



270 Aldington Road, Kemps Creek: Aboriginal Cultural Heritage Assessment

FINAL REPORT

Prepared for AT&L on behalf of Stockland Development Pty Ltd

27 November 2023

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- Anthea Vella (assistance in the field).
- Astrid Mackegard (mapping).
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- Sunday de Joux (assistance in the field).

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A search conducted by the Office of the Registrar; *Aboriginal Land Rights Act 1983* listed no Aboriginal Owners with land within the study area. A search conducted by the National Native Title Tribunal (NNTT) listed no Registered Native Title Claims, Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the study area.

Upon registration, the Aboriginal parties were invited to provide their knowledge on the study area and on the proposal provided in project information and methodology. The responses identify the study area as an area of moderate significance. Responses from the Registered Aboriginal Parties (RAPs) are included in Appendix C. The outcome of the consultation process was that the RAPs considered the study area to have a high level of cultural significance:

- Darug Custodian Aboriginal Corporation (DCAC) [5] responded to project information and methodology pack on 12 July 2023 via email:

"This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site there is a complex of significant sites."

- Kamilaroi Yankuntjatjara Working Group [11] responded to project information and methodology pack on 25 July 2023 via email:

"The whole study area is highly sensitive & spiritual to us Aboriginal people, for our ancestors walked this land for tens of thousands of years and we continue to follow in their footsteps to protect conserve and manage country."

The results of the consultation process are included in this document, and the recommendations that resulted from the consultation process are provided below.

Results

The ACHA undertook background research for the proposed study area. Key considerations arising from the background research include:

- Previous predictive modelling conducted for the Cumberland Plain and Kemps Creek region indicates that the most important factor for site distribution in this landscape is distance to water (AMBS 2012, White, B & McDonald, J 2010, Brayshaw McDonald Pty Ltd 1994a, McDonald, J & Rich, E 1993). The study area is located within proximity to a second-order non-perennial creek line and has two first-order creek lines within it. It is also in proximity to Kemps Creek, a fourth-order perennial water course. The presence of a ample water sources in proximity to the study area indicates that food resources, were readily accessible from the study area (JMCHM 2000, p.19).
- The Luddenham soil landscape underlays most of the study area and has erosional soil deposits that have the potential to contain in situ archaeological deposits in areas subjected to low levels of disturbance.
- Previous archaeological assessments in the local area identified artefact sites are the most common site type followed by Potential Archaeological Deposits (PADs), and modified trees.

- A search of the Aboriginal Heritage Information Management System (AHIMS) database (Client Service ID: 776488) identified 113 Aboriginal archaeological sites within a 2.7 by 2.7 kilometre search area, centred on the study area. One of these registered sites is located within the study area, AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1.

An archaeological survey was conducted on 18 July 2023 by Crystal Garabedian (Biosis, Heritage Consultant), Bronte Baonza (Biosis, Graduate Heritage Consultant), and Dominic Wilkins (DCAC, Cultural Sites Officer). An additional survey was conducted on 28 September 2023 by Anthea Vella (Biosis, Senior Heritage Consultant), Crystal Garabedian (Biosis, Heritage Consultant) and Lana Wedgewood (DCAC, Cultural Sites Officer). The survey was hampered by generally low ground surface visibility and the inability to access one area in the south-western portion of the study area, which could not be accessed due to unrestrained cattle. The survey identified four areas of moderate archaeological potential. Three were located within the western portion and one was located in the eastern portion. This was due in part to the limited disturbance observed within the areas of moderate potential, proximity of ample water sources to the study area, areas of potential outlined in the *Mamre Road Development Control Plan 2021* (MDCP) and existing evidence of Aboriginal people's use of the areas adjacent to creeklines on similar landforms. Moderate potential was also determined due to the existence of AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1 within the study area. An attempt was made to relocate the site during the archaeological survey; however it could not be located.

Test excavations were undertaken between 9 August 2023 and 17 August 2023 with cultural sites officers:

- Aaron Taylor (Murra Bidjee Mullangari Aboriginal Corporation, Cultural Sites Officer).
- Dominic Wilkins (DCAC, Cultural Sites Officer).
- Jamie Currell (Koori Digs, Cultural Sites Officer).
- Justine Coplin (DCAC, Cultural Sites Officer).
- Korri Currell (Koori Digs, Cultural Sites Officer).
- Kurt Brenner (Muragadi Heritage Indigenous Corporation, Cultural Sites Officer).

A total of 69 test pits were excavated within four areas of moderate potential. Test pits were excavated at 20 metres intervals. Nine subsurface archaeological deposits were discovered, including seven isolated artefacts (AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, and AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06 and 270 Aldington Road IF07) and two low density artefact scatters (AHIMS 45-5-5746/270 Aldington Road AS01 and AHIMS 45-5-5747/270 Aldington Road AS02). A total of 40 artefacts were recovered across the nine sites. All sites uncovered during excavation, as well as AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1 have been assessed as possessing low archaeological significance. The bulk excavation and modification of the landforms within the study area will result in a total loss of value (Table 2).

[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
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Management recommendations

Prior to any development impacts occurring within the study area, the following is recommended:

Recommendation 1: Application for an AHIP

An AHIP is required for any activities likely to have an impact on Aboriginal objects or Places, or that cause land to be disturbed for the purposes of discovering an Aboriginal object. Heritage NSW, Department of Planning and Environment (Heritage NSW) issues AHIPs under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act).

Impacts to AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02 cannot be avoided. The AHIP should allow for direct impacts to the Aboriginal heritage sites within the study area to occur. Therefore, an AHIP to harm these sites is required prior to works proceeding. **The AHIP should be for a term of 10 years.**

The AHIP would cover the areas within the site boundaries of; AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02. Subsurface test excavations have confirmed the sites possess low archaeological significance. The locations of these are shown in Figure 5. The site boundaries are to be clearly marked with appropriate fencing (e.g. star pickets and high visibility flagging tape) to ensure that no impacts can occur to Aboriginal sites until the AHIP is approved.

AHIPs should be prepared by a qualified archaeologist and lodged with Heritage NSW. Once the application is lodged processing time can take between 8–12 weeks. It should be noted that there will be an application fee levied by Heritage NSW for the processing of AHIPs, which is dependent on the estimated total cost of the development project. The AHIP will be applied for following the approval of the development application to Penrith City Council.

Recommendation 2: No further archaeological work required

No further archaeological work is required for AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02.

Works can proceed within the study area following the issue of an AHIP by Heritage NSW for the proposed development, and subject to recommendations 3 to 8 below.

Recommendation 3: Continued consultation with the RAPs

As per the consultation requirements it is recommended that the proponent provides a copy of this report to the RAPs. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project. Consultation is being undertaken for this project and will aid in developing an adequate artefact management process of the recovered artefacts with the Aboriginal community.

Recommendation 4: Heritage induction for all contractors

Heritage inductions for all site workers and contractors should be undertaken to prevent any unintentional harm to any unexpected Aboriginal objects. The heritage induction should include the following items:

- Relevant legislation.
- Location of identified Aboriginal heritage sites, and areas of archaeological sensitivity within proximity to the study area.
- Basic identification skills for Aboriginal and non-Aboriginal artefacts, and human remains.
- Procedure to follow in the event of an unexpected heritage item find during construction works.
- Procedure to follow in the event of discovery of human remains during construction works.
- Penalties and non-compliance.

Recommendation 5: Heritage interpretation

Given the significance of the Kemps Creek region to Aboriginal people and the discovery of Aboriginal cultural heritage on site, there is an opportunity for heritage interpretation as part of the design. Heritage interpretation is an innovative way to integrate culture into design and can not only honour the deep-rooted connection to the land but also ensure that Aboriginal cultural heritage remains present in the daily operations of the proposed industrial estate.

As such, it is recommended that a Heritage Interpretation Plan be prepared by a suitably qualified heritage consultant following the NSW Heritage Council's *Interpreting Heritage Places and Items Guidelines*. The plan should identify how information on the Aboriginal history of the Kemps Creek region could be communicated through the proposed industrial development. The heritage devices used in interpretation must be created in consultation with the RAPs.

Recommendation 6: Discovery of unanticipated Aboriginal objects

All Aboriginal objects and Places are protected under the NSW NPW Act. It is an offence to disturb an Aboriginal site without a consent permit issued by Heritage NSW. Should any Aboriginal objects be encountered outside of the AHIP area during works, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and RAPs.

Recommendation 7: Discovery of unanticipated historical relics

Relics are historical archaeological resources of local or State significance and are protected in NSW under the *Heritage Act 1977* (Heritage Act). Relics cannot be disturbed except with a permit or exception/exemption notification. Should unanticipated relics be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic.

Recommendation 8: Discovery of human remains

If any suspected human remains are discovered during any activity works, all activity in the vicinity must cease immediately. The remains must be left in place and protected from harm or damage. The following contingency plan describes the immediate actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the study area must follow these steps:

1. **Discovery:** If suspected human remains are discovered all activity in the vicinity must stop to ensure minimal damage is caused to the remains; and the remains must be left in place and protected from harm or damage.
2. **Notification:** Once suspected human skeletal remains have been found, the Coroner's Office and the NSW Police must be notified immediately. Following this, the find will be reported to the Aboriginal parties and Heritage NSW.

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Abbreviations

ACHA	Aboriginal Cultural Heritage Assessment
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AR	Archaeological Report
Biosis	Biosis Pty Ltd
BP	Before present
Consultation Requirements	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i>
DA	Development Application
DECCW	Department of Environment, Climate Change and Water (now Heritage NSW)
DCAC	Darug Custodian Aboriginal Corporation
DP	Deposited Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
ESD	Ecologically Sustainable Development
GDA	Geocentric Datum of Australia
GPS	Global Positioning System
GSV	Ground Surface Visibility
Heritage NSW	Heritage NSW, Department of Planning and Environment
ICOMOS	International Council on Monuments and Sites
IMT	Indurated Mudstone/Tuff
JMCHM	Jo McDonald Cultural Heritage Management
LALC	Local Aboriginal Land Council
LGA	Local Government Area
MDCP	<i>Mamre Road Development Control Plan 2021</i>
MGA	Map Grid of Australia
NHL	National Heritage List
NNTT	National Native Title Tribunal
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Service
NSW	New South Wales
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
REF	Review of Environmental Factors
REP	Regional Environmental Plan

SEPP	State Environmental Planning Policy
Stockland	Stockland Development Pty Ltd
Study area	Defined as 244–270 Aldington Road (part of Lot 15, and Lot 16 and Lot 17 DP253503) NSW
the Code	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i>

1 Introduction

1.1 Project background

Biosis has been commissioned by AT&L, on behalf of Stockland, to undertake an ACHA for the demolition of buildings, subdivision and subdivision works at 270 Aldington Road, Kemps Creek in NSW (Figure 1 and Figure 2).

The project involves the demolition of buildings, subdivision and subdivision works of the study area (Figure 3). The DA will be assessed under Part 4 of the EP&A Act. This report details the investigation, consultation and assessment of Aboriginal cultural heritage undertaken for the study area. The Archaeological Report (AR) in Appendix E details the findings of the archaeological investigations conducted as part of the ACHA. As required under Section 2.3 of the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b) (the Code), the AR provides evidence about the material traces of Aboriginal land use to support the conclusions and management recommendations in the ACHA.

1.2 Study area

The study area is located within part of Lot 15 DP 252503 and all of Lot 16 and Lot 17 DP253503 in the Western Sydney suburb of Kemps Creek. It is approximately 53 kilometres west of the Sydney central business district (Figure 1).

It encompasses 23 hectares of private land. The study area is within the:

- Penrith City Council
- Parish of Melville.
- County of Cumberland (Figure 2).

The study area is bounded by Aldington Road to the west, Lot 18 DP253503 to the north, Lot 4132 DP857093 to the east and Lot 15 DP253503 to the south.

1.3 Proposed development

The proposed development will involve the demolition, subdivision and subdivision works within part of Lot 15 DP253503 and all of Lot 16 and Lot 17 DP253503 (Figure 3). This includes, but is not limited to:

- Bulk earthworks including infilling of existing dams and modification of drainage lines.
- Installation of services and amenities including underground utilities such as electrical, telecommunication and wastewater services.
- Construction of roads and associated features such as roundabouts, signage, and kerbing.

1.4 Planning approvals

The proposed development will be assessed against Part 4 of the EP&A Act. Other relevant legislation and planning instruments that will inform this assessment include:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999.*

- NPW Act.
- *NSW National Parks and Wildlife Amendment Act 2010*.
- *State Environmental Planning Policy (Industry and Employment) 2021*.
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*.
- MDCP.

1.5 Restricted and confidential information

Appendix A in the AR contains AHIMS information which is confidential and not to be made public. This is clearly marked on the title page for the Attachment.

1.6 Aboriginal cultural heritage

1.6.1 General description

It is generally accepted that people have inhabited the Australian landmass for the last 50,000 years (Clarkson et al. 2015). Dates of the earliest occupation of the continent by Aboriginal people are subject to continued revision as more research is undertaken. New evidence out of the Northern Territory has pushed this date back with the Malakanunja II rock shelter dated at around 65,000 years BP (before present) (Clarkson et al. 2017). The timing for the human occupation of the Sydney Basin is still uncertain. While there is some possible evidence for occupation of the region around 40,000 years ago, the earliest known radiocarbon date for the Aboriginal occupation of the Sydney Basin is associated with a cultural/archaeological deposit at Parramatta, which was dated to $30,735 \pm 407$ BP (JMCHM 2005).

Without being part of the Aboriginal culture and the productions of this culture, it is not possible for non-Aboriginal people to fully understand the meaning of site, objects, and places to Aboriginal people—only to move closer towards understanding this meaning with the help of the Aboriginal community. Similarly, definitions of Aboriginal culture and cultural heritage without this involvement constitute outsider interpretations.

With this preface Aboriginal cultural heritage broadly refers to things that relate to Aboriginal culture and hold cultural meaning and significance to Aboriginal people (DECCW 2010a, pp. 3). There is an understanding in Aboriginal culture that everything is interconnected. In essence Aboriginal cultural heritage can be viewed as potentially encompassing any part of the physical and/or mental landscape, that is, 'Country' (DECCW 2010a, pp. iii).

Aboriginal people's interpretation of cultural value is based on their 'traditions, observance, lore, customs, beliefs and history' (DECCW 2010a, pp. 3). The things associated with Aboriginal cultural heritage are continually and actively being defined by Aboriginal people (DECCW 2010a, pp. 3). These things can be associated with traditional, historical or contemporary Aboriginal culture (DECCW 2010a, pp. 3).

1.6.2 Tangible Aboriginal cultural heritage

Three categories of tangible Aboriginal cultural heritage may be defined as:

- Things that have been observably modified by Aboriginal people.
- Things that may have been modified by Aboriginal people, but no discernible traces of that activity remain.

- Things never physically modified by Aboriginal people (but associated with Dreamtime Ancestors who shaped those things).

1.6.3 Intangible Aboriginal cultural heritage

Examples of intangible Aboriginal cultural heritage would include memories of stories and 'ways of doing', which would include language and ceremonies (DECCW 2010a, pp. 3).

1.6.4 Statutory

Currently Aboriginal cultural heritage, as statutorily defined by the NPW Act, consists of objects and places which are protected under Part 6 of the Act.

Aboriginal objects are defined as:

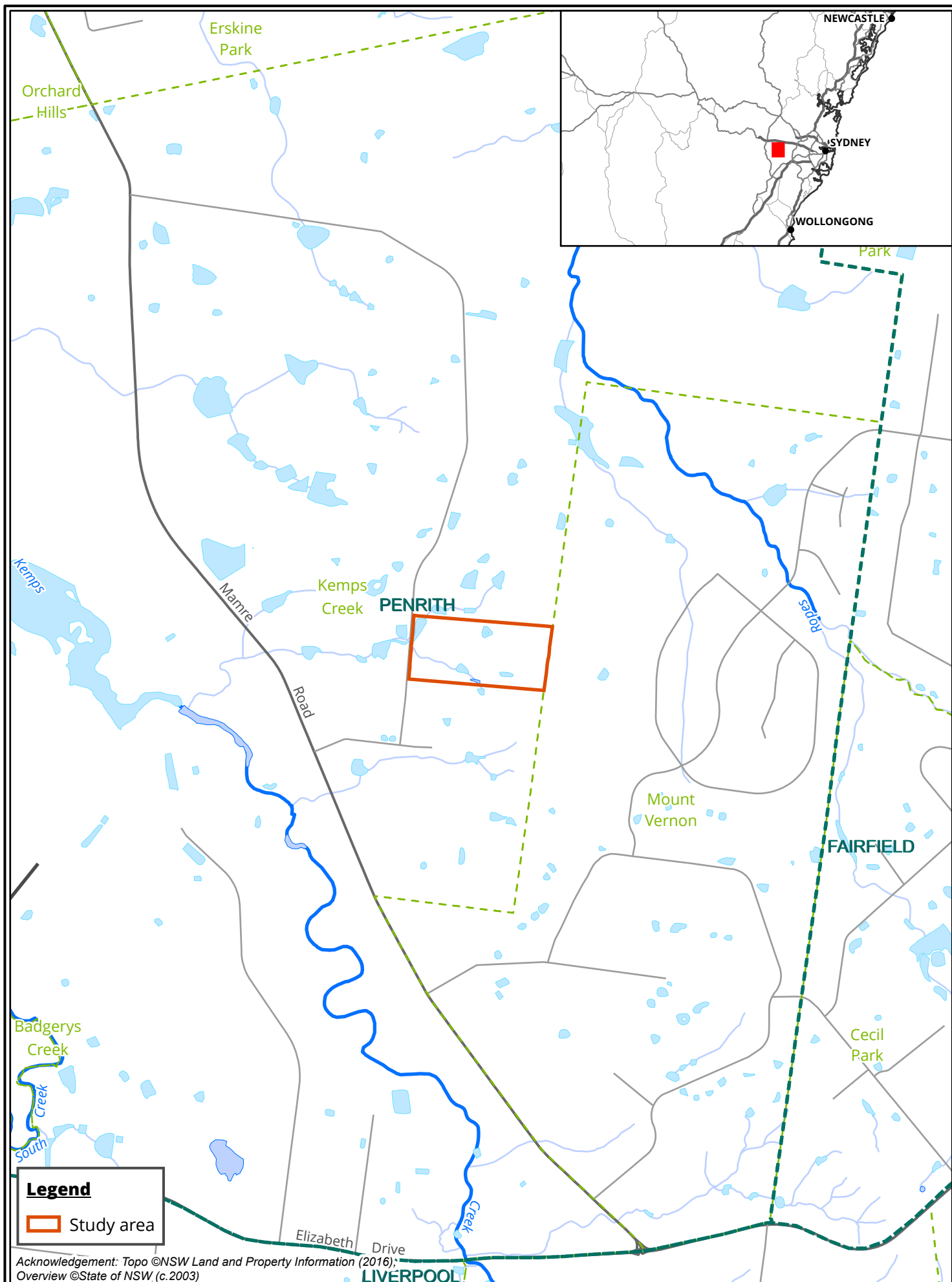
any deposit, object or material evidence...relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

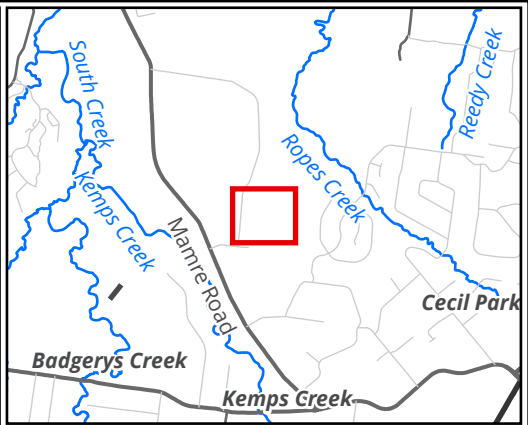
Aboriginal places are defined as a place that is or was of special Aboriginal cultural significance. Places are declared under section 84 of the NPW Act.

1.6.5 Values

Aboriginal cultural heritage is valued by Aboriginal people as it is used to define their identity as both individuals and as part of a group (DECCW 2010a, pp. iii). More specifically it is used:

- To provide a:
 - 'Connection and sense of belonging to Country' (DECCW 2010a, pp. iii).
 - Link between the present and the past (DECCW 2010a, pp. iii).
- As a learning tool to teach Aboriginal culture to younger Aboriginal generations and the general public (DECCW 2010a, pp. 3).
- As further evidence of Aboriginal occupation prior to European settlement for people who do not understand the magnitude to which Aboriginal people occupied the continent (DECCW 2010a, pp. 3).





Legend

-  Study area
-  Lot

Figure 2 Study area detail

0 30 60 90 120

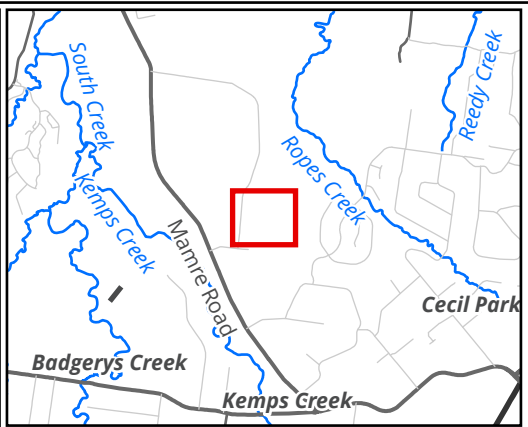
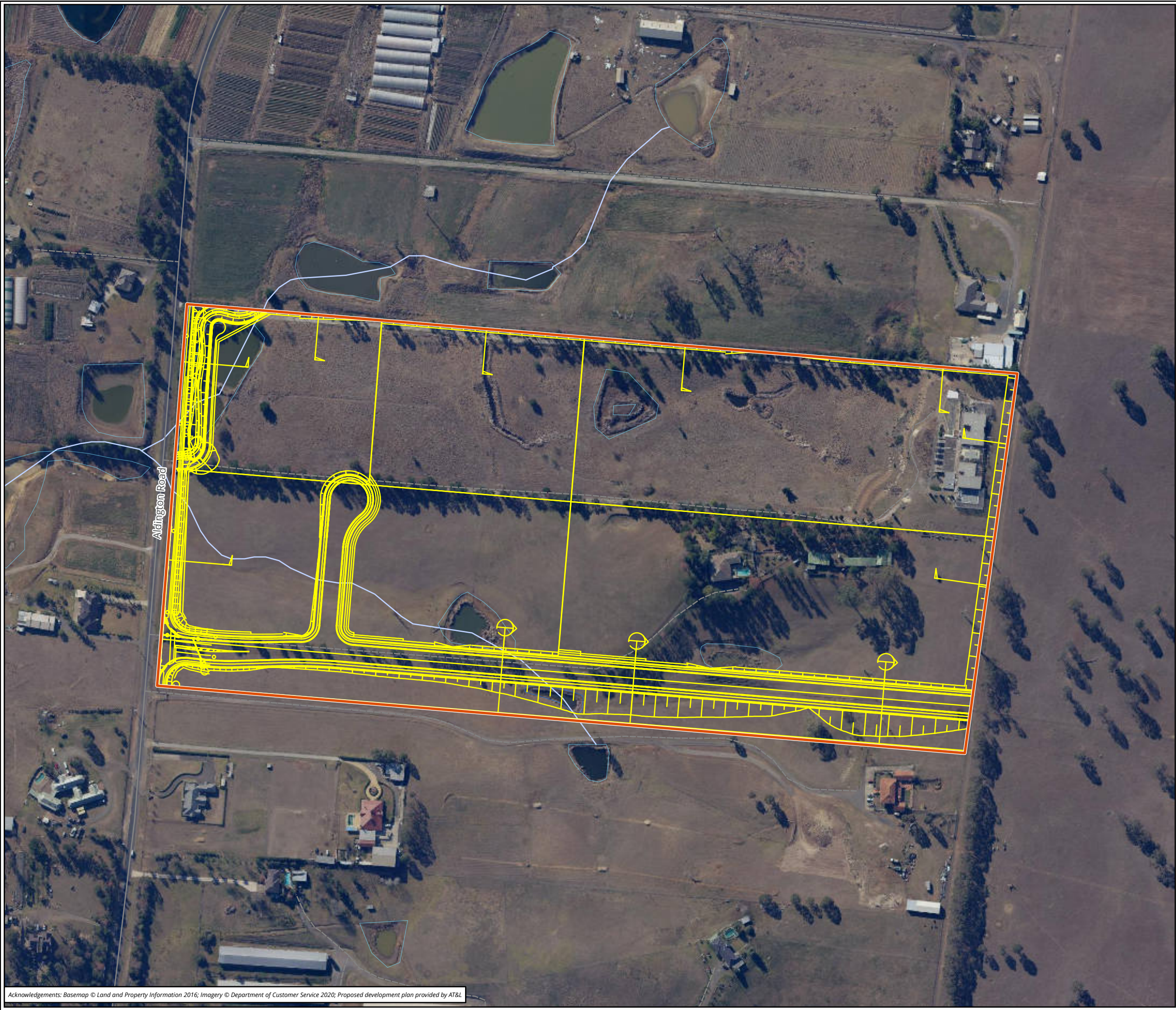
Metres

Scale: 1:3,000@ A3

Coordinate System:
GDA 1994 MGA Zone 56

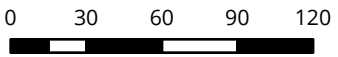


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- Legend**
- Study area
 - Proposed works

Figure 3 Proposed development



Metres
Scale: 1:3,000@ A3
Coordinate System:
GDA 1994 MGA Zone 56



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2 Study area context

This section discusses the study area regarding its landscape, environmental and Aboriginal cultural heritage context. This section should be read in conjunction with the AR attached in Appendix E. The background research has been undertaken in accordance with the Code.

2.1 Topography, geology, and hydrology

The study area is located within the Cumberland Lowlands physiographic region, which consists of low lying and gently undulating plains and hills, with a dense drainage net of predominantly northward flowing channels (Bannerman & Hazelton 1990, pp. 2). The study area itself is an undulating, moderately inclined slope which gradually descends from a crest in the east towards unnamed tributaries of Kemps Creek in the west. The study area is situated on the Bringelly Shale formation which consists of shales with pockets of occasional calcareous claystone, laminate, grey siltstone and infrequent coal deposits (Bannerman & Hazelton 1990, pp. 28). Aboriginal artefact scatter sites are common across this formation, as are PADs. The lack of underlying sandstone geology in this area makes other varieties of sites such as rock shelters and engraving sites less common (JMCHM 2002).

Stream order is recognised as a factor which assists the development of predictive modelling in Sydney Basin Aboriginal archaeology and has seen extensive use in predictive modelling for the Cumberland Plain. The study area is situated within a complex hydrological system. The study area contains two modified first-order creeklines which converge approximately 28 metres west of the study area. These water courses are tributaries of fourth-order, perennial Kemps Creek, located approximately 914 metres to the south-west of the study area. Ropes Creek, a third-order perennial watercourse, is located 1 kilometre to the north-east of the study area.

Full details on topography and hydrology can be found in the AR in Appendix E.

2.2 Soil landscapes

Soil landscapes have distinct morphological and topological characteristics that result in specific archaeological potential. Because they are defined by a combination of soils, topography, vegetation and weathering conditions, soil landscapes are essentially terrain units that provide a useful way to summarise archaeological potential and exposure.

The study area is located within the Luddenham and Blacktown soil landscapes. The Luddenham soil landscape is the dominant landscape within the study area, existing everywhere apart from the western border and is characterised as an erosional soil landscape. Erosional landscapes are generally subject to movement of shallow soils, which can result in poor preservation of the archaeological record. Dispersed and undisturbed sandy soils found within this landscape usually have a low erosion potential. However, when cleared of vegetation the soils typically experience high levels of erosion, can be shallow and highly permeable, and have low soil fertility. This could suggest that the presence of Aboriginal sites and objects may be unlikely where erosion has occurred (Chapman et al. 1989, pp. 64–67, McInnes 1997, p.45, cited by Umwelt (Australia) Pty Limited 2016, pp. 13).

The study area is also located within the Blacktown soil landscape. It is contained within westernmost portion of the study area and is characterised as a residual soil landscape. Residual soils form from the *in situ* weathering of bedrock material, resulting in slow accumulation of soils over long periods of time. Due to their

age and slow accumulation, residual soil landscapes have reasonable potential to preserve archaeological deposits in an open context, such as stone artefacts derived from occupation sites.

Full details on soil characteristics can be found in the AR in Appendix E.

2.3 Climate and rainfall

Climate and rainfall data provide use evidence to determine human occupation of a site or area. Often, changes in climatic pattern will affect the presence or likelihood that people would occupy a specific area. This data has been supplied by the Australian Government Bureau of Meteorology from the Orchard Hills Treatment Works weather station (067084), approximately 7.4 kilometres from the study area (BOM 2023).

- The mean maximum average temperature is highest in January when it reaches 25 degrees.
- The lowest mean maximum temperature is in July at 12.7 degrees.
- The mean minimum temperature is highest in February at 17.4 degrees and lowest in July at 5.3 degrees.
- The average rainfall is highest in February at 113 millimetres and lowest in September at 37.3 millimetres.

Based on modern climate data it is likely the study area would have provided a temperate area with high average rainfalls and proximity to permanent water sources, making it likely the area was seasonally occupied. This would also suggest the presence of Aboriginal sites is highly likely as a result.

2.4 Landscape resources

Within the Cumberland subregion of the Sydney Basin Bioregion a variety of vegetation types are present, with Grey Box *Eucalyptus microcarpa*, Forest Red Gum *E. tereticornis*, Narrow-leaved Ironbark *E. crebra* woodland, and Spotted Gum *Corymbia maculata* present on shale hills. Hard-Leaved Scribbly Gum *E. sclerophylla*, Rough-Barked Apple *Angophora floribunda*, and Old Man Banksia *Banksia serrata* are identified on alluvial sands and gravels. Broad-Leaved Apple *Angophora subvelutina*, Cabbage Gum *E. amplifolia*, Forest Red Gum *E. tereticornis*, and Swamp Oak *Casuarina glauca* are present on river flats. Tall Spike Rush *Eleocharis sphacelata*, and Juncus *Juncus effuses* and Parramatta Red Gum *E. parramattensis* are noted around lagoons and swamps (NPWS 2003, pp. 193).

Native fauna that may have been present in the vicinity of the study area include Australian Wood Duck *Chenonetta jubata*, White-Faced Heron *Egretta novaehollandiae*, Eastern Long-Necked Tortoise *Chelodina longicollis*, Eastern Water Skink *Eulamprus quoyii*, Garden Skink *Lampropholis guichenoti*, Welcome Swallow *Hirundo neoxena*, Western Swampen *Porphyrio porphyrio*, as well as arboreal fauna including owls *Strigiformes*, Ringtailed Possum *Pseudocheirus peregrinus* and Brushtailed Possums *Trichosurus vulpecula*, and gliders *Petauridae*.

Full details on landscape resources can be found in the AR in Appendix E.

2.5 European land use history

Historical aerial imagery allows for modern developments and land use to be identified within the study area. Table 3 summarises the development of the study area with reference to the historical aerials, which can be found in the AR in Appendix E.

3 Aboriginal cultural heritage context

3.1 Ethnohistory

Our knowledge of Aboriginal people and their land-use patterns and lifestyles prior to European contact is mainly reliant on documents written by non-Aboriginal people. These documents are affected by the inherent bias of the class and cultures of their authors, who were also often describing a culture that they did not fully understand - a culture that was in a heightened state of disruption given the arrival of settlers and disease. Early written records can however be used in conjunction with archaeological information and surviving oral histories from members of the Aboriginal community to gain a picture of Aboriginal life in the region.

Despite a proliferation of Aboriginal heritage sites there is considerable ongoing debate about the nature, territory, and range of pre-contact Aboriginal language groups in the greater Sydney region. These debates have arisen largely because, by the time colonial diarists, missionaries and proto-anthropologists began making detailed records of Aboriginal people in the late 19th century, pre-European Aboriginal groups had been broken up and reconfigured by European settlement activity. The following information relating to Aboriginal people on the Cumberland Plains is based on such early records.

There is some confusion relating to group names, which can be explained using differing terminologies in early historical references. Language groups were not the main political or social units in Aboriginal life. Instead, land custodianship and ownership centred on the smaller named groups that comprised the broader language grouping. There is some variation in the terminology used to categorise these smaller groups; the terms used by Attenbrow (2010) will be used here.

The study area is in the vicinity of three language groups, Dharawal, Gundungurra and the hinterland Darug. Attenbrow (2010, pp. 34) suggests:

- The Gundungurra covered “the southern rim of the Cumberland Plain west of the Georges River, as well as the southern Blue Mountains”.
- The Dharawal covered “the south side of Botany Bay, extending as far as the Shoalhaven River; from the coast to the Georges River and Appin, possibly as far west as Camden”.
- The hinterland Darug covered the area “from Appin in the south to the Hawkesbury River in the north; west of the Georges River, Parramatta, the Lane Cove River and Berowra Creek”.

These areas are indicative only and would have changed through time.

After the arrival of European settlers, the movement of Aboriginal people became increasingly restricted. European expansion along the Cumberland Plain was swift and soon there had been considerable loss of land to agriculture. At the same time diseases such as smallpox were having a devastating effect on the Aboriginal population. Death, starvation, and disease were some of the disrupting factors that led to a reorganisation of the social practices of Aboriginal communities after European contact. The formation of new social groups and alliances were made as Aboriginal people sought to retain some semblance of their previous lifestyle.

3.2 Aboriginal heritage located in the study area

3.2.1 AHIMS search results

A search of the AHIMS database on 26 April 2023 (Client Service ID: 776488) identified 113 Aboriginal sites within a 2.7 kilometre search area of the study area (Figure 4). AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1 is located within the study area (Figure 4). AHIMS search results are provided in Appendix A of the AR.

AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1

AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1 is an isolated artefact flake with retouch found in the south of the study area. This site was recorded during an archaeological survey undertaken as part of an Aboriginal Due Diligence Assessment (ADDA) by Urbis (2021). The site is located on the northern bank of the dam.

3.2.2 Archaeological investigation results

Test excavations were carried out between 9 to 17 August 2023. The test excavations recovered nine subsurface archaeological deposits containing a total of 40 artefacts between them. This included seven isolated artefacts (AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, and AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06 and AHIMS 45-5-5758/270 Aldington Road IF07) and two low density artefact scatters (AHIMS 45-5-5746/270 Aldington Road AS01 and AHIMS 45-5-5747/270 Aldington Road AS02). Summaries of the sites are presented below, and full site descriptions and images are provided in the AR in Appendix E.

AHIMS 45-5-5742/270 Aldington Road IF01

AHIMS 45-5-5742/270 Aldington Road IF01 is located within a lower slope landform in the western portion of the study area. This site was identified during test in PAD 1, transect 1, test pit 4. The site contained a silcrete angular fragment was identified in this test pit. It belongs to a size class of 15–20 millimetres. This artefact was in spit 1 (0–100 millimetres).

AHIMS 45-5-5743/270 Aldington Road IF02

AHIMS 45-5-5743/270 Aldington Road IF02 is located within a lower slope landform in the western portion of the study area. This site was identified during test excavations in PAD 1, transect 2, test pit 3. The site consists of a subsurface archaeological deposit of a single silcrete distal fragment. This artefact was in spit 1 (0–100 millimetres) and has a feather termination. It measures 10.95 millimetres in length, 11.23 millimetres in width and 4.63 millimetres in thickness.

AHIMS 45-5-5744/270 Aldington Road IF03

AHIMS 45-5-5744/270 Aldington Road IF03 is located within a crest landform in the eastern portion of the study area. This site was identified during test excavations in PAD 4, transect 3, test pit 4. The site IF03 consists of a subsurface archaeological deposit of an isolated silcrete angular fragment. It belongs to a size class of 15–20 millimetres and was found in spit 1 (0–100 millimetres).

AHIMS 45-5-5745/270 Aldington Road IF04

AHIMS 45-5-5745/270 Aldington Road IF04 is located within a crest landform in the eastern portion of the study area. This site was identified during test excavations in PAD 4, transect 4, test pit 1. The site consists of a subsurface archaeological deposit of a single silcrete distal fragment. This artefact was in spit 1 (0–100 millimetres) and has a feather termination. It measures 9.35 millimetres in length, 18.03 millimetres in width and 6.76 millimetres in thickness.

AHIMS 45-5-5741/270 Aldington Road IF05

AHIMS 45-5-5741/270 Aldington Road IF05 is located within a crest landform in the eastern portion of the study area. This site was discovered during test excavations in PAD 4, transect 1, test pit 1. The site consists of a subsurface archaeological deposit of a single indurated mudstone/tuff (IMT) angular fragment. This artefact was in spit 2 (50–100 millimetres) and measures 9.18 millimetres in length, 7.90 millimetres in width and 1.30 millimetres in thickness.

AHIMS 45-5-5757/270 Aldington Road IF06

AHIMS 45-5-5757/270 Aldington Road IF06 is located within a crest landform in the eastern portion of the study area. This site was discovered during test excavations in PAD 4, transect 2, test pit 2. AHIMS 45-5-

5757/270 Aldington Road IF06 consists of a subsurface archaeological deposit of a single chert angular fragment. This artefact was in spit 1 (0–100 millimetres) and measures 18.84 millimetres in length, 15.74 millimetres in width and 5.25 millimetres in thickness.

AHIMS 45-5-5758/270 Aldington Road IF07

AHIMS 45-5-5758/270 Aldington Road IF07 is located within a crest landform in the eastern portion of the study area. This site was discovered during test excavations in PAD 4, transect 1, test pit 3. AHIMS 45-5-5758/270 Aldington Road IF07 consists of a subsurface archaeological deposit of a single silcrete medial flake fragment. This artefact was in spit 2 (100–200 millimetres) and measures 10.35 millimetres in length, 7.54 millimetres in width and 2.35 millimetres in thickness.

AHIMS 45-5-5746/270 Aldington Road AS01

AHIMS 45-5-5746/270 Aldington Road AS01 is located within a lower slope landform in the western portion of the study area. This site was identified during test excavations in PAD 2, transect 1, test pit 3. AHIMS 45-5-5746/270 Aldington Road AS01 is a low density artefact scatter consisting of an IMT manuport and basalt grinding stone fragment. The IMT manuport was found in spit 1 (0–100 millimetres), has a maximum dimension of 15.47 millimetres and is likely a potlid. The basalt grinding stone fragment was found in spit 3 (200–300 millimetres). It measures 49.55 millimetres in length, 34.97 millimetres in width and 17.24 millimetres in thickness.

AHIMS 45-5-5747/270 Aldington Road AS02

AHIMS 45-5-5747/270 Aldington Road AS02 is located within a lower slope landform in the western portion of the study area. This site was discovered during test excavations which identified 31 lithic artefacts located across PAD 3. AHIMS 45-5-5747/270 Aldington Road AS02 is a low density artefact scatter consisting of 25 silcrete, three IMT and three chert artefacts. The artefact forms consisted of 15 angular fragments, five distal flakes, four complete flakes, three proximal flakes, two medial flakes, one multidirectional core and one manuport. Artefacts were found at various depths within the test pits, with 16 recovered from spit 1 (0–100 millimetres), 10 from spit 2 (100–200 millimetres) and five from spit 3 (200–300 millimetres).

3.3 Interpretation of past Aboriginal land use

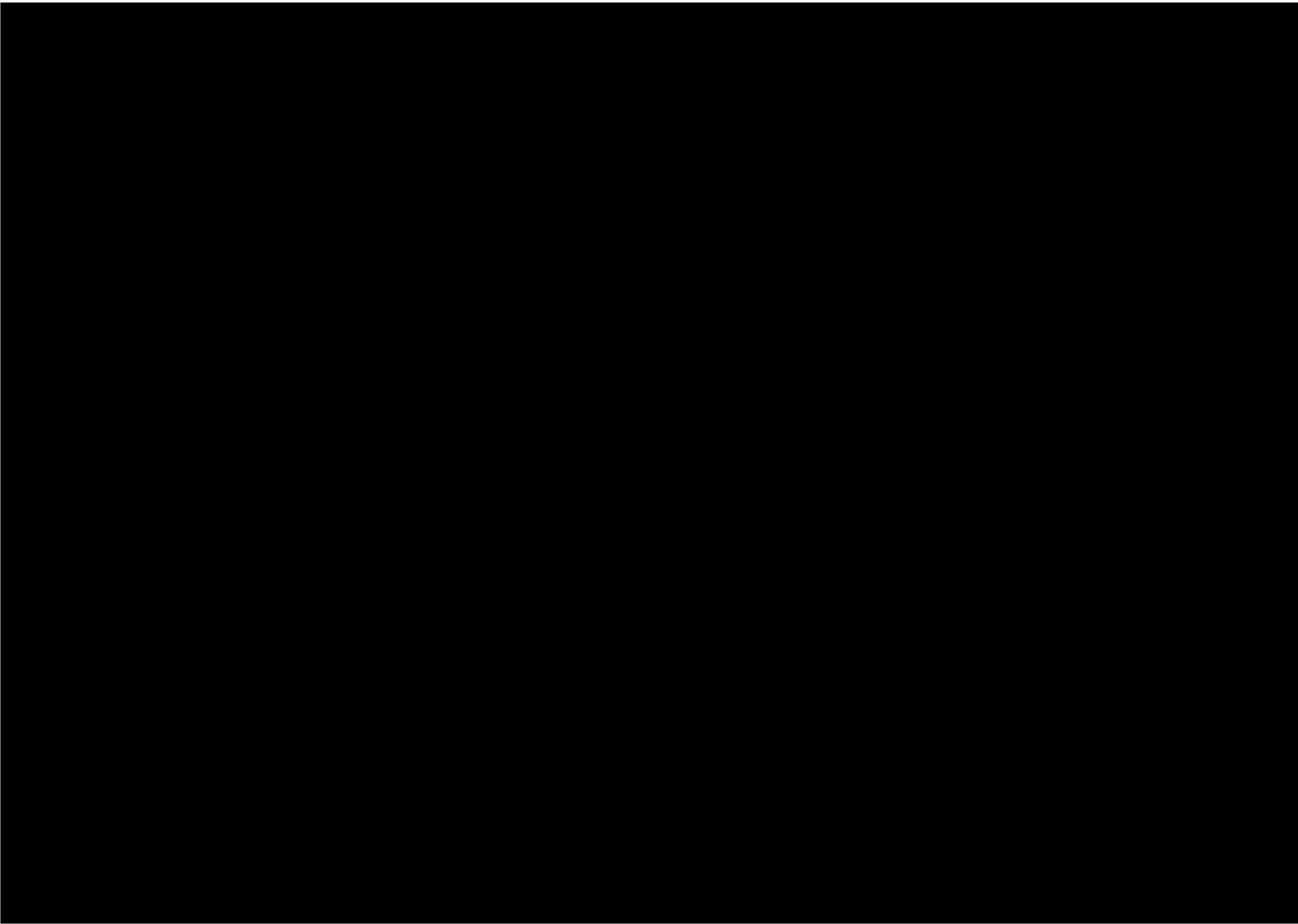
The study area is situated within the Cumberland Lowlands which features undulating plains and low hills with dense drainage lines. The study area itself reflects this, possessing undulating moderately inclined slopes. The study area is underlain by the Bringelly shale geological unit, where artefact sites and PADs are common. Rock shelters and grinding grooves are less common within this unit due to the lack of sandstone geology.

Water sources located in the study area include two first-order creek lines, one in the north-east and another in the south. Perennial water sources within proximity to the study area include Ropes Creek, 1 kilometre north-east and Kemps Creek, 930 metres to the west. These water sources would have provided resources exploitable by Aboriginal people. The location of the study area in such proximity to Ropes Creek and its elevated landforms may suggest Aboriginal occupation in the past.

European history of the Kemps Creek region is largely one of rural development. Early exploration and movement into the region accompanied early land grants which were subdivided and sold, not often developed. Nicholas Bayly, the original owner of the land likely used it for pastoral purposes, as did subsequent owners. More recent aerial images show that to be the case until the 1990s when agricultural practices began within the study area. These agricultural activities may have disturbed archaeological remains

that exist within the study area. Vegetation clearance would have removed any modified trees and disturbed the top layer of soil. Pastoral activities would have also disturbed the topsoil. Deeper deposits however may remain unaffected.

A program of test excavations was undertaken to determine whether subsurface archaeological deposits have the potential to occur within the study area. The dominant material identified within the assemblage was silcrete (n=30, 75%), and the dominant form was angular fragments (n=19, 47.5%). The small size of the assemblage uncovered as part of these test excavations makes it difficult to undertake an in-depth lithic analysis. Deposits with lithic artefact scatters within gently sloping landforms are consistent with other excavations and predictive modelling in the area. While this analysis is limited due to the small sample size and can only make a limited contribution to the artefact trends and analysis in the area, it does conform to the previous studies and trends (Biosis 2020, 2021, Urbis 2021, Austral Archaeology 2022, Biosis 2023). The low quantity of artefacts recovered from the site suggests that it is unlikely that it was used for short or long term occupation, but rather for transitory occupation or resource gathering, utilised by Aboriginal people within the local region travelling to more permanent water sources, including Kemps Creek to the west or Ropes Creek to the east, or other resources.



4 Aboriginal community consultation

Consultation with the Aboriginal community has been undertaken in compliance with the consultation requirements as detailed below. A consultation log of all communications with RAPs is provided in Appendix A.

4.1 Stage 1: Notification of project proposal and registration of interest

4.1.1 Identification of relevant Aboriginal stakeholders

In accordance with the consultation guidelines, Biosis notified the following bodies regarding the proposal:

- Penrith City Council.
- Heritage NSW.
- NSW Native Title Services Corporation Limited.
- Office of the Registrar, *Aboriginal Land Rights Act 1983* of Aboriginal Owners.
- NNTT.
- Greater Sydney Local Land Services.
- Deerubbin Local Aboriginal Land Council (LALC).

A list of known Aboriginal stakeholders in the Kemps Creek region was provided by Heritage NSW (a copy of this response is provided in Appendix B and include:

- | | |
|---|--|
| • A1 Indigenous Services | • Kamilaroi Yankuntjatjara Working Group |
| • Amanda Hickey Cultural Services | • Koori Digs Services |
| • Anthony Williams | • Minnamunnung |
| • Aragung Aboriginal Cultural Heritage Site Assessments | • Mundawari Heritage Consultants |
| • B.H. Heritage Consultants | • Munyunga (Murrin Clan/Peoples) |
| • Badu (Murrin Clan/Peoples) | • Mura Indigenous Corporation (icn:8991) |
| • Barking Owl Aboriginal Corporation | • Muragadi Heritage Indigenous Corporation |
| • Barraby Cultural Services | • Murra Bidgee Mullangari Aboriginal Corporation |
| • Biamanga (Murrin Clan/Peoples) | • Murramarang (Murrin Clan/Peoples) |
| • Bidjawong Aboriginal Corporation | • Murrumbul (Murrin Clan/Peoples) |
| • Bilinga (Murrin Clan/Peoples) | • Ngambaa Cultural Connections |
| • Black Duck Aboriginal Corporation | • Nundagurri (Murrin Clan/Peoples) |
| • Butucarbin Aboriginal Corporation | • Pemulwuy (Murrin Clan/Peoples) |
| • Clive Freeman | • Rane Consulting |

- Corroboree Aboriginal Corporation
- Cullendulla (Murrin Clan/Peoples)
- Darug Aboriginal Cultural Heritage Assessments
- Darug Boorooberongal Elders Aboriginal Corporation
- Darug Custodian Aboriginal Corporation
- Darug Land Observations
- Deerubbin Local Aboriginal Land Council
- Dharug (Murrin Clan/Peoples)
- Dharug Ngurra Aboriginal Corporation
- Dhinawan Culture & Heritage Pty Ltd
- Didge Ngunawal Clan
- DJMD Consultancy
- Galamaay Cultural Consultants (GCC)
- Gilay Consultants
- Ginninderra Aboriginal Corporation
- Goobah Development PTY LTD (Murrin Clan/Peoples)
- Goodradigbee Cultural & Heritage Aboriginal Corporation
- Gulaga
- Gunjeewong Cultural Heritage Aboriginal Corporation
- Gunya Aboriginal Cultural Heritage Services PTY LTD
- Gunyuu (Murrin Clan/Peoples)
- HSB Heritage Consultants
- Jerringong (Murrin Clan/Peoples)
- Julia Narayan
- Thauaira
- Thawun Aboriginal Consultancy
- Thomas Dahlstrom
- Thoorga Nura
- Tocomwall Pty Ltd
- Waawaar Awaa Aboriginal Corporation
- Wailwan Aboriginal Group
- Walbunja (Murrin Clan/Peoples)
- Walgalu (Murrin Clan/Peoples)
- Warragil Cultural Services
- Widescope Indigenous Group
- Widescope Indigenous Group
- Wingikara (Murrin Clan/Peoples)
- Woka Aboriginal Corporation
- Wori Woilywa
- Wullung (Murrin Clan/Peoples)
- Wurrumay Pty Ltd
- Yerramurra (Murrin Clan/Peoples) and Taste of Tradition Native Aboriginal Corporation
- Yulay Cultural Services
- Yurrandaali
- Yurwang Gundana Consultancy Cultural Heritage Services
- Bariyan Cultural Connections
- Wallanbah Aboriginal Site Conveyancing
- RAW Cultural Healing

A search conducted by the Office of the Registrar; *Aboriginal Land Rights Act 1983* listed no Aboriginal Owners with land within the study area. A search conducted by the NNTT listed no Registered Native Title Claims, Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the study area.

4.2 Stage 2: Presentation of information about the proposed project

On 13 June 2023, Biosis provided RAPs with details about the proposed development works (project information pack). A copy of the project information pack is provided in Appendix C.

4.3 Stage 3: Gathering information about cultural significance

4.3.1 Archaeological assessment methodology information pack

On 13 June 2023, Biosis provided each RAP with a copy of the project methodology pack outlining the proposed ACHA process and methodology for this project. RAPs were given 28 days to review and prepare feedback on the proposed methodology. A copy of the project methodology pack is provided in Appendix C.

There were five responses received that were in support of the proposed methodology. Specific response details have been provided in Appendix A.

One response provided comments regarding a care and control agreement, including holding a ceremony to repatriate artefacts back to Country if this could be acknowledged by all parties. This may need a smoking ceremony and gender basis to determine who would be accepted to participate. Response details have been provided in Appendix A.

No additional comments were received at this stage.

4.3.2 Information gathered during fieldwork

During the test excavations, Aaron Taylor (Murra Bidgee Mullangari Aboriginal Corporation) commented on the importance of travel routes and song lines in Aboriginal culture. He suggested that the location of the study area may have been along the way of a travel route between the two big creeks (Ropes Creek and Kemps Creek).

4.4 Stage 4: Review of draft ACHA report

A copy of the draft ACHA and the proposed testing methodology were provided to RAPs on 1 August 2023 for review and comment. RAPs were given 28 days to provide comments in accordance with consultation requirements. One response was received as detailed below, and a record of all correspondence is provided in Appendix D.

Amanda Hickey Cultural Services [1], Koori Digs Services [13] and Murra Bidgee Mullangari Aboriginal Corporation [16] responded by email on 29 October 2023, 30 October 2023, and 3 November 2023 respectively, stating that they agree and support the recommendations in the ACHA.

DCAC [5] responded by email on 14 November 2023 stating that they agree and support the recommendations in the ACHA and also reiterated the importance of interpreting the connections between individual sites, as well as the strong connection between Dharug people and the area. DCAC [5] also reiterated the significance of the information and material evidence collected in this project to Dharug people.

5 Aboriginal cultural significance assessment

The two main values addressed when assessing the significance of Aboriginal sites are cultural values to the Aboriginal community and archaeological (scientific) values. This report will assess the cultural values of Aboriginal sites in the study area. Details of the scientific significance assessment of Aboriginal sites in the study area are provided in Appendix E.

5.1 Introduction to the assessment process

Heritage assessment criteria in NSW fall broadly within the significance values outlined in the Australia International Council on Monuments and Sites (ICOMOS) *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS 2013) (the Burra Charter). This approach to heritage has been adopted by cultural heritage managers and government agencies as the set of guidelines for best practice heritage management in Australia. These values are provided as background and include:

- **Historical significance** (evolution and association) refers to historic values and encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, a historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.
- **Aesthetic significance** (Scenic/architectural qualities, creative accomplishment) refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with social values and may include consideration of form, scale, colour, texture, and material of the fabric or landscape, and the smell and sounds associated with the place and its use.
- **Social significance** (contemporary community esteem) refers to the spiritual, traditional, historical or contemporary associations and attachment that the place or area has for the present-day community. Places of social significance have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods or events. Communities can experience a sense of loss should a place of social significance be damaged or destroyed. These aspects of heritage significance can only be determined through consultative processes with local communities.
- **Scientific significance** (Archaeological, industrial, educational, research potential and scientific significance values) refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects. Assessment of scientific value is often based on the likely research potential of the area, place or object and will consider the importance of the data involved, its rarity, quality or representativeness, and the degree to which it may contribute further substantial information.

The cultural and archaeological significance of Aboriginal and historic sites and places is assessed on the basis of the significance values outlined above. As well as the Burra Charter significance values guidelines, various government agencies have developed formal criteria and guidelines that have application when assessing the significance of heritage places within NSW. Of primary interest are guidelines prepared by the Australian

Government, Heritage NSW and the Heritage Branch, and the NSW Department of Planning and Environment. The relevant sections of these guidelines are presented below.

These guidelines state that an area may contain evidence and associations which demonstrate one or any combination of the Burra Charter significance values outlined above in reference to Aboriginal heritage. Reference to each of the values should be made when evaluating archaeological and cultural significance for Aboriginal sites and places.

In addition to the previously outlined heritage values, the Heritage NSW *Guidelines to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) also specify the importance of considering cultural landscapes when determining and assessing Aboriginal heritage values. The principle behind a cultural landscape is that 'the significance of individual features is derived from their inter-relatedness within the cultural landscape'. This means that sites or places cannot be 'assessed in isolation' but must be considered as parts of the wider cultural landscape. Hence the site or place will possibly have values derived from its association with other sites and places. By investigating the associations between sites, places, and (for example) natural resources in the cultural landscape the stories behind the features can be told. The context of the cultural landscape can unlock 'better understanding of the cultural meaning and importance' of sites and places.

Although other values may be considered – such as educational or tourism values – the two principal values that are likely to be addressed in consideration of Aboriginal sites and places are the cultural/social significance to Aboriginal people and their archaeological or scientific significance to archaeologists and the Aboriginal community. The determinations of archaeological and cultural significance for sites and places should then be expressed as statements of significance that preface a concise discussion of the contributing factors to Aboriginal cultural heritage significance.

5.2 Cultural (social significance) values

Cultural or social significance refers to the spiritual, traditional, historical and/or contemporary associations and values attached to a place or objects by Aboriginal people. Aboriginal cultural heritage is broadly valued by Aboriginal people as it is used to define their identity as both individuals and as part of a group (DECCW 2010a, pp. iii). More specifically it provides:

- A 'connection and sense of belonging to Country' (DECCW 2010a, pp. iii).
- A link between the present and the past (DECCW 2010a, pp. 3).
- A learning tool to teach Aboriginal culture to younger Aboriginal generations and the general public (DECCW 2010a, pp. 3).
- Further evidence of Aboriginal occupation prior to European settlement for people who do not understand the magnitude to which Aboriginal people occupied the continent (DECCW 2010a, pp. 3).

It is acknowledged that Aboriginal people are the primary determiners of the cultural significance of Aboriginal cultural heritage. During consultation the following information was provided by RAPs in regard to the cultural values of the study area.

DCAC [5] responded to project information and methodology pack on 12 July 2023 via email:

"This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site there is a complex of significant sites."

Kamilaroi Yankuntjatjara Working Group [11] responded to project information and methodology pack on 25 July 2023 via email:

"The whole study area is highly sensitive & spiritual to us Aboriginal people, for our ancestors walked this land for tens of thousands of years and we continue to follow in their footsteps to protect conserve and manage country."

5.3 Historic values

Historic significance refers to associations a place or object may have with a historically important person, event, phase or activity to the Aboriginal and other communities. Historic values have been assessed for the study area, in the Statement of Heritage Impact currently being prepared by Biosis. A review of these reports indicates that the study area is not known to have any historic associations. Therefore, this assessment has concluded that the study area has low historic significance.

5.4 Archaeological (scientific significance) values

An archaeological scientific assessment was undertaken for the study area and is presented in detail as part of the attached AR (Appendix E). Background research identified the presence of a previously discovered Aboriginal site within the study area; AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1. Test excavations within the study area recovered nine subsurface archaeological deposits, including seven isolated artefacts (AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, and AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06 and 270 Aldington Road IF07) and two low density artefact scatters (AHIMS 45-5-5746/270 Aldington Road AS01 and AHIMS 45-5-5747/270 Aldington Road AS02). A total of 40 artefacts were recovered across the nine sites. These low density sites are consistent with predictive modelling for gentle slope landforms in the area. Isolated artefacts and low density deposits are considered a common site type within the region with limited potential to contribute further information about Aboriginal occupation and land use within the local region. The archaeological significance of these sites has been assessed as low.

5.5 Aesthetic values

The study area has been disturbed through land clearance of the native vegetation. However, the overall landscape is a typical example of the undulating, moderately inclined slopes, and crests of the Bringelly Shale geological unit. The landscape of the study area is linked with Aboriginal cultural values and provides context for Aboriginal sites that gives a strong sense of place. The vegetation clearance and other development surrounding the study area indicates that the aesthetic values have been altered from the original landscape before European settlement, and therefore has moderate aesthetic values.

5.6 Statement of significance

The significance of sites was assessed in accordance with the following criteria:

- Requirements of the Code.
- The Burra Charter.
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

The combined use of these guidelines is widely considered to represent the best practice for assessments of Aboriginal cultural heritage. The identification and assessment of cultural heritage values includes the four

values of the Burra Charter: social, historical, scientific and aesthetic values. The resultant statements of significance have been constructed for the study area.

5.6.1 Statement of significance for AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.2 Statement of significance for AHIMS 45-5-5742/270 Aldington Road IF01

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.3 Statement of significance for AHIMS 45-5-5743/270 Aldington Road IF02

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.4 Statement of significance for AHIMS 45-5-5744/270 Aldington Road IF03

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical

associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.5 Statement of significance for AHIMS 45-5-5745/270 Aldington Road IF04

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.6 Statement of significance for AHIMS 45-5-5741/270 Aldington Road IF05

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.7 Statement of significance for AHIMS 45-5-5757/270 Aldington Road IF06

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.8 Statement of significance for AHIMS 45-5-5758/270 Aldington Road IF07

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.9 Statement of significance for AHIMS 45-5-5746/270 Aldington Road AS01

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

5.6.10 Statement of significance for AHIMS 45-5-5747/270 Aldington Road AS02

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The archaeological significance of this site has been assessed as low. Discussions with the local Aboriginal communities reflect that the site is high in cultural in value. The site has no known direct historical associations and has low historical value. This site type occurs frequently within the region and the scientific significance of this site has been assessed as low. The site is located within the rolling green hills and pastoral landscape of Kemps Creek, though has been impacted by the housing development and agricultural facilities. This development and disturbance have altered the original landscape before European settlement, and therefore the site has moderate aesthetic value. The overall significance of this site has been assessed as low.

Table 5 **Significance assessment criteria**

Site name	Criteria	Ranking
AHIMS 45-5-5502/Aldington Rd Kemps Creek IF-1	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5742/270 Aldington Road IF01	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5743/270 Aldington Road IF02	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5744/270 Aldington Road IF03	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5745/270 Aldington Road IF04	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate

Site name	Criteria	Ranking
AHIMS 45-5-5741/270 Aldington Road IF05	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5757/270 Aldington Road IF06	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5758/270 Aldington Road IF07	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5746/270 Aldington Road AS01	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate
AHIMS 45-5-5747/270 Aldington Road AS02	Cultural— discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical— the site is not connected to any historical event or personage.	Low
	Scientific— the site possesses some archaeological values.	Low
	Aesthetic— the site is located within the rolling green hills and pastoral landscape of Kemps Creek. It has been impacted by the housing development and agricultural facilities.	Moderate

6 Development limitations and mitigation measures

The proposed future development will consist of an industrial development. The potential impacts of these works on Aboriginal heritage are presented below.

6.1 Predicted physical impacts

The following activities will or have the potential to impact Aboriginal sites:

- Bulk earthworks for landscaping including infilling of existing dams and modification of drainage lines.
- Installation of services and amenities including underground utilities such as electrical, telecommunication and wastewater services.
- Construction of roads and associated features.

These works all have the potential to heavily impact ground surfaces and will result in direct impacts to the Aboriginal sites within the study area (Figure 5). A summary of impacts is provided below in Table 6.

Table 6 Summary of potential archaeological impacts

AHIMS site no.	Site name	Significance	Type of harm	Degree of harm	Consequence of harm
AHIMS 45-5-5502	Aldington Rd Kemps Ck IF-1	Low	Direct	Total	Total loss of value
AHIMS 45-5-5742	270 Aldington Road IF01	Low	Direct	Total	Total loss of value
AHIMS 45-5-5743	270 Aldington Road IF02	Low	Direct	Total	Total loss of value
AHIMS 45-5-5744	270 Aldington Road IF03	Low	Direct	Total	Total loss of value
AHIMS 45-5-5745	270 Aldington Road IF04	Low	Direct	Total	Total loss of value
AHIMS 45-5-5741	270 Aldington Road IF05	Low	Direct	Total	Total loss of value
AHIMS 45-5-5757	270 Aldington Road IF06	Low	Direct	Total	Total loss of value
AHIMS 45-5-5758	270 Aldington Road IF07	Low	Direct	Total	Total loss of value
AHIMS 45-5-5746	270 Aldington Road AS01	Low	Direct	Total	Total loss of value
AHIMS 45-5-5747	270 Aldington Road AS02	Low	Direct	Total	Total loss of value

6.2 Ecologically Sustainable Development

One of the primary aims of the NP&W Act is the 'conservation of objects places and features ... of cultural value within the landscape, including ... places, objects and features of significance to Aboriginal people ...' ((s.2A(1)(b)(i)). The *Operational Policy: Protecting Aboriginal Cultural Heritage (Version 2)* (State of NSW and Office of Environment and Heritage NSW 2011) provides guidance to proponents in term of 1.1 Ecologically Sustainable Development (ESD).

ESD has been defined in Part 3, 6. (2) Objective of the Authority of the *Protection of the Environment Administration Act 1991* (NSW). This outlines that the ESD requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. In regard to

Aboriginal cultural heritage, ESD can be achieved by applying the principle of intergenerational equity and the precautionary principle.

Intergenerational equity

The principle of intergenerational equity states that the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – for the benefit of future generations.

In terms of Aboriginal cultural heritage, intergenerational equity can be considered in terms of the 'cumulative impacts' of any proposal to Aboriginal objects and places. For example, if few Aboriginal objects and places remain in a region (because of harm authorised under previous AHIPs), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the significance of Aboriginal cultural heritage values associated with the Aboriginal objects and places proposed to be harmed will be relevant to the consideration of intergenerational equity and an understanding of the cumulative impacts of a proposal.

Where there is uncertainty, the precautionary principle should also be followed (see below).

The precautionary principle

The precautionary principle states that the lack of full scientific certainty about the threat of harm should not be used as a reason for not taking measures to prevent harm from occurring.

In applying the precautionary principle, decisions should be guided by:

- *a careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment (which includes cultural heritage)*
- *an assessment of the risk-weighted consequences of various options. The precautionary principle is relevant to OEH consideration of potential harm to Aboriginal cultural heritage where:*
- *the proposal involves a risk of serious or irreversible harm to Aboriginal objects or places or to the value of those objects or places, and*
- *there is a lot of uncertainty about the significance of Aboriginal cultural heritage values of the Aboriginal objects or places proposed to be harmed.*

Where this is the case, a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce harm to the Aboriginal objects/place.

6.3 Mitigation measures

Ideally, heritage management involves conservation of sites through the preservation and conservation of fabric and context within a framework of 'doing as much as necessary, as little as possible' (Marquis-Kyle & Walker 1994, pp. 13). In cases where conservation is not practical, several options for management are available. For sites, management often involves the salvage of features or artefacts, retrieval of information through excavation or collection (especially where impact cannot be avoided) and interpretation.

Avoidance of impact to archaeological and cultural heritage sites through design of the development is the primary mitigation and management strategy and should be implemented where practicable. Due to the undulating landforms in the study area and the level of bulk earthworks required to make it suitable for

development it is not possible to totally avoid impacts to Aboriginal sites. Therefore, a program of archaeological test excavations was undertaken to mitigate the amount of value lost during the works to any potential Aboriginal sites by providing an opportunity to collect information about the area that would expand our knowledge of Aboriginal occupation.

Analysis of the site data collected throughout the test excavations undertaken in the study area identified two low density sub-surface artefact scatters (AHIMS 45-5-5746/270 Aldington Road AS01 and AHIMS 45-5-5747/270 Aldington Road AS02) and seven isolated artefact sites (AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06 and 270 Aldington Road IF07), in addition to the isolated surface artefact site identified during the background research (AHIMS 45-5-5502/ Aldington Rd Kemps Ck IF-1). The sites were identified on crest and lower slope landforms and consisted predominantly of silcrete material and angular fragment artefact forms. These sites are comparable to those identified by previous assessments on similar landforms and at similar distances to water sources. Analysis has provided limited additional information about site patterning in the area. Due to the sites representing a low density sporadic deposit, the information obtained from this analysis is of low scientific value as it contributes little information that is not already known from previous assessments. Further salvage and analysis of the deposits in the study area is unlikely to provide any further information relating to Aboriginal land and technology use that is not already known about the area and no further assessment is recommended at this stage as a result. The information obtained from this assessment does however contribute to the information regarding Aboriginal occupation in the area and allows future generations to access and build on this knowledge in accordance with principles of intergenerational equity and ESD.

There are eight Aboriginal sites in the study area requiring management (Figure 5). If the proposed works cannot avoid impacts to the sites located within the study area, then the following mitigation measures, which consider the principles of ESD and intergenerational equity in their design, are proposed:

Apply for an AHIP to impact Aboriginal heritage sites within the study area

Impacts to AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02 cannot be avoided. Therefore, an AHIP to harm these sites is required prior to works proceeding. The AHIP should allow for direct impacts to the Aboriginal heritage sites within the study area to occur. **The AHIP should be for a term of 10 years.**

An AHIP is required for any activities likely to have an impact on Aboriginal objects or Places or cause land to be disturbed for the purposes of discovering an Aboriginal object. Heritage NSW issues AHIPs under Part 6 of the NPW Act.

Management of artefacts

As the site will be completely modified, there is no place that will not be impacted and thus no place for artefacts to be reburied on site. The artefacts recovered from the excavations will be given back to the Aboriginal community through a care and control agreement, where they can then be used to teach subsequent generations about Aboriginal culture. This will be done by transferring the artefacts from their temporary storage location at the Biosis Sydney Office at Unit 14/17–27 Power Avenue, Alexandria, NSW to the location of a nominated RAP group.

RAPs were provided with the opportunity to review the draft report and provide comment on how they would like to see the artefacts cared for as part of the Stage 4 Aboriginal community consultation process. During Stage 4 consultation, no preferred method for the treatment of the cultural material recovered from site was suggested. As such, a care and control agreement with a nominated RAP group will be established. This will be included in the AHIP application.

Heritage induction for all contractors

Heritage inductions for all site workers and contractors should be undertaken prior to works to prevent any unintentional harm to unexpected Aboriginal objects or sites, or Aboriginal sites or objects located within proximity to the study area.

Continued consultation

As per the consultation guidelines it is outlined that the proponent provides a copy of this report to the RAPs and considers all comments received. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project. The RAPs should be consulted regarding the long-term care of the artefacts.

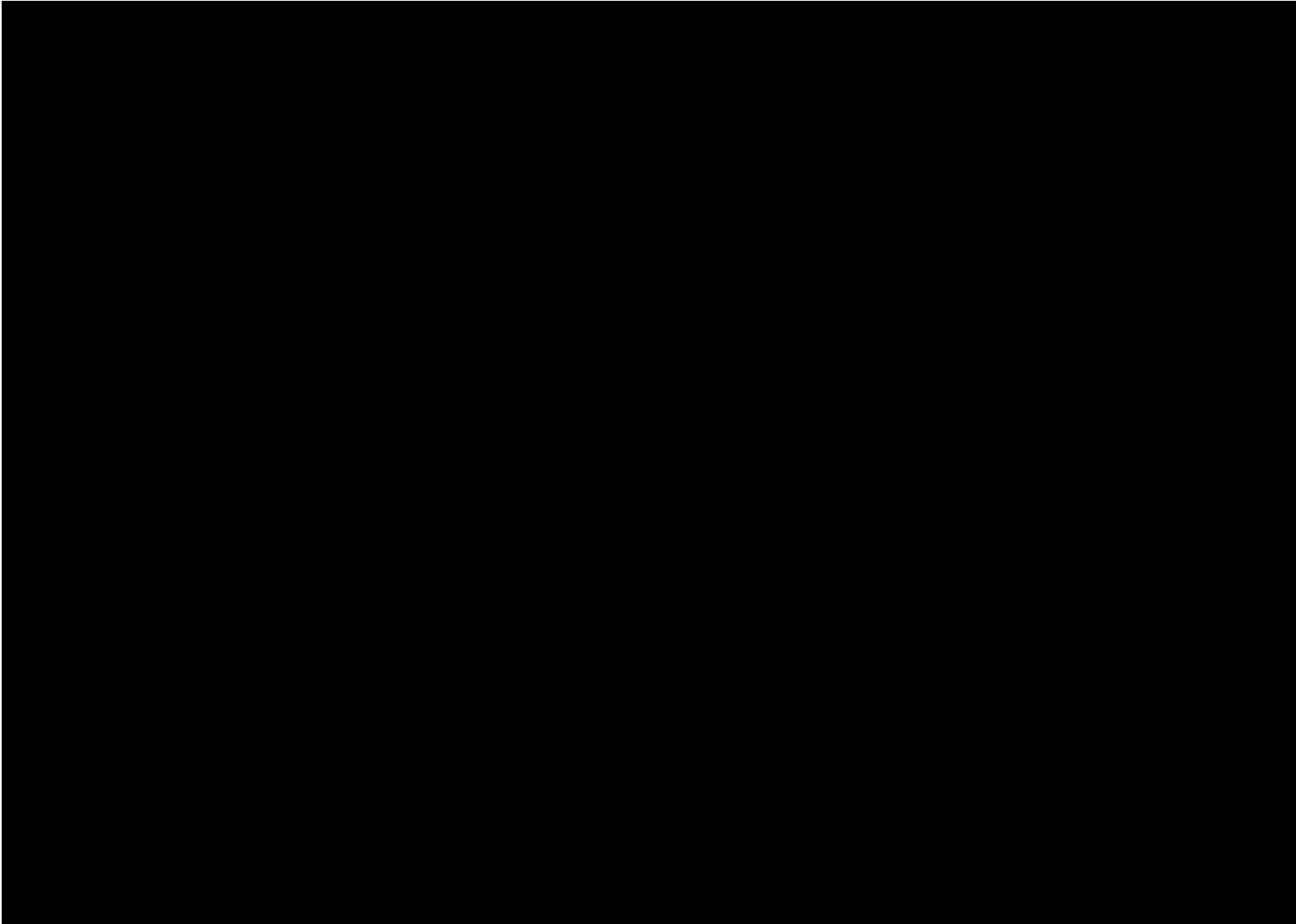
6.3.1 Potential archaeological impacts and mitigation measures

The potential archaeological impacts and mitigation measures have been summarised in Table 7 below.

Table 7 Summary of potential archaeological impacts and mitigation measures

AHIMS site	Significance	Type of harm	Degree of harm	Consequence of harm	Mitigation measure
AHIMS 45-5-5502/ Aldington Rd Kemps Ck IF-1	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5742/270 Aldington Road IF01	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5743/270 Aldington Road IF02	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5744/270 Aldington Road IF03	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5745/270 Aldington Road IF04	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5741/270 Aldington Road IF05	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5757/270 Aldington Road IF06	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5758/270 Aldington Road IF07	Low	Direct	Total	Total loss of value	AHIP required
AHIMS 45-5-5746/270 Aldington Road AS01	Low	Direct	Total	Total loss of value	AHIP required

AHIMS site	Significance	Type of harm	Degree of harm	Consequence of harm	Mitigation measure
AHIMS 45-5-5747/270 Aldington Road AS02	Low	Direct	Total	Total loss of value	AHIP required



7 Recommendations

The recommendations below respond specifically to the wishes of the RAPs. Recommendations regarding the archaeological value of the site, and the subsequent management of Aboriginal cultural heritage is provided in the archaeological report (Appendix E).

Prior to any impacts occurring within the study area, the following is recommended:

Recommendation 1: Application for an AHIP

An AHIP is required for any activities likely to have an impact on Aboriginal objects or Places, or that cause land to be disturbed for the purposes of discovering an Aboriginal object. Heritage NSW issues AHIPs under Part 6 of the NPW Act.

Impacts to AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02 cannot be avoided. Therefore, an AHIP to harm these sites is required prior to works proceeding. The AHIP should allow for direct impacts to the Aboriginal heritage sites within the study area to occur. **The AHIP should be for a term of 10 years.**

The AHIP would cover the areas within the site boundaries of; AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02. Subsurface test excavations have confirmed the sites possess low archaeological significance. The locations of these are shown in Figure 5. The site boundaries are to be clearly marked with appropriate fencing (e.g., star pickets and high visibility flagging tape) to ensure that no impacts can occur to Aboriginal sites until the AHIP is approved.

AHIPs should be prepared by a qualified archaeologist and lodged with Heritage NSW. Once the application is lodged processing time can take between 8–12 weeks. It should be noted that there will be an application fee levied by Heritage NSW for the processing of AHIPs, which is dependent on the estimated total cost of the development project. The AHIP will be applied for following the approval of the development application to Penrith City Council.

Recommendation 2: No further archaeological work required

No further archaeological work is required for AHIMS 45-5-5502/Aldington Rd Kemps Ck IF-1, AHIMS 45-5-5742/270 Aldington Road IF01, AHIMS 45-5-5743/270 Aldington Road IF02, AHIMS 45-5-5744/270 Aldington Road IF03, AHIMS 45-5-5745/270 Aldington Road IF04, AHIMS 45-5-5741/270 Aldington Road IF05, AHIMS 45-5-5757/270 Aldington Road IF06, 270 Aldington Road IF07, AHIMS 45-5-5746/270 Aldington Road AS01, and AHIMS 45-5-5747/270 Aldington Road AS02. Works can proceed within the study area following the issue of an AHIP by Heritage NSW for the proposed development, and subject to recommendations 3 to 8 below.

Recommendation 3: Continued consultation with the RAPs

As per the consultation requirements it is recommended that the proponent provides a copy of this report to the RAPs. The proponent should continue to inform these groups about the management of Aboriginal

cultural heritage sites within the study area throughout the life of the project. Consultation is being undertaken for this project and will aid in developing an adequate artefact management process of the recovered artefacts with the Aboriginal community.

Recommendation 4: Heritage induction for all contractors

Heritage inductions for all site workers and contractors should be undertaken to prevent any unintentional harm to any unexpected Aboriginal objects. The heritage induction should include the following items:

- Relevant legislation.
- Location of identified Aboriginal heritage sites, and areas of archaeological sensitivity within proximity to the study area.
- Basic identification skills for Aboriginal and non-Aboriginal artefacts, and human remains.
- Procedure to follow in the event of an unexpected heritage item find during construction works.
- Procedure to follow in the event of discovery of human remains during construction works.
- Penalties and non-compliance.

Recommendation 5: Heritage interpretation

Given the significance of the Kemps Creek region to Aboriginal people and the discovery of Aboriginal cultural heritage on site, there is an opportunity for heritage interpretation as part of the design. Heritage interpretation is an innovative way to integrate culture into design and can not only honour the deep-rooted connection to the land but also ensure that Aboriginal cultural heritage remains present in the daily operations of the proposed industrial estate.

As such, it is recommended that a Heritage Interpretation Plan be prepared by a suitably qualified heritage consultant following the NSW Heritage Council's *Interpreting Heritage Places and Items Guidelines*. The plan should identify how information on the Aboriginal history of the Kemps Creek region could be communicated through the proposed industrial development. The heritage devices used in interpretation must be created in consultation with the RAPs.

Recommendation 6: Discovery of unanticipated Aboriginal objects

All Aboriginal objects and Places are protected under the NSW NPW Act. It is an offence to disturb an Aboriginal site without a consent permit issued by Heritage NSW. Should any Aboriginal objects be encountered outside of the AHIP area during works, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and RAPs.

Recommendation 7: Discovery of unanticipated historical relics

Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act. Relics cannot be disturbed except with a permit or exception/exemption notification. Should unanticipated relics be discovered during the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic.

Recommendation 8: Discovery of human remains

If any suspected human remains are discovered during any activity works, all activity in the vicinity must cease immediately. The remains must be left in place and protected from harm or damage. The following contingency plan describes the immediate actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the study area must follow these steps:

1. **Discovery:** If suspected human remains are discovered all activity in the vicinity must stop to ensure minimal damage is caused to the remains; and the remains must be left in place and protected from harm or damage.
2. **Notification:** Once suspected human skeletal remains have been found, the Coroner's Office and the NSW Police must be notified immediately. Following this, the find will be reported to the Aboriginal parties and Heritage NSW.

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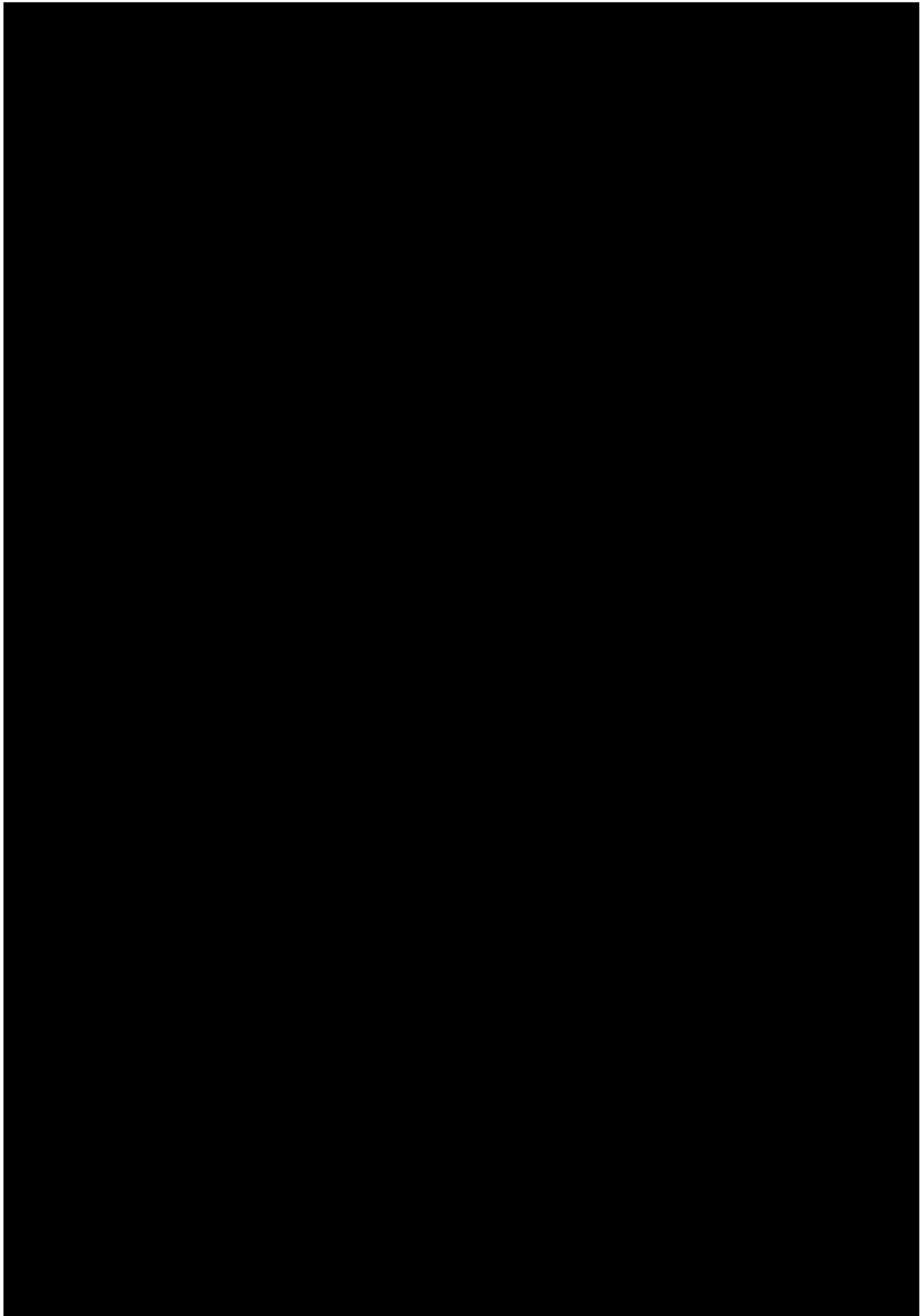
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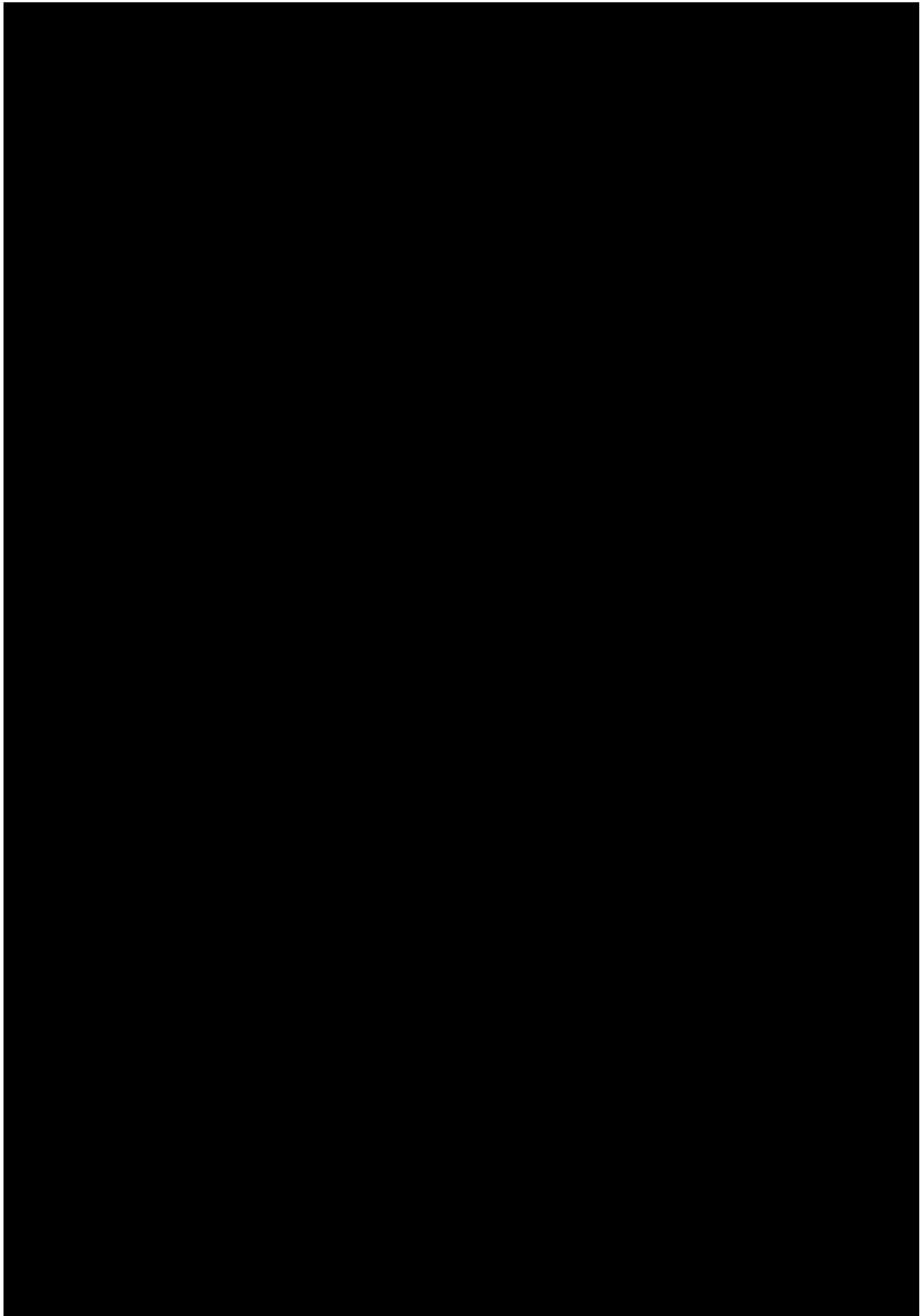
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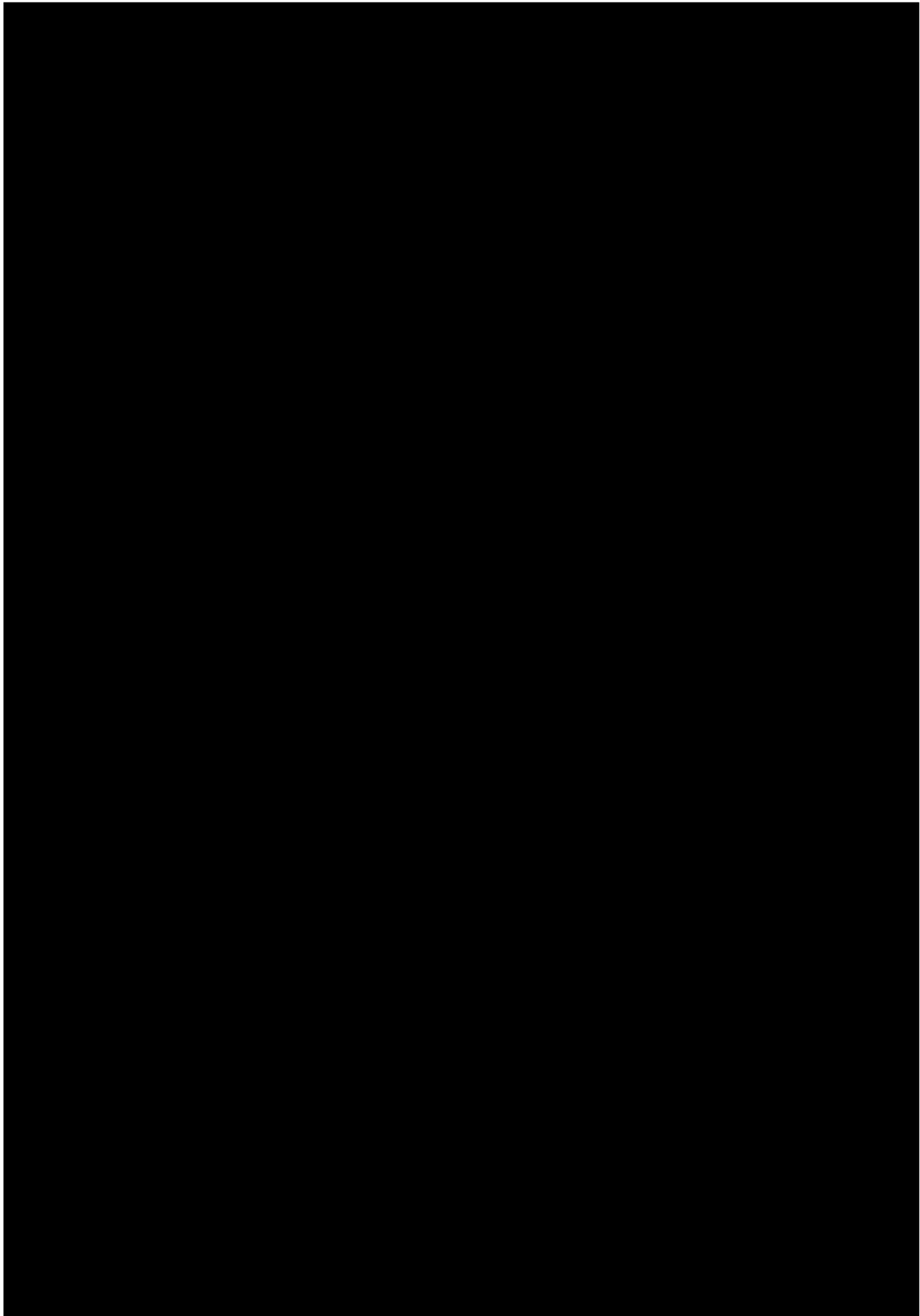
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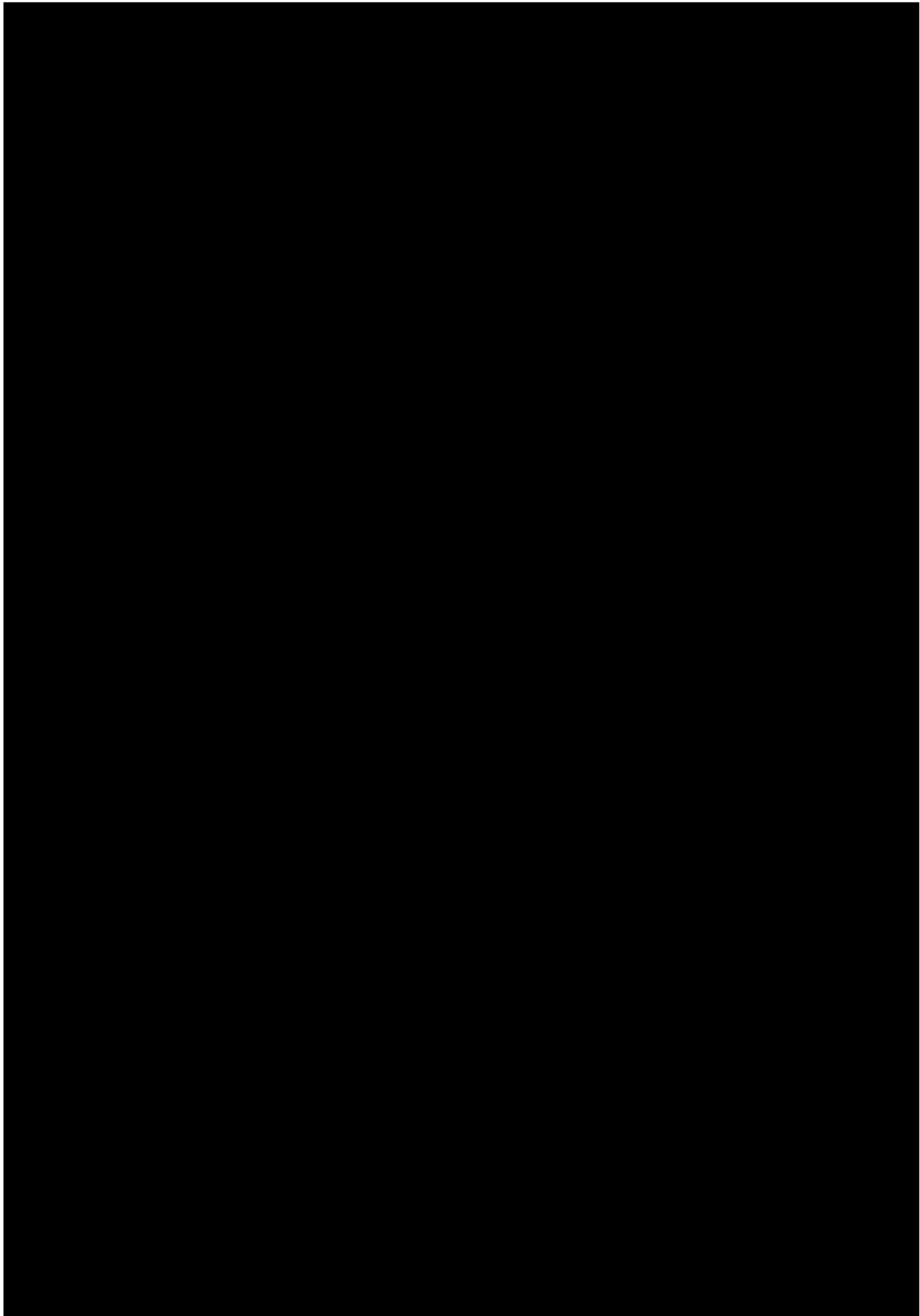
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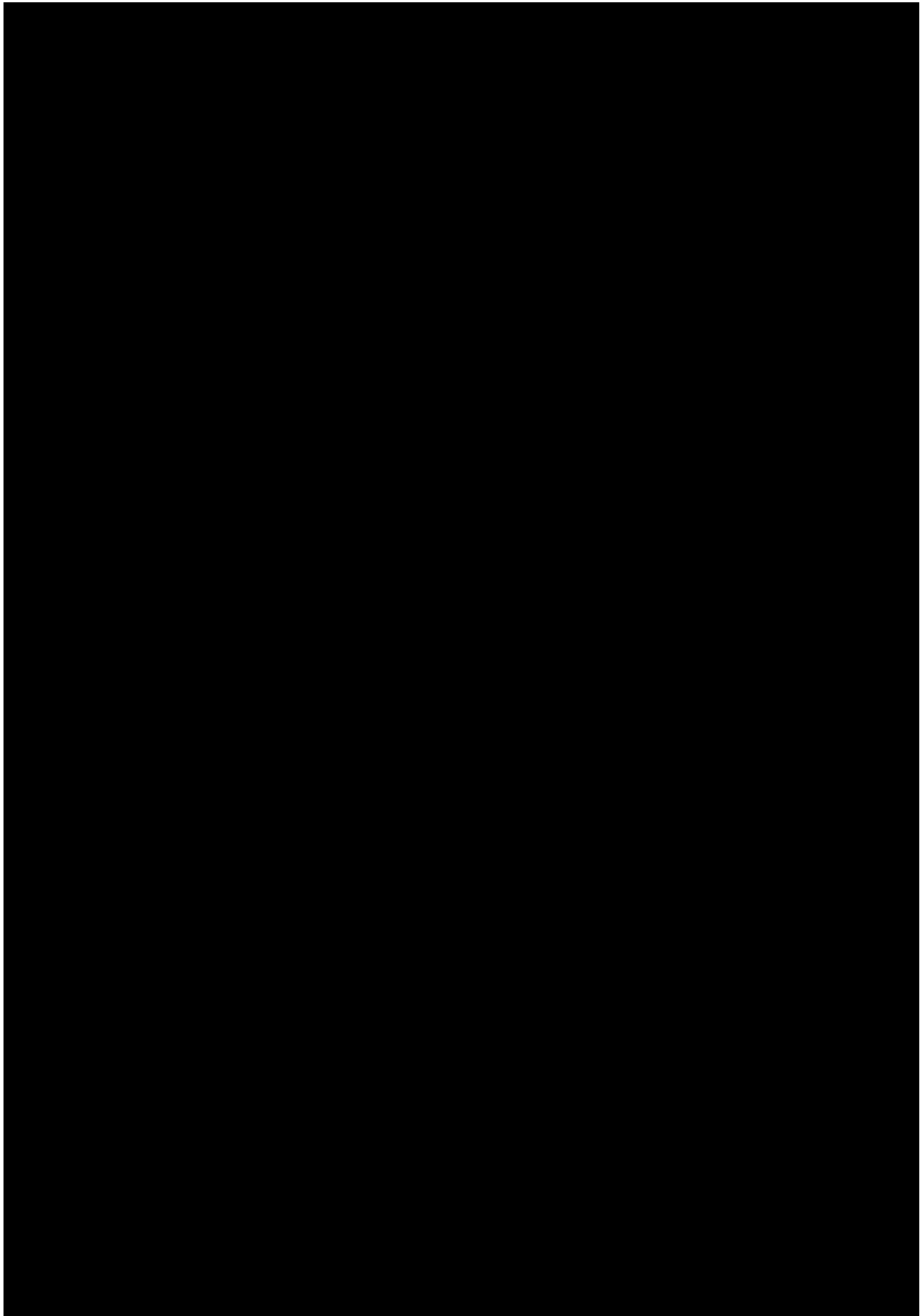
APPENDICES

