07 | 4,429.22 | 2,649.61 | 14,027.80 |
| Lachlan | - | - | 41.20 | 435.50 | 1,527.46 |
| Lower Namoi | 522.25 | 1,154.36 | 1,896.89 | 5,687.30 | 9,796.09 |
| MacIntyre | 2,745.00 | 282.29 | 131.53 | 1,254.37 | 4,490.47 |
| Macquarie | - | 1,015.86 | 32.70 | 1,118.76 | 2,663.23 |
| Mungindi | 545.48 | 736.79 | 874.11 | 1,003.00 | 3,288.28 |
| Murrumbidgee | - | - | - | 106.00 | 876.00 |
| St George | 441.10 | 397.62 | 40.15 | 1,242.43 | 6,401.80 |
| The Ord | - | - | - | - | 12.15 |
| Upper Namoi | 7.00 | 31.00 | 22.90 | 5,515.10 | 2,536.76 |
| Walgett | - | - | 51.23 | 208.83 | 3,034.79 |
| Grand Total | 6,743.10 | 7,744.50 | 8,695.20 | 21,342.81 | 95,324.23 |

Total Bollgard II Hectares planted:

102,067.33Ha

Total Roundup Ready/Roundup Ready Flex Hectares planted:

133,106.74 Ha

Valley: Ord (WA)

Boundaries: Area north of 22° south in Western Australia.

Crop Location:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|----------|---------|--------|--------|---------------|---------------|
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ████████ | ████ | ████ | ████ | ████ | ██████ |

Valley: Burdekin (QLD)

Boundaries: Area north of 22° South in Queensland.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|----------|---------|--------|--------|---------------|---------------|
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ██████ | ████ | ██████ |
| ██████ | ████ | ████ | ██████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ██████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ██████ | ████ | ██████ |
| ██████ | ████ | ████ | ██████ | ████ | ██████ |
| ████████ | ████ | ████ | ██████ | ████ | ██████ |

Valley: Emerald (QLD)

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Crop Locations:

[illegible]

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | █ | ██████ | ████ | ██████ |

Valley: Dawson/Callide (QLD)

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ██████ | ████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
| ██████ | ████ | ████ | ████ | ████ | ██████ |
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| ██████ | ██████ | ████ | ████ | ████ | ██████ |
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| ██████ | ████ | ████ | ████ | ████ | ██████ |



Valley: Darling Downs (QLD)
Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.
Crop Locations:

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In Confidence



In Confidence



| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| 000001 | 100 | 100 | 100 | 100 | 100 |
| 000002 | 100 | 100 | 100 | 100 | 100 |
| 000003 | 100 | 100 | 100 | 100 | 100 |
| 000004 | 100 | 100 | 100 | 100 | 100 |
| 000005 | 100 | 100 | 100 | 100 | 100 |
| 000006 | 100 | 100 | 100 | 100 | 100 |
| 000007 | 100 | 100 | 100 | 100 | 100 |
| 000008 | 100 | 100 | 100 | 100 | 100 |
| 000009 | 100 | 100 | 100 | 100 | 100 |
| 000010 | 100 | 100 | 100 | 100 | 100 |
| 000011 | 100 | 100 | 100 | 100 | 100 |
| 000012 | 100 | 100 | 100 | 100 | 100 |
| 000013 | 100 | 100 | 100 | 100 | 100 |
| 000014 | 100 | 100 | 100 | 100 | 100 |
| 000015 | 100 | 100 | 100 | 100 | 100 |
| 000016 | 100 | 100 | 100 | 100 | 100 |
| 000017 | 100 | 100 | 100 | 100 | 100 |
| 000018 | 100 | 100 | 100 | 100 | 100 |
| 000019 | 100 | 100 | 100 | 100 | 100 |
| 000020 | 100 | 100 | 100 | 100 | 100 |
| 000021 | 100 | 100 | 100 | 100 | 100 |
| 000022 | 100 | 100 | 100 | 100 | 100 |
| 000023 | 100 | 100 | 100 | 100 | 100 |
| 000024 | 100 | 100 | 100 | 100 | 100 |
| 000025 | 100 | 100 | 100 | 100 | 100 |
| 000026 | 100 | 100 | 100 | 100 | 100 |
| 000027 | 100 | 100 | 100 | 100 | 100 |
| 000028 | 100 | 100 | 100 | 100 | 100 |
| 000029 | 100 | 100 | 100 | 100 | 100 |
| 000030 | 100 | 100 | 100 | 100 | 100 |
| 000031 | 100 | 100 | 100 | 100 | 100 |
| 000032 | 100 | 100 | 100 | 100 | 100 |
| 000033 | 100 | 100 | 100 | 100 | 100 |
| 000034 | 100 | 100 | 100 | 100 | 100 |
| 000035 | 100 | 100 | 100 | 100 | 100 |
| 000036 | 100 | 100 | 100 | 100 | 100 |
| 000037 | 100 | 100 | 100 | 100 | 100 |
| 000038 | 100 | 100 | 100 | 100 | 100 |
| 000039 | 100 | 100 | 100 | 100 | 100 |
| 000040 | 100 | 100 | 100 | 100 | 100 |
| 000041 | 100 | 100 | 100 | 100 | 100 |
| 000042 | 100 | 100 | 100 | 100 | 100 |
| 000043 | 100 | 100 | 100 | 100 | 100 |
| 000044 | 100 | 100 | 100 | 100 | 100 |
| 000045 | 100 | 100 | 100 | 100 | 100 |
| 000046 | 100 | 100 | 100 | 100 | 100 |
| 000047 | 100 | 100 | 100 | 100 | 100 |
| 000048 | 100 | 100 | 100 | 100 | 100 |
| 000049 | 100 | 100 | 100 | 100 | 100 |
| 000050 | 100 | 100 | 100 | 100 | 100 |
| 000051 | 100 | 100 | 100 | 100 | 100 |
| 000052 | 100 | 100 | 100 | 100 | 100 |
| 000053 | 100 | 100 | 100 | 100 | 100 |
| 000054 | 100 | 100 | 100 | 100 | 100 |
| 000055 | 100 | 100 | 100 | 100 | 100 |
| 000056 | 100 | 100 | 100 | 100 | 100 |
| 000057 | 100 | 100 | 100 | 100 | 100 |
| 000058 | 100 | 100 | 100 | 100 | 100 |
| 000059 | 100 | 100 | 100 | 100 | 100 |
| 000060 | 100 | 100 | 100 | 100 | 100 |
| 000061 | 100 | 100 | 100 | 100 | 100 |
| 000062 | 100 | 100 | 100 | 100 | 100 |
| 000063 | 100 | 100 | 100 | 100 | 100 |
| 000064 | 100 | 100 | 100 | 100 | 100 |
| 000065 | 100 | 100 | 100 | 100 | 100 |
| 000066 | 100 | 100 | 100 | 100 | 100 |
| 000067 | 100 | 100 | 100 | 100 | 100 |
| 000068 | 100 | 100 | 100 | 100 | 100 |
| 000069 | 100 | 100 | 100 | 100 | 100 |
| 000070 | 100 | 100 | 100 | 100 | 100 |
| 000071 | 100 | 100 | 100 | 100 | 100 |
| 000072 | 100 | 100 | 100 | 100 | 100 |



In Confidence

[illegible]



| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| 000001 | 100 | 100 | 100 | 100 | 100 |
| 000002 | 100 | 100 | 100 | 100 | 100 |
| 000003 | 100 | 100 | 100 | 100 | 100 |
| 000004 | 100 | 100 | 100 | 100 | 100 |
| 000005 | 100 | 100 | 100 | 100 | 100 |
| 000006 | 100 | 100 | 100 | 100 | 100 |
| 000007 | 100 | 100 | 100 | 100 | 100 |
| 000008 | 100 | 100 | 100 | 100 | 100 |
| 000009 | 100 | 100 | 100 | 100 | 100 |
| 000010 | 100 | 100 | 100 | 100 | 100 |
| 000011 | 100 | 100 | 100 | 100 | 100 |
| 000012 | 100 | 100 | 100 | 100 | 100 |
| 000013 | 100 | 100 | 100 | 100 | 100 |
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| 000027 | 100 | 100 | 100 | 100 | 100 |
| 000028 | 100 | 100 | 100 | 100 | 100 |
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| 000033 | 100 | 100 | 100 | 100 | 100 |
| 000034 | 100 | 100 | 100 | 100 | 100 |
| 000035 | 100 | 100 | 100 | 100 | 100 |
| 000036 | 100 | 100 | 100 | 100 | 100 |
| 000037 | 100 | 100 | 100 | 100 | 100 |
| 000038 | 100 | 100 | 100 | 100 | 100 |
| 000039 | 100 | 100 | 100 | 100 | 100 |
| 000040 | 100 | 100 | 100 | 100 | 100 |
| 000041 | 100 | 100 | 100 | 100 | 100 |
| 000042 | 100 | 100 | 100 | 100 | 100 |
| 000043 | 100 | 100 | 100 | 100 | 100 |
| 000044 | 100 | 100 | 100 | 100 | 100 |
| 000045 | 100 | 100 | 100 | 100 | 100 |
| 000046 | 100 | 100 | 100 | 100 | 100 |
| 000047 | 100 | 100 | 100 | 100 | 100 |
| 000048 | 100 | 100 | 100 | 100 | 100 |
| 000049 | 100 | 100 | 100 | 100 | 100 |
| 000050 | 100 | 100 | 100 | 100 | 100 |
| 000051 | 100 | 100 | 100 | 100 | 100 |
| 000052 | 100 | 100 | 100 | 100 | 100 |
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| 000054 | 100 | 100 | 100 | 100 | 100 |
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| 000056 | 100 | 100 | 100 | 100 | 100 |
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| 000058 | 100 | 100 | 100 | 100 | 100 |
| 000059 | 100 | 100 | 100 | 100 | 100 |
| 000060 | 100 | 100 | 100 | 100 | 100 |
| 000061 | 100 | 100 | 100 | 100 | 100 |
| 000062 | 100 | 100 | 100 | 100 | 100 |
| 000063 | 100 | 100 | 100 | 100 | 100 |
| 000064 | 100 | 100 | 100 | 100 | 100 |
| 000065 | 100 | 100 | 100 | 100 | 100 |
| 000066 | 100 | 100 | 100 | 100 | 100 |
| 000067 | 100 | 100 | 100 | 100 | 100 |
| 000068 | 100 | 100 | 100 | 100 | 100 |
| 000069 | 100 | 100 | 100 | 100 | 100 |
| 000070 | 100 | 100 | 100 | 100 | 100 |
| 000071 | 100 | 100 | 100 | 100 | 100 |
| 000072 | 100 | 100 | 100 | 100 | |



Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-------|---------|--------|--------|---------------|---------------|
| 00001 | 0000 | 0000 | 0000 | 0000 | 0000 |
| 00002 | 0000 | 0000 | 0000 | 0000 | 0000 |
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| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Crop Locations:

Valley: Dirranbandi (QLD)

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Crop Locations:

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Crop Locations:

[illegible]



Valley: **Mungindi (NSW/QLD)**

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Crop Locations:

Page | 21

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Valley: Gwydir (NSW)

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Crop Locations:

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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In Confidence



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Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Valley: Upper Namoi (NSW)

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Crop Locations:

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

[illegible]



In Confidence

[illegible]

[illegible]



Valley: Macquarie (NSW)

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Crop Locations:

[illegible]

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Crop Locations:

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

| <i>TUA#</i> | <i>BGII ha</i> | <i>RRC ha</i> | <i>RRF ha</i> | <i>BGII w RRC ha</i> | <i>BGII w RRF ha</i> |
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| Valley | TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
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| Subtotal | | 22.78 | 0.00 | 25.84 | 3.32 | 123.09 |

LICENCE NO: DIR124
LICENCE HOLDER: Monsanto Australia Limited
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2015 Annual Report for Commercial release of GM insect resistant and/or herbicide tolerant cotton lines
REPORTING PERIOD: 1 June 2014 – 1 June 2015
(covering 2014/15 cotton growing season)
DATE: 30 June 2015

PREPARED BY:

[REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorized to disclose such data and information without written permission from Monsanto Australia Limited.

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SECTION 1. LICENCE HOLDER DETAILS

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Contact email: [REDACTED]

**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR124 commercial licence covering Bollgard® 3 and Bollgard® 3 x Roundup Ready Flex® cotton trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 3 of the DIR124 licence as issued to Monsanto Australia Limited on 19 June 2014.

This report covers the period of time from 19 June 2014 to 1 June 2015, including the 2014/15 cotton planting season.

SECTION 2. LICENCE CONDITIONS AND OBLIGATIONS

Condition 3. Authorised Dealings

No dealings were conducted with GMOs under this licence that are otherwise prohibited as a result of the operation of State legislation declaring areas to be GM, GM free, or both, for marketing purposes.

Condition 4. Duration of Licence

DIR124 has not been suspended, cancelled or surrendered.

Condition 5. Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

Condition 6. Project Supervisor

The project supervisor is [REDACTED]

Condition 7. Persons covered by this GMO Licence

Monsanto acknowledges that any person, including the licence holder, may conduct any permitted dealings with the GMOs as covered by the licence.

Condition 8. Dealings with GMOs as authorized by this Licence

All dealings with the GMOs are permitted under this licence.

Condition 9. Location

The licence allows for dealings with GMOs to be conducted in all areas of Australia.

Condition 10. GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR124 Licence.

Condition 11. Licence Conditions

Monsanto acknowledges that if the conditions of any prior licence authorising dealings with the GMO are inconsistent with the conditions of this licence, the conditions of this licence will prevail.

Condition 12. Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with the Act and with its instrument of accreditation.

Condition 13. Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet

the conditions of the DIR124 licence. Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence, if requested, within a time period stipulated by the Regulator.

Condition 14. Informing people of their obligations

DIR124 was issued in June 2014, permitting dealings with the GMOs to be undertaken during the 2014/15 cotton growing season. Bollgard 3 will be grown under APVMA PER 14438 until Monsanto receives approval of from the APVMA for the product.

Monsanto Australia Limited informed all persons covered by the DIR124 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program and contractual obligations, which includes information on regulatory obligations as well as management of the crop. Accreditation requires all persons having management responsibility for Bollgard 3 cotton crops to undergo training.

Monsanto recognizes that any persons covered by the DIR124 licence, to whom a particular condition of the licence applies, must be informed of particular conditions and any variations, the cancellation, suspension or surrender of the licence. This is achieved through training and contractual obligations.

Conditions 15 - 17. Applicant to notify of circumstances that might affect the risk assessment

During the reporting period, Monsanto Australia Ltd did not become aware of any risks to the health and safety of people, or to the environment, associated with the dealings authorised under DIR124; or of any contraventions of the licence by a person covered by the licence; or any unintended effects of the dealings authorised by the licence.

Monsanto acknowledges that should it be required to inform the regulator of additional information under these licence conditions it must do so without delay.

Conditions 18 and 19. Persons covered by the licence

Monsanto acknowledges that the persons covered by the licence must not deal with the GMOs except as expressly permitted by this licence.

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in the DIR124 Licence.

3.2 Permitted dealings

Planting of Bollgard 3 were undertaken under a Technology User Agreement (TUA), which sets out the conditions for planting and growing a cotton crop containing Bollgard 3 technology.

In order to be eligible to sign such an agreement, a grower is required to attend an accreditation and training program.

In the 2014/15 season, all Bollgard 3 cotton planted was managed under the Bollgard II cotton Resistance Management Plan (RMP), which is attached in Appendix A. Management of Bollgard 3 cotton under the Bollgard II RMP was a requirement for the APVMA permit (PER14438) as issued by the APVMA. Bollgard 3 cotton planted in the 2015/16 season will be managed under a Bollgard 3 RMP as per the APVMA permit (PER80841) issued in May, 2015.

3.3 Commercial Crop Locations

There were no crops of Bollgard 3 cotton planted for commercial purposes during the reporting period.

3.4 Trial/Research Crop Locations and Volumes by State

| State | Trial/Research BG3 ha |
|--|-----------------------|
| NSW (Murrumbidgee, MacIntyre, Gwydir, Lachlan, Lower Namoi and Macquarie valleys) | 461.16 |
| QLD (Darling Downs and Emerald valleys) | 30.47 |
| Total BG3 ha planted | 491.63 |

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfhagen, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimban, Blair Athol and Pasha.

Valley: Bourke

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Valley: Darling Downs

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Valley: Dirranbandi

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Valley: St George

Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

Valley: Tandou

Boundaries: surrounds Menindee shire. North of Mildura and west of the SA border

Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

APPENDIX A -

Resistance Management Plan for Bollgard II® Cotton 2014/2015

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.



DIR124 OGTR ANNUAL REPORT 2014/15 SEASON

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied. An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in

adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. larvae.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.

- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando - Clermont: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Mackenzie: All Bollgard II crops are to be planted into moisture or watered-up in the period between November 4 and December 15, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift, except where a pigeon pea refuge is converted to a trap crop. In this case the full 5% pigeon pea refuge area managed to become the late summer trap crop can only be sprayed with virus after the first defoliation of Bollgard II cotton. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. When using the full 5% pigeon pea trap crop option, weed control must not be carried out by cultivation once flowering of the associated Bollgard II cotton crop has commenced |

| | |
|------------------|--|
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). All Bollgard II and associated trap crops must be destroyed by July 31. |
|------------------|--|

* A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.

** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

LICENSE No: DIR 066/2006
LICENSE HOLDER: Monsanto Australia Limited
PROJECT SUPERVISOR: [REDACTED]
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2007 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines.
REPORTING PERIOD: 26 October 2007 – 26 October 2008
(Covering 2007/08 cotton growing season)
DATE: 27 November 2008

PREPARED BY: [REDACTED]
[REDACTED]

Information and data submitted herein contains trade secrets, or privileged or confidential information the property of Monsanto Australia Limited and no government agency or representative thereof is authorised to disclose such data and information without written permission from Monsanto Australia Limited.

SECION 1. LICENSE HOLDER DETAILS

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Facsimile: 03 9521 2725

Contact email: [REDACTED]

**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR 066/2006 commercial license for Roundup Ready Cotton, Roundup Ready Flex Cotton and the Bollgard II trait issued to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR 066 license as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006 and 6 December 2007.

The report covers the period of time from 26 October 2007 to 26 October 2008, including the 2007/08 cotton growing season.

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SECTION 2. GENERAL CONDITIONS

2.1 Duration of License

DIR066/2006 (DIR066) has not been suspended, cancelled or surrendered

2.2 Holder of License

Monsanto Australia Ltd (Monsanto) remains the holder of the License.

2.3 Project Supervisor

[REDACTED]

2.4 No dealings with GMOs except as authorised by this License

Persons covered by the License did not deal with GMOs except as expressly permitted by the License.

2.5 Location

The license allows for dealings with GMO's to be conducted anywhere within Australia. This license supercedes any previous licenses regarding location of this license.

2.6 Persons covered by this GMO License

Monsanto acknowledges that the persons covered by the License are the License holder and employees, agents or contractors of the License holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a Location pursuant to this License.

2.7 Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons in 2006/07 and 2007/08.

Monsanto Australia Limited informed all cotton growers and cotton gins covered by DIR066/2006 license, of the obligations imposed on them as a result of the conditions of this license. This was primarily achieved through the Monsanto Accreditation program and information course which includes information on regulatory obligations, as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready, Roundup Ready Flex and Bollgard II Cotton crops, to undergo training and pass a test on the content of the training. Growers were only required to attend these courses and pass the accreditation test once.

2.8 Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this License; nor was there any revocation or suspension of a License or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or a foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of the License that would affect the capacity of Monsanto to meet the conditions of the DIR 066 License.

2.9 License holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to their ongoing suitability to hold a License when requested to do so in writing by the Regulator and must provide the information within a time period stipulated by the Regulator.

2.10 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorised by the License; or of any unintended effects of the dealings authorised by the License.

2.11 People dealing with GMOs must allow auditing and monitoring of the dealing

Monsanto acknowledges that if a person is authorised by this License to deal with GMOs and a particular condition of this License applies to the dealing by that person, the person must allow the Regulator, or a person authorised by the Regulator, to enter premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

2.12 Remaining an Accredited organisation

At all times, Monsanto remained an accredited organisation and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this License

The only dealings with GMOs under this License were those with the GMOs described in DIR 066/2006 License.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Cotton (RRC), Roundup Ready Flex (RRF) and Bollgard II (BGII) were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRC, RRF and BGII technology. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Crop Locations

| | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-----------------------|----------------|----------------|----------------|-----------------|-----------------|
| Ord | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Burdekin | 0.00 | 0.00 | 73.98 | 0.00 | 720.46 |
| Emerald | 780.89 | 3.20 | 0.00 | 2102.96 | 377.86 |
| Dawson/Callide | 585.94 | 16.74 | 6.48 | 837.55 | 121.15 |
| Darling Downs | 2269.00 | 38.53 | 252.34 | 3146.67 | 5966.71 |
| St George | 250.80 | 17.56 | 66.20 | 2583.39 | 617.15 |
| Dirranbandi | 0.00 | 10.30 | 0.00 | 66.70 | 0.00 |
| Macintyre | 2793.87 | 25.03 | 13.46 | 2456.90 | 250.22 |
| Mungindi | 37.80 | 0.00 | 0.00 | 332.19 | 392.43 |
| Gwydir | 247.20 | 1839.97 | 363.28 | 4339.35 | 4039.49 |
| Bourke | 79.90 | 0.00 | 0.00 | 45.11 | 0.00 |
| Upper Namoi | 299.60 | 0.00 | 0.00 | 6558.52 | 700.05 |
| Lower Namoi | 893.69 | 117.87 | 414.18 | 7856.90 | 3101.89 |
| Macquarie | 93.90 | 110.64 | 34.43 | 2665.71 | 453.84 |
| Lachlan | 0.00 | 10.00 | 15.00 | 941.30 | 1300.84 |
| Murrumbidgee | 0.00 | 0.00 | 0.00 | 135.00 | 143.00 |
| Total Crop ha | 8332.59 | 2189.84 | 1239.35 | 34068.25 | 18186.09 |
| % of Total | 13.02% | 3.42% | 1.94% | 53.22% | 28.41% |

Total Bollgard II Ha planted:

60586.93Ha = 94.65%

Total Roundup Ready Ha and Roundup Ready Flex Ha planted:

55683.53Ha = 86.98%



Valley: Ord (WA)

Boundaries: Area north of 22° south in Western Australia.

Crop Location:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-----------------|-------------|-------------|-------------|---------------|---------------|
| ████ | ████ | ████ | ████ | ████ | ████ |
| Subtotal | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |

Valley: Burdekin (QLD)

Boundaries: Area north of 22° South in Queensland.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-----------------|-------------|-------------|--------------|---------------|---------------|
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| ████ | ████ | ████ | ████ | ████ | ████ |
| Subtotal | 0.00 | 0.00 | 73.98 | 0.00 | 720.46 |



Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

[illegible]

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ████ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ██████ | ████ | ████ | ██ | ████ | ████ |



Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

[illegible]



| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|--------|---------|--------|--------|---------------|---------------|
| 000001 | 100 | 100 | 100 | 100 | 100 |
| 000002 | 100 | 100 | 100 | 100 | 100 |
| 000003 | 100 | 100 | 100 | 100 | 100 |
| 000004 | 100 | 100 | 100 | 100 | 100 |
| 000005 | 100 | 100 | 100 | 100 | 100 |
| 000006 | 100 | 100 | 100 | 100 | 100 |
| 000007 | 100 | 100 | 100 | 100 | 100 |
| 000008 | 100 | 100 | 100 | 100 | 100 |
| 000009 | 100 | 100 | 100 | 100 | 100 |
| 000010 | 100 | 100 | 100 | 100 | 100 |
| 000011 | 100 | 100 | 100 | 100 | 100 |
| 000012 | 100 | 100 | 100 | 100 | 100 |
| 000013 | 100 | 100 | 100 | 100 | 100 |
| 000014 | 100 | 100 | 100 | 100 | 100 |
| 000015 | 100 | 100 | 100 | 100 | 100 |
| 000016 | 100 | 100 | 100 | 100 | 100 |
| 000017 | 100 | 100 | 100 | 100 | 100 |
| 000018 | 100 | 100 | 100 | 100 | 100 |
| 000019 | 100 | 100 | 100 | 100 | 100 |
| 000020 | 100 | 100 | 100 | 100 | 100 |
| 000021 | 100 | 100 | 100 | 100 | 100 |
| 000022 | 100 | 100 | 100 | 100 | 100 |
| 000023 | 100 | 100 | 100 | 100 | 100 |
| 000024 | 100 | 100 | 100 | 100 | 100 |
| 000025 | 100 | 100 | 100 | 100 | 100 |
| 000026 | 100 | 100 | 100 | 100 | 100 |
| 000027 | 100 | 100 | 100 | 100 | 100 |
| 000028 | 100 | 100 | 100 | 100 | 100 |
| 000029 | 100 | 100 | 100 | 100 | 100 |
| 000030 | 100 | 100 | 100 | 100 | 100 |
| 000031 | 100 | 100 | 100 | 100 | 100 |
| 000032 | 100 | 100 | 100 | 100 | 100 |
| 000033 | 100 | 100 | 100 | 100 | 100 |
| 000034 | 100 | 100 | 100 | 100 | 100 |
| 000035 | 100 | 100 | 100 | 100 | 100 |
| 000036 | 100 | 100 | 100 | 100 | 100 |
| 000037 | 100 | 100 | 100 | 100 | 100 |
| 000038 | 100 | 100 | 100 | 100 | 100 |
| 000039 | 100 | 100 | 100 | 100 | 100 |
| 000040 | 100 | 100 | 100 | 100 | 100 |
| 000041 | 100 | 100 | 100 | 100 | 100 |
| 000042 | 100 | 100 | 100 | 100 | 100 |
| 000043 | 100 | 100 | 100 | 100 | 100 |
| 000044 | 100 | 100 | 100 | 100 | 100 |
| 000045 | 100 | 100 | 100 | 100 | 100 |
| 000046 | 100 | 100 | 100 | 100 | 100 |
| 000047 | 100 | 100 | 100 | 100 | 100 |
| 000048 | 100 | 100 | 100 | 100 | 100 |
| 000049 | 100 | 100 | 100 | 100 | 100 |
| 000050 | 100 | 100 | 100 | 100 | 100 |
| 000051 | 100 | 100 | 100 | 100 | 100 |
| 000052 | 100 | 100 | 100 | 100 | 100 |
| 000053 | 100 | 100 | 100 | 100 | 100 |
| 000054 | 100 | 100 | 100 | 100 | 100 |
| 000055 | 100 | 100 | 100 | 100 | 100 |
| 000056 | 100 | 100 | 100 | 100 | 100 |
| 000057 | 100 | 100 | 100 | 100 | 100 |
| 000058 | 100 | 100 | 100 | 100 | 100 |
| 000059 | 100 | 100 | 100 | 100 | 100 |
| 000060 | 100 | 100 | 100 | 100 | 100 |
| 000061 | 100 | 100 | 100 | 100 | 100 |
| 000062 | 100 | 100 | 100 | 100 | 100 |
| 000063 | 100 | 100 | 100 | 100 | 100 |
| 000064 | 100 | 100 | 100 | 100 | 100 |
| 000065 | 100 | 100 | 100 | 100 | 100 |
| 000066 | 100 | 100 | 100 | 100 | 100 |
| 000067 | 100 | 100 | 100 | 100 | 100 |
| 000068 | 100 | 100 | 100 | 100 | 100 |
| 000069 | 100 | 100 | 100 | 100 | 100 |
| 000070 | 100 | 100 | 100 | 100 | 100 |
| 000071 | 100 | 100 | 100 | 100 | 100 |
| 000072 | 100 | 100 | 100 | 100 | |



| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-------|---------|--------|--------|---------------|---------------|
| 00001 | 100 | 100 | 100 | 100 | 100 |
| 00002 | 100 | 100 | 100 | 100 | 100 |
| 00003 | 100 | 100 | 100 | 100 | 100 |
| 00004 | 100 | 100 | 100 | 100 | 100 |
| 00005 | 100 | 100 | 100 | 100 | 100 |
| 00006 | 100 | 100 | 100 | 100 | 100 |
| 00007 | 100 | 100 | 100 | 100 | 100 |
| 00008 | 100 | 100 | 100 | 100 | 100 |
| 00009 | 100 | 100 | 100 | 100 | 100 |
| 00010 | 100 | 100 | 100 | 100 | 100 |
| 00011 | 100 | 100 | 100 | 100 | 100 |
| 00012 | 100 | 100 | 100 | 100 | 100 |
| 00013 | 100 | 100 | 100 | 100 | 100 |
| 00014 | 100 | 100 | 100 | 100 | 100 |
| 00015 | 100 | 100 | 100 | 100 | 100 |
| 00016 | 100 | 100 | 100 | 100 | 100 |
| 00017 | 100 | 100 | 100 | 100 | 100 |
| 00018 | 100 | 100 | 100 | 100 | 100 |
| 00019 | 100 | 100 | 100 | 100 | 100 |
| 00020 | 100 | 100 | 100 | 100 | 100 |
| 00021 | 100 | 100 | 100 | 100 | 100 |
| 00022 | 100 | 100 | 100 | 100 | 100 |
| 00023 | 100 | 100 | 100 | 100 | 100 |
| 00024 | 100 | 100 | 100 | 100 | 100 |
| 00025 | 100 | 100 | 100 | 100 | 100 |
| 00026 | 100 | 100 | 100 | 100 | 100 |
| 00027 | 100 | 100 | 100 | 100 | 100 |
| 00028 | 100 | 100 | 100 | 100 | 100 |
| 00029 | 100 | 100 | 100 | 100 | 100 |
| 00030 | 100 | 100 | 100 | 100 | 100 |
| 00031 | 100 | 100 | 100 | 100 | 100 |
| 00032 | 100 | 100 | 100 | 100 | 100 |
| 00033 | 100 | 100 | 100 | 100 | 100 |
| 00034 | 100 | 100 | 100 | 100 | 100 |
| 00035 | 100 | 100 | 100 | 100 | 100 |
| 00036 | 100 | 100 | 100 | 100 | 100 |
| 00037 | 100 | 100 | 100 | 100 | 100 |
| 00038 | 100 | 100 | 100 | 100 | 100 |
| 00039 | 100 | 100 | 100 | 100 | 100 |
| 00040 | 100 | 100 | 100 | 100 | 100 |
| 00041 | 100 | 100 | 100 | 100 | 100 |
| 00042 | 100 | 100 | 100 | 100 | 100 |
| 00043 | 100 | 100 | 100 | 100 | 100 |
| 00044 | 100 | 100 | 100 | 100 | 100 |
| 00045 | 100 | 100 | 100 | 100 | 100 |
| 00046 | 100 | 100 | 100 | 100 | 100 |
| 00047 | 100 | 100 | 100 | 100 | 100 |
| 00048 | 100 | 100 | 100 | 100 | 100 |
| 00049 | 100 | 100 | 100 | 100 | 100 |
| 00050 | 100 | 100 | 100 | 100 | 100 |
| 00051 | 100 | 100 | 100 | 100 | 100 |
| 00052 | 100 | 100 | 100 | 100 | 100 |
| 00053 | 100 | 100 | 100 | 100 | 100 |
| 00054 | 100 | 100 | 100 | 100 | 100 |
| 00055 | 100 | 100 | 100 | 100 | 100 |
| 00056 | 100 | 100 | 100 | 100 | 100 |
| 00057 | 100 | 100 | 100 | 100 | 100 |
| 00058 | 100 | 100 | 100 | 100 | 100 |
| 00059 | 100 | 100 | 100 | 100 | 100 |
| 00060 | 100 | 100 | 100 | 100 | 100 |
| 00061 | 100 | 100 | 100 | 100 | 100 |
| 00062 | 100 | 100 | 100 | 100 | 100 |
| 00063 | 100 | 100 | 100 | 100 | 100 |
| 00064 | 100 | 100 | 100 | 100 | 100 |
| 00065 | 100 | 100 | 100 | 100 | 100 |
| 00066 | 100 | 100 | 100 | 100 | 100 |
| 00067 | 100 | 100 | 100 | 100 | 100 |
| 00068 | 100 | 100 | 100 | 100 | 100 |
| 00069 | 100 | 100 | 100 | 100 | 100 |
| 00070 | 100 | 100 | 100 | 100 | 100 |
| 00071 | 100 | 100 | 100 | 100 | 100 |
| 00072 | 100 | 100 | 100 | 100 | 100 |
| 00073 | 100 | 100 | 100 | 100 | 100 |
| 00074 | 100 | 100 | 100 | 100 | 100 |
| 00075 | 100 | 100 | 100 | 100 | 100 |
| 00076 | 100 | 100 | 100 | 100 | 100 |
| 00077 | 100 | 100 | 100 | 100 | 100 |
| 00078 | 100 | 100 | 100 | 100 | 100 |
| 00079 | 100 | 100 | 100 | 100 | 100 |
| 00080 | 100 | 100 | 100 | 100 | 100 |
| 00081 | 100 | 100 | 100 | 100 | 100 |
| 00082 | 100 | 100 | 100 | 100 | 100 |
| 00083 | 100 | 100 | 100 | 100 | 100 |
| 00084 | 100 | 100 | 100 | 100 | 100 |
| 00085 | 100 | 100 | 100 | 100 | 100 |
| 00086 | 100 | 100 | 100 | 100 | 100 |
| 00087 | 100 | 100 | 100 | 100 | 100 |
| 00088 | 100 | 100 | 100 | 100 | 100 |
| 00089 | 100 | 100 | 100 | 100 | 100 |
| 00090 | 100 | 100 | 100 | 100 | 100 |
| 00091 | 100 | 100 | 100 | 100 | 100 |
| 00092 | 100 | 100 | 100 | 100 | 100 |
| 00093 | 100 | 100 | 100 | 100 | 100 |
| 00094 | 100 | 100 | 100 | 100 | 100 |
| 00095 | 100 | 100 | 100 | 100 | 100 |
| 00096 | 100 | 100 | 100 | 100 | 100 |
| 00097 | 100 | 100 | 100 | 100 | 100 |
| 00098 | 100 | 100 | 100 | 100 | 100 |
| 00099 | 100 | 100 | 100 | 100 | 100 |
| 00100 | 100 | 100 | 100 | 100 | 100 |



Valley: St George (QLD)
Boundaries: Above Lower Plains on the southern side and north-east to include majority of Waroo Shire with the north-east boundary being Surat.

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| 0001 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0002 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0003 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0004 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0006 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0007 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0008 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0009 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0010 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0011 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0012 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0013 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0014 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0015 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0016 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0018 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0019 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0023 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0025 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0026 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0028 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0029 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0030 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0031 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0032 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0033 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0034 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0035 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0036 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0037 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0038 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0039 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0040 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0041 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0042 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0043 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0044 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0045 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0046 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0047 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0048 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0049 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0050 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0051 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0052 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0053 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0054 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0055 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0056 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0057 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0058 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0059 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0060 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0061 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0062 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0063 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0064 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0065 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0066 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0067 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0068 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0069 | | | | | |

Valley: Dirranbandi (QLD)

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ██ |

Valley: Macintyre (NSW/QLD)

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
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| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ████ | ██ | ██ | ██ | ████ |
| ████ | ████ | ██ | ██ | ██ | ██ |
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Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|----------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████████ | ████ | ██ | ██ | ████ | ████ |

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

[illegible]

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ████ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ████ | ██ | ████ |
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| ████ | ████ | ████ | ████ | ████ | ████ |

Valley: Bourke (NSW/QLD)

Boundaries: West of Walgett Shire, north of Coolahbah. Includes Cunnamulla in Queensland.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ████ | ██ | ██ | ████ | ██ |
| ████ | ████ | ██ | ██ | ████ | ██ |

Valley: Upper Namoi (NSW)

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |

[illegible]



Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|-------|---------|--------|--------|---------------|---------------|
| 00001 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00002 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00003 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00004 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00006 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00007 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00008 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00009 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00010 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00011 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00012 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00013 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00014 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00015 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00016 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00018 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00019 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00023 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00025 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00026 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00028 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00029 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00030 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00031 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00032 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00033 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00034 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00035 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00036 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00037 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00038 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00039 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00040 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00041 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00042 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00043 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00044 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00045 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00046 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00047 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00048 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00049 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00050 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00051 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00052 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00053 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00054 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00055 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00056 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00057 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00058 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00059 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00060 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00061 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00062 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00063 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00064 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00065 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00066 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 00067 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | |

[illegible]



Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Valley: Lachlan (NSW)

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ████ | ██ | ████ |
| ████ | ██ | ████ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ████ | ████ |

Valley: Murrumbidgee (NSW)

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Crop Locations:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ████ | ████ |

**Locations of Research Sites:****Ord:**

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ██ |

Emerald:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ████ |

Darling Downs:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ██ |

St George:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ██ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ████ | ██ |

Mungindi:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ████ | ██ | ██ | ██ | ██ |

Gwydir:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ████ |

Upper Namoi:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ██ |

**Lower Namoi:**

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ████ | ██ | ████ | ██ | ████ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ████ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ██ |
| ████ | ██ | ██ | ██ | ██ | ████ |

Macquarie:

| TUA# | BGII ha | RRC ha | RRF ha | BGII w RRC ha | BGII w RRF ha |
|------|---------|--------|--------|---------------|---------------|
| ████ | ██ | ██ | ██ | ████ | ████ |
| ████ | ██ | ██ | ██ | ████ | ████ |

LICENCE NO: DIR066
LICENCE HOLDER: Monsanto Australia Limited
ACCREDITATION NO: ACCR 034/2002

SUBMISSION: 2012 Annual Report for Commercial release of GM herbicide tolerant and/or insect resistant cotton lines
REPORTING PERIOD: 26 October 2011 – 26 October 2012
(covering 2011/12 cotton growing season)
DATE: 7 January, 2013

PREPARED BY: 


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SECTION 1. LICENCE HOLDER DETAILS

Name: Monsanto Australia Limited

Address: 600 St Kilda rd, Melbourne 3004
PO Box 6051
St Kilda rd Central
Victoria, 8008

Telephone: (03)9522 7122

Facsimilie: (03)9522 6122

Contact email: [REDACTED]

**Accreditation
Number:** ACCR 034/2002

SCOPE OF THE REPORT

This report addresses the annual reporting condition of the DIR066 commercial licence covering Roundup Ready Cotton, Roundup Ready Flex Cotton and the Bollgard II trait issues to Monsanto Australia Limited by the Office of the Gene Technology Regulator.

This report details compliance with general and specific conditions of Sections 2 to 6 of the DIR066 licence as issued to Monsanto Australia Limited on 26 October 2006, and as varied 22 December 2006, 6 December 2007 and 15 April 2009.

This report covers the period of time from 26 October 2011 to 26 October 2012, including the 2011/12 cotton growing season.

SECTION 2. LICENCE CONDITIONS

Condition 1. Duration of Licence

DIR066 has not been suspended, cancelled or surrendered.

Condition 2. Holder of Licence

Monsanto Australia Limited (Monsanto) remains the holder of the licence.

Conditions 3 and 4. Project Supervisor

██████████ is the project supervisor as per attachment A of the licence. This licence was varied 15 April 2009 to reflect the change of contact details.

Condition 5. No dealings with GMOs except as authorized by this Licence

Persons covered by the licence did not deal with GMOs except as expressly permitted by the licence.

Conditions 6 and 7. Location

The licence allows for dealings with GMOs to be conducted anywhere in Australia. This licence supersedes any previous licences regarding location.

Conditions 8 and 9. Persons covered by this GMO Licence

Monsanto acknowledges that the persons covered by the licence are the licence holder and employees, agents or contractors of the licence holder and other persons who are, or have been, engaged to undertake any activity in connection with GMOs grown in a location pursuant to this licence.

Conditions 10 and 11. Informing people of their obligations

DIR066 was issued in October 2006, permitting dealings with the GMOs to be undertaken during the cotton growing seasons.

Monsanto Australia Limited informed all persons covered by the DIR066 licence of the obligations imposed on them as a result of the conditions of the licence. This was primarily achieved through the Monsanto accreditation program, which includes information on regulatory obligations as well as management of the crop.

Accreditation programs require all persons having management responsibility for Roundup Ready (no longer sold commercially), Roundup Ready Flex and Bollgard II cotton crops to undergo training.

Condition 12. Applicant to notify of circumstances that might affect suitability

During the reporting period, Monsanto Australia Ltd did not receive a relevant conviction occurring after the commencement of this licence; nor was there any revocation or suspension of a licence or permit held by Monsanto Australia Ltd under a law of the Australian Government, a State or foreign country, being a law relating to the health and safety of people or the environment; or any event or circumstance occurring after the commencement of this licence that would affect the capacity of Monsanto to meet the conditions of the DIR066 licence.

Condition 13. Licence holder must provide information on matters related to suitability

Monsanto acknowledges that it must provide information related to its ongoing suitability to hold a licence when requested to do so in writing by the Regulator and must provide information within a time period stipulated by the Regulator.