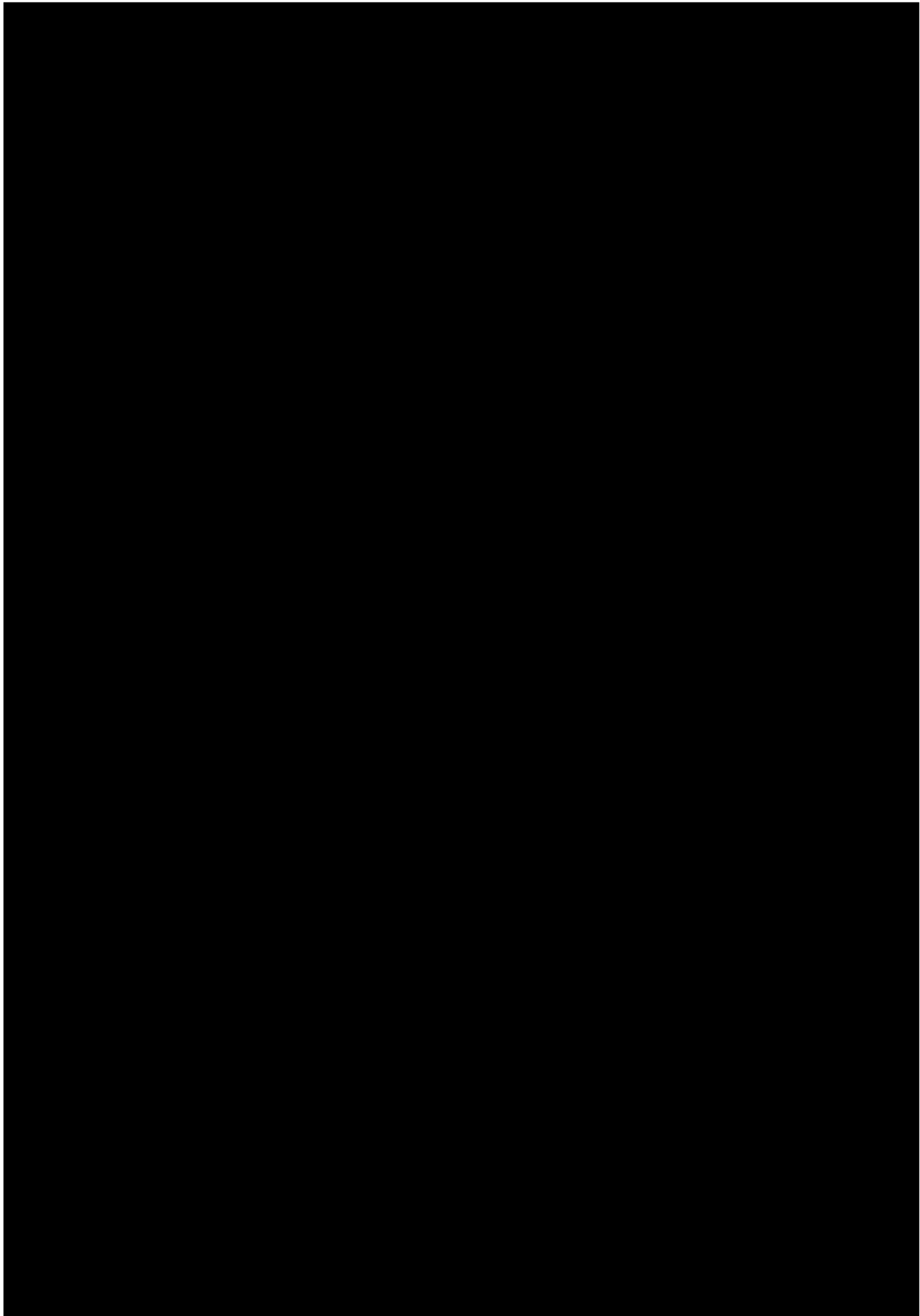


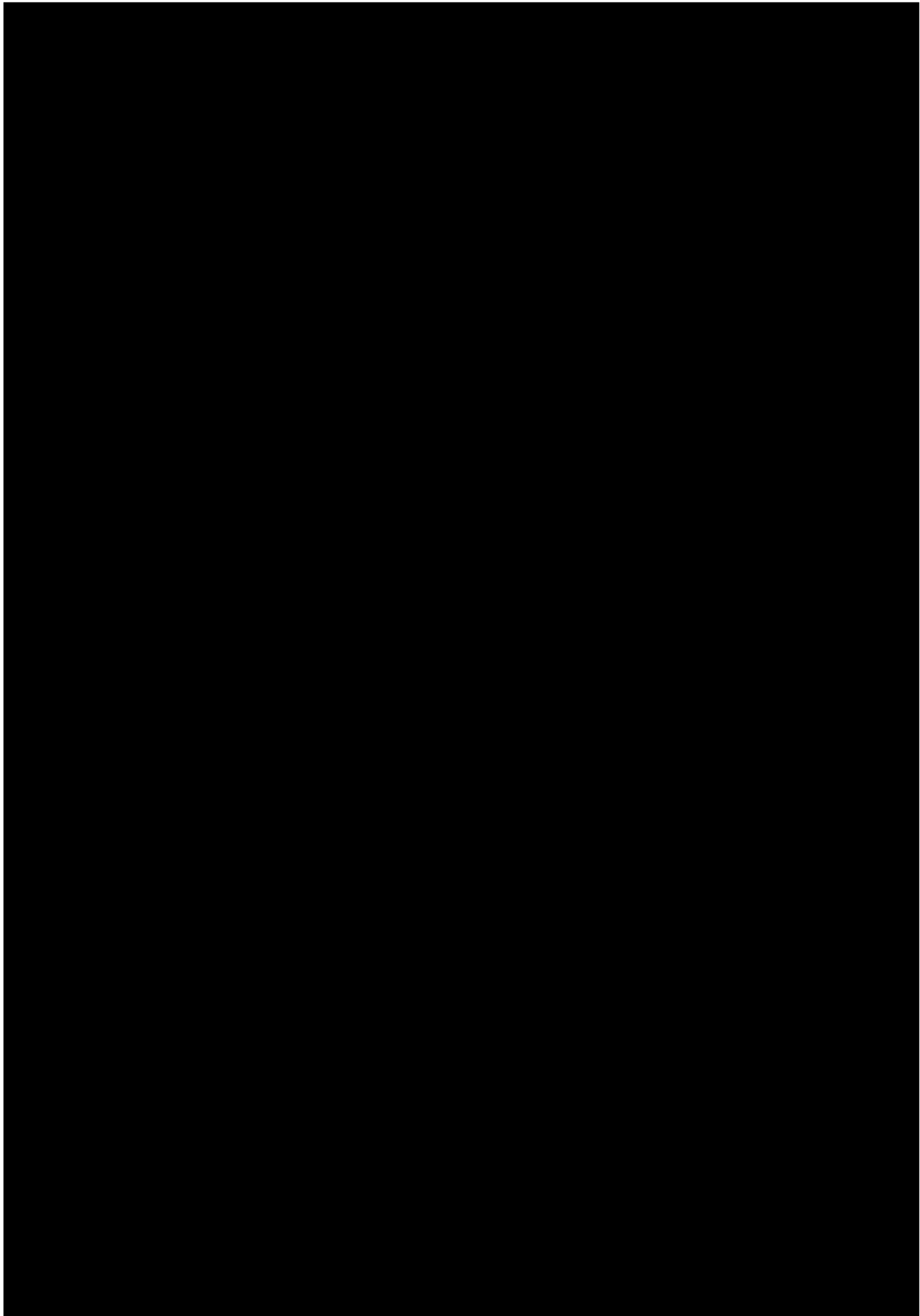


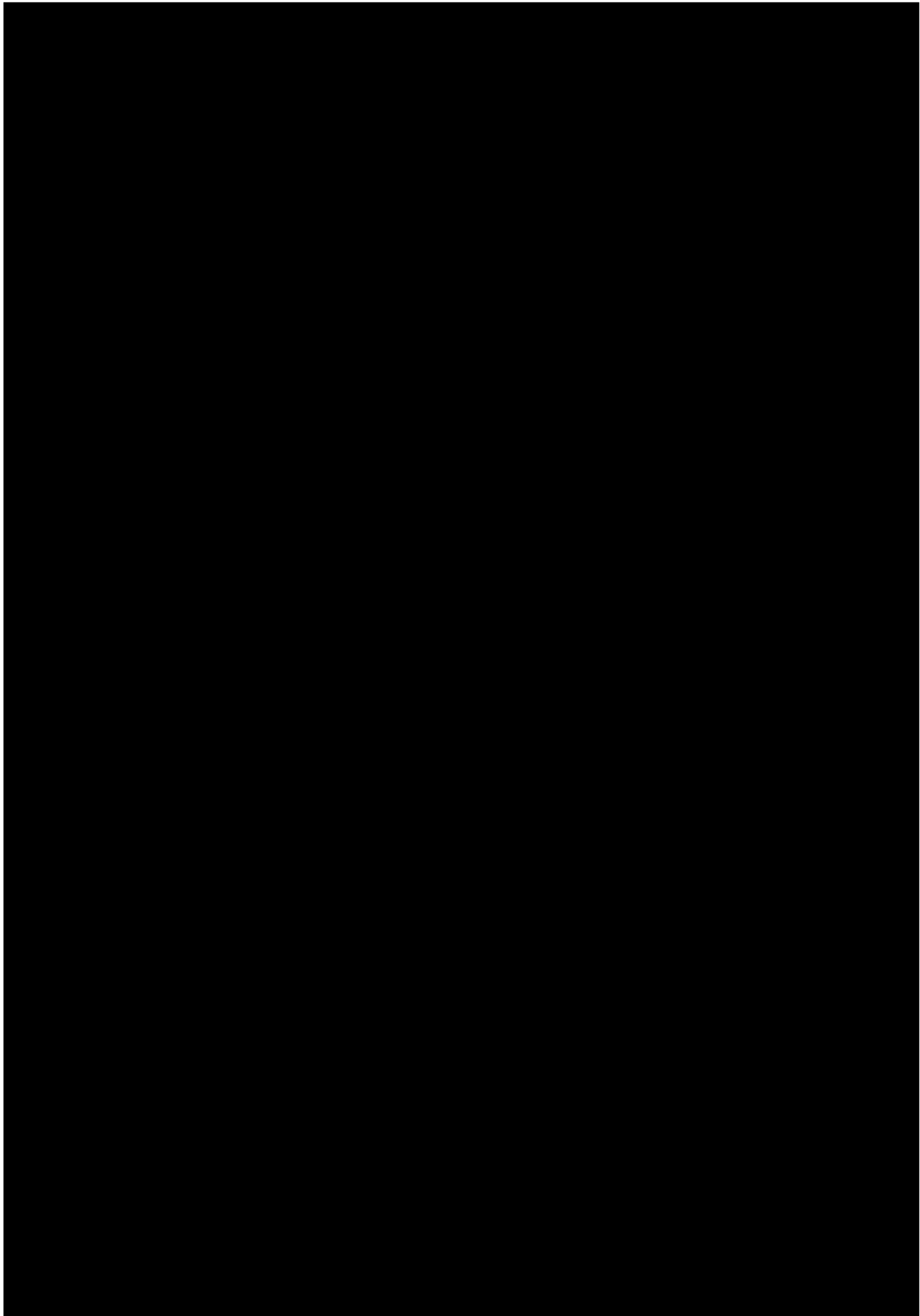


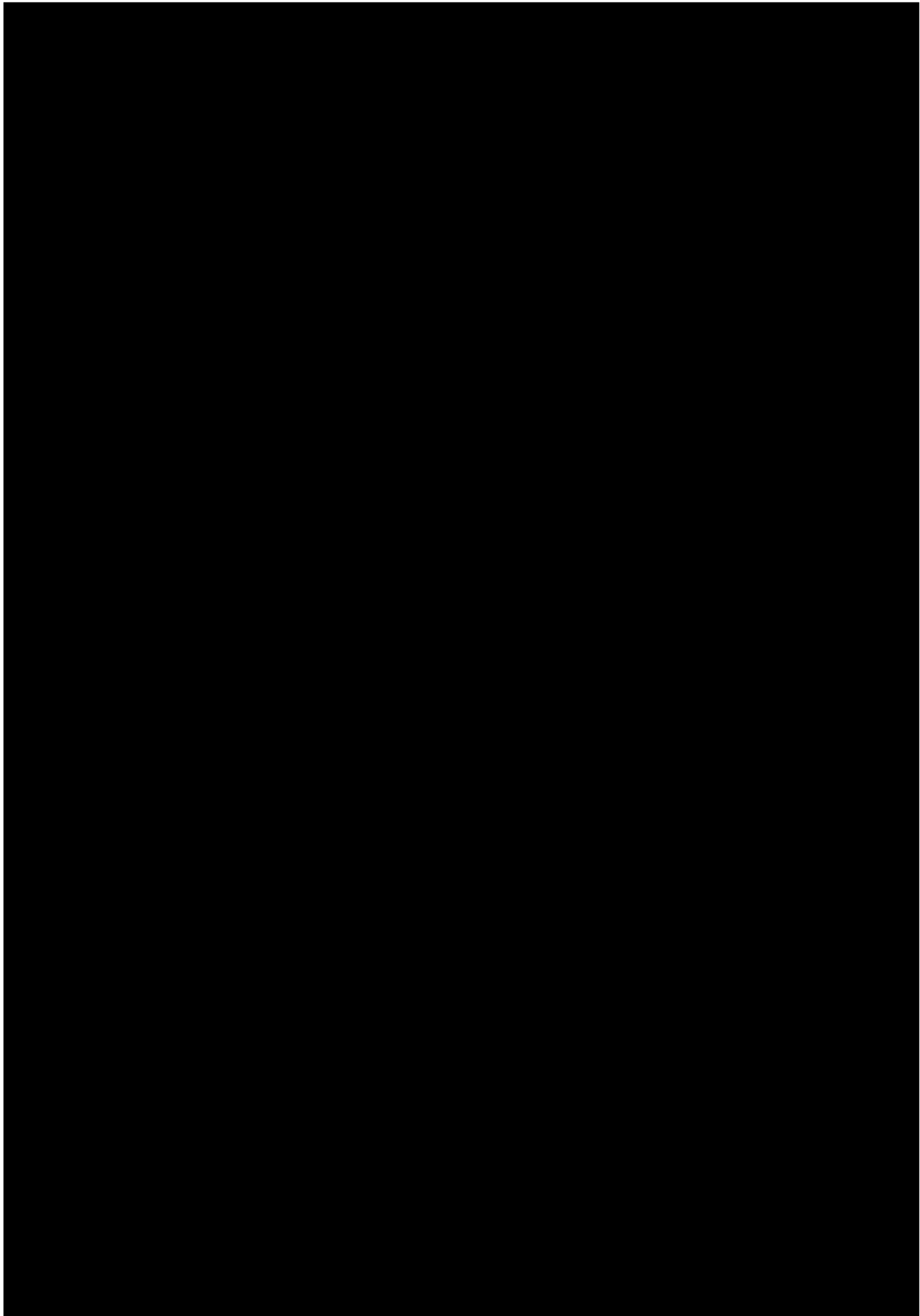


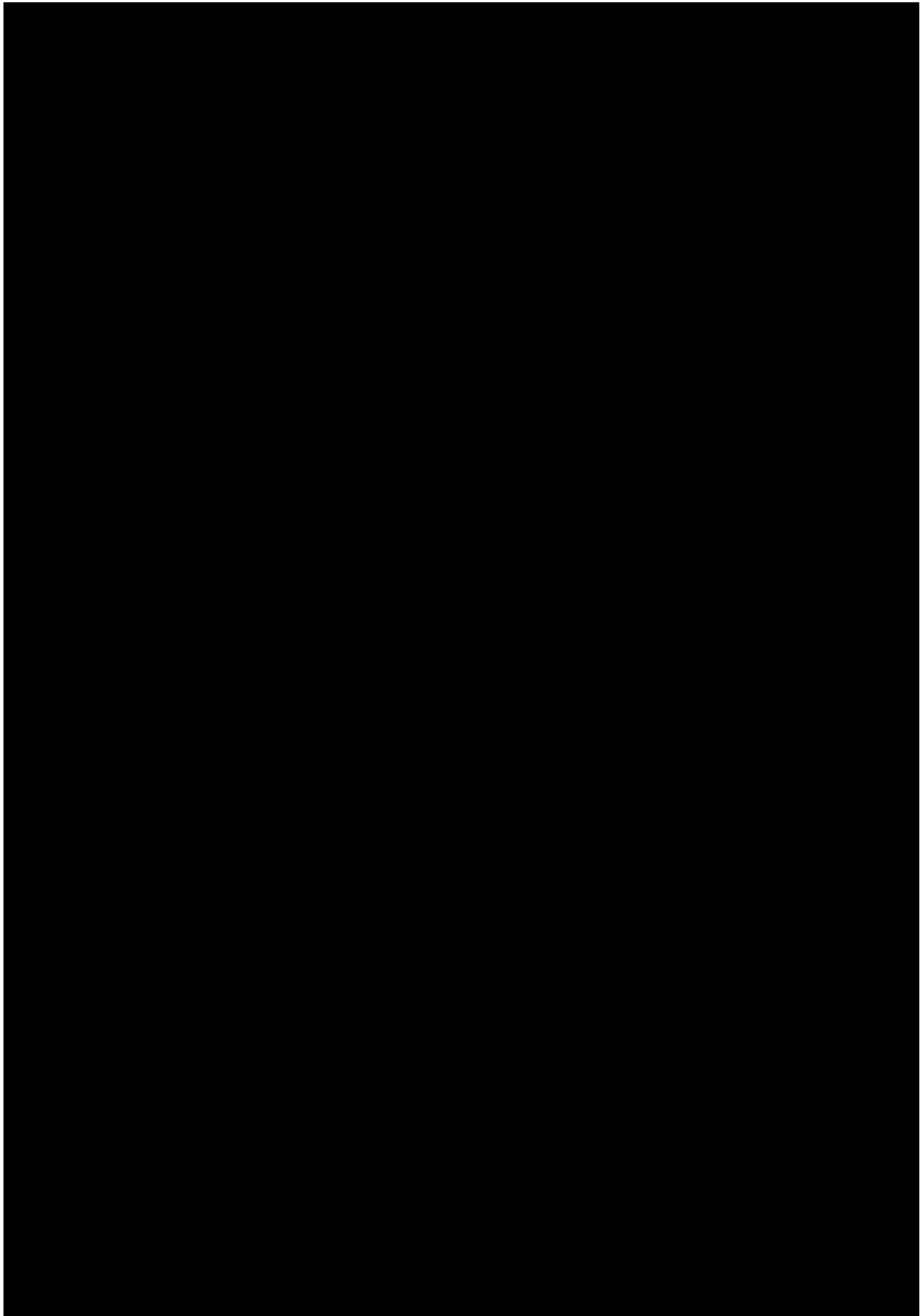


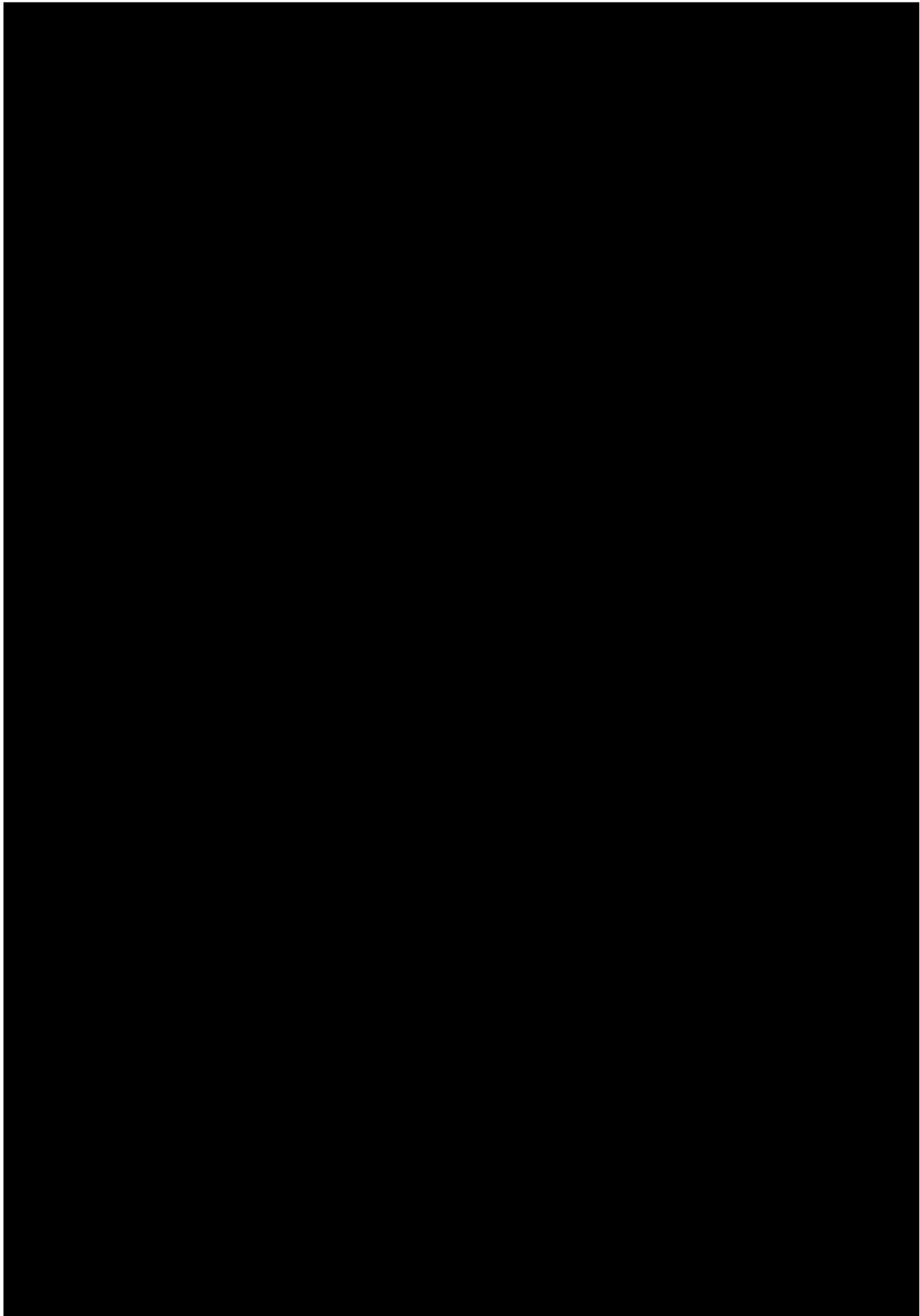


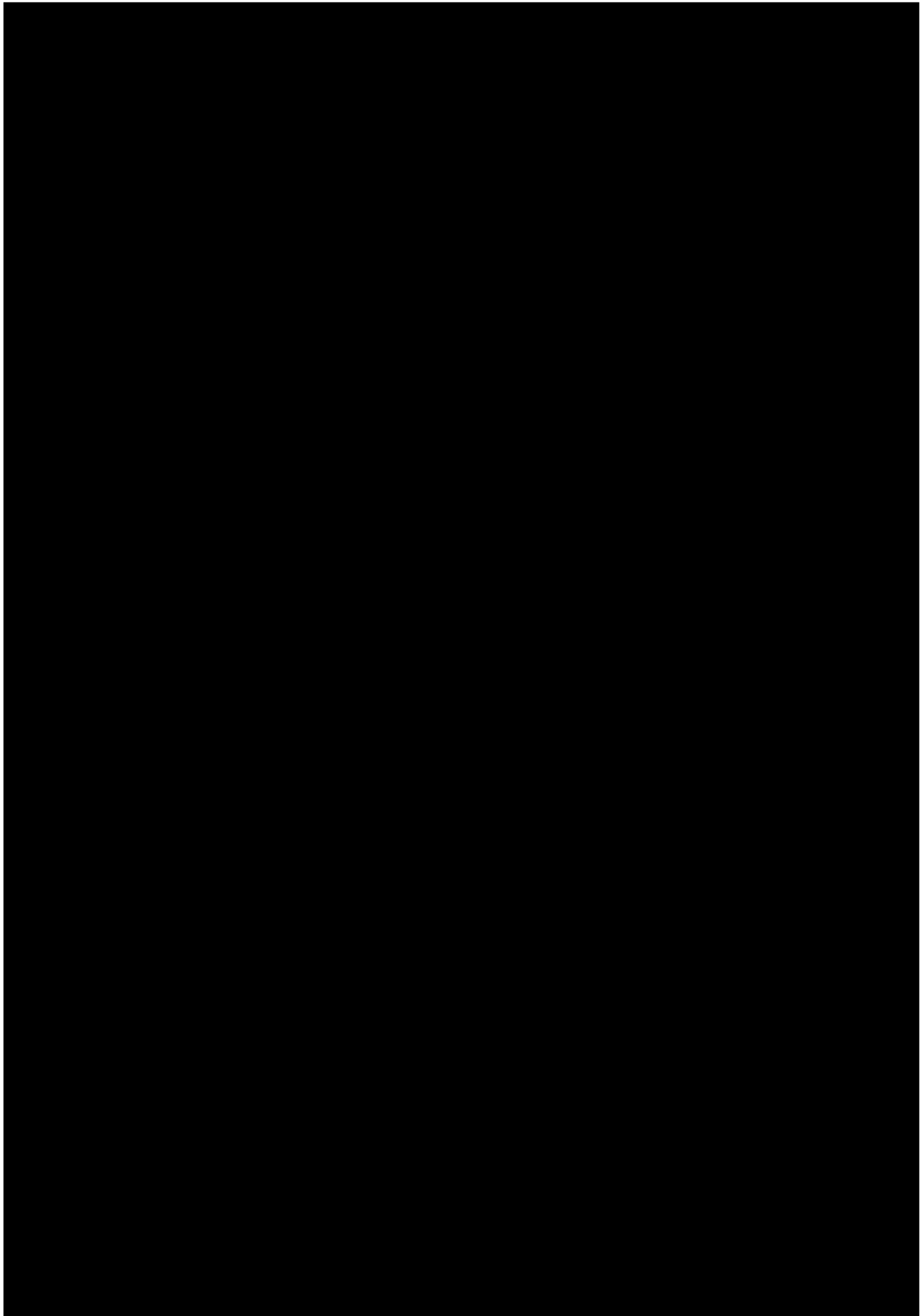


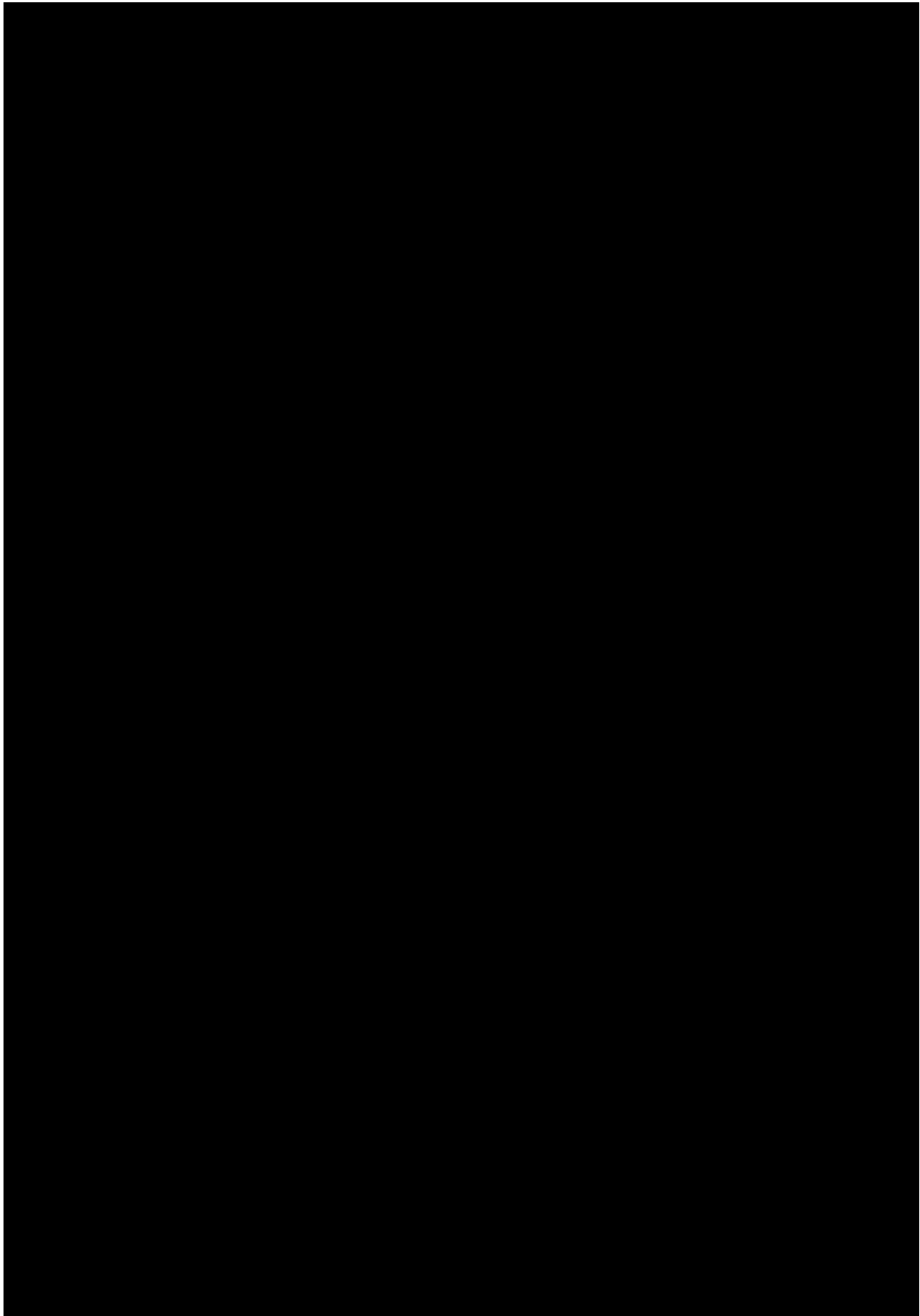


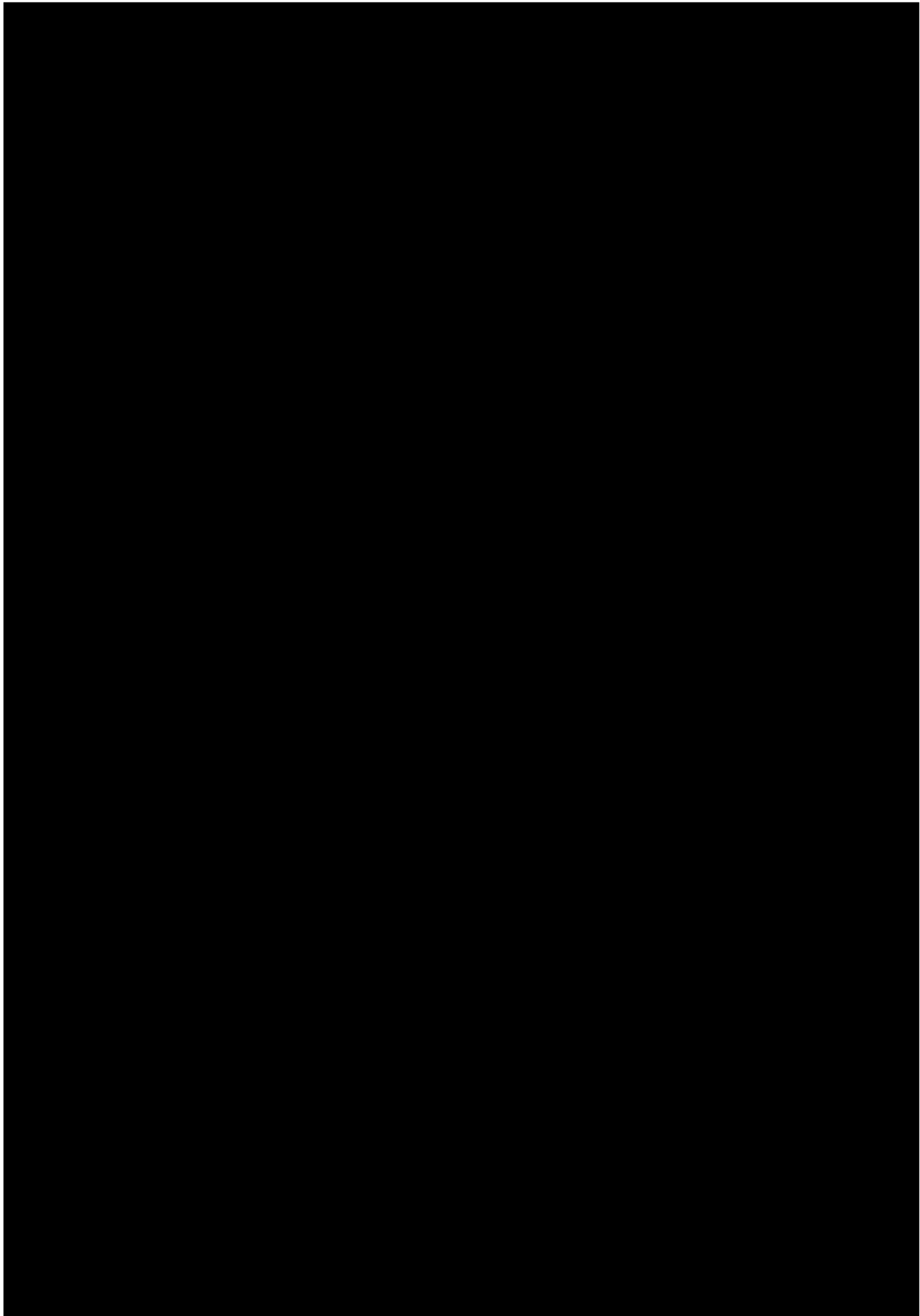


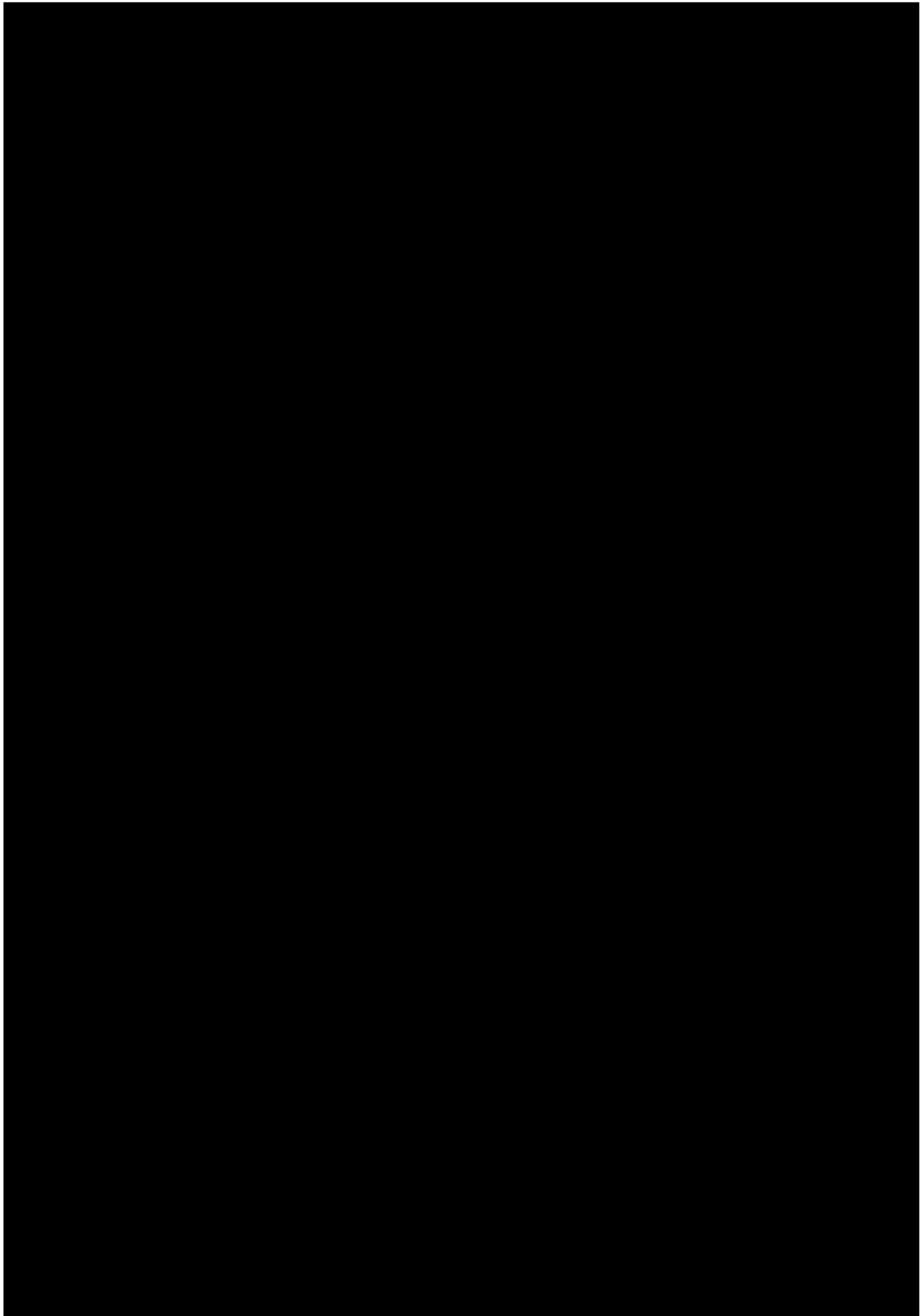


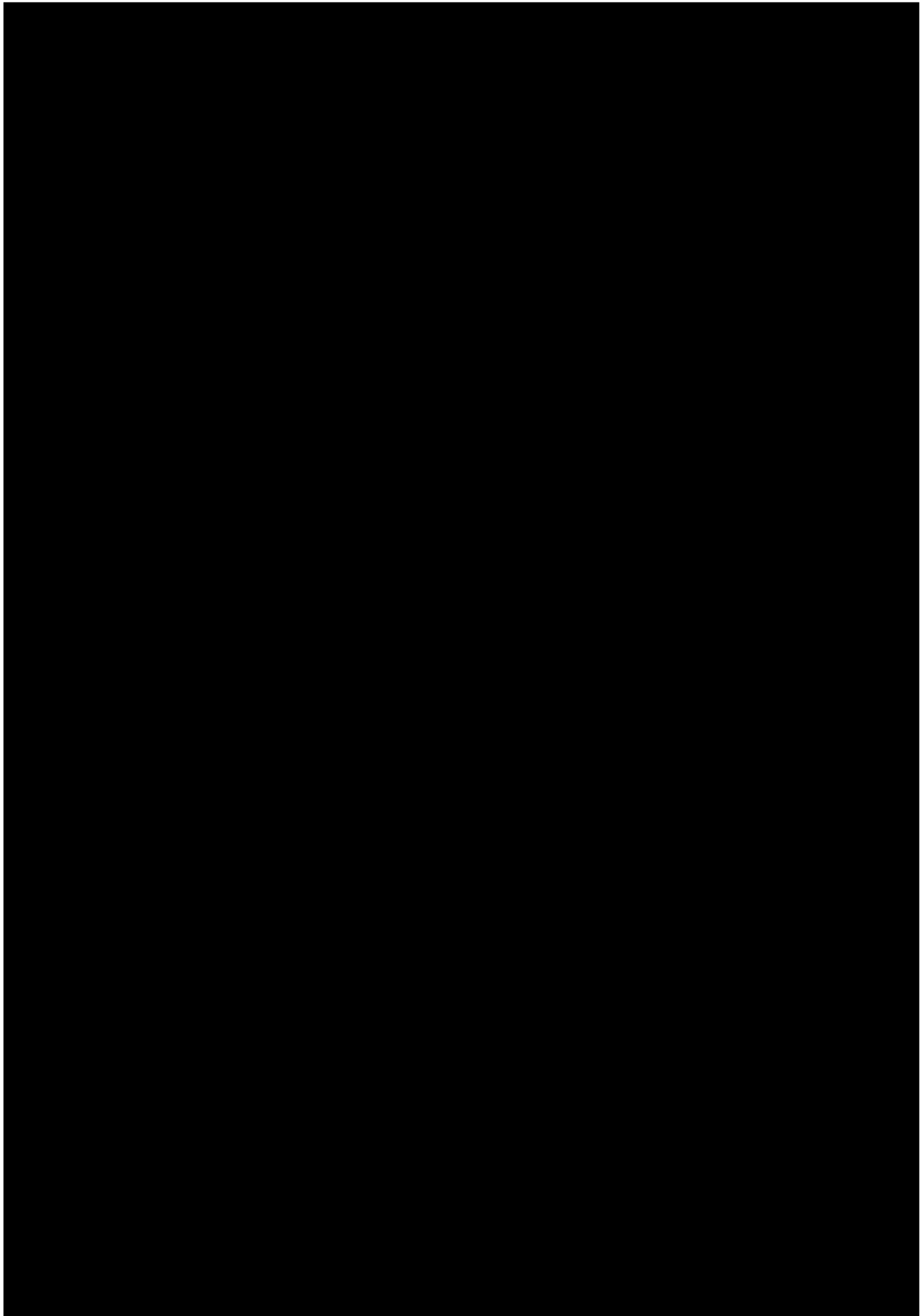


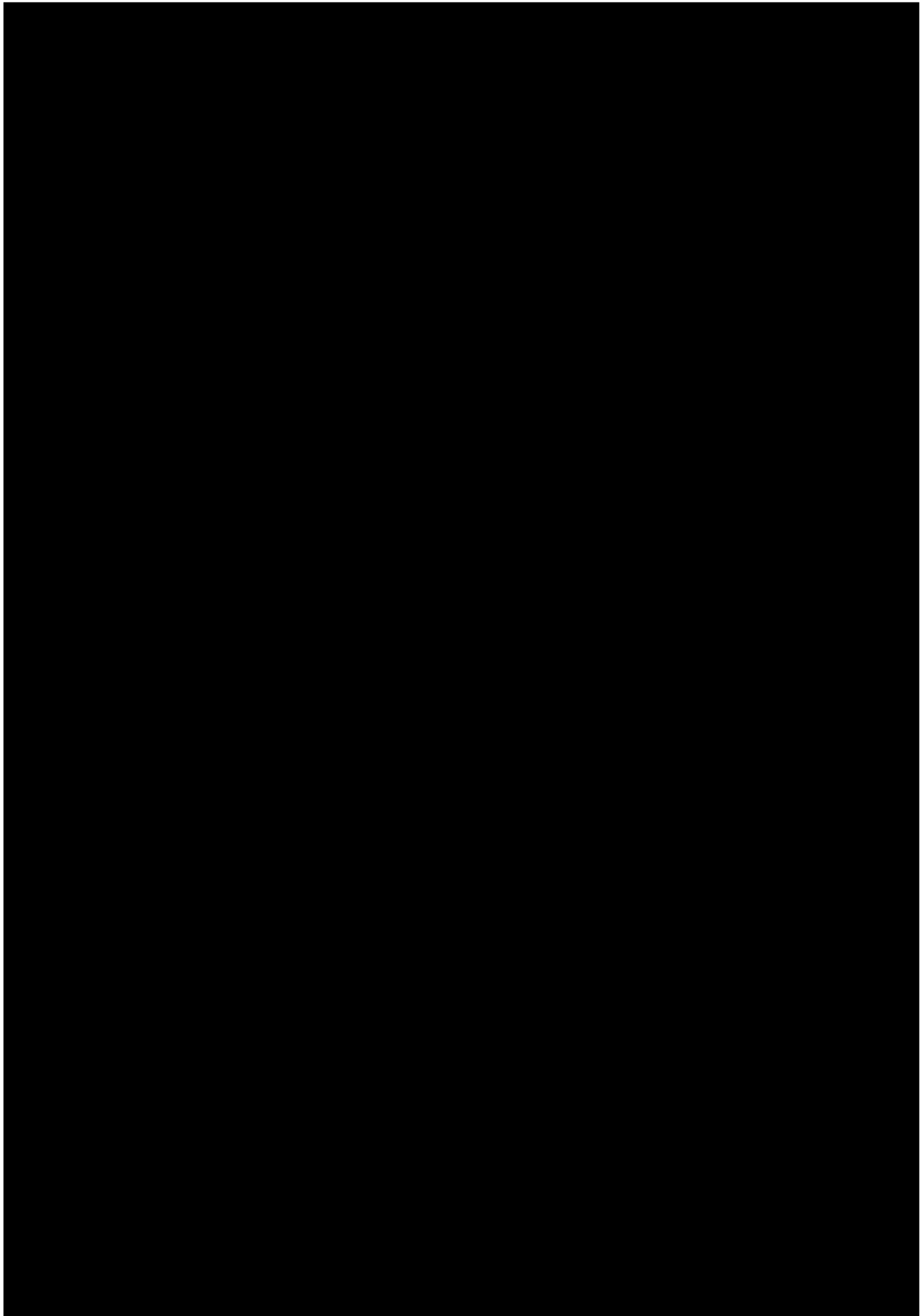


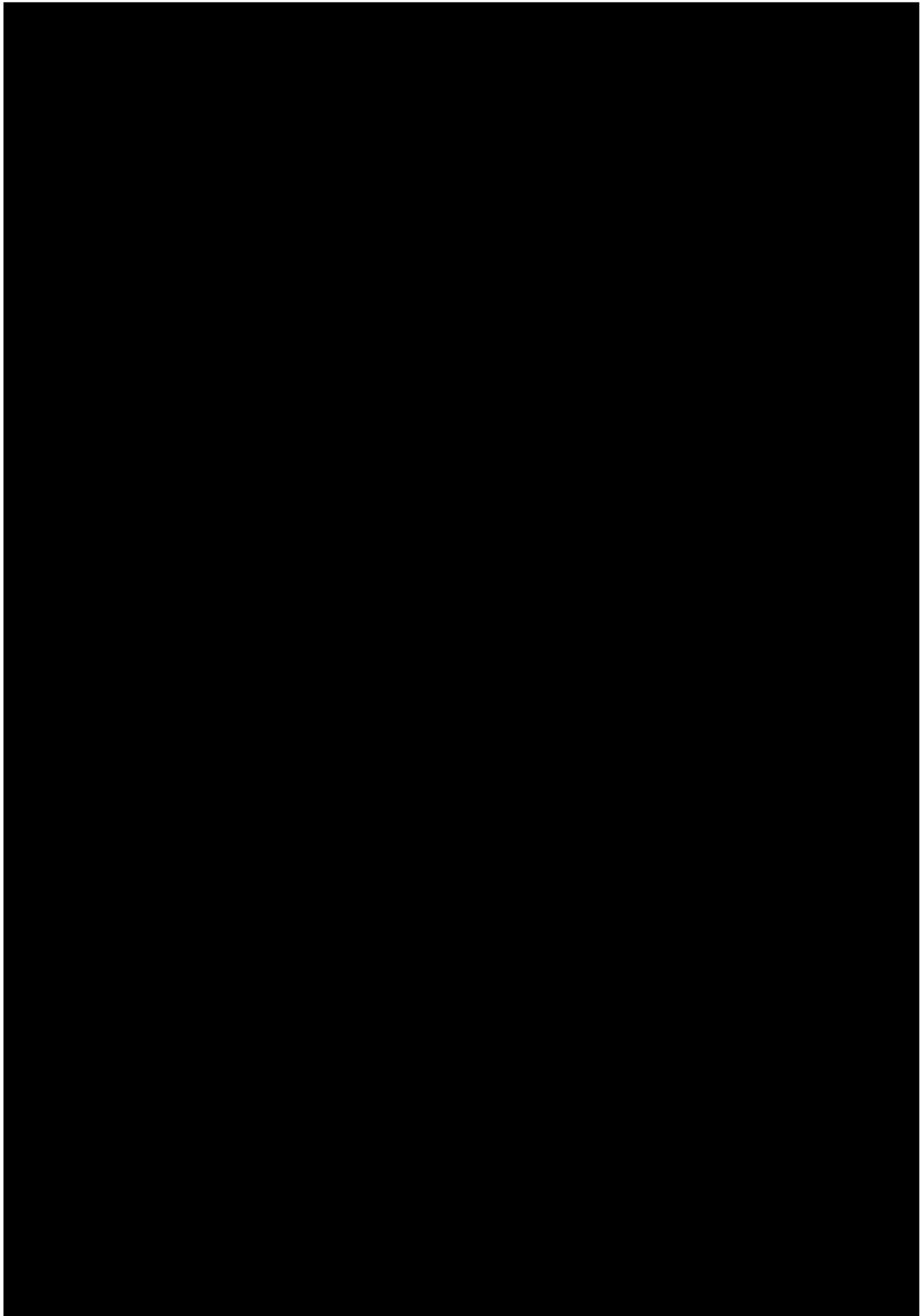


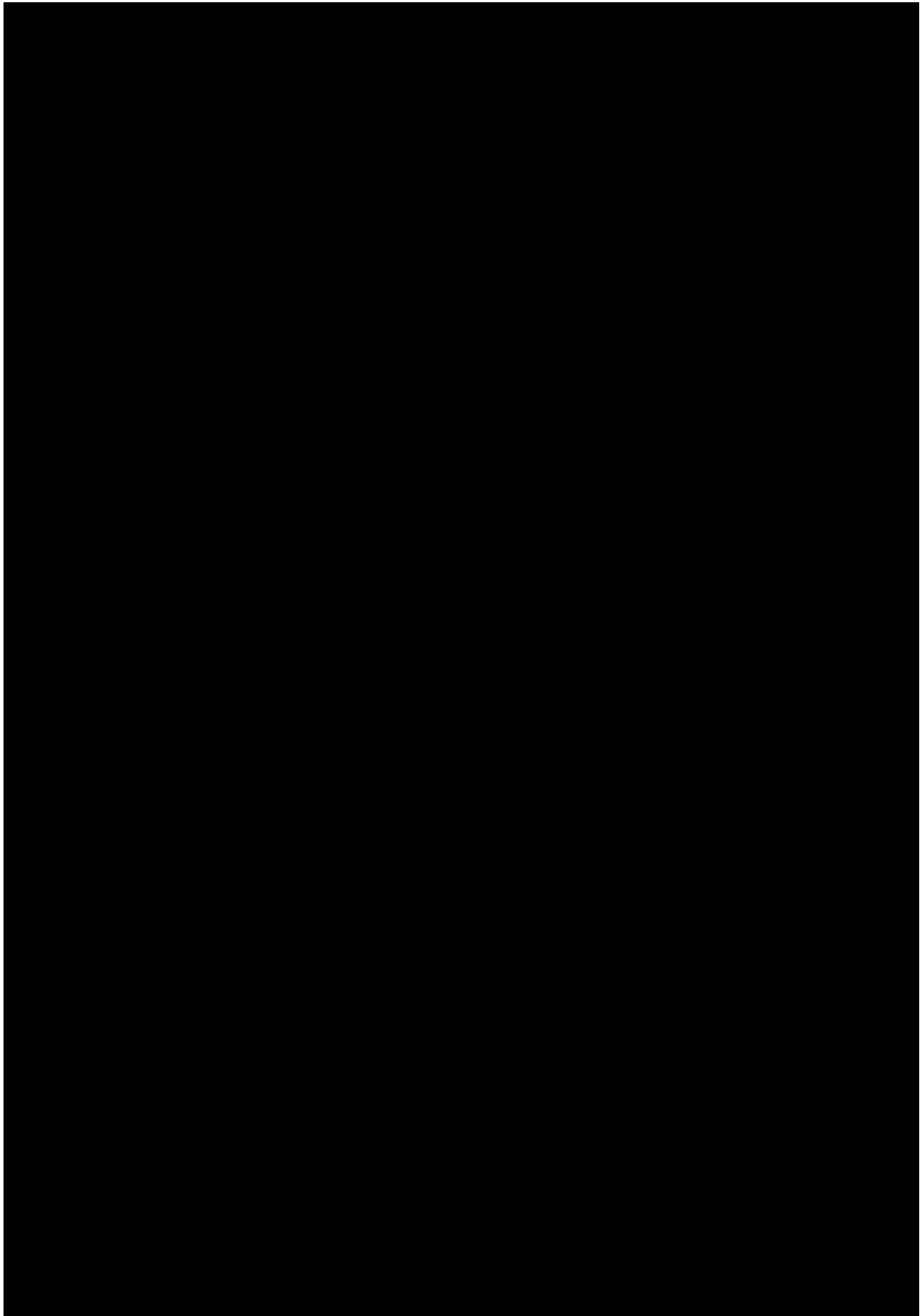


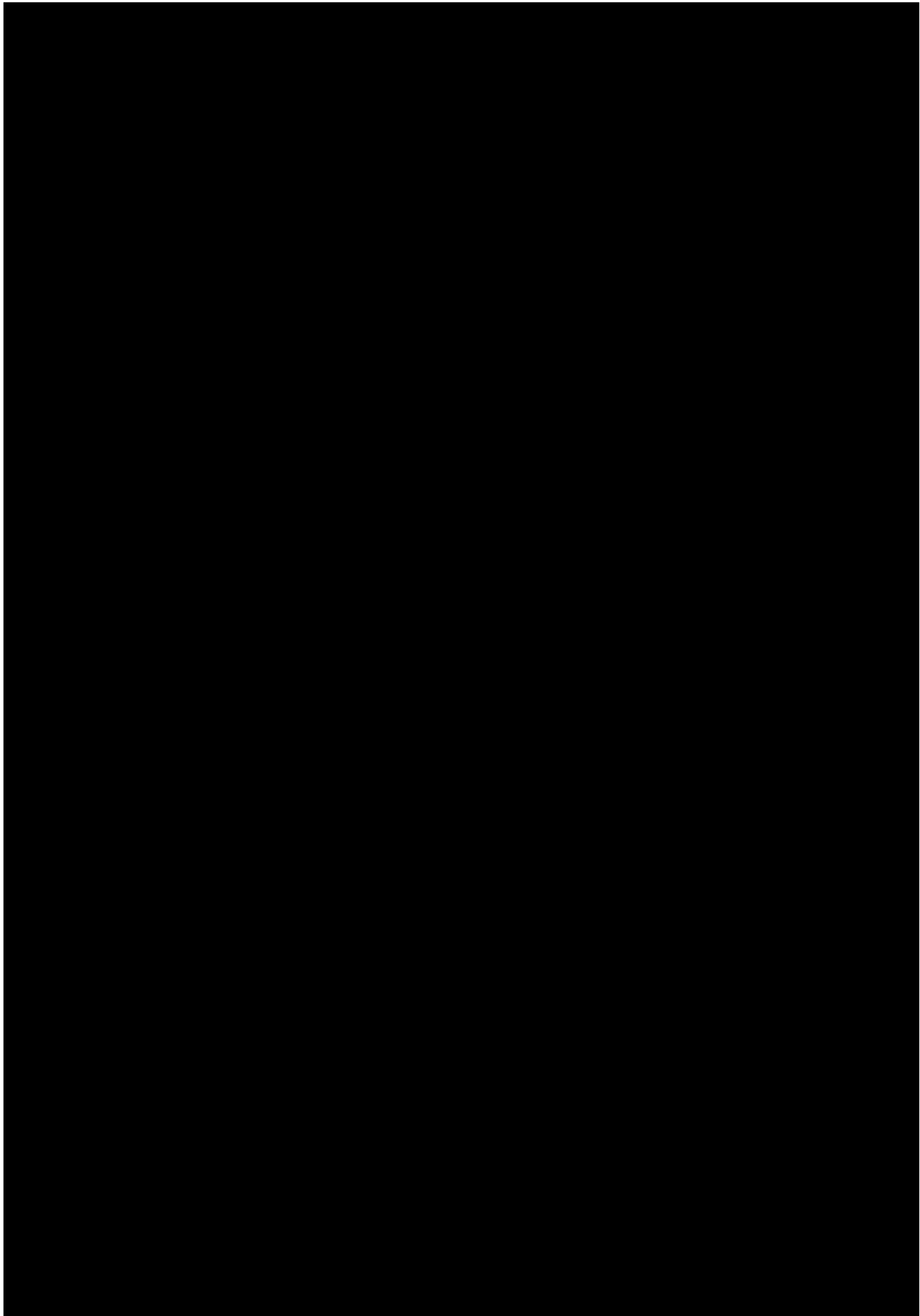


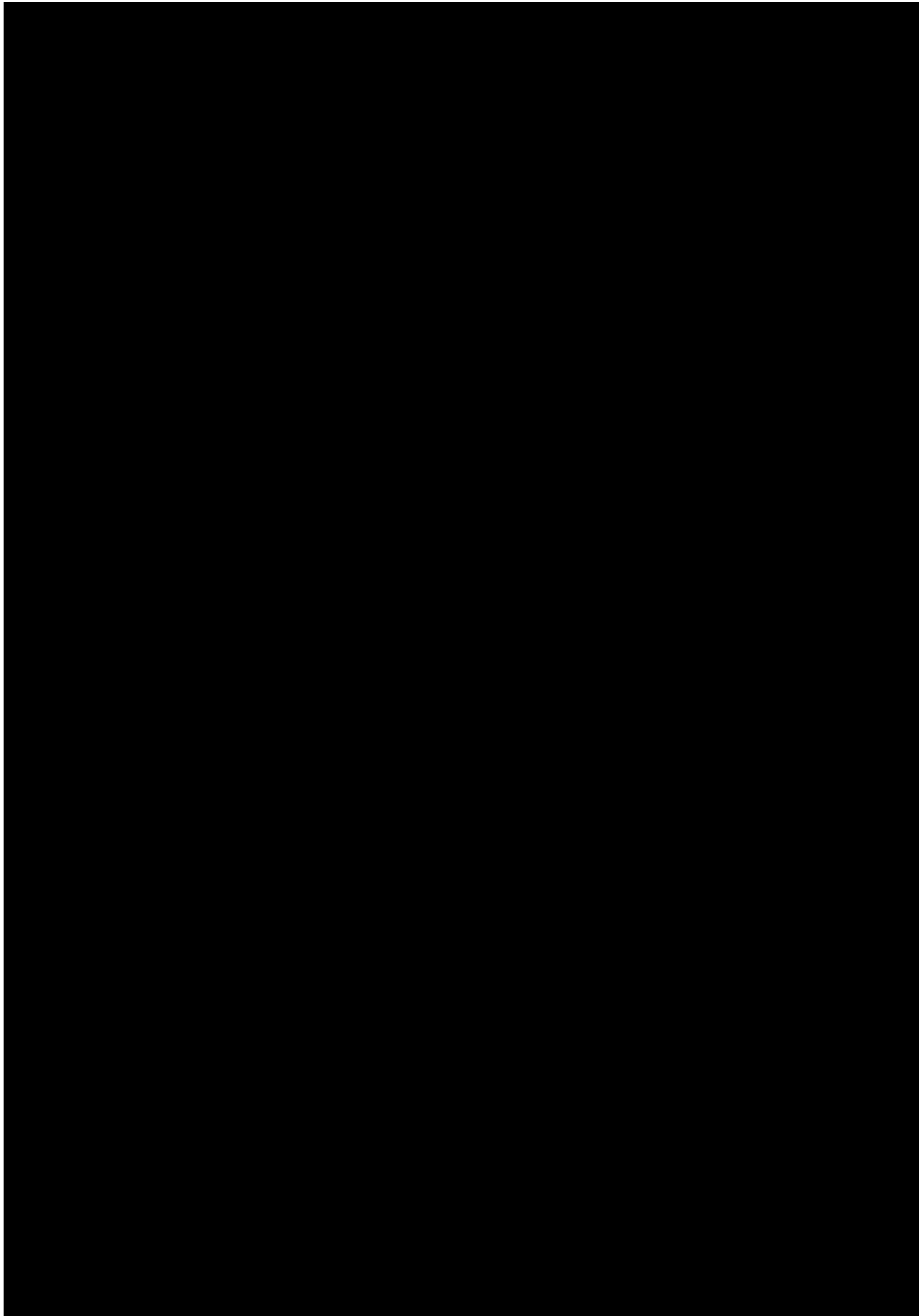


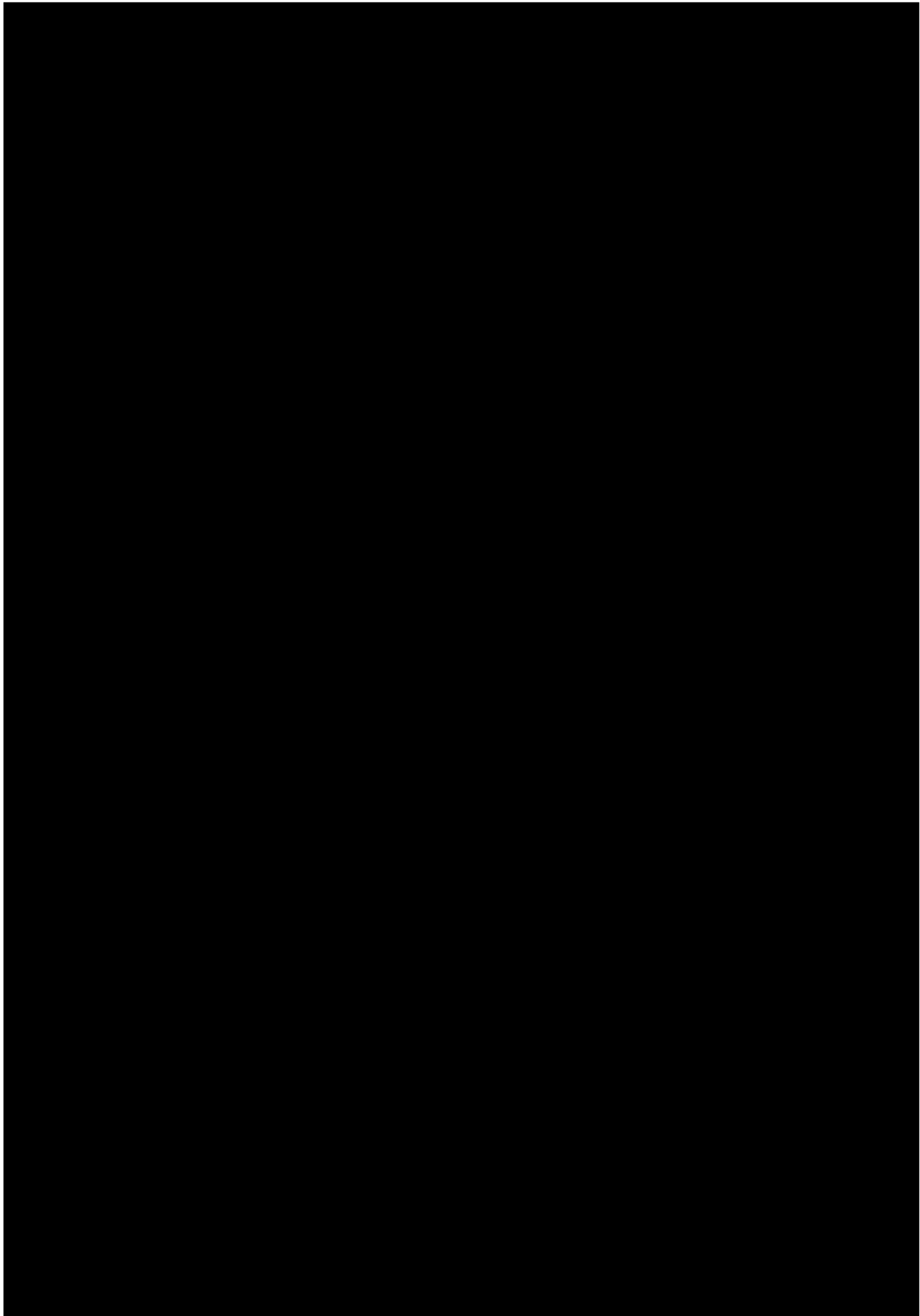


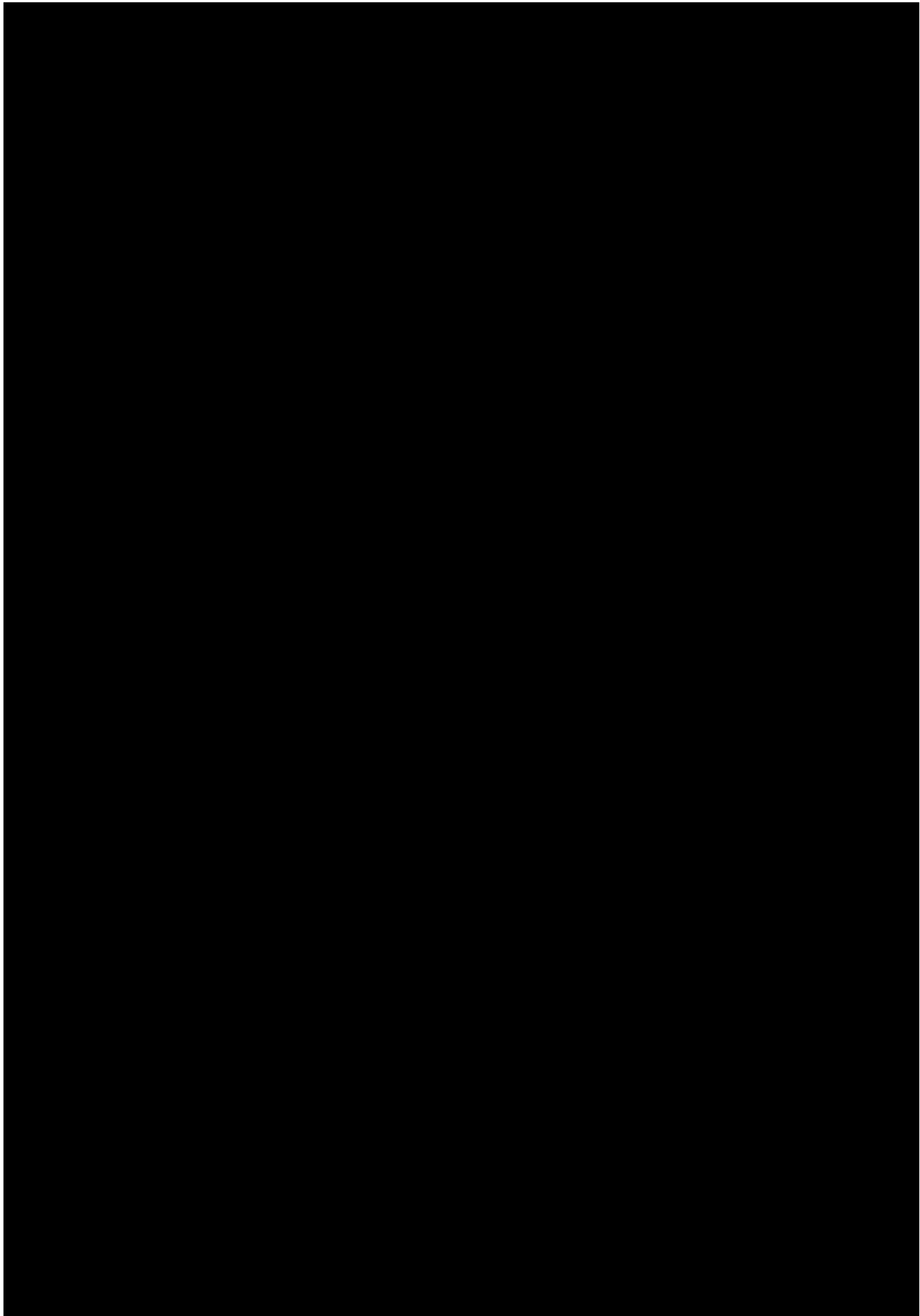


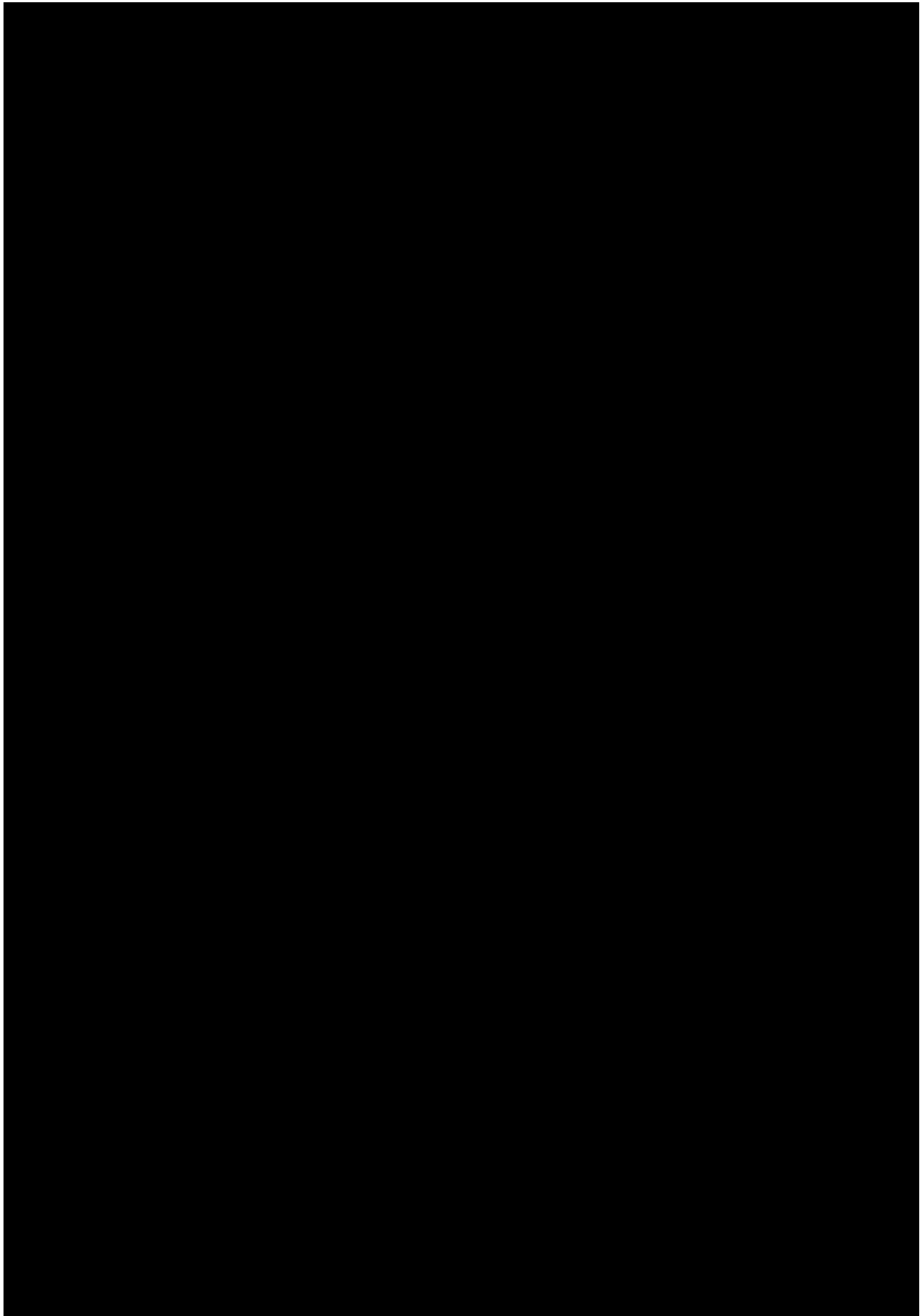


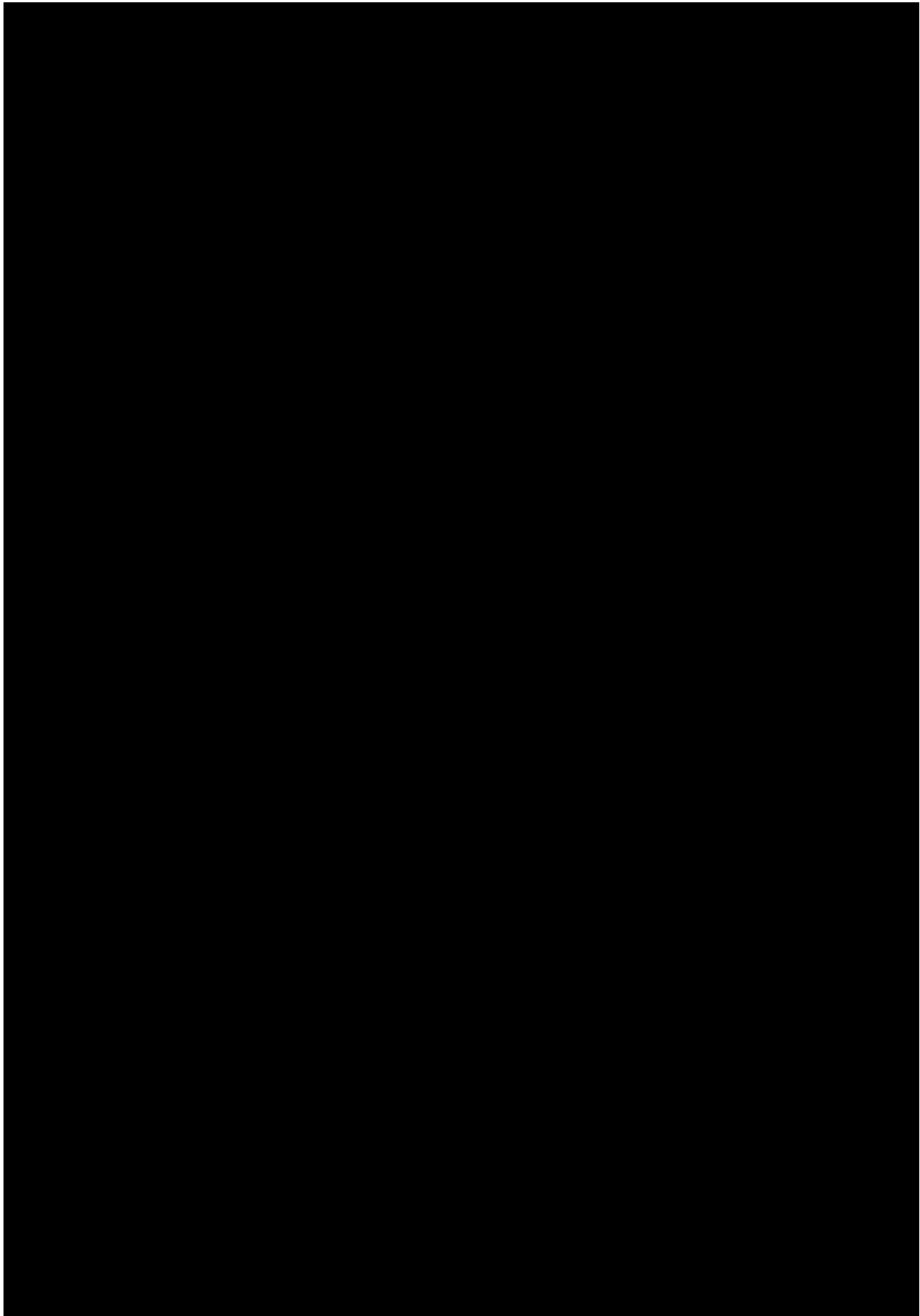


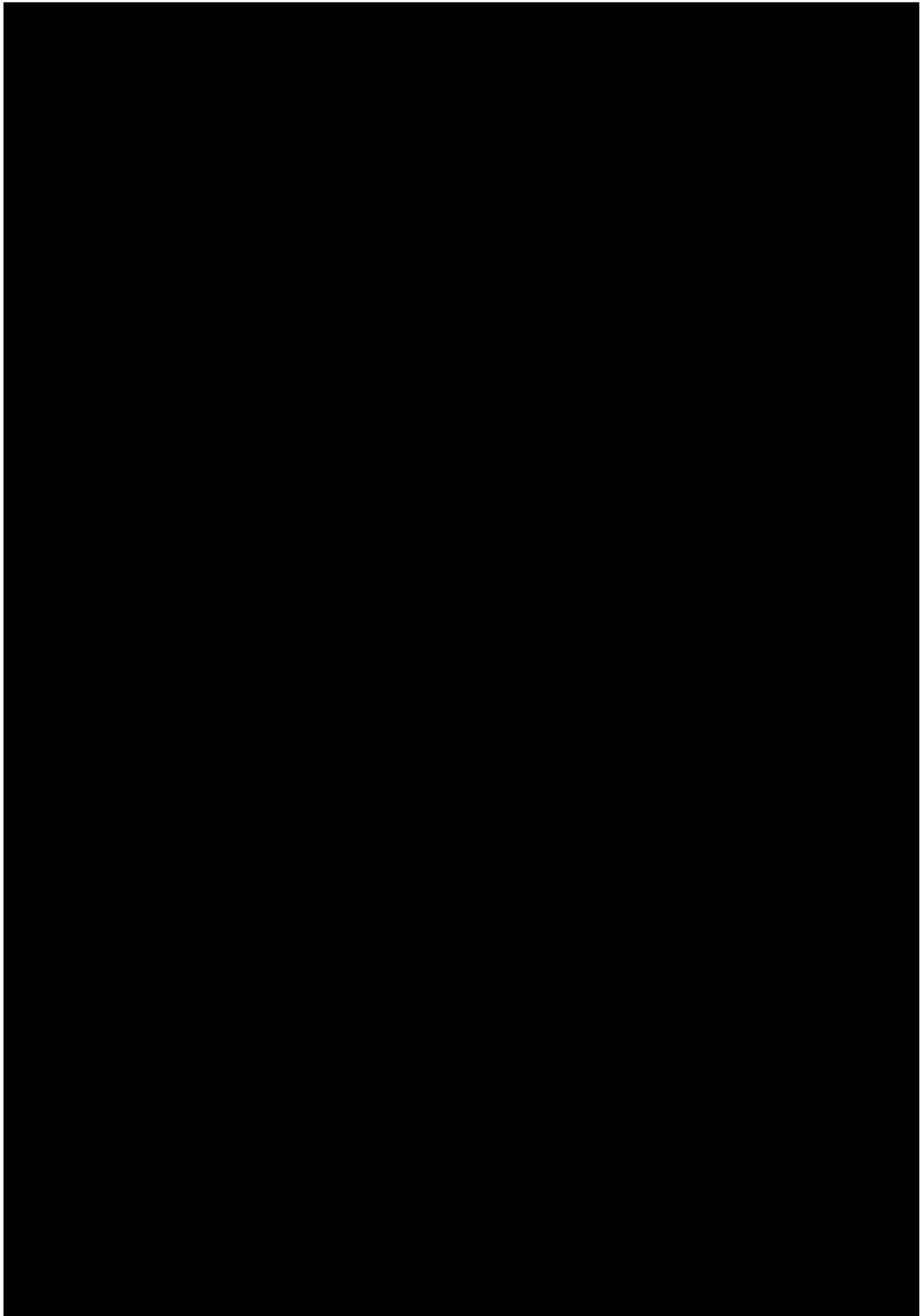


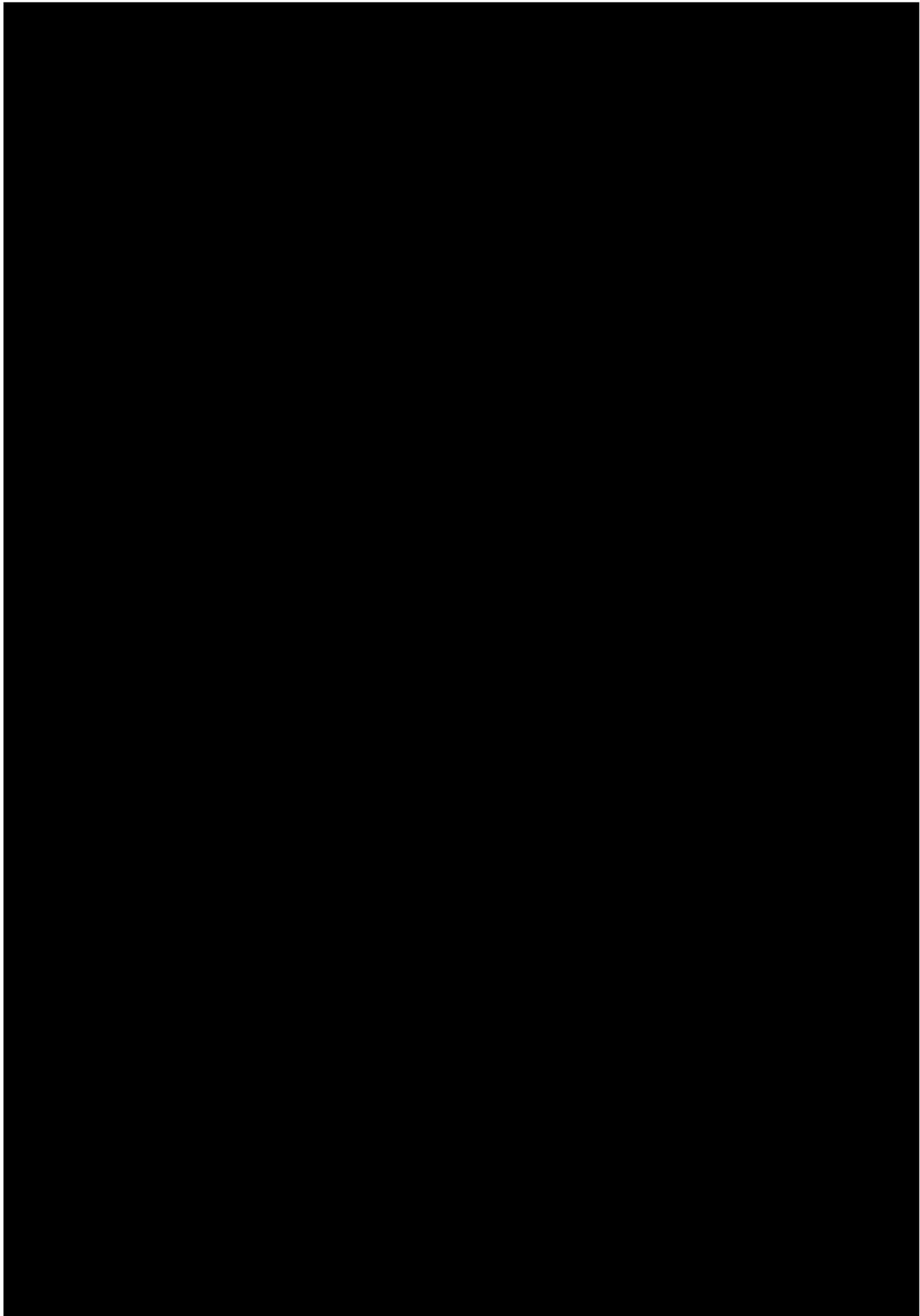


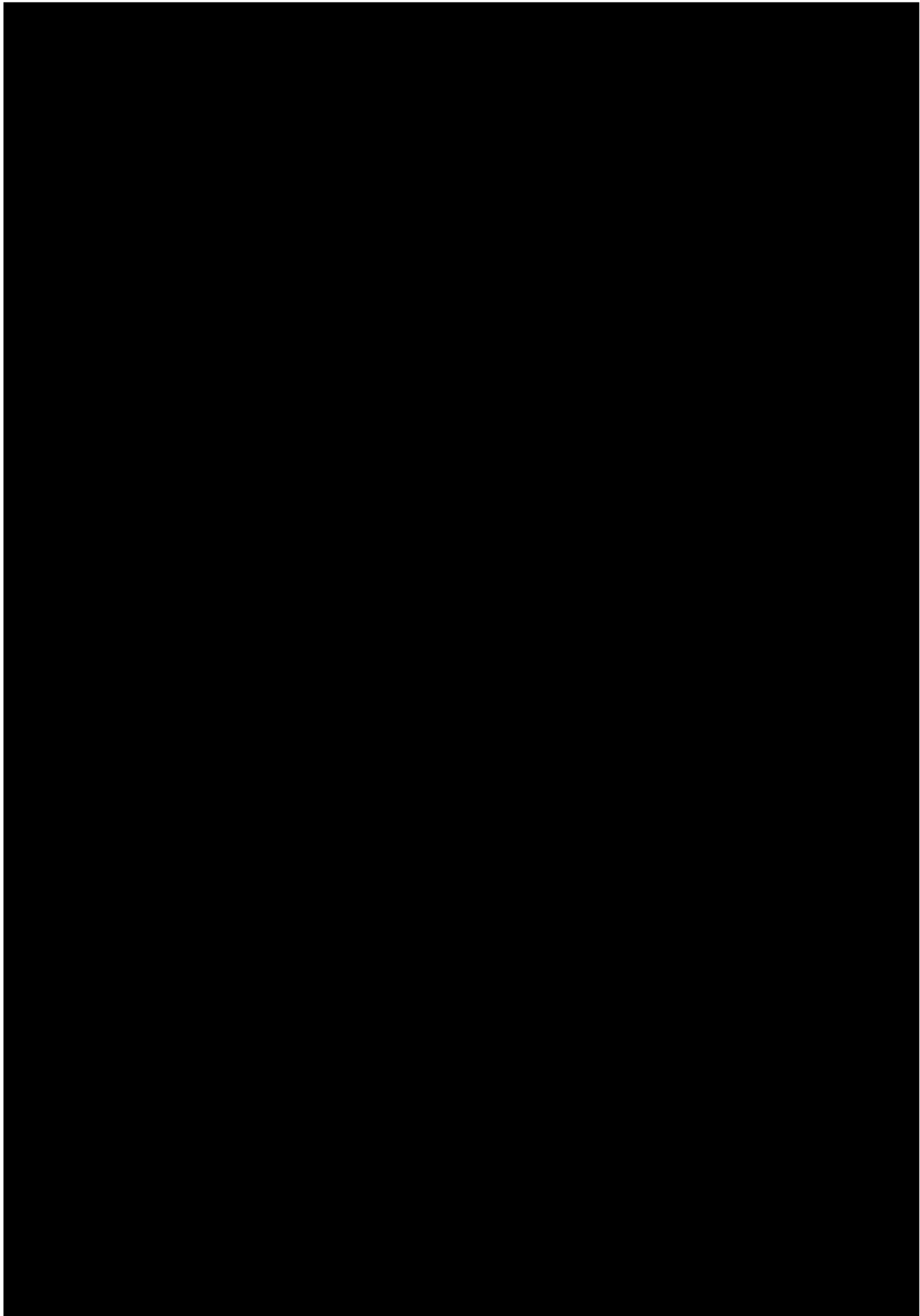


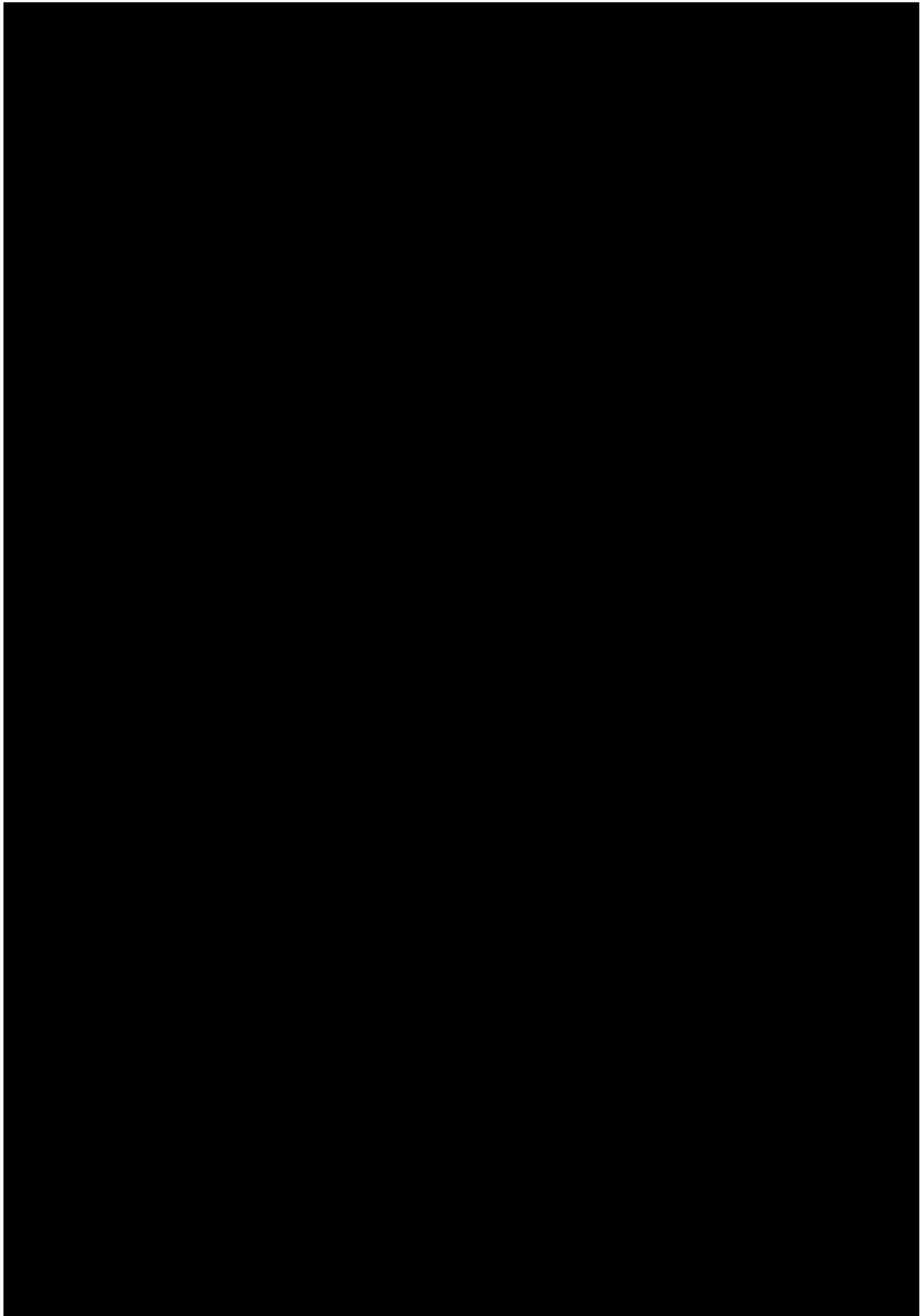


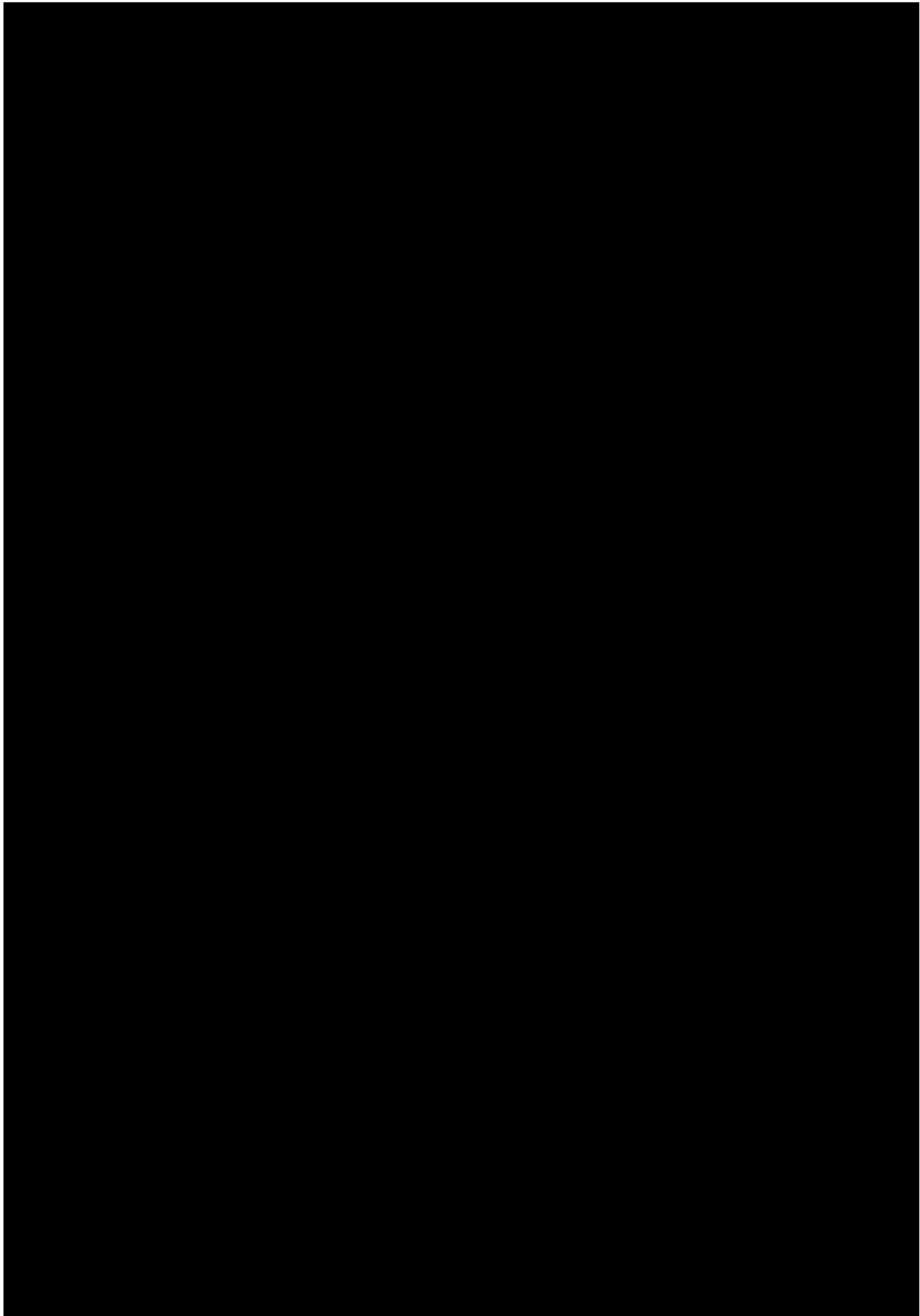


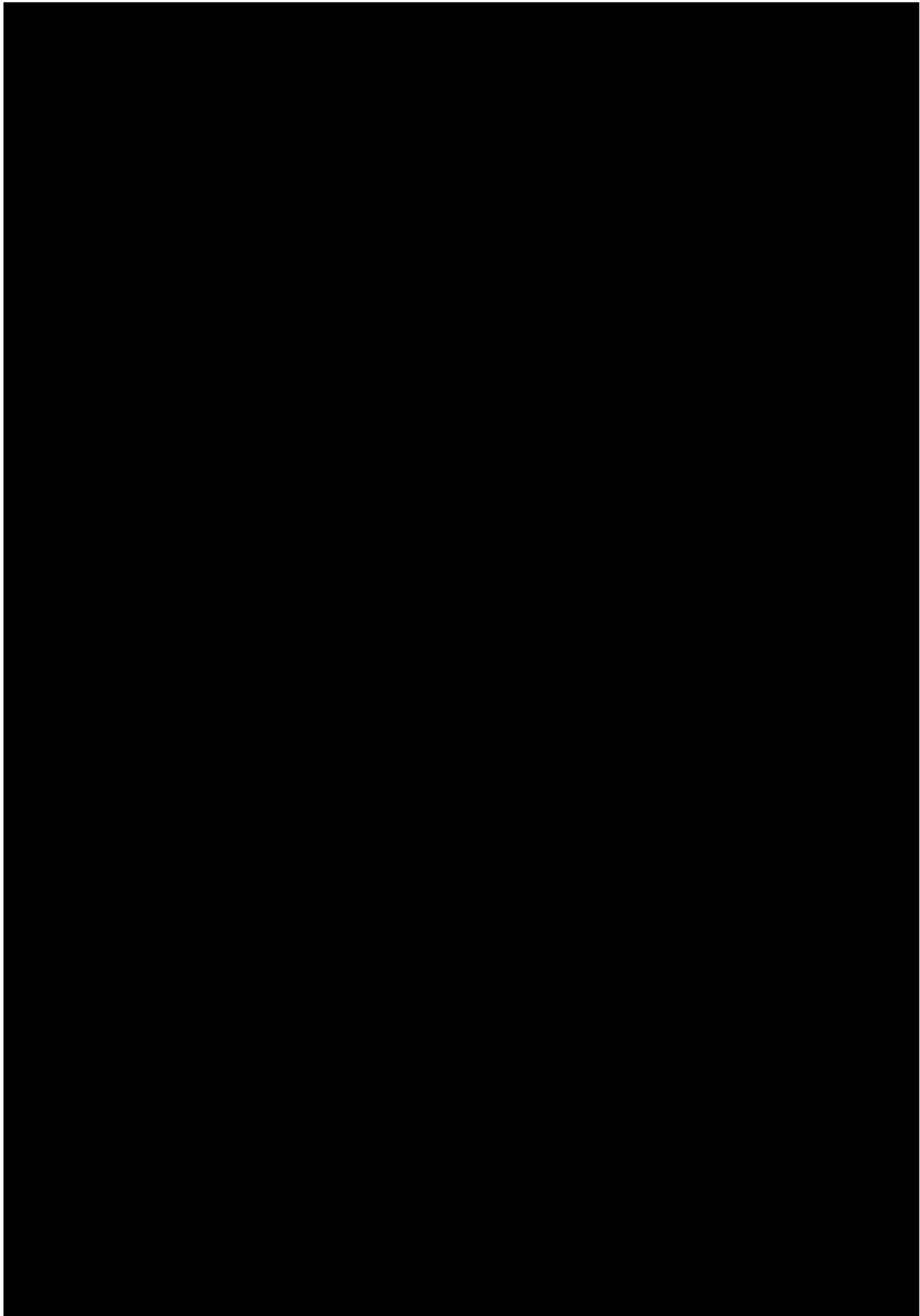


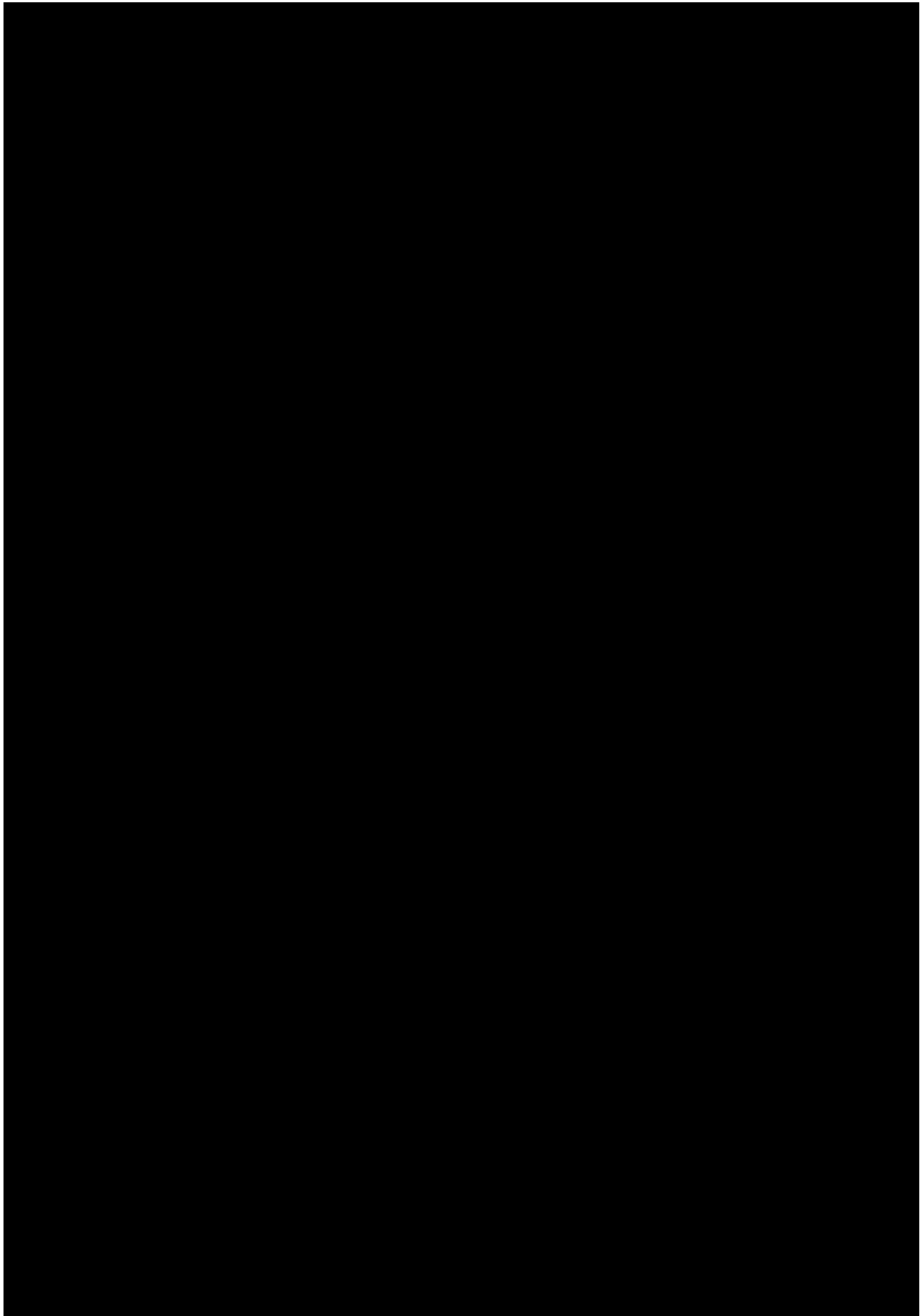


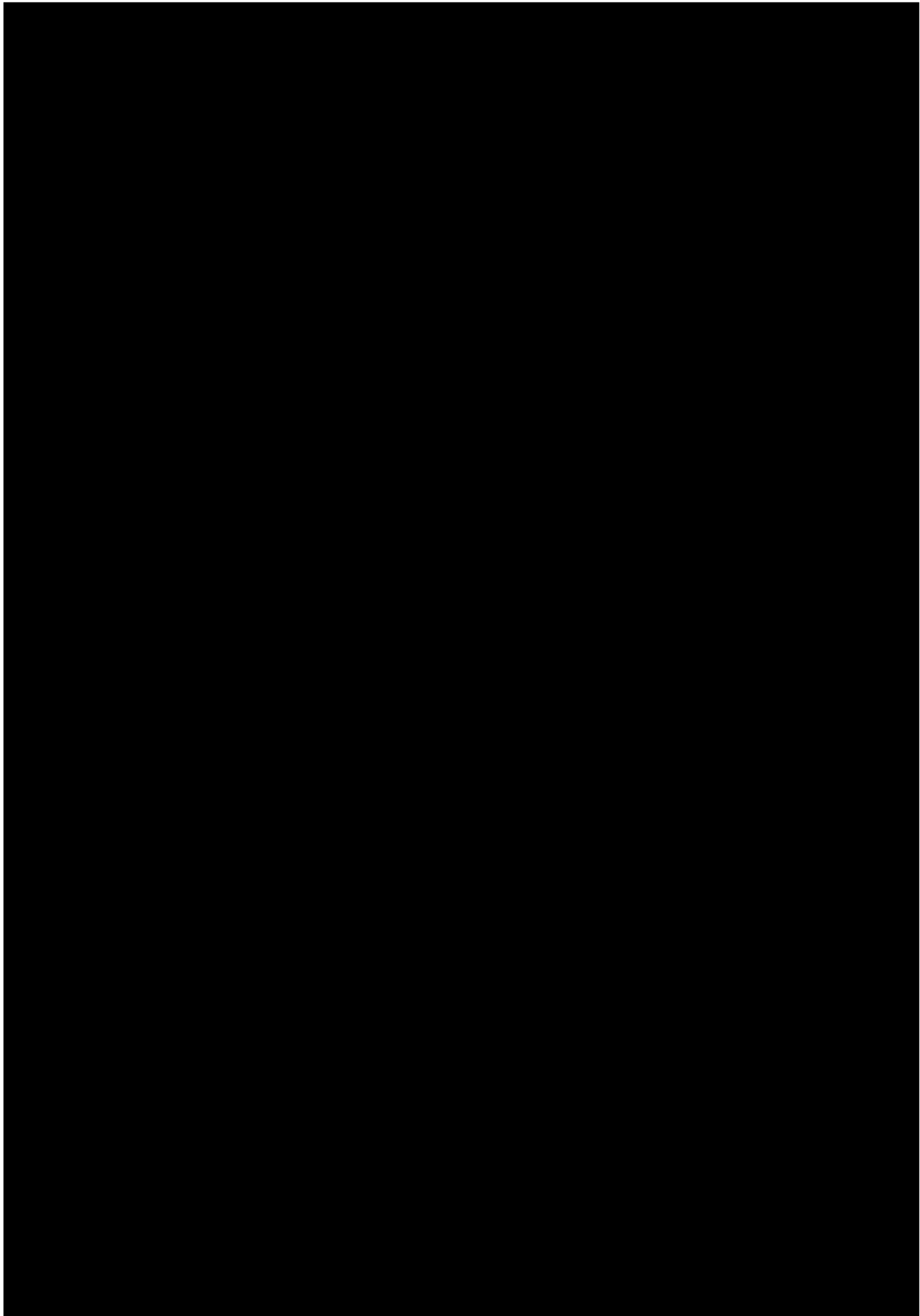


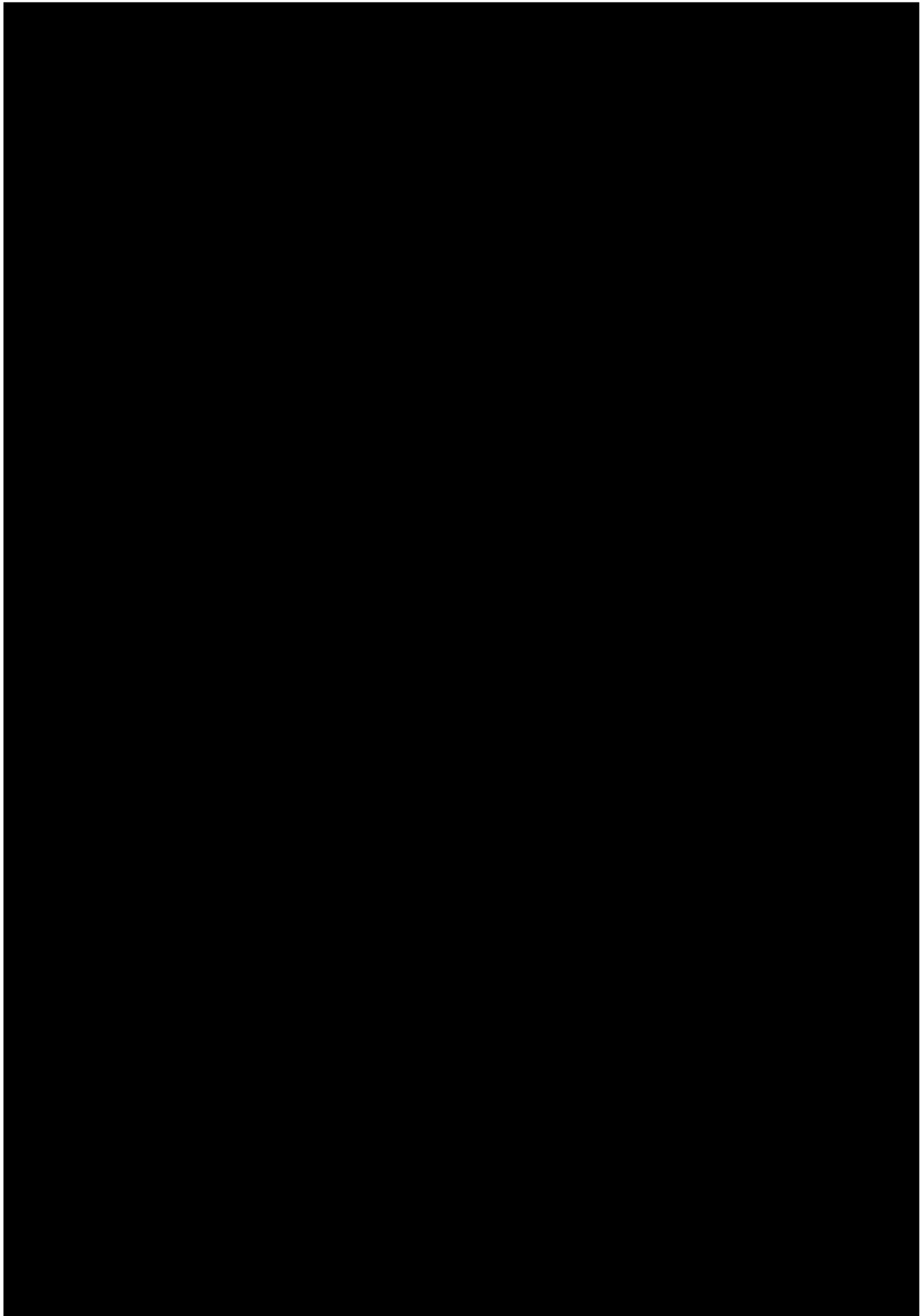


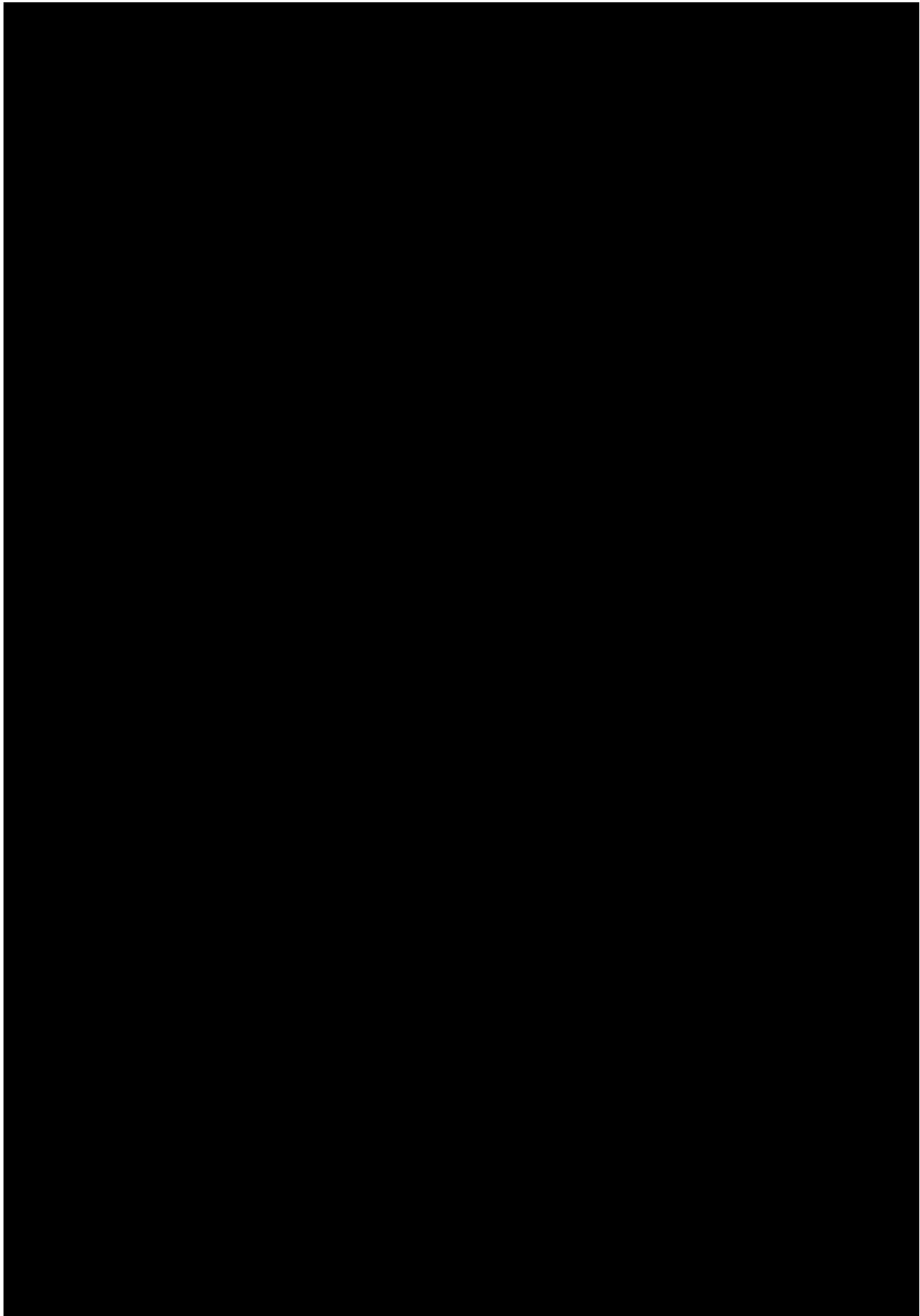


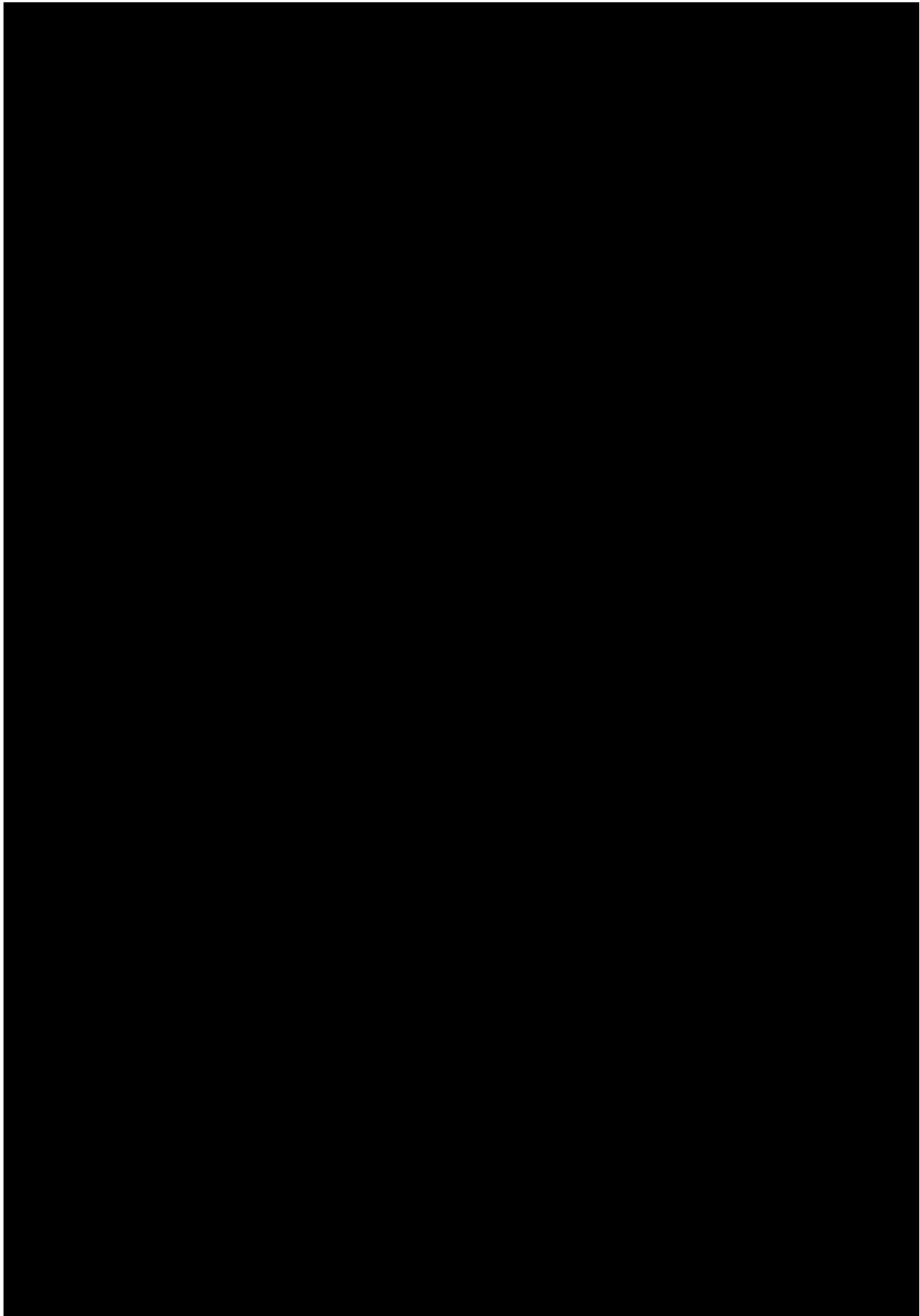


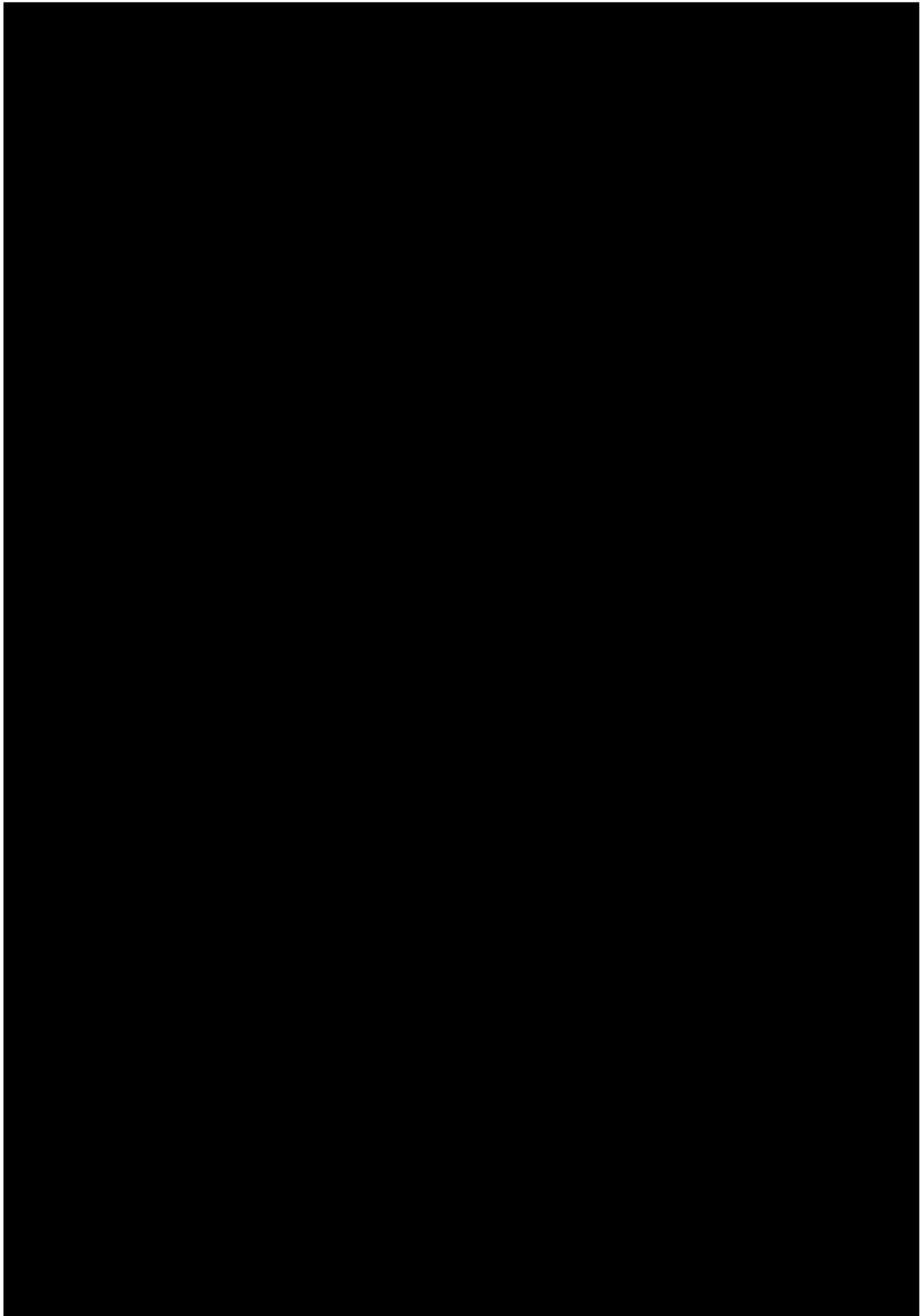


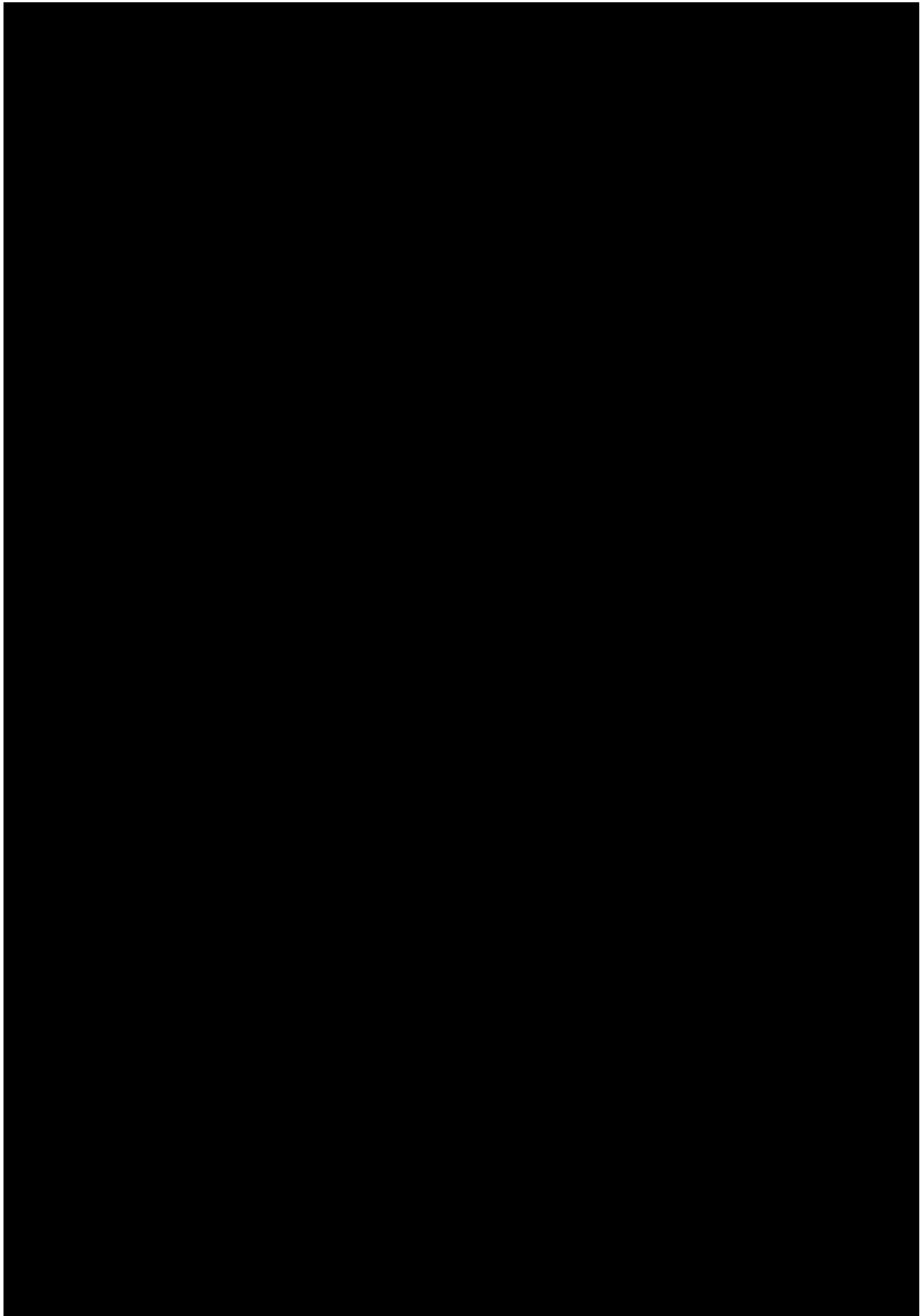


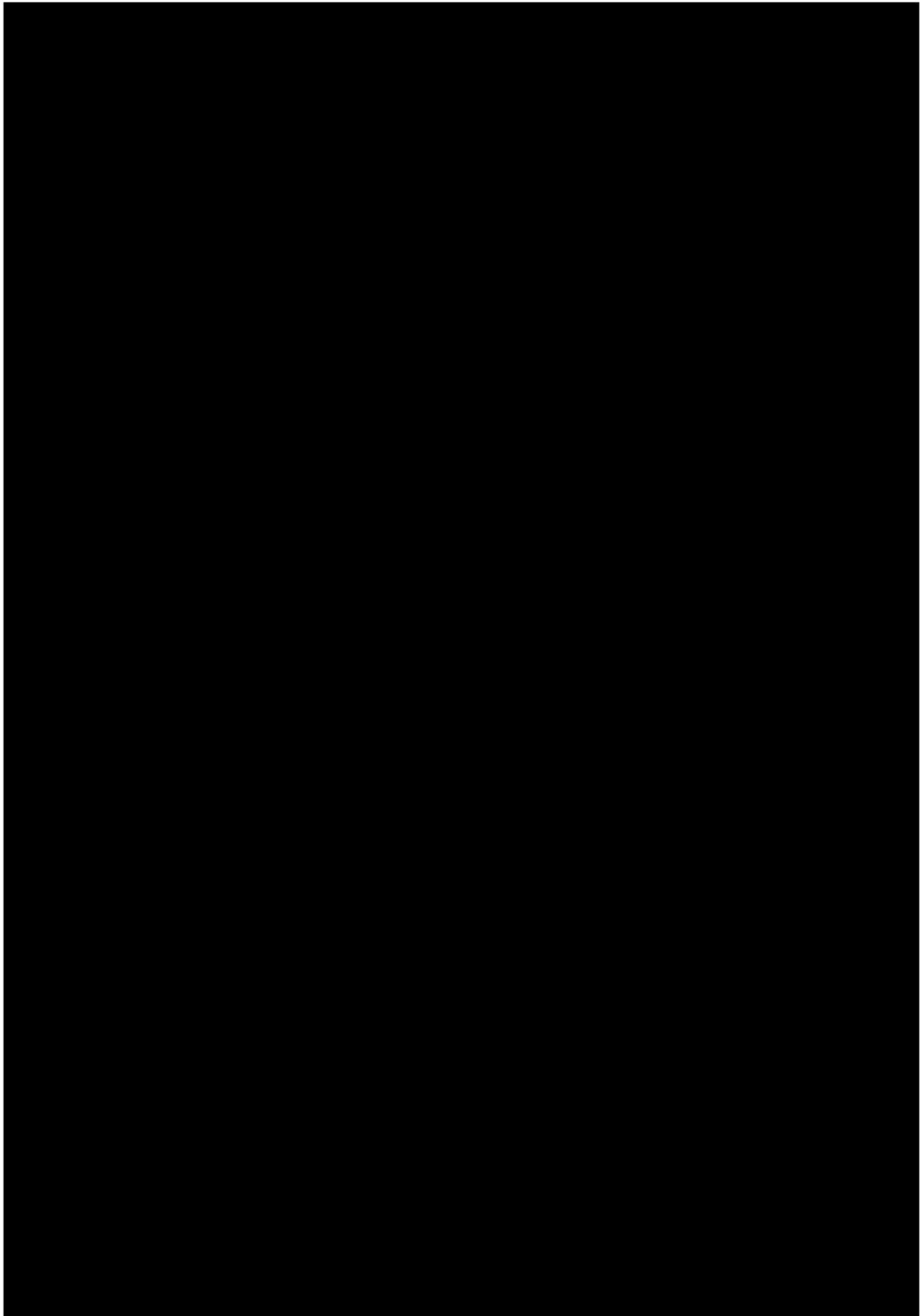


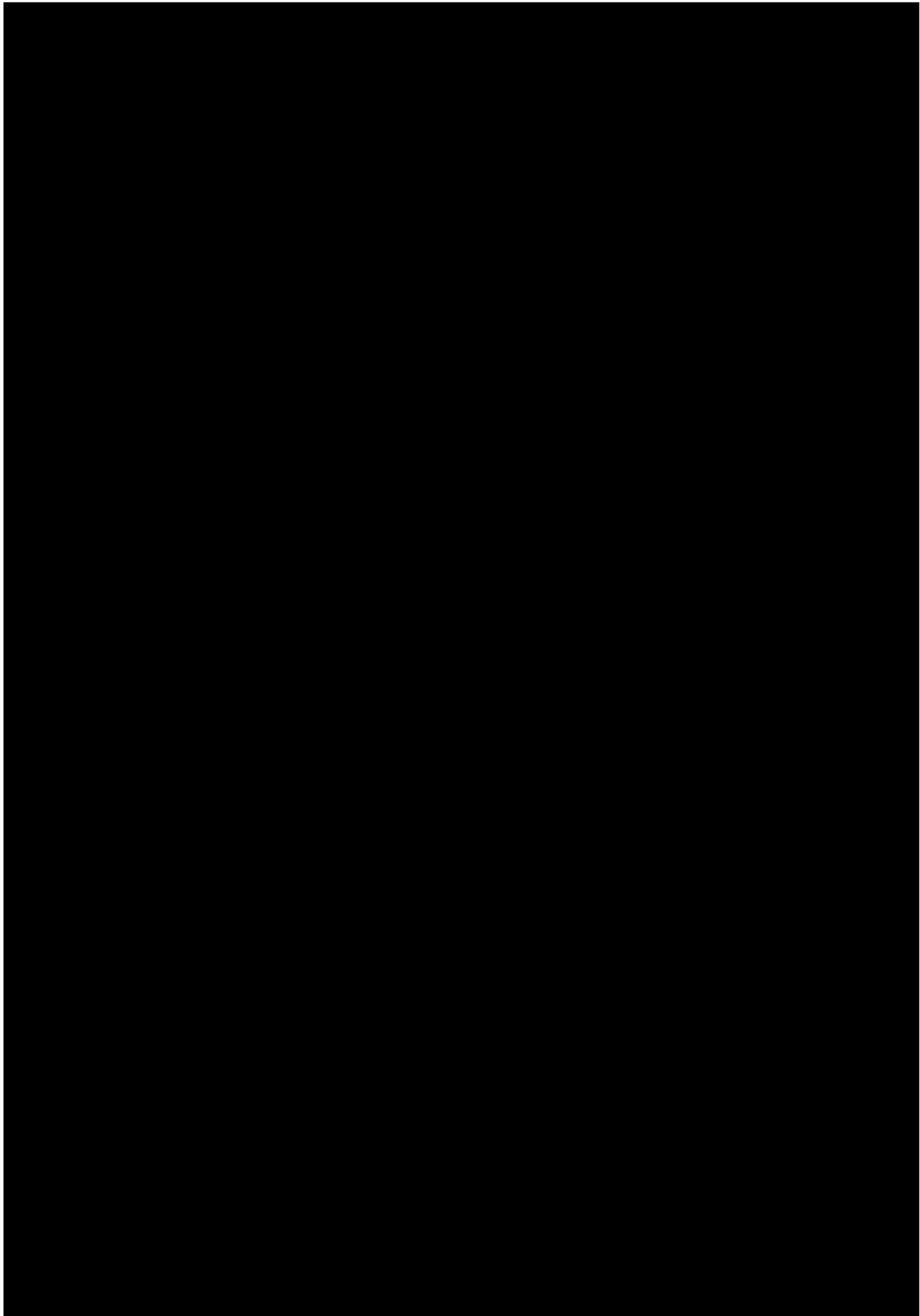


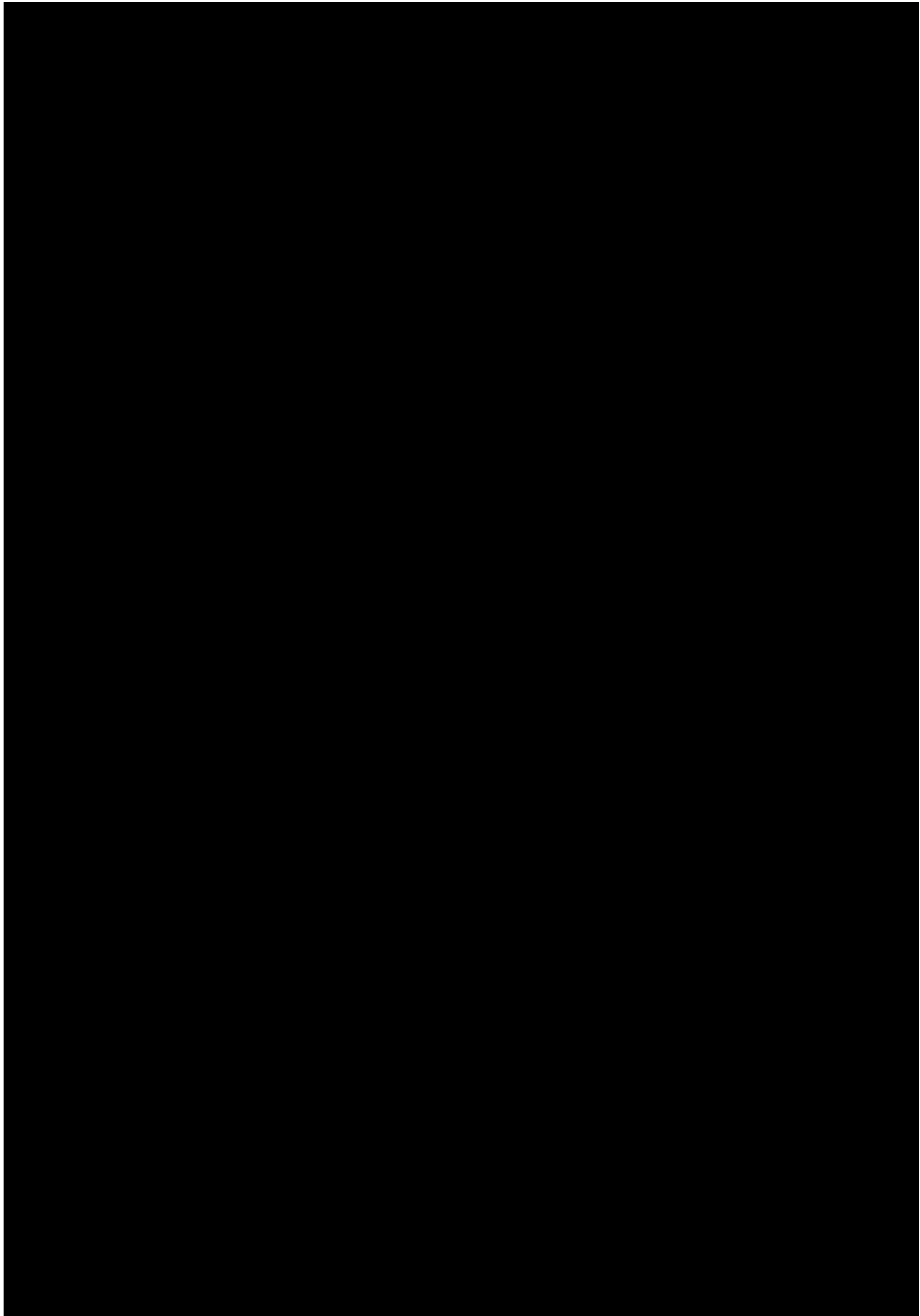


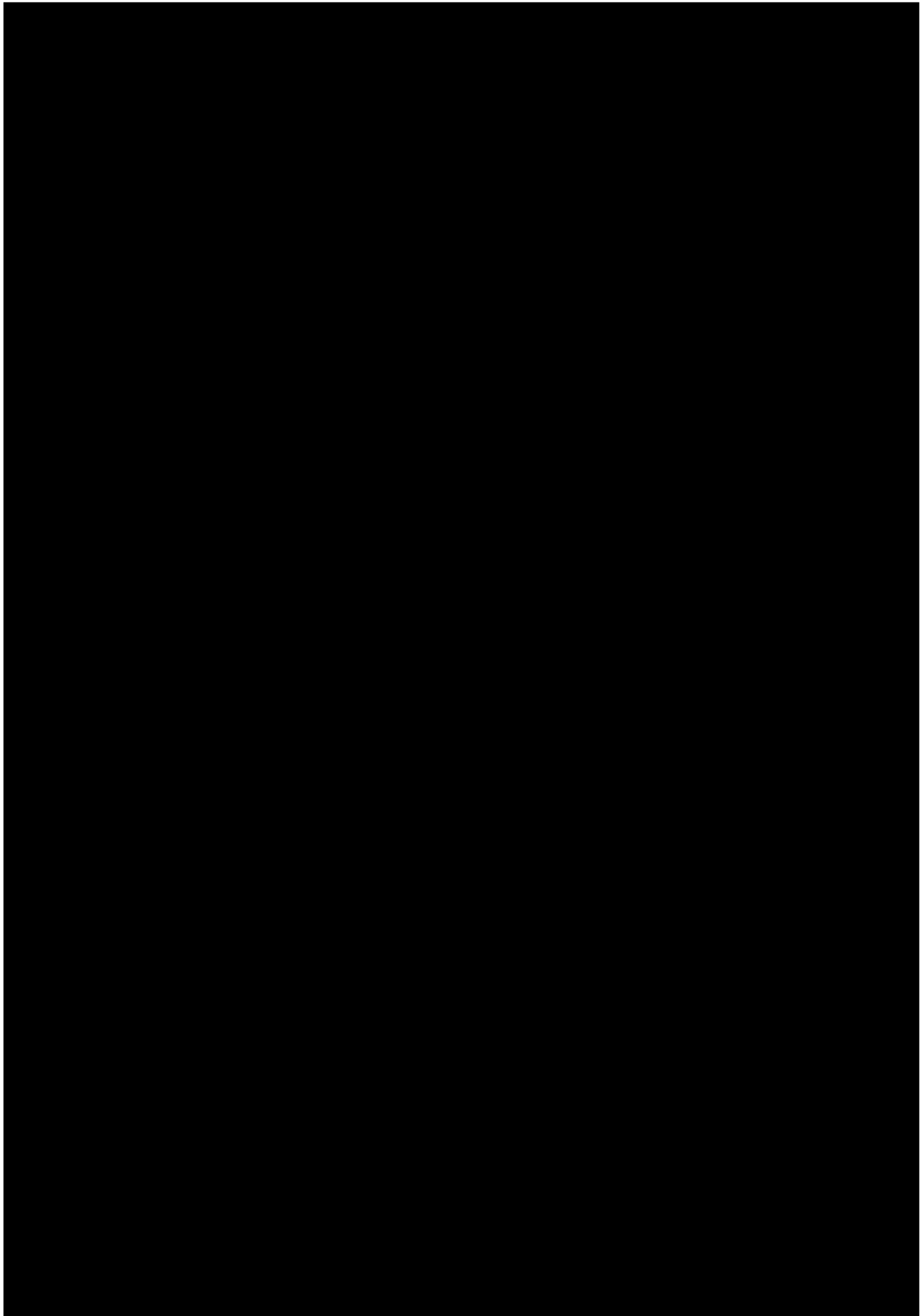


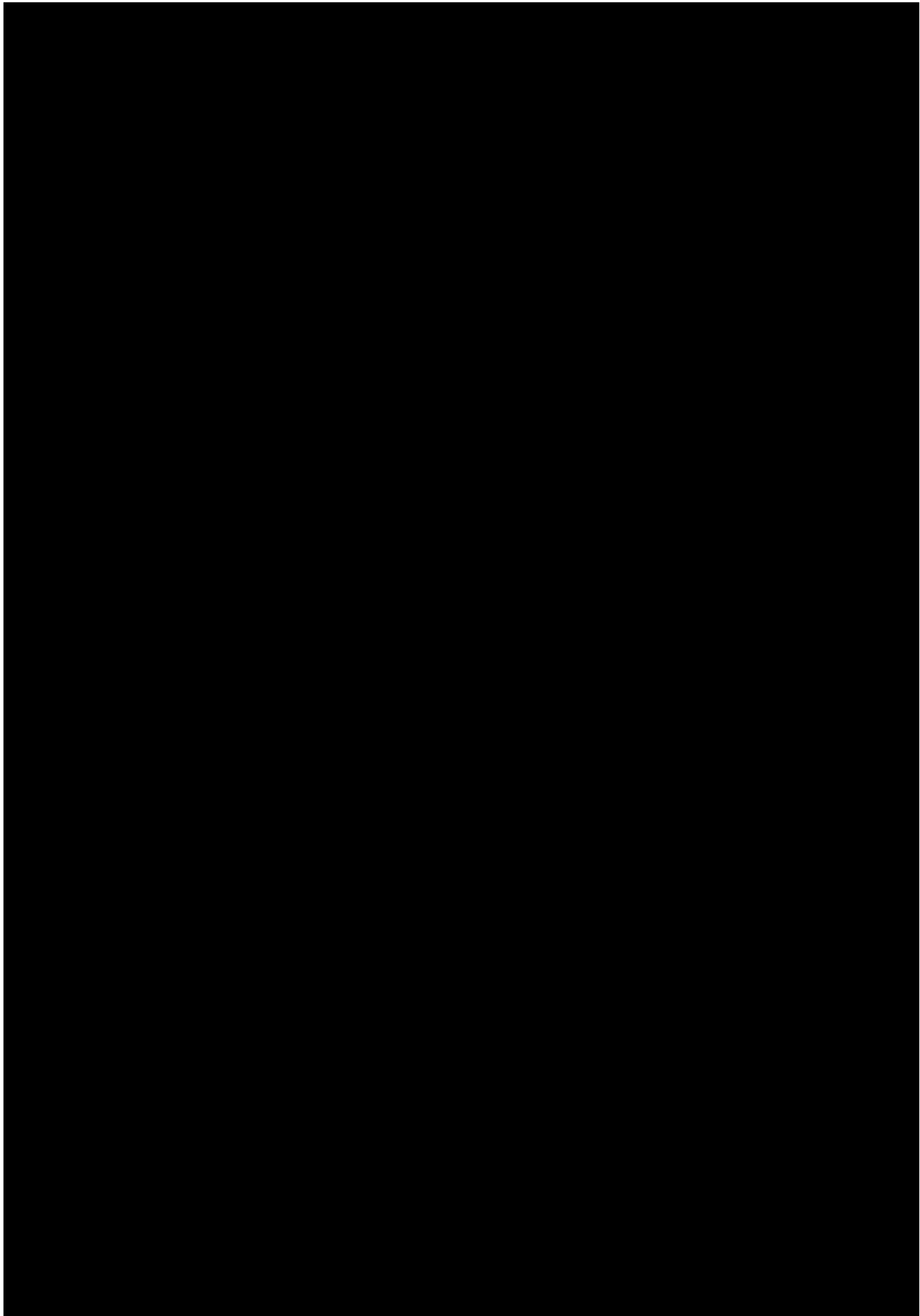


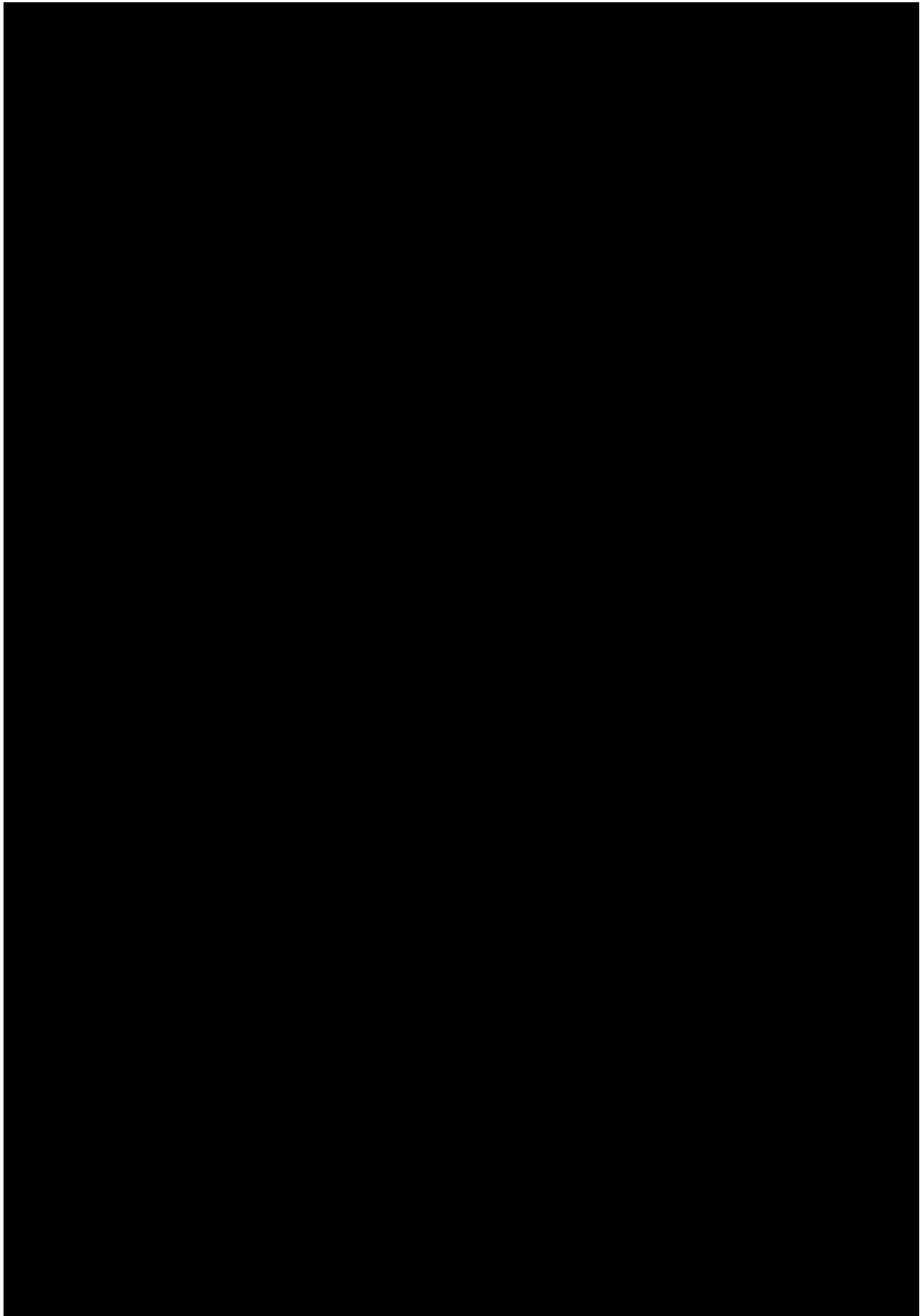


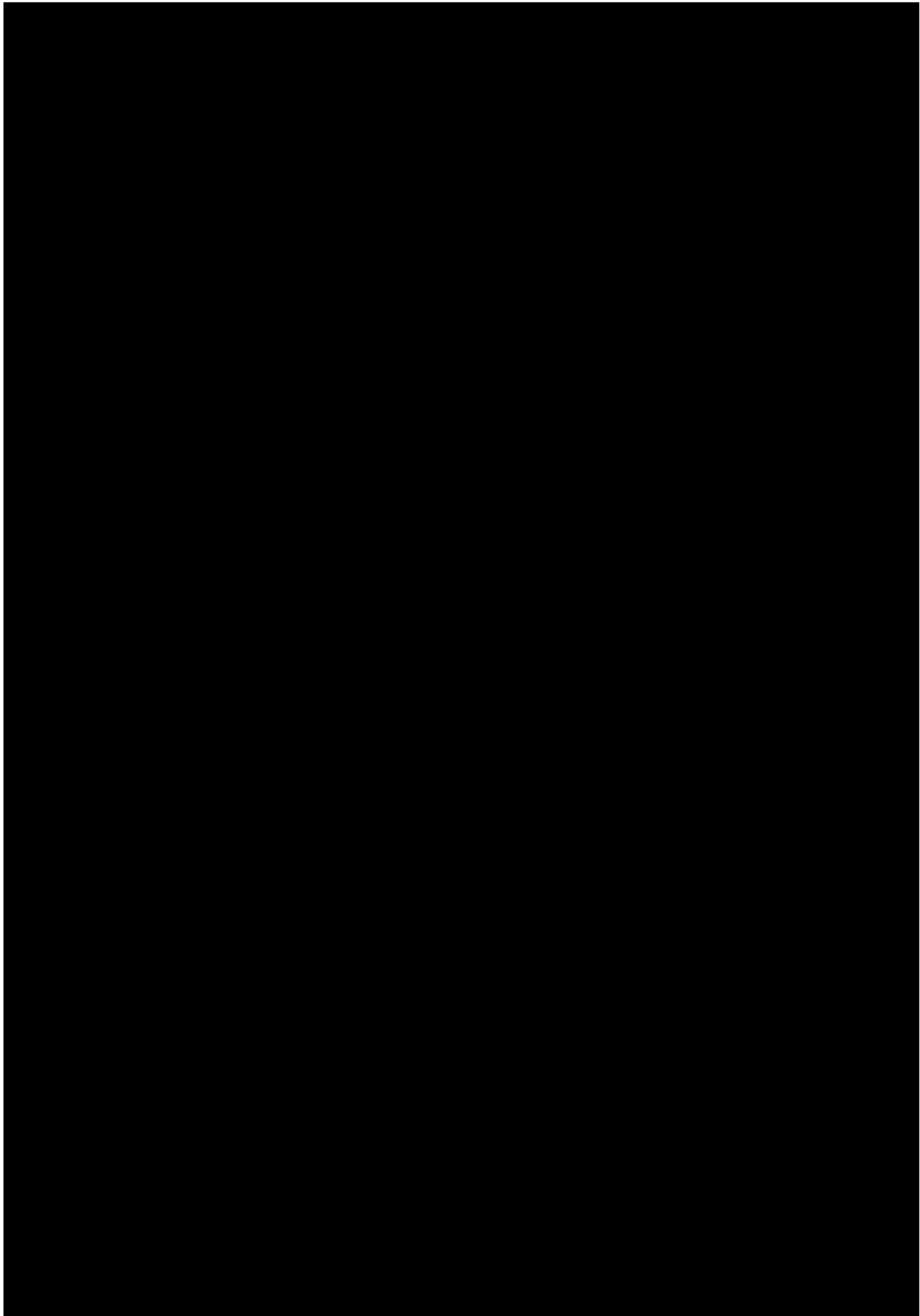


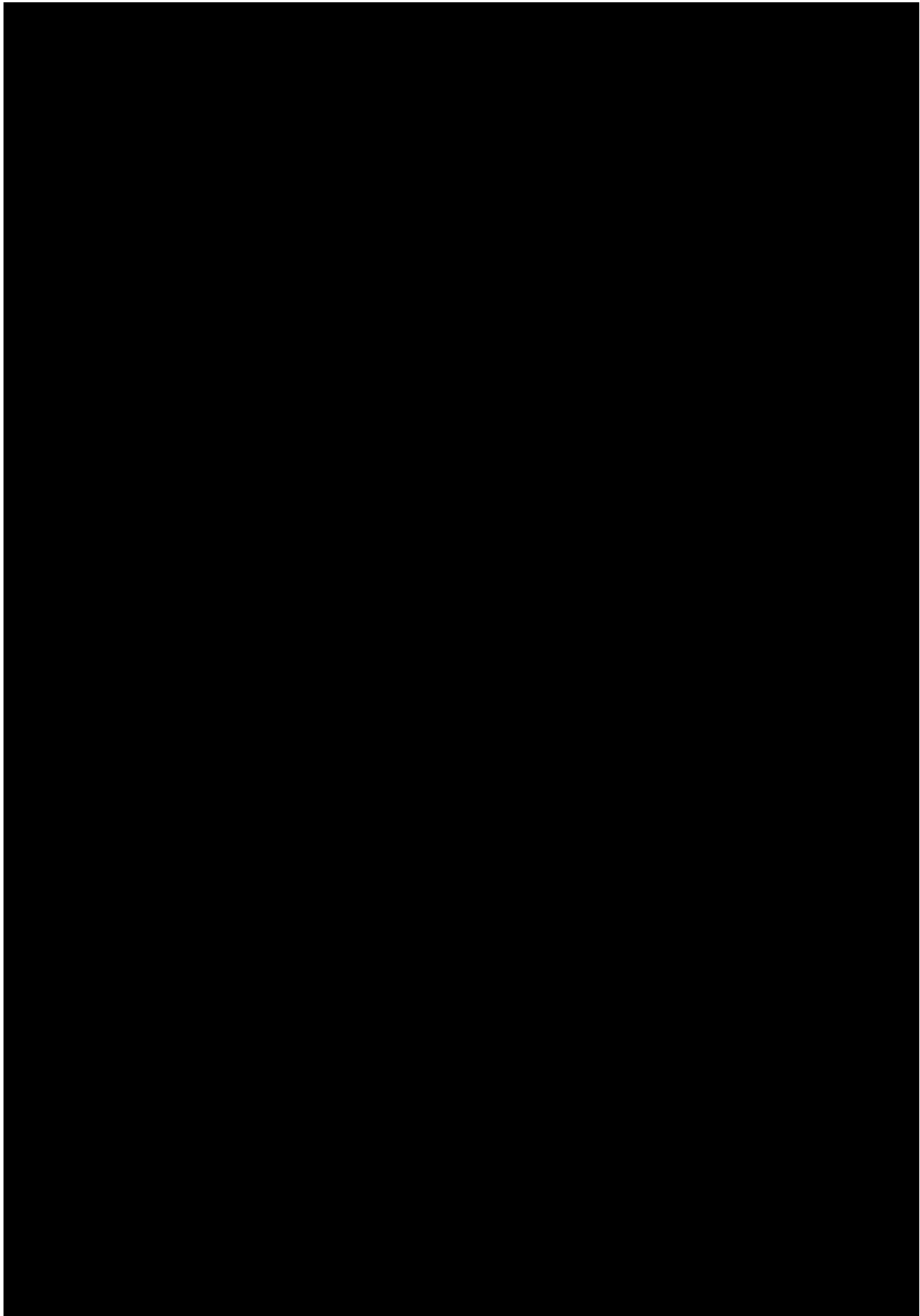


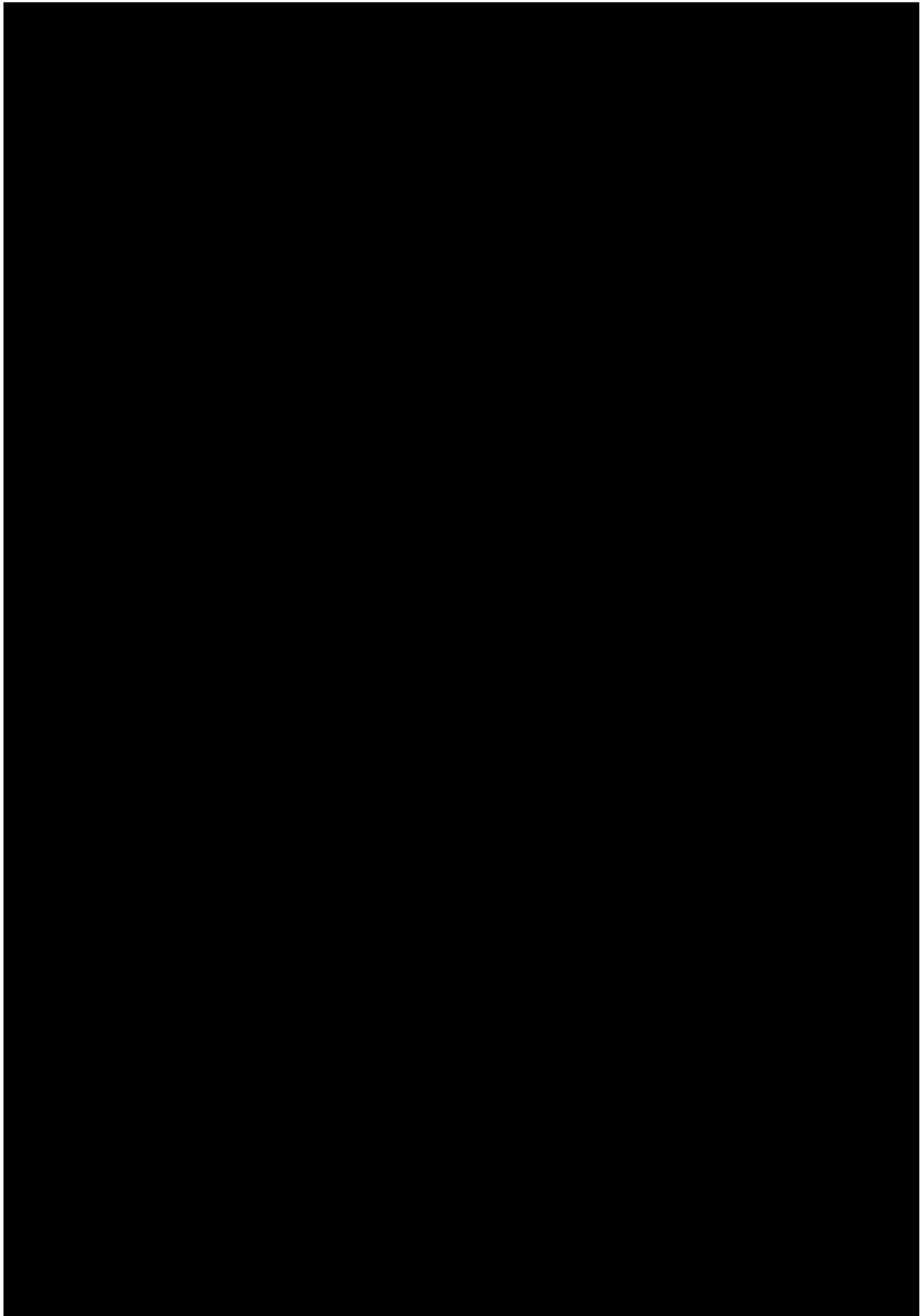


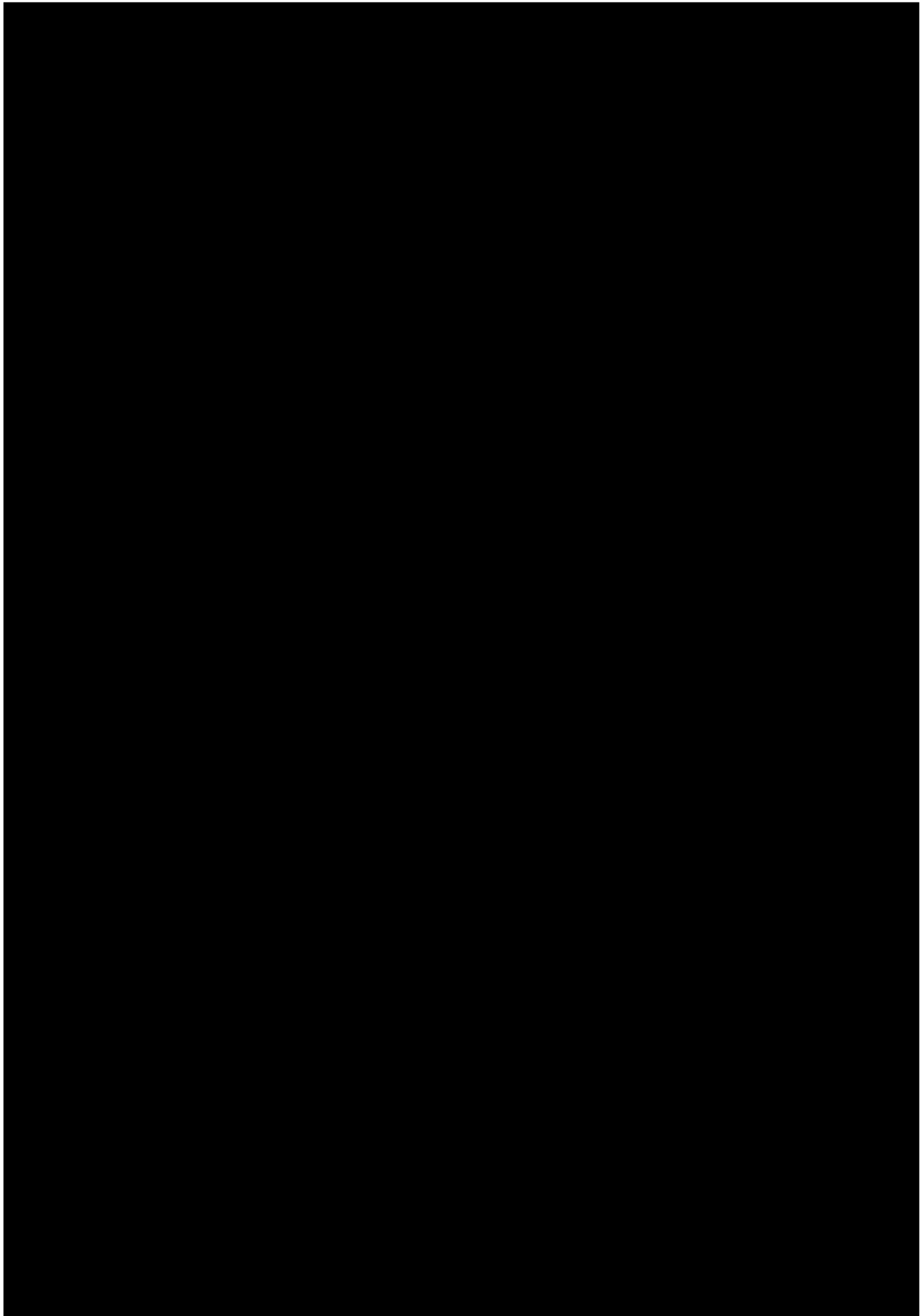


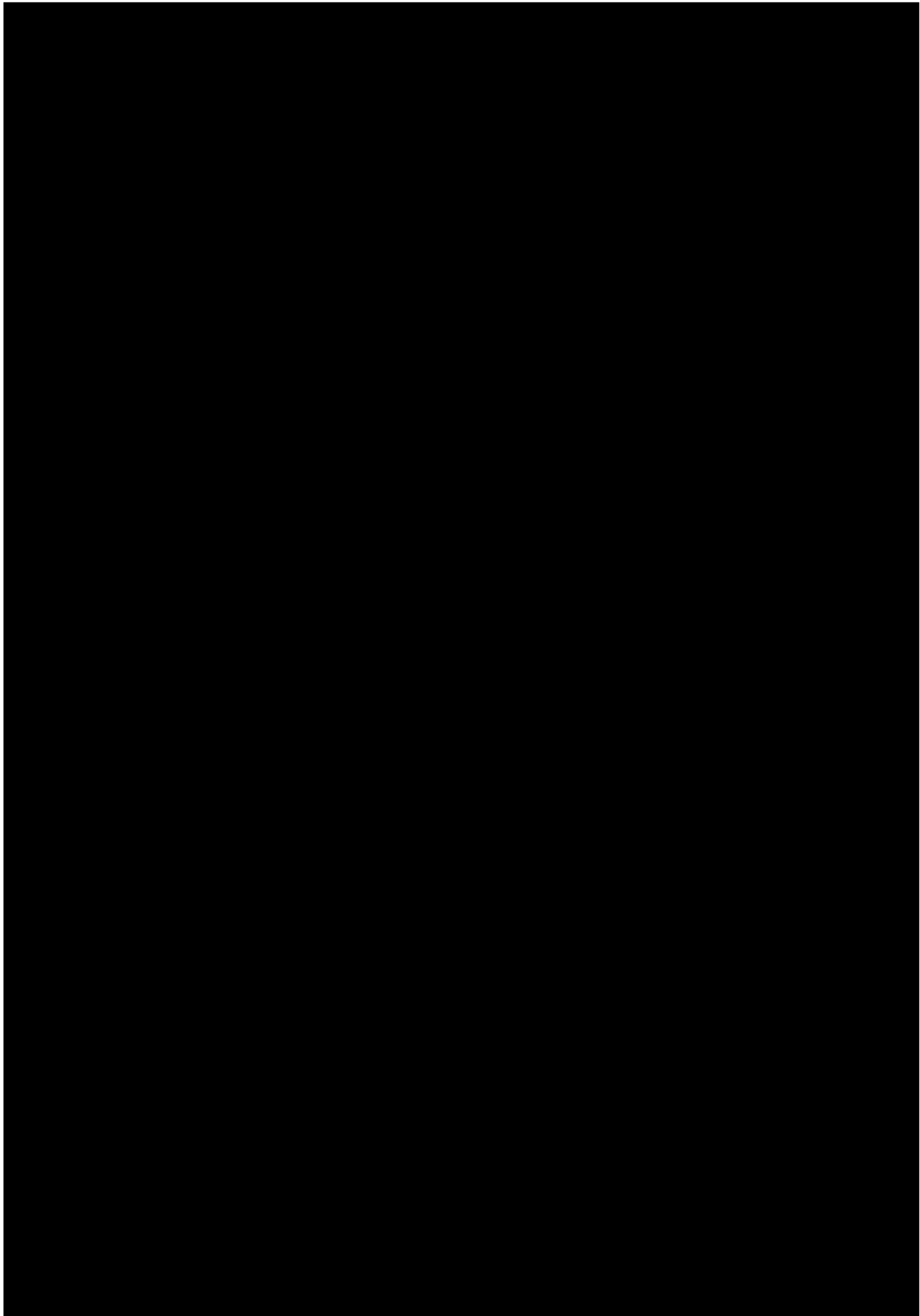


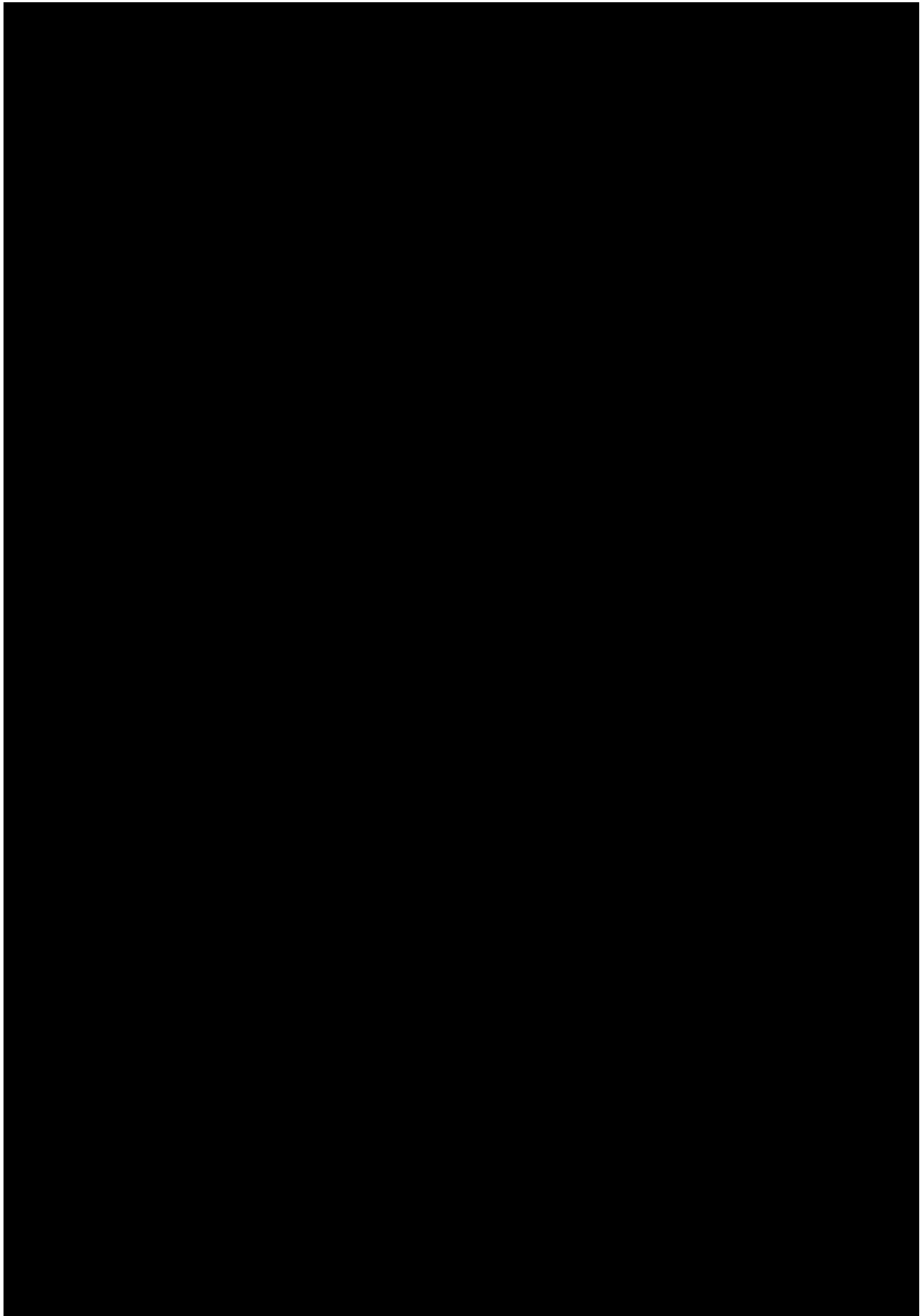


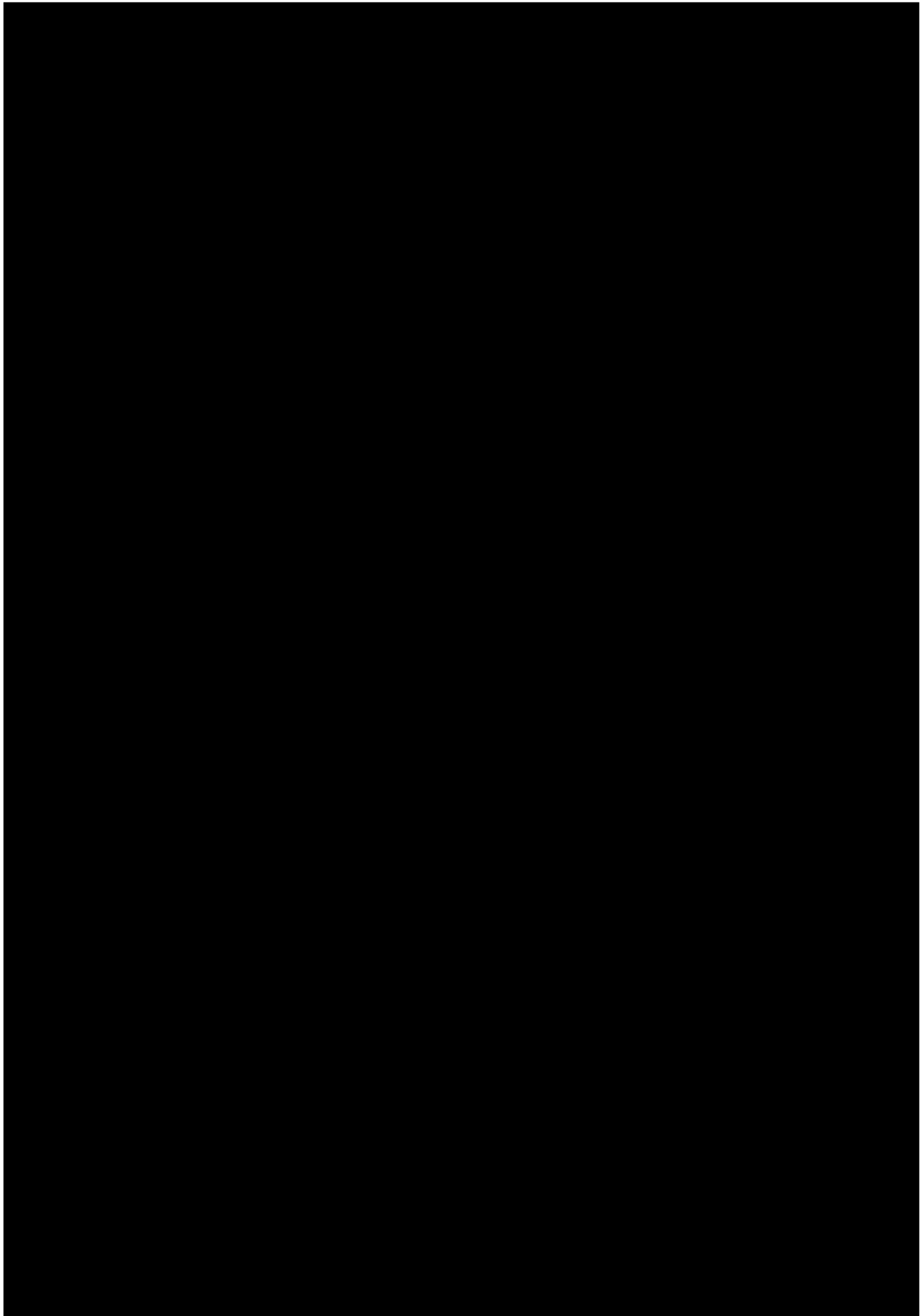


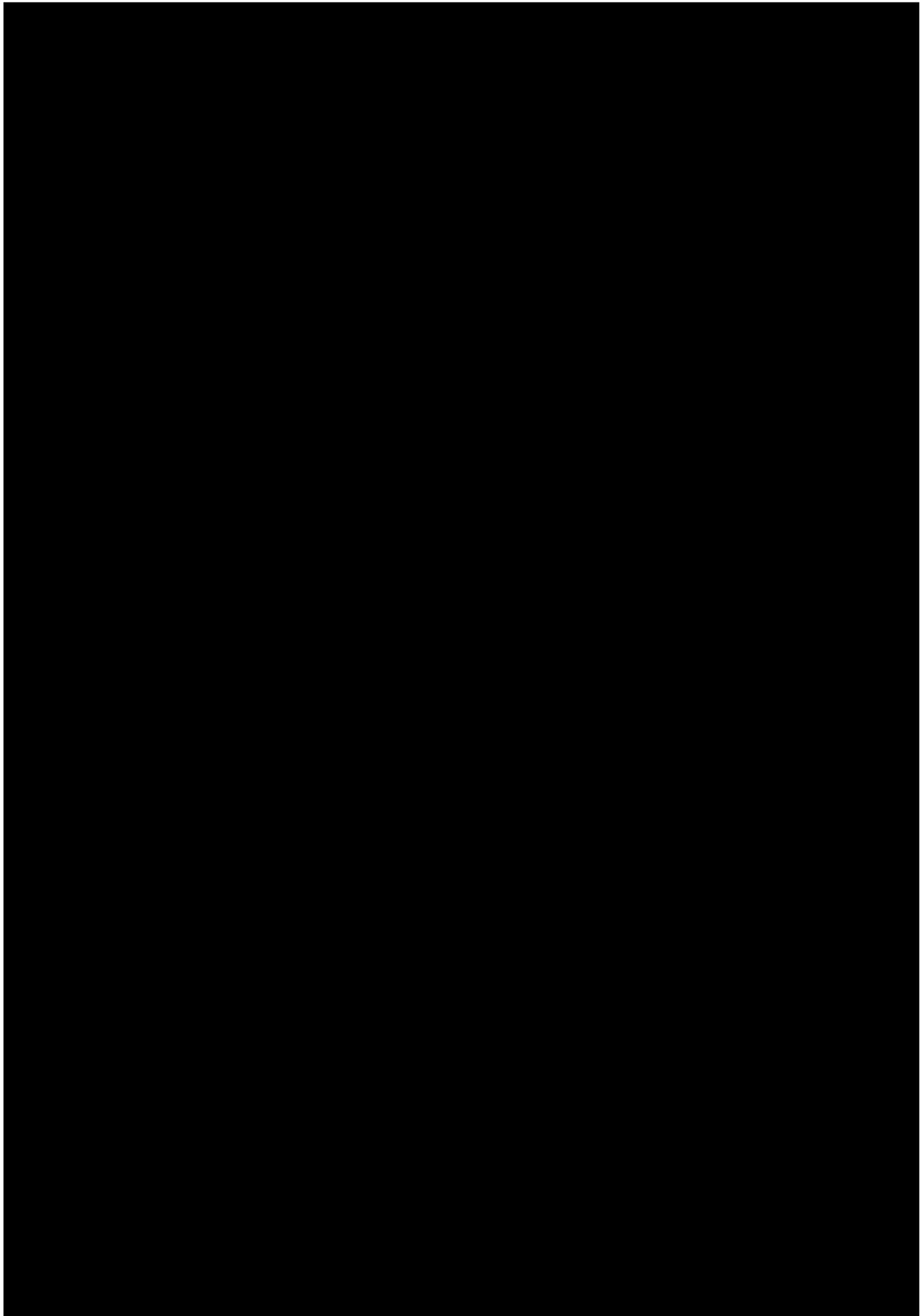


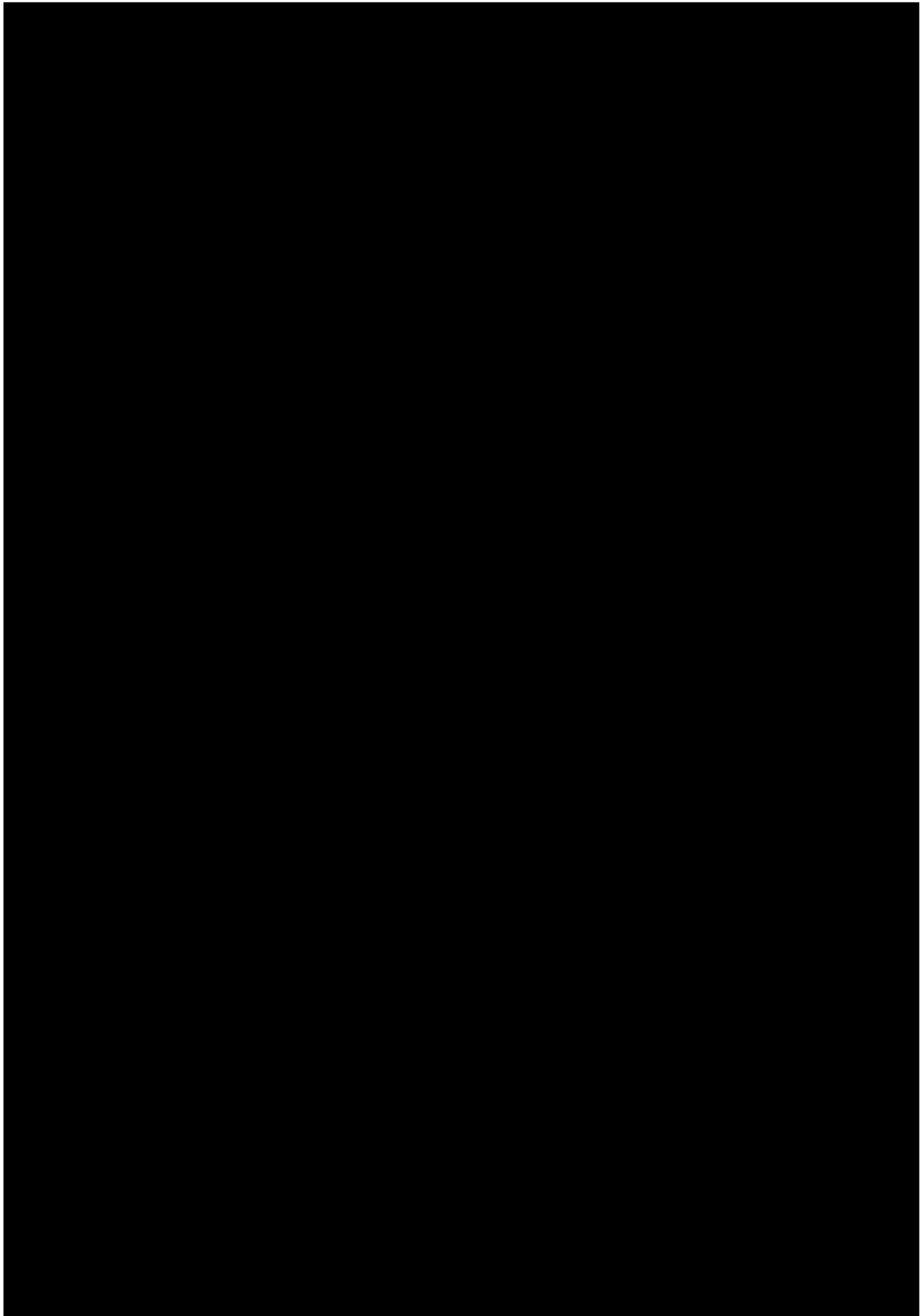


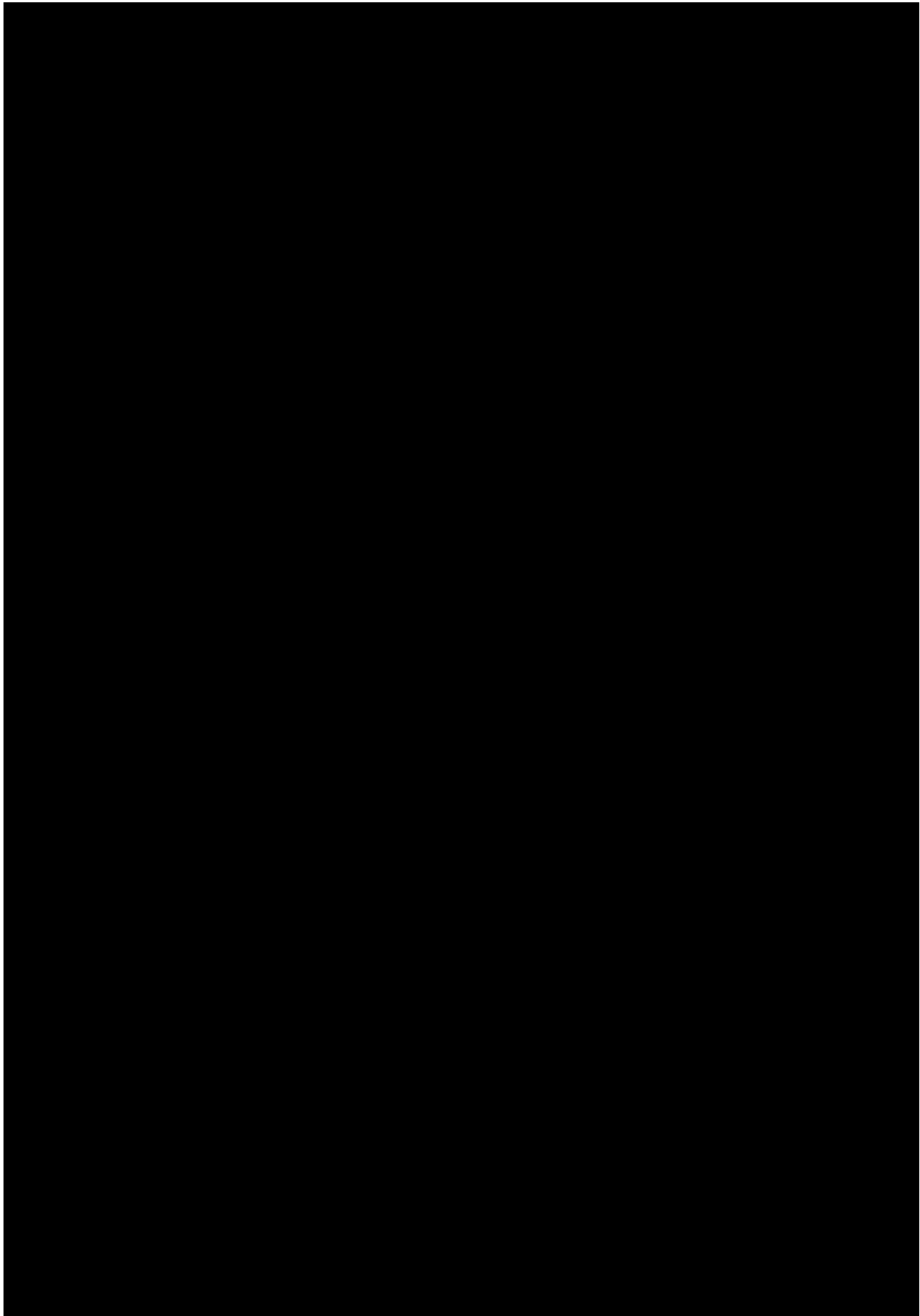


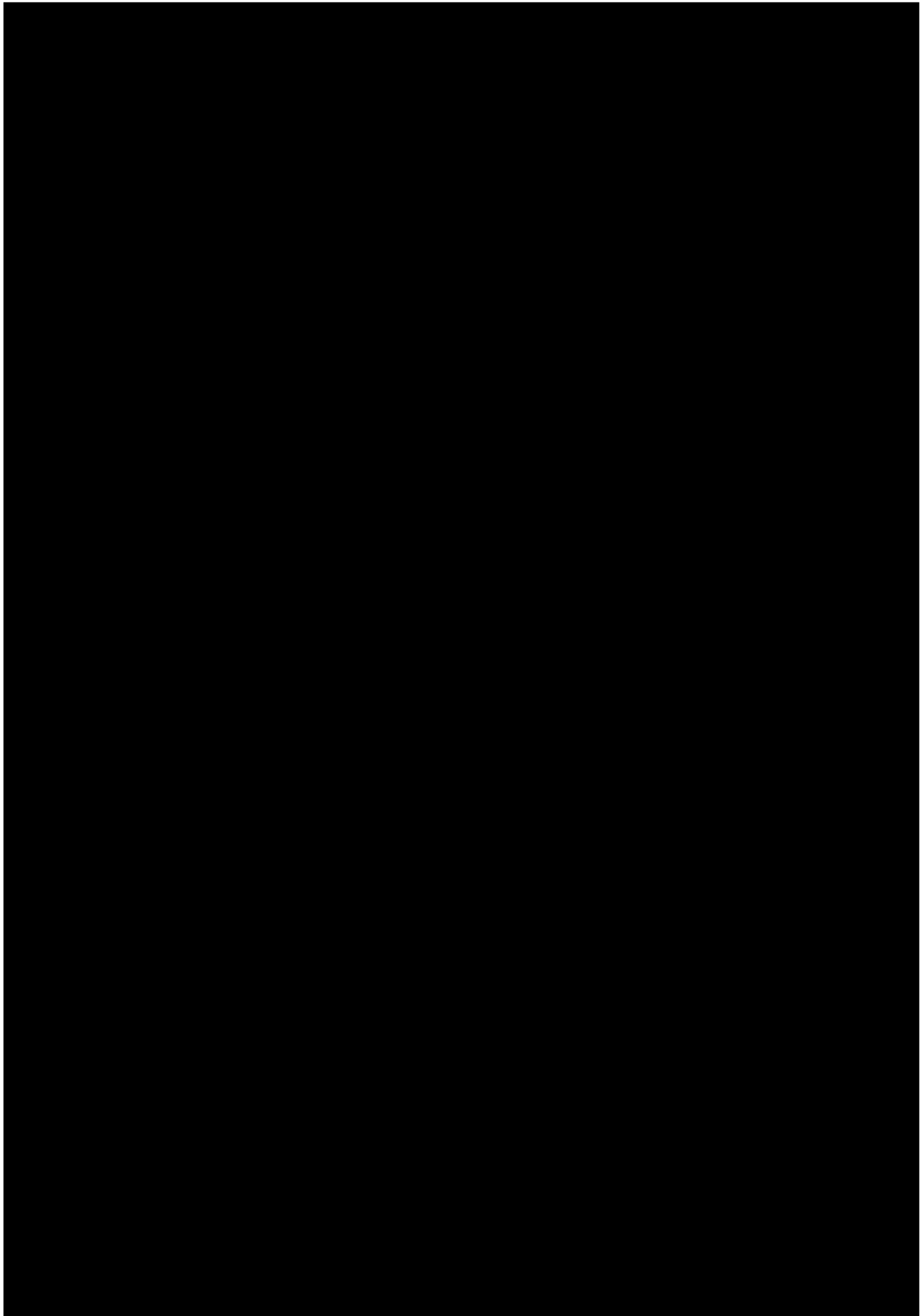


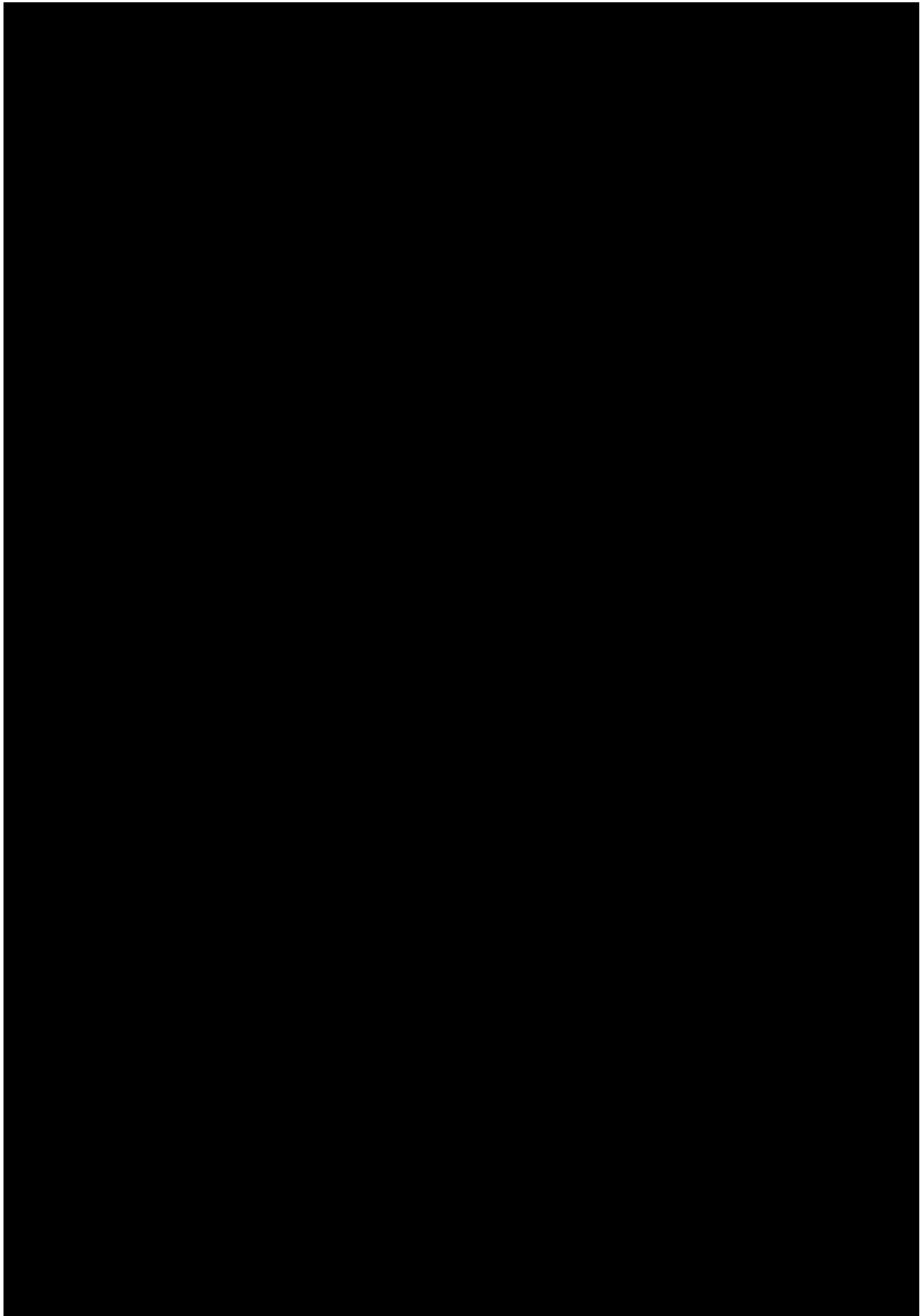


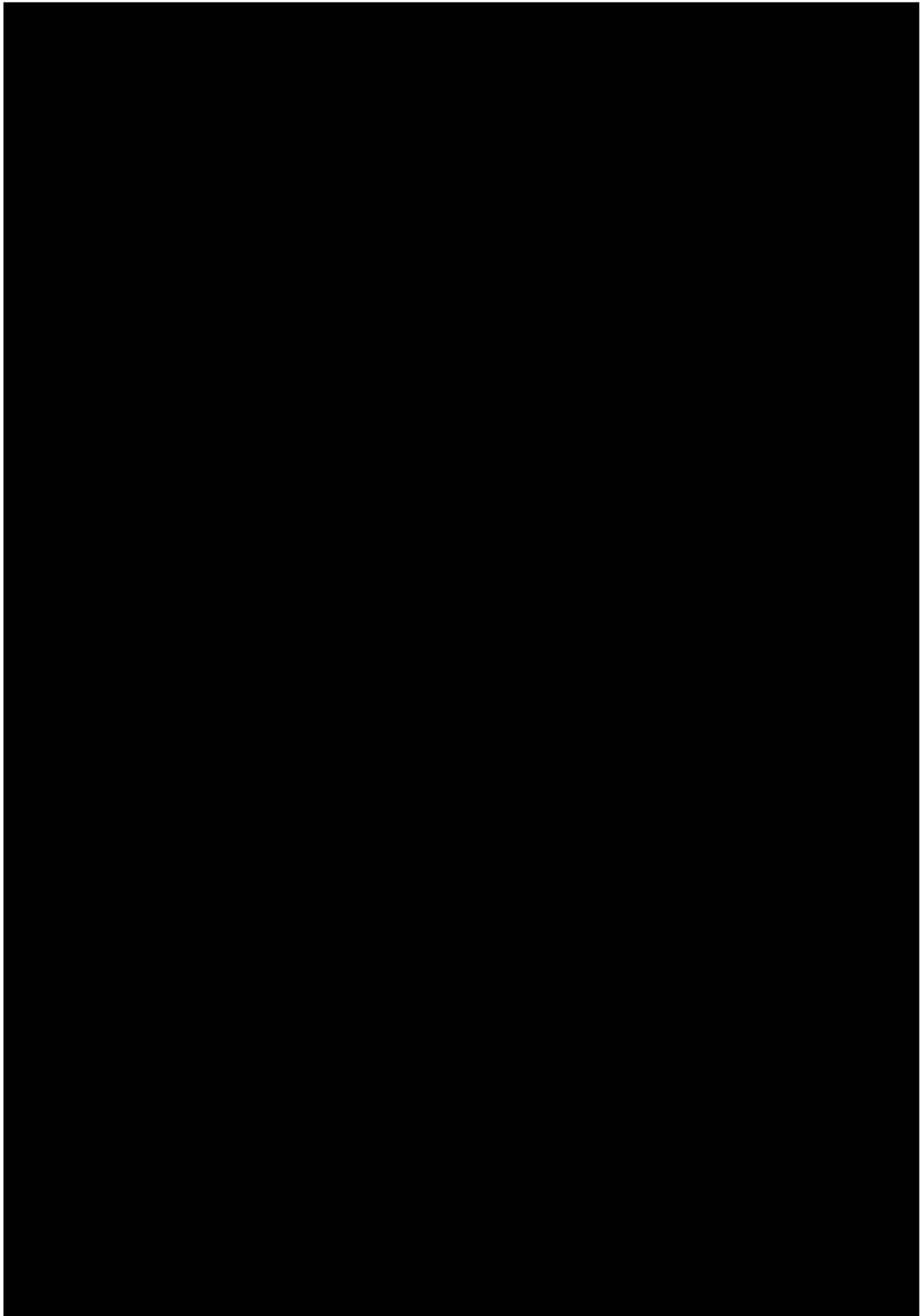


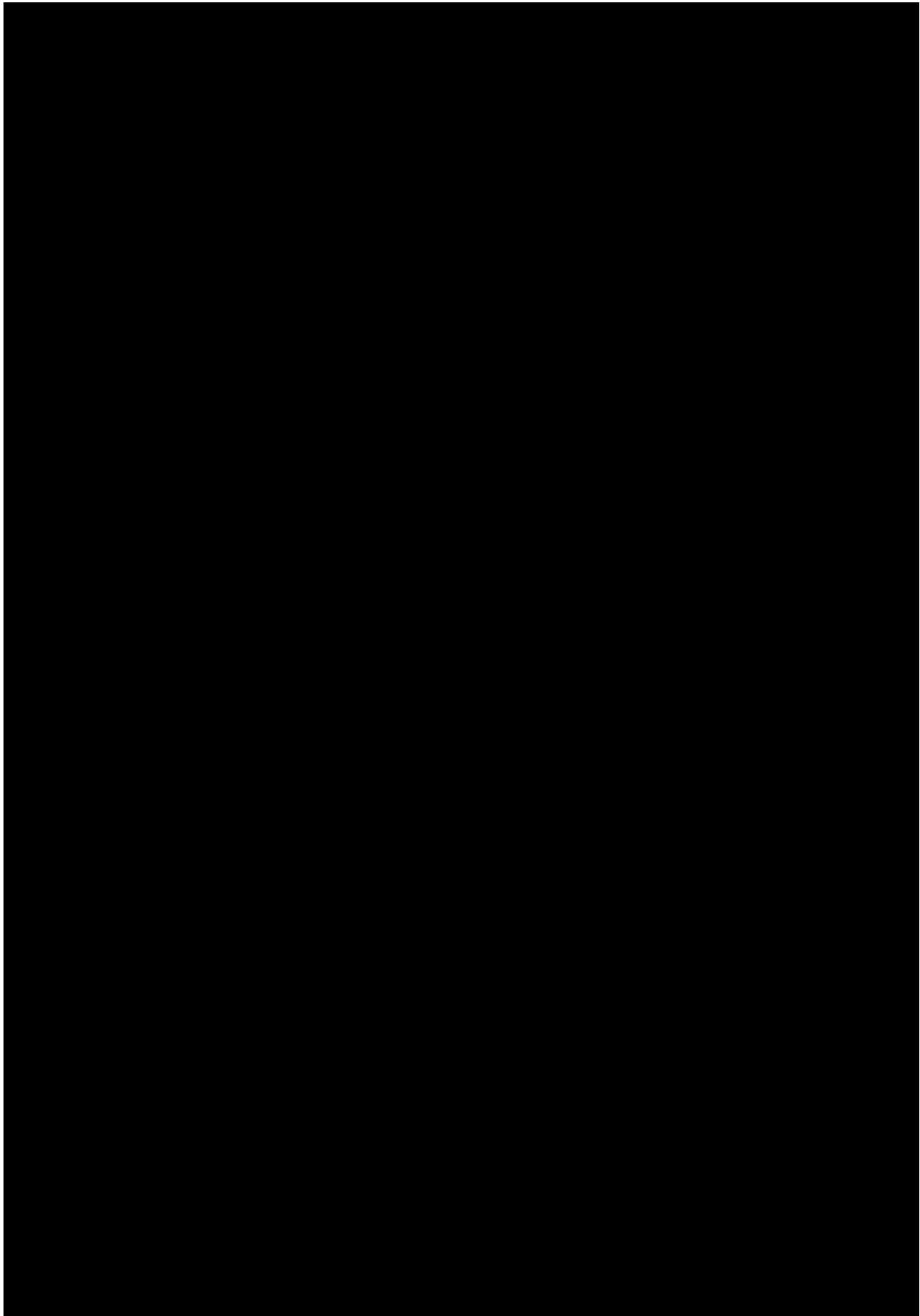


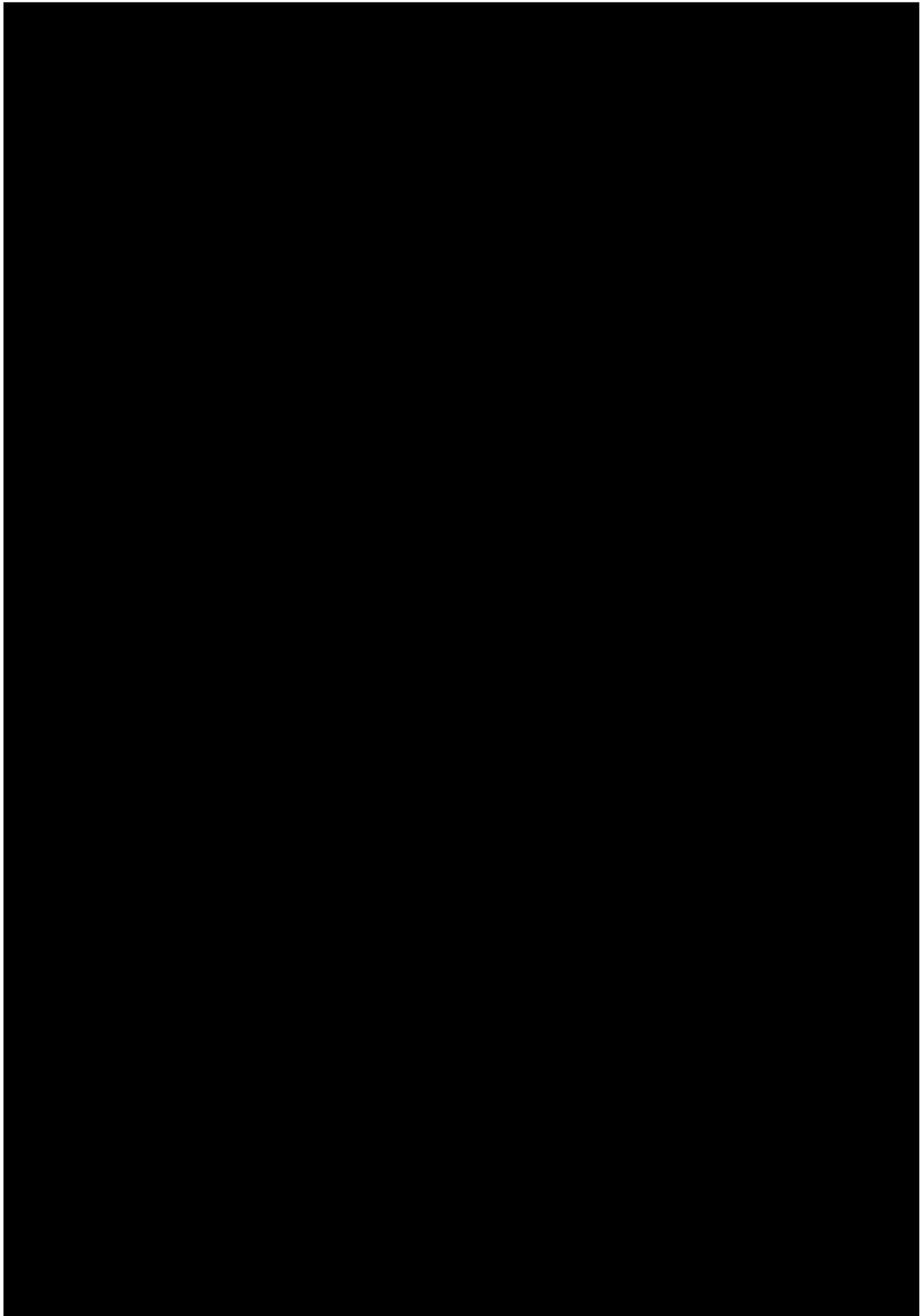


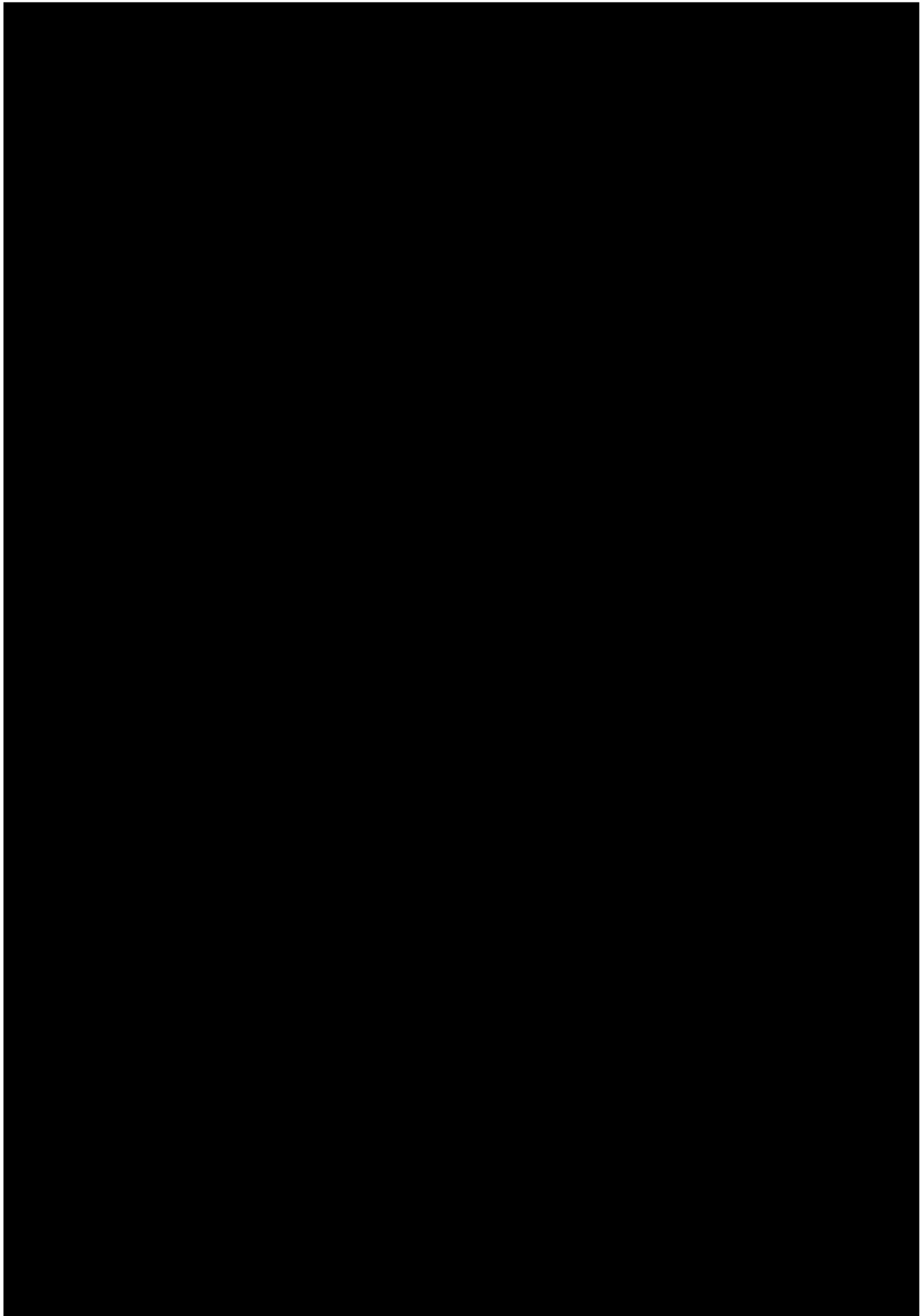


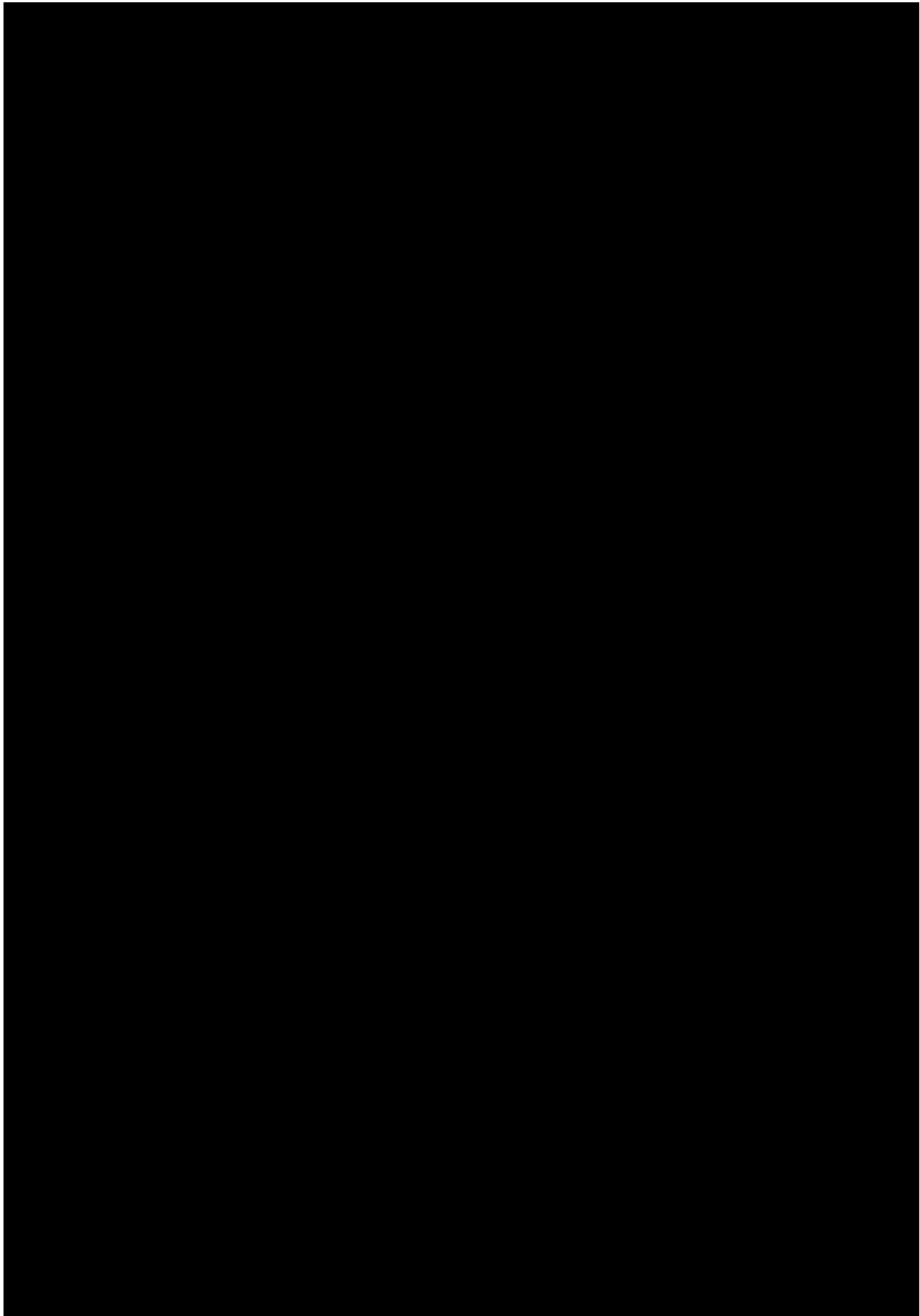


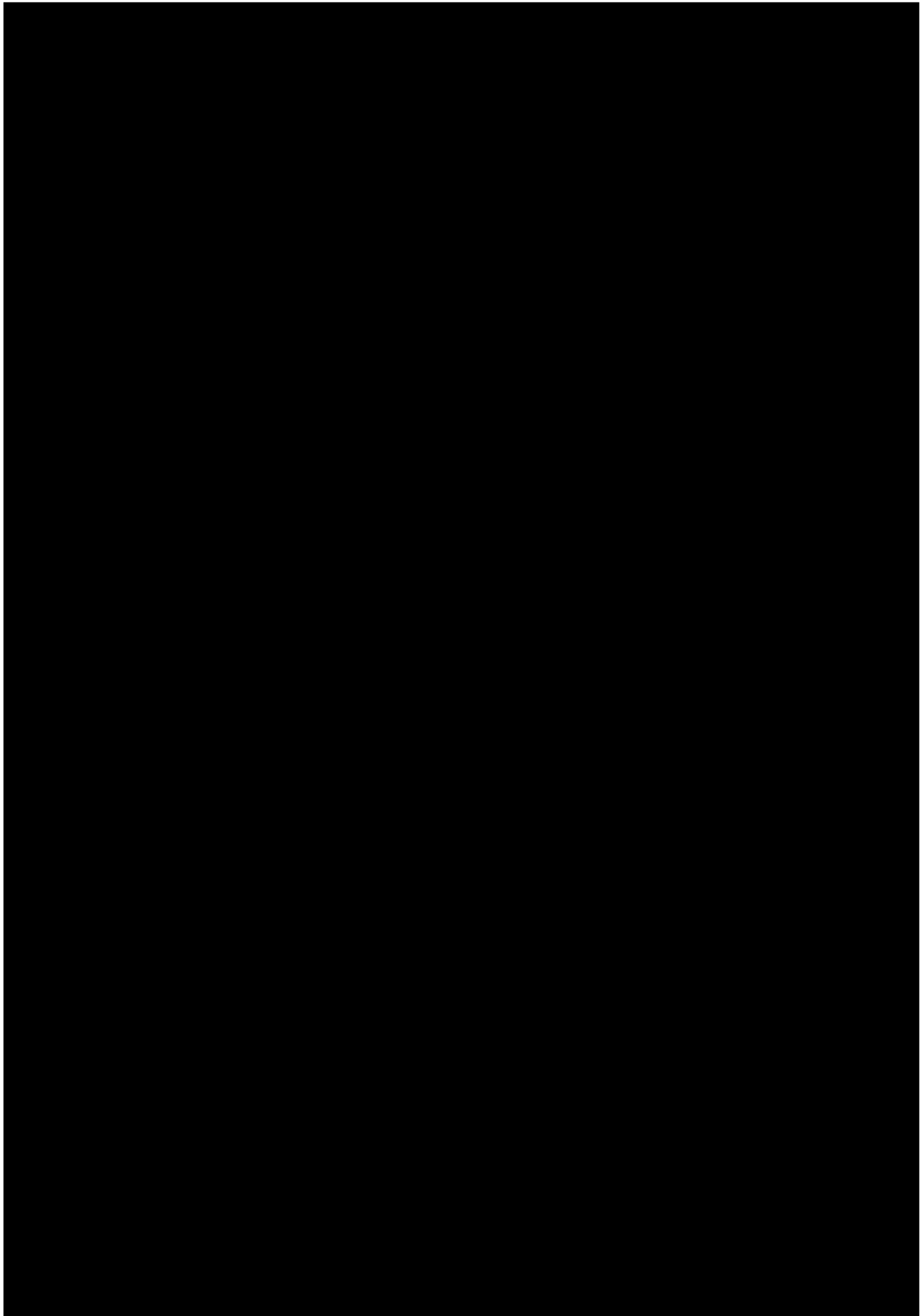


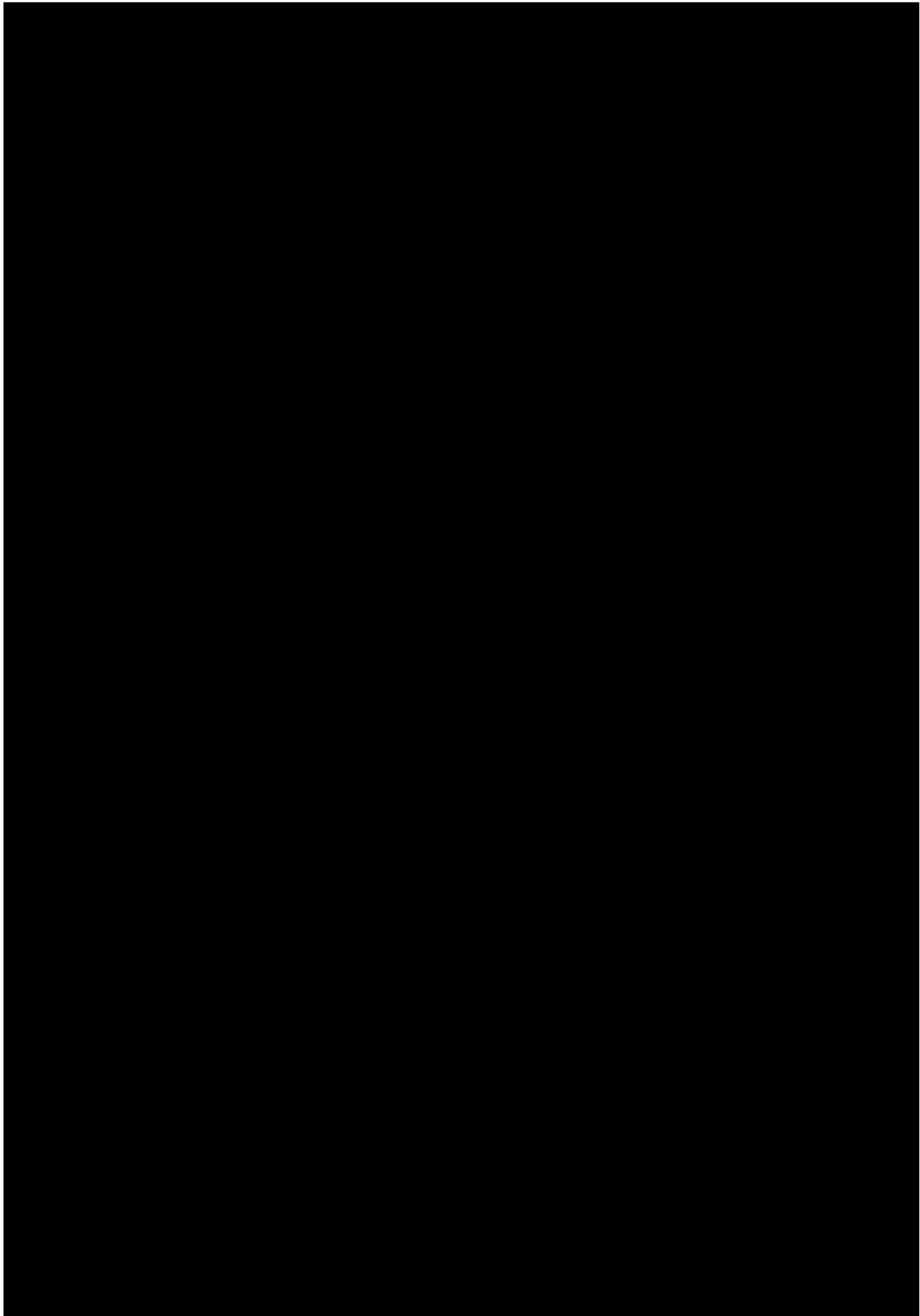


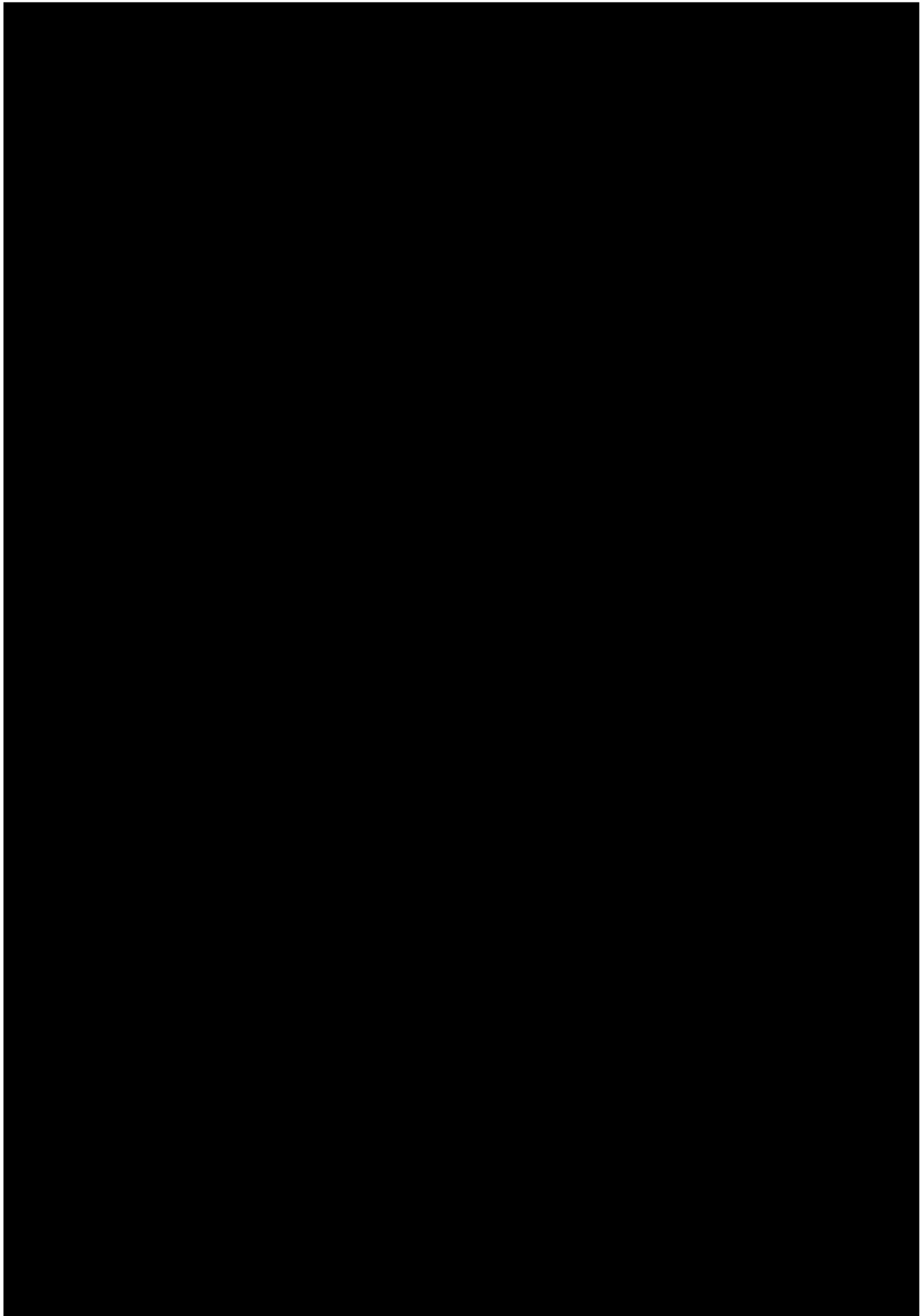