Condition 14. People dealing with the GMOs must allow auditing and monitoring if the dealing

Monsanto acknowledges that if a person authorized by this licence to deal with GMOs and a particular condition of this licence applies to the dealing by that person, the person must allow the Regulator, or a person authorized by the Regulator, to enter the premises where the dealing is being undertaken, for the purposes of auditing or monitoring the dealing.

Condition 15. Remaining an Accredited organization

At all times, Monsanto remained an accredited organization and complied with conditions of accreditation as set out in the OGTR Guidelines for Accreditation of Organisations.

Conditions 16 - 19 Additional information must be given to the Regulator

During the reporting period, Monsanto did not become aware of any additional information as to any risks to the health and safety of people, or to the environment, associated with the dealings authorized by this licence; or of any unintended effects of the dealings authorized by this licence.

Condition 20. Compliance Management Plan

A Compliance Management Plan was provided to the Regulator on issuance of the DIR066 licence. A copy of the current Resistance Management Plans showing compliance metrics is in Appendix A and B.

SECTION 3. GROWING THE GMOS

3.1 GMOs covered by this licence

The only dealings with GMOs under this licence were those with the GMOs described in DIR066 Licence.

3.2 Permitted dealings

Sales and planting of the Roundup Ready Flex (RRF), Bollgard II (BGII) and Bollgard II stacked with [REDACTED] were undertaken under a Technology User Agreement, which sets out the conditions for planting and growing a cotton crop containing RRF and BGII technology. Roundup Ready Cotton is no longer sold in Australia. In order to be eligible to sign such an agreement, a grower was required to attend an accreditation program and pass a test based on the material covered in the accreditation program.

3.3 Commercial Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w [REDACTED] ha | Total ha |
|-----------------|--------------|-------------|------------------|--------------|-------------------|----------------------|-------------------|
| Belyando | 0.00 | 0.00 | 858.30 | 0.00 | 2,709.47 | 0.00 | 3,567.77 |
| Bourke | 45.63 | 0.00 | 18.70 | 0.00 | 10,030.21 | 0.00 | 10,094.54 |
| Burdekin | 0.00 | 0.00 | 45.96 | 0.00 | 390.61 | 0.00 | 436.57 |
| Darling Downs | 0.00 | 0.00 | 4,901.40 | 0.00 | 82,079.19 | 367.80 | 87,423.09 |
| Dawson/Callide | 0.00 | 0.00 | 728.68 | 0.00 | 7,991.11 | 0.00 | 8,719.79 |
| Dirranbandi | 0.00 | 0.00 | 0.00 | 0.00 | 31,828.62 | 0.00 | 31,828.62 |
| Emerald | 0.00 | 0.00 | 626.20 | 0.00 | 21,834.31 | 511.30 | 22,977.81 |
| Gwydir | 0.00 | 0.00 | 8,735.81 | 0.00 | 85,043.80 | 289.70 | 94,279.19 |
| Lachlan | 0.00 | 0.00 | 299.56 | 0.00 | 16,535.37 | 0.00 | 16,833.93 |
| Lower Namoi | 1.50 | 0.00 | 2,644.99 | 0.00 | 56,050.44 | 23.83 | 58,752.96 |
| MacIntyre | 0.00 | 0.00 | 2,745.98 | 0.00 | 65,162.80 | 0.00 | 68,949.66 |
| Macquarie | 0.00 | 0.00 | 267.82 | 0.00 | 43,793.87 | 0.00 | 44,061.69 |
| McKenzie River | 0.00 | 0.00 | 148.47 | 0.00 | 1,539.68 | 0.00 | 1,688.15 |
| Mungindi | 0.00 | 0.00 | 6,954.78 | 0.00 | 17,059.87 | 27.50 | 27,658.81 |
| Murrumbidgee | 0.00 | 0.00 | 1,425.67 | 0.00 | 35,545.85 | 54.30 | 37,039.32 |
| St George | 0.00 | 0.00 | 269.54 | 0.00 | 29,203.75 | 235.15 | 29,977.60 |
| Tandou | 0.00 | 0.00 | 0.00 | 0.00 | 5,773.59 | 0.00 | 6,639.09 |
| Upper Namoi | 0.00 | 0.00 | 1,031.45 | 0.00 | 27,730.11 | 461.90 | 29,247.56 |
| Walgett | 0.00 | 0.00 | 707.85 | 0.00 | 9,590.89 | 0.00 | 10,298.74 |
| Total ha | 47.13 | 0.00 | 32,411.16 | 0.00 | 549,893.54 | 1,971.48 | 590,514.89 |

| | |
|--|----------------|
| Total Bollgard II ha planted | 551,912 |
| Total Roundup Ready Flex ha planted | 582,305 |

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

Valley: Belyando

Boundaries: Includes the shires of Moranbah, Clermont, Kilcummin, Mistake Creek, Belyando, Elgin, Wolfgagn, Winchester, Old Labona, Gemini Mountains, Amaroo, South Copperfield, Laglan, Birimgan, Blair Athol and Pasha.

Volumes:

[illegible][illegible]



Valley: Burdekin

Boundaries: Area north of 22° south in Queensland

Volumes:

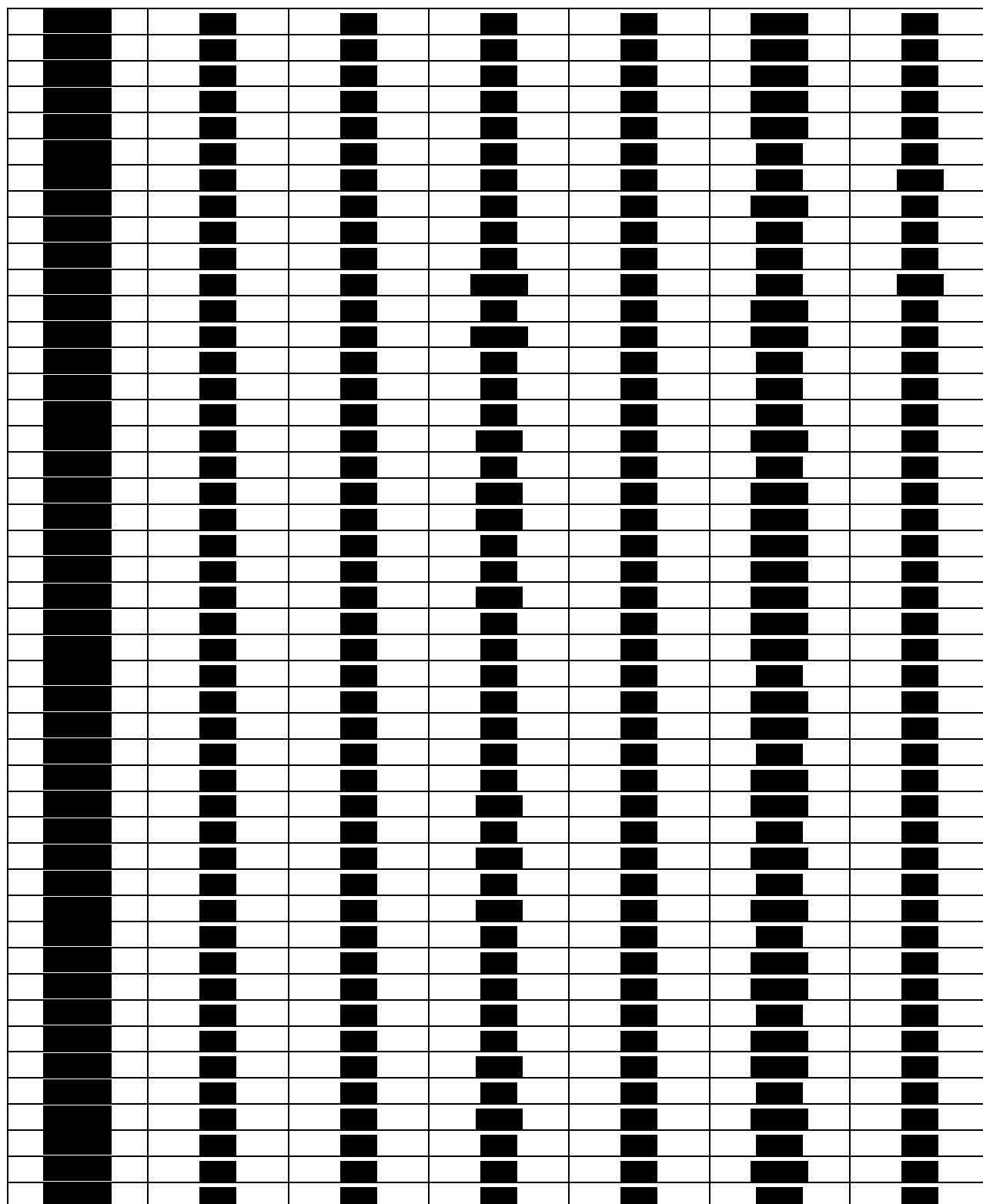
[illegible]

Valley: Darling Downs

Boundaries: Follows the Condamine River. Includes Toowoomba, Murgon, Dalby, Chinchilla, Condamine, and Roma. South-west boundary is Surat.

Volumes:

[illegible]



**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, each column being 10 squares high and separated by 10 white squares. The first column of black squares is in the first column of the grid, the second in the 11th, the third in the 21st, and so on.



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern is defined by the following columns (from left to right):

- Column 1: All squares are black.
- Column 2: All squares are white.
- Column 3: All squares are black.
- Column 4: All squares are white.
- Column 5: All squares are black.
- Column 6: All squares are white.
- Column 7: All squares are black.
- Column 8: All squares are white.
- Column 9: All squares are black.
- Column 10: All squares are white.
- Column 11: All squares are black.
- Column 12: All squares are white.
- Column 13: All squares are black.
- Column 14: All squares are white.
- Column 15: All squares are black.
- Column 16: All squares are white.
- Column 17: All squares are black.
- Column 18: All squares are white.
- Column 19: All squares are black.
- Column 20: All squares are white.

The pattern is a simple alternating sequence of black and white columns, starting and ending with a black column.