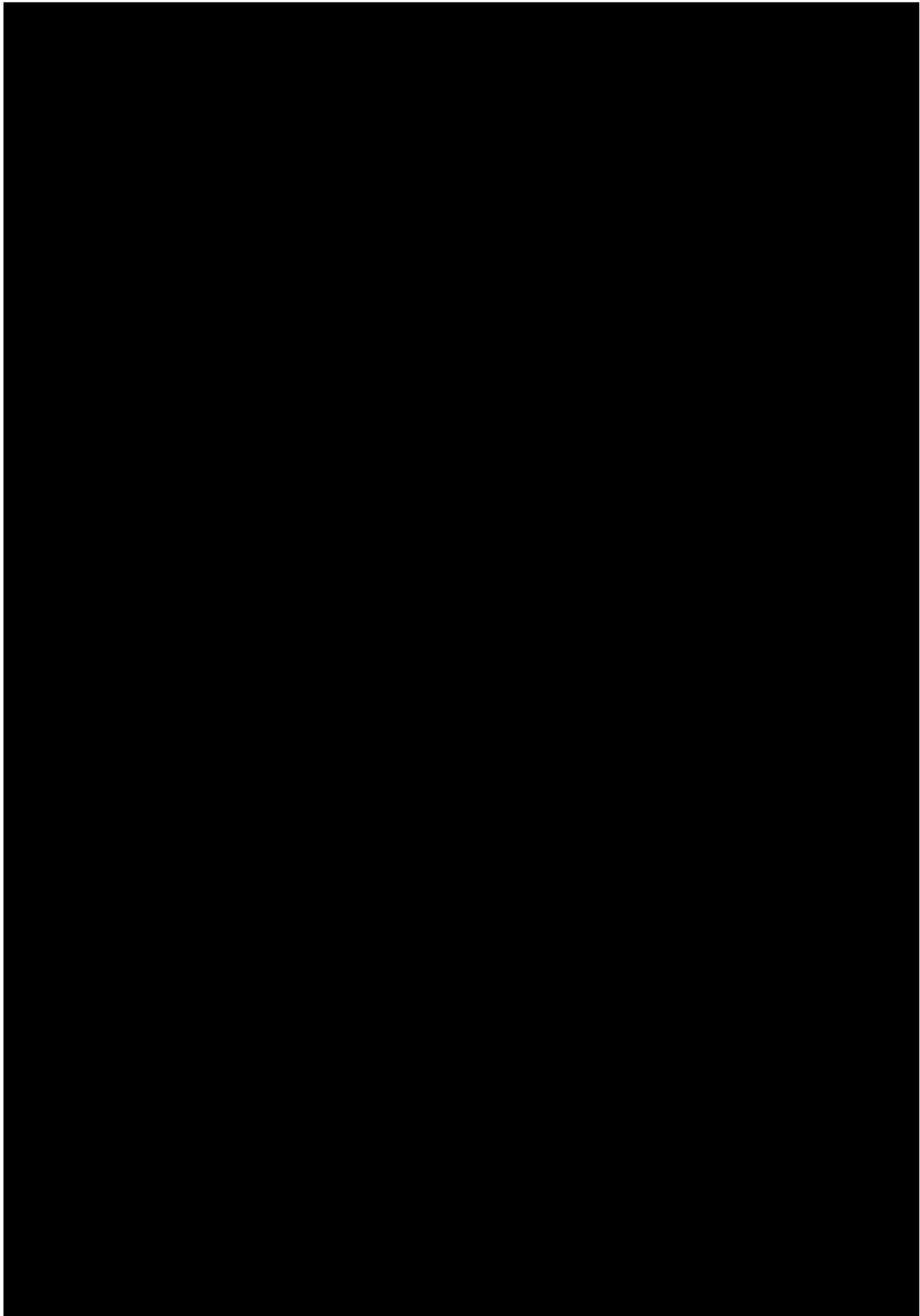


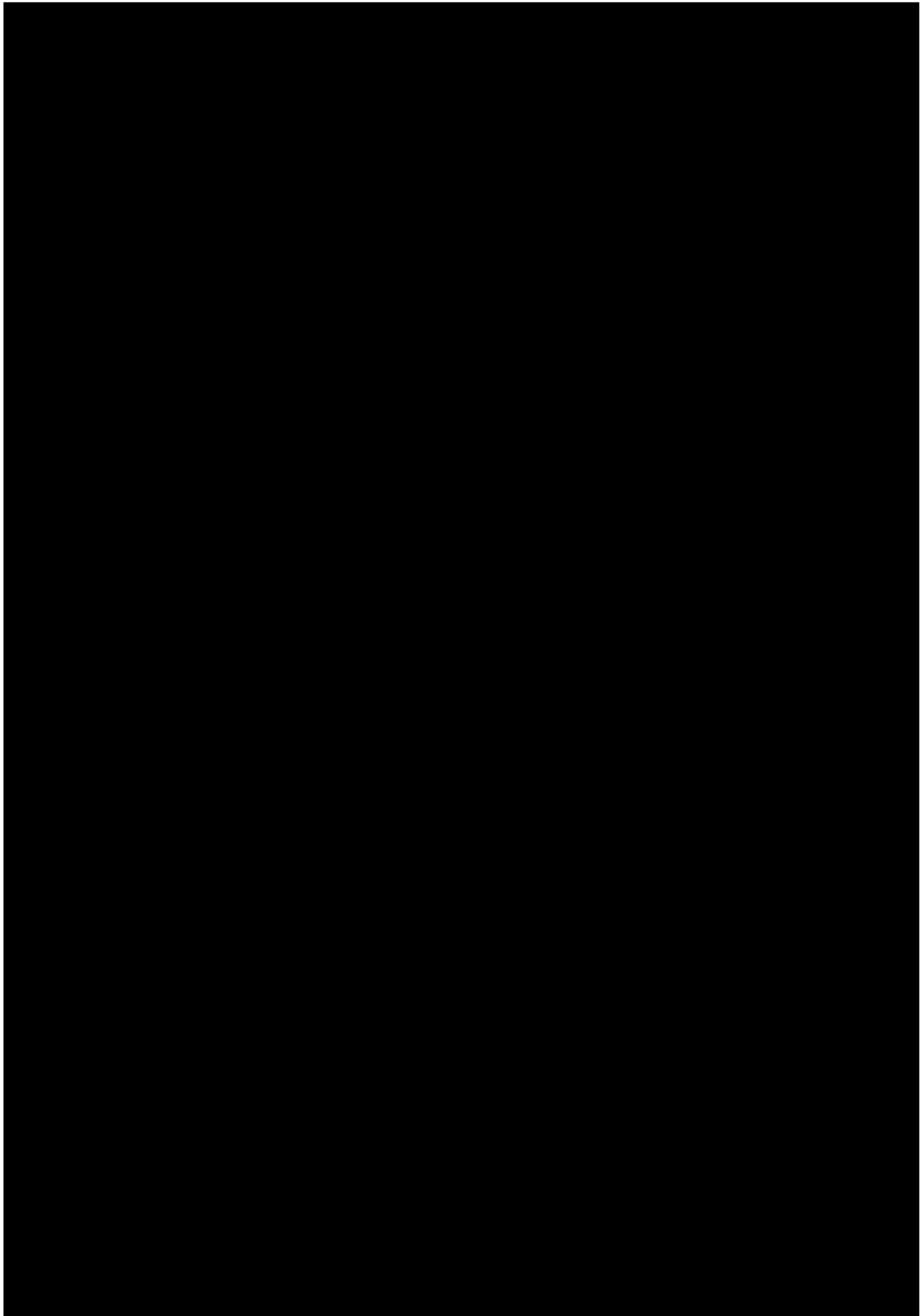


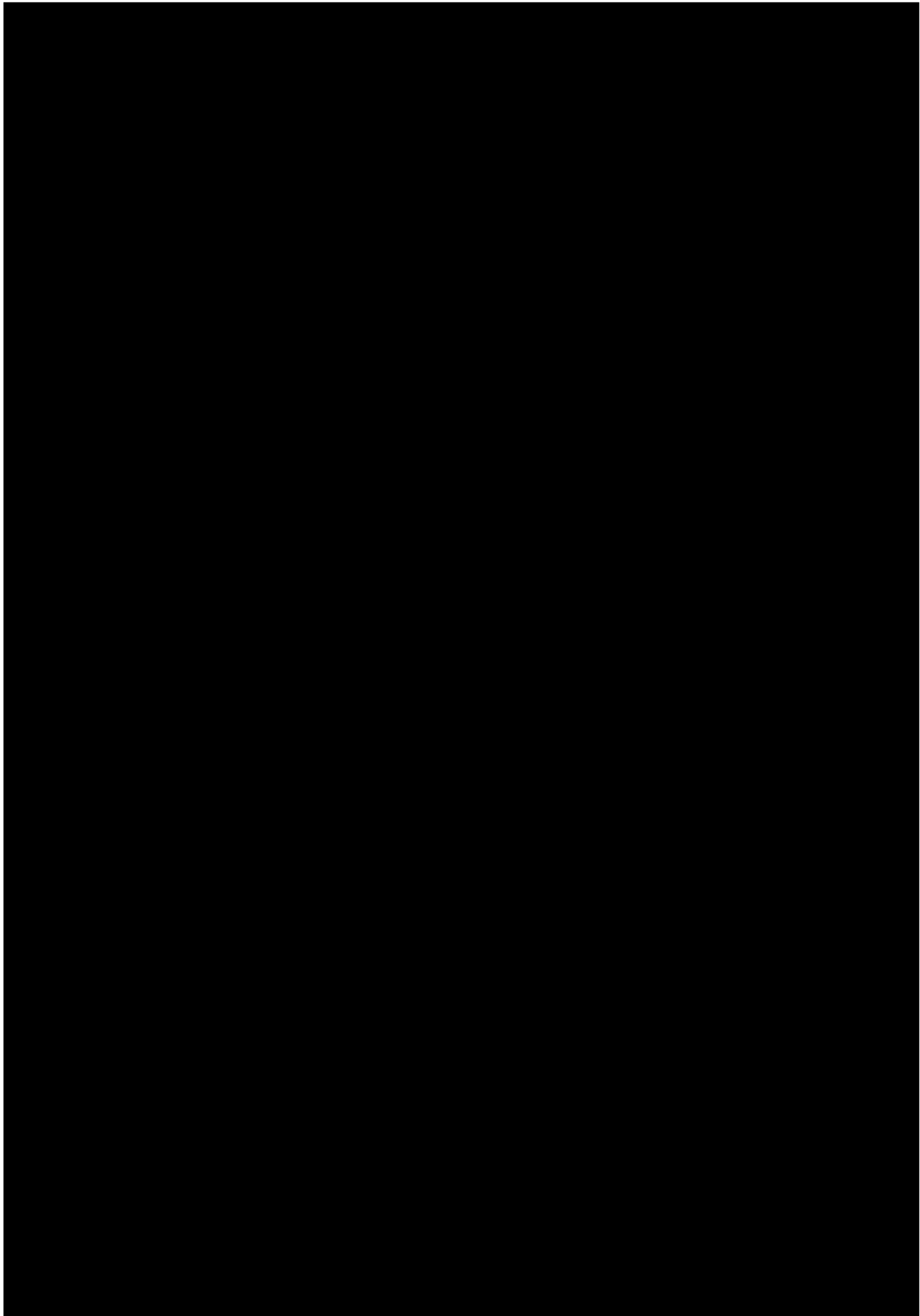


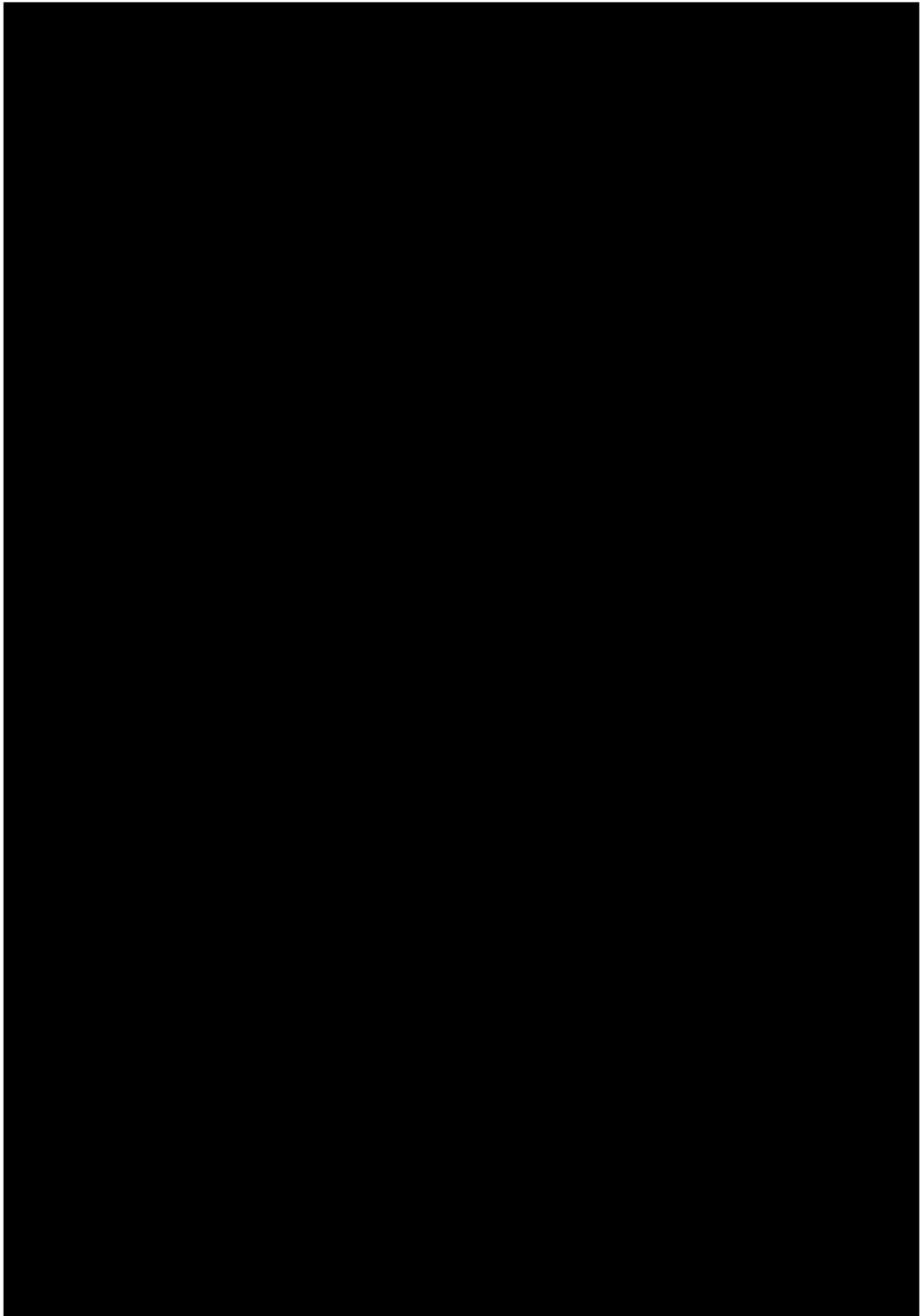


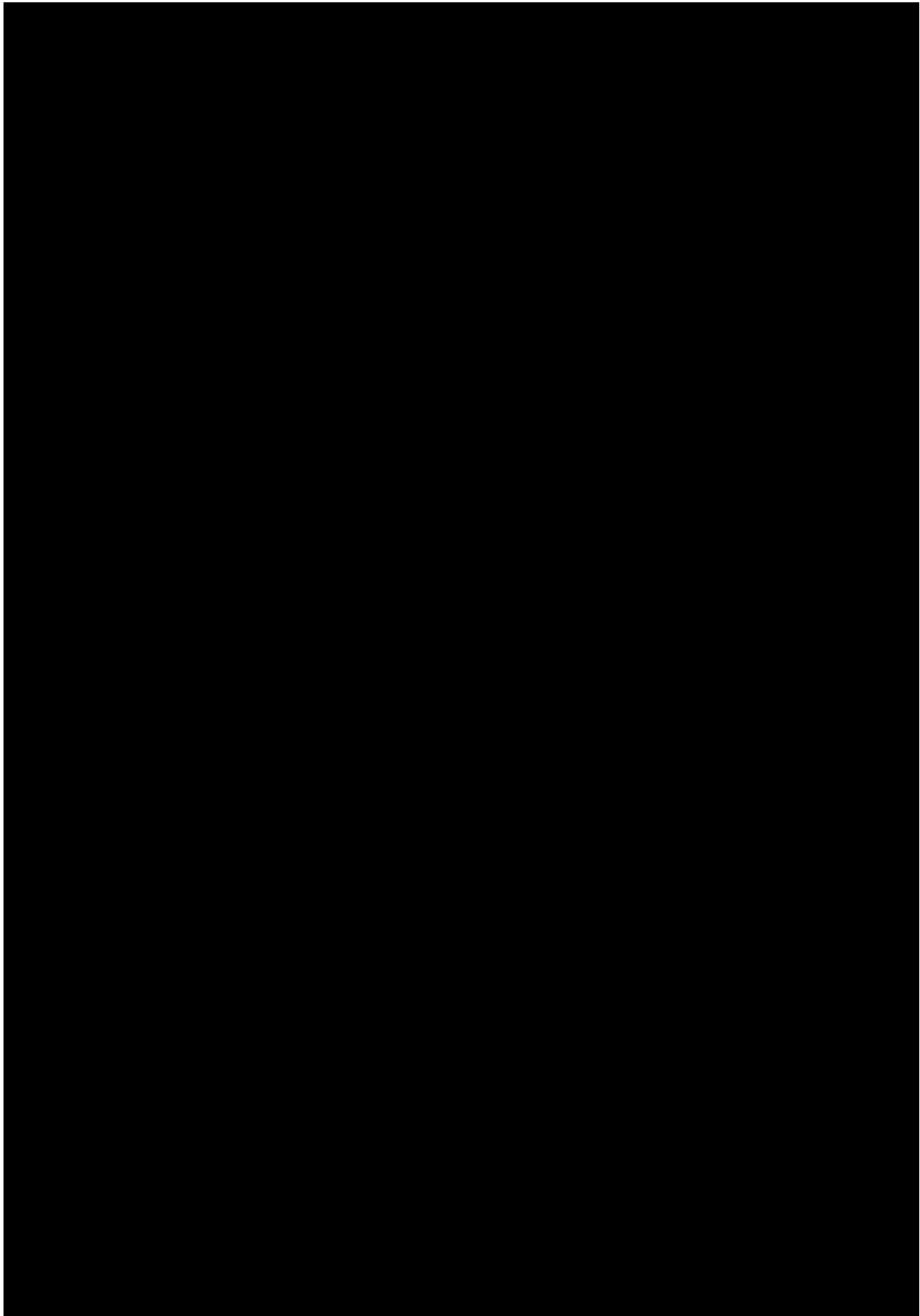


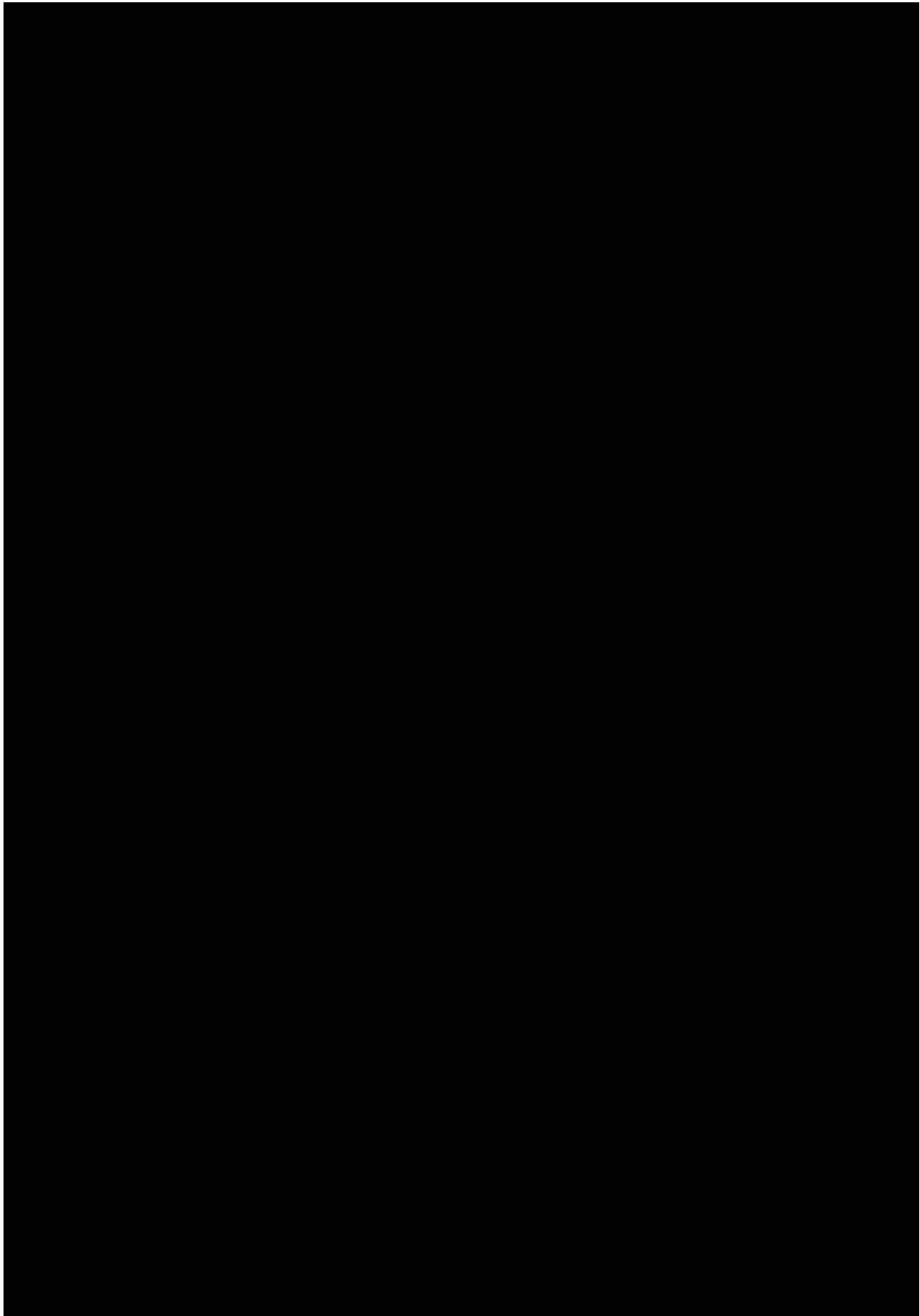


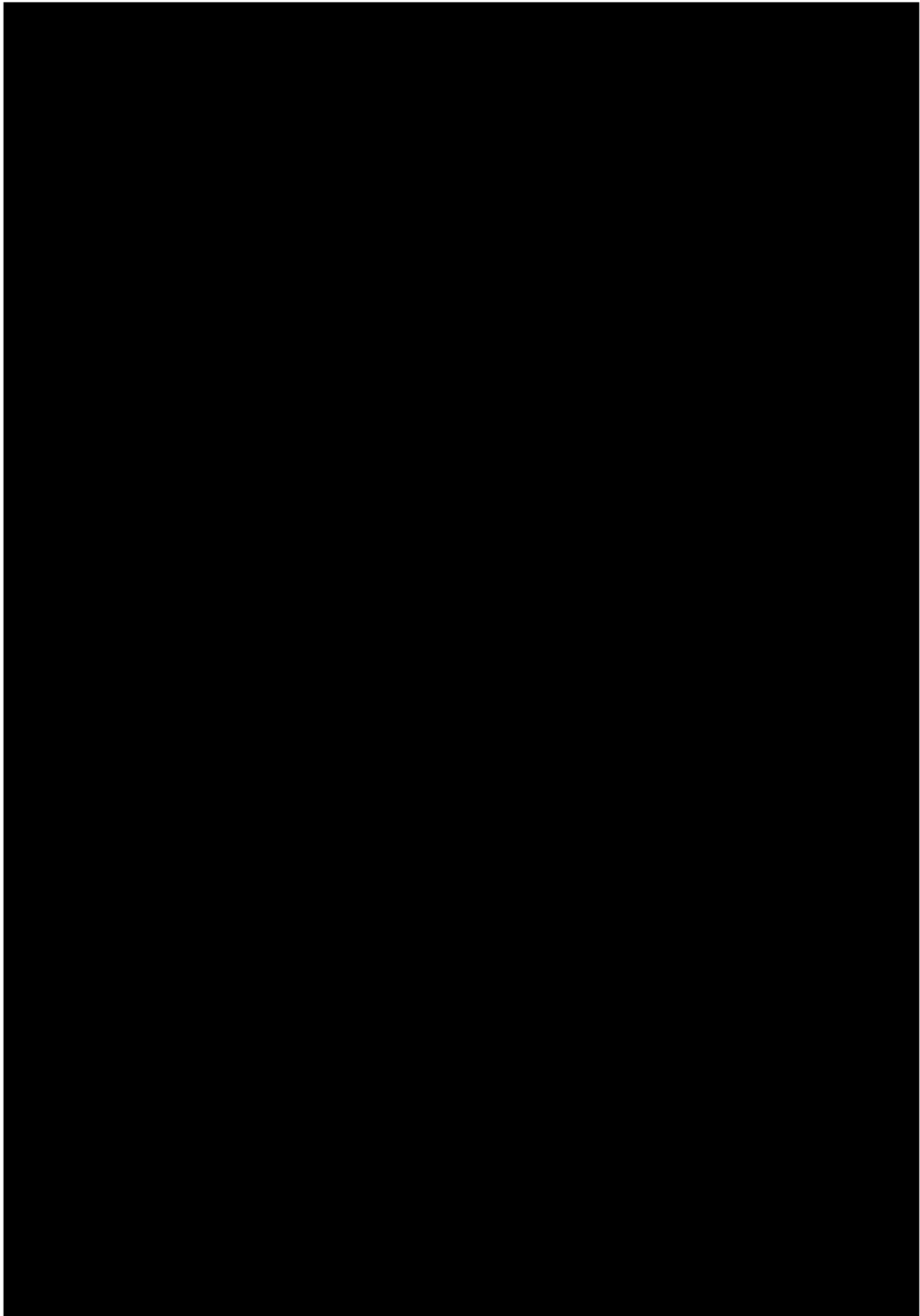


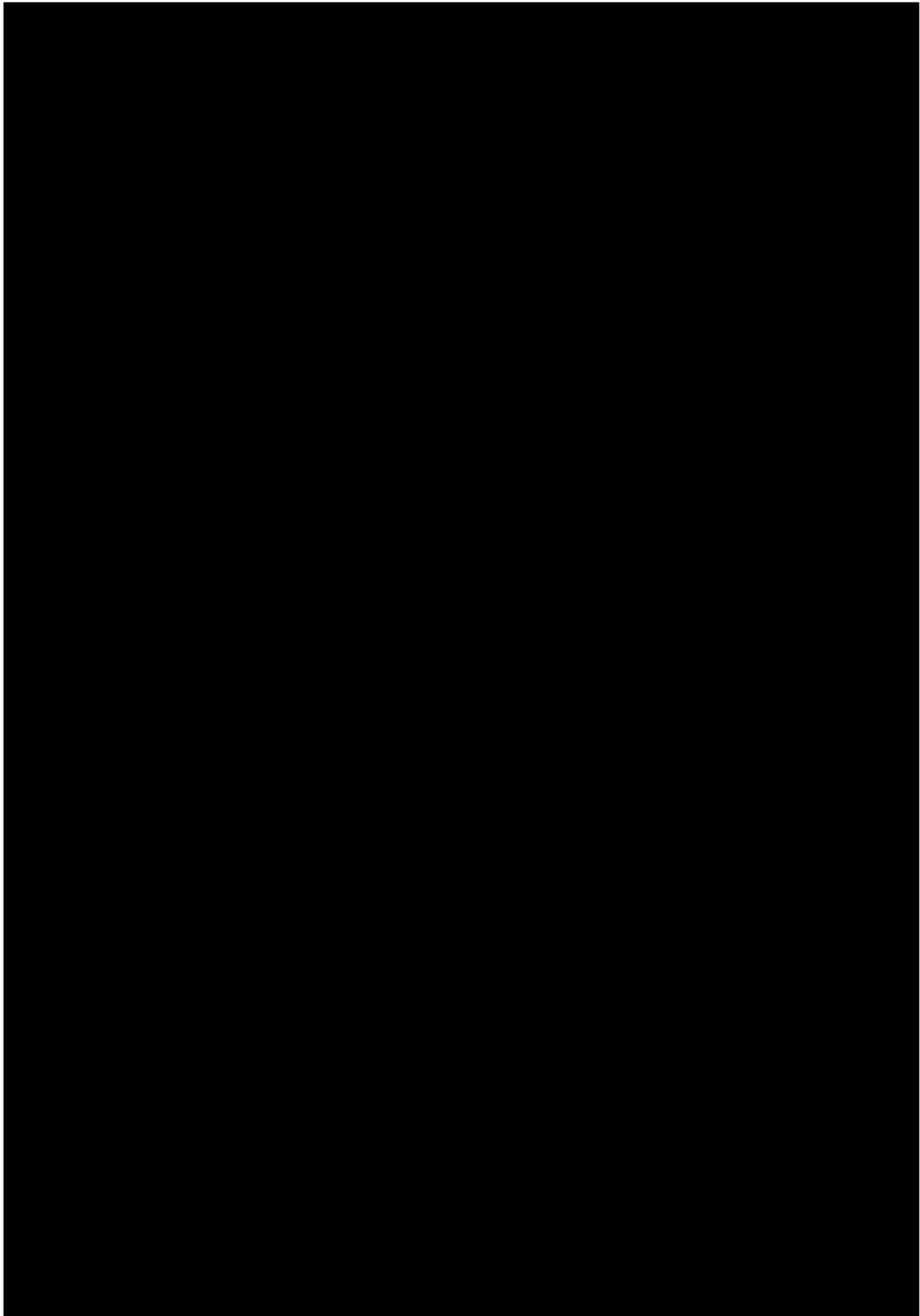


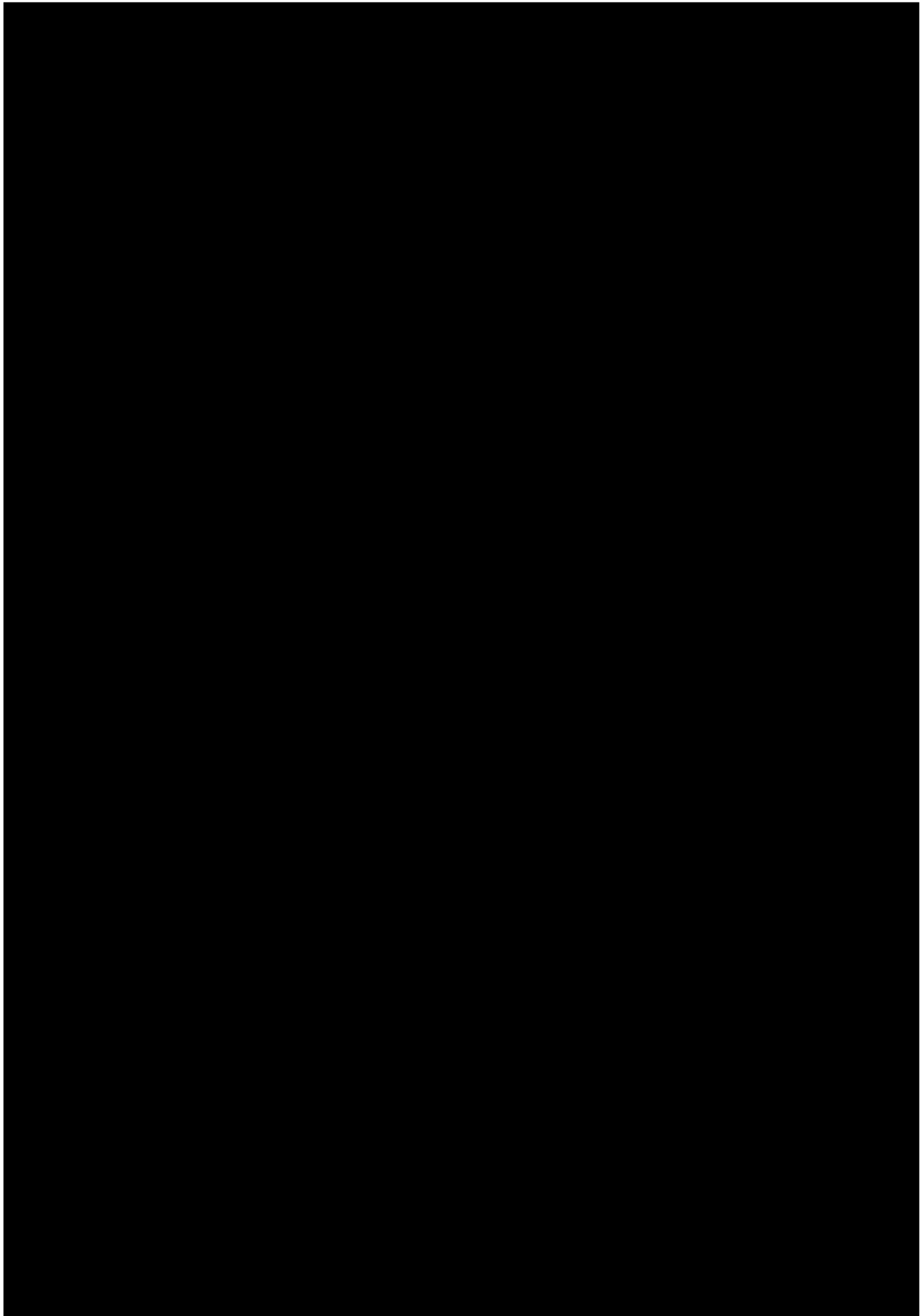


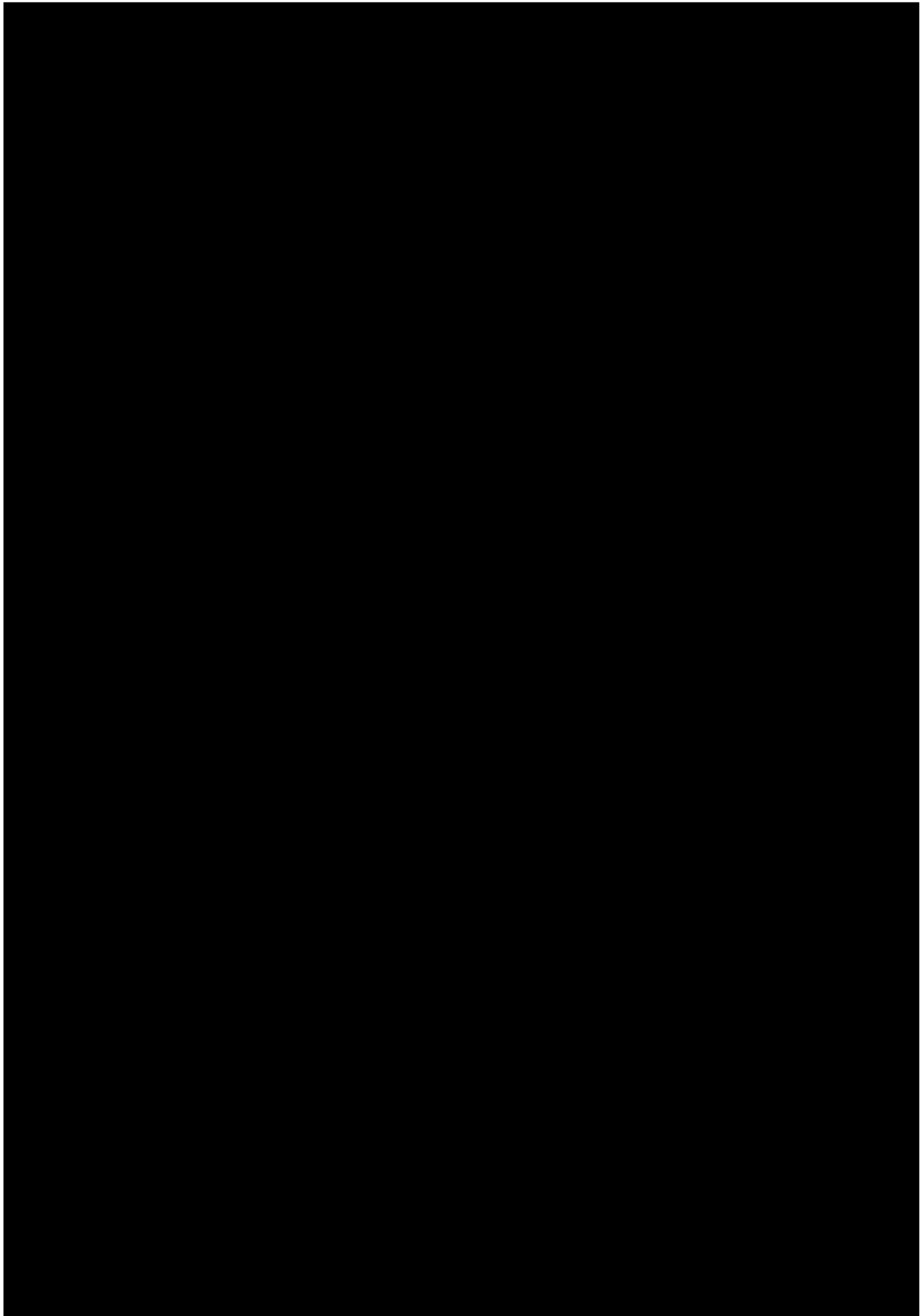


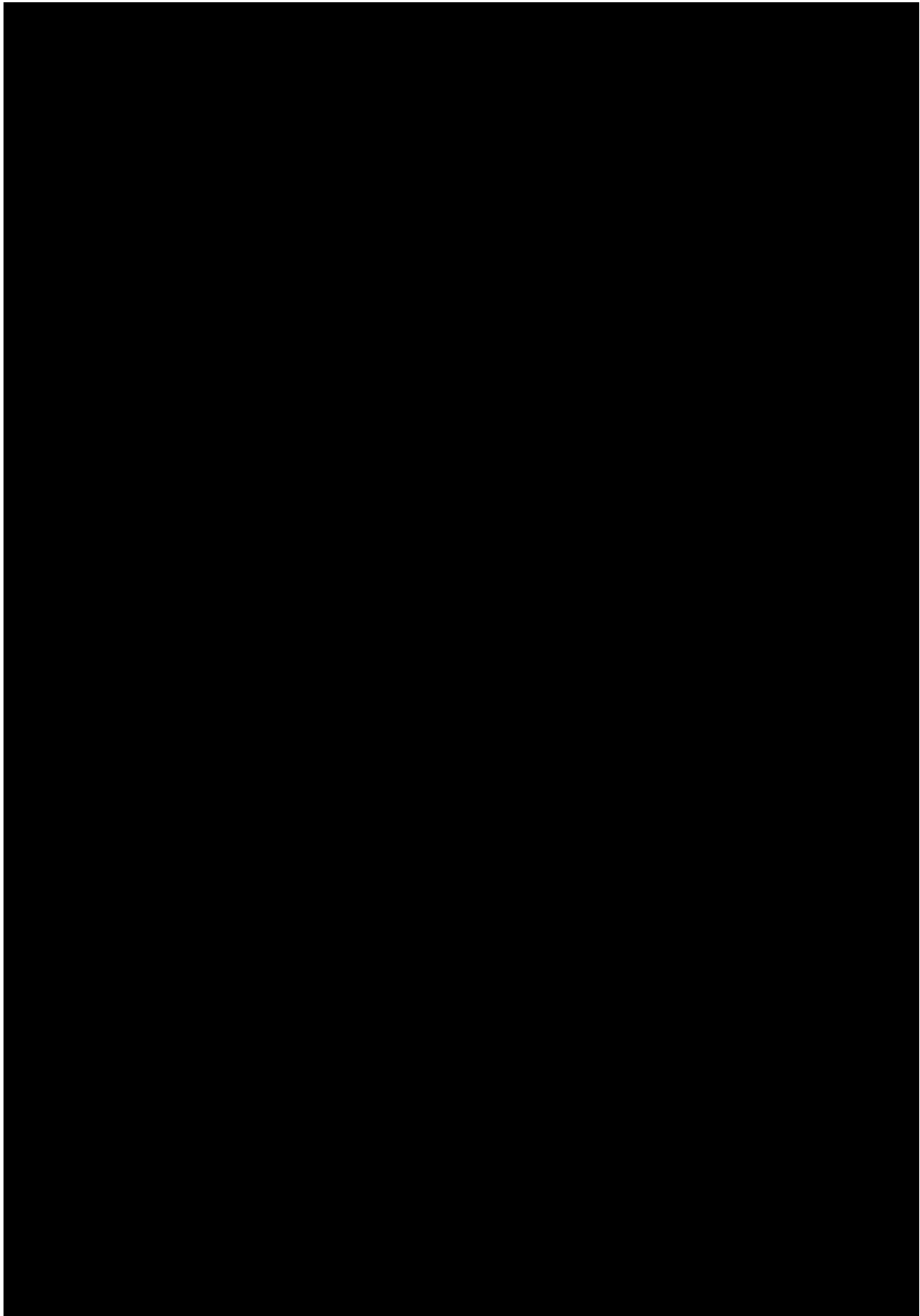


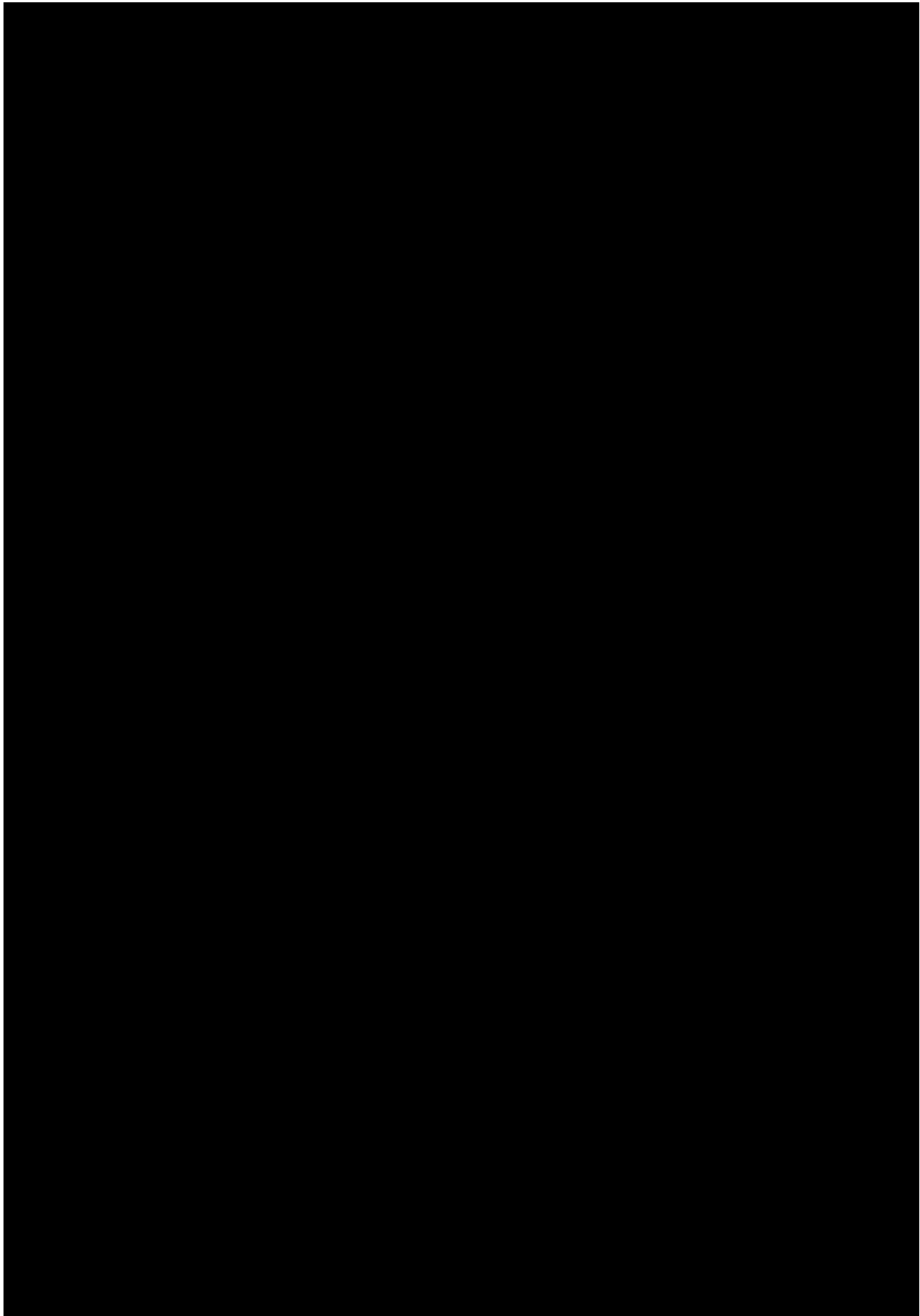


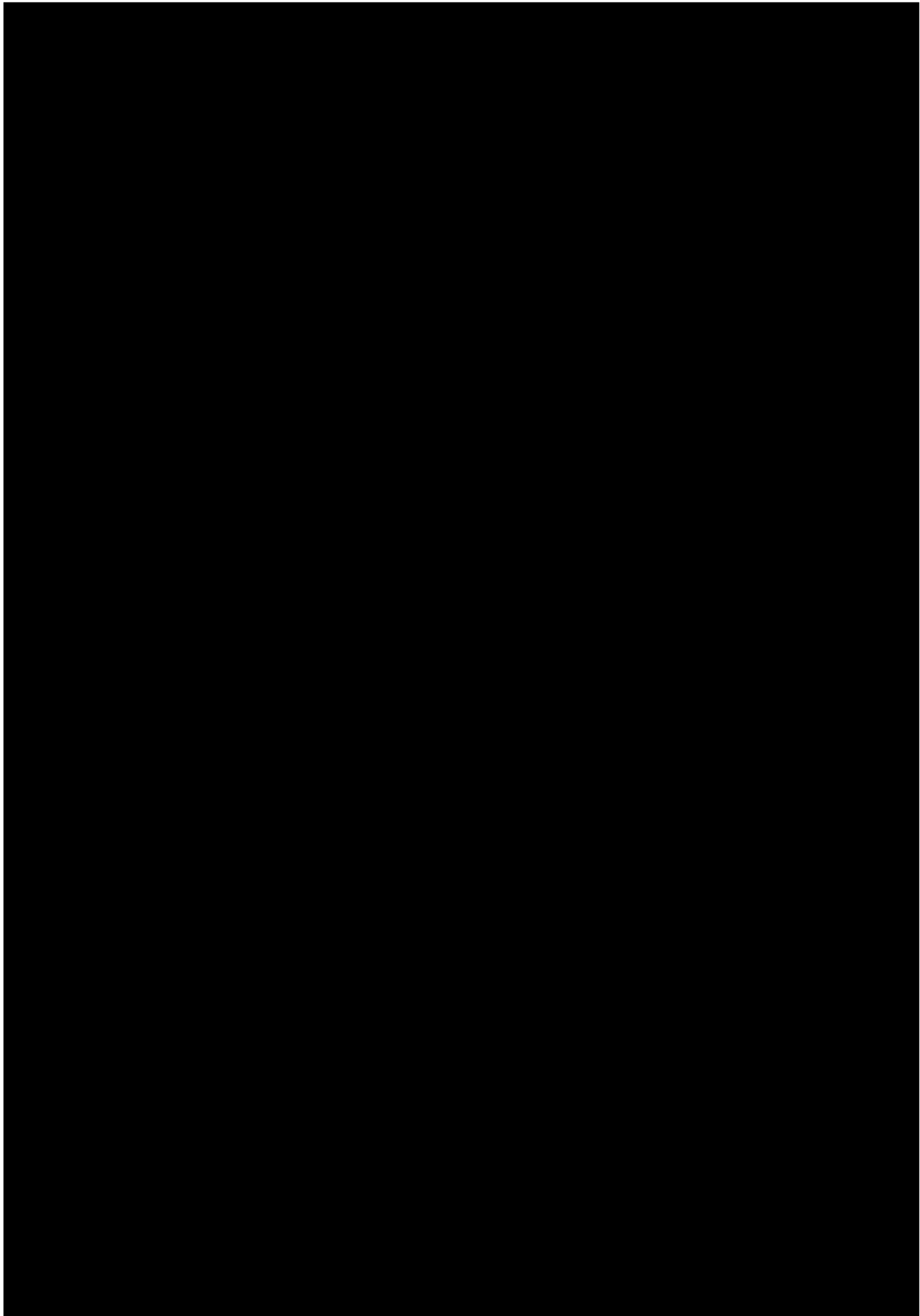


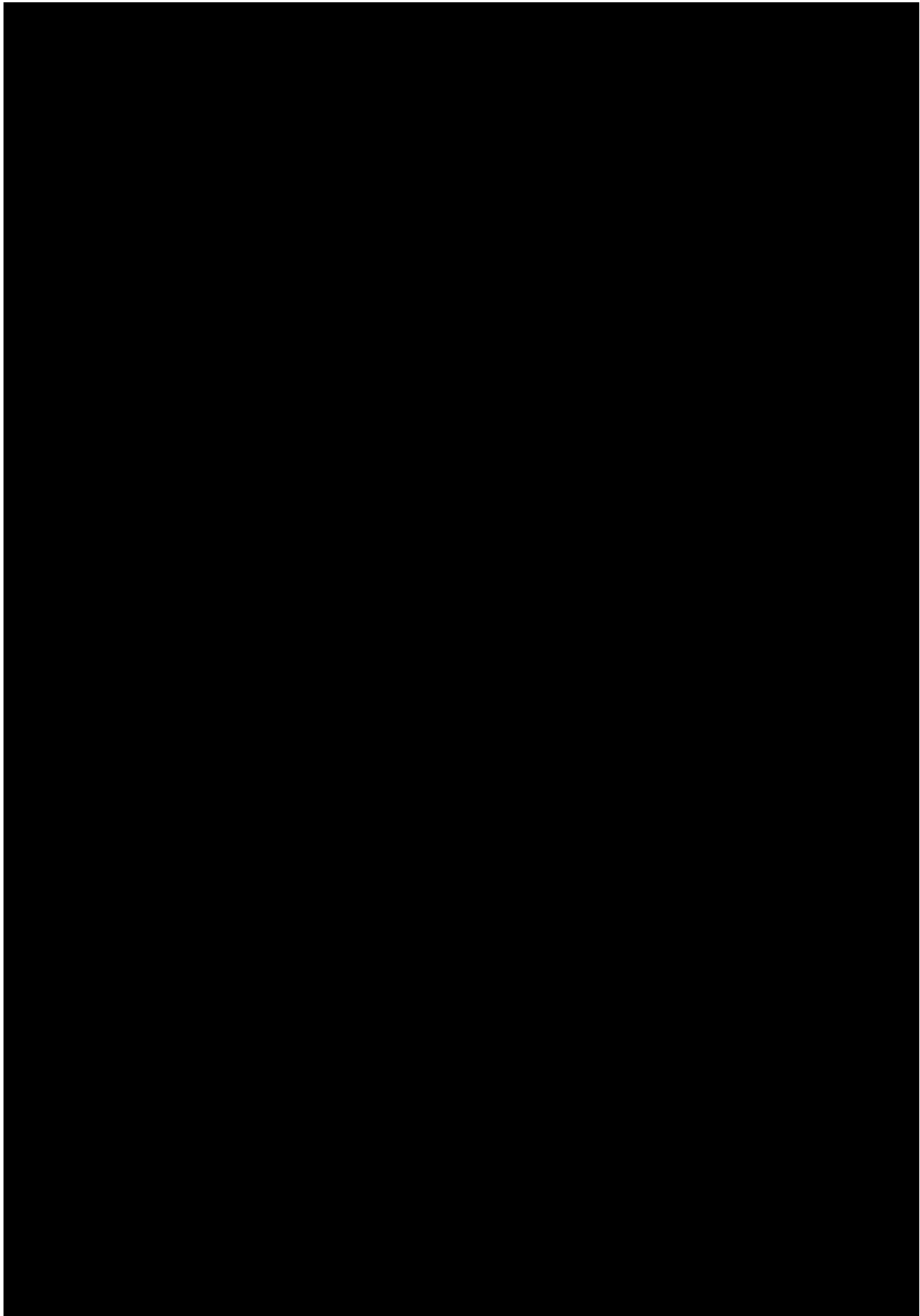


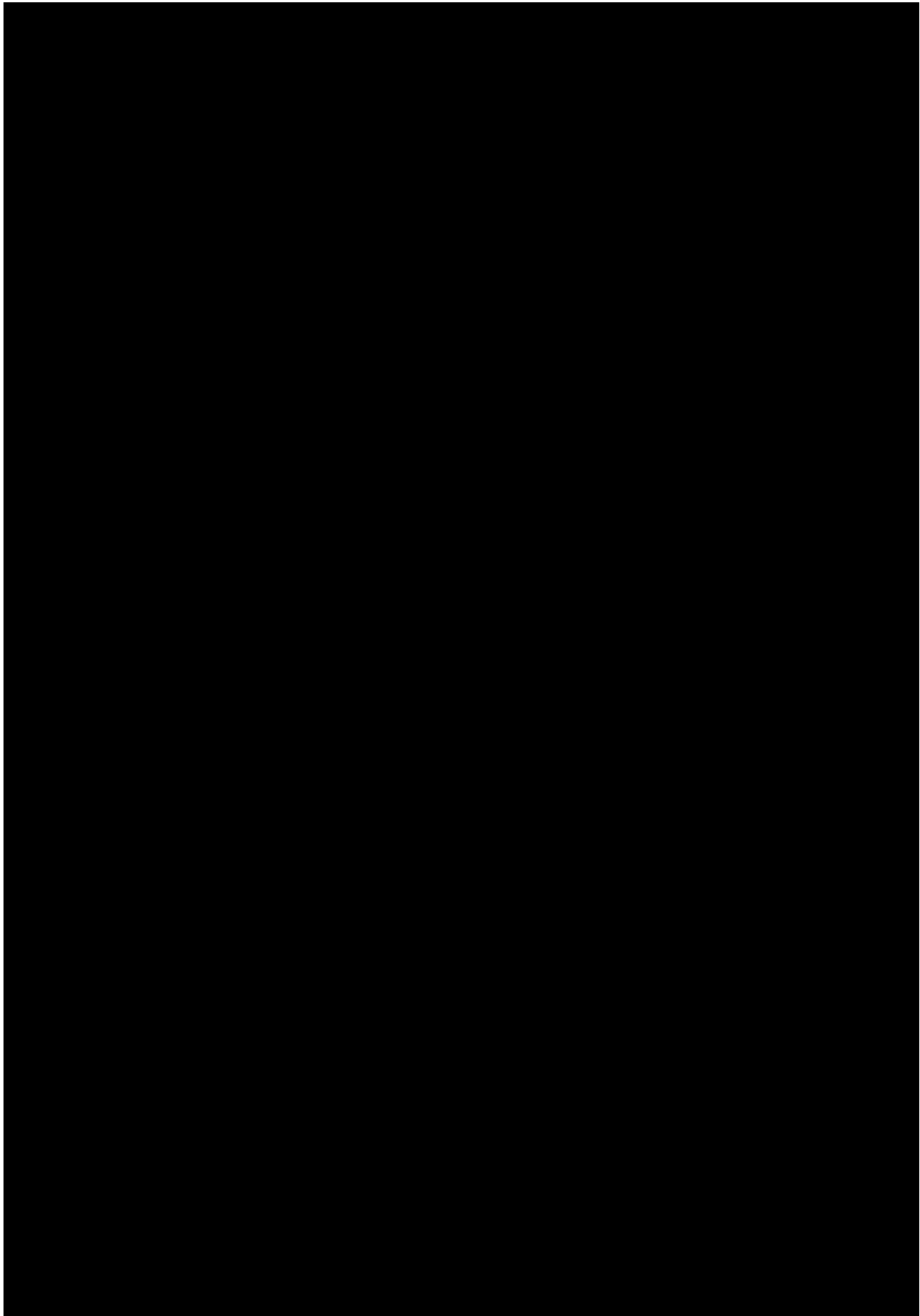


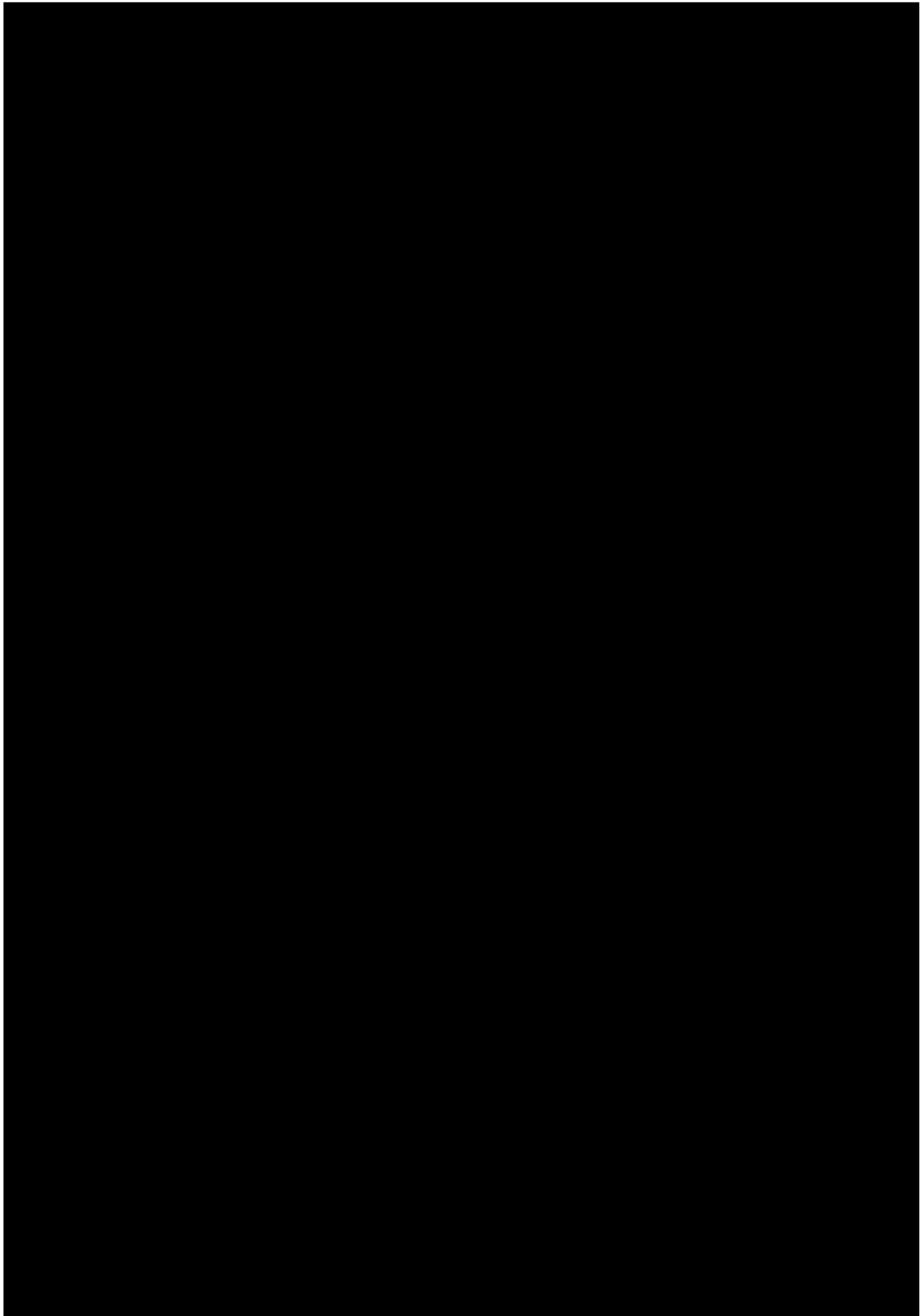


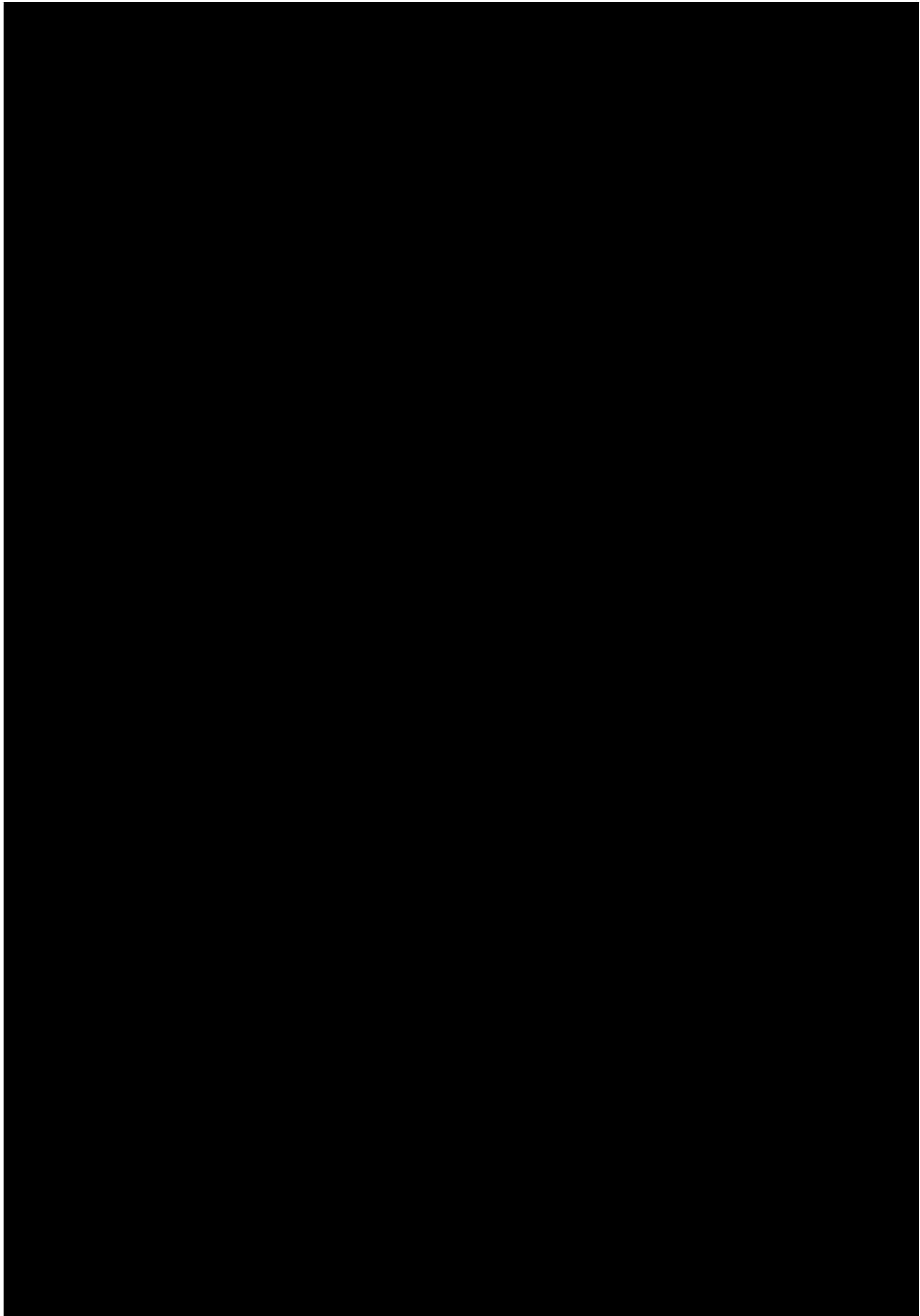


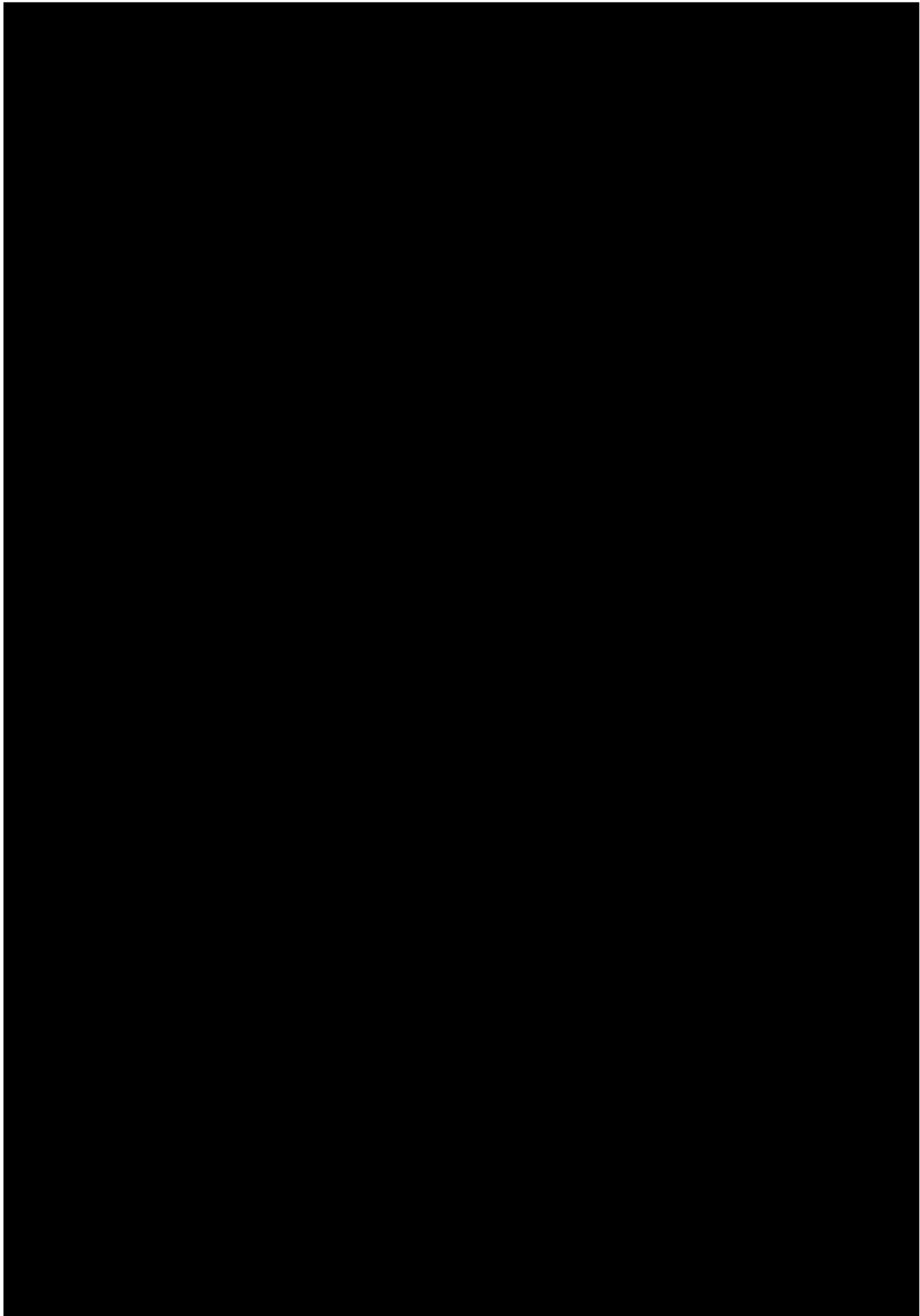


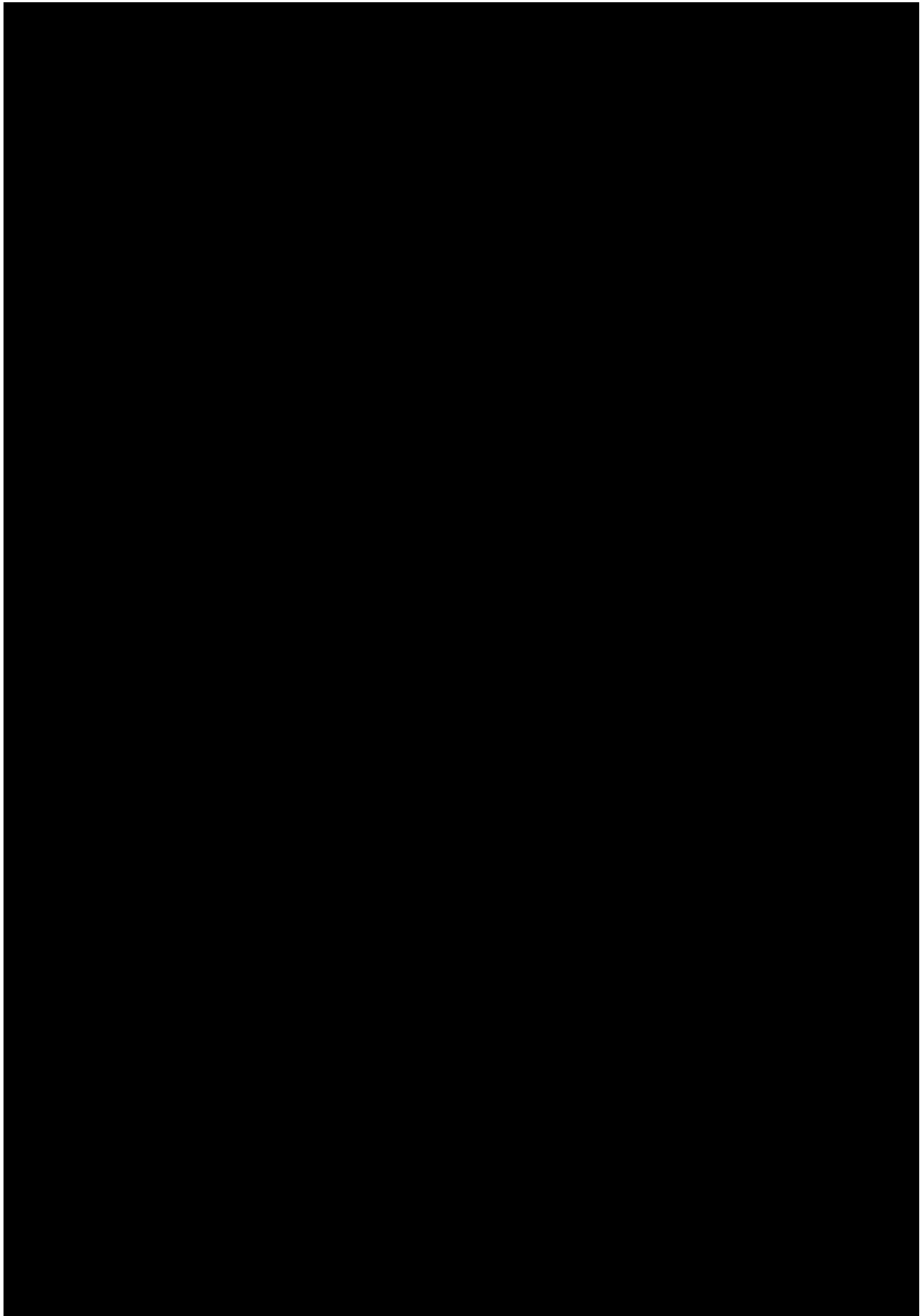


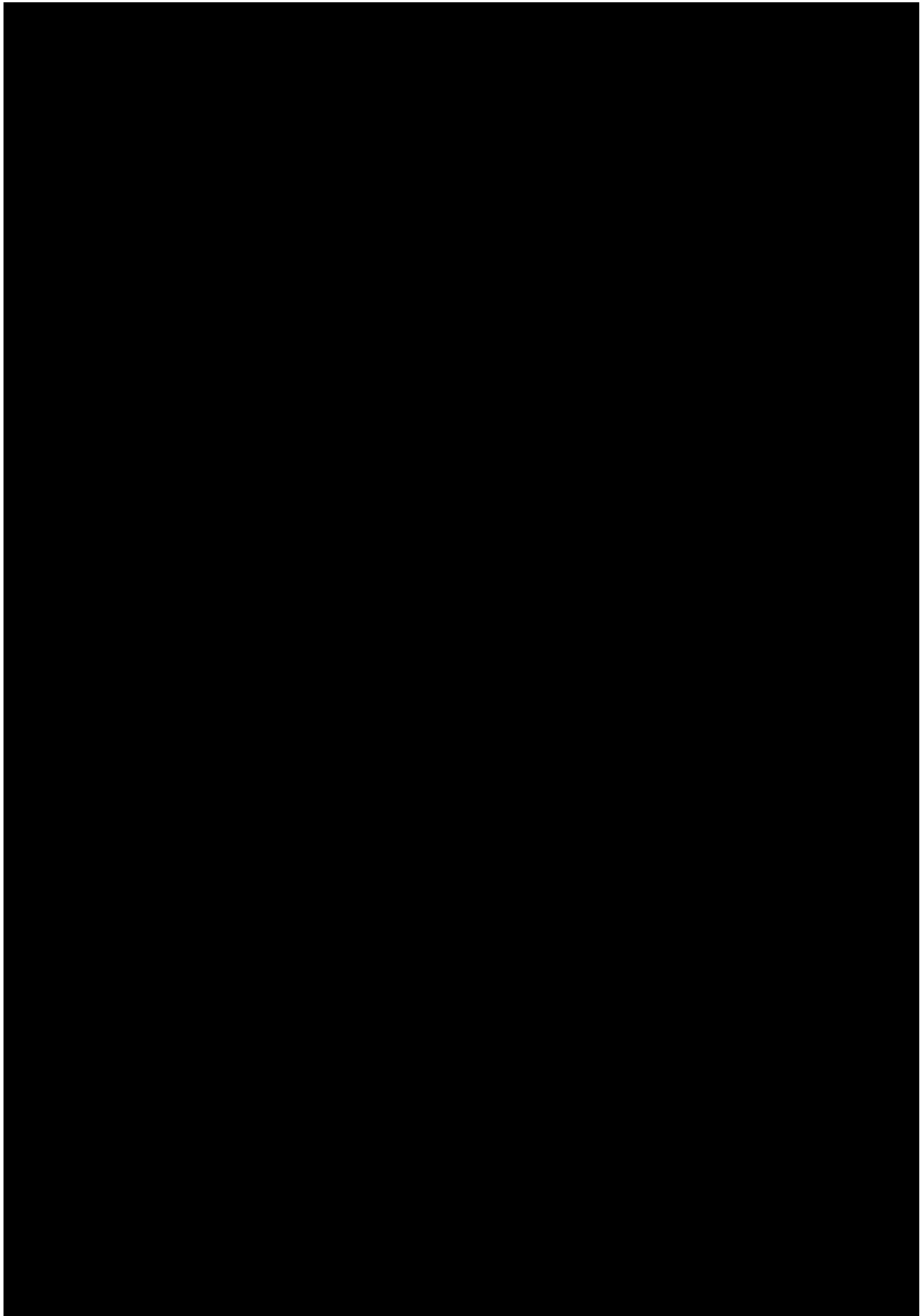


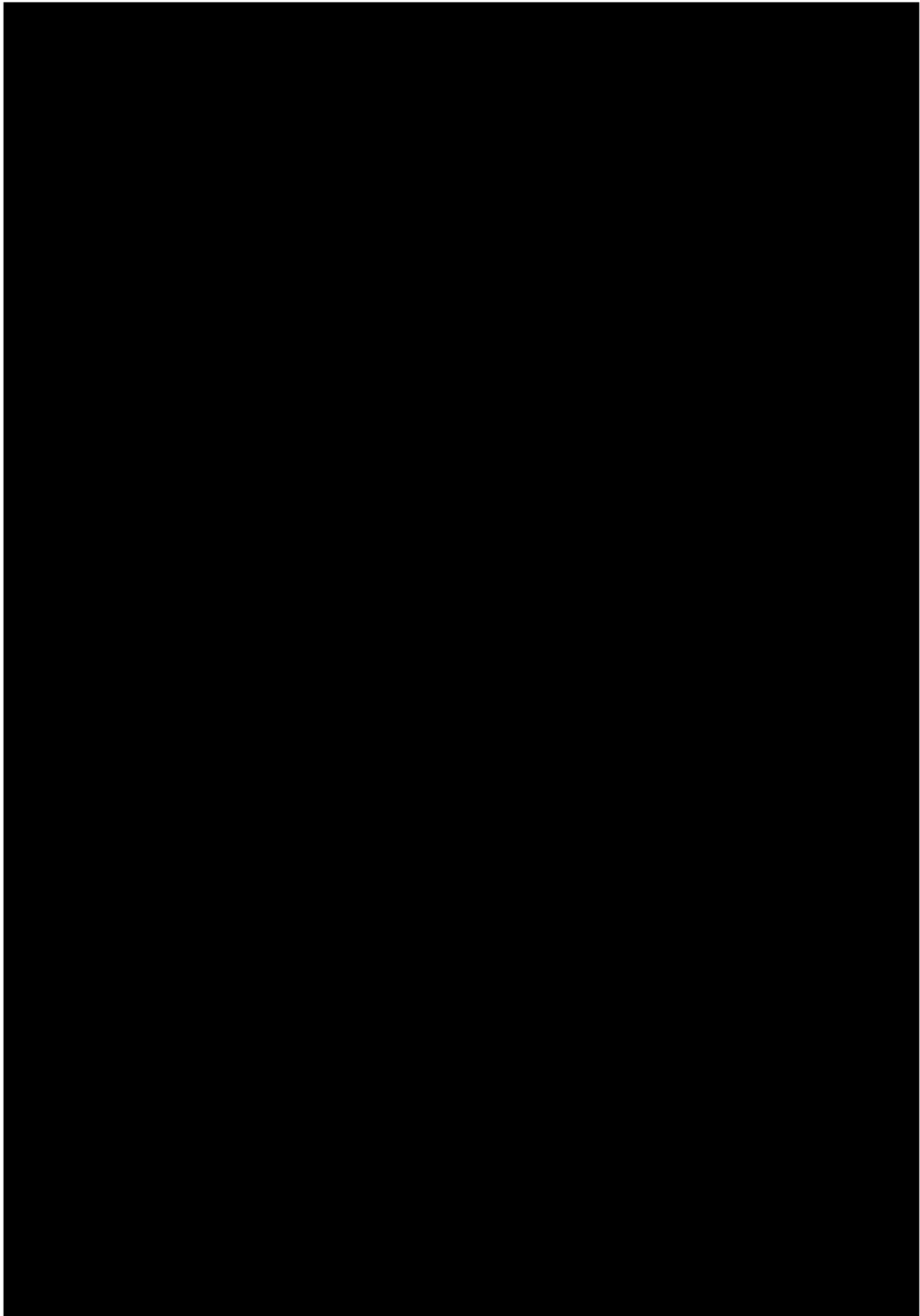


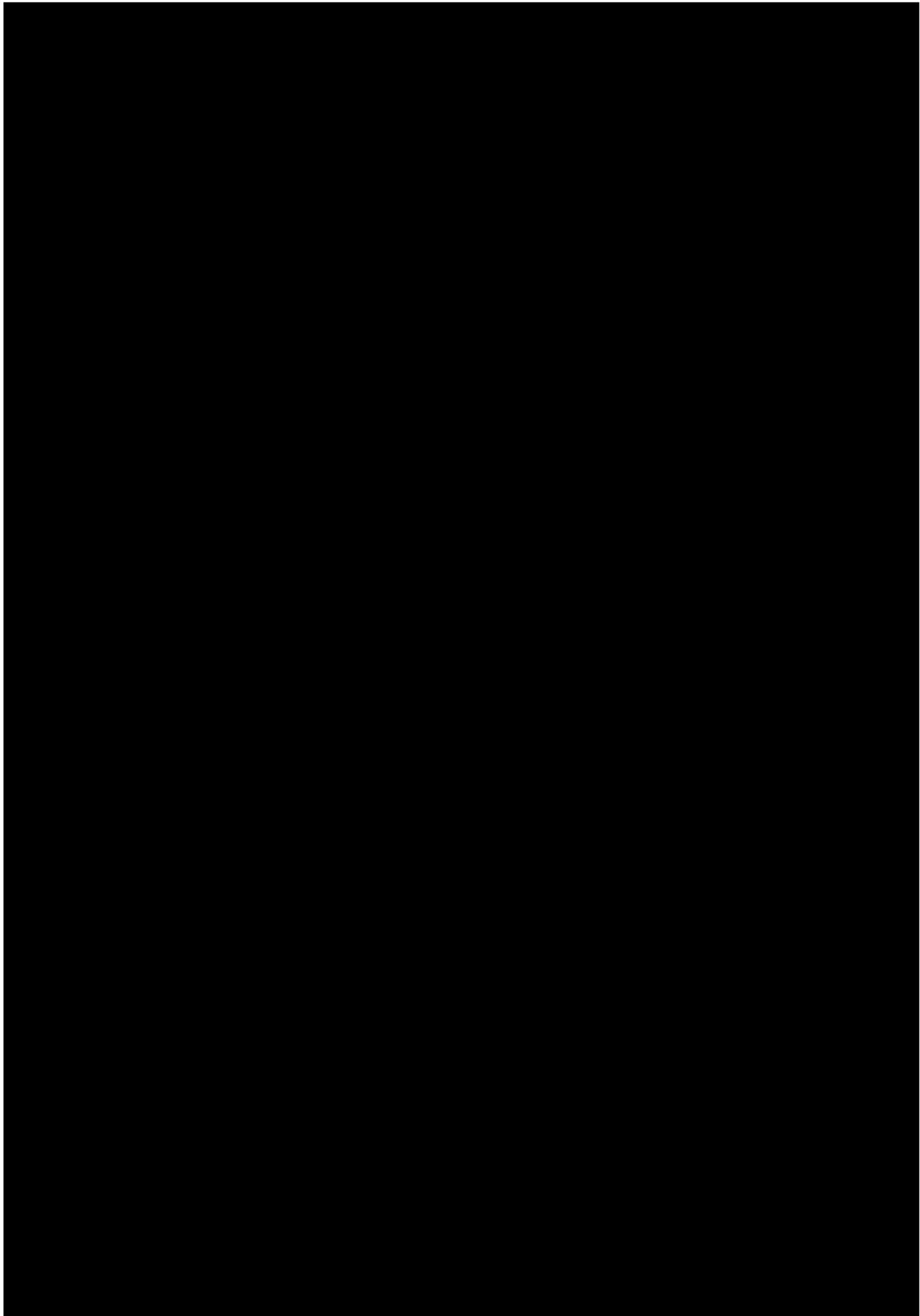


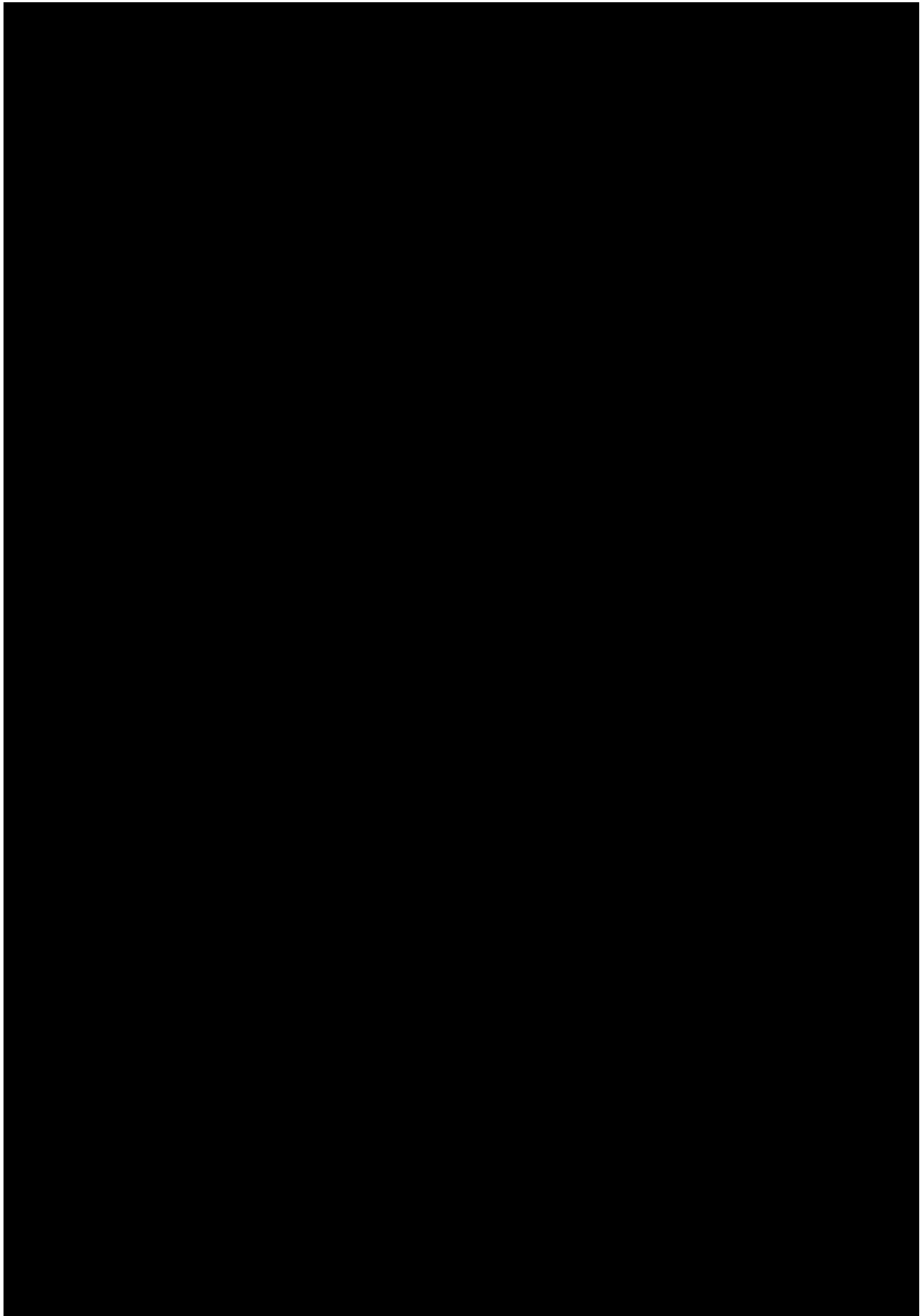


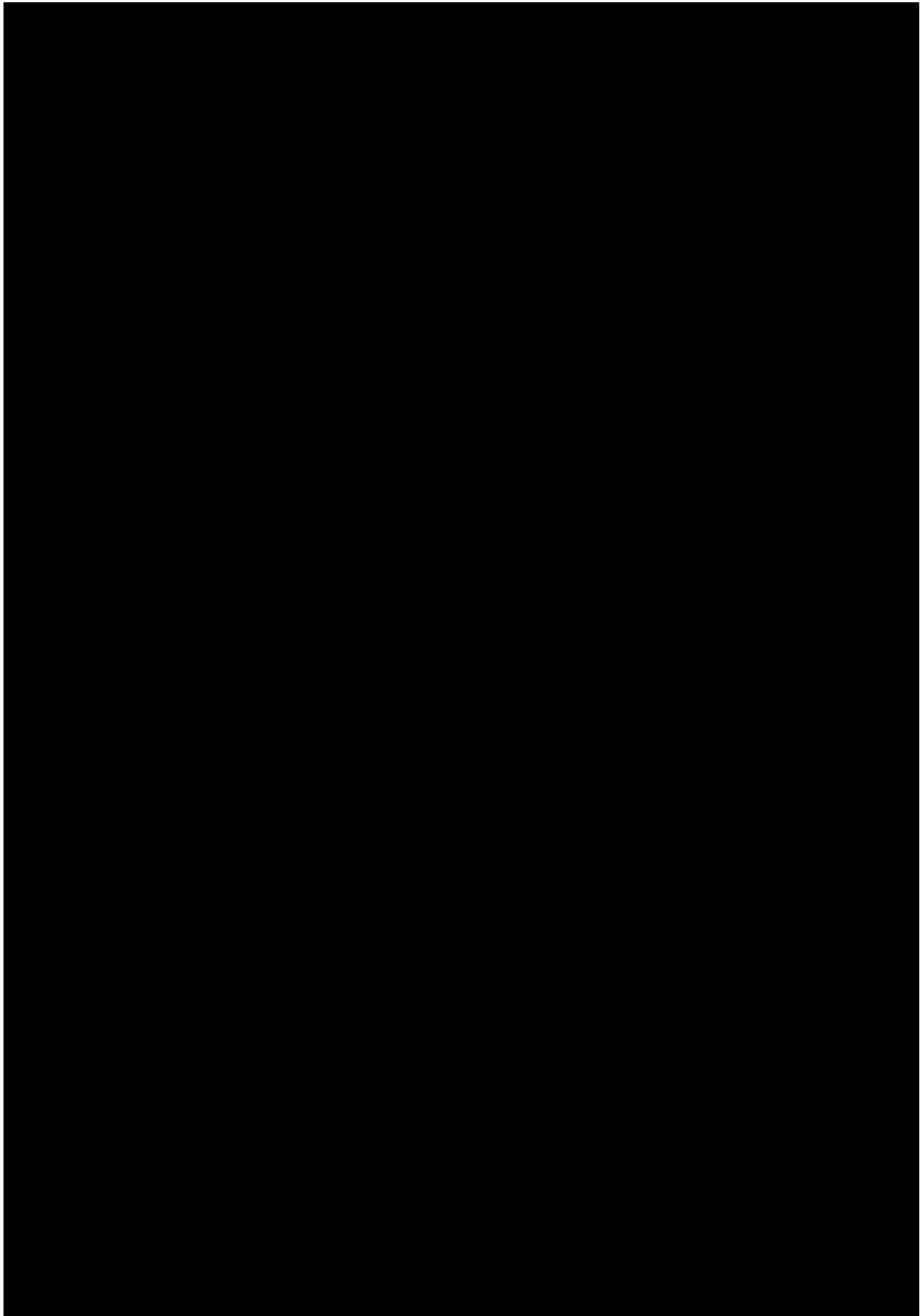


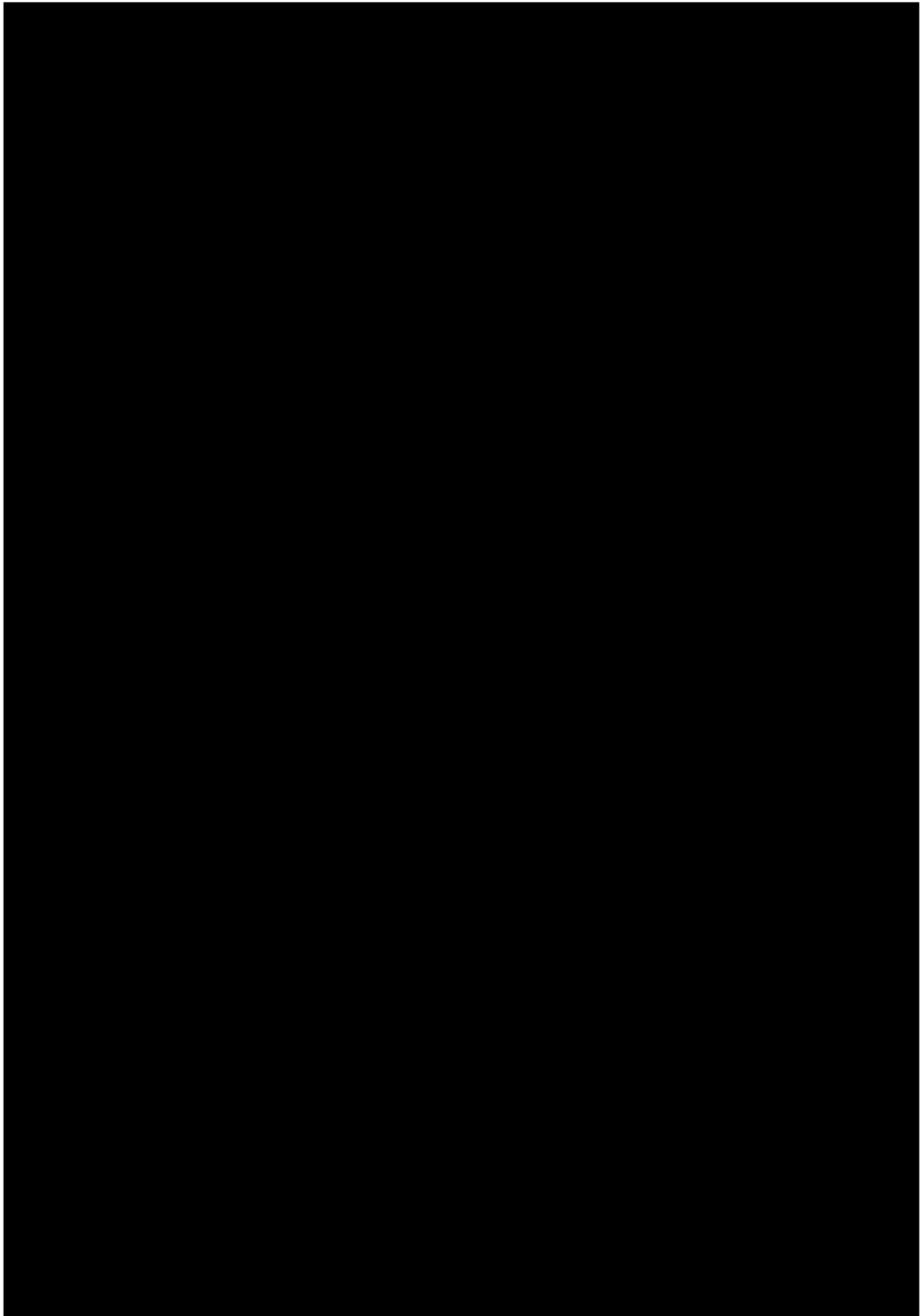


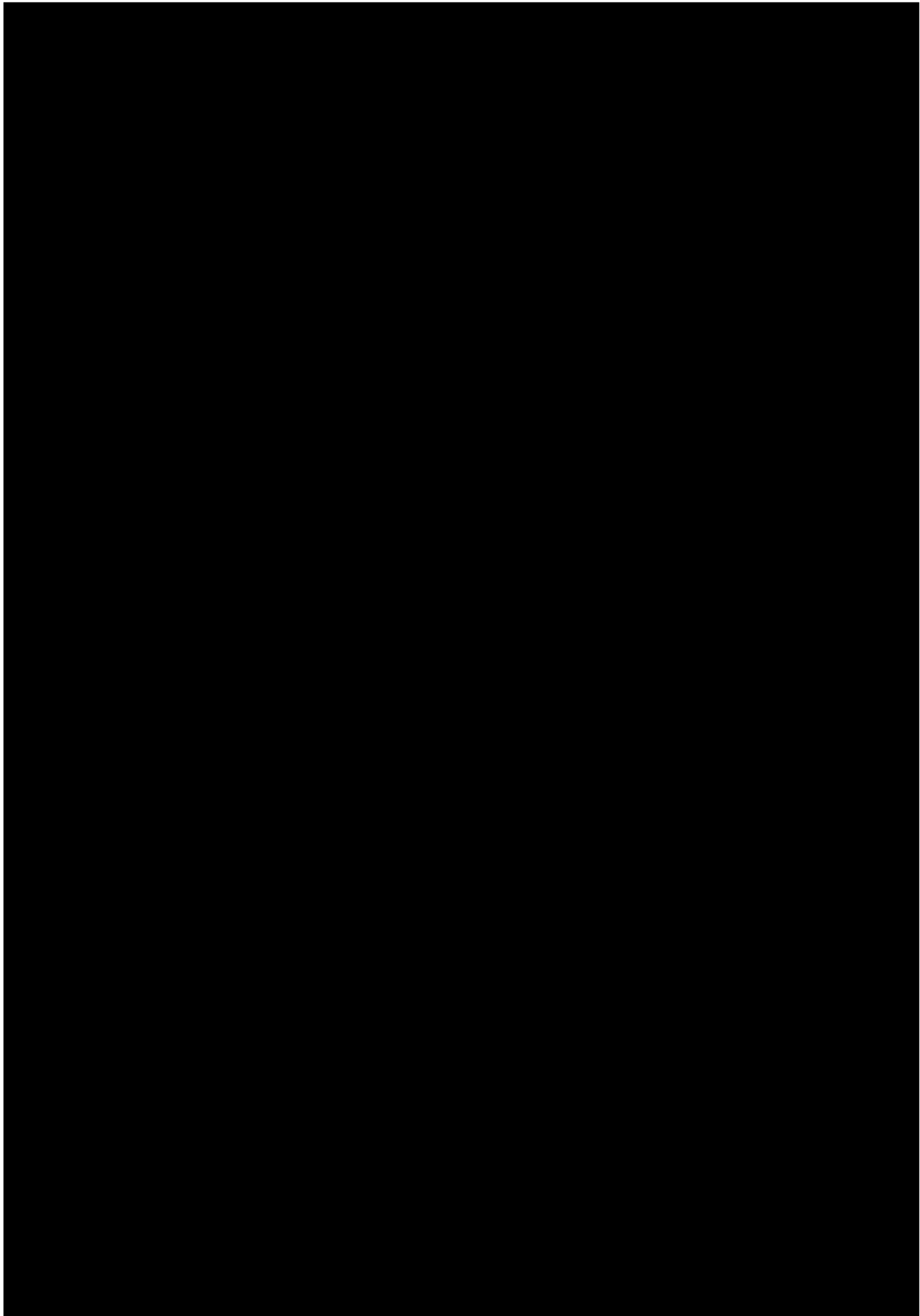


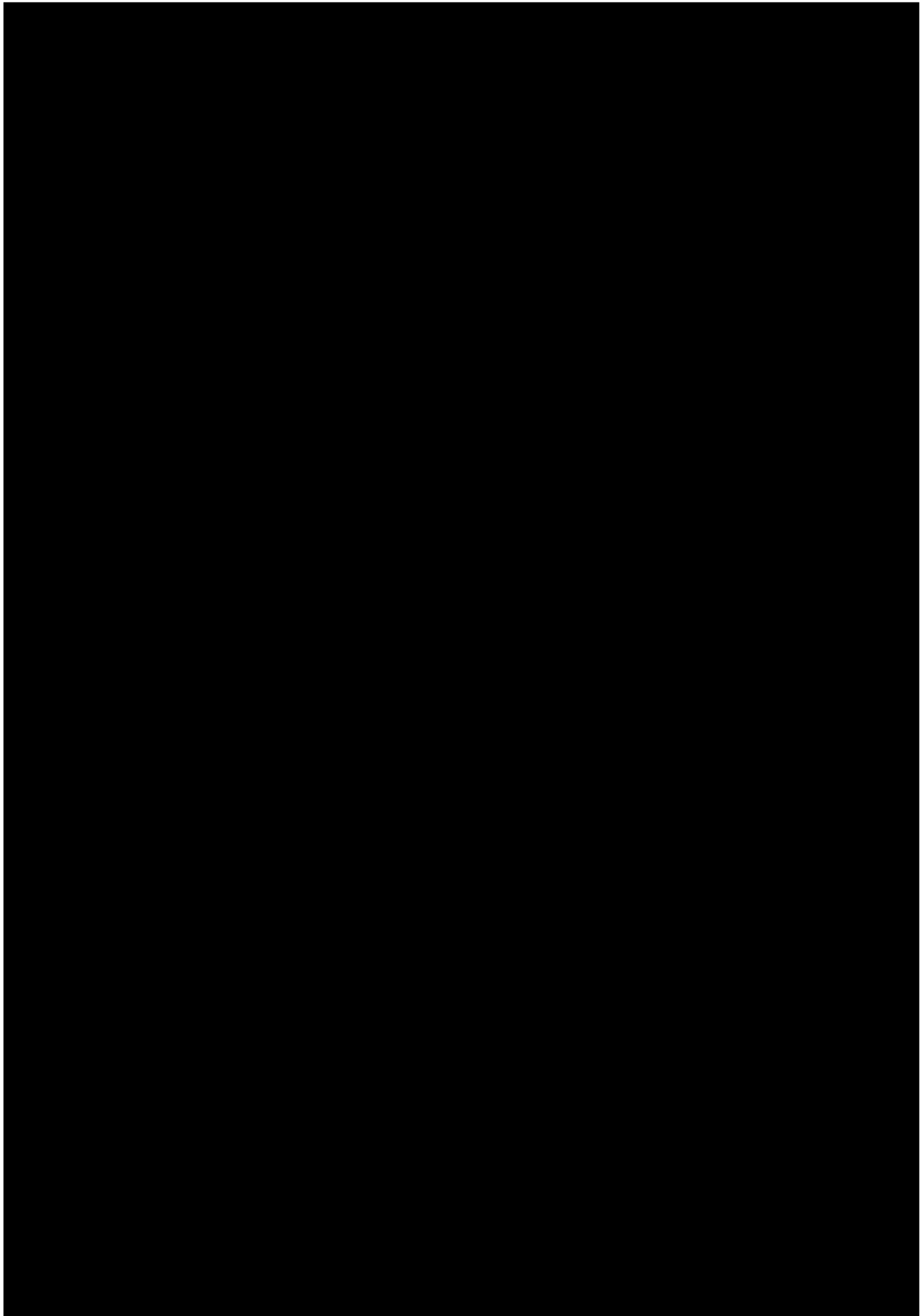


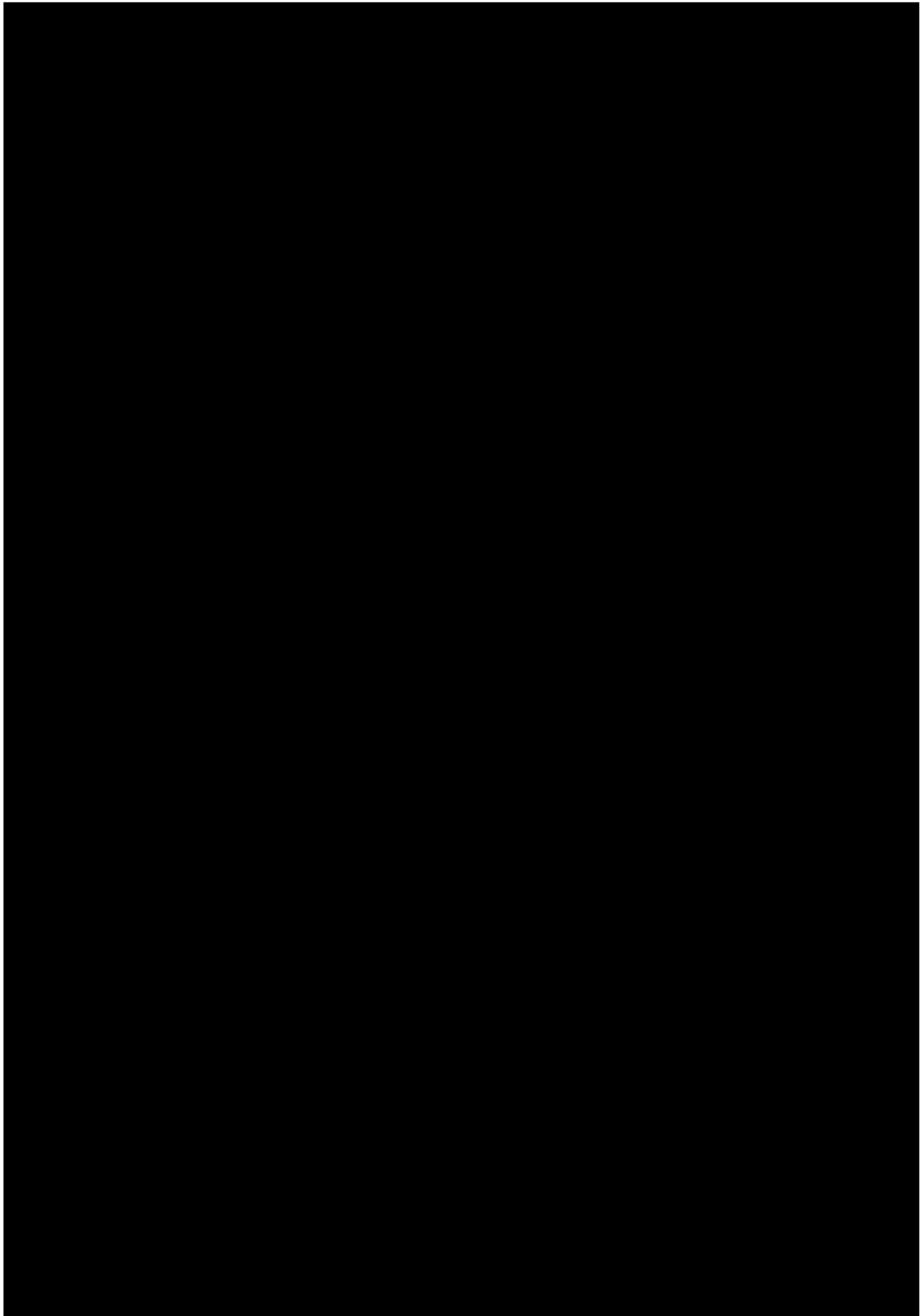


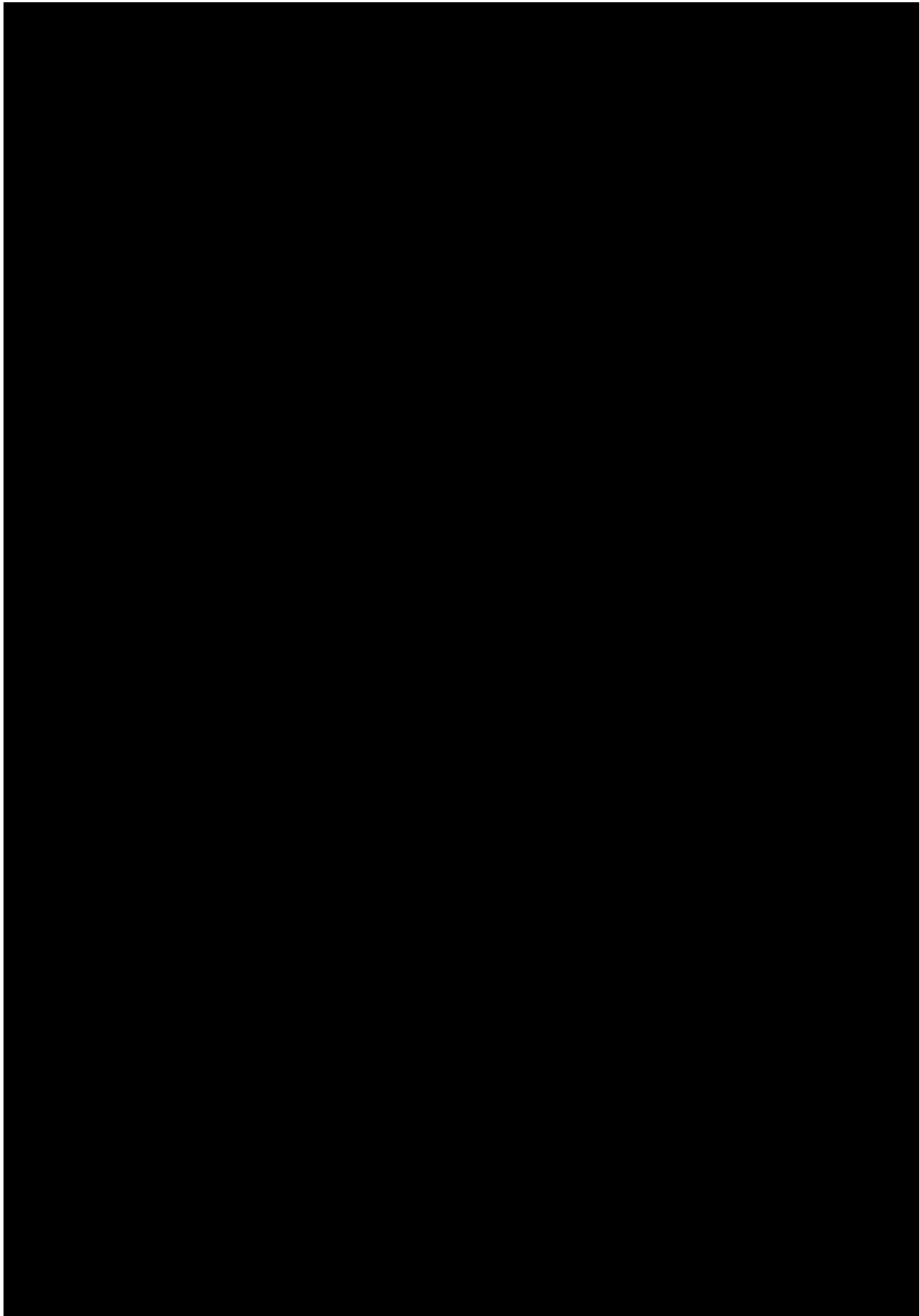


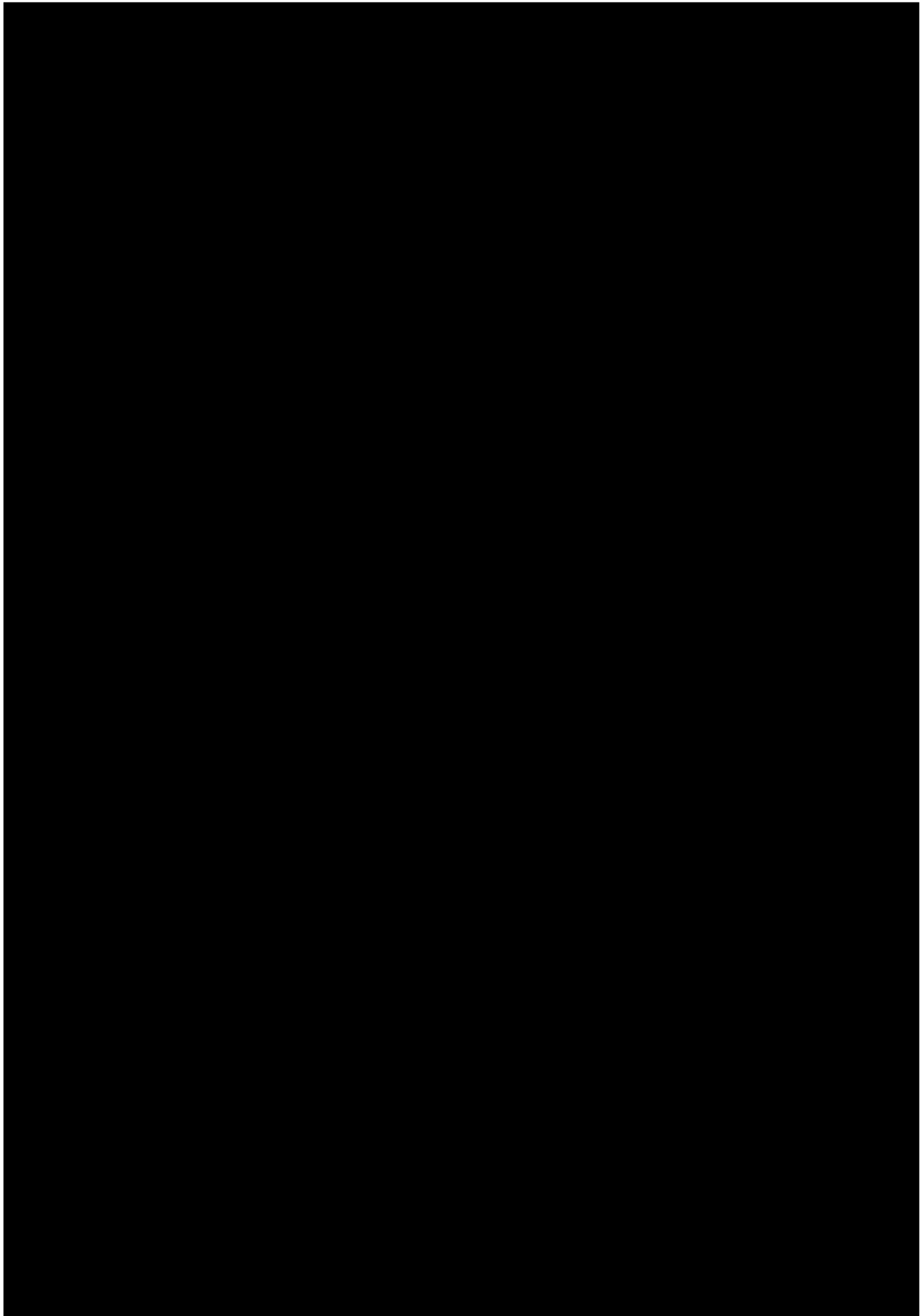


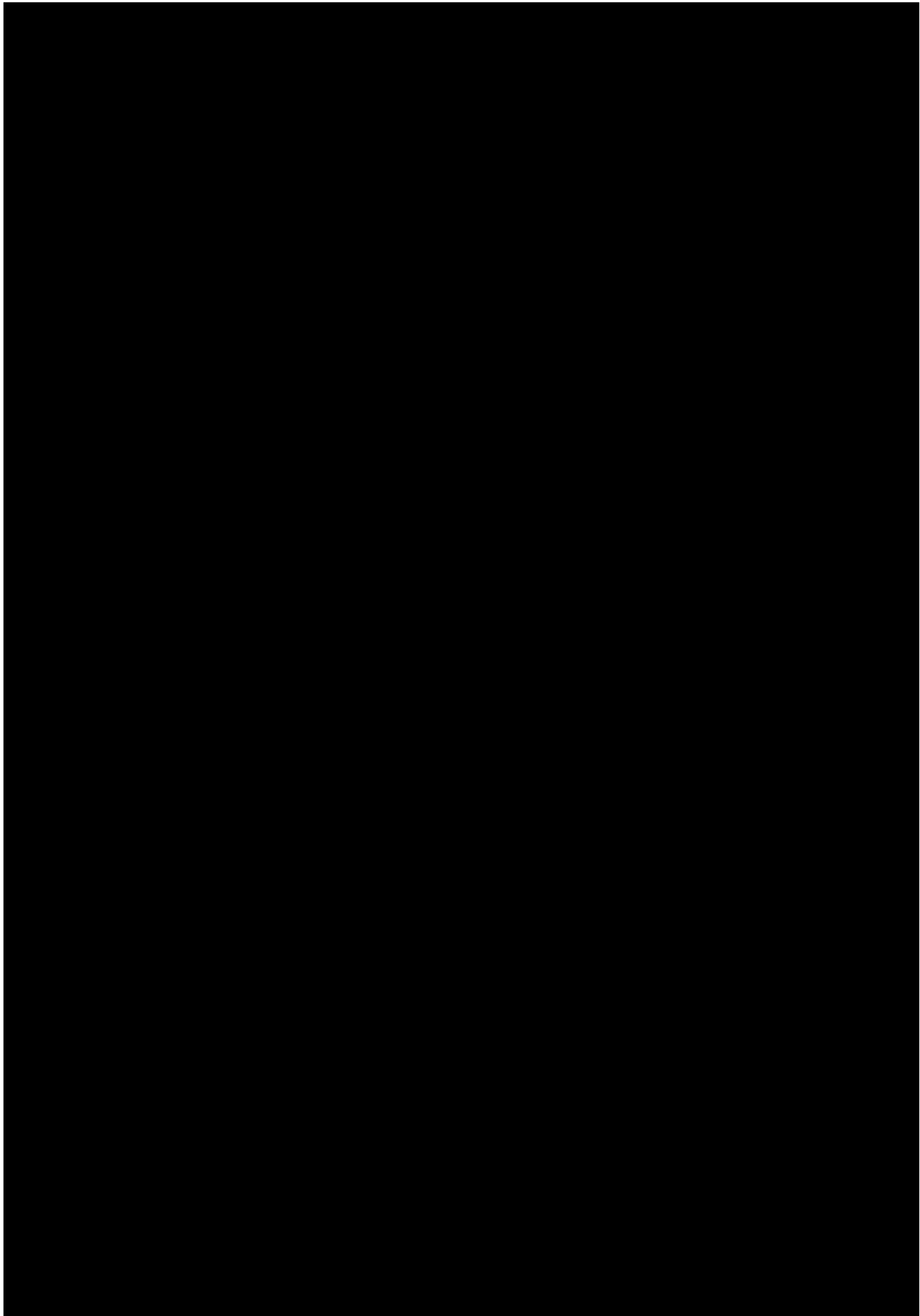


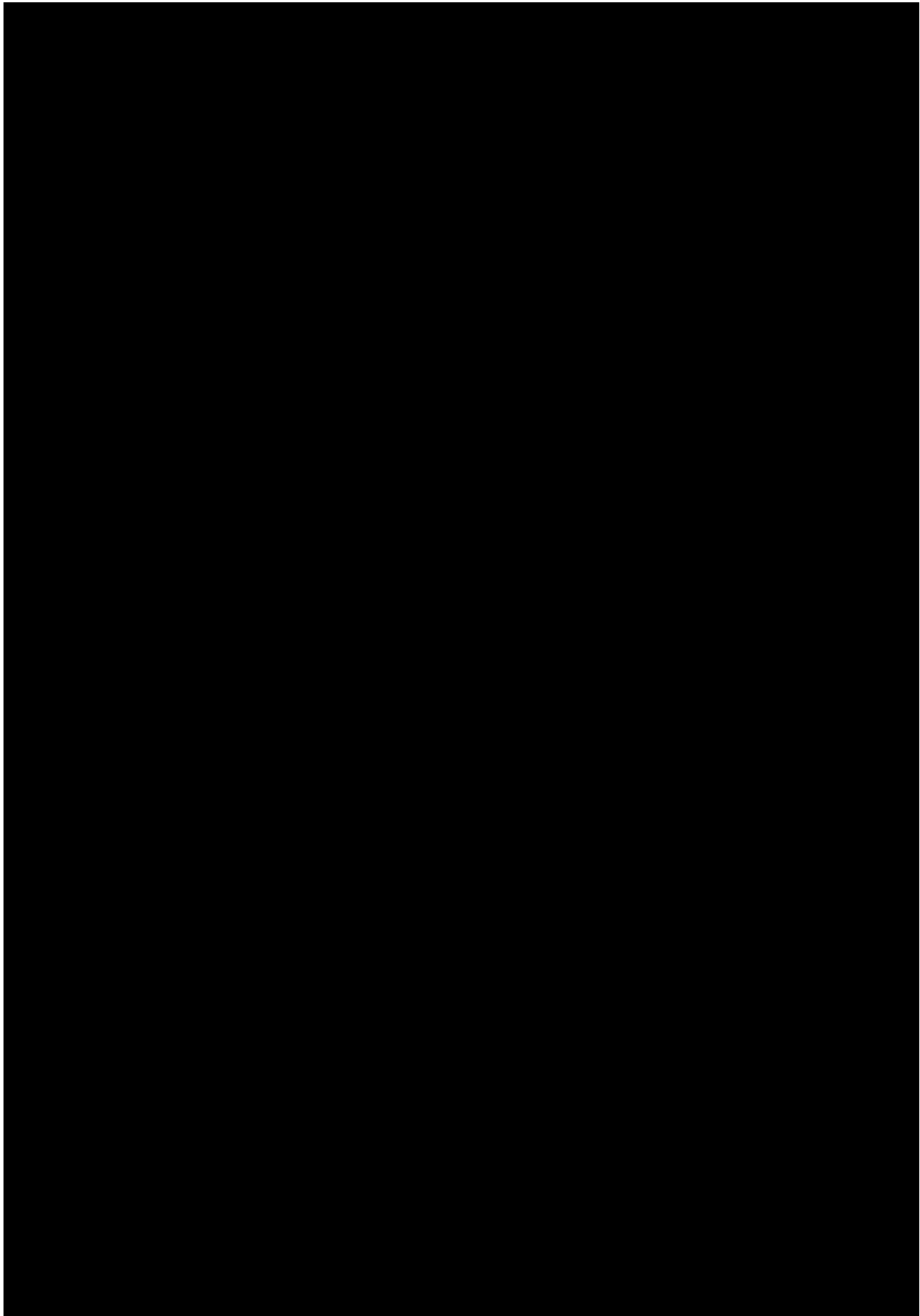


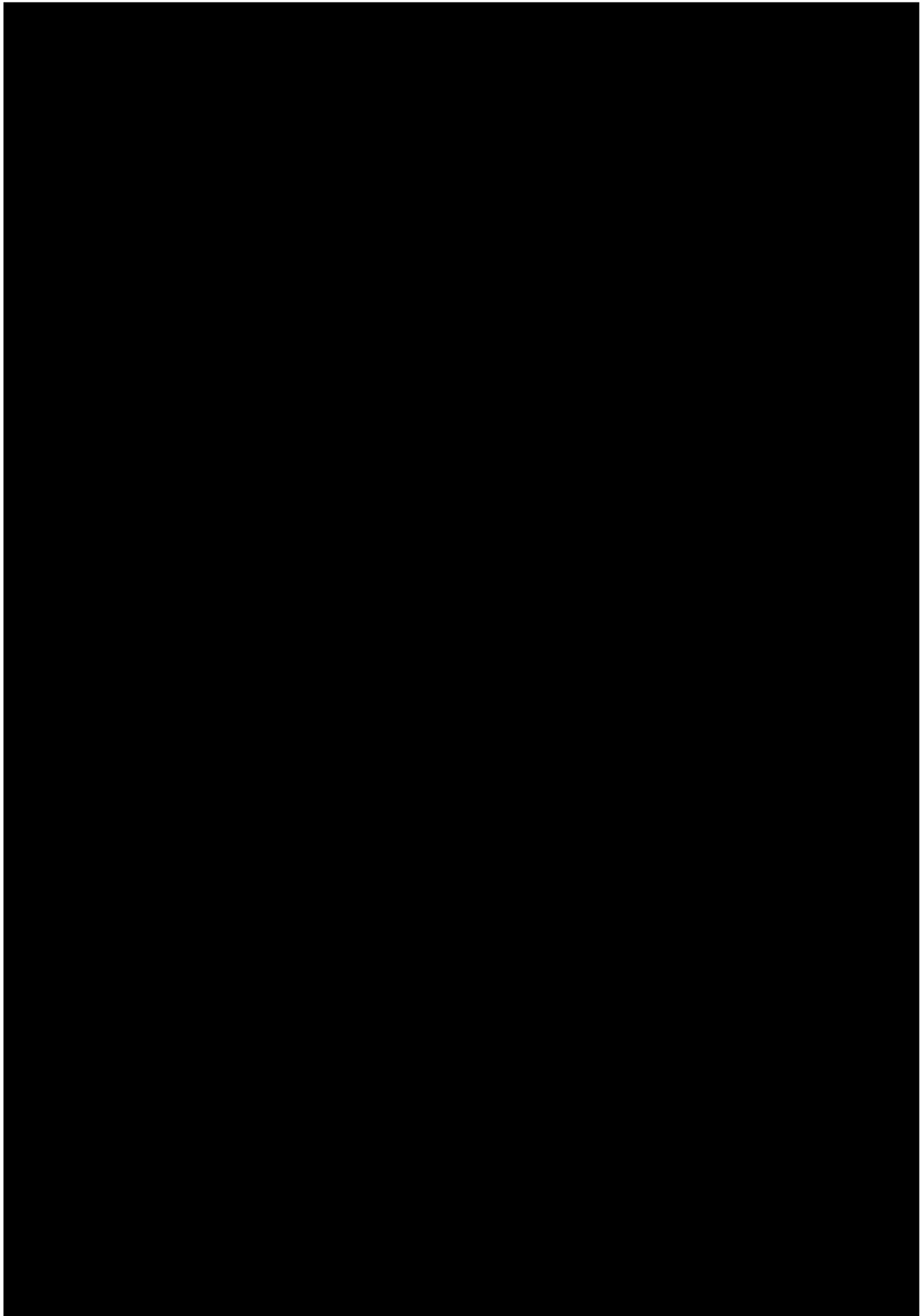


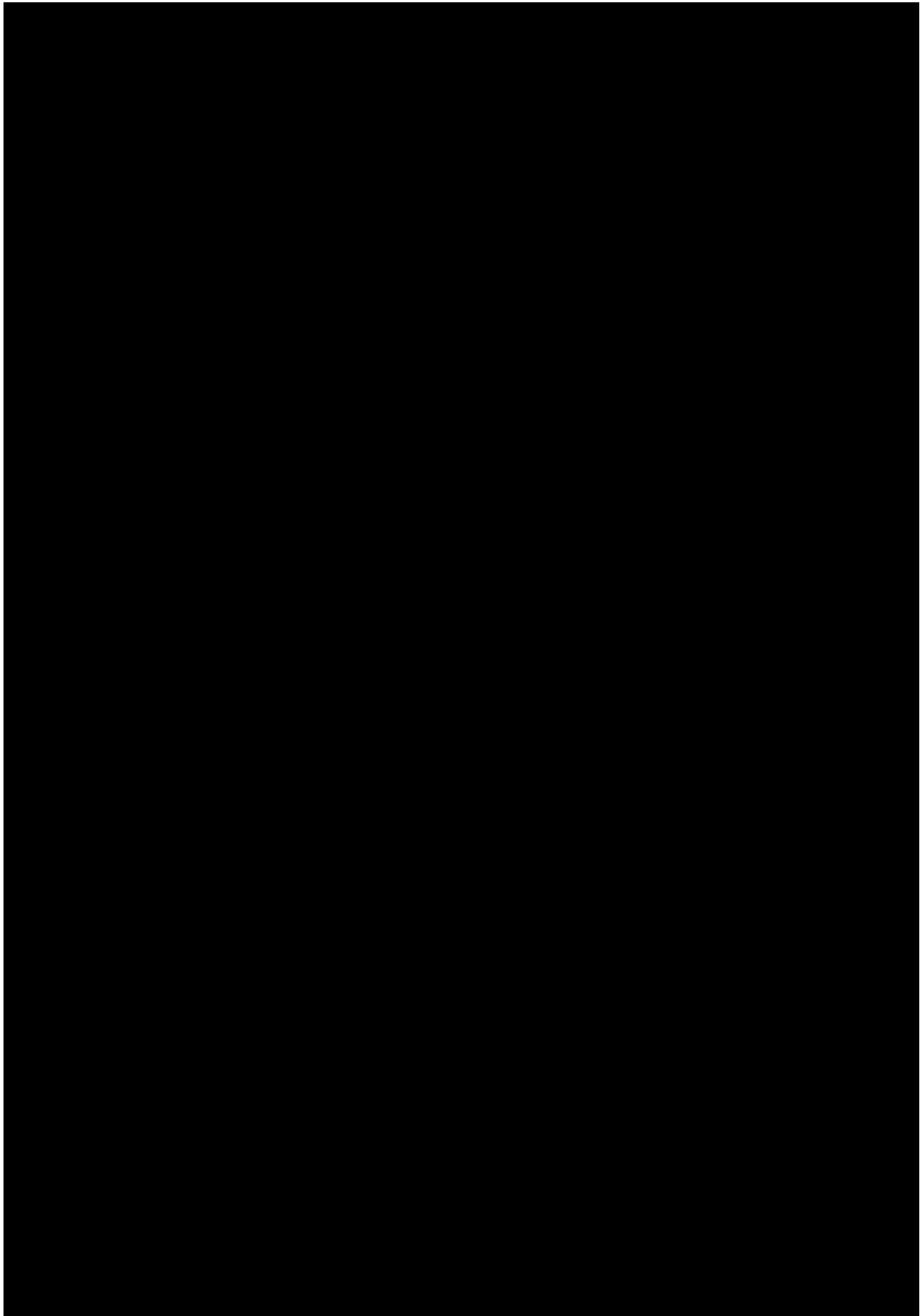


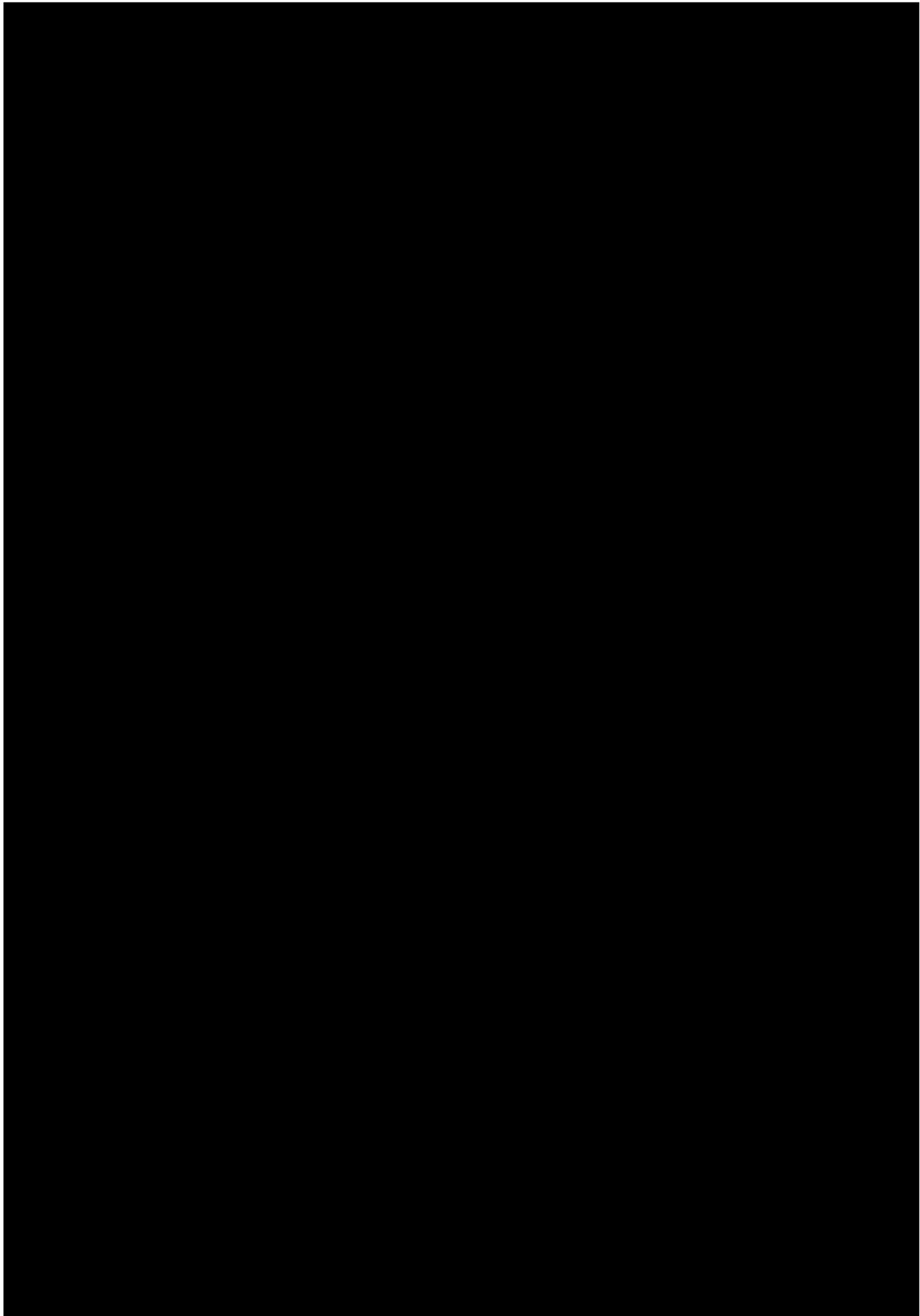


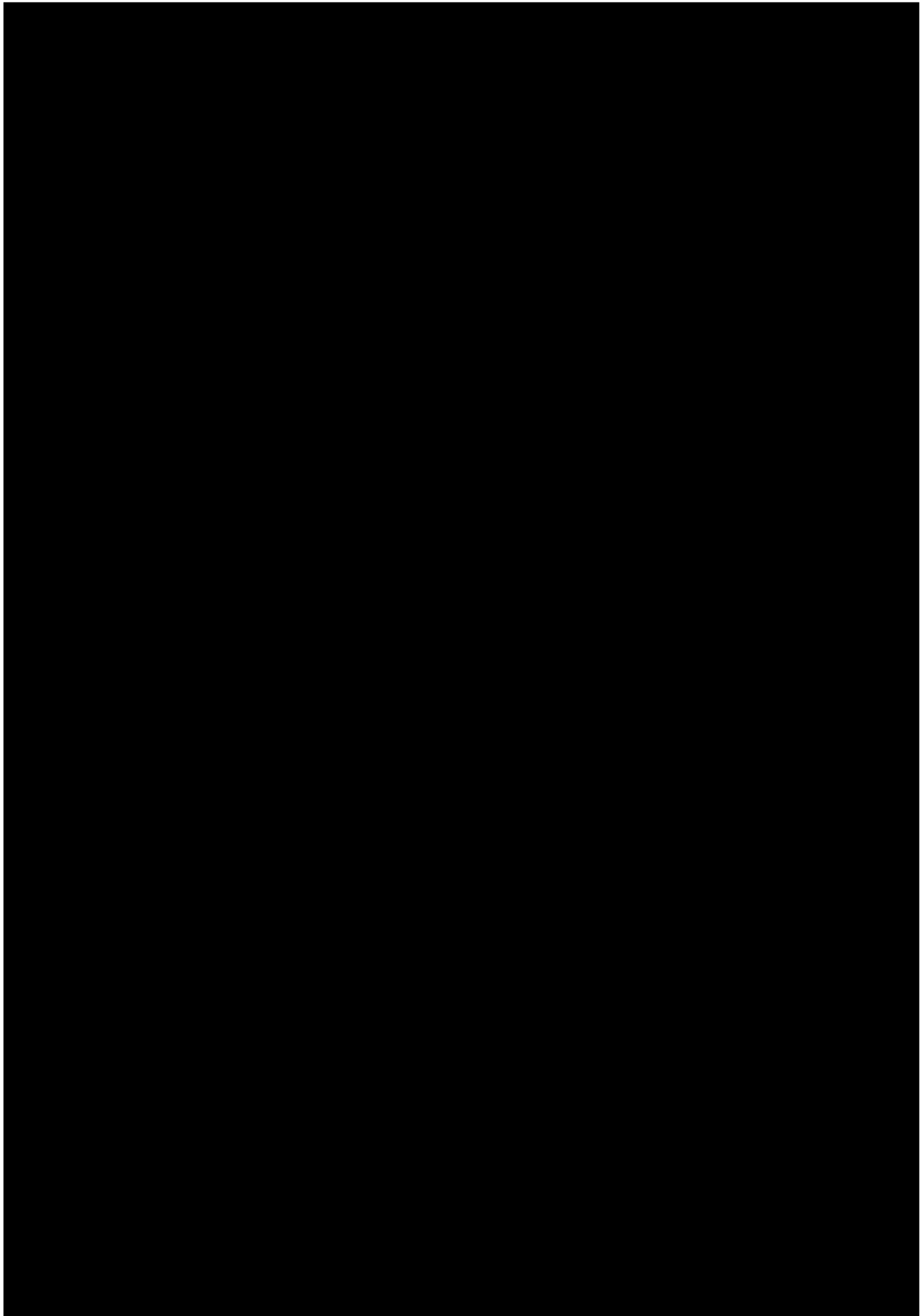


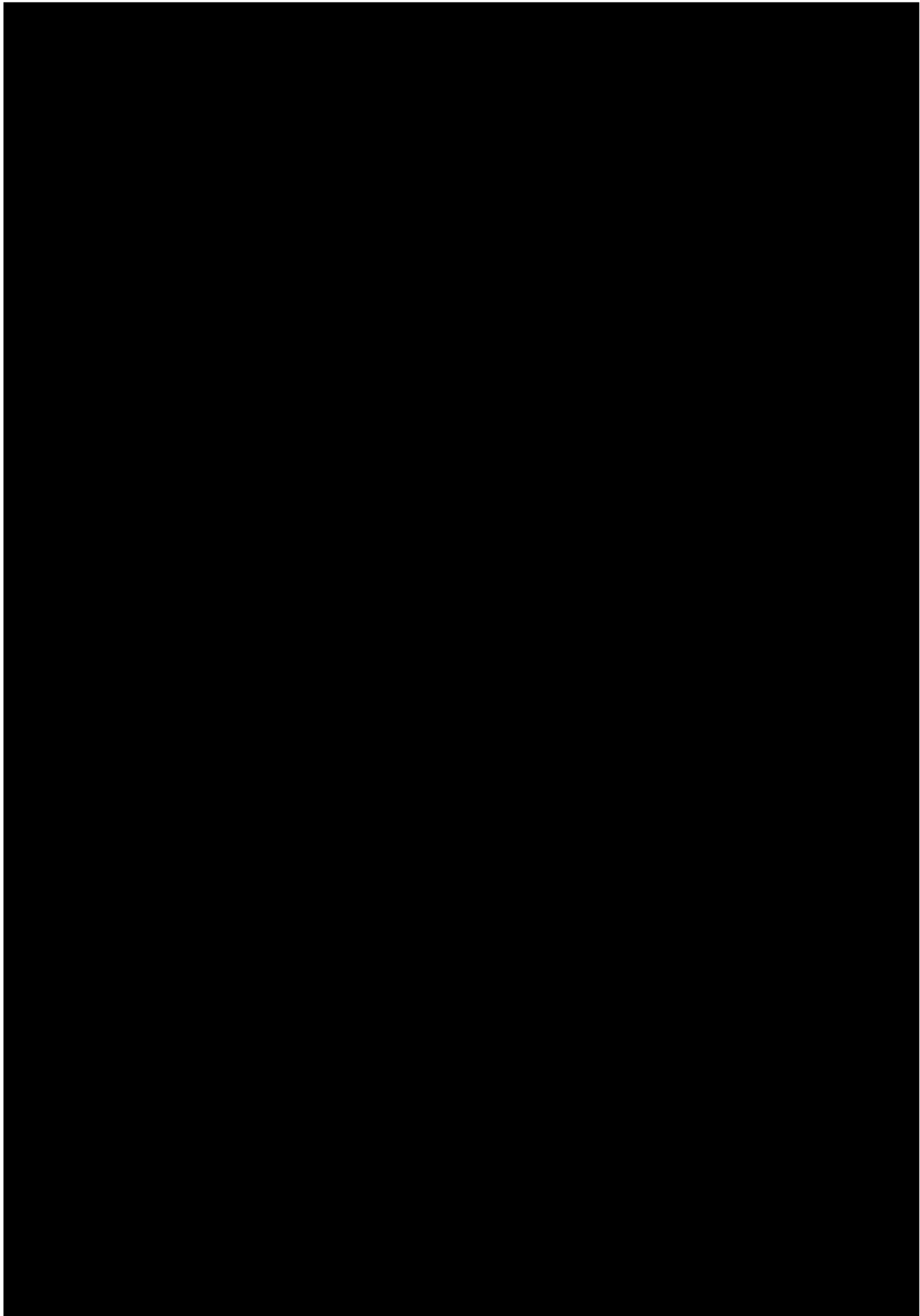


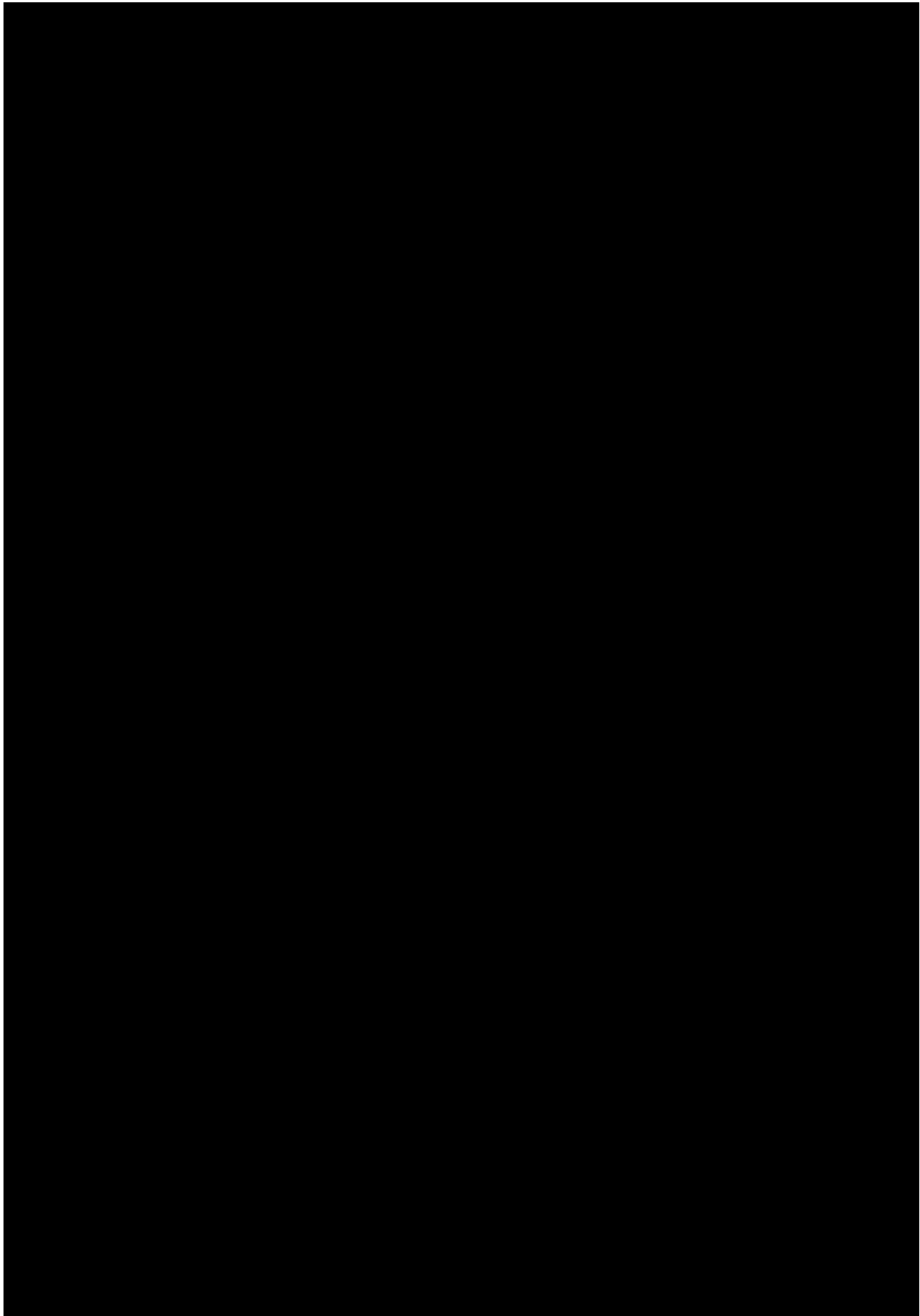


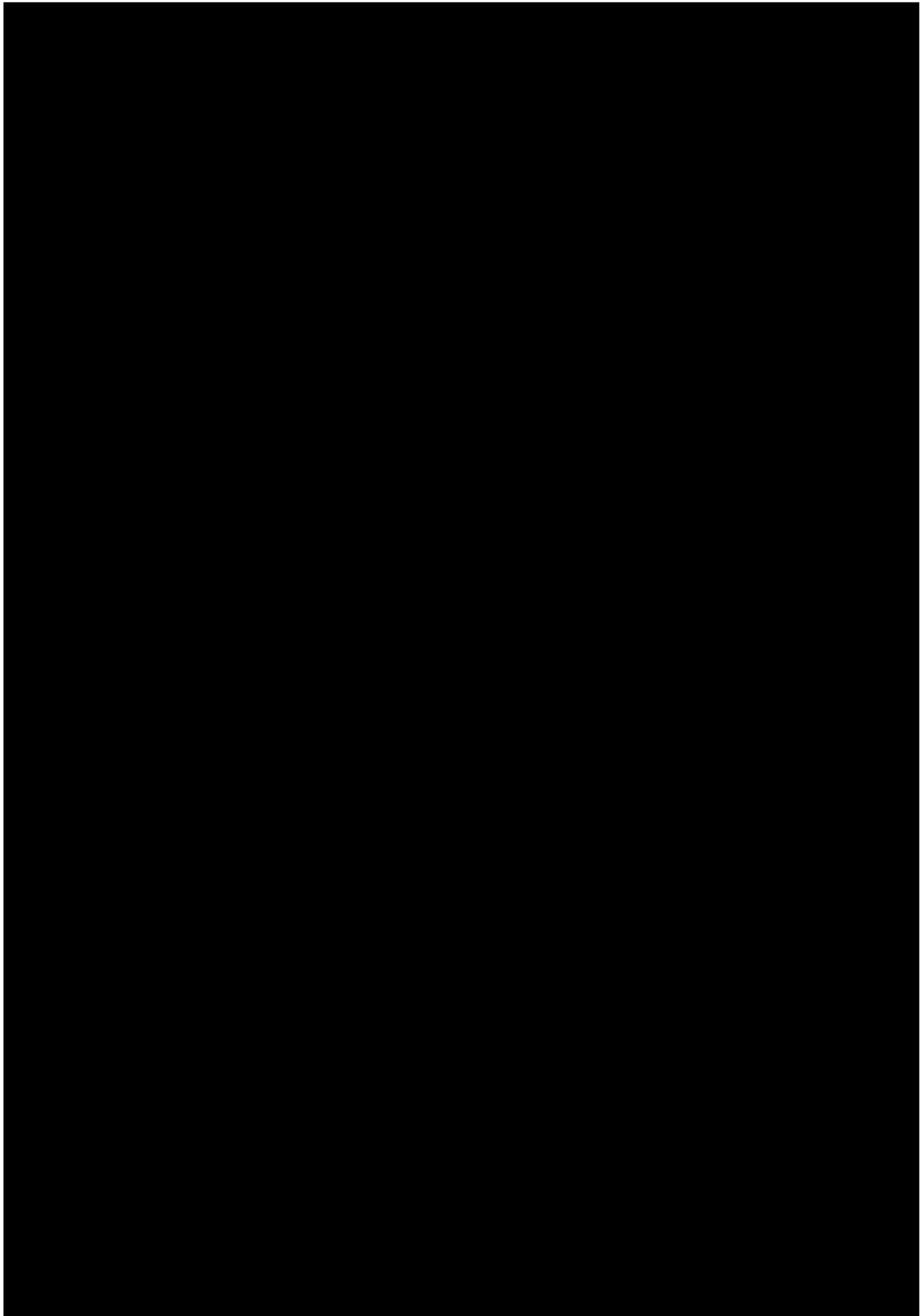


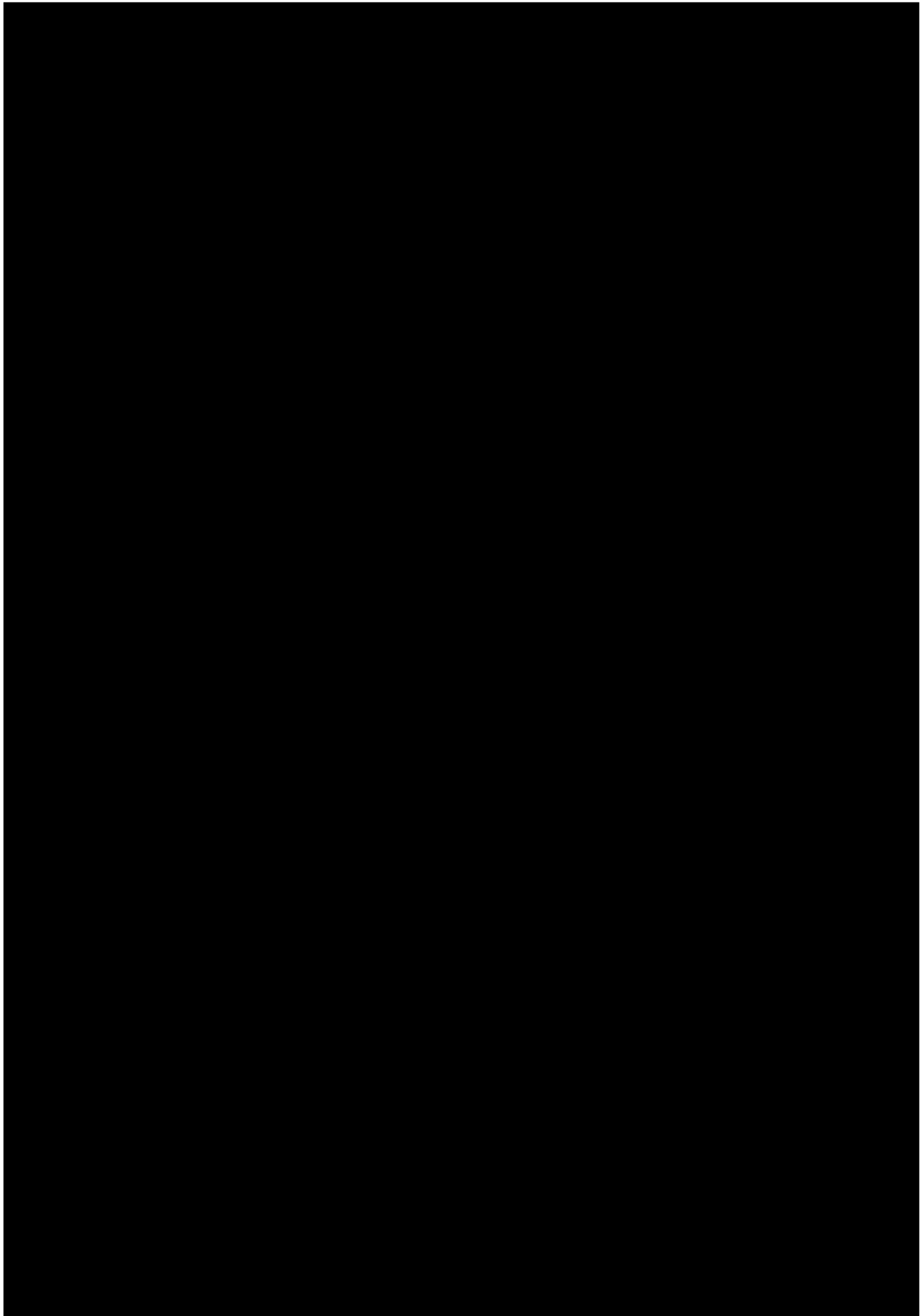


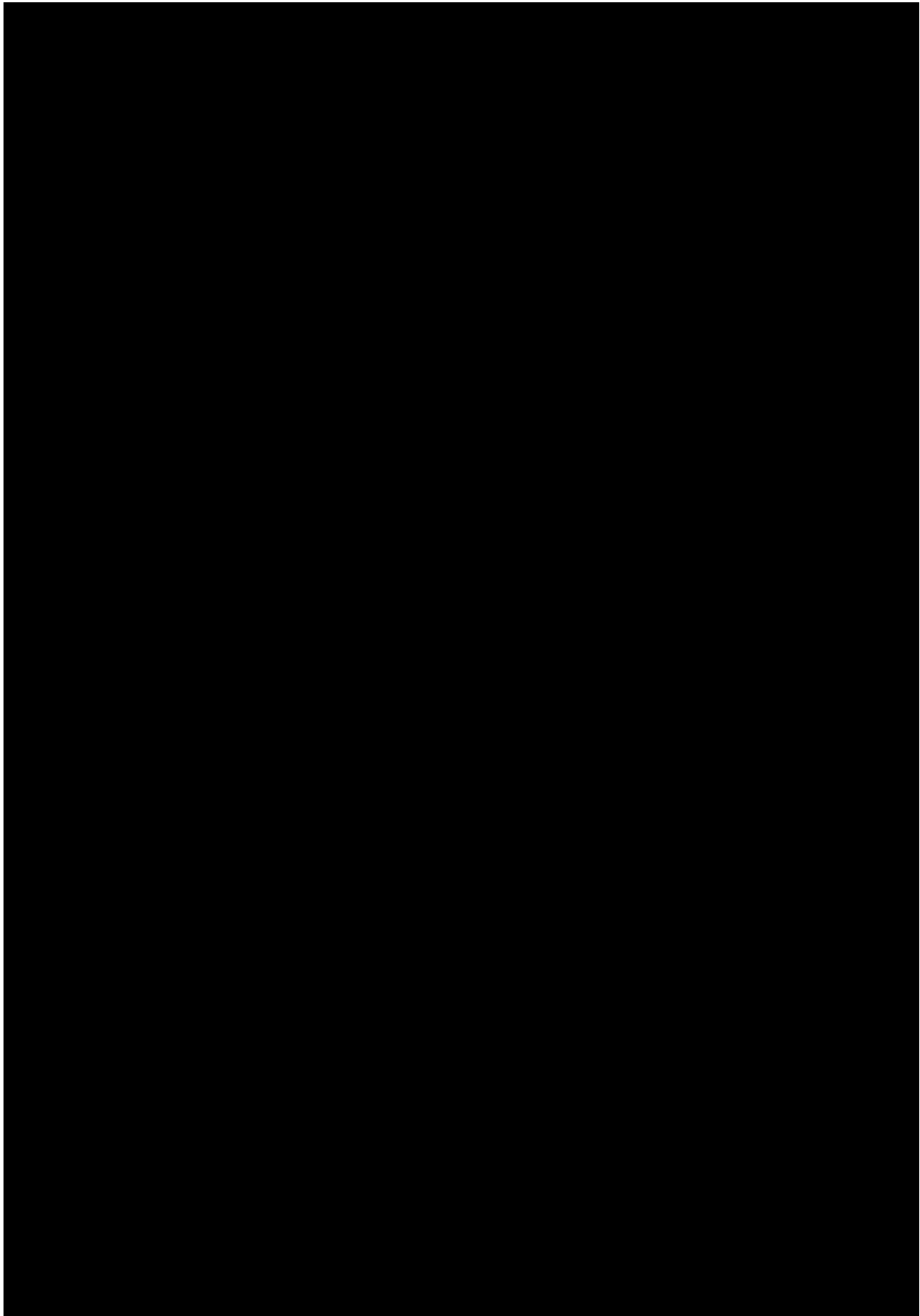


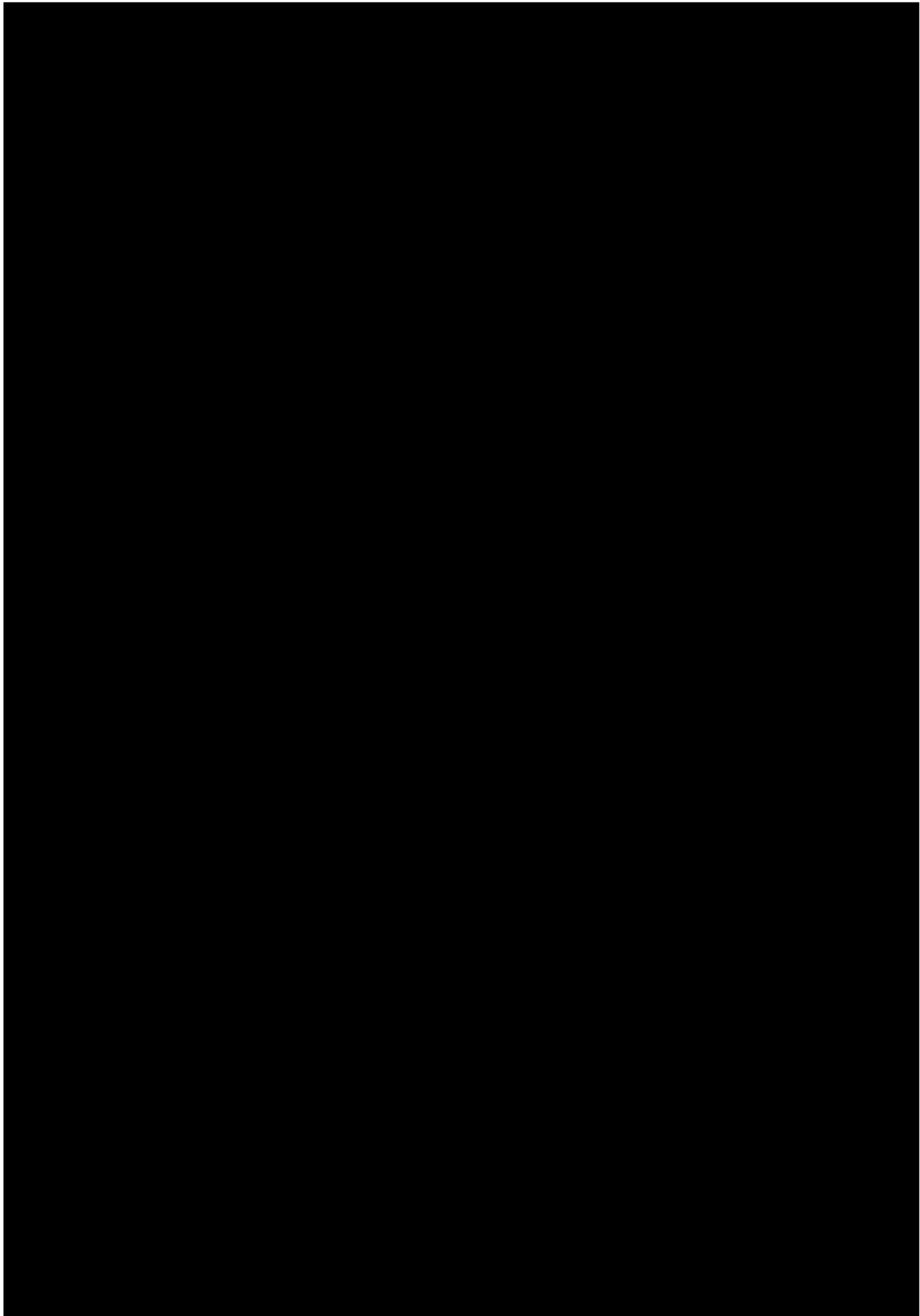


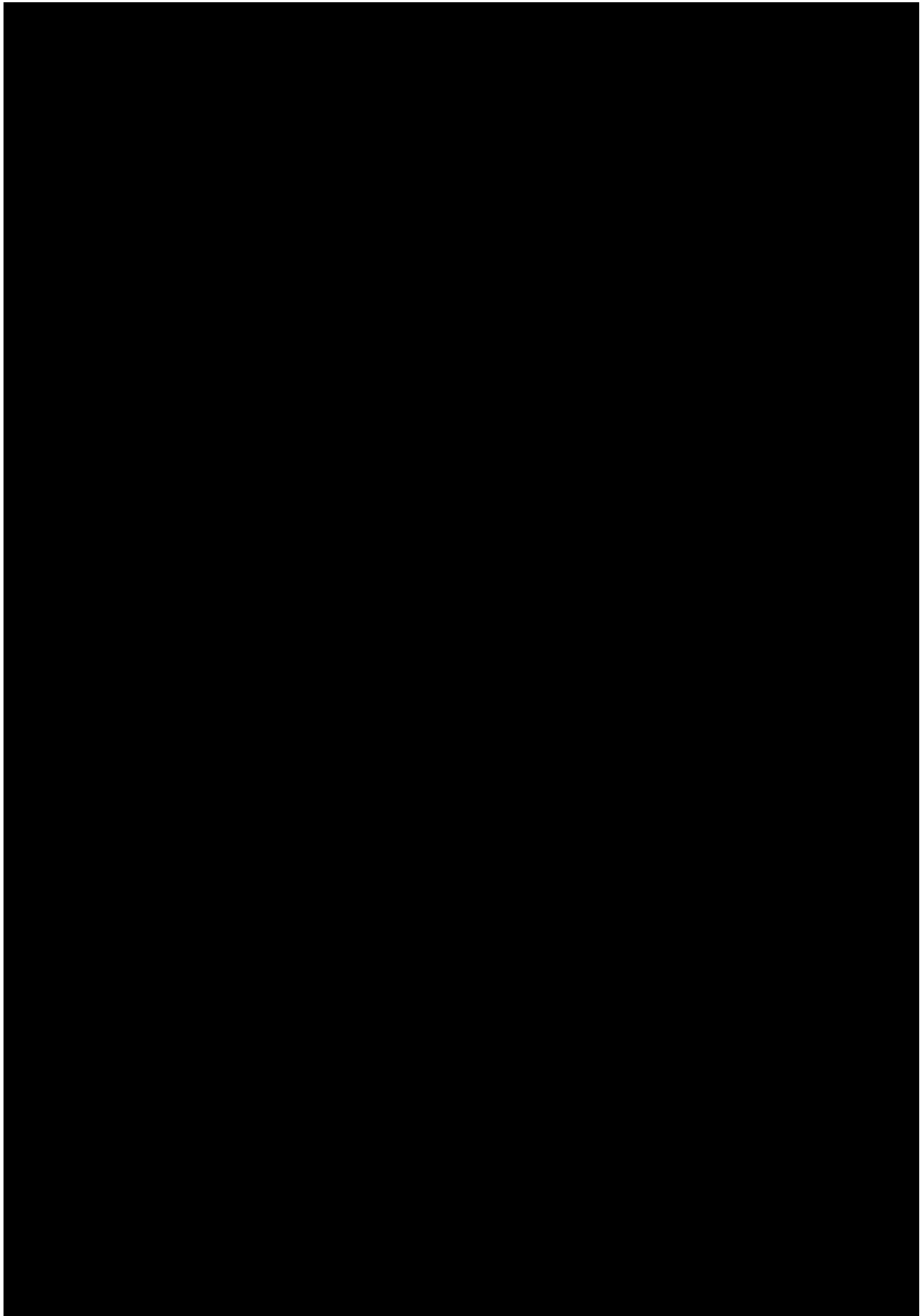


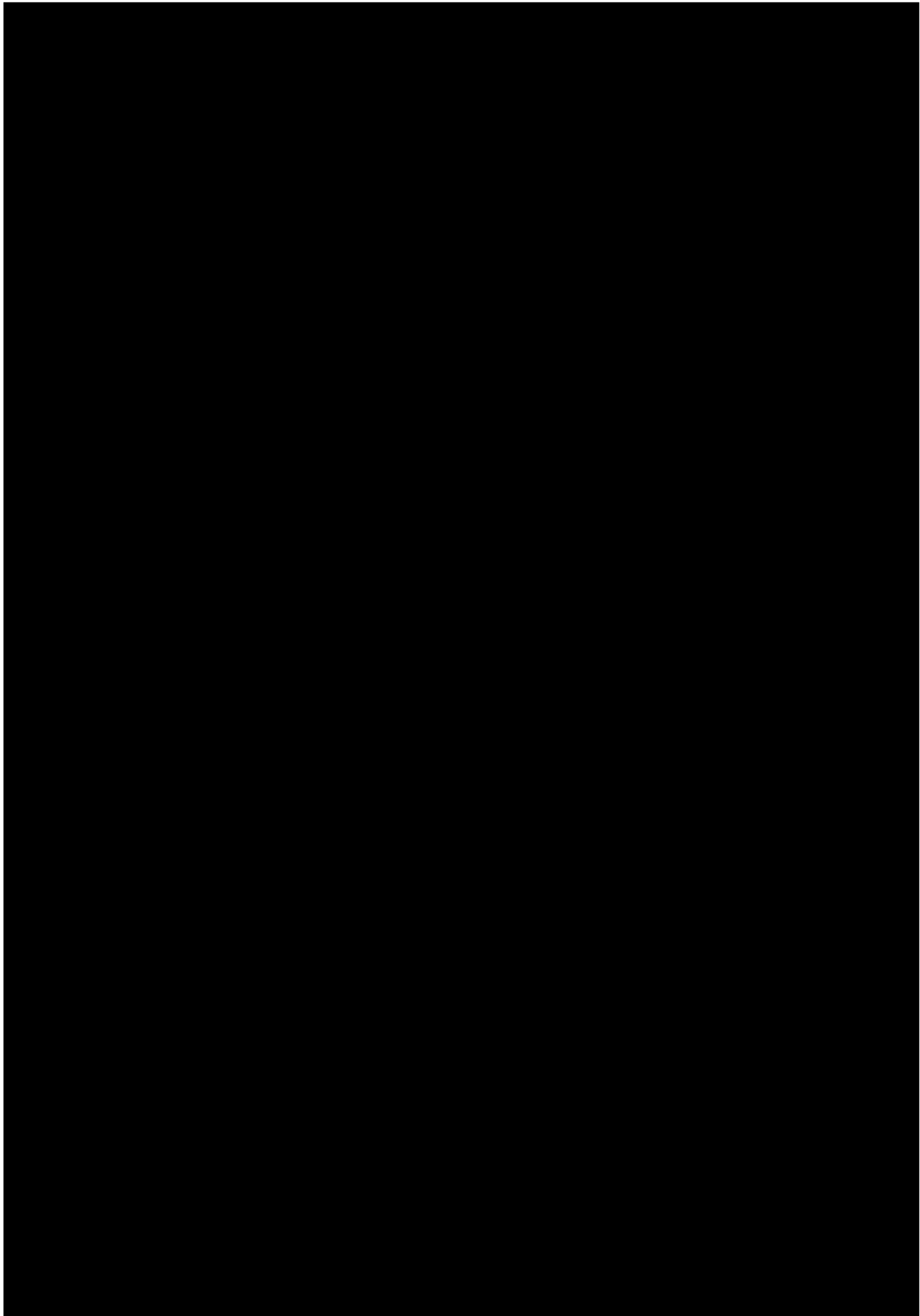


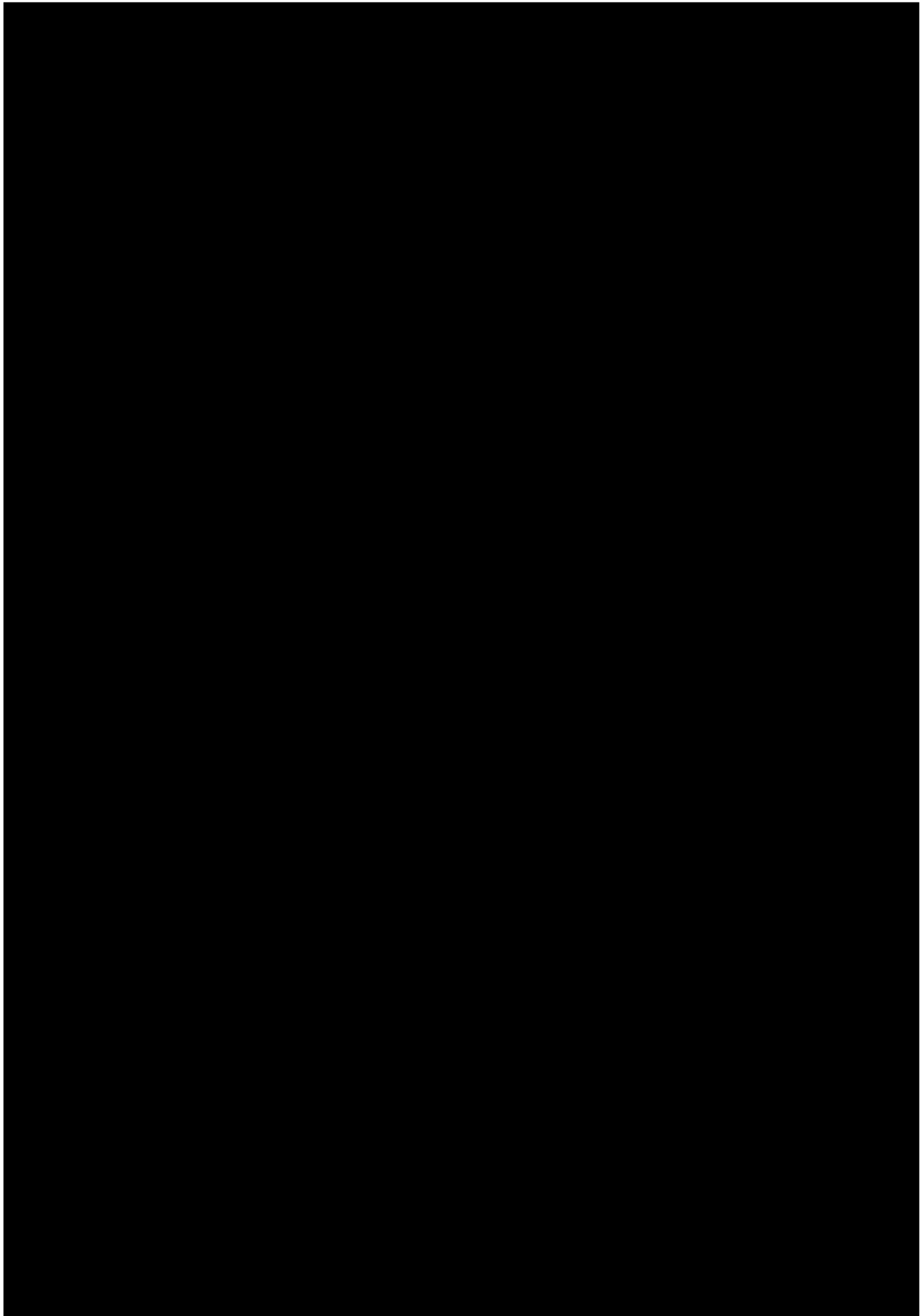


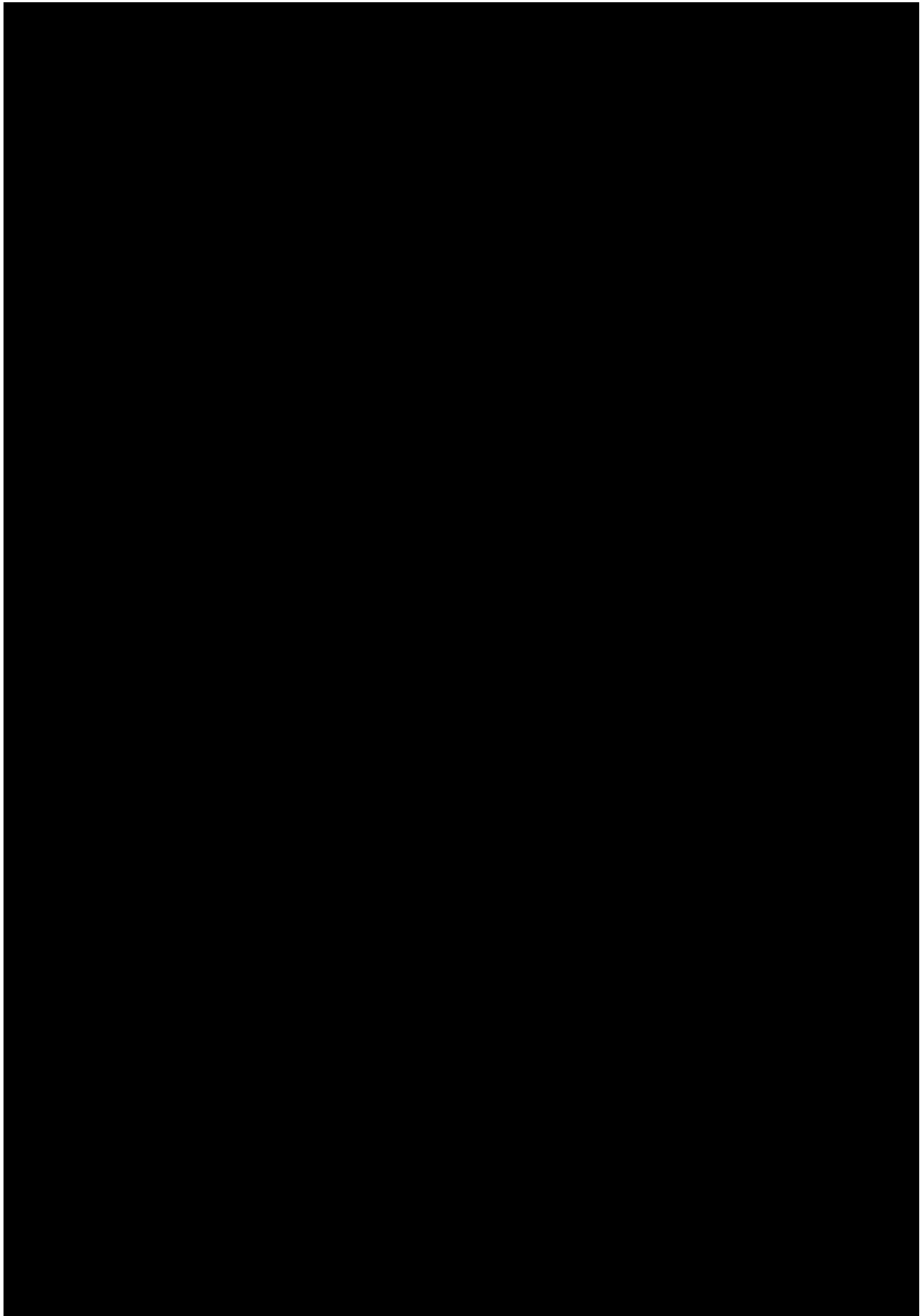


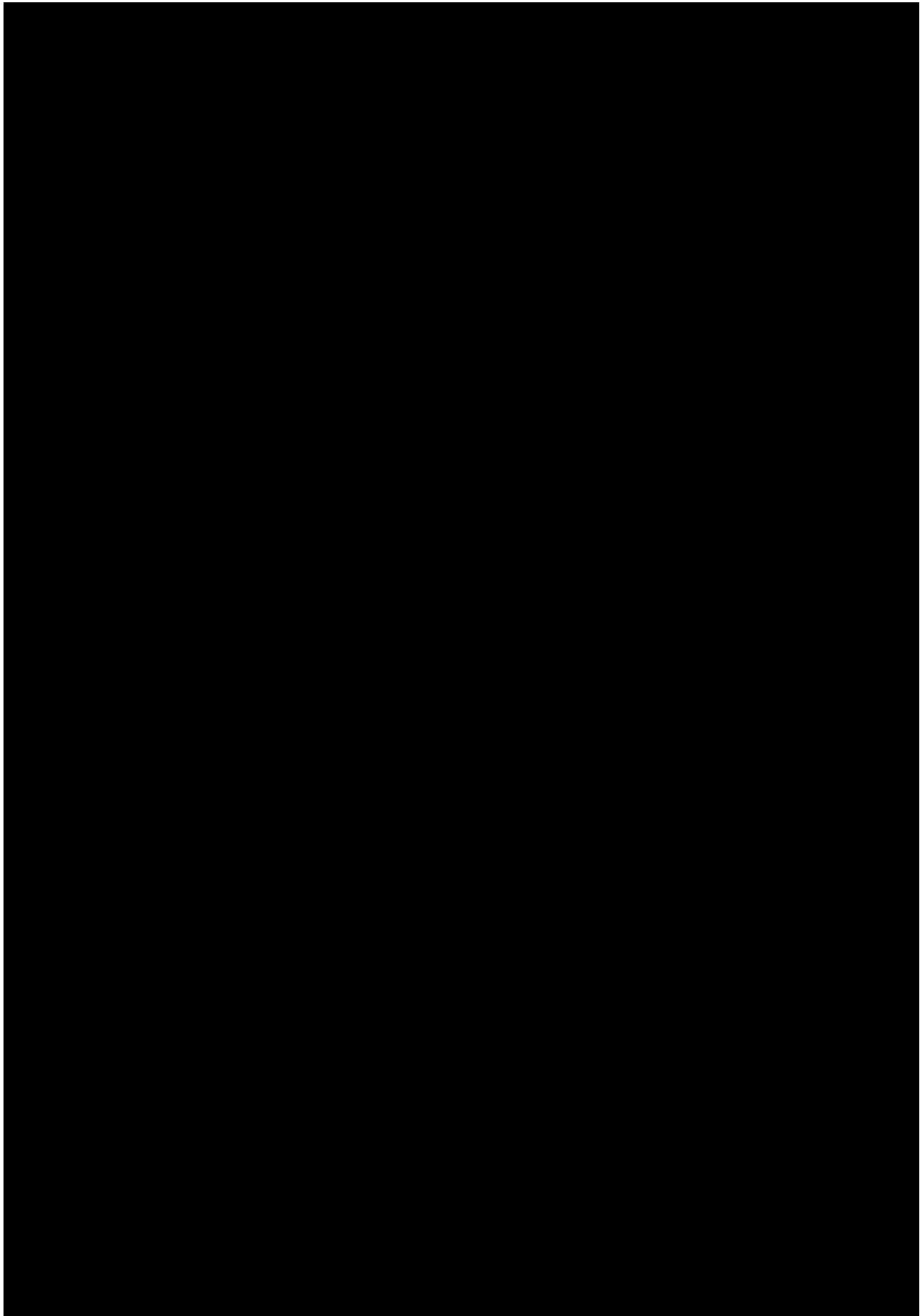


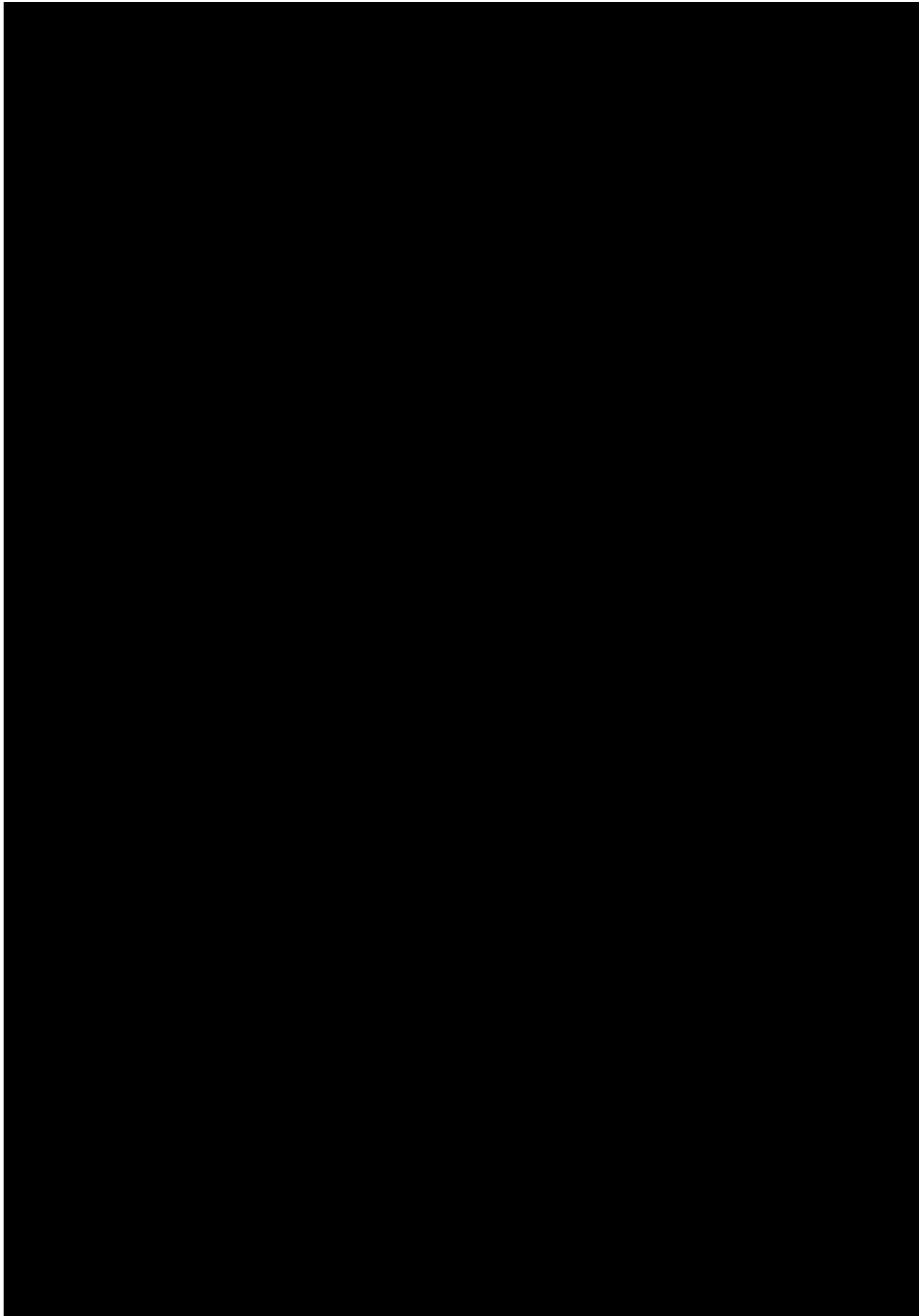


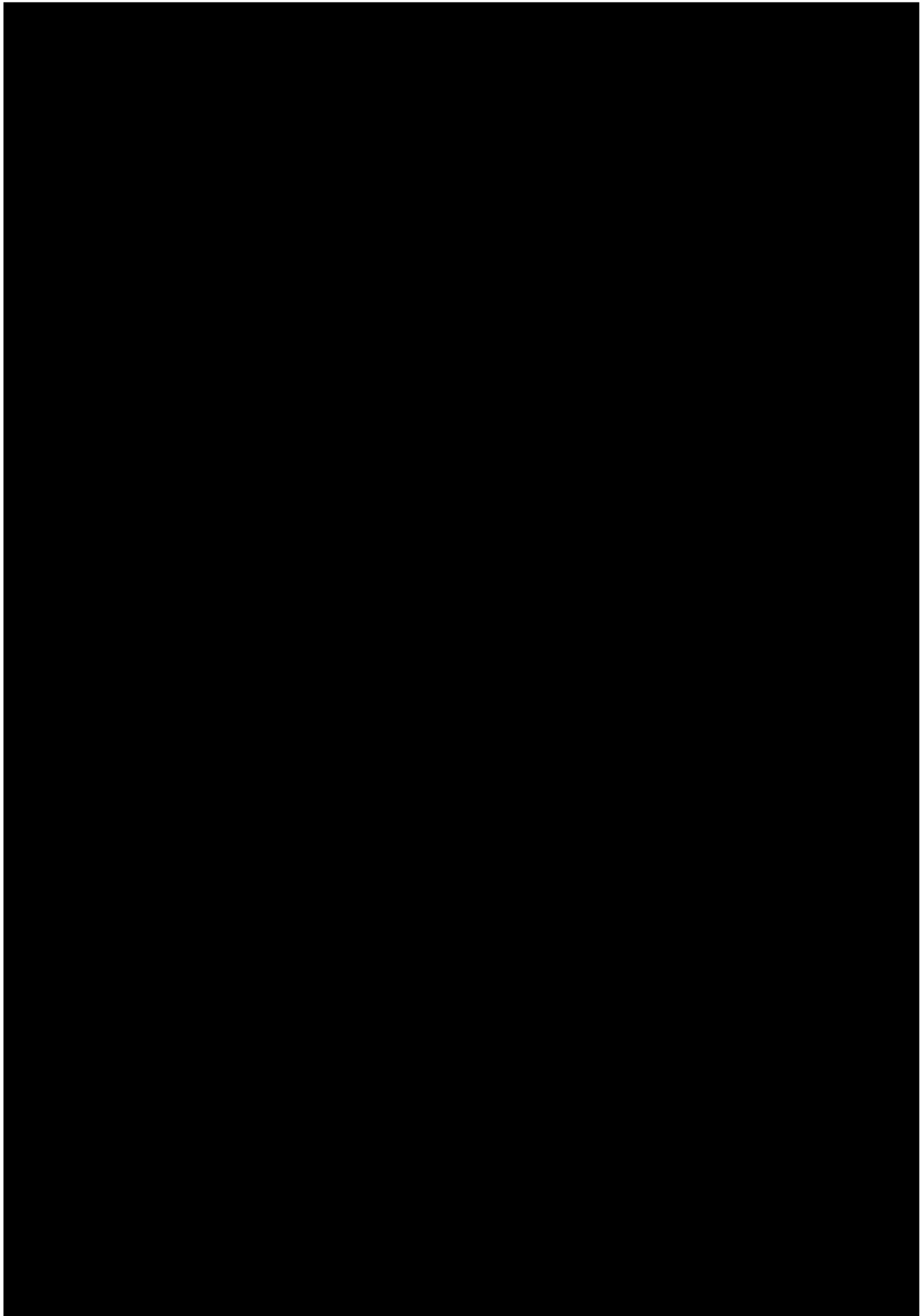


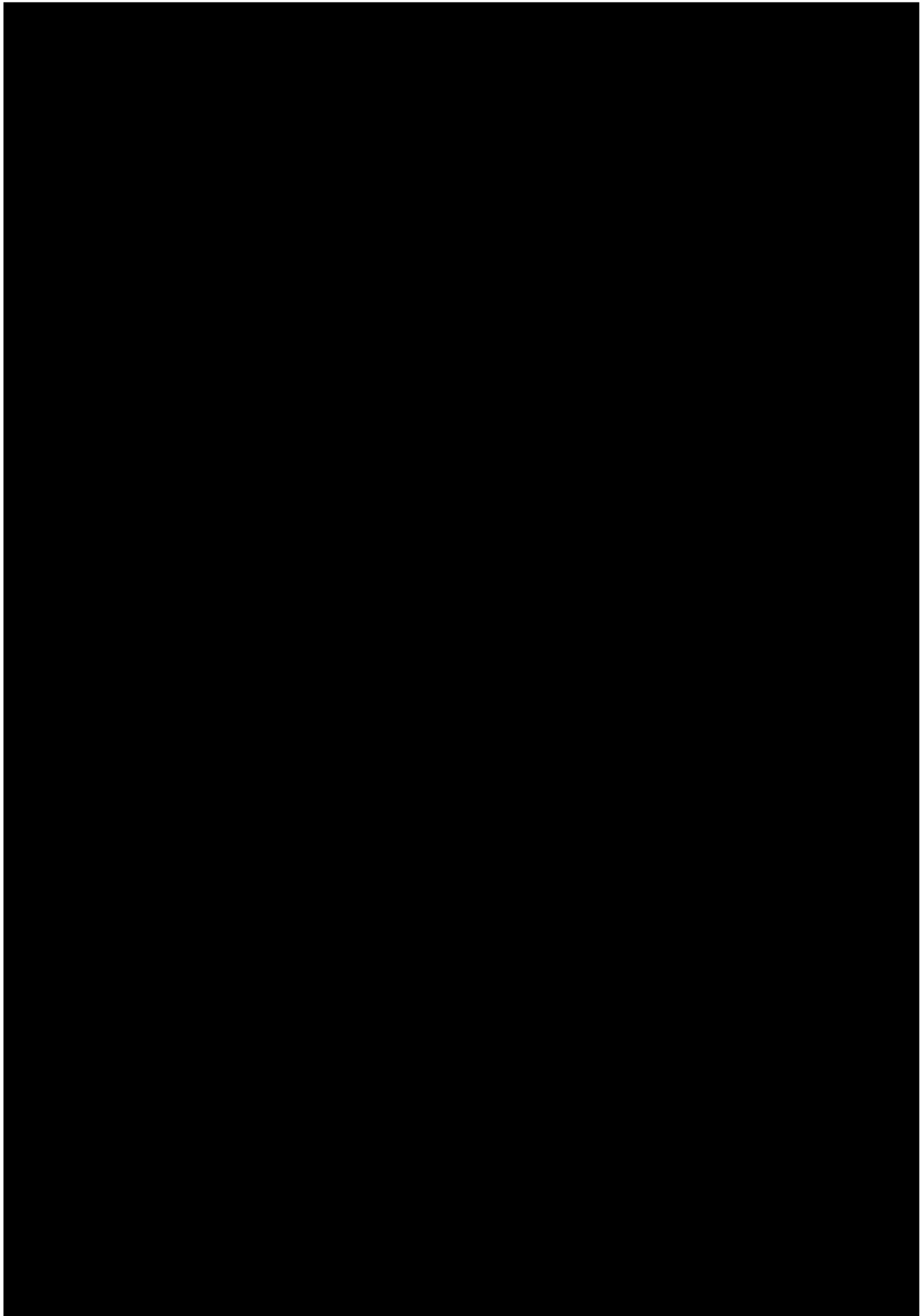


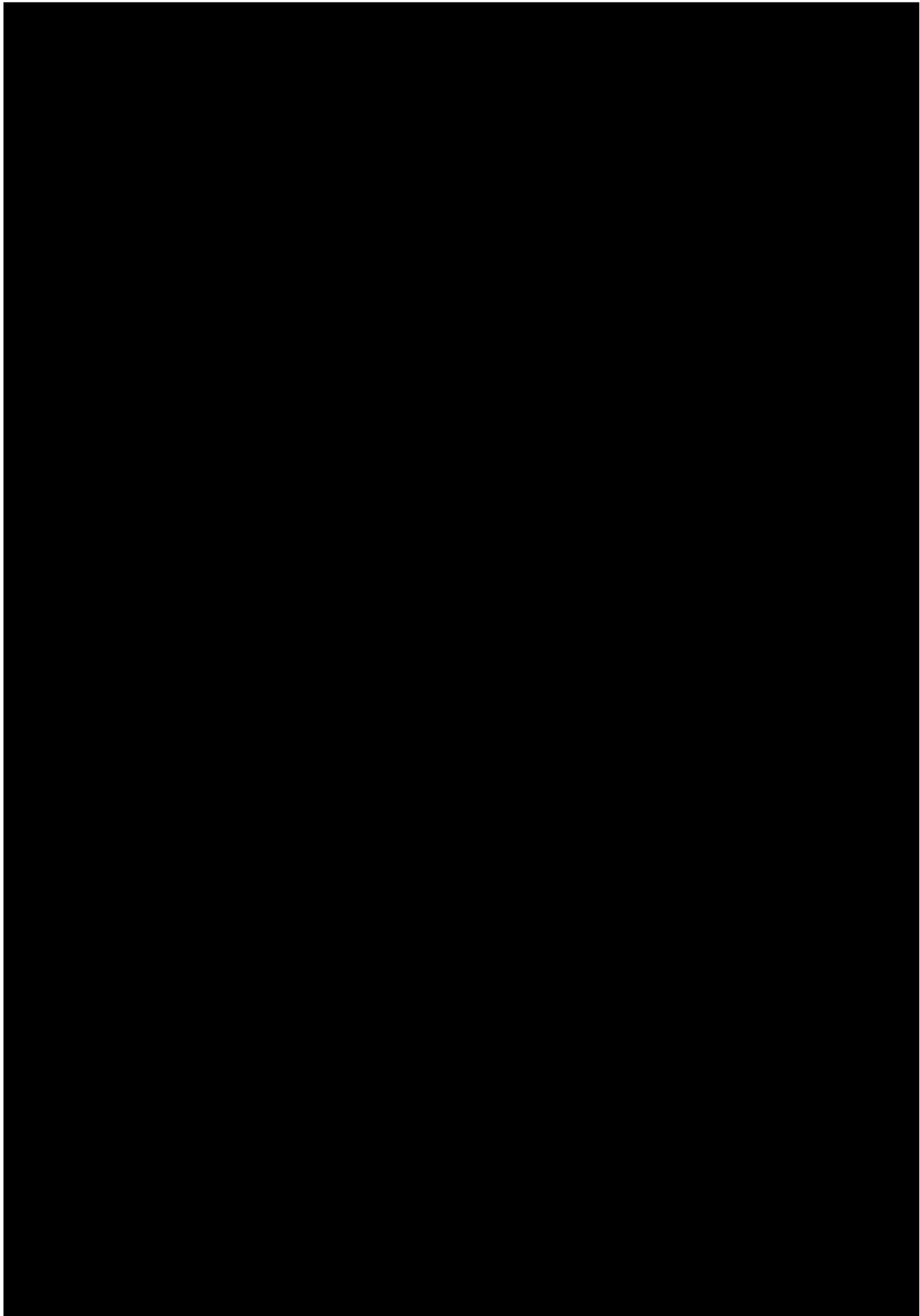


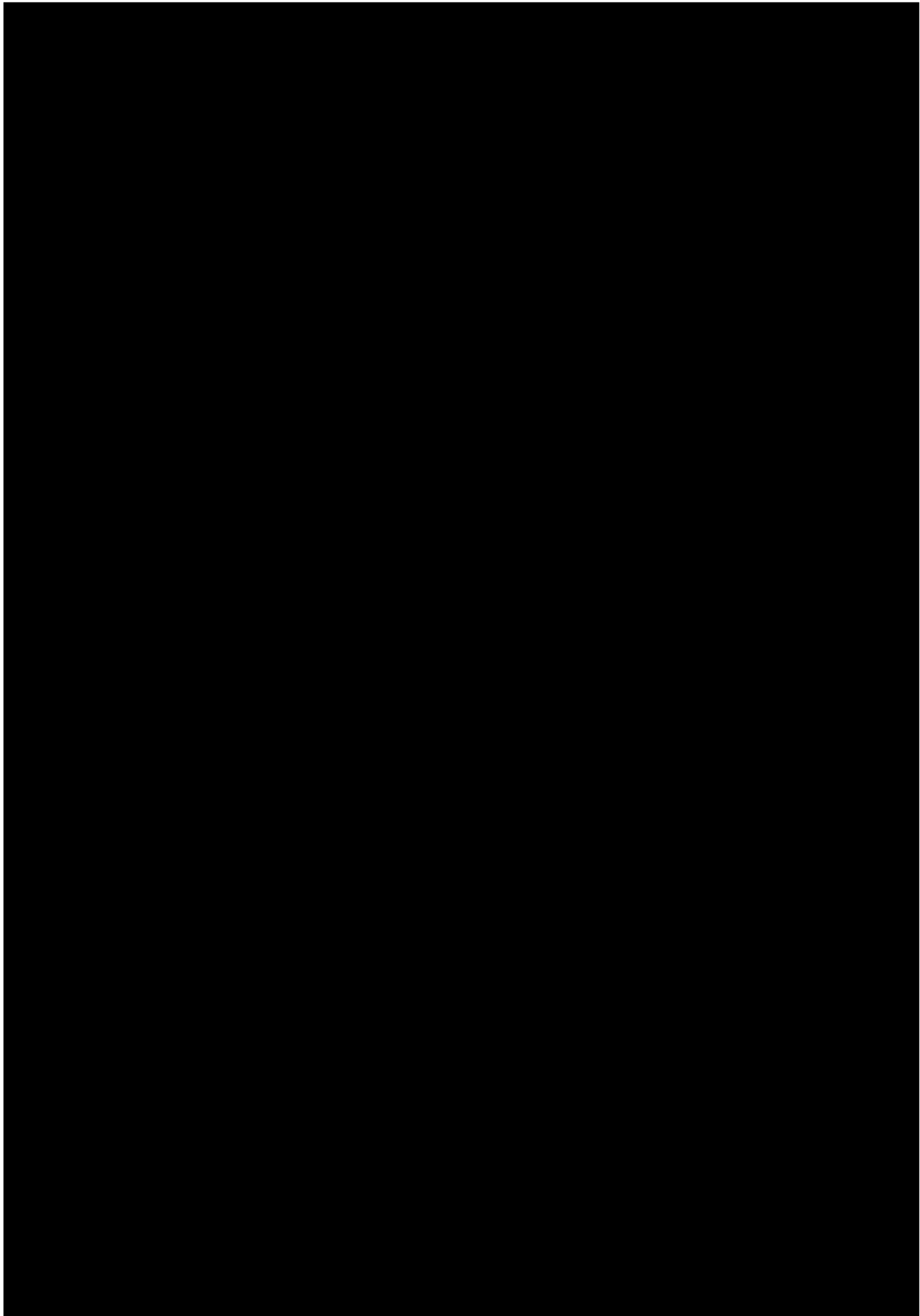


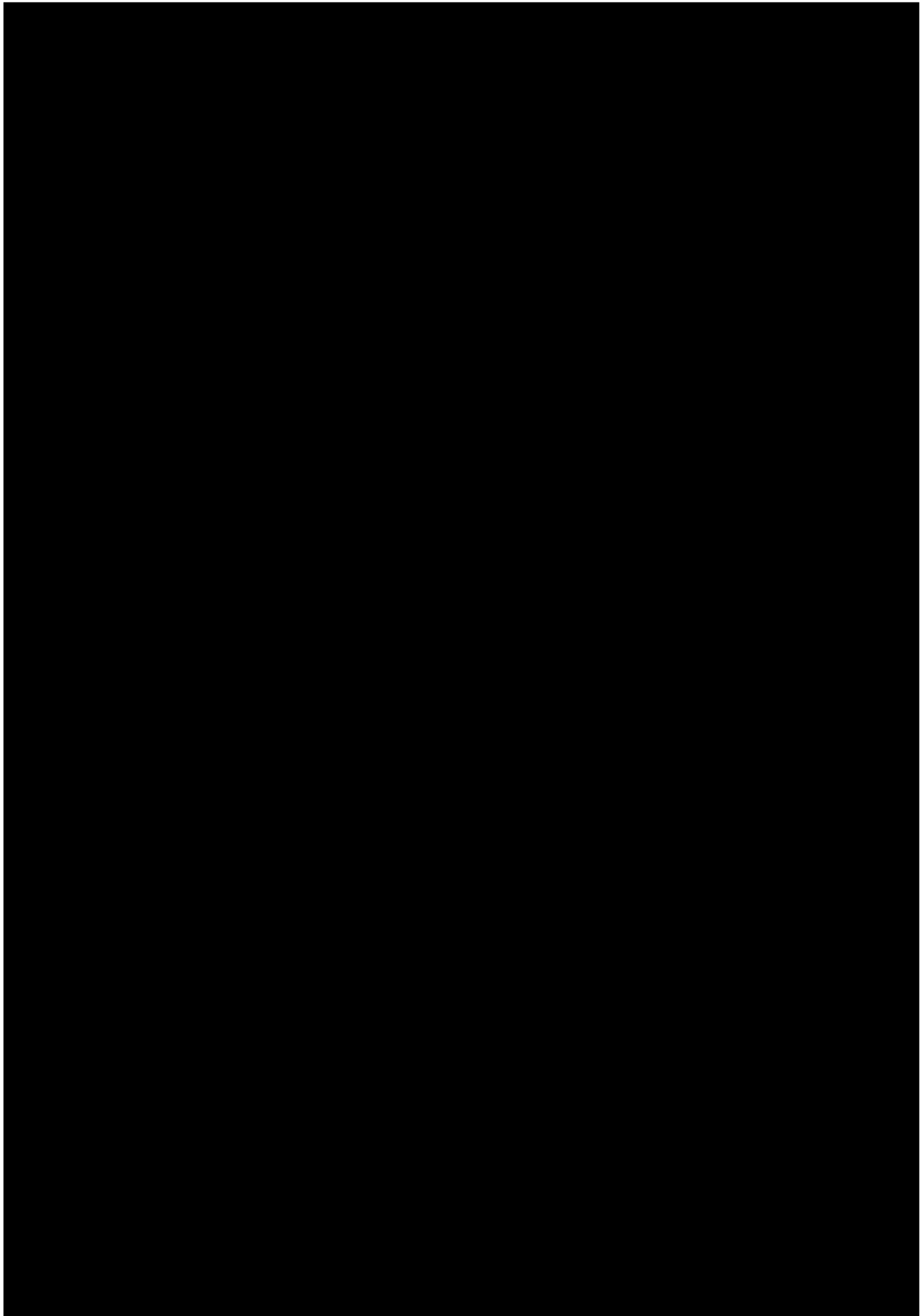


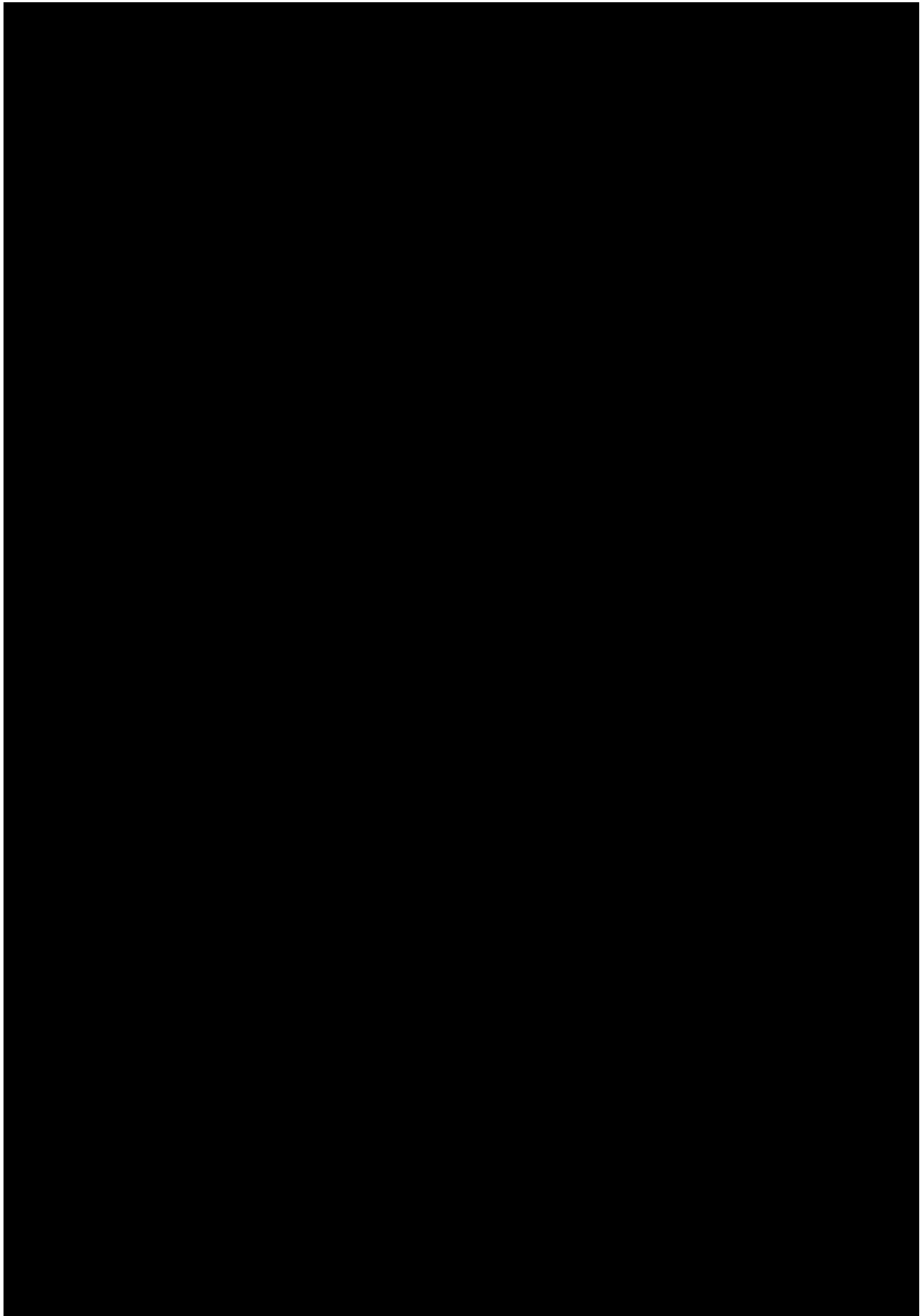


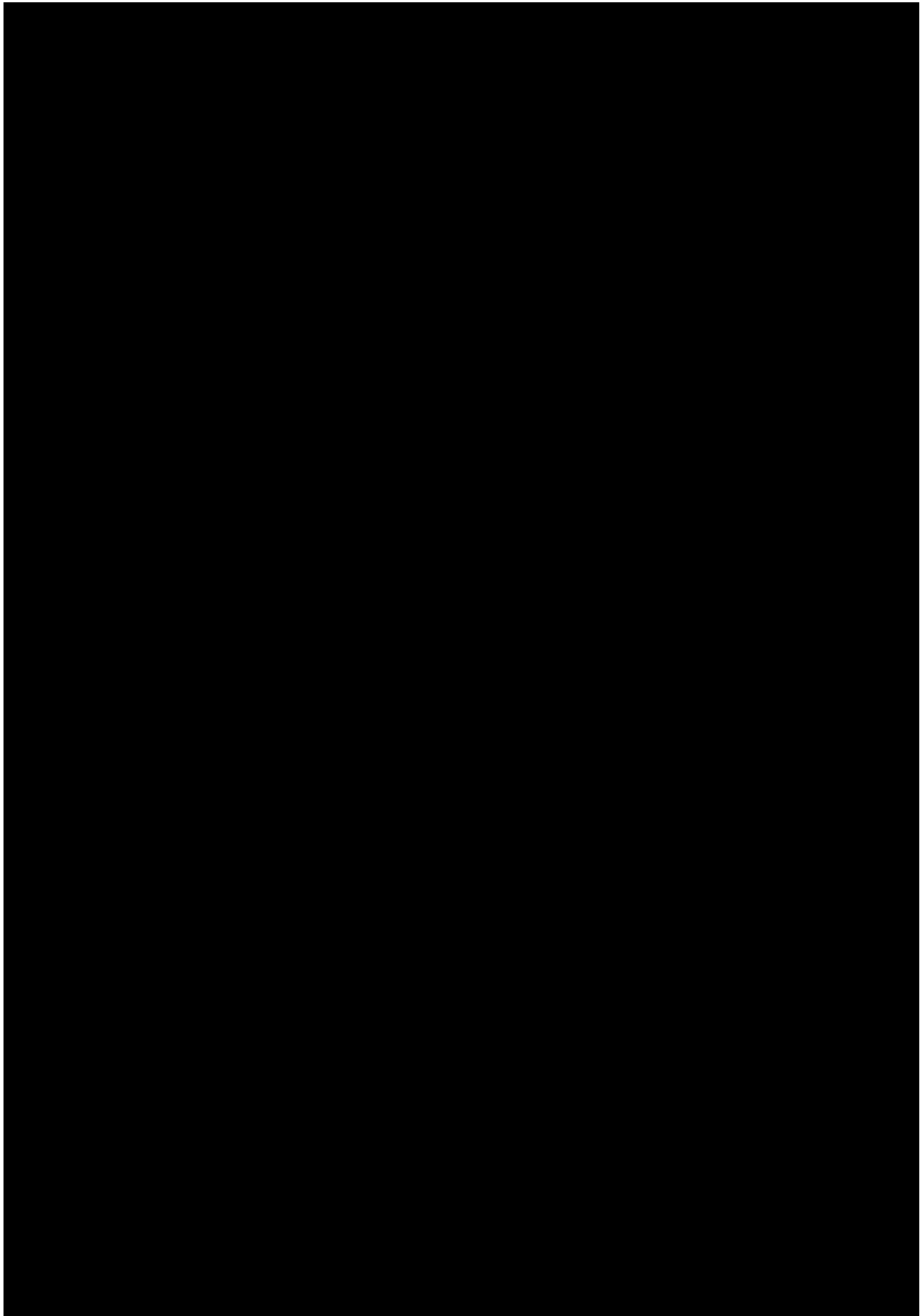


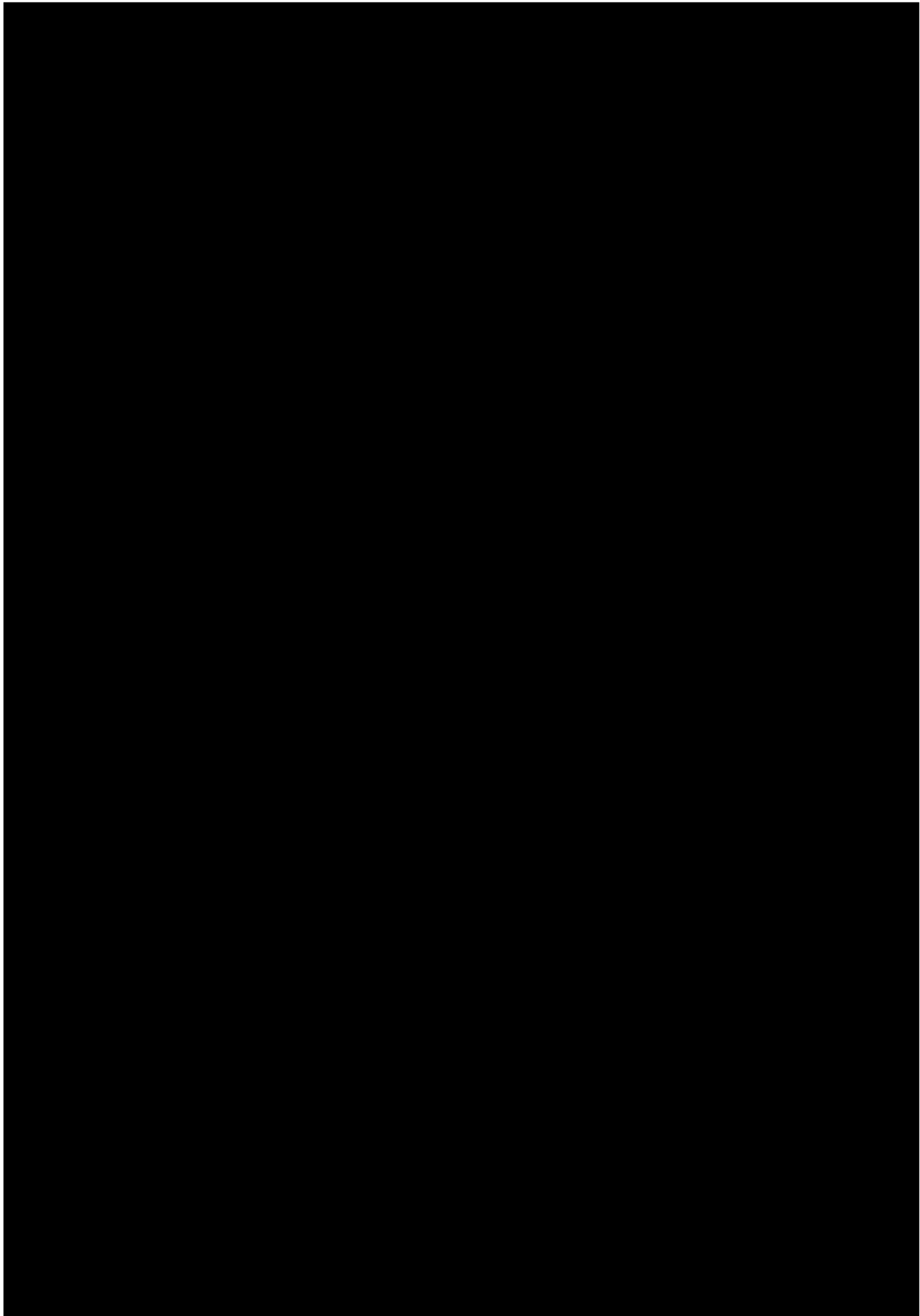


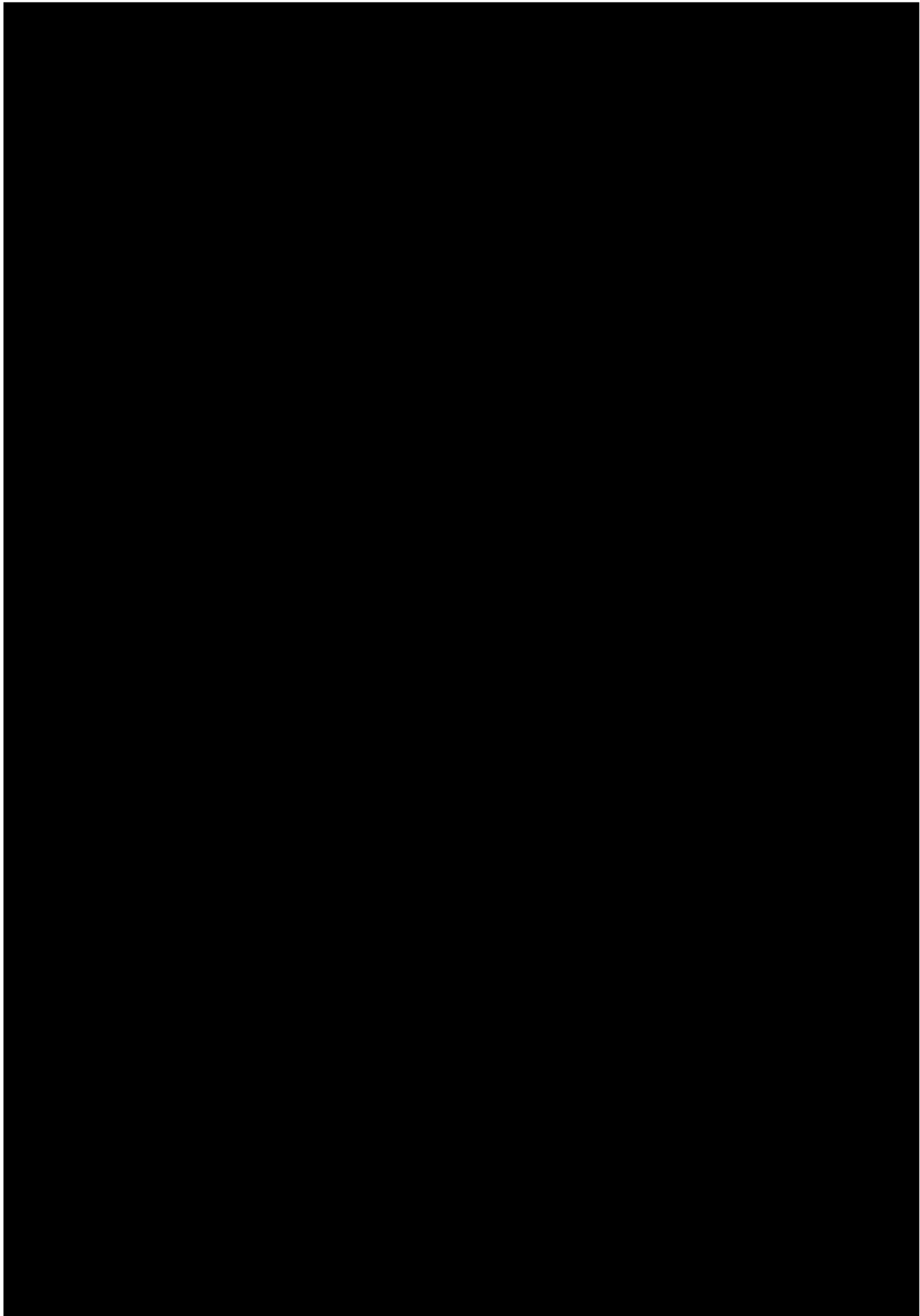


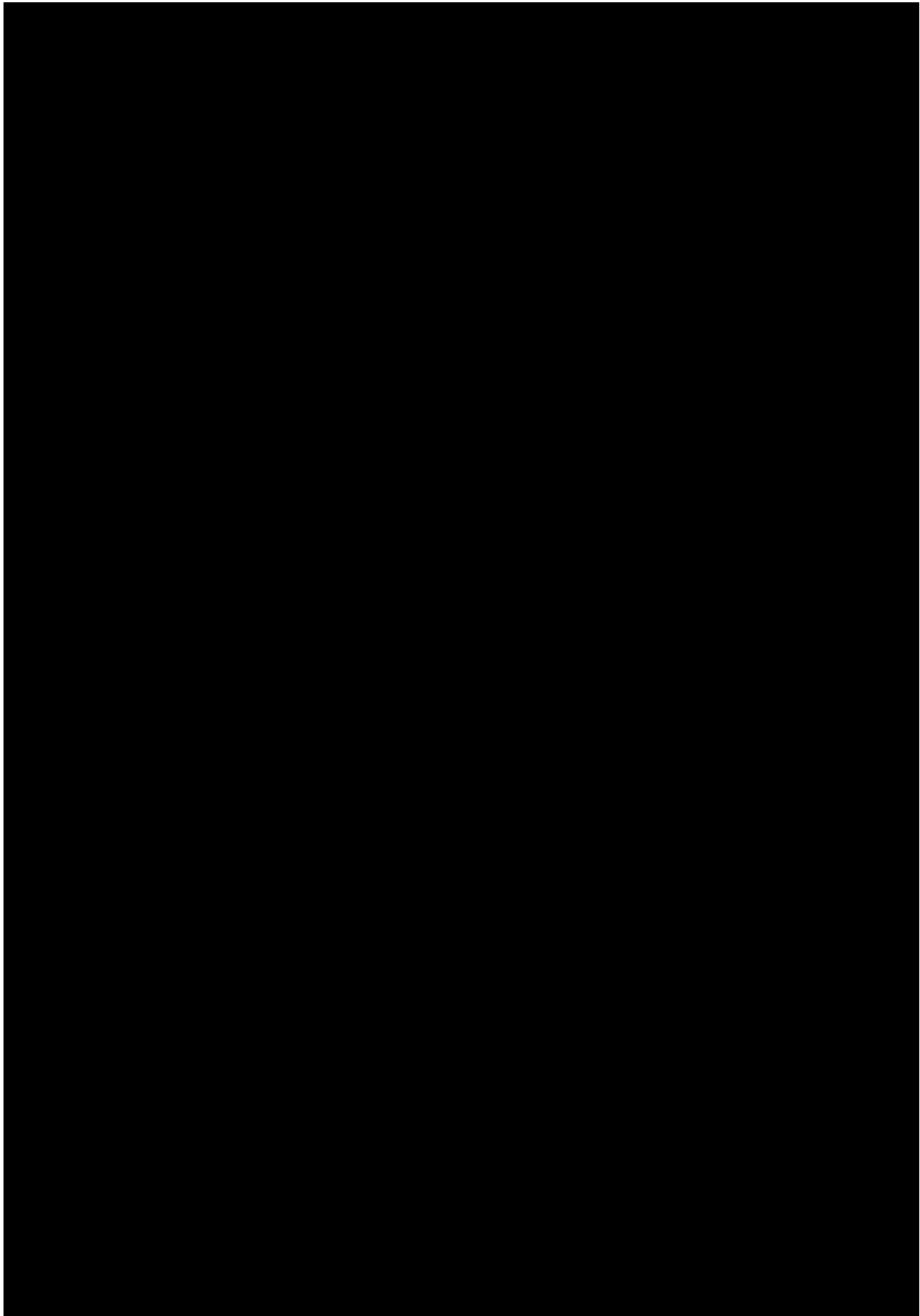


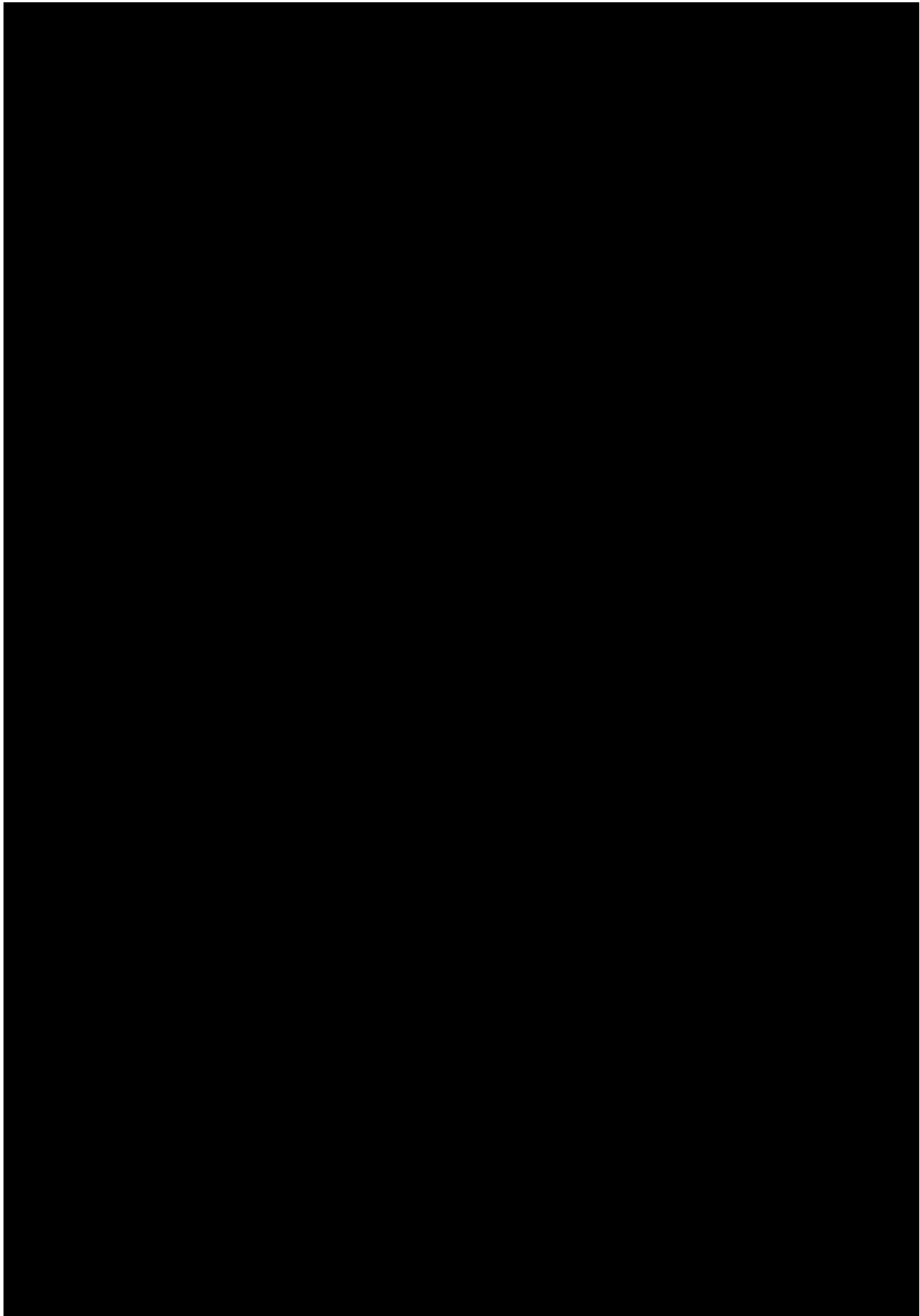


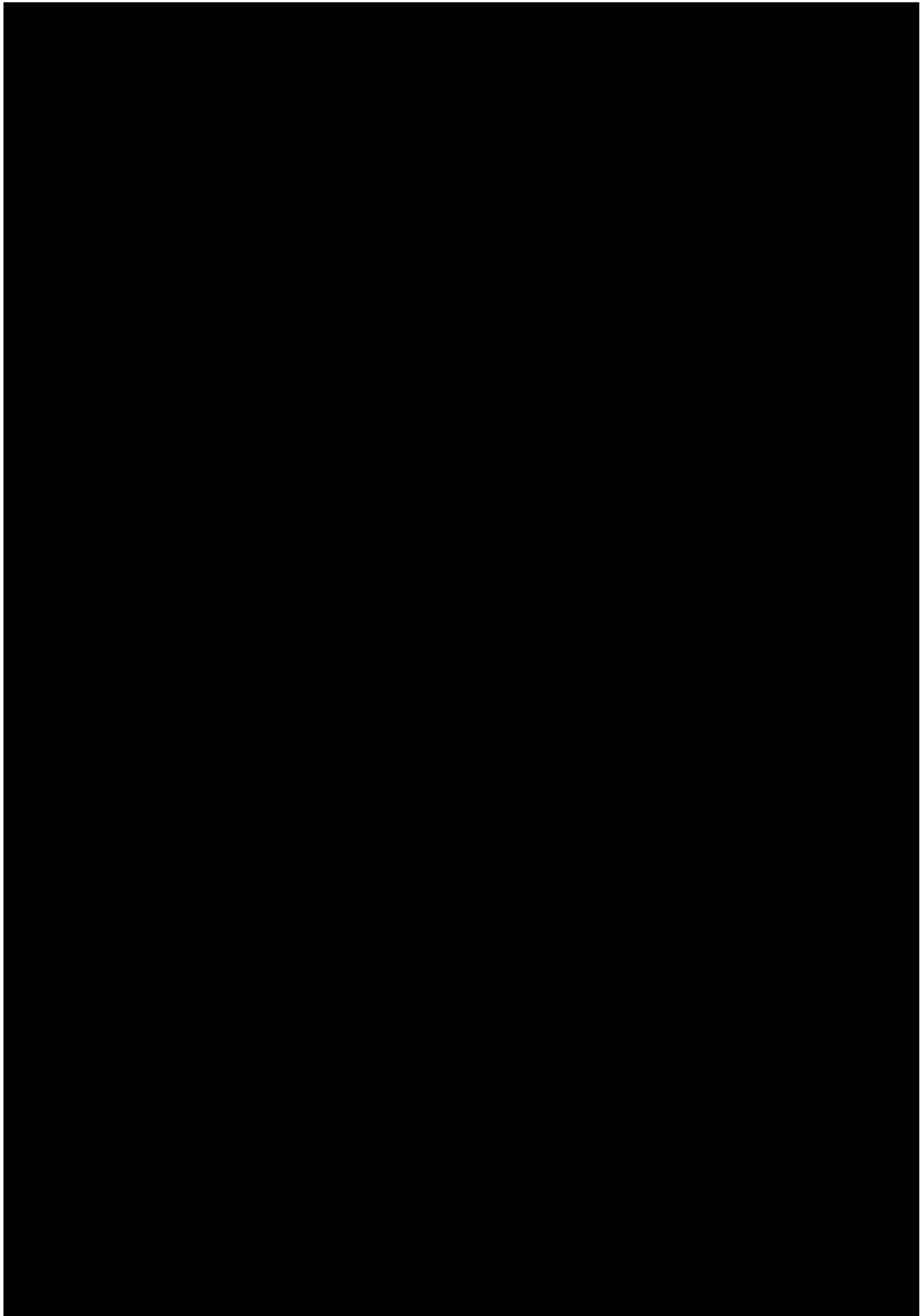