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, each column being 4 squares high and separated by 1 white square. The columns are located at columns 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19 of the grid.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern is defined by the following sequence of black squares in each row (columns are indexed 0 to 19 from left to right):

| Row | Black Squares (Columns) |
|-----|-----------------------------------|
| 0 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 1 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 2 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 3 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 4 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 5 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 6 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 7 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 8 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 9 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 10 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 11 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 12 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 13 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 14 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 15 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 16 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 17 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 18 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |
| 19 | 0, 2, 4, 6, 8, 10, 12, 14, 16, 18 |

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid with a black background and white grid lines. The grid contains a pattern of black and white squares forming a complex, symmetrical design. The pattern consists of several vertical columns of black squares, with some columns having gaps. The overall shape is roughly rectangular, with the black squares forming a central vertical band and two side bands, with some horizontal connections between them.



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern is defined by the following sequence of black squares (row, column) for each row:

- Row 1: (1,1), (1,3), (1,5), (1,7), (1,9), (1,11), (1,13), (1,15), (1,17), (1,19)
- Row 2: (2,1), (2,3), (2,5), (2,7), (2,9), (2,11), (2,13), (2,15), (2,17), (2,19)
- Row 3: (3,1), (3,3), (3,5), (3,7), (3,9), (3,11), (3,13), (3,15), (3,17), (3,19)
- Row 4: (4,1), (4,3), (4,5), (4,7), (4,9), (4,11), (4,13), (4,15), (4,17), (4,19)
- Row 5: (5,1), (5,3), (5,5), (5,7), (5,9), (5,11), (5,13), (5,15), (5,17), (5,19)
- Row 6: (6,1), (6,3), (6,5), (6,7), (6,9), (6,11), (6,13), (6,15), (6,17), (6,19)
- Row 7: (7,1), (7,3), (7,5), (7,7), (7,9), (7,11), (7,13), (7,15), (7,17), (7,19)
- Row 8: (8,1), (8,3), (8,5), (8,7), (8,9), (8,11), (8,13), (8,15), (8,17), (8,19)
- Row 9: (9,1), (9,3), (9,5), (9,7), (9,9), (9,11), (9,13), (9,15), (9,17), (9,19)
- Row 10: (10,1), (10,3), (10,5), (10,7), (10,9), (10,11), (10,13), (10,15), (10,17), (10,19)
- Row 11: (11,1), (11,3), (11,5), (11,7), (11,9), (11,11), (11,13), (11,15), (11,17), (11,19)
- Row 12: (12,1), (12,3), (12,5), (12,7), (12,9), (12,11), (12,13), (12,15), (12,17), (12,19)
- Row 13: (13,1), (13,3), (13,5), (13,7), (13,9), (13,11), (13,13), (13,15), (13,17), (13,19)
- Row 14: (14,1), (14,3), (14,5), (14,7), (14,9), (14,11), (14,13), (14,15), (14,17), (14,19)
- Row 15: (15,1), (15,3), (15,5), (15,7), (15,9), (15,11), (15,13), (15,15), (15,17), (15,19)
- Row 16: (16,1), (16,3), (16,5), (16,7), (16,9), (16,11), (16,13), (16,15), (16,17), (16,19)
- Row 17: (17,1), (17,3), (17,5), (17,7), (17,9), (17,11), (17,13), (17,15), (17,17), (17,19)
- Row 18: (18,1), (18,3), (18,5), (18,7), (18,9), (18,11), (18,13), (18,15), (18,17), (18,19)
- Row 19: (19,1), (19,3), (19,5), (19,7), (19,9), (19,11), (19,13), (19,15), (19,17), (19,19)
- Row 20: (20,1), (20,3), (20,5), (20,7), (20,9), (20,11), (20,13), (20,15), (20,17), (20,19)



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

The image displays a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, each column being 4 squares high, followed by a column of 4 white squares. This sequence repeats across the grid.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]

Valley: Dawson/Callide

Boundaries: Includes Taroom, Biloela, Moura and Theodore regions.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]**Valley: Dirranbandi**

Boundaries: Runs north toward St George and includes Lower Plains, follows south along the Balonne River right down to the NSW border.

Volumes:

[illegible]

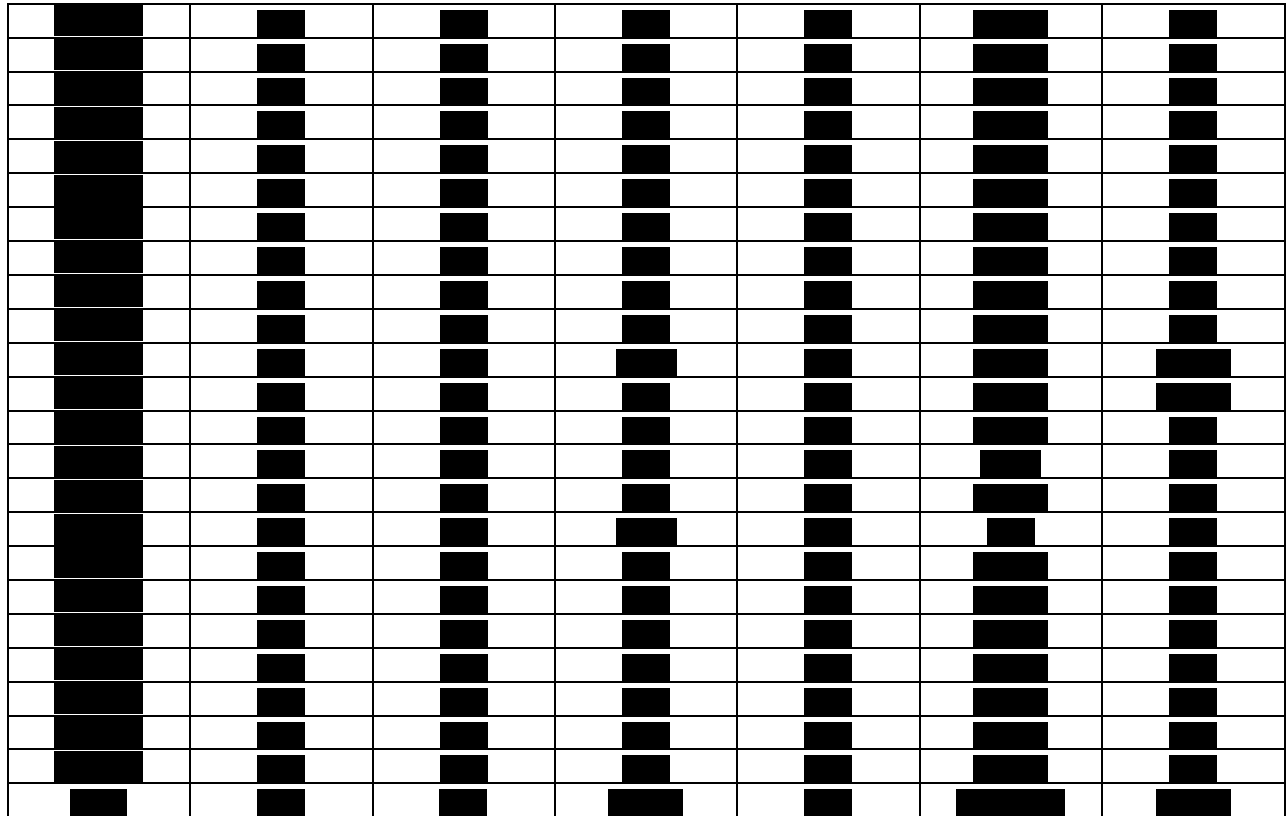


Valley: Emerald

Boundaries: South-eastern boundary formed by the Expedition Ranges between Rolleston and Bauhinia. Region runs north-west from there to include Emerald and Dysart.

Volumes:

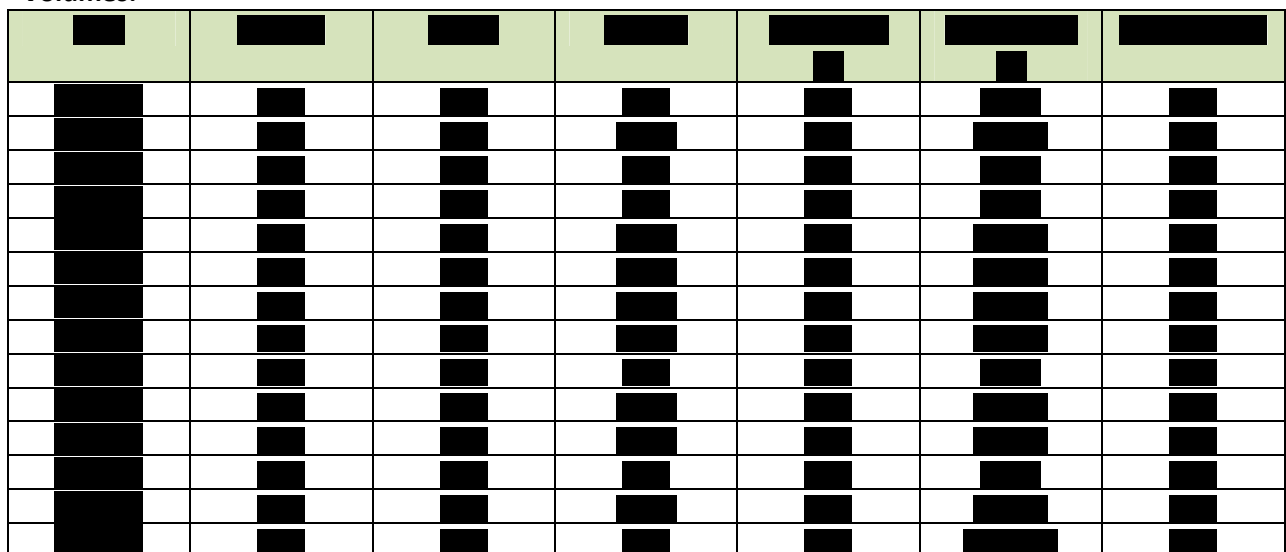
[illegible]



Valley: Gwydir

Boundaries: South of Fox Lane, north-west to Garah, west to Collarenebri, south to Bellata. The road that runs east-west through Bellata and to Rowena is southern boundary.

Volumes:



**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, with the first column being solid black and the others having gaps. The gaps are arranged in a way that creates a series of vertical lines of black squares, with the first line being solid black and the others having gaps. The pattern is periodic, with the first column being solid black and the others having gaps. The gaps are arranged in a way that creates a series of vertical lines of black squares, with the first line being solid black and the others having gaps. The pattern is periodic, with the first column being solid black and the others having gaps.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

A 30x30 grid with black and white cells. The pattern is complex and non-repeating, with black cells forming various shapes and structures across the grid. The grid is composed of 30 rows and 30 columns, with each cell being either black or white.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

Valley: Lachlan

Boundaries: Northern boundary is Peak Hill and Tullamore and the cotton follows the Lachlan River through to Booligal. The southern boundary is the road through to Gunbar and then follows the Great Western Highway through to West Wyalong.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

| | | | | | | | |
|--|--|--|--|--|--|--|--|
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| | | | | | | | |

Valley: Lower Namoi

Boundaries: North-west of Baan Baa-Manilla Road and south of Bellata-Rowena Road. Western boundary is formed by the road that runs from Pilliga via Burren Junction to Collarenebri.

Volumes:

[illegible]



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid with a repeating pattern of black and white squares. The pattern consists of vertical columns of black squares, with the first column being solid black and the others having gaps. The columns are defined by the following sequences of black squares (row indices from 0 to 19):

- Column 0: All 20 squares are black.
- Column 1: All 20 squares are white.
- Column 2: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 3: All 20 squares are white.
- Column 4: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 5: All 20 squares are white.
- Column 6: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 7: All 20 squares are white.
- Column 8: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 9: All 20 squares are white.
- Column 10: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 11: All 20 squares are white.
- Column 12: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 13: All 20 squares are white.
- Column 14: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 15: All 20 squares are white.
- Column 16: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 17: All 20 squares are white.
- Column 18: Squares at rows 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 are black.
- Column 19: All 20 squares are white.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid with a black background and white grid lines. The grid contains a pattern of black and white squares forming a stylized, abstract design. The design consists of several vertical columns of black squares, with some columns having gaps. The overall shape is roughly rectangular, with the black squares forming a central, slightly irregular block.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image displays a 20x20 grid representing the evolution of a pattern over 20 generations. The grid is divided into four quadrants by a vertical line at column 10 and a horizontal line at row 10. The pattern starts as a single cell at (0,0) and grows into a complex, fractal-like structure. The grid is filled with black cells, representing the pattern's growth, against a white background. The pattern is symmetric across both axes.

Valley: MacIntyre

Boundaries: North of Gwydir, western boundary is Garah to Talwood Road north include Moonie and east to include Texas. Southern boundary is Foxes Lane which runs Garah back to the Newell Highway and then along to Croppa Creek, Yallaroi and Coolatai.

Volumes:

[illegible]

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid with a black background and white grid lines. The grid contains a pattern of black and white squares forming a stylized, abstract design. The design consists of several vertical columns of black squares, with some columns having gaps. The overall shape is roughly rectangular, with the black squares forming a central, slightly irregular block.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

| | | | | | | | |
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Valley: Macquarie

Boundaries: Dubbo and south to Peak Hill. West to Tullamore. North through Tottenham. Nyngan and Coolabah, then east via southern boundary of Walgett shire and then south back to Dubbo via Coonabarabran.

Volu [REDACTED]

[illegible]



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

The image shows a 20x20 grid. Each column contains a vertical bar of black squares. The height of the bar in each column represents a binary value (0 or 1) for that column. The bars are located in columns 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19. The heights of the bars are as follows:

| Column | Bar Height (Number of Black Squares) |
|--------|--------------------------------------|
| 1 | 20 |
| 3 | 19 |
| 5 | 19 |
| 7 | 19 |
| 9 | 19 |
| 11 | 19 |
| 13 | 19 |
| 15 | 19 |
| 17 | 18 |
| 19 | 19 |

Valley: McKenzie River

Boundaries: North West of Comet, to include McKenzie River and Alton Downs

Volumes:[illegible]



Valley: Mungindi

Boundaries: West of Garah and Boomi Road to Talwood and follows Barwon River south-west of Mungindi towards Collarenebri. Southern boundary is the Watercourse Road from Colly through to Gingham and then to Garah.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |



Valley: Murrumbidgee

Boundaries: Northern boundary is the Great Western Highway from West Wyalong through Goolgowi to Gunbar, from Gunbar west to Booligal on the Lachlan River. Downstream of Booligal on the Lachlan and south-west is the Murrumbidgee River.

Volumes:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 |
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**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

A 20x20 grid with black bars of varying widths and heights, creating a barcode-like pattern. The bars are located at columns 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19. The heights of the bars vary, with some reaching the top of the grid and others being shorter. The bars are black, and the background is white.

**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]

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**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]

Valley: Tandou

Boundaries: surrounds Menindee shire. North of Mildure and west of the SA border

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Valley: Upper Namoi

Boundaries: South-east of Baan Baa-Manilla Road. Includes Coolah, Merriwa, Mullaley, Gunnedah and Quirindi.

Volumes:

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**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**[illegible]



DIR066 OGTR ANNUAL REPORT 2011/12 SEASON

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**DIR066 OGTR ANNUAL REPORT 2011/12 SEASON**

Valley: Walgett

Boundaries: Includes almost entirety of Walgett Shire, with eastern boundary being the road that runs south from Collarenebri to Burren Junction.

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3.4 Trial/Research Crop Locations and Volumes

| Valley | BGII ha | RR ha | RRF ha | BGII w RR ha | BGII w RRF ha | BGII w ha | Total ha |
|-----------------|-------------|-------------|--------------|--------------|---------------|-------------|---------------|
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| Total ha | 1.50 | 0.00 | 54.35 | 0.00 | 709.8 | 7.83 | 773.48 |

APPENDIX A -

Resistance Management Plan for Bollgard II® Cotton 2011/2012

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Ltd.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act 1994*).

Section 1 is applicable to all regions in New South Wales and Queensland that grow cotton while sections 2 and 3 detail specific requirements for New South Wales and Southern Queensland, and Central Queensland respectively.

SECTION 1: NEW SOUTH WALES, SOUTHERN QUEENSLAND & CENTRAL QUEENSLAND

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt



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proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent, as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in Tables 1 and 2, for irrigated and dryland production scenarios respectively. Irrespective of the irrigation regime for the Bollgard II cotton, all pigeon pea refuges must be fully irrigated so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one or a combination of the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|--|------------------|
| Cotton | Irrigated, sprayed conventional cotton | 100 |
| | Irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

Table 2. Dryland Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II |
|------------|---|------------------|
| Cotton | Dryland or irrigated, sprayed conventional cotton | 100 |
| | Dryland or irrigated, unsprayed conventional cotton | 10 |
| Pigeon pea | Fully irrigated, unsprayed | 5 |

No other refuge options are approved for dryland Bollgard II.

Note: Unsprayed means not sprayed with any insecticide that targets any life stage of *Helicoverpa* spp. Bt products must not be applied to any refuge (including sprayed cotton).

If the viability of an unsprayed conventional cotton refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage. An unsprayed refuge

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In Confidence

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should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

General conditions for all refuges:

- (a) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

Irrigated: It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

Dryland: A dryland refuge must be planted within the 2 week period prior to the first day of planting Bollgard II cotton.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to a Bollgard II cotton field and all Bollgard II fields must be no more than 2 km from the nearest associated Bollgard II refuge.

- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, the options for the width of refuge crops vary according to spray regime. If any sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 48 metres wide and each refuge area must be a minimum of 2 hectares. If no sprayed conventional cotton is grown on the same farm unit, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit; however a sprayed conventional cotton refuge must not be planted in a field that is also planted to an unsprayed refuge type.
- (h) In all regions, destruction of refuges should only be carried out after Bollgard II cotton lint removal has been completed.
- (i) Refuges for dryland Bollgard II cotton crops must be planted in the same row configuration as the Bollgard II crop unless the refuge is irrigated. If an irrigated option is utilised for a dryland Bollgard II crop, then that refuge may be planted in a solid configuration. Dryland cotton is measured as green hectares (calculated as defined in the Technology User Agreement).

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt Cry 1Ac and Cry 2Ab proteins produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants, as soon as possible from all fields, including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.**

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp.

SECTION 2: NEW SOUTH WALES AND SOUTHERN QUEENSLAND ONLY

1. Planting windows

All Bollgard II crops are to be planted into moisture or watered-up by 15 November, unless otherwise advised by a Bollgard II Planting Window Variation Notice.

2. Pupae destruction

In Bollgard II cotton fields, each grower will be required to undertake *Helicoverpa* spp. pupae destruction after harvest according to the following key guidelines:

- Bollgard II crops should be slashed or mulched and fields cultivated for pupae control within 4 weeks of harvesting. All pupae busting must be completed by July 31.
- Ensure disturbance of the whole soil surface to a depth of 10 cm.
- All fields that are sown to any winter crop following a Bollgard II crop must be inspected by the Technology Service Provider before sowing commences in order to ensure that pupae busting has occurred.

In Refuge crops:

In New South Wales and Southern Queensland, to ensure maximum emergence of late pupae from associated refuges, soil disturbance of refuge crops should not be undertaken until after the pupae busting in Bollgard II cotton crops on the farm unit is complete. All unsprayed refuges, should preferably be left uncultivated until the following October.

3. Failed crops

Bollgard II crops that will not be grown through to harvest for various reasons and are declared to, and verified by, Monsanto as failed must be destroyed within two weeks after verification, in such a way that prevents regrowth. Crops abandoned before February 28 do not require pupae busting. Crops abandoned on February 28 or later must be pupae busted.

NB: If any grower encounters problems in complying with the Resistance Management Plan please contact your local Monsanto Regional Business Manager.

SECTION 3: CENTRAL QUEENSLAND ONLY

1. Planting Windows

Emerald: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Dawson Callide Valleys: All Bollgard II crops are to be planted into moisture or watered-up in the period between September 15 and October 26, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

Belyando: All Bollgard II crops are to be planted into moisture or watered-up in the period between October 10 and November 20, unless advised otherwise by a Bollgard II Planting Window Variation Notice.

2. Refuges

Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season to avoid volunteer and ratoon cotton.

In Central Queensland soil disturbance of refuge crops can only occur 2 weeks after final defoliation of the Bollgard II cotton.

3. Late summer pigeon pea trap crop

A late summer trap crop (pigeon pea) must be planted for all Bollgard II cotton grown in Central Queensland. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Irrigated Bollgard II must have an irrigated trap crop. Table 3 shows the requirements for the late summer pigeon pea trap crop. Dryland Bollgard II growers who do not have any irrigated cotton on their farm should contact their Monsanto Regional Business Manager for alternative options.