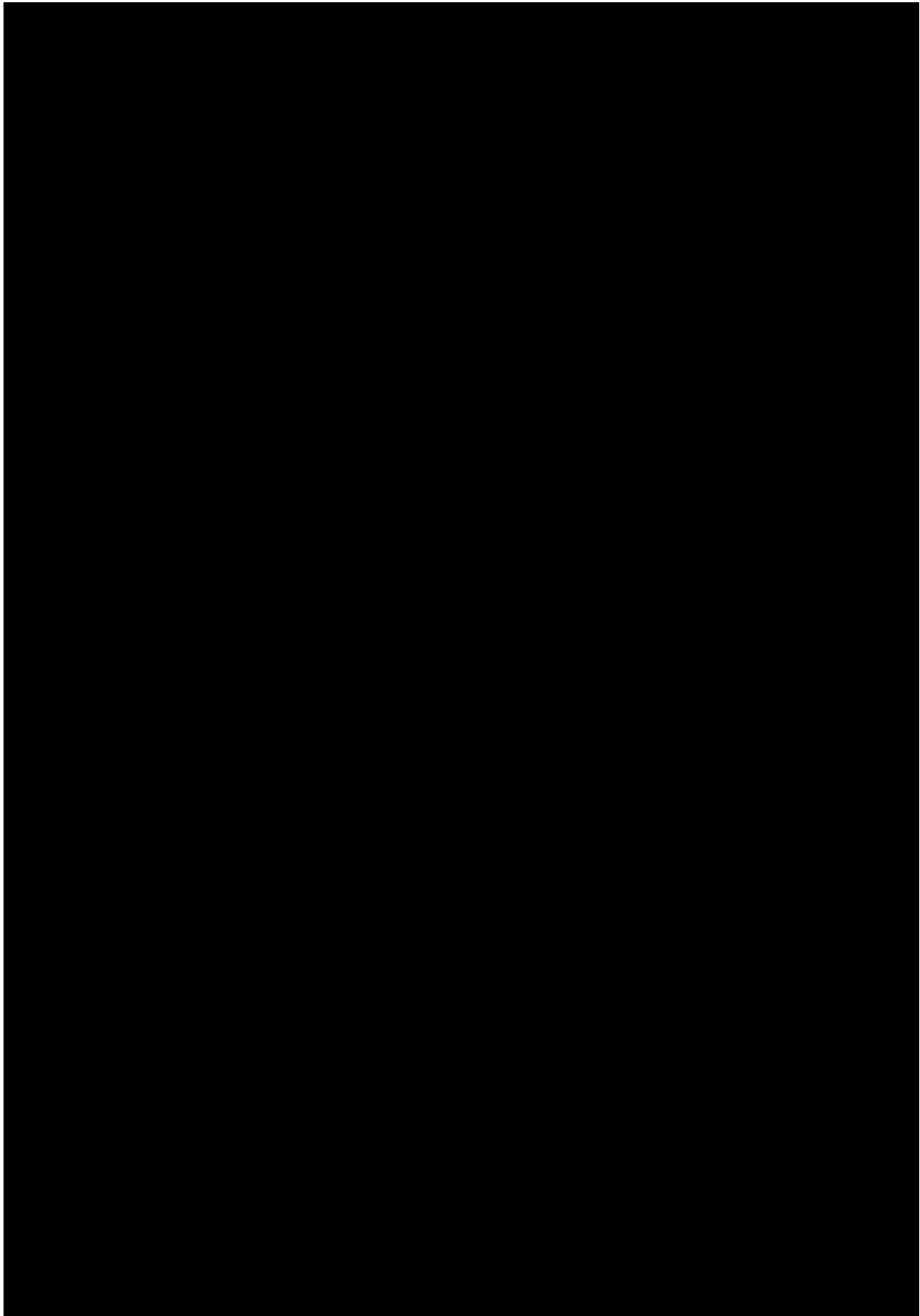


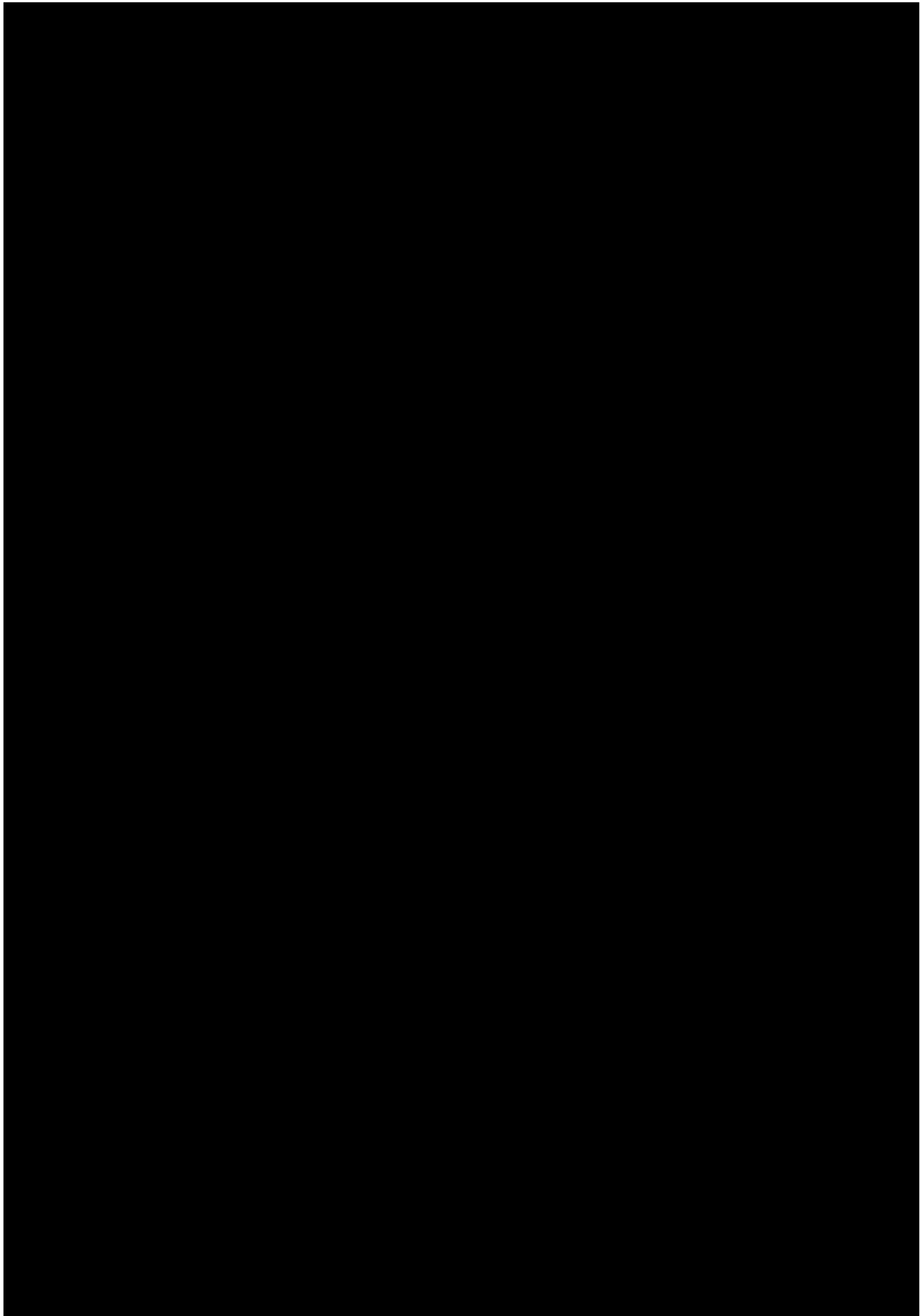


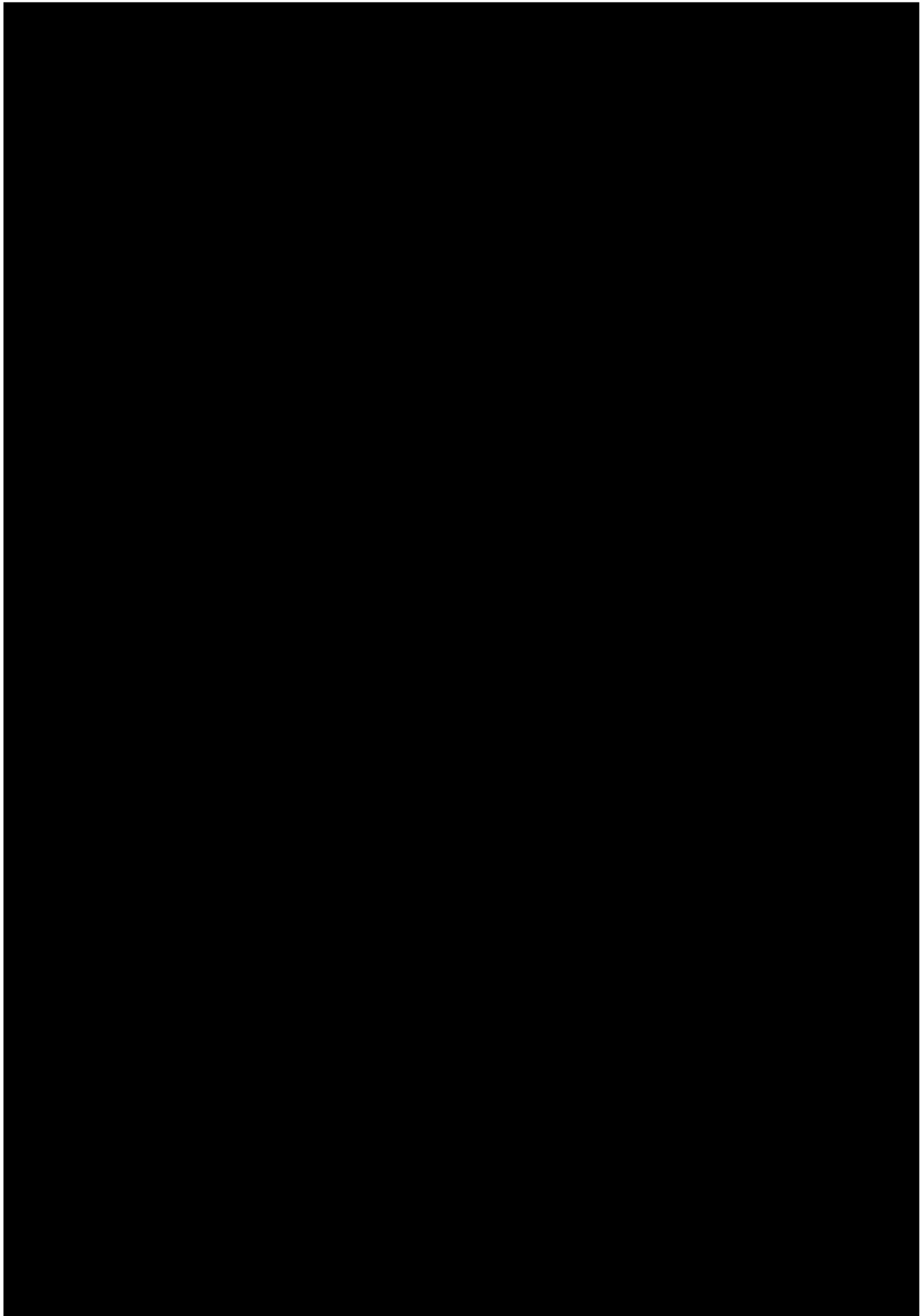


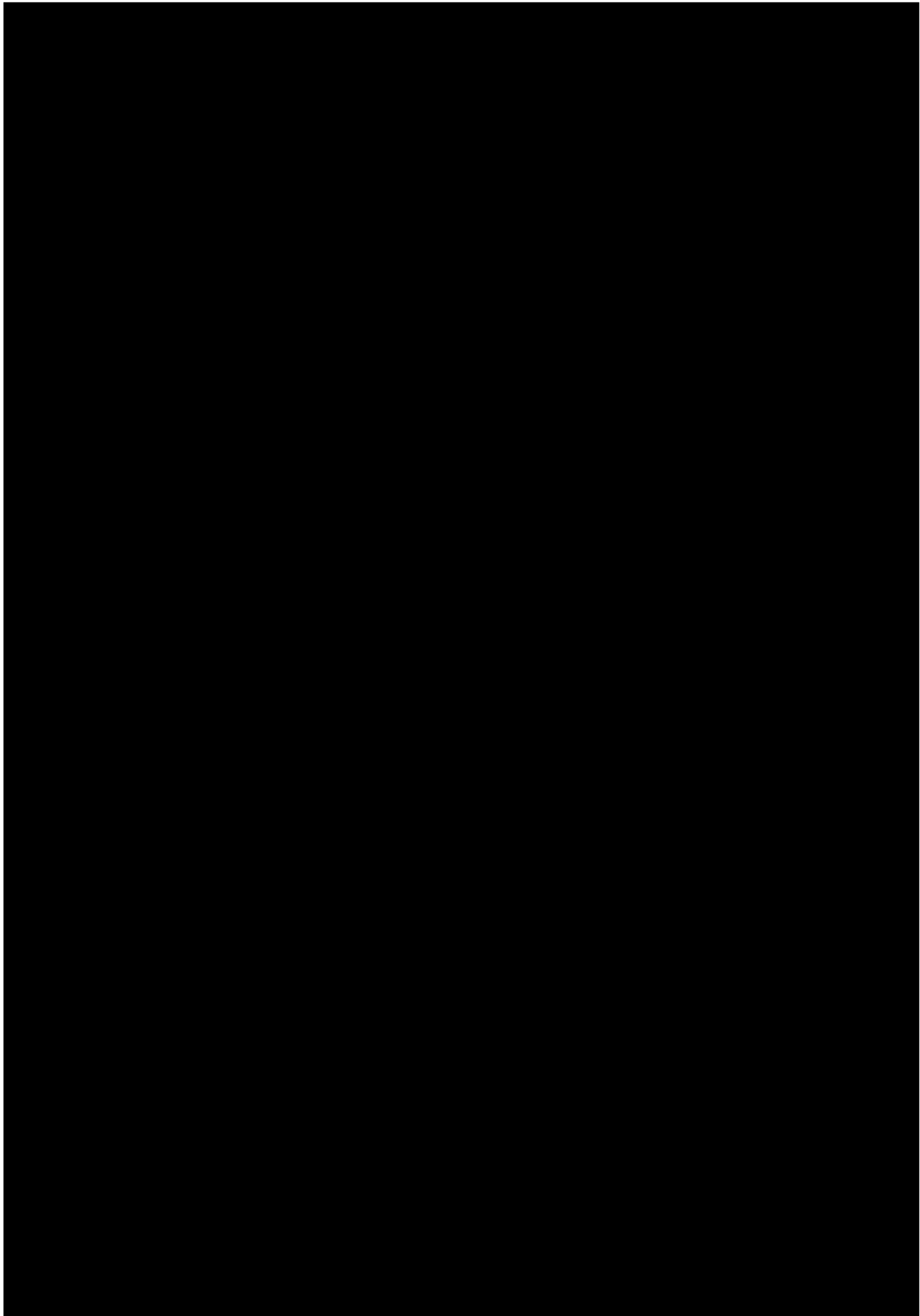


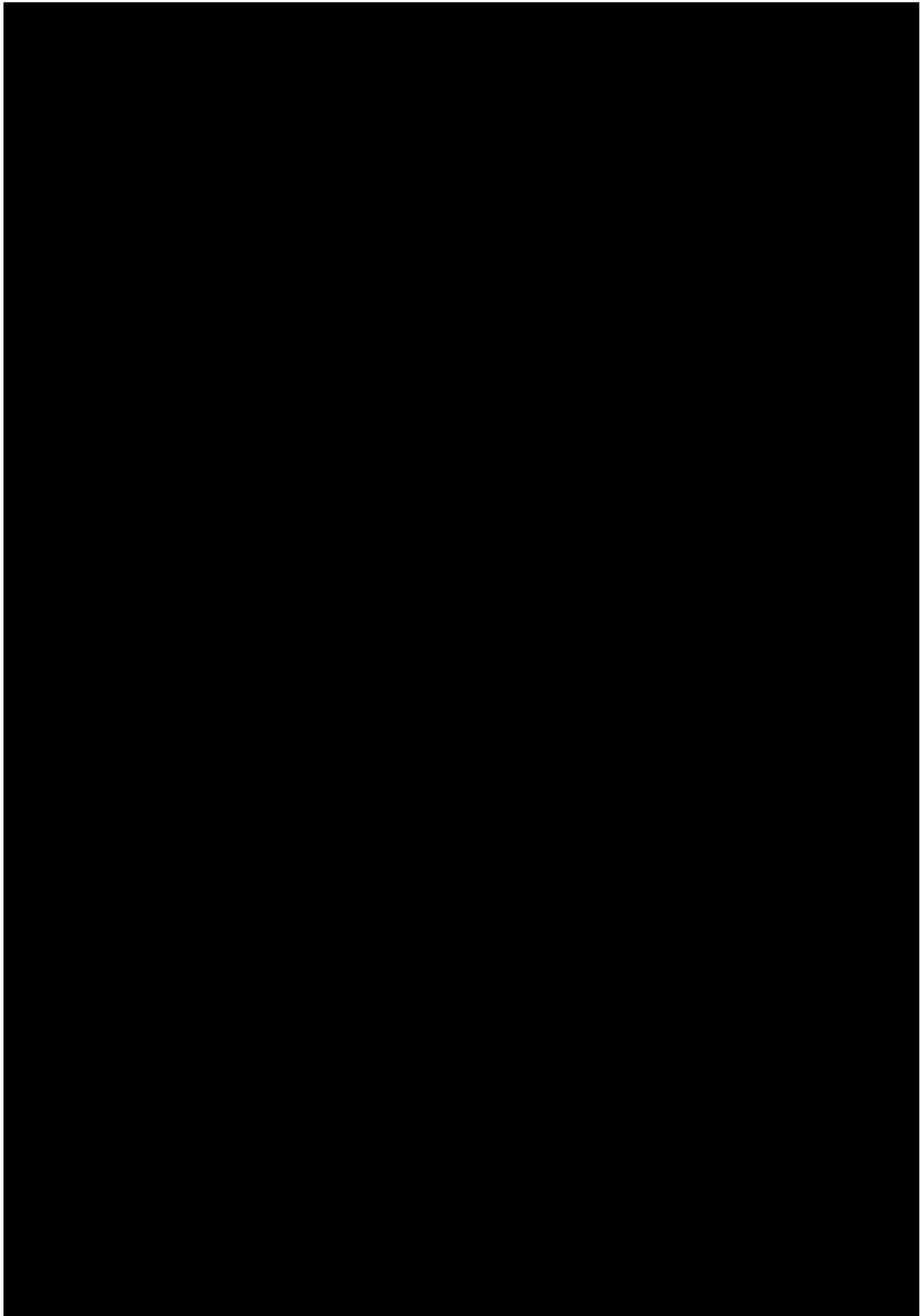


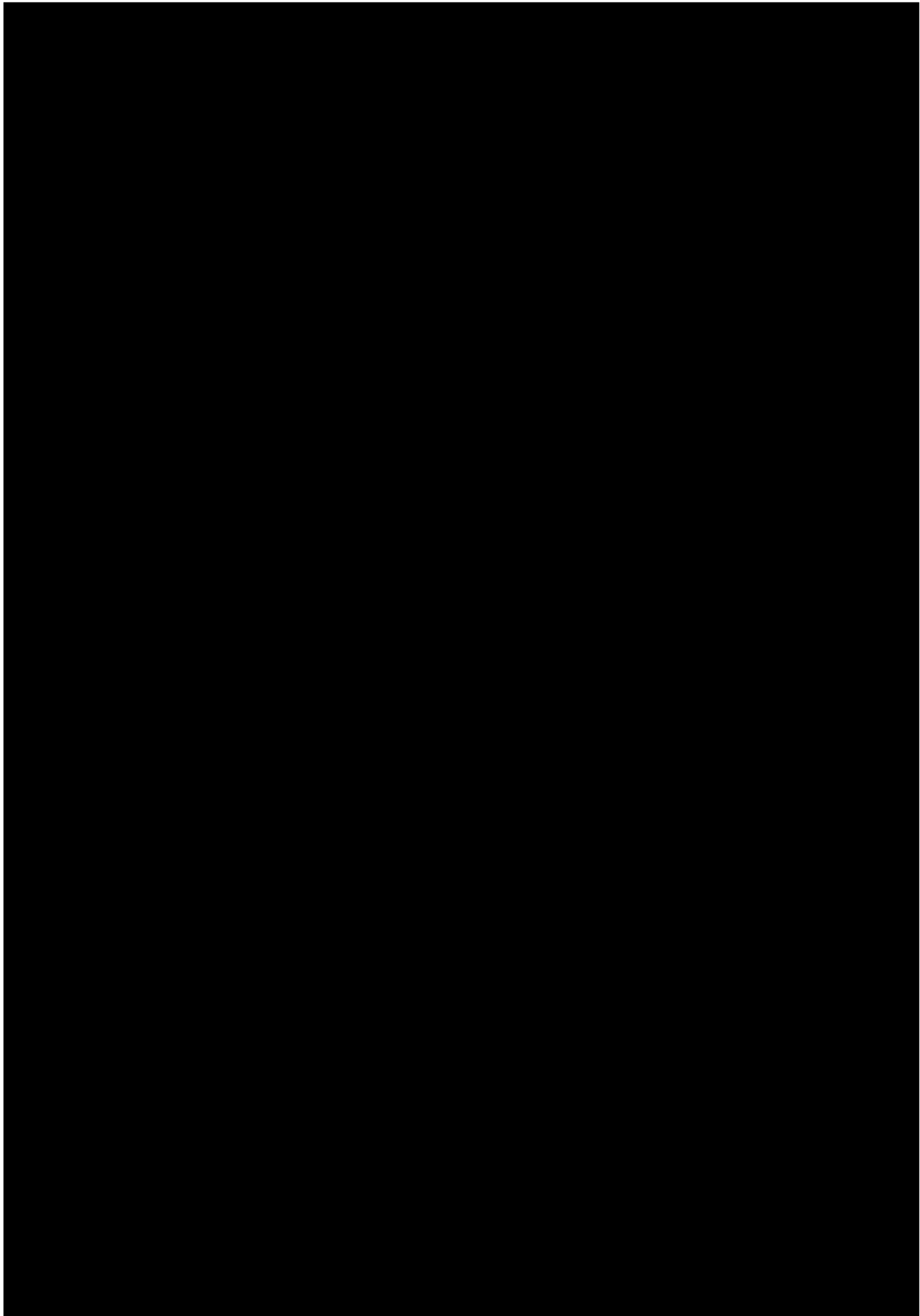


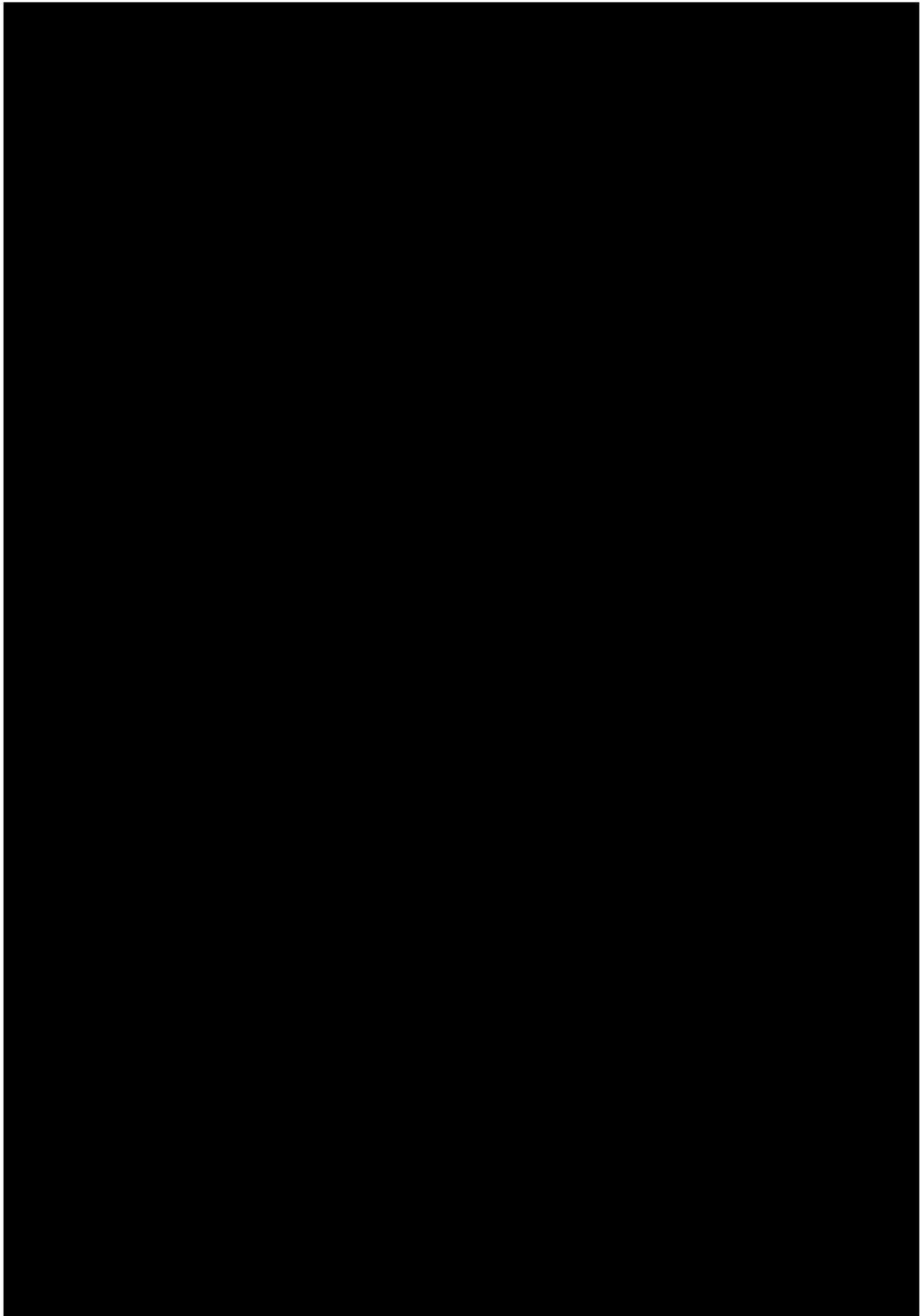


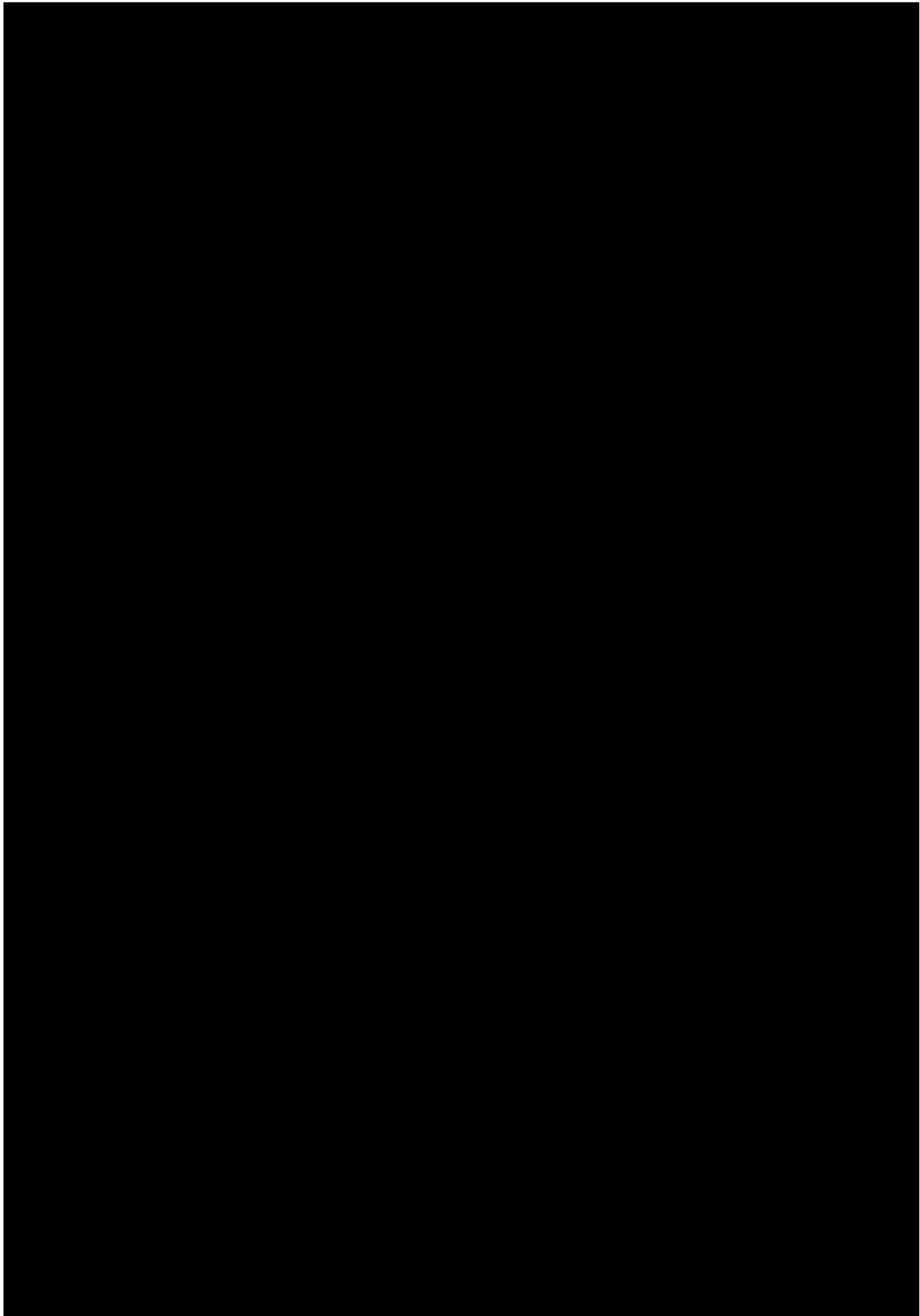


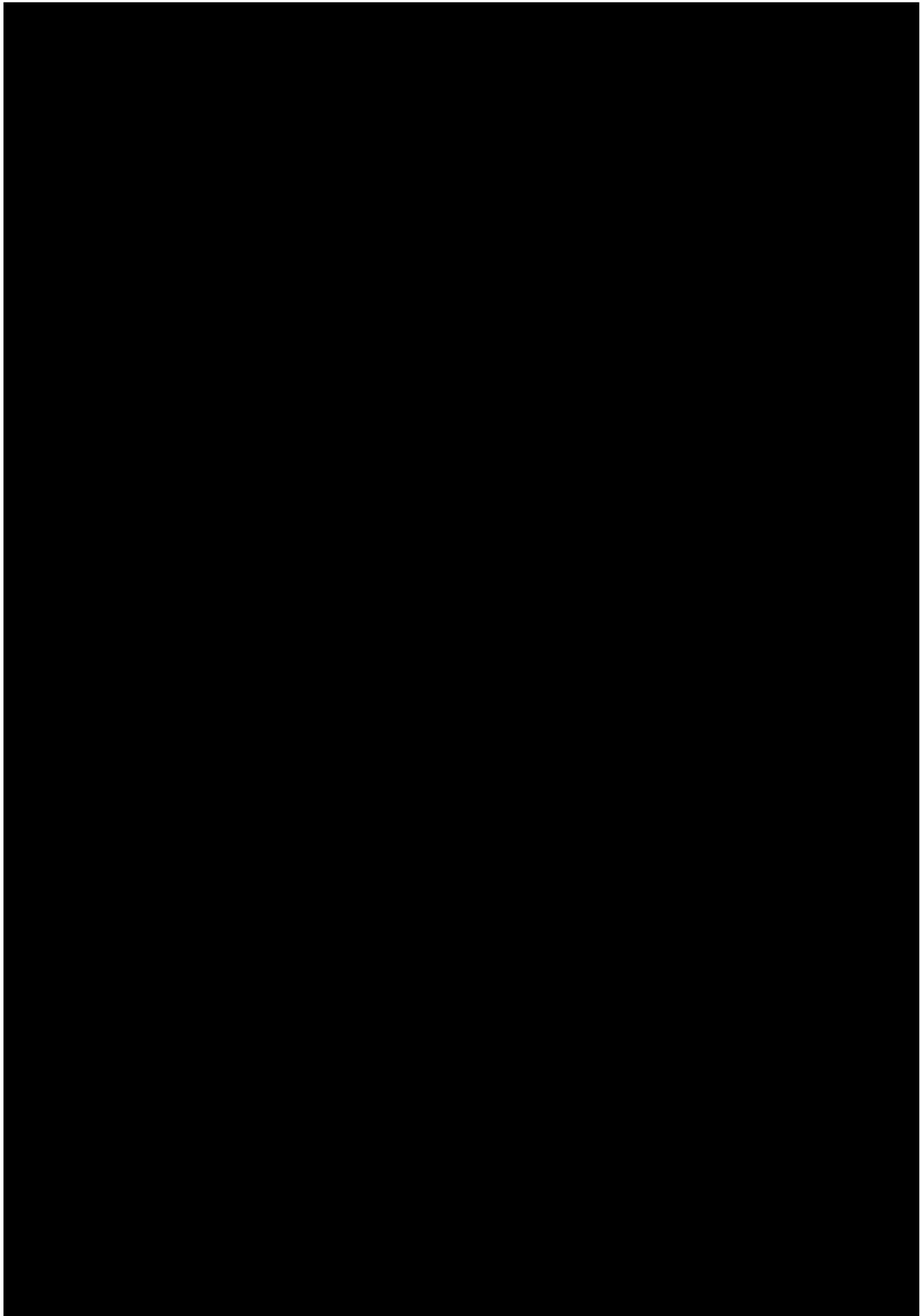


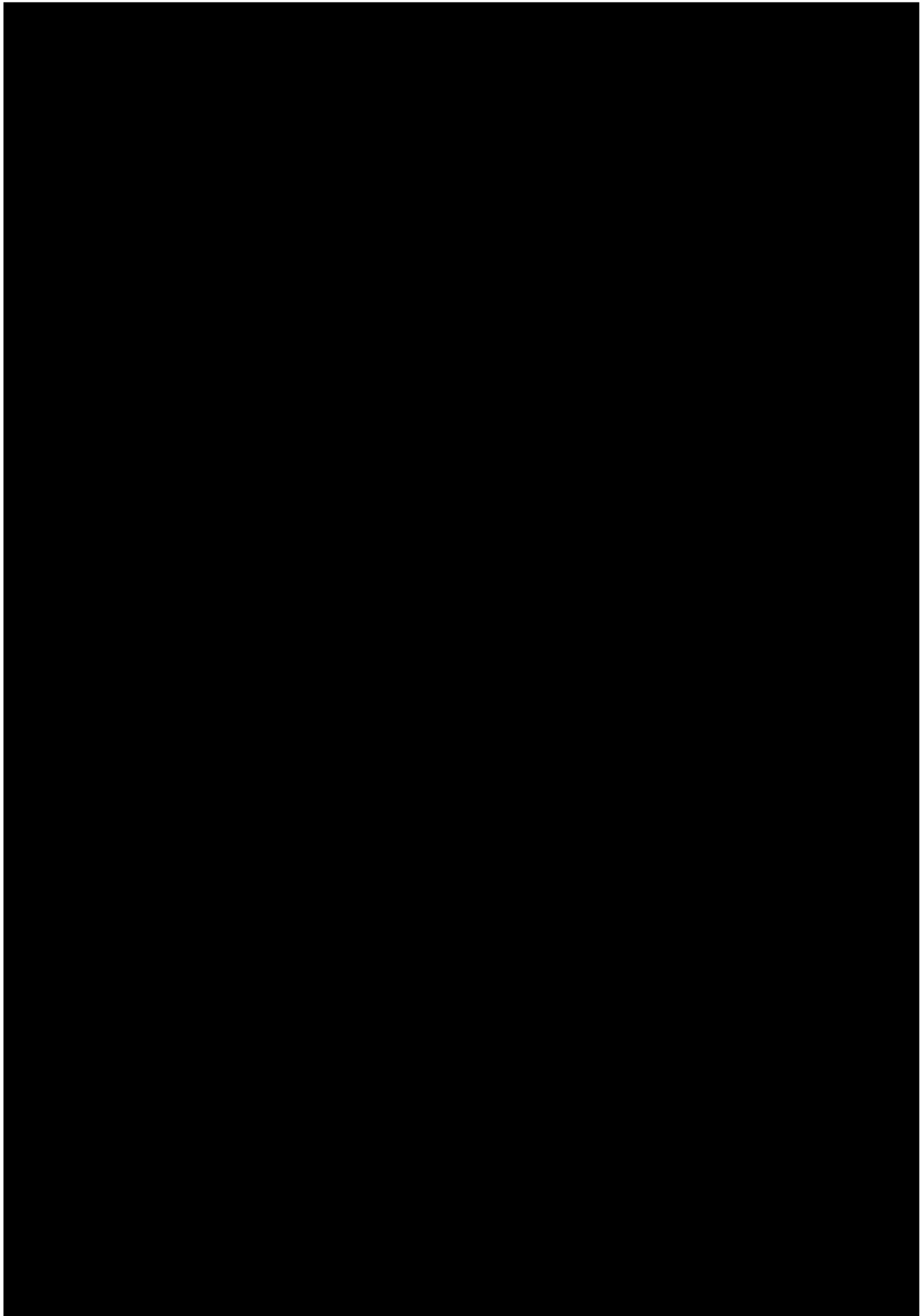


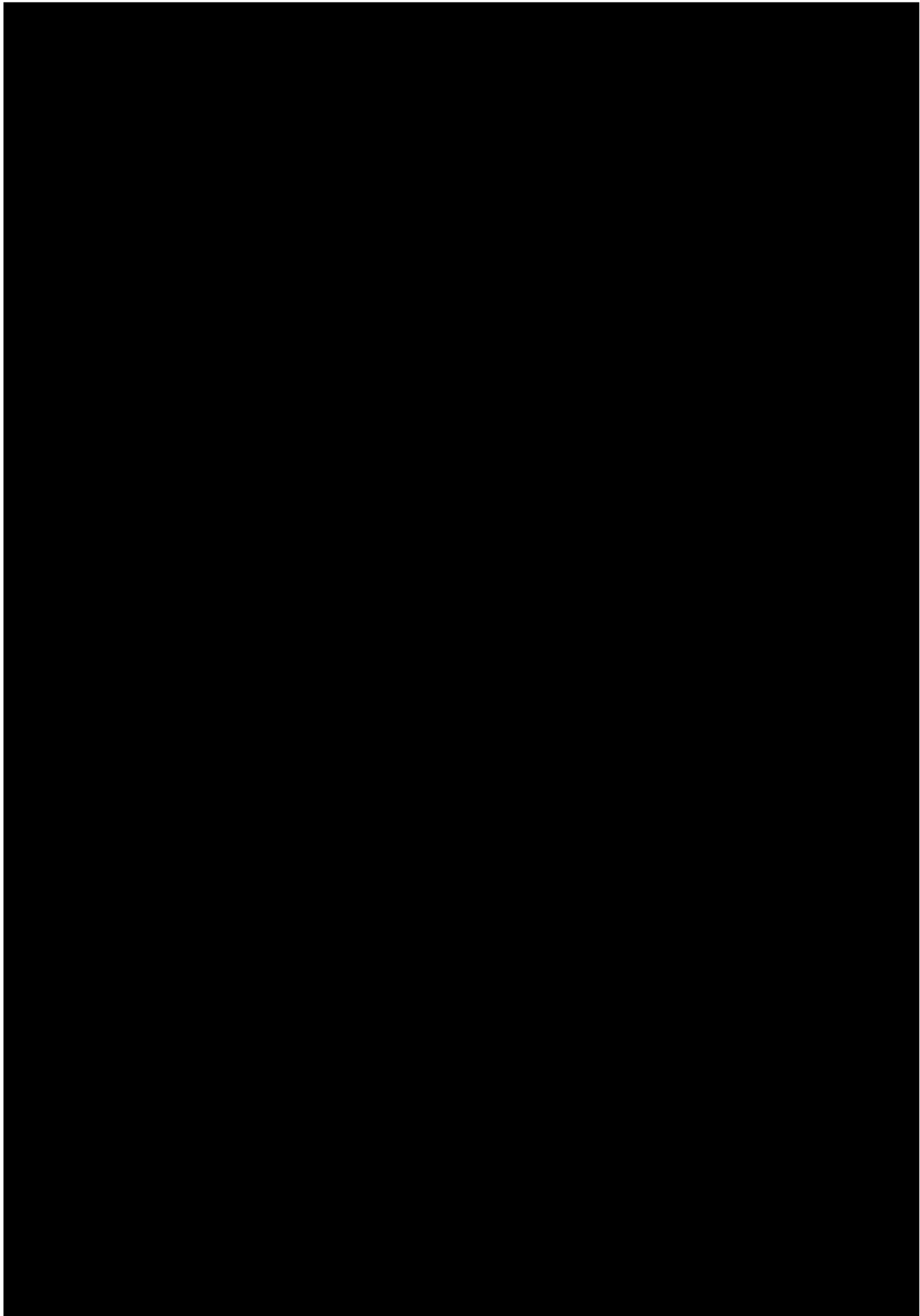


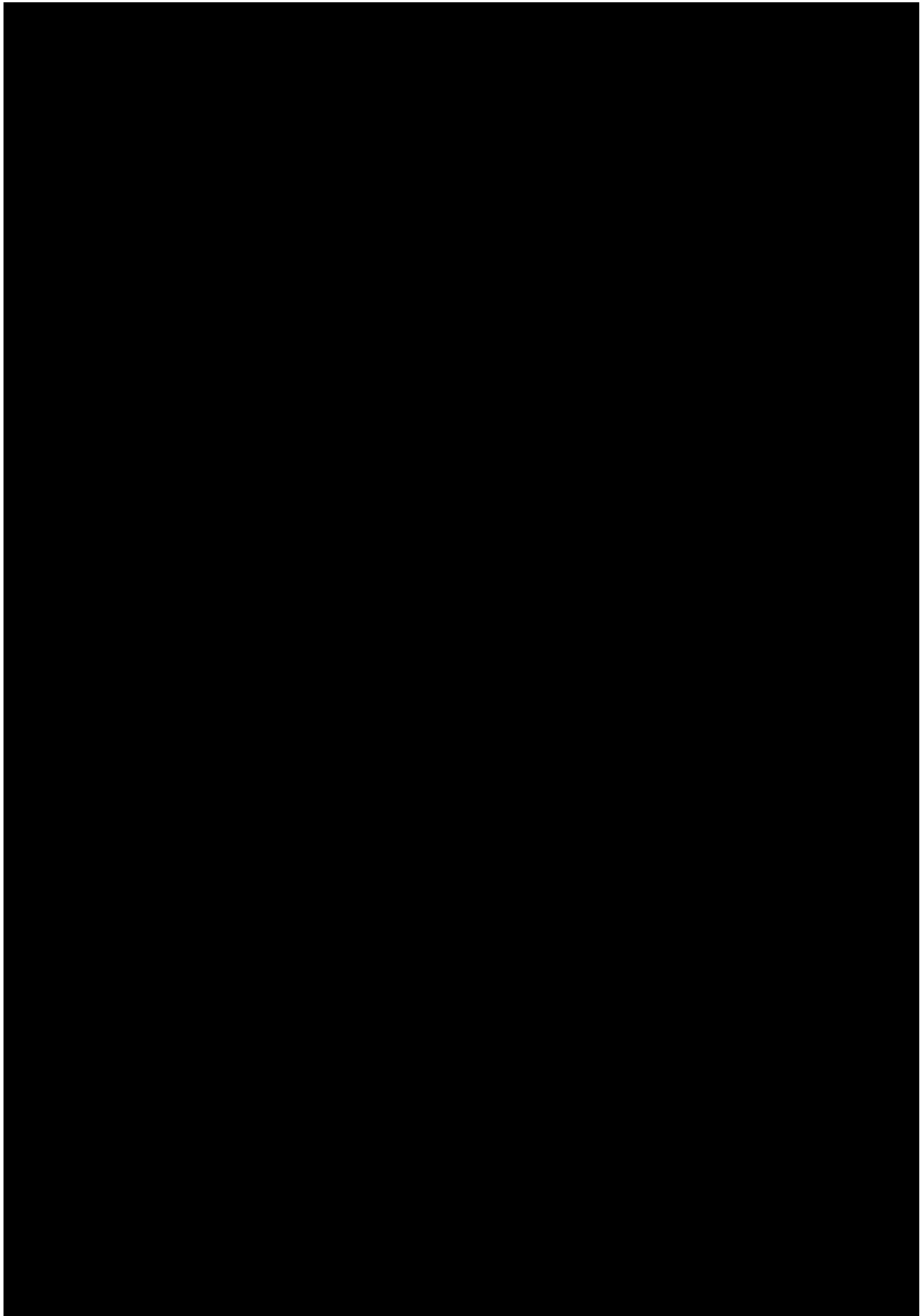


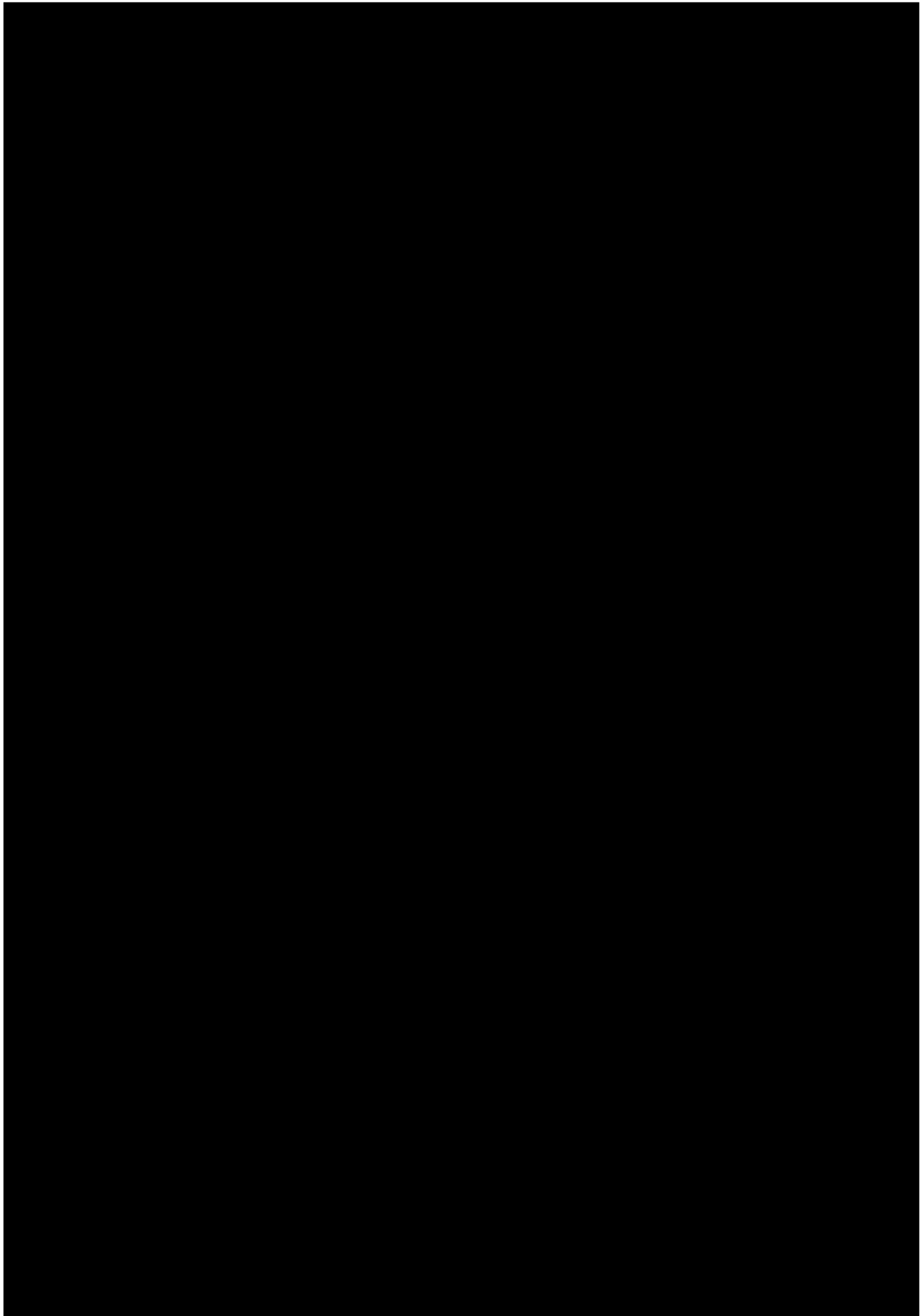


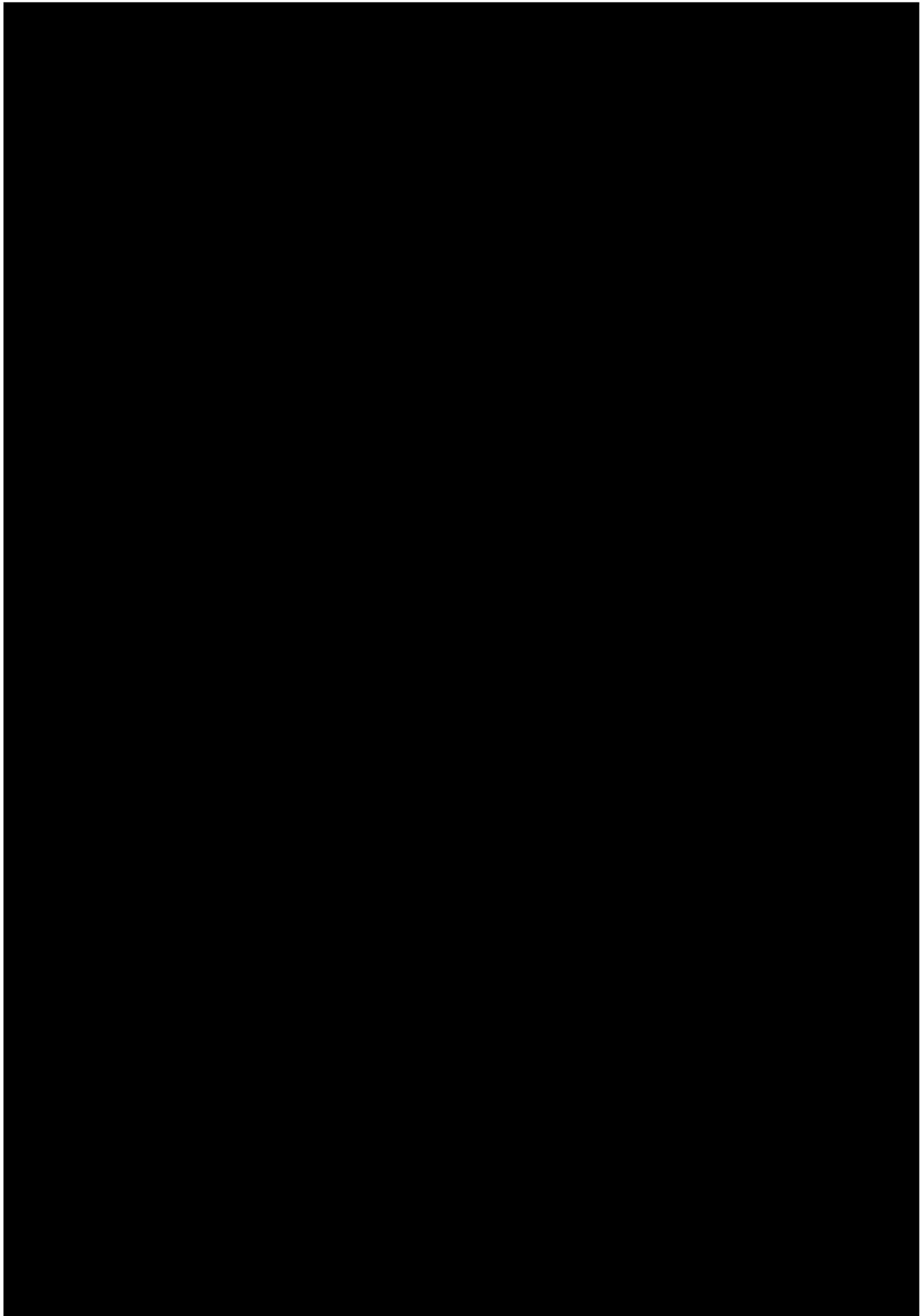


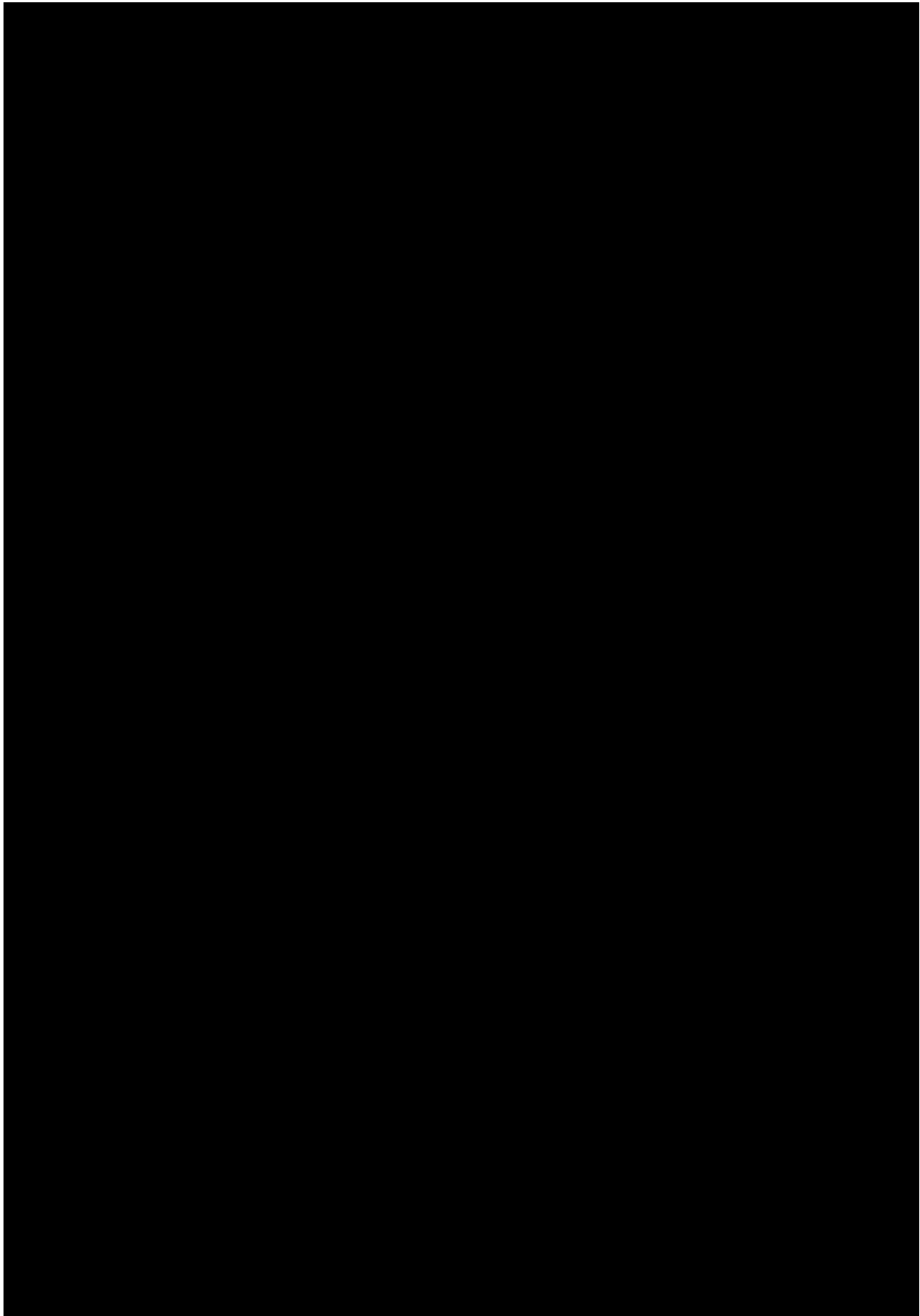


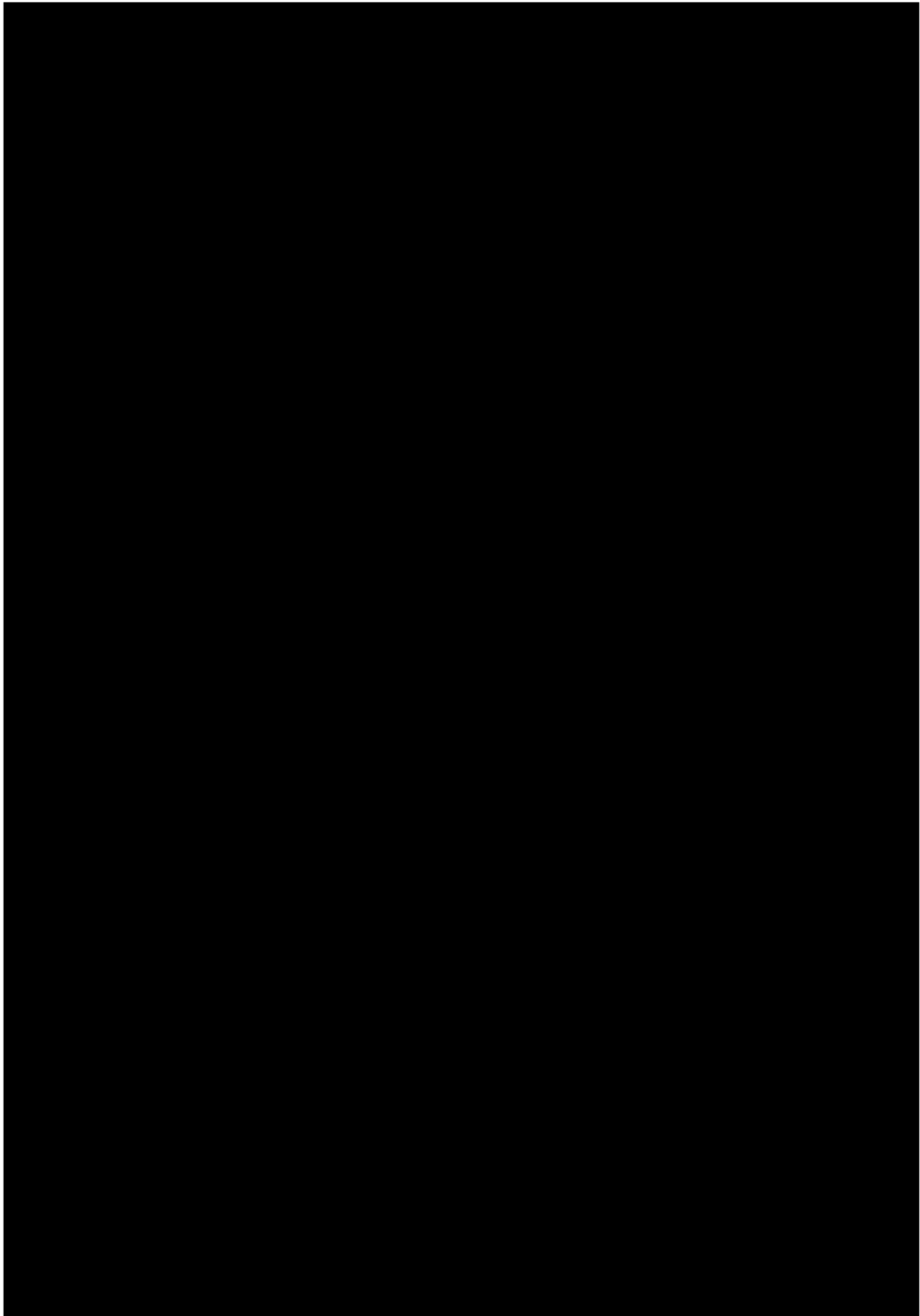


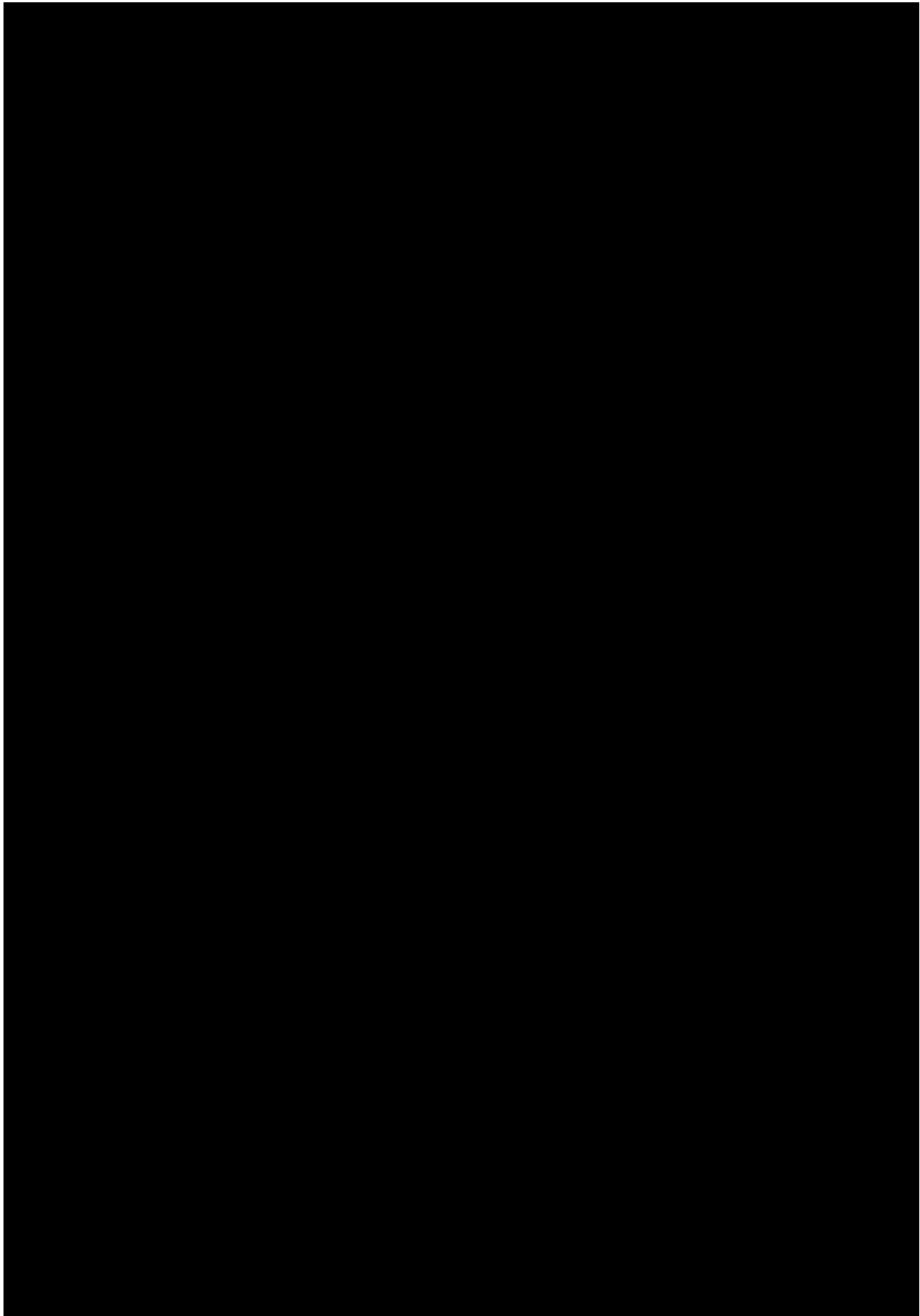


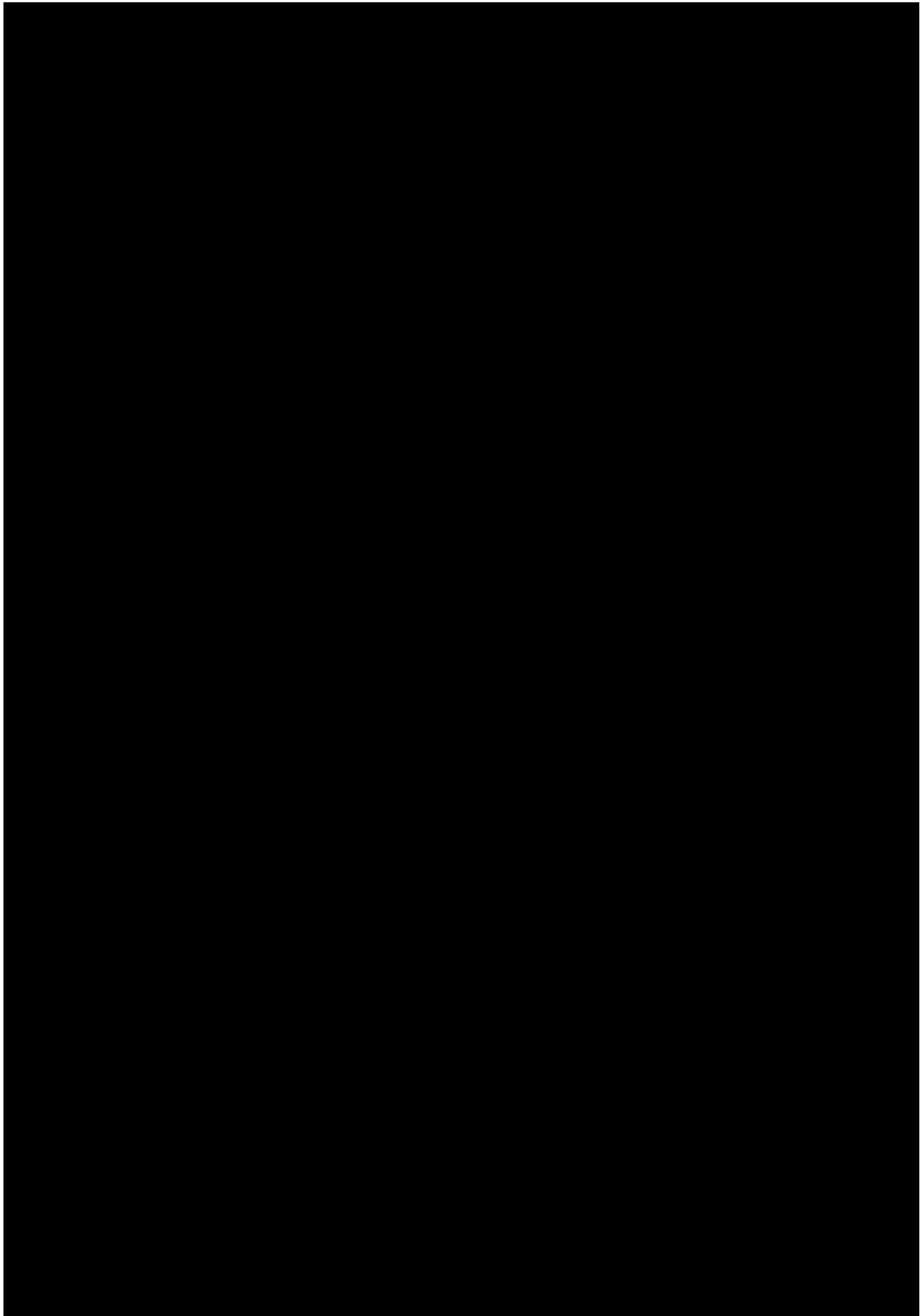


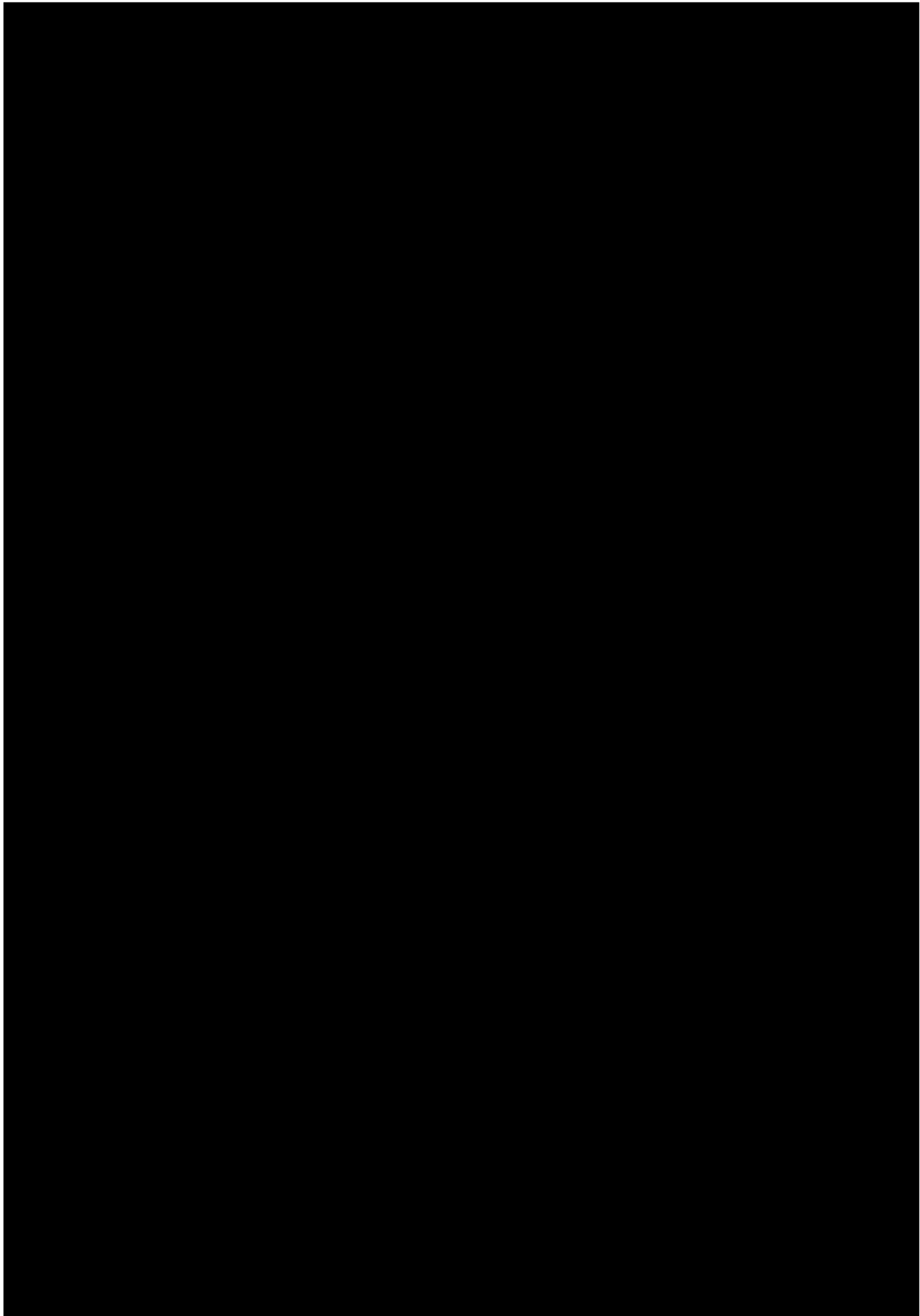


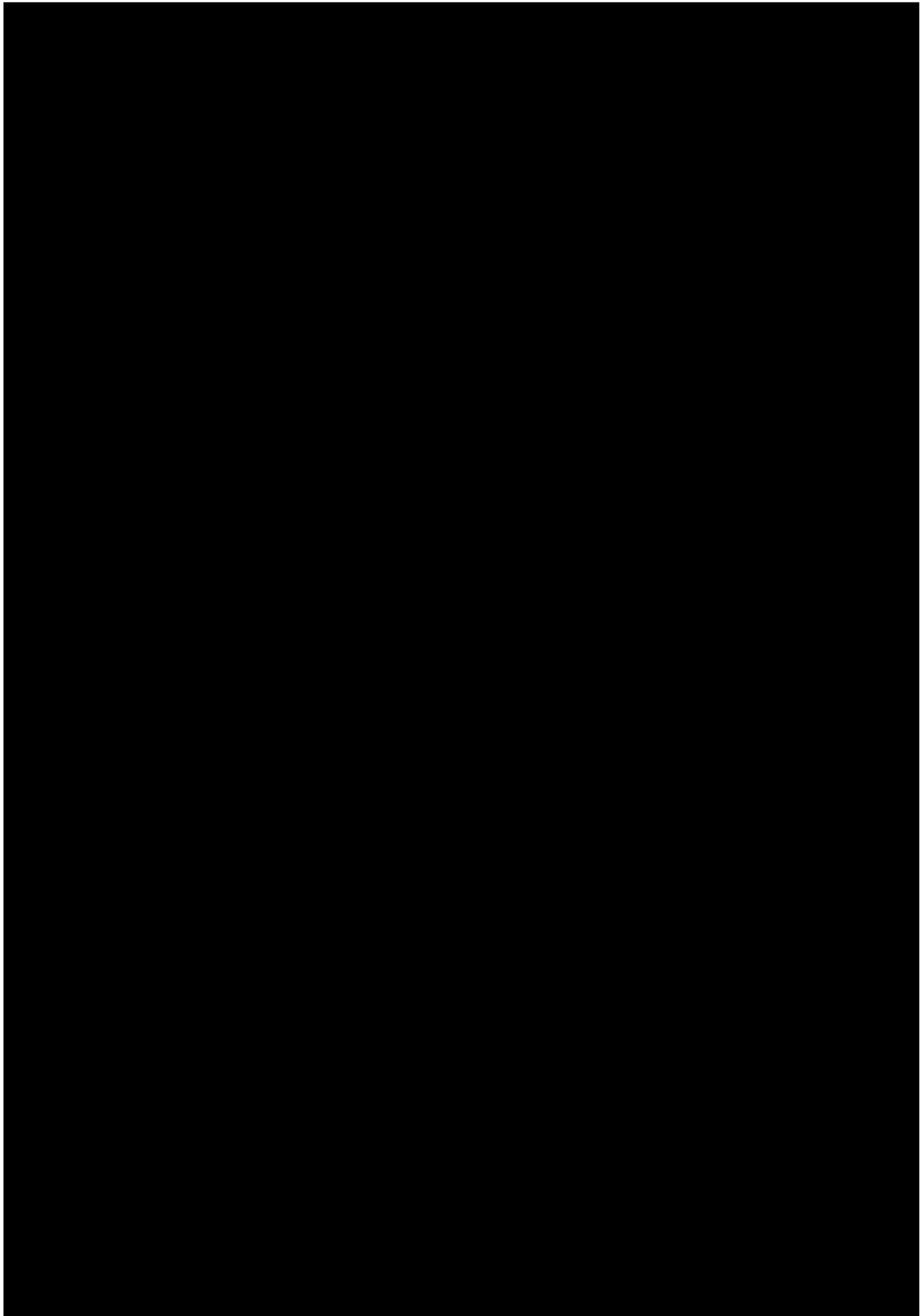


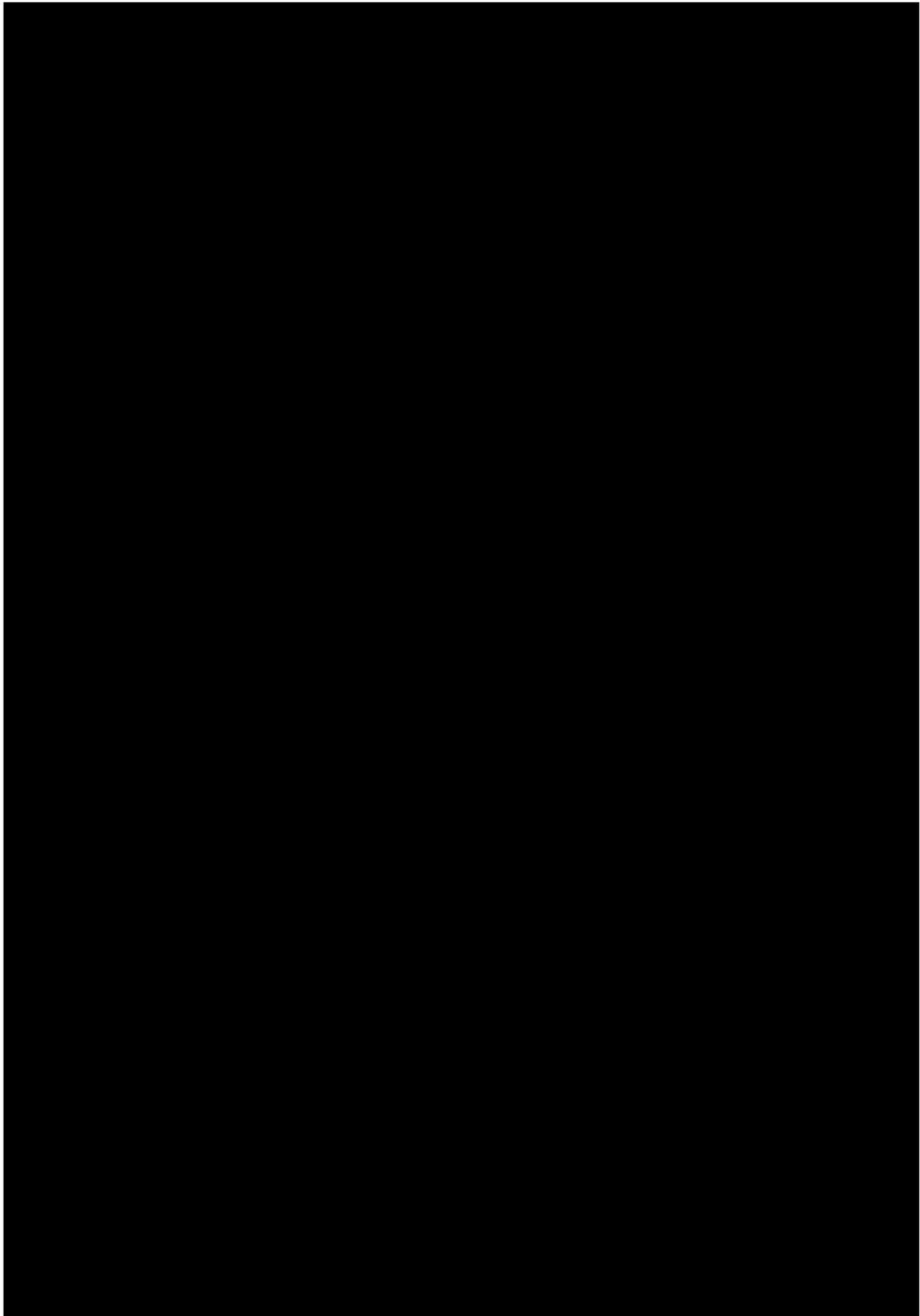


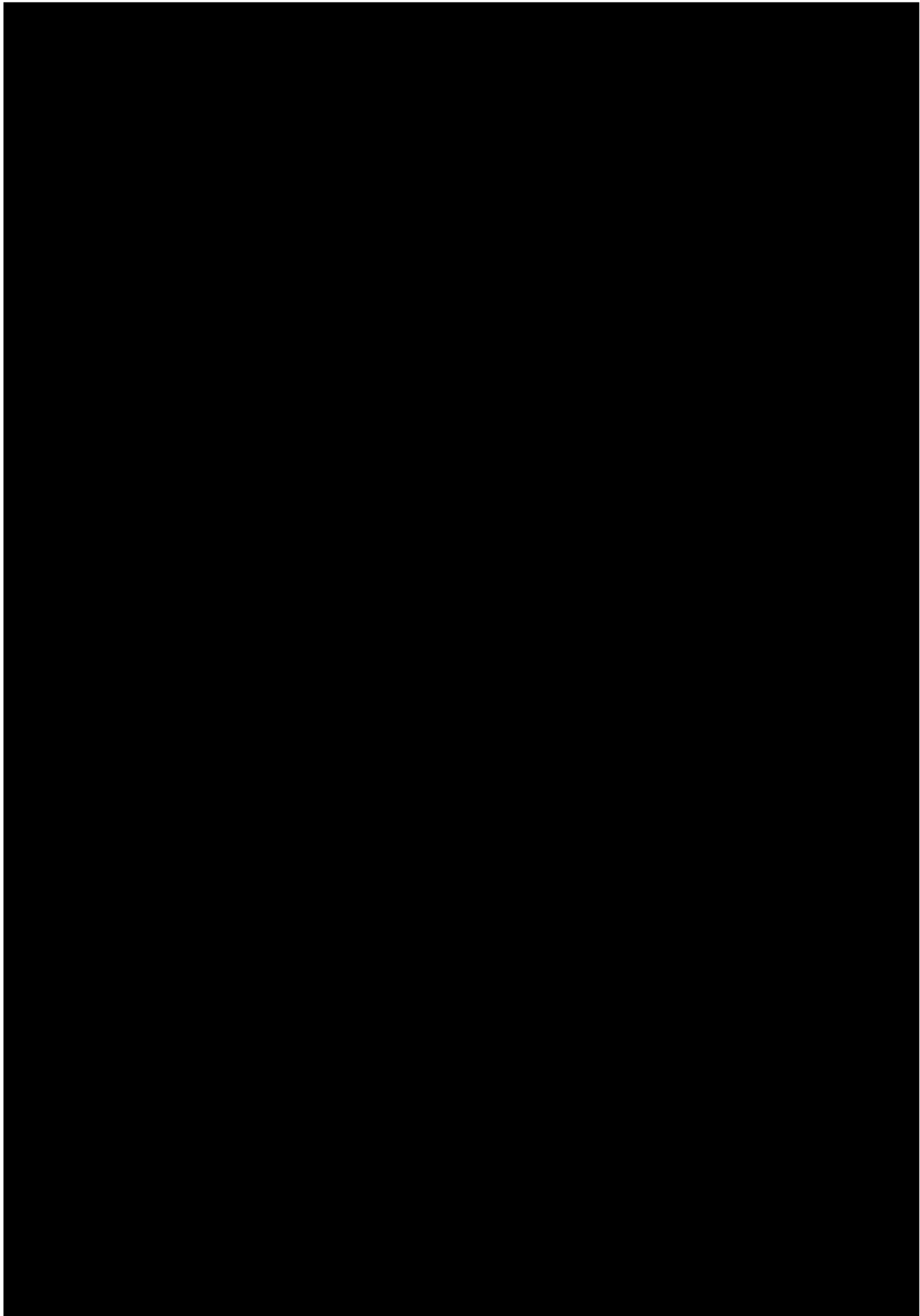


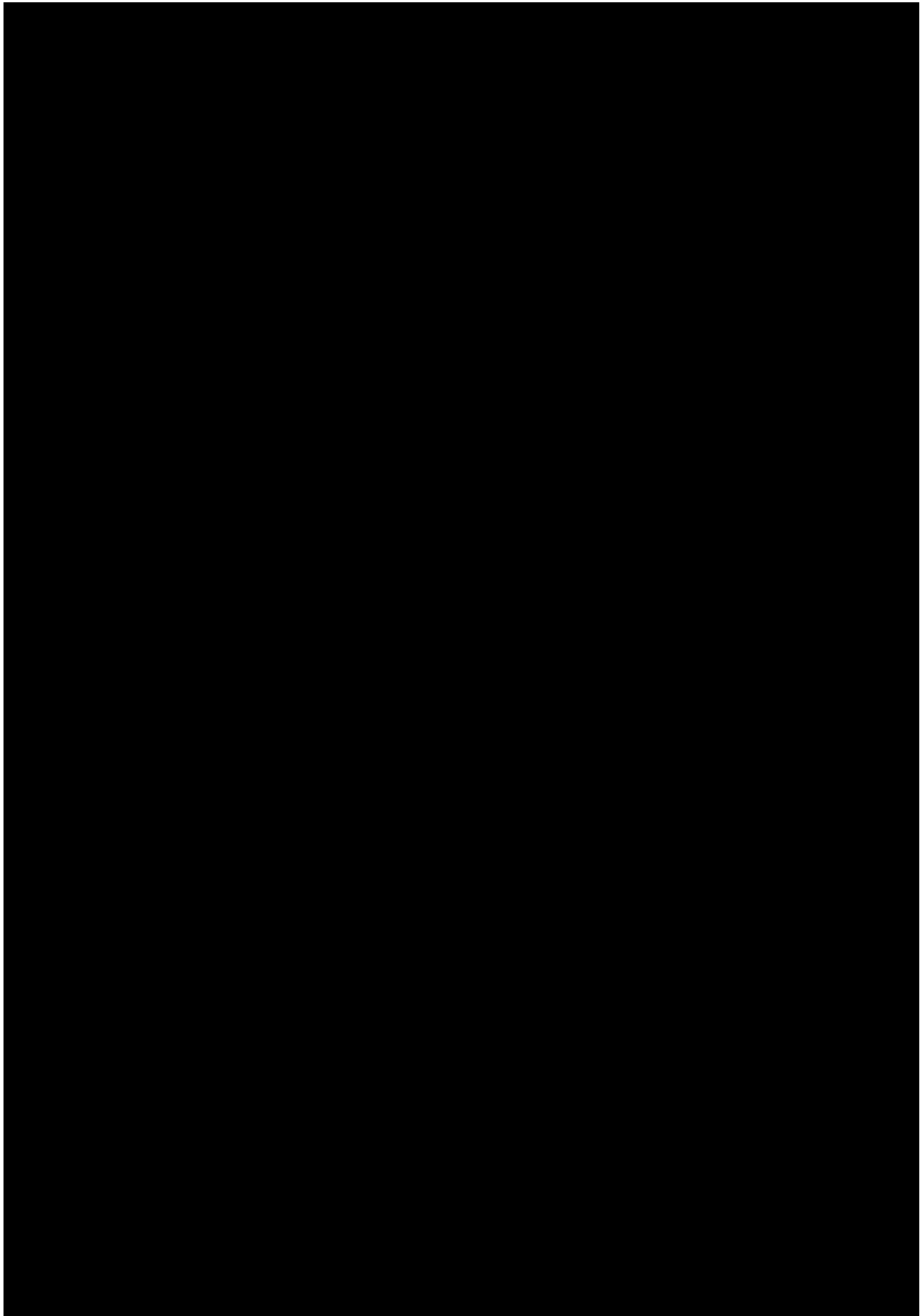


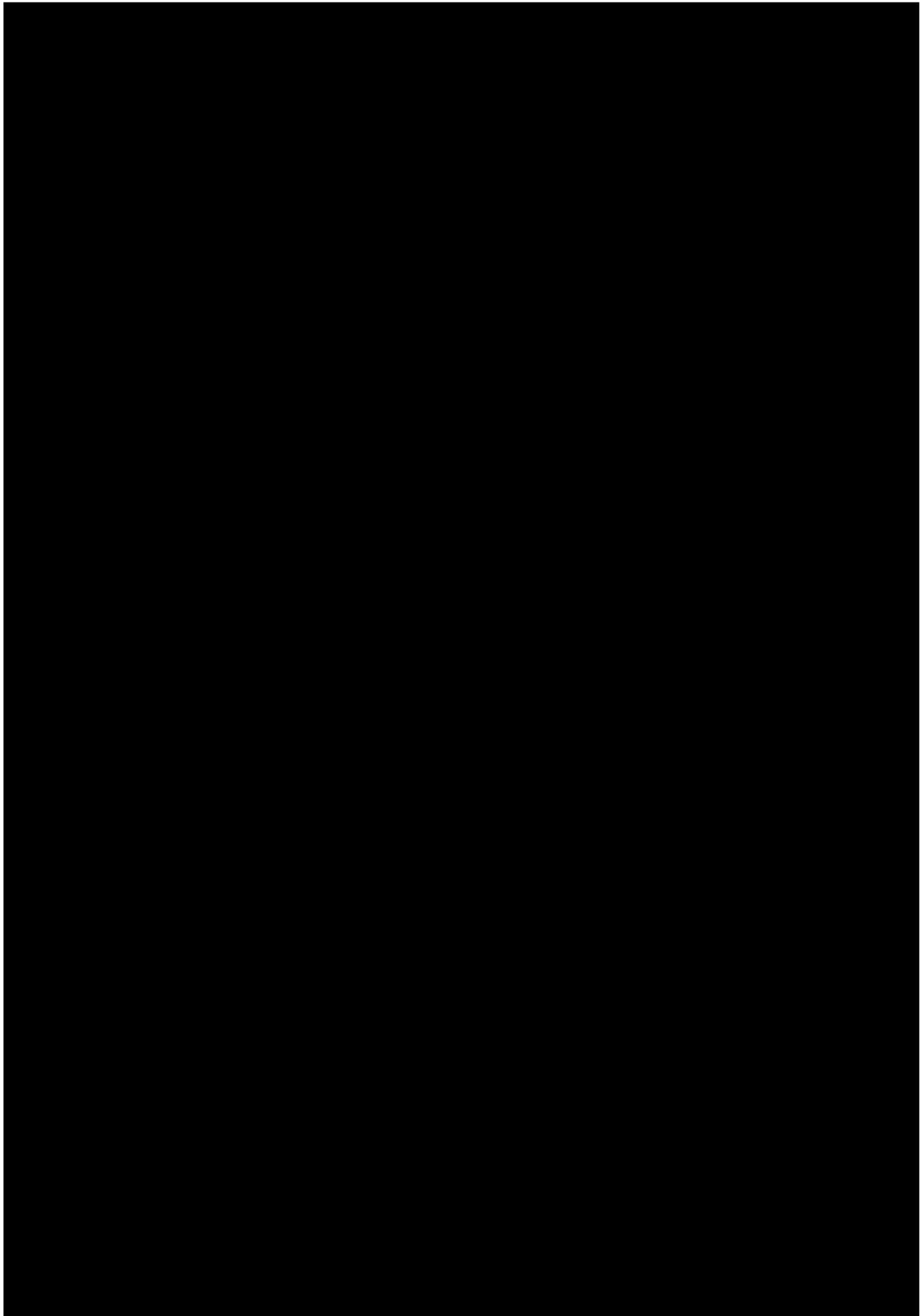


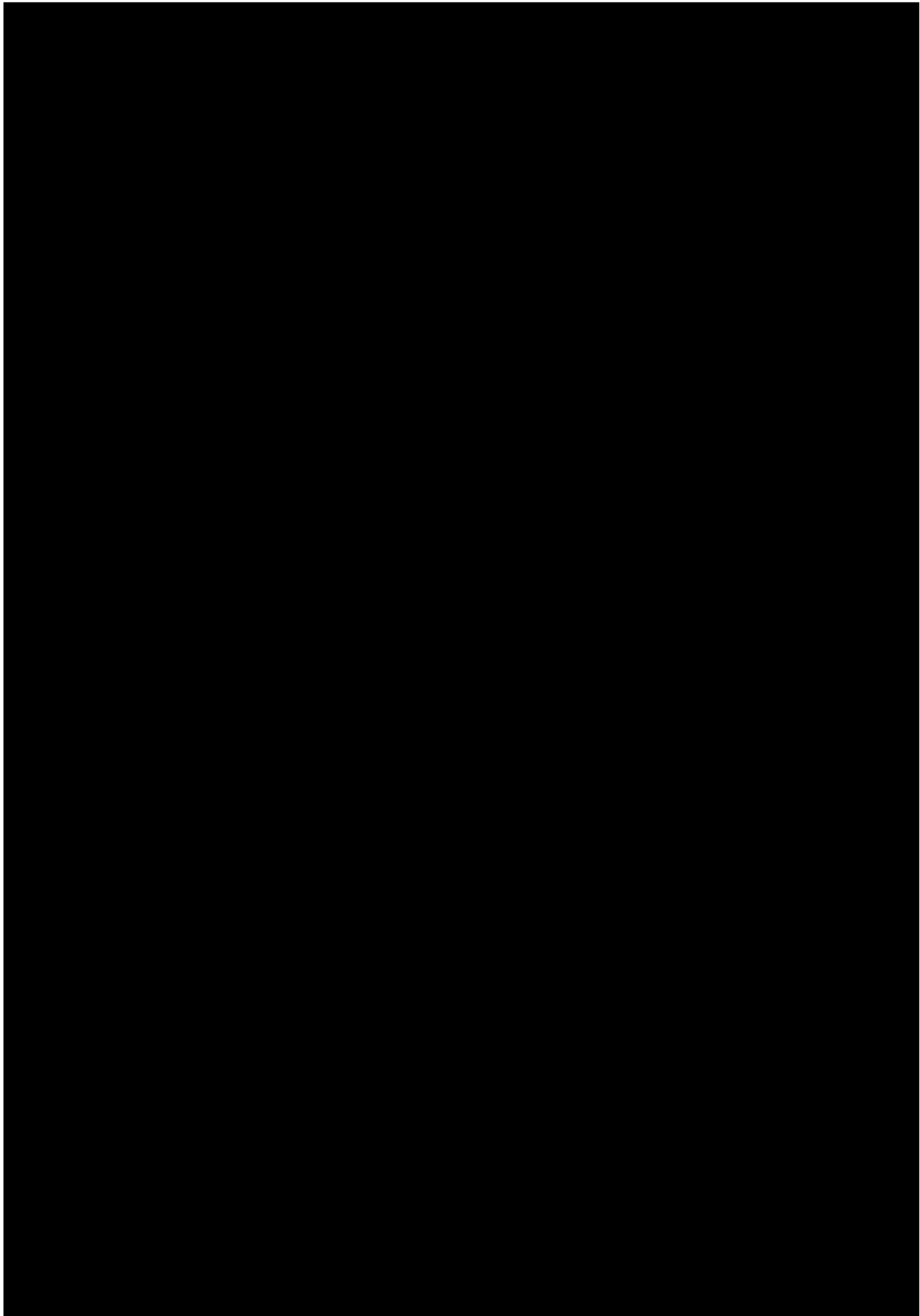


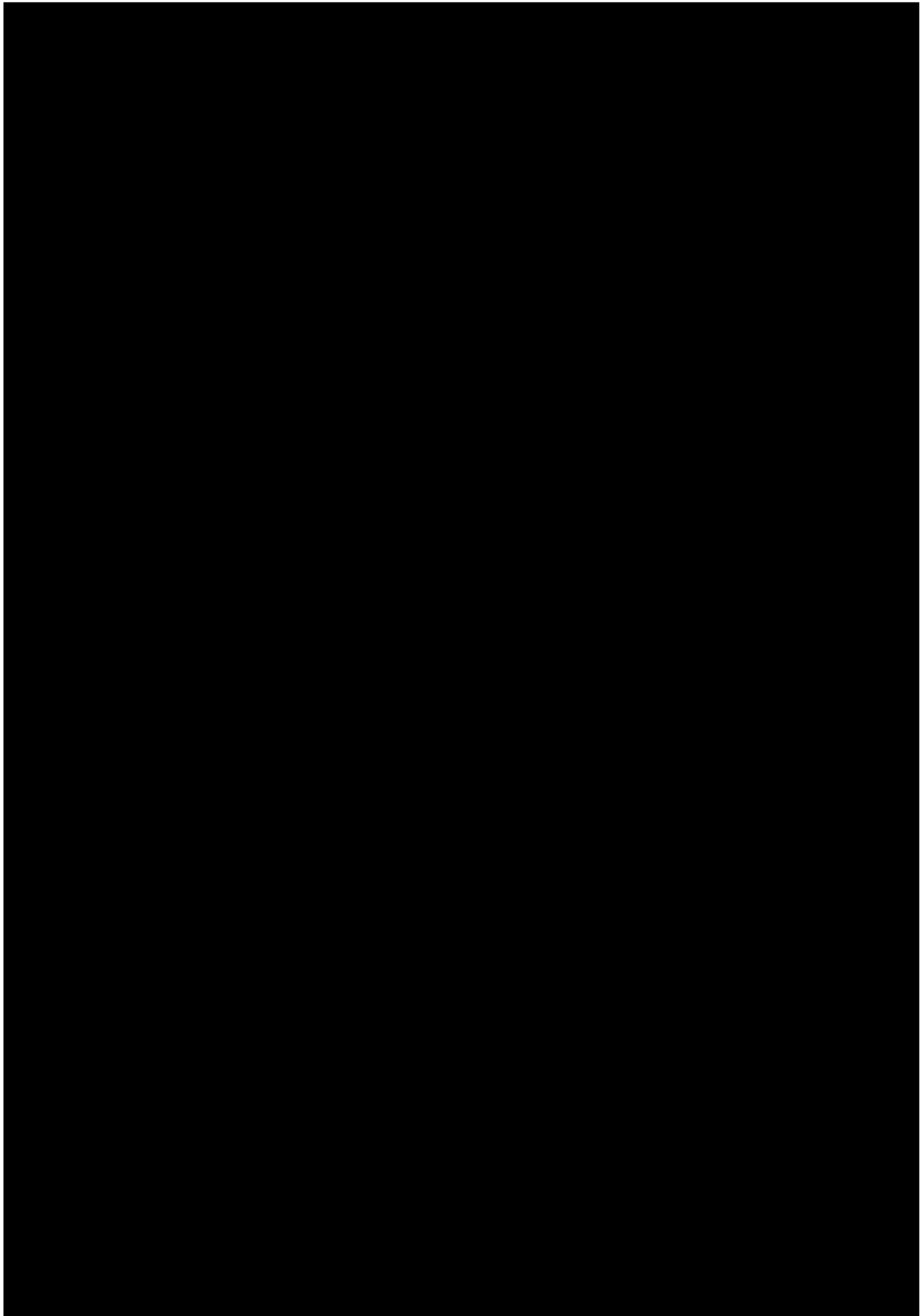


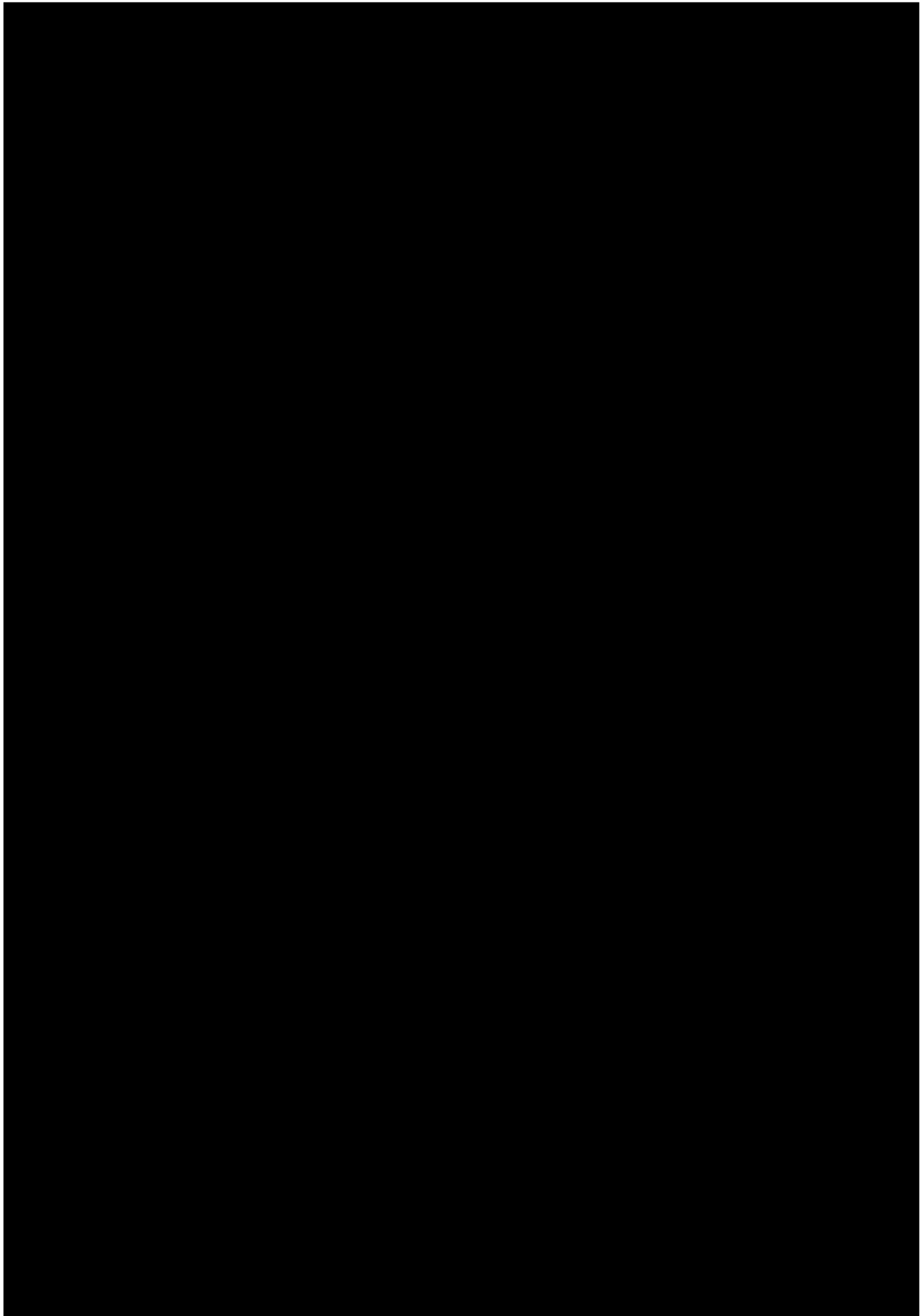


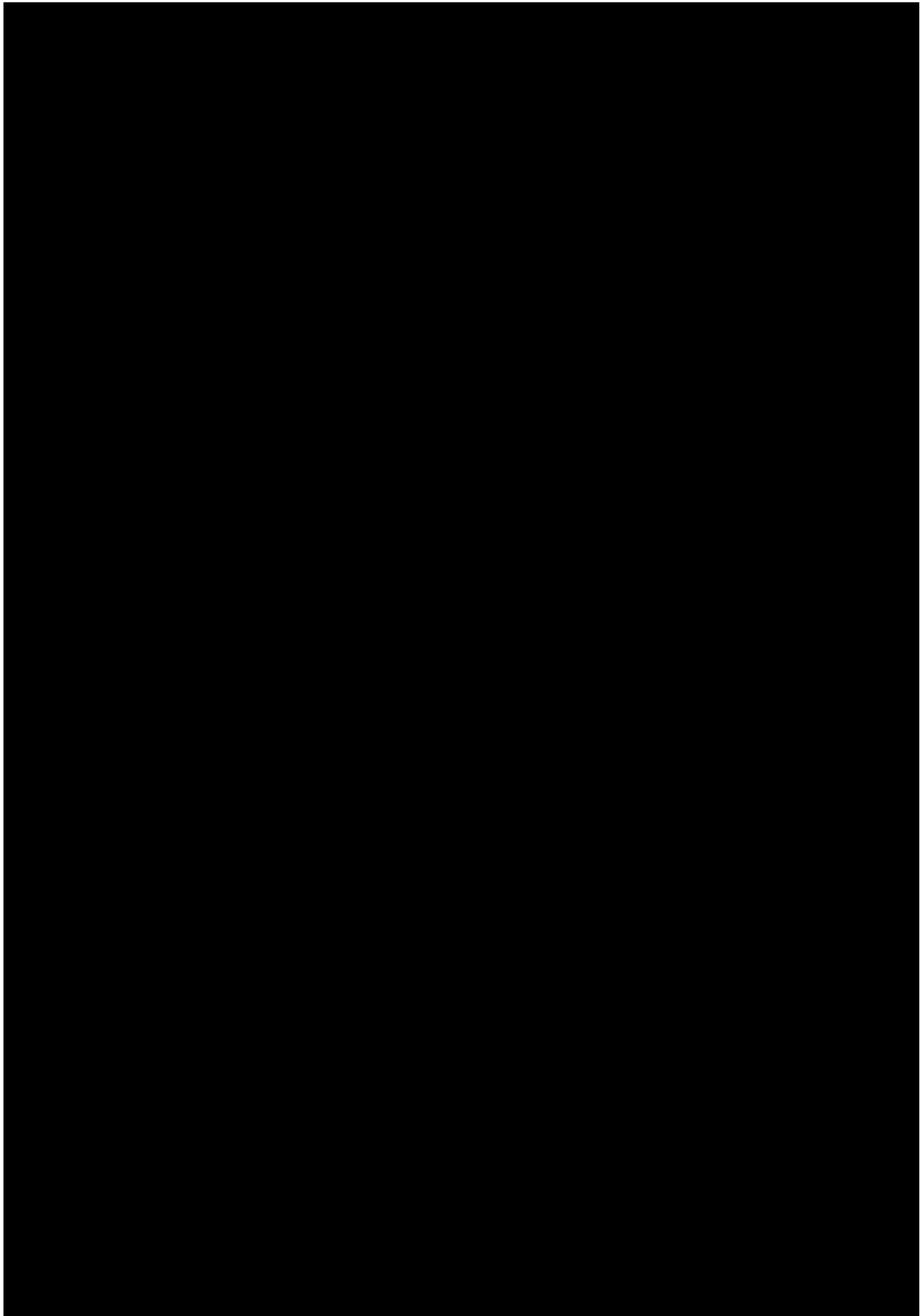


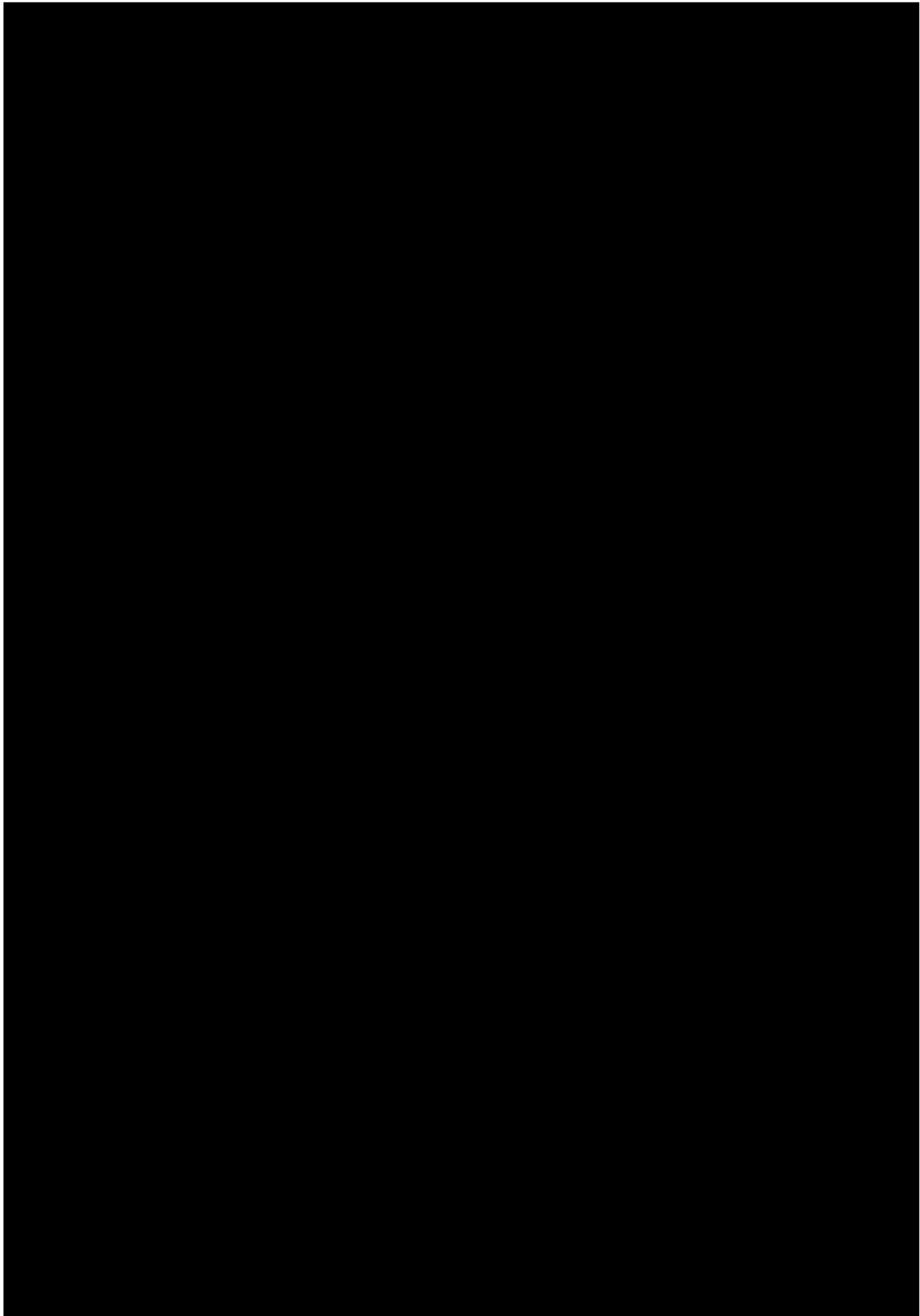


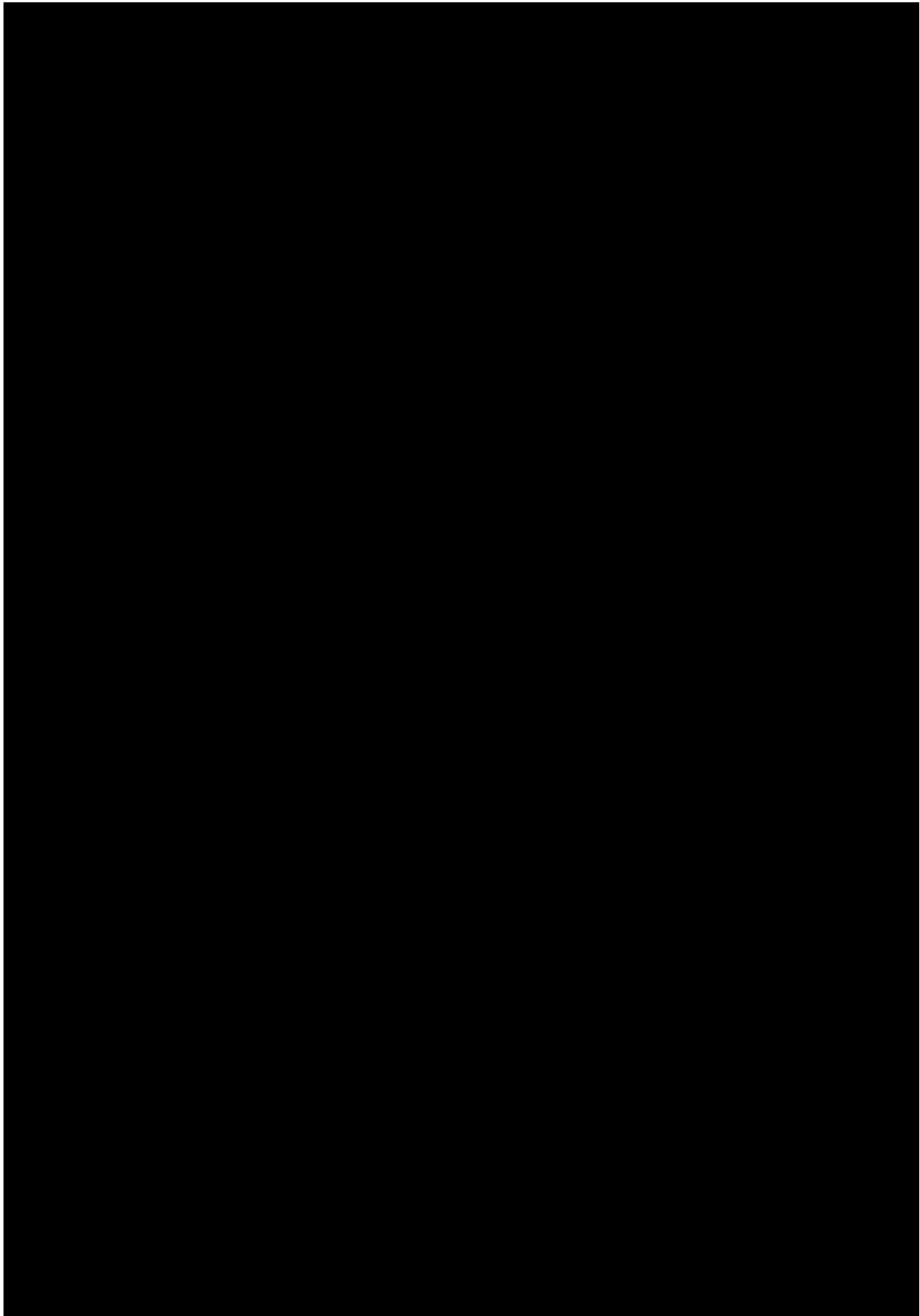


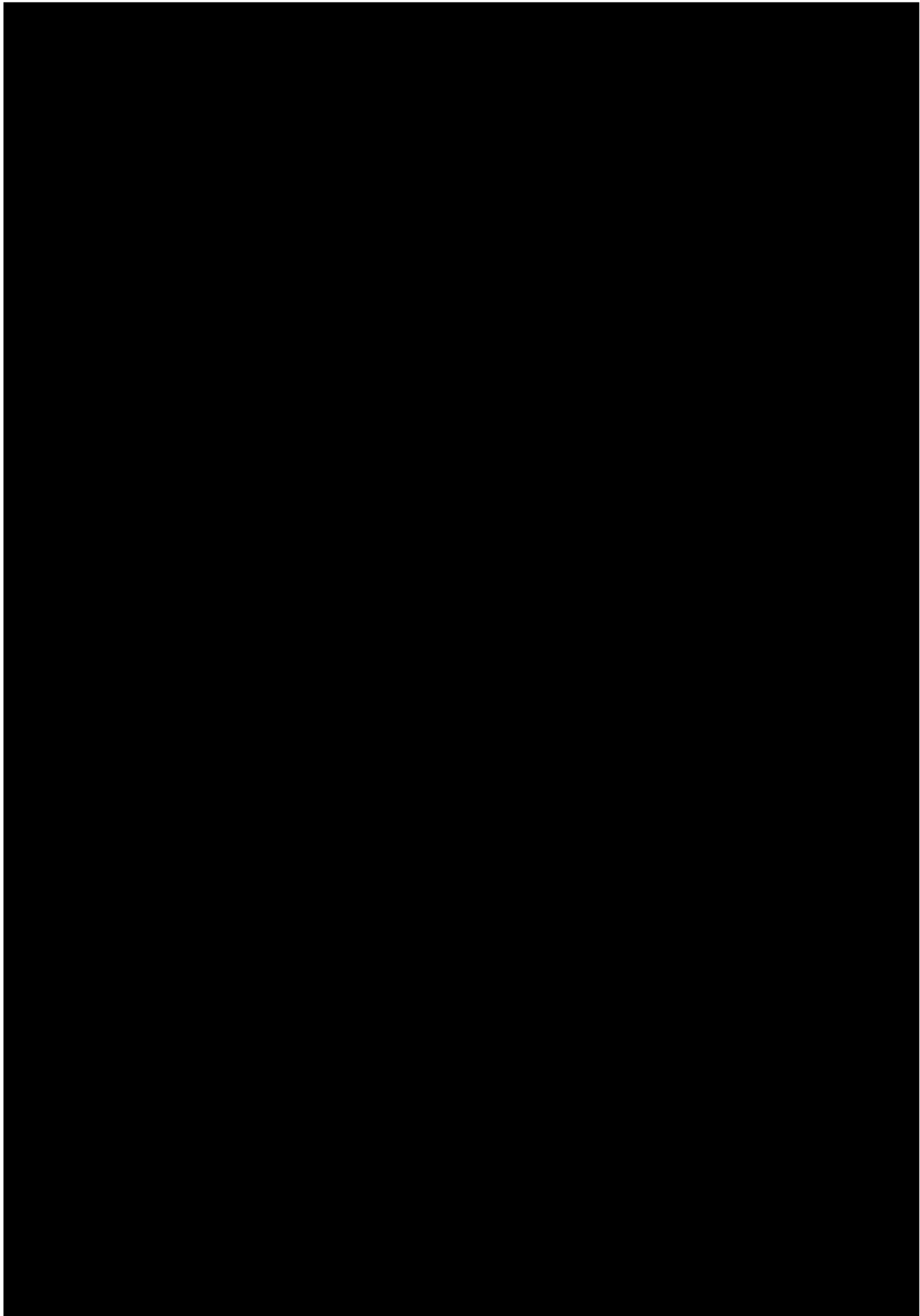


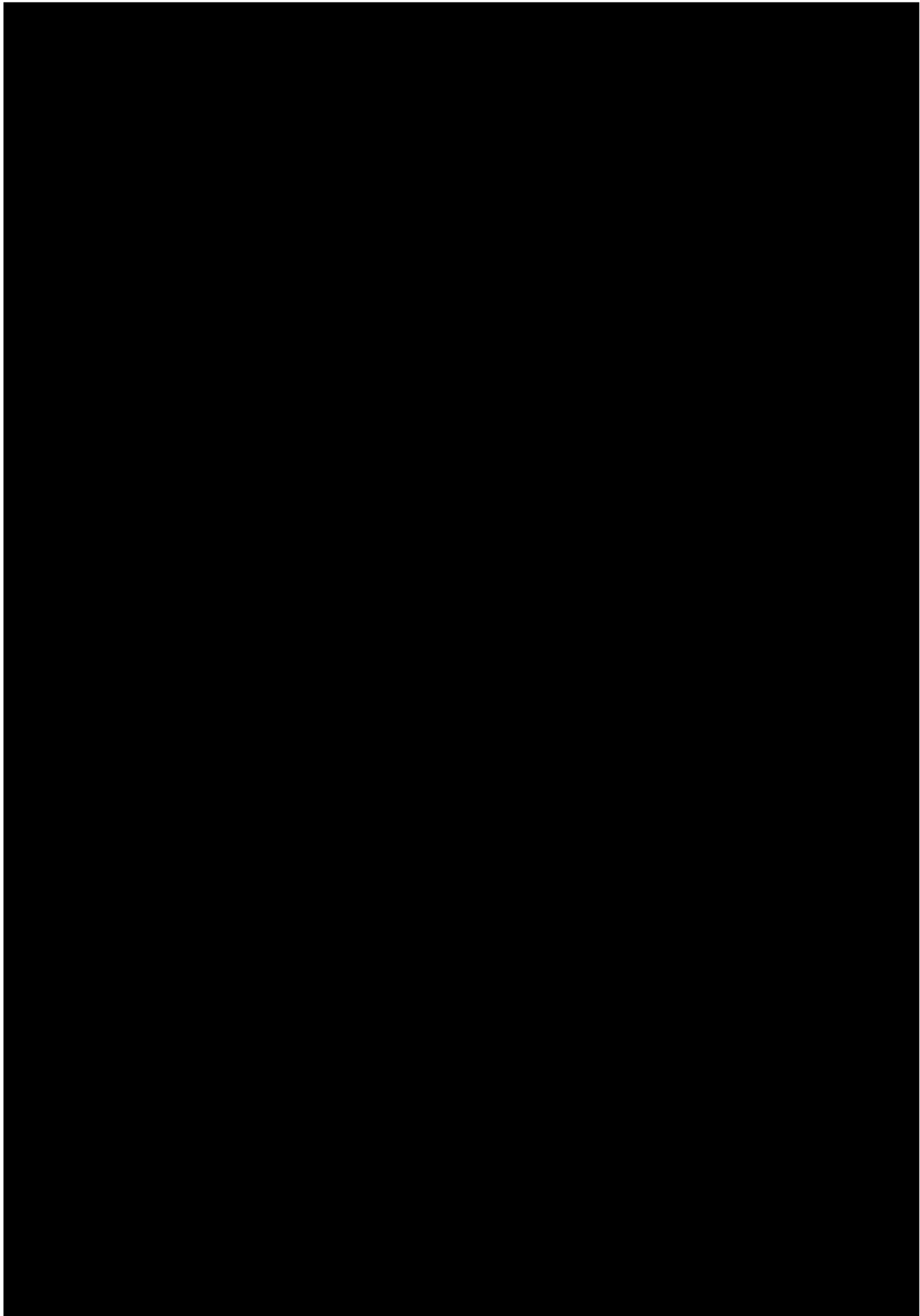


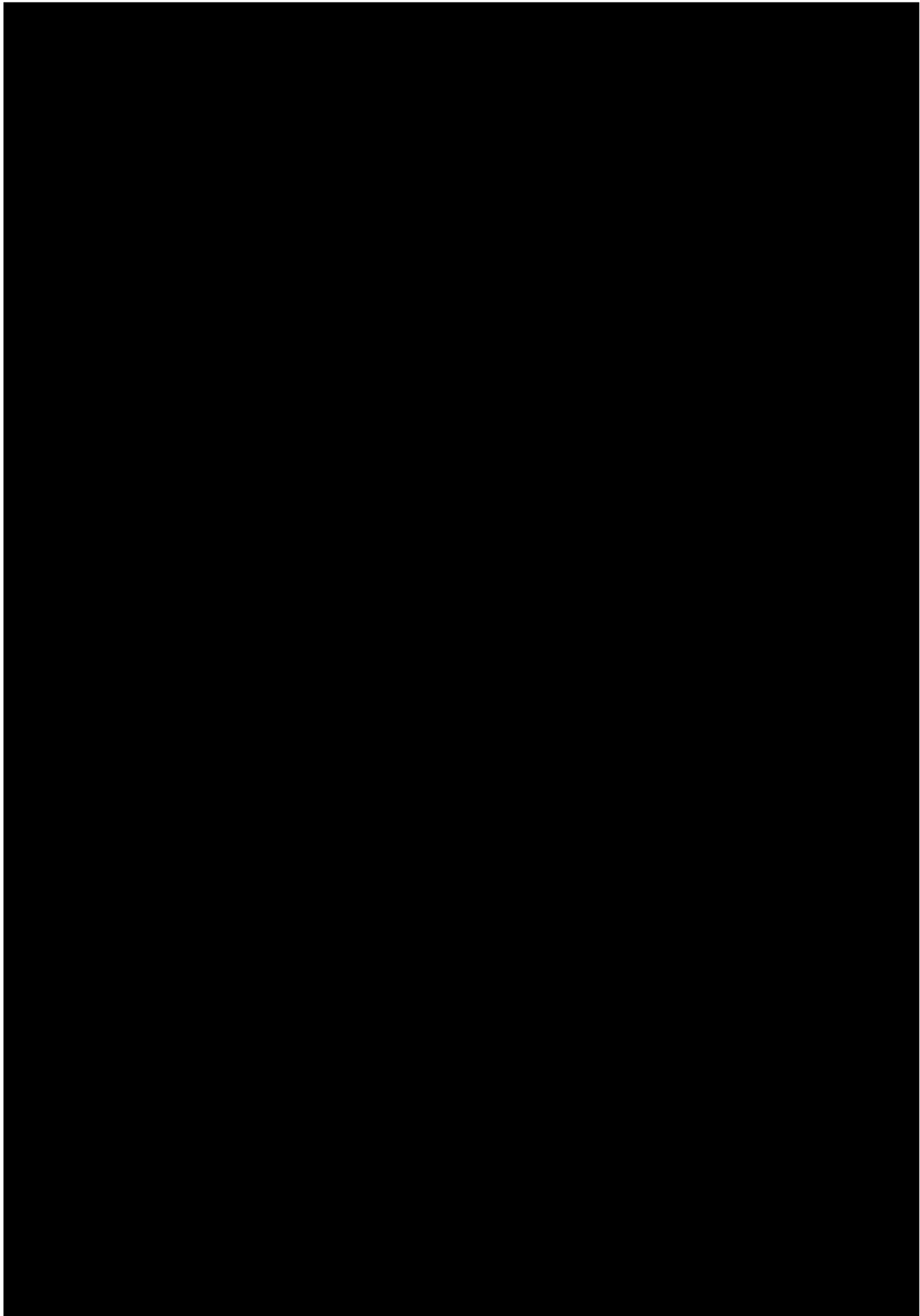


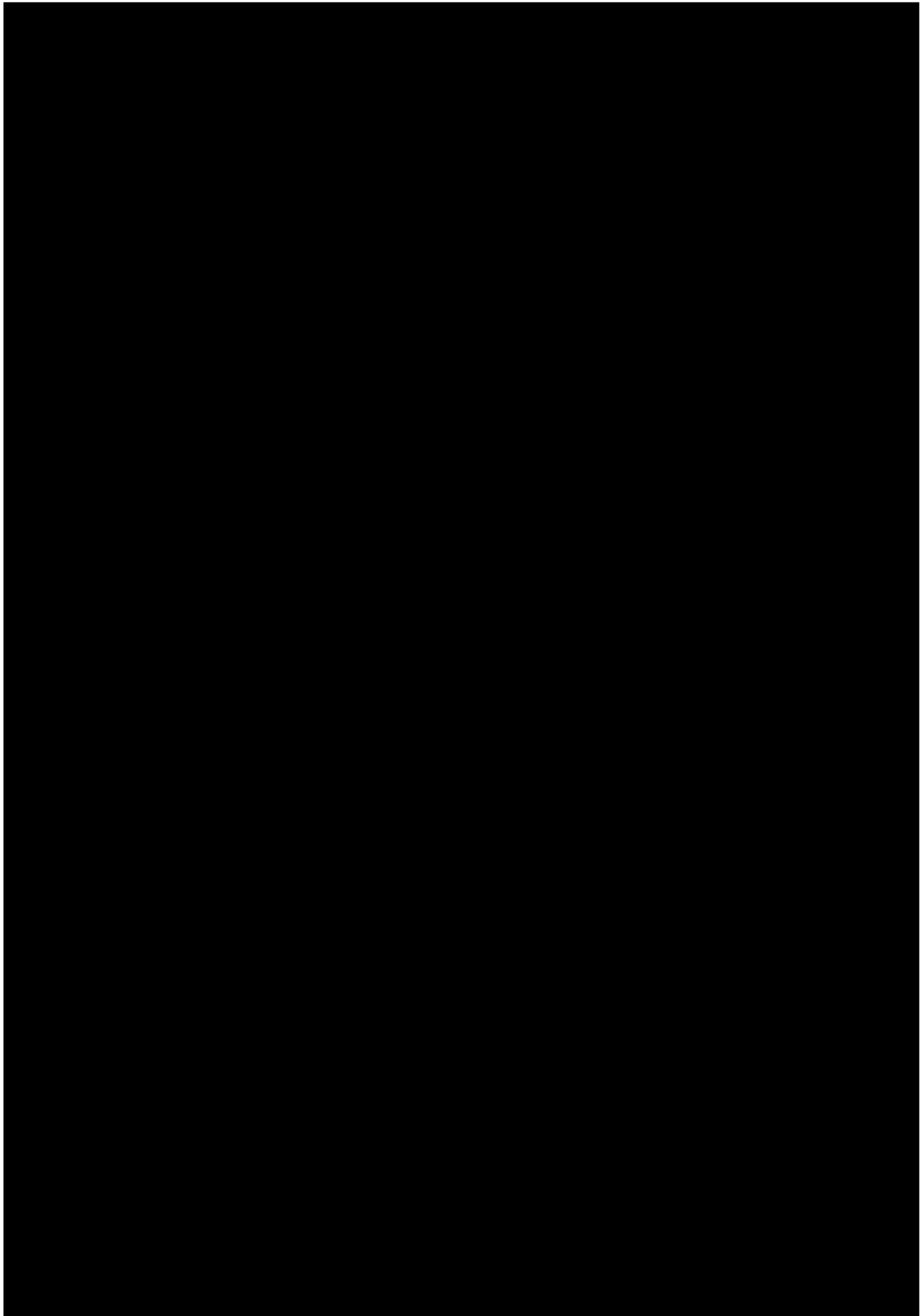


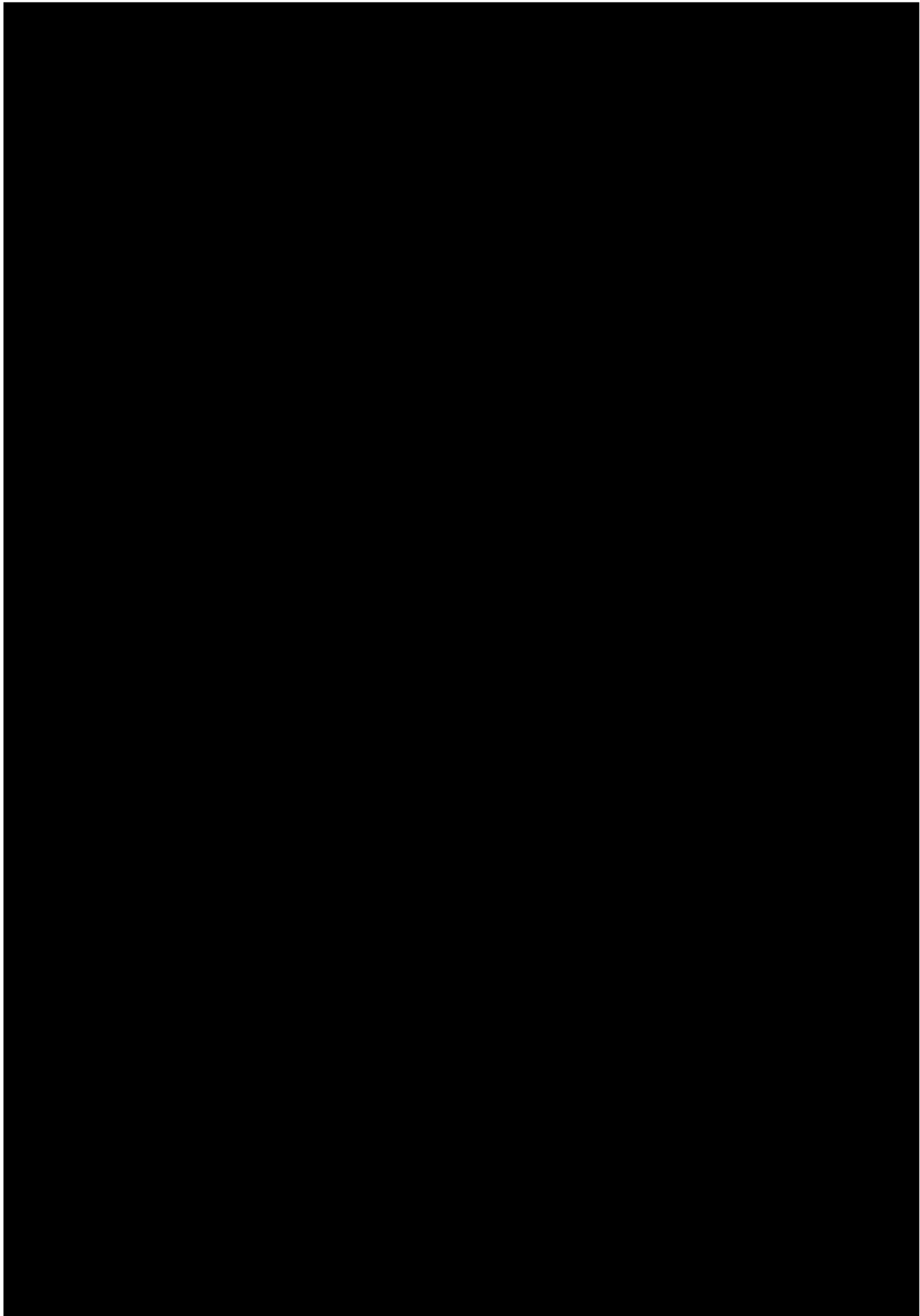


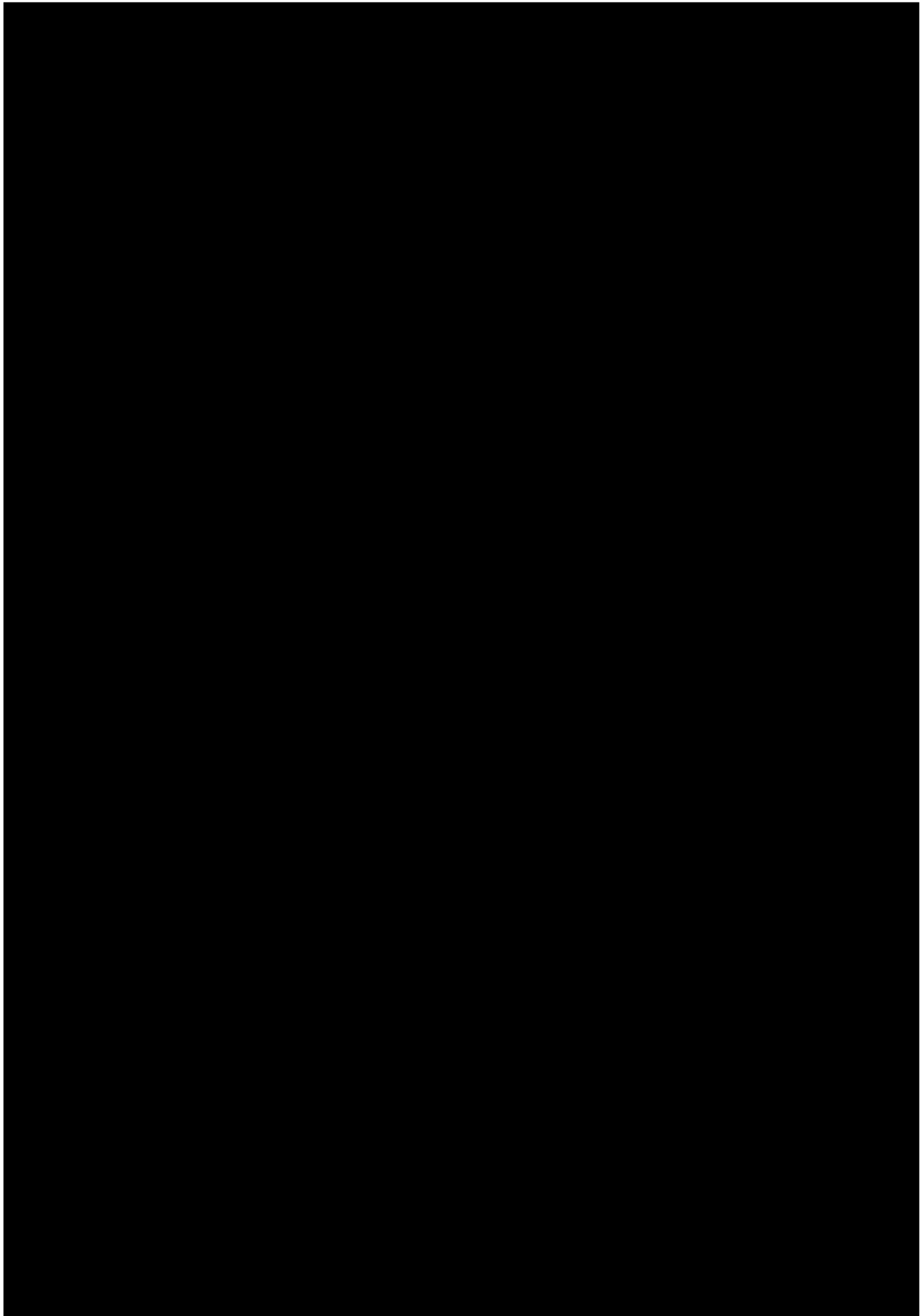


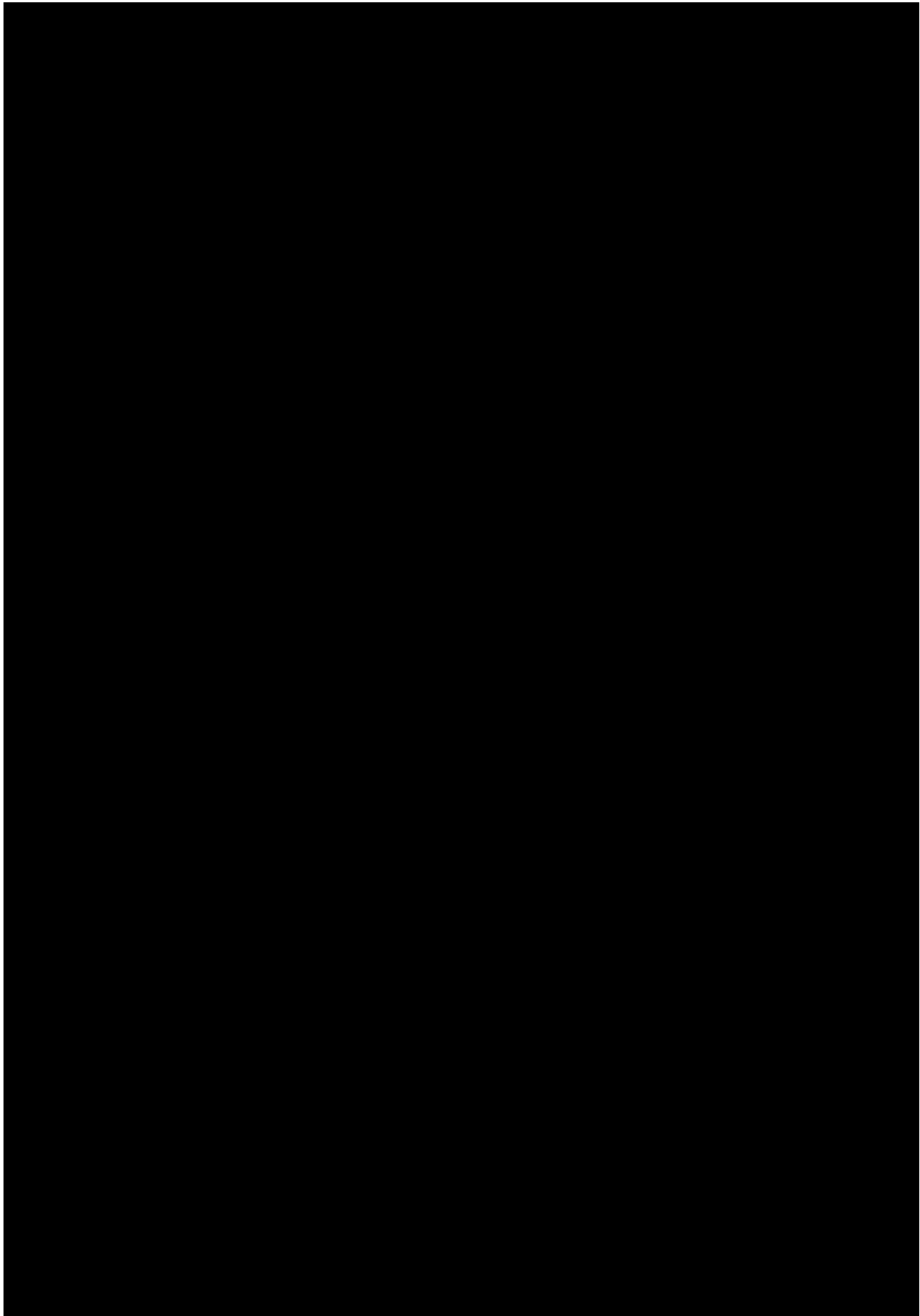


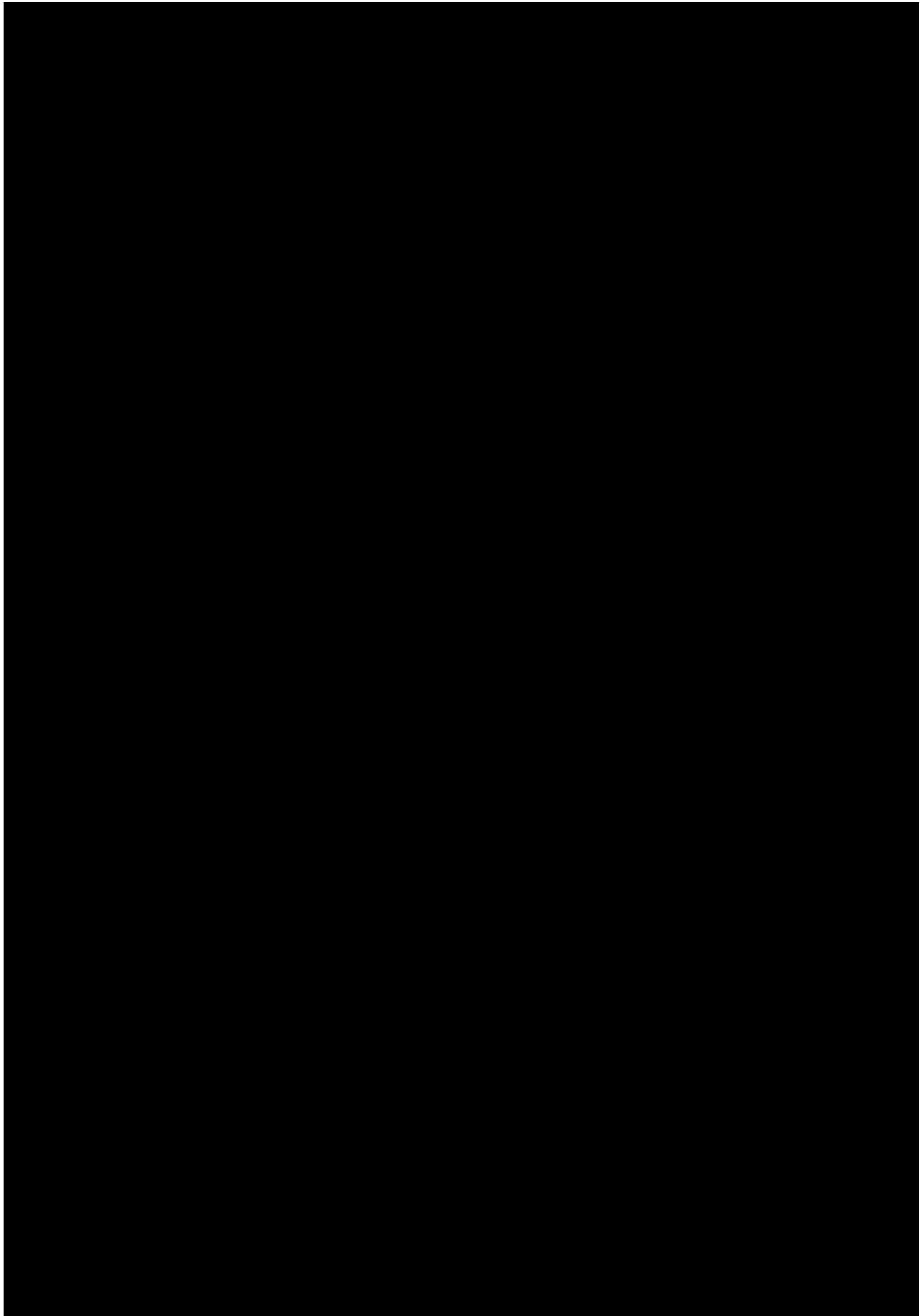


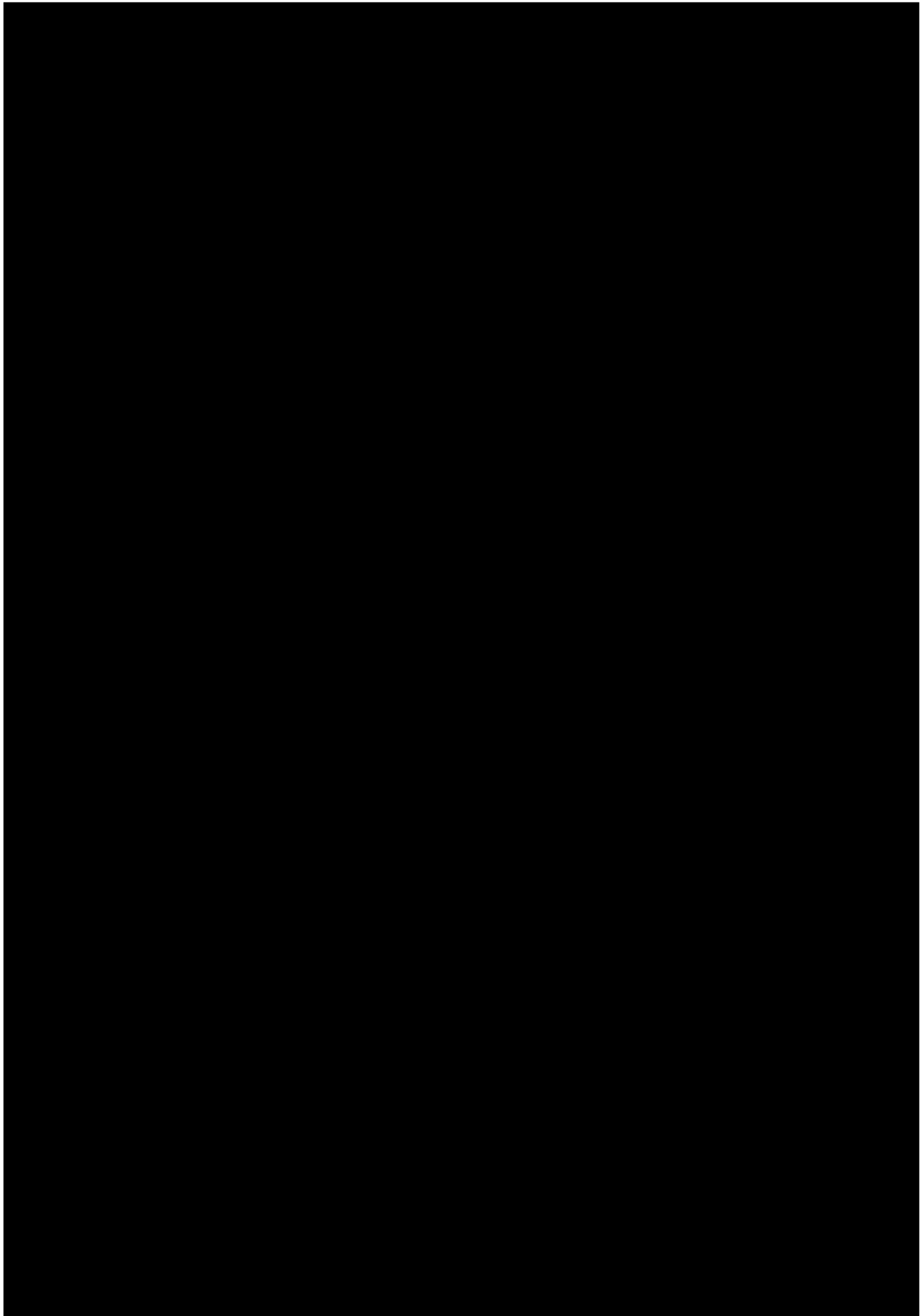


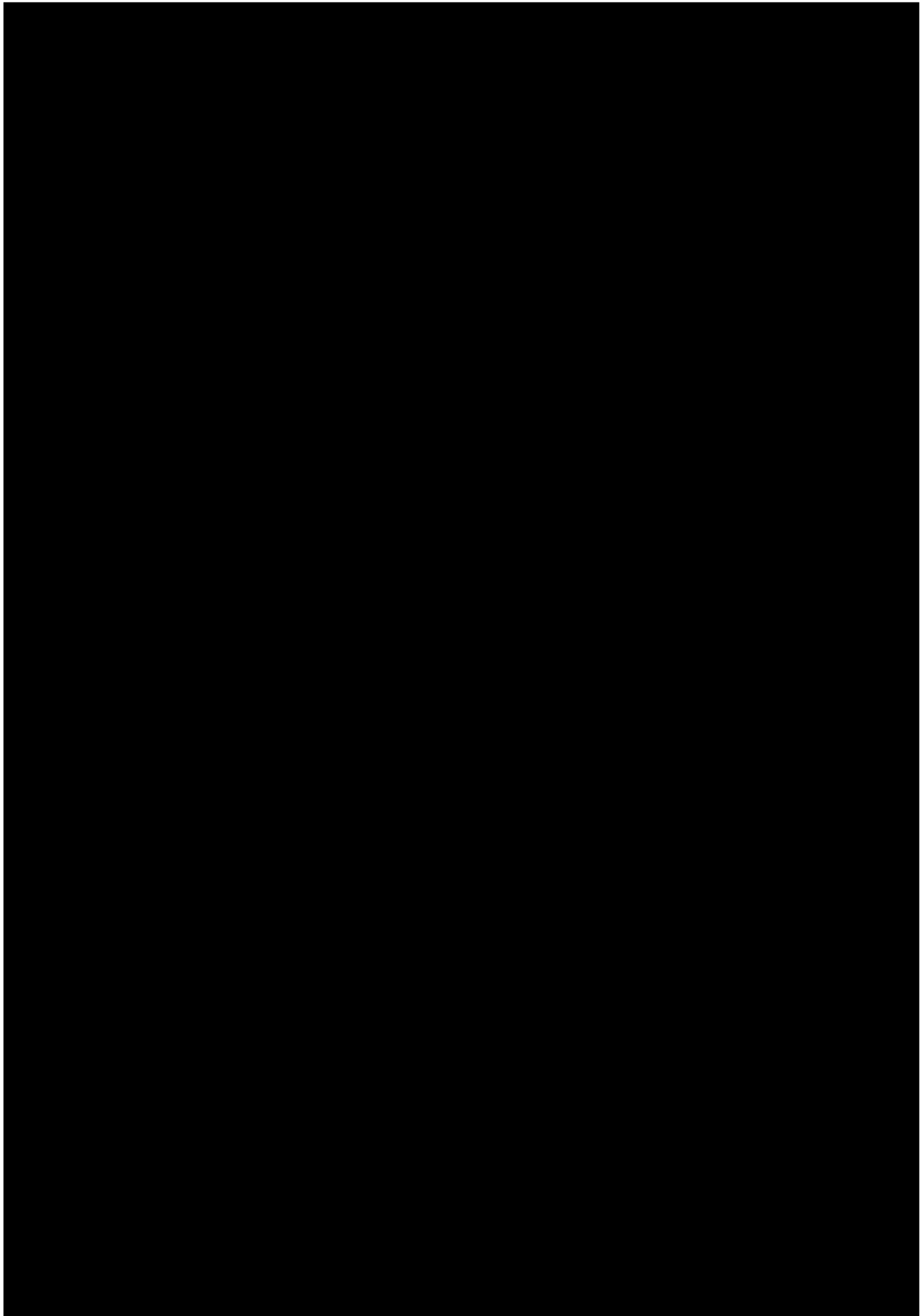


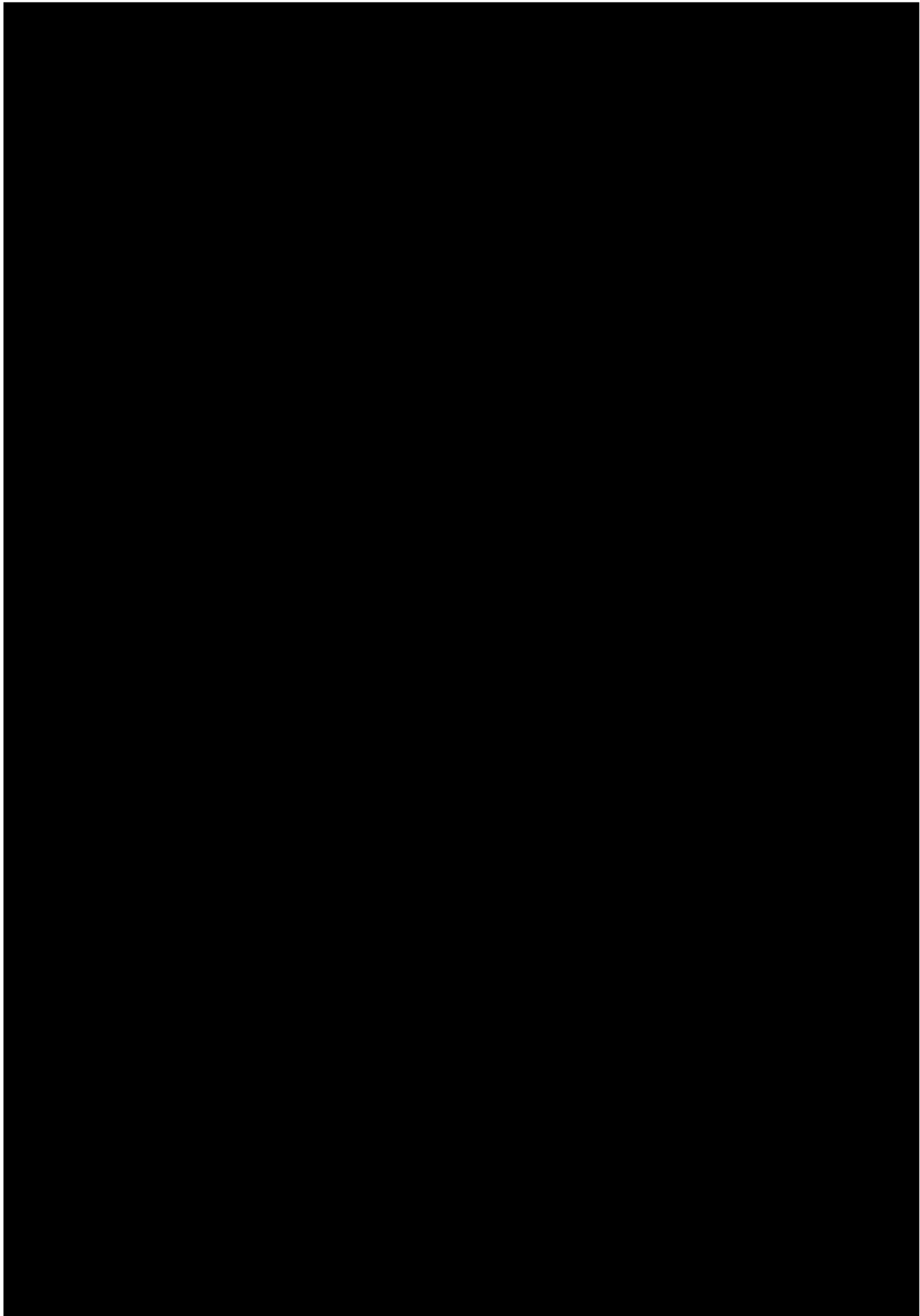


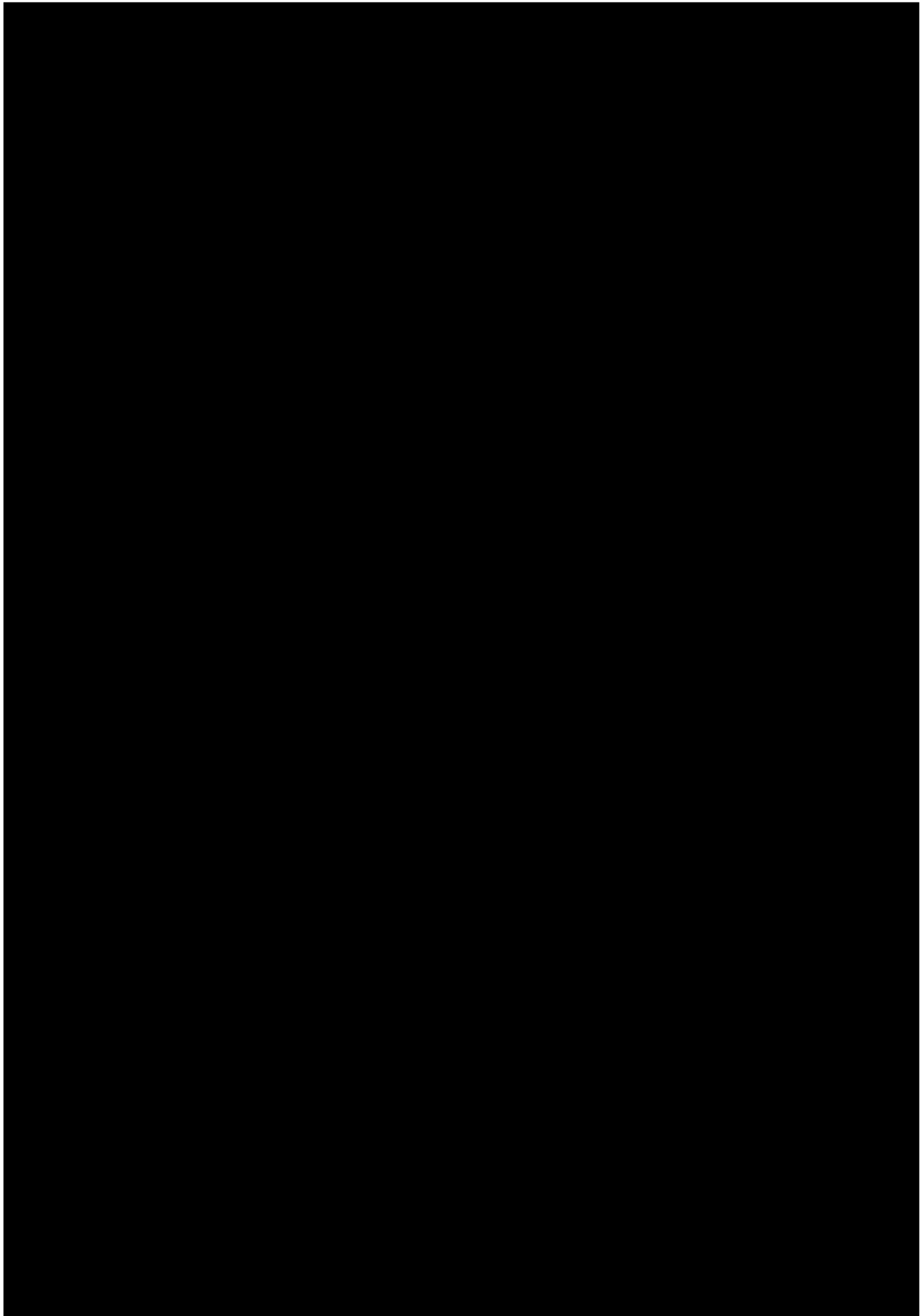


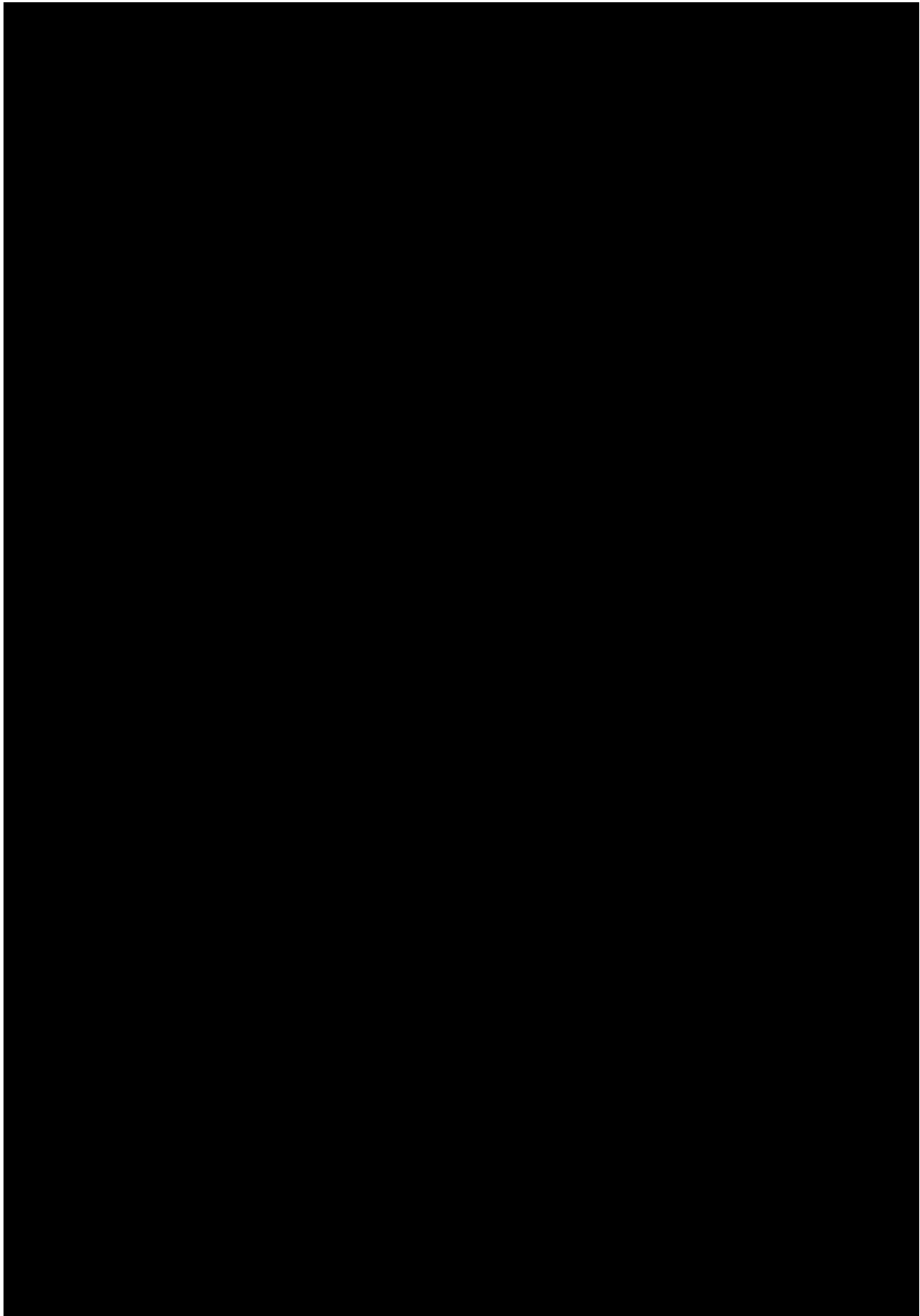


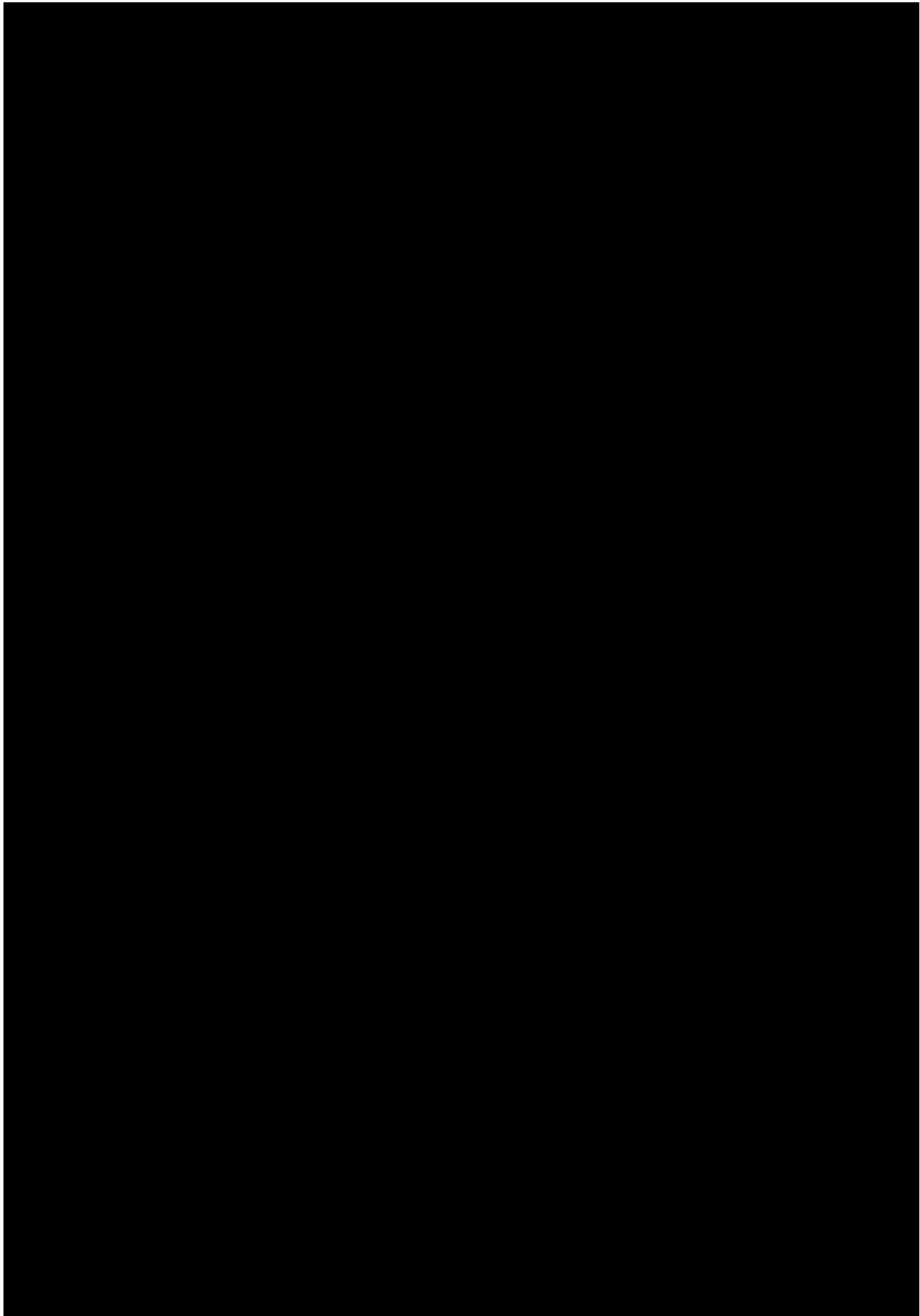


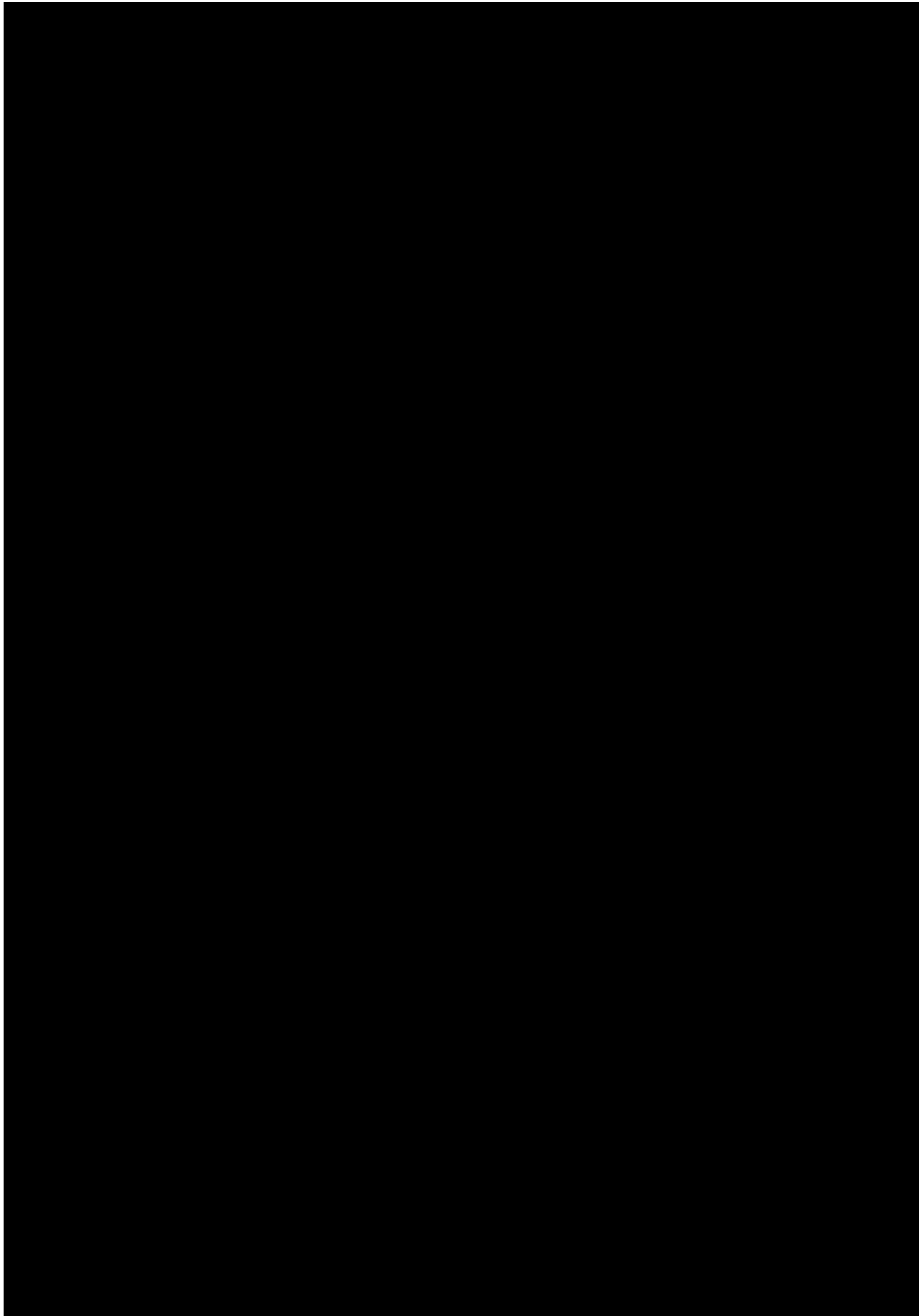


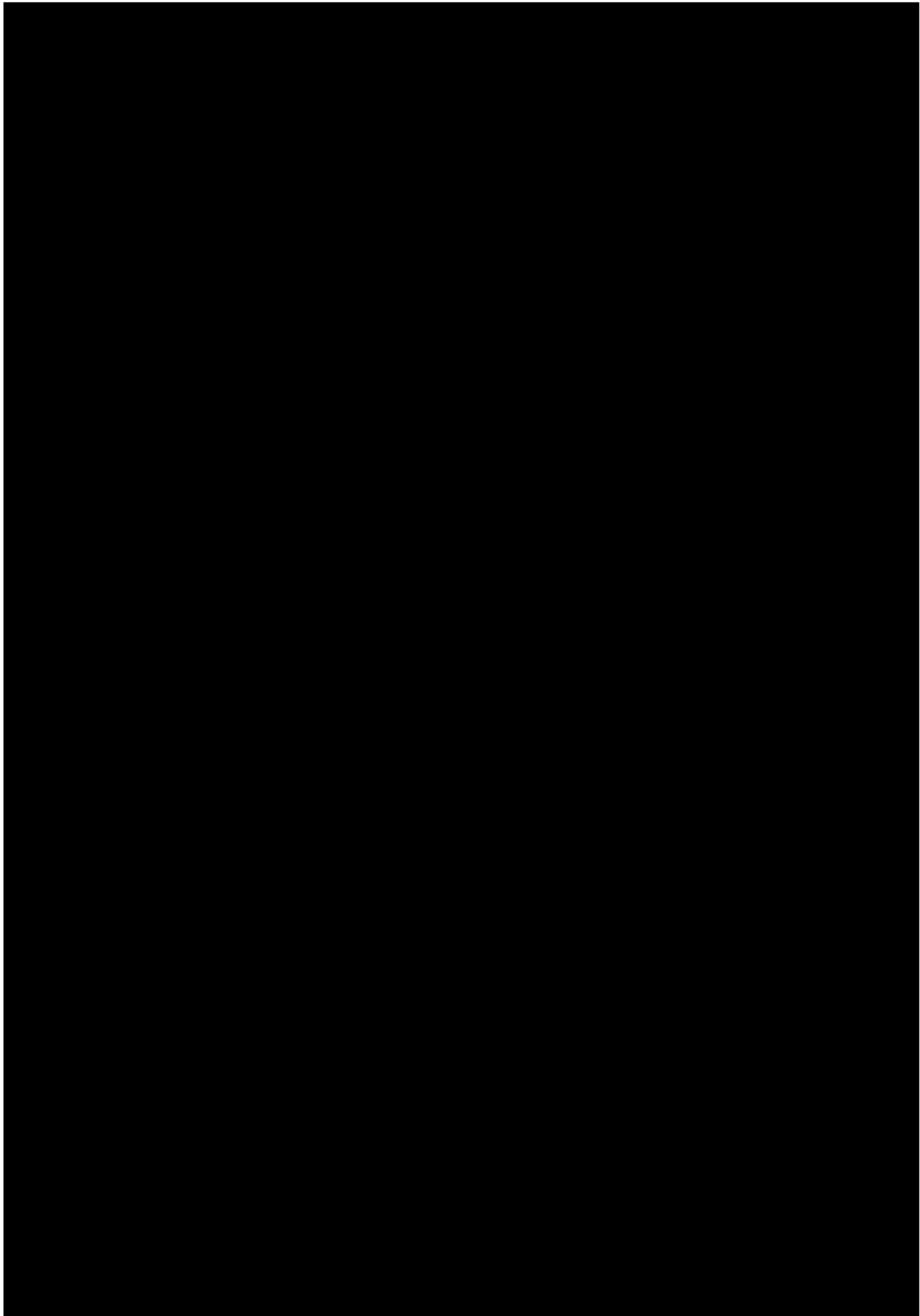


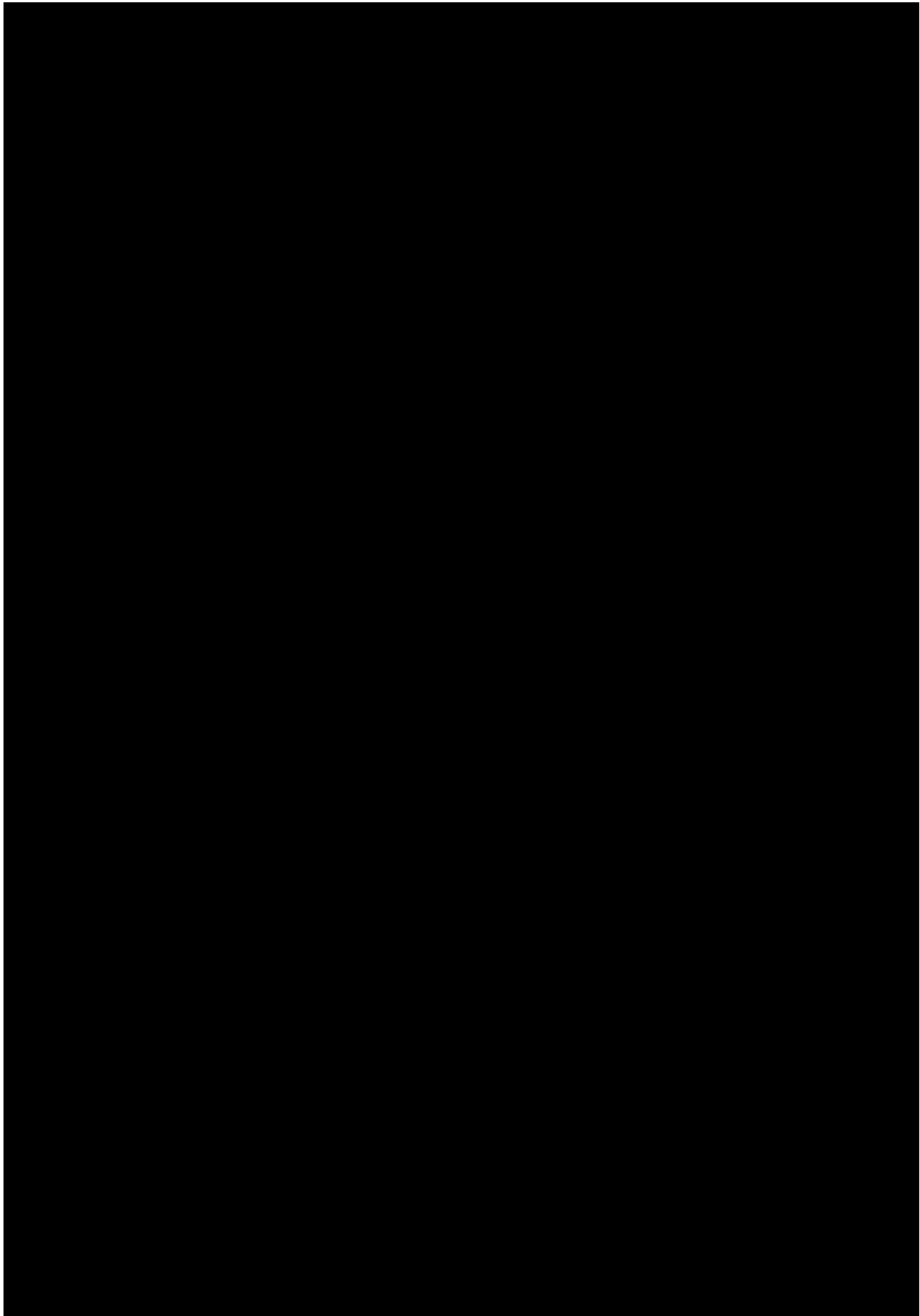


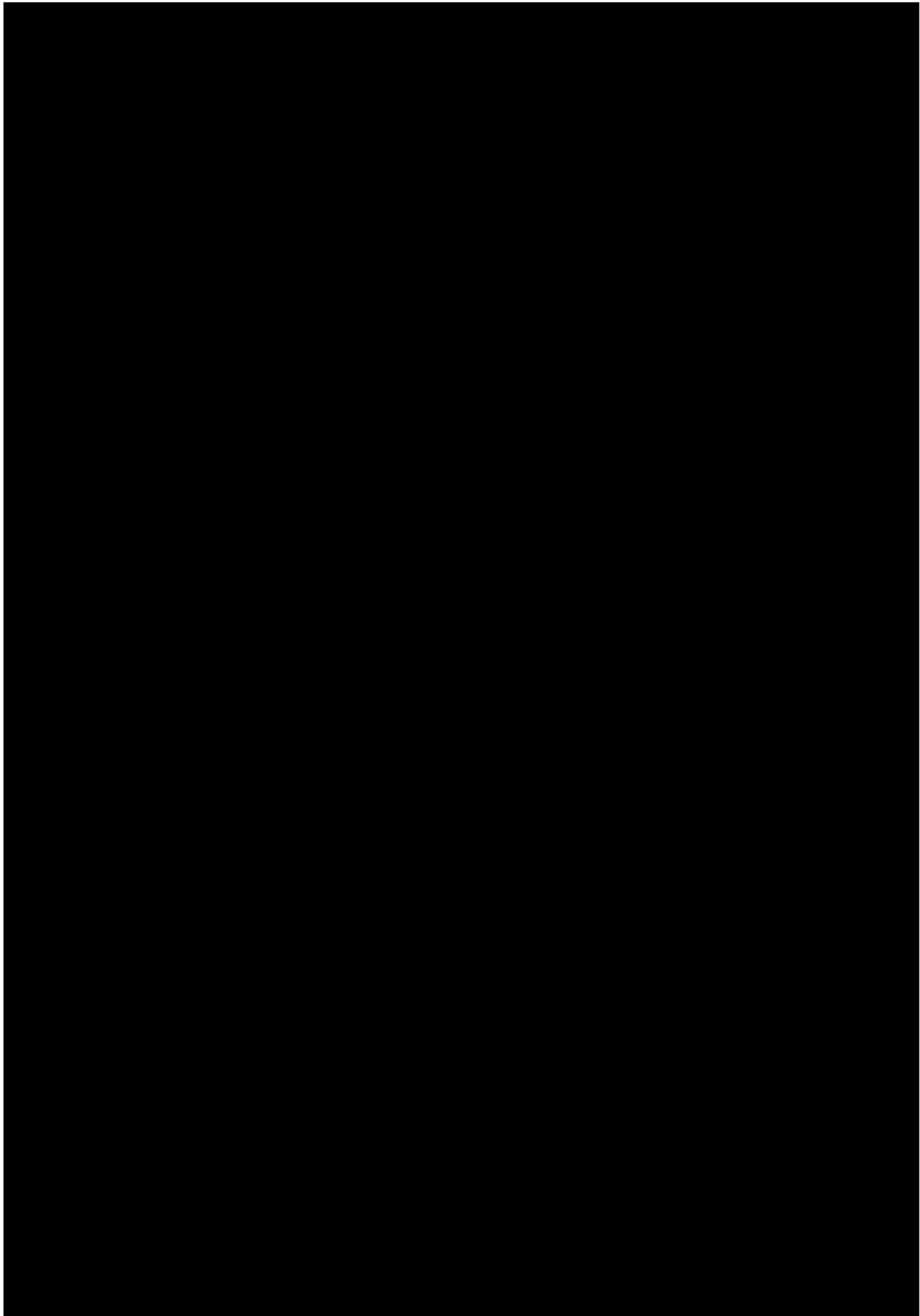


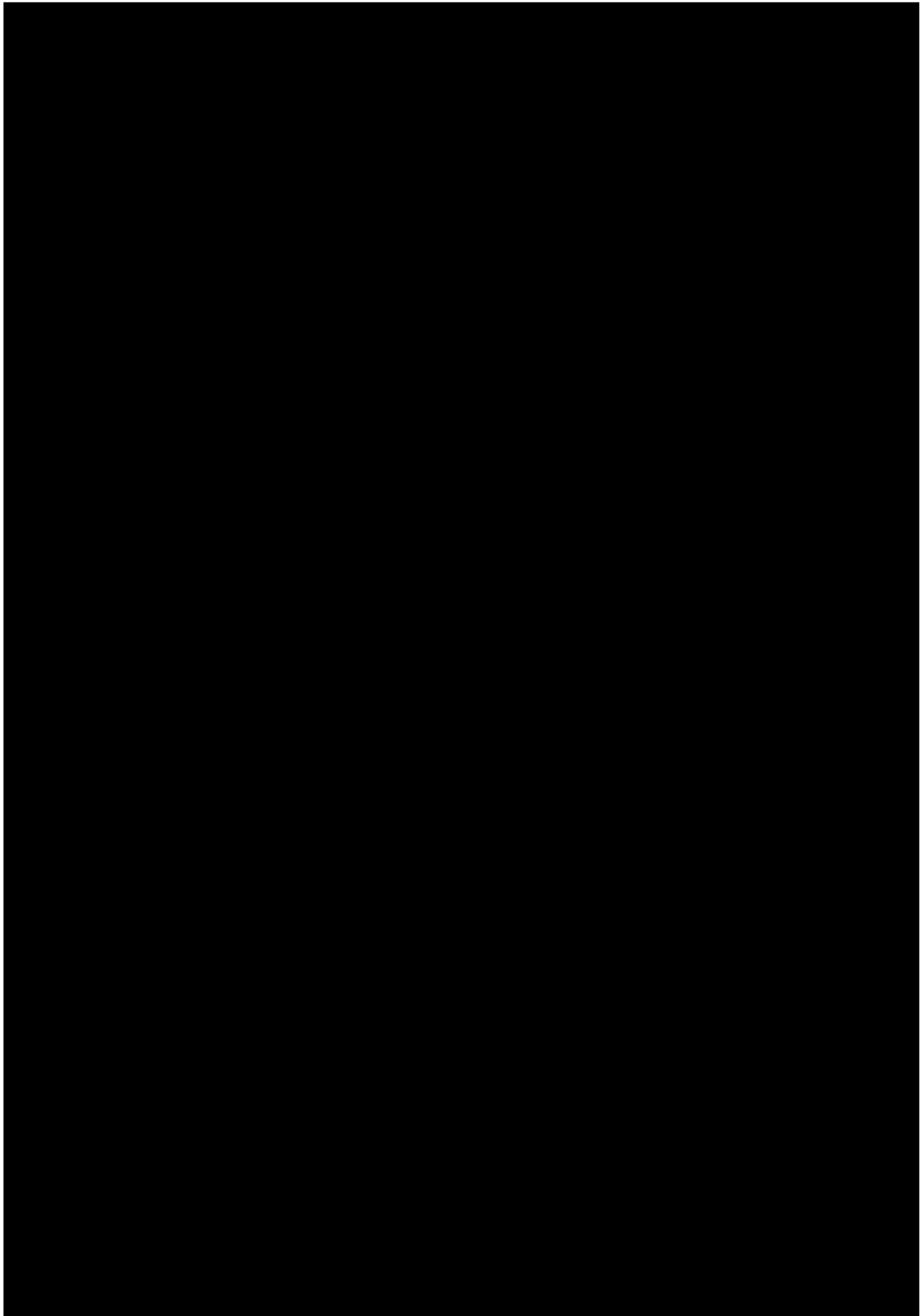


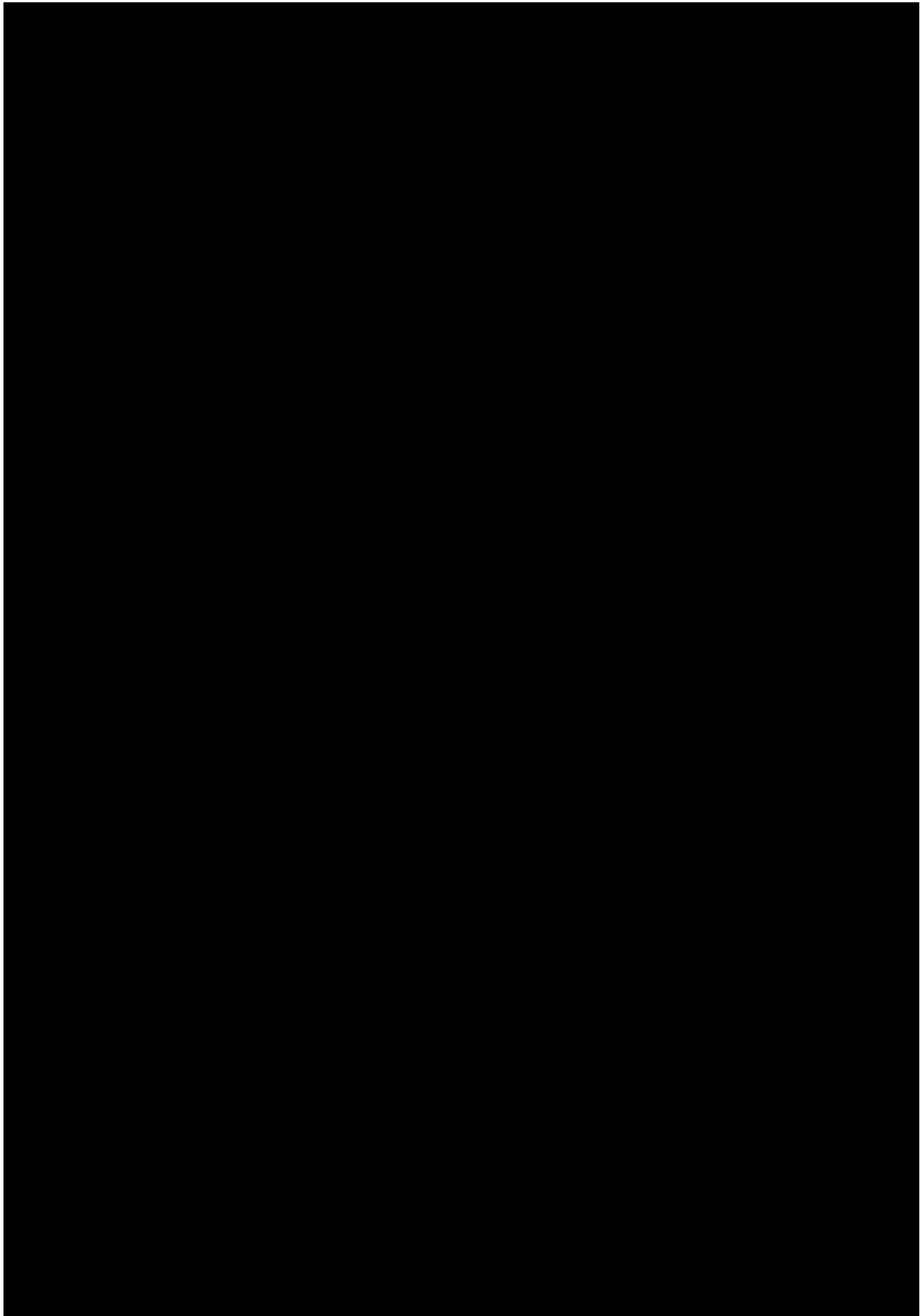


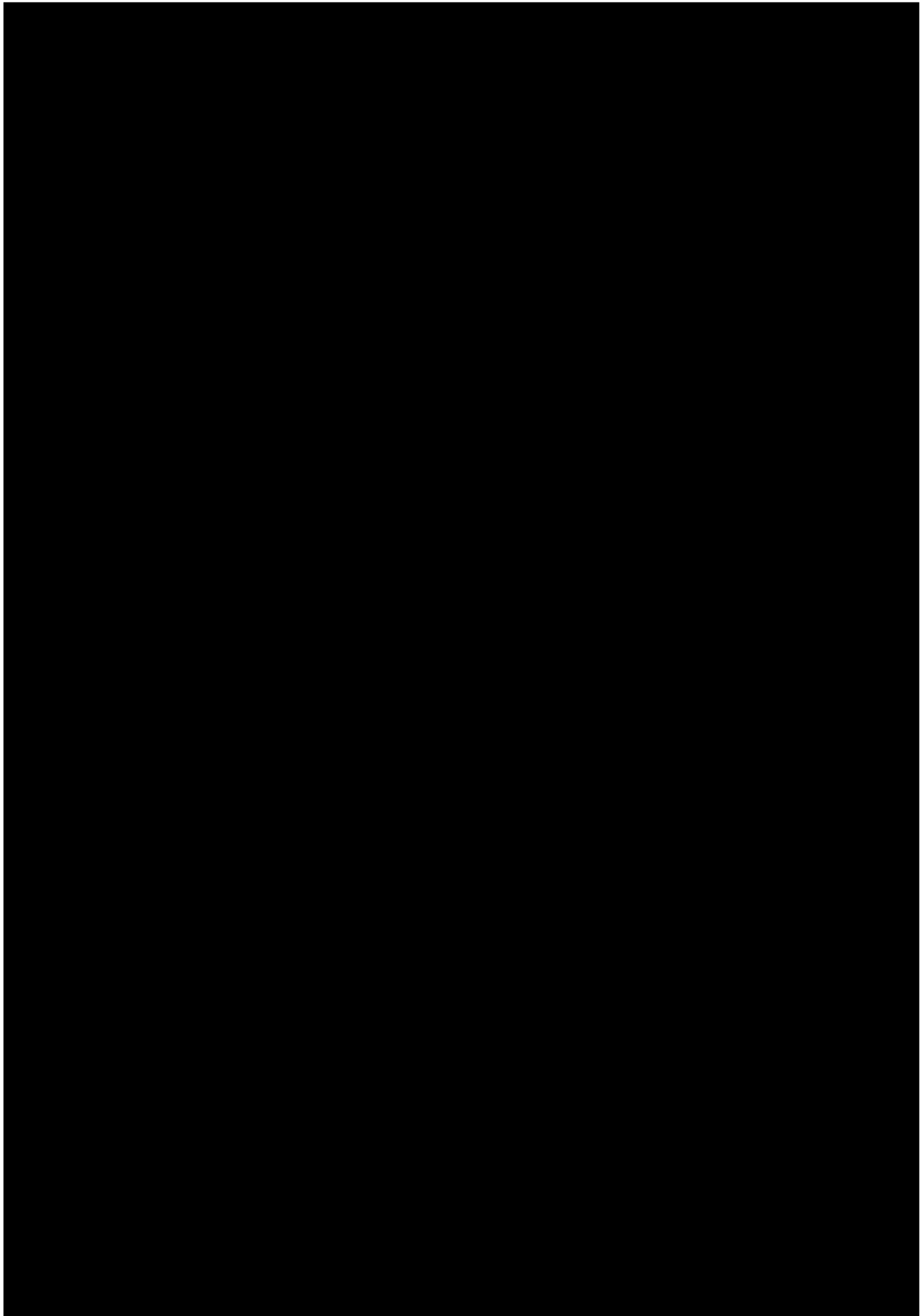


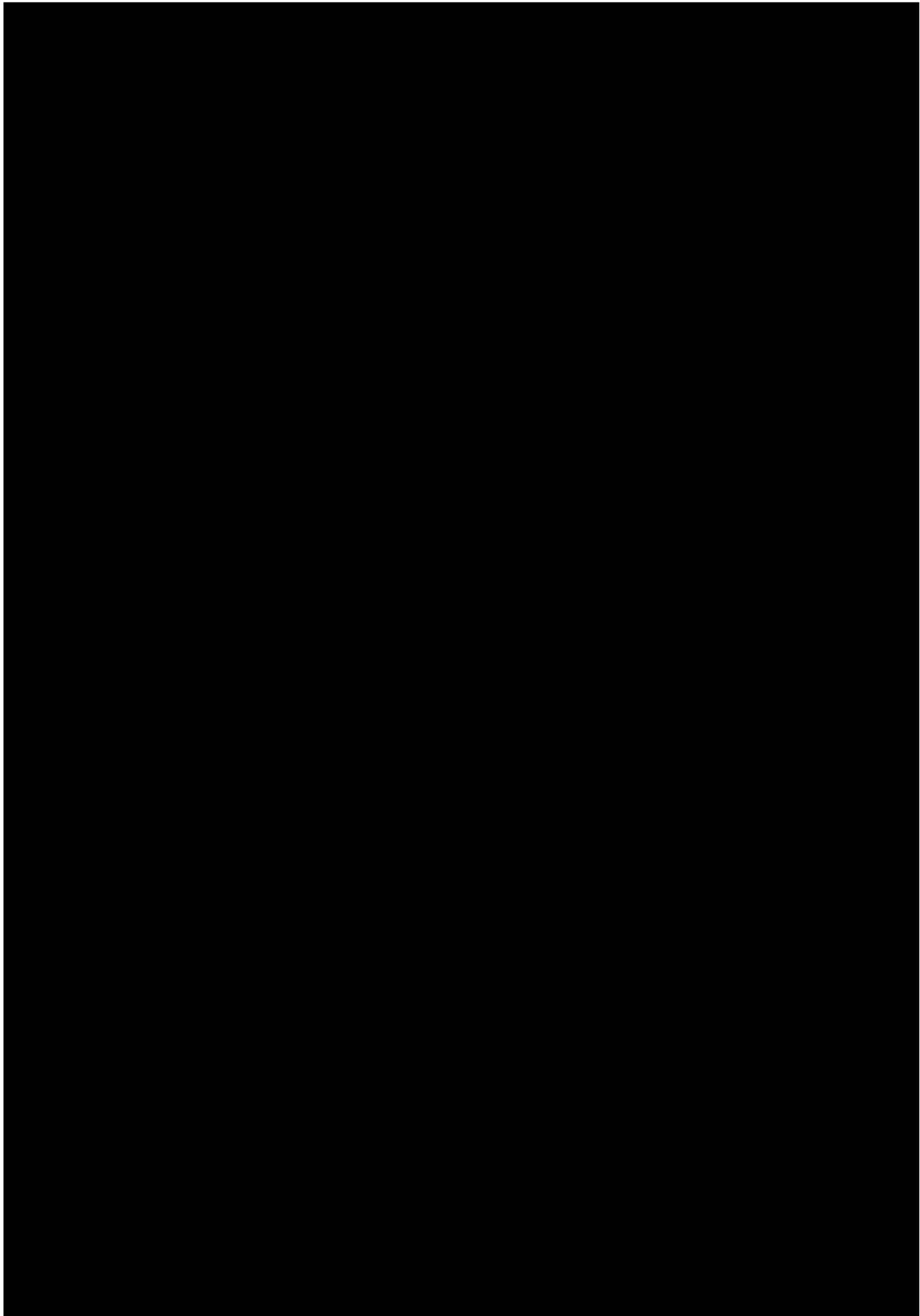


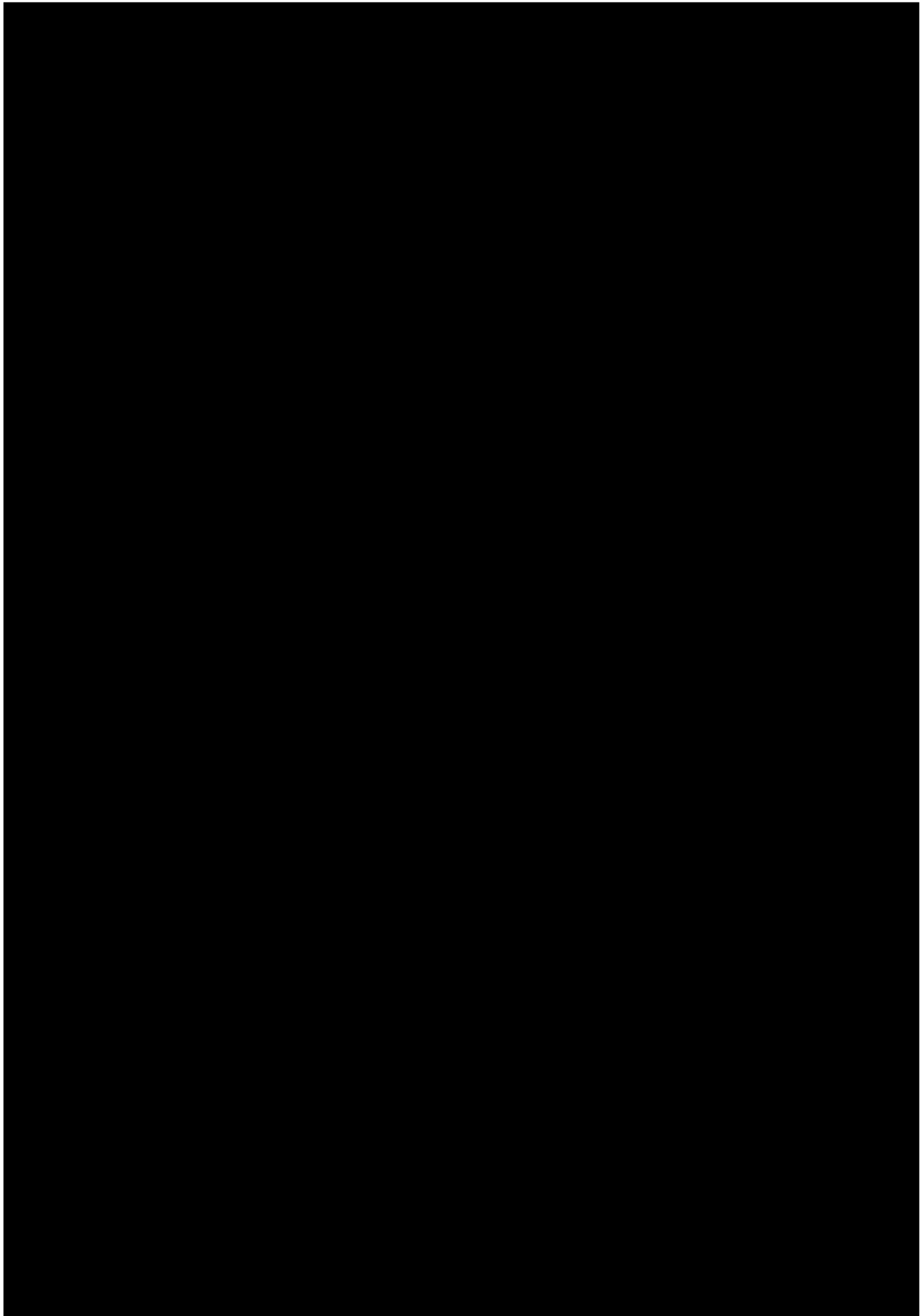


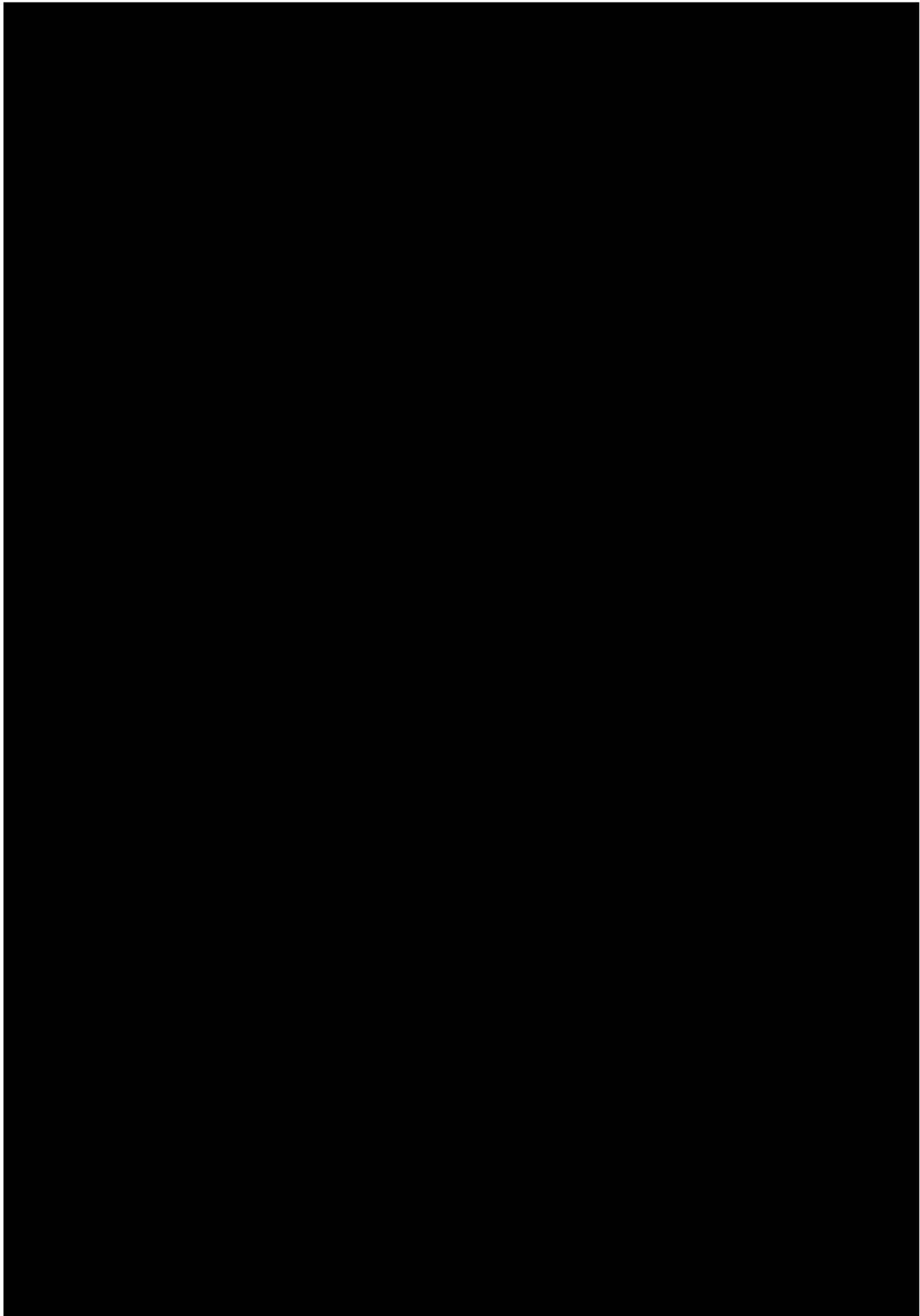


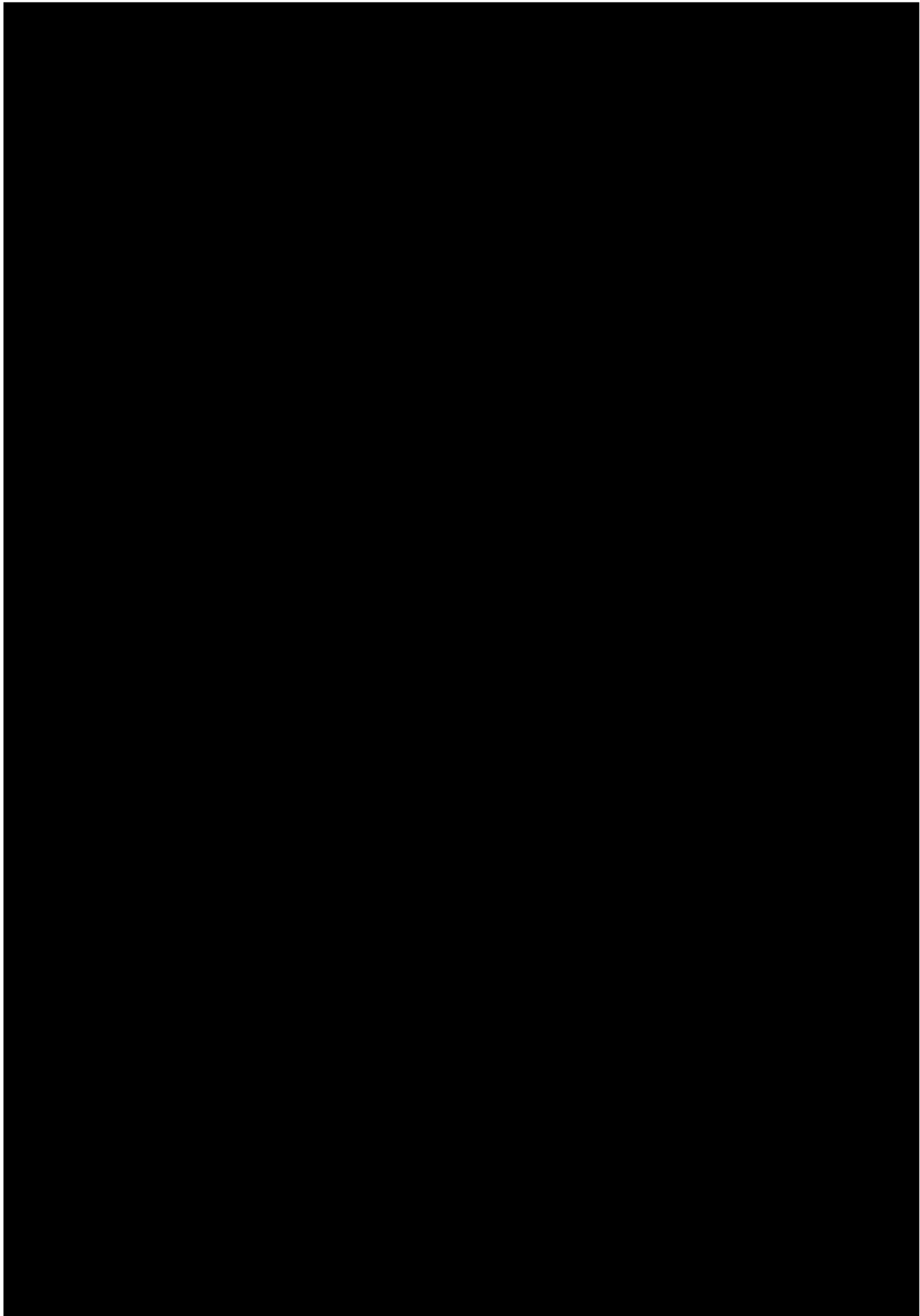


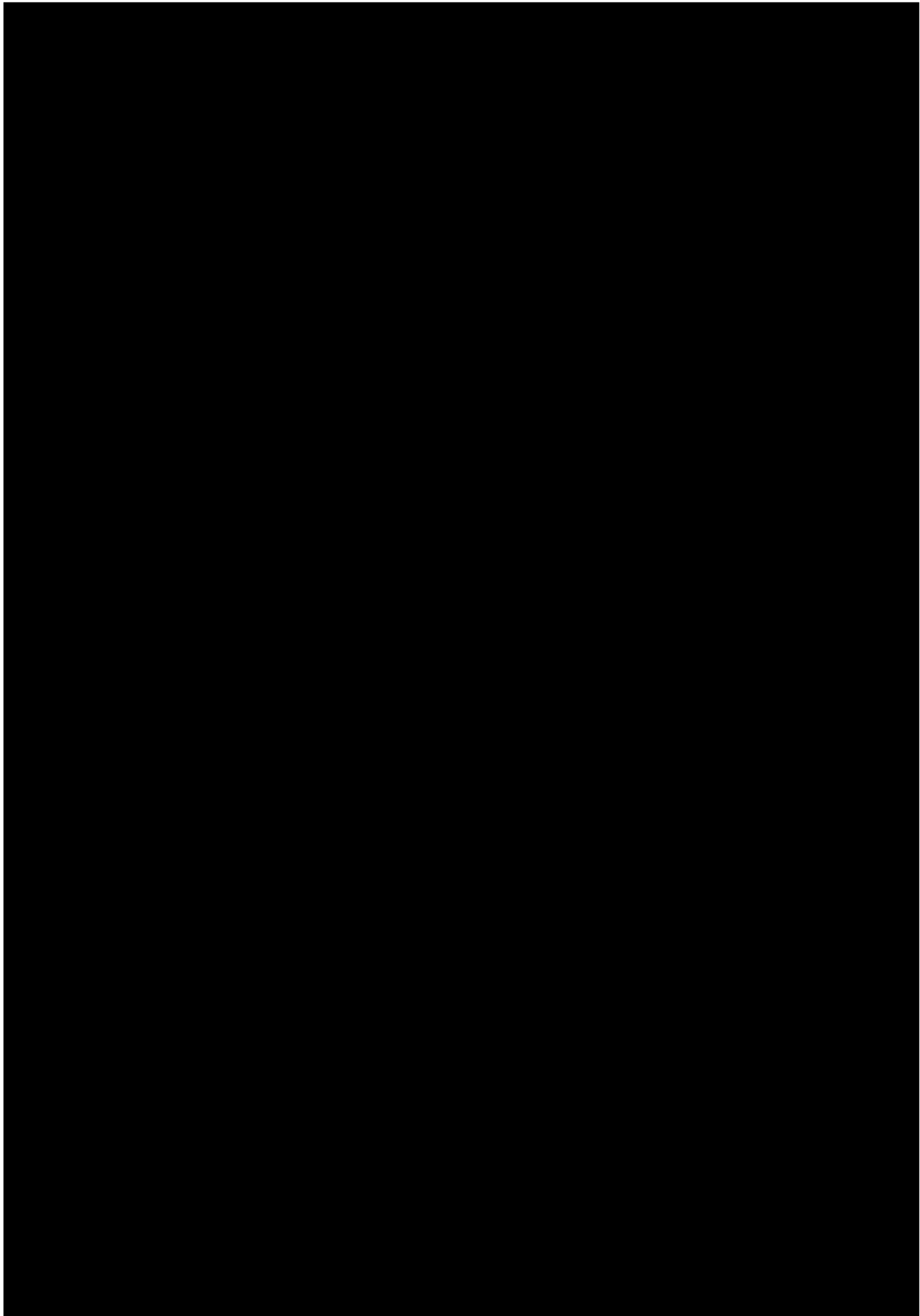


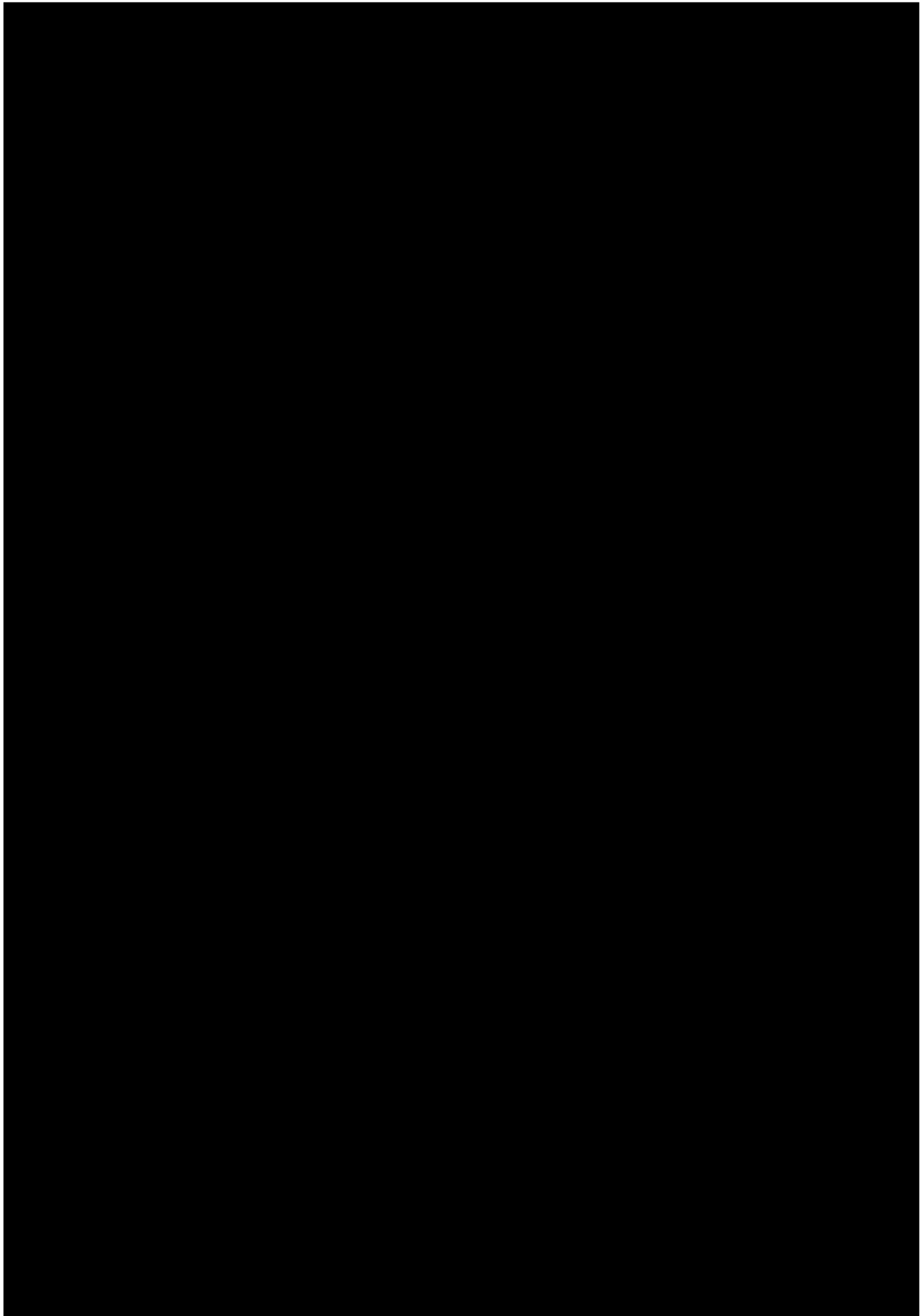


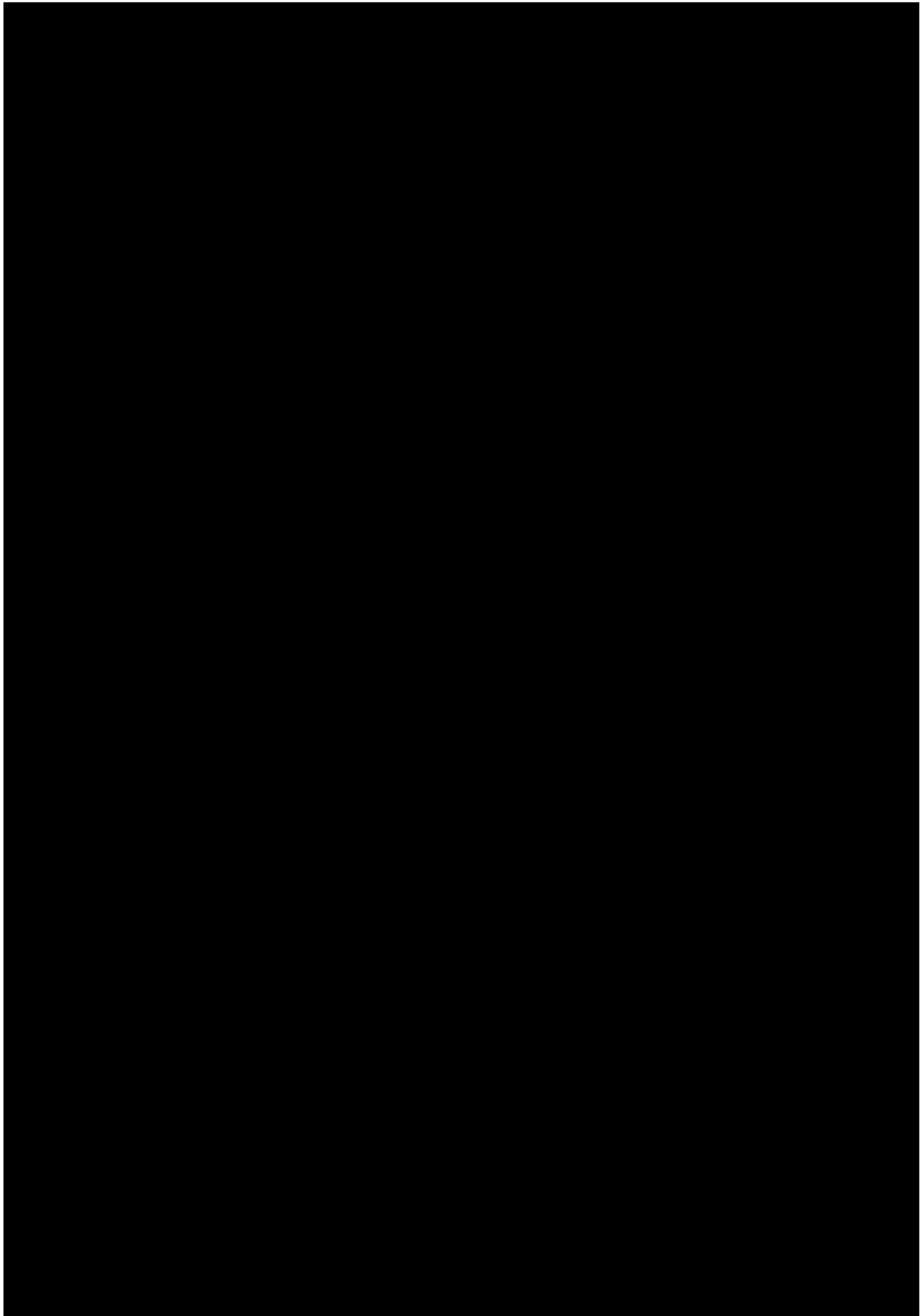


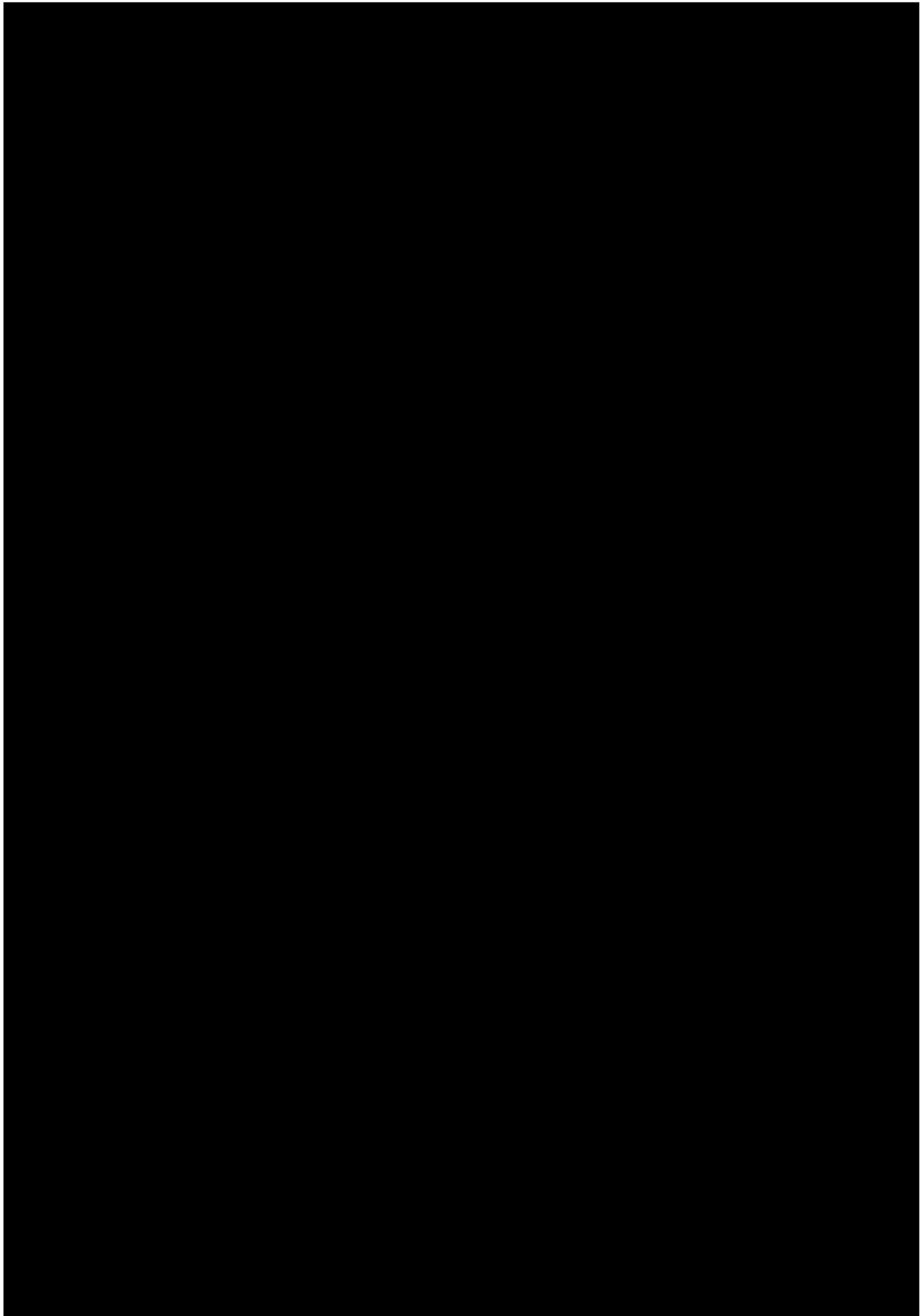


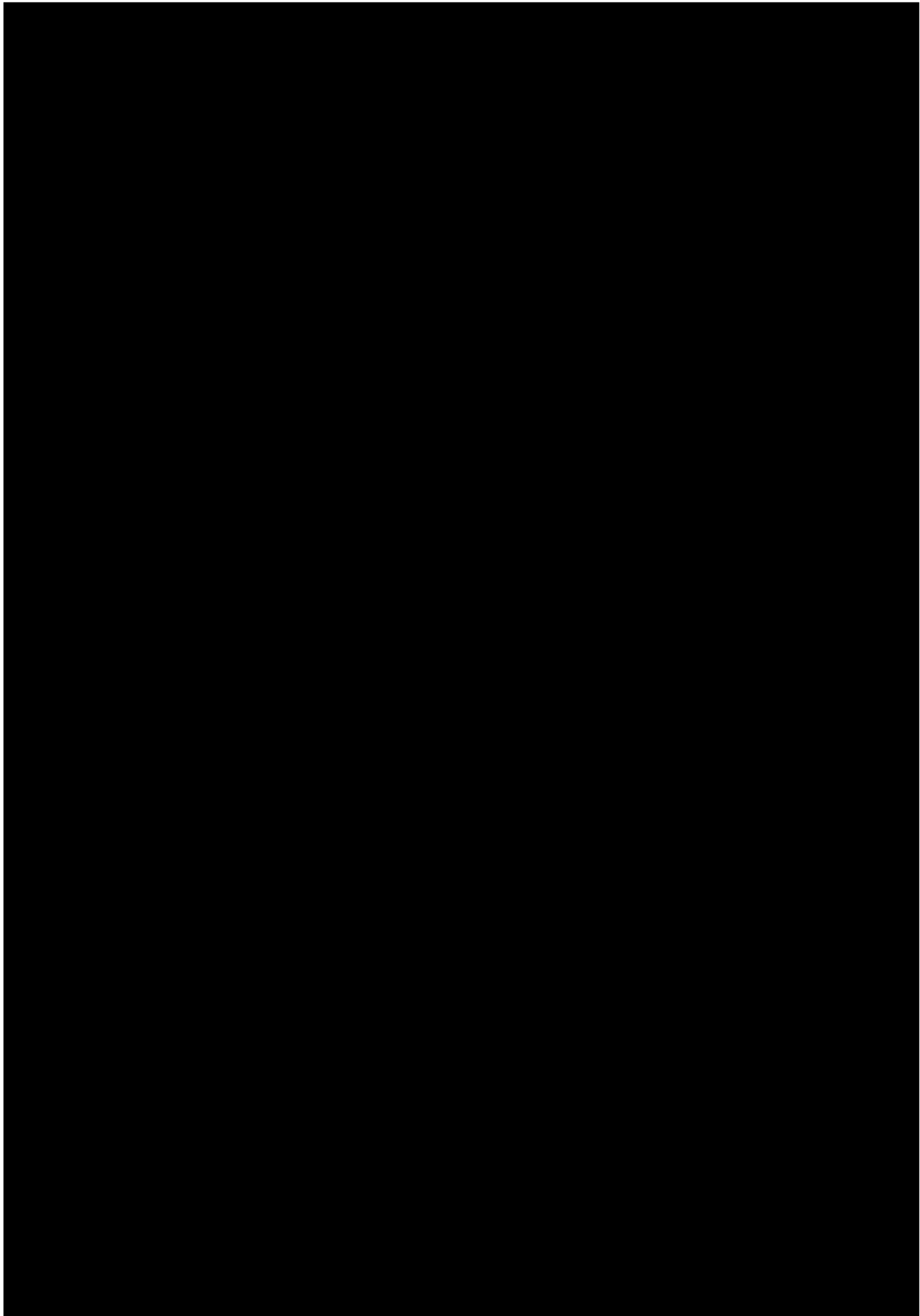


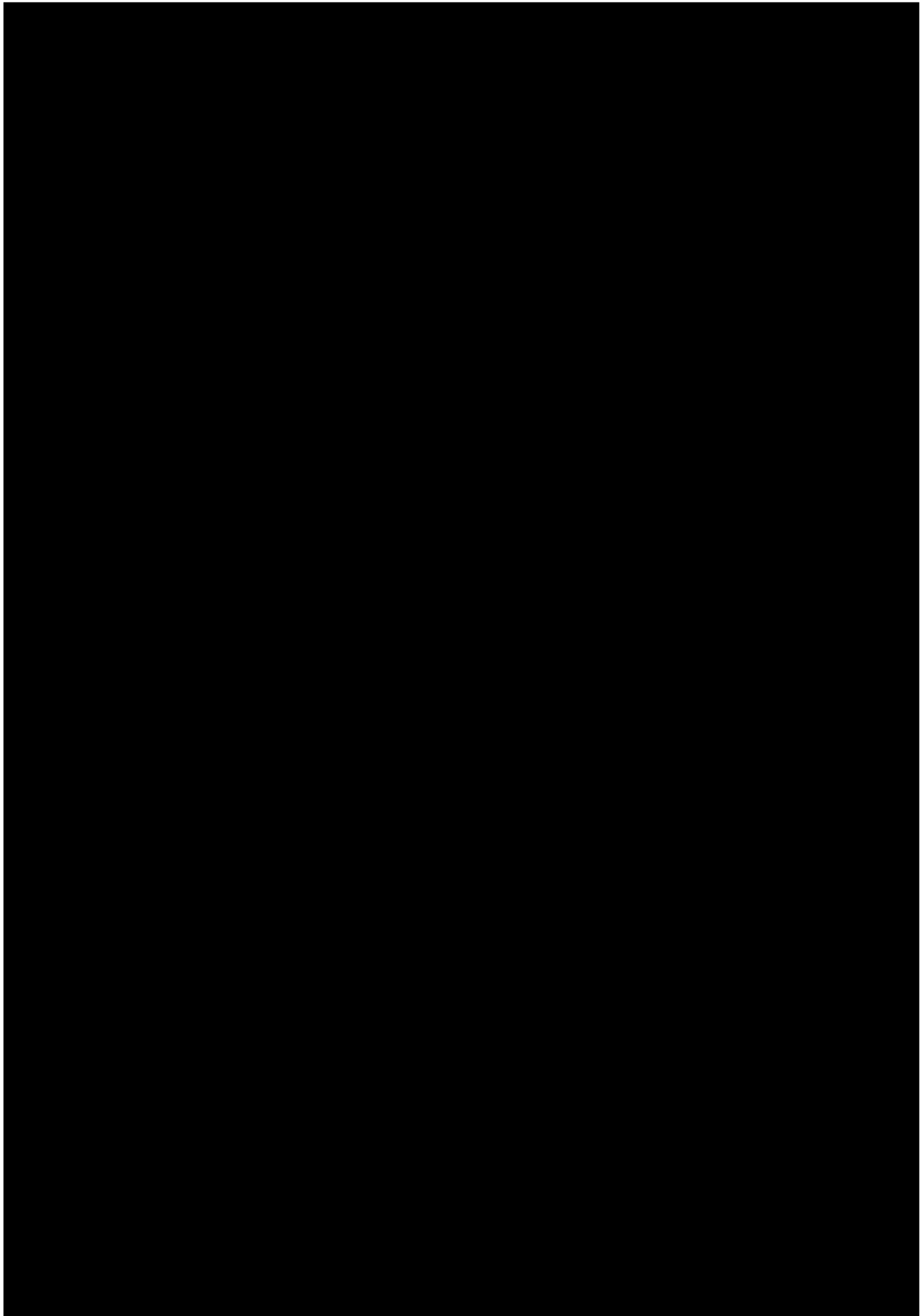


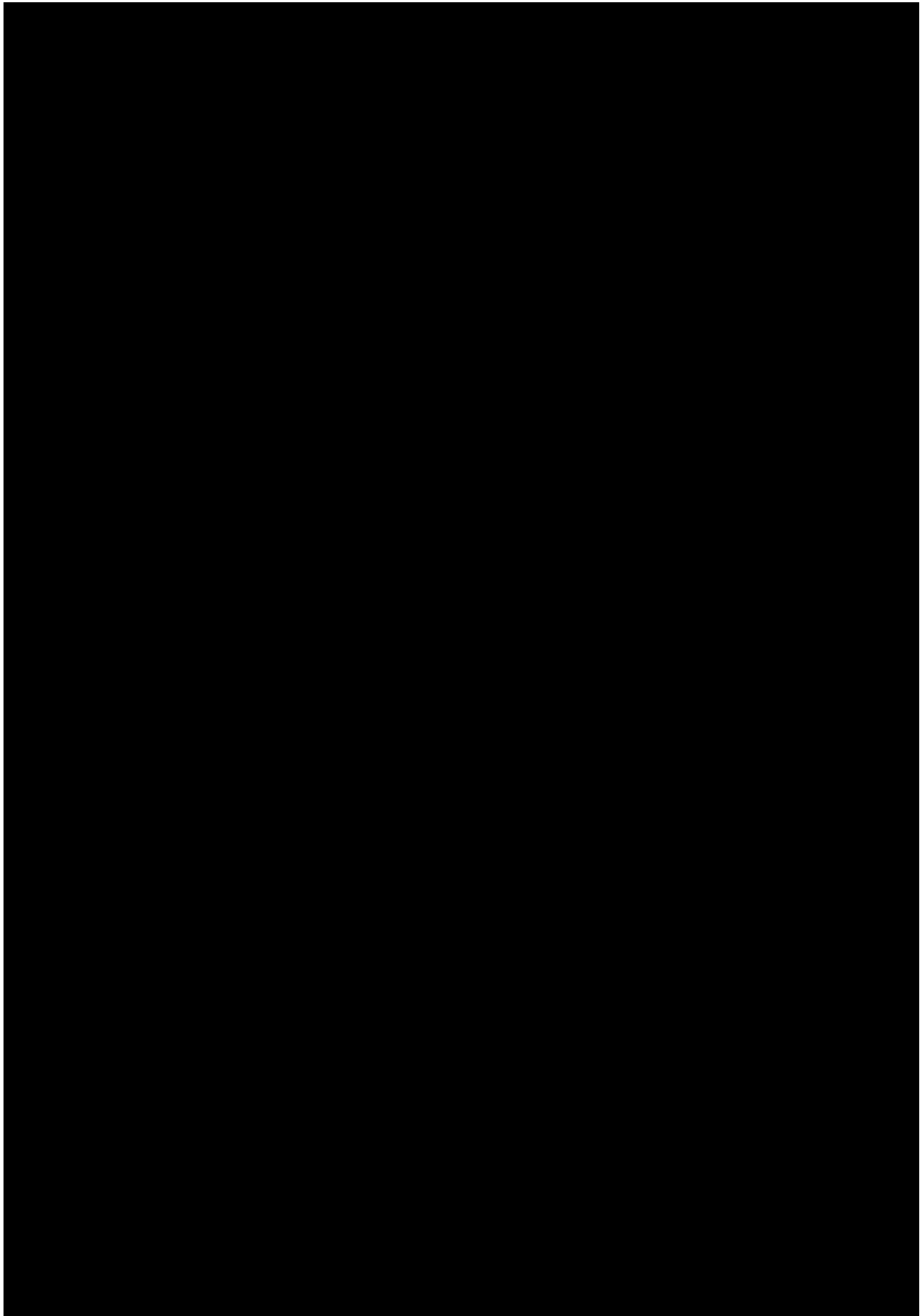


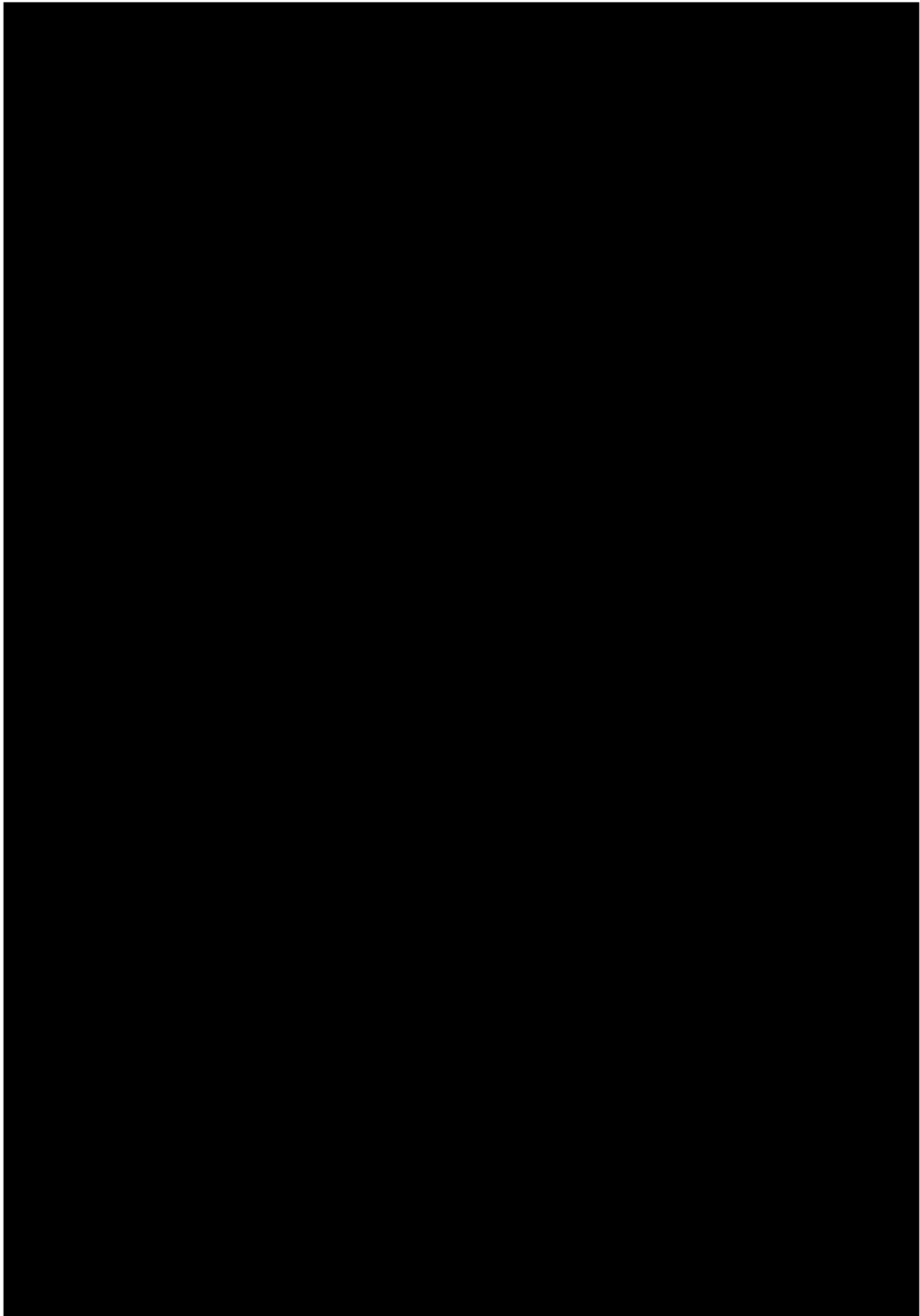


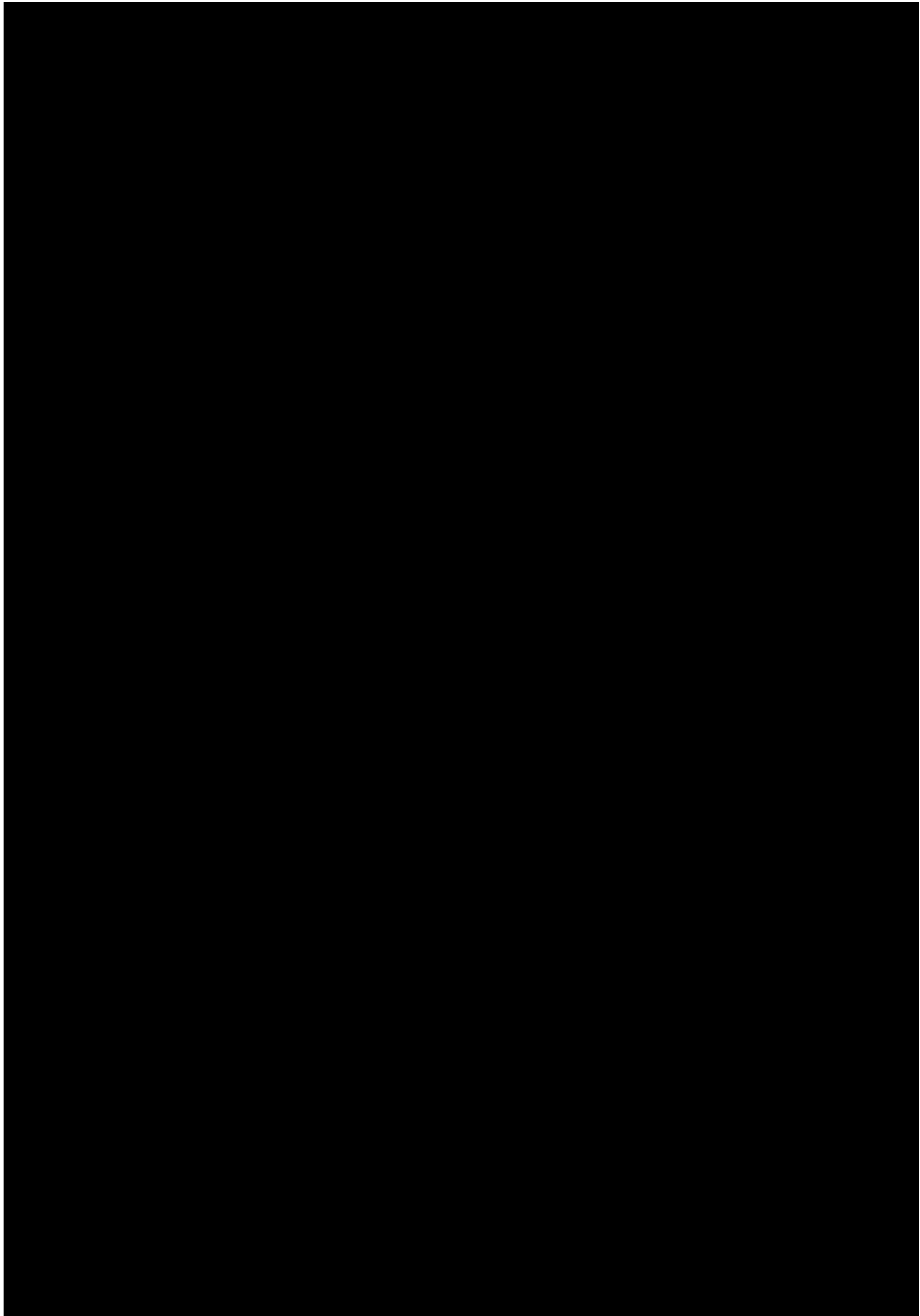


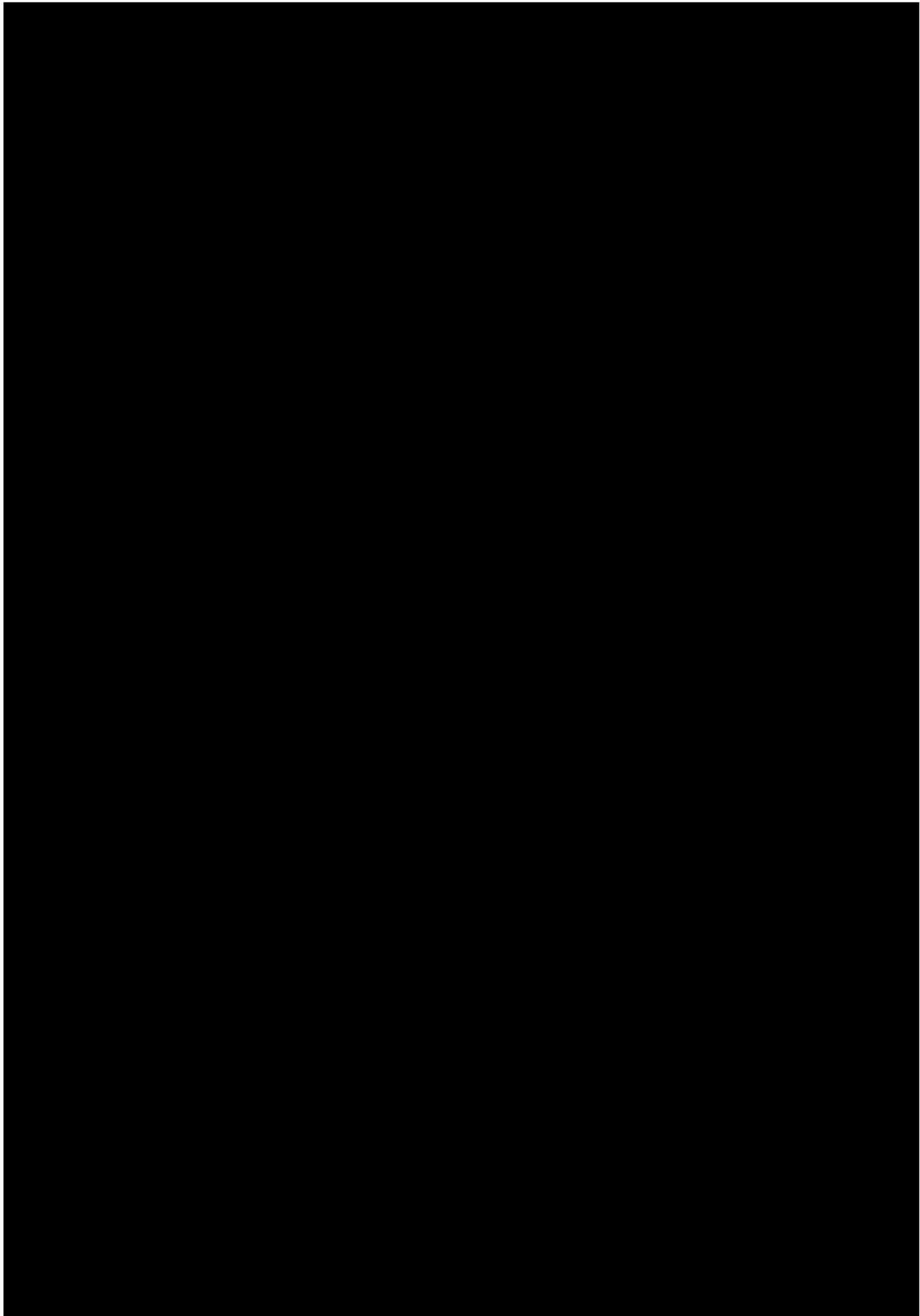


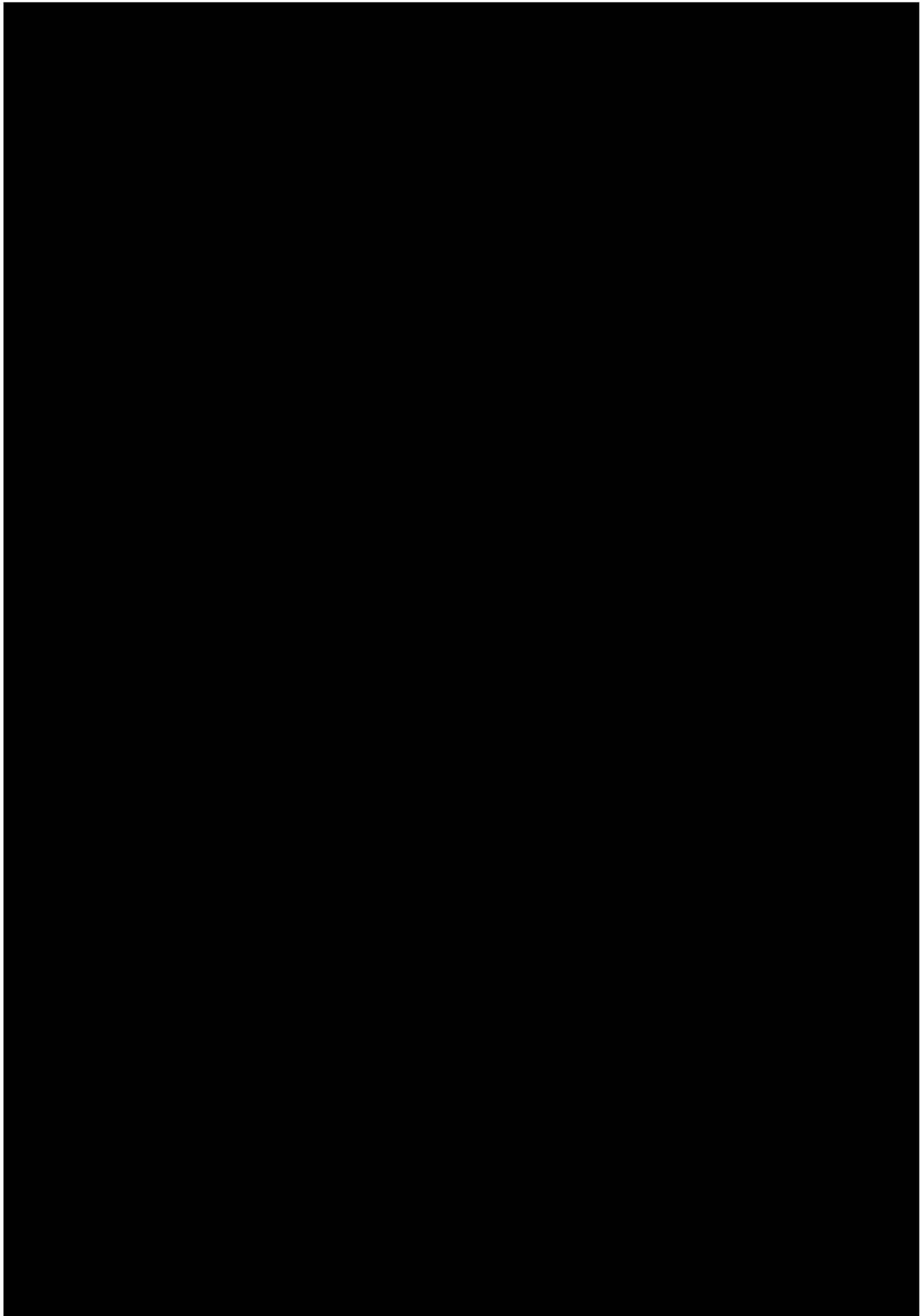


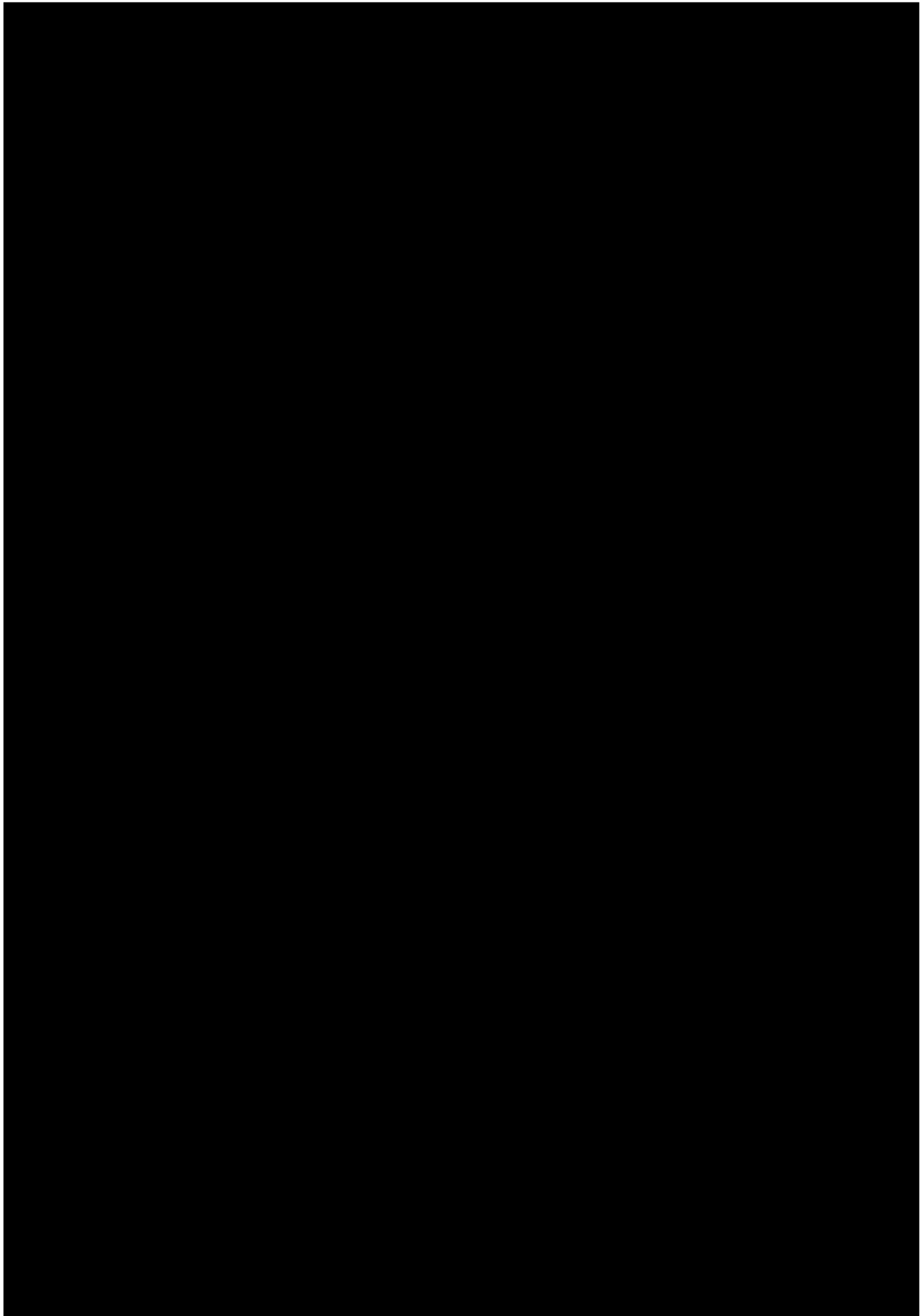


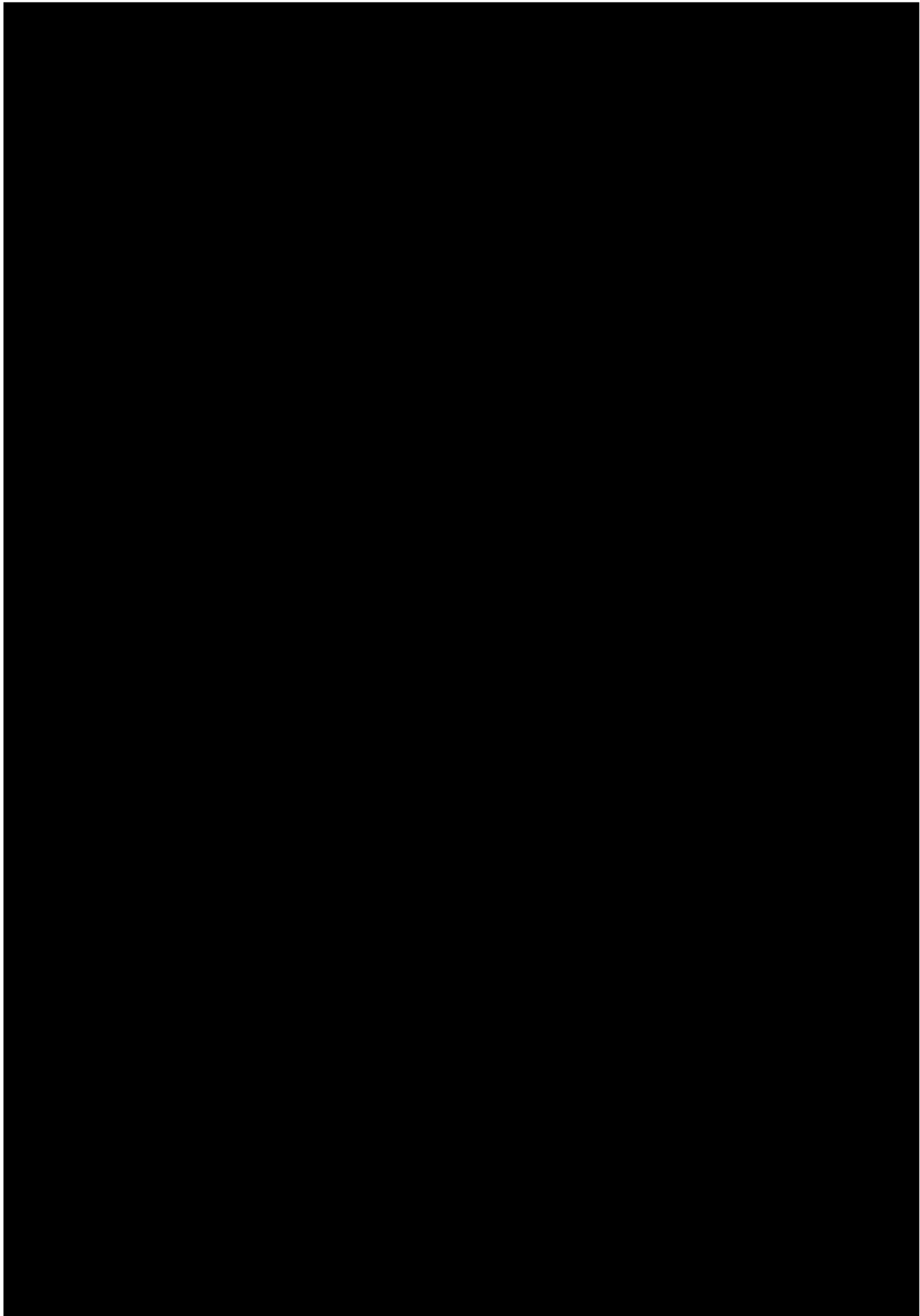


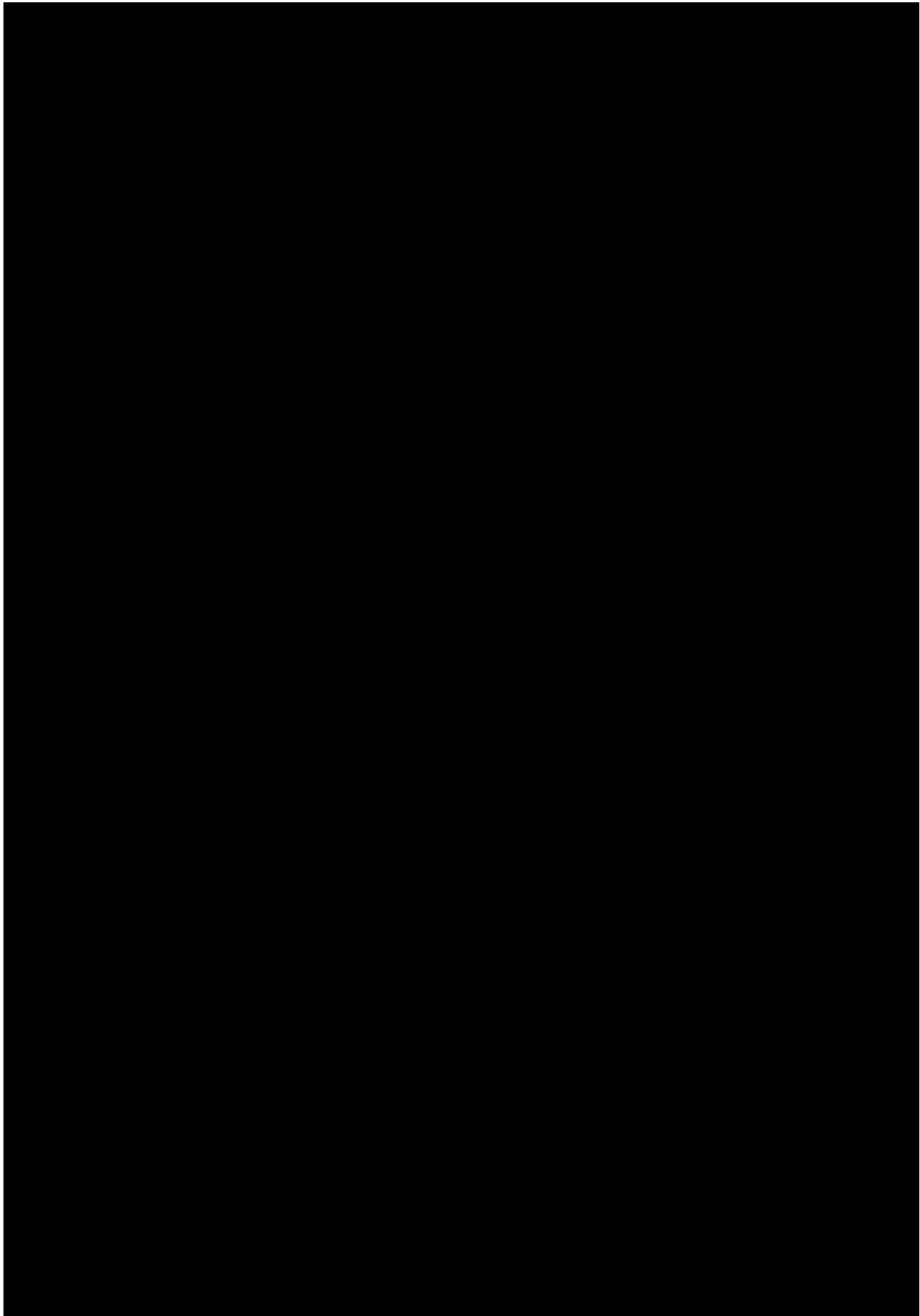


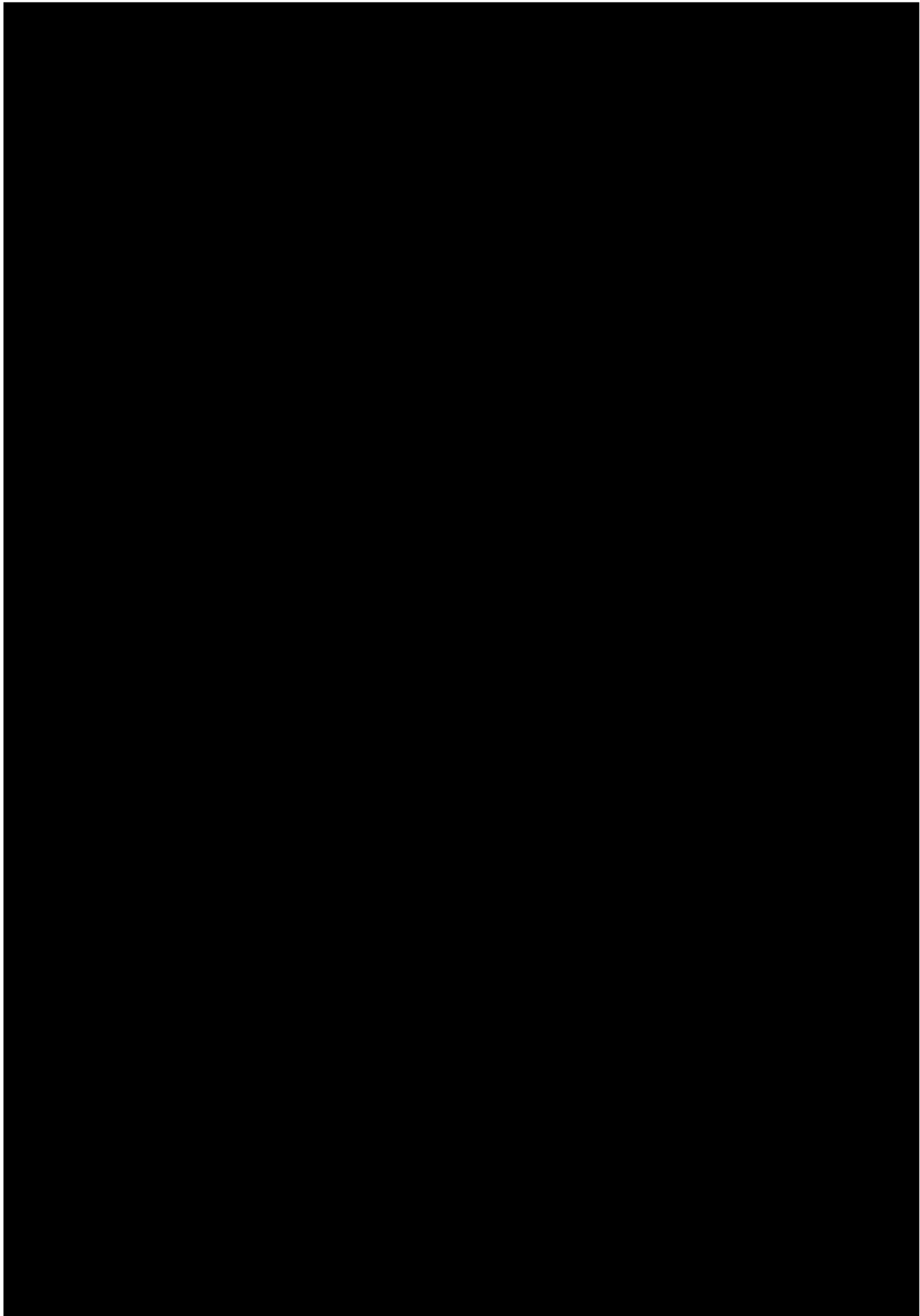


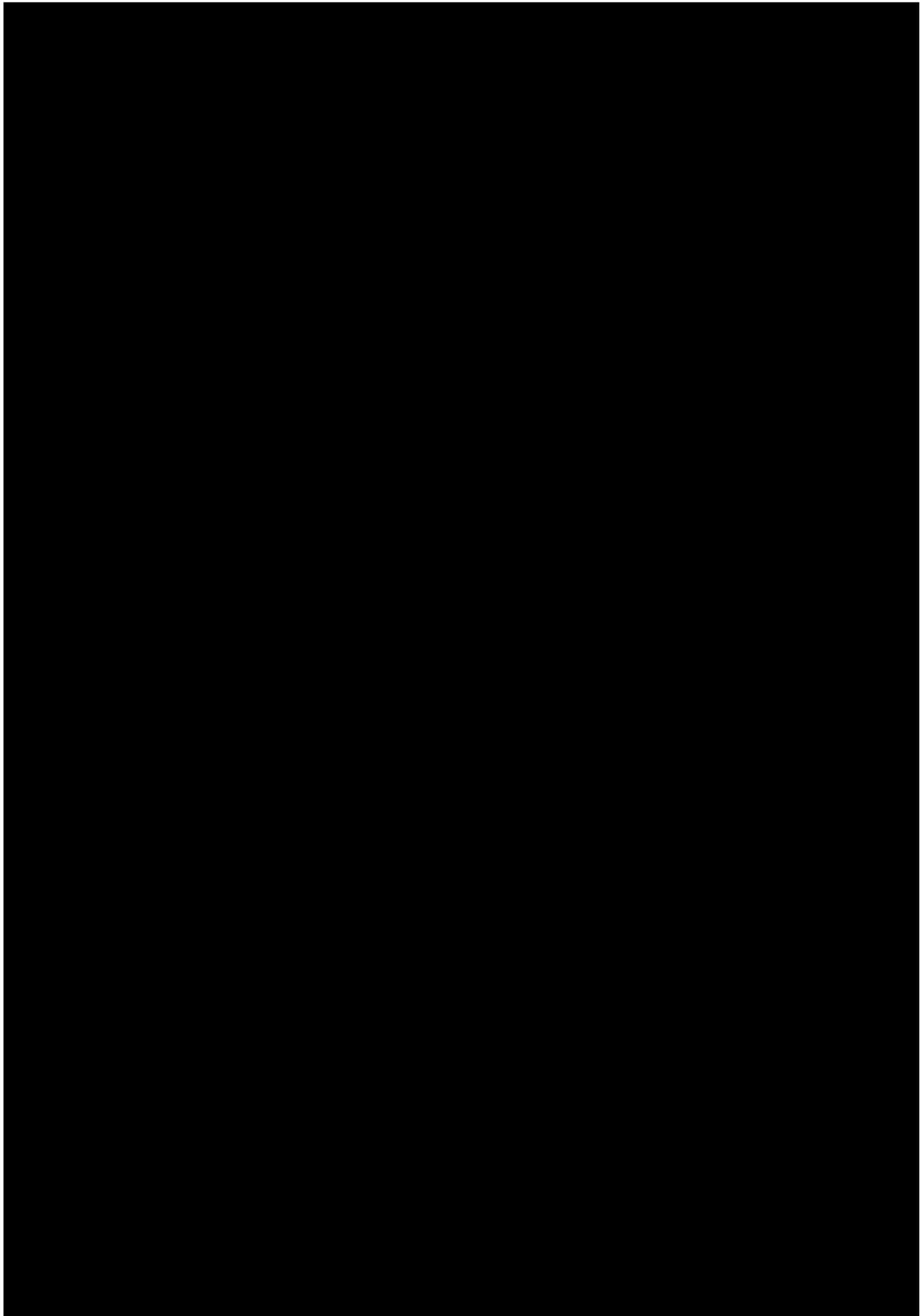


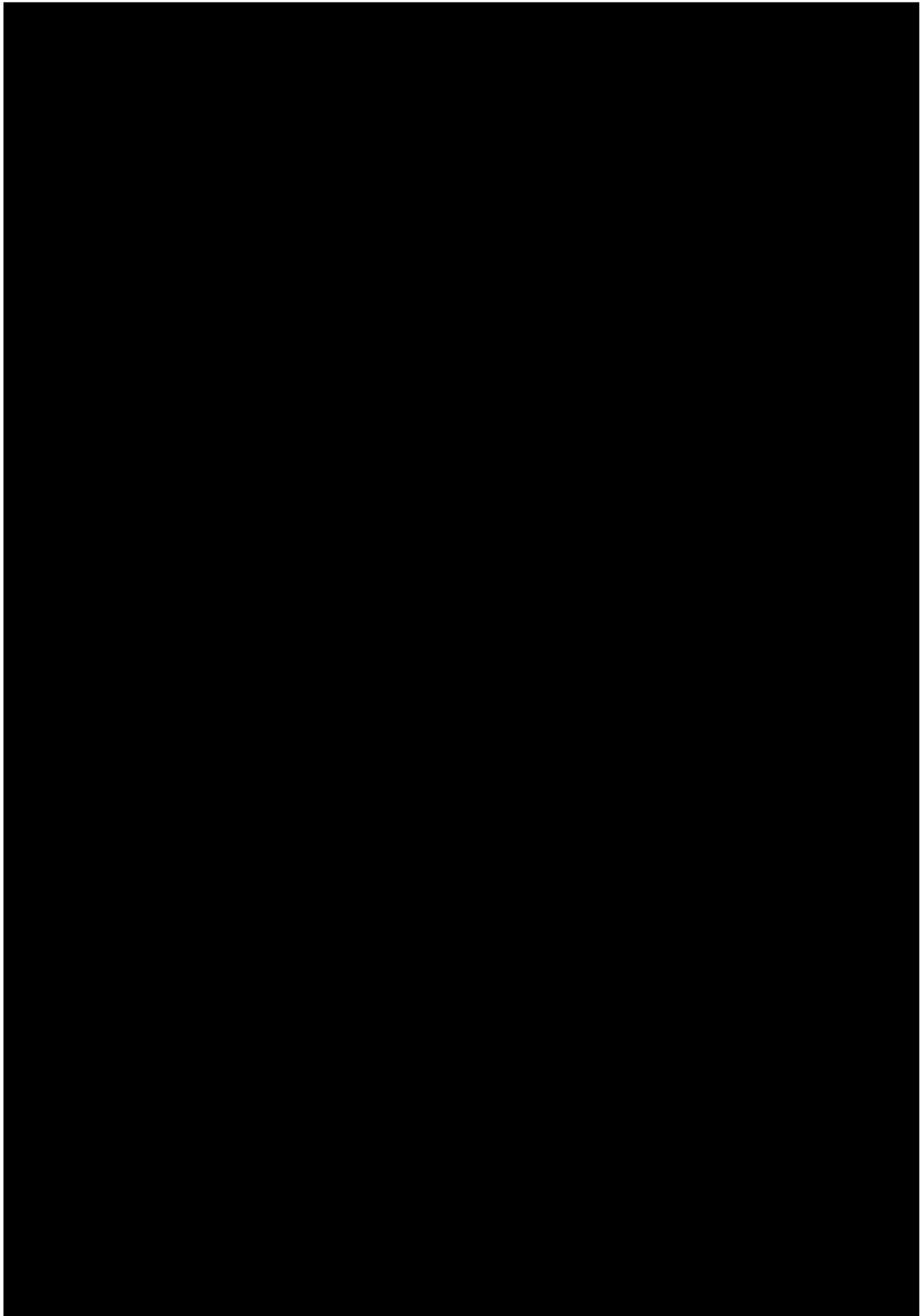


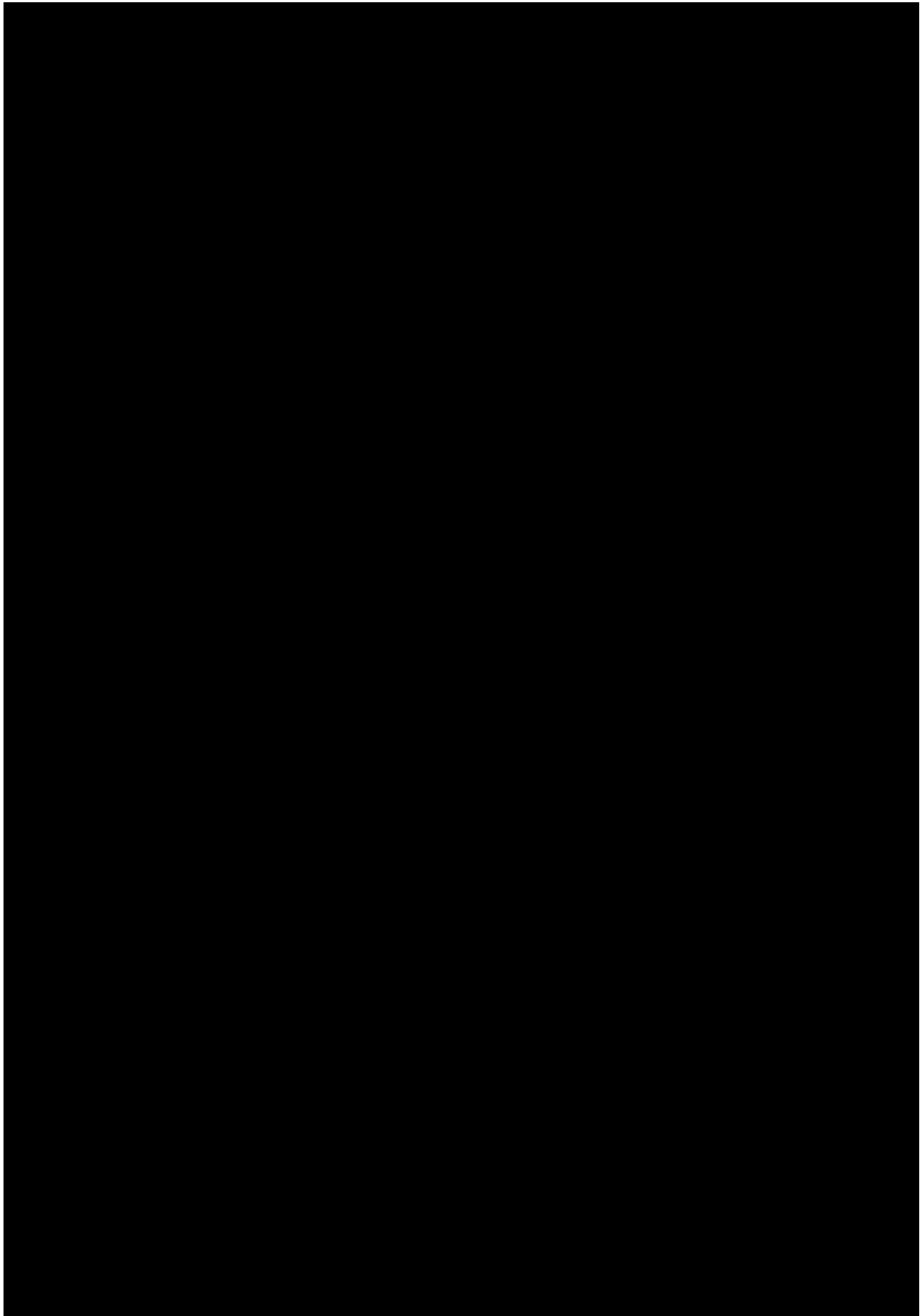


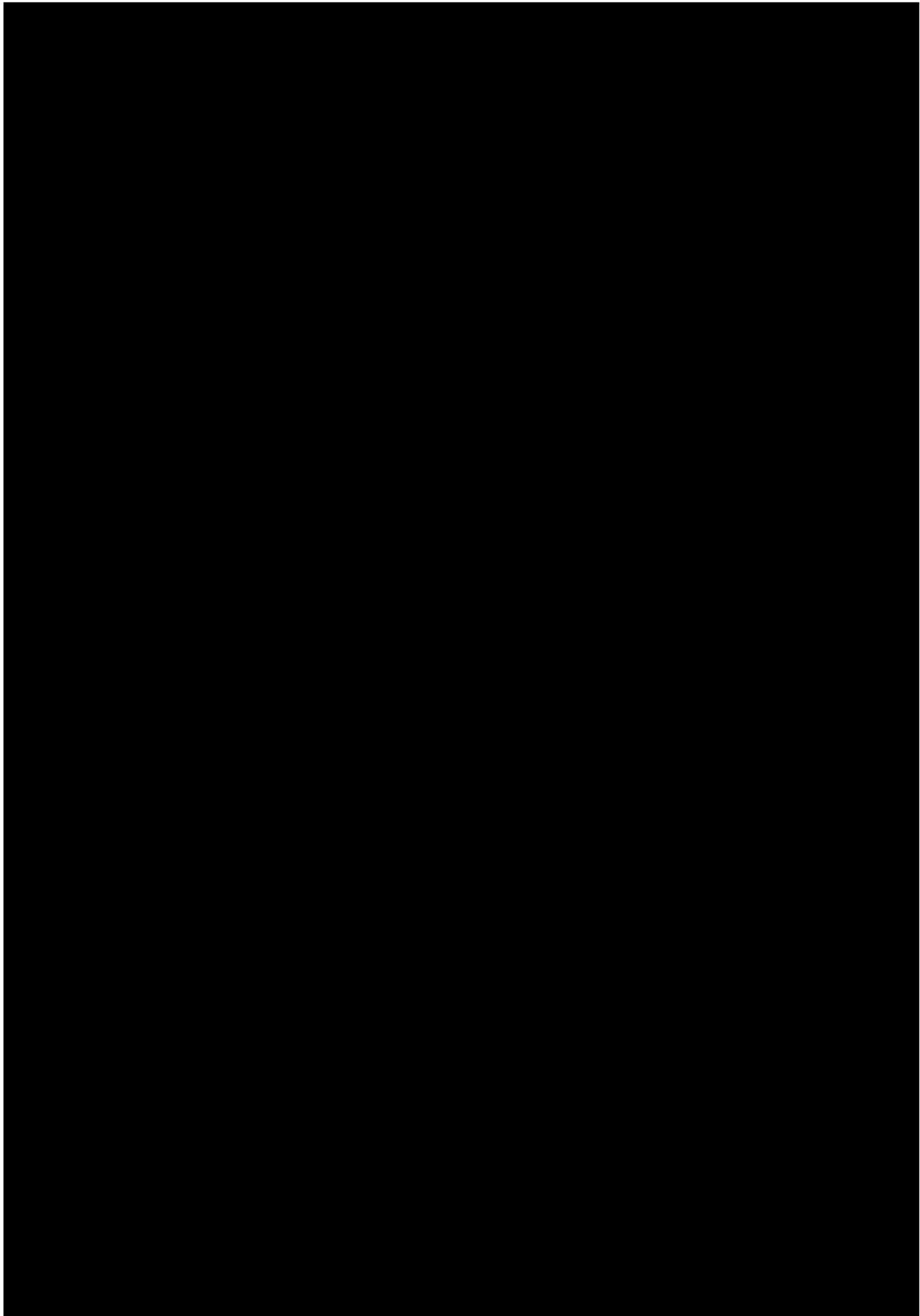


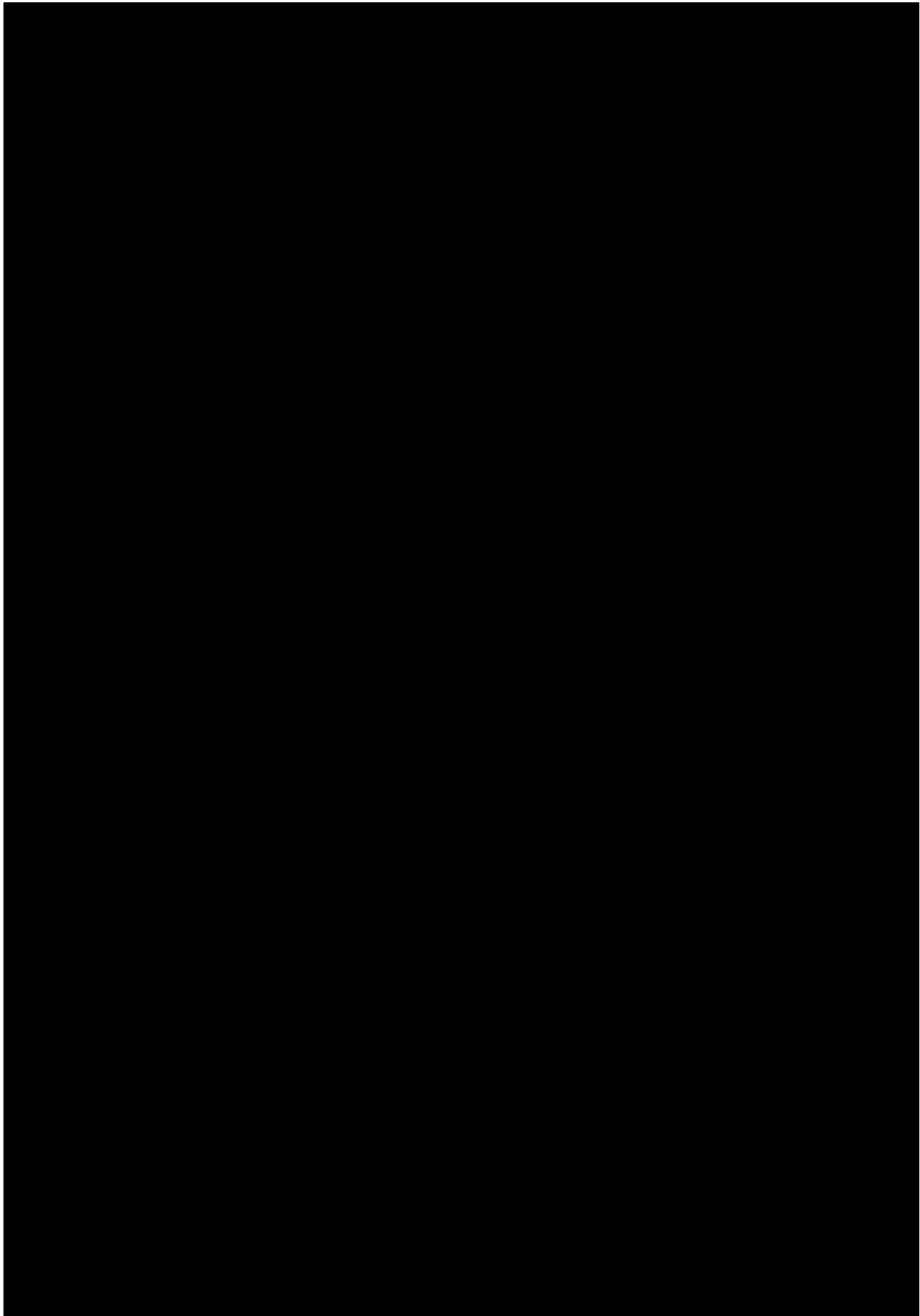


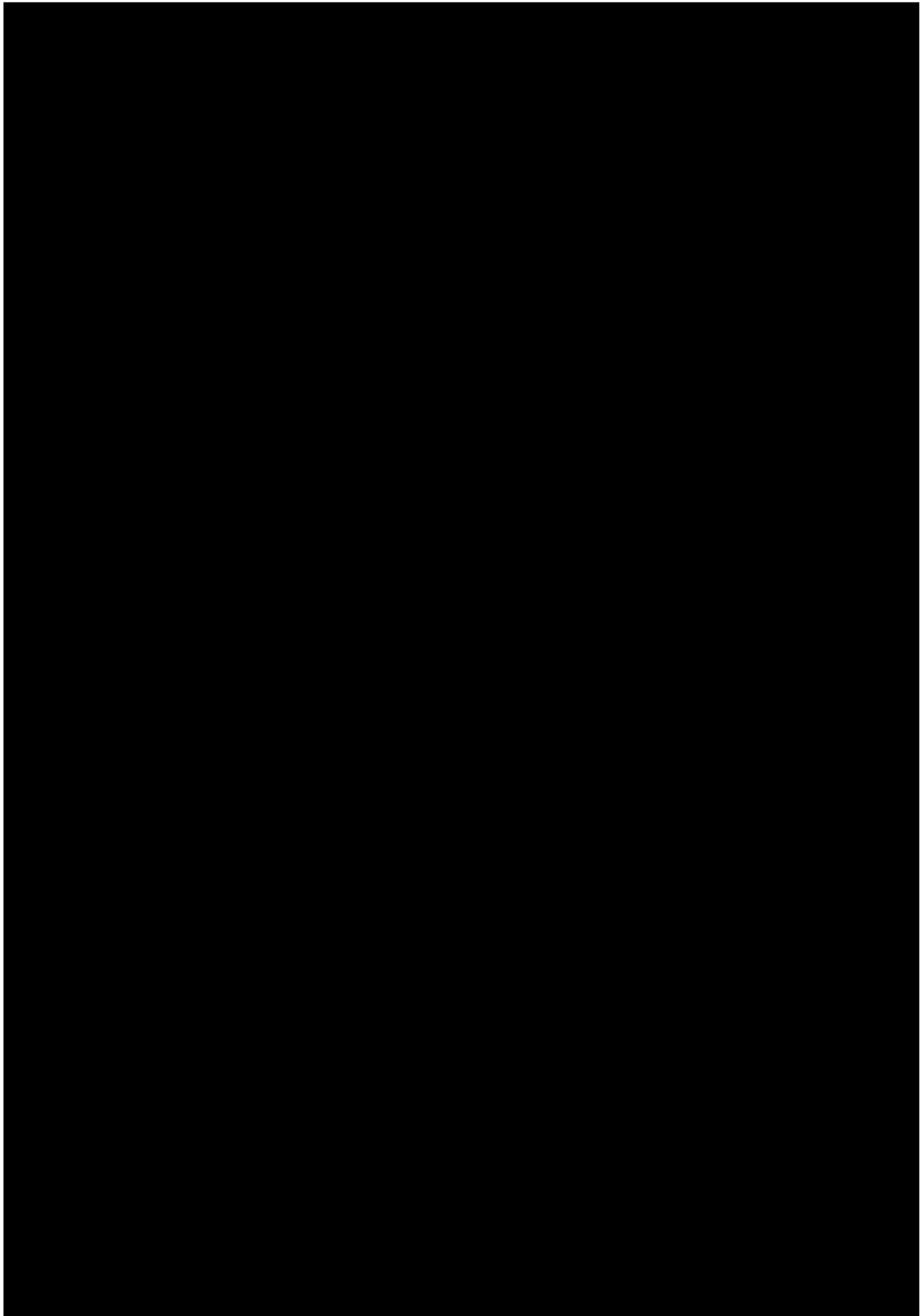


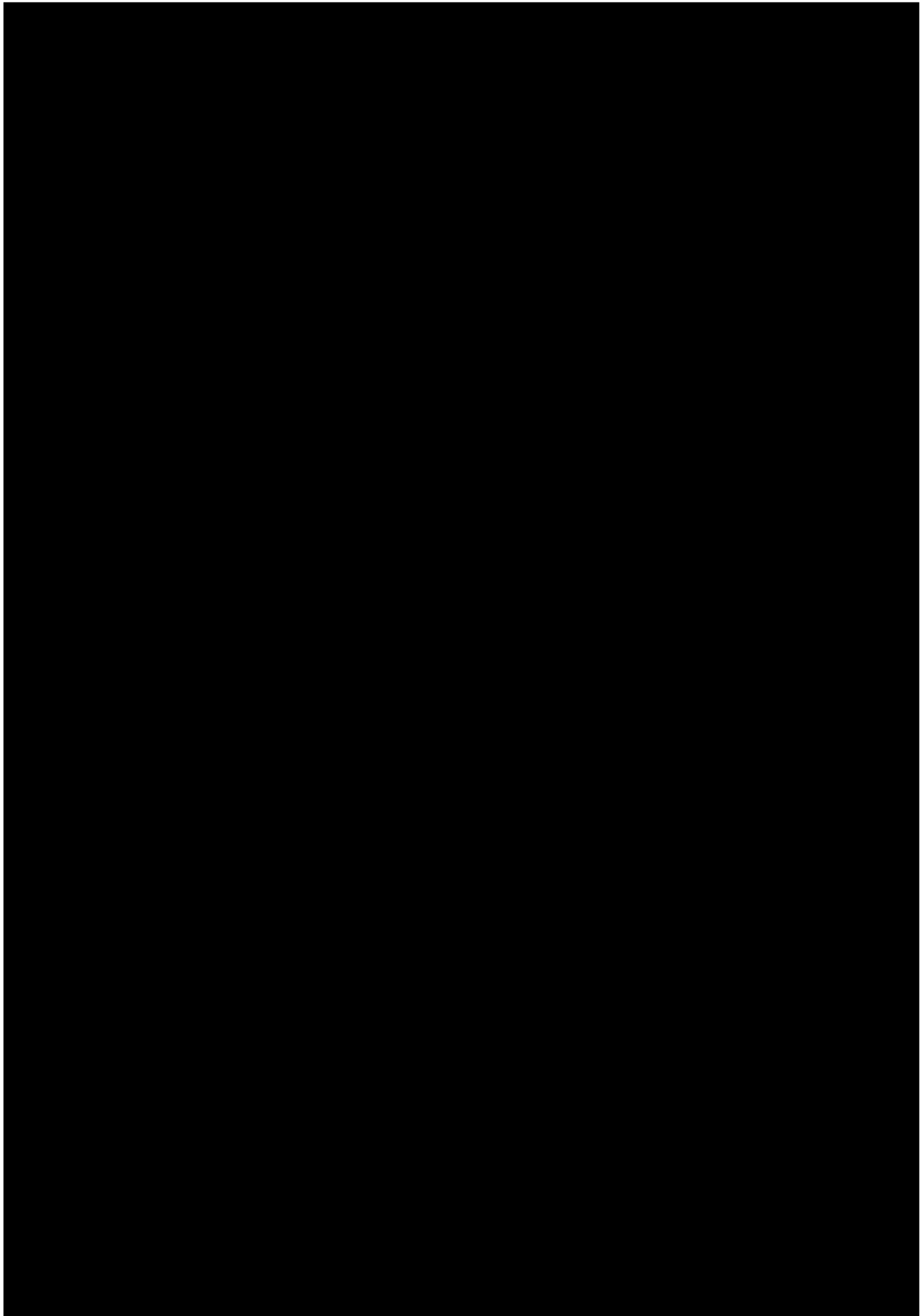


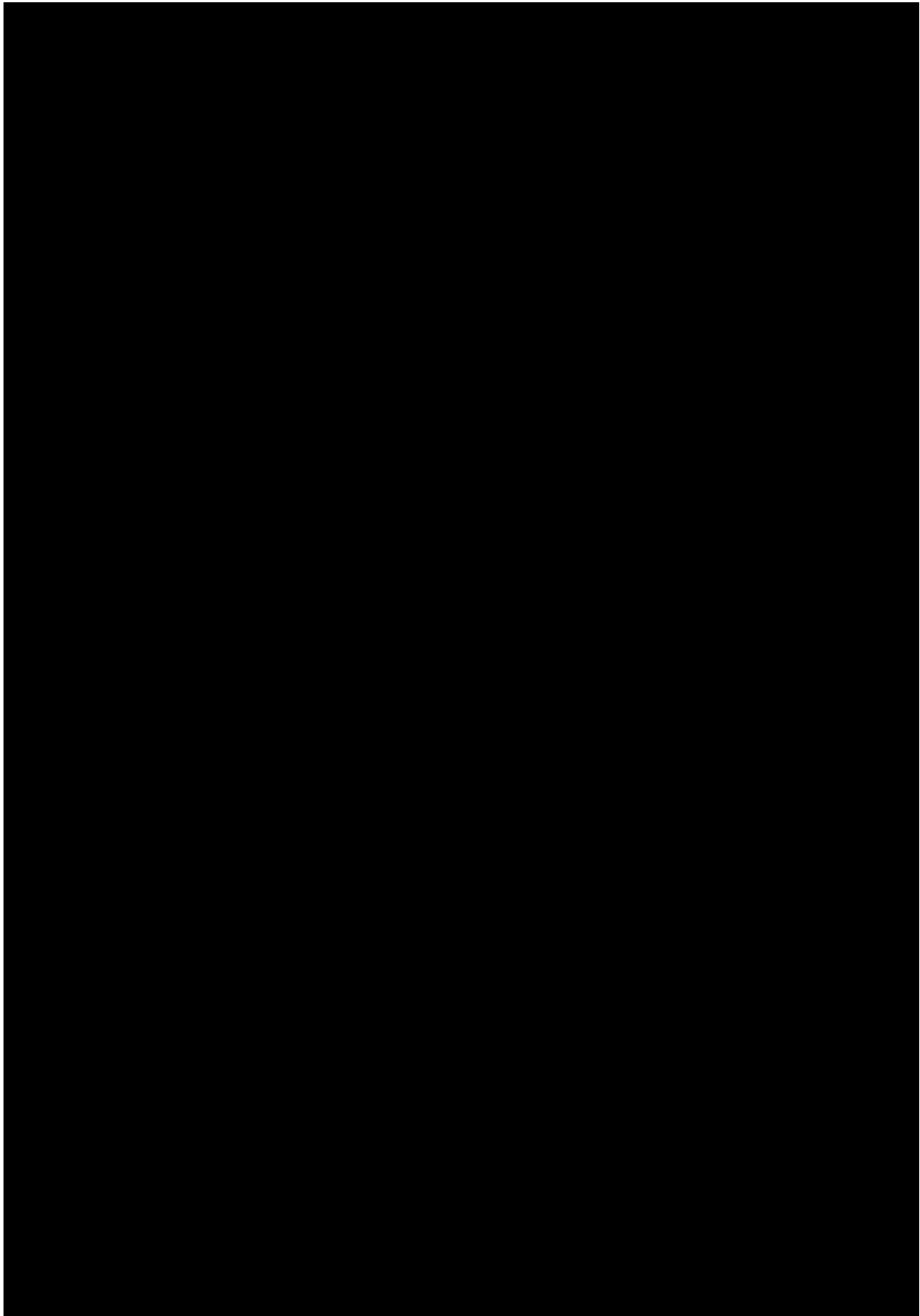


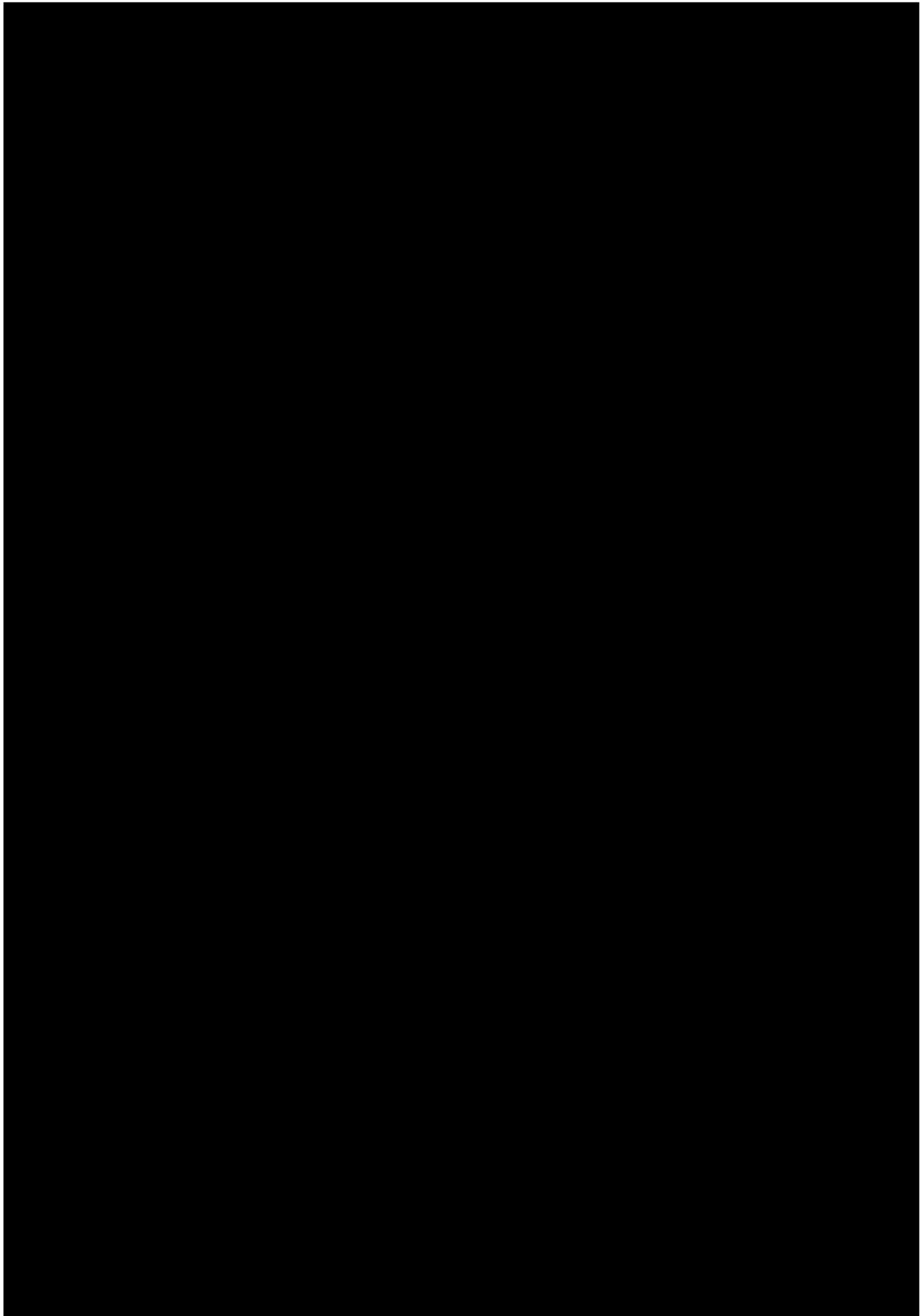


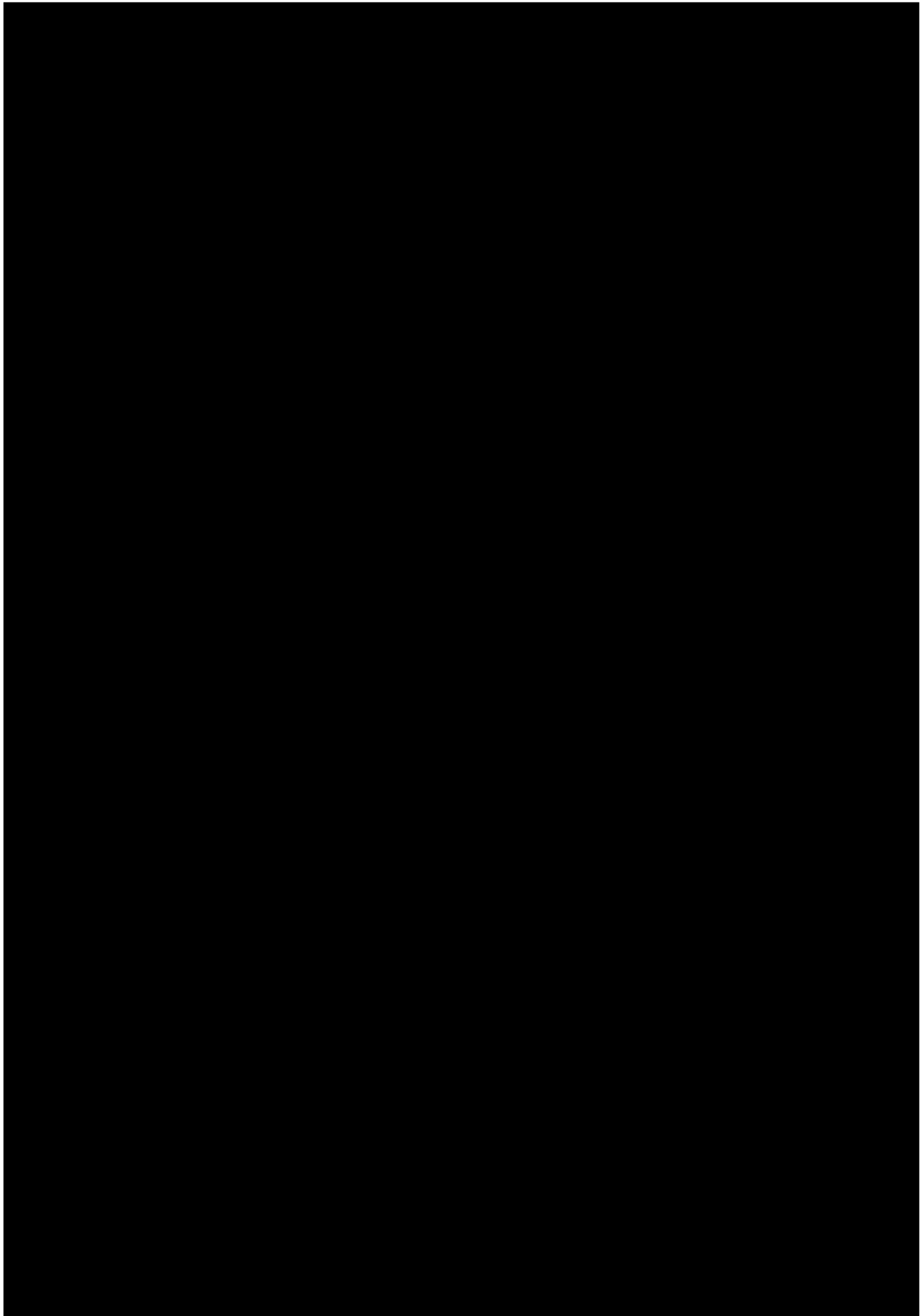


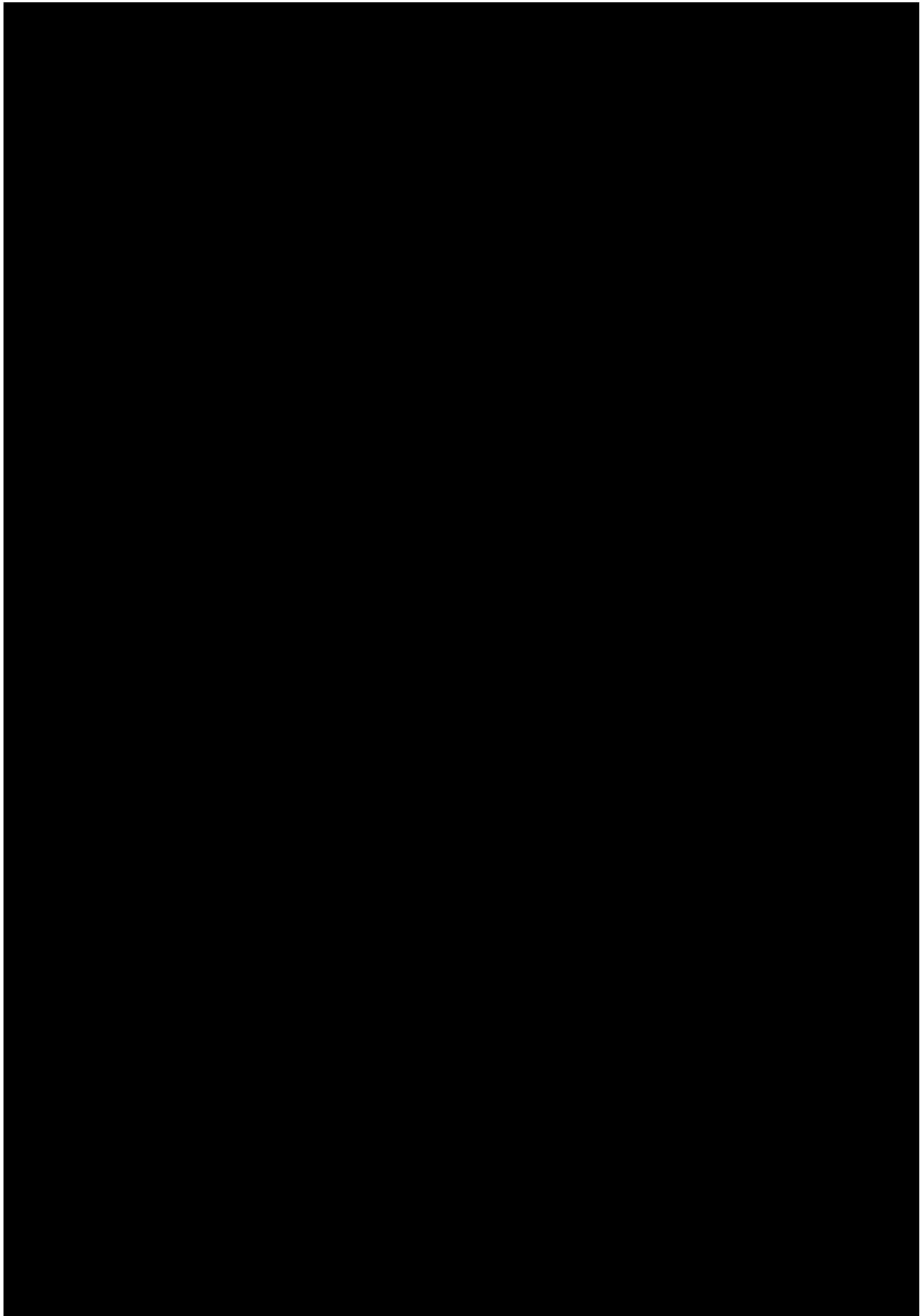


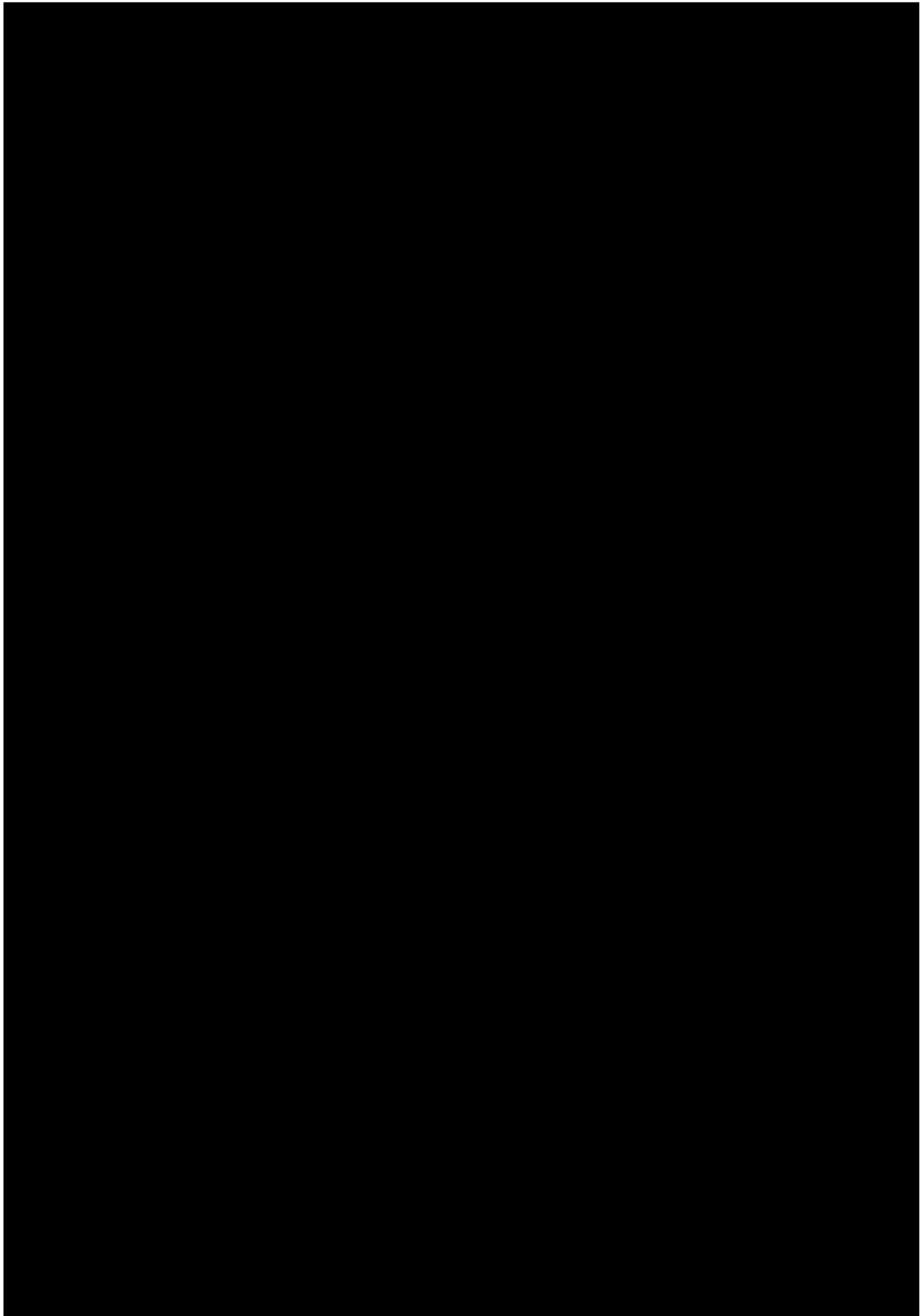


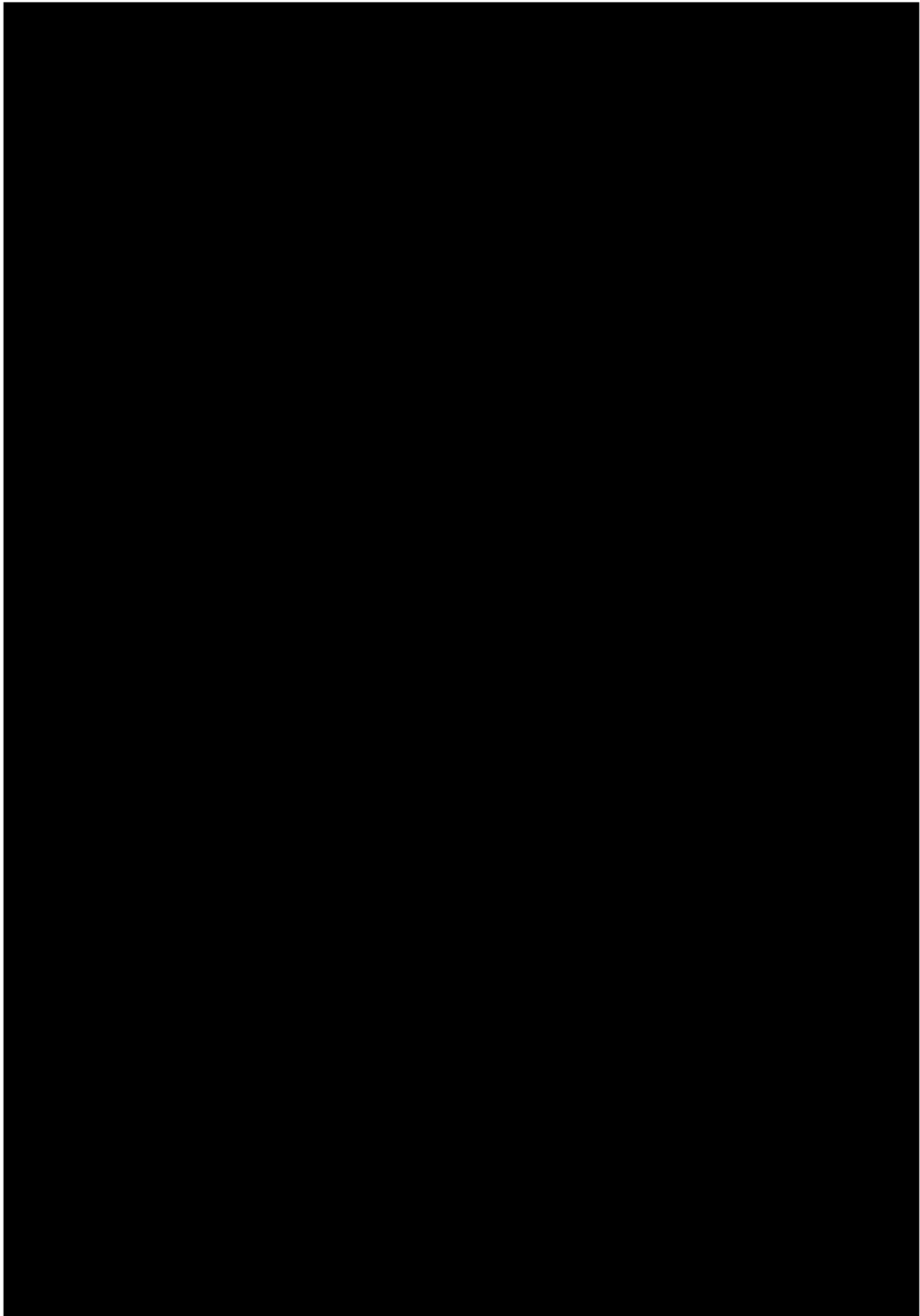


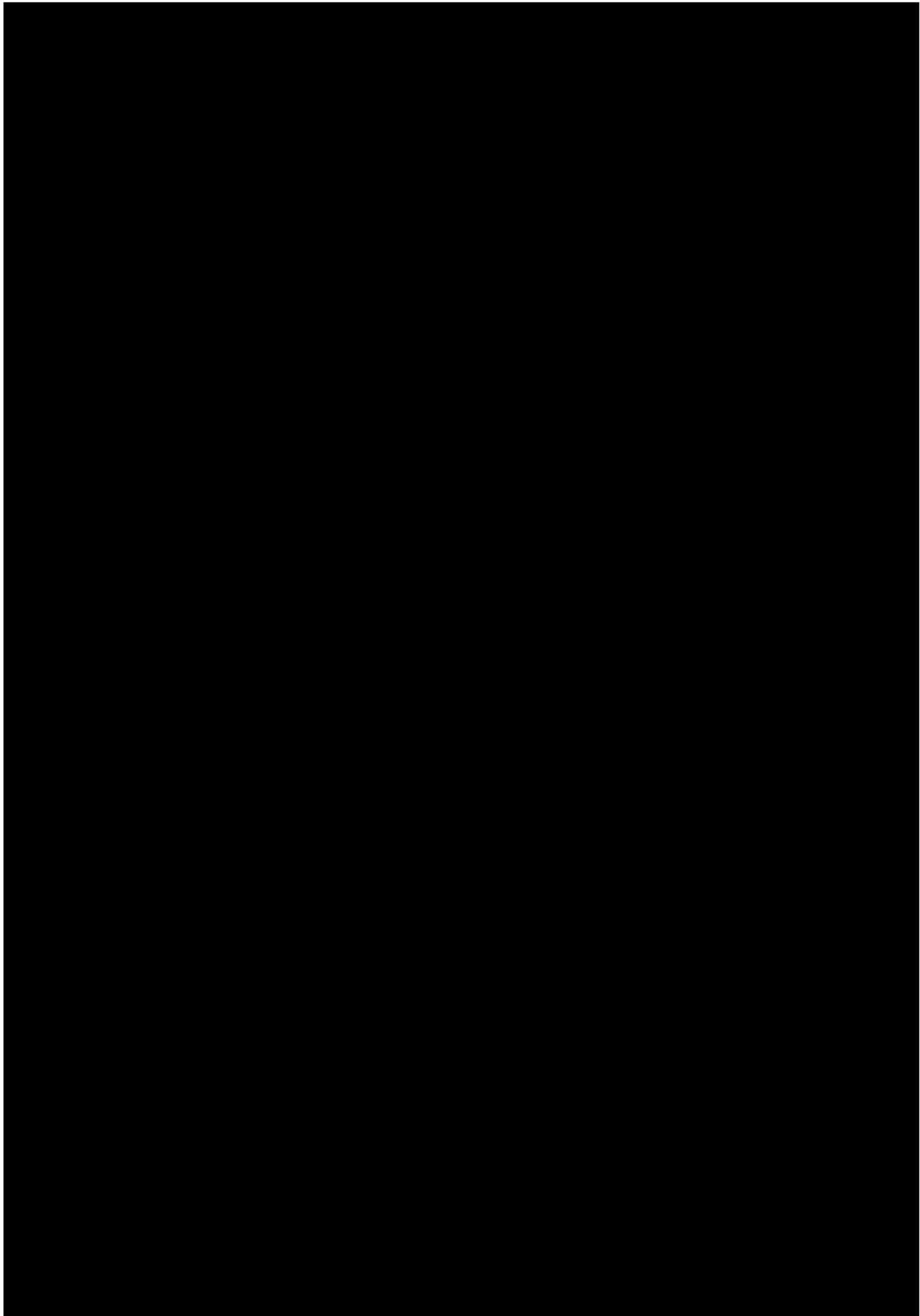


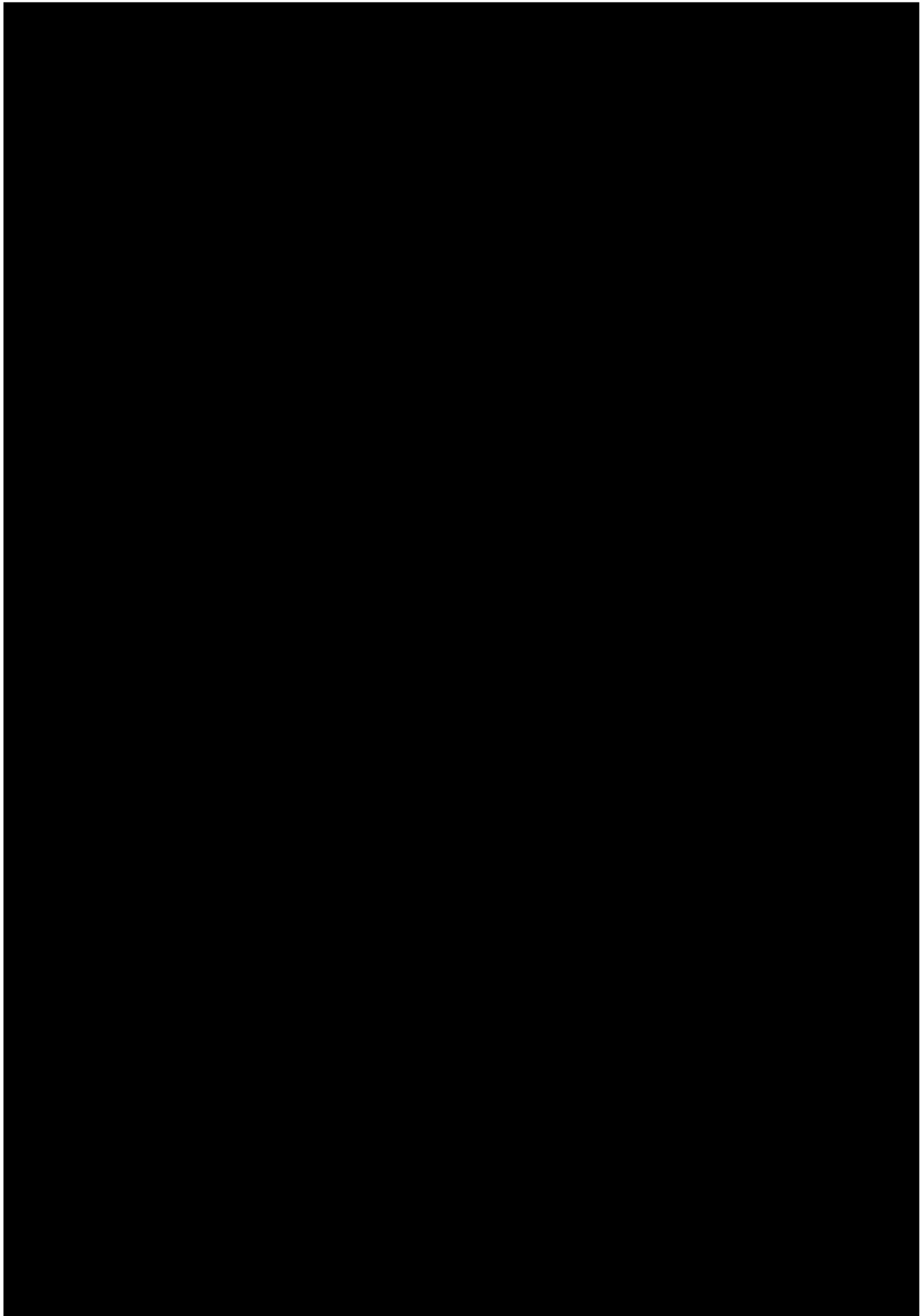


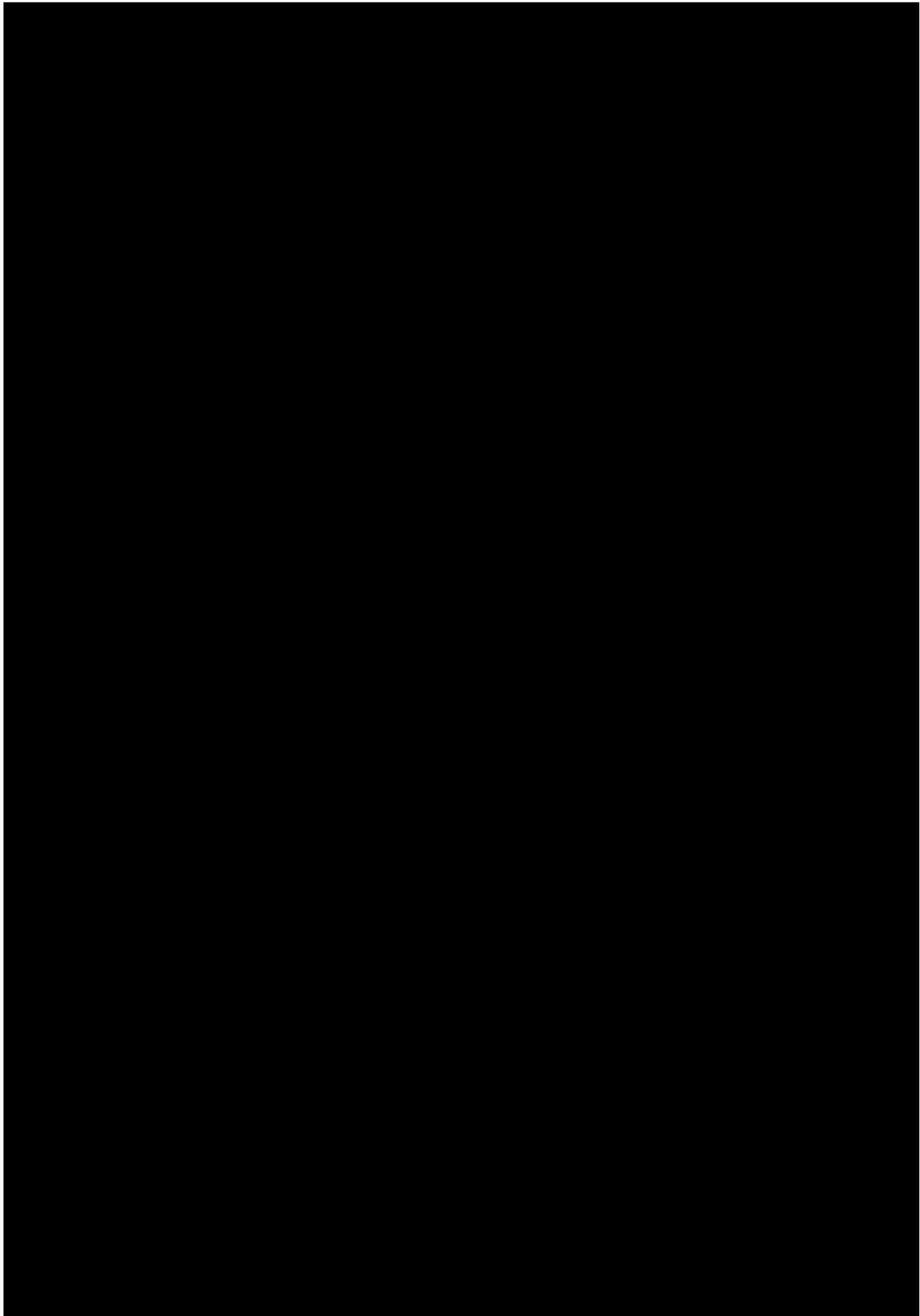


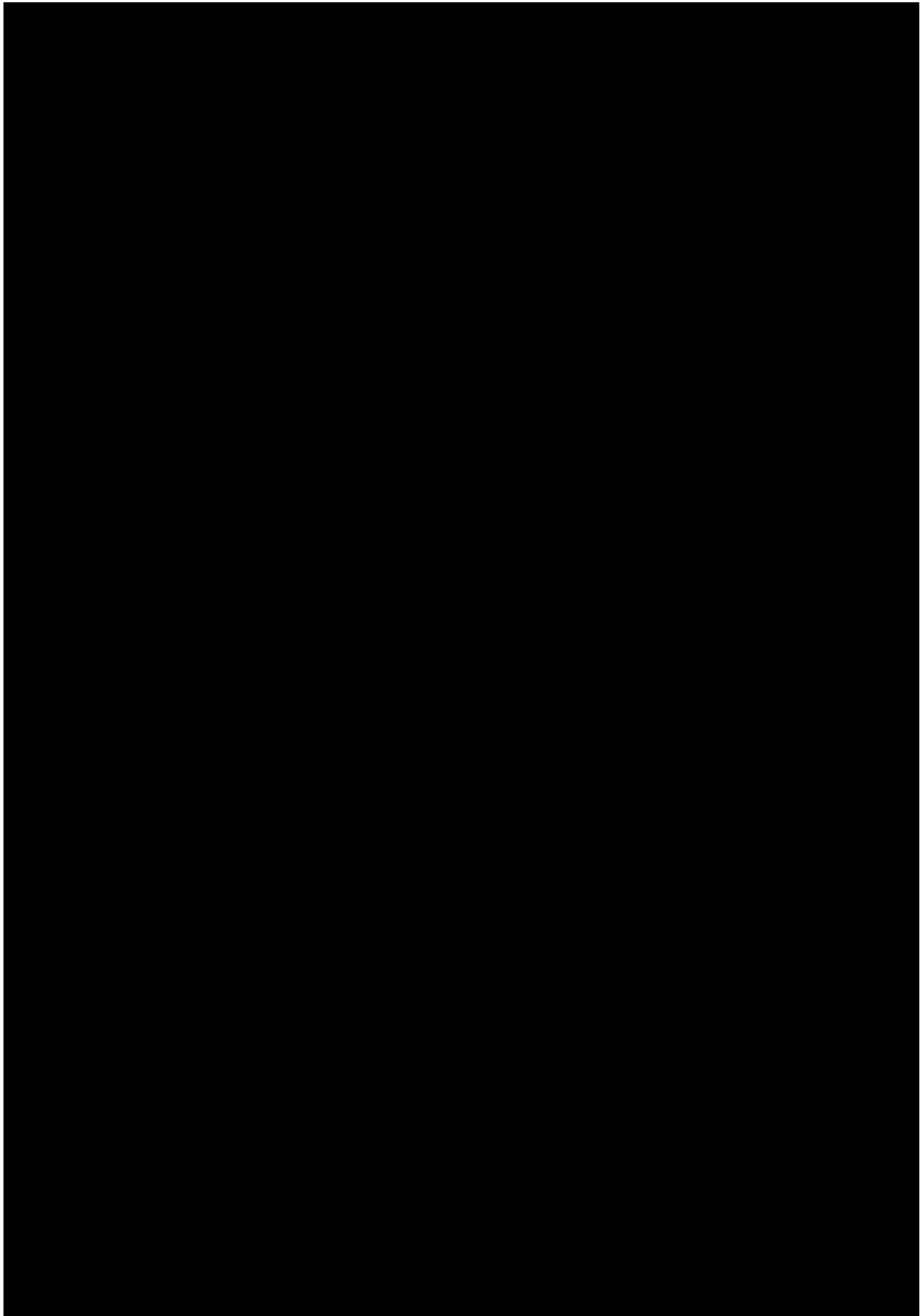


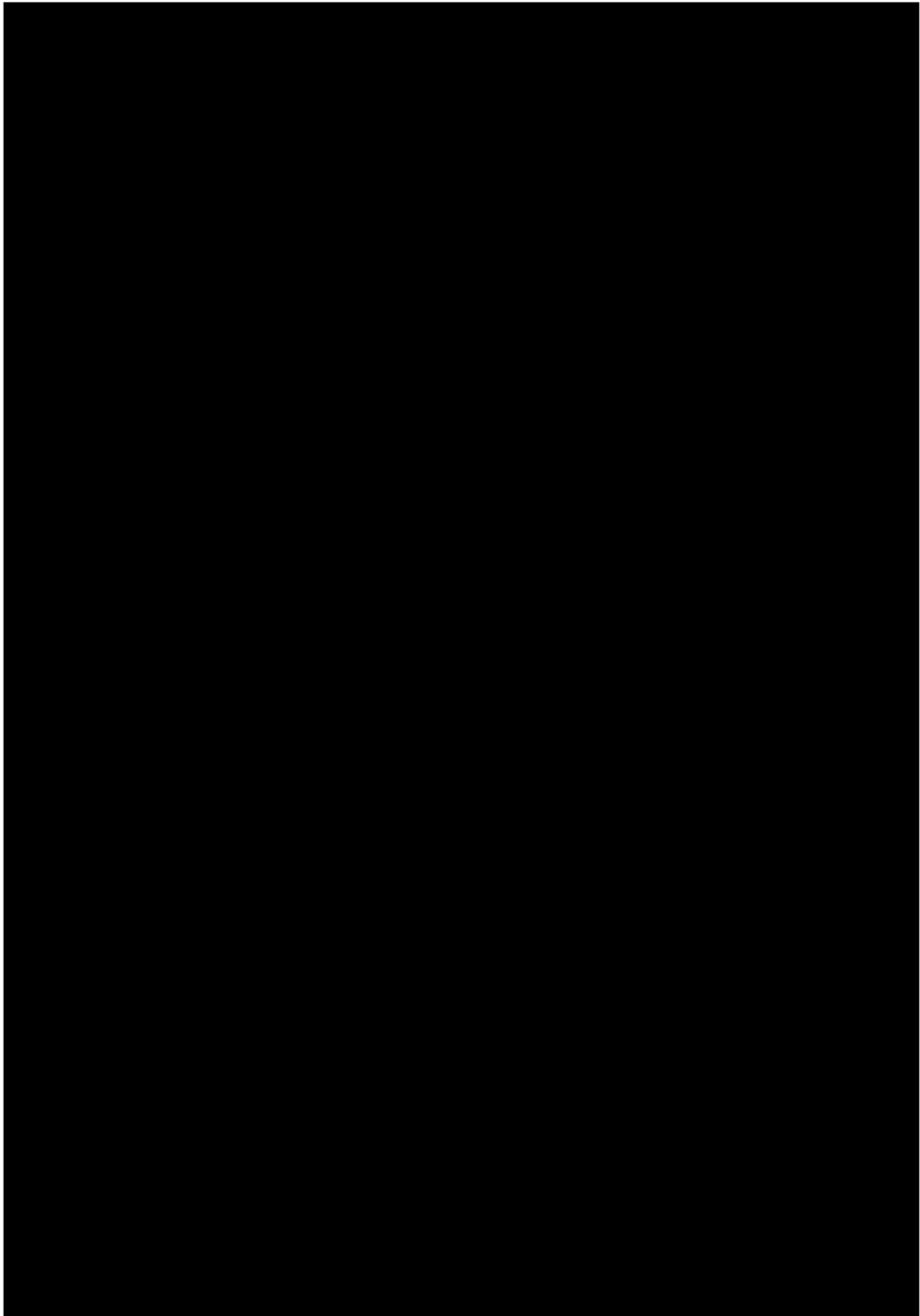


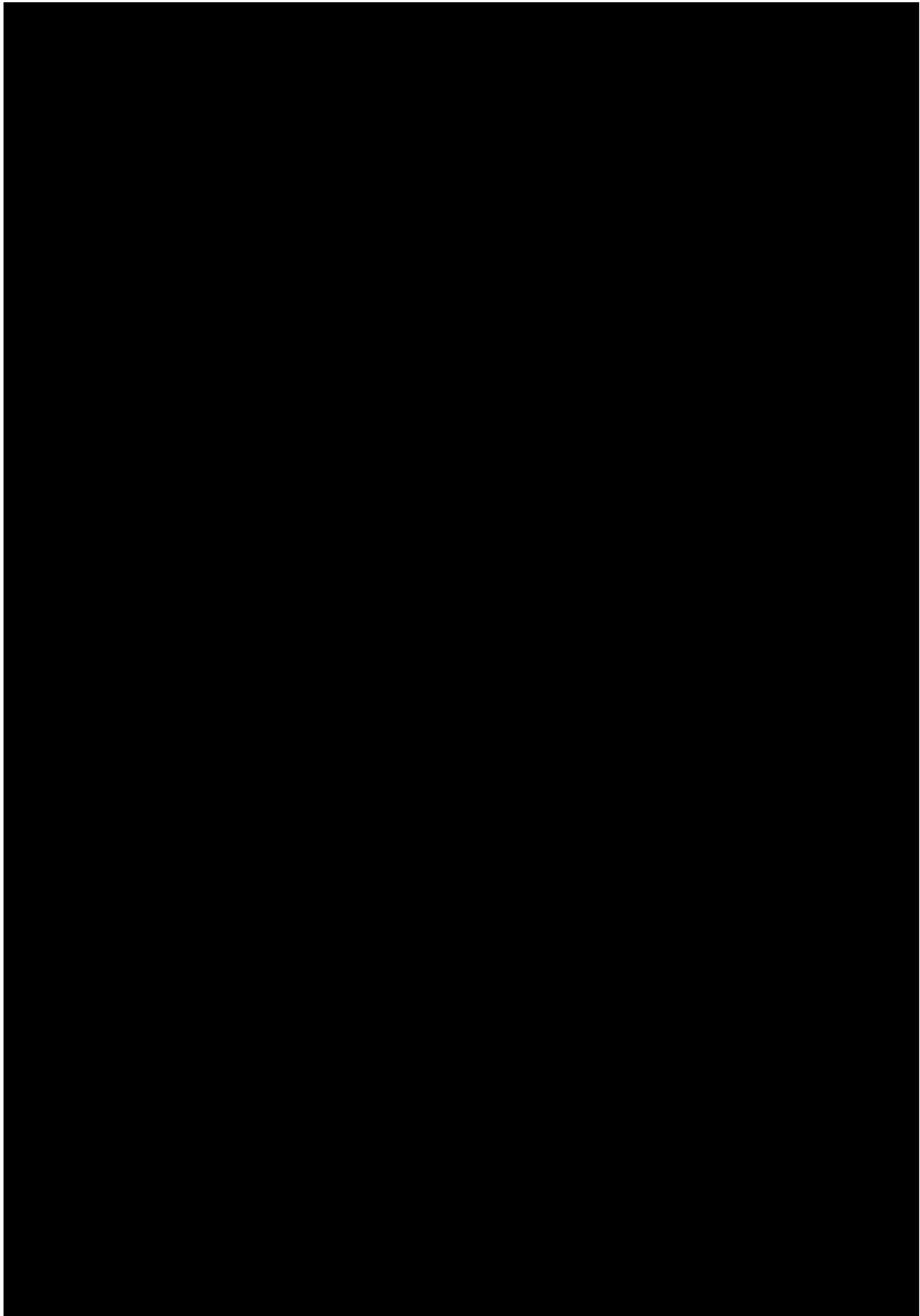


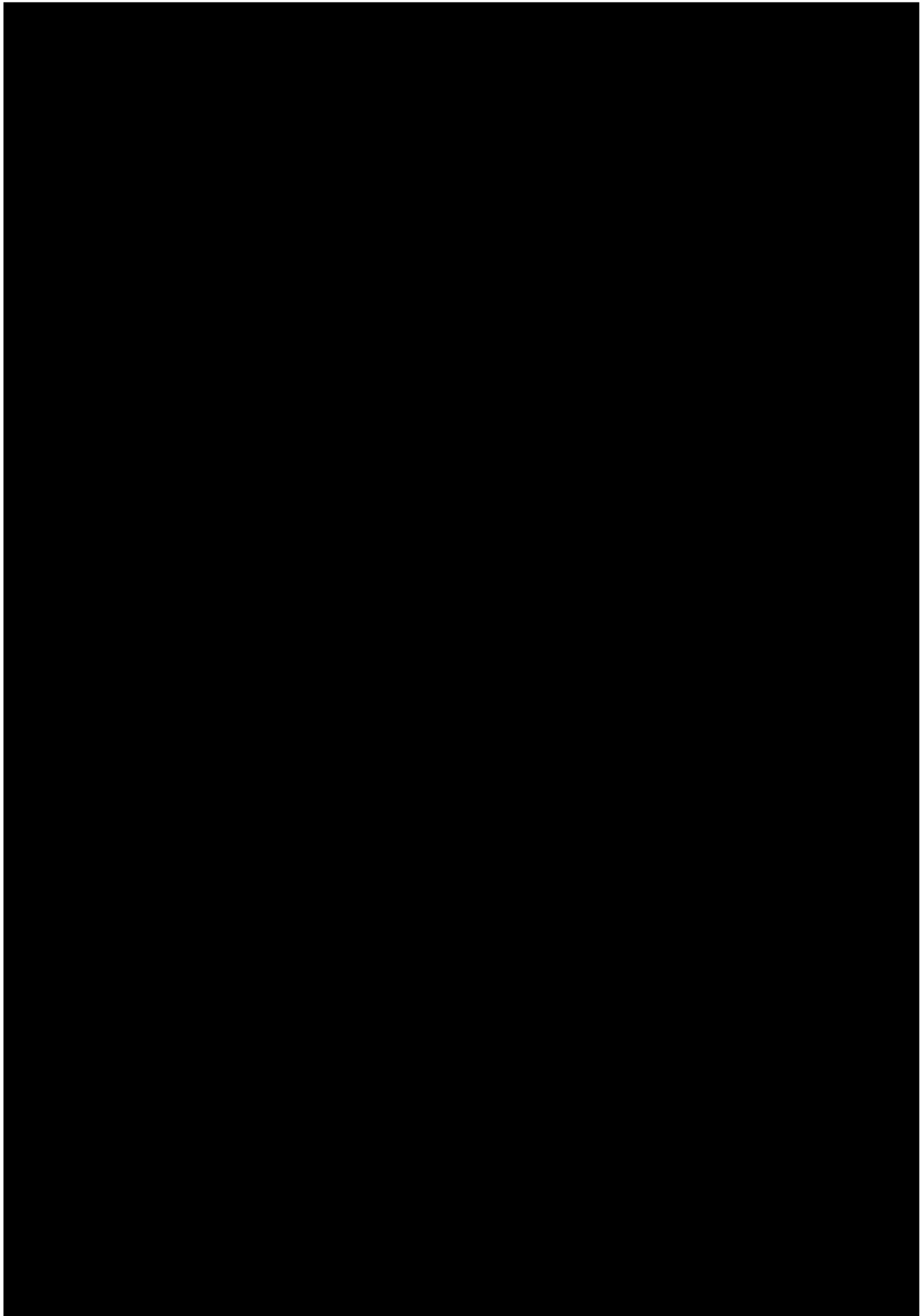


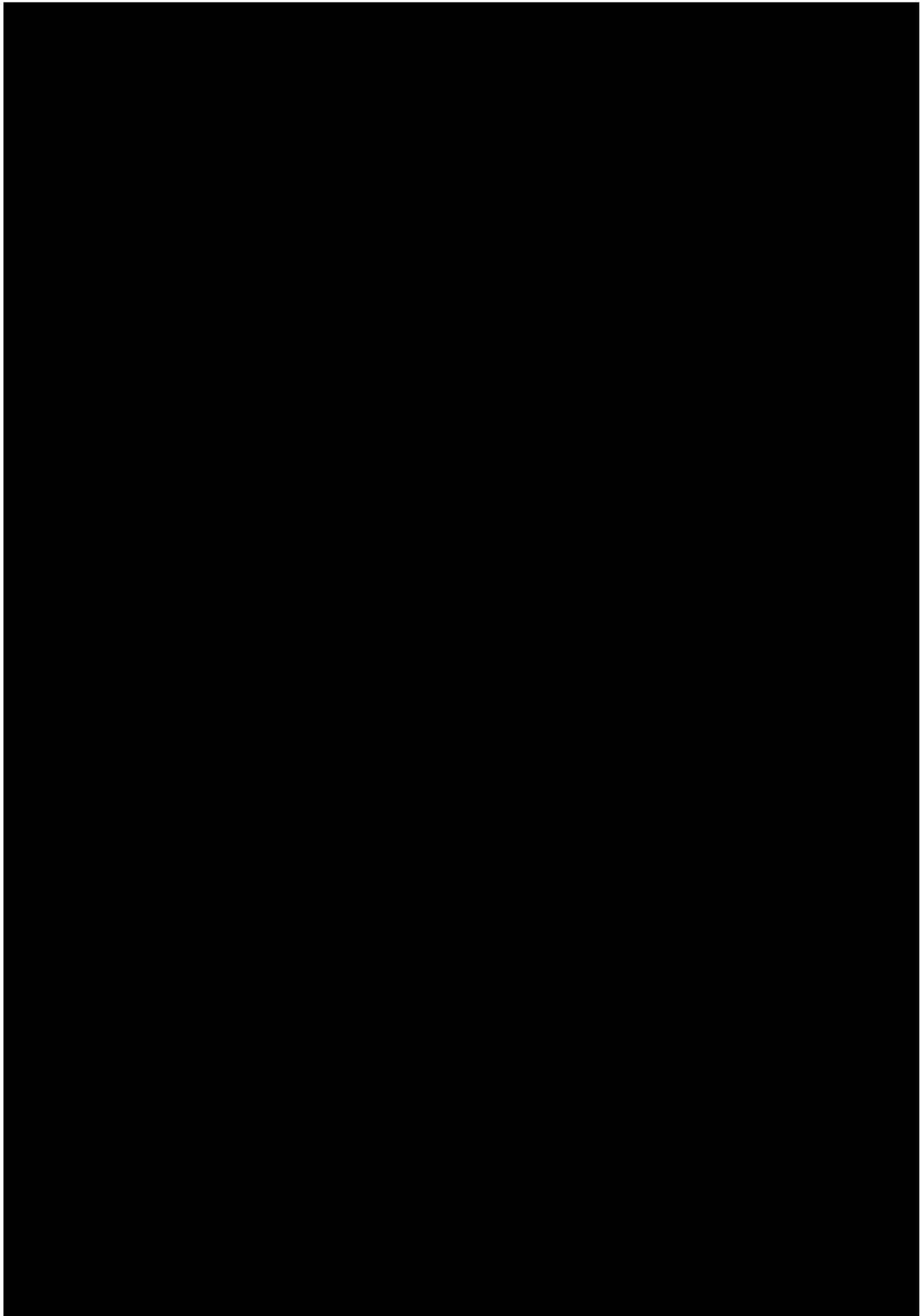


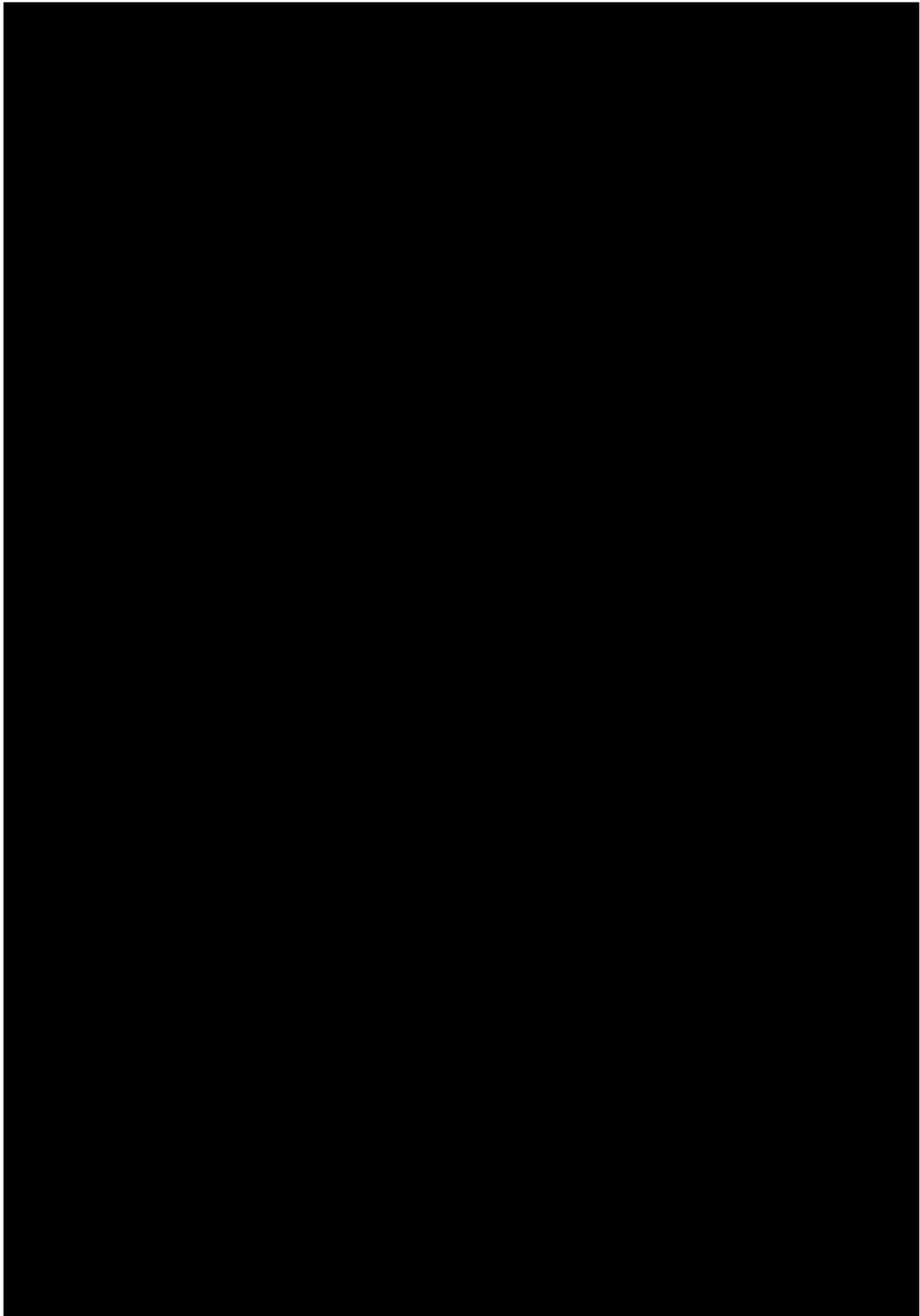


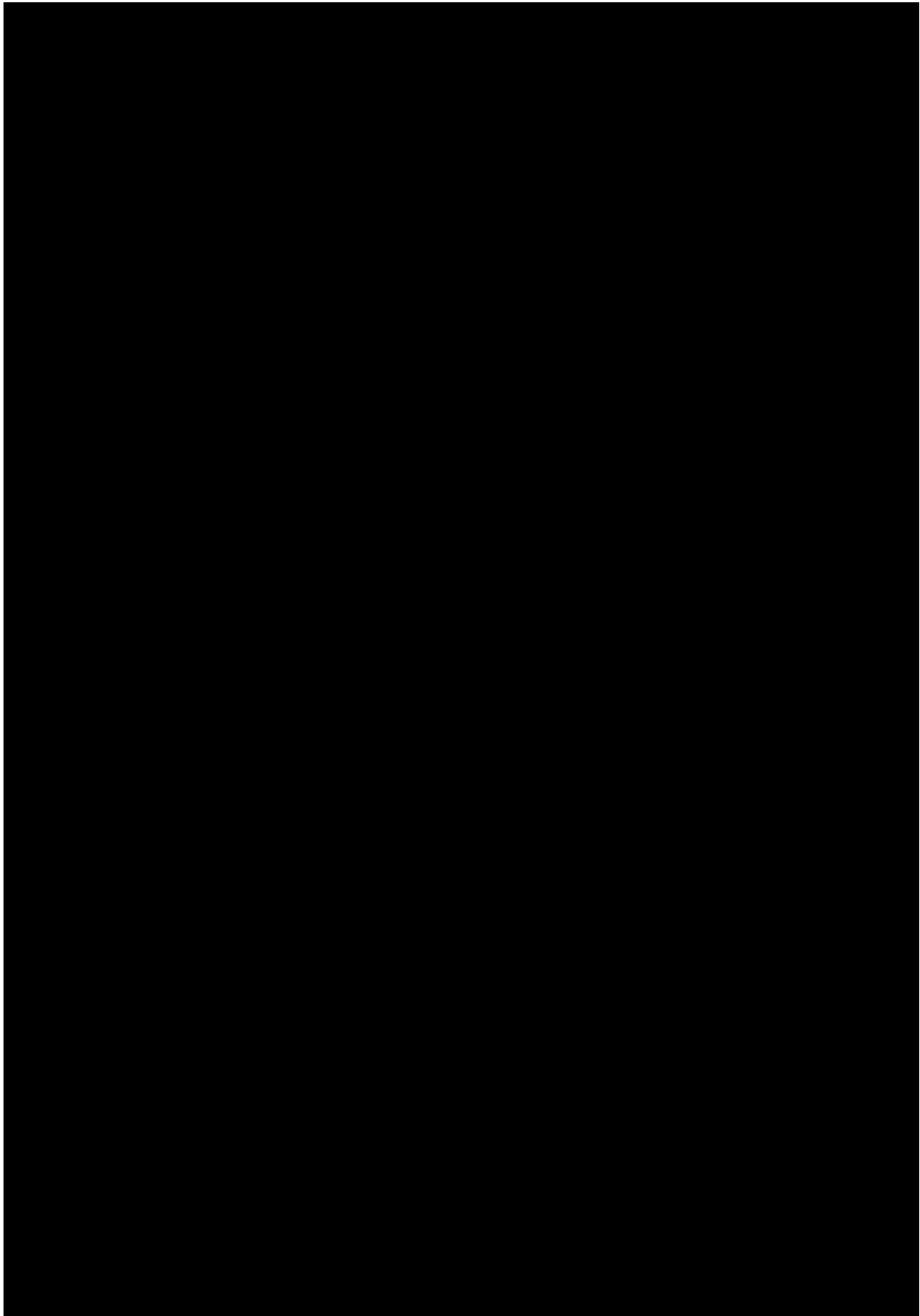


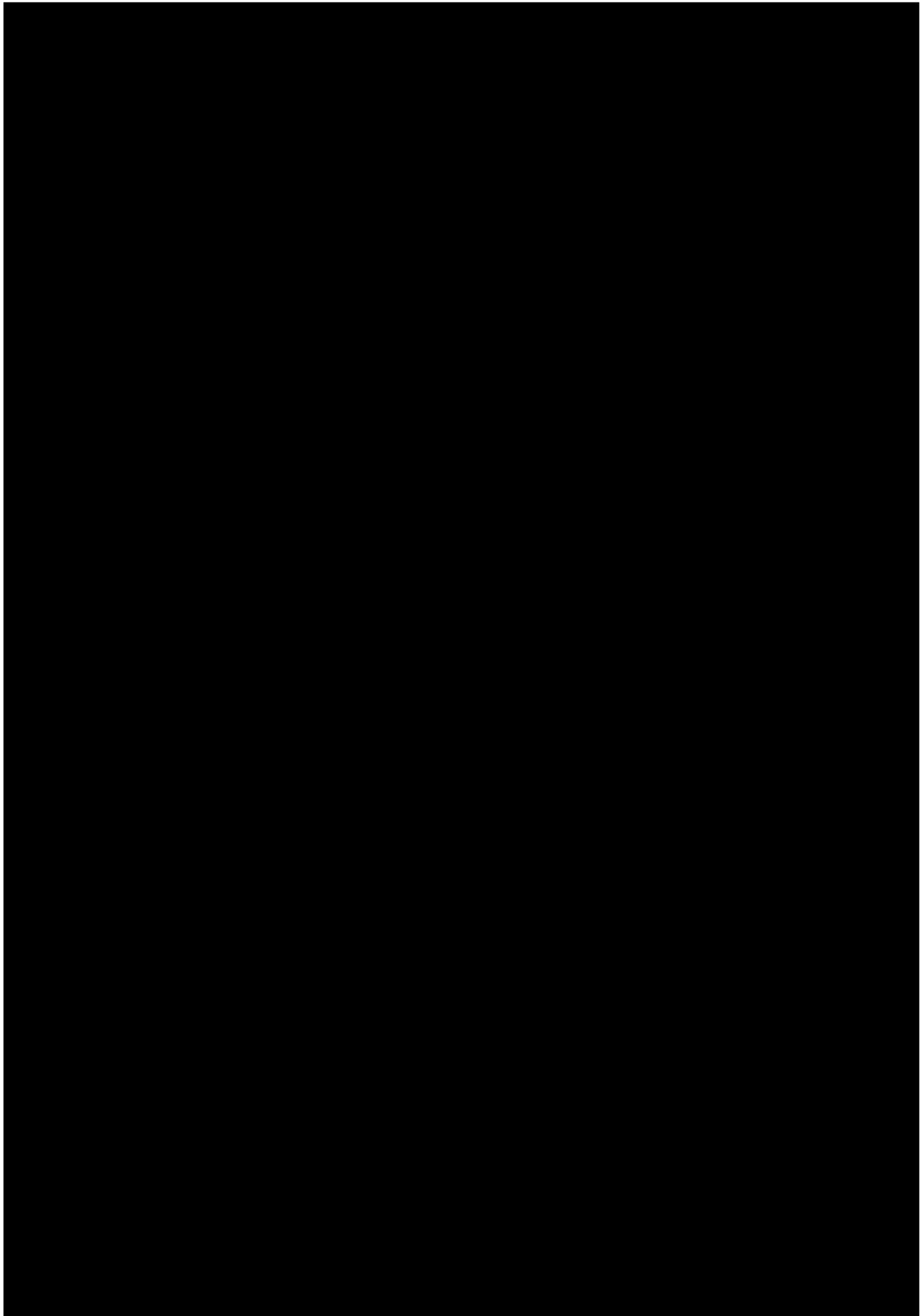


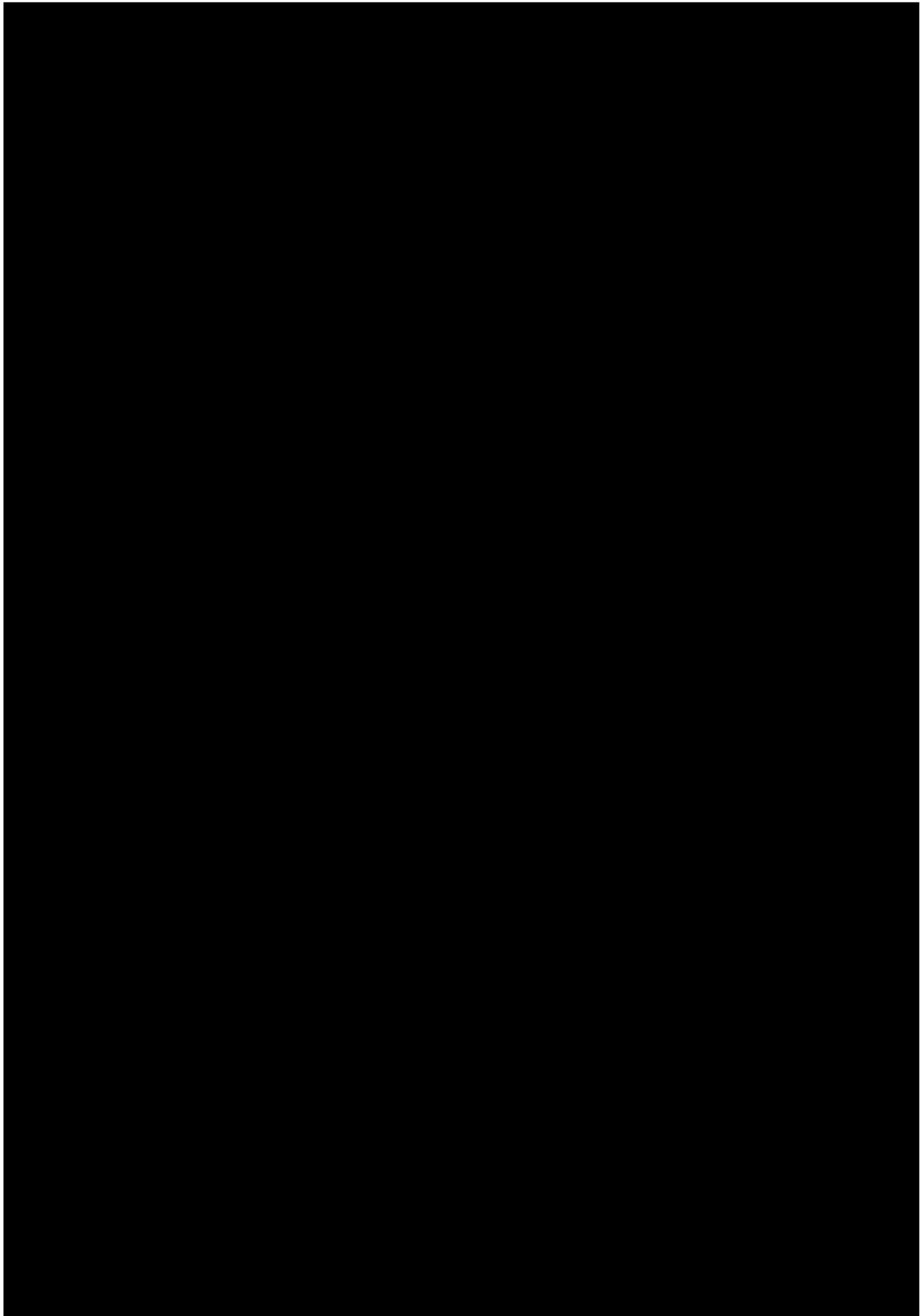


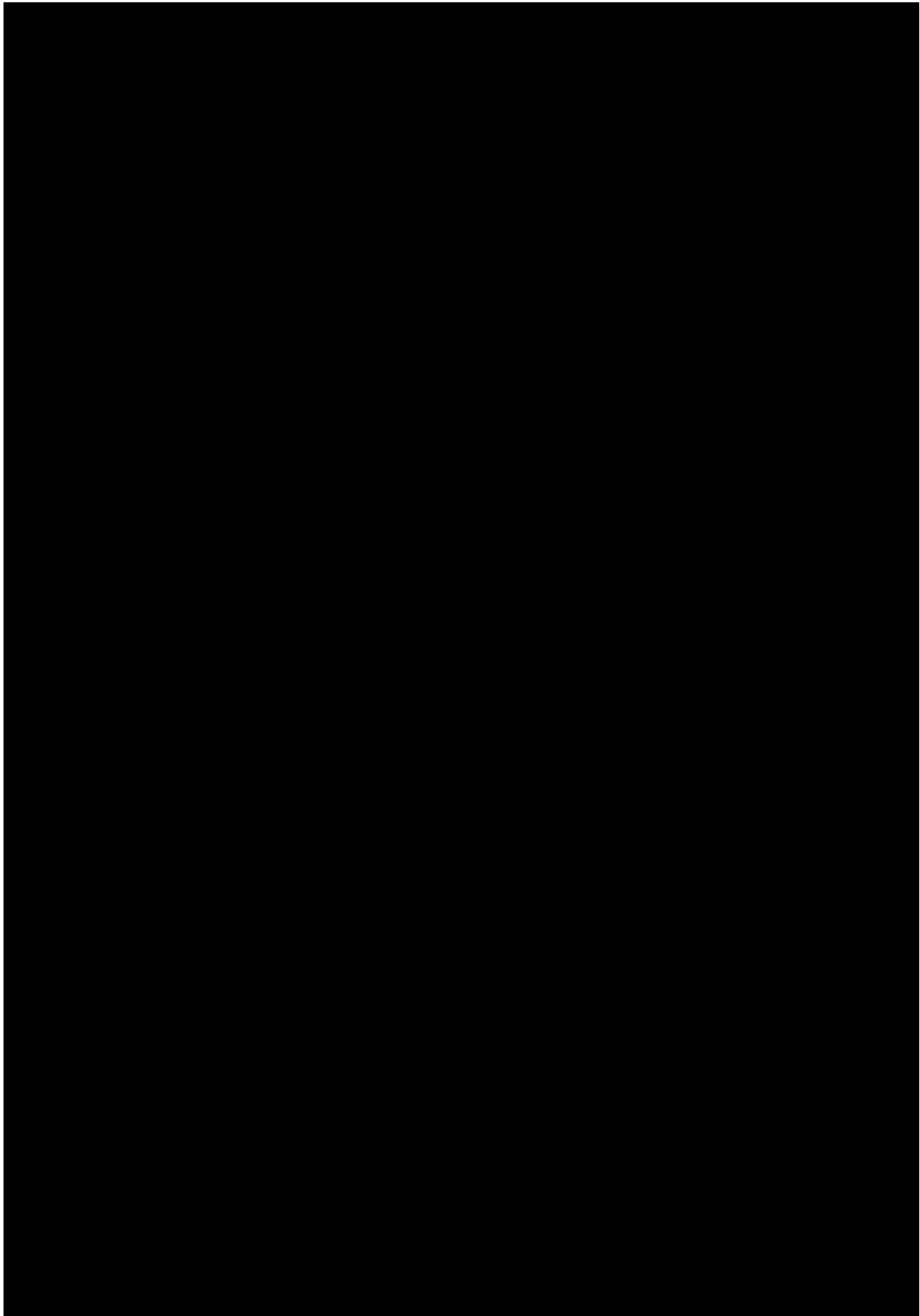


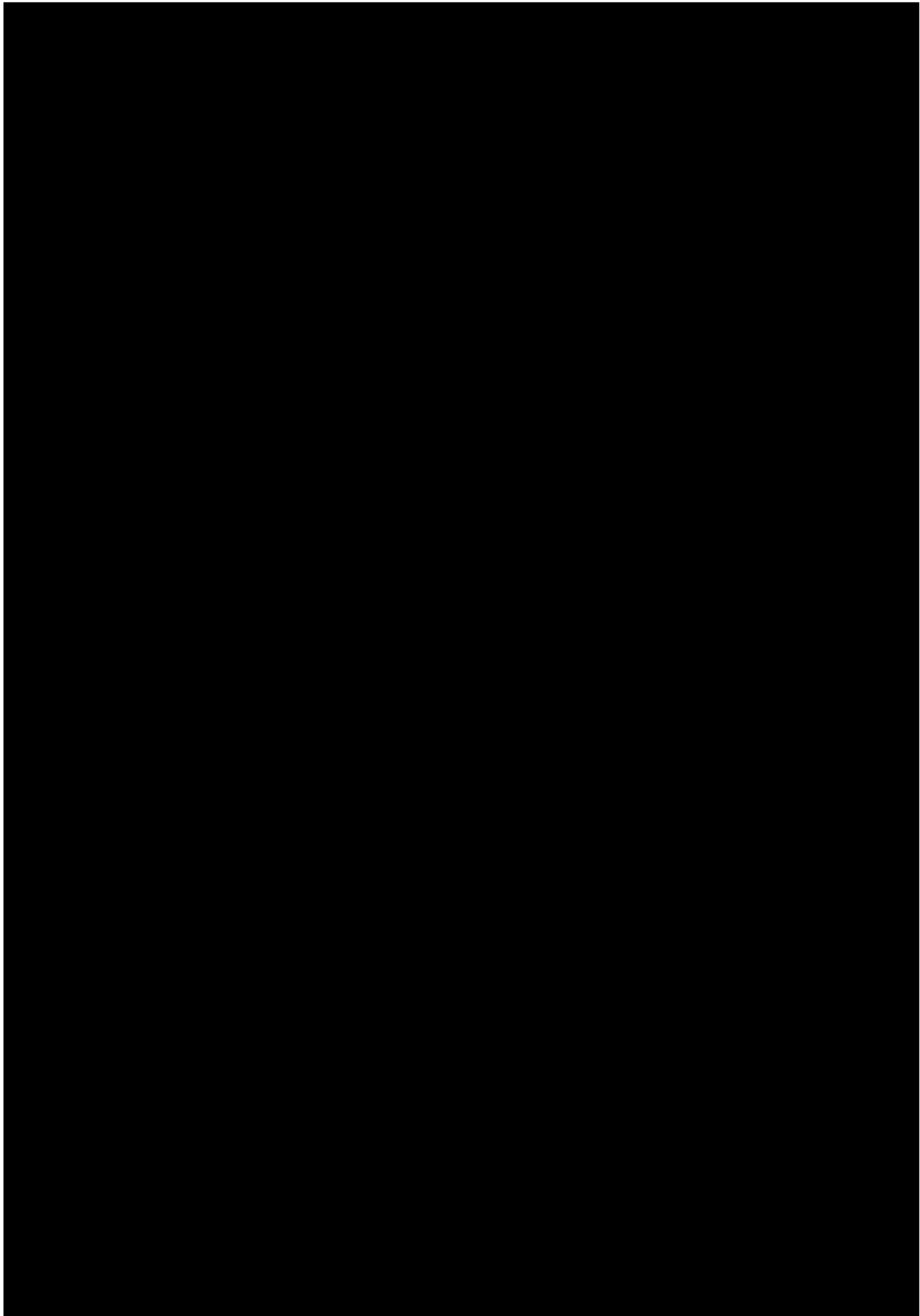


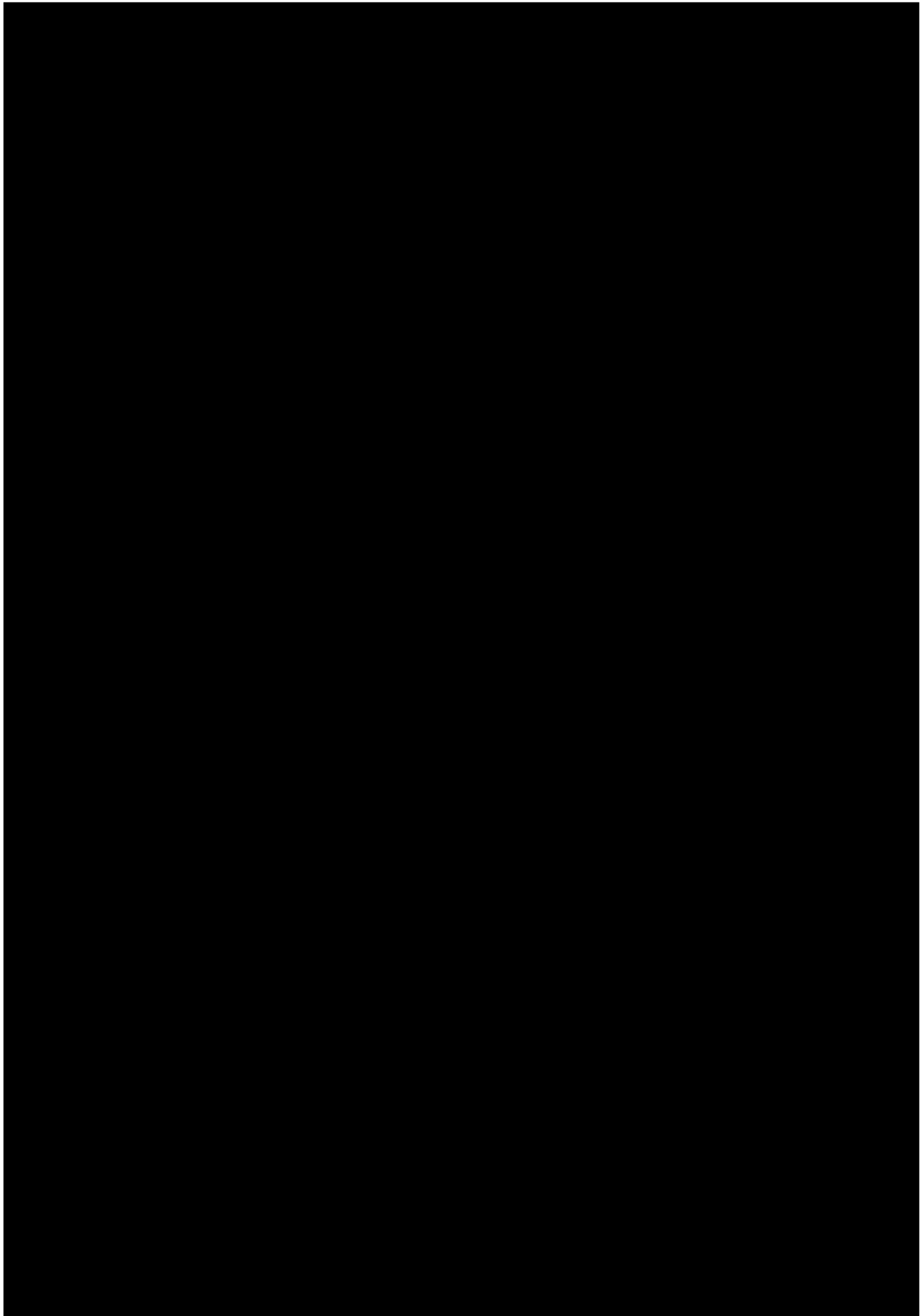


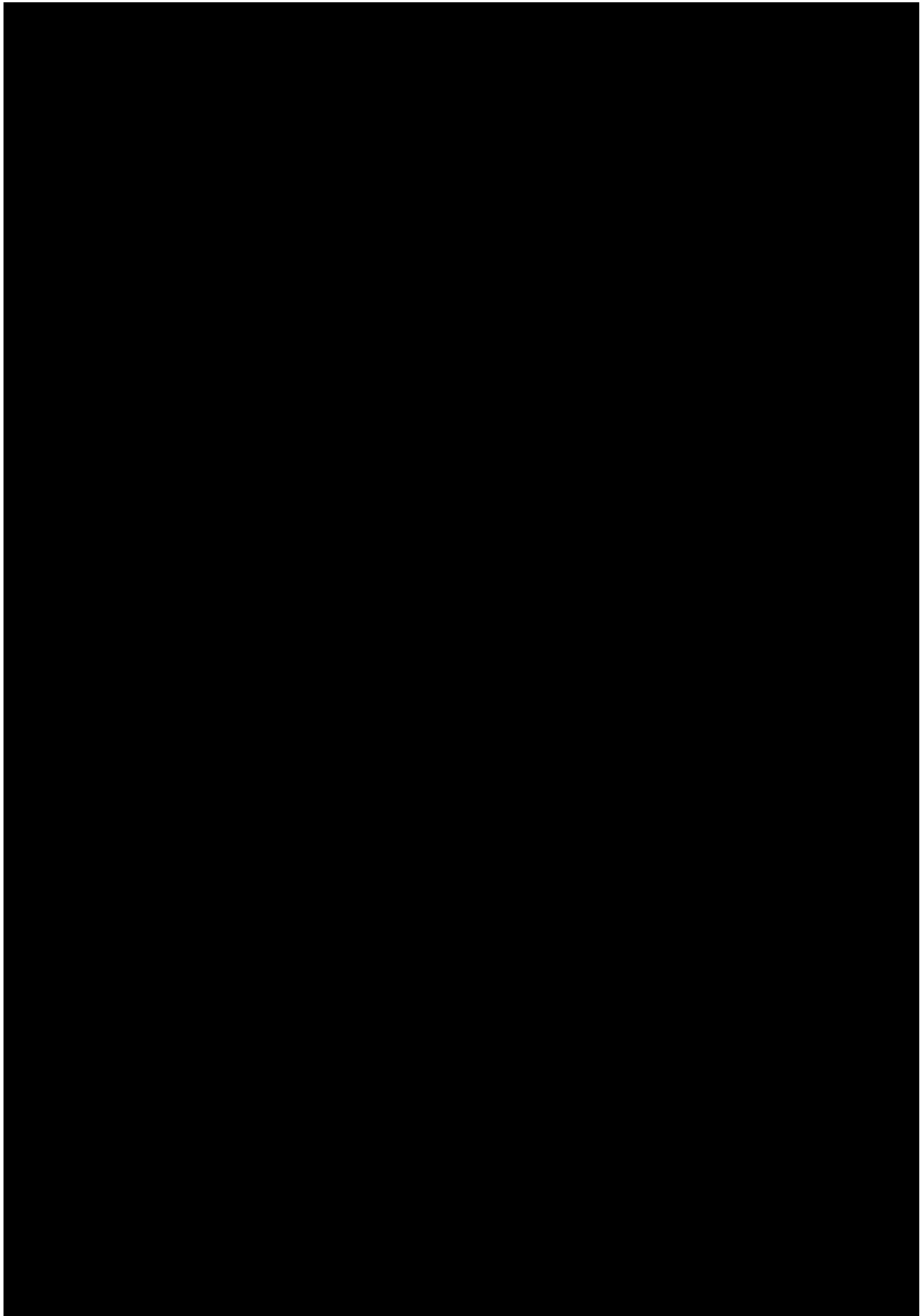


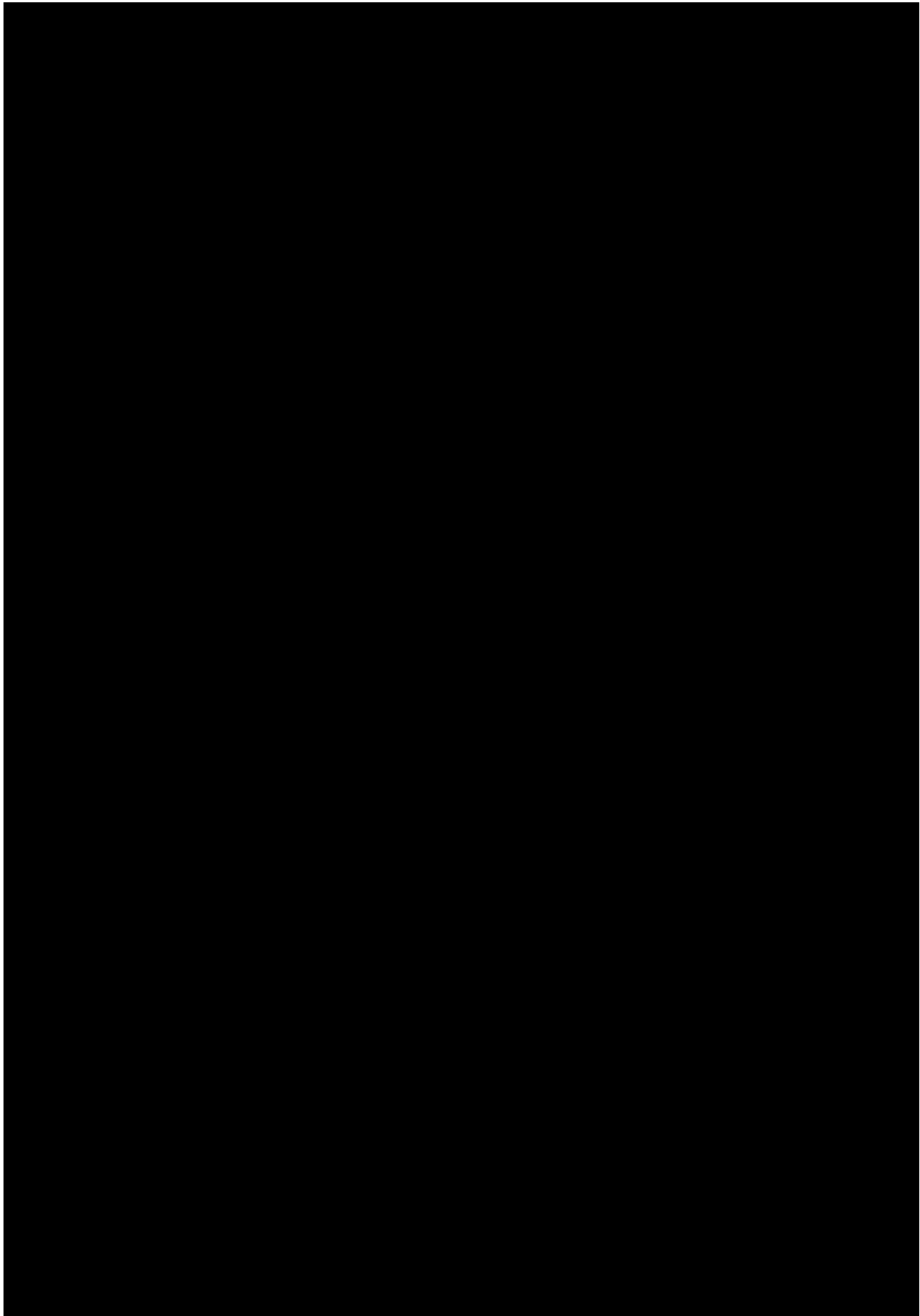


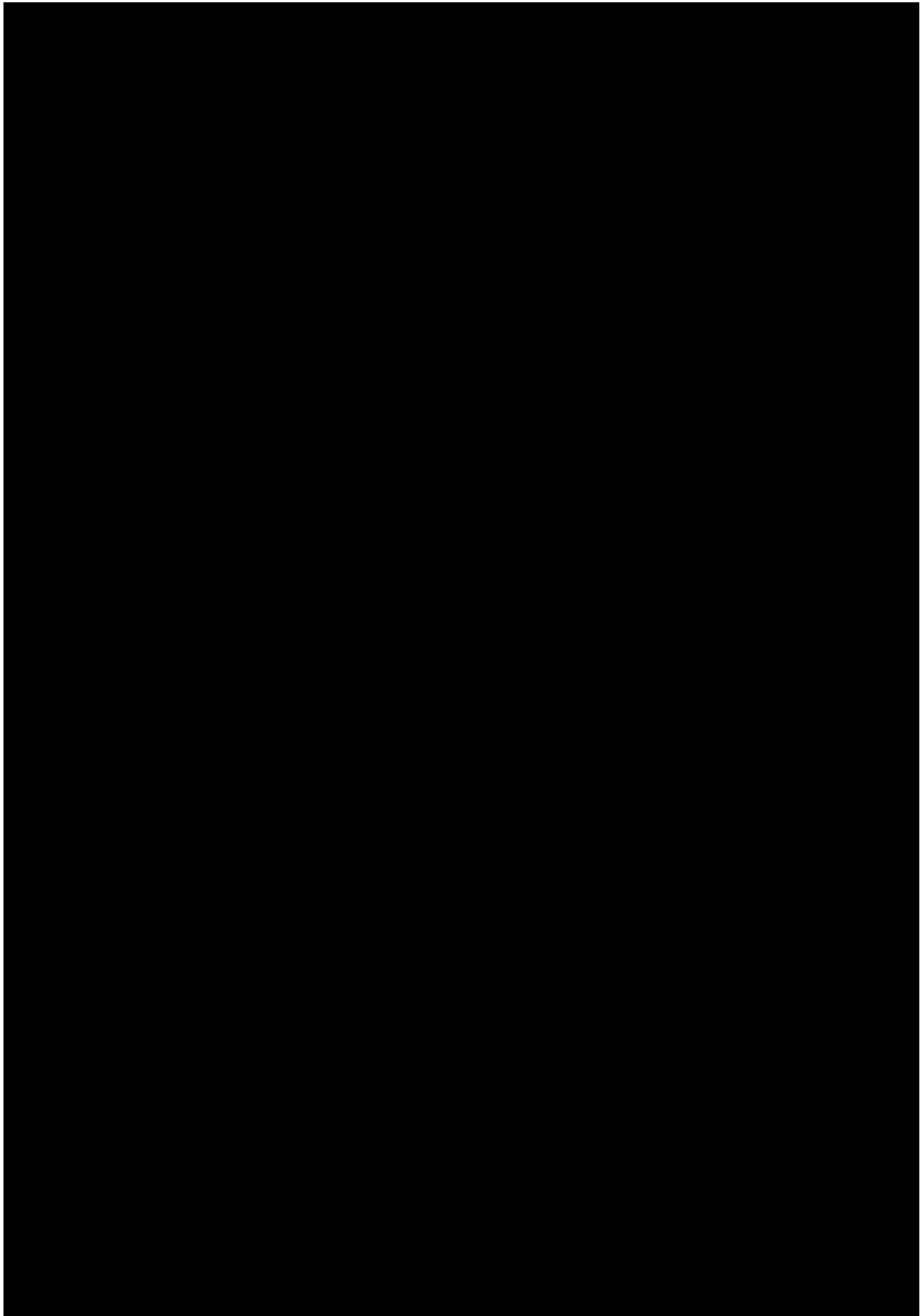


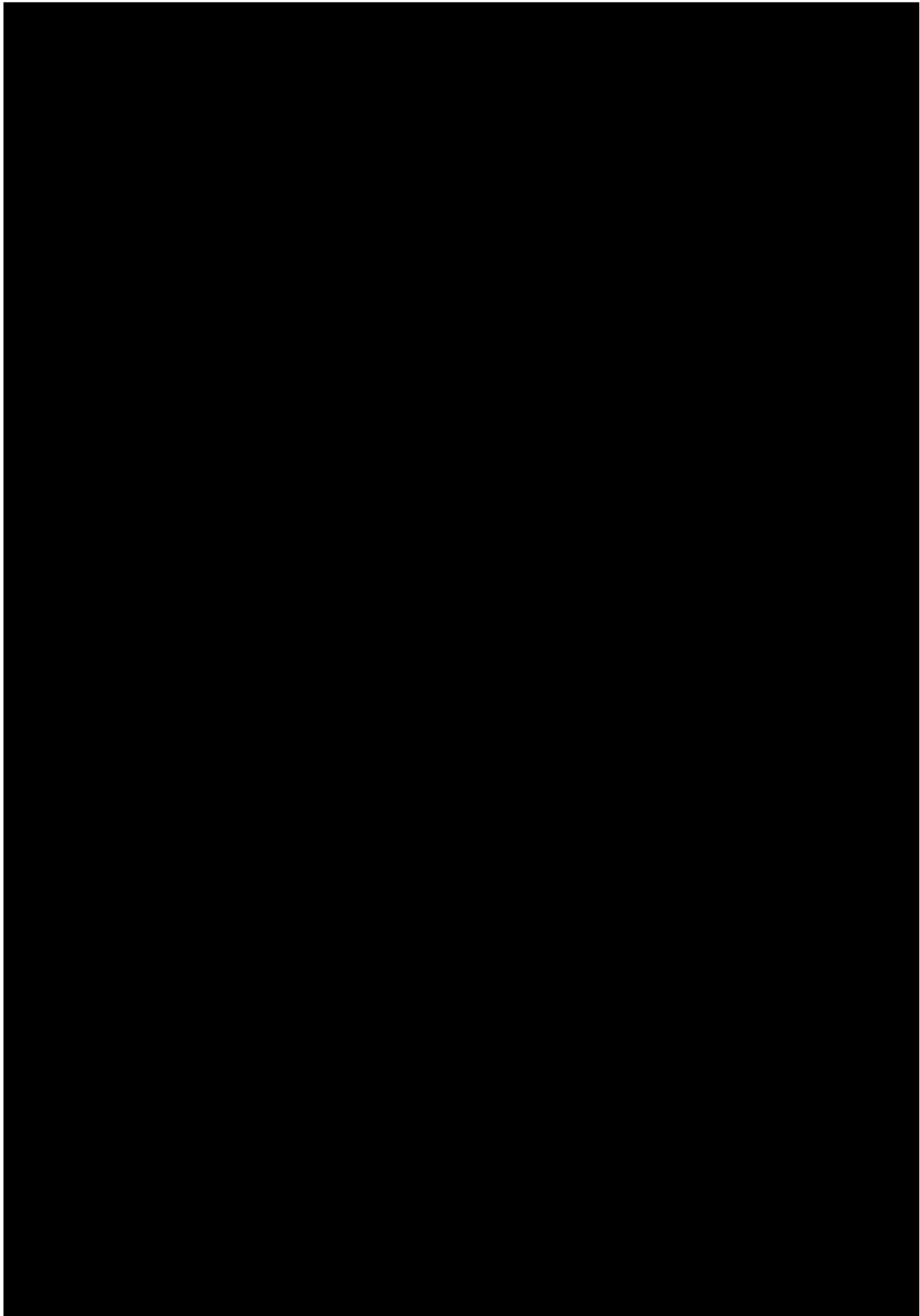


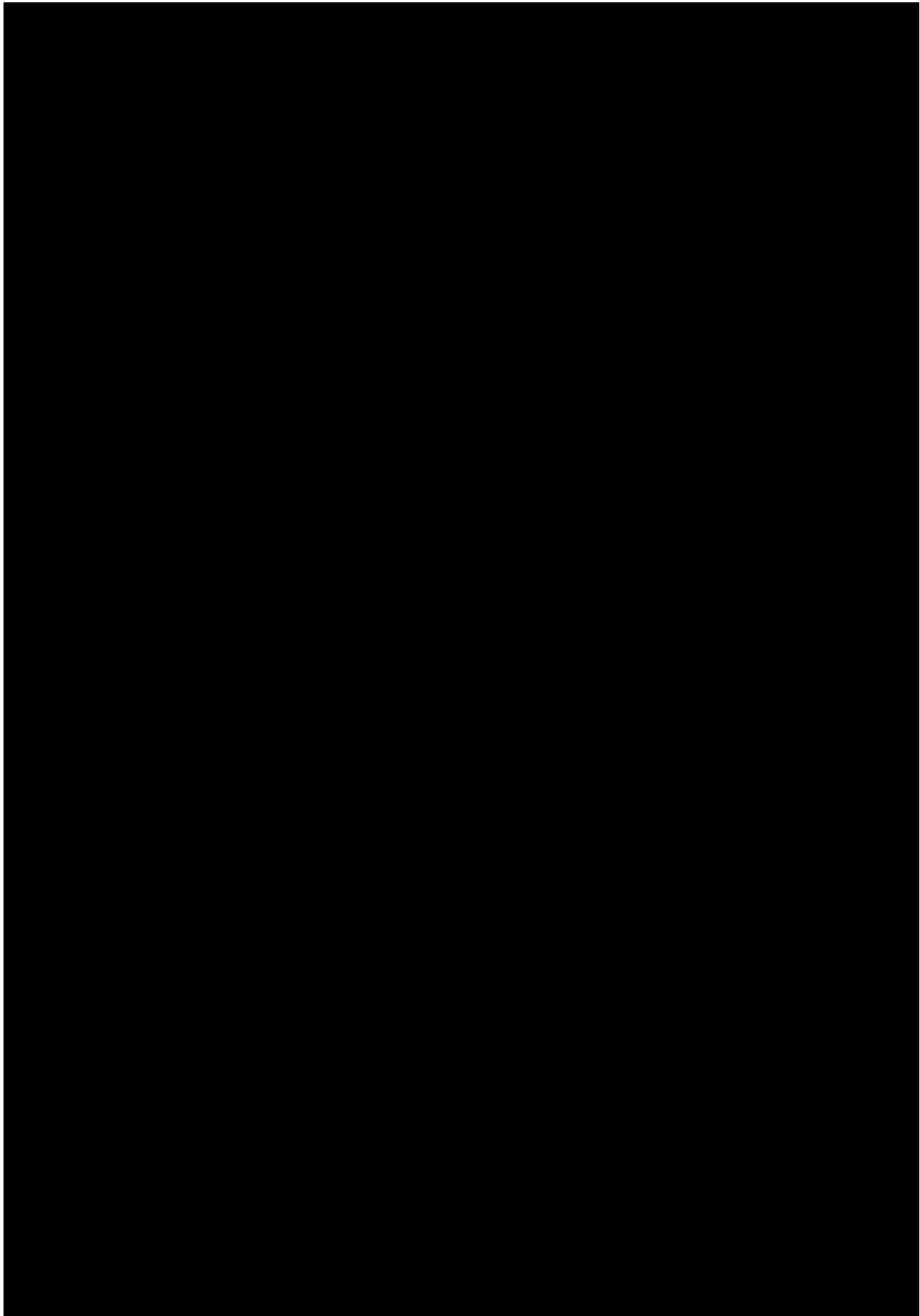


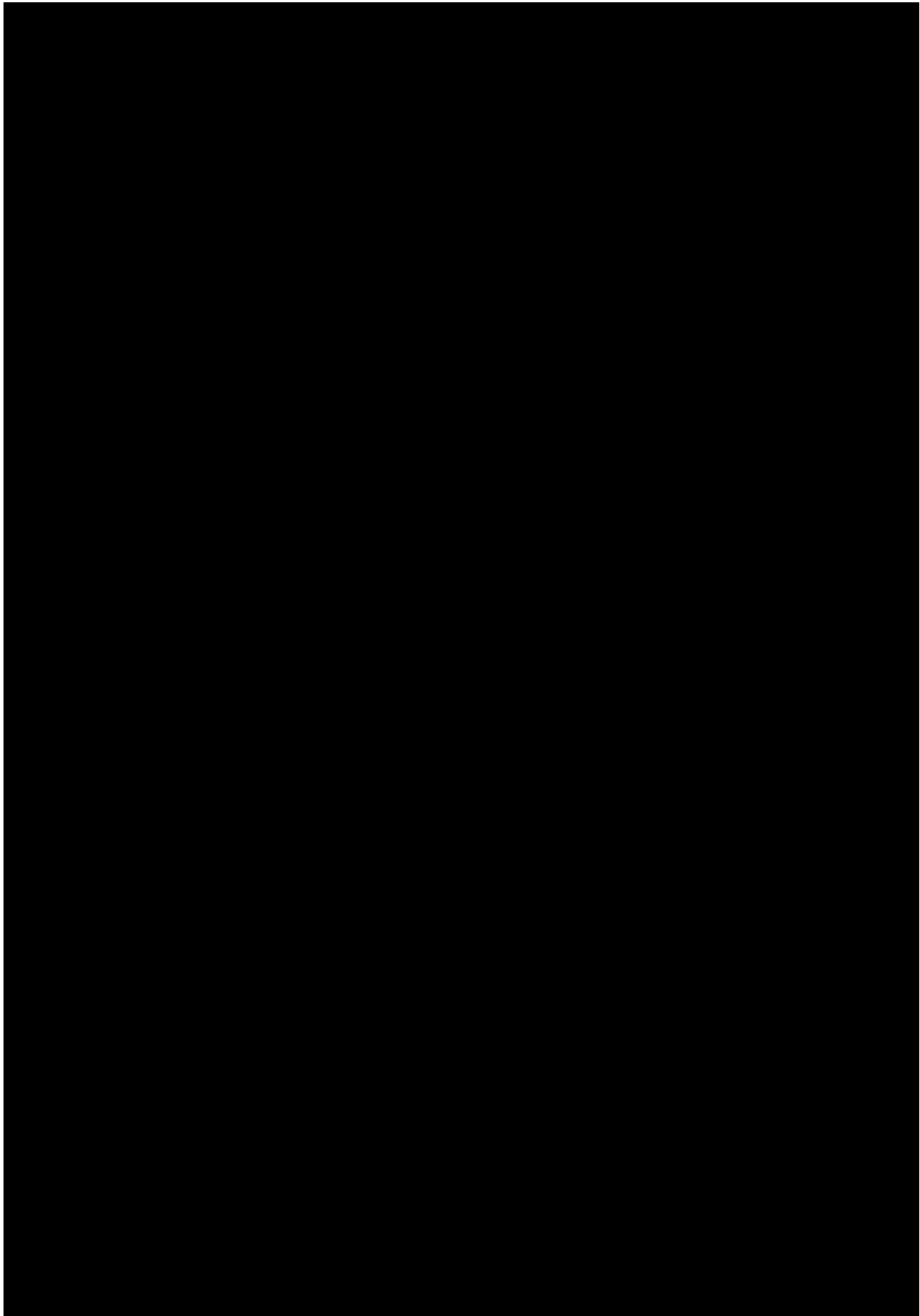


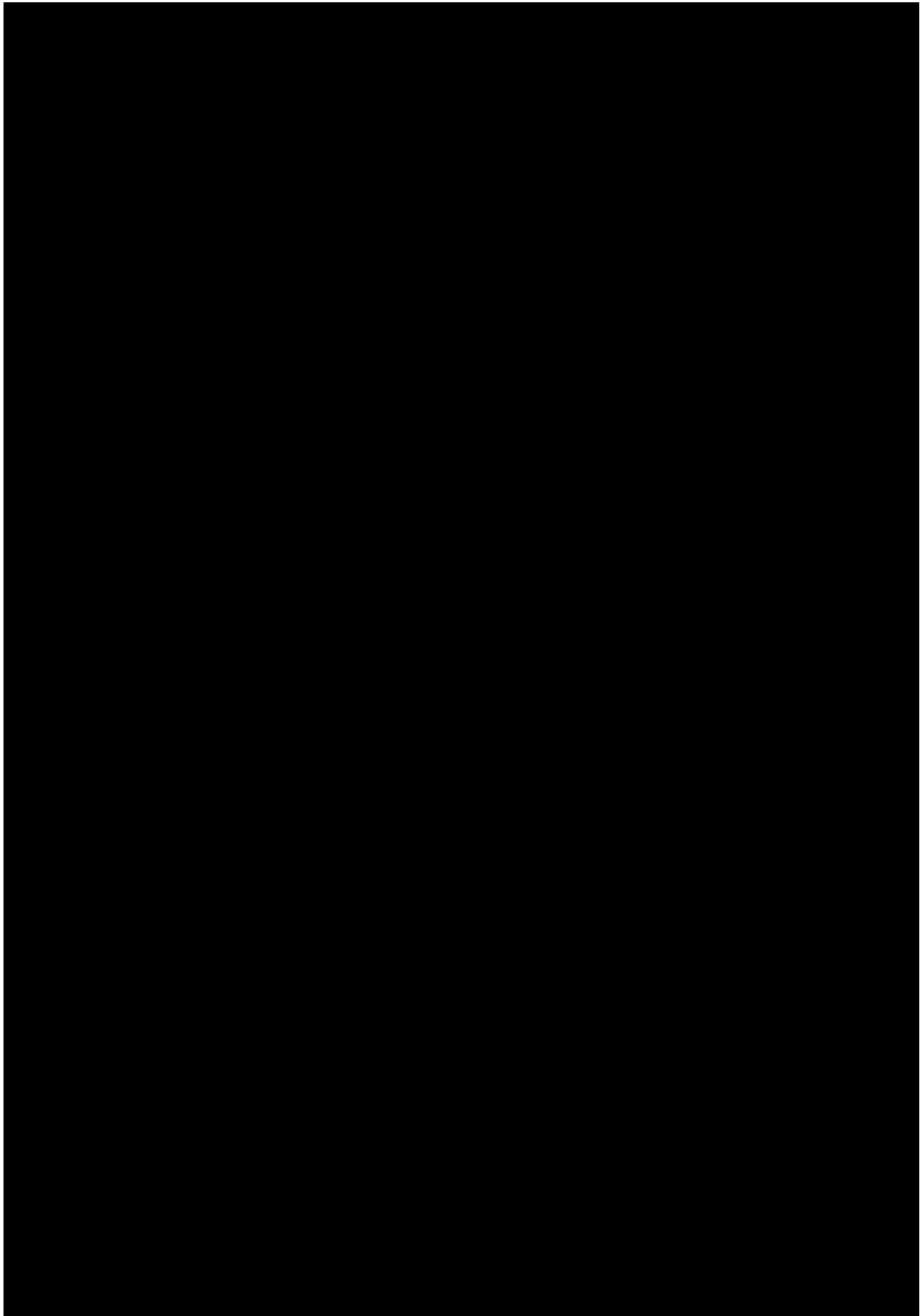


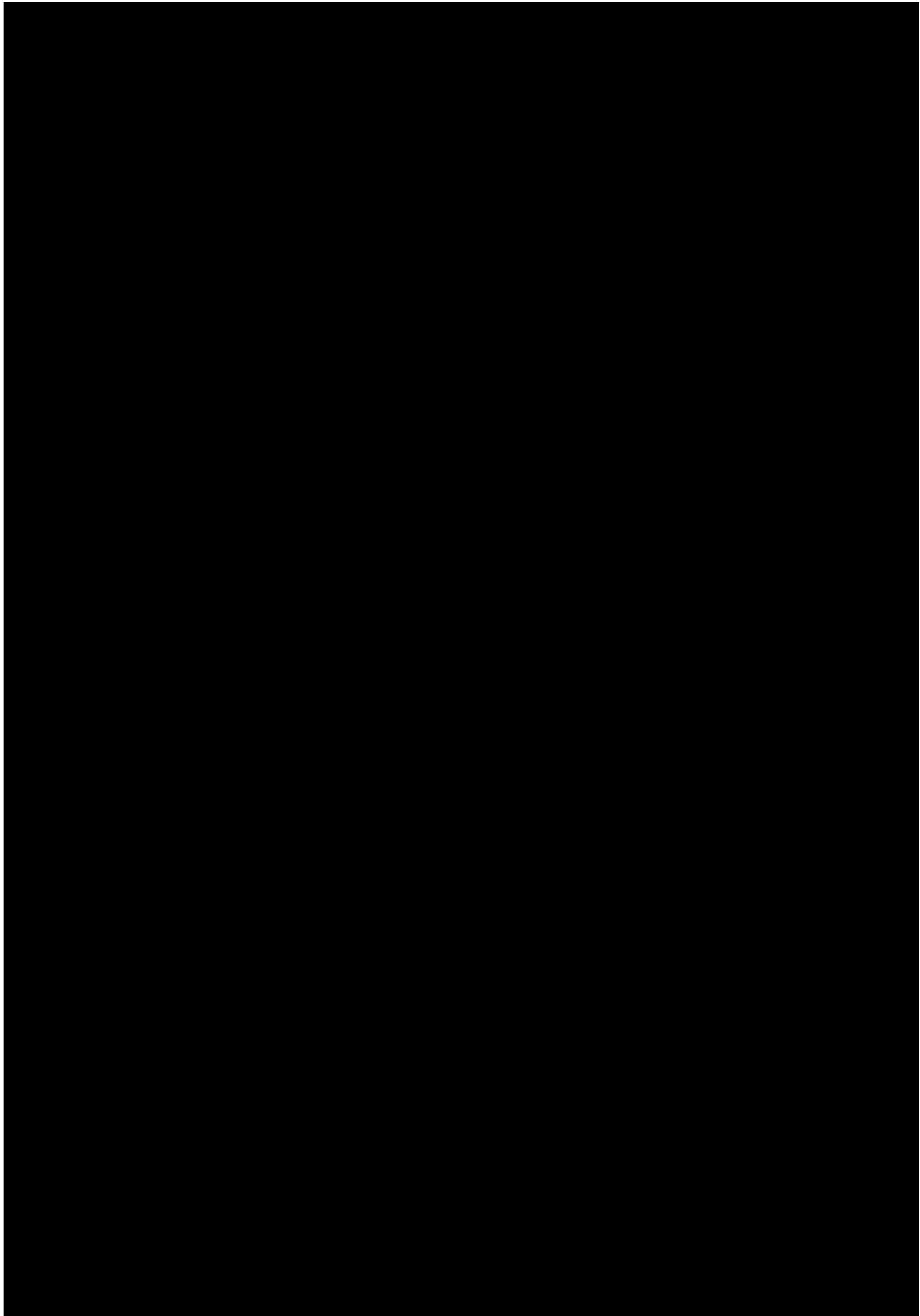


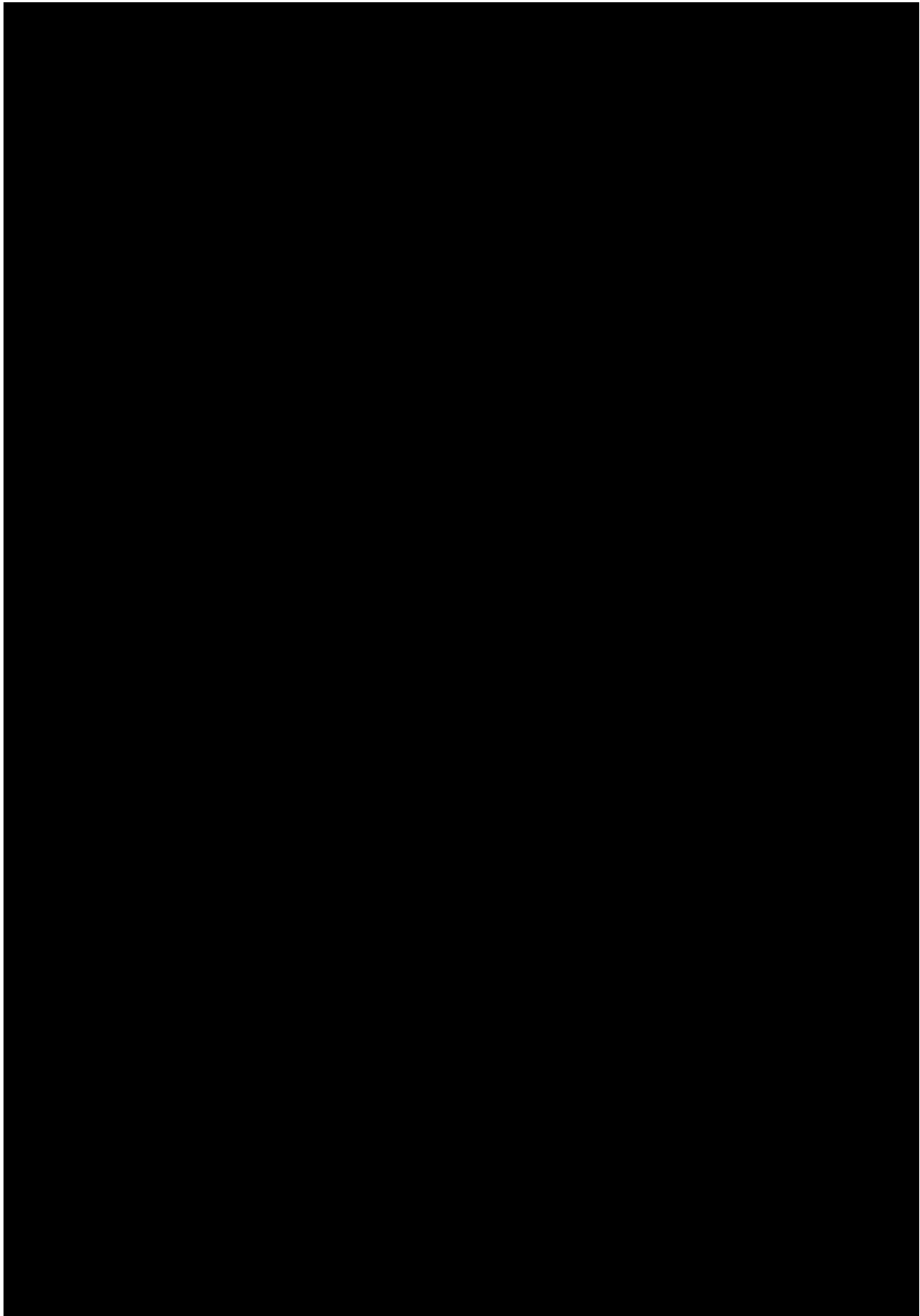


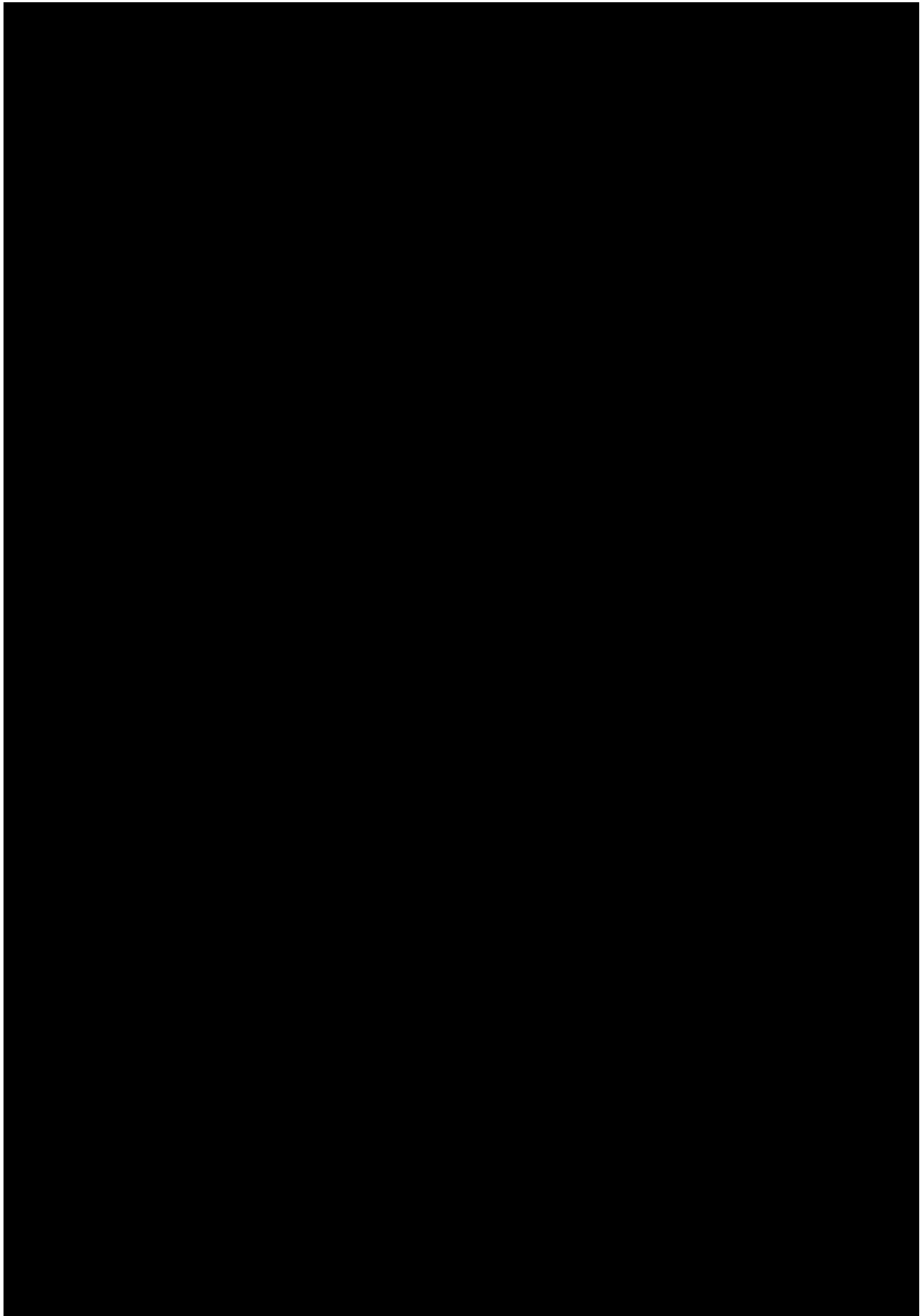


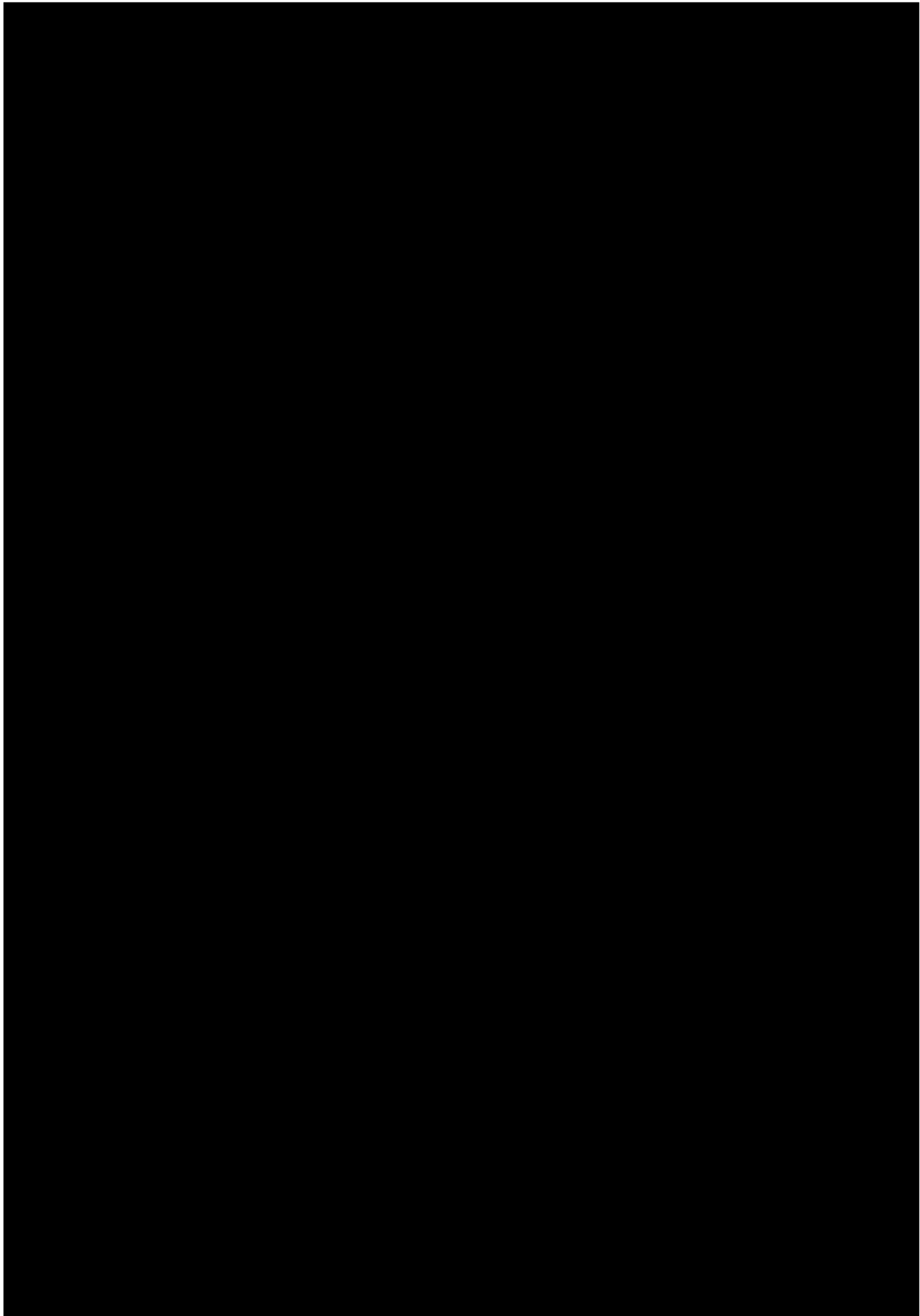


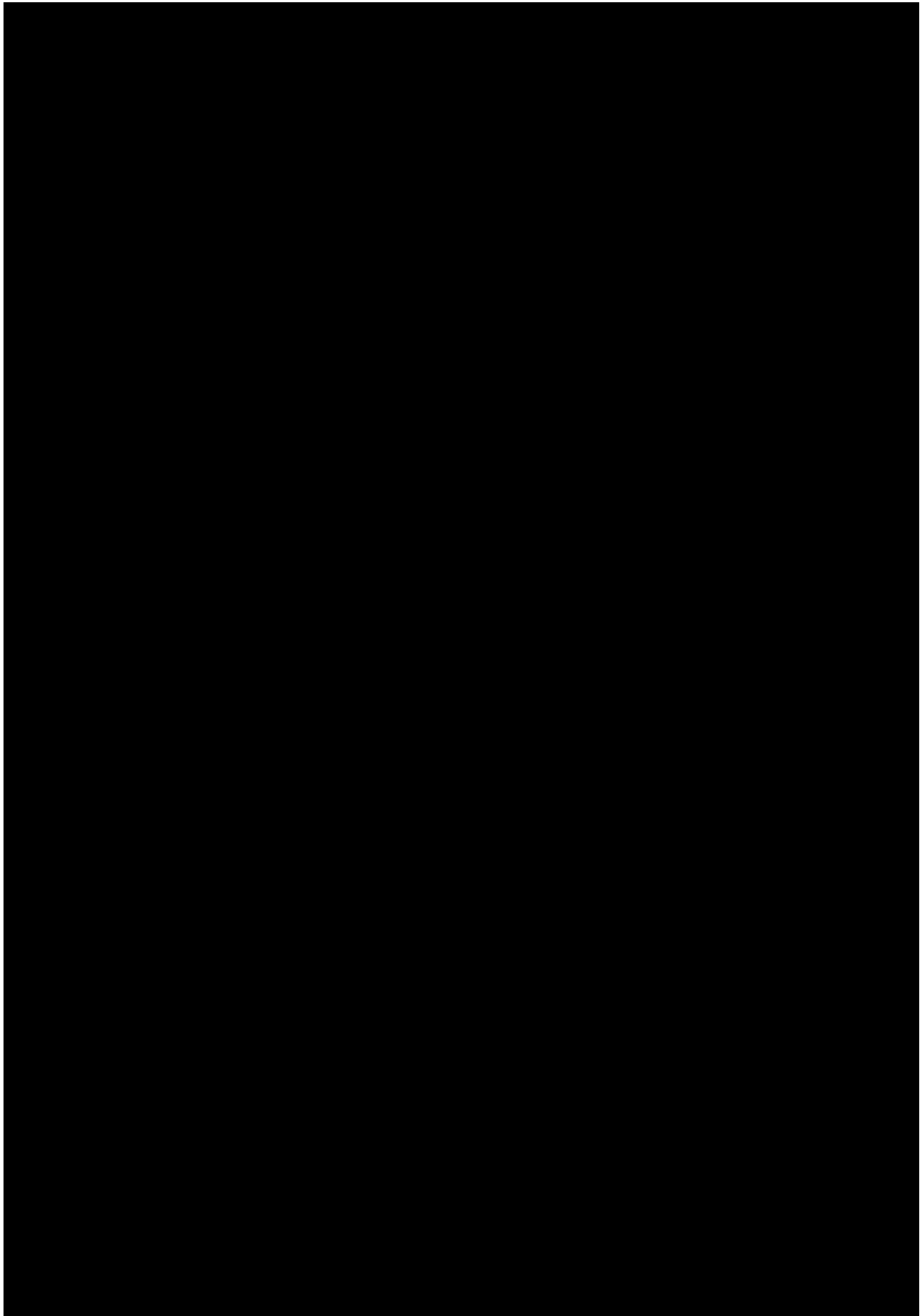


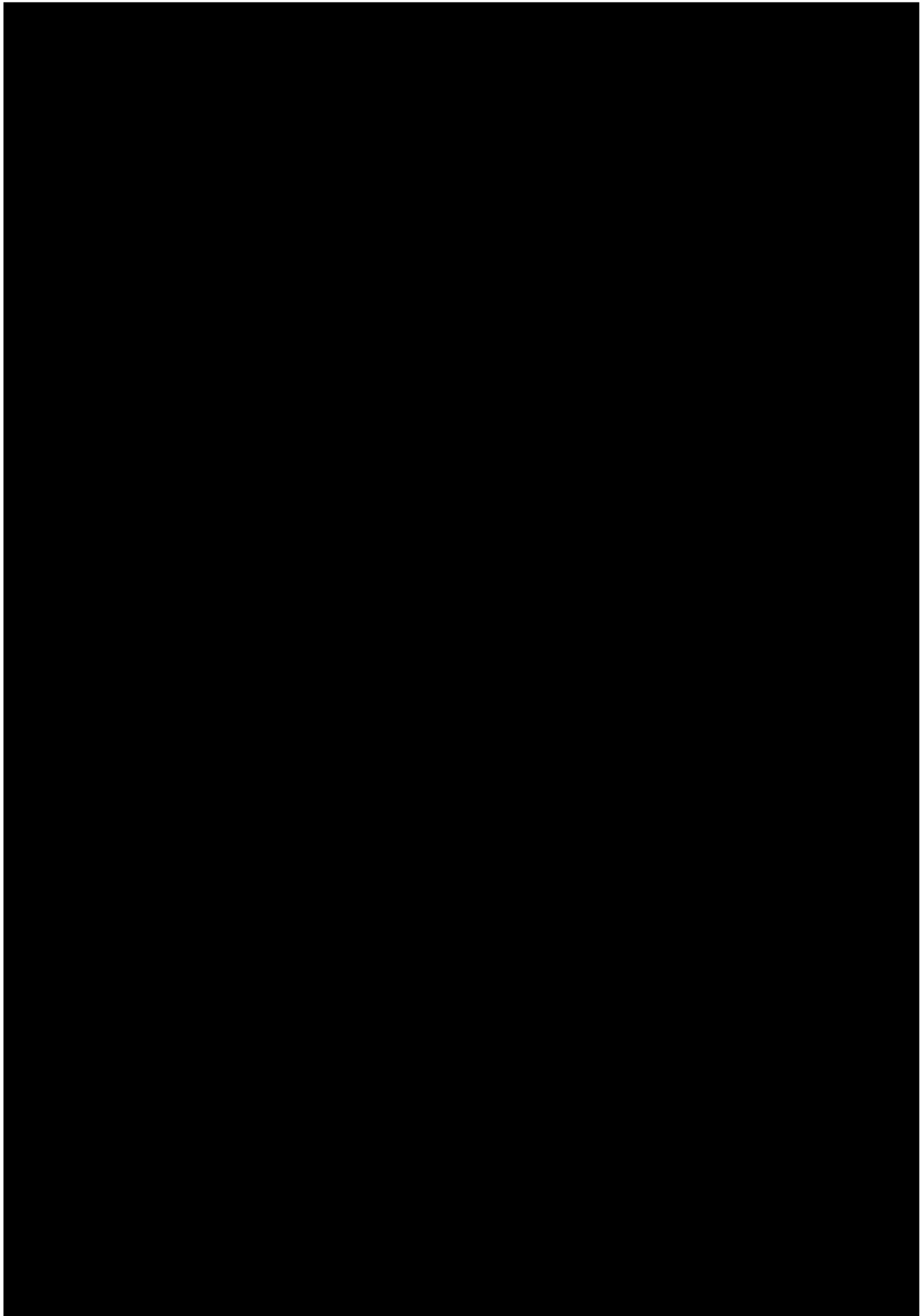


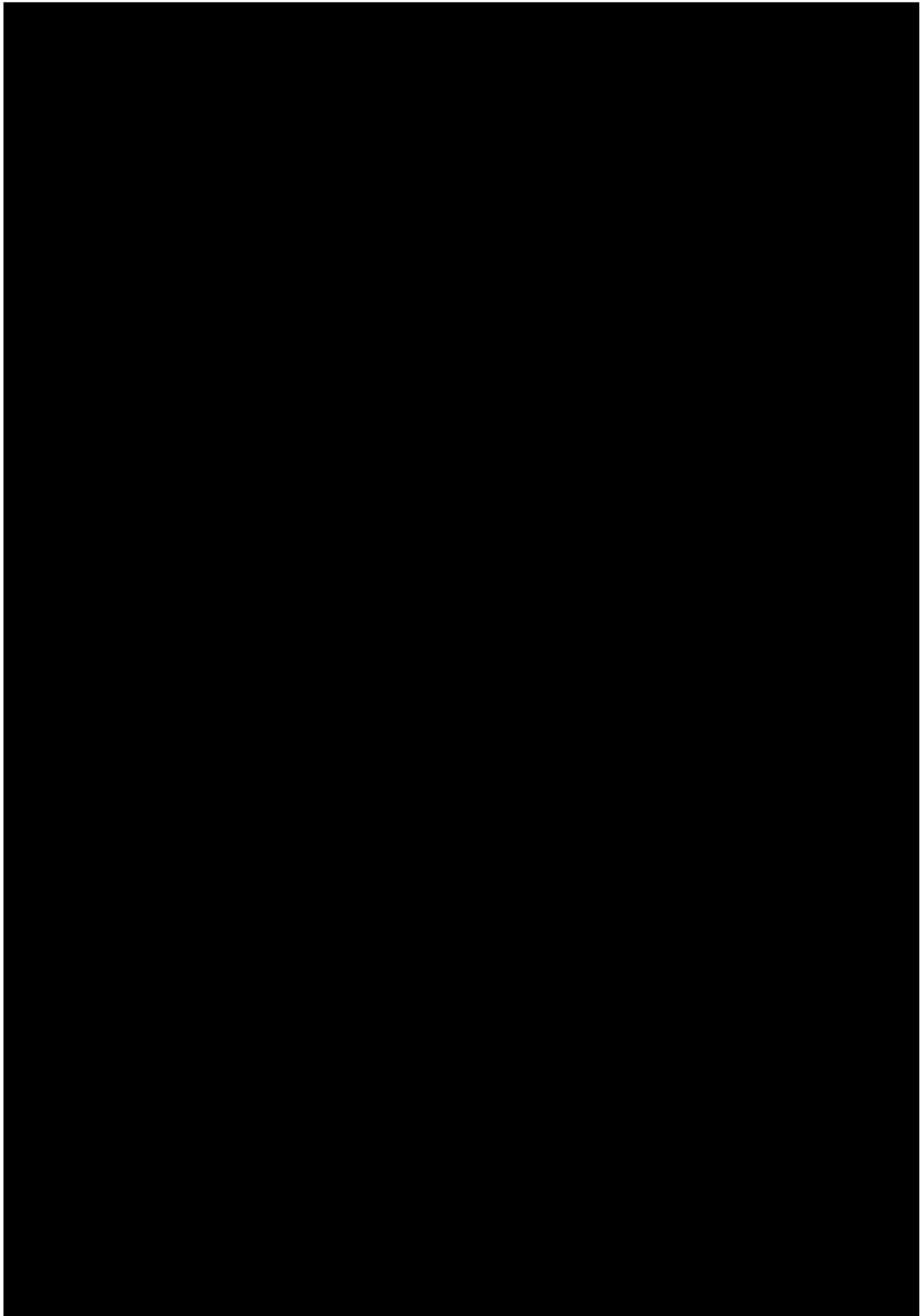


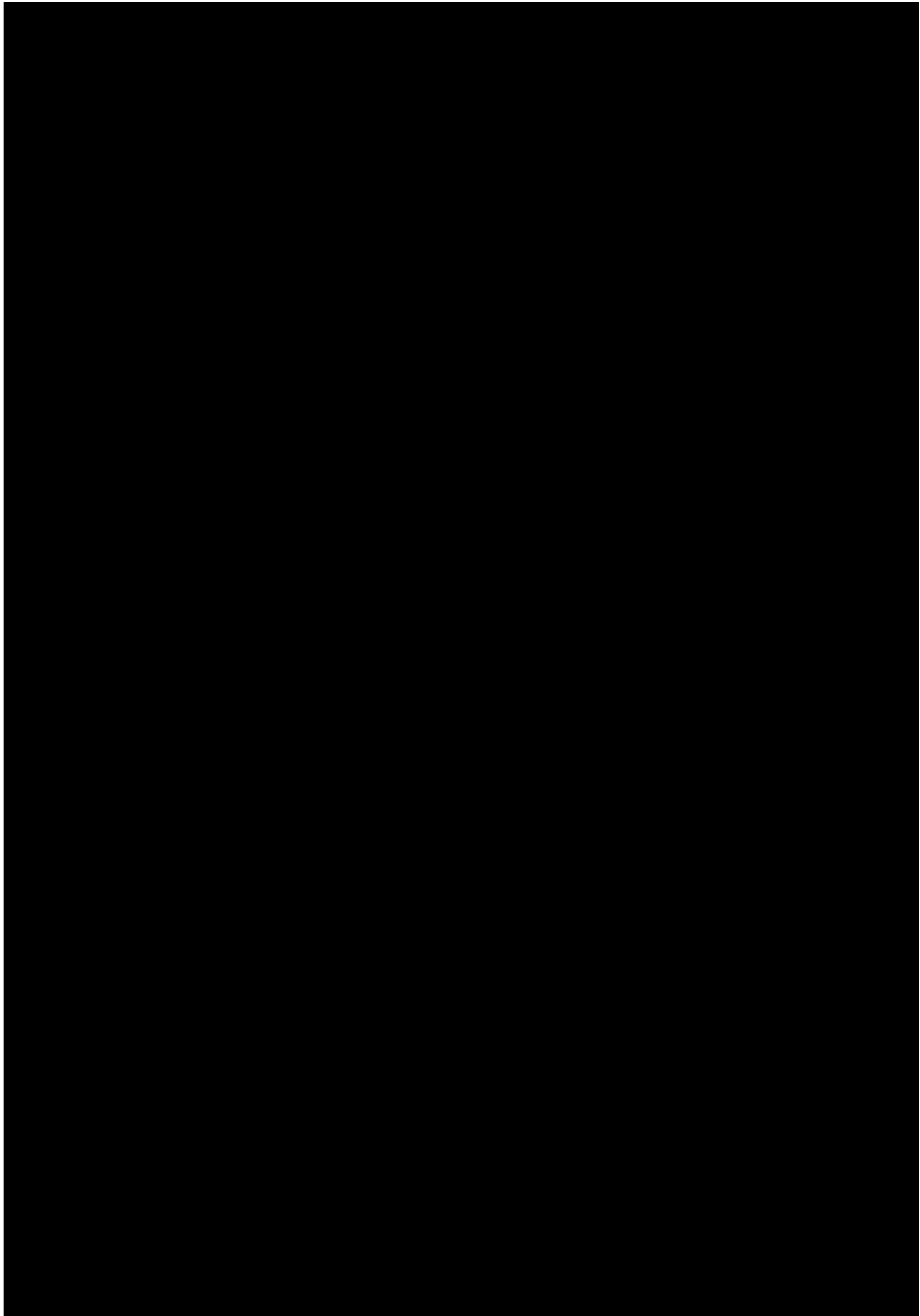


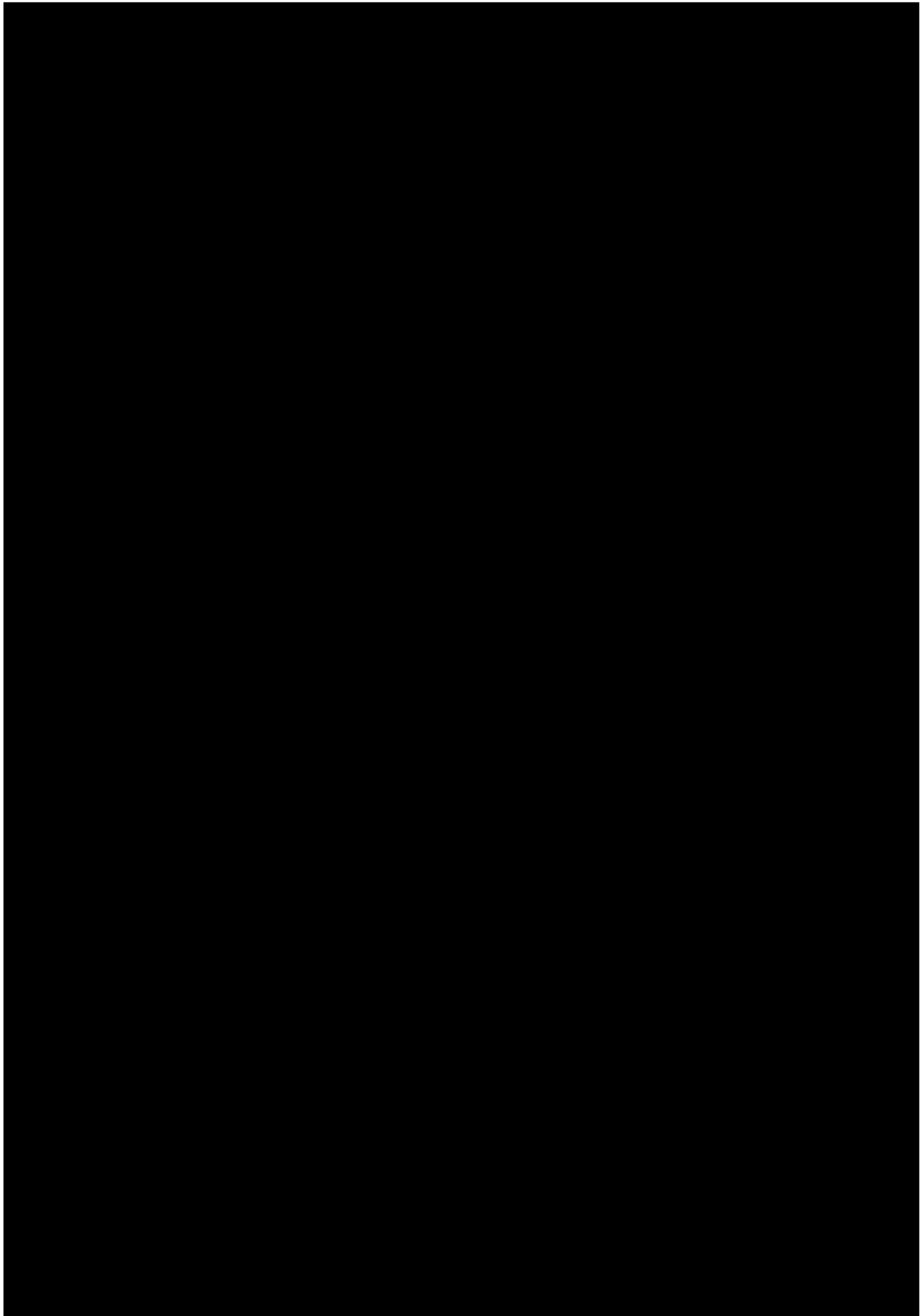


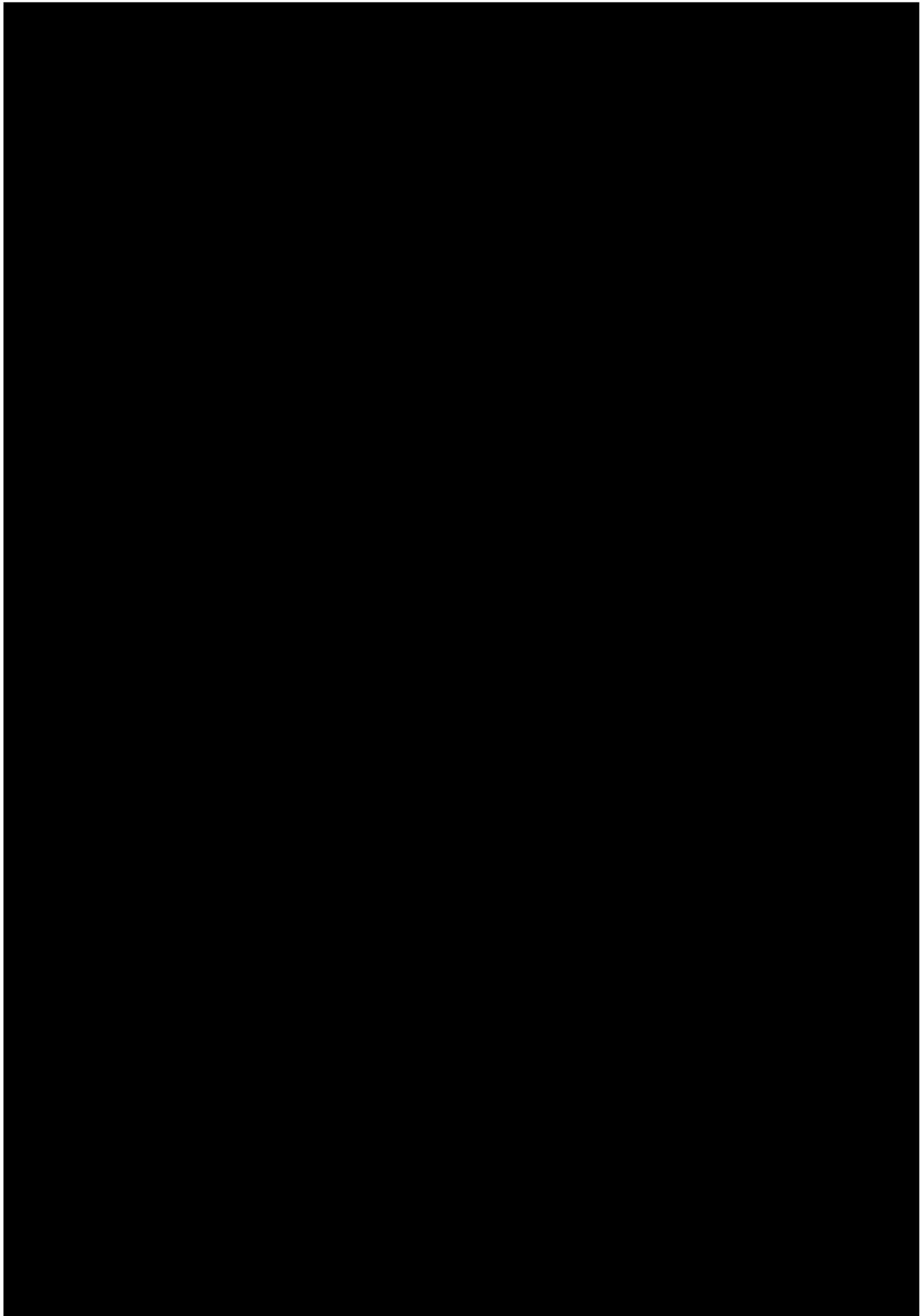


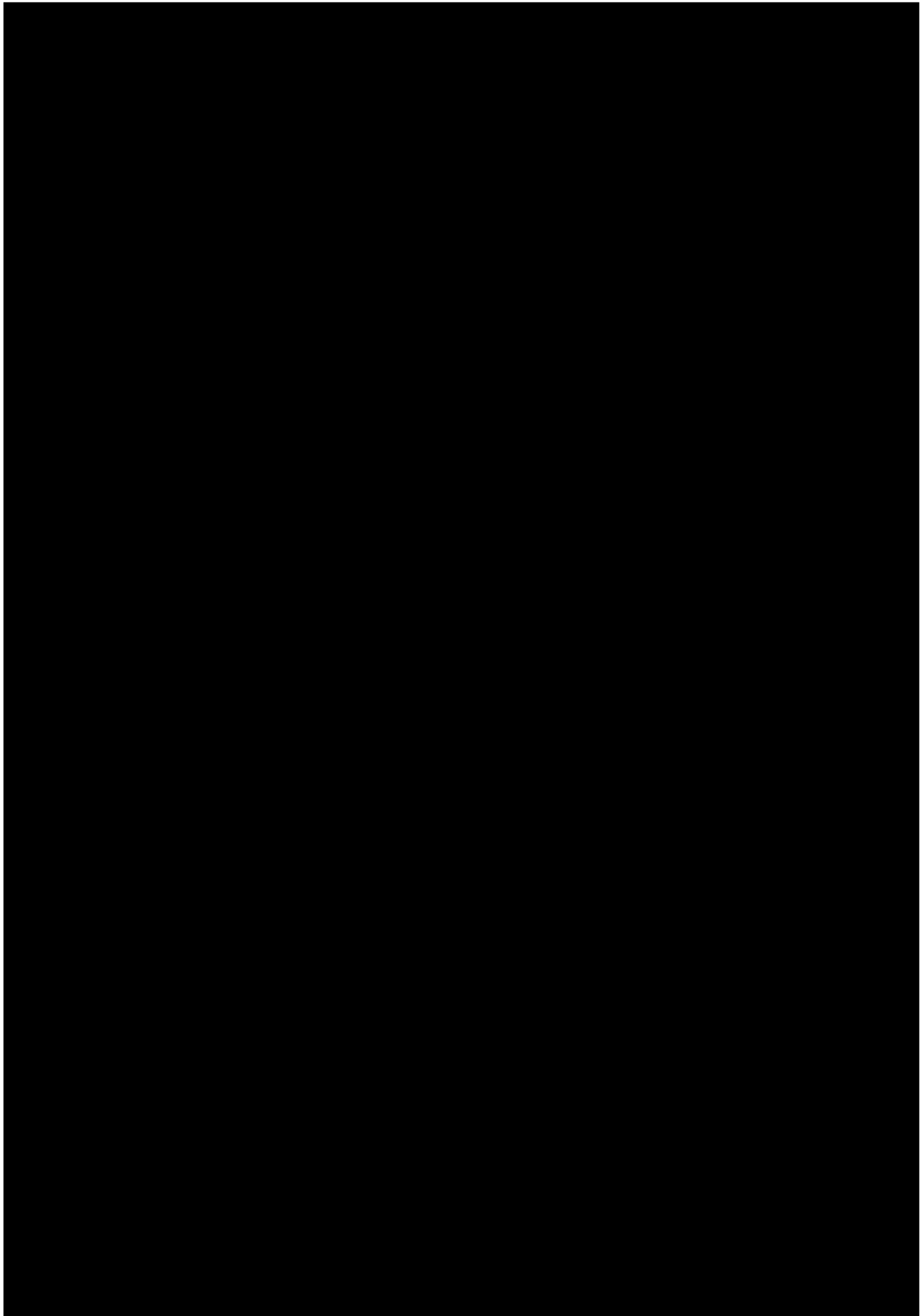


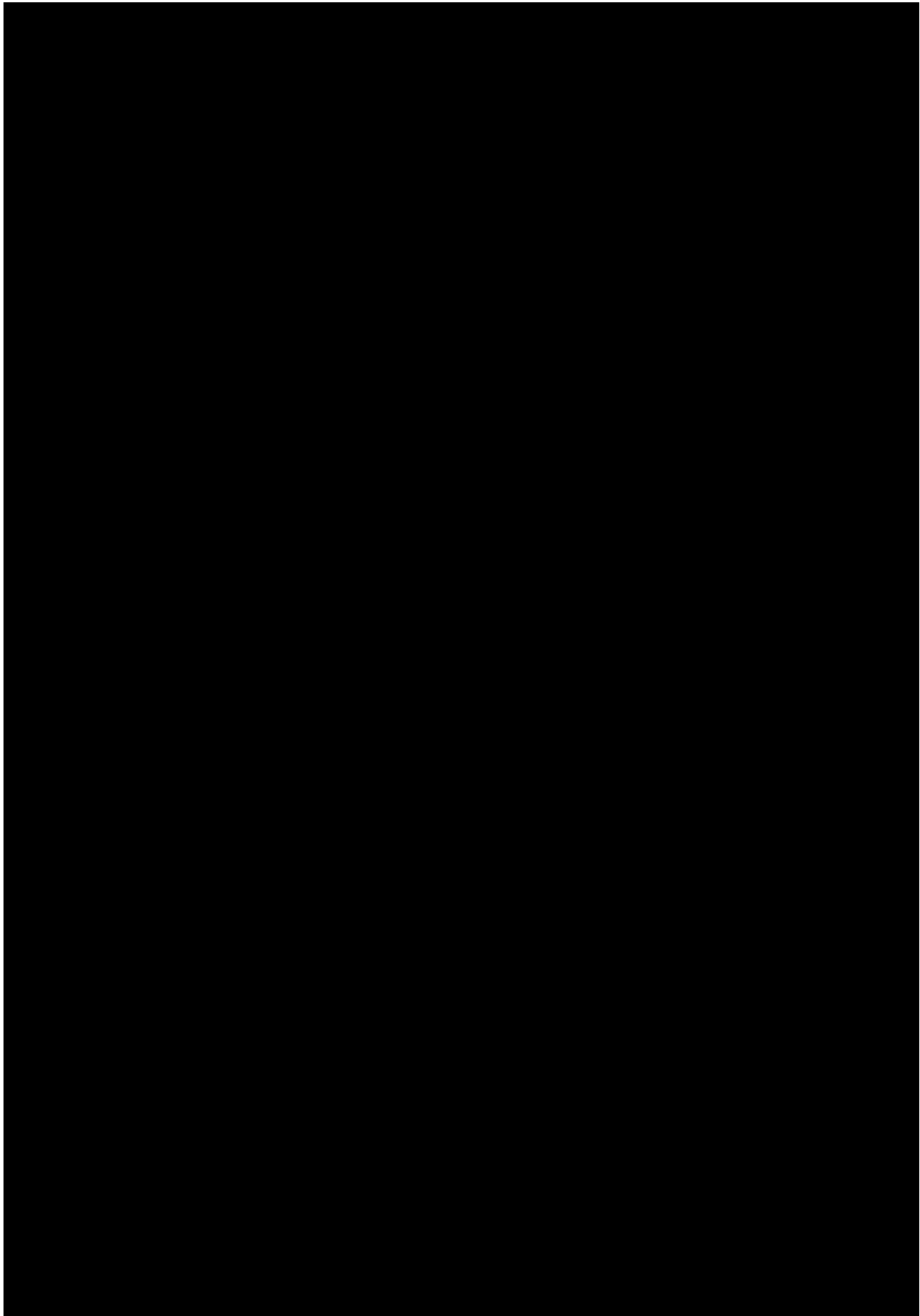


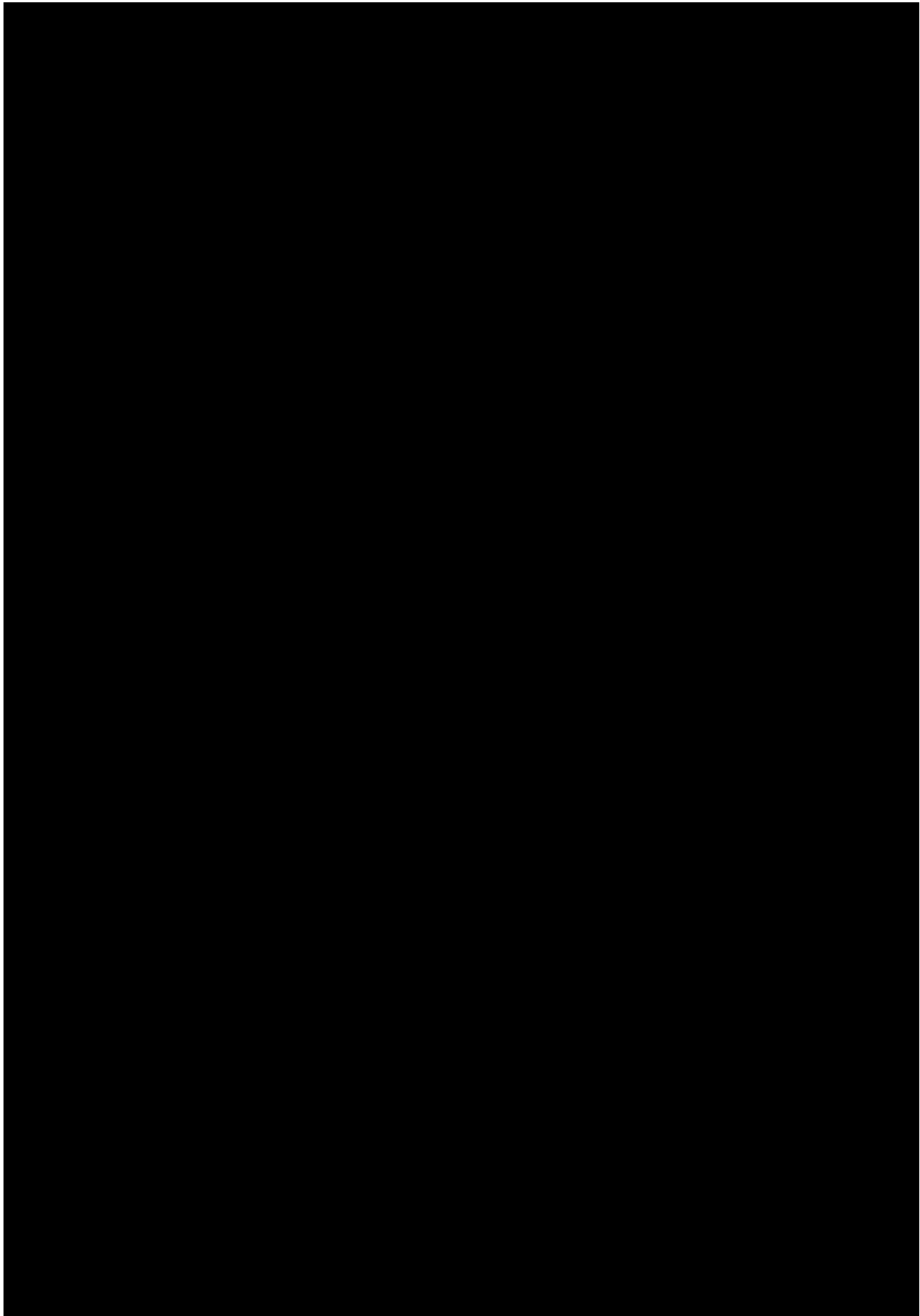


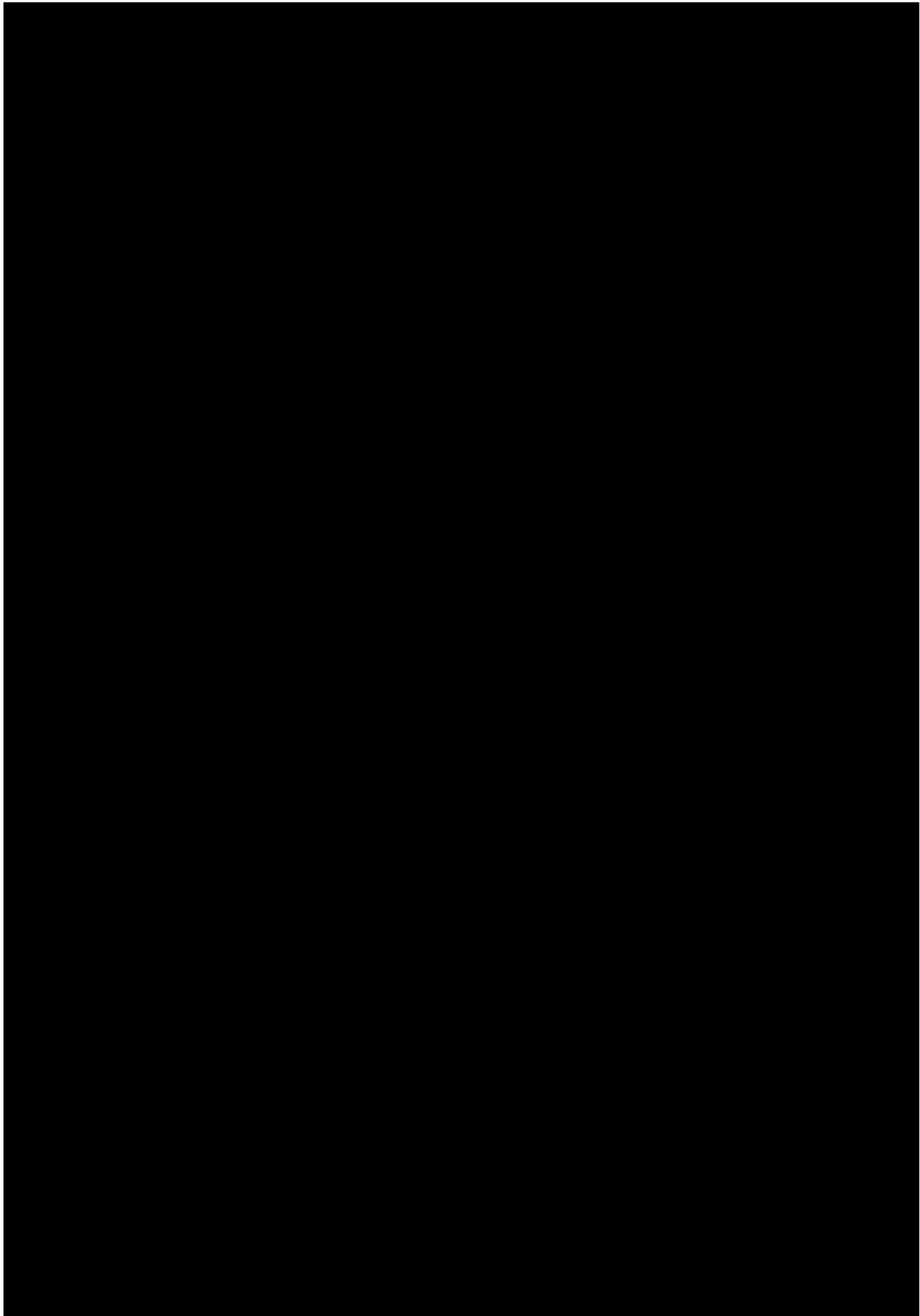


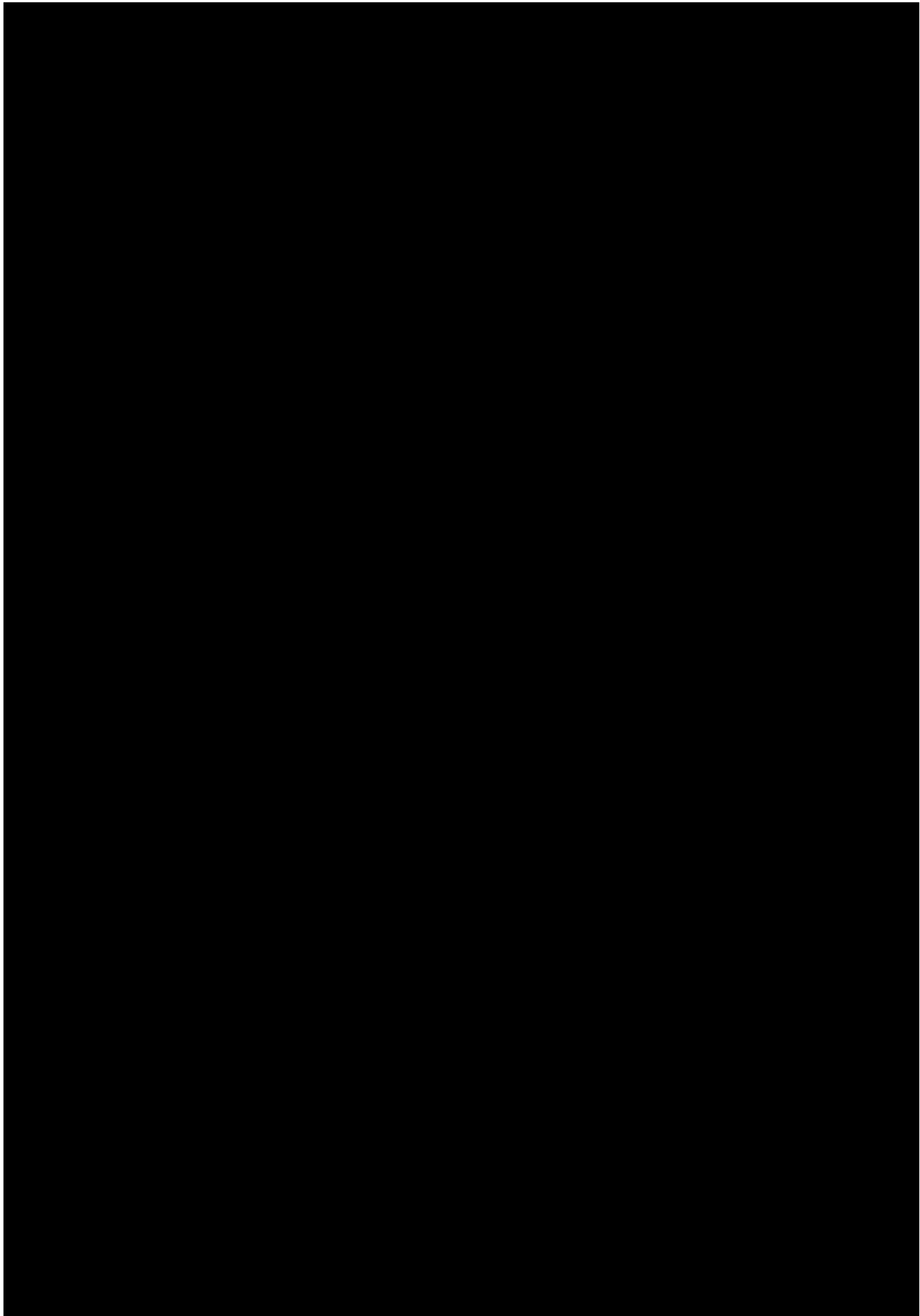


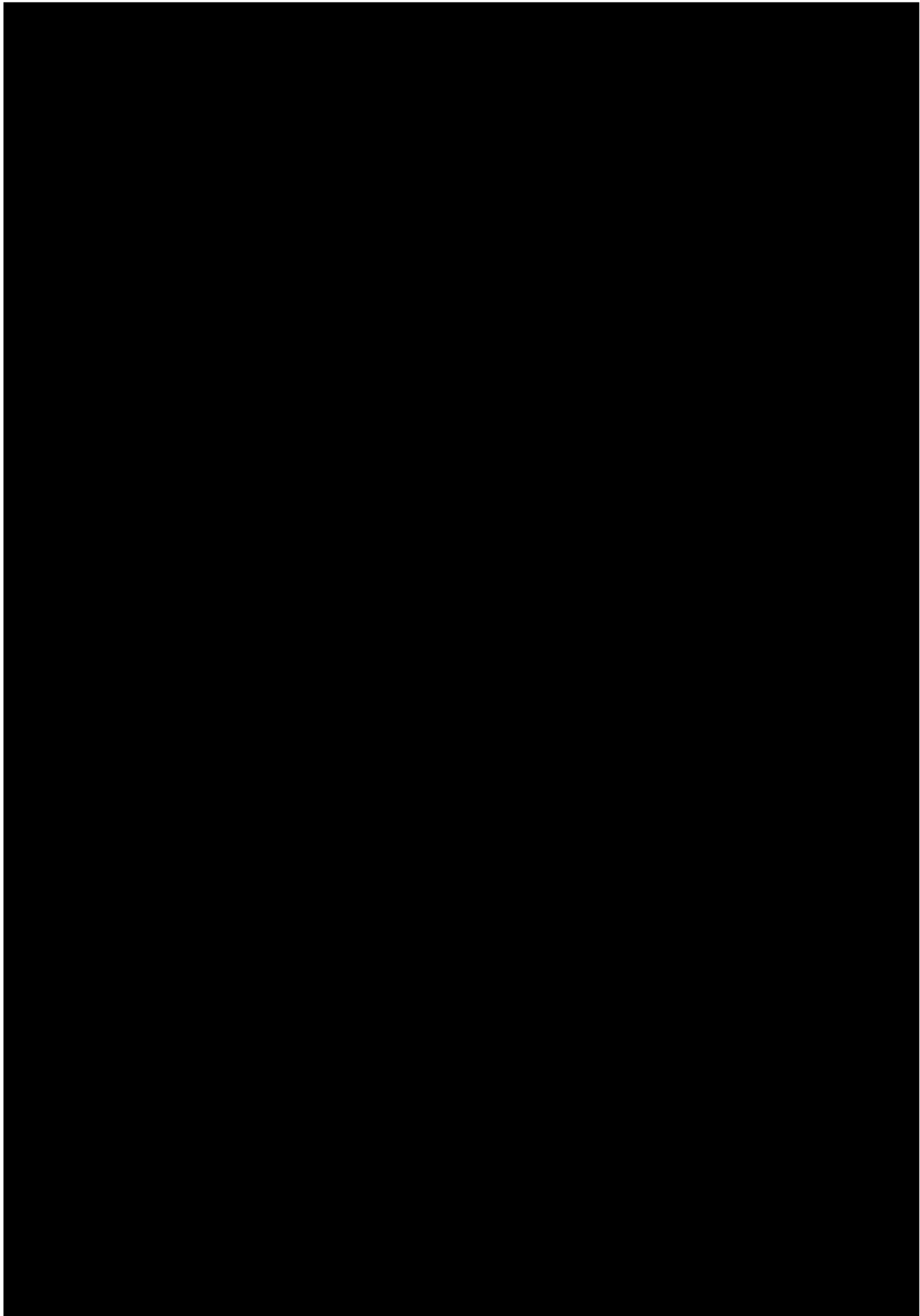


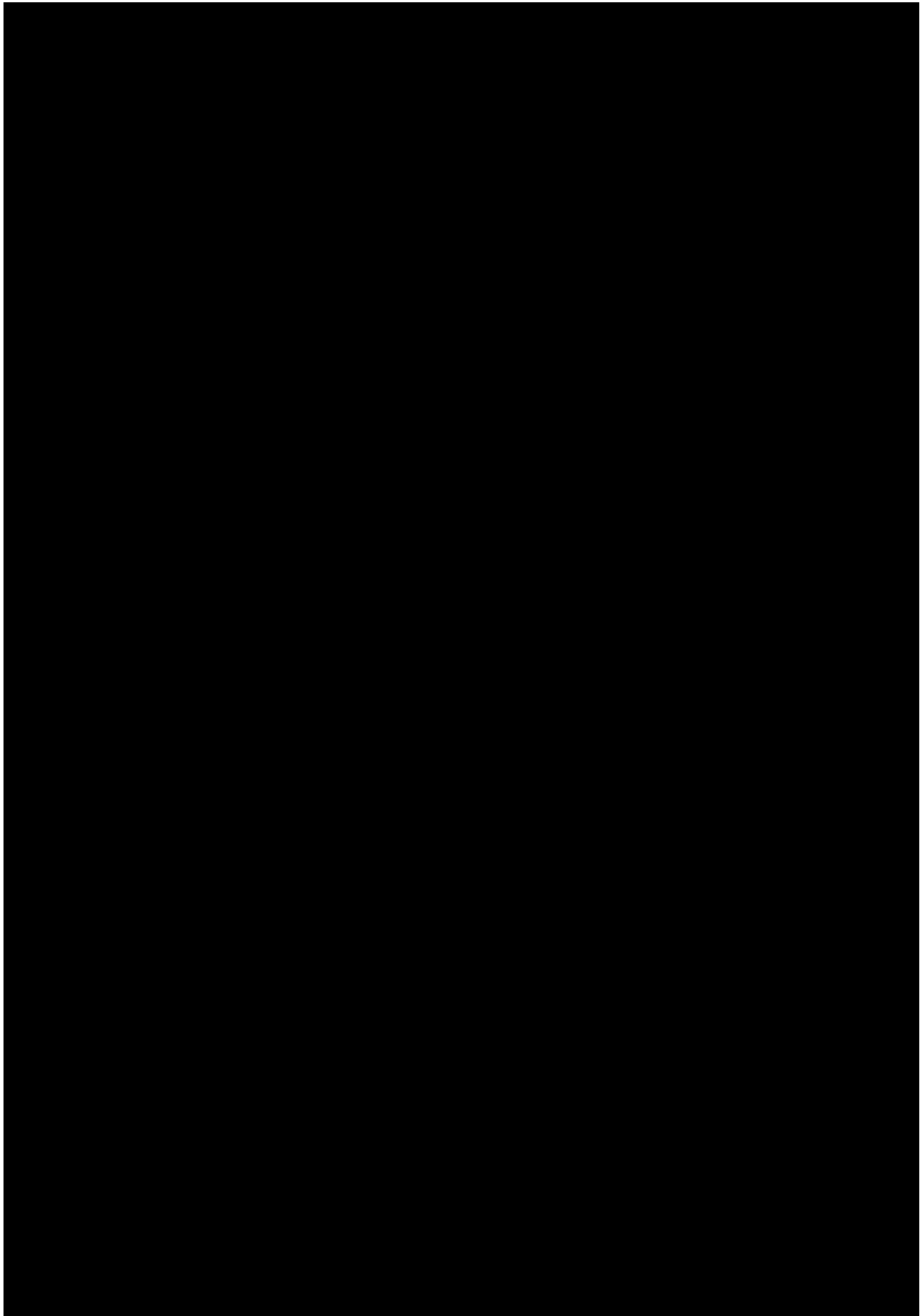


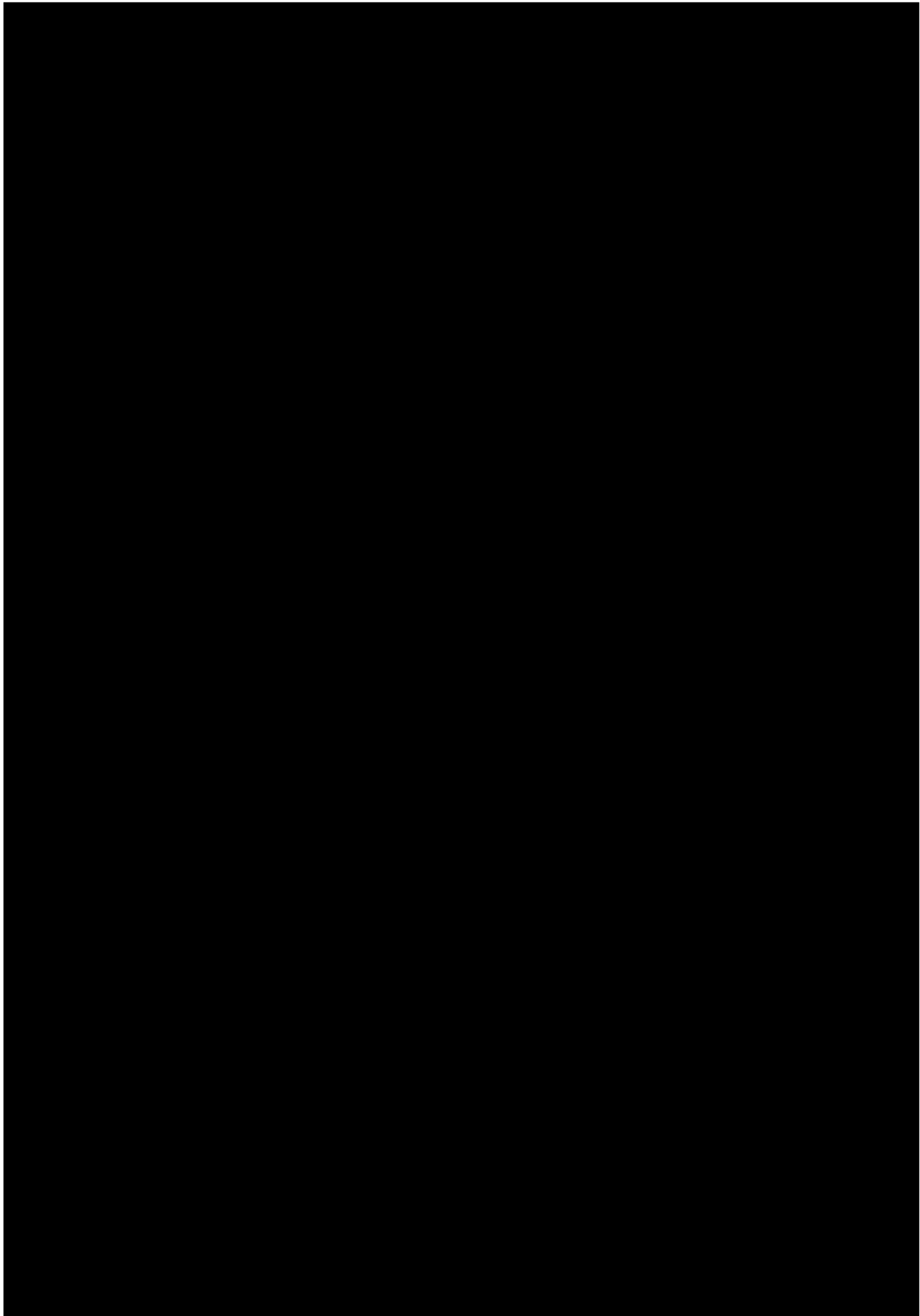


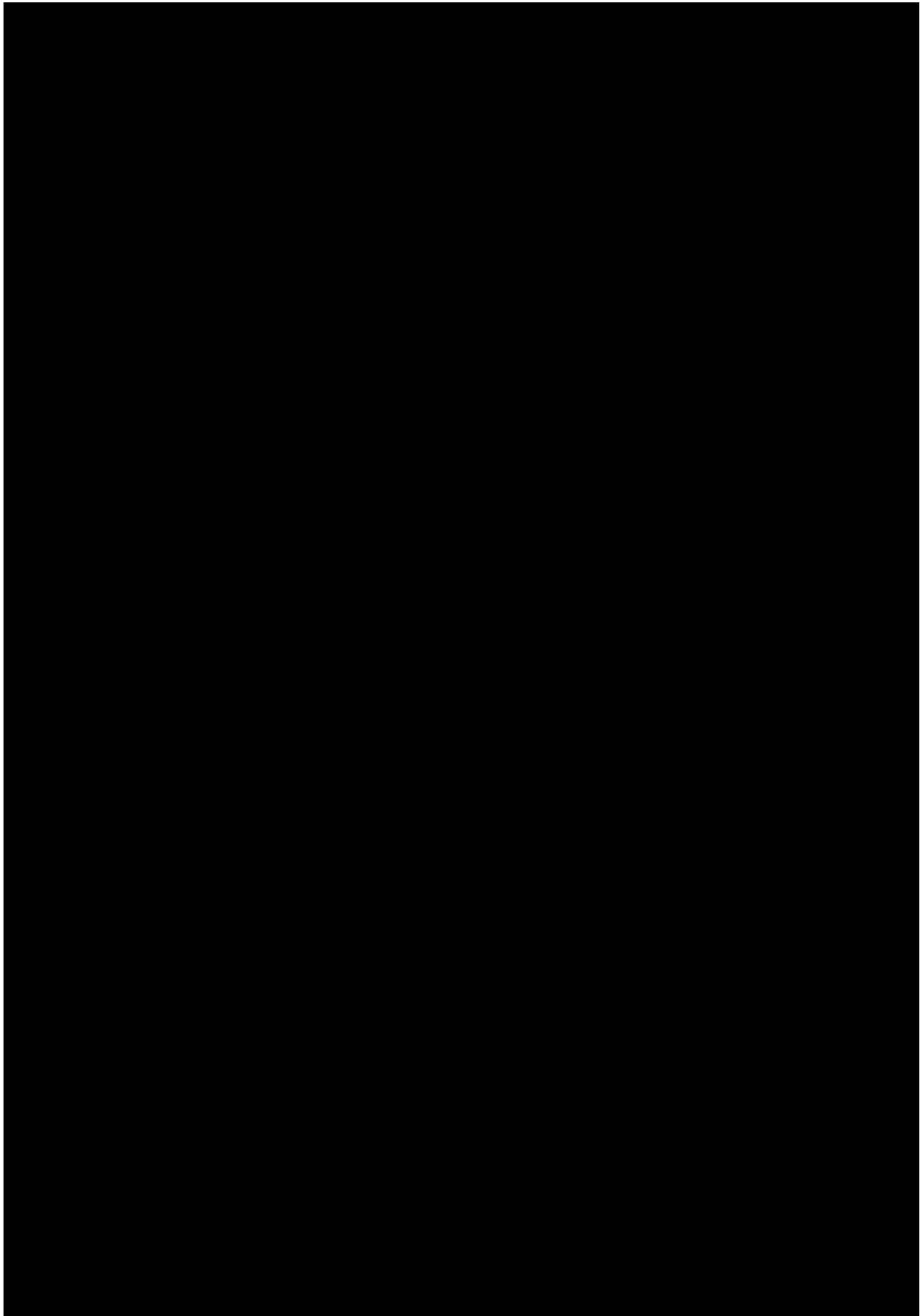


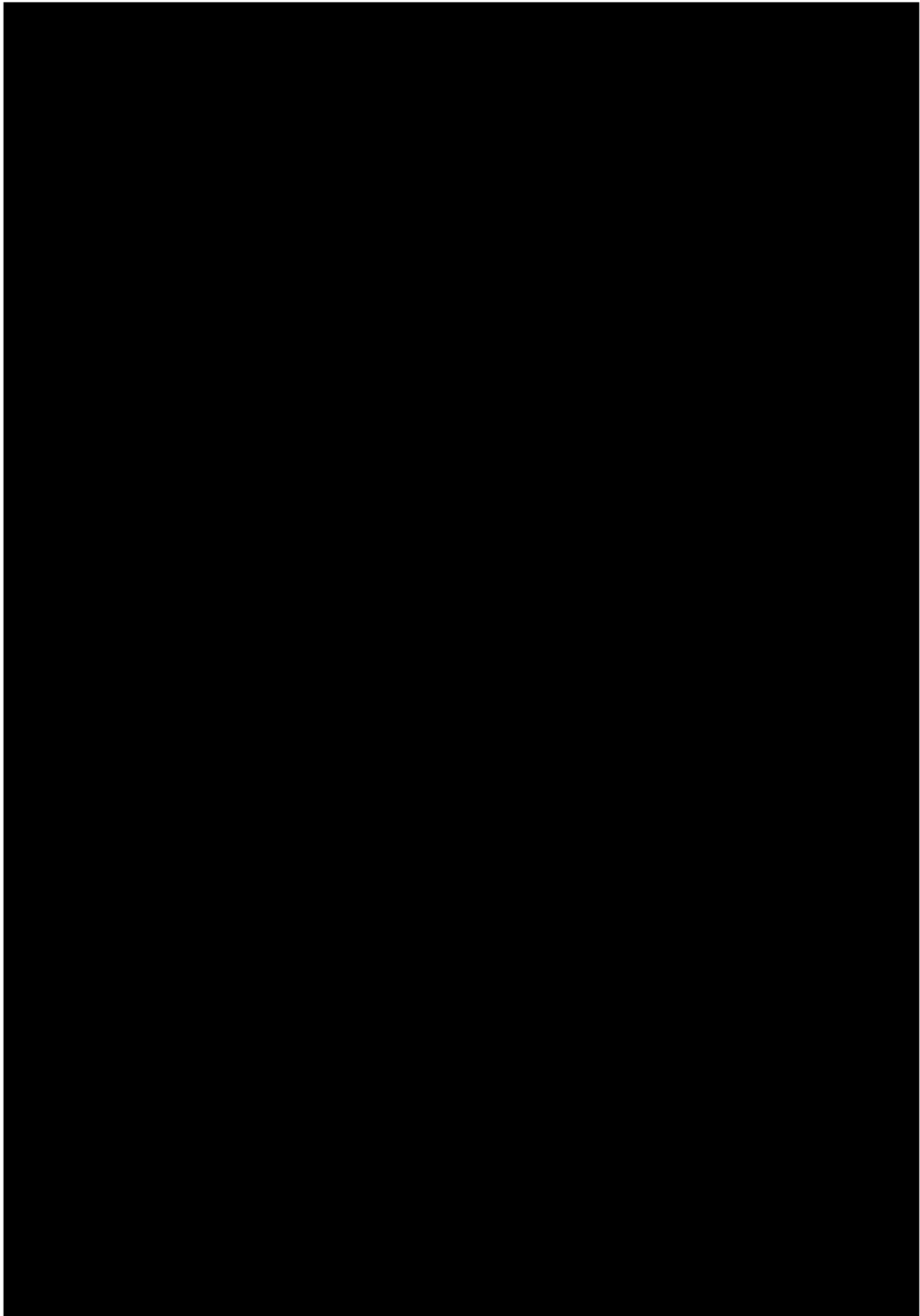


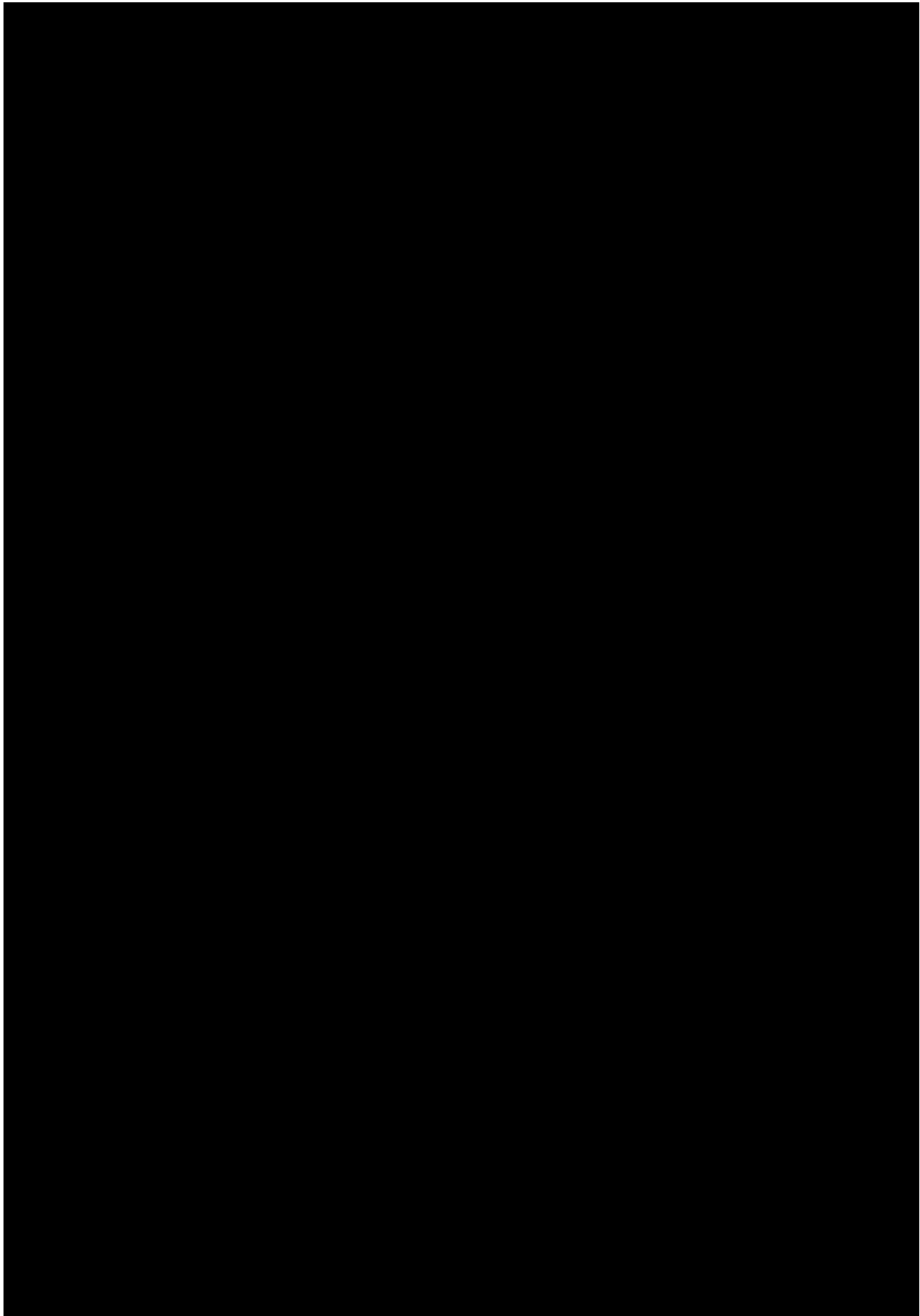


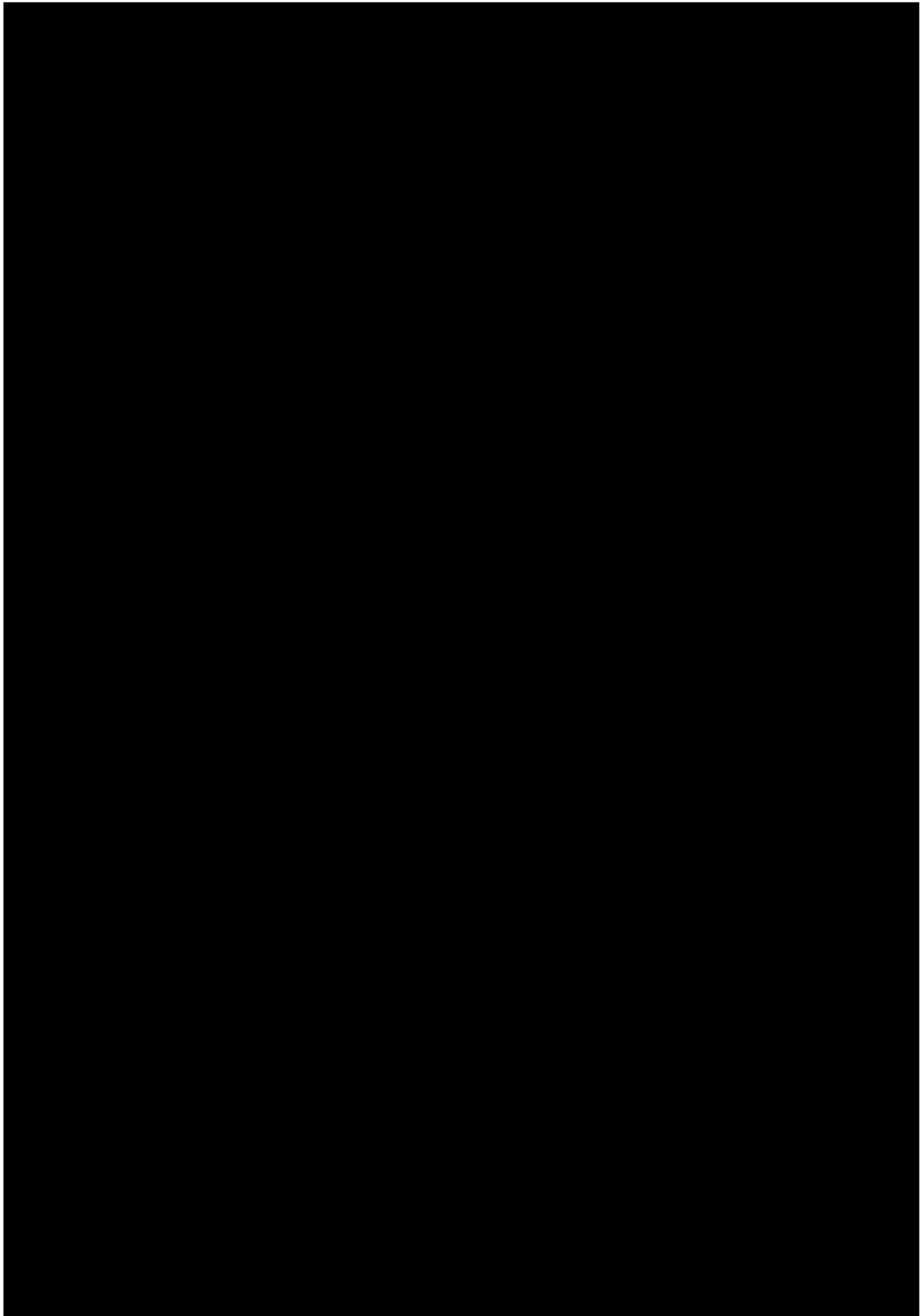


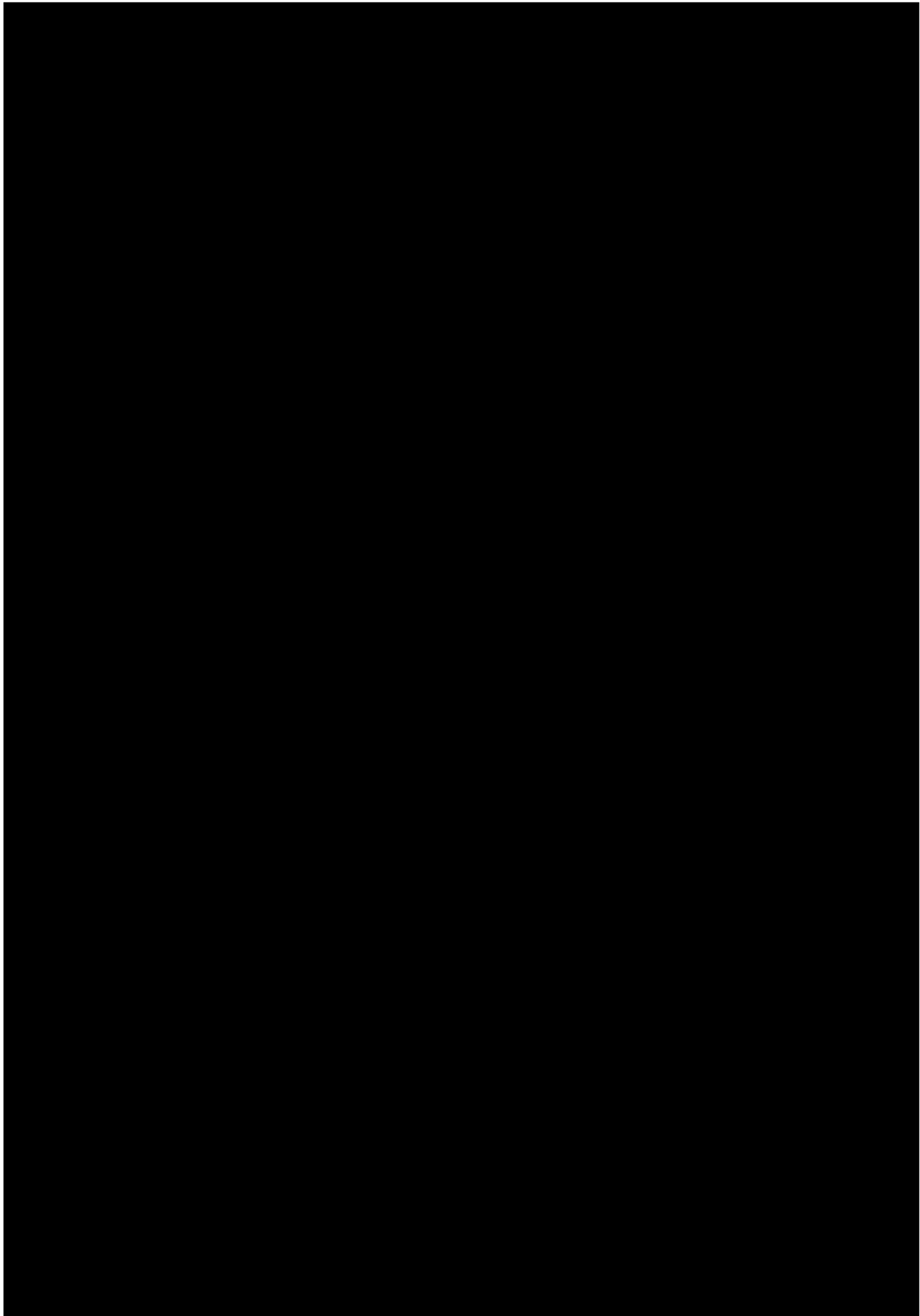


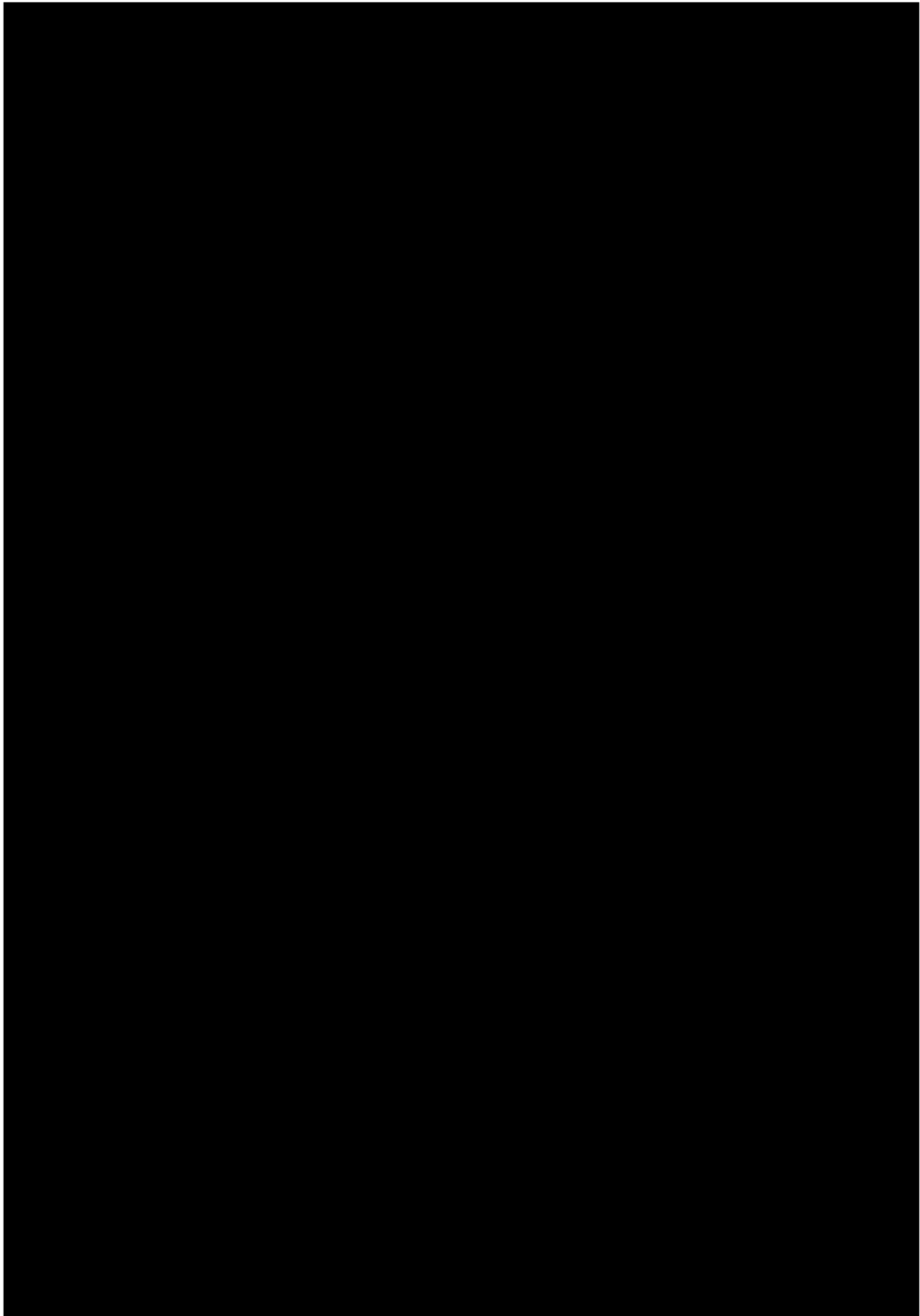


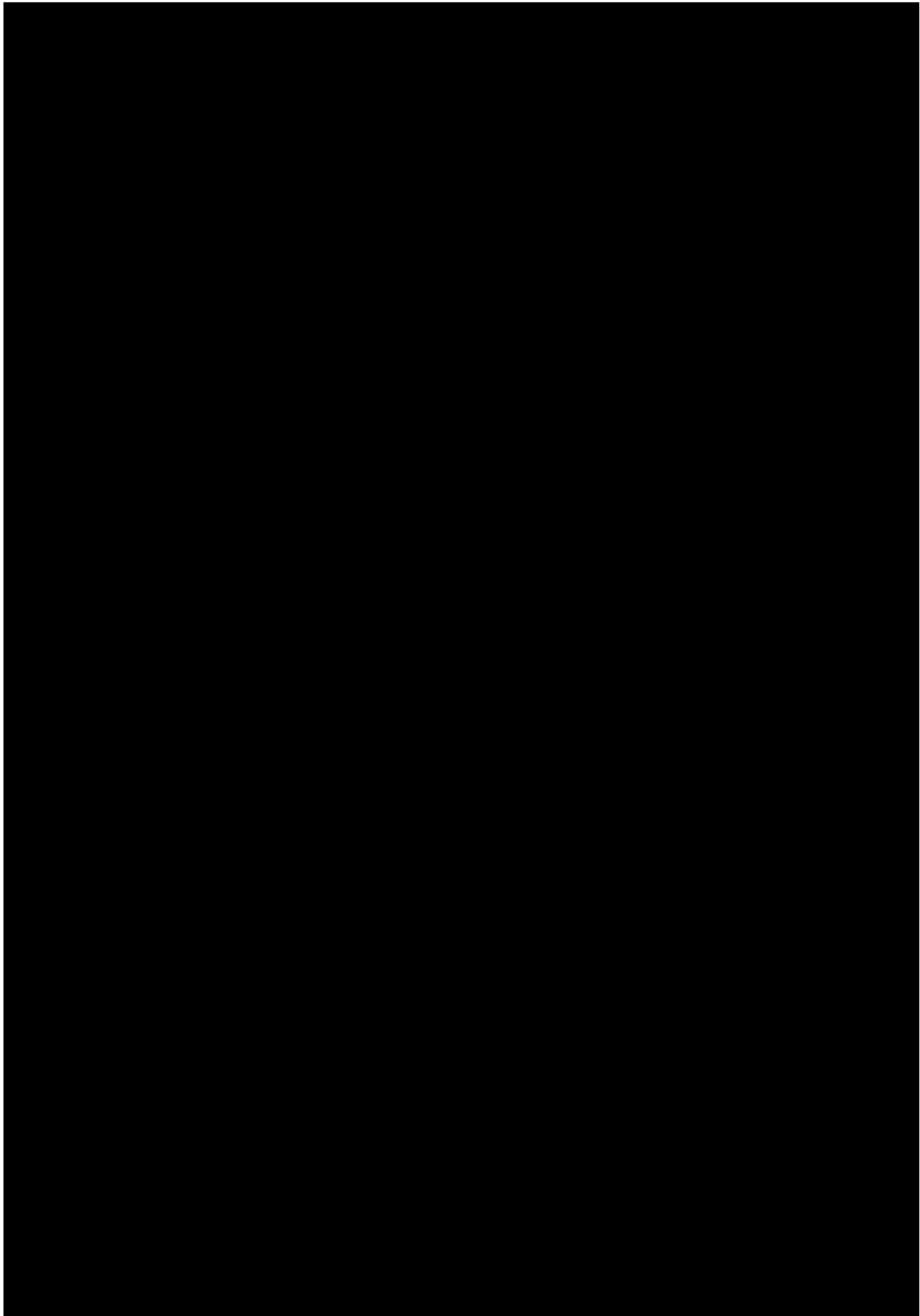


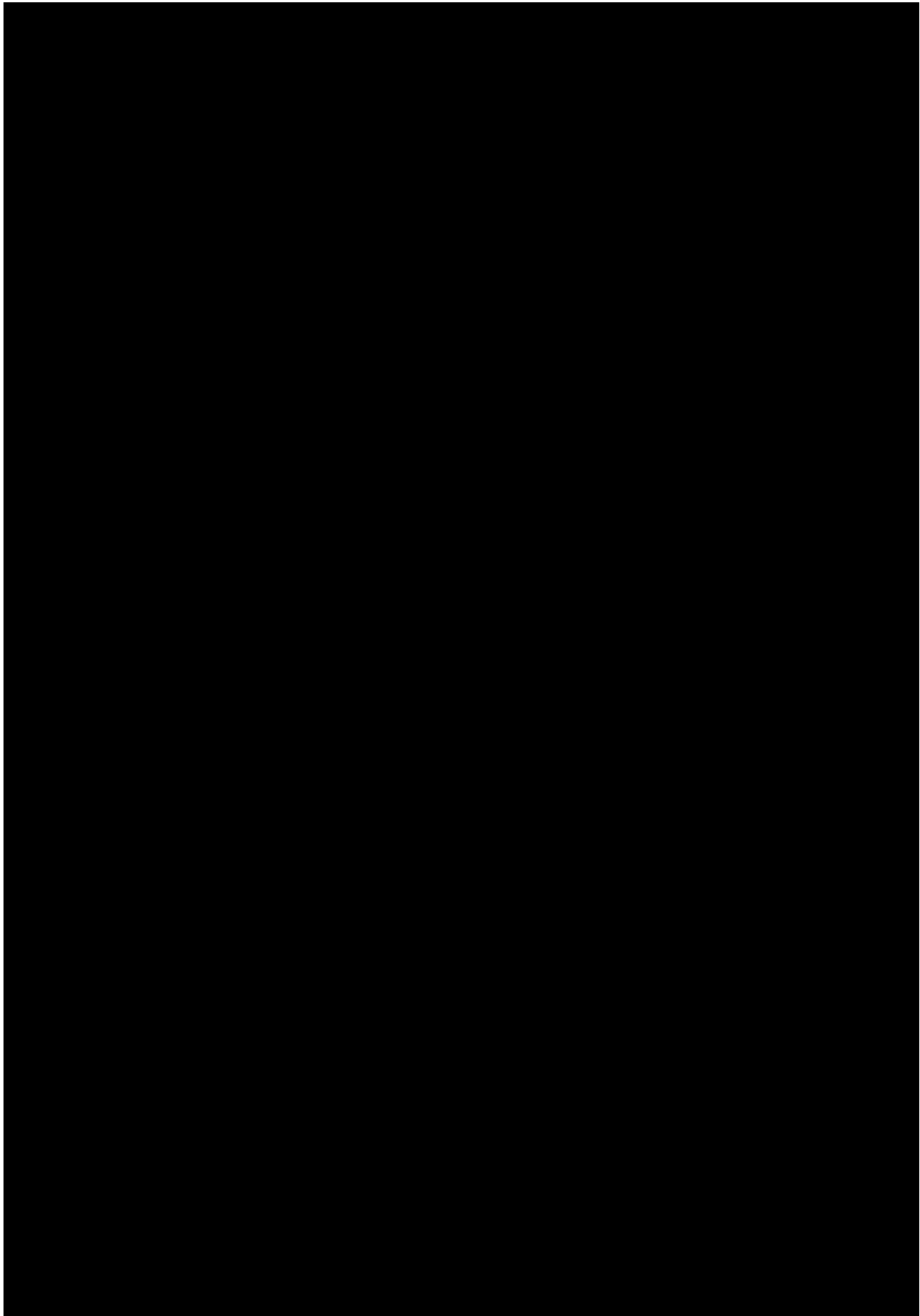


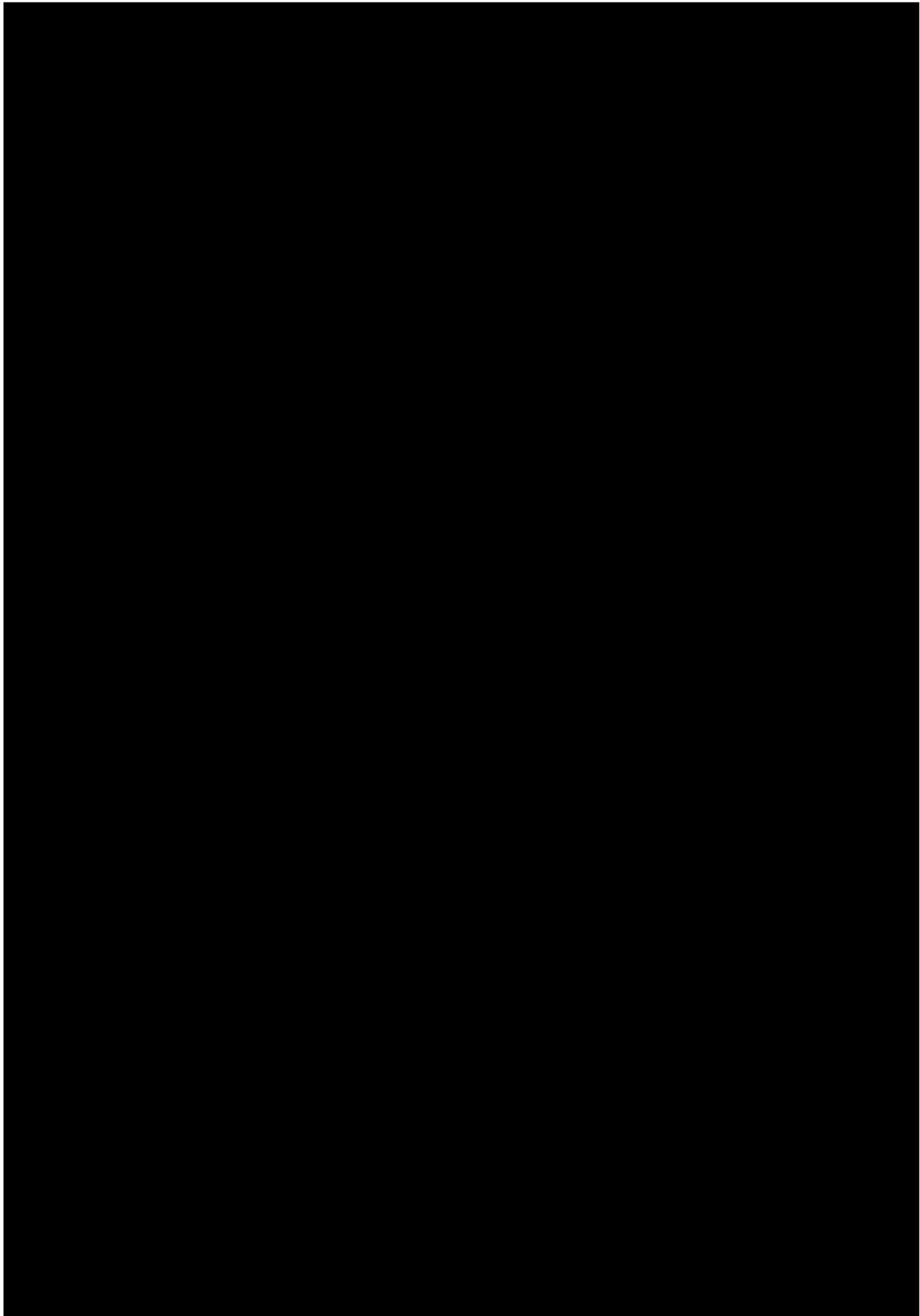


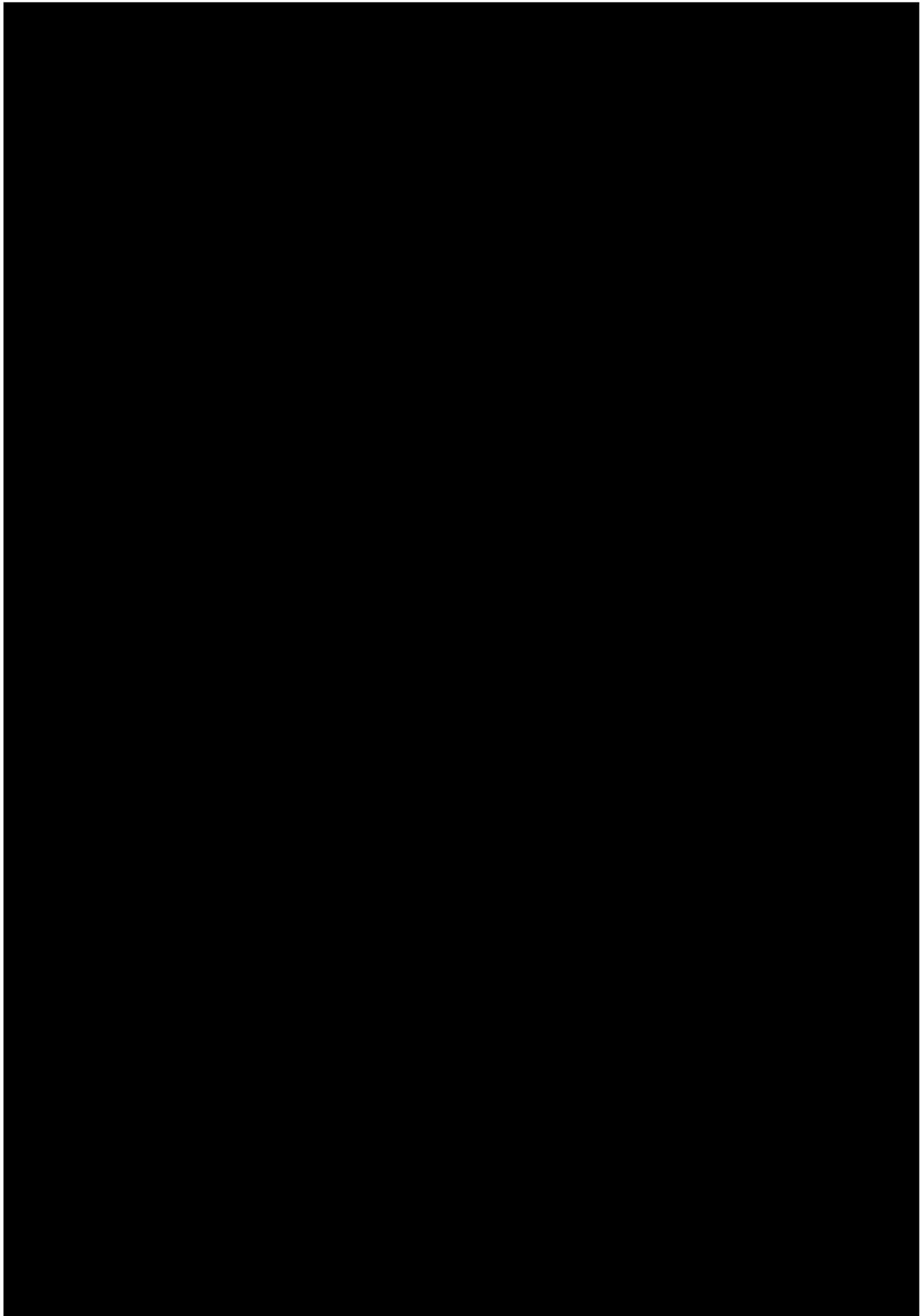


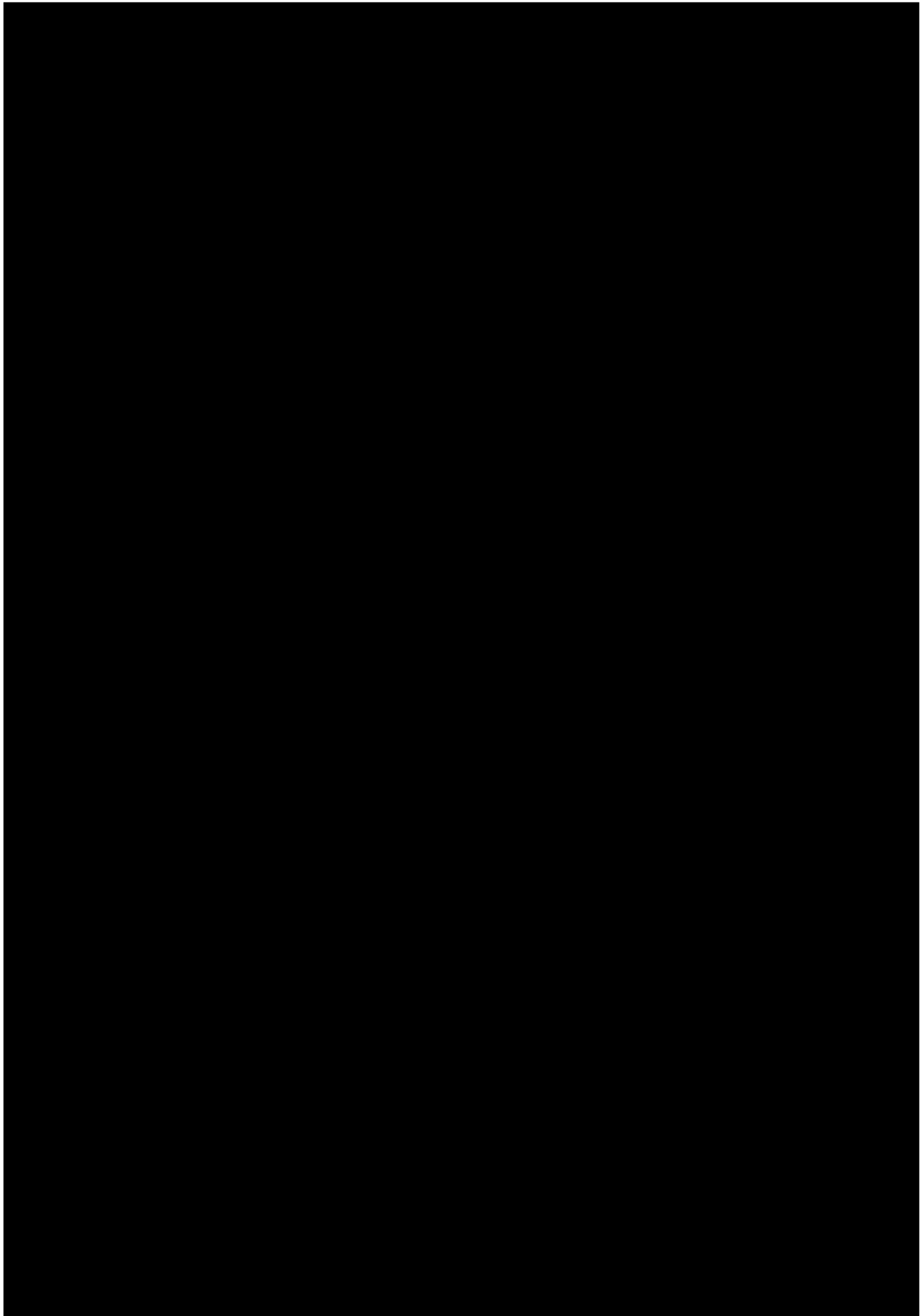


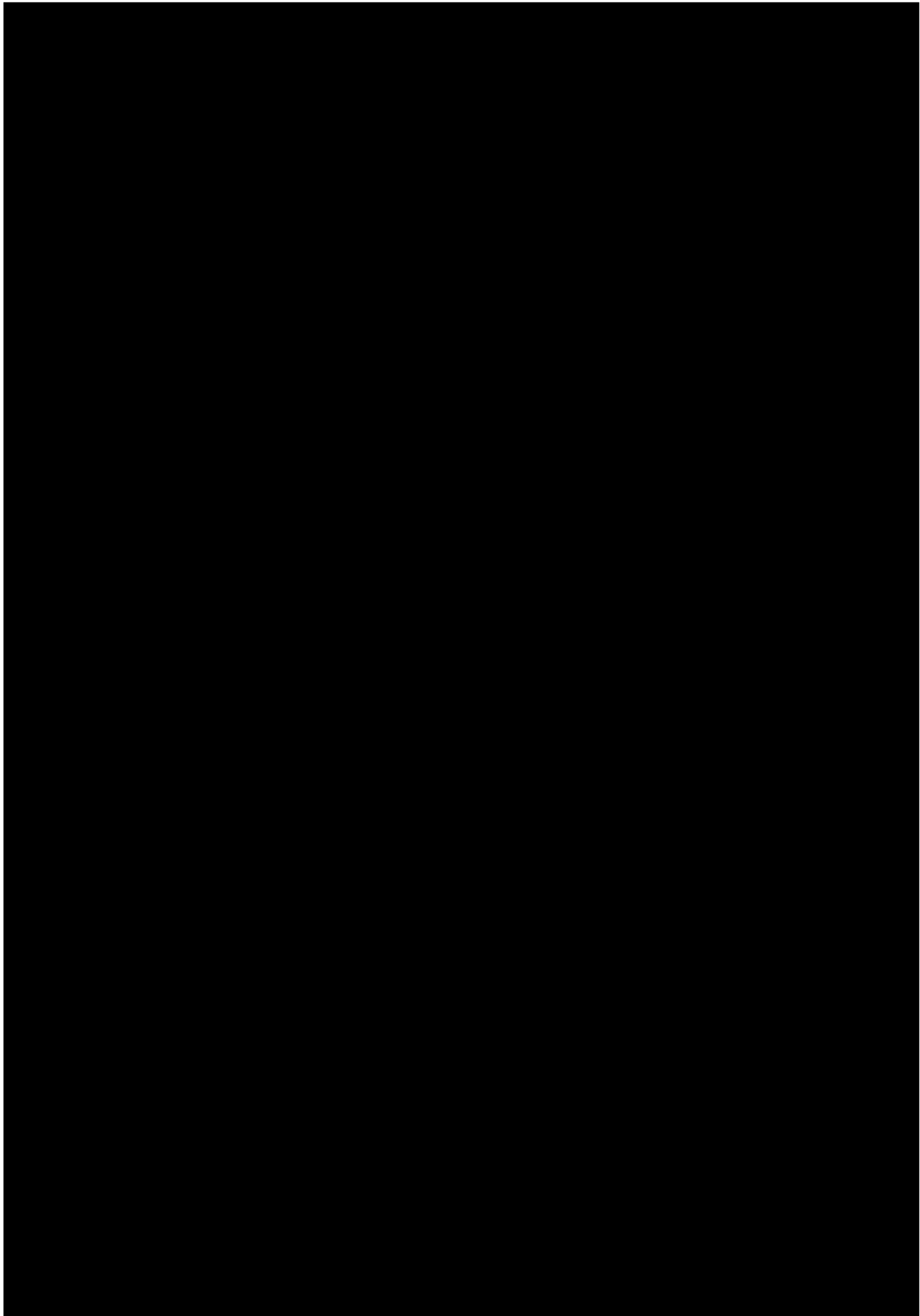


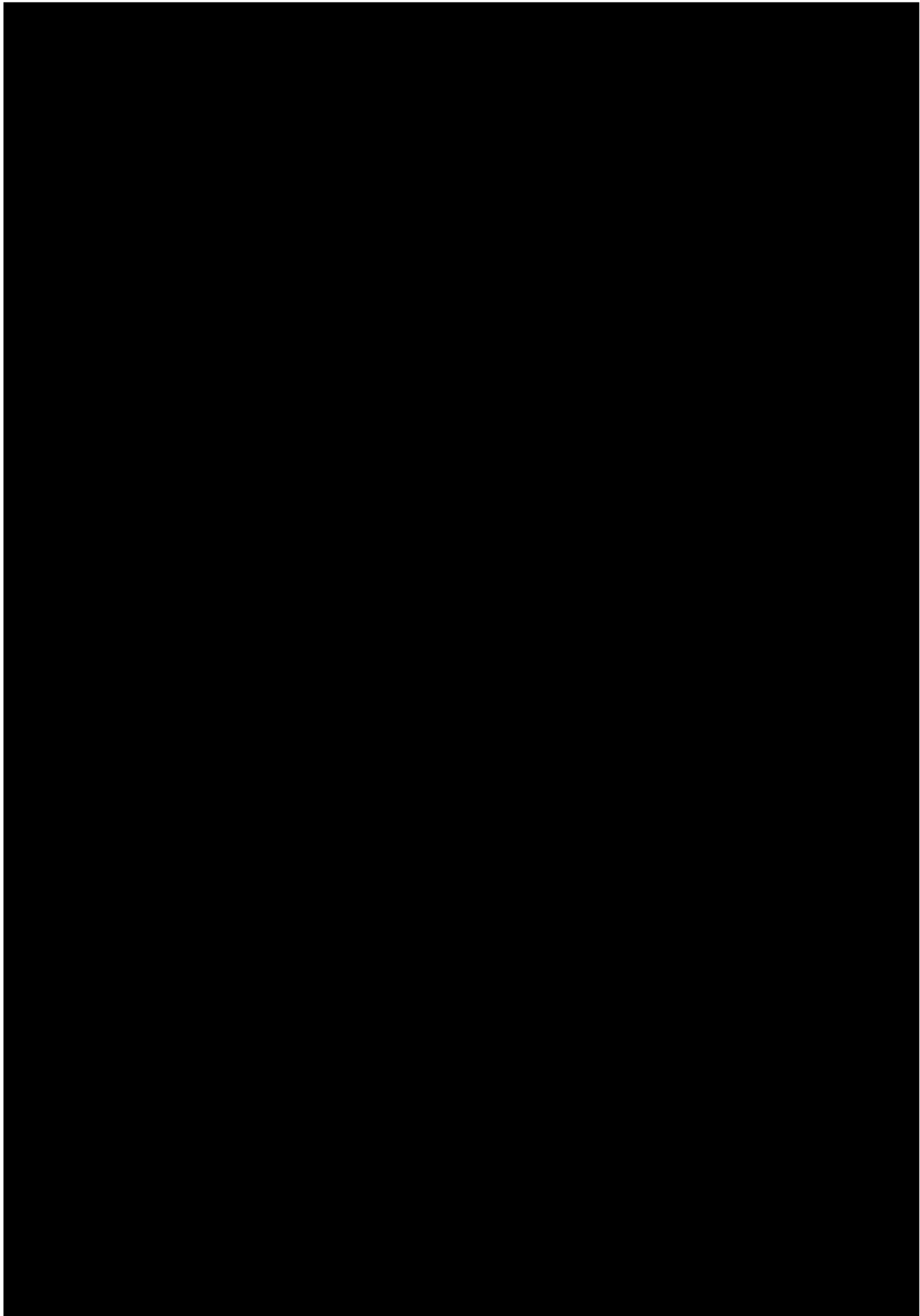


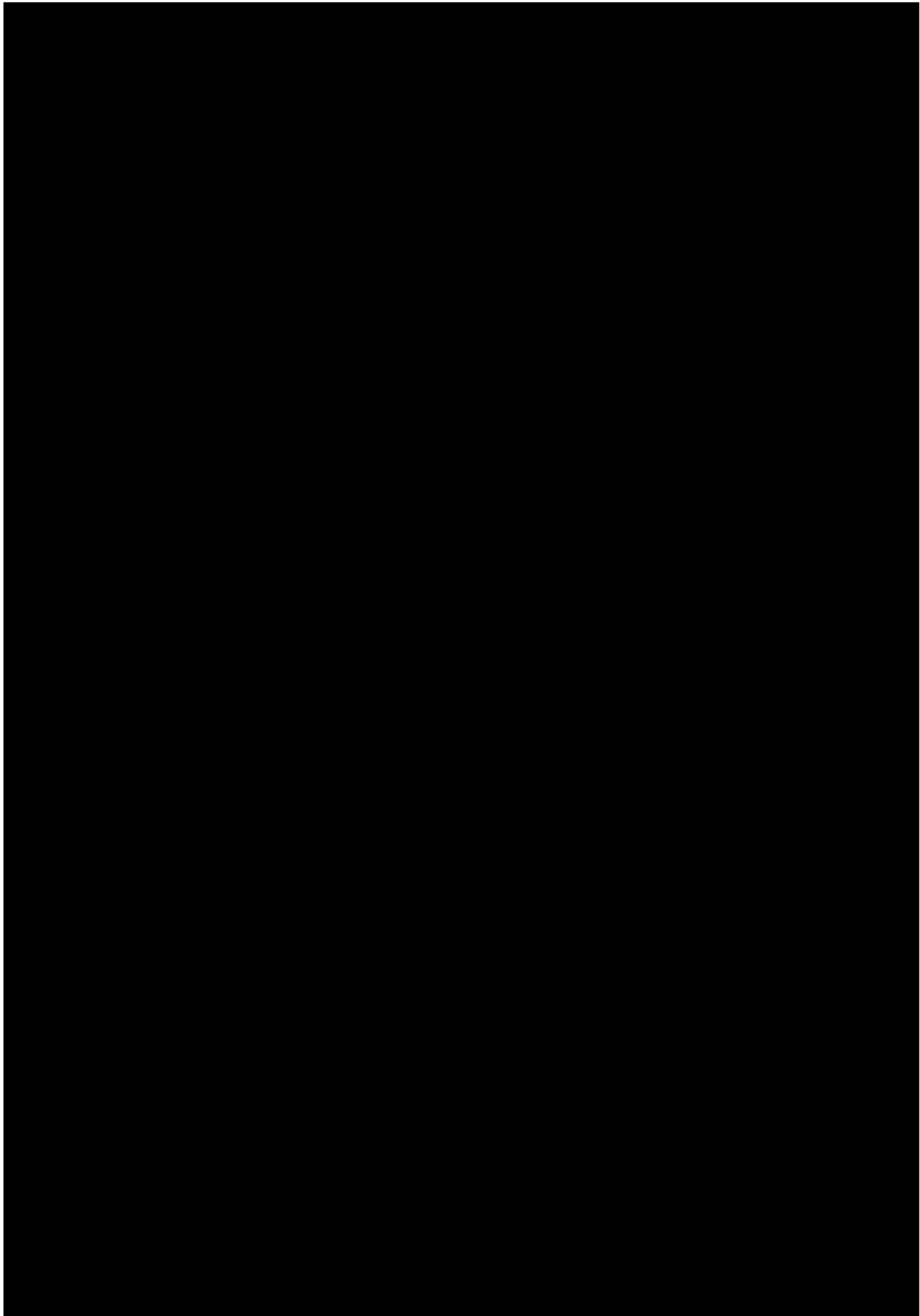


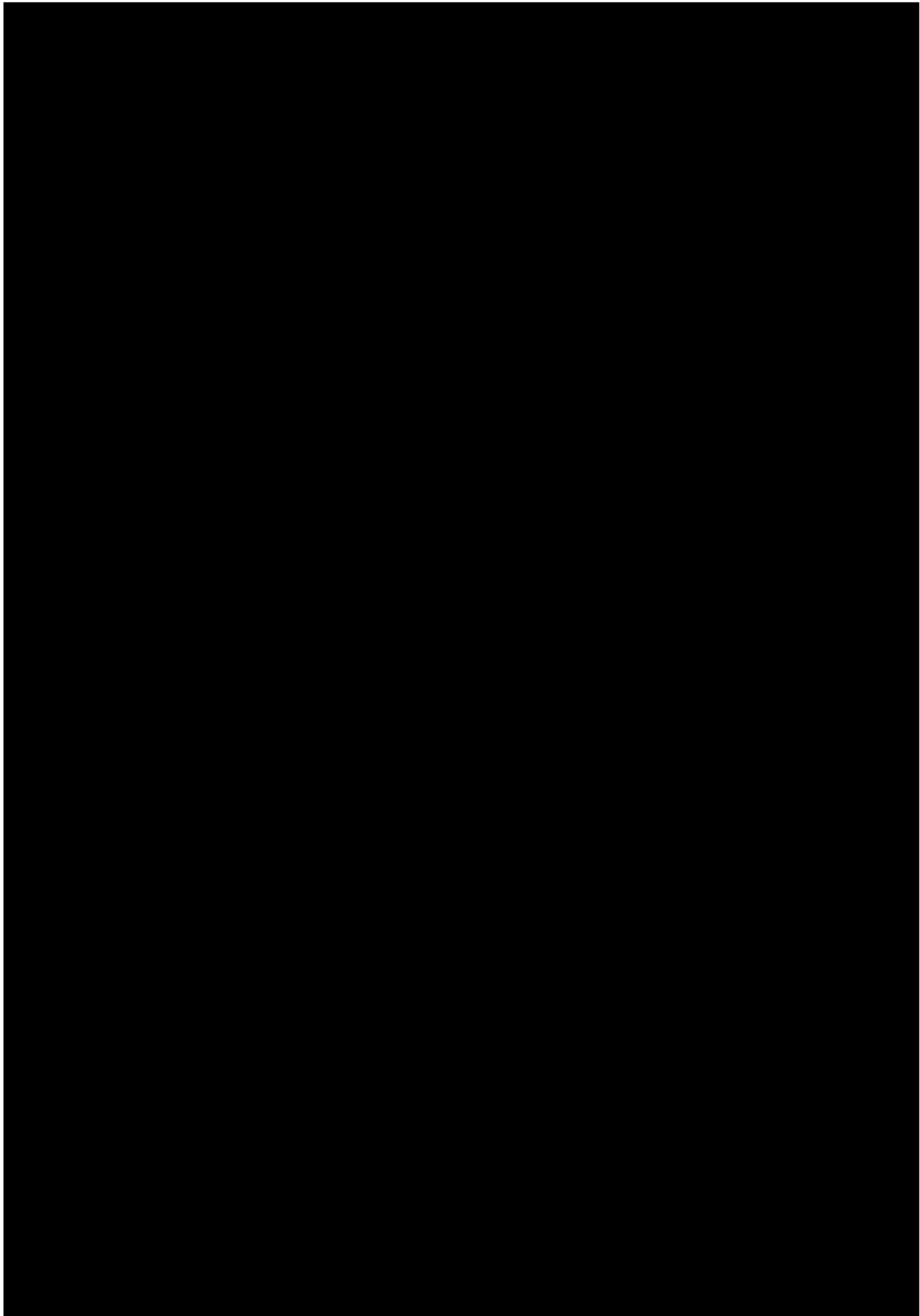


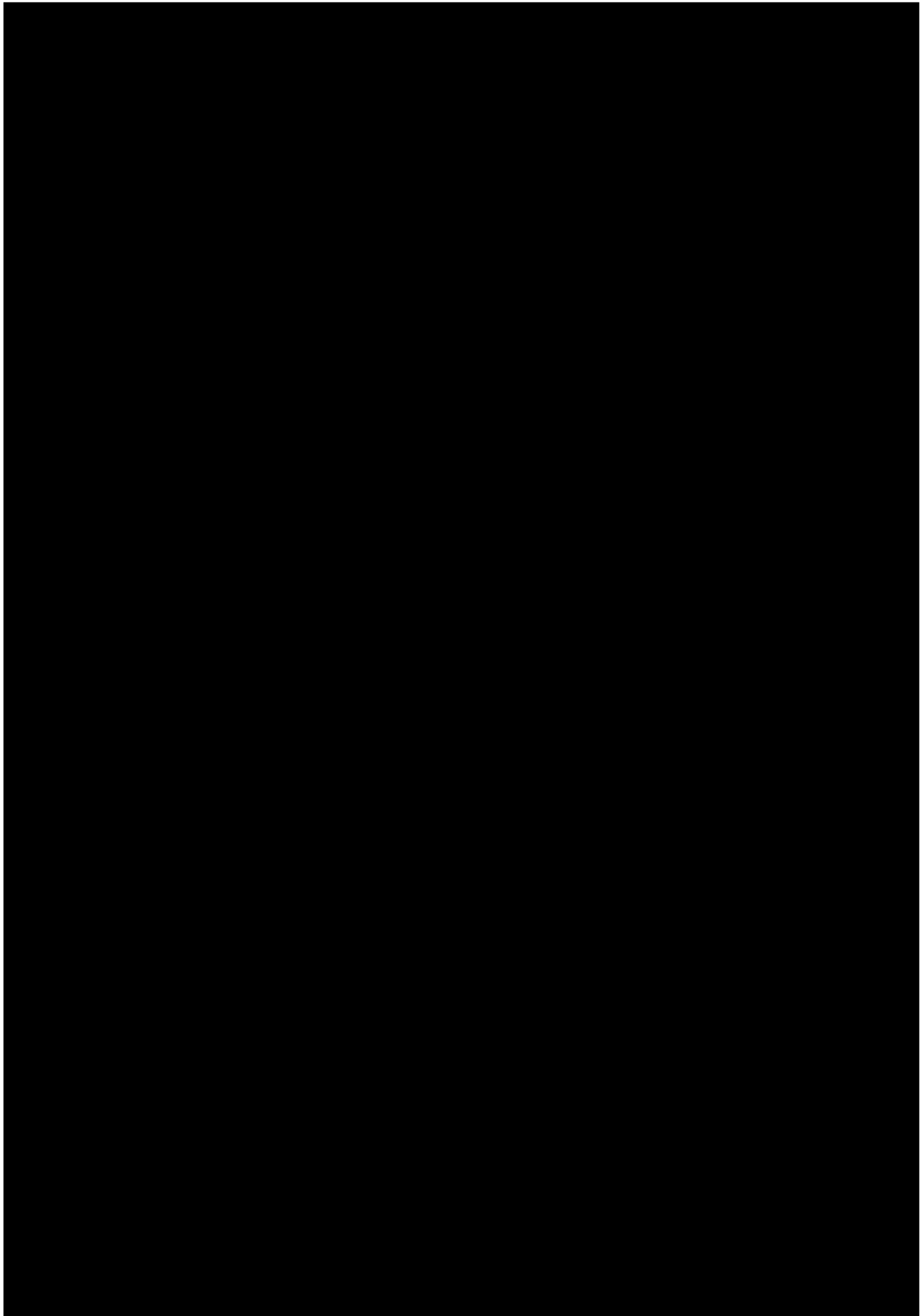


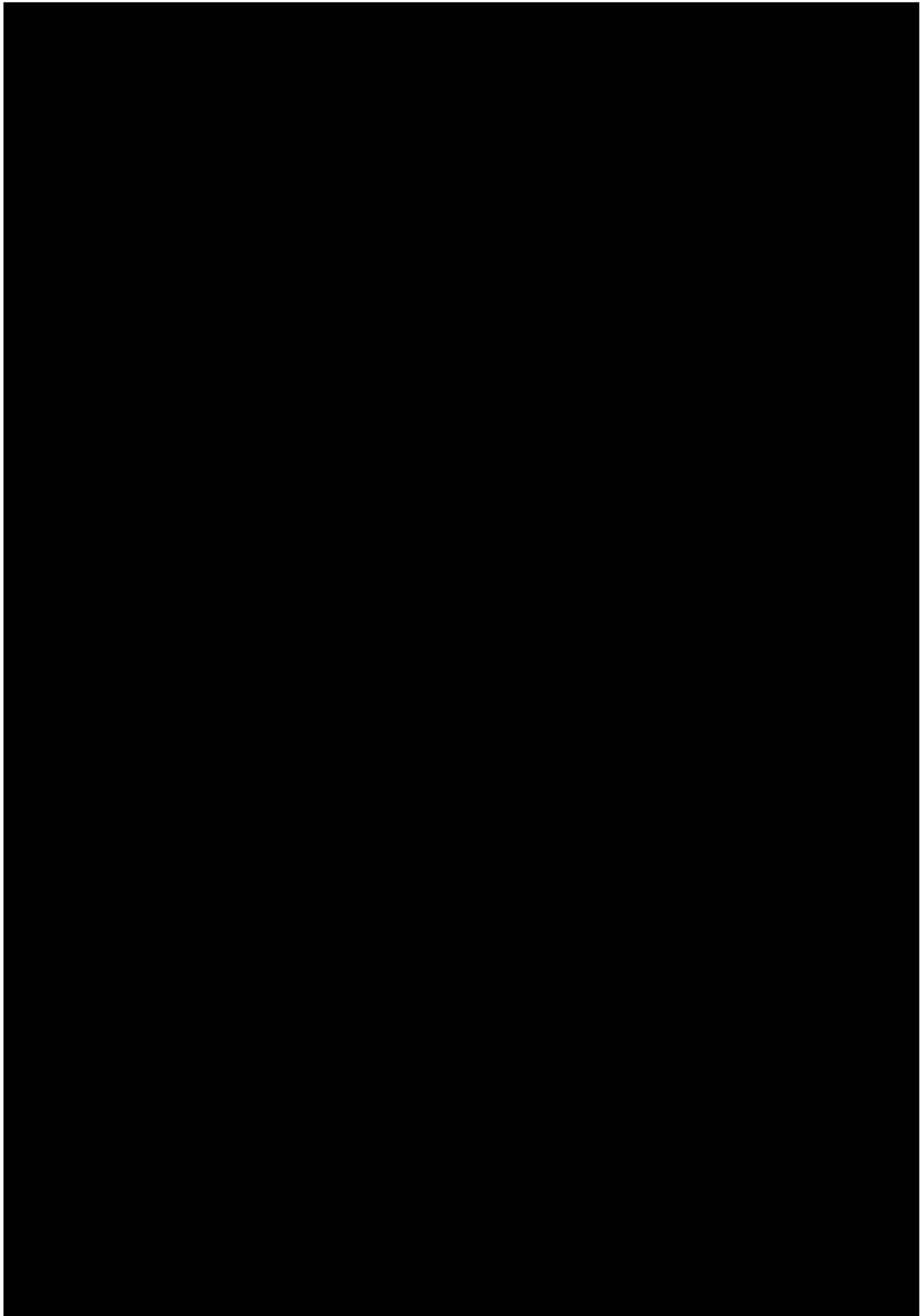


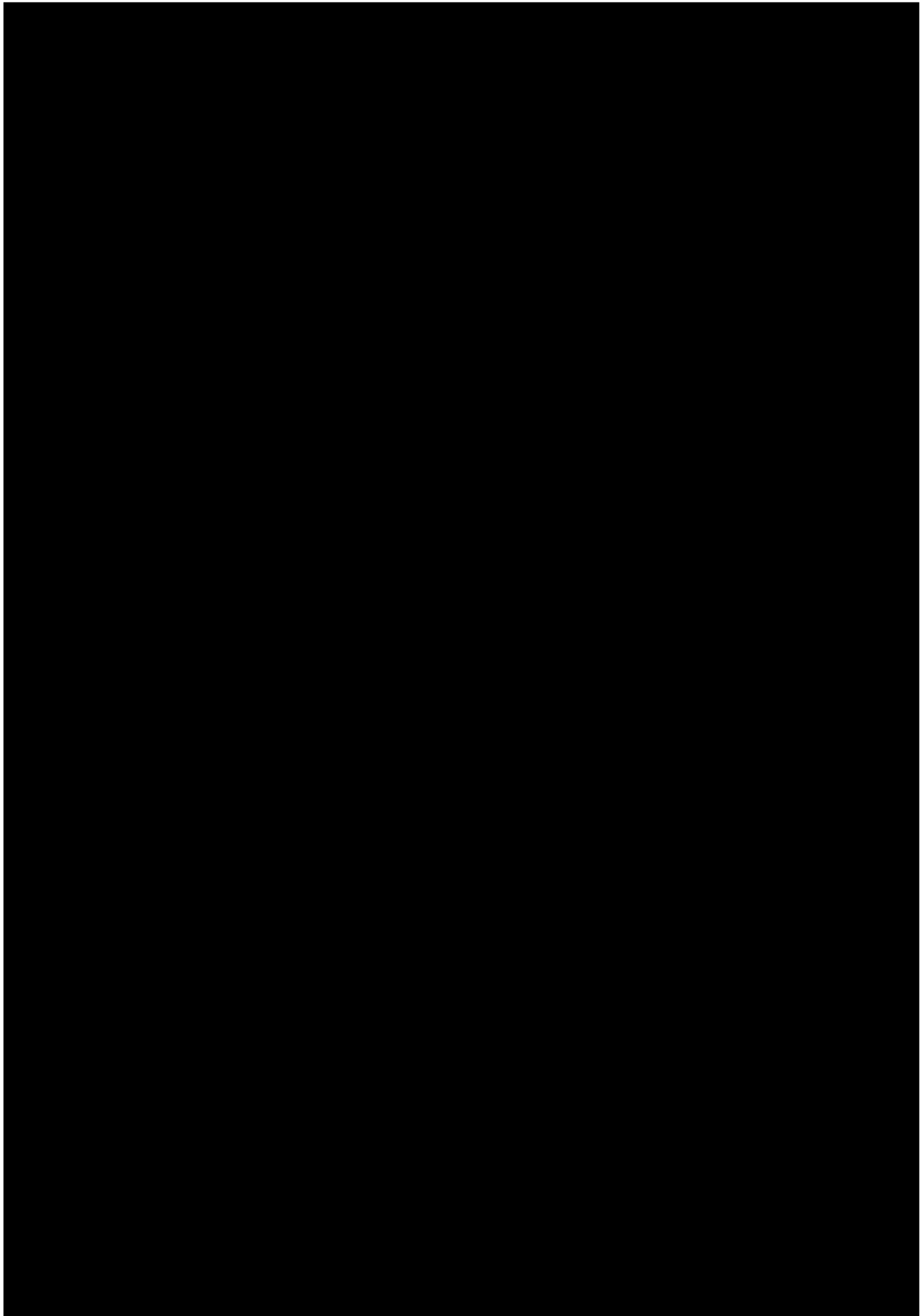


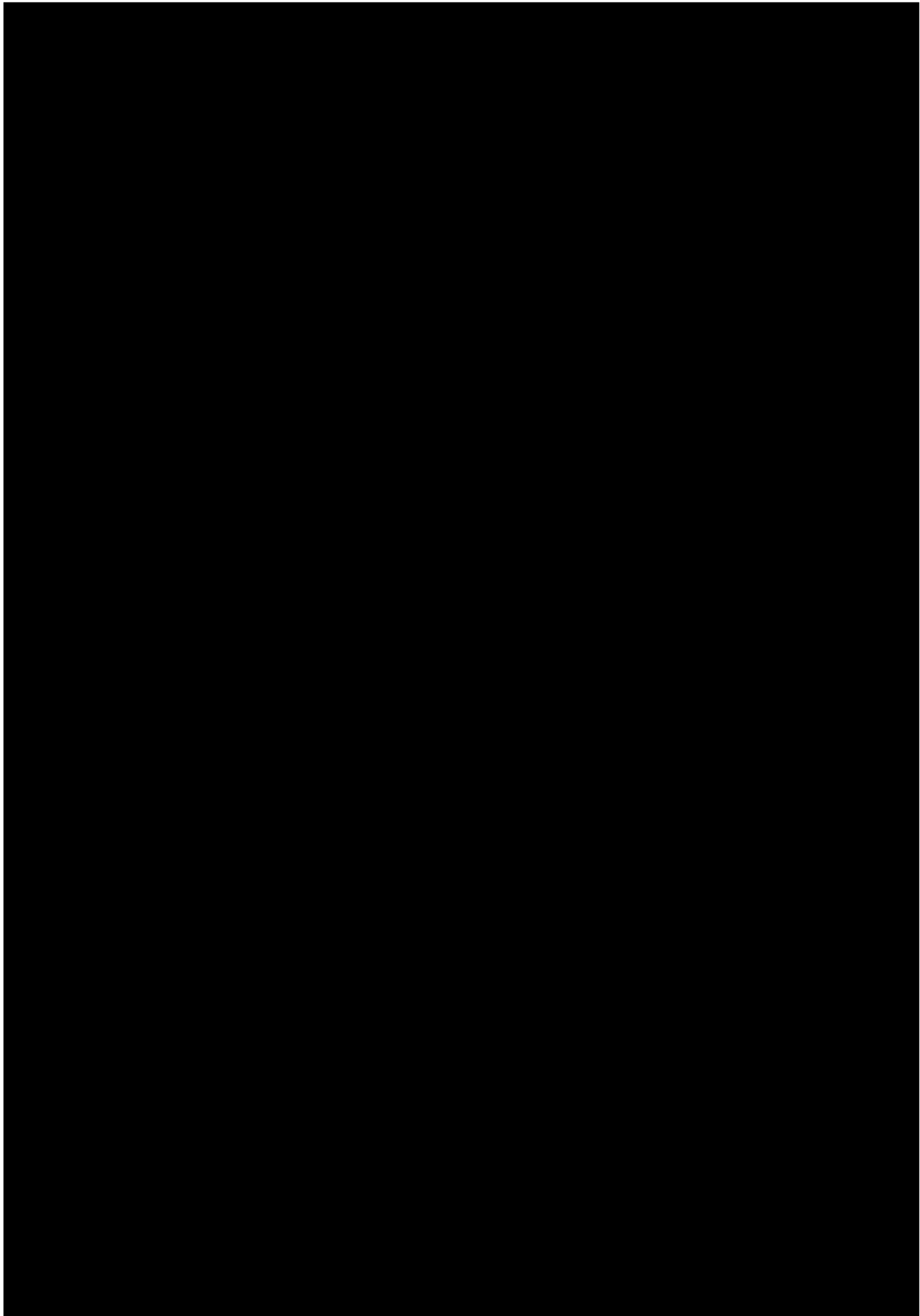


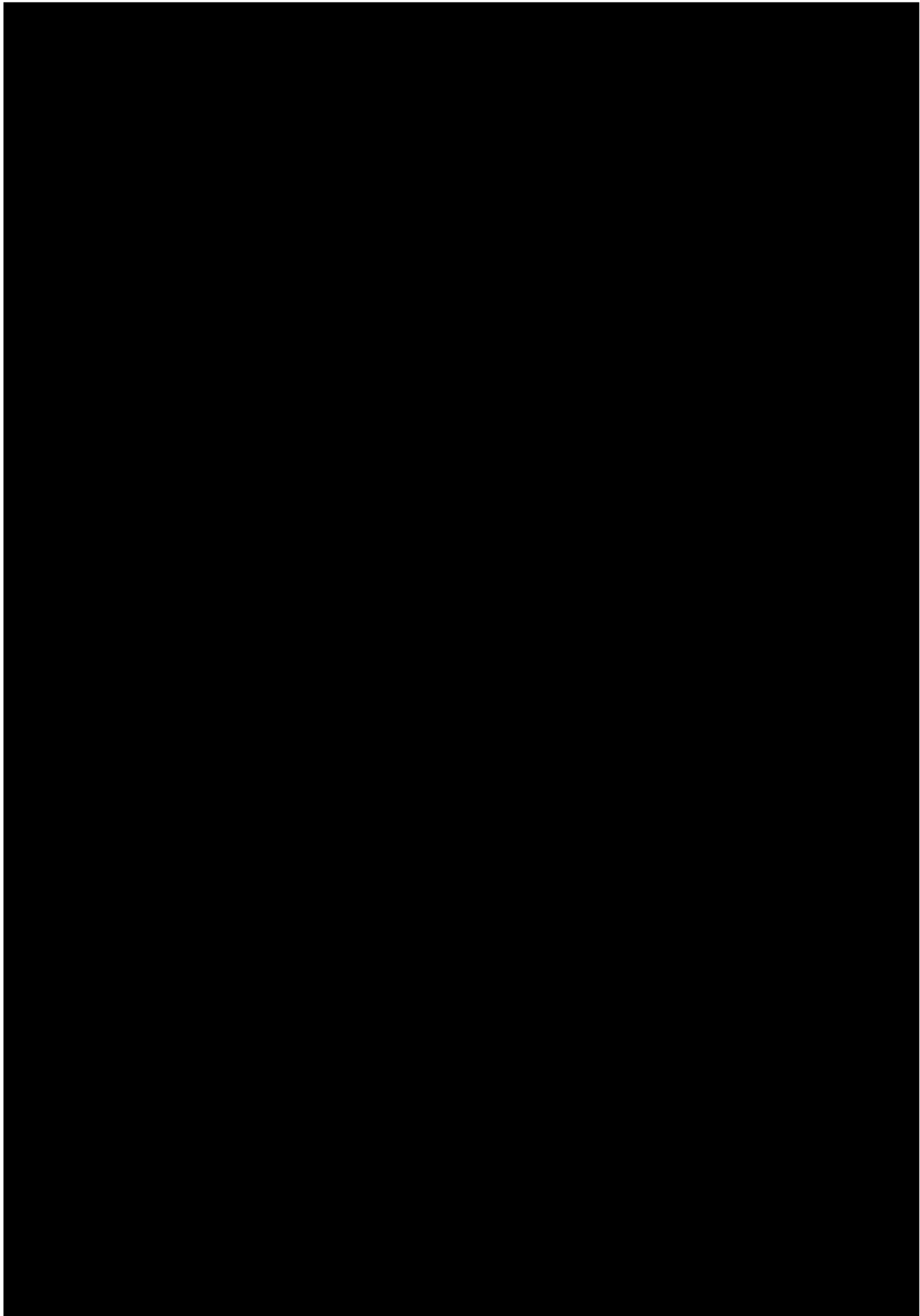


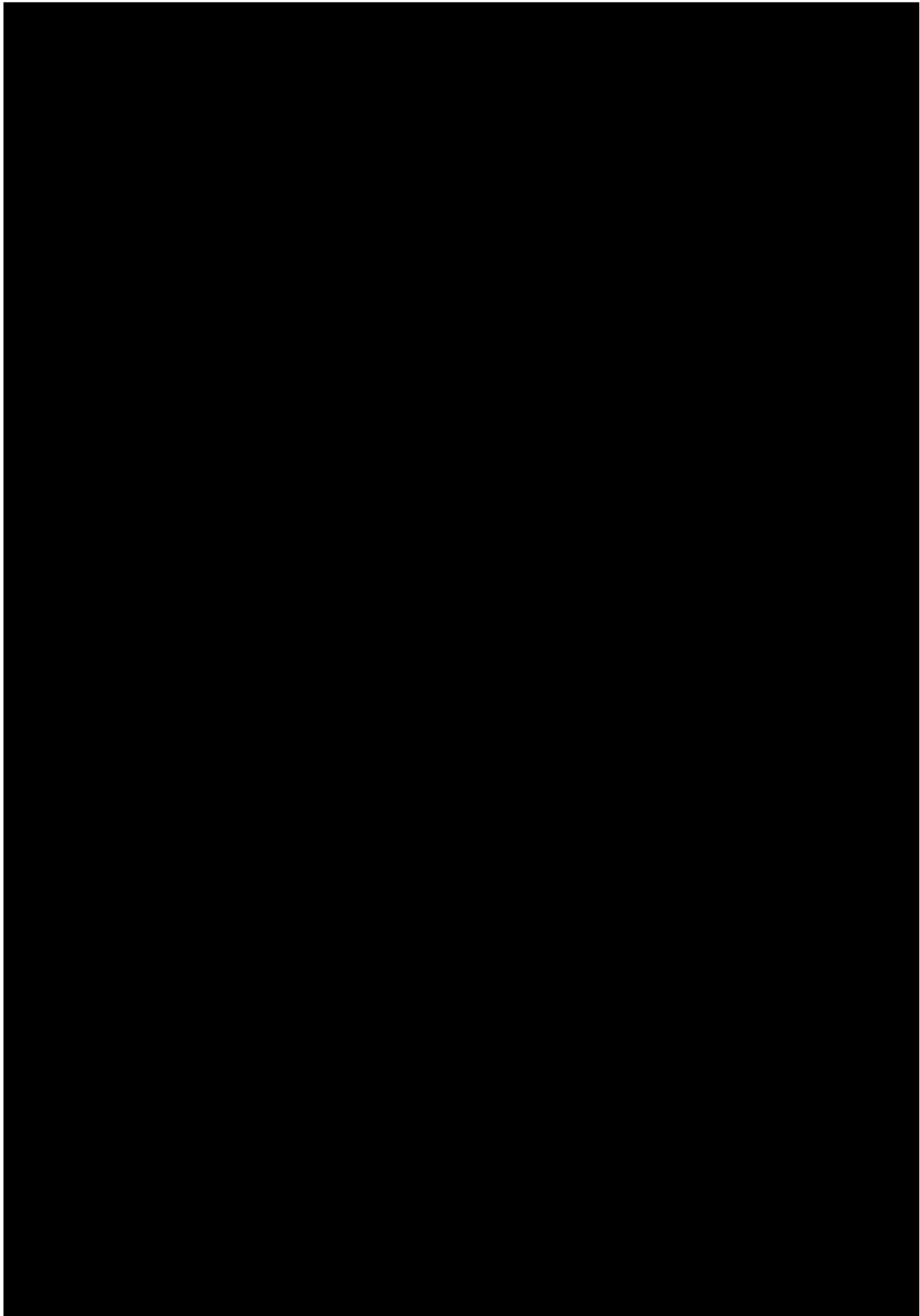


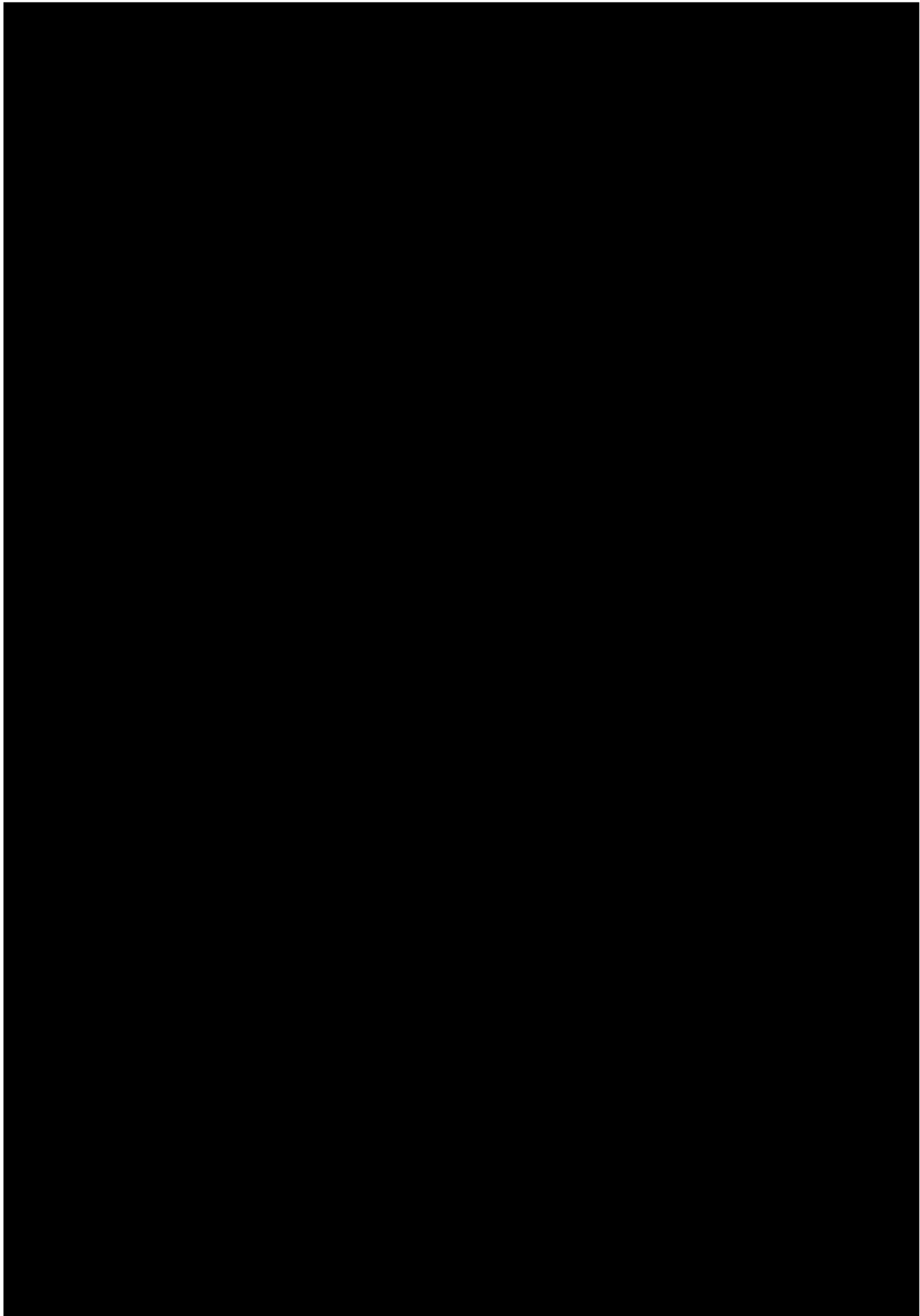


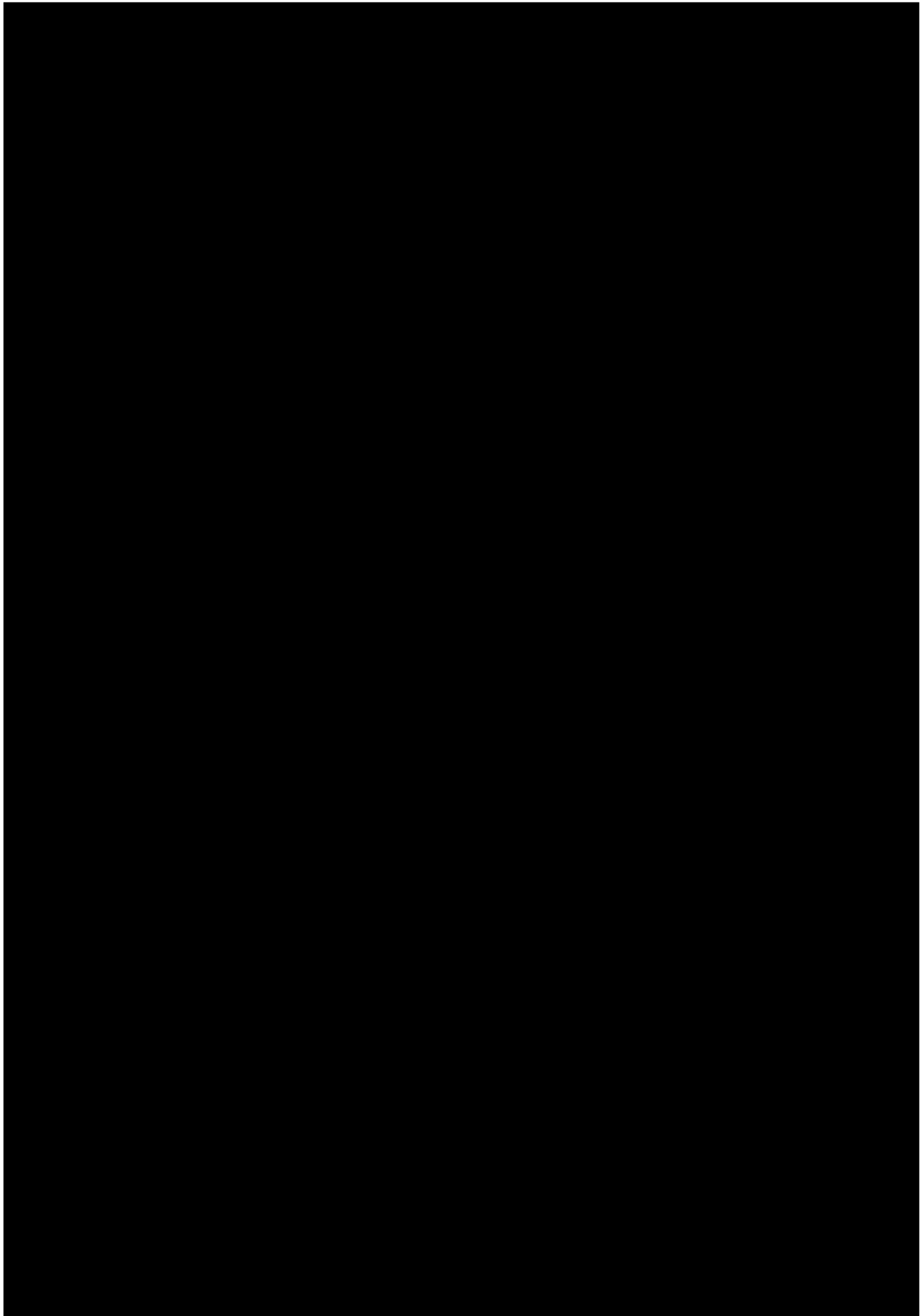


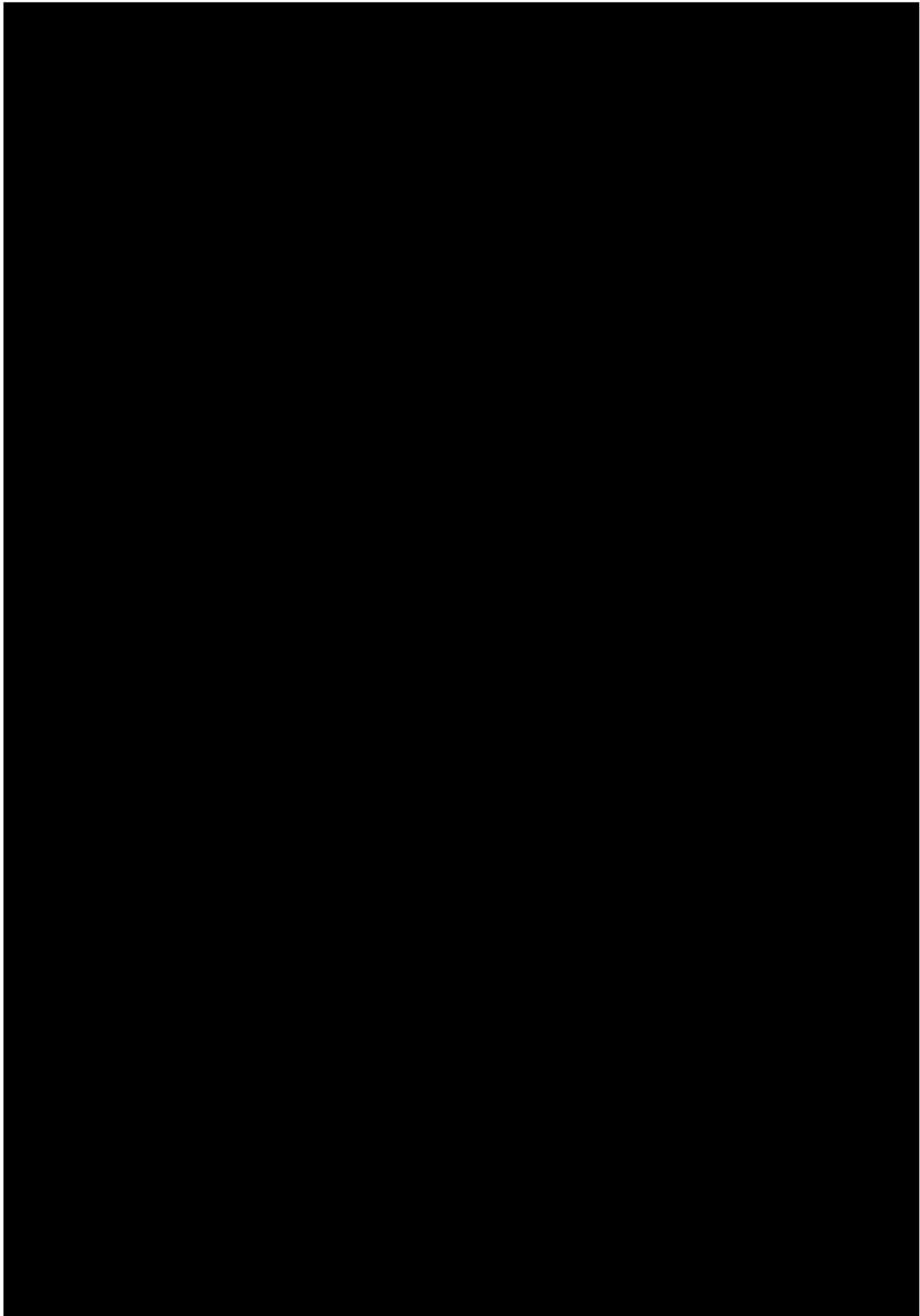


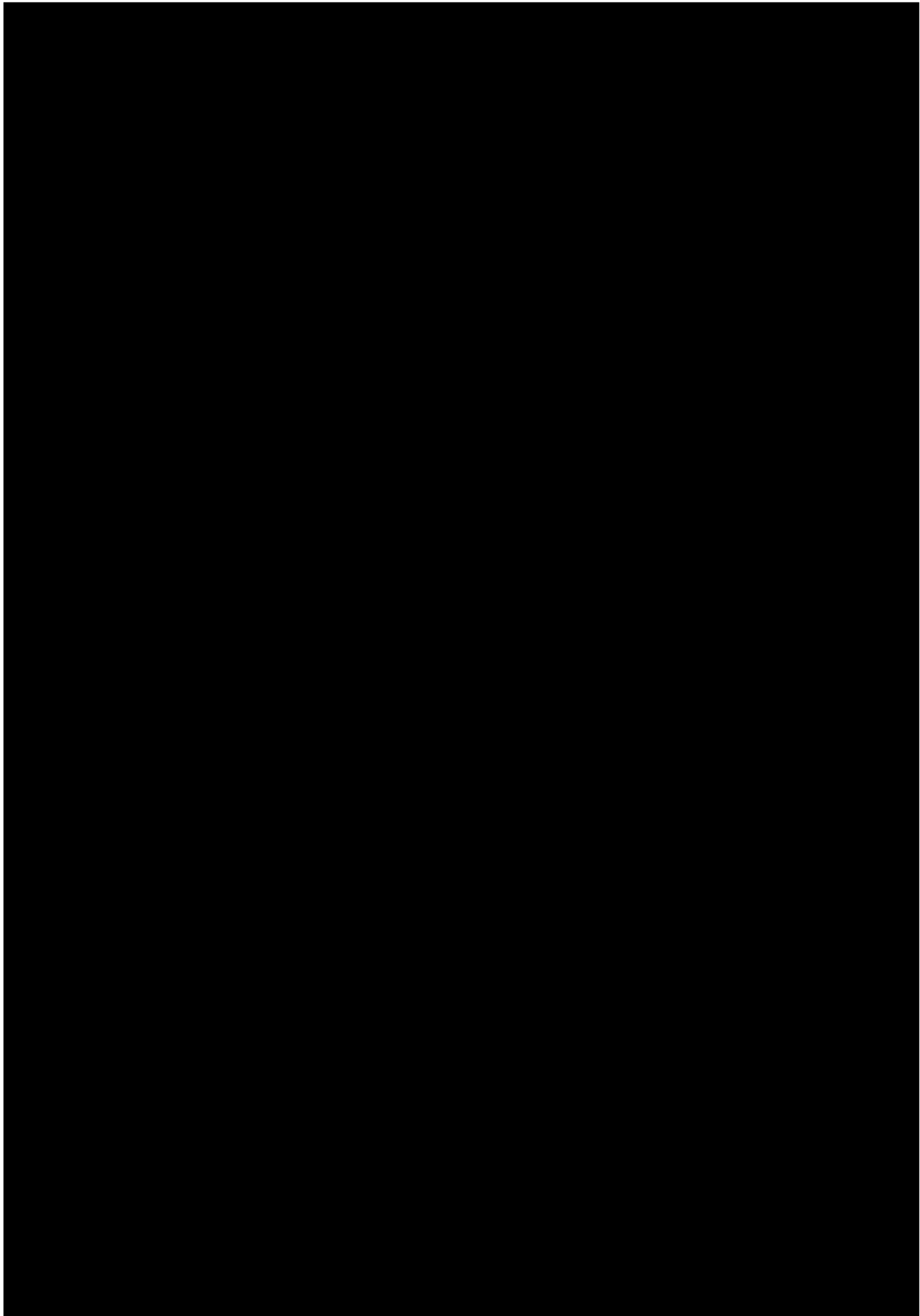


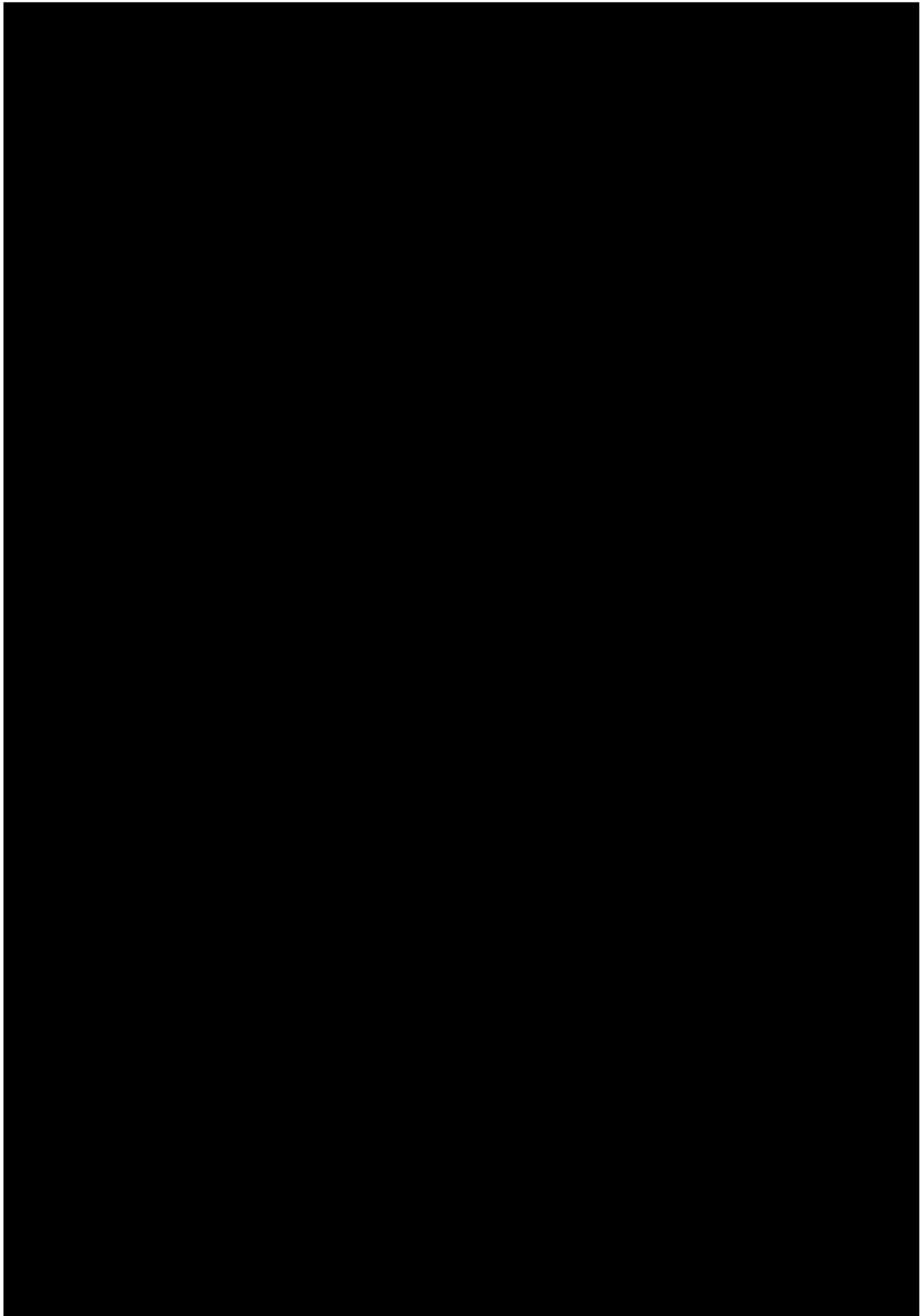


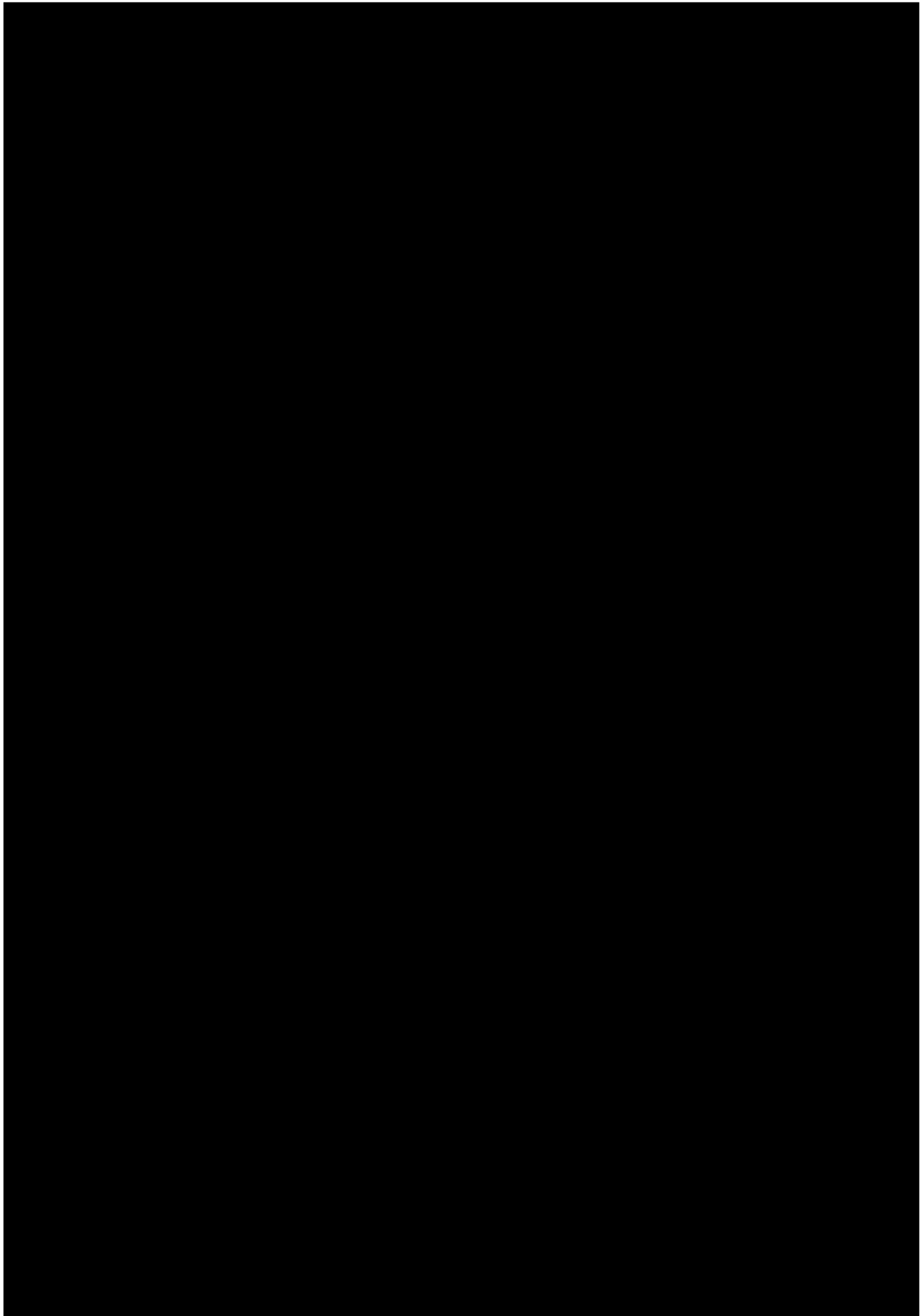


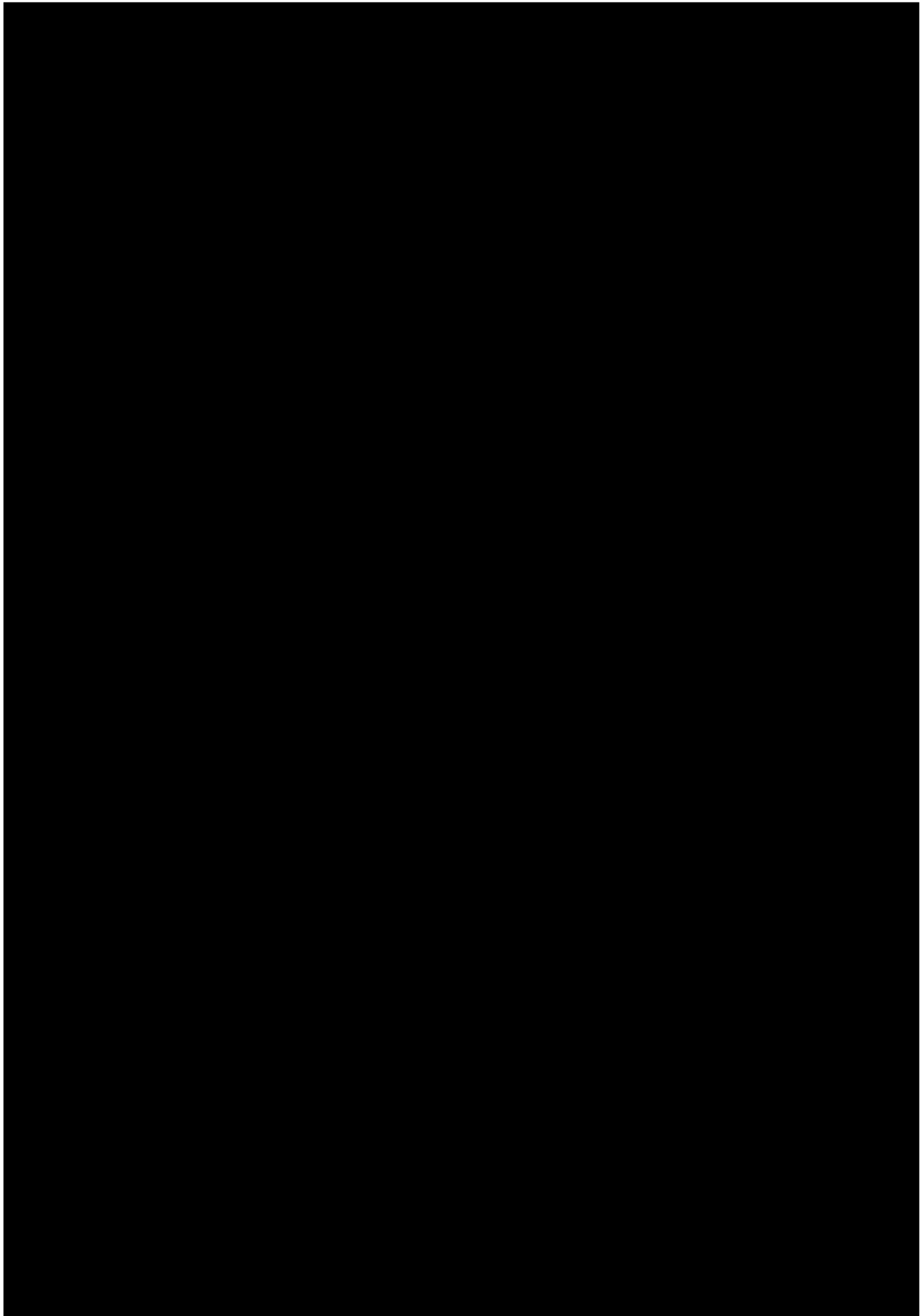


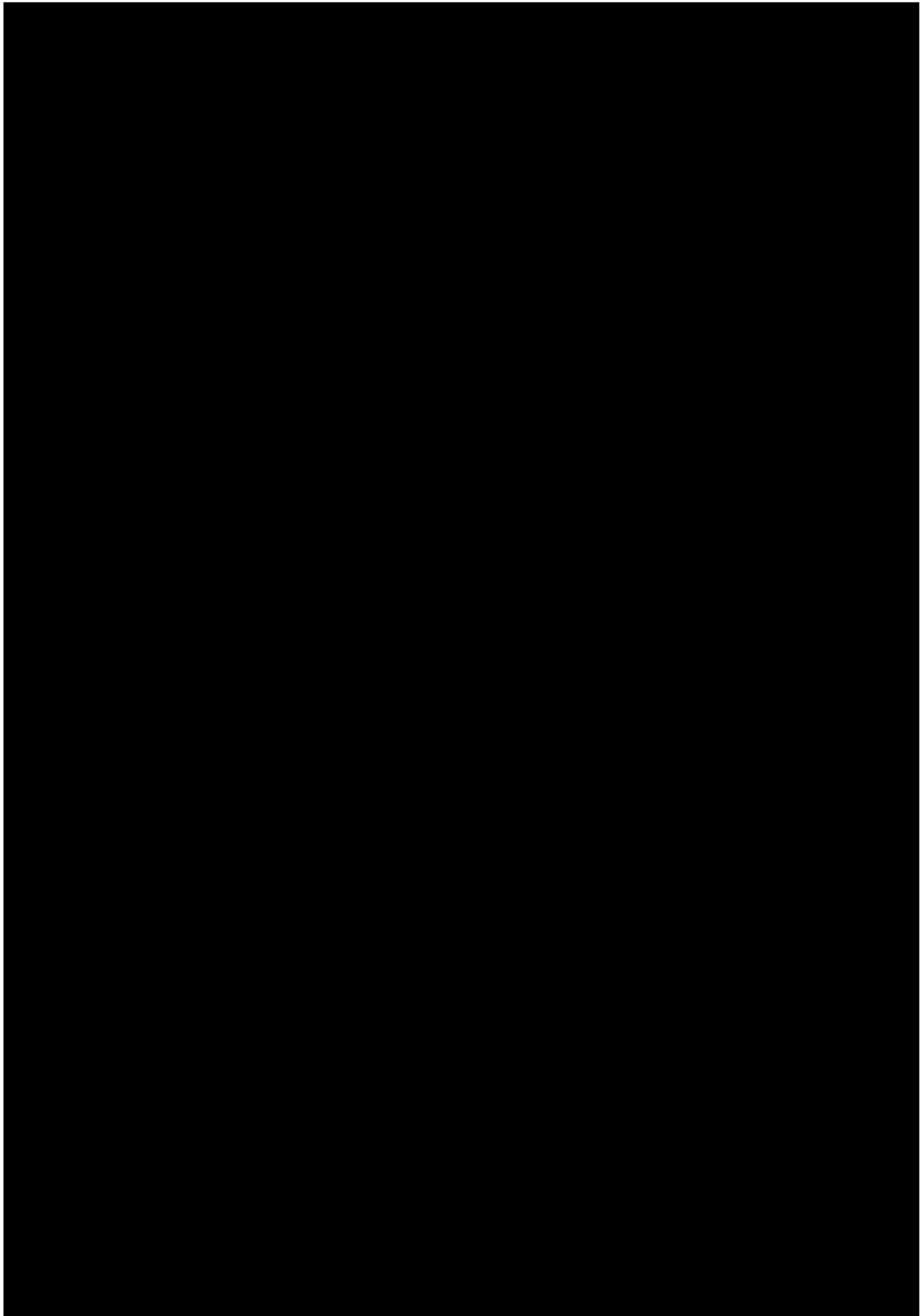


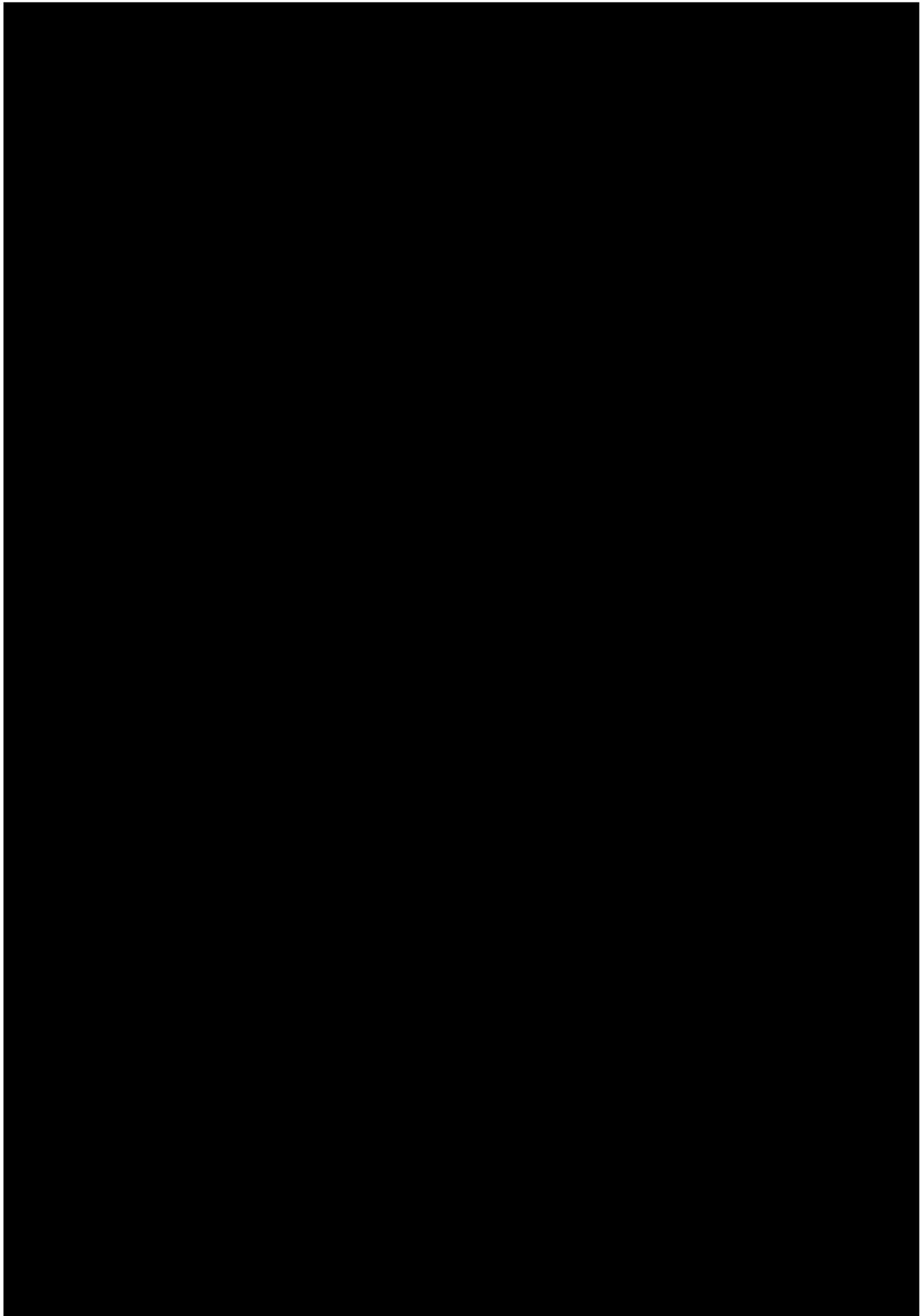


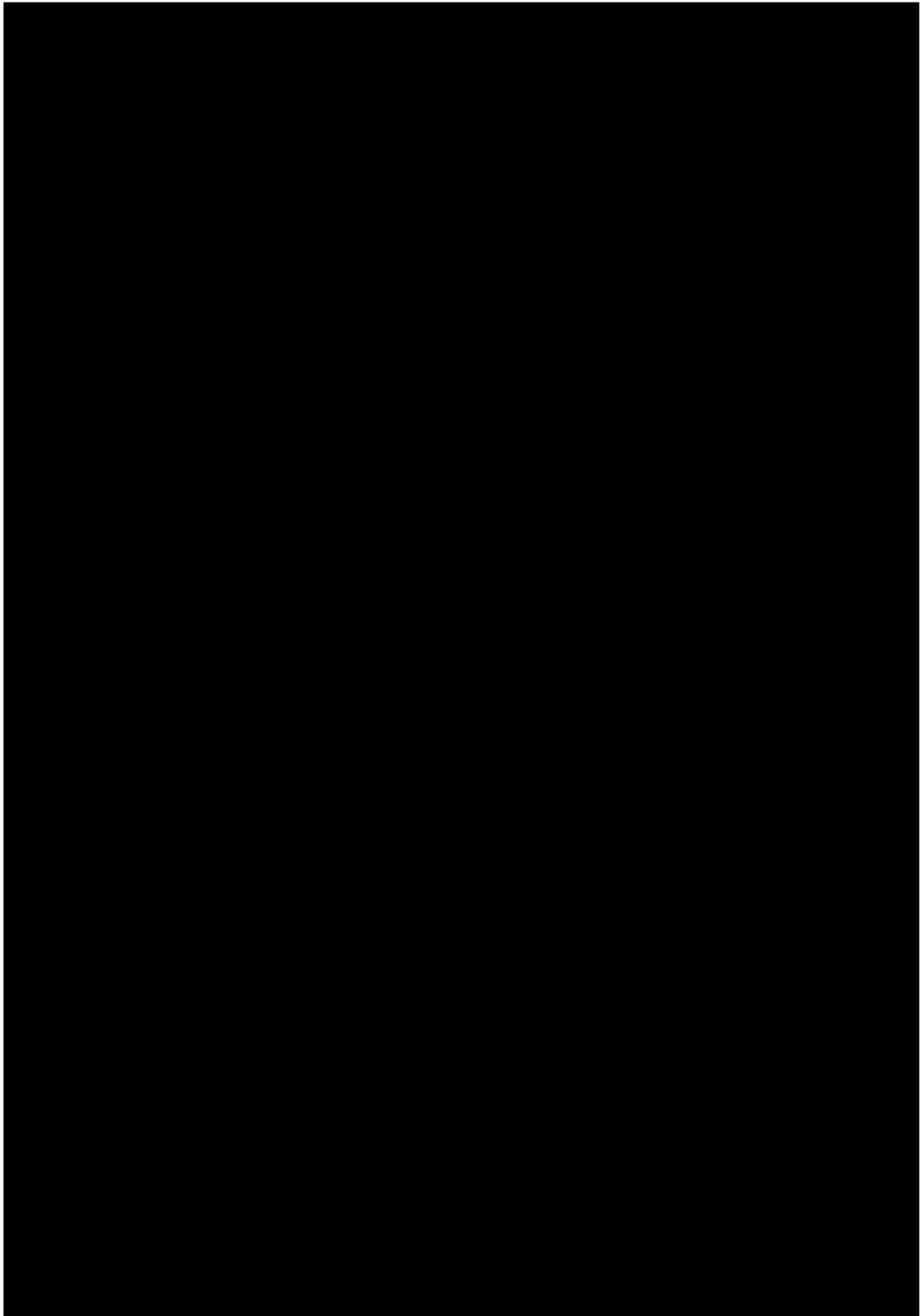


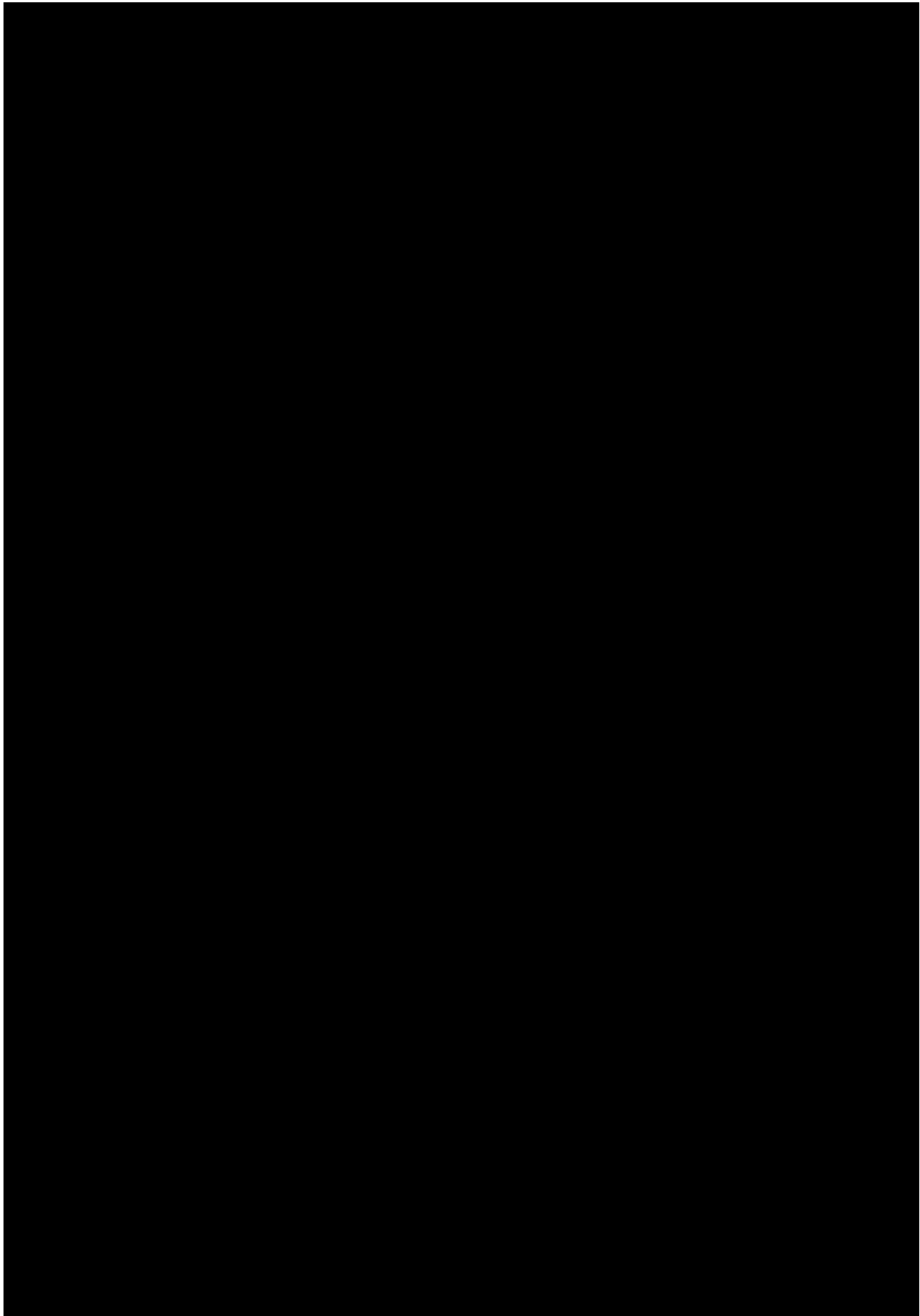


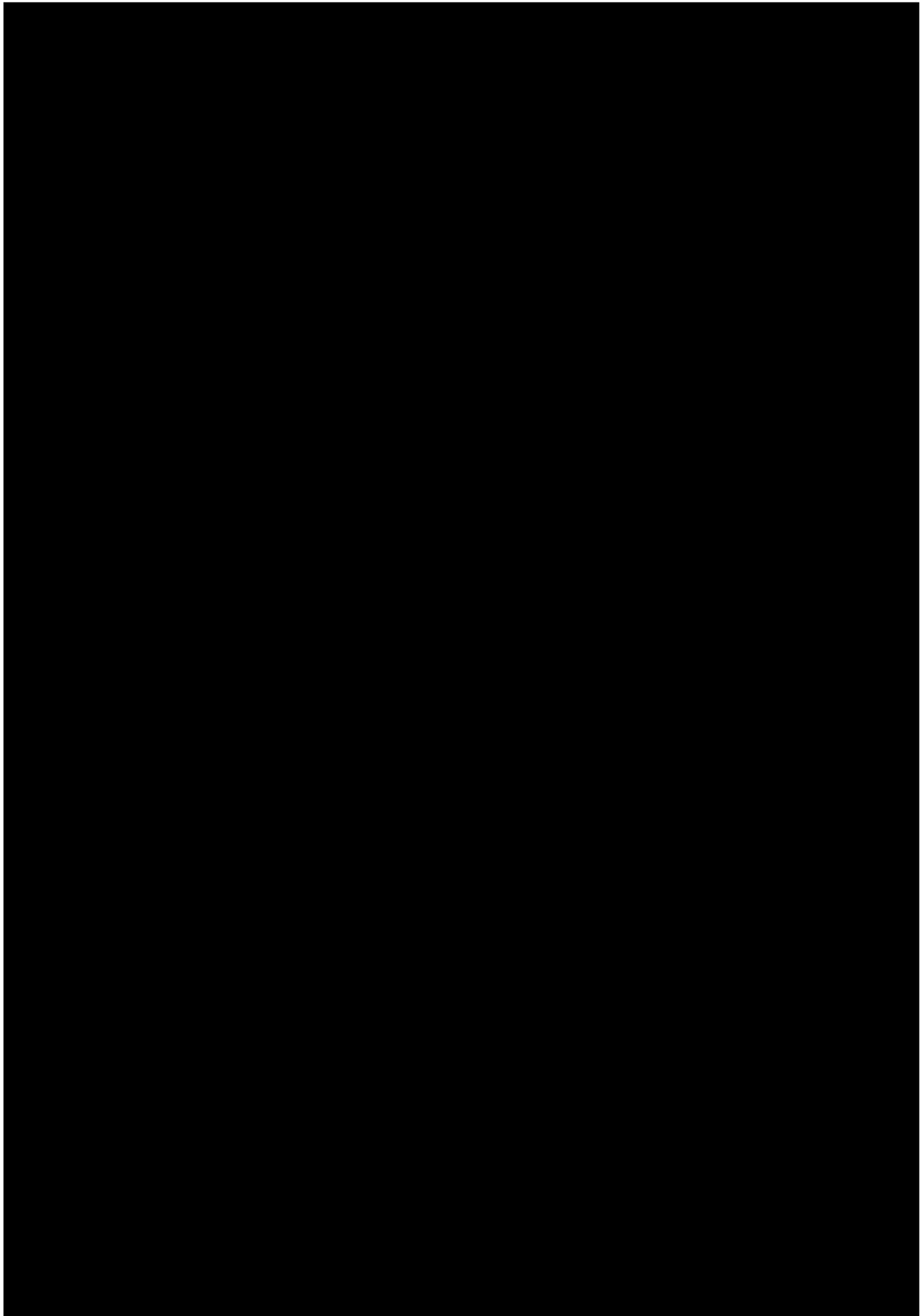


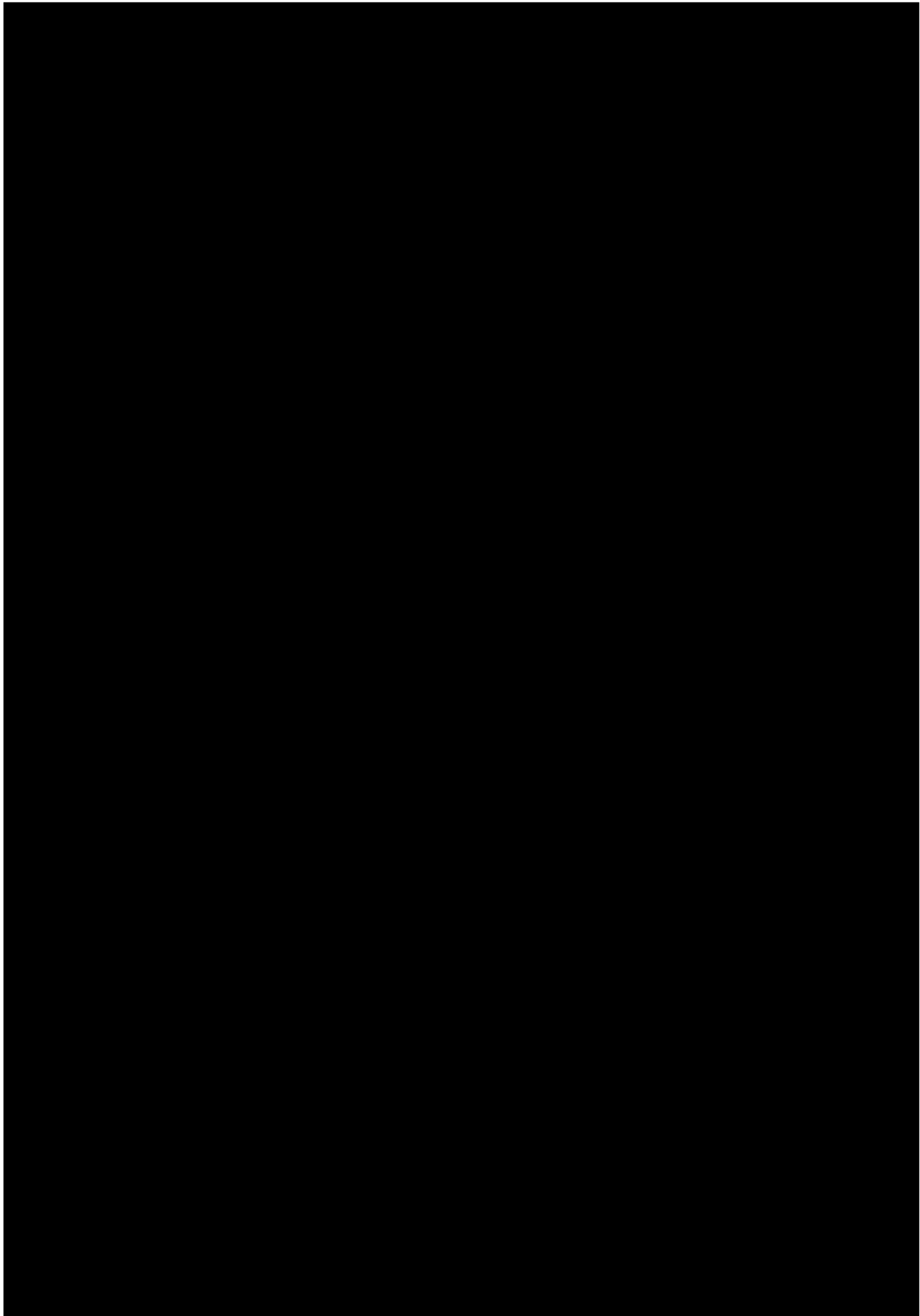


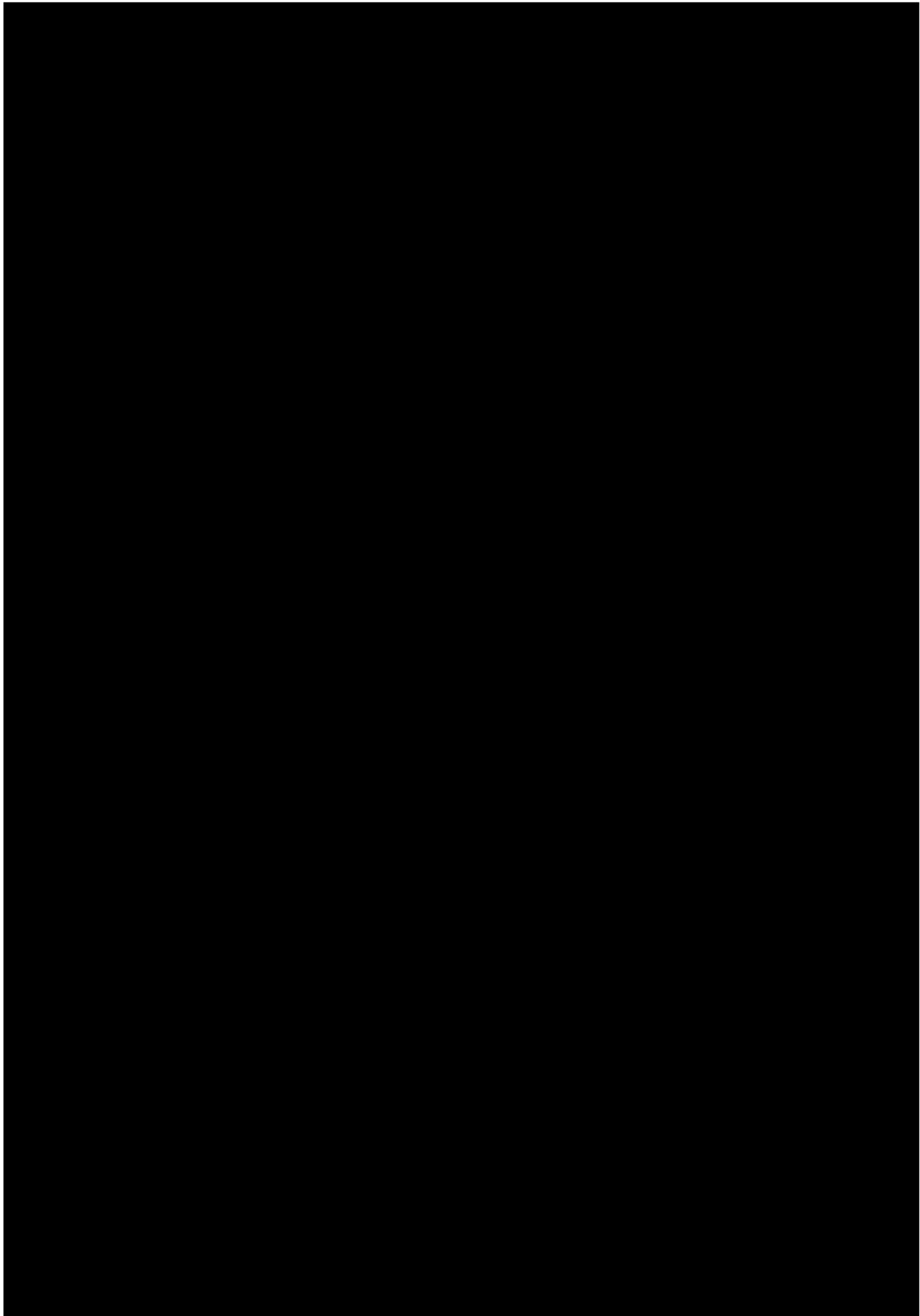


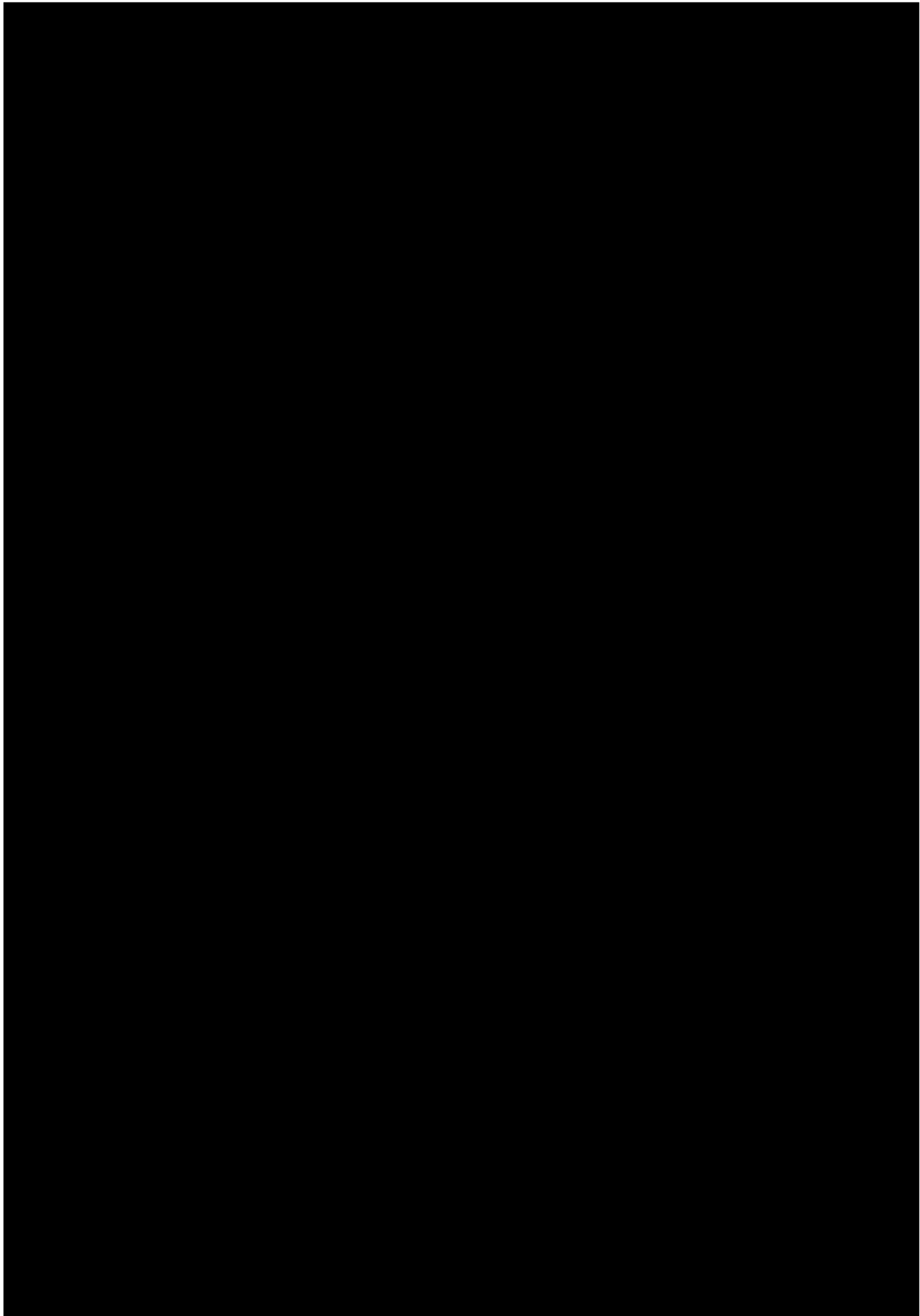


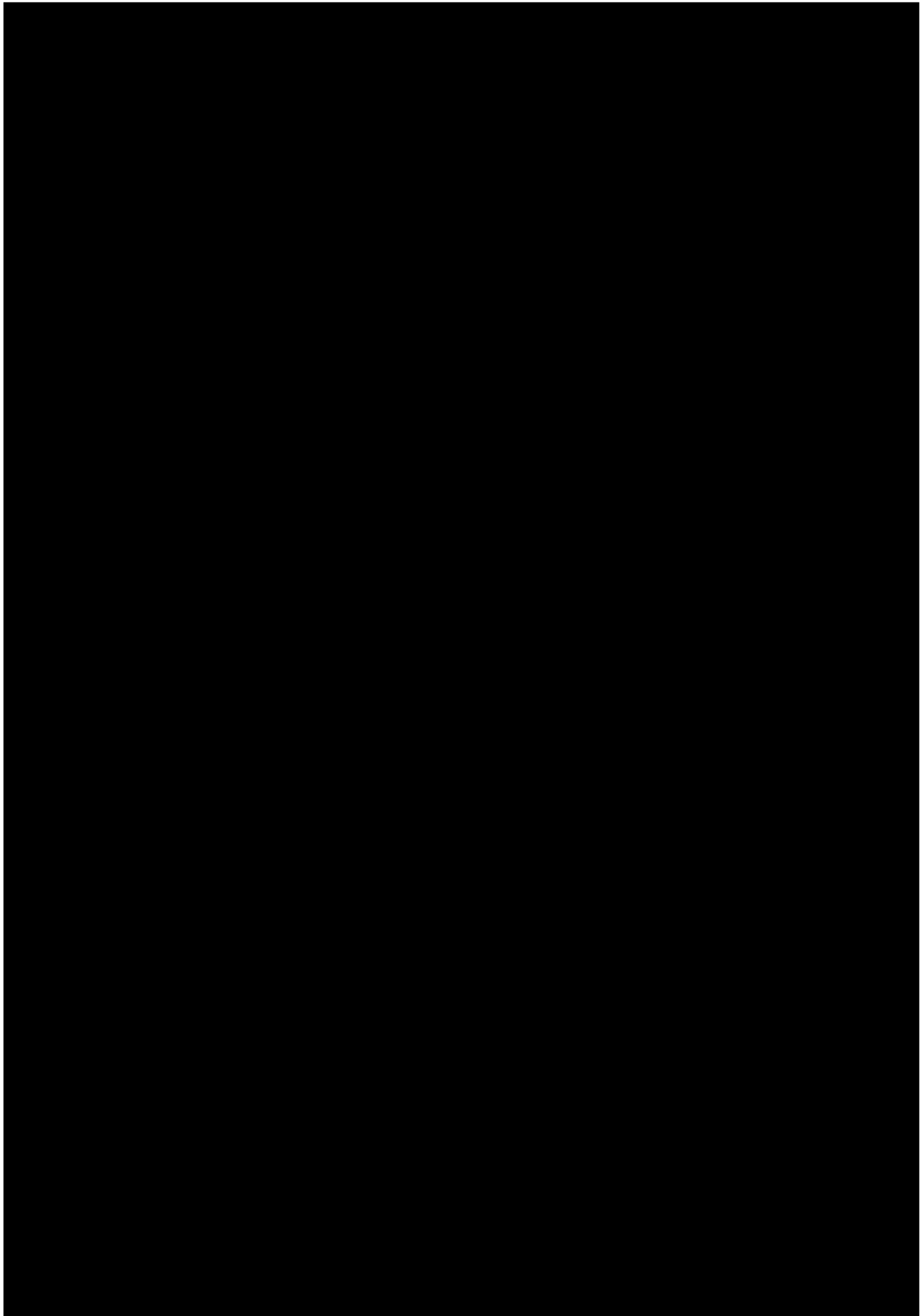


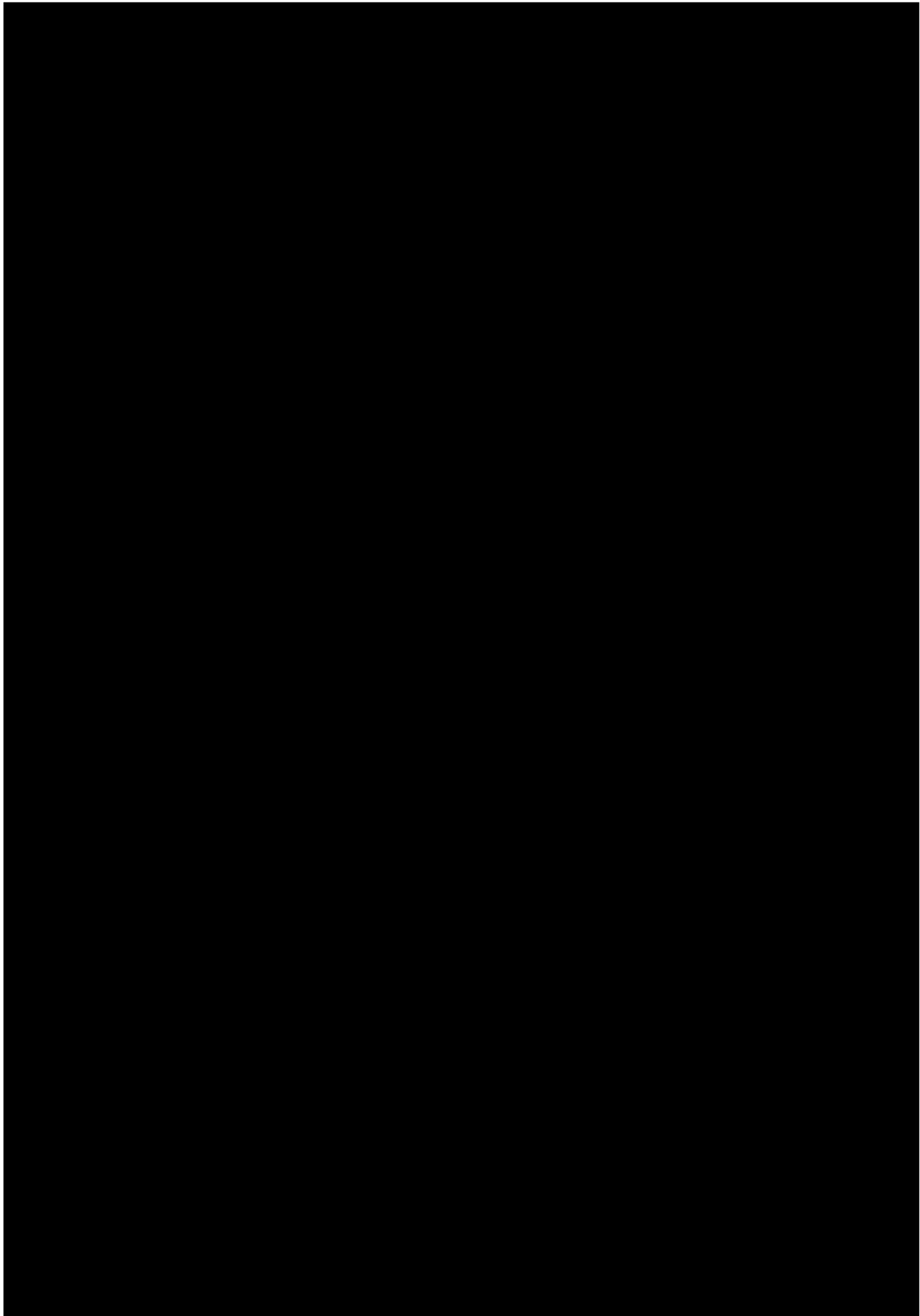


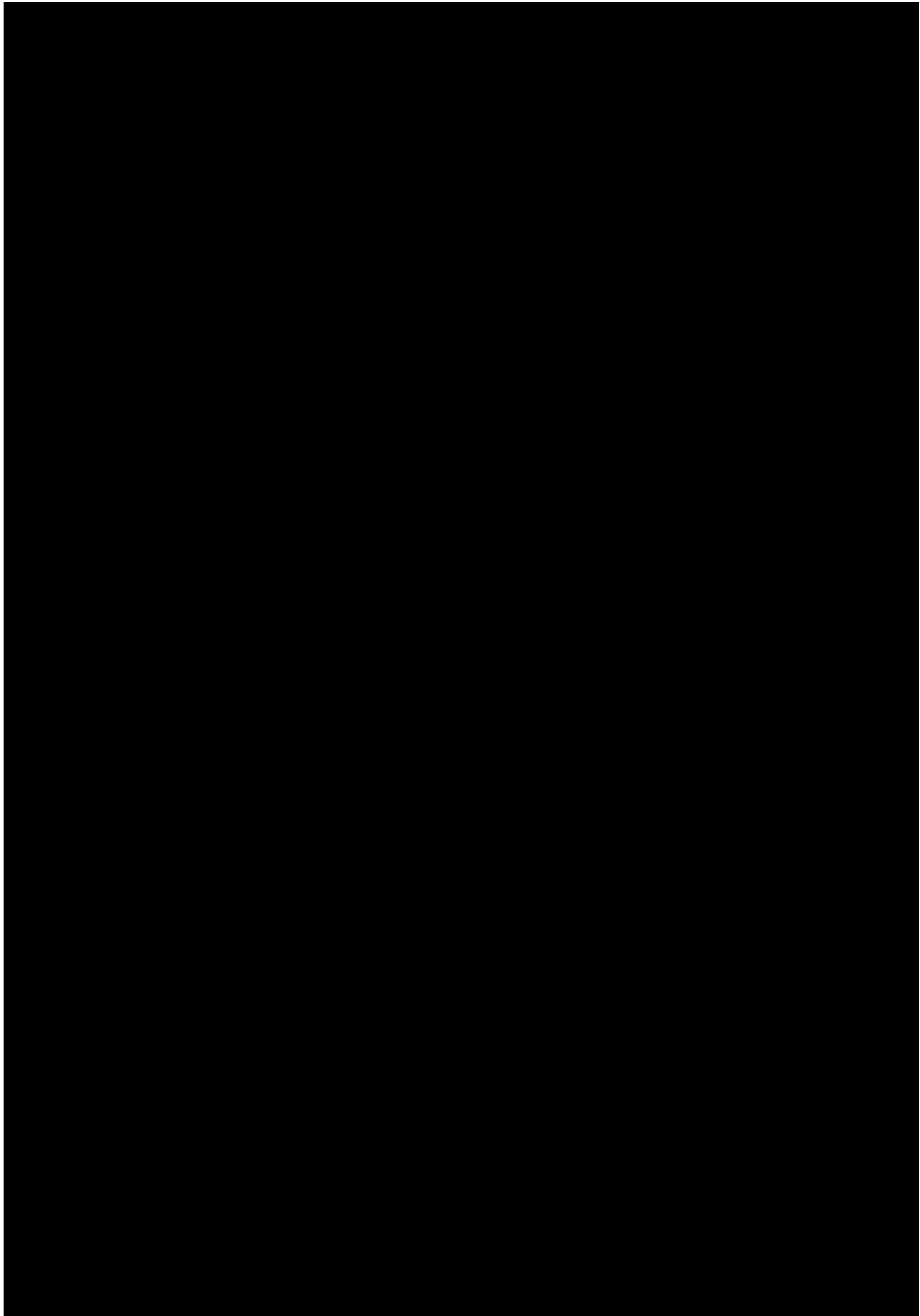


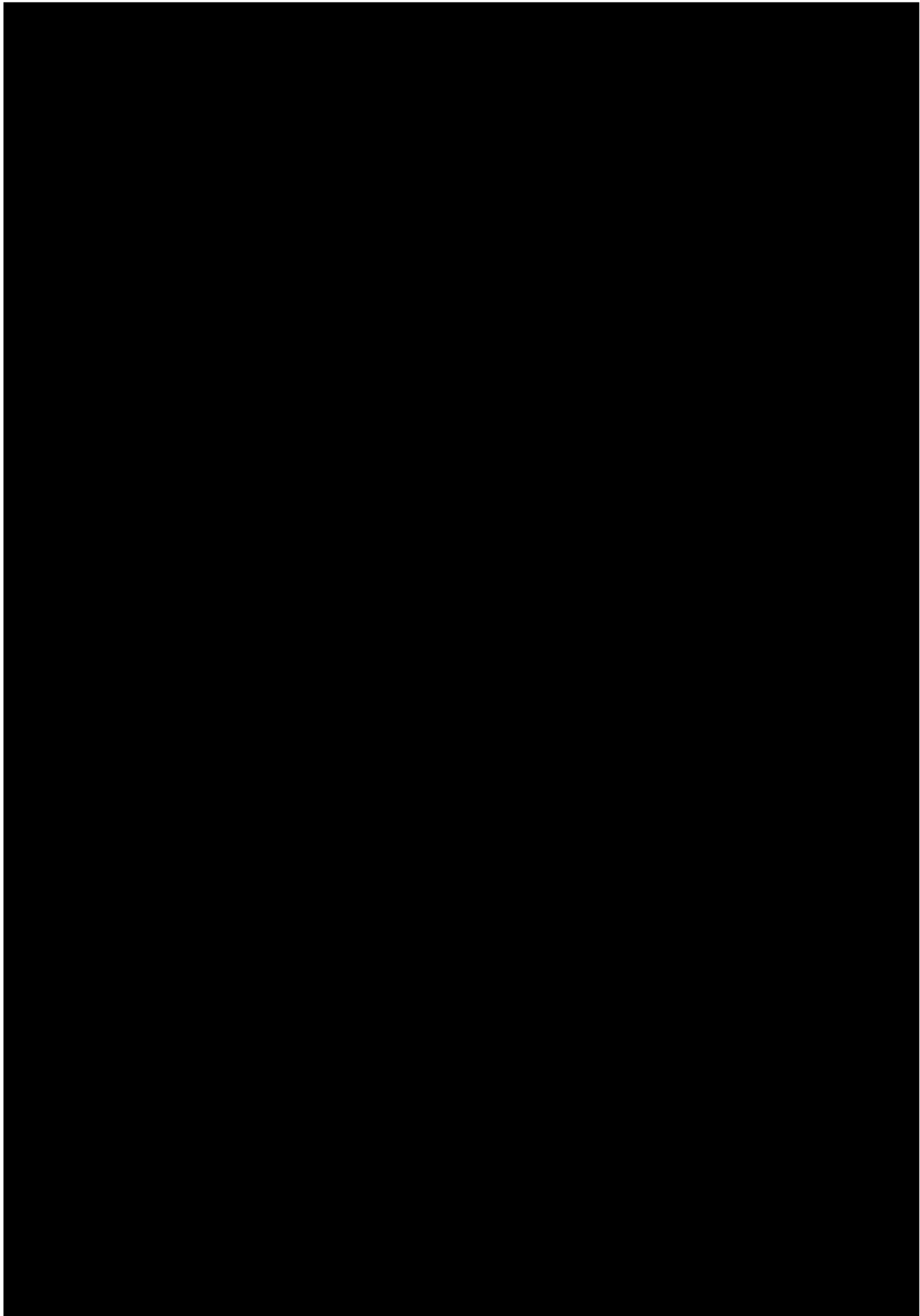


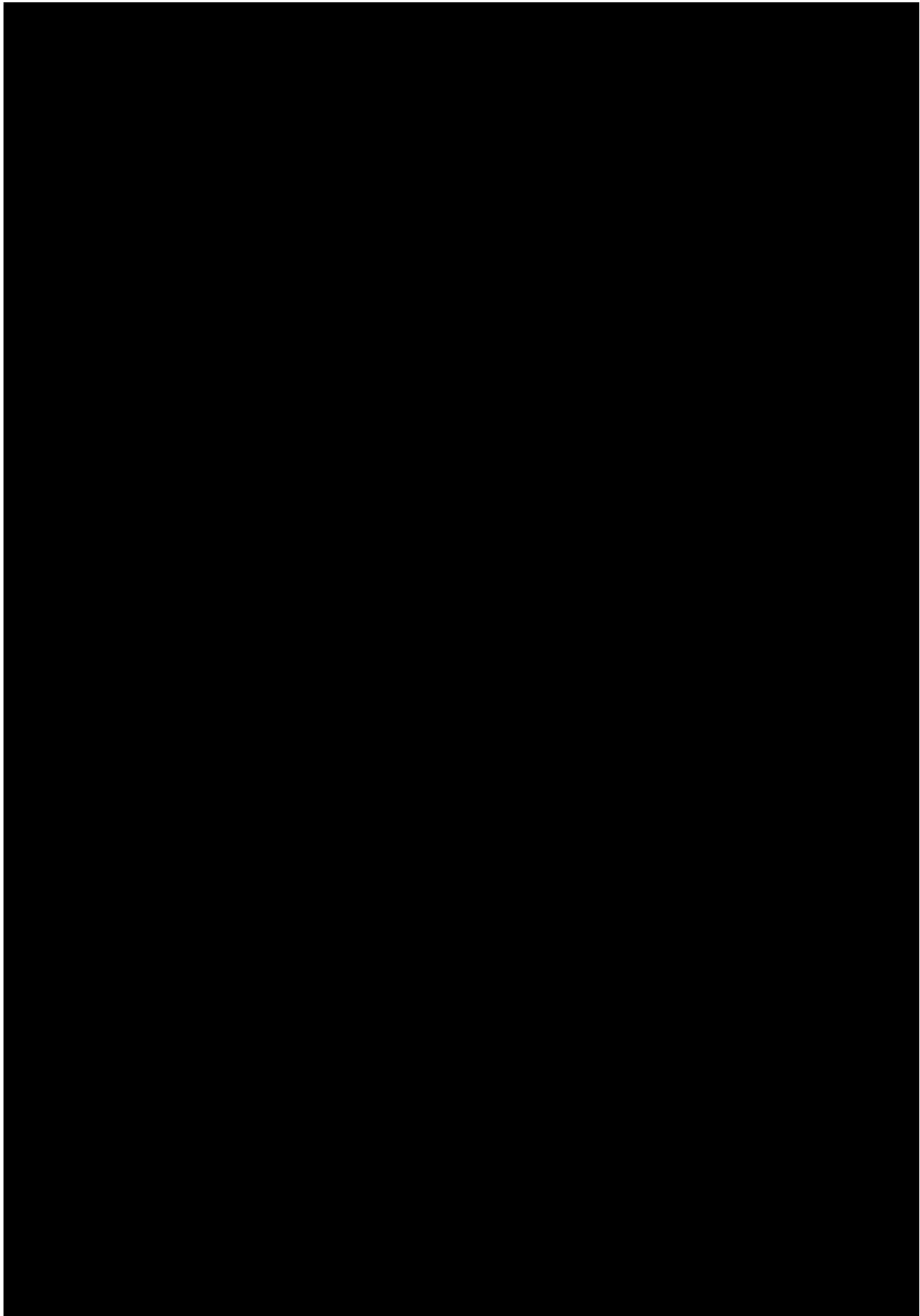


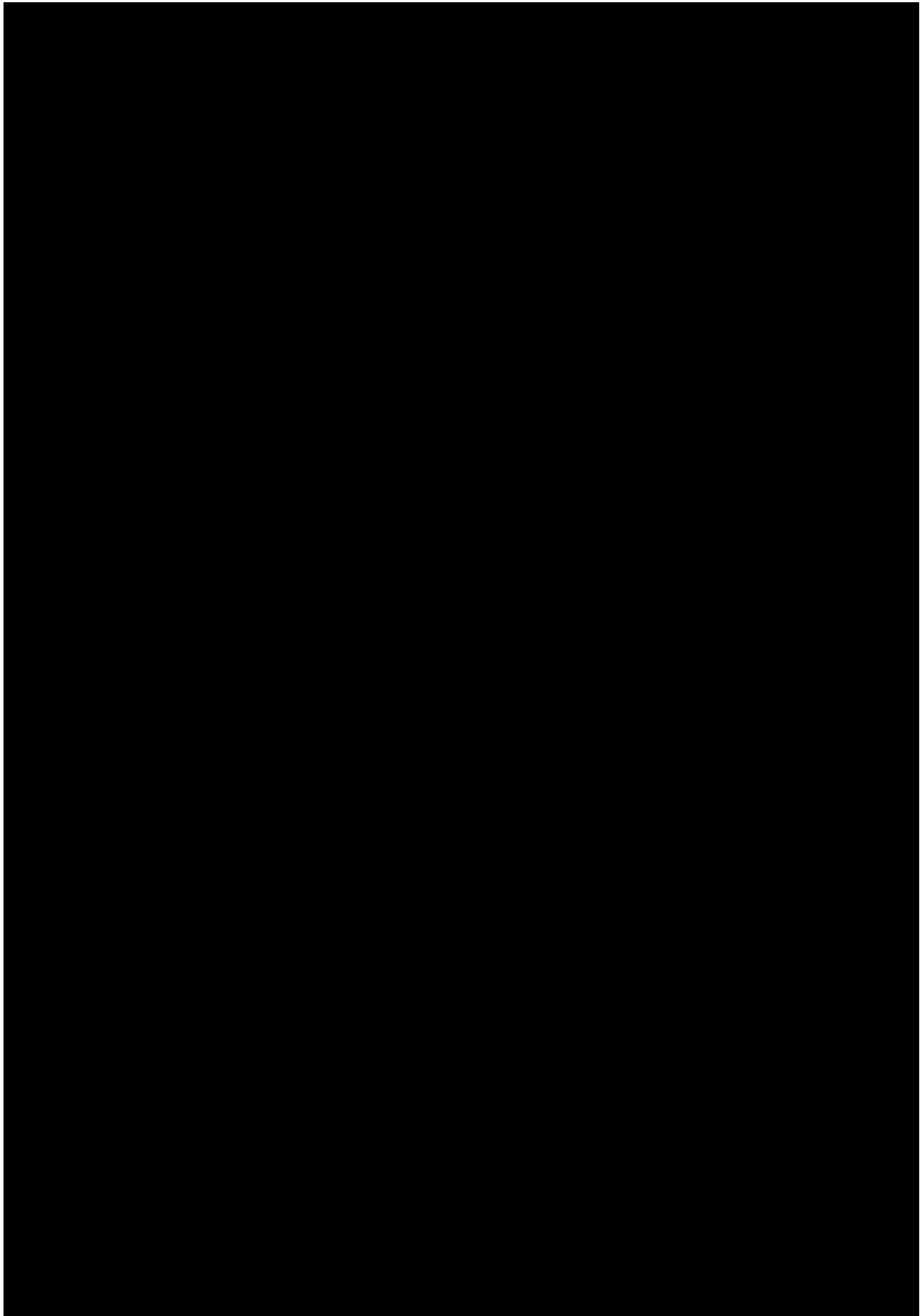


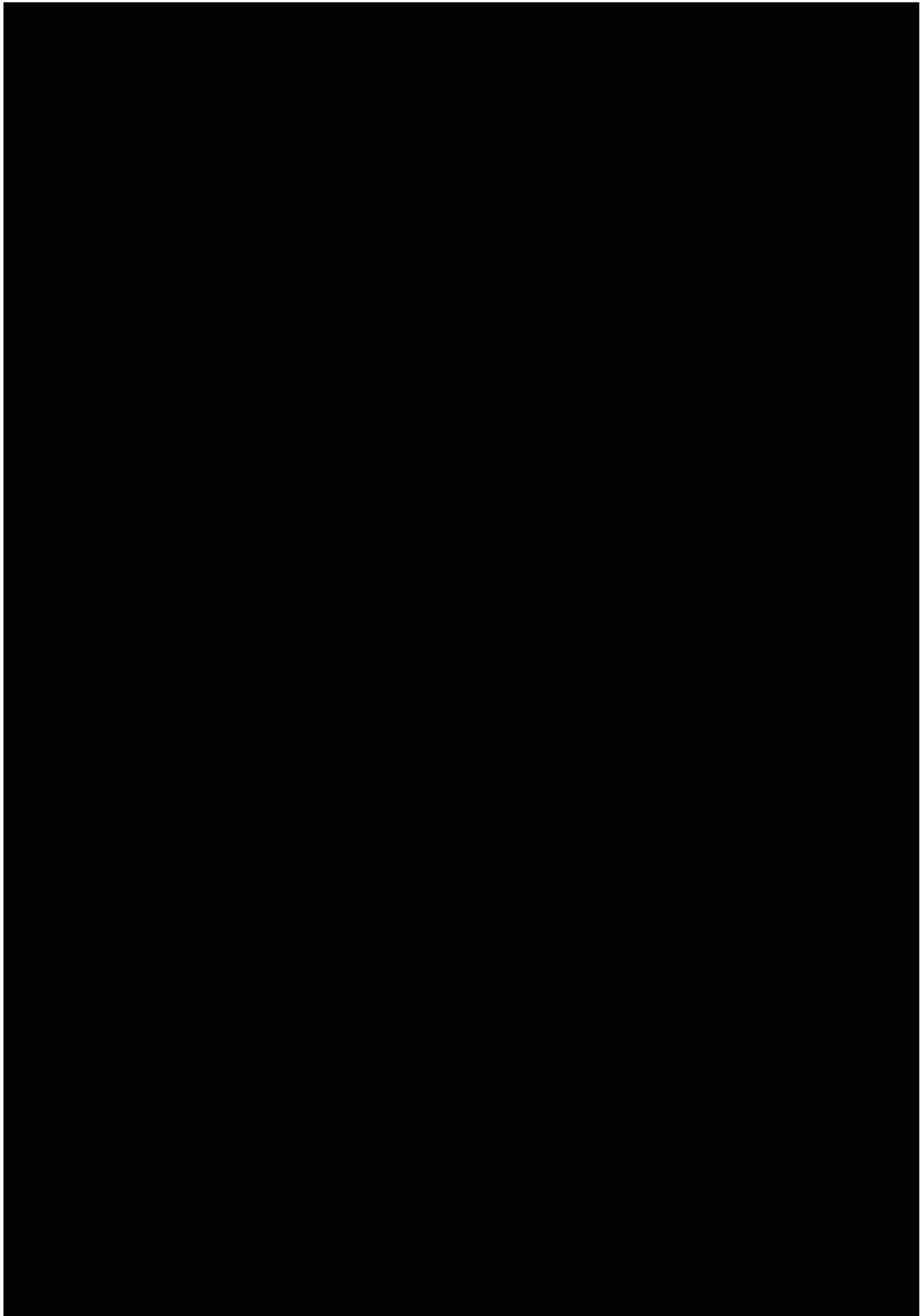


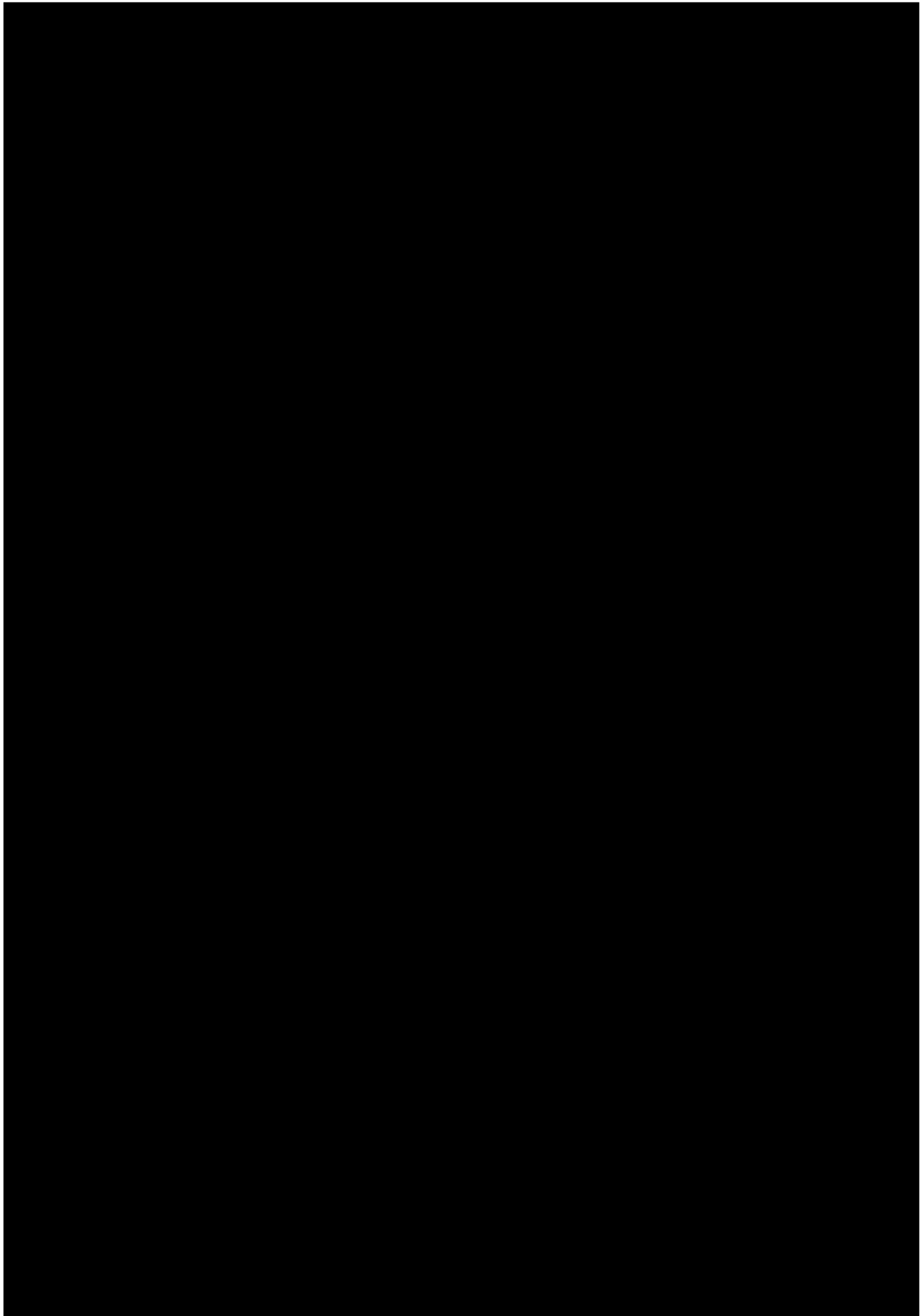


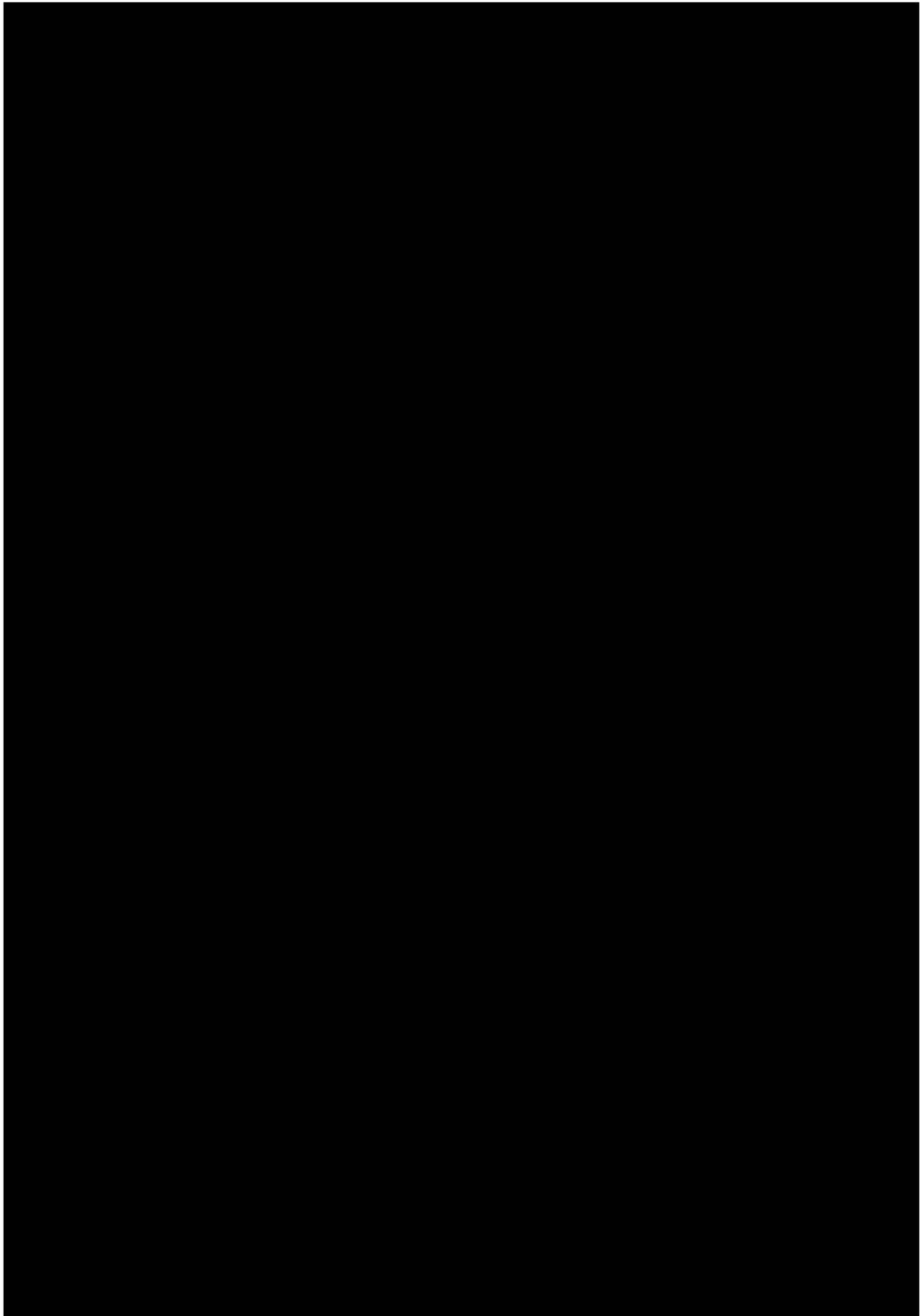


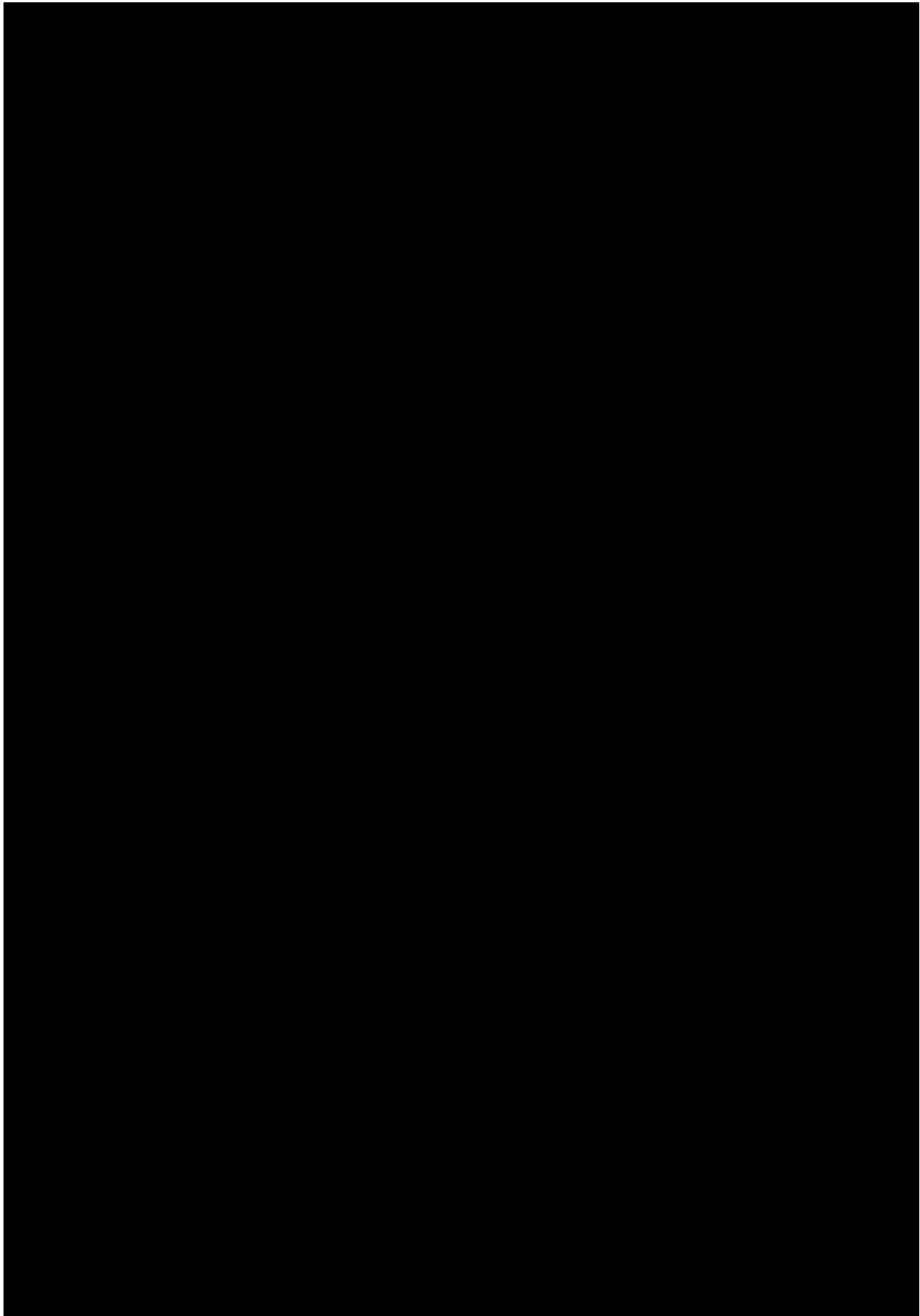


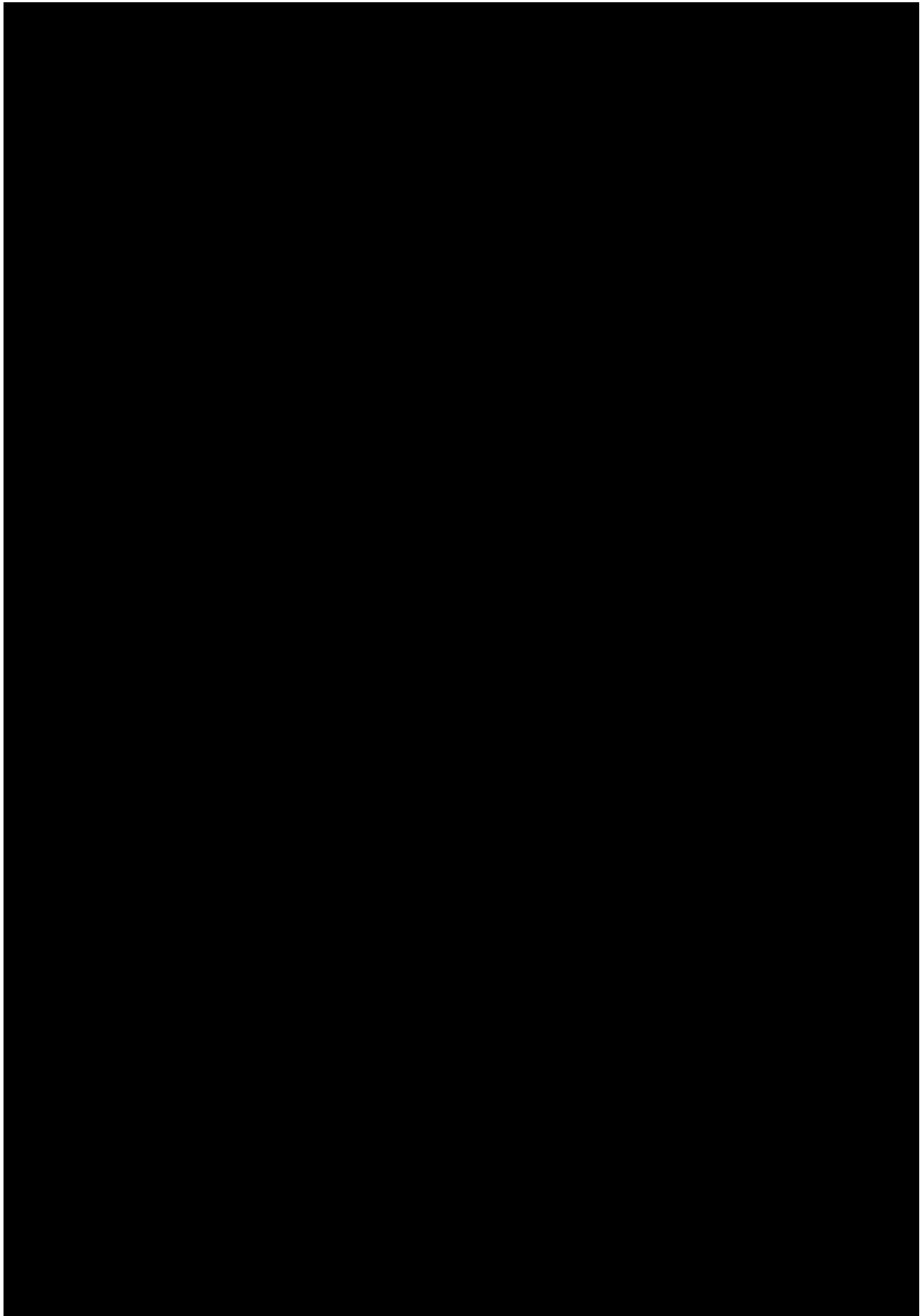


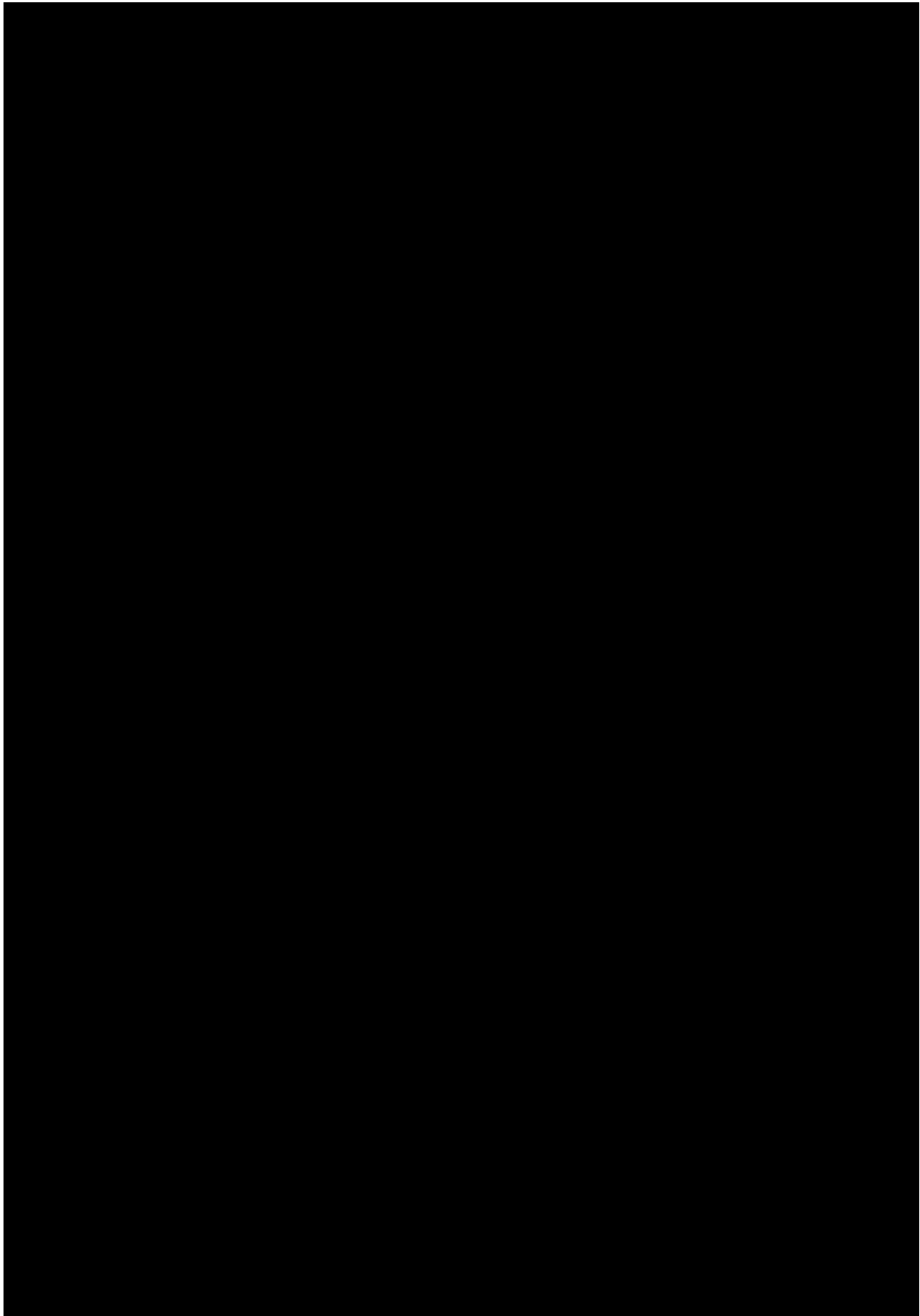


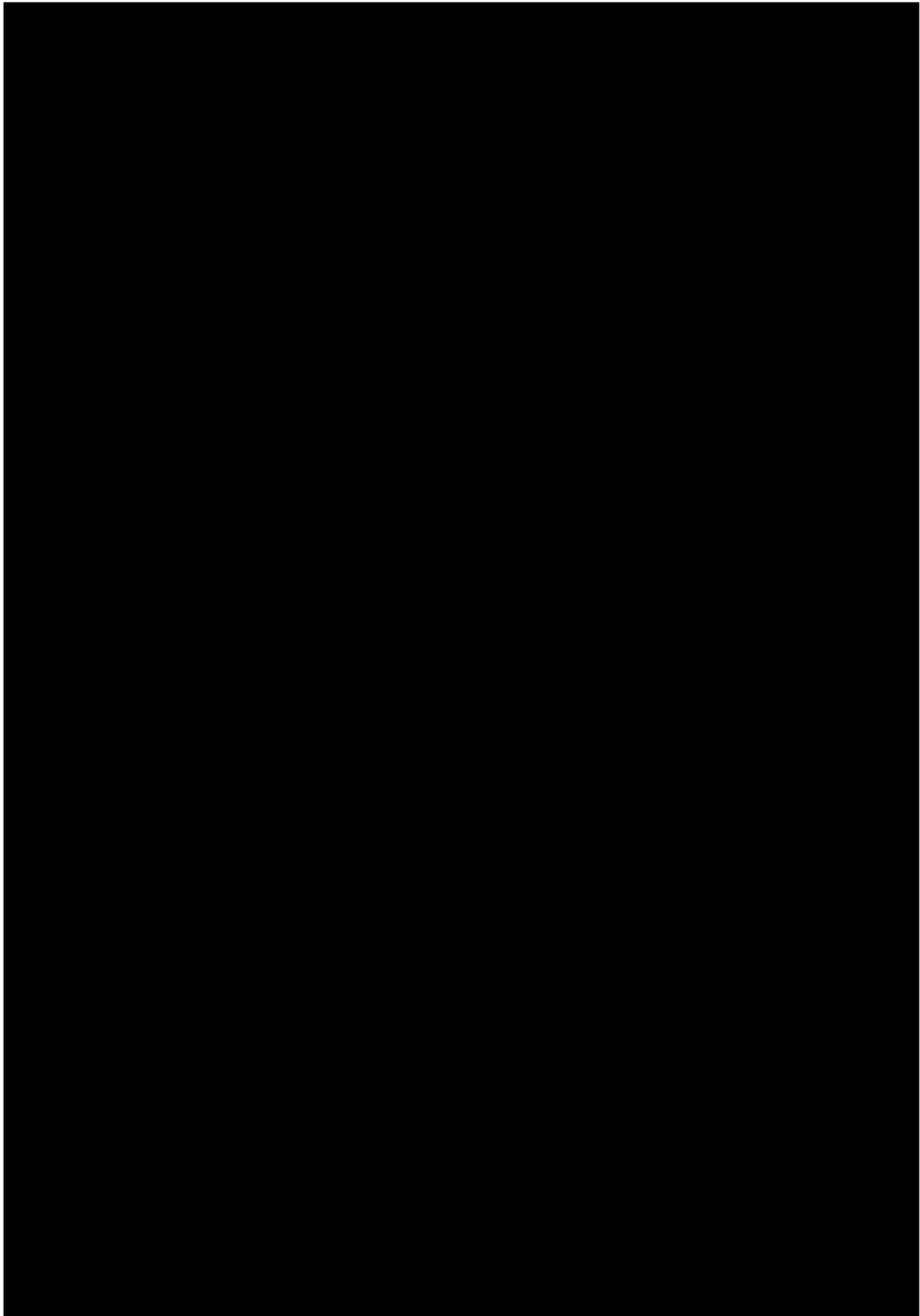


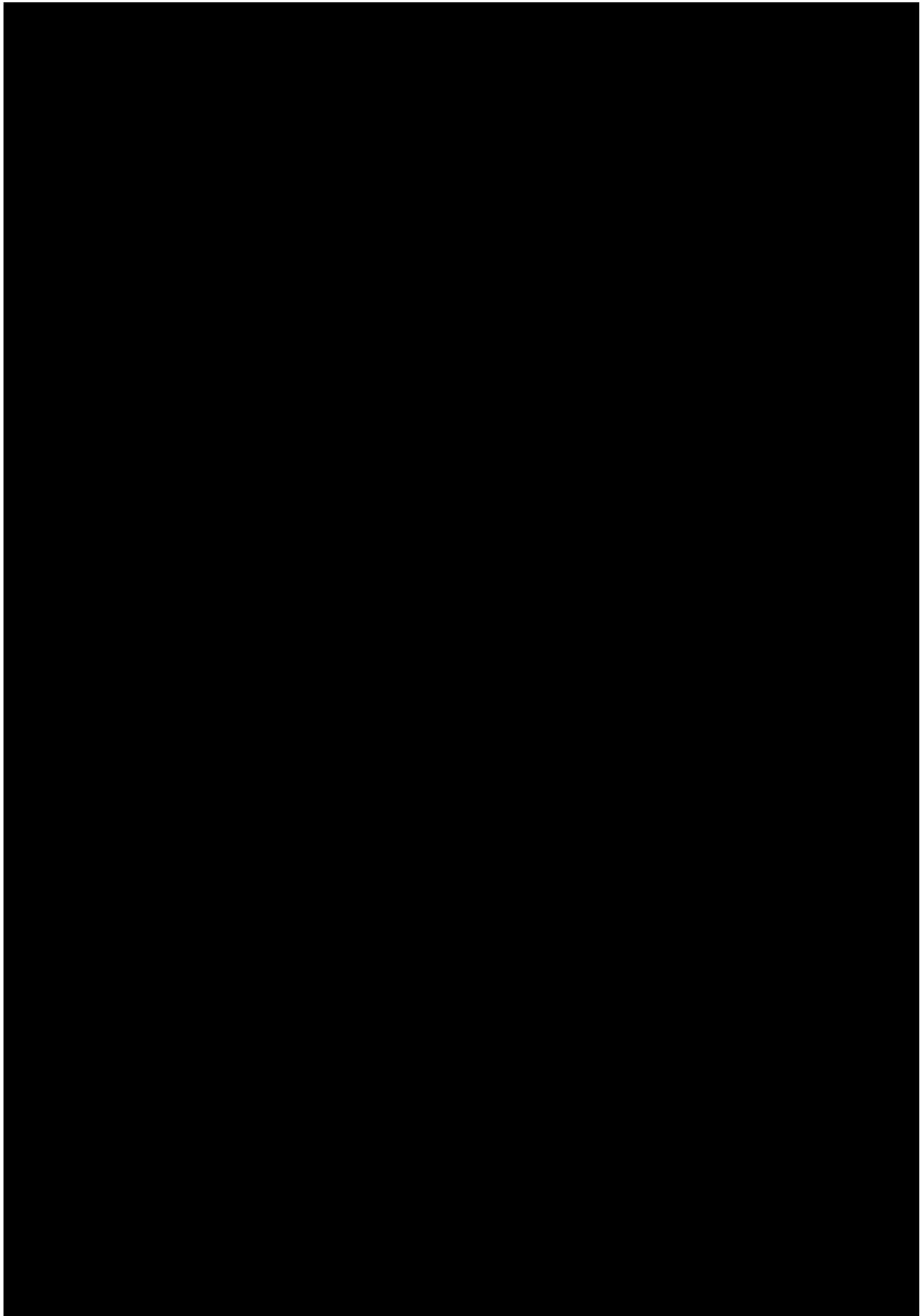


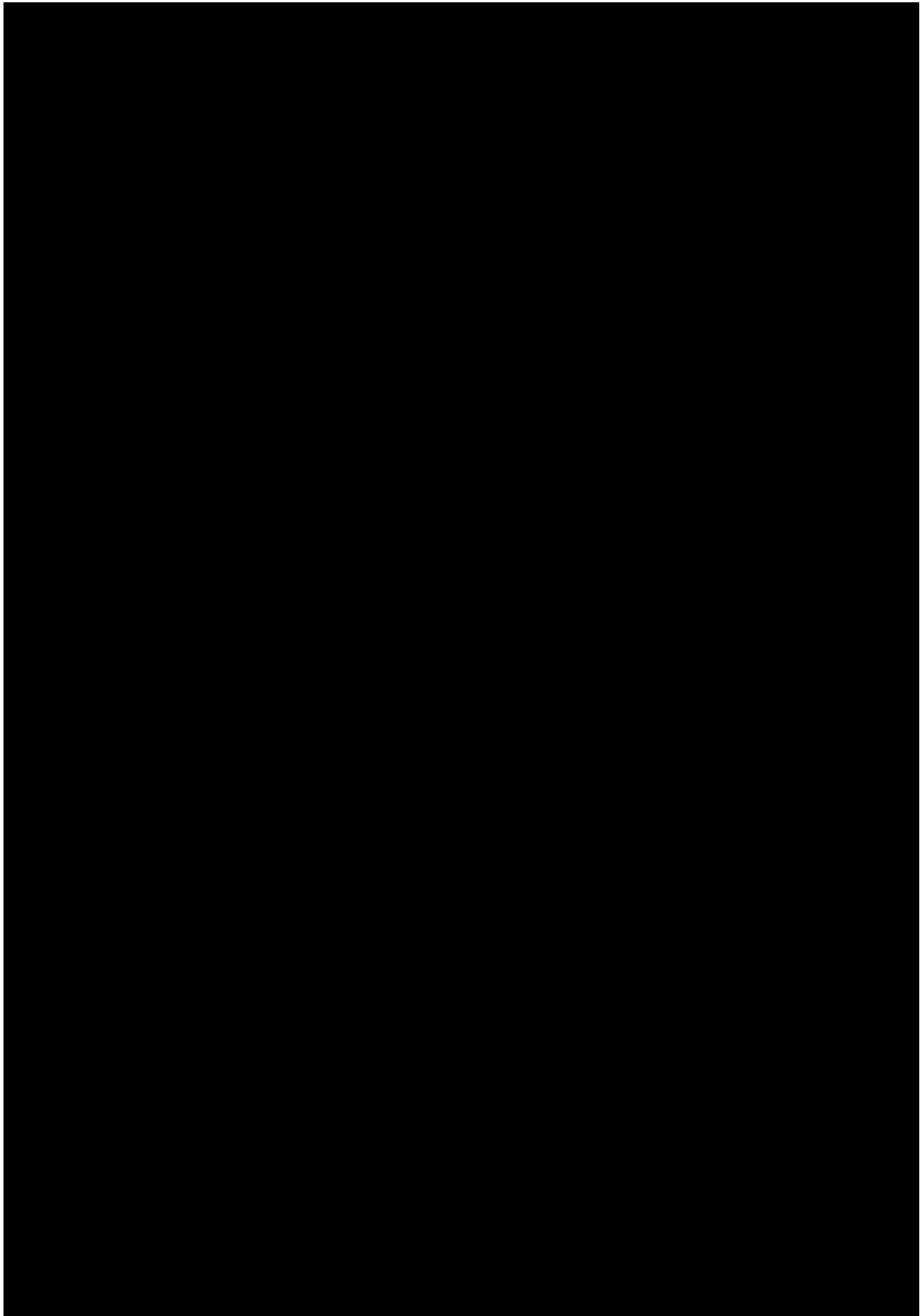


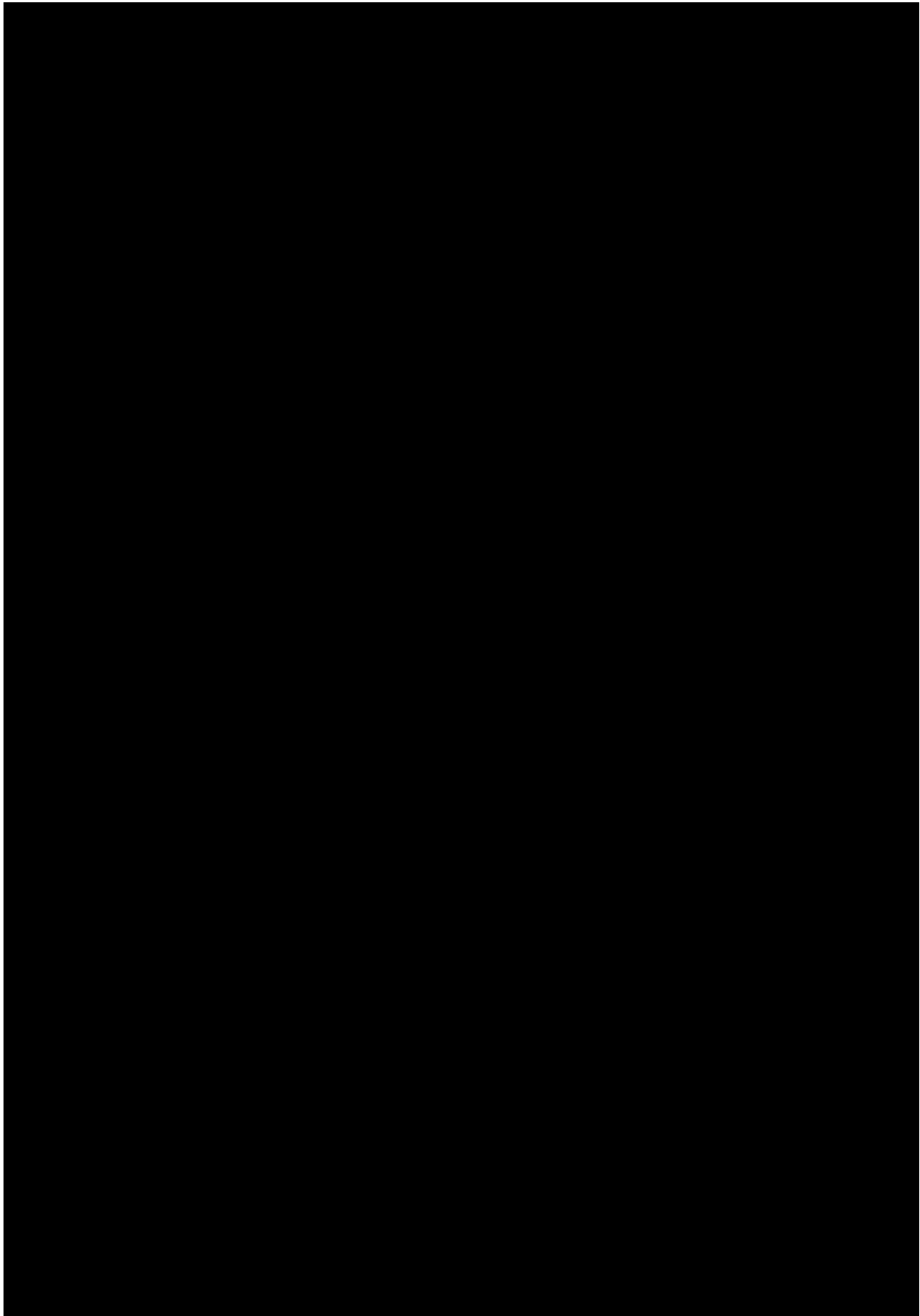


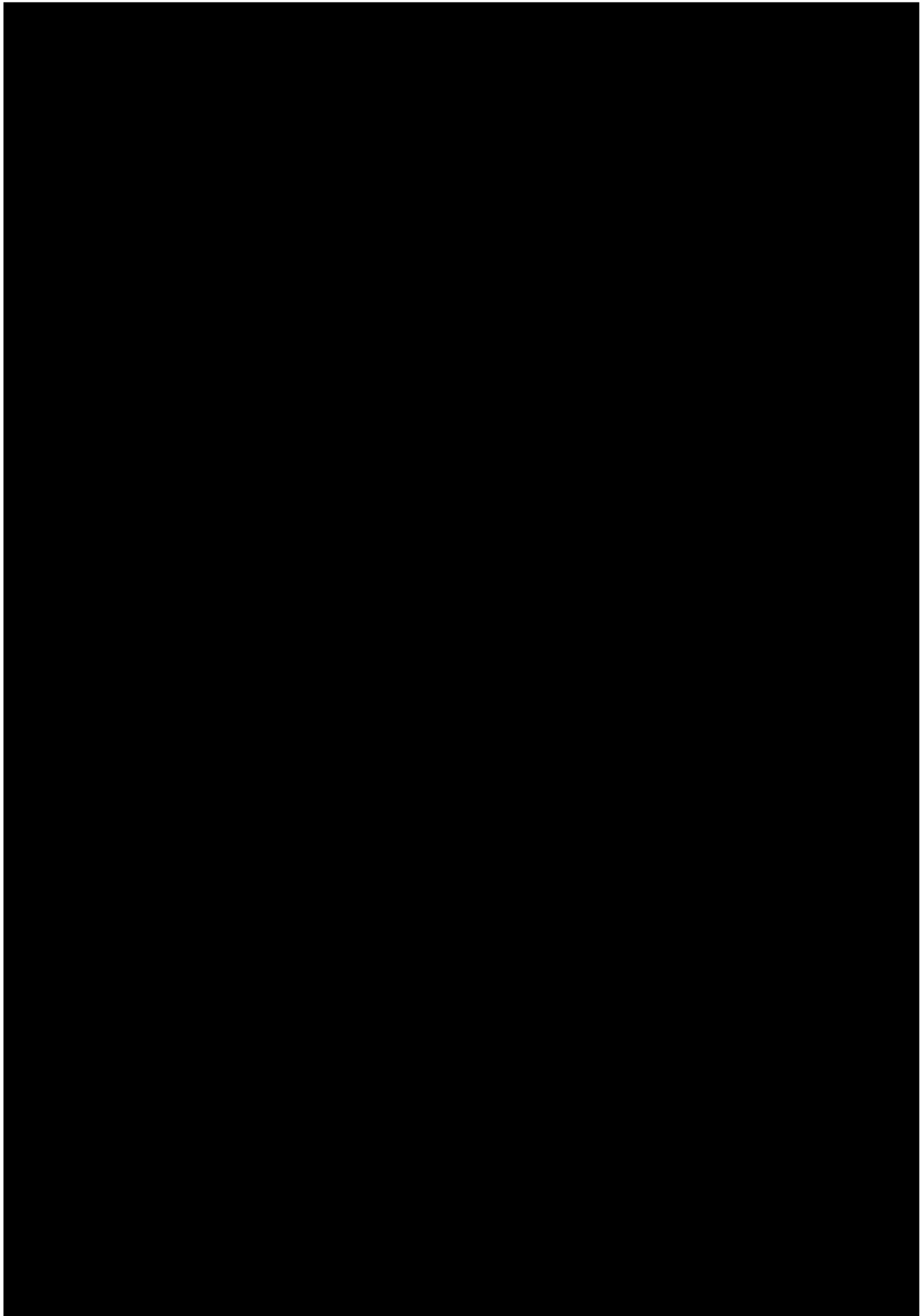


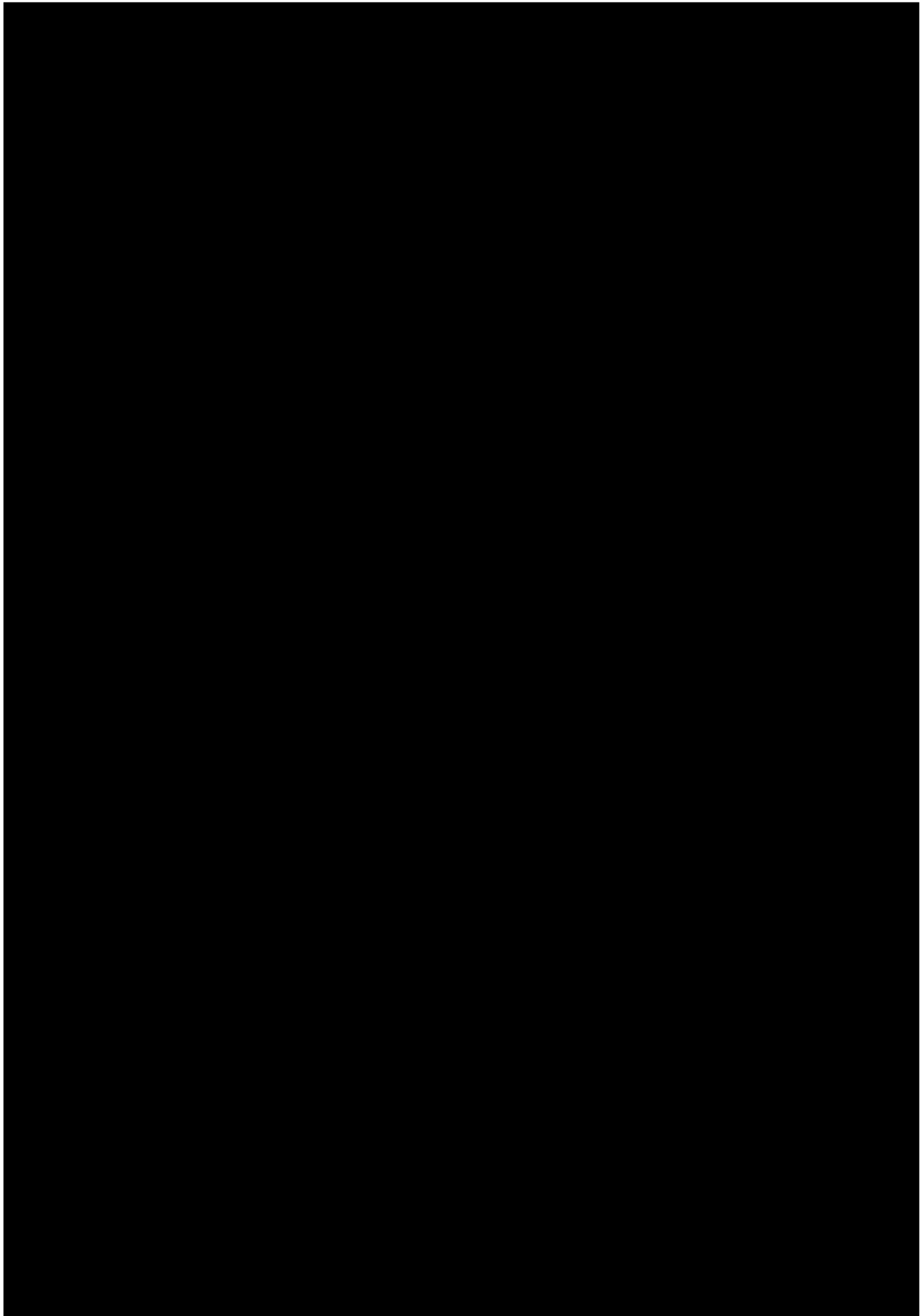


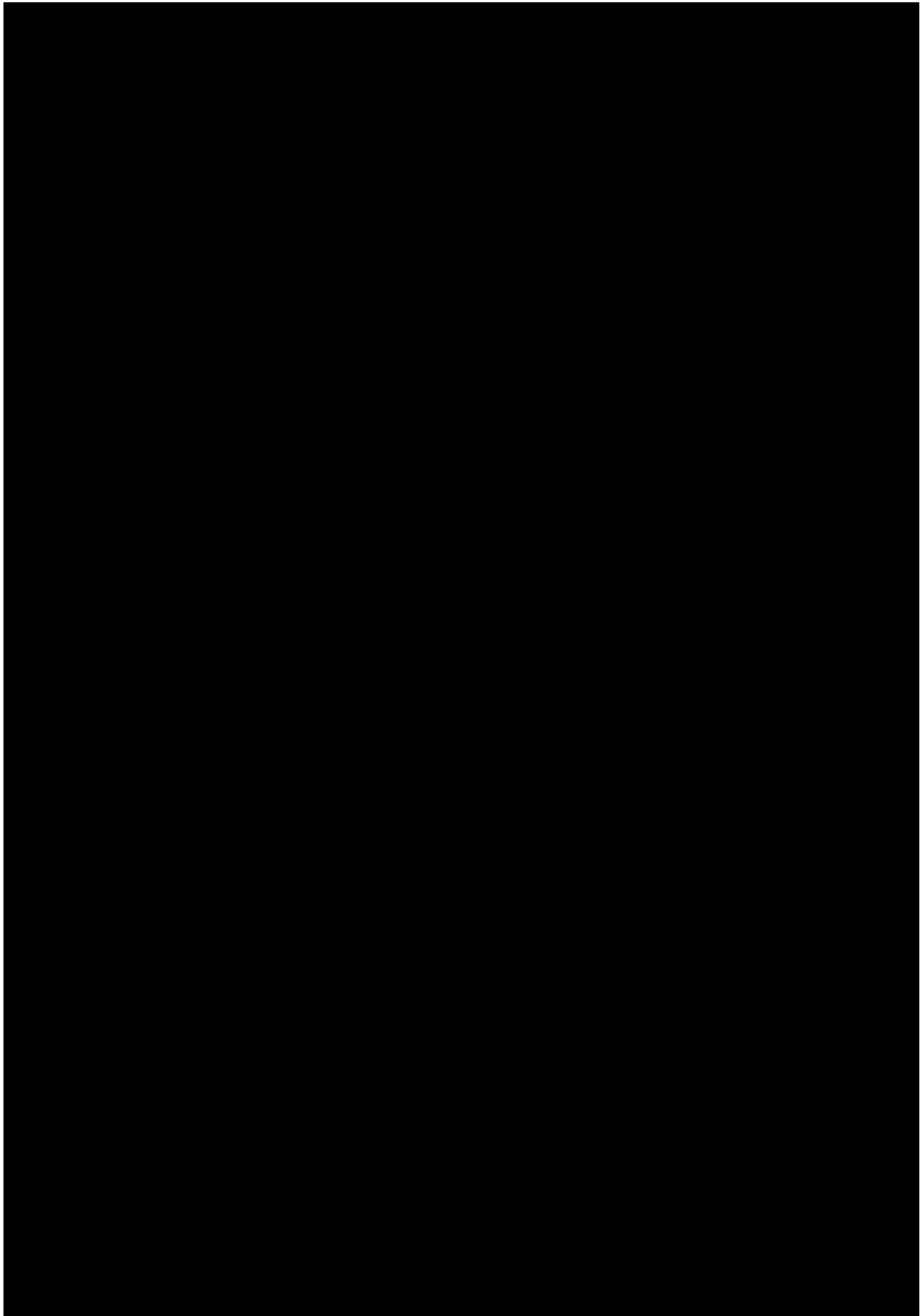


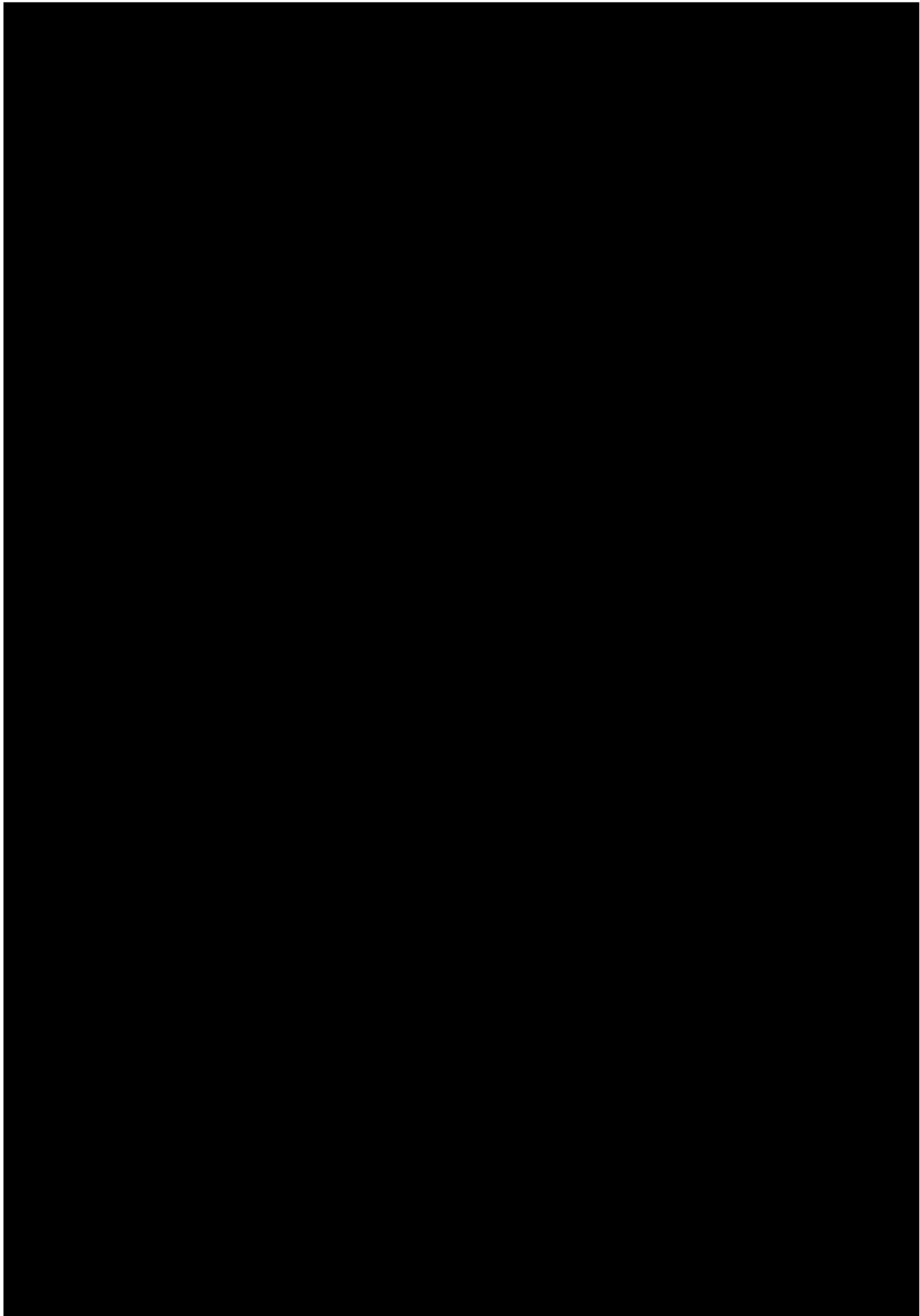


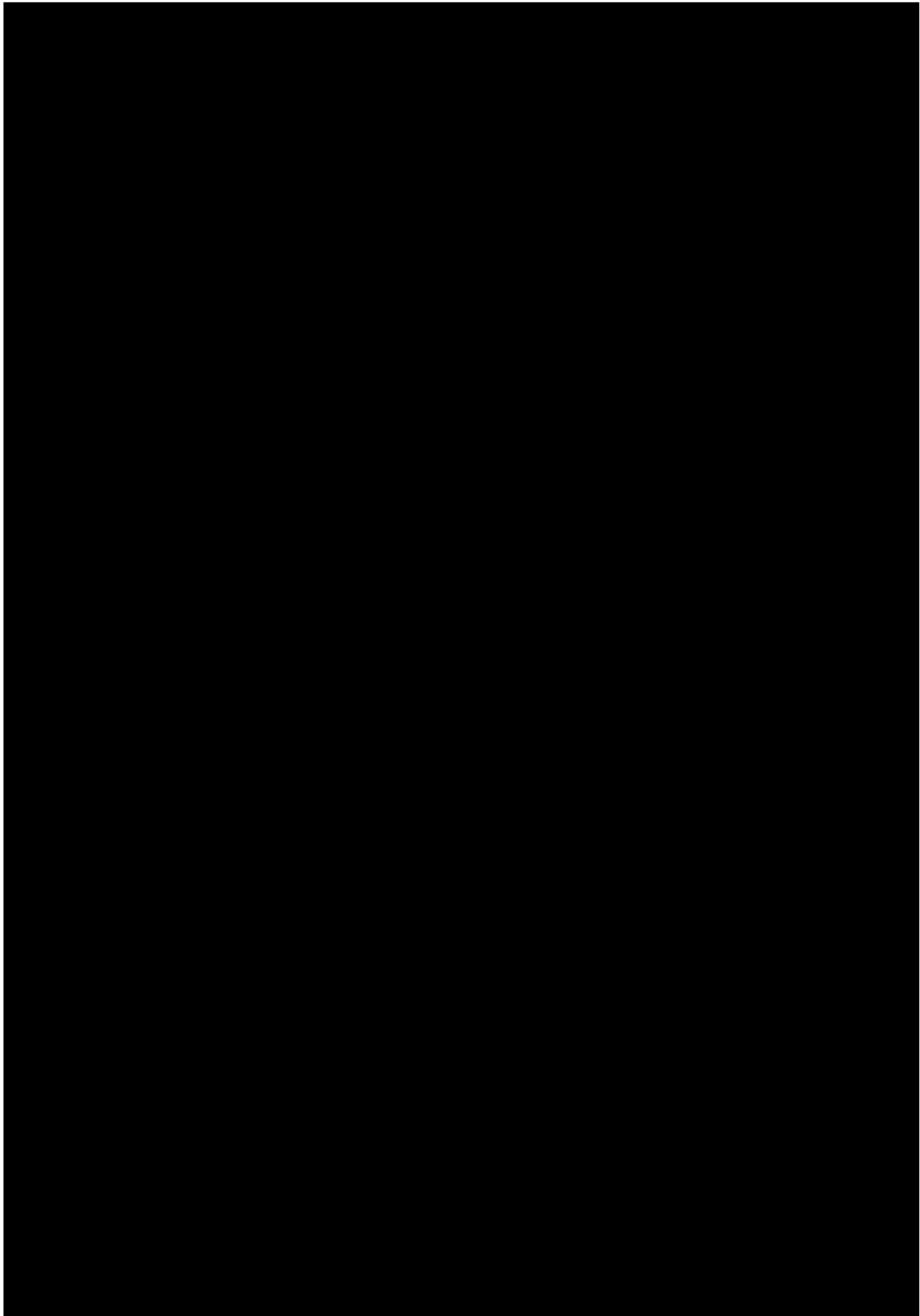


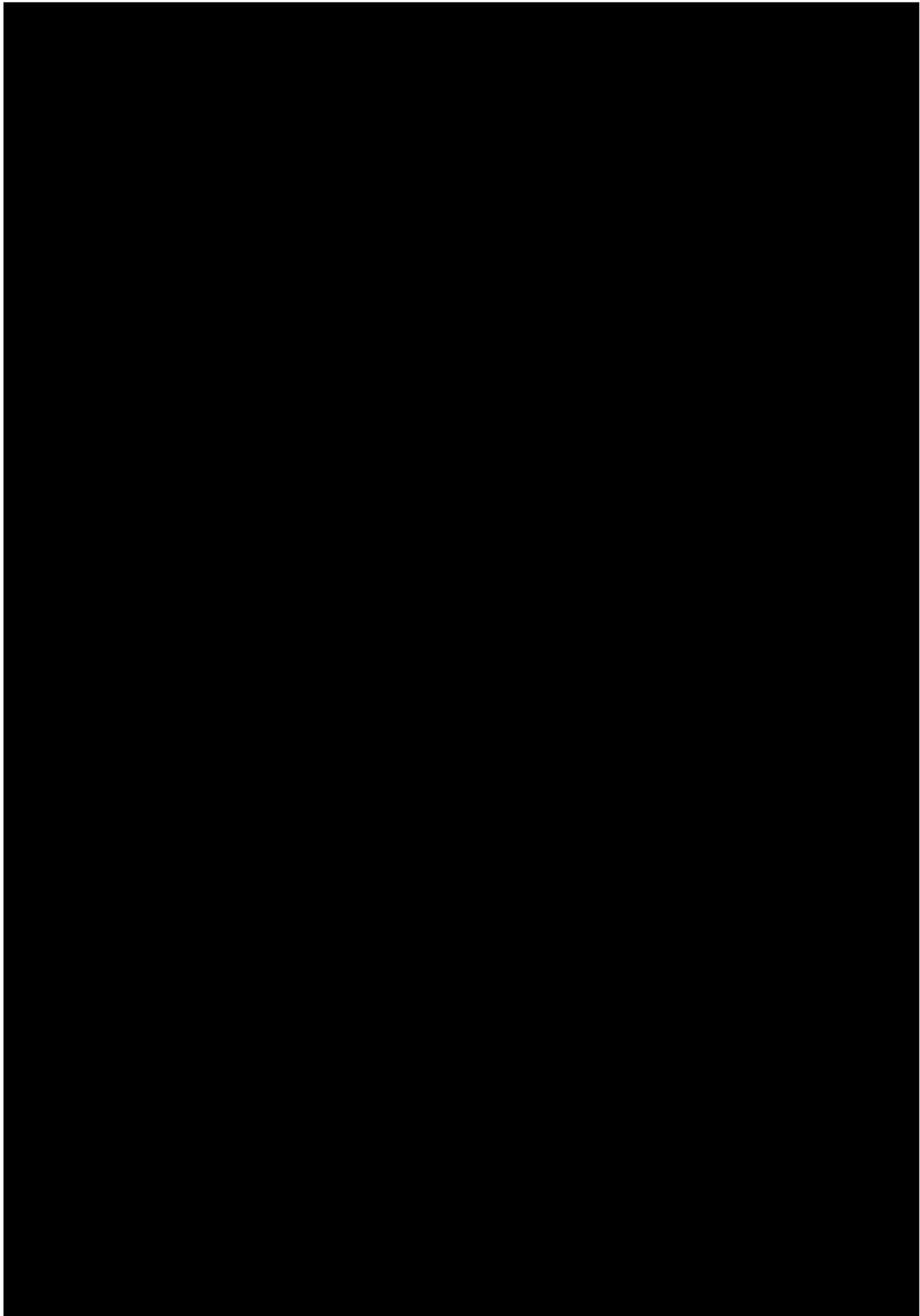


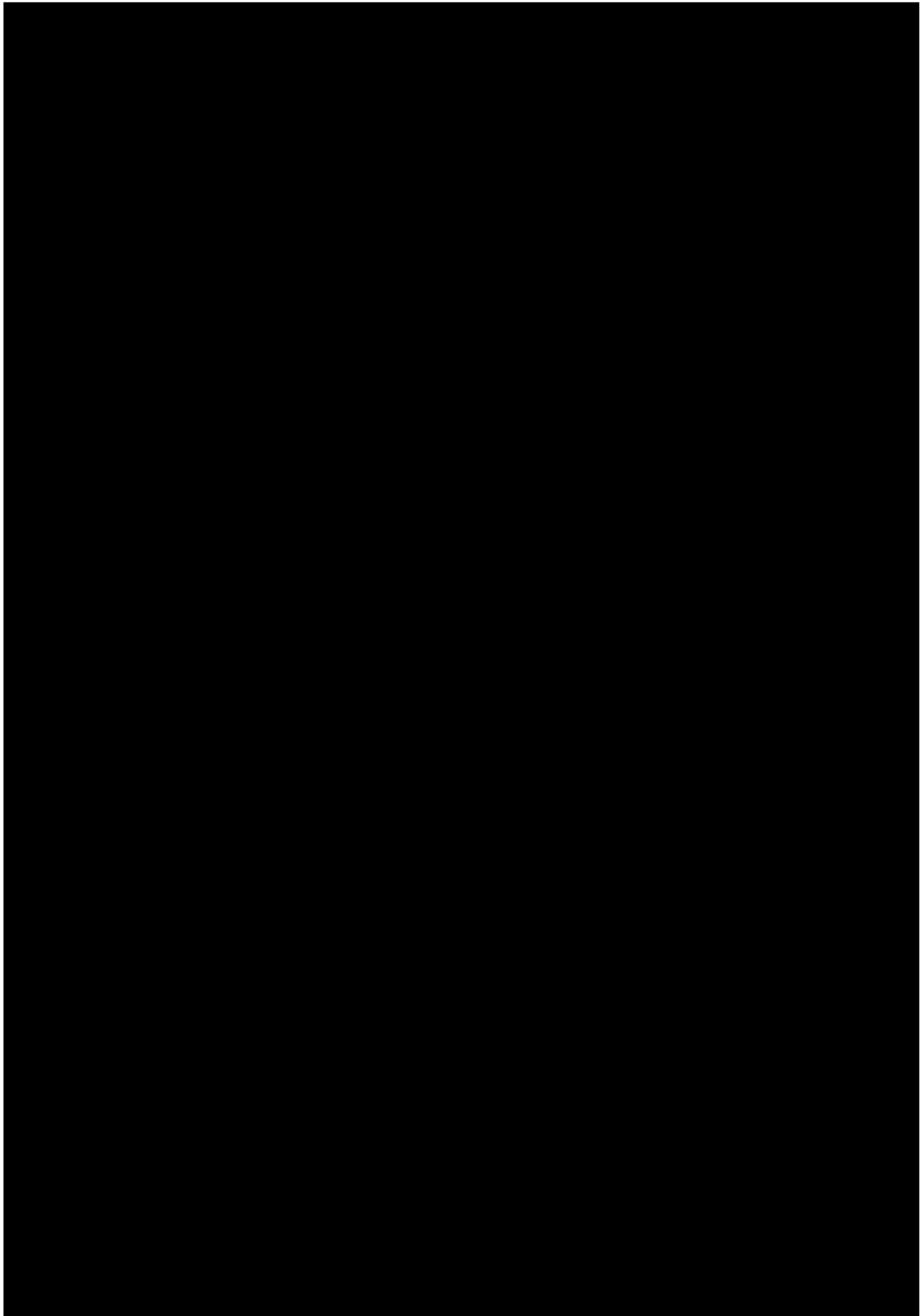


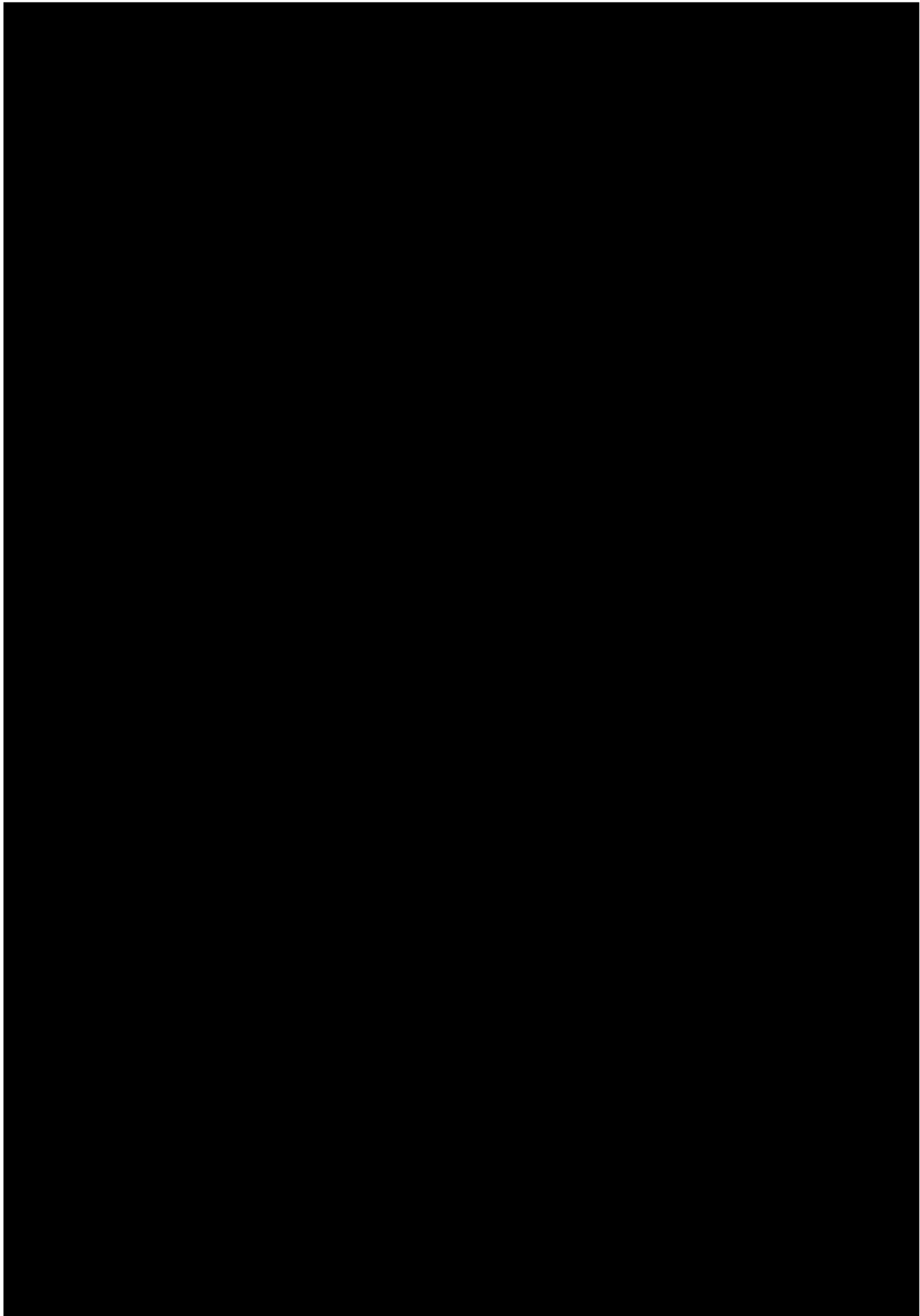


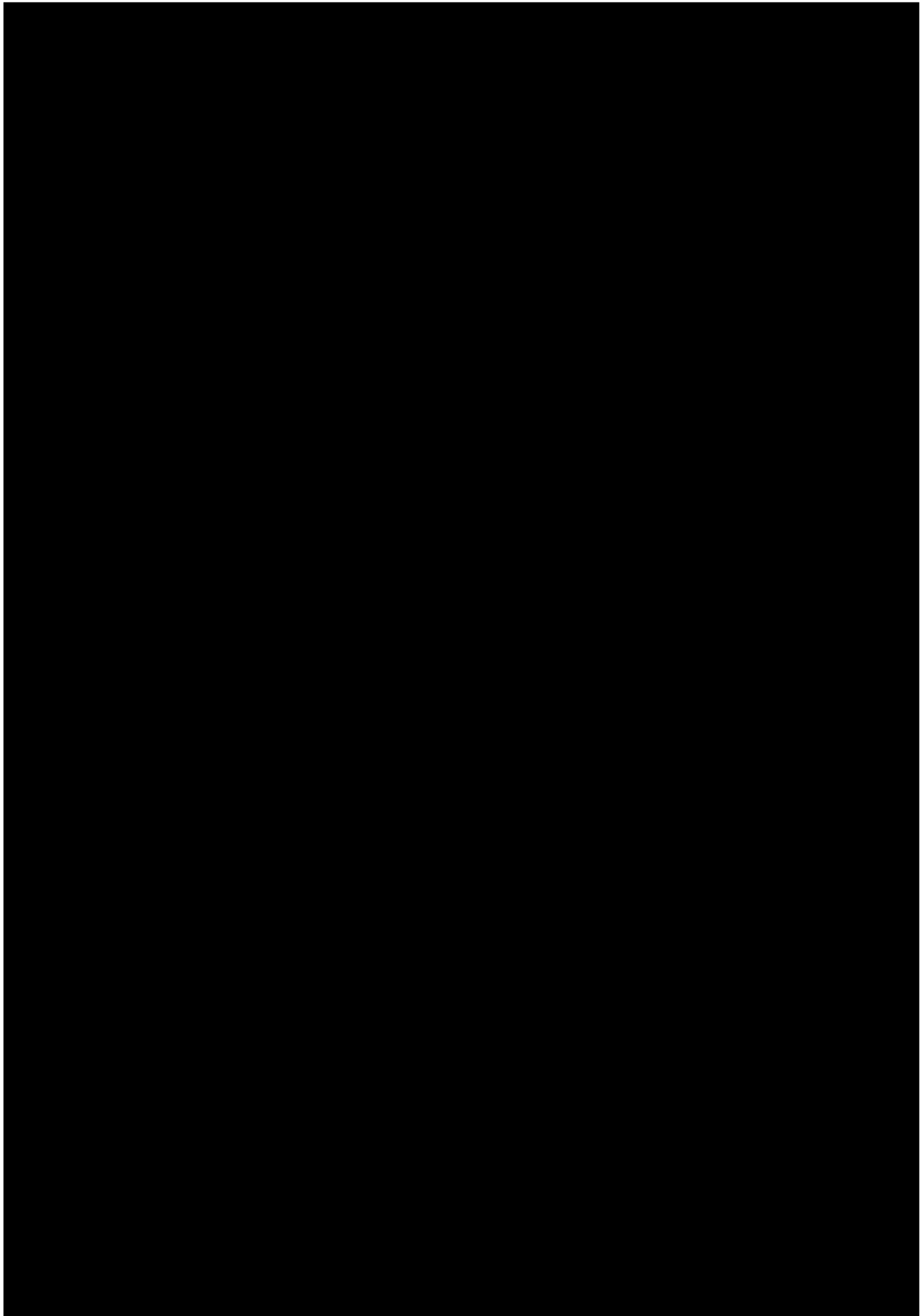


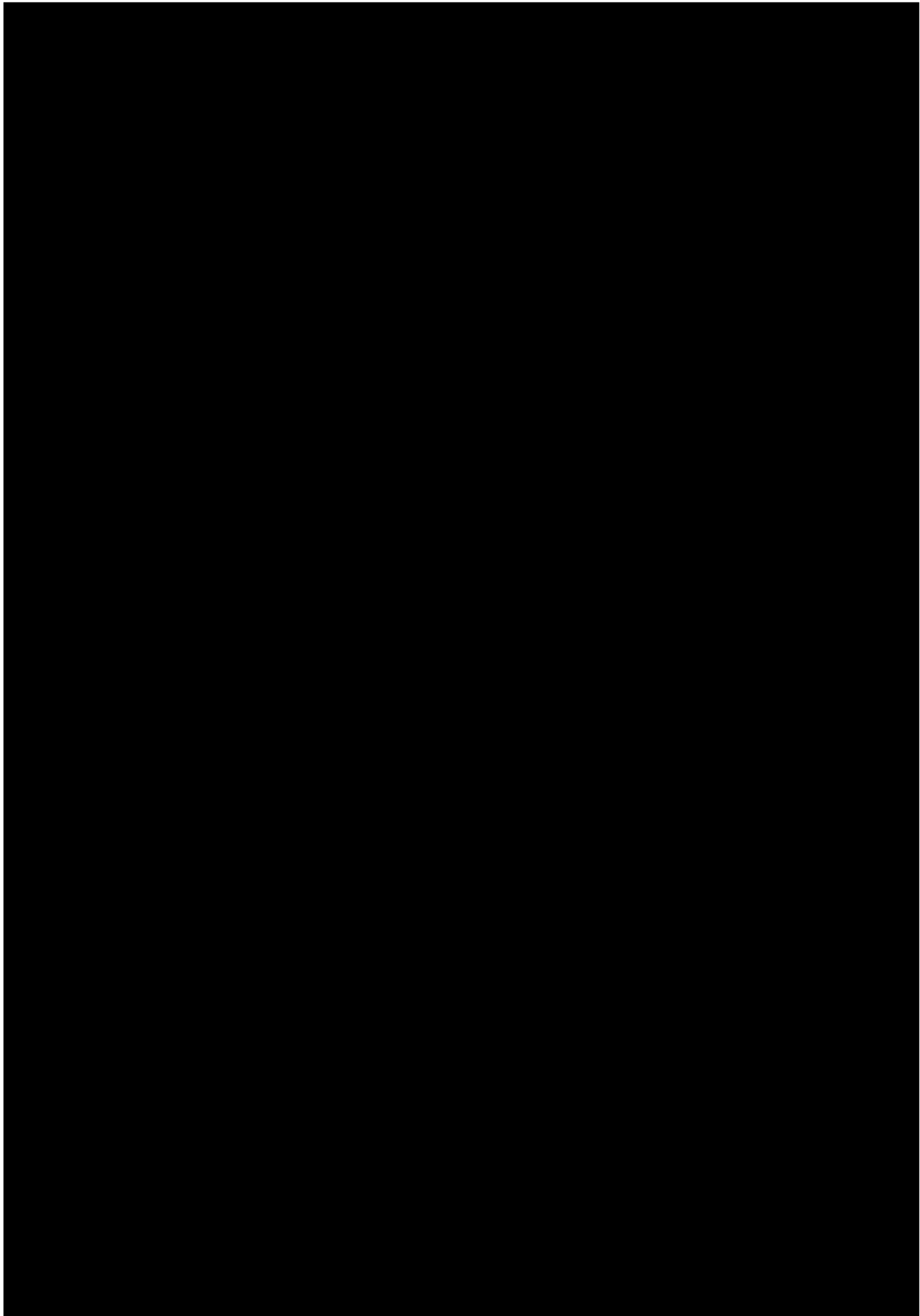


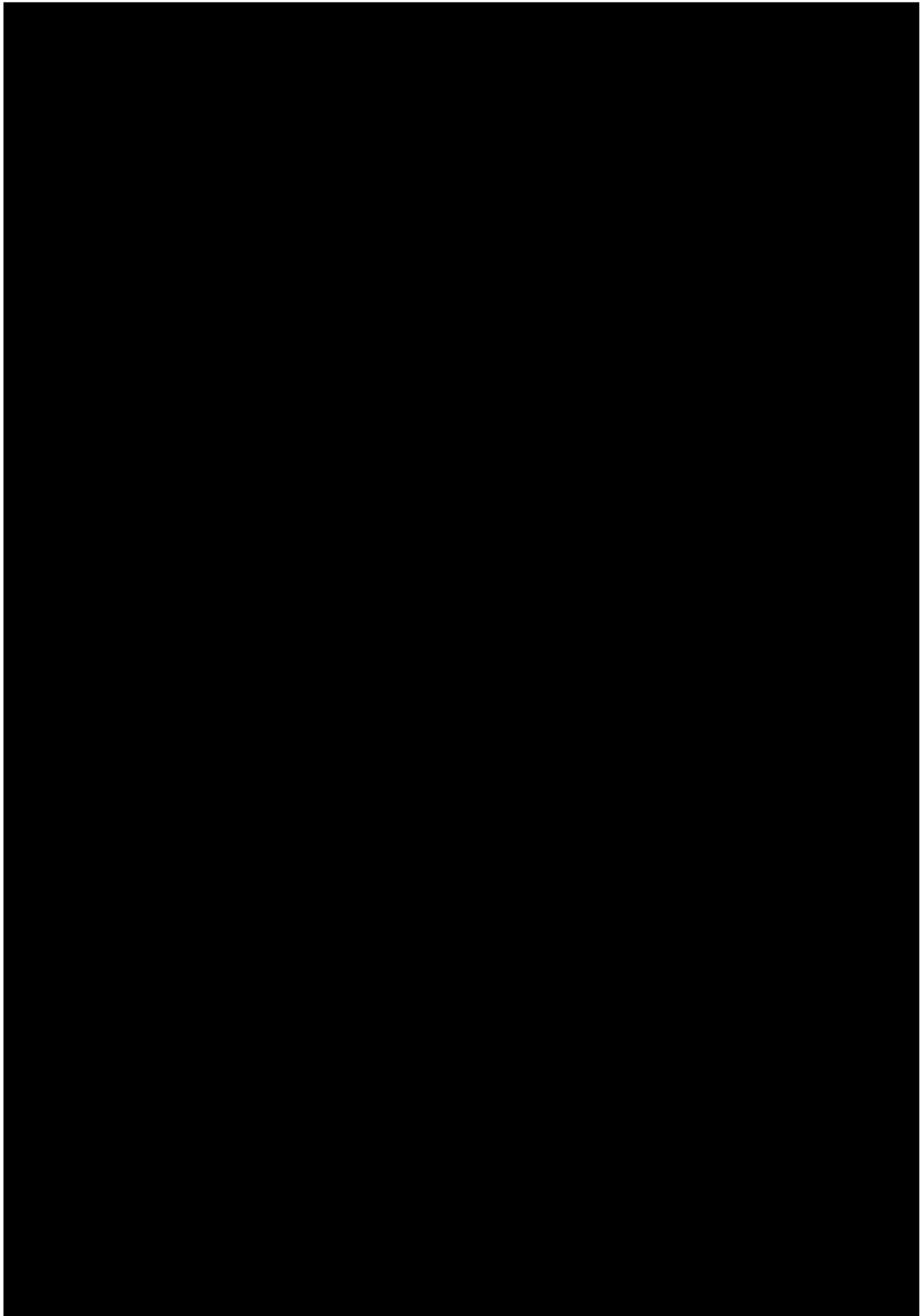


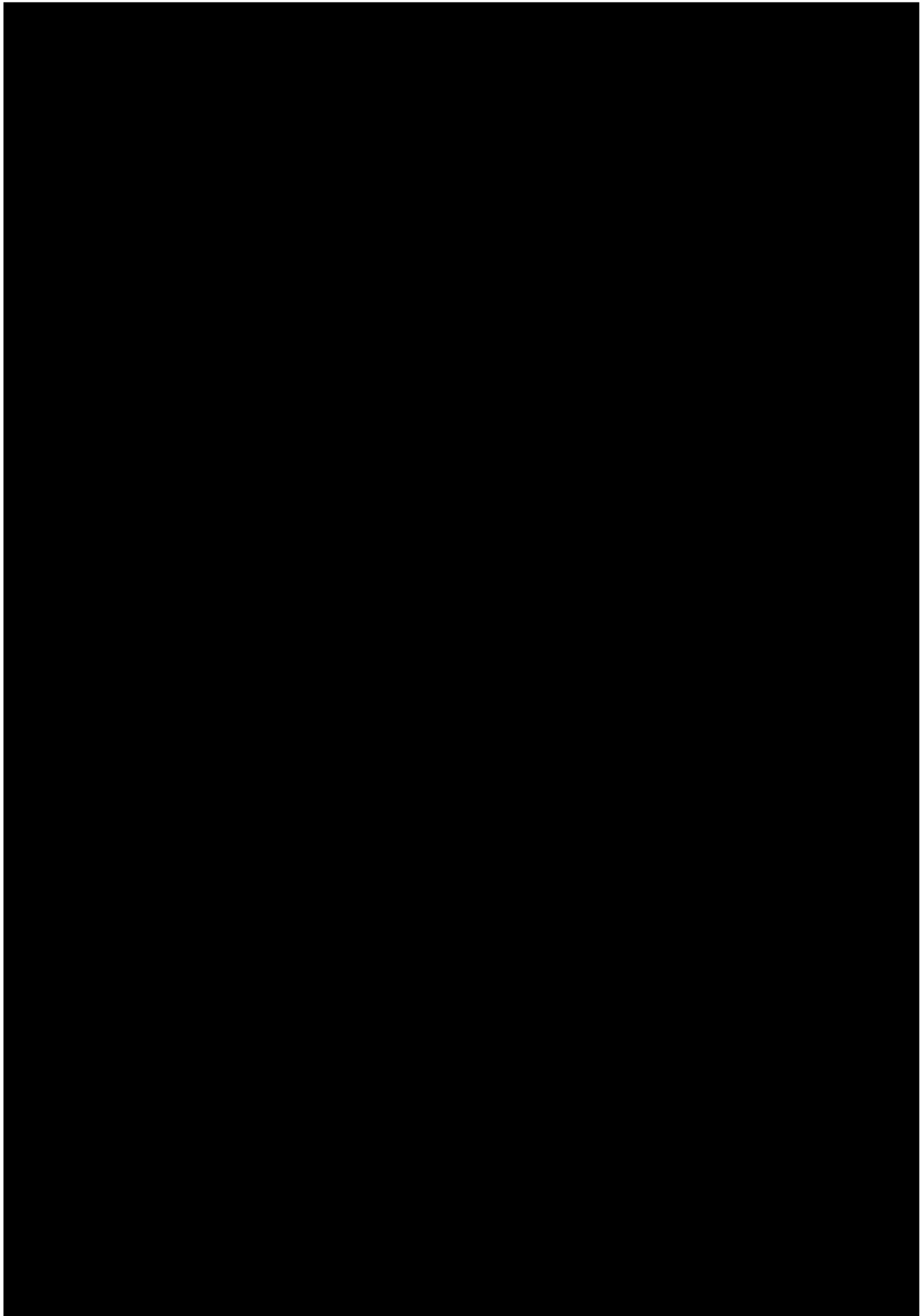


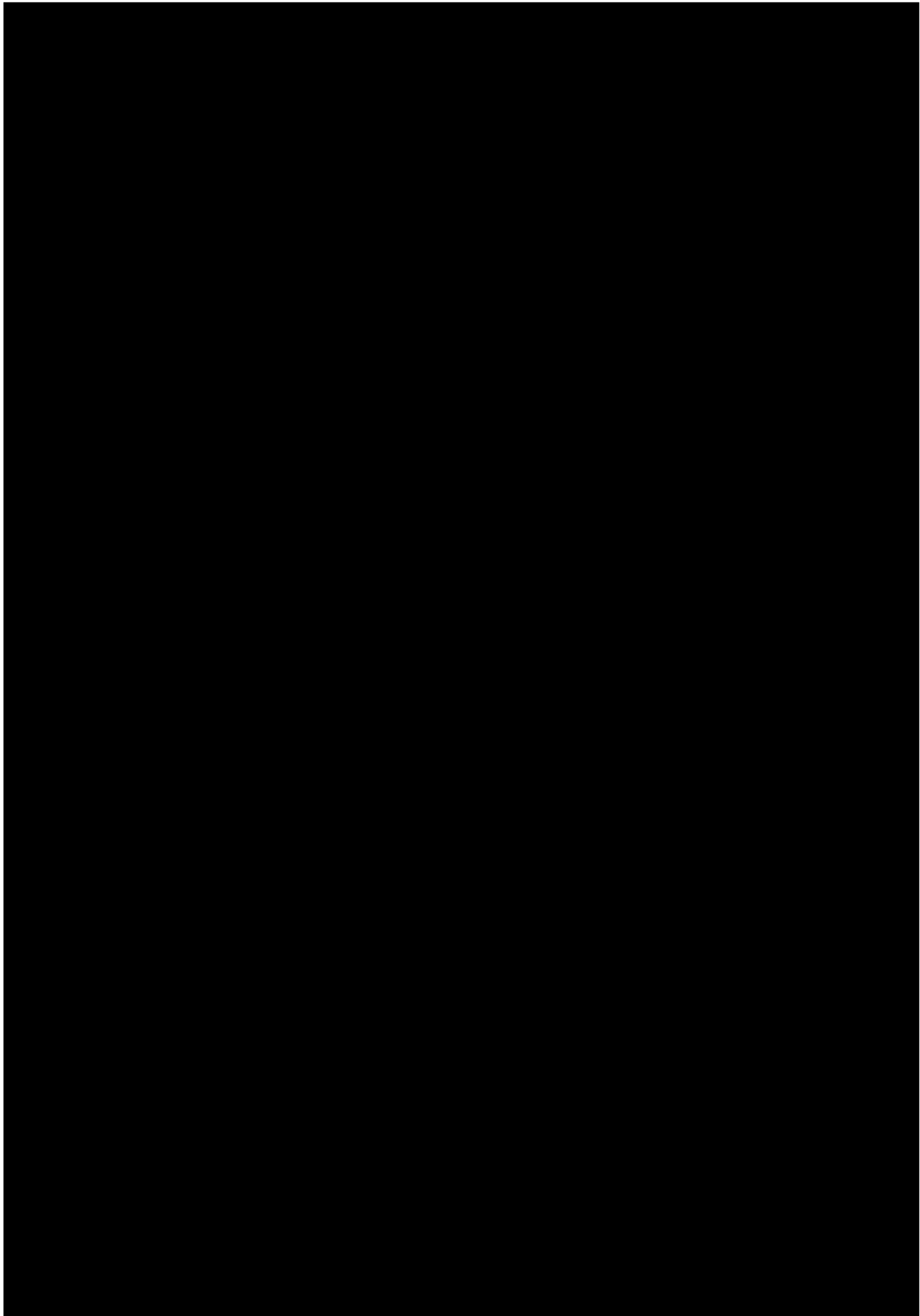


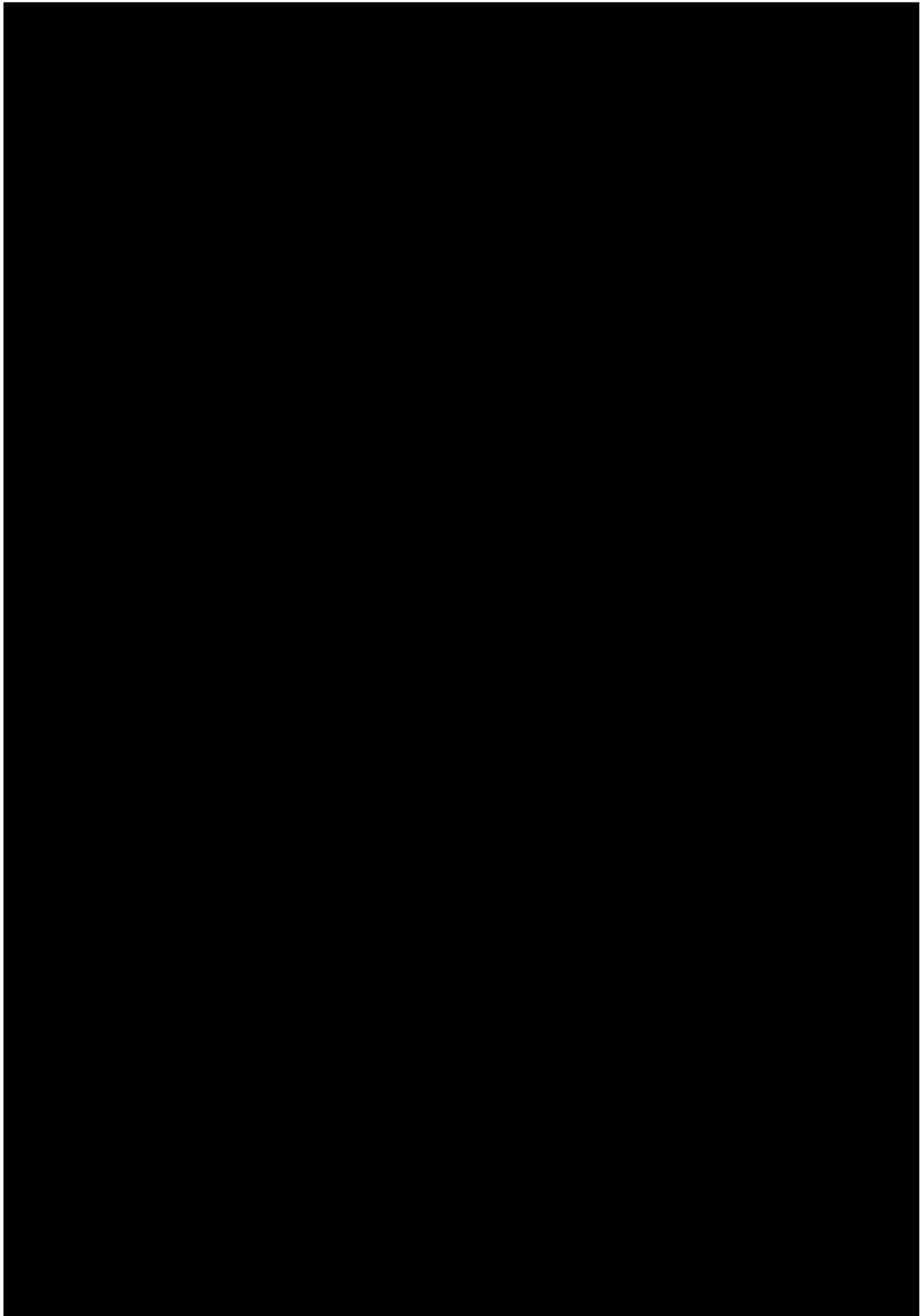


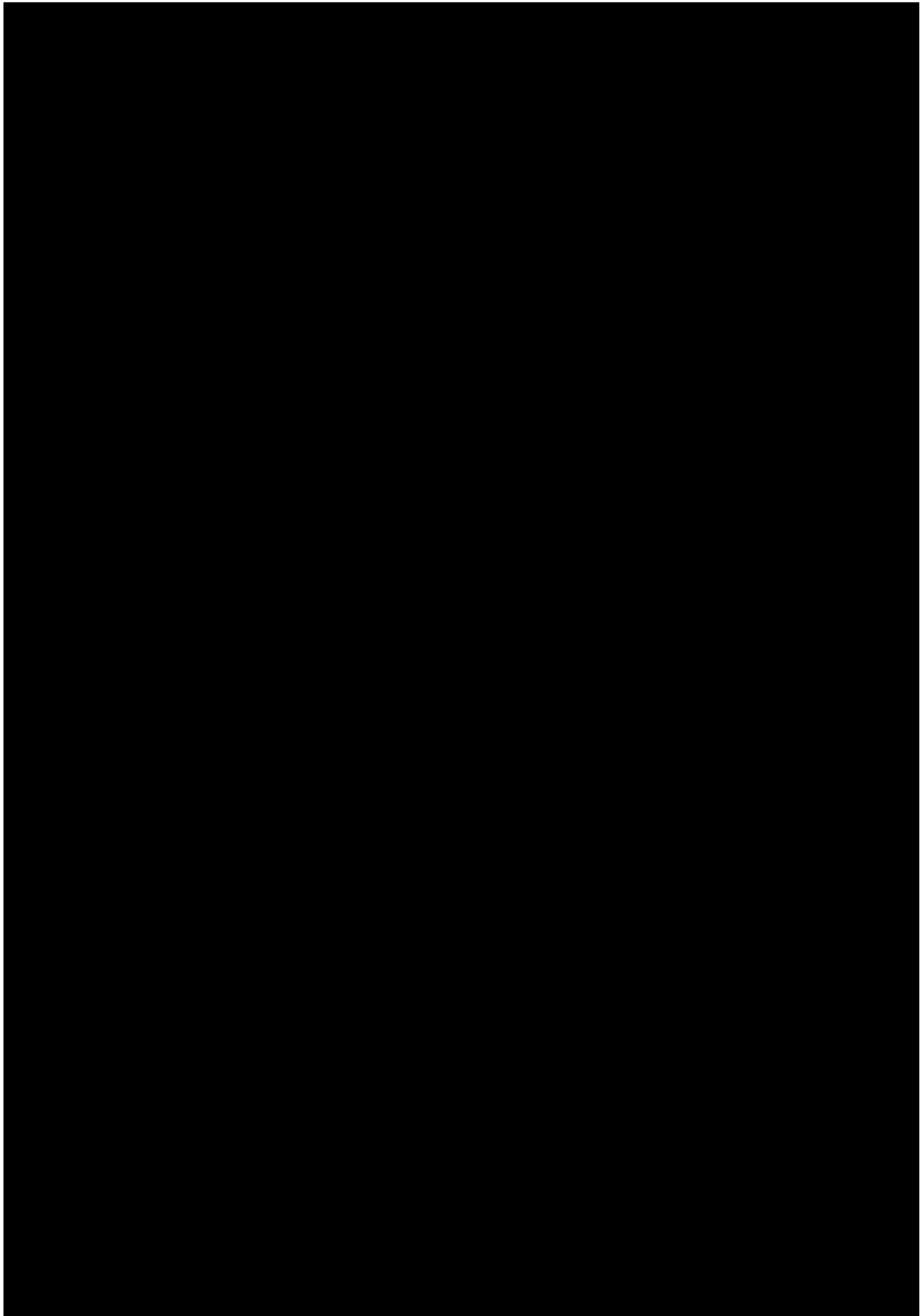


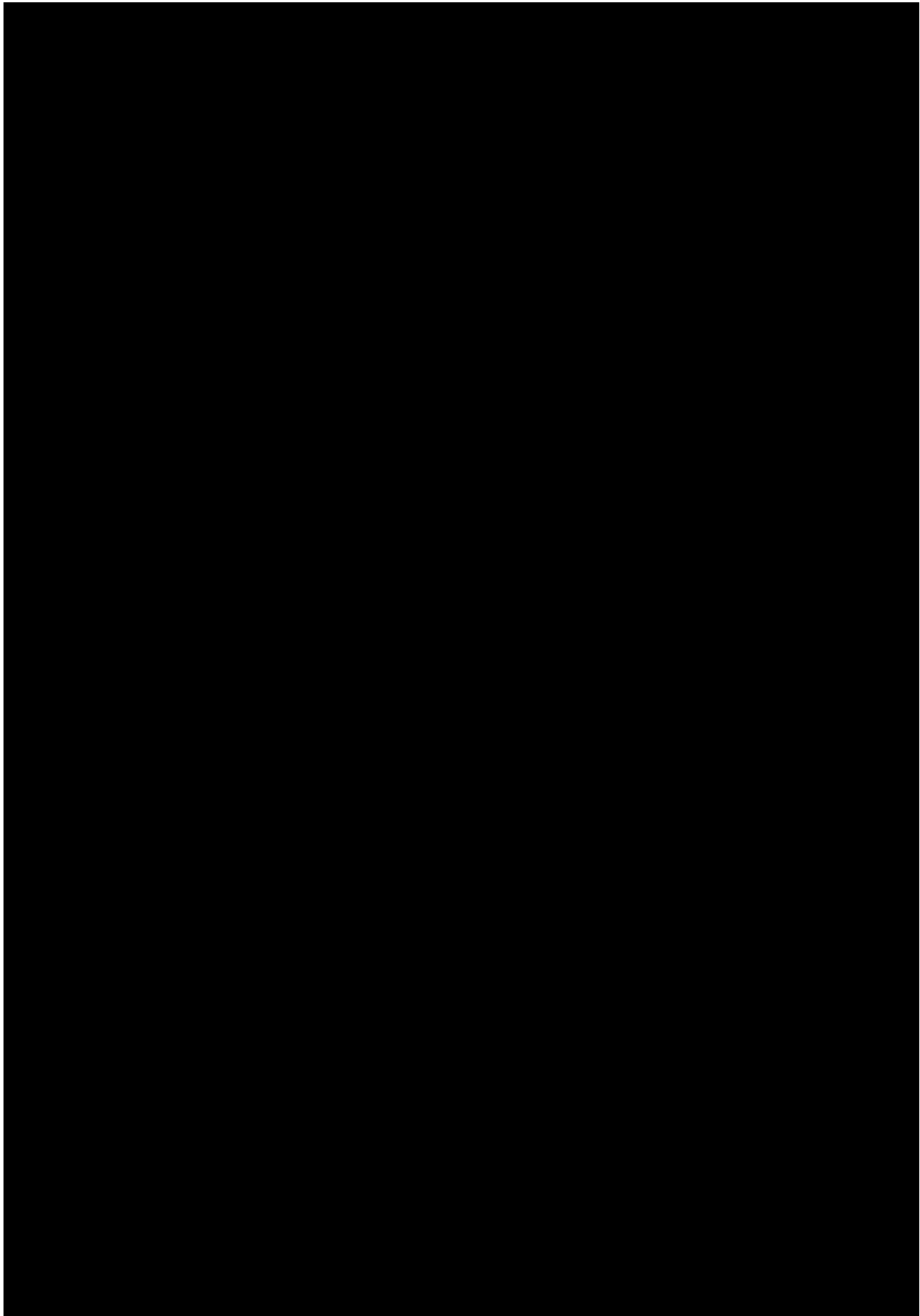


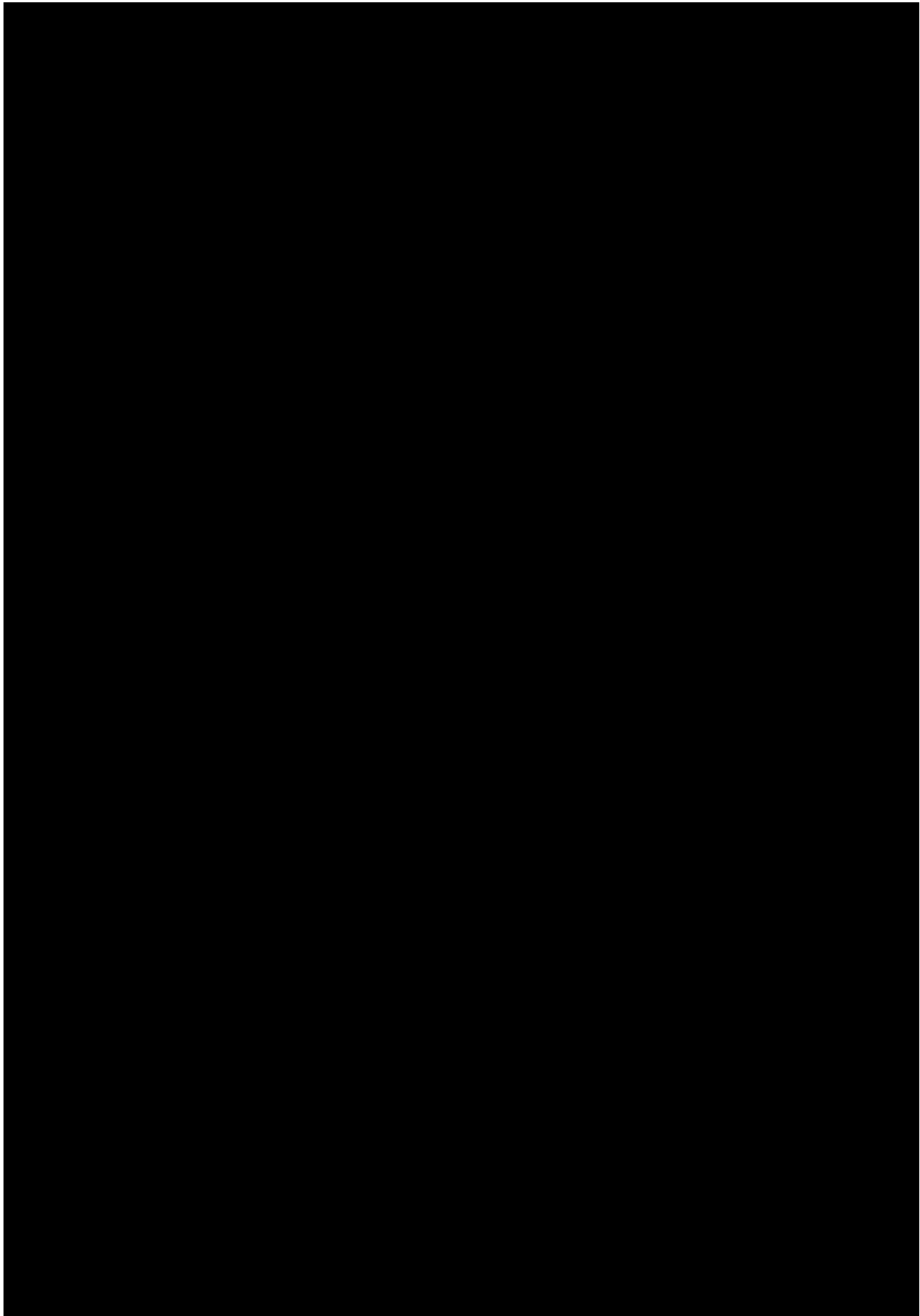


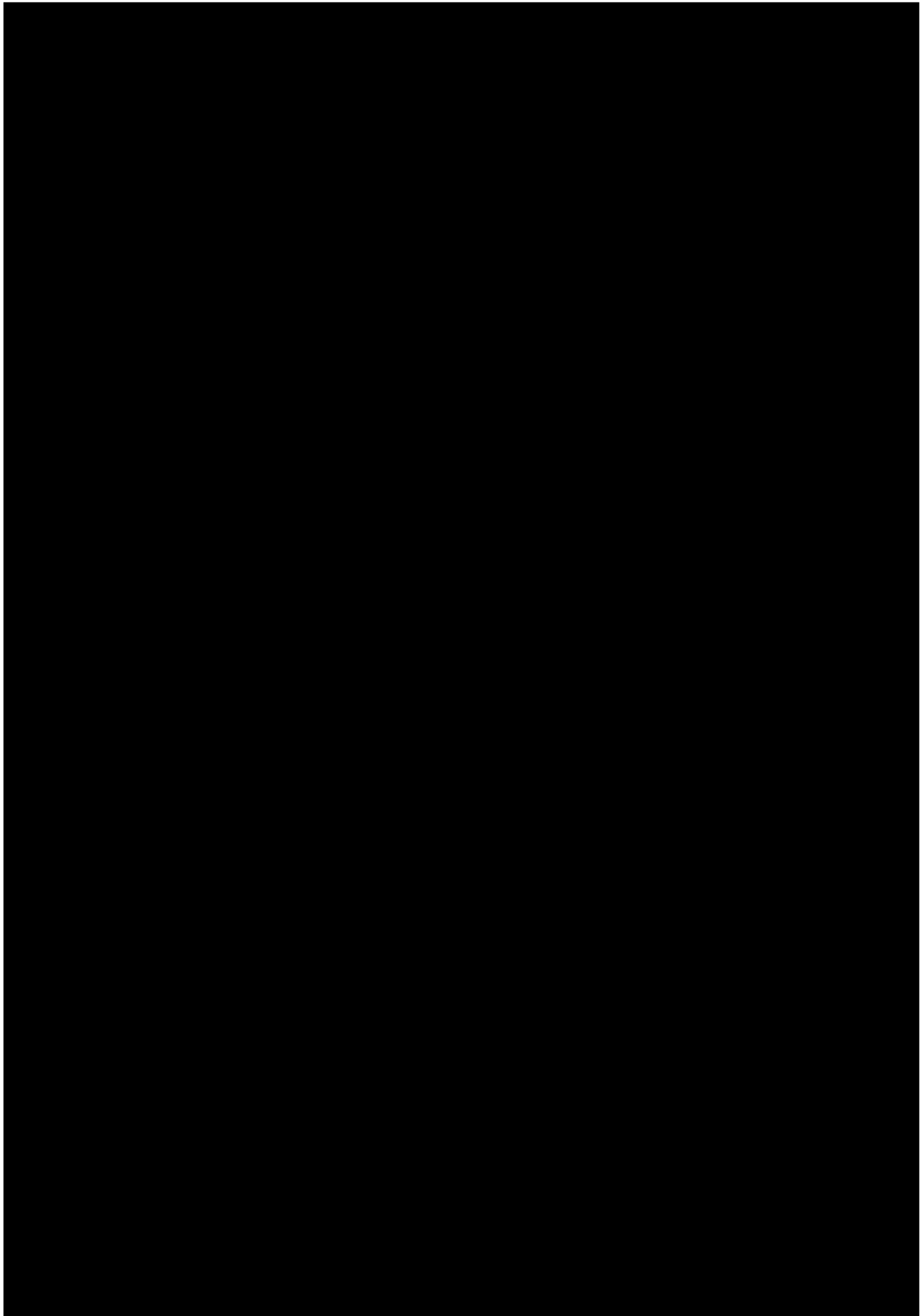


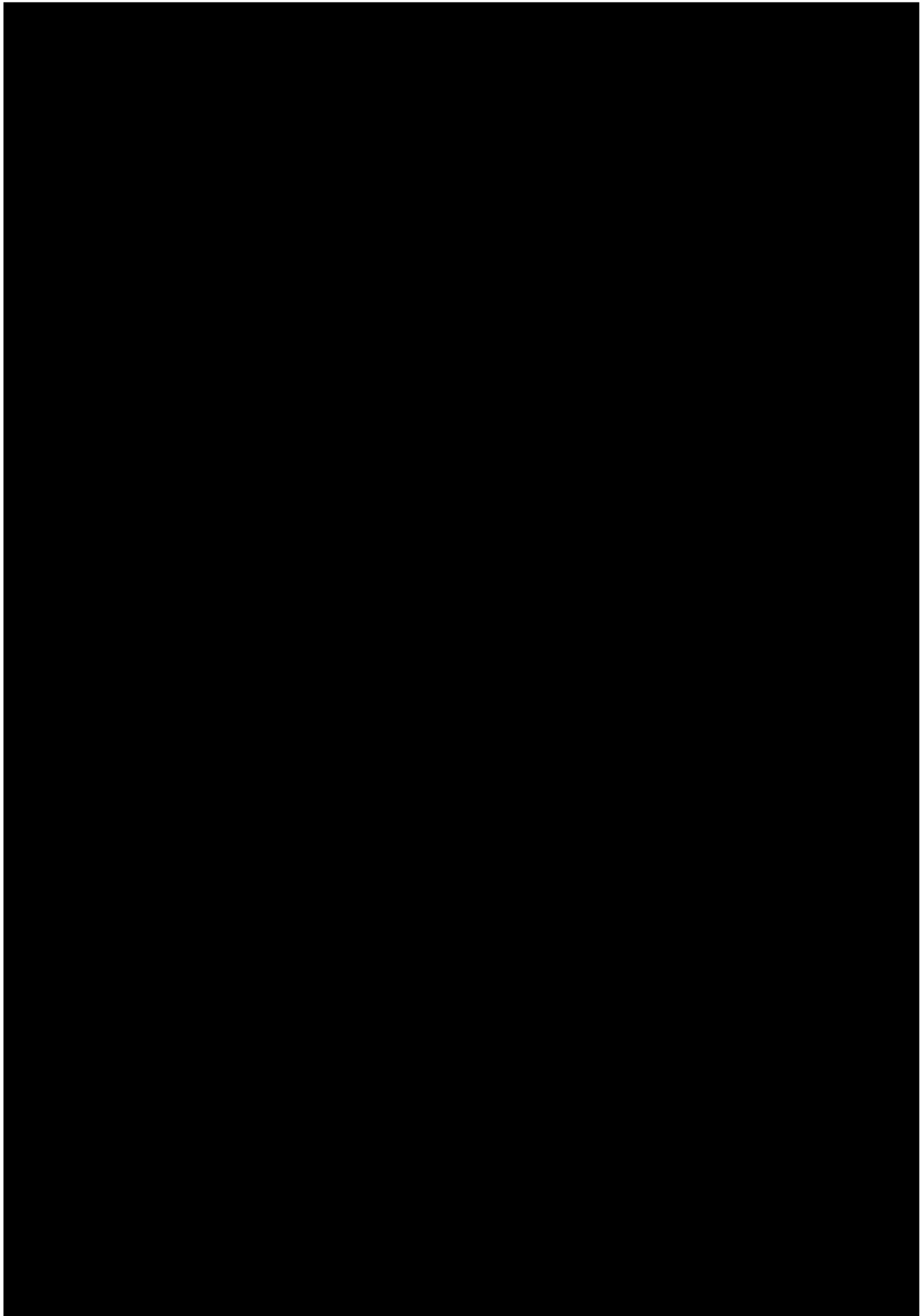


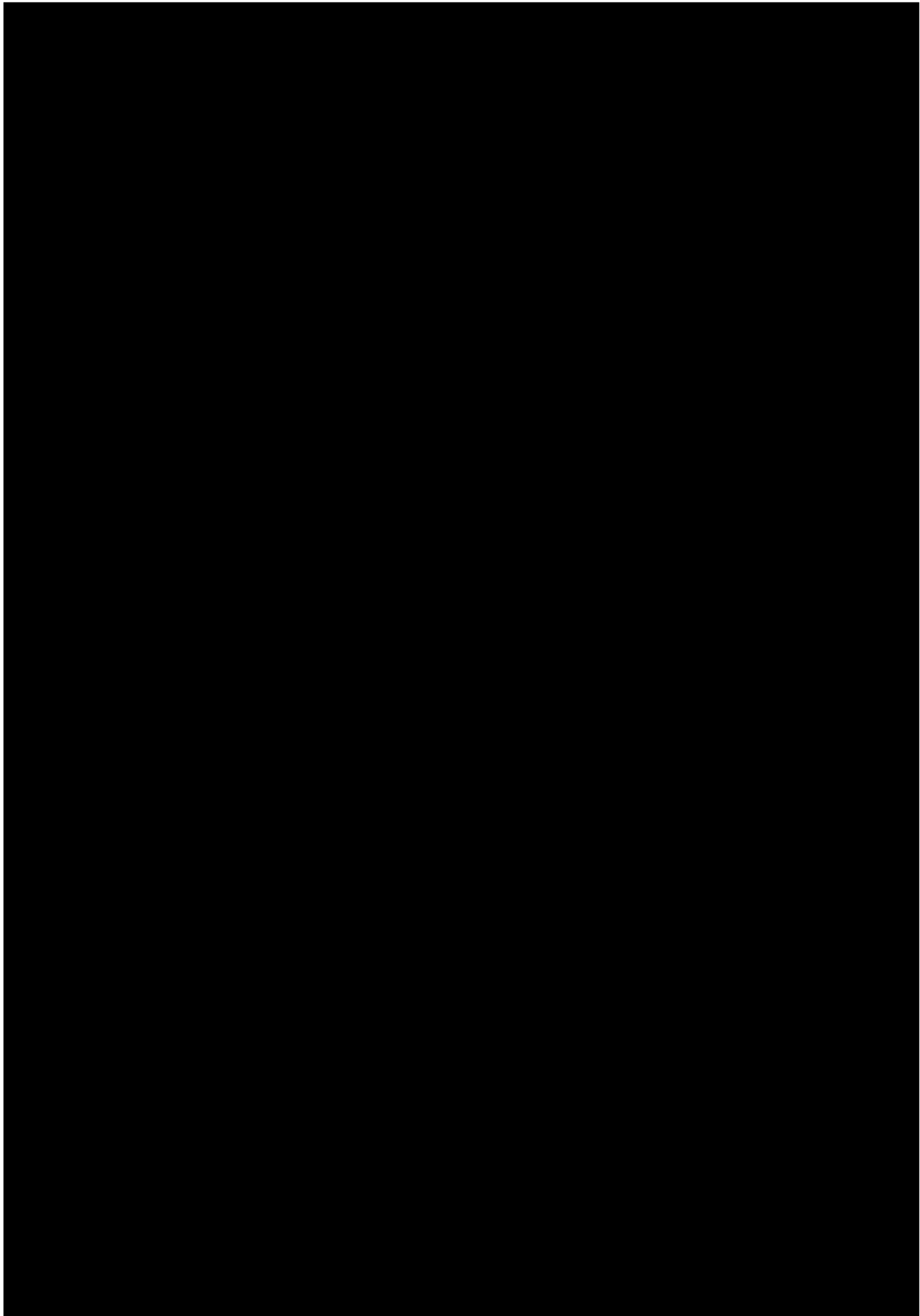


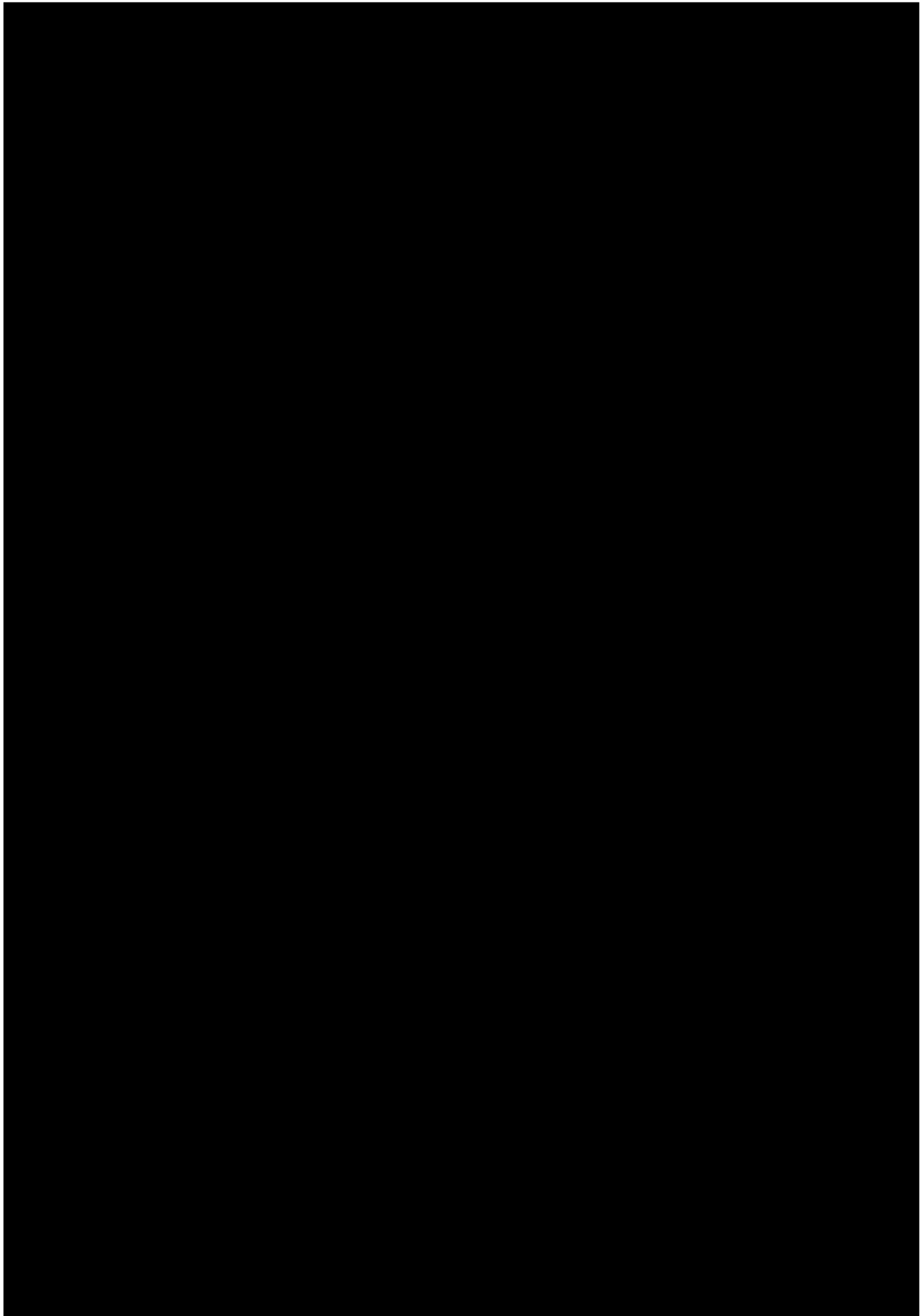


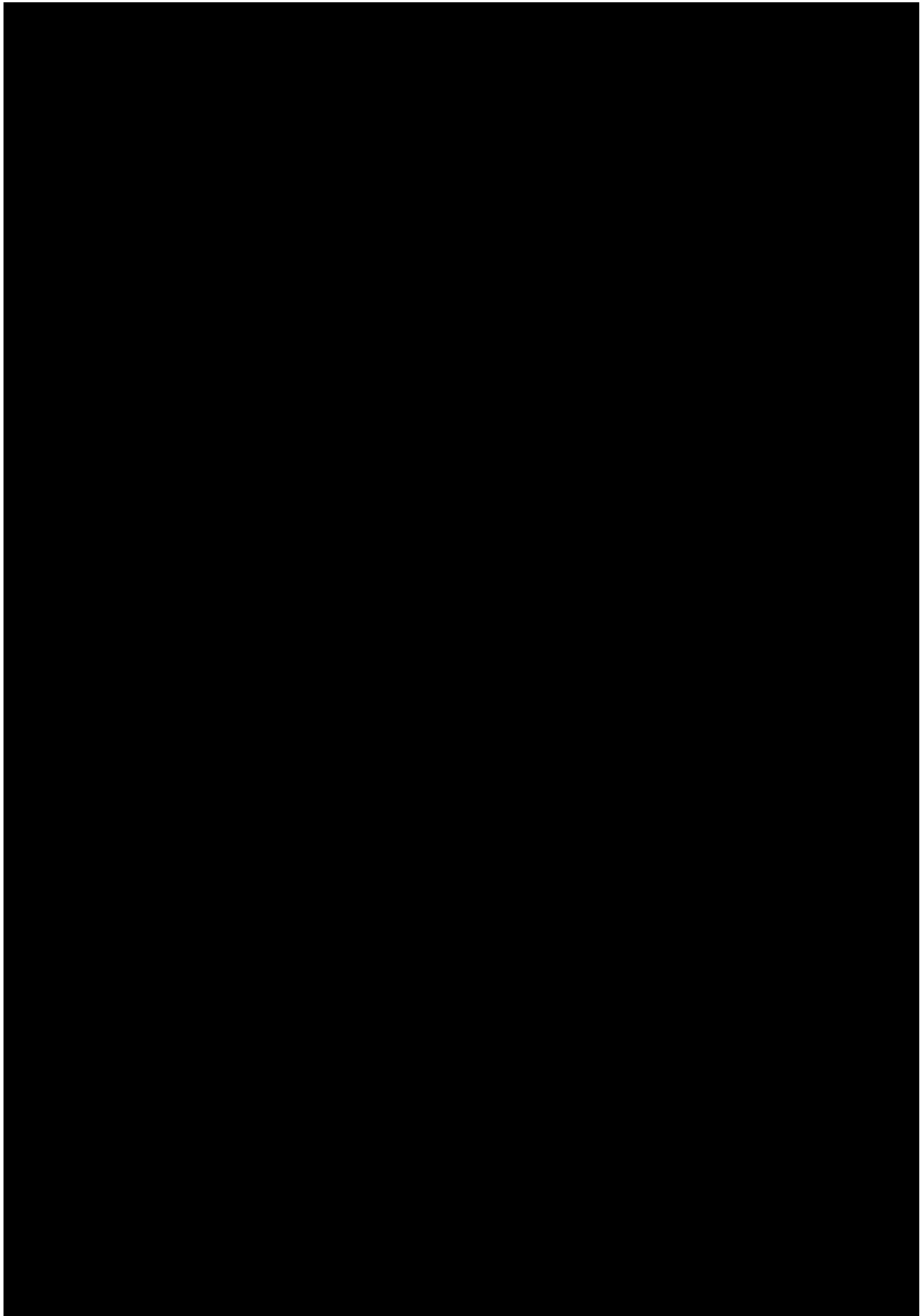


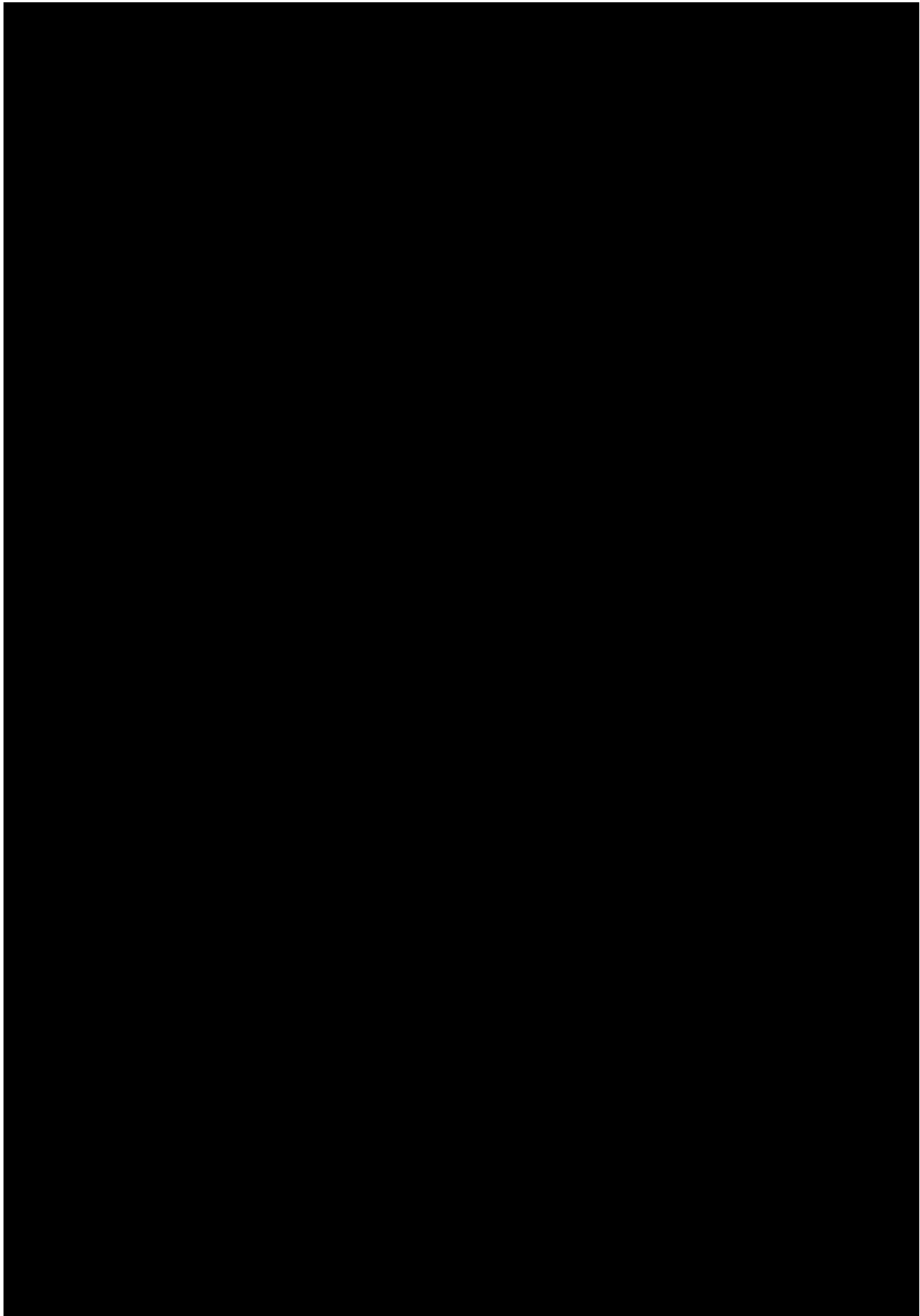


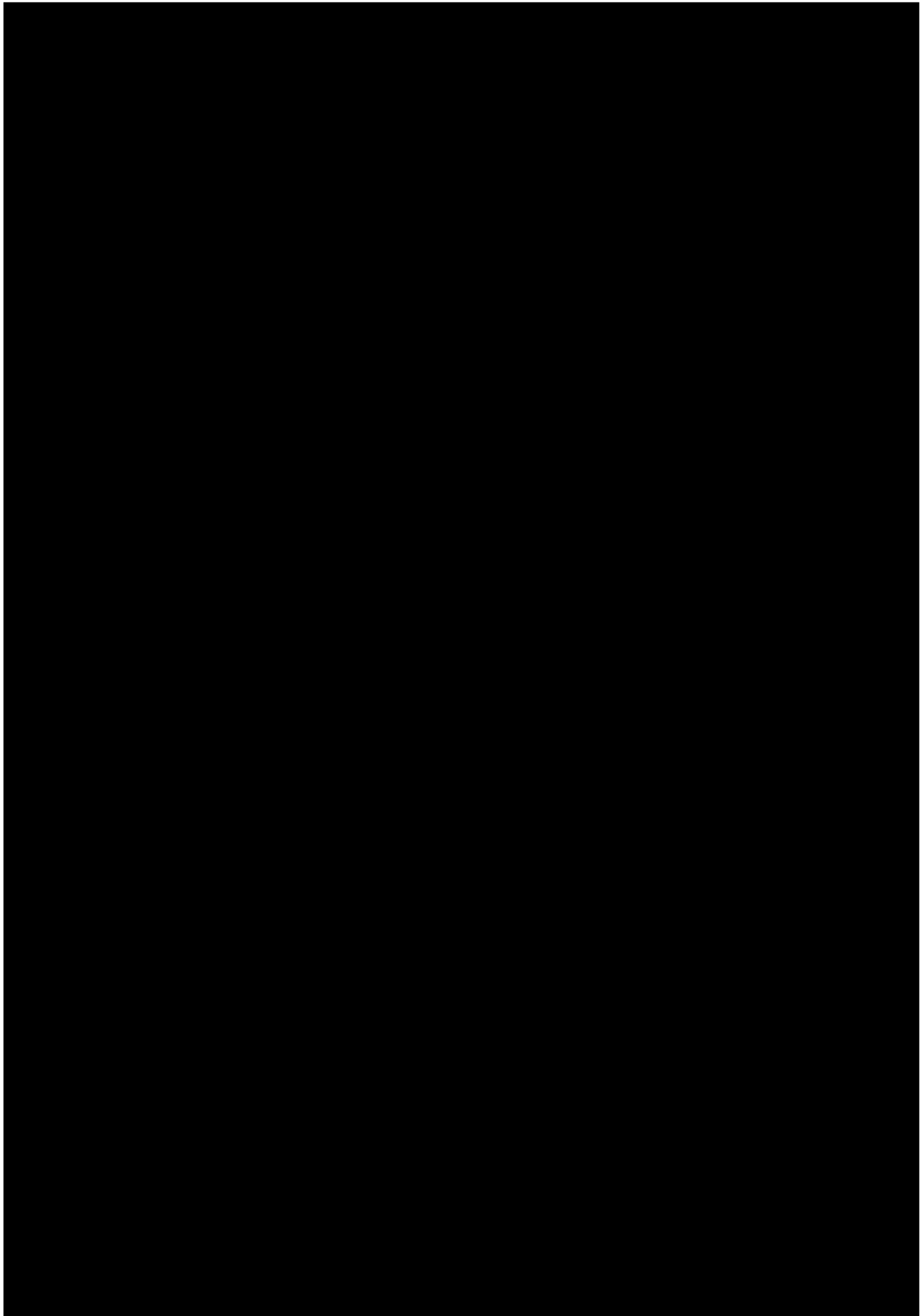


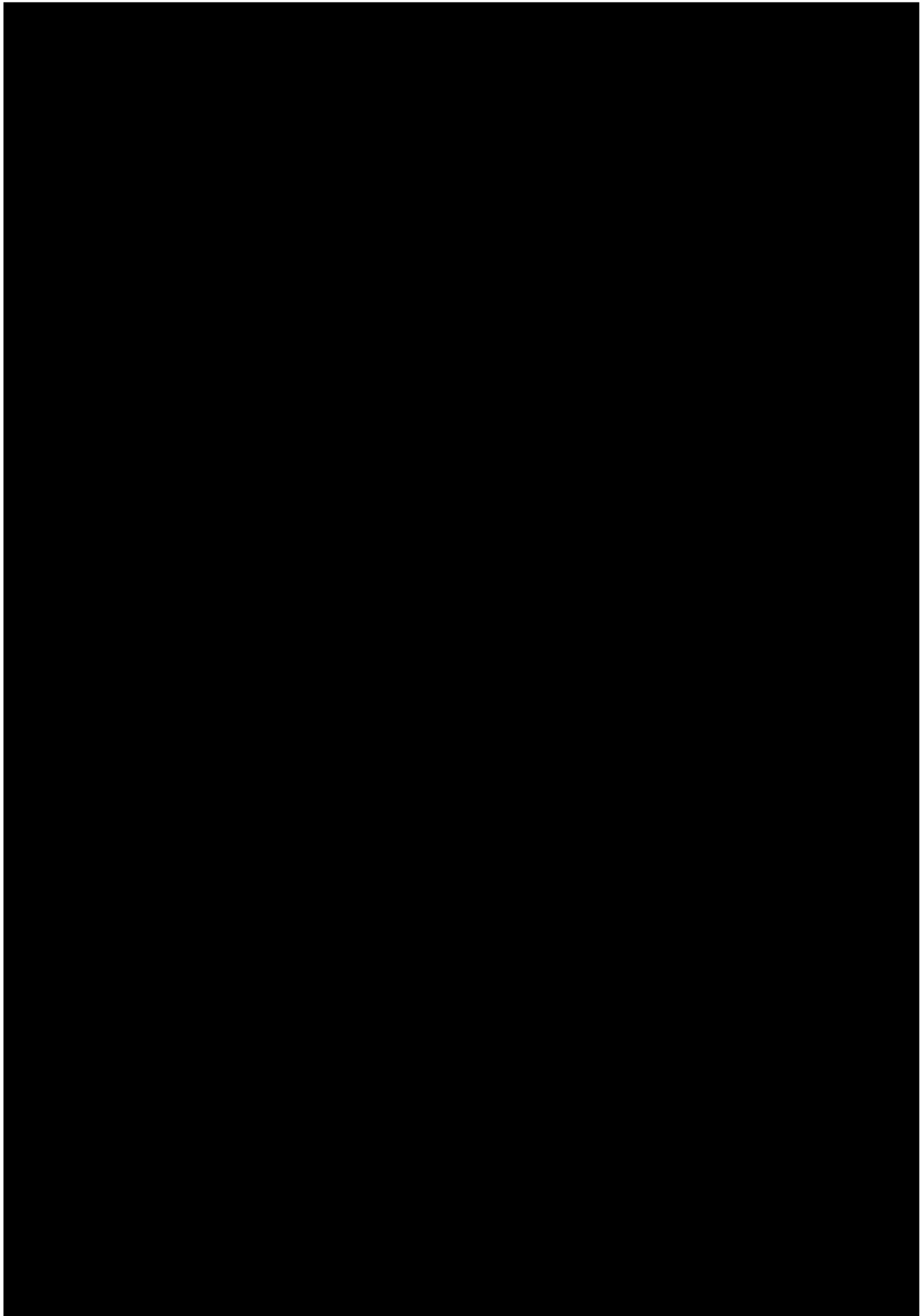


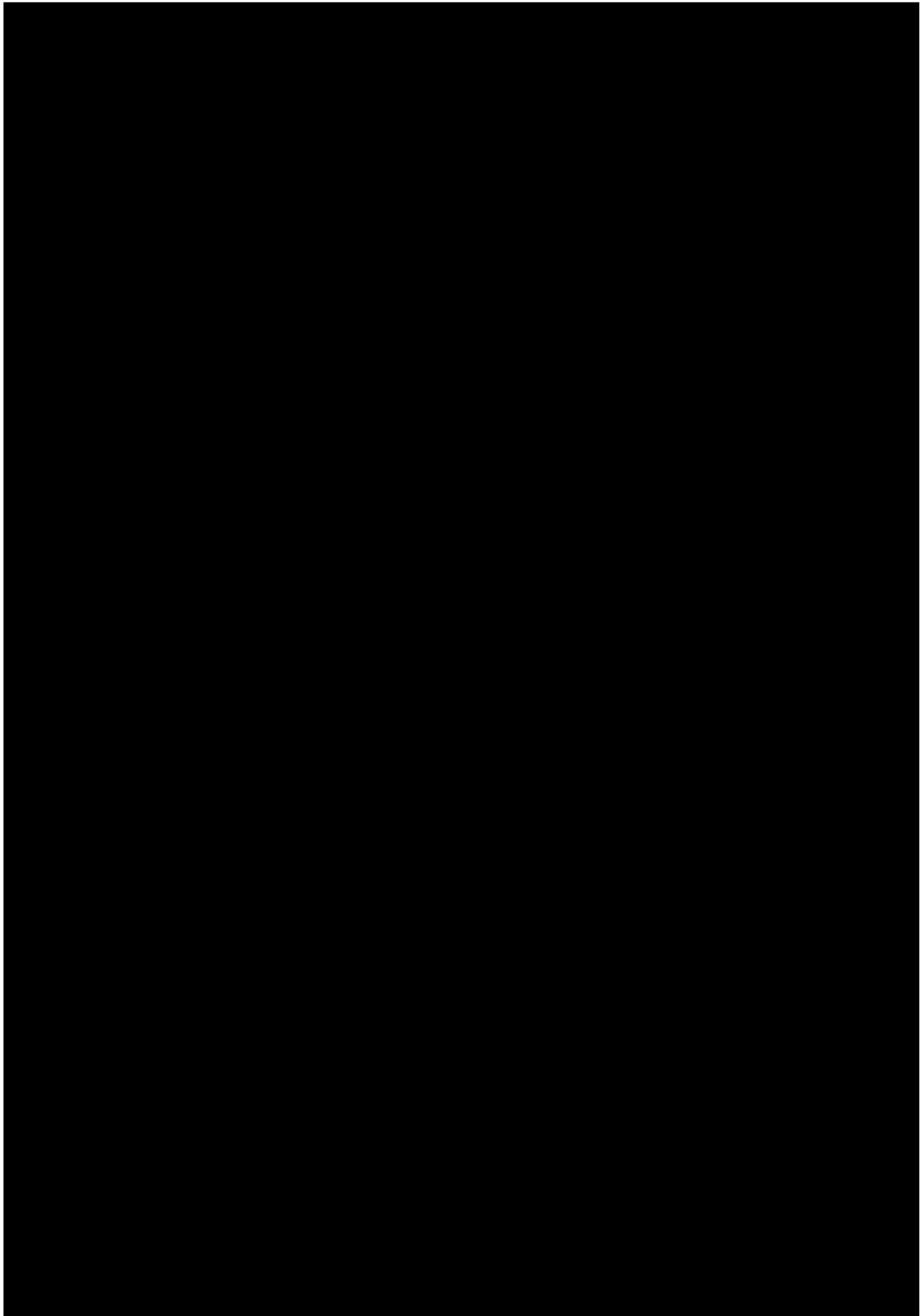


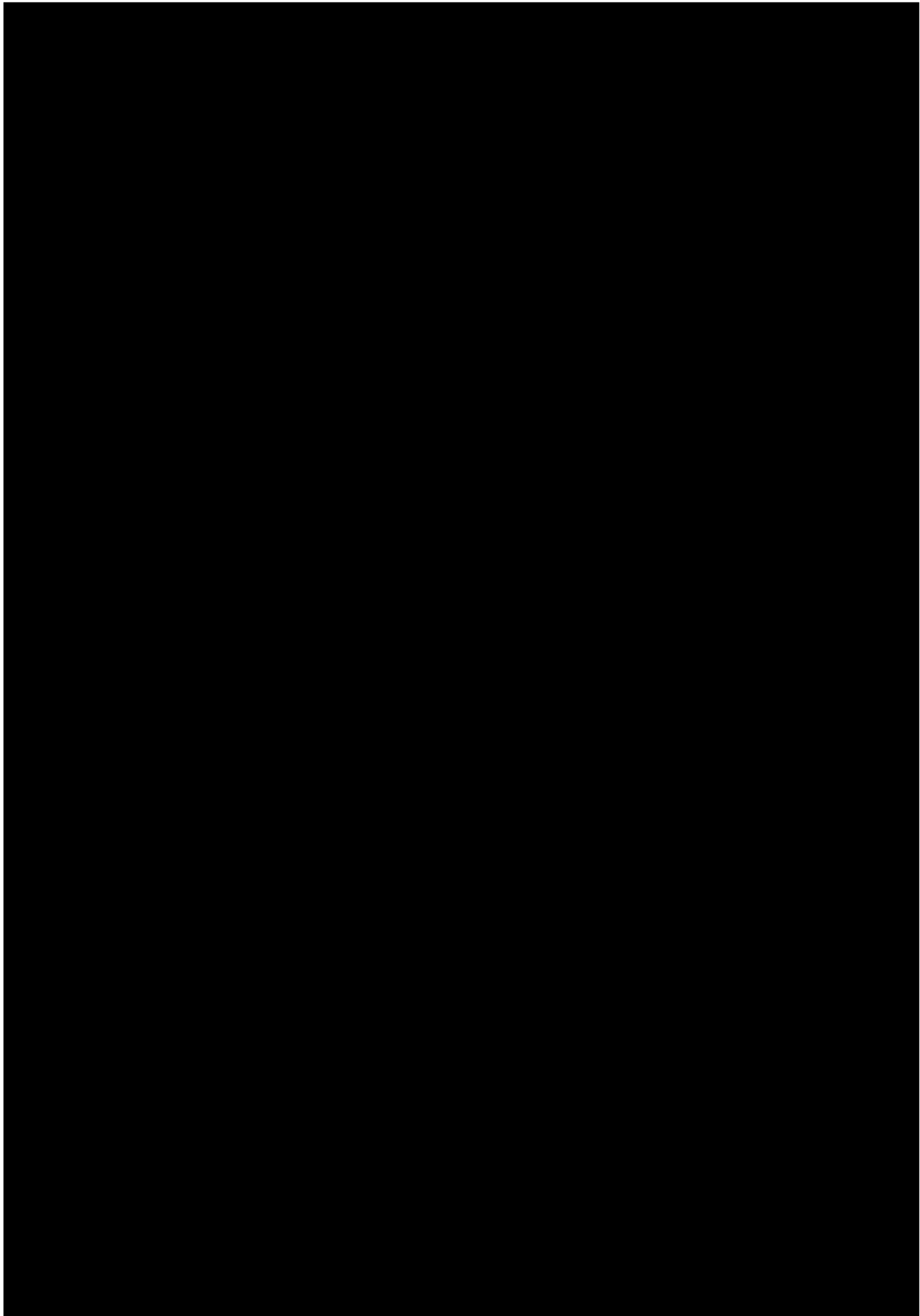


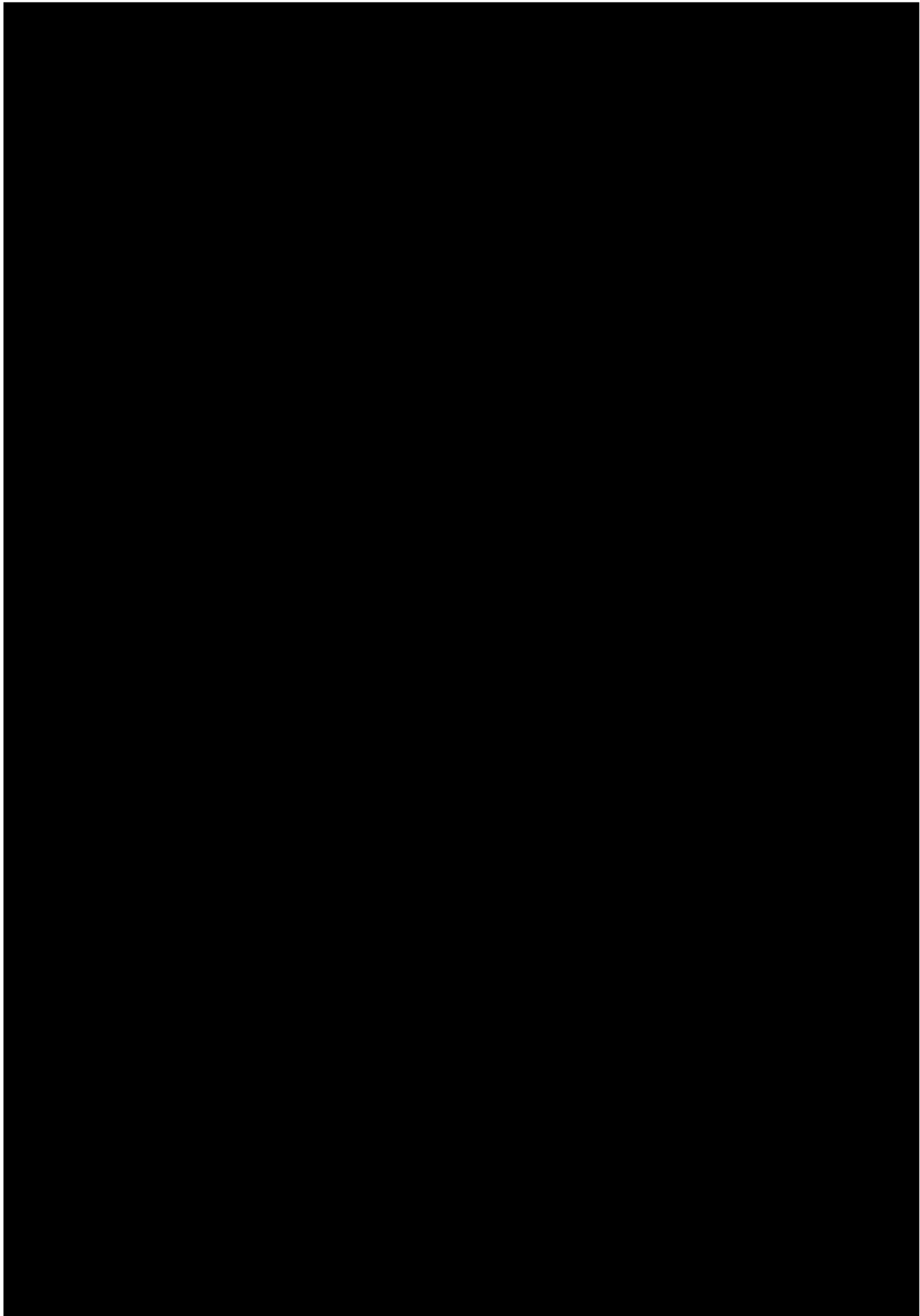


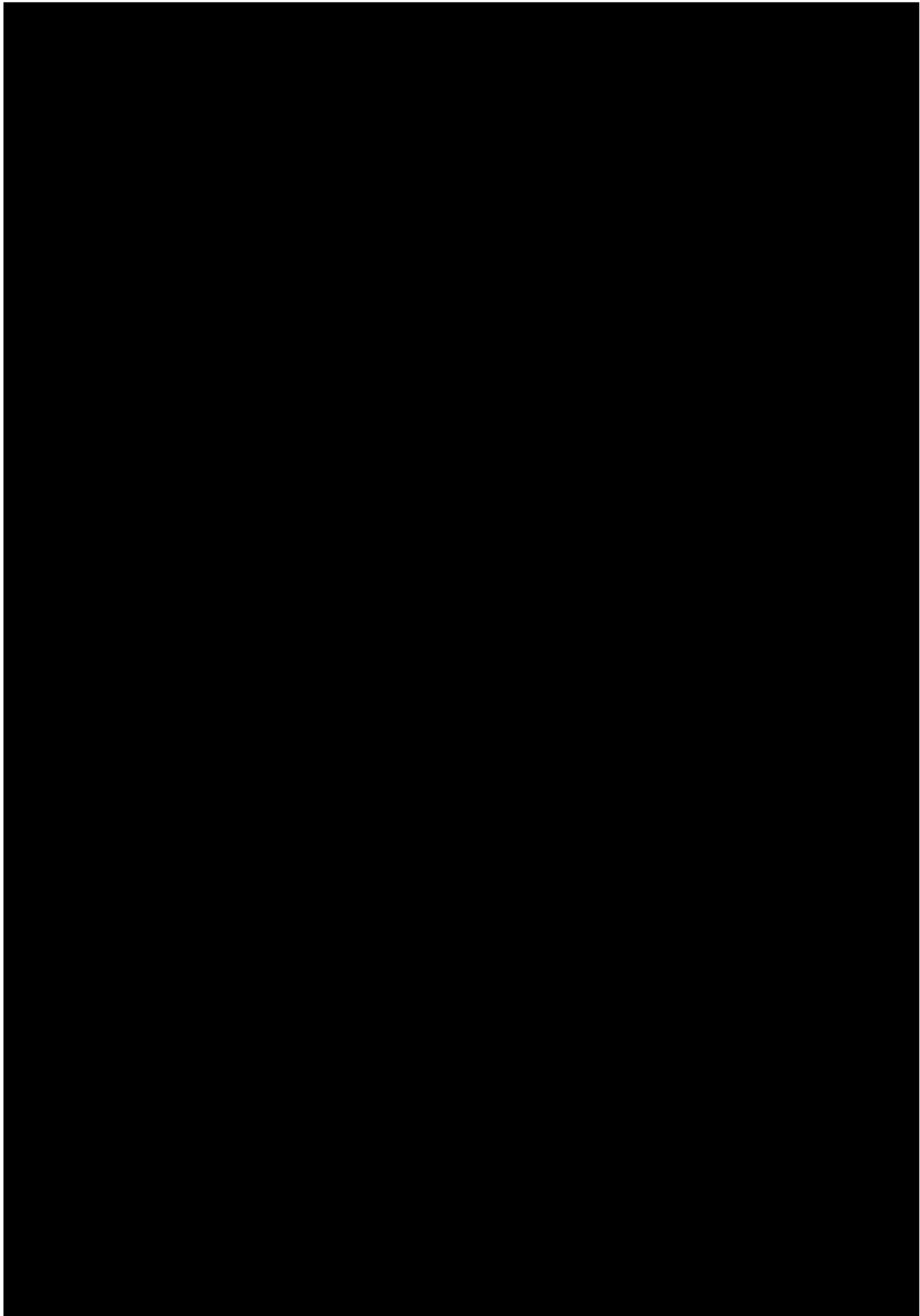


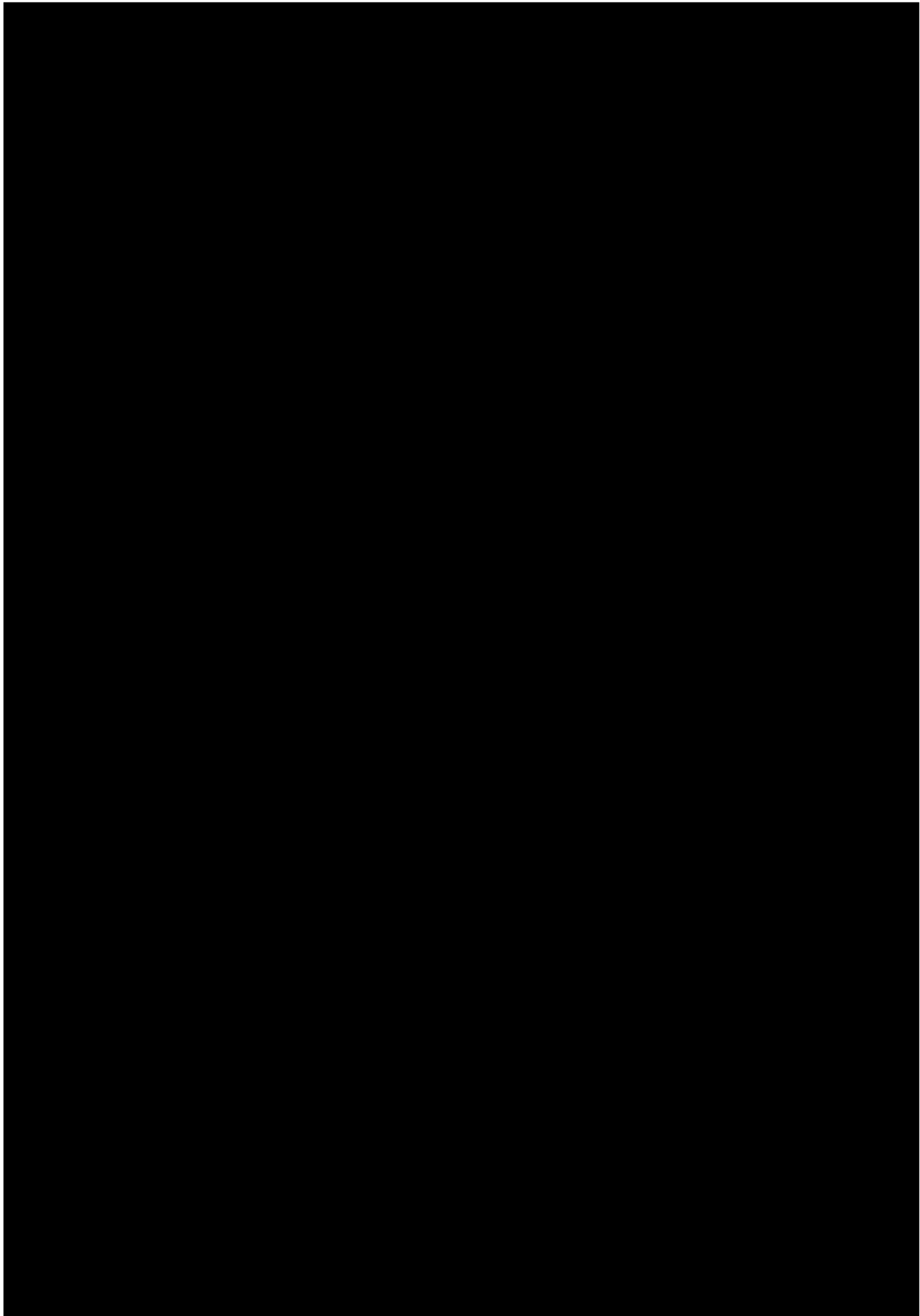


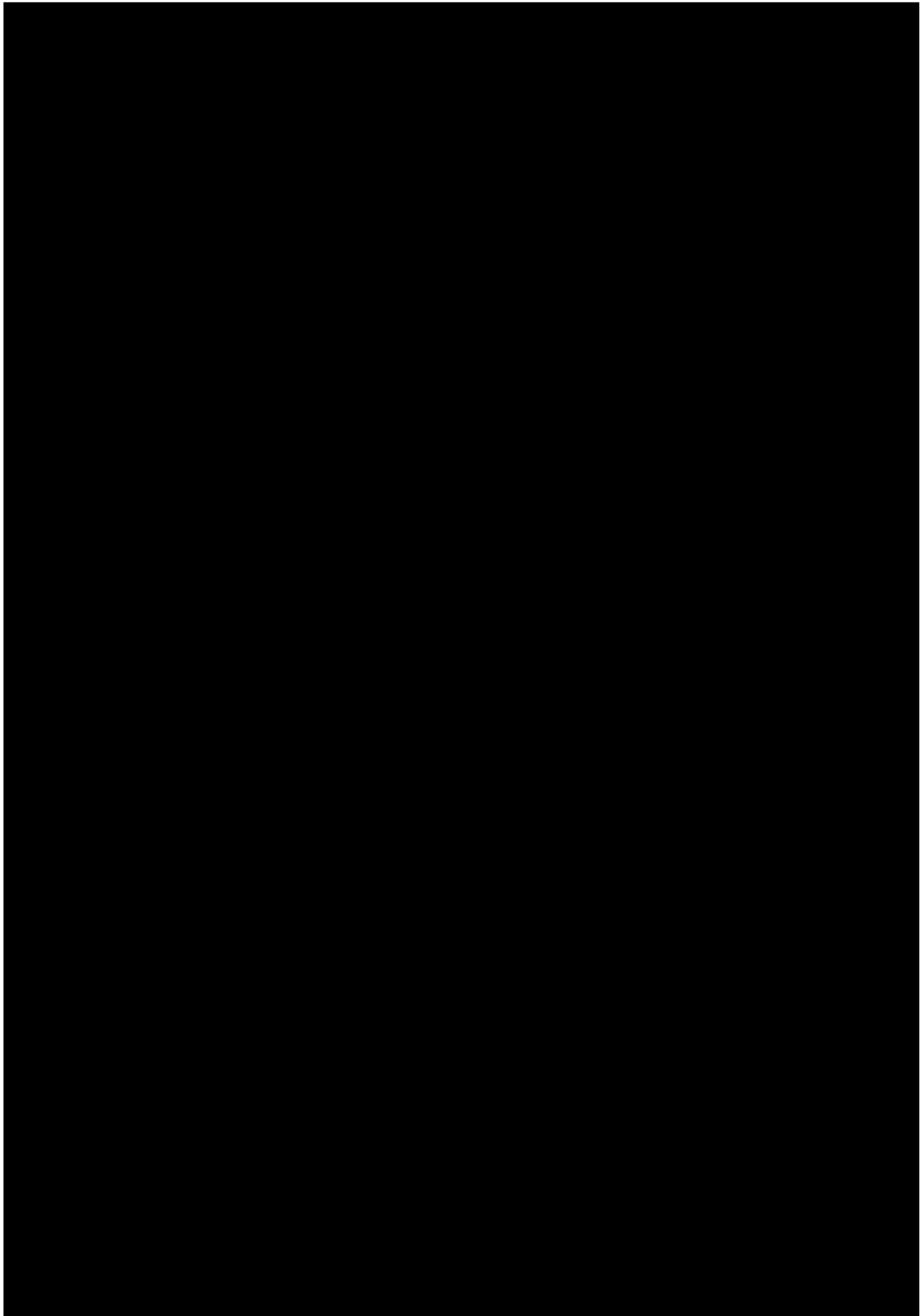


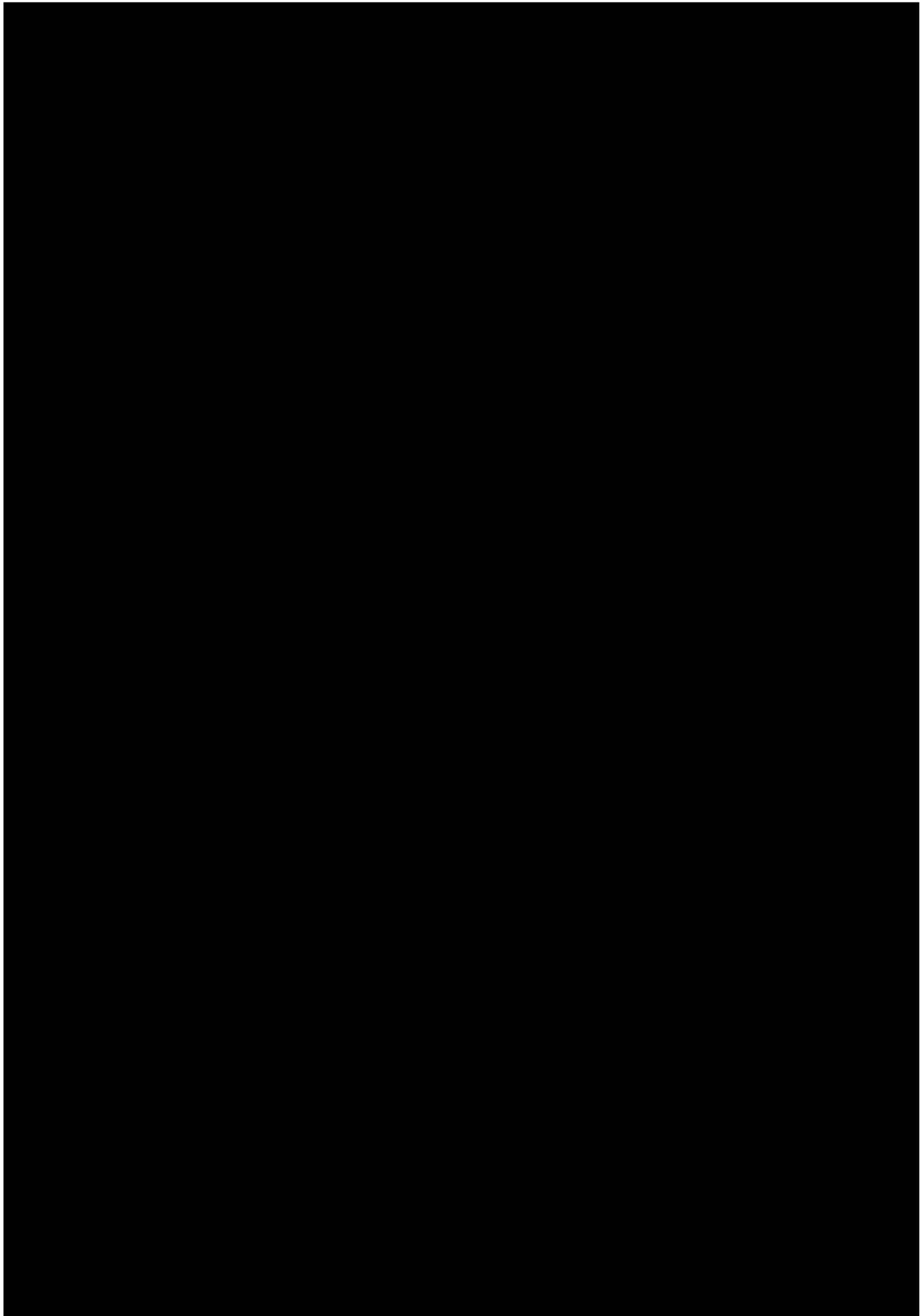


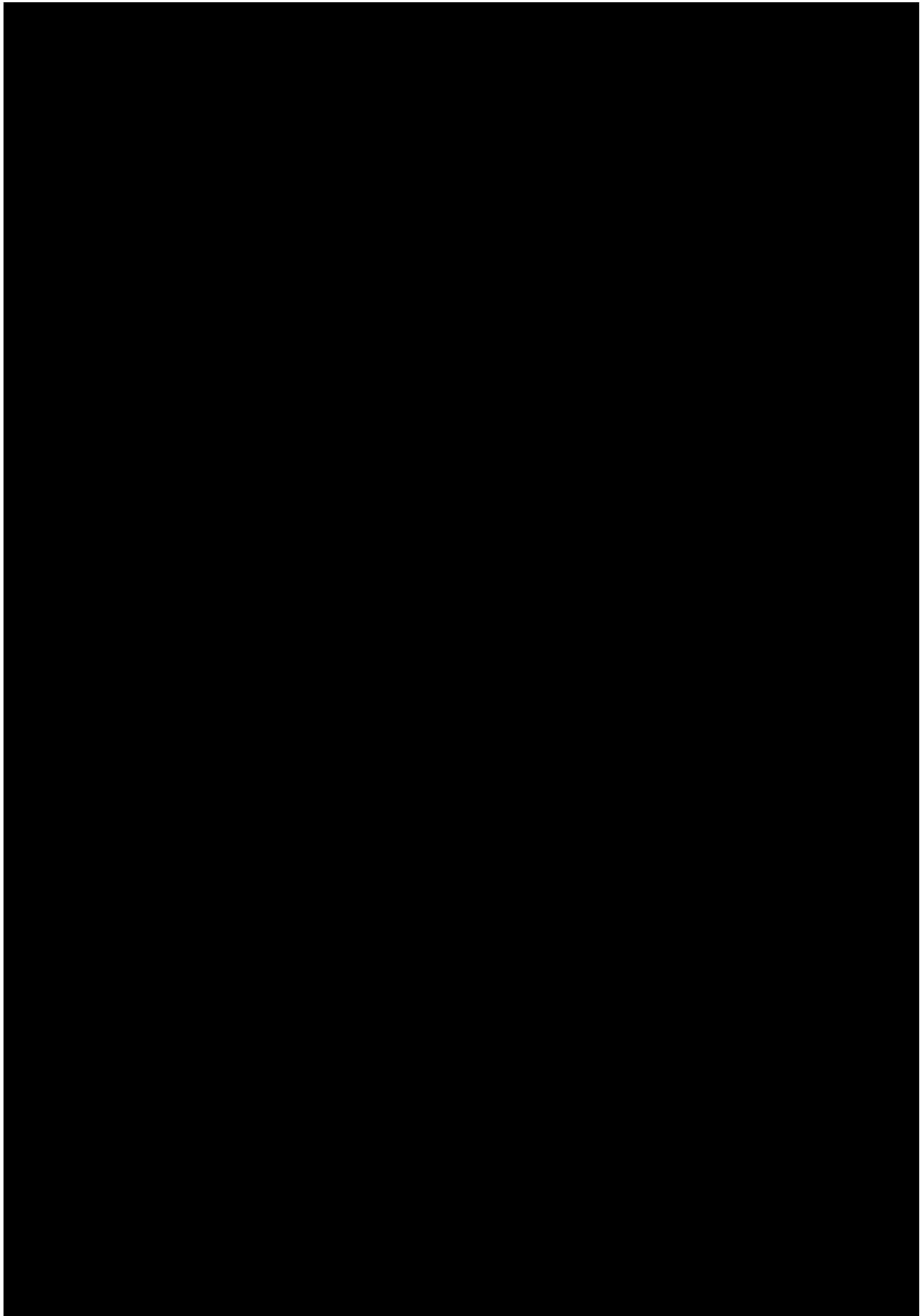


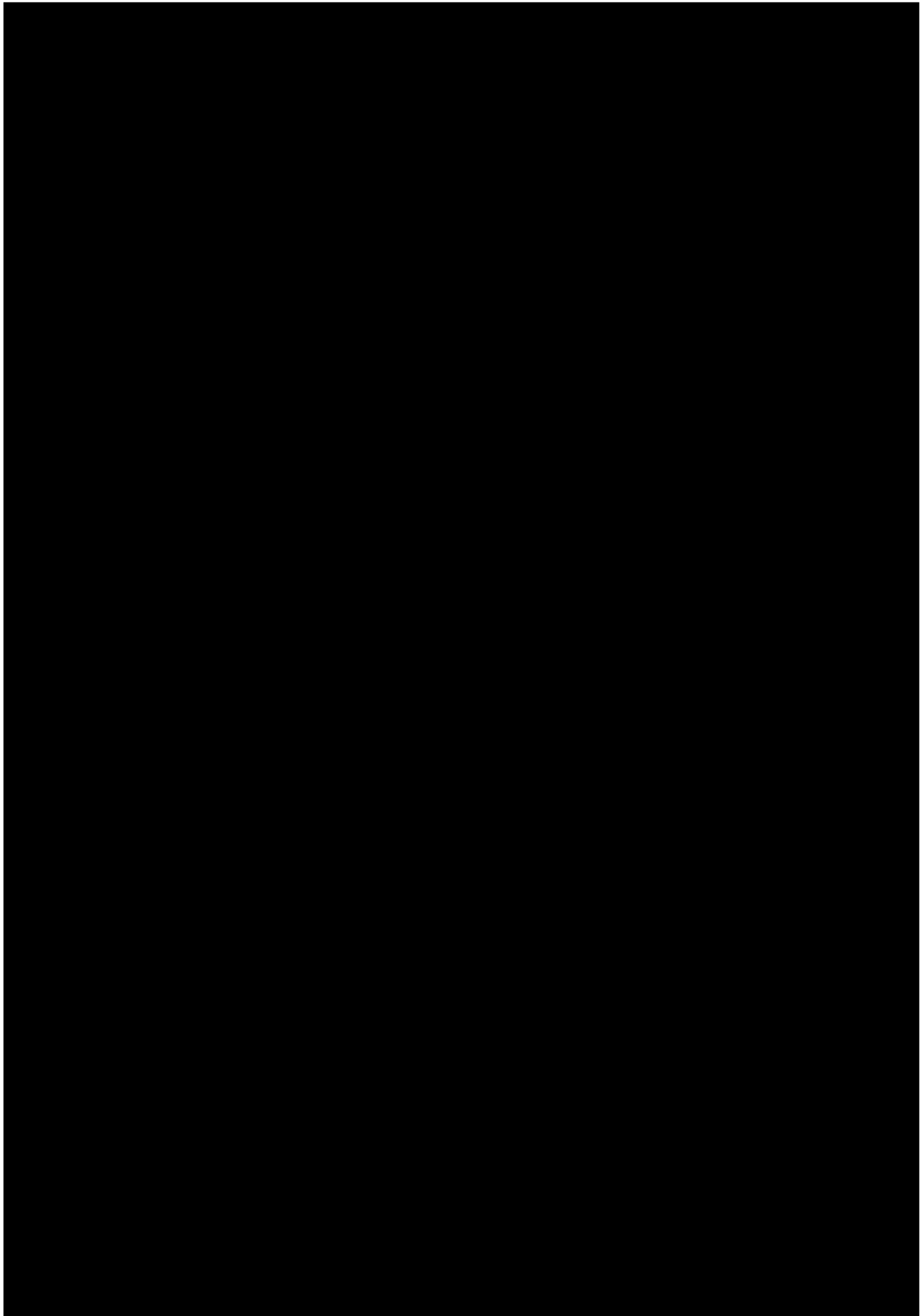


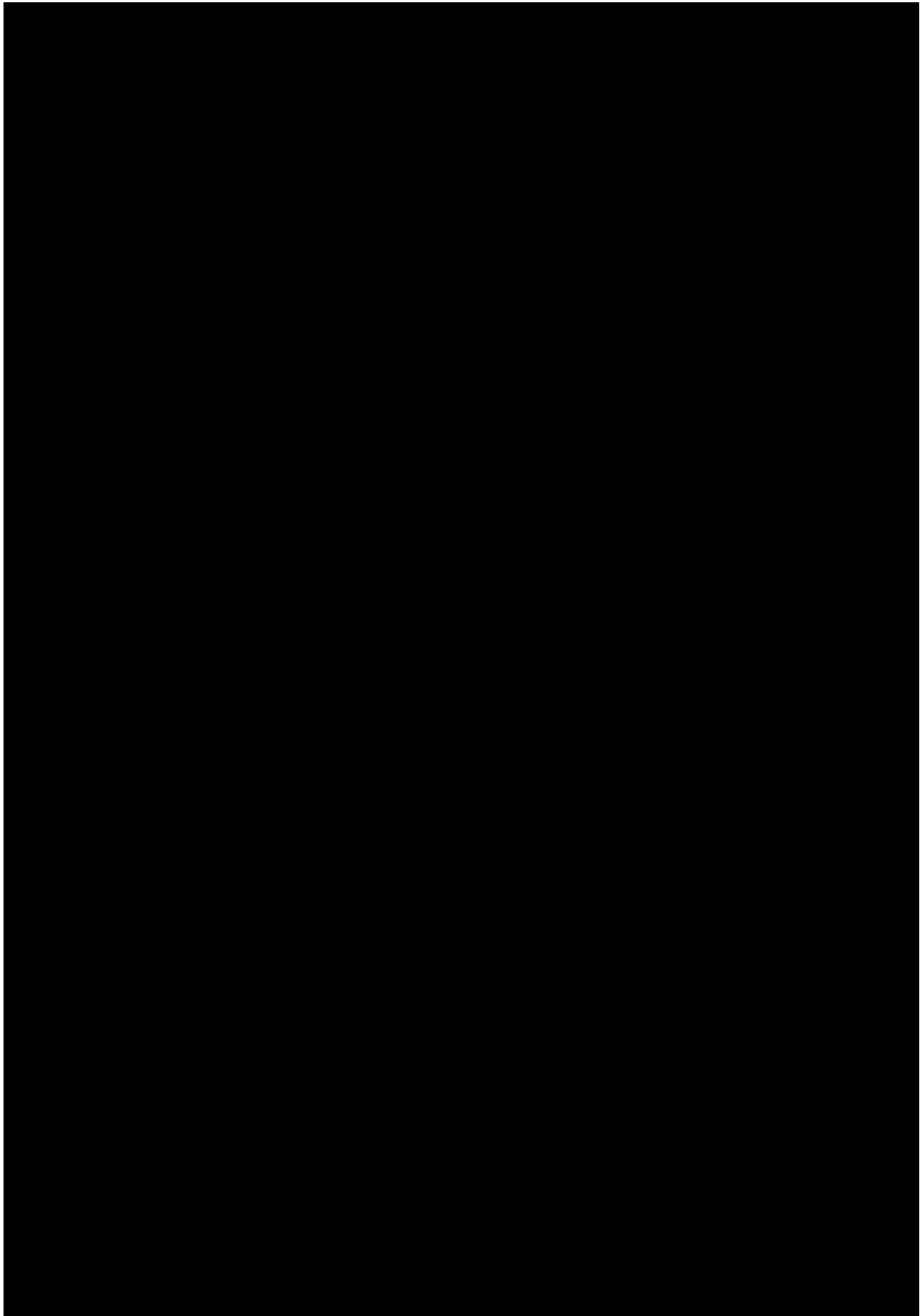


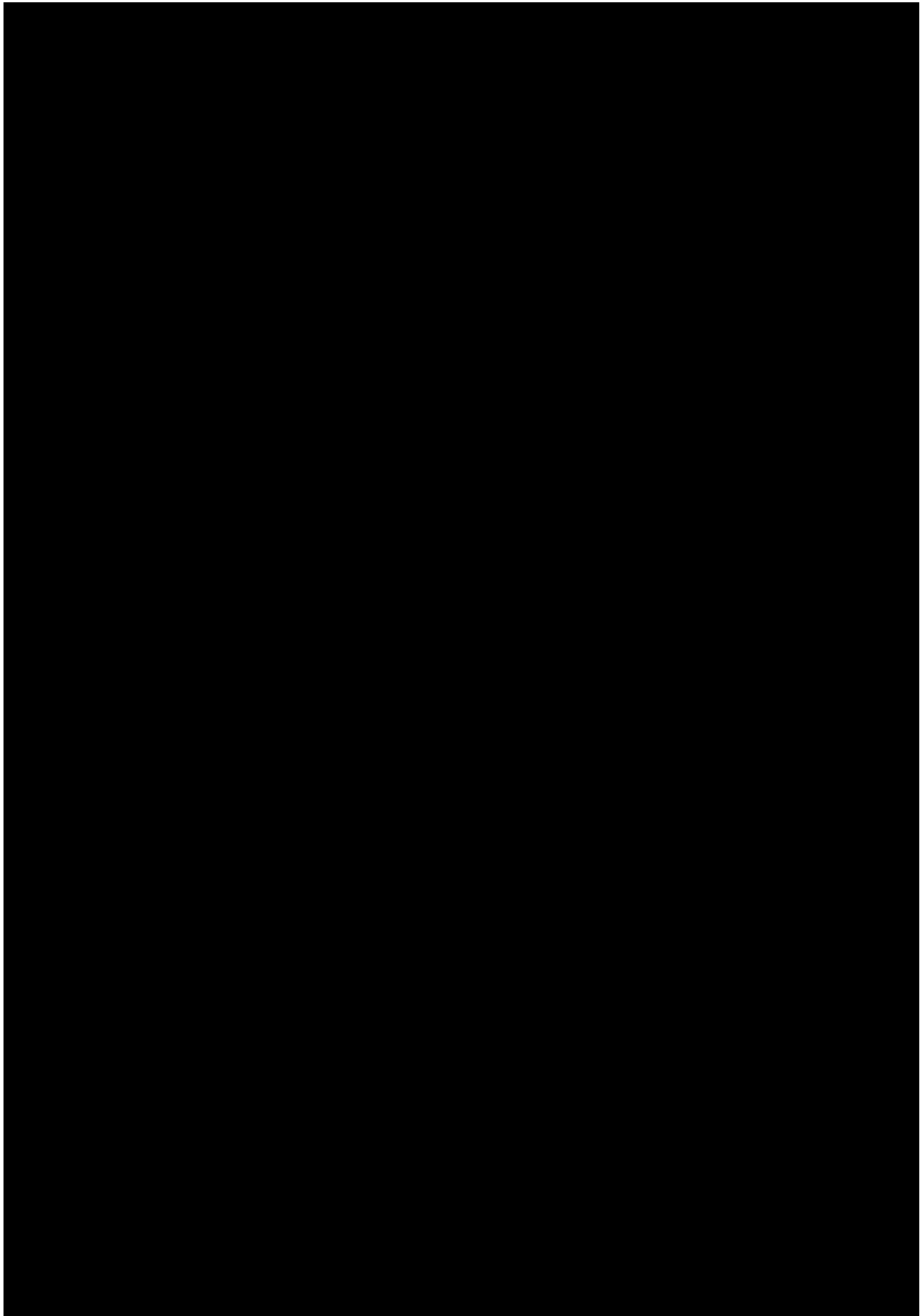


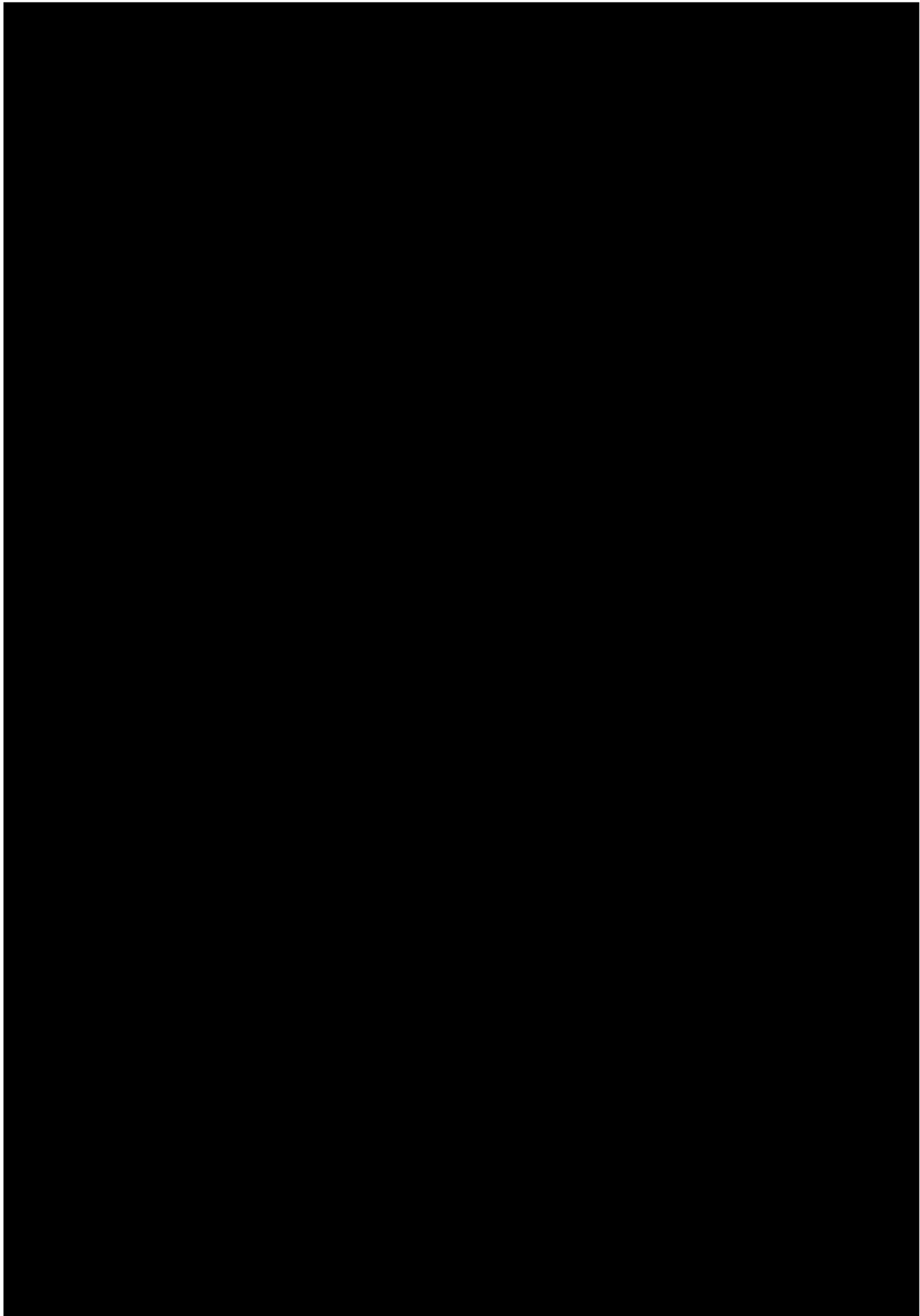


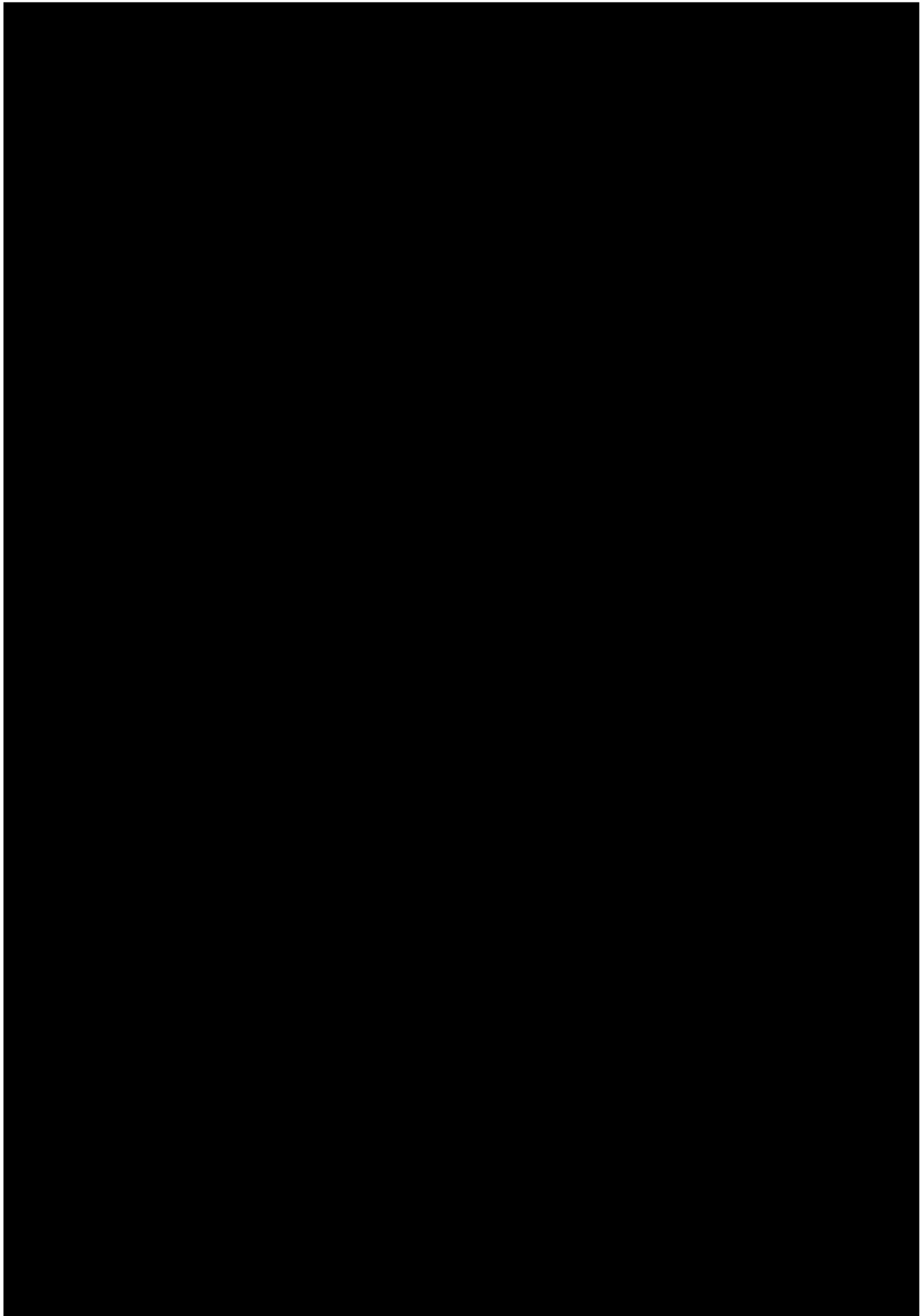


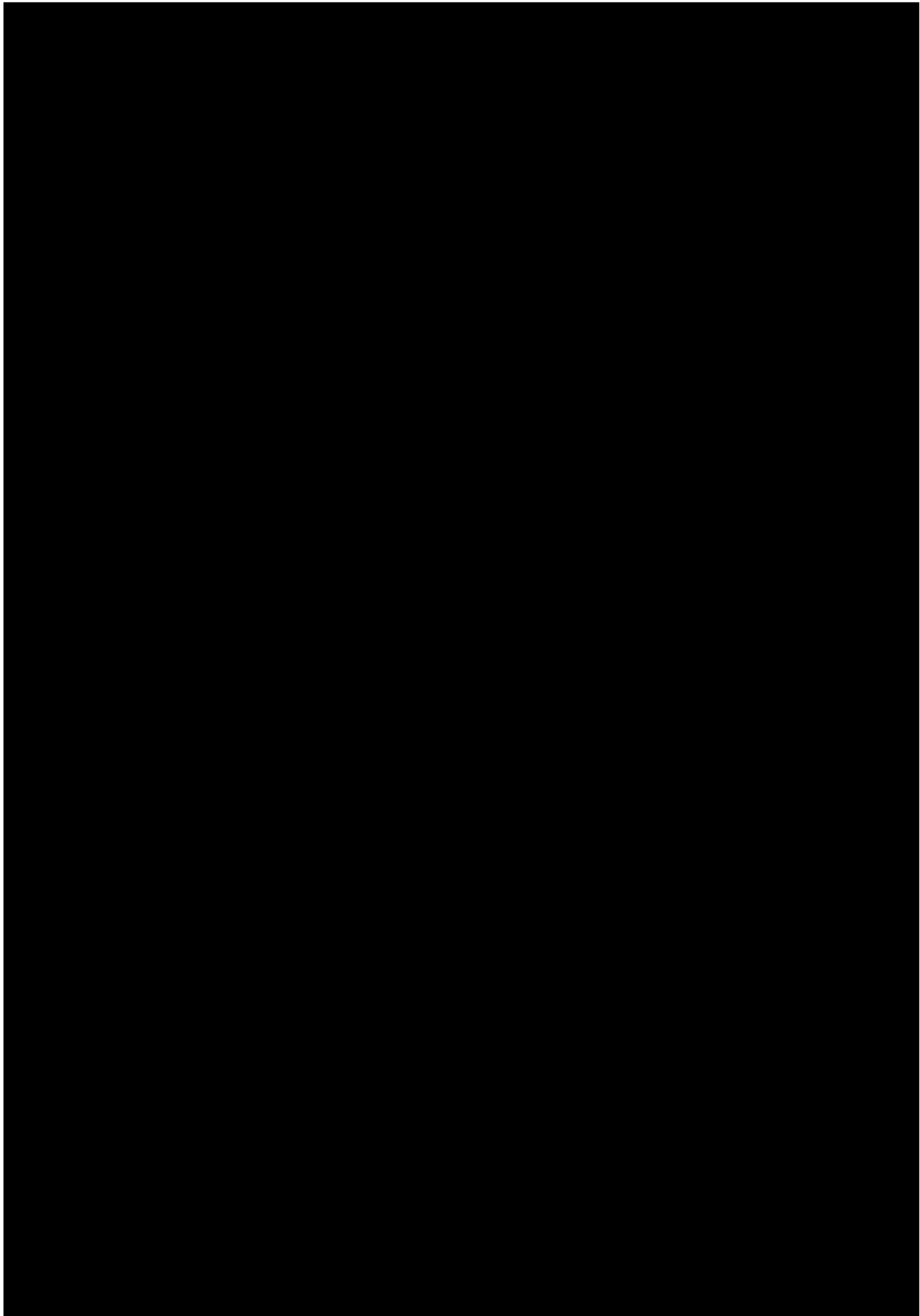


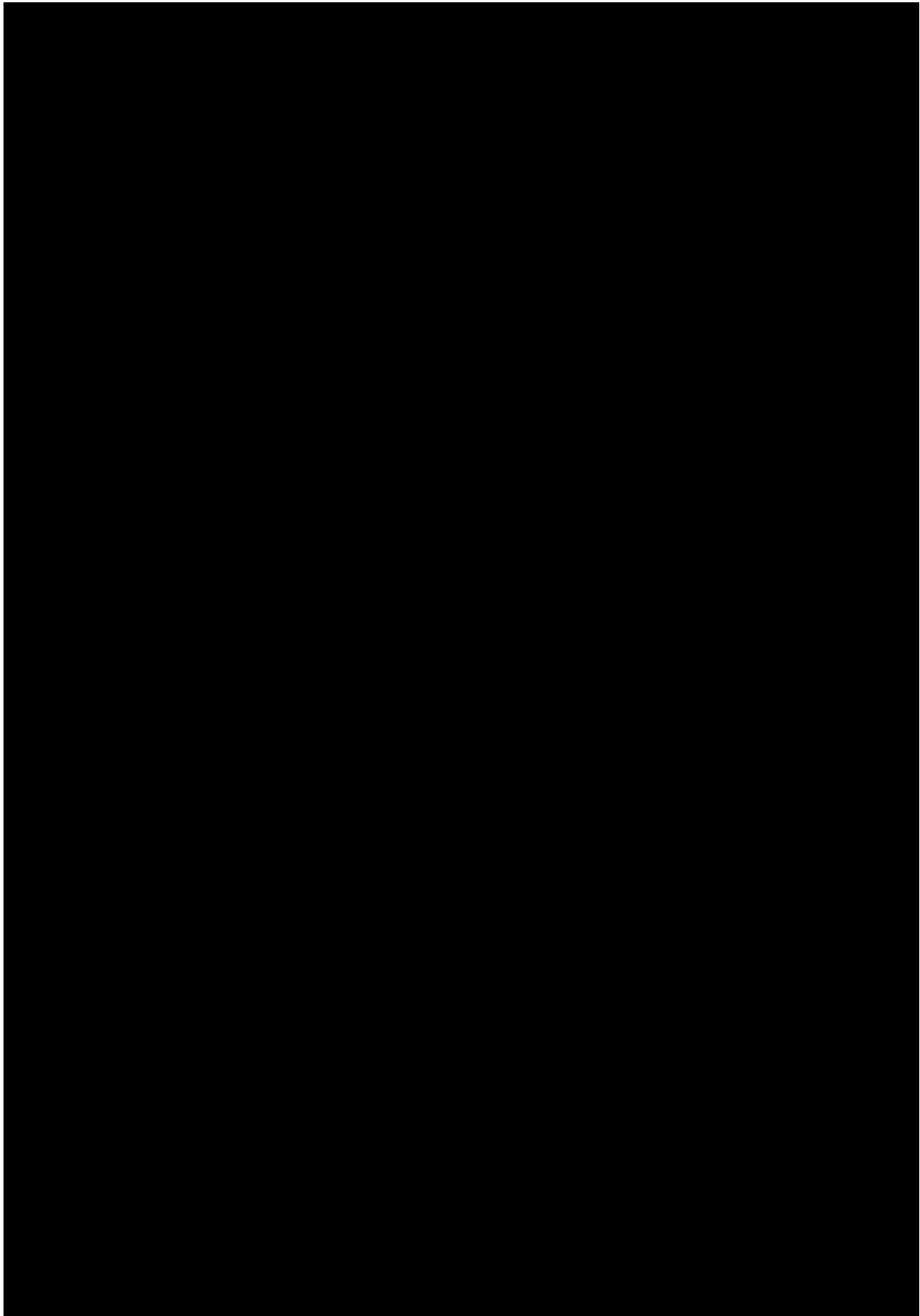


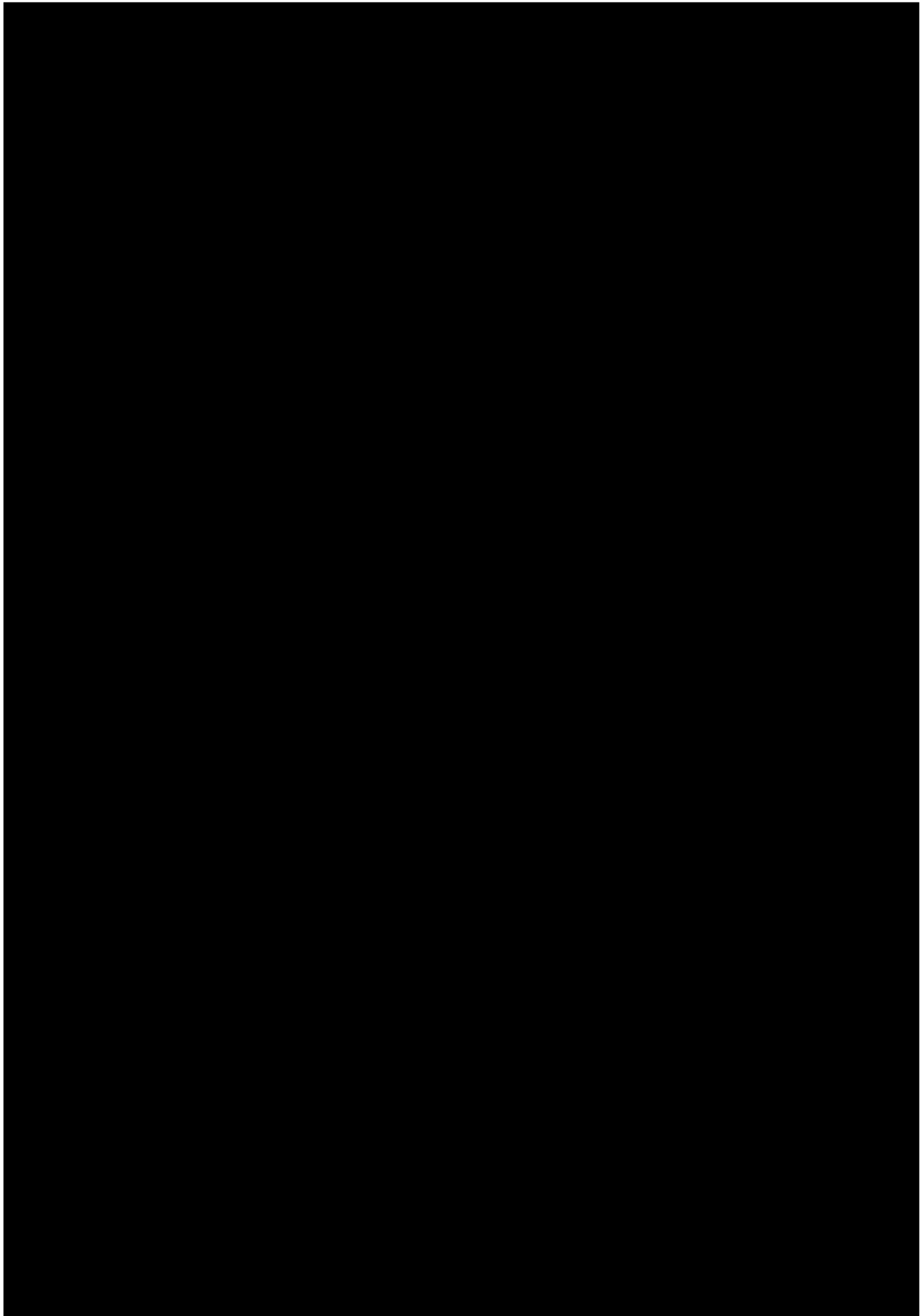


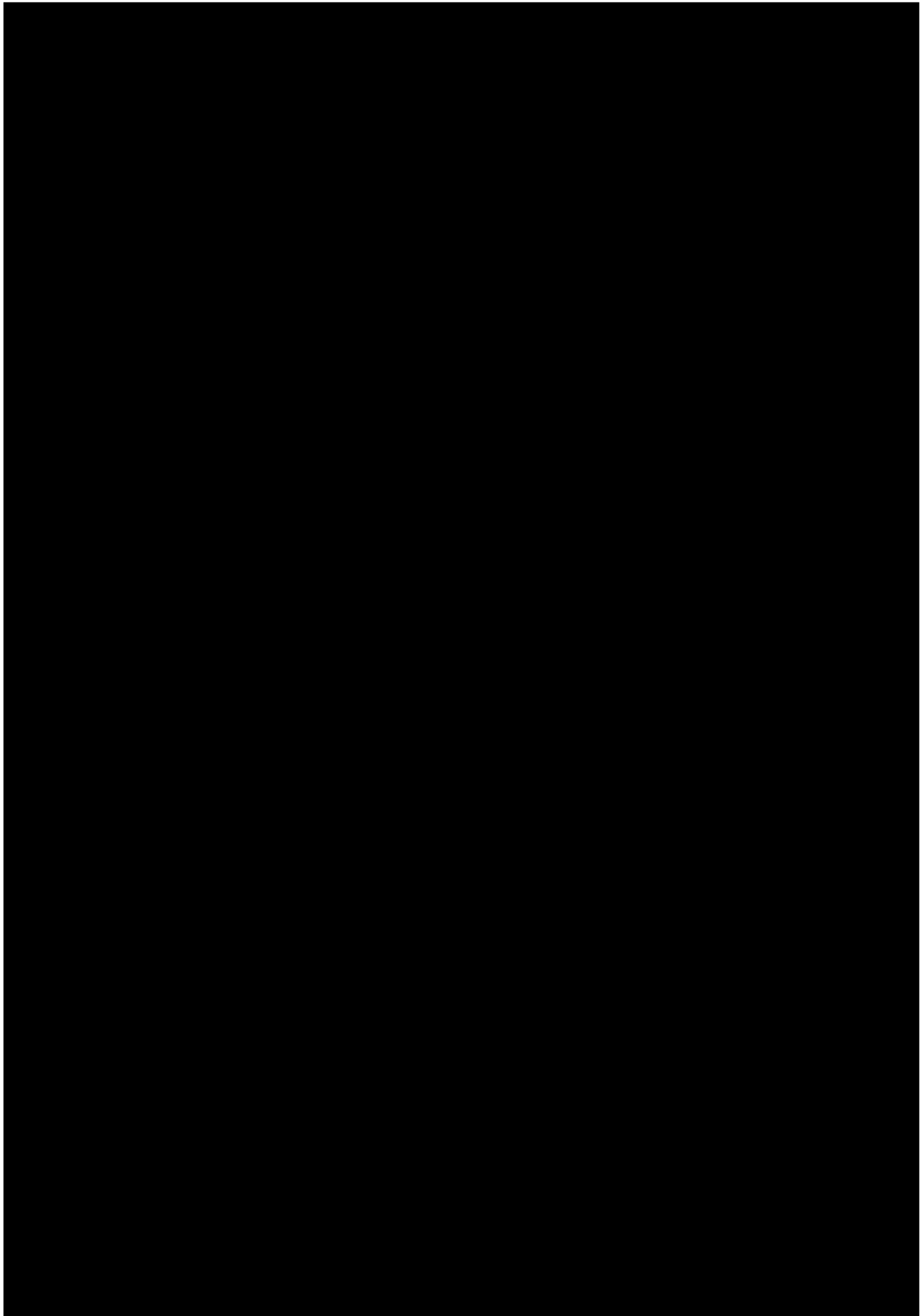


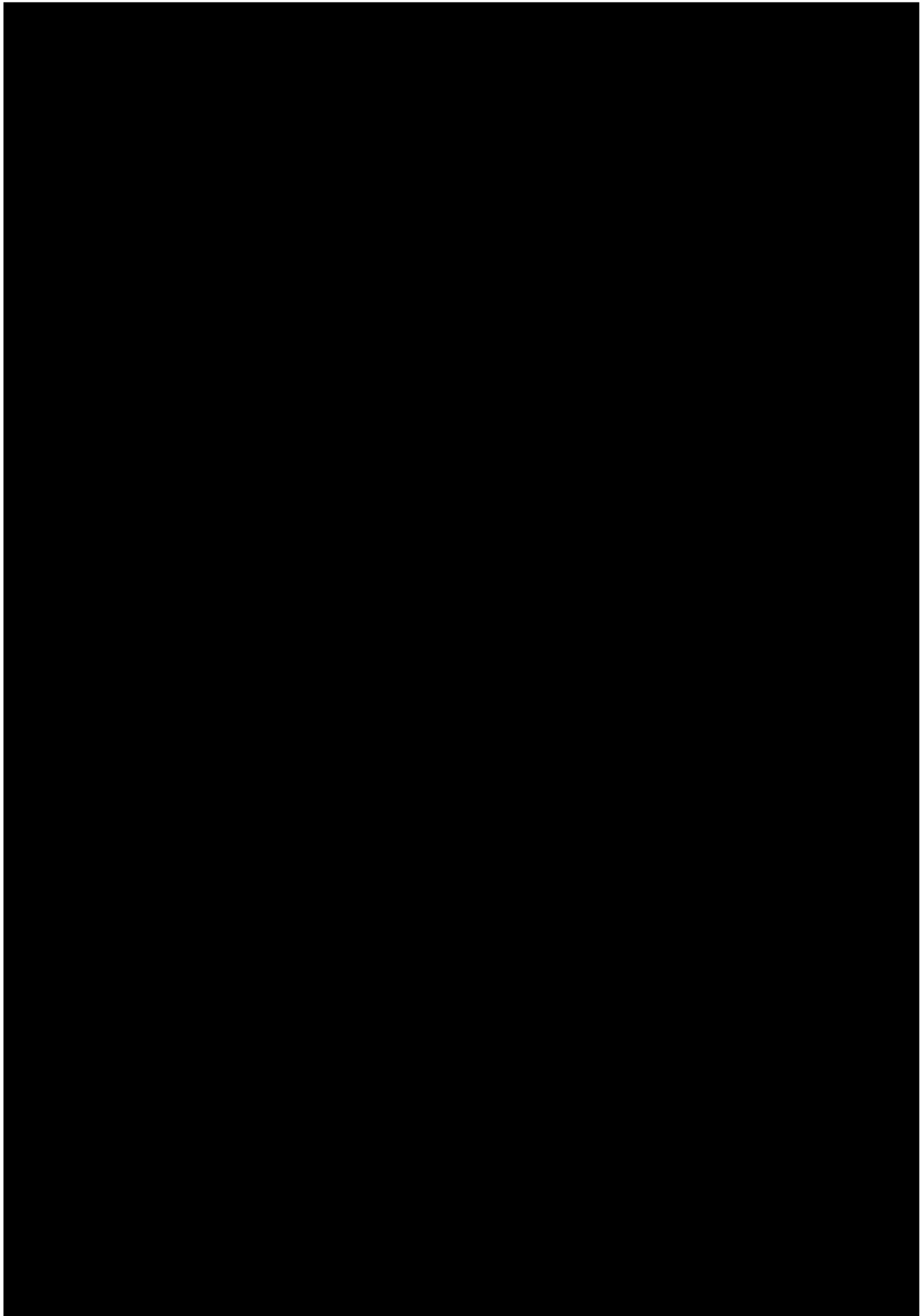


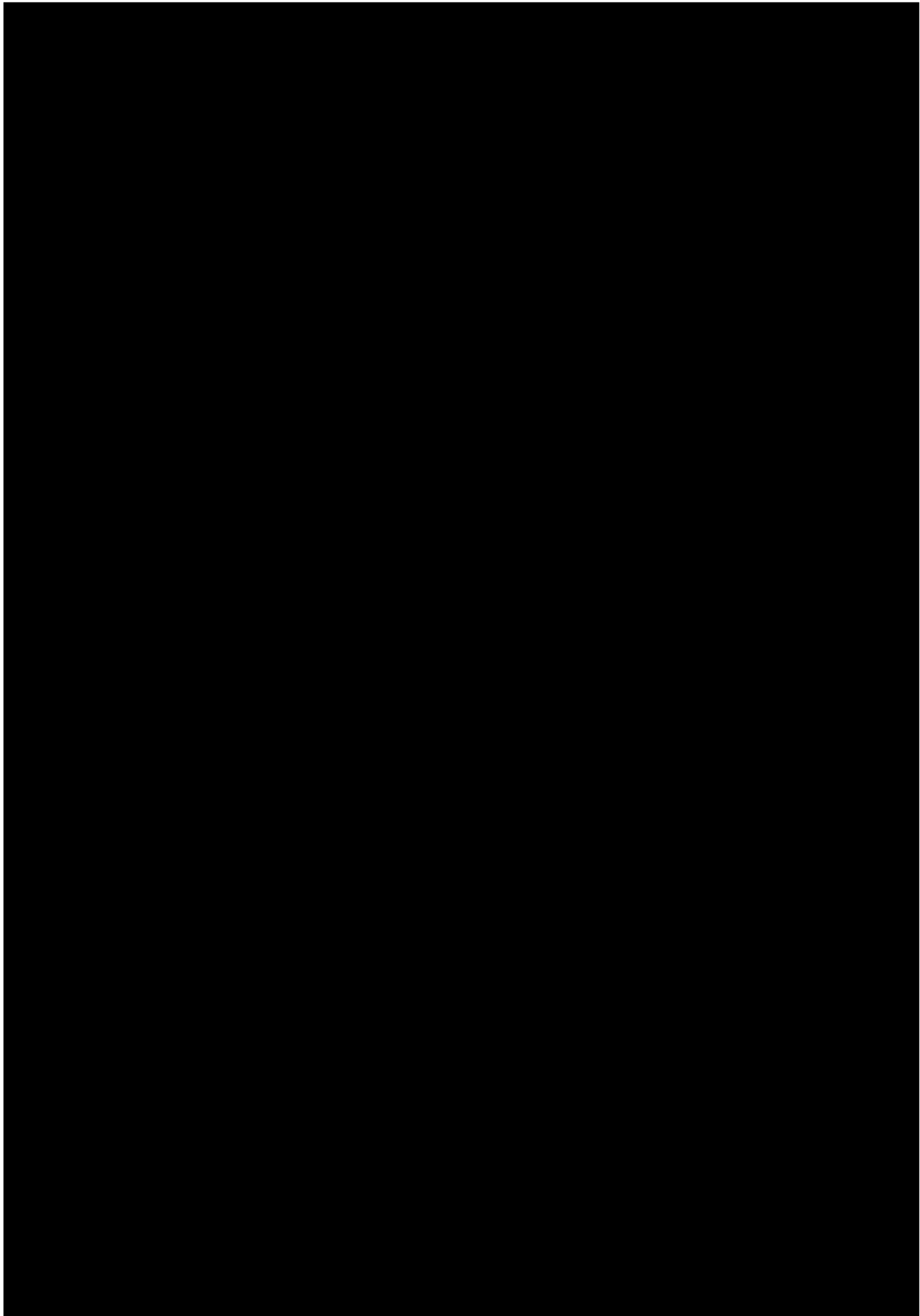


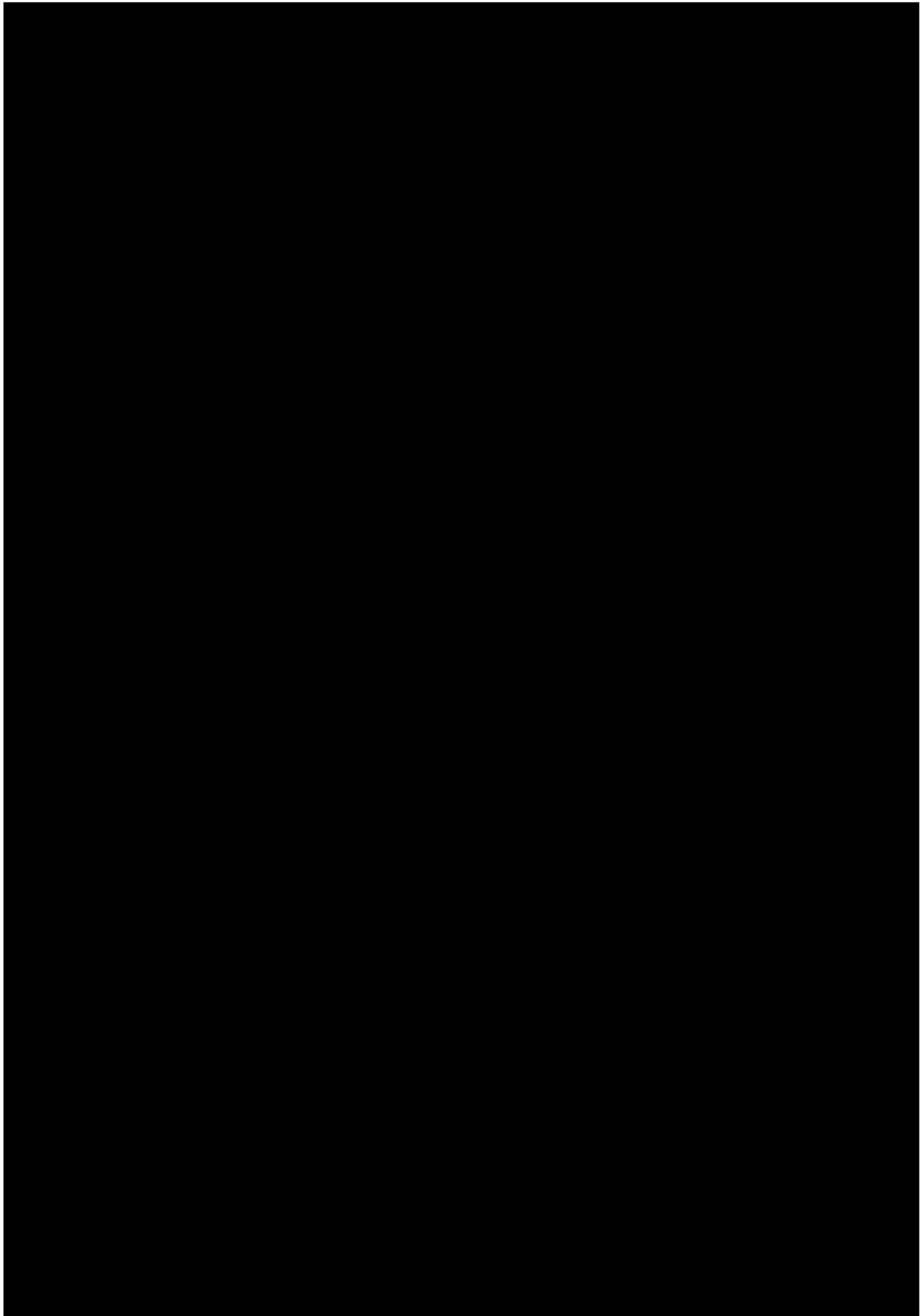


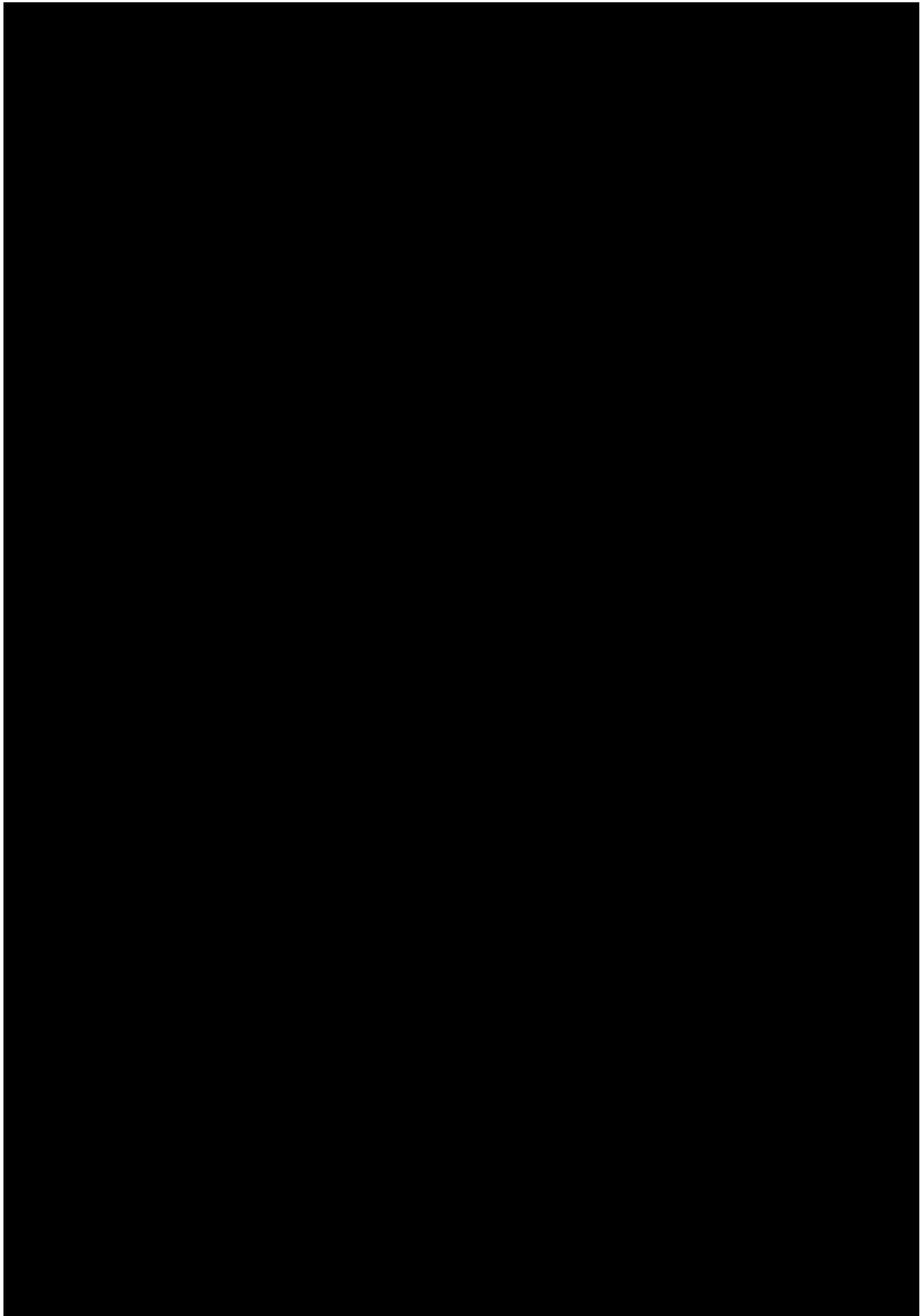


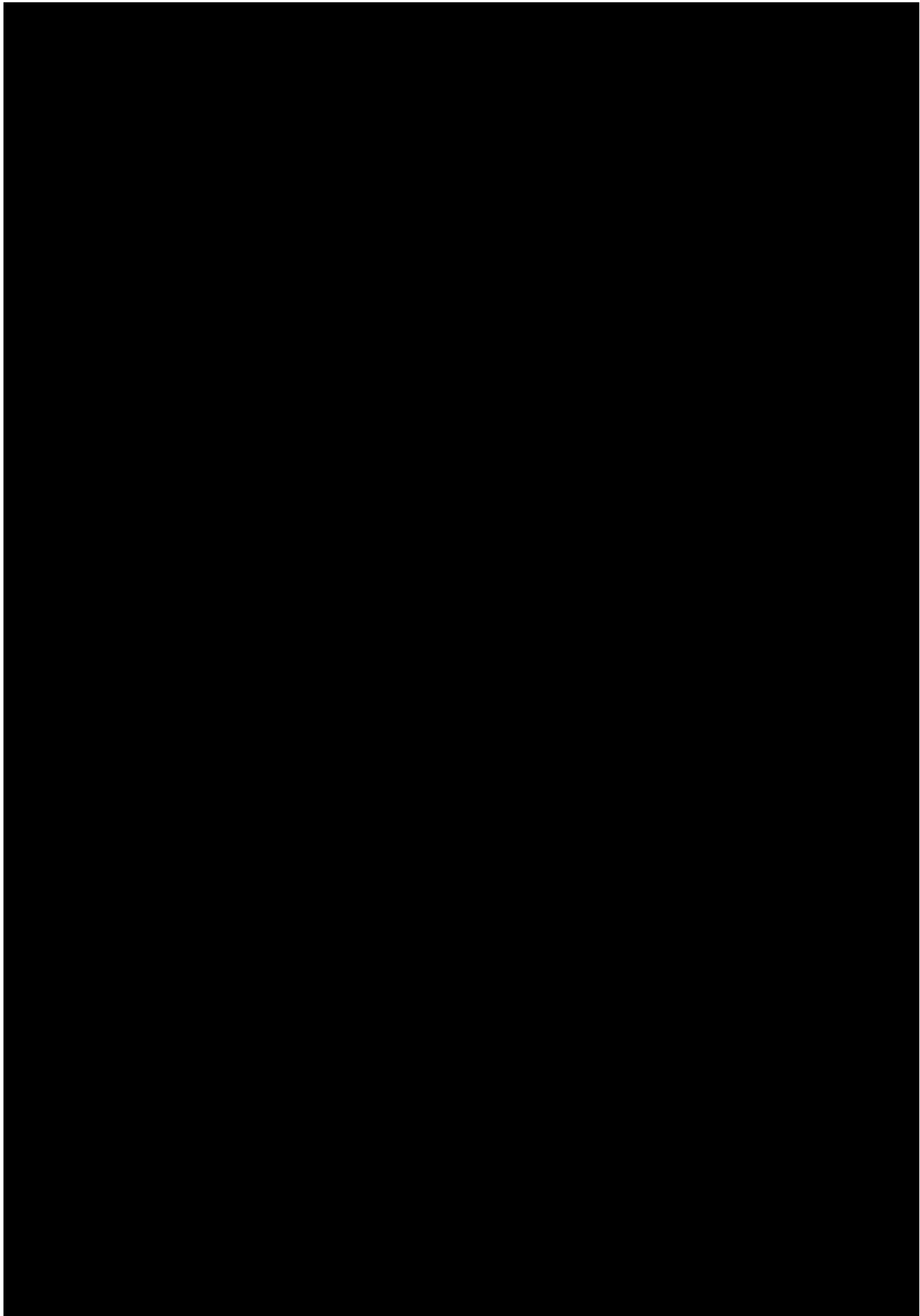


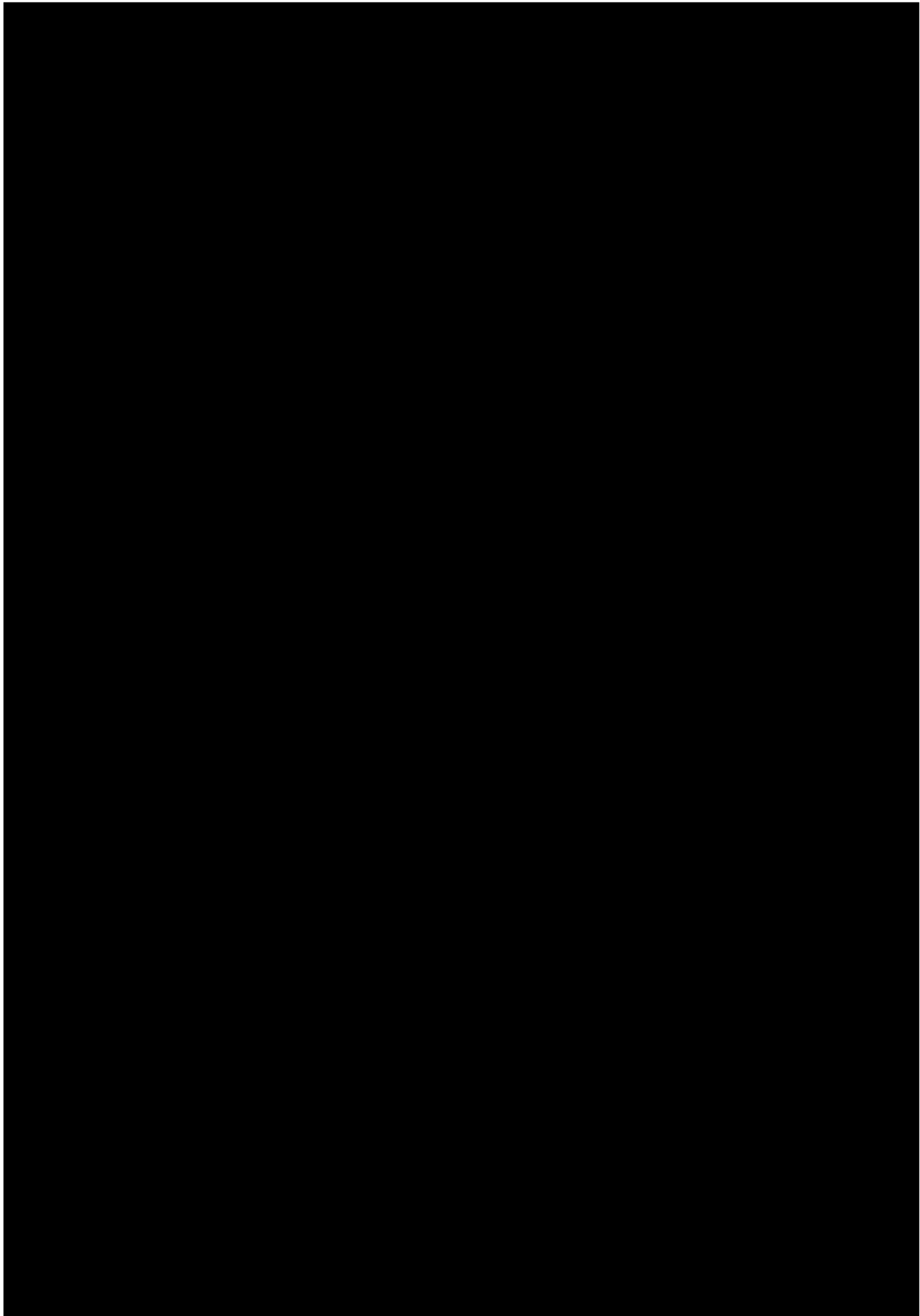


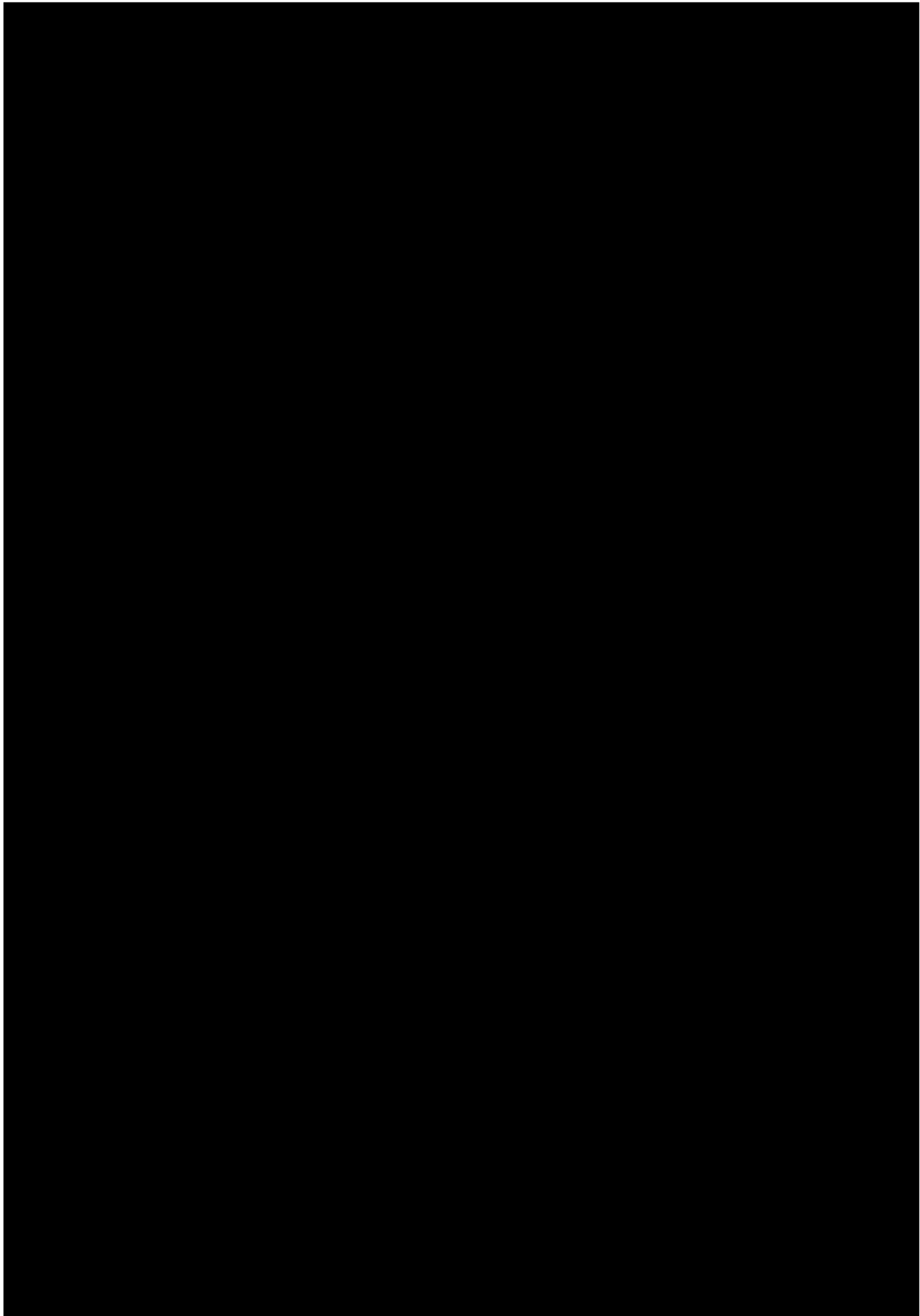


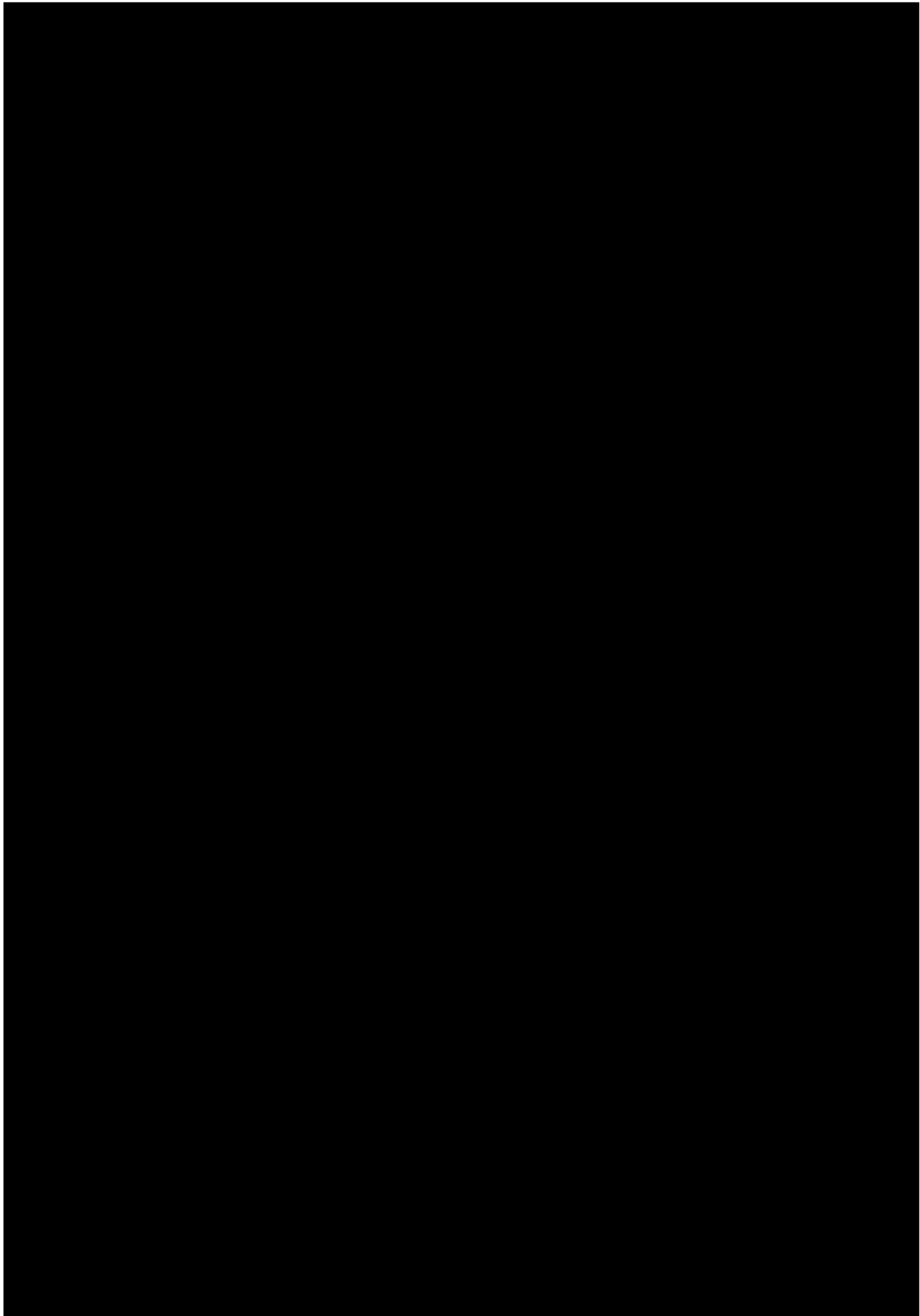


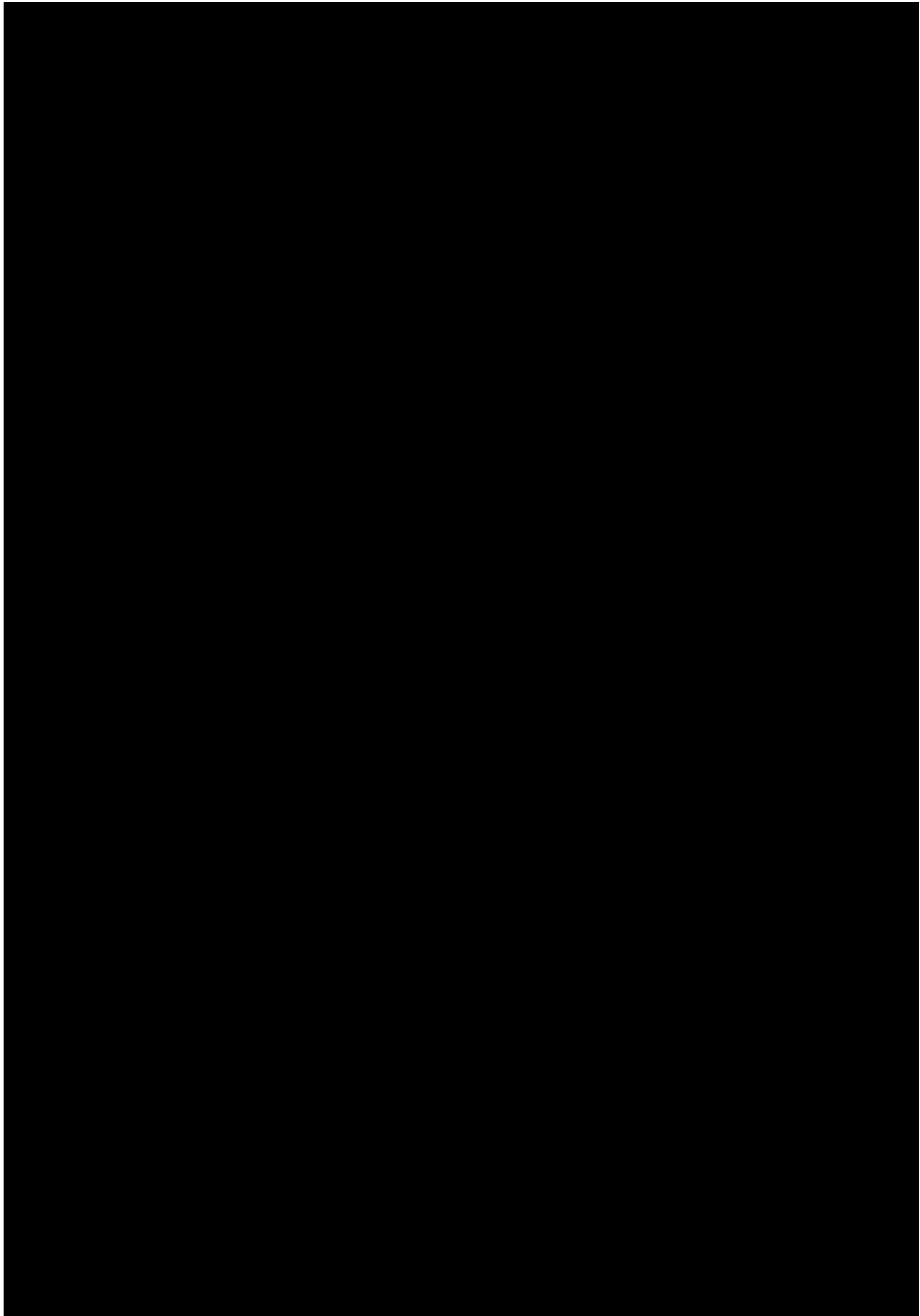


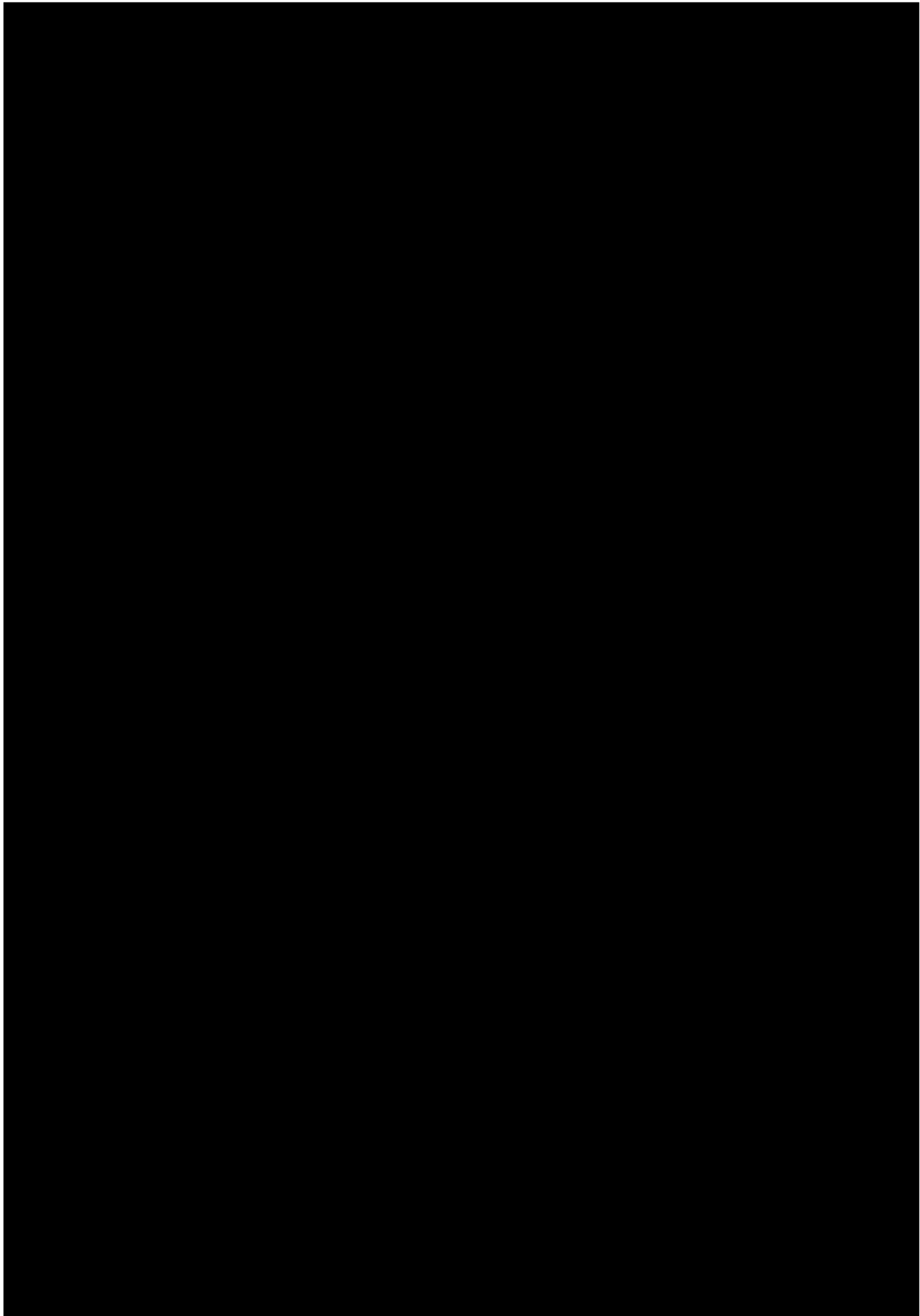


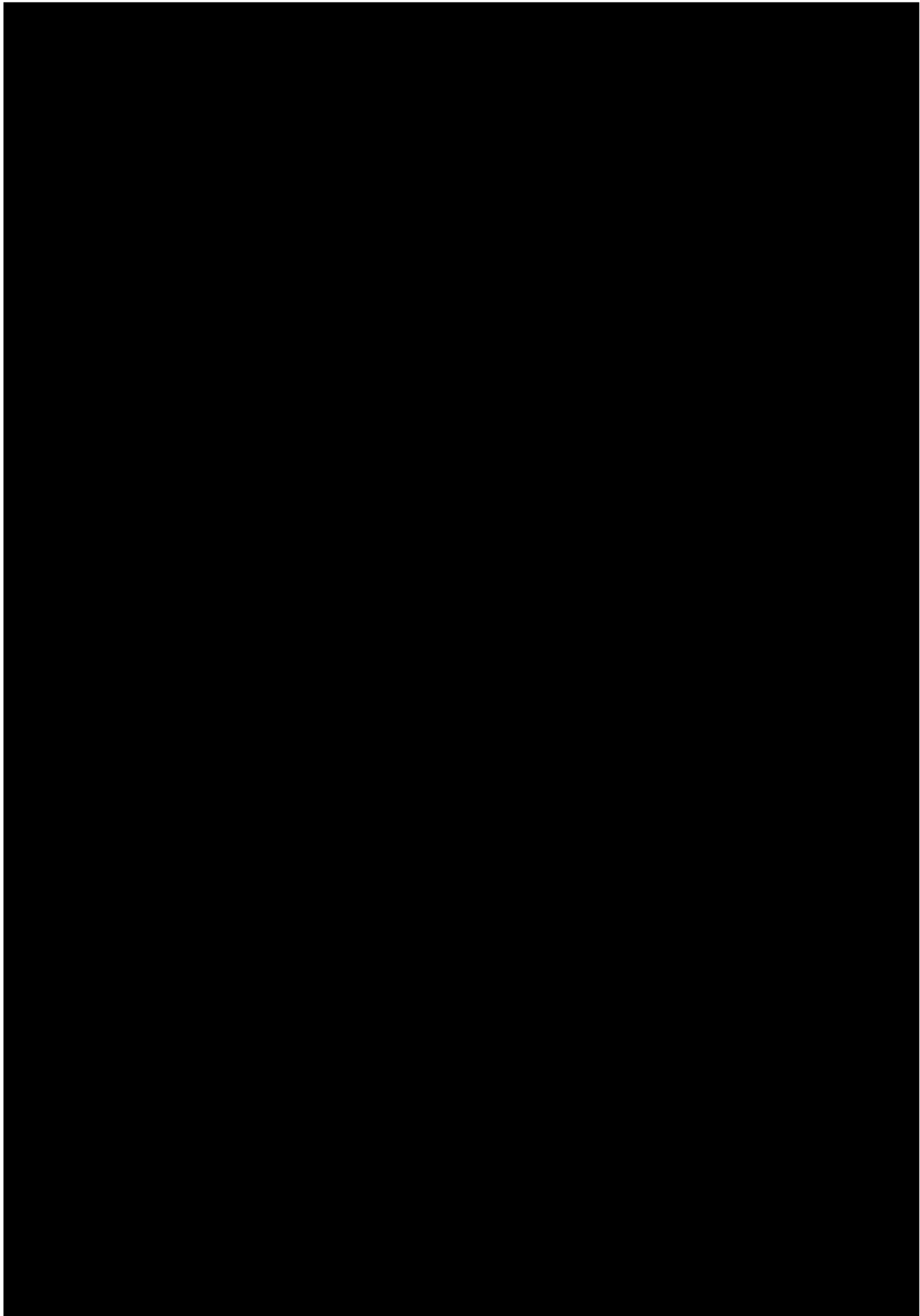


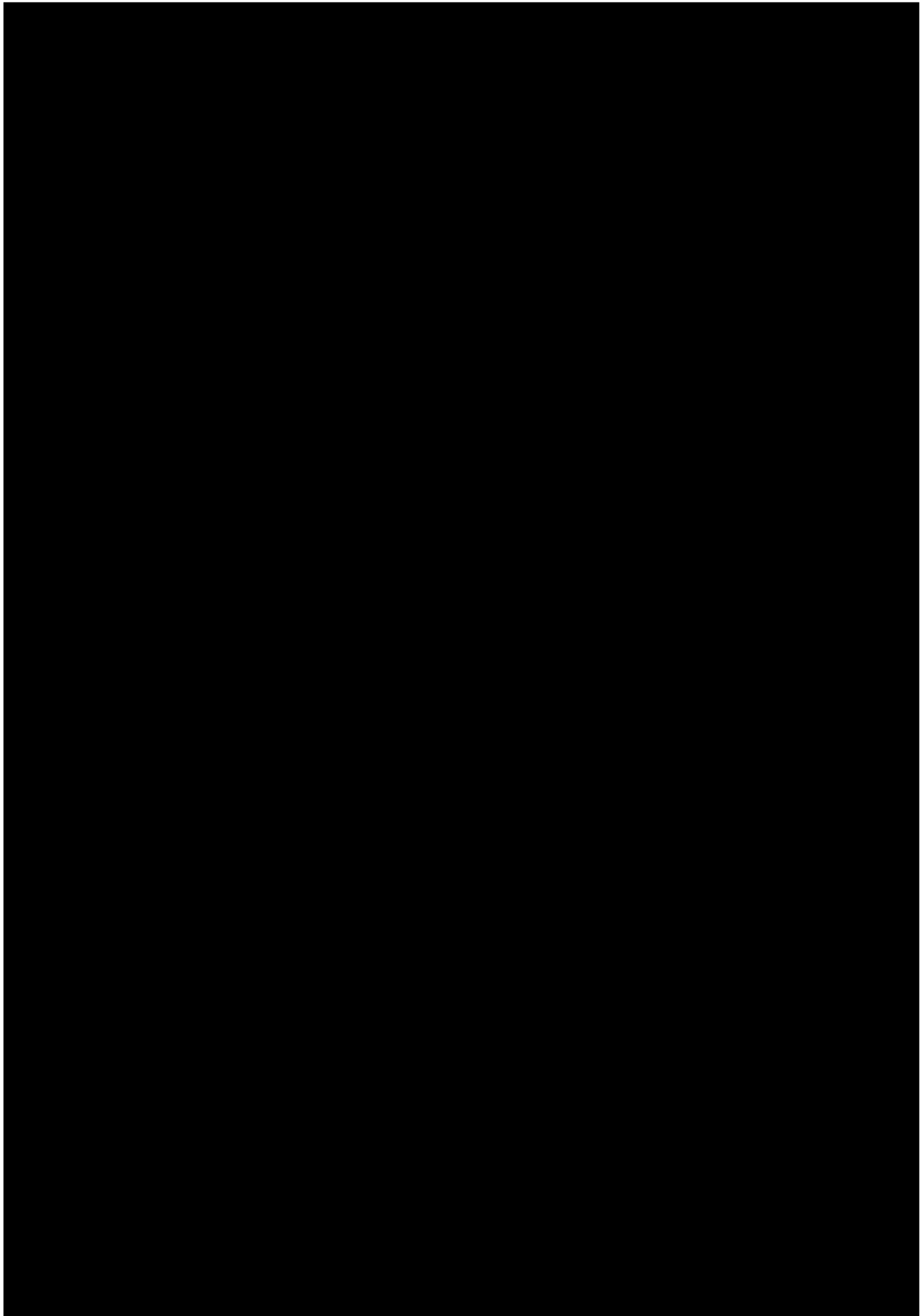


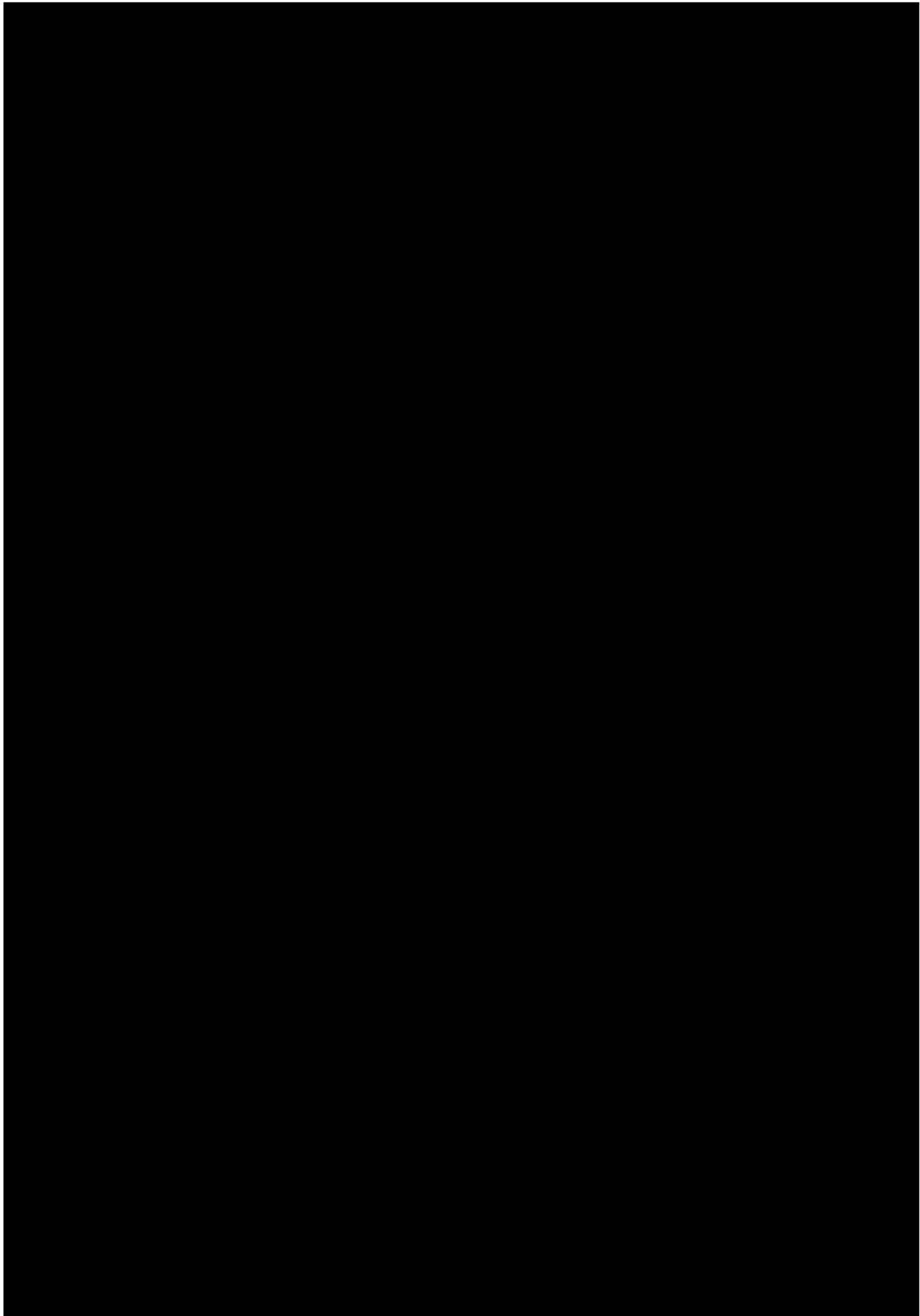


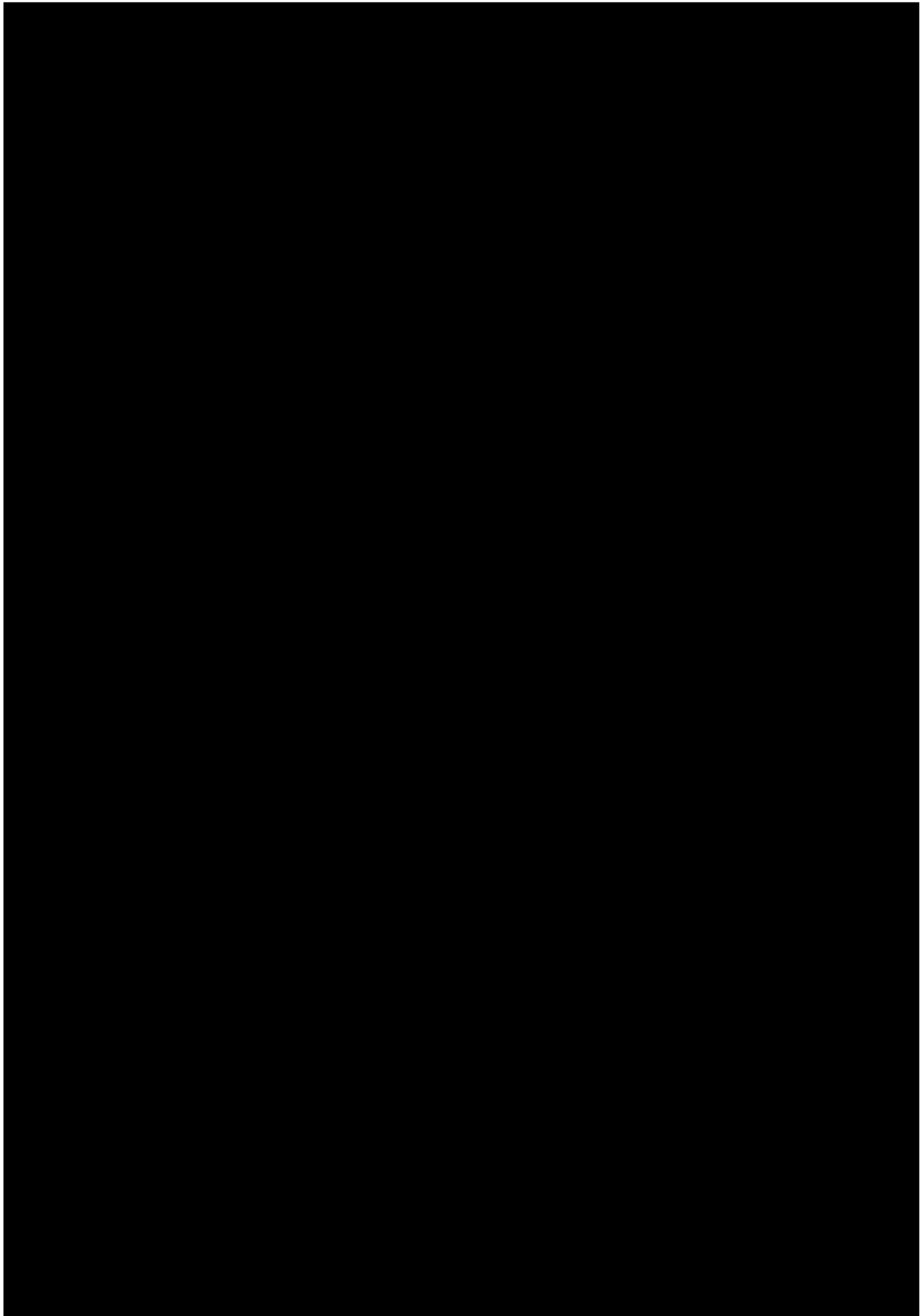


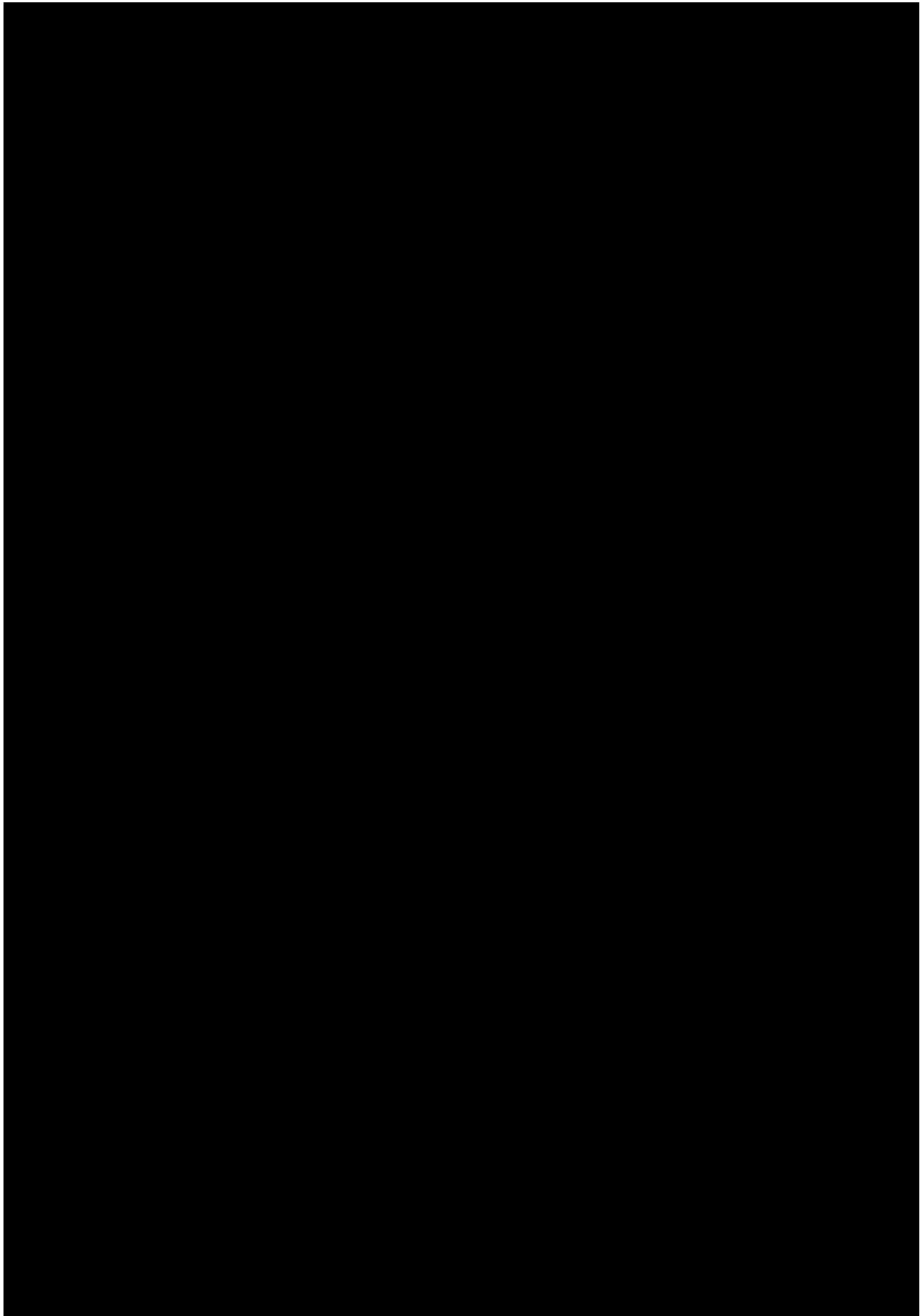


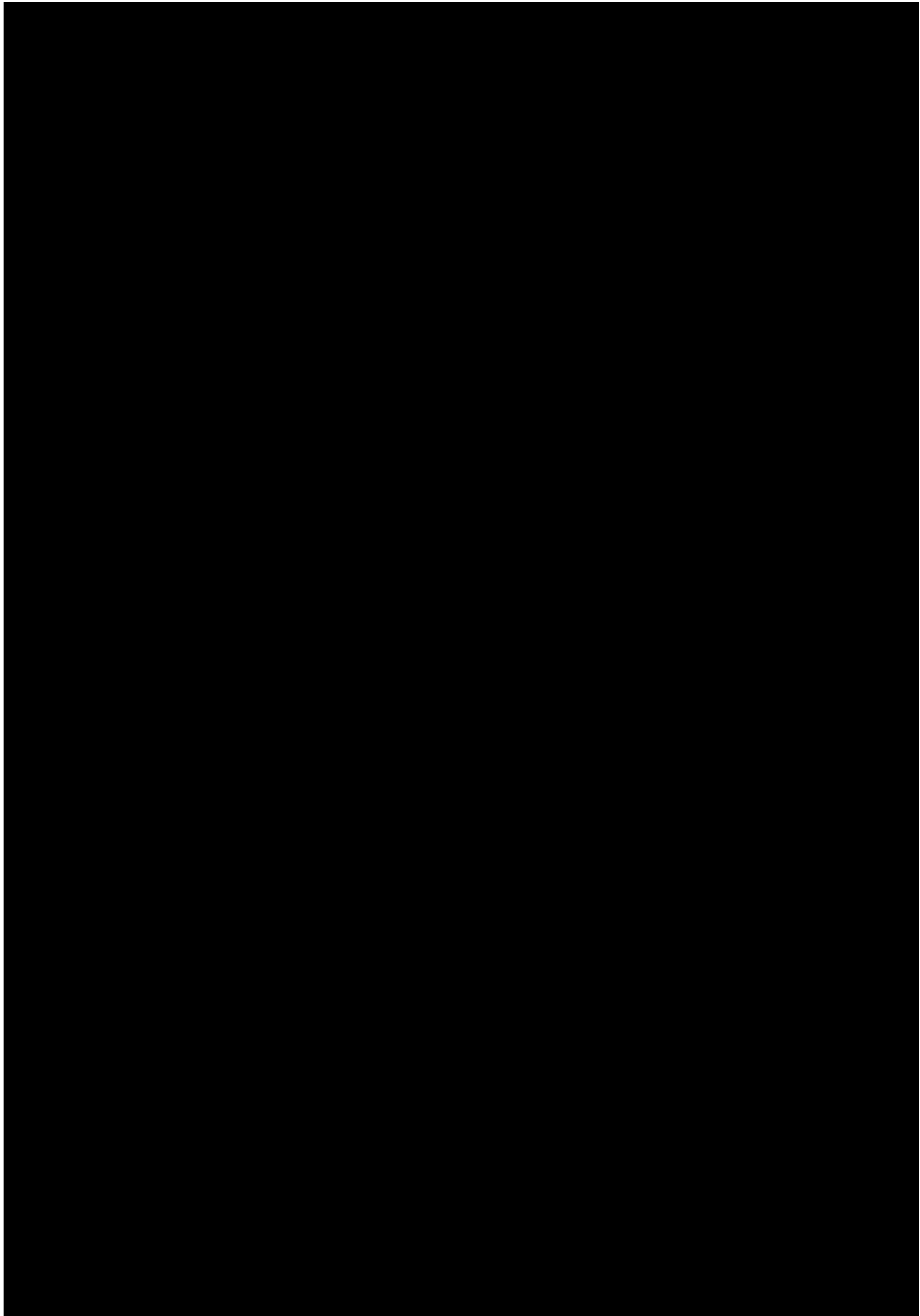


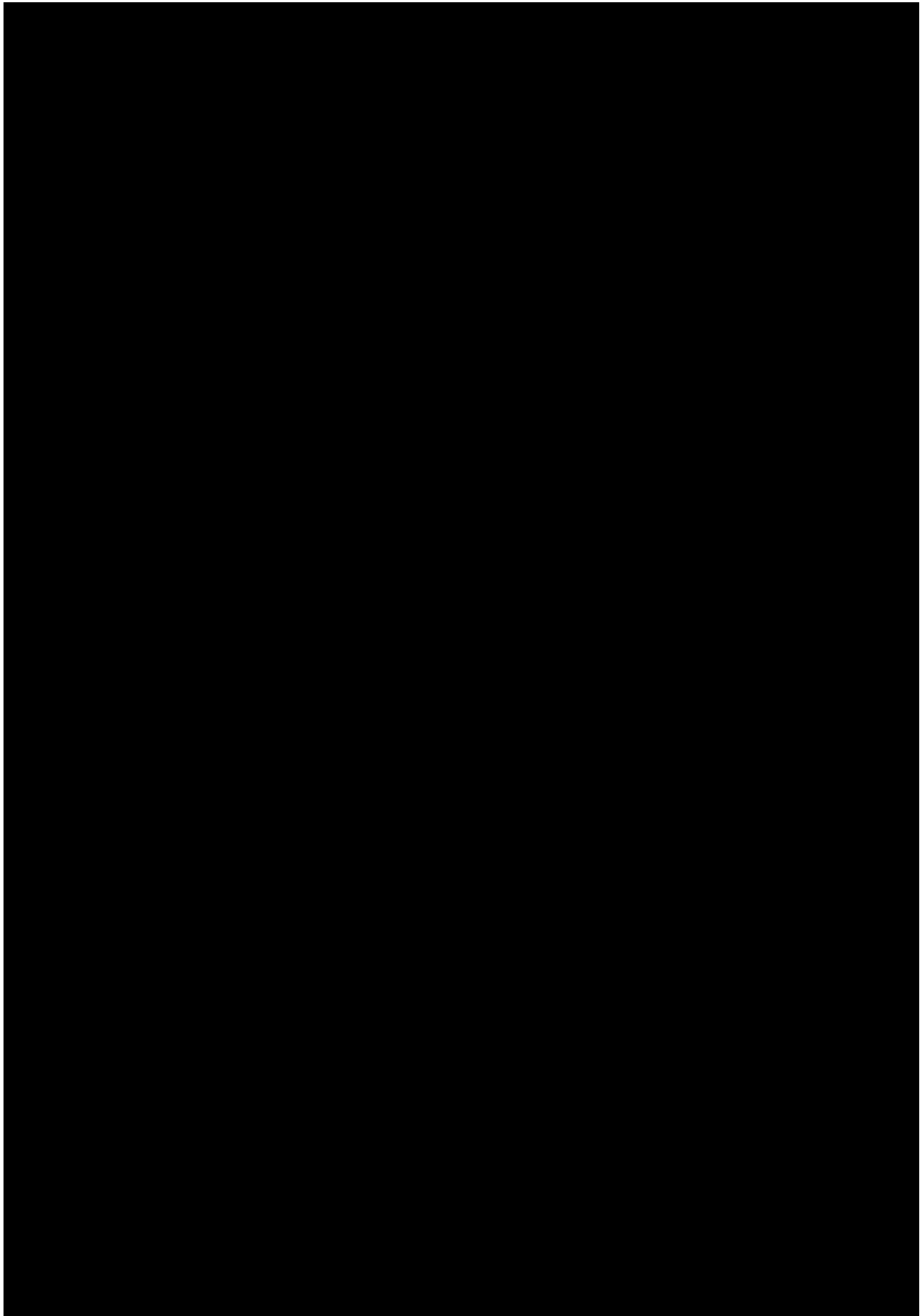


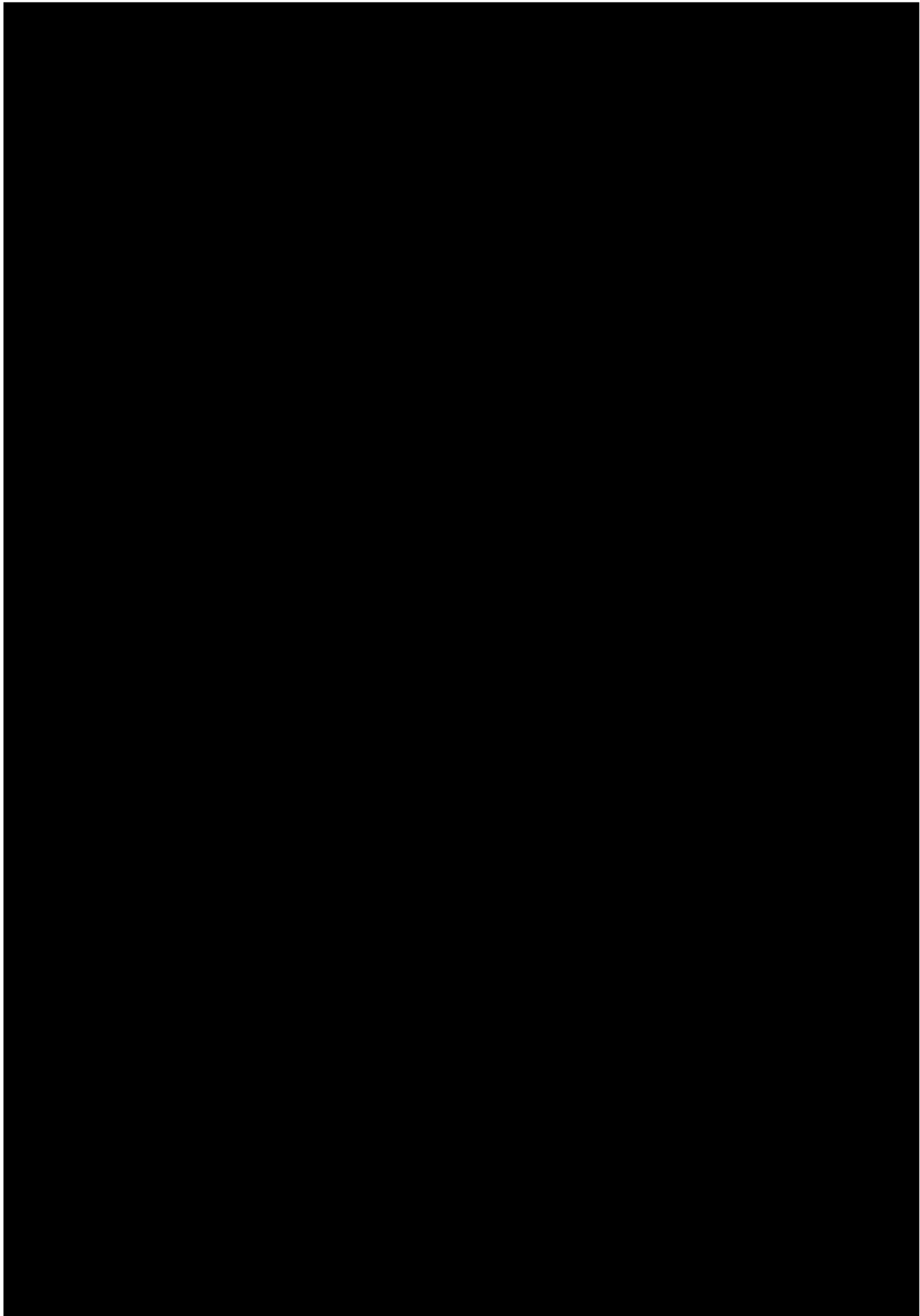


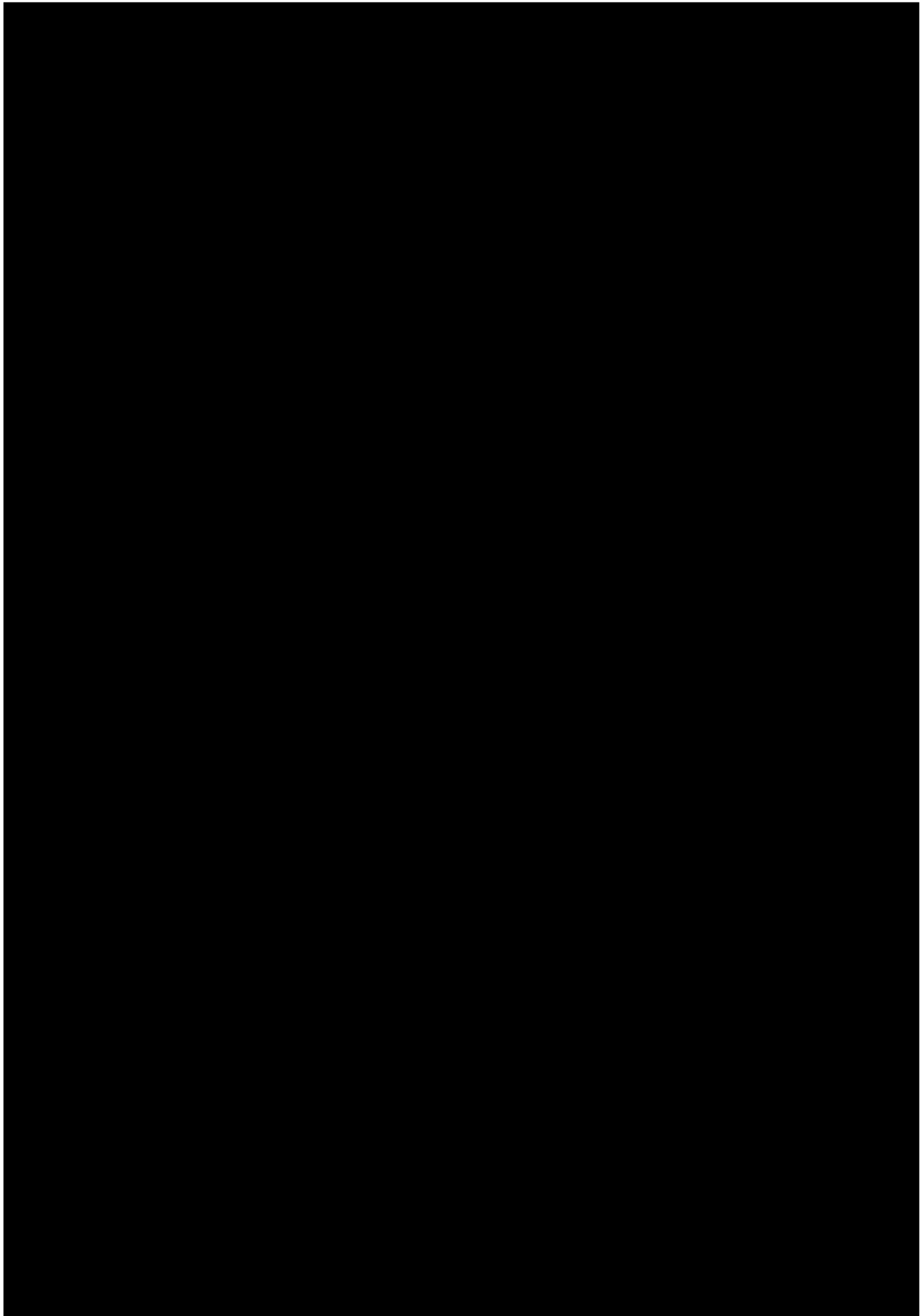


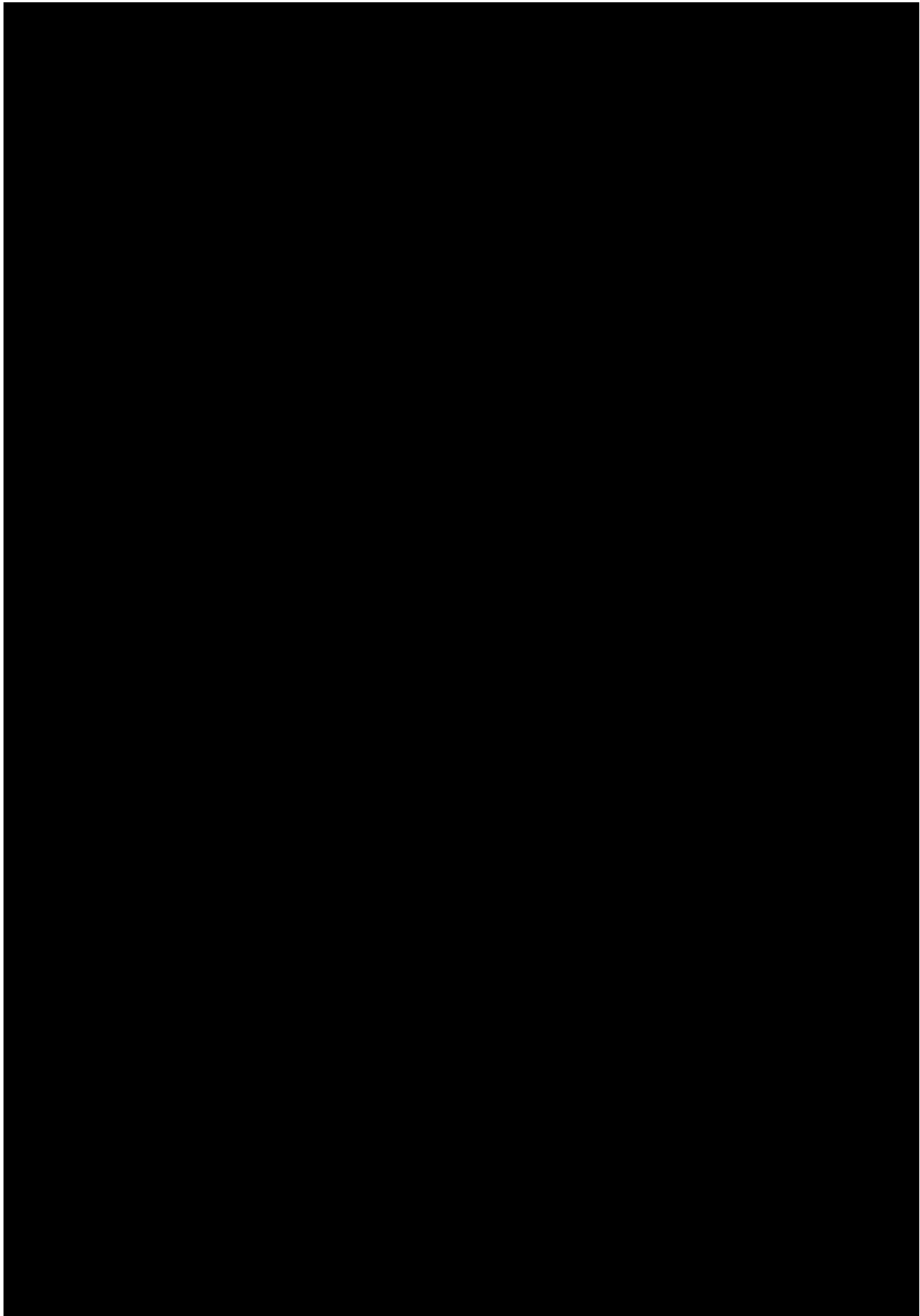


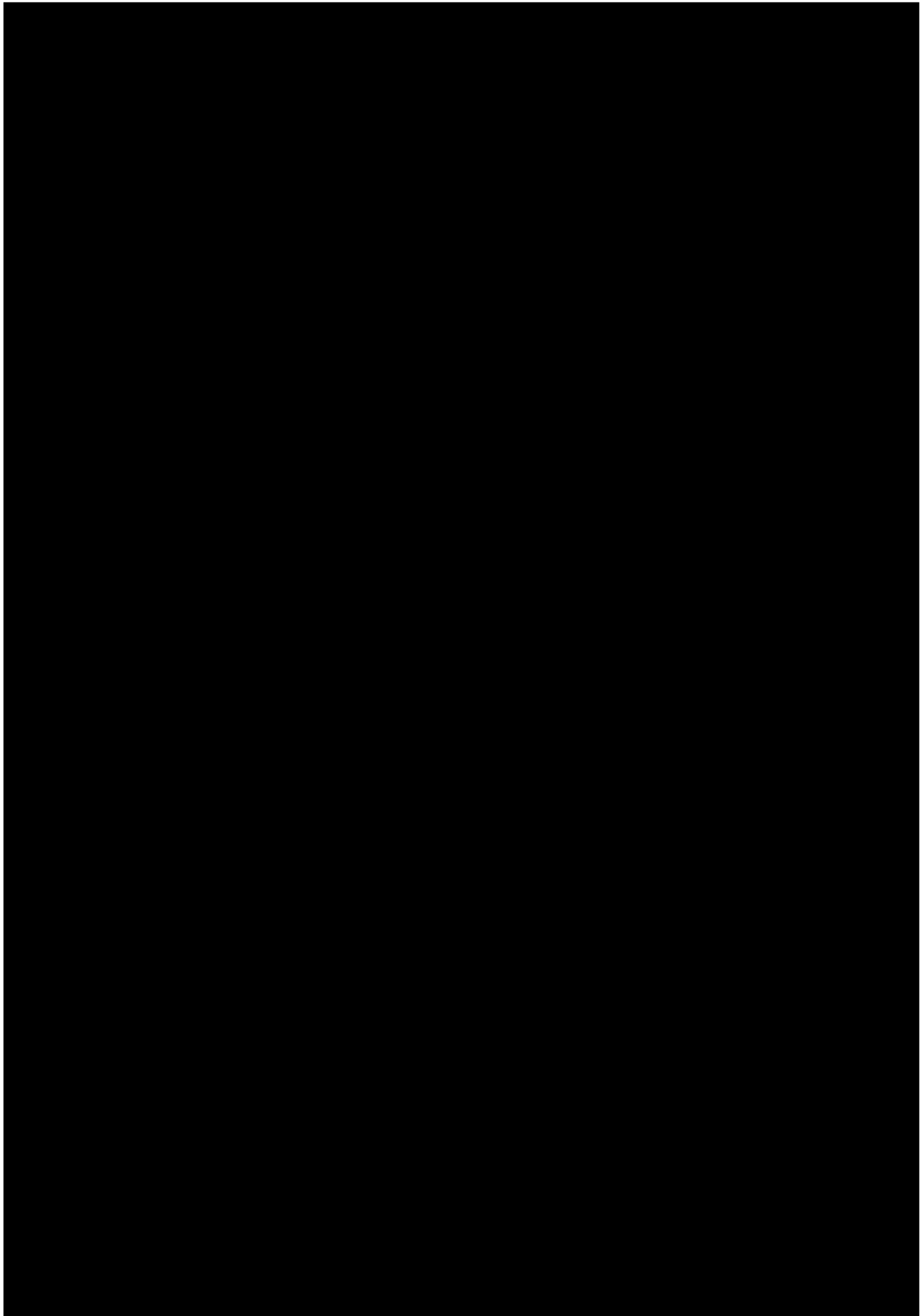


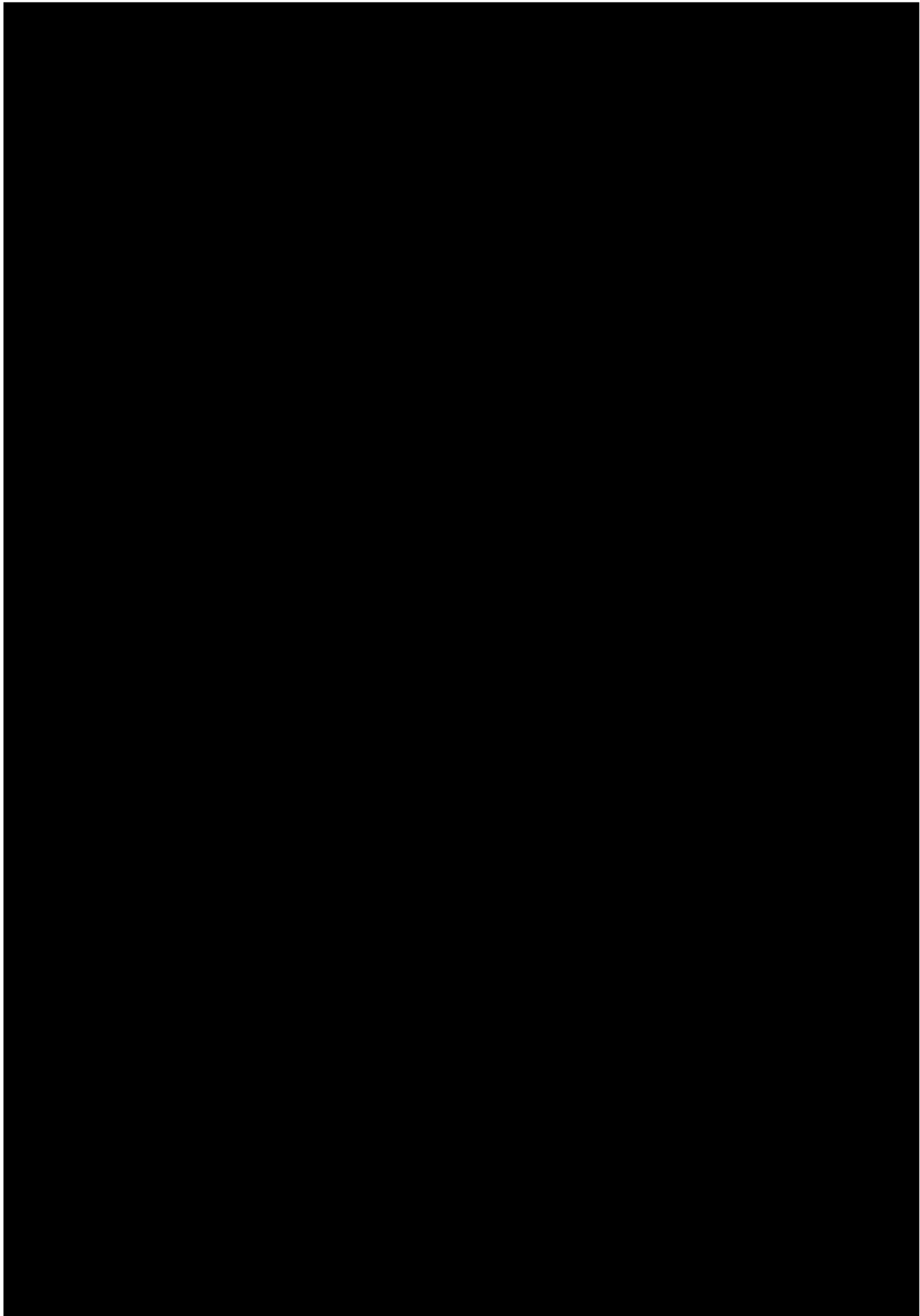


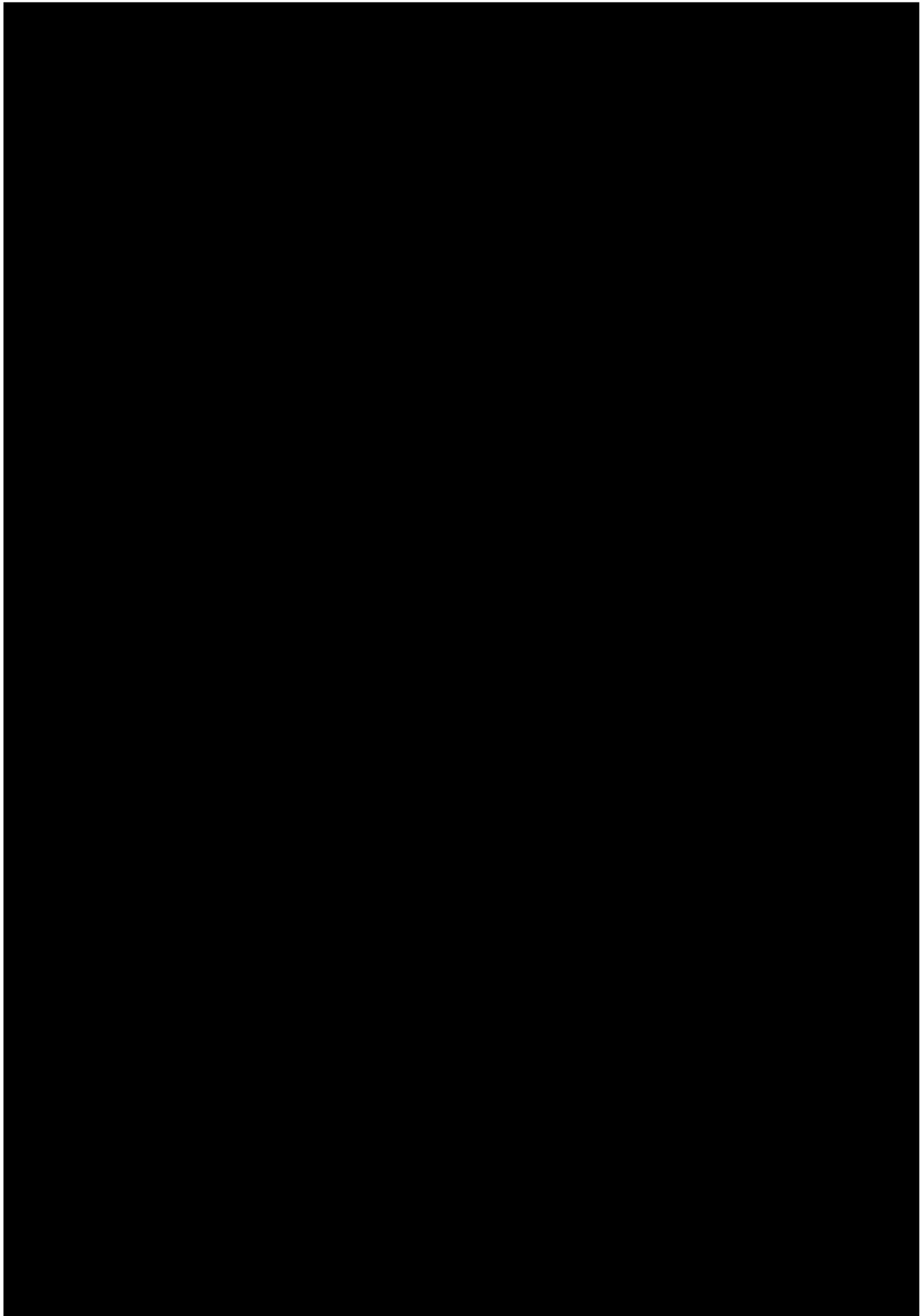


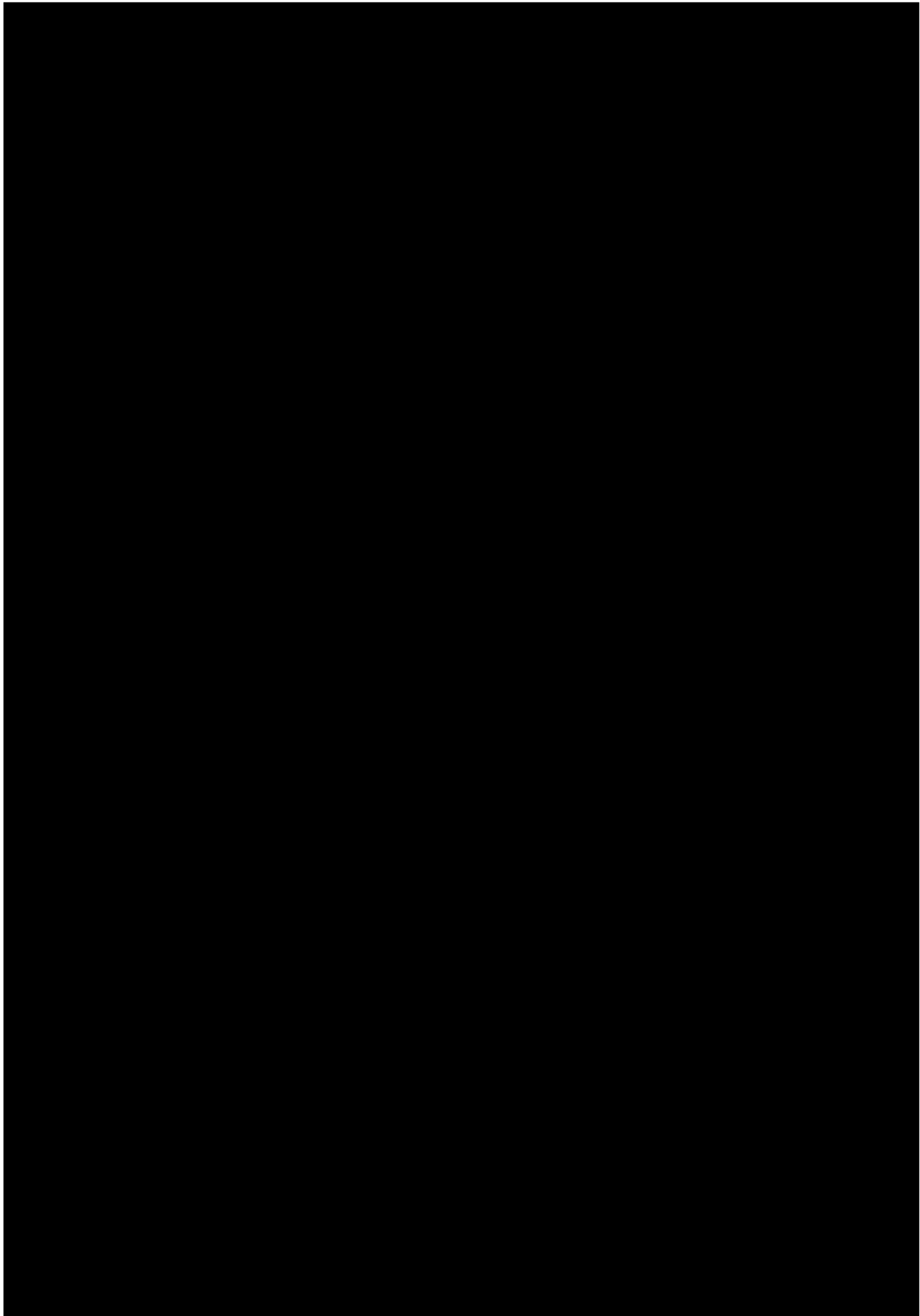


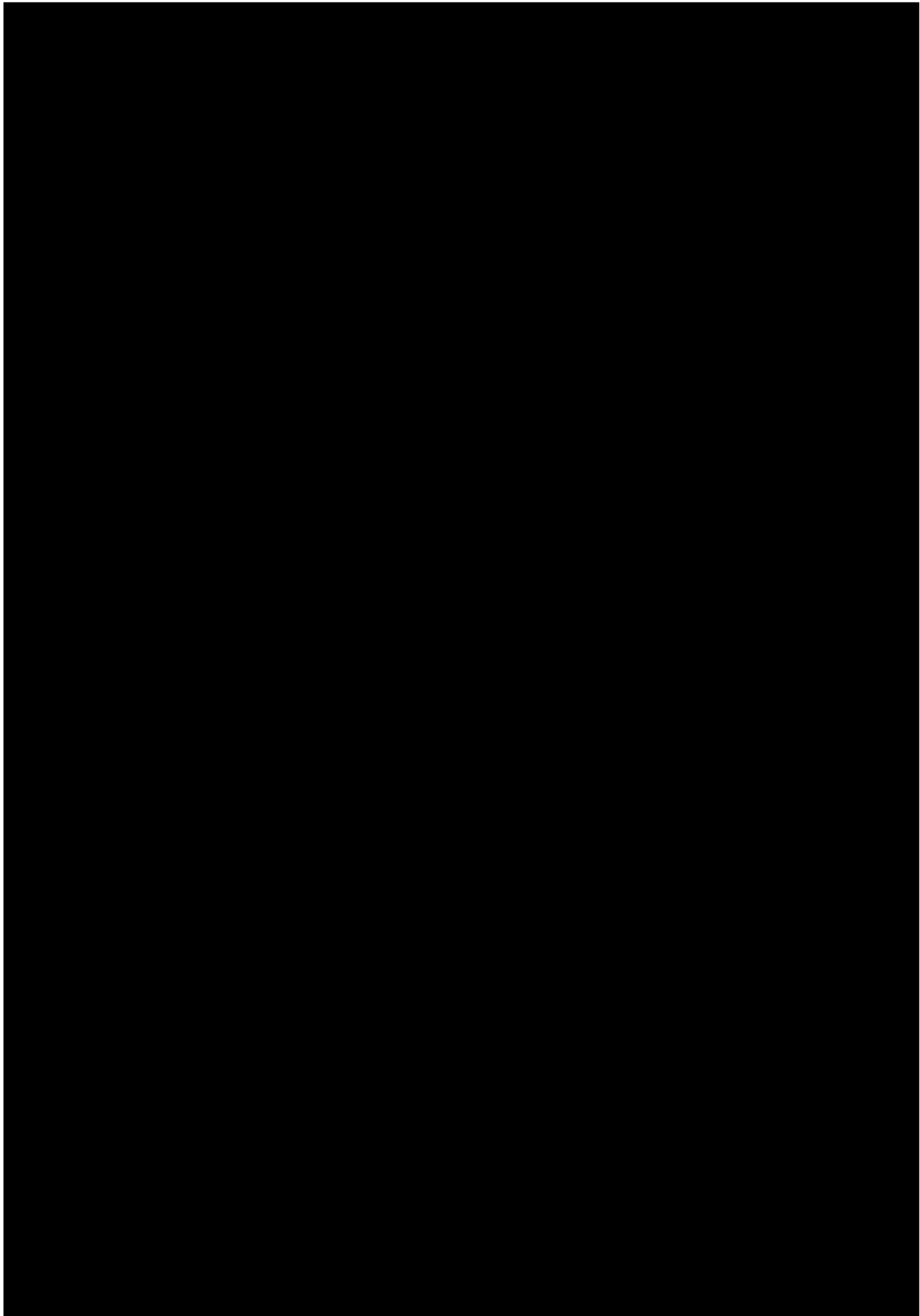


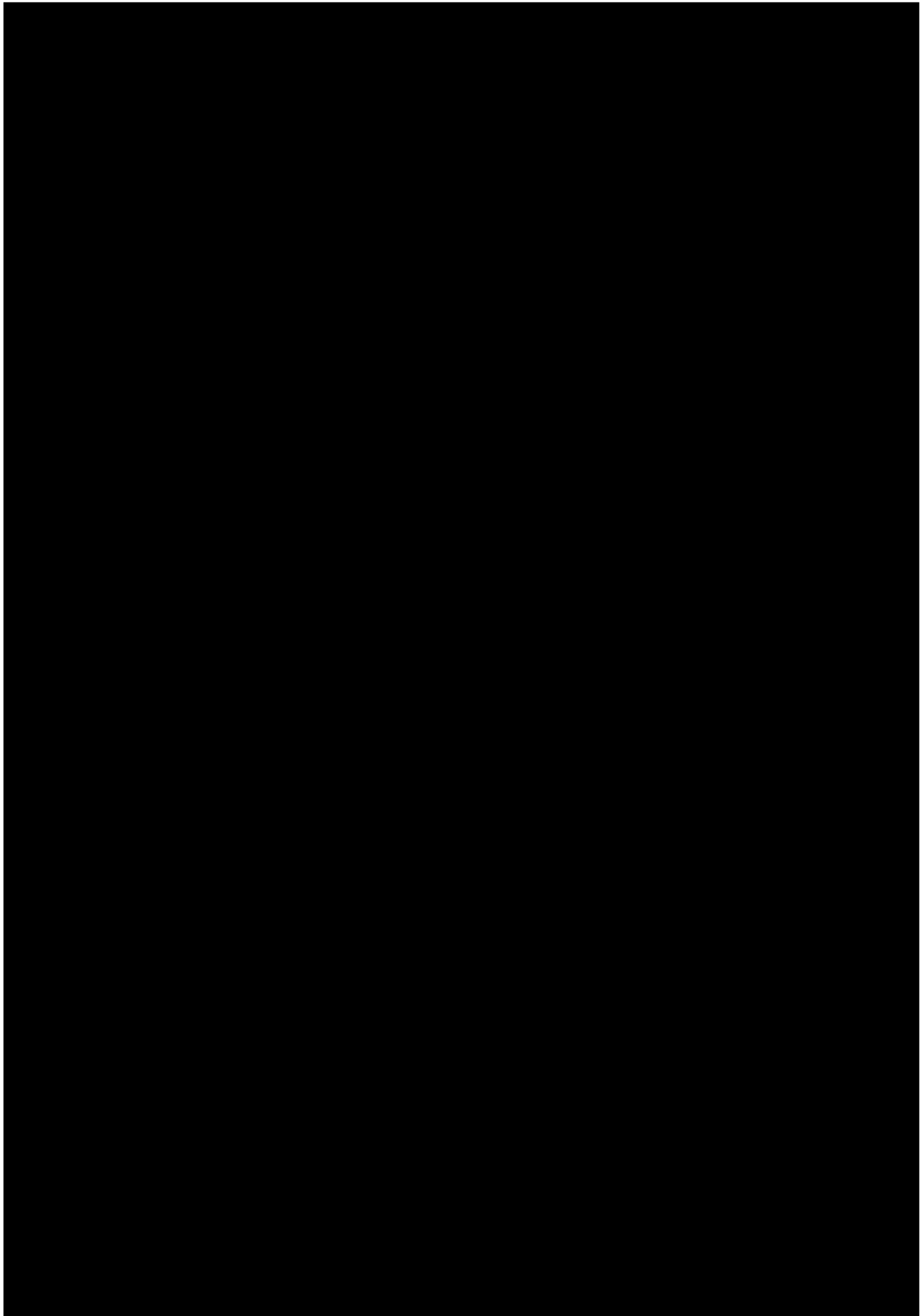


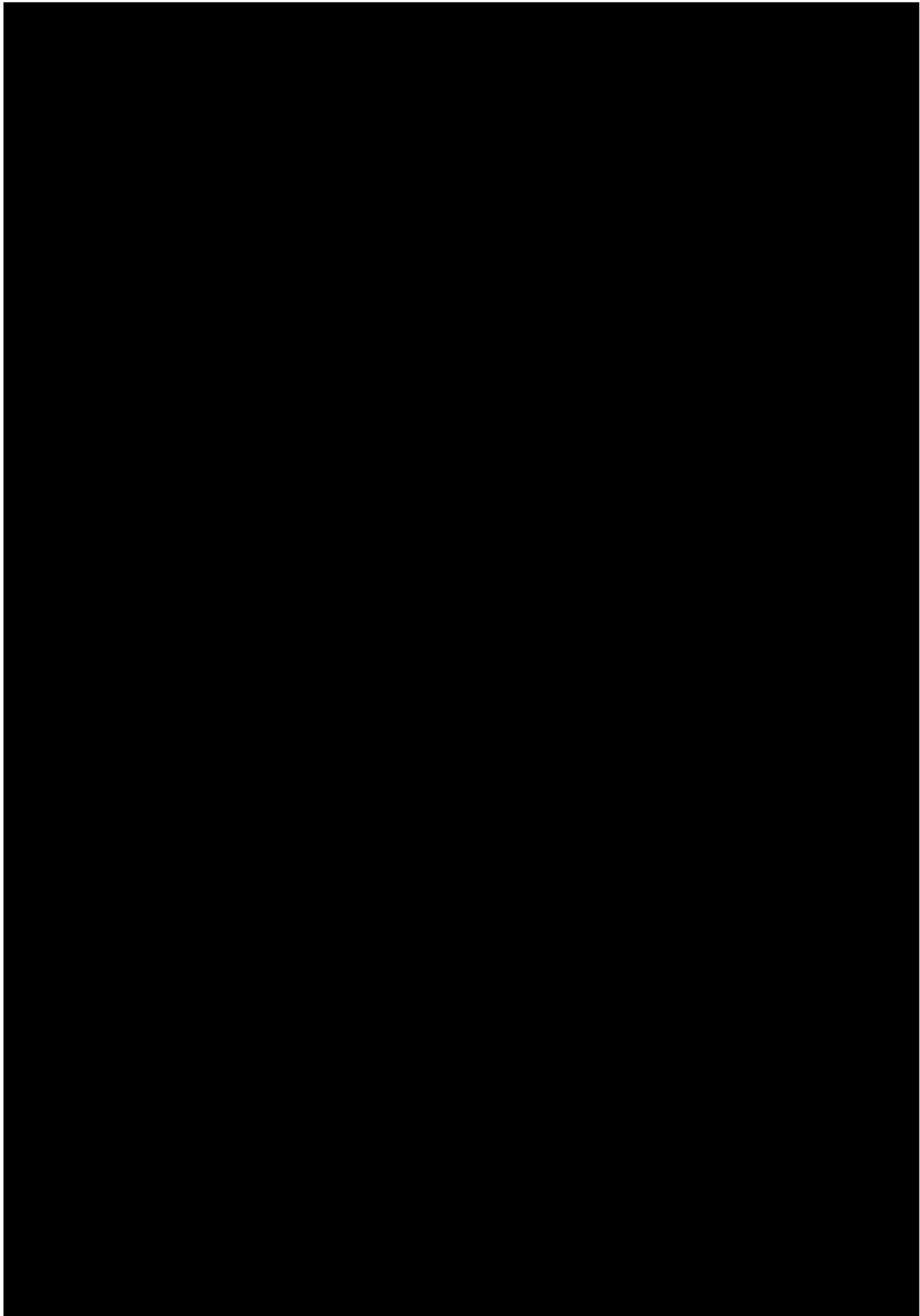


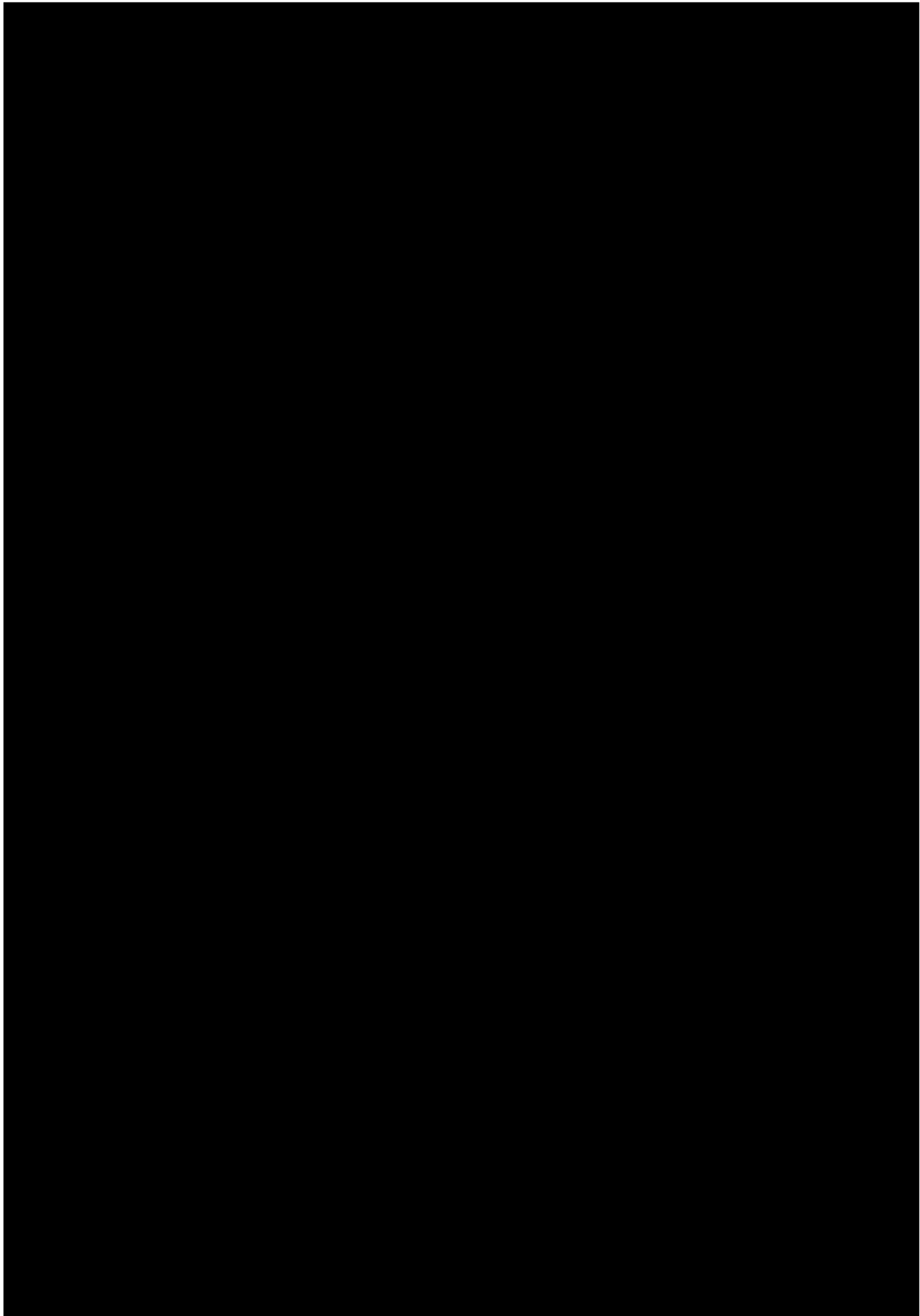


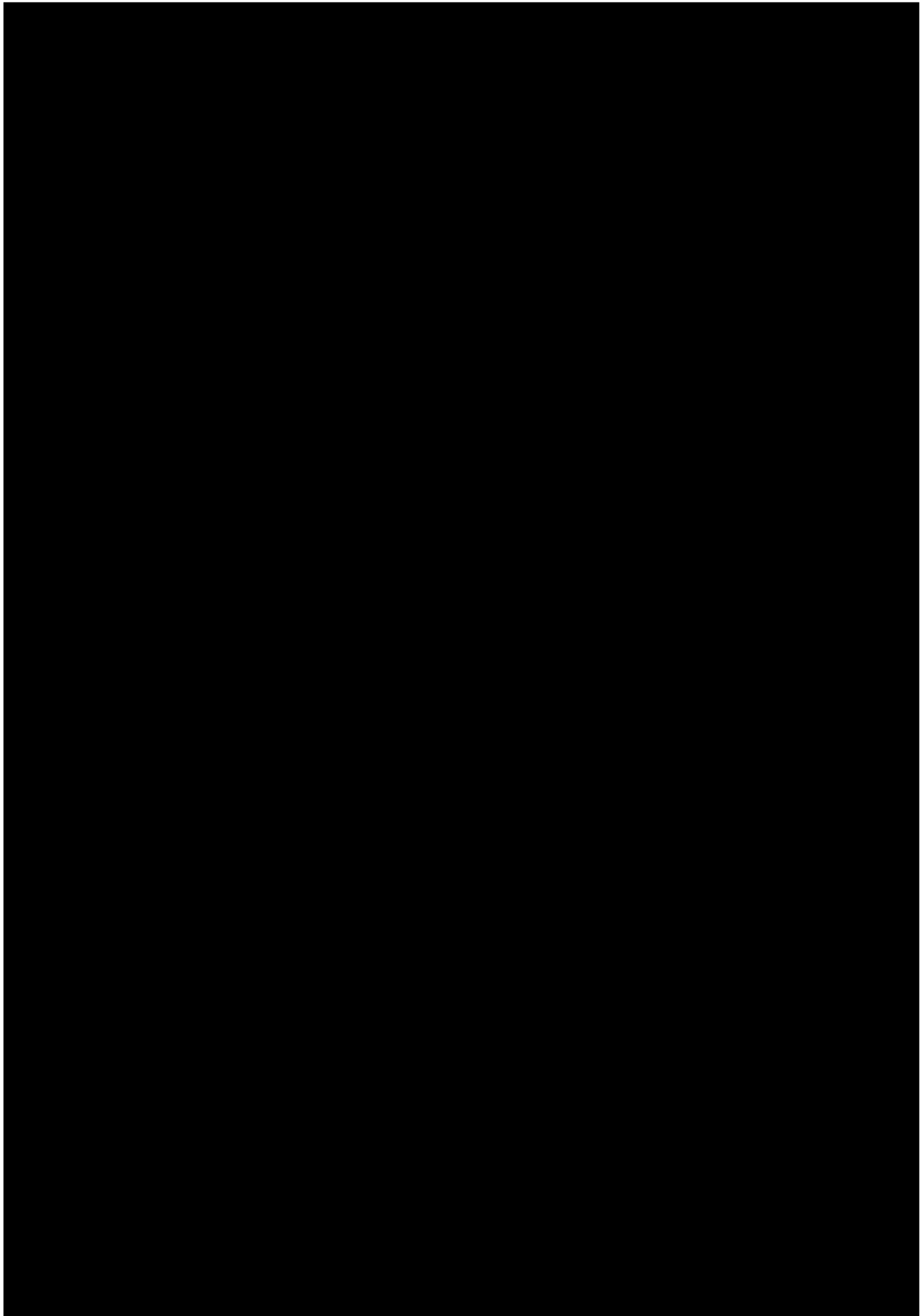


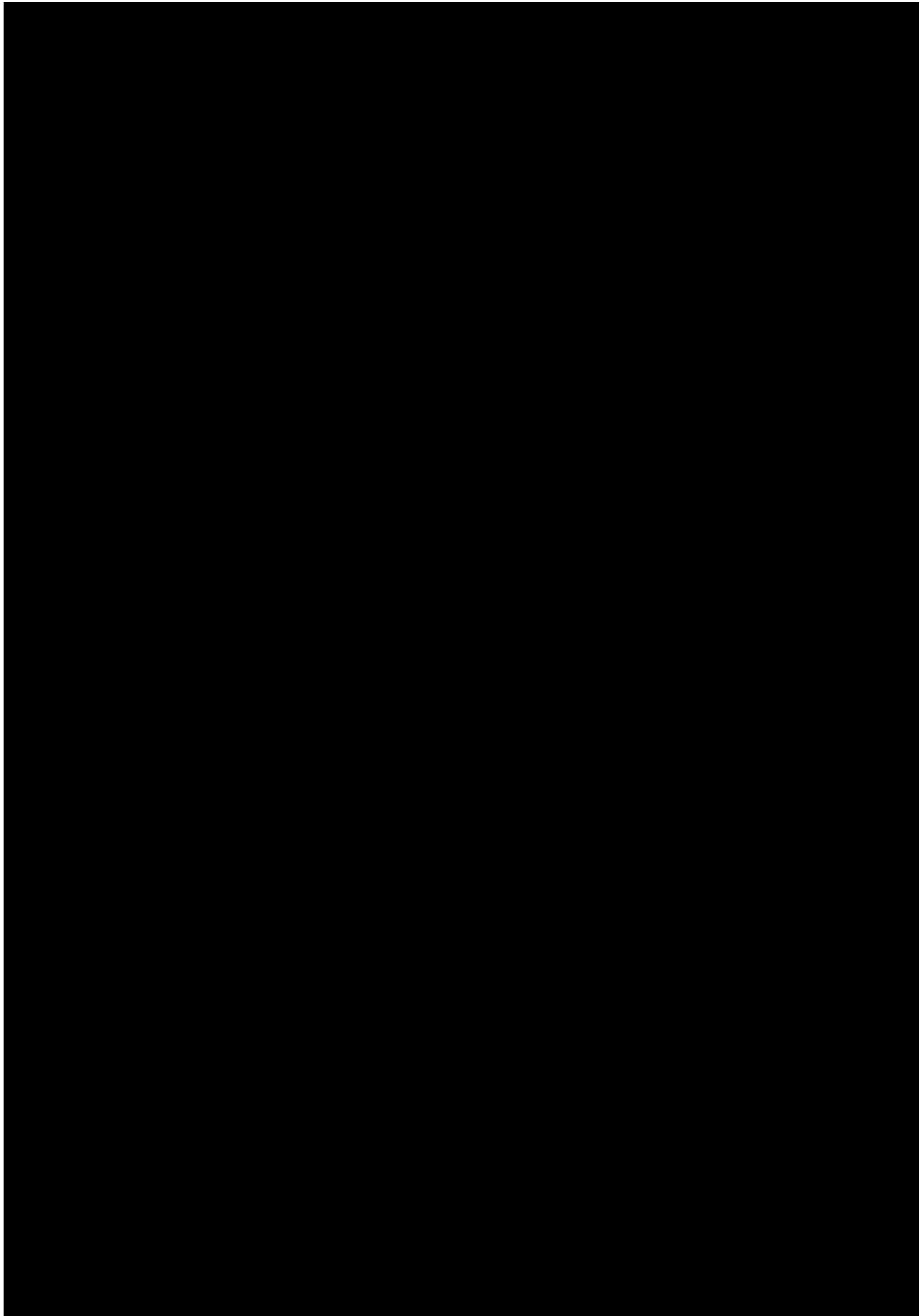


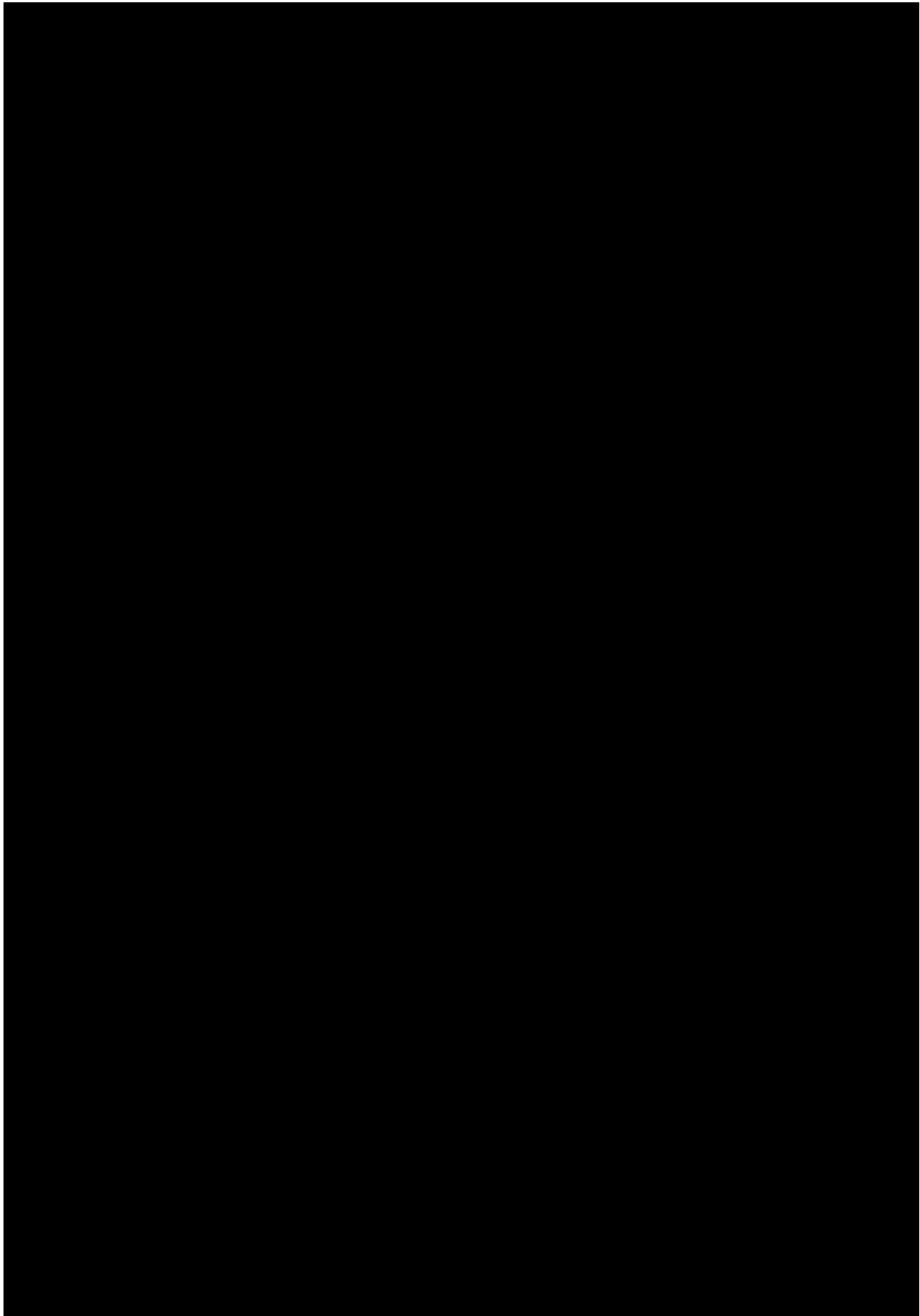


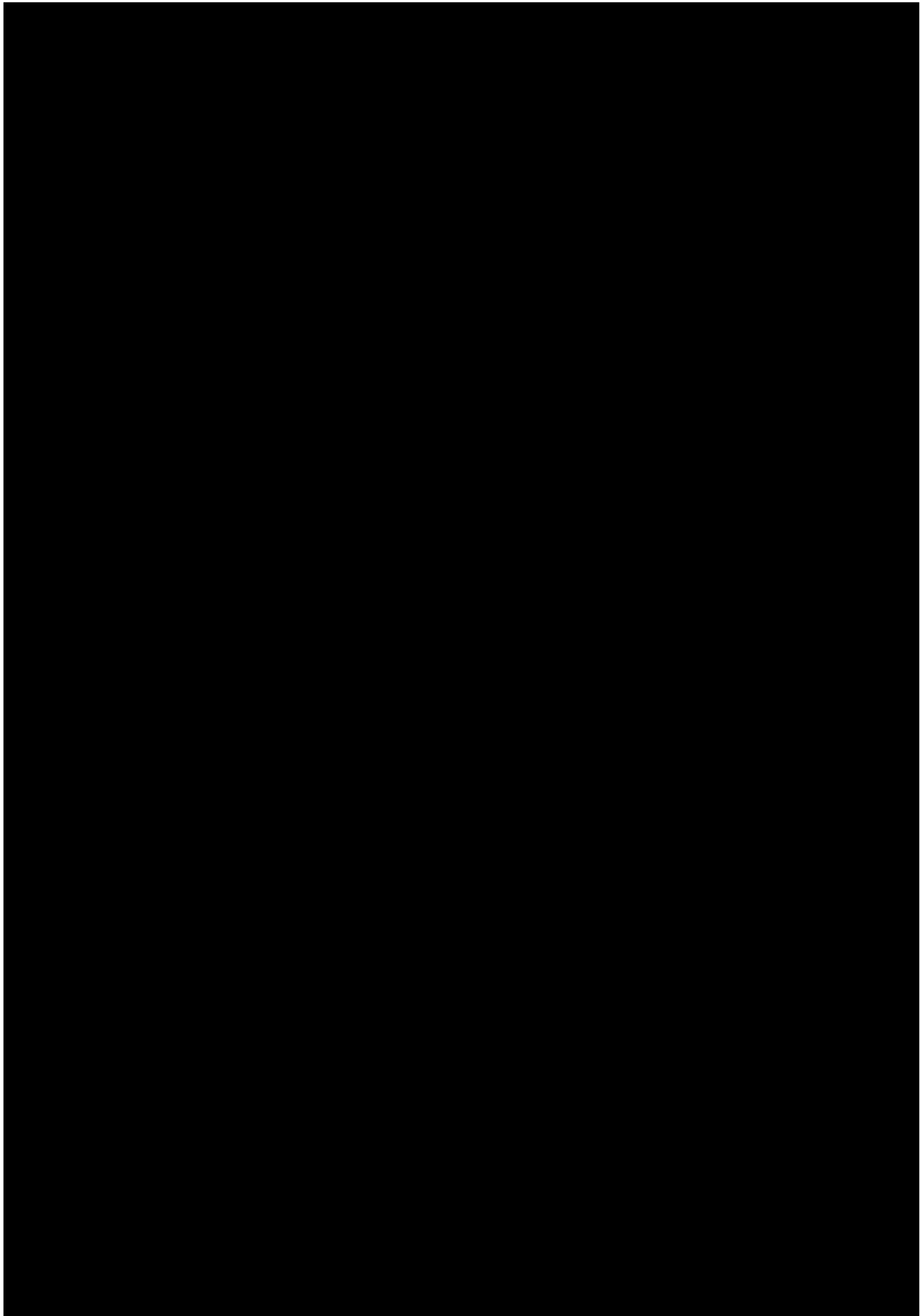


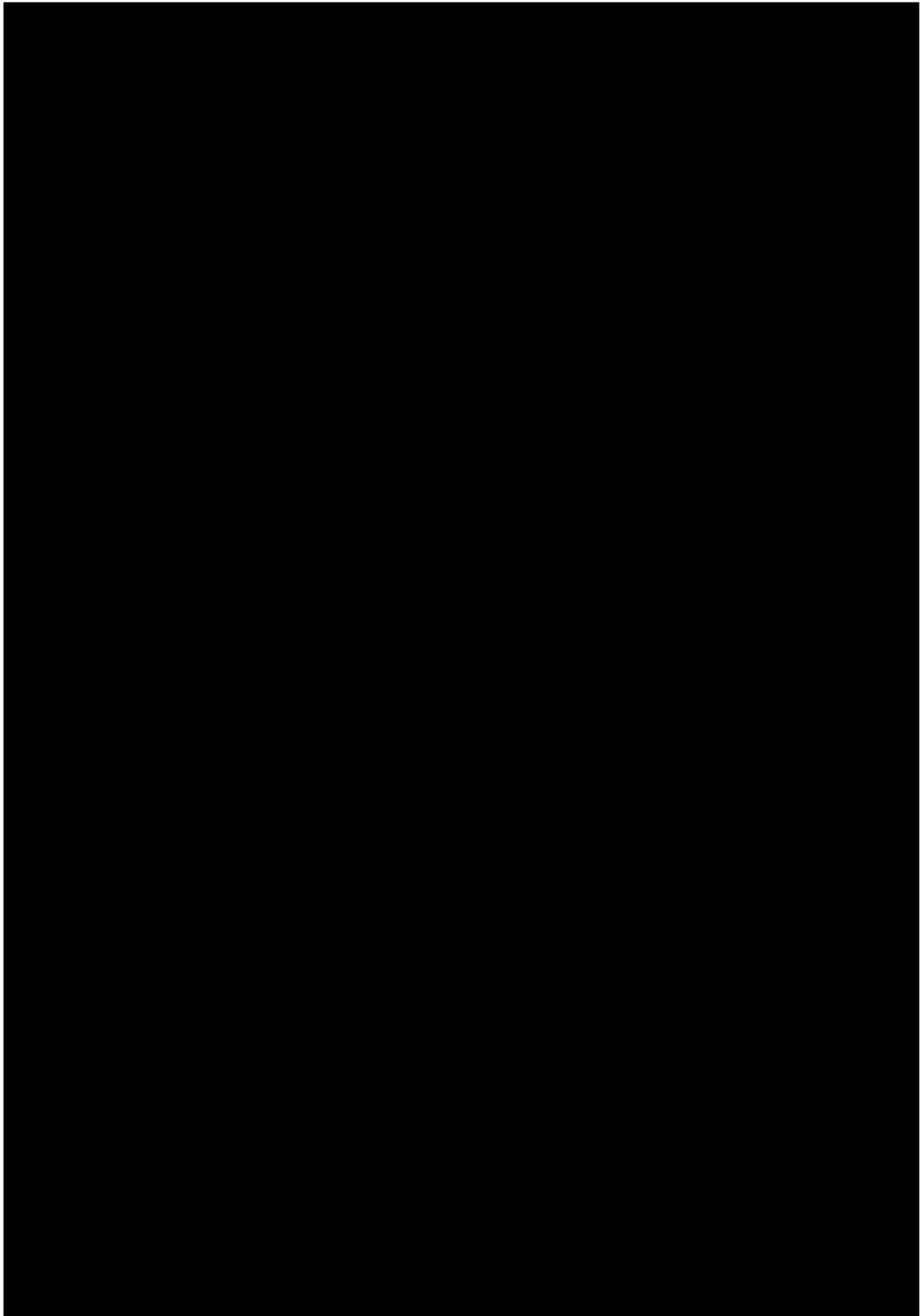


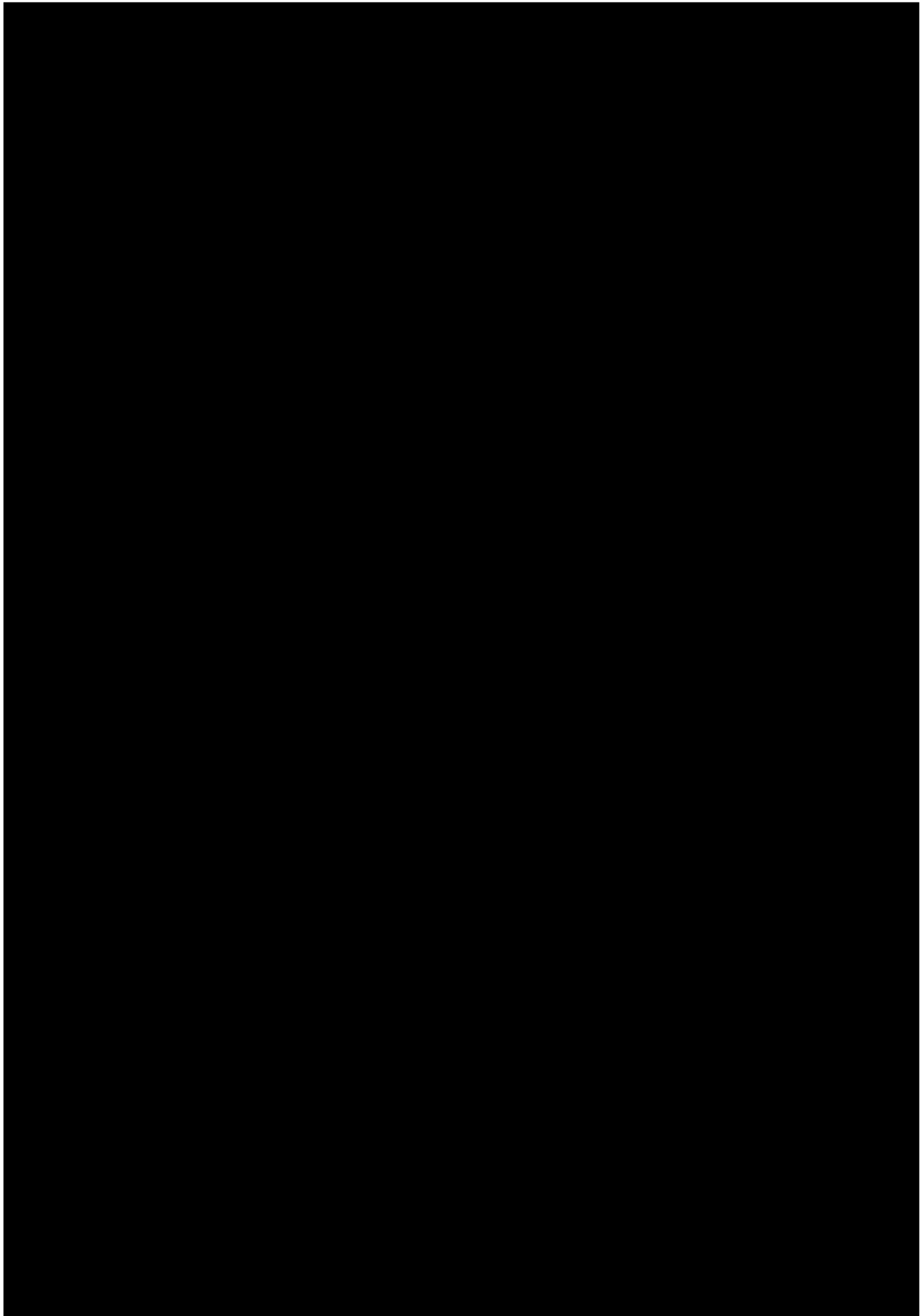


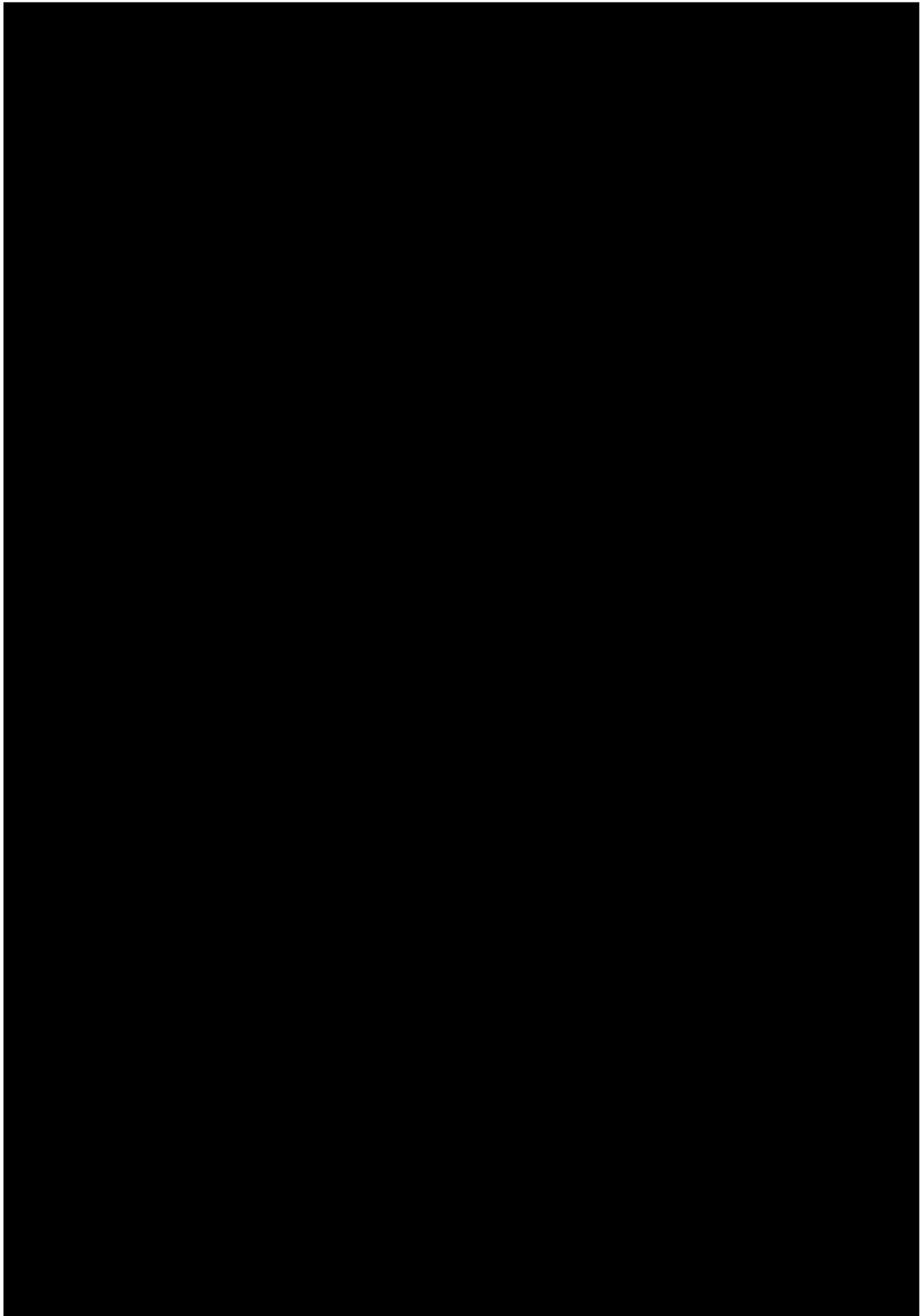


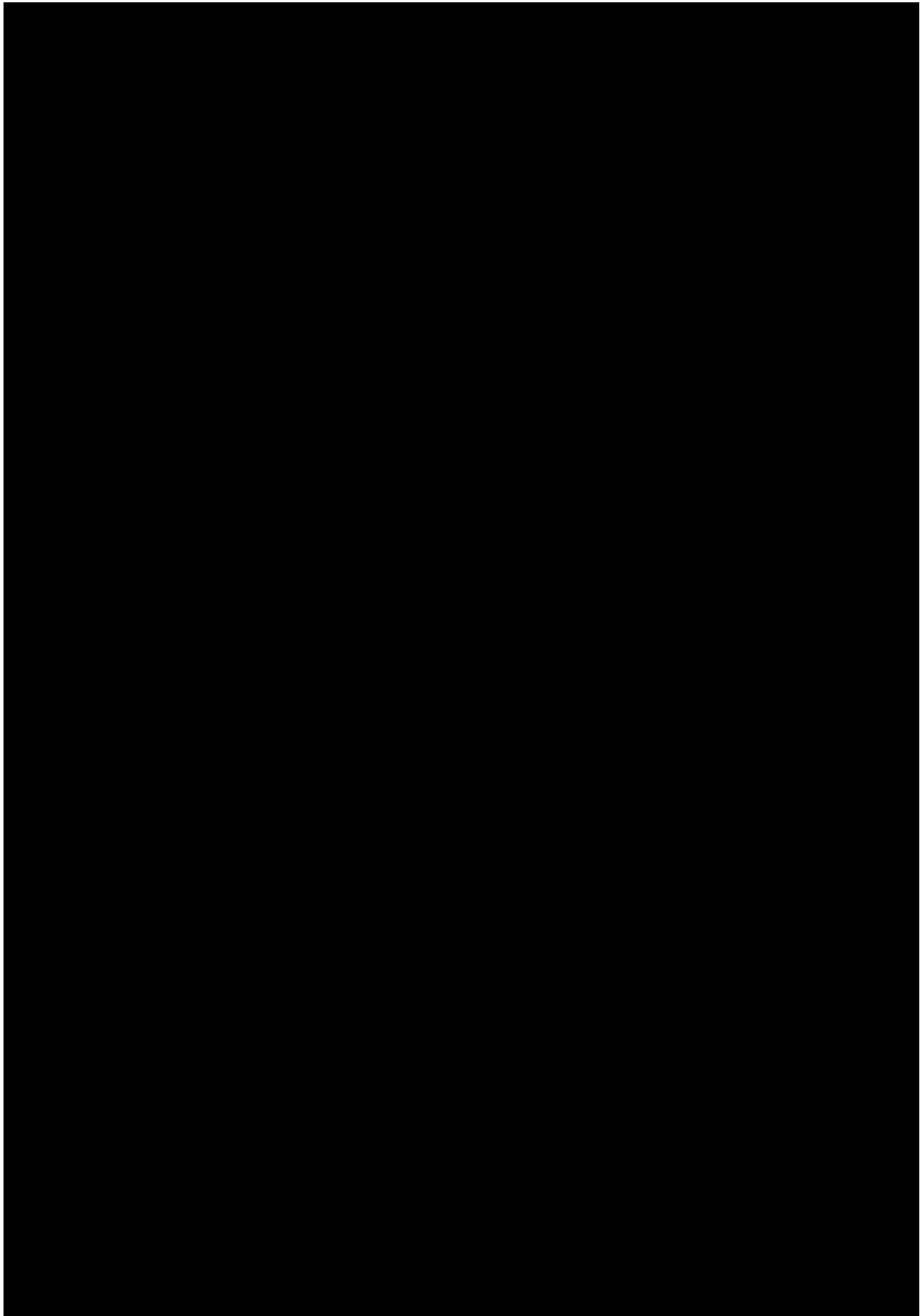


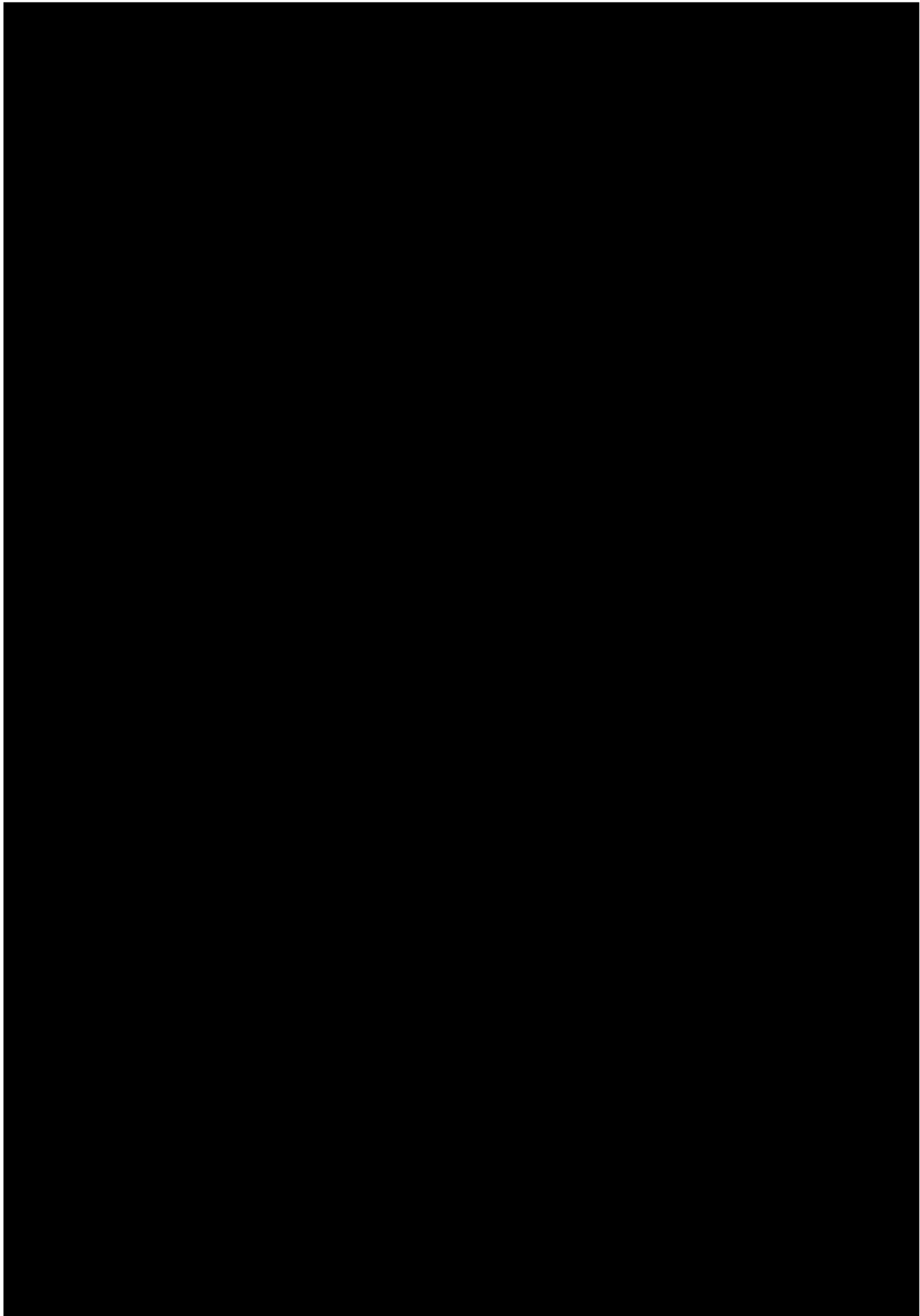


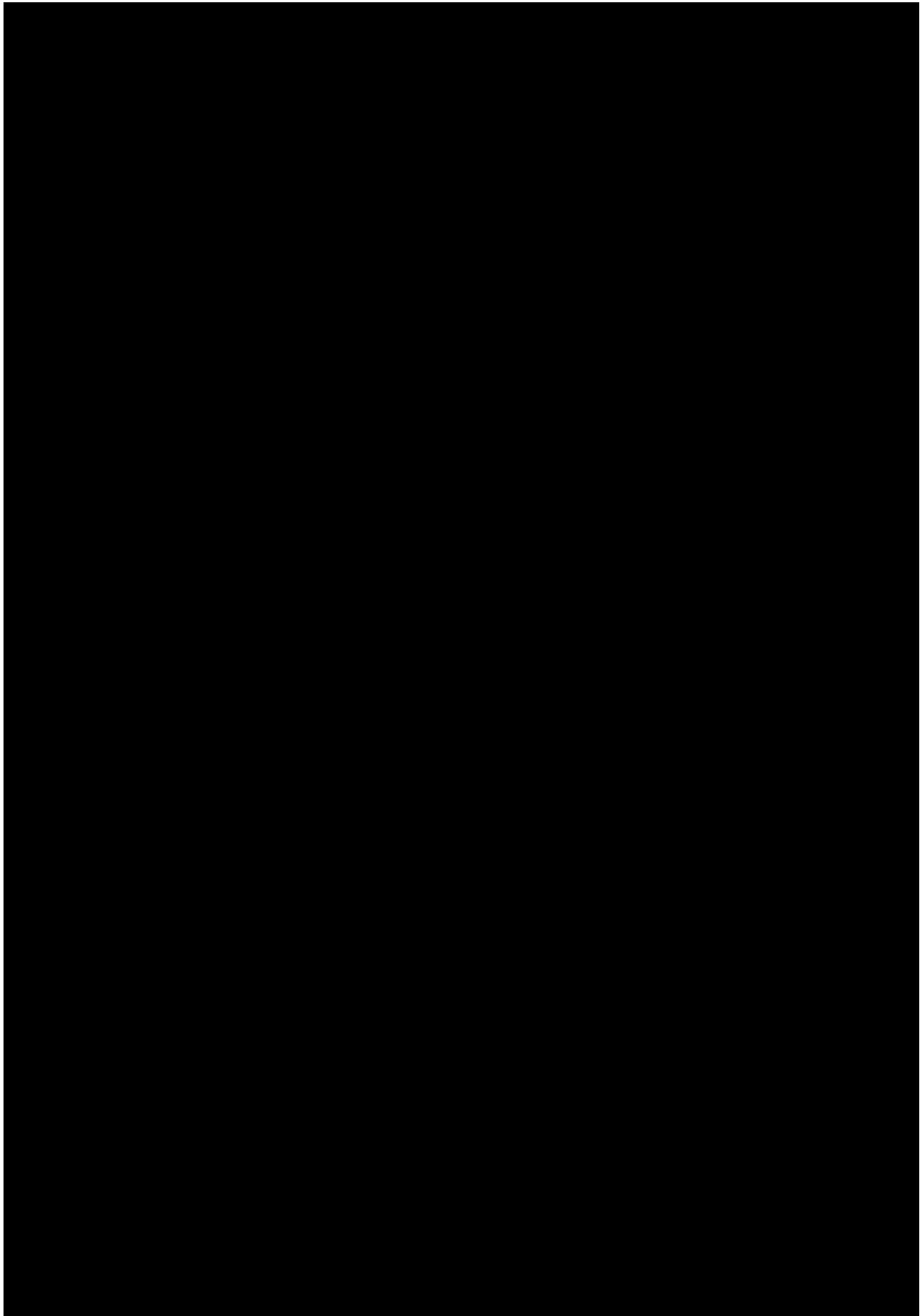


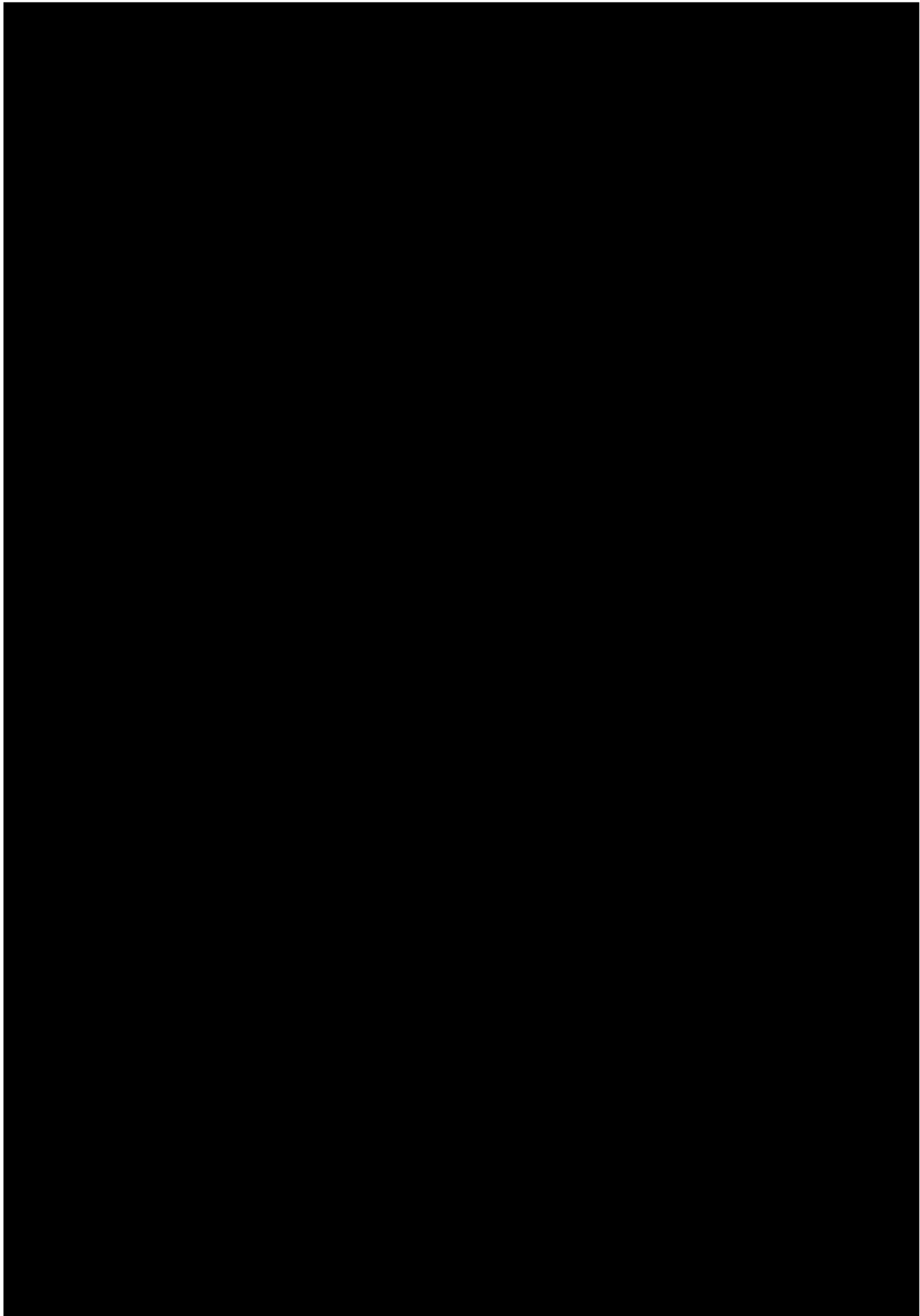


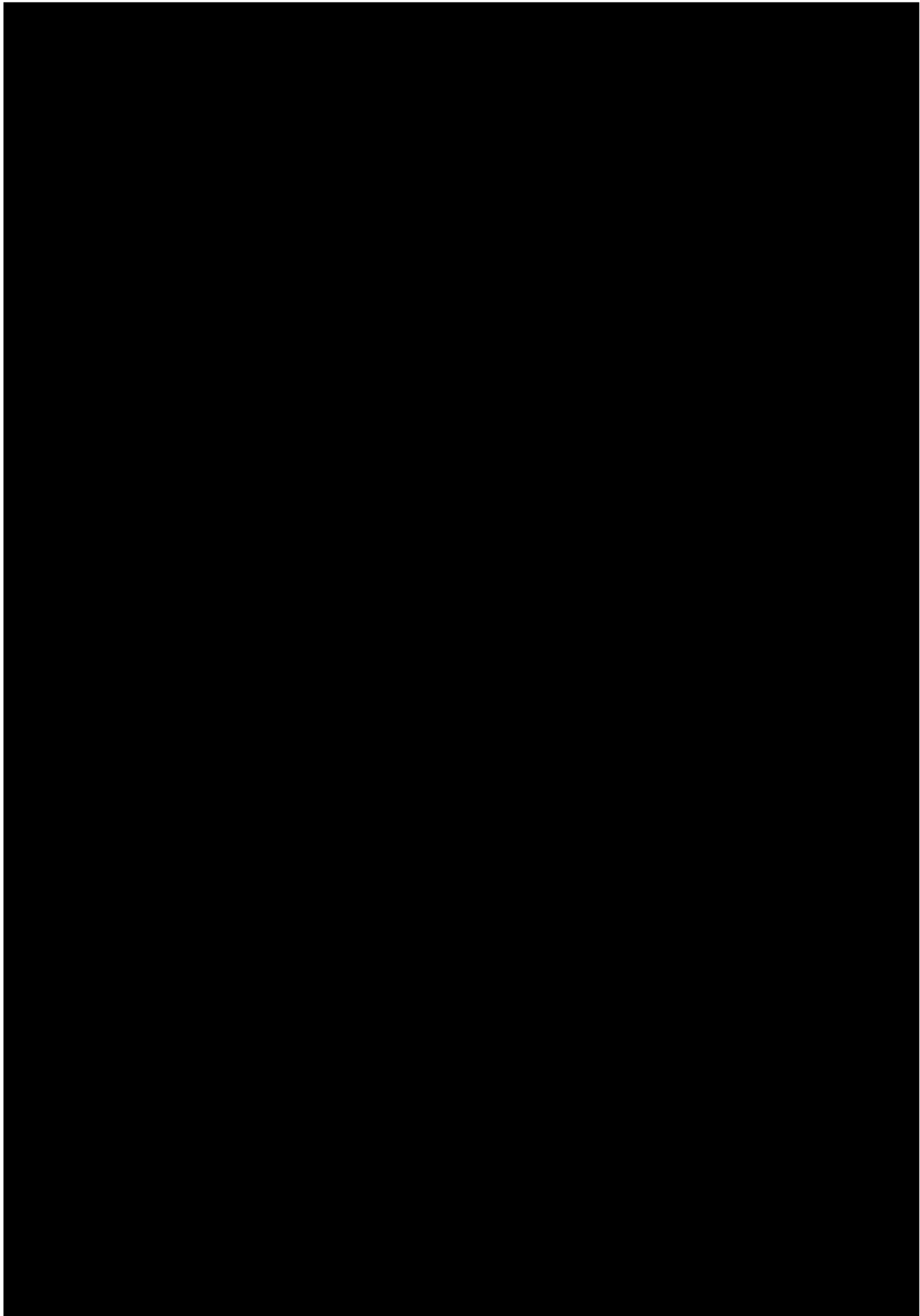


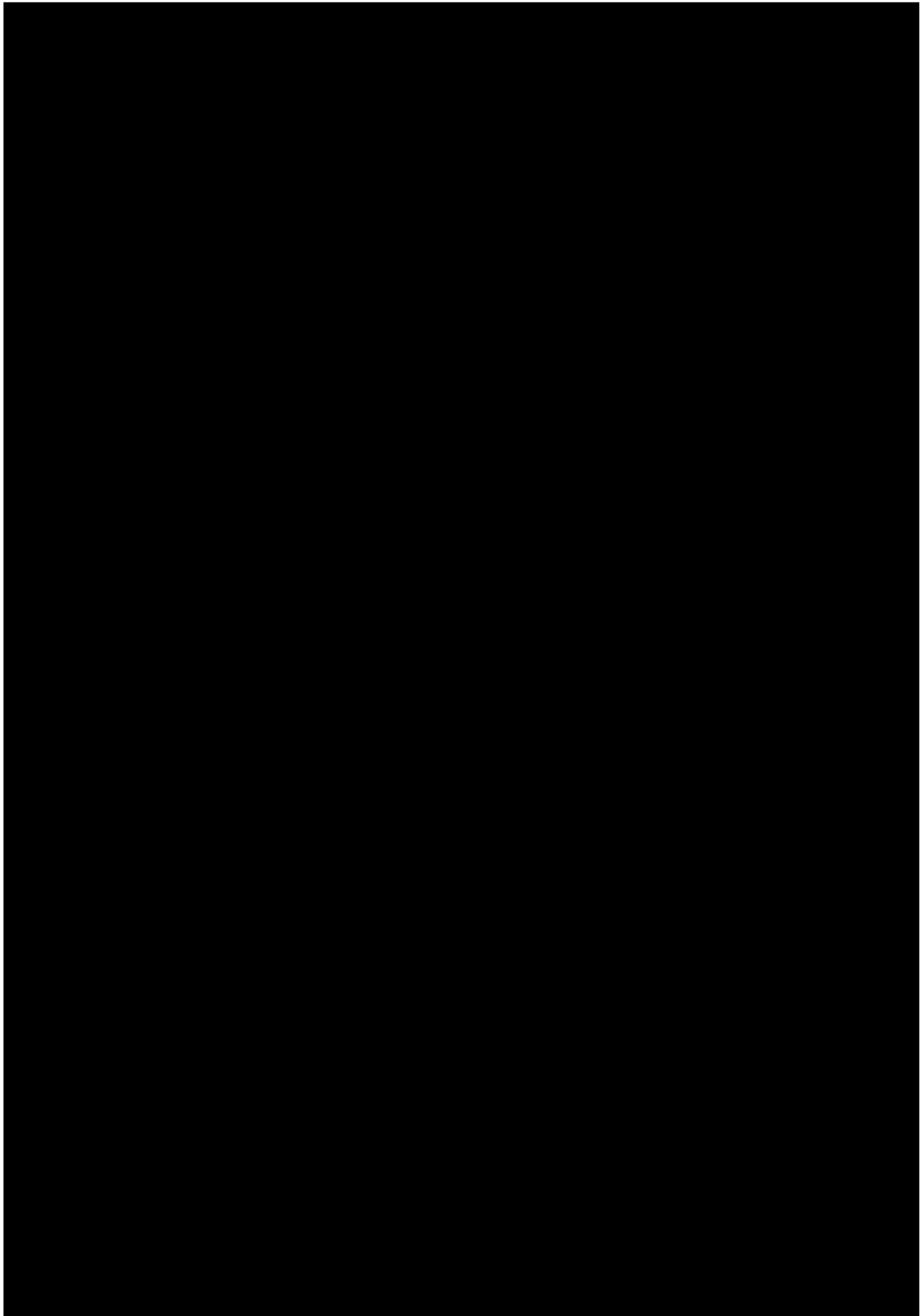


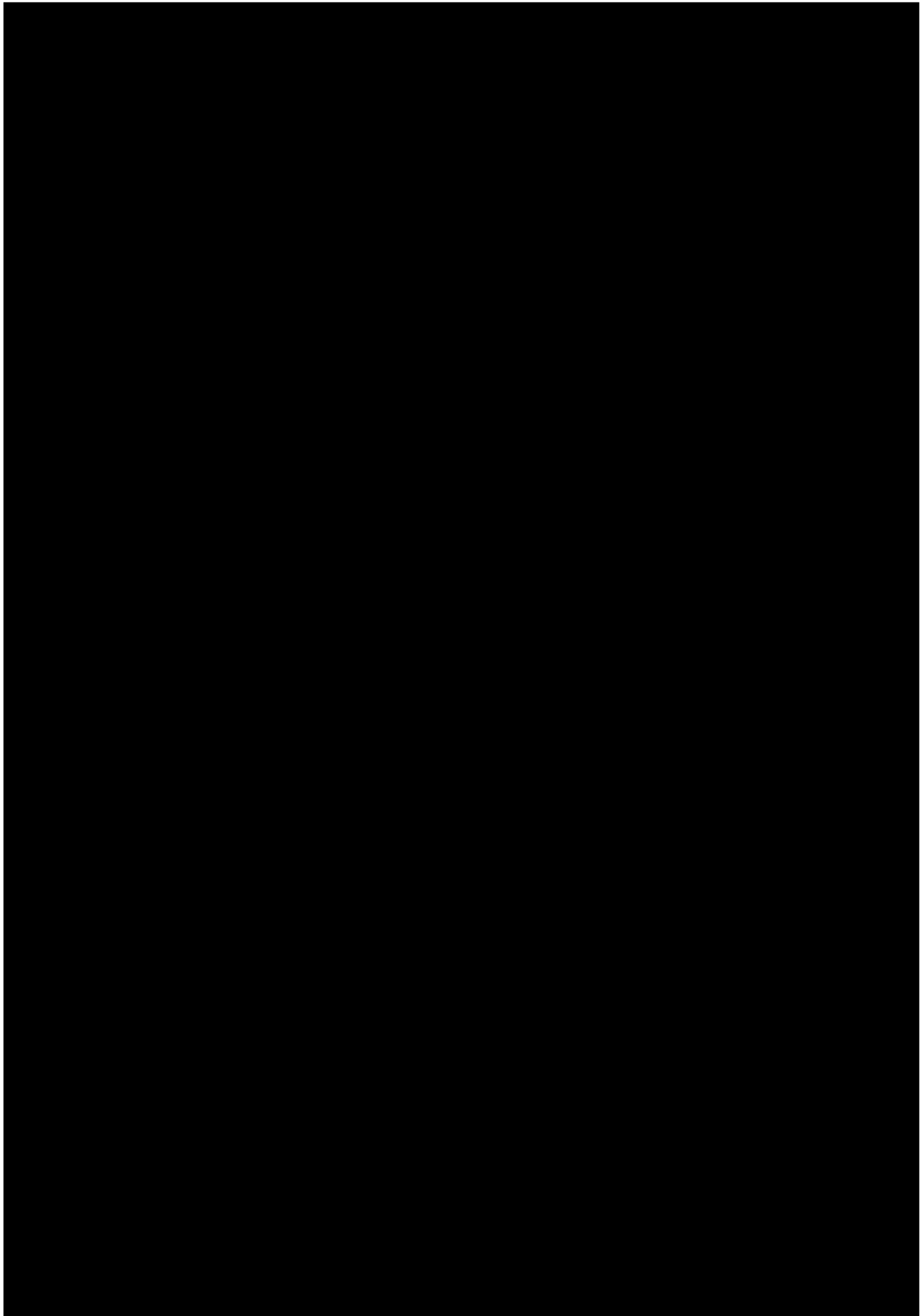


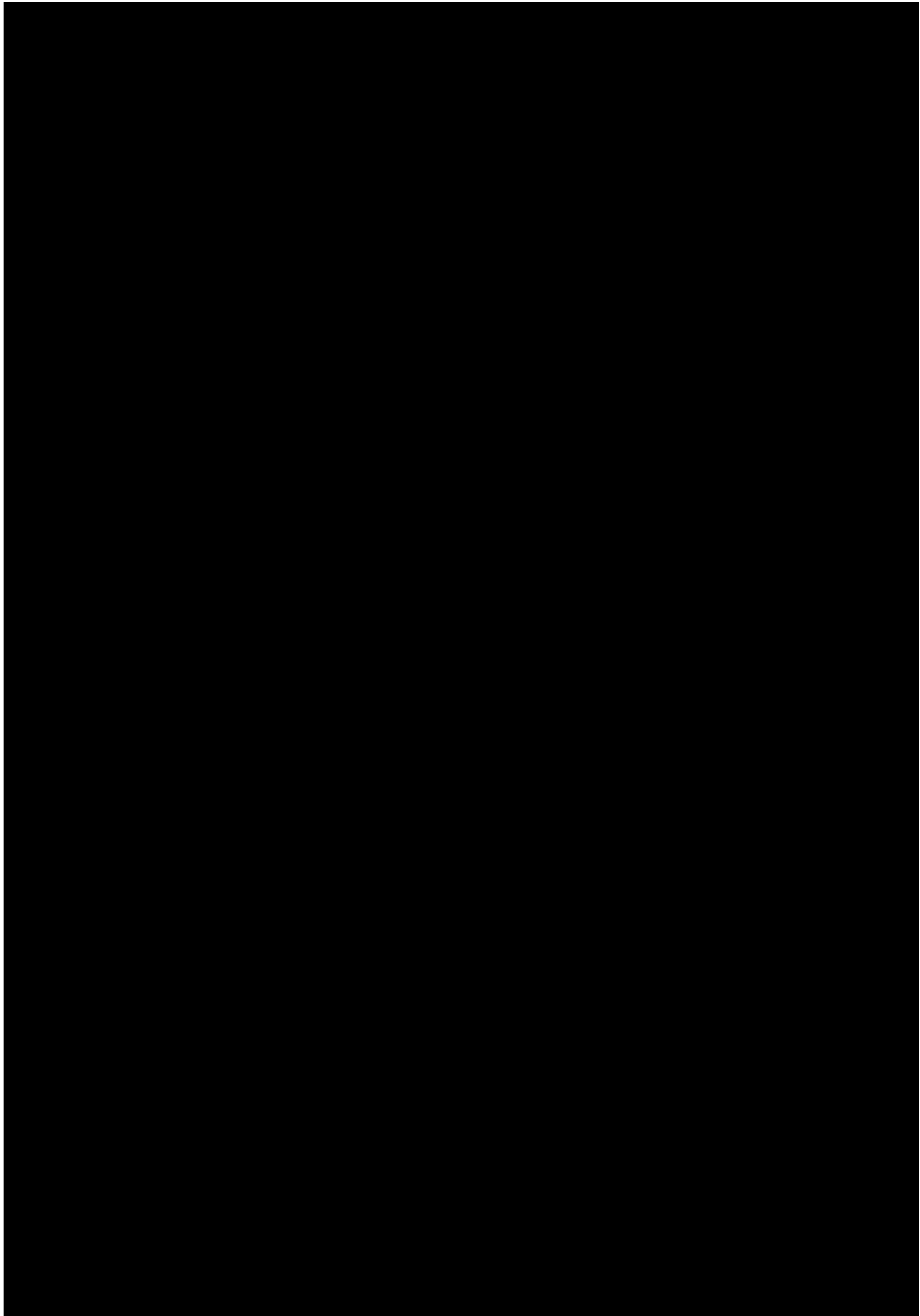


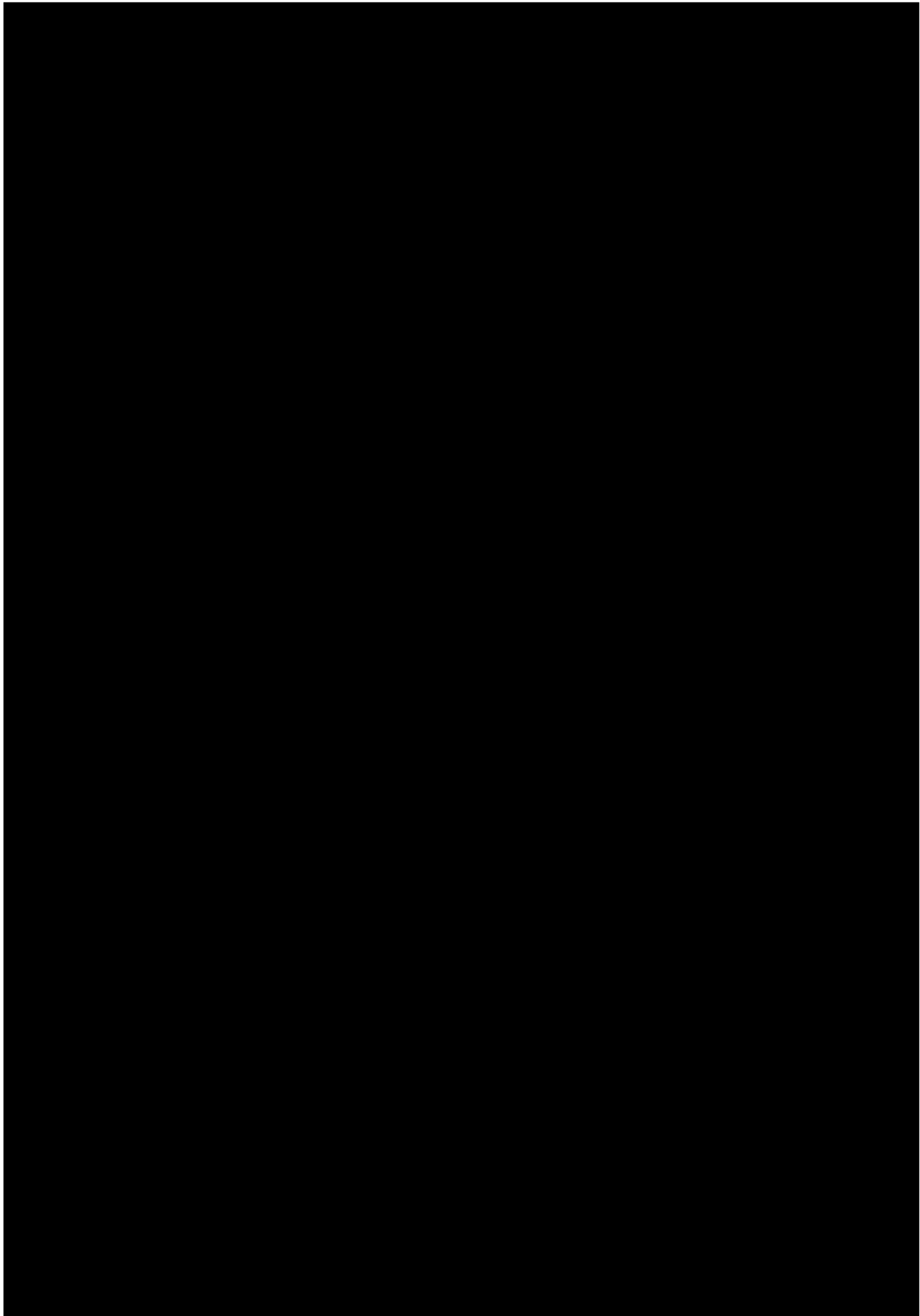


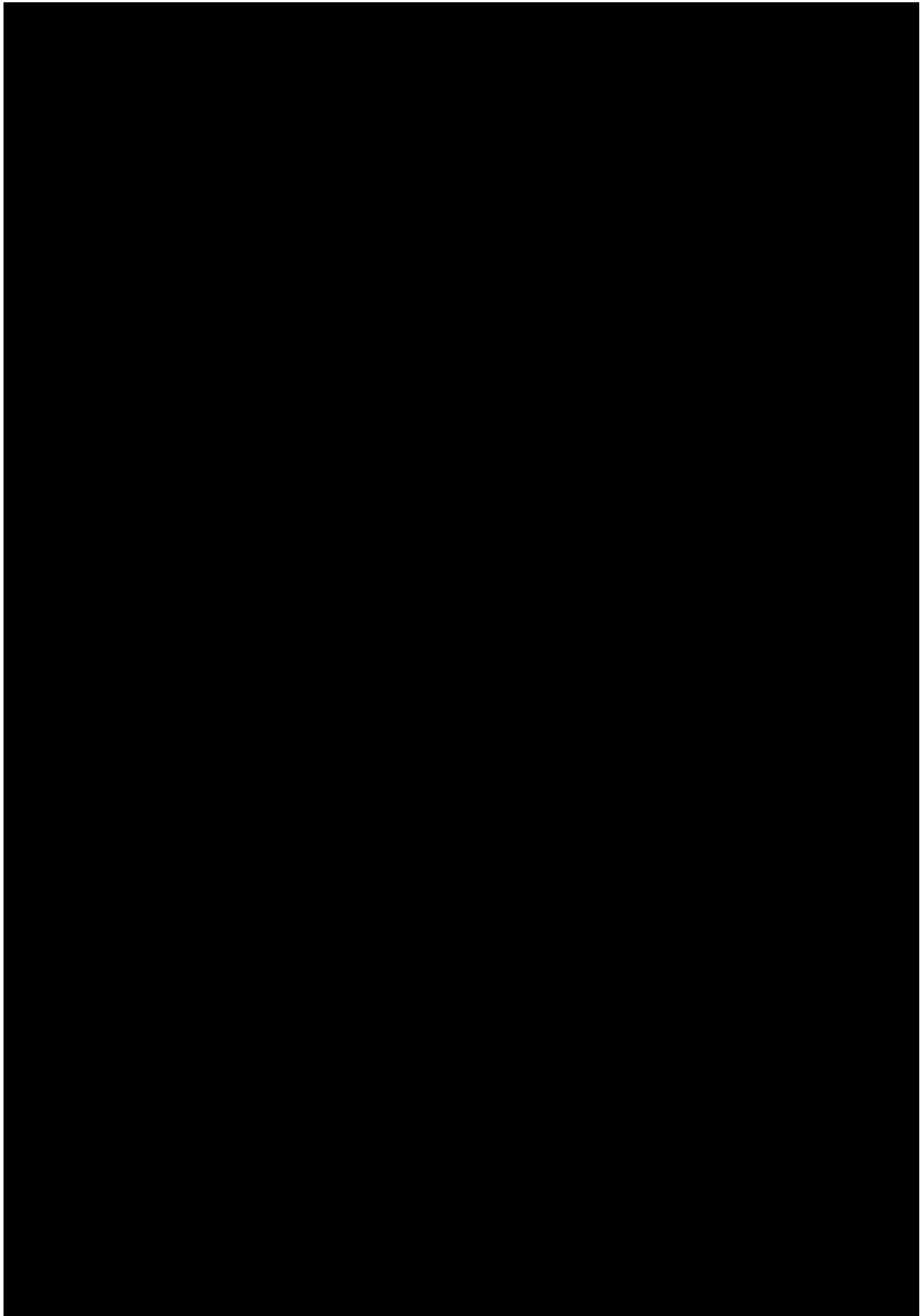


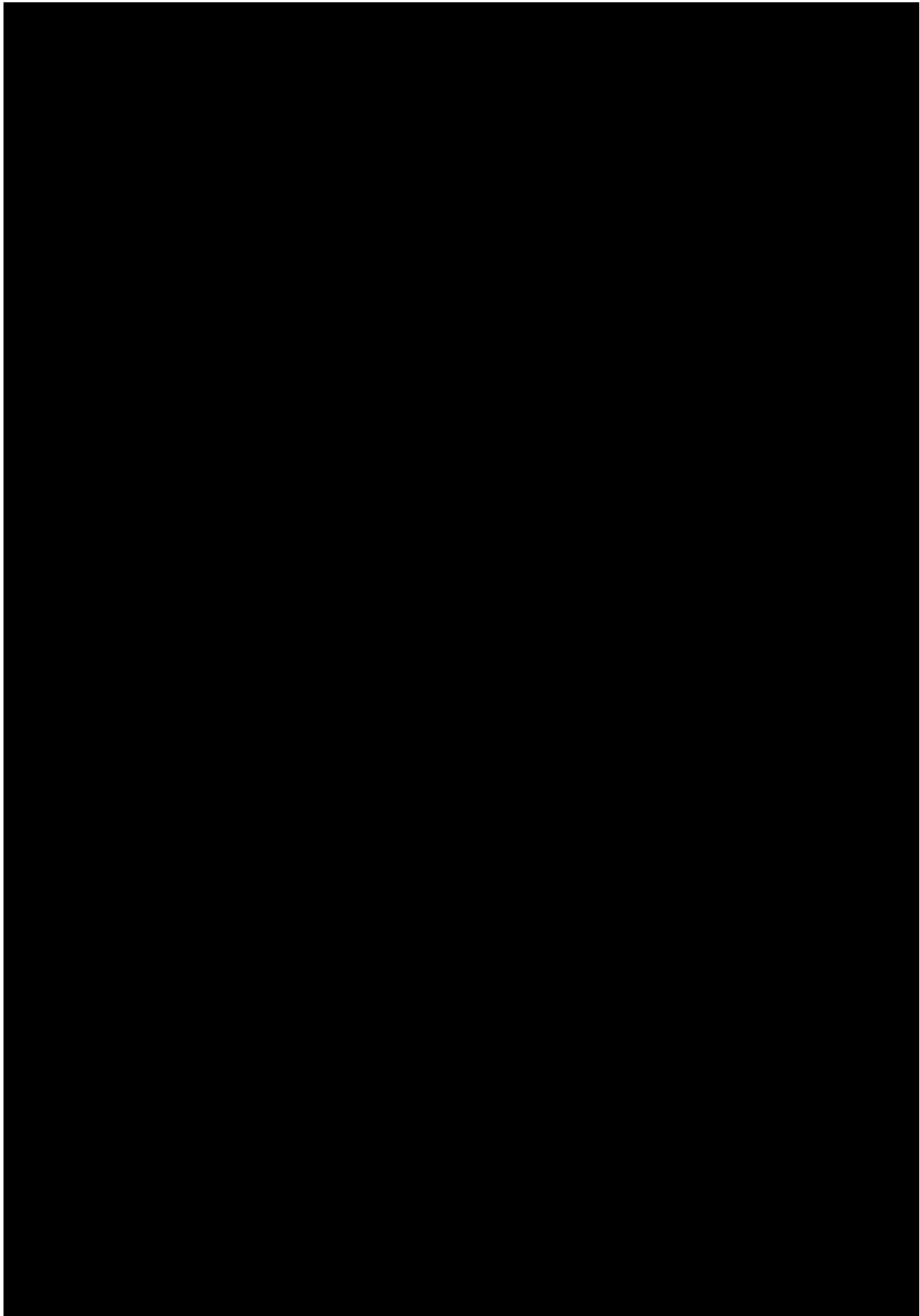


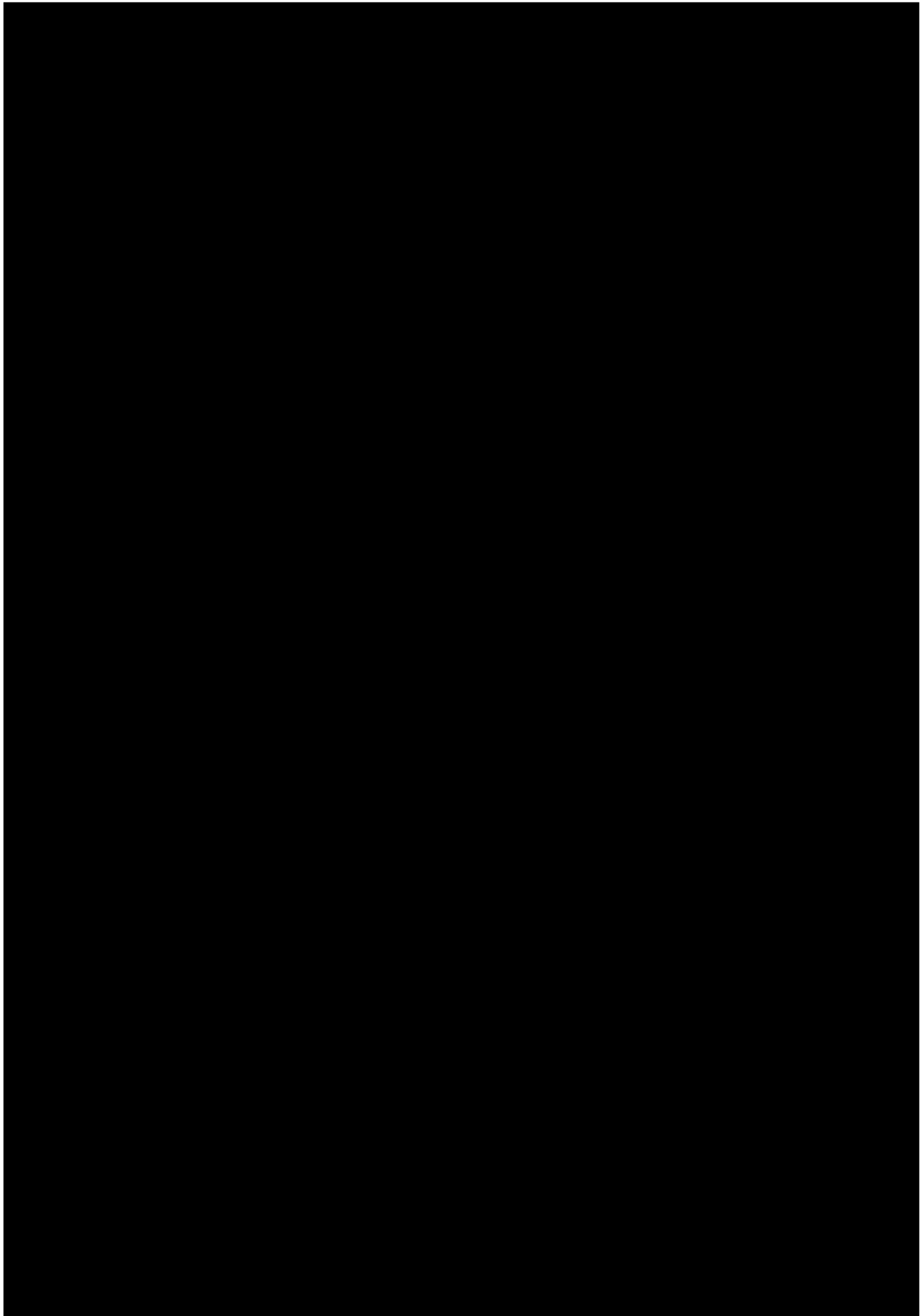


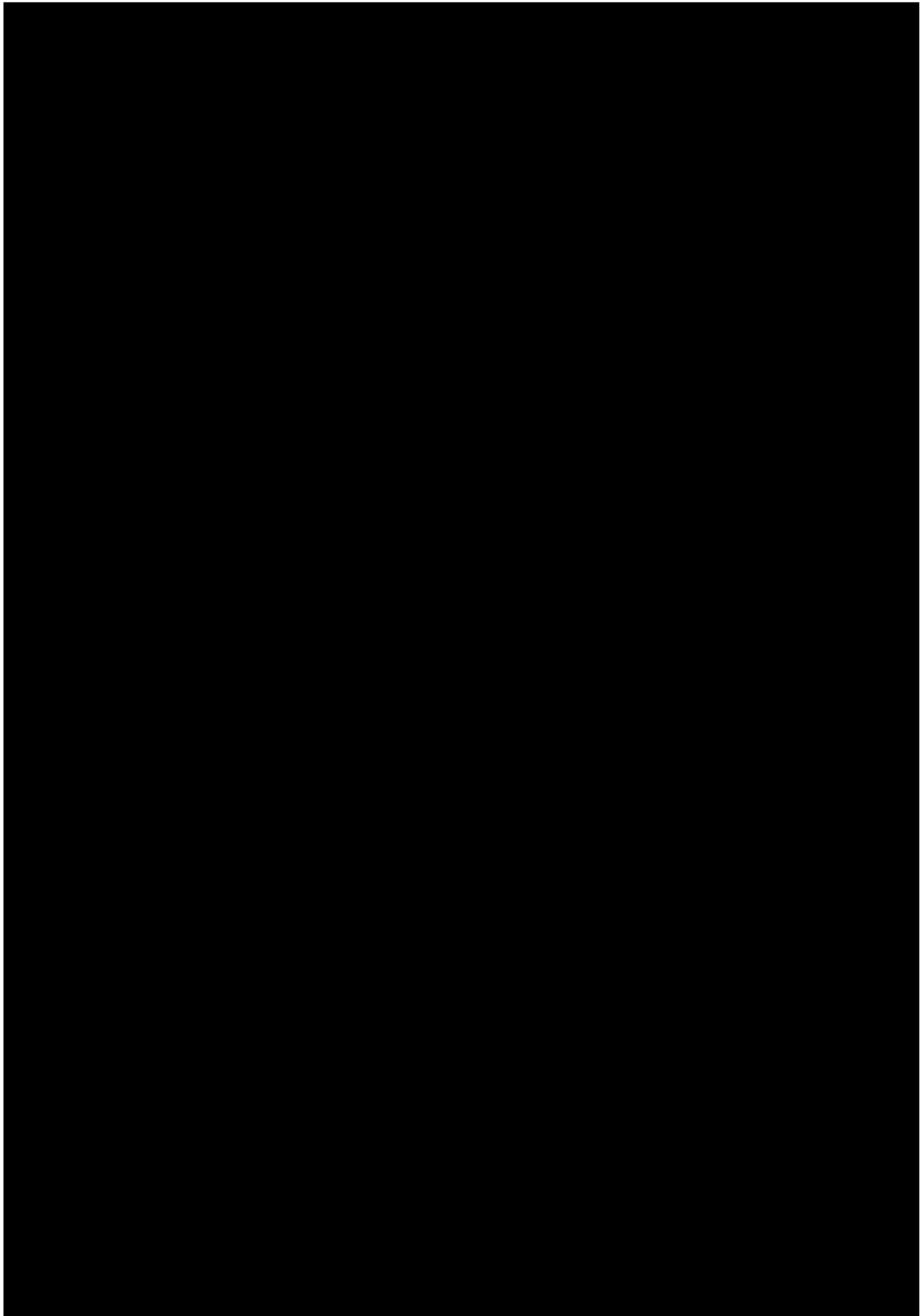


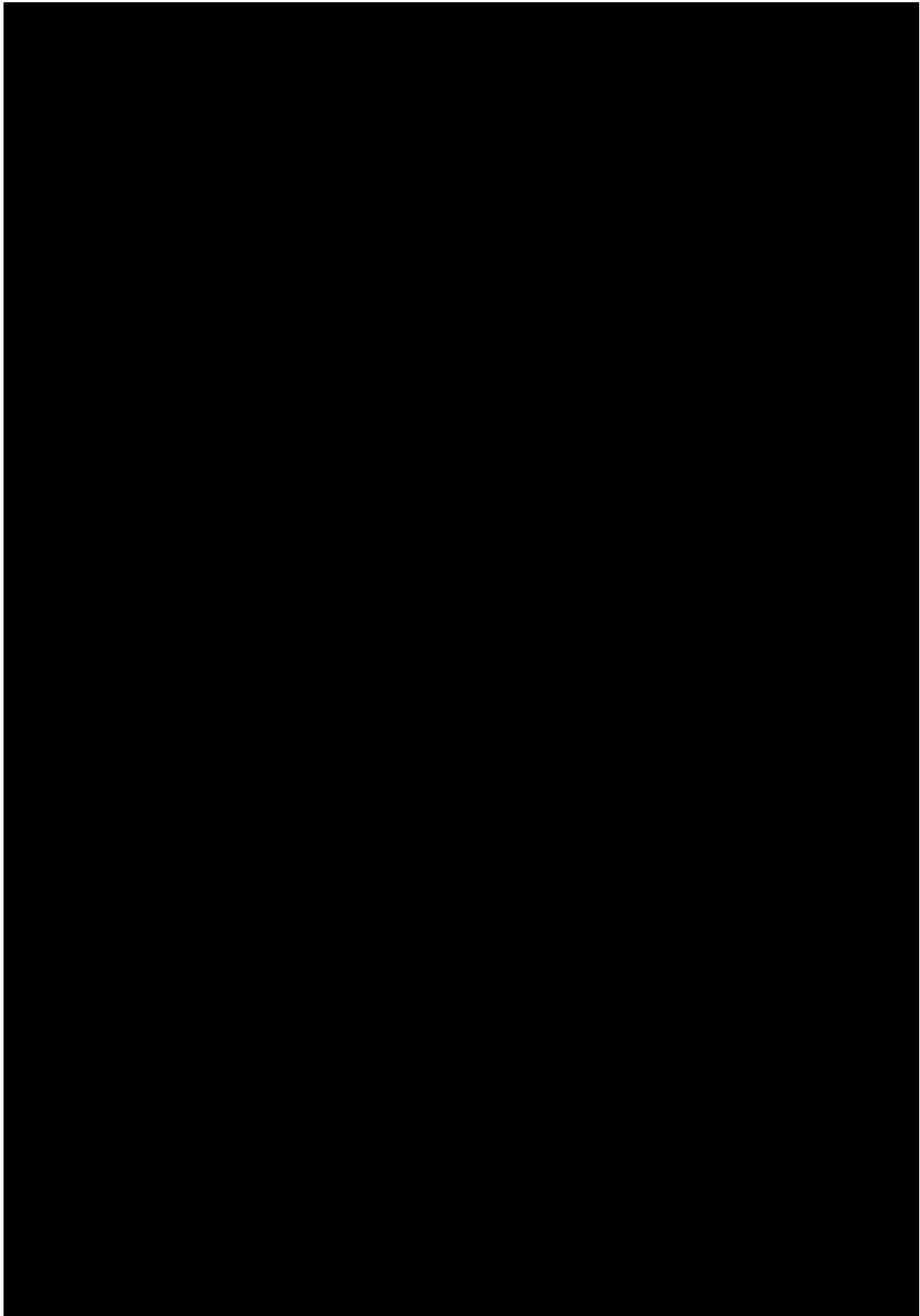


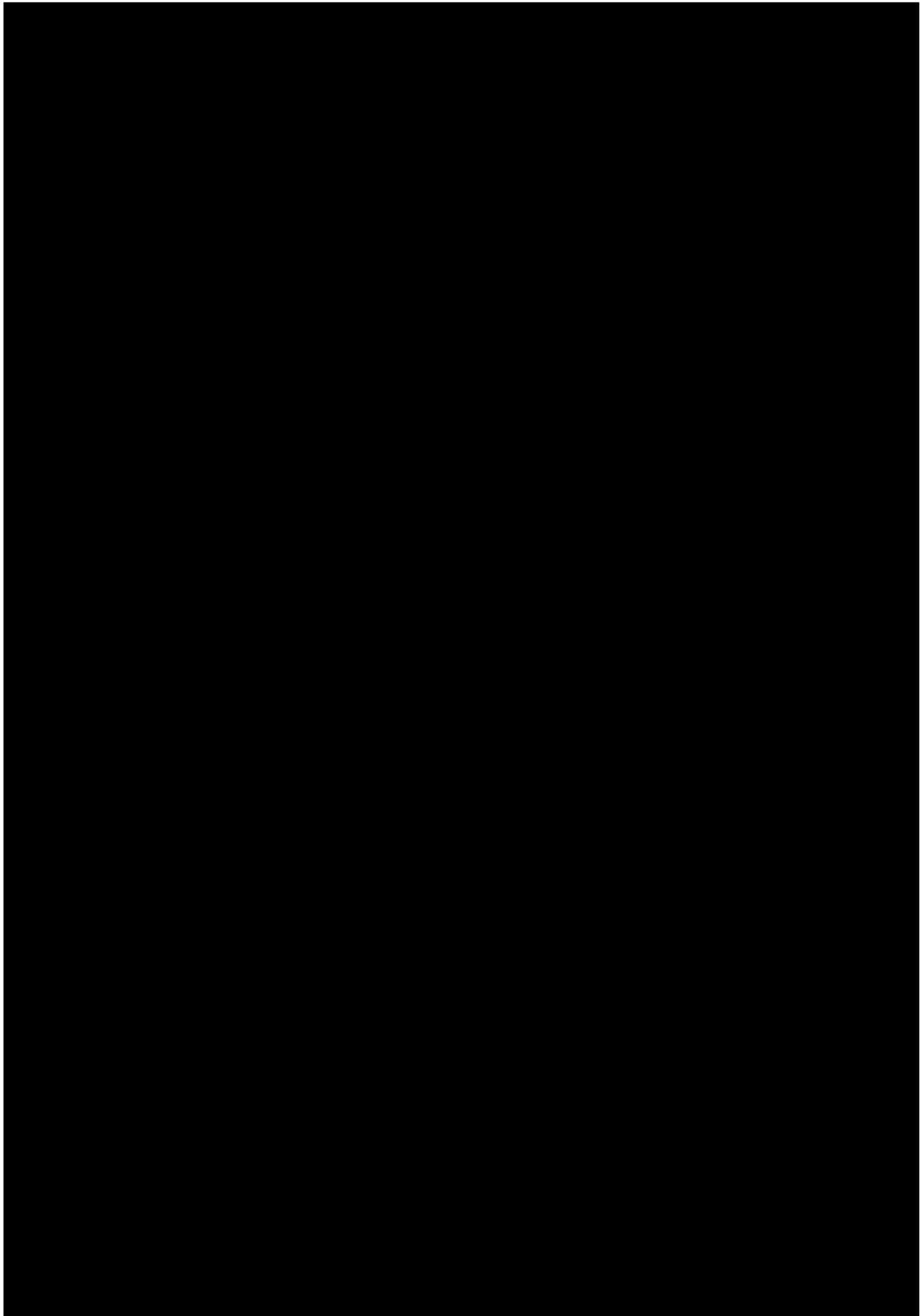


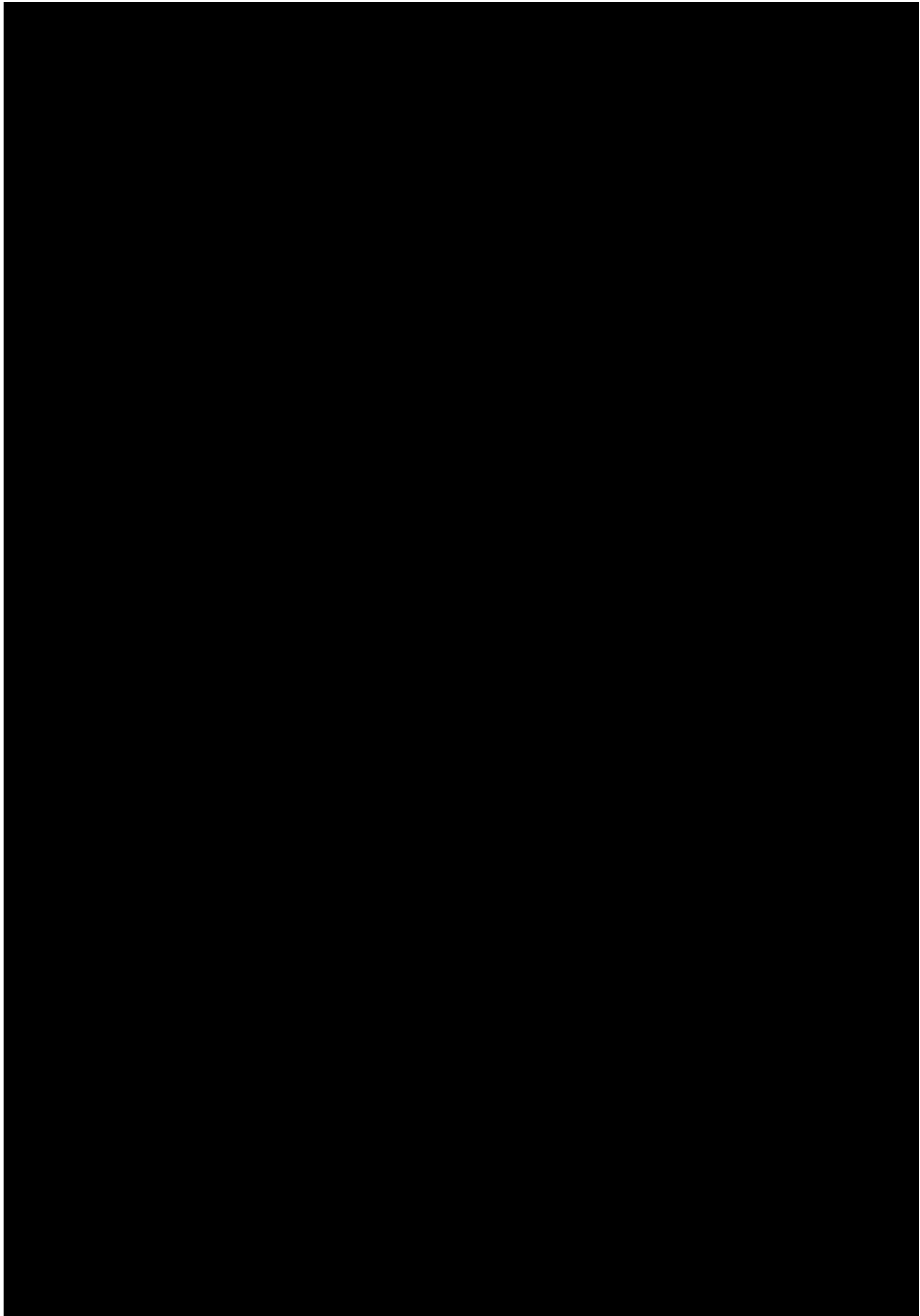


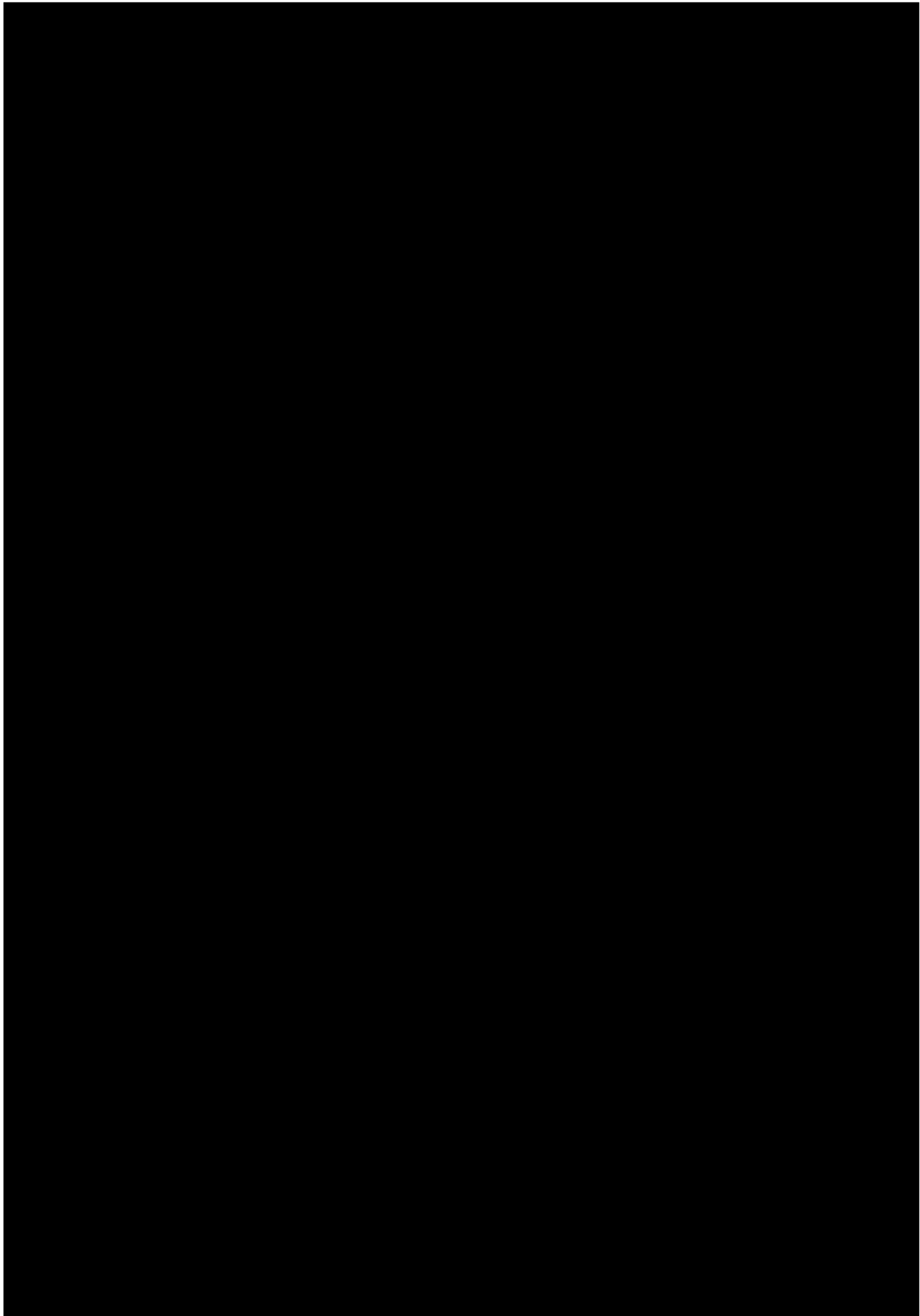


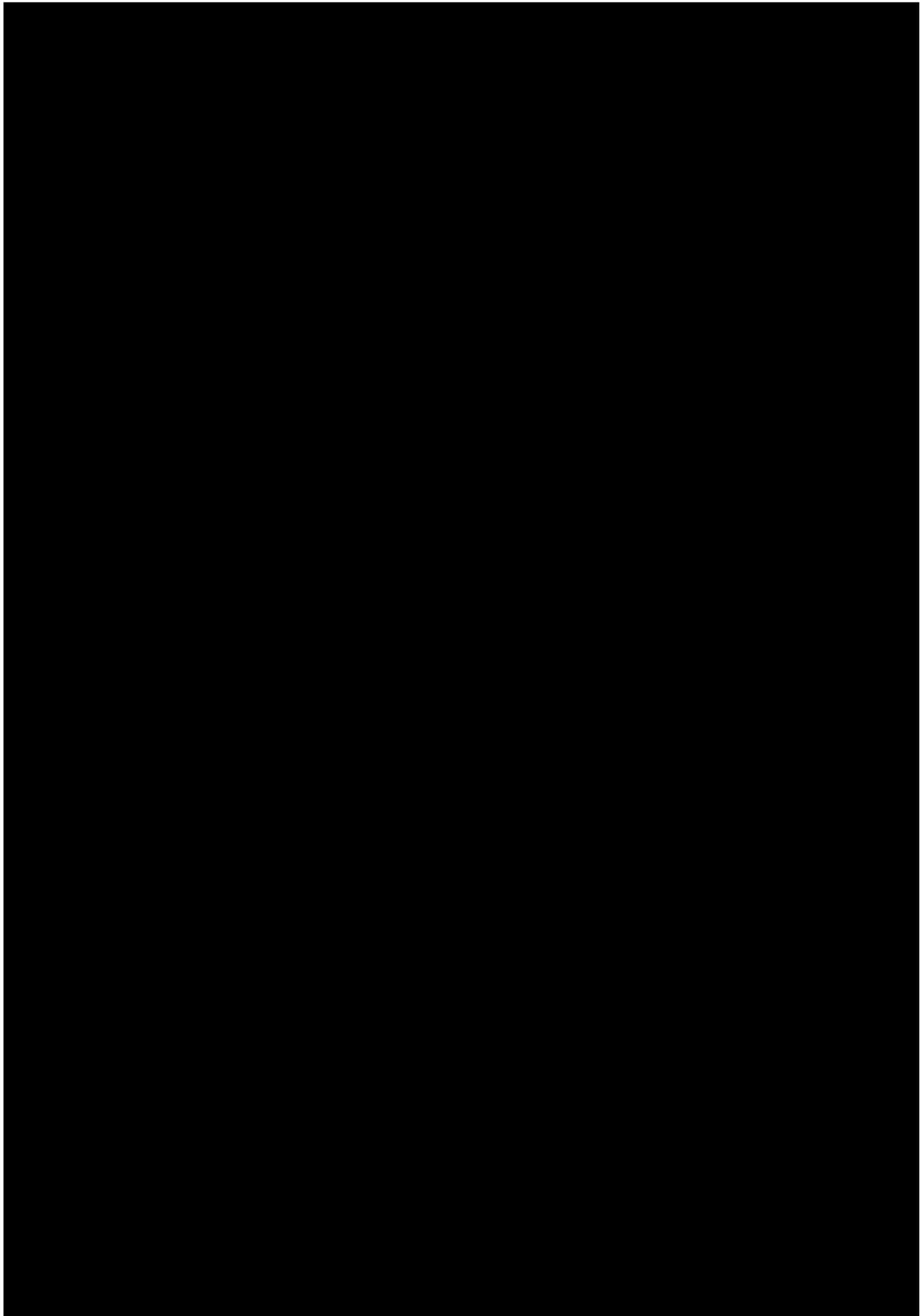


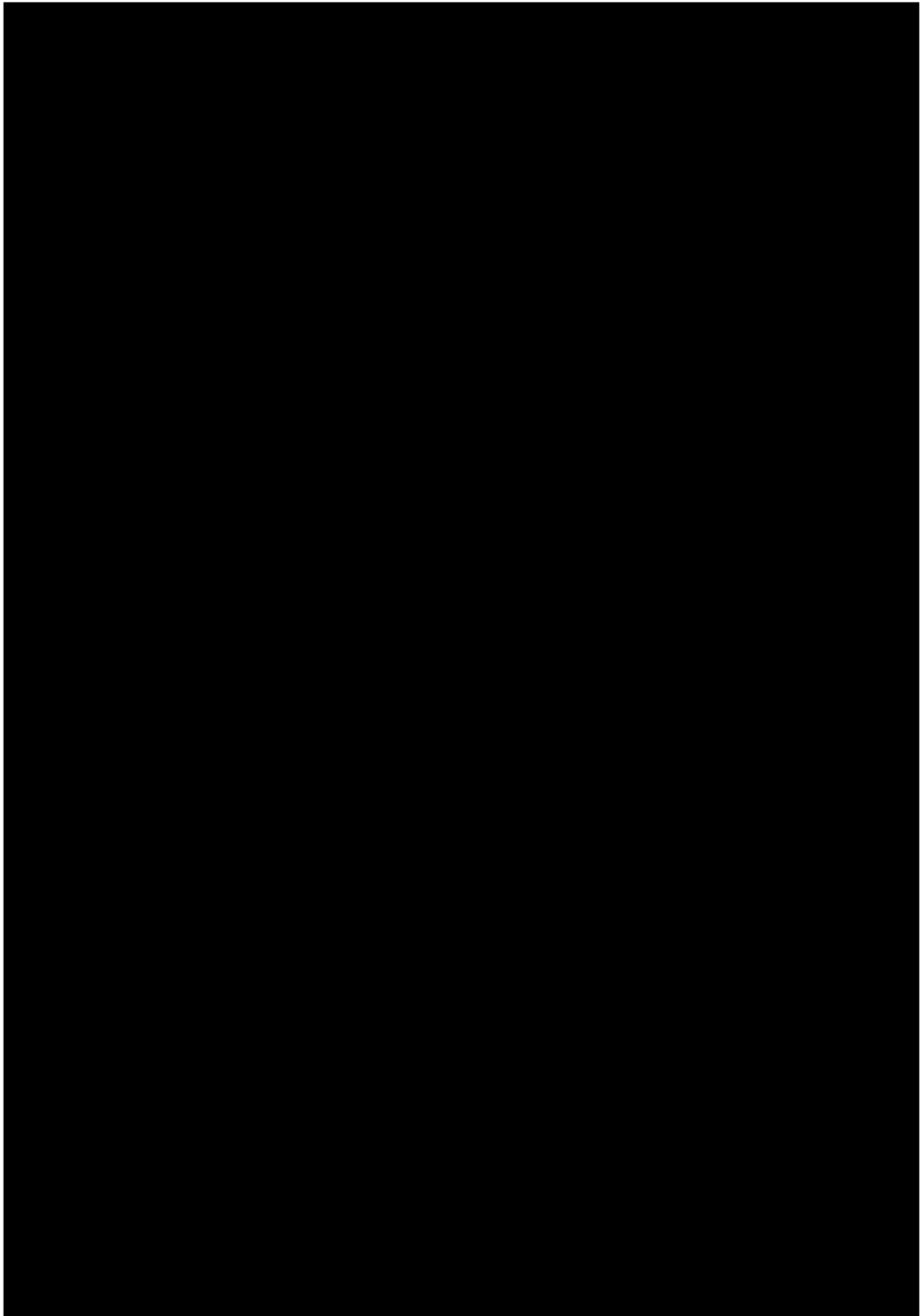


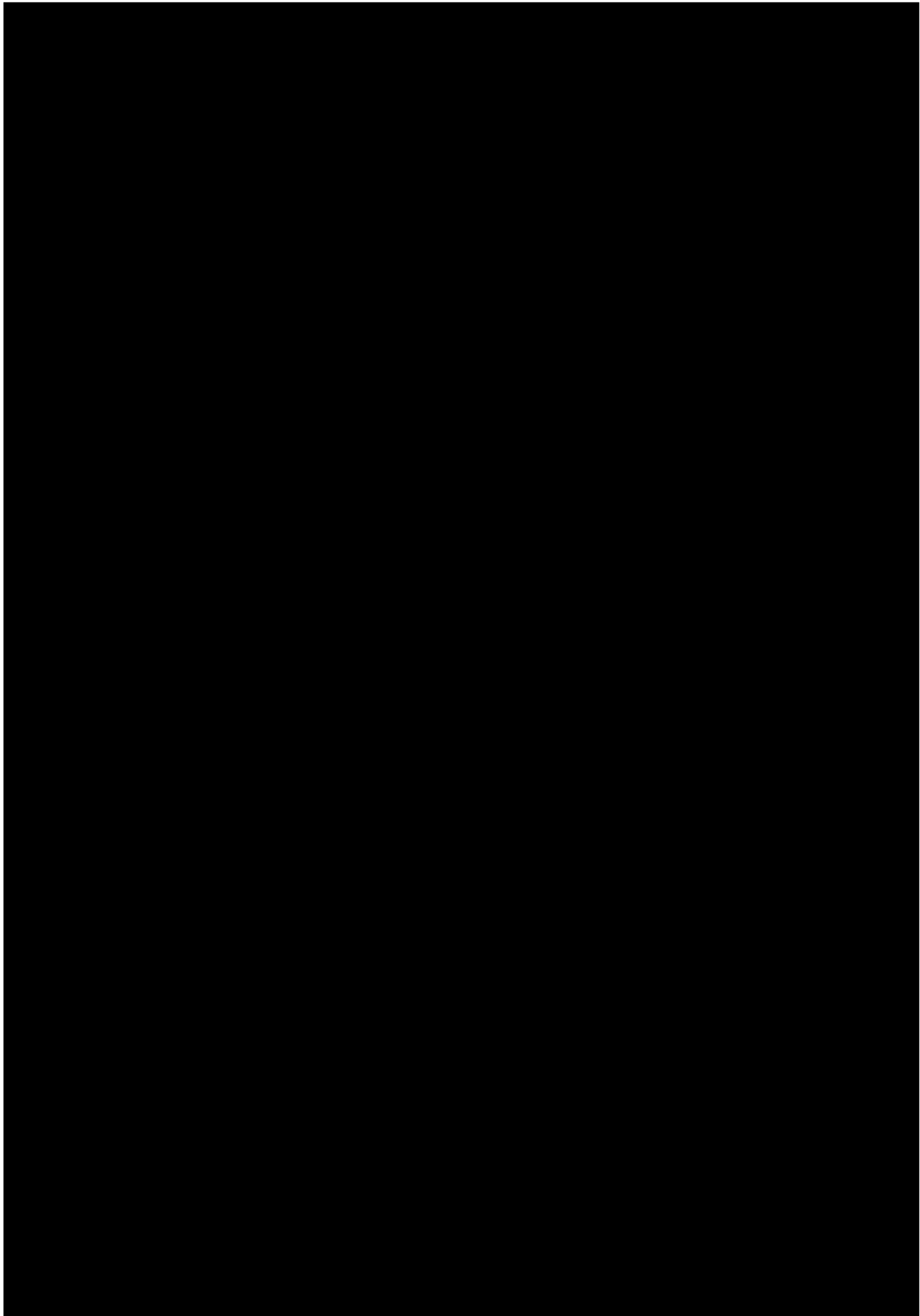


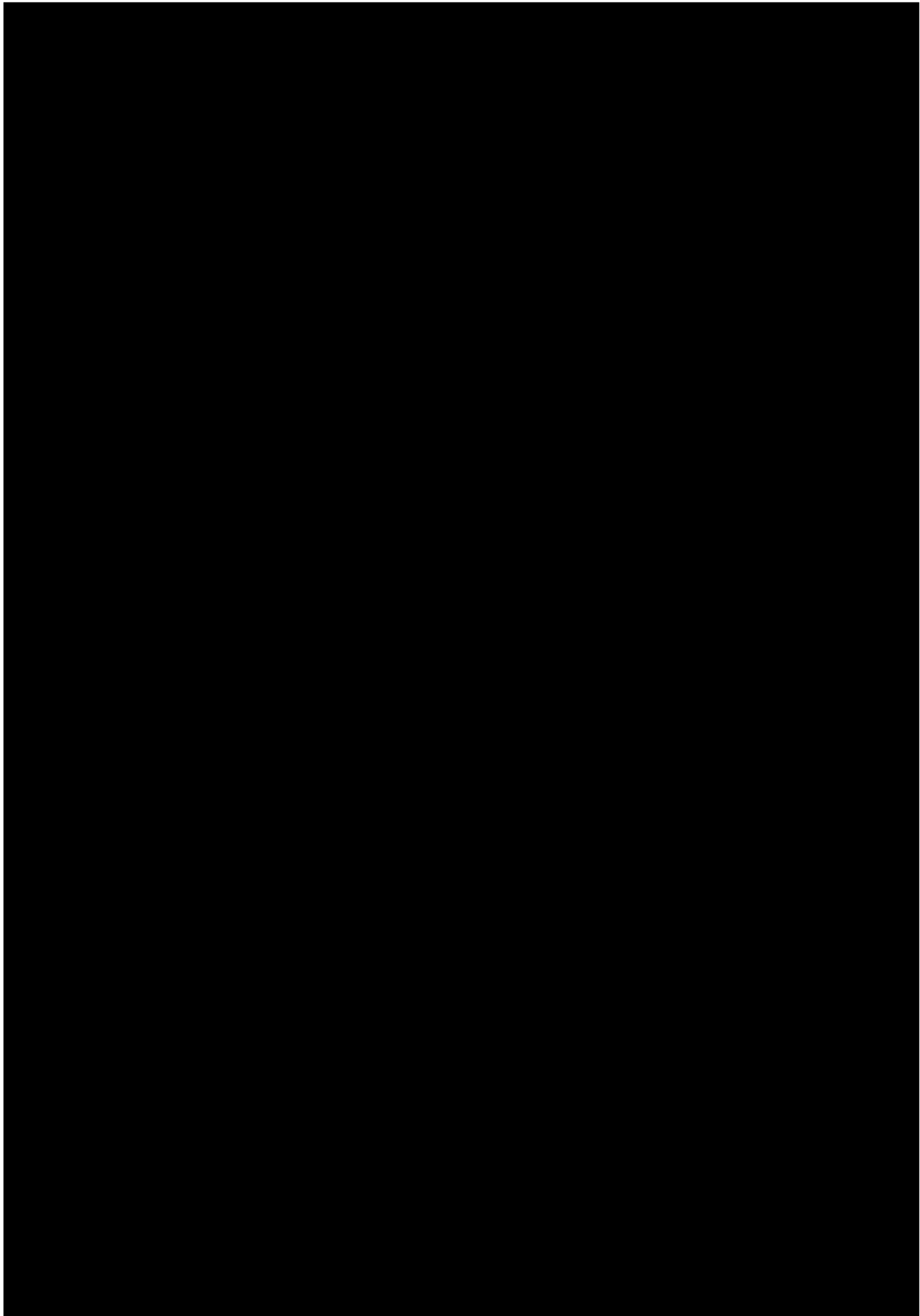


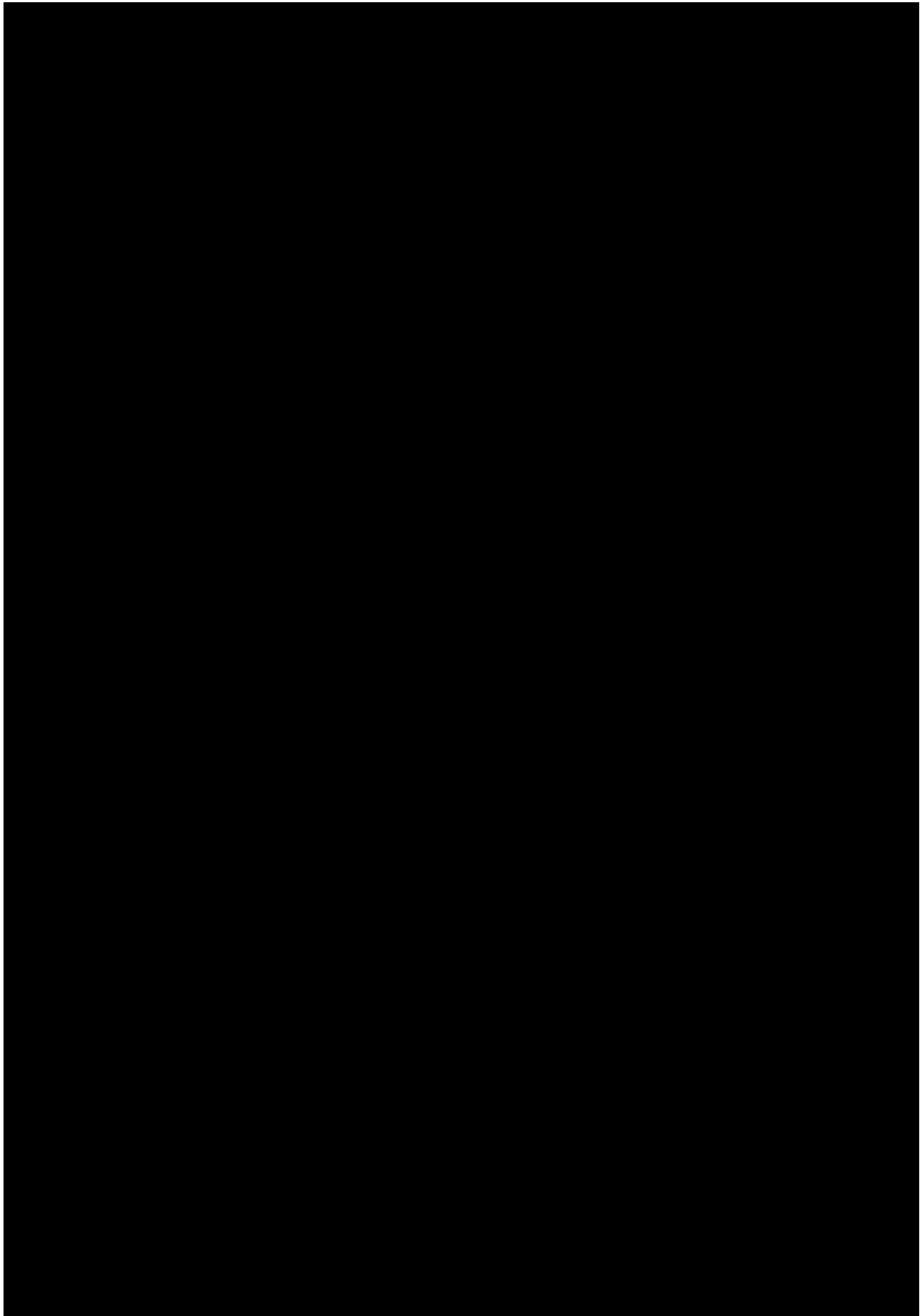


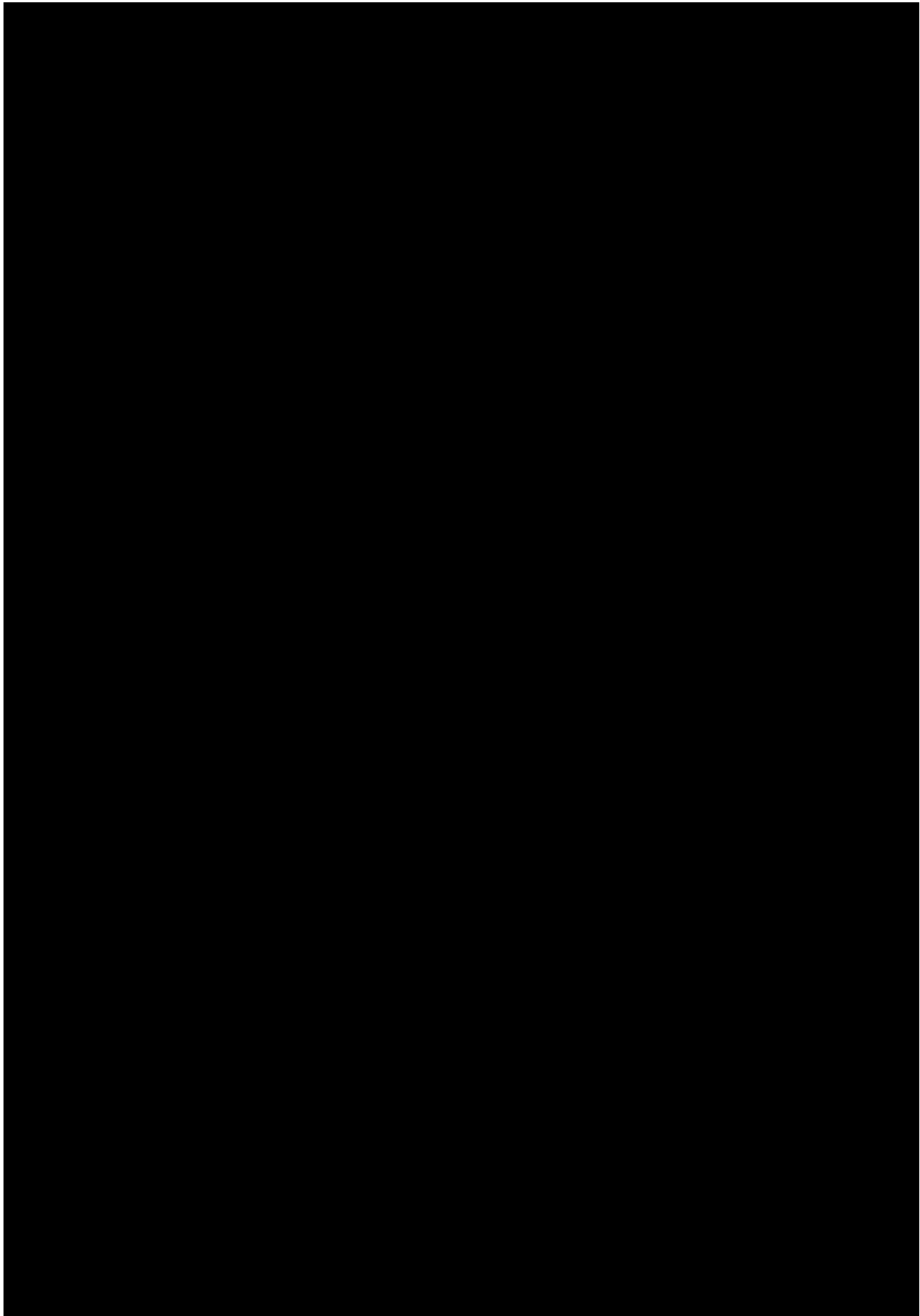


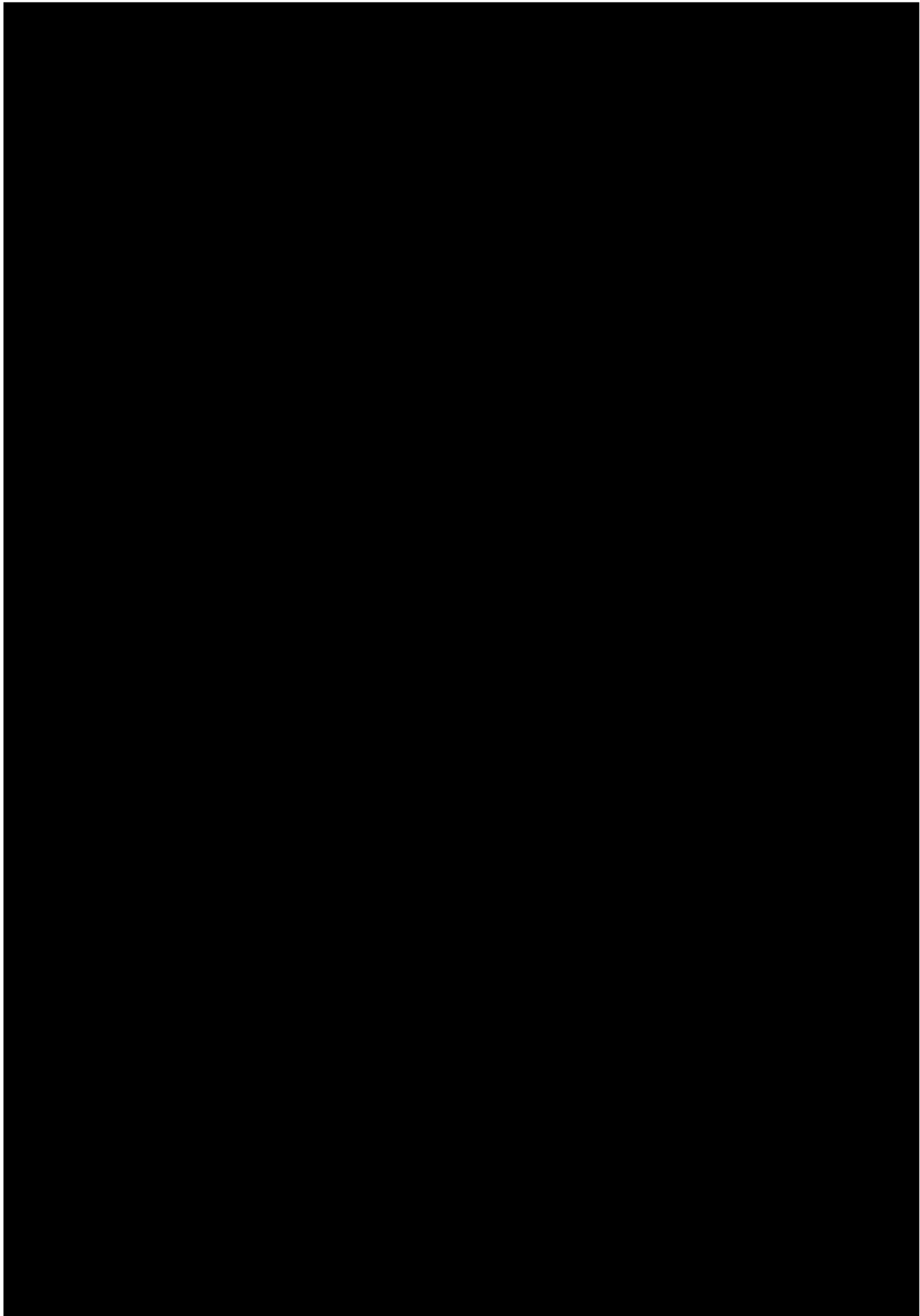


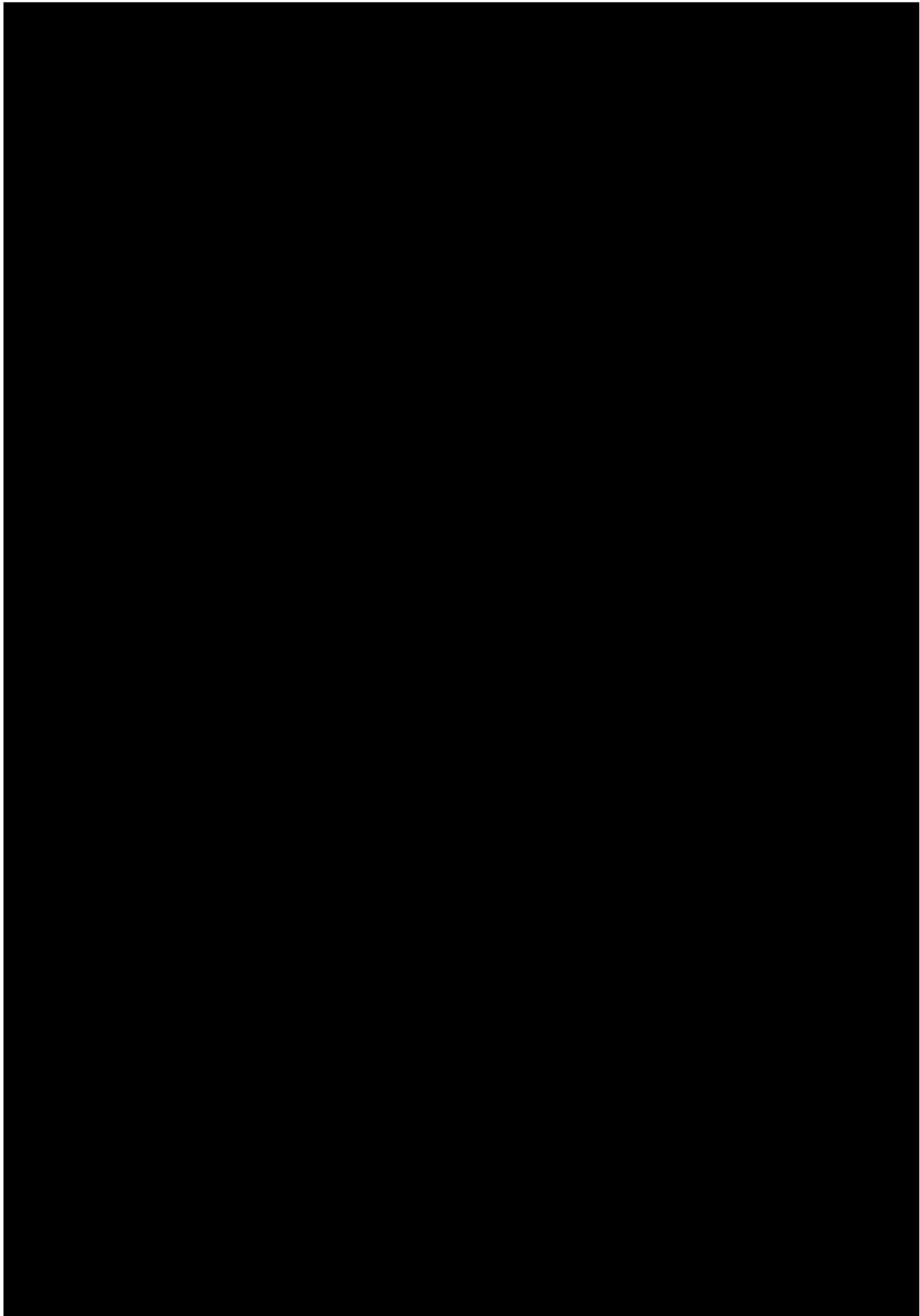


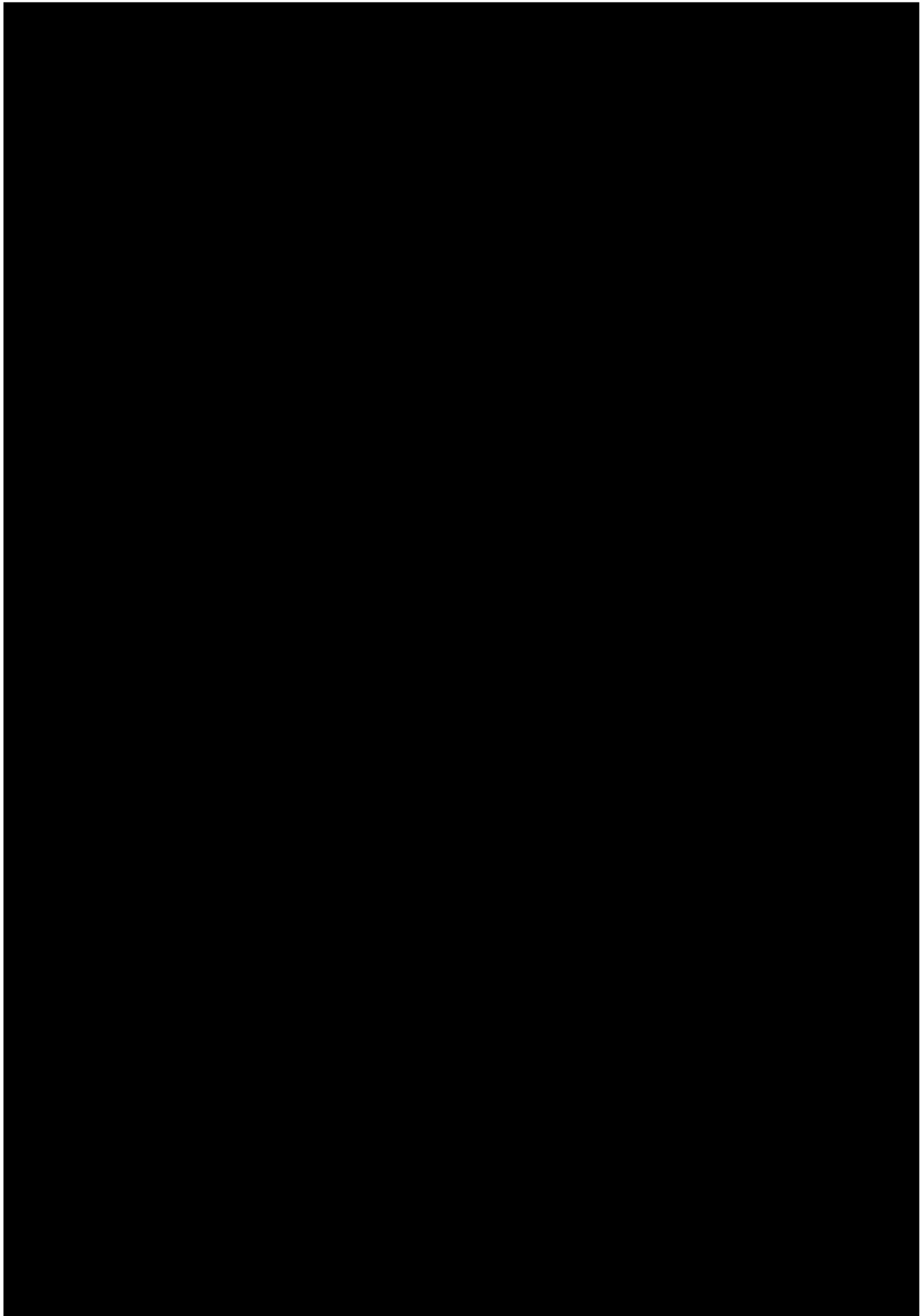


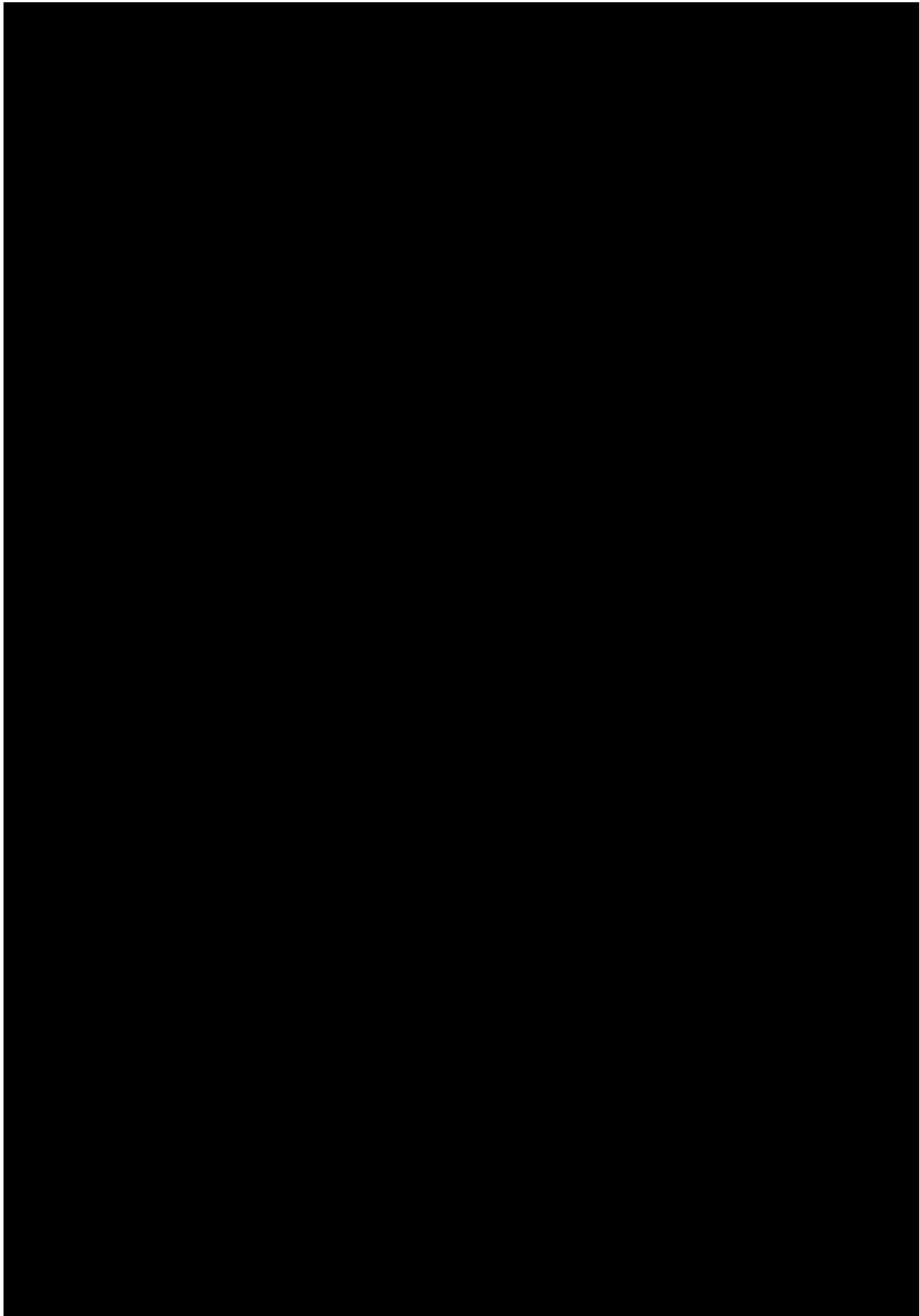


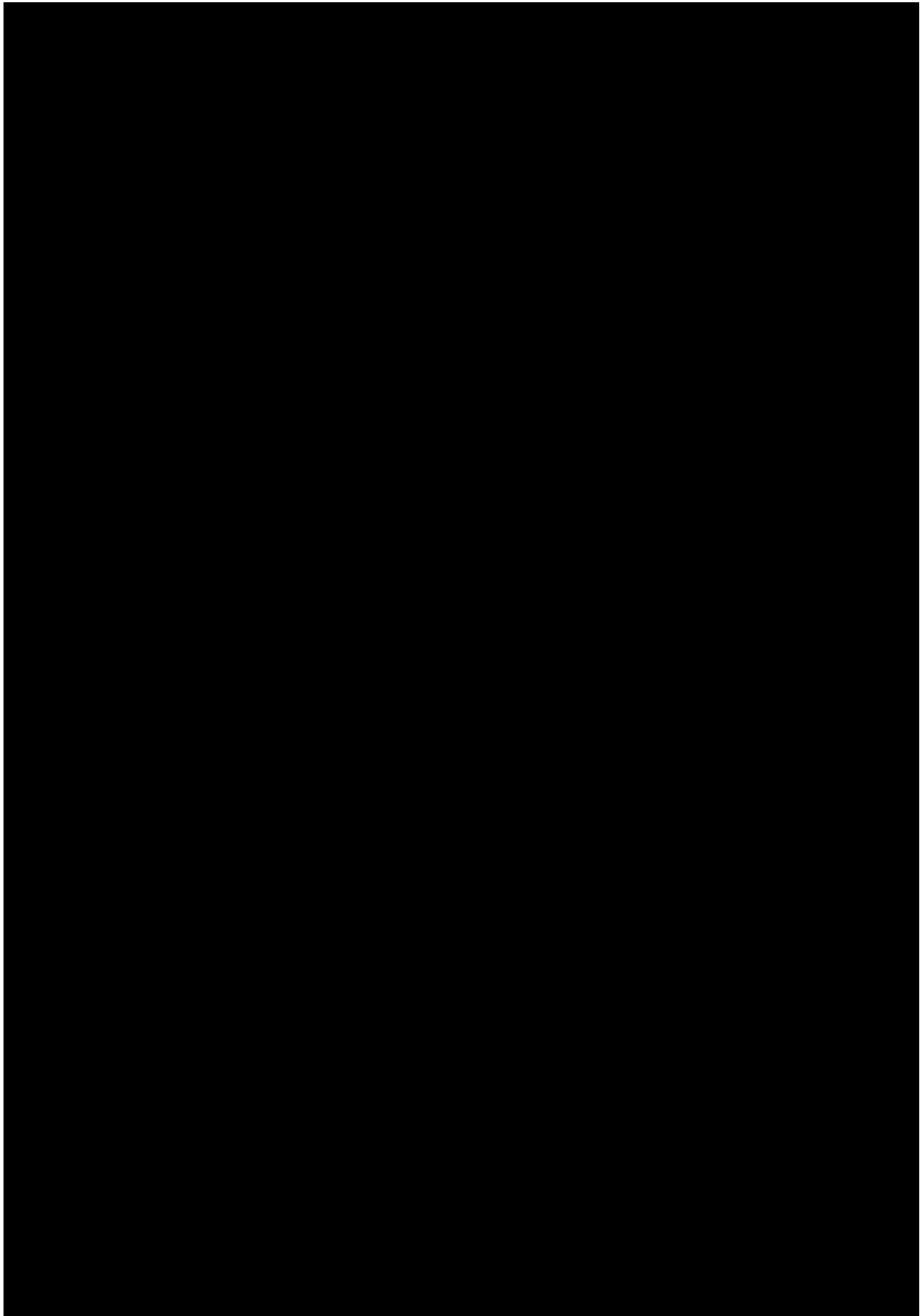


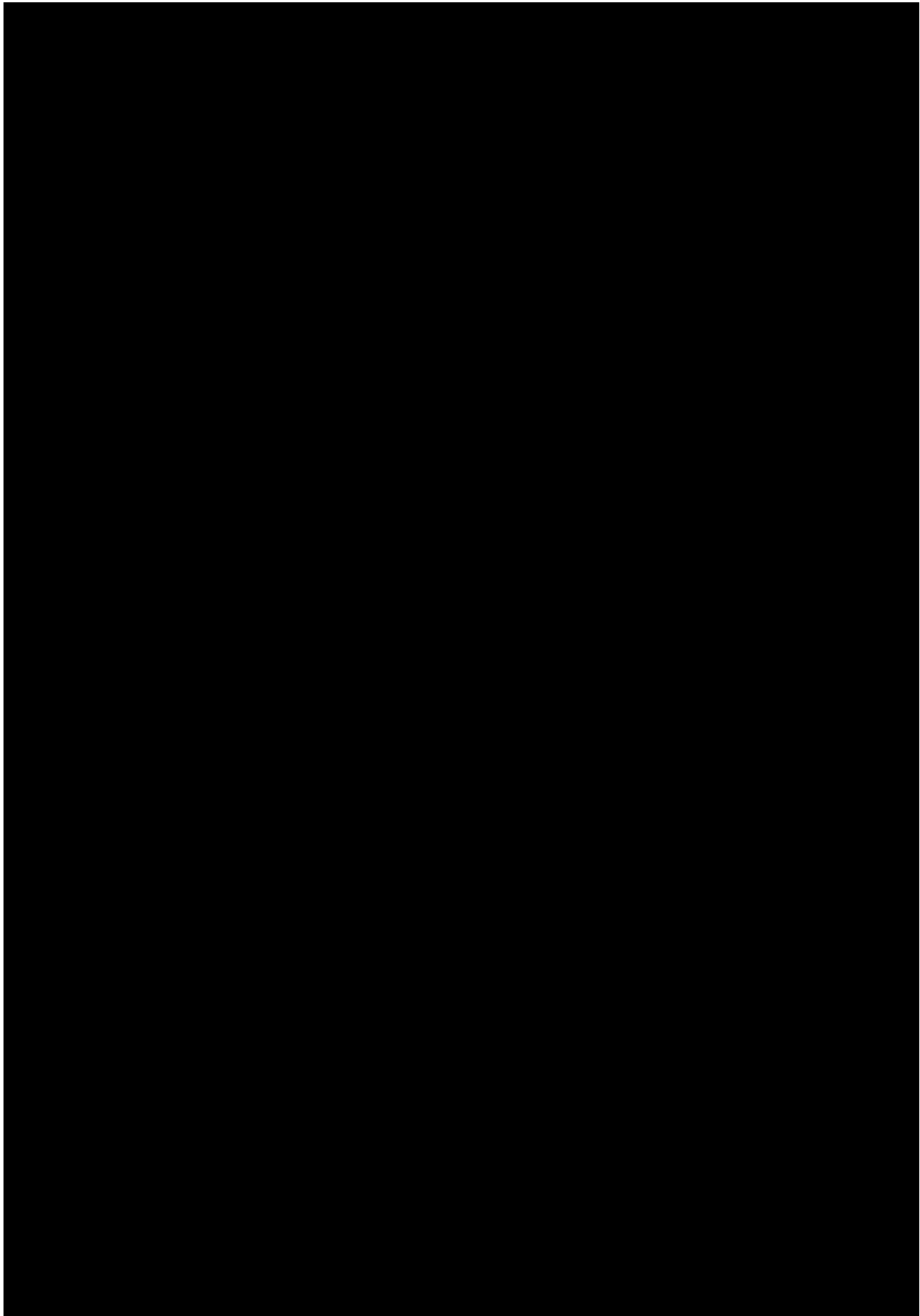


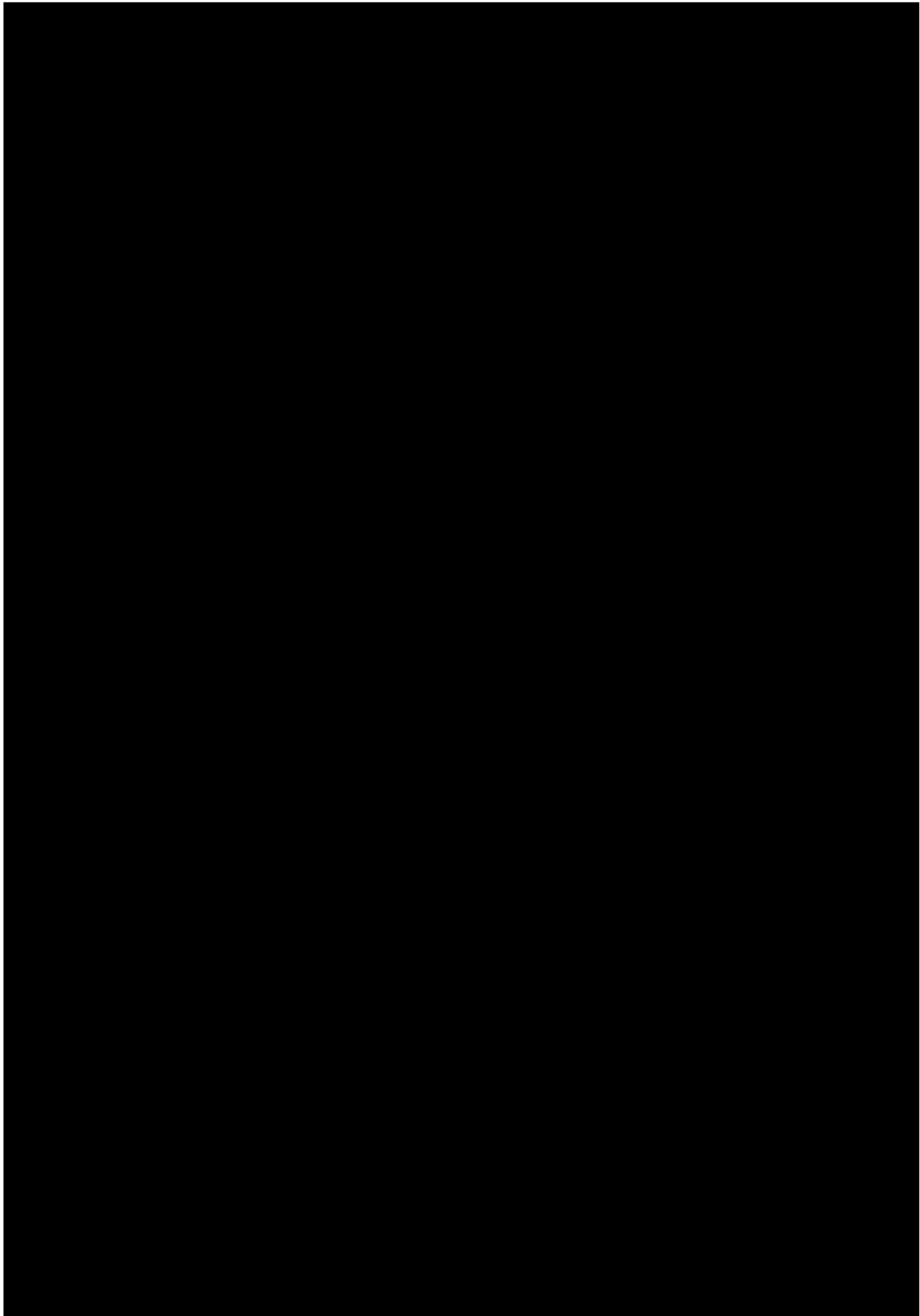


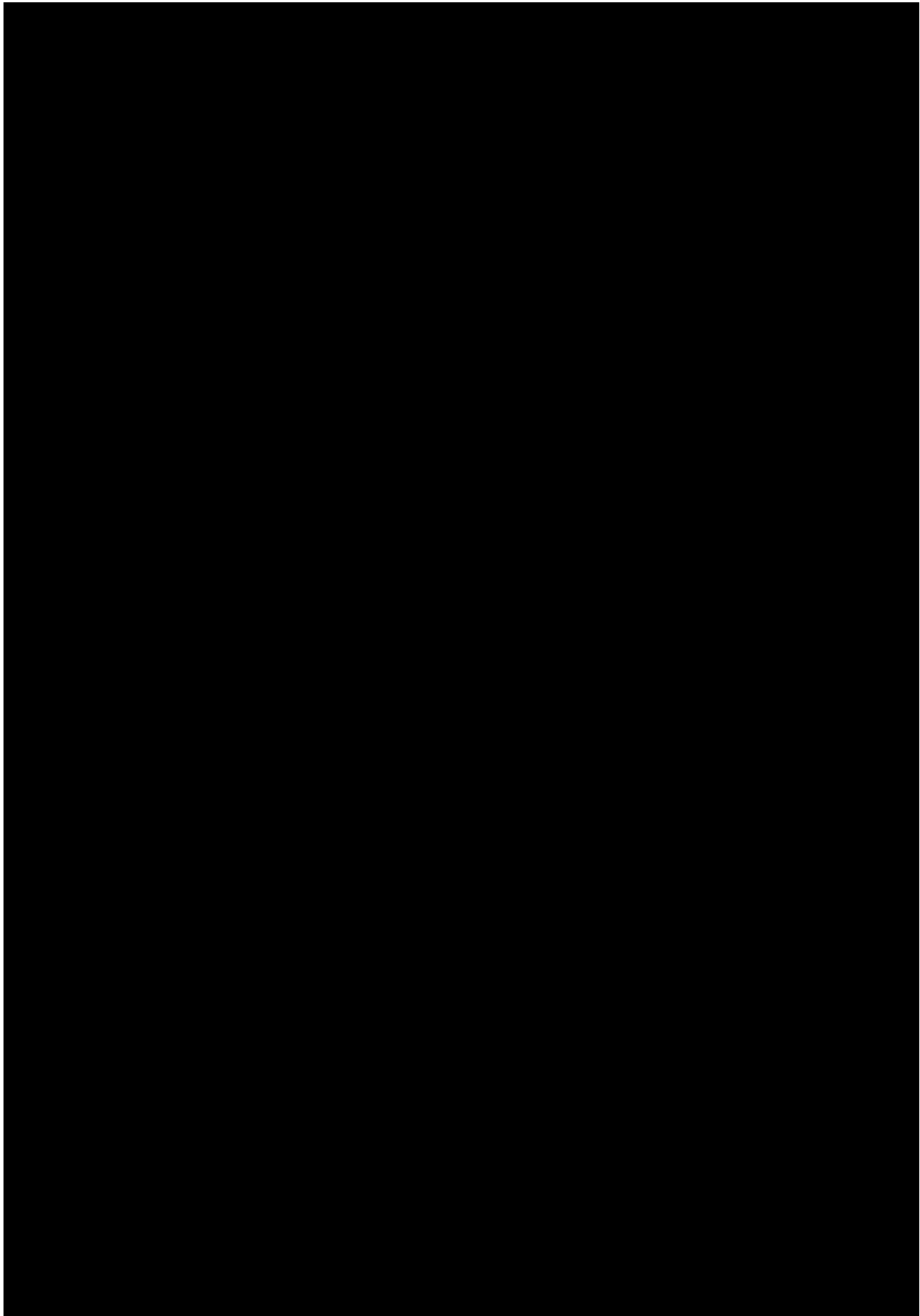


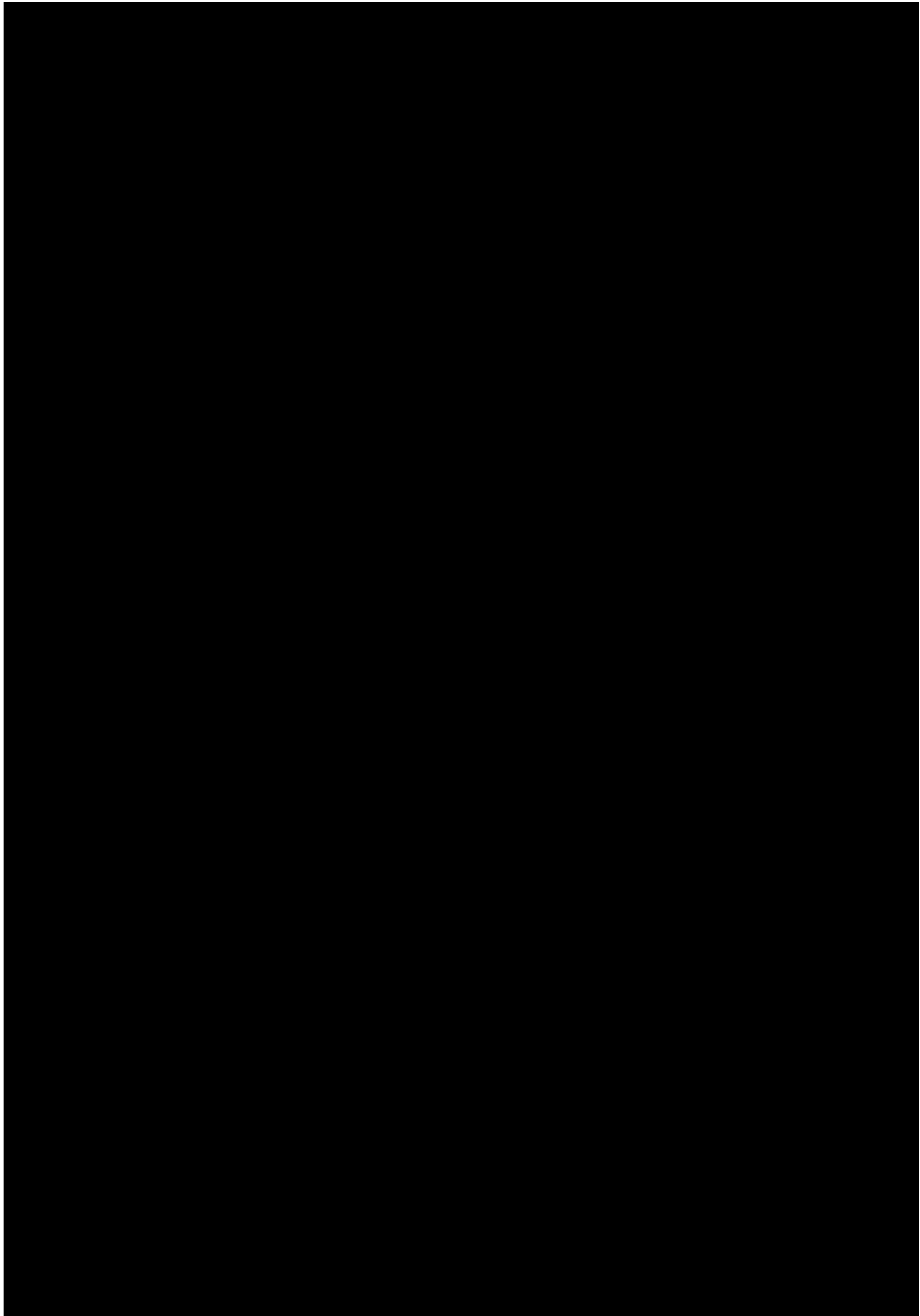


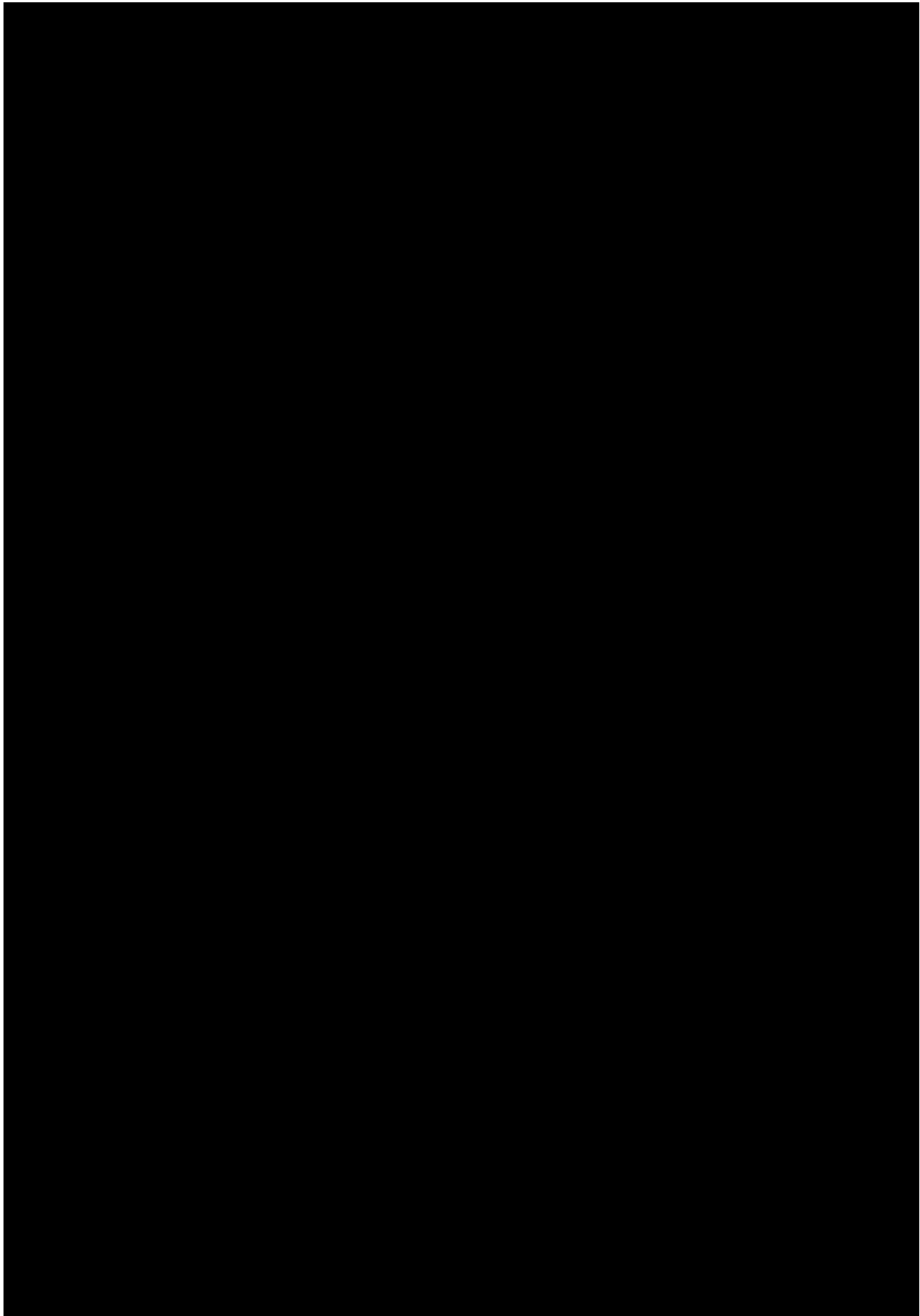


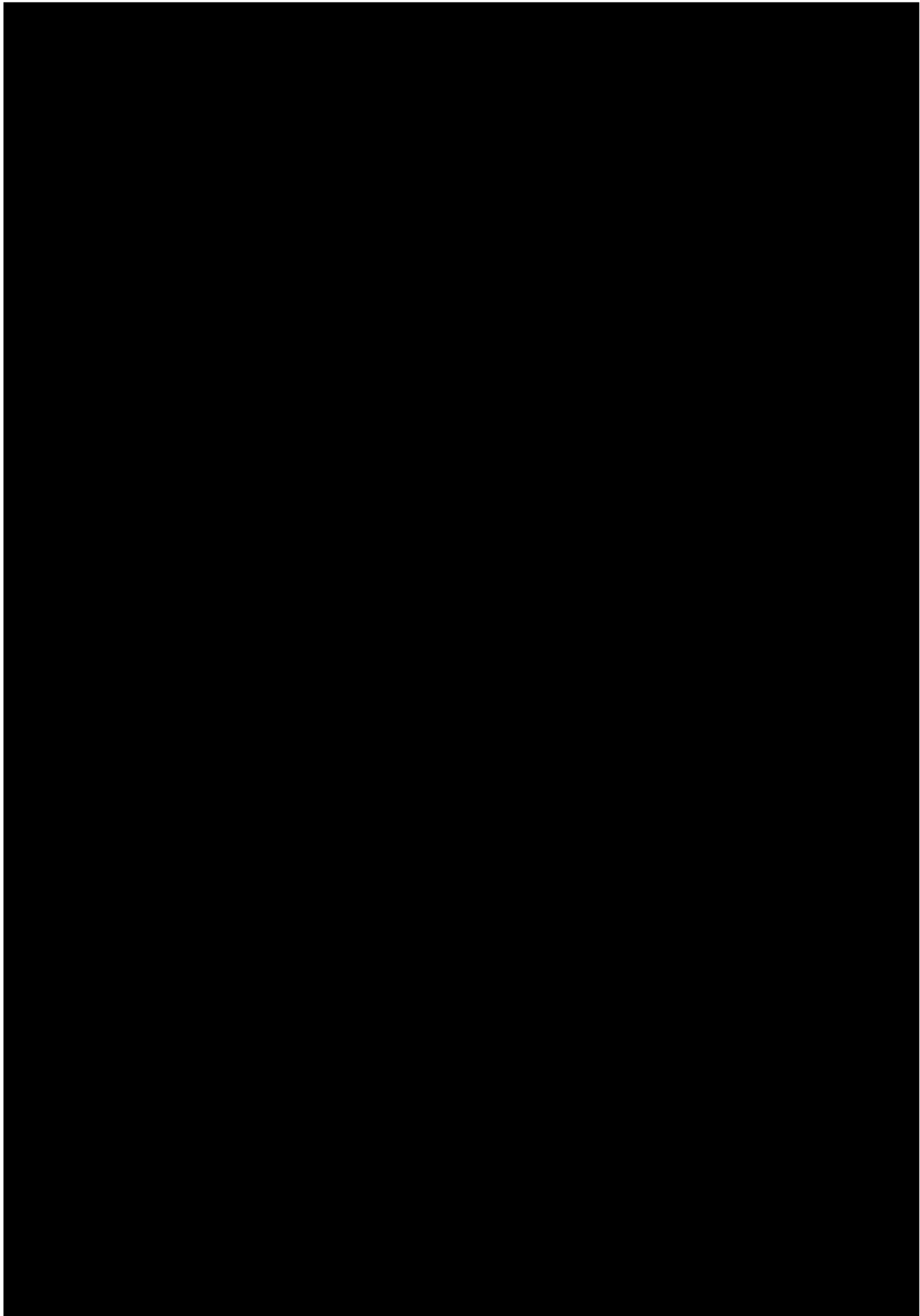


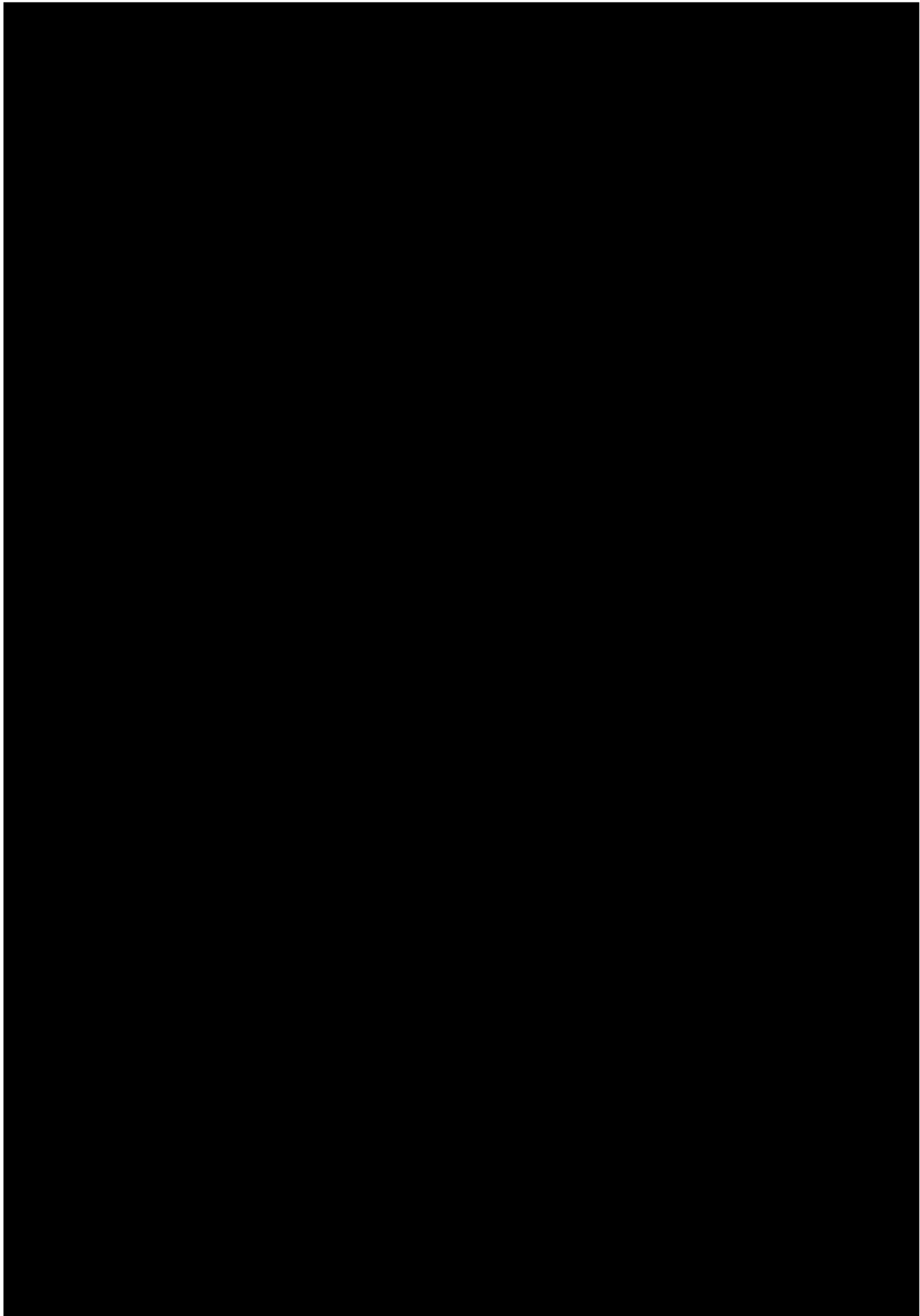


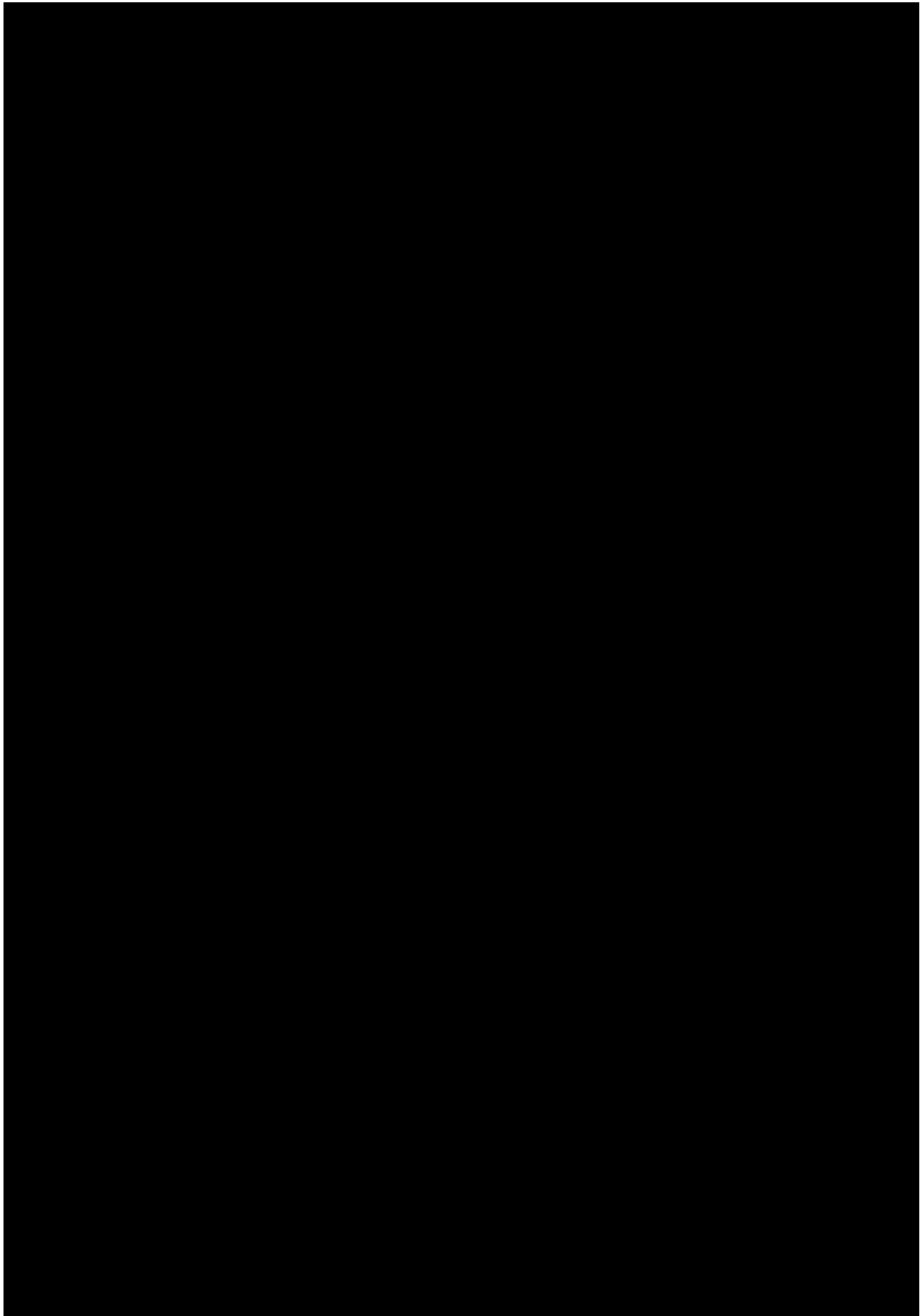


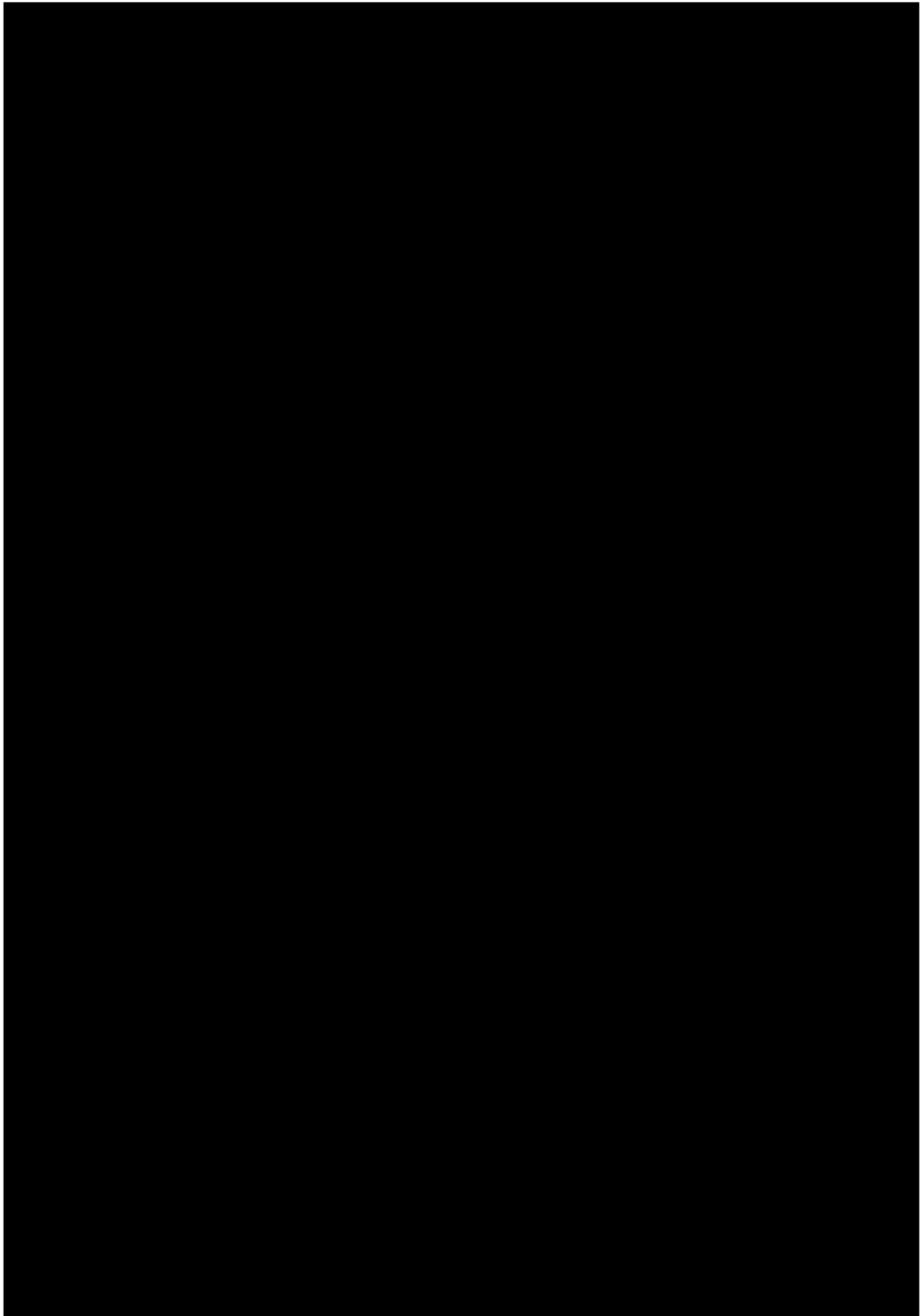


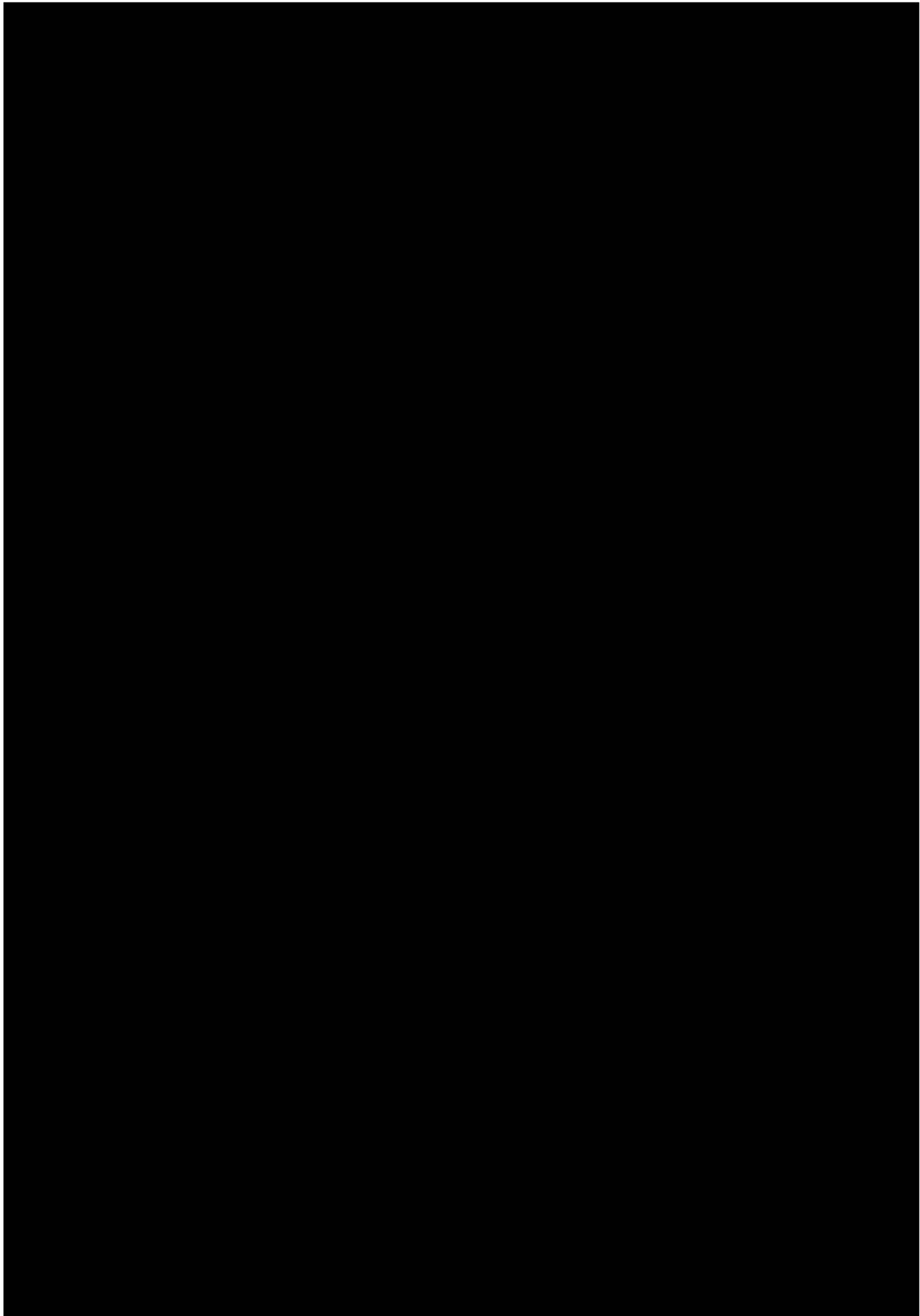


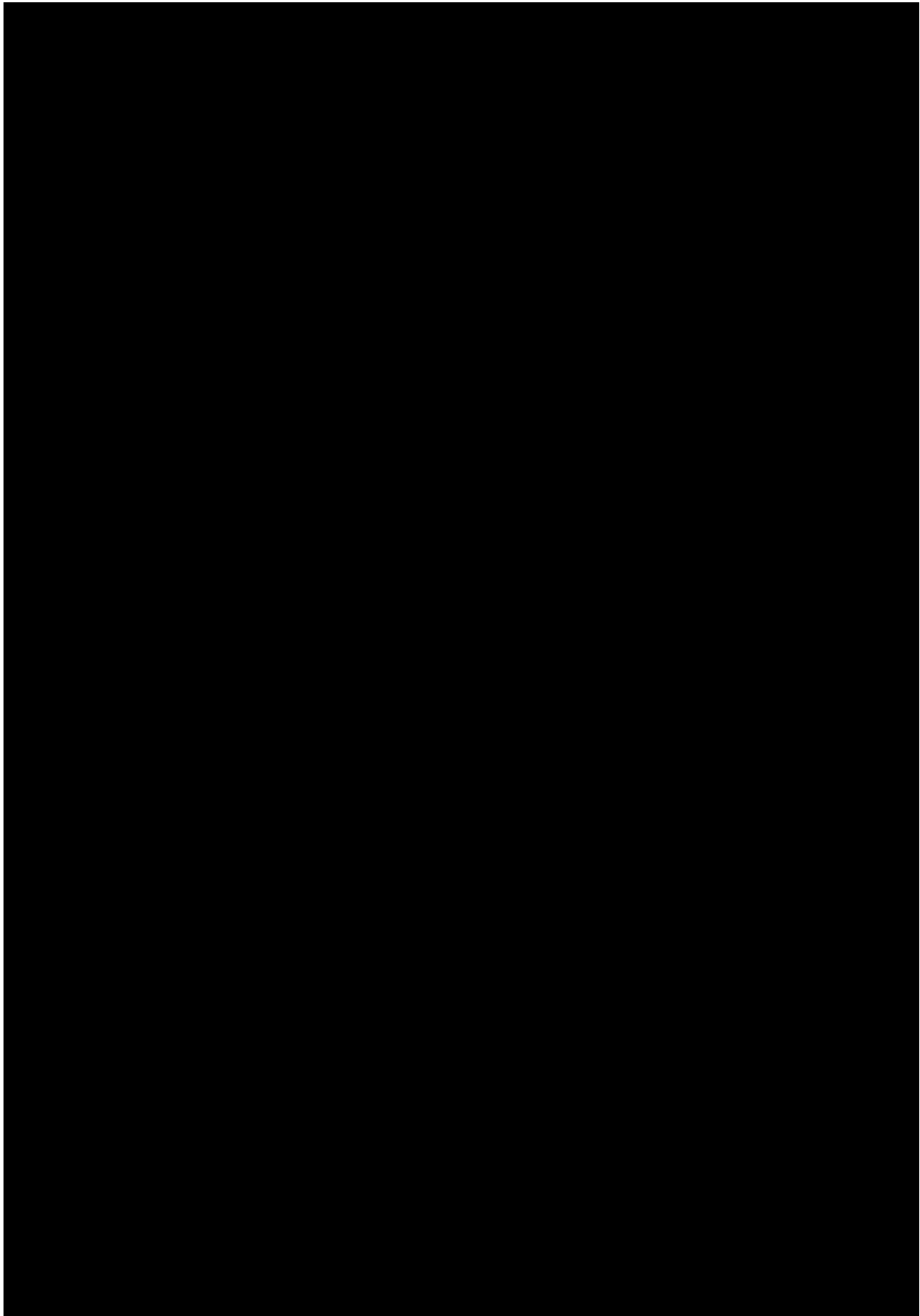


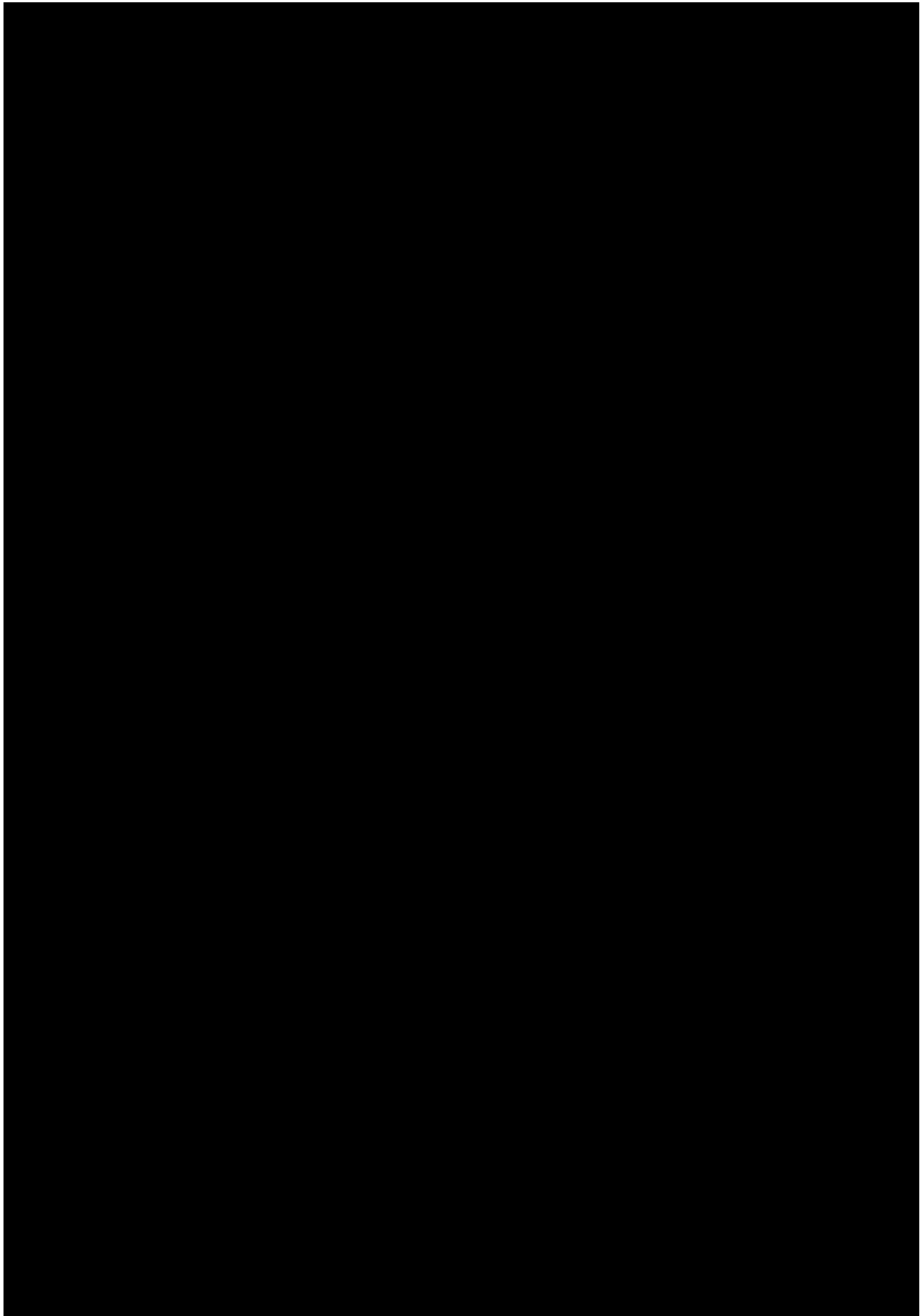


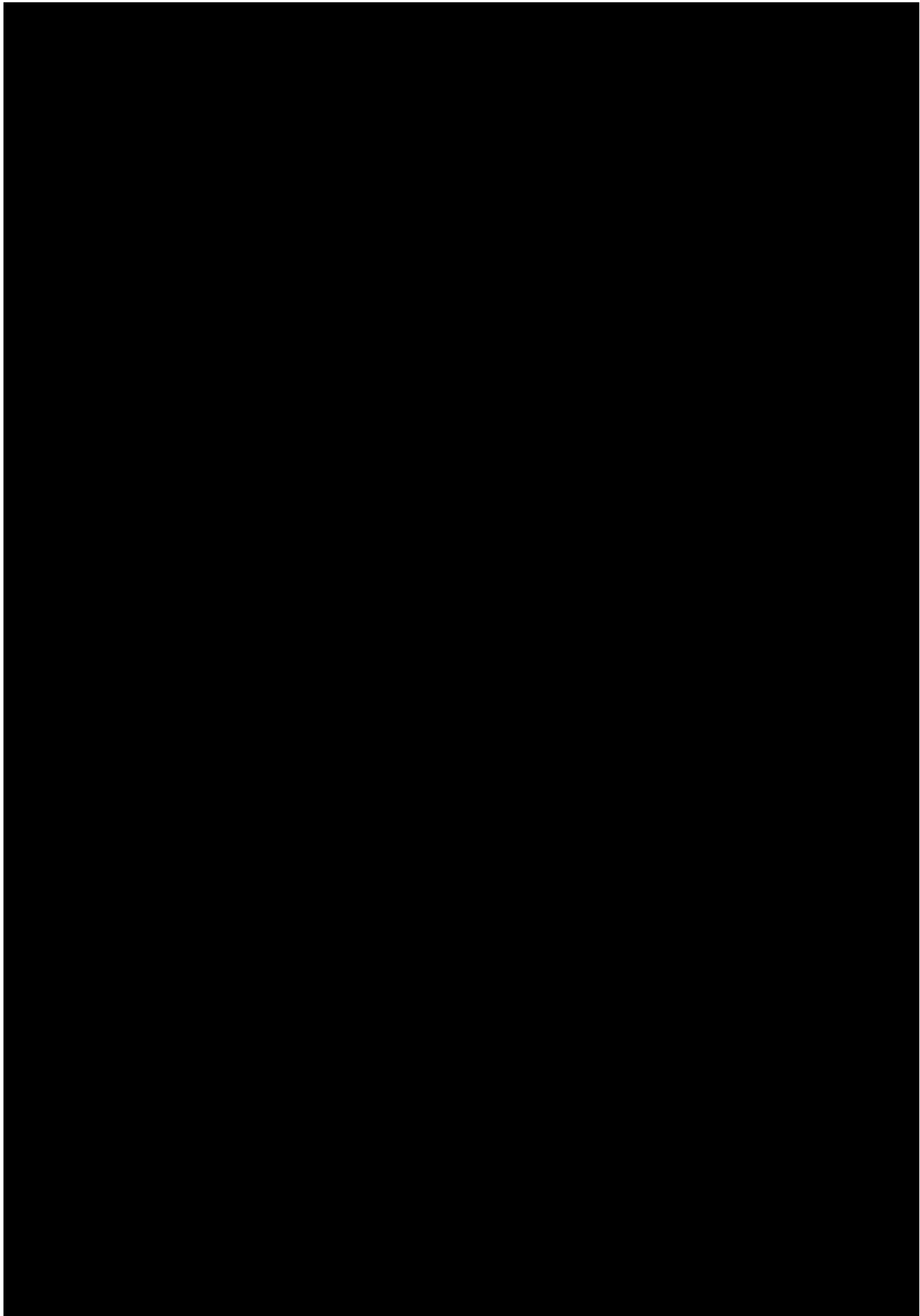


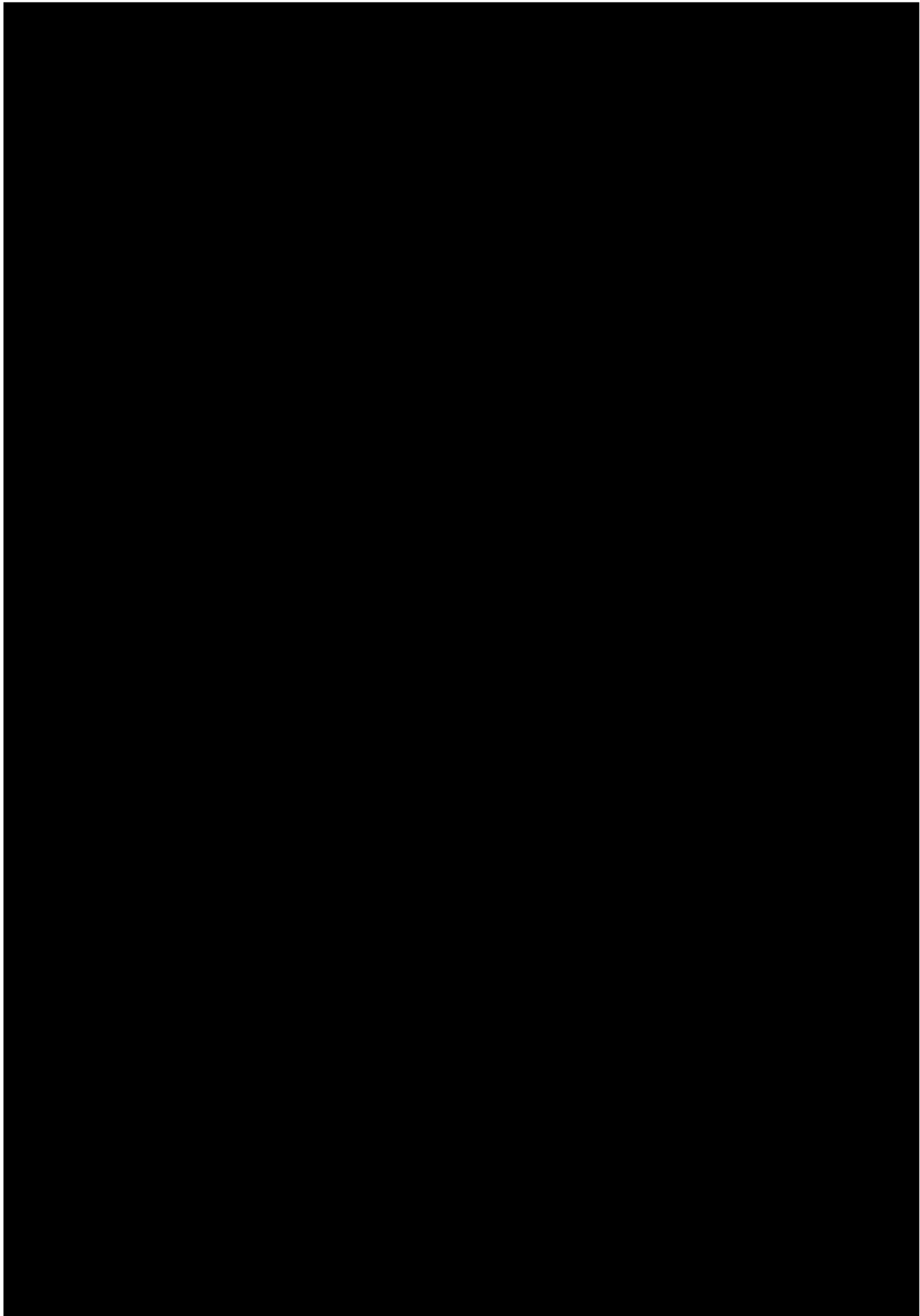


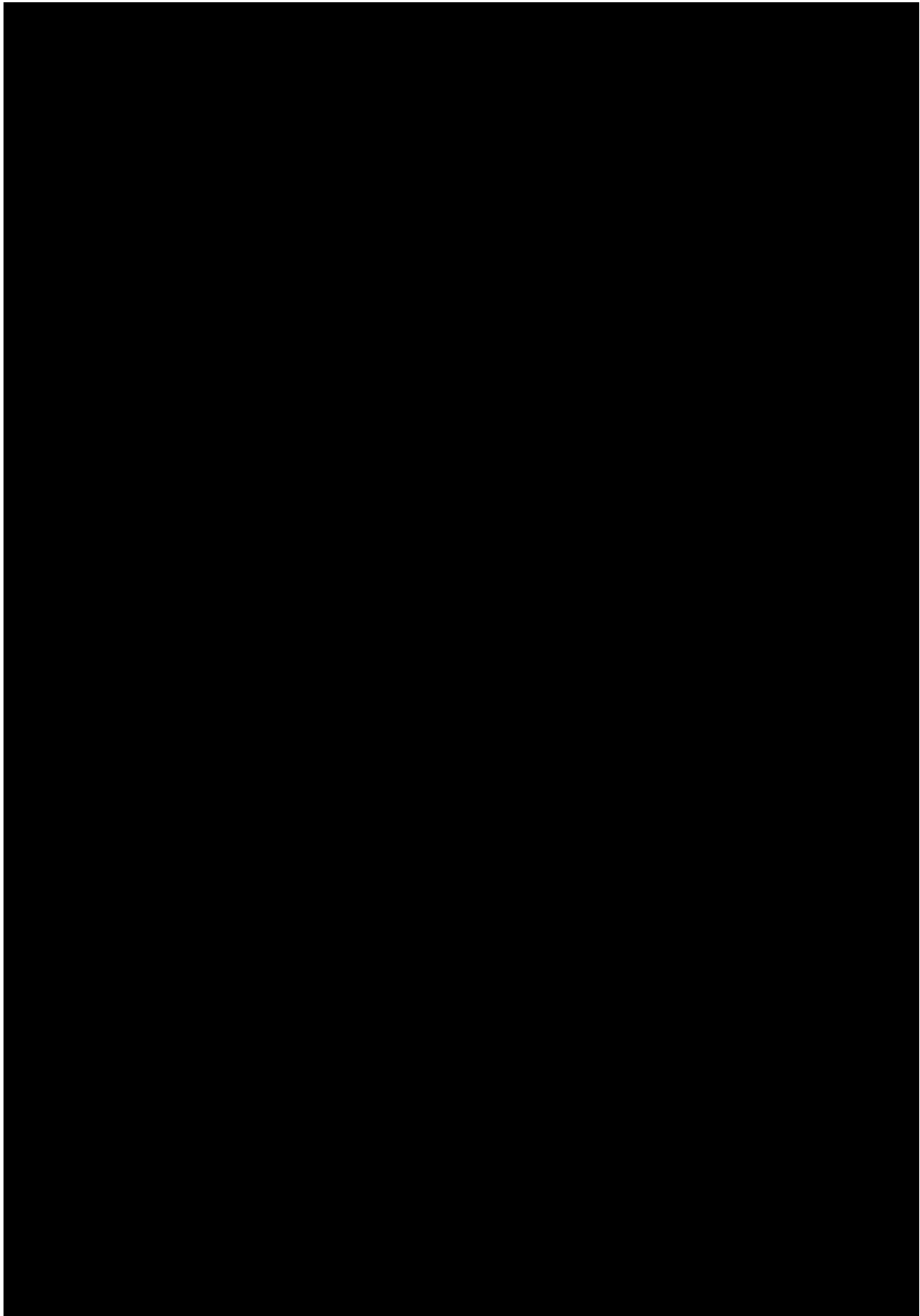


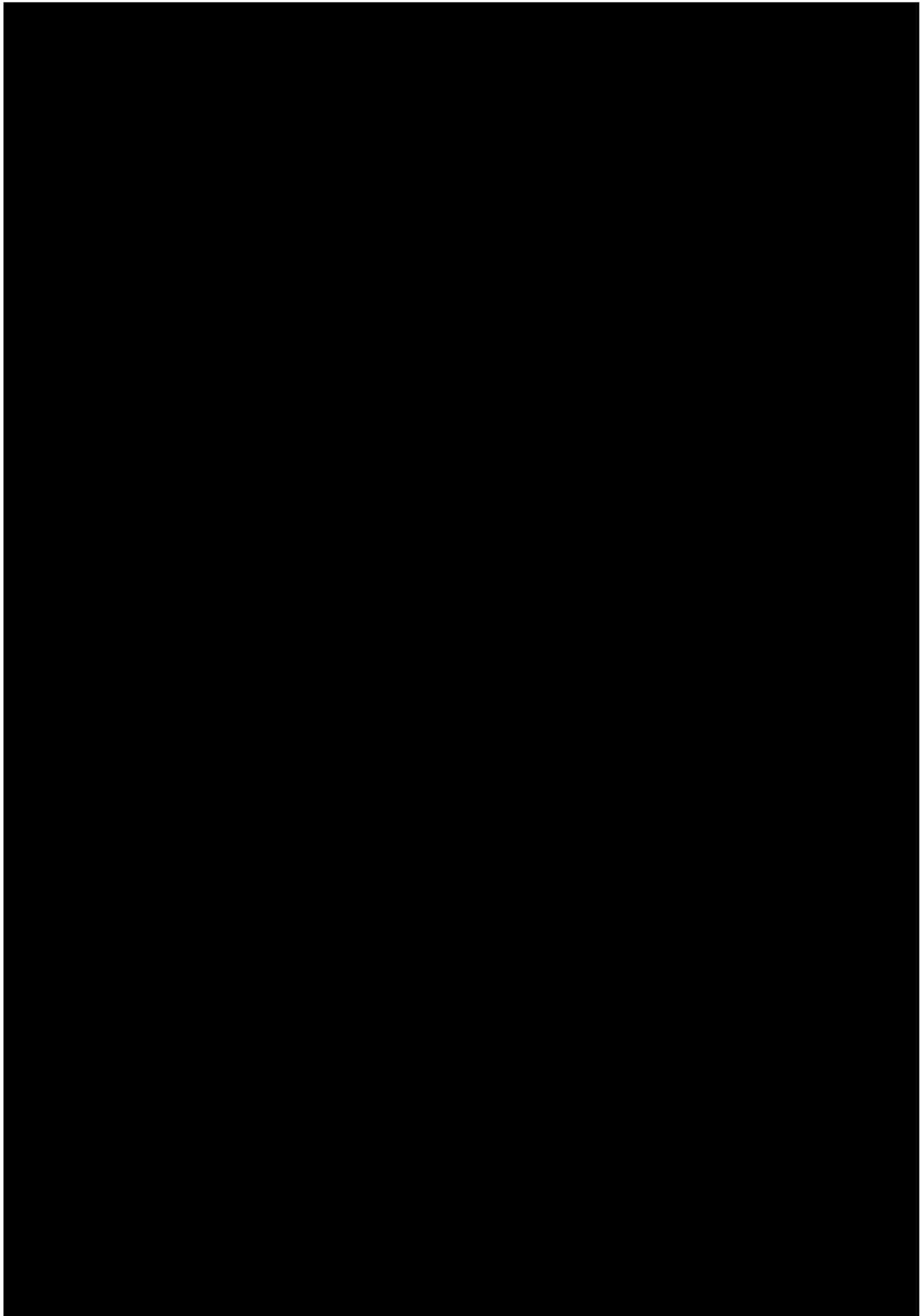