Refuge and late summer trap crops have different purposes and, if pigeon pea is selected for both, two separate plantings may be required. However, where a pigeon pea refuge is utilised as a trap crop the

full 5% pigeon pea refuge area must be managed to become the late summer trap crop and must adhere to the requirements in Table 3 below.

Table 3. Late summer pigeon pea trap crop requirements in Central Queensland

| Criterion | Trap crop* |
|---|--|
| Minimum area & dimension (Requirement) | A minimum trap crop of 1% of planted Bollgard II cotton crop is required. If sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 48m x 48m. If no sprayed conventional cotton is grown on that farm unit: the trap crop must be at least 24m x 24m. |
| Planting time | The trap crop should preferably be planted between November 1 and November 30 Note: if growers choose to plant their trap crop to coincide with the planting of pigeon pea refuges they must manage the trap crop in such a way that it remains attractive to <i>Helicoverpa</i> spp. 2-4 weeks after final defoliation. |
| Planting rate ** | 35kg/ha (recommended establishment greater than 4 plants per metre) |
| Insect control | The trap crop can be sprayed with virus after flowering; while avoiding insecticide spray drift. |
| Irrigation | The trap crop must be planted into an area where it can receive the additional irrigation required to keep the trap crop attractive to <i>Helicoverpa</i> spp. until after the cotton is defoliated. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard II cotton crop, (slash and pupae bust – full soil disturbance to a depth of 10cm across the entire trap crop area). |



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- * A pigeon pea trap crop is to be planted so that it is attractive (flowering) to *Helicoverpa* spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (e.g. before November) or too late (e.g. mid December) is not adequate for cotton crops planted during September through to October.
- ** The planting rate is a recommendation based on a minimum of 85% seed germination.

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.

For further background information on the various components of this plan see the "Preamble to the Resistance Management Plan for Bollgard II" in the current Cotton Pest Management Guide.

APPENDIX B

Resistance Management Plan for Bollgard II® Cotton 2011/2012 - Ord River Irrigation and Burdekin Bowen Basin Areas

Developed by Monsanto Australia Limited and the Transgenic and Insect Management Strategy (TIMS) Committee of Cotton Australia Limited.

The resistance management plan is based on three basic principles: (1) minimising the exposure of *Helicoverpa* spp. to the *Bacillus thuringiensis* (Bt) proteins Cry 1Ac and Cry 2Ab; (2) providing a population of susceptible individuals that can mate with any resistant individuals, hence diluting any potential resistance; and (3) removing resistant individuals at the end of the cotton season. The three principles are supported through the implementation of 5 elements that are the key components of the Resistance Management Plan. These elements are:

1. Refuge crops
2. Planting window
3. Pupae busting/Trap crops
4. Control of volunteers and ratoon cotton and
5. Spray limitations.

Growers of Bollgard II cotton are required to practice preventative resistance management as set out below. Compliance with the Resistance Management Plan is required under the terms of the Bollgard II Technology User Agreement and under the conditions of registration (*Agricultural and Veterinary Chemicals Act, 1994*).

This RMP is for the following areas:

- **Ord River Irrigation Area**, Western Australia
- **Burdekin Bowen Basin Area**, Queensland

1. Refuges

Growers planting Bollgard II cotton will also be required to grow a refuge crop that is capable of producing large numbers of *Helicoverpa* spp. moths which have not been exposed to selection with Bt proteins Cry 1Ac and Cry 2Ab. These unselected moths are expected to dominate matings with any survivors from Bollgard II crops and thus help to maintain resistance to Bt proteins Cry 1Ac and Cry 2Ab at low levels.

All refuge options are based on the requirement of a 10% unsprayed cotton refuge or its equivalent as determined by the relative production of *Helicoverpa* spp. from each of the refuge types as described in the tables below.

For each area of irrigated Bollgard II cotton planted, a grower is required to plant a minimum of one, or a combination of, the following:

Table 1. Irrigated Bollgard II cotton refuge options

| Crop | Conditions | % of Bollgard II | Regions permitted |
|---------------------|--|------------------|---------------------------|
| Conventional Cotton | Irrigated, unsprayed conventional cotton | 10 | Ord River, Burdekin Bowen |
| Pigeon pea | Fully irrigated, unsprayed | 5 | Ord River |
| Chick pea | Fully irrigated, unsprayed | 5 | Ord River |

Note: Unsprayed means not sprayed with insecticides that target any life stage of *Helicoverpa* spp.

Bt products must not be applied to any refuge.

If the viability of an unsprayed conventional refuge is at risk due to early season pressure by *Helicoverpa* spp., and with prior approval from the Monsanto Compliance and Stewardship Manager, a non-Bt heliocide can be applied up to the 4th true leaf stage.

An unsprayed refuge should not be planted in the same field as any crop sprayed with a rate of insecticide that is registered for *Helicoverpa* spp, with the exception of Bollgard II. Sprayed crops and unsprayed refuges that are planted in adjacent fields must be separated by sufficient distance to *minimise the likelihood of insecticide drift onto the unsprayed refuge*.

For the purposes of this Resistance Management Plan, conventional cotton includes any cotton varieties that do not have Bt proteins in the plant that control *Helicoverpa* spp. moths.

General conditions for all refuges:

- (b) Refuge crops are to be planted and managed so that they are attractive to *Helicoverpa* spp. during the growing period of the Bollgard II cotton varieties.

It is preferable that all refuge is planted within the 2 week period prior to planting Bollgard II. If this is not possible, refuge planting must be completed within 3 weeks of the first day of sowing of Bollgard II. At this time, sufficient refuge must have been planted to cover all of the Bollgard II cotton proposed to be planted for the season (including Bollgard II already planted and any that

remains unplanted). Should additional Bollgard II planting be made after this date, which is not already covered by refuge, additional refuge must be planted as soon as possible and no more than 2 weeks after sowing of the additional Bollgard II.

- (b) Pigeon pea refuges should not be planted until the soil temperature reaches 17°C, which is a requirement for germination, and should also be planted into moisture to ensure successful germination. If soil temperatures are not suitable to allow germination of pigeon peas in line with condition (a), an alternative refuge must be planted in its place within the prescribed period (under (a) above).
- (c) Once the Bollgard II cotton begins to flower the corresponding refuge should not be cultivated.
- (d) Insecticide preparations containing Bt may be used on Bollgard II cotton throughout the season BUT NOT on any refuge crops.
- (e) All refuges are to be planted within the farm unit growing Bollgard II cotton. Subject to clause (f) below, all reasonable effort should be taken to plant the refuge either on one side of, or next to, a Bollgard II cotton field, and all Bollgard II fields must be no more than 2 km from the nearest Bollgard II refuge.
- (f) To minimise the possibility of refuge attractiveness being affected by herbicide drift, non-herbicide tolerant refuges should be separated from herbicide tolerant Bollgard II cotton crops by a sufficient distance to minimise such drift, but no more than 2km from the Bollgard II cotton.
- (g) To account for possible insecticide drift, Bollgard II refuge crops must be at least 24 metres wide and 24 metres long. Different unsprayed refuge options may be planted in the same field as a single unit.
- (h) Slashing of plants within the refuge should only be carried out after Bollgard II cotton lint removal has been completed. Soil disturbance of refuge crops can only occur 2 weeks after Bollgard II cotton plants have been harvested.
- (i) Refuges for Bollgard II crops must be planted in the same row configuration as the Bollgard II crop.

2. Control of volunteer and ratoon cotton

Volunteer and ratoon cotton may impose additional selection pressure on *Helicoverpa* spp. to develop resistance to the Bt proteins Cry 1Ac and Cry 2Ab produced by Bollgard II cotton.

Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard II crops, conventional cotton crops and all refuges. **The**

presence of Bollgard II volunteers/ratoon cotton in any refuge will diminish the value of the refuge and must be removed as soon as possible.

Note: The refuge should preferably be planted into fallow or rotation fields that have not been planted to cotton in the previous season.

3. Post-harvest crop destruction

As soon as practical after harvest, Bollgard II cotton crops must be destroyed by cultivation or herbicide so that they do not continue to act as hosts for *Helicoverpa* spp. Unsprayed refuges must be left uncultivated for two weeks after harvest to allow emergence of any pupating *Helicoverpa* spp.

4. Planting windows

All Bollgard II crops and cotton refuges are to be planted into moisture or watered-up in a five week window. In each region, the start date of the planting window will be determined by TIMS in consultation with local growers and reflected in a regionally amended "Bollgard II Planting Window Variation Notice".

The planting window will occur within the following periods:

Ord River Irrigation Area: March 1 and May 1.

Burdekin Bowen Basin Area: December 1 and April 1.

5. Refuge

Unsprayed Pigeon Pea refuge should preferably be planted into a fallow or rotation field that has not been planted to cotton in the previous season.

6. End of season chick pea trap crop

An end of season chick pea trap crop must be planted. The planting configuration of the trap crop should be the same as that of the Bollgard II crop. Table 2 shows the requirements for the chick pea trap crop.

Table 2. End of season chick pea trap crop requirements

| Criterion | End of season chick pea trap crop |
|---------------------------|---|
| Minimum area & dimensions | A trap crop of 1% of planted Bollgard II crop area is required. This planting must be at least 24 m x 24m wide. |
| Planting time | In April for Burdekin Bowen Area. In July/August for Ord area. The trap crop is to be planted such that it is attractive to <i>Helicoverpa</i> spp. from 2 weeks before defoliation of the Bollgard II cotton. It must remain attractive to <i>Helicoverpa</i> spp. until at least 2 weeks after defoliation of the Bollgard II cotton. |
| Insect control | The trap crop should be monitored and sprayed with insecticide if the larval pressure threatens the viability of the crop. |
| Irrigation | The trap crop is to remain attractive to <i>Helicoverpa</i> spp. until after defoliation of cotton. In some cases this may require one additional irrigation after the cotton is defoliated. The trap crop must be planted into an area where it can receive the additional irrigation required to ensure the trap crop remains attractive to <i>Helicoverpa</i> spp. |
| Weed control | The trap crop should be kept free of weeds and particularly volunteer Bollgard II cotton. |
| Crop destruction | The trap crop must be destroyed 2-4 weeks after defoliation of the Bollgard II cotton crop, but not before 3 weeks (slash and pupae bust – full soil disturbance to a depth of 10 cm across the entire trap crop area). |

NB: If any grower encounters problems in complying with the resistance management plan, please contact your Monsanto Regional Business Manager.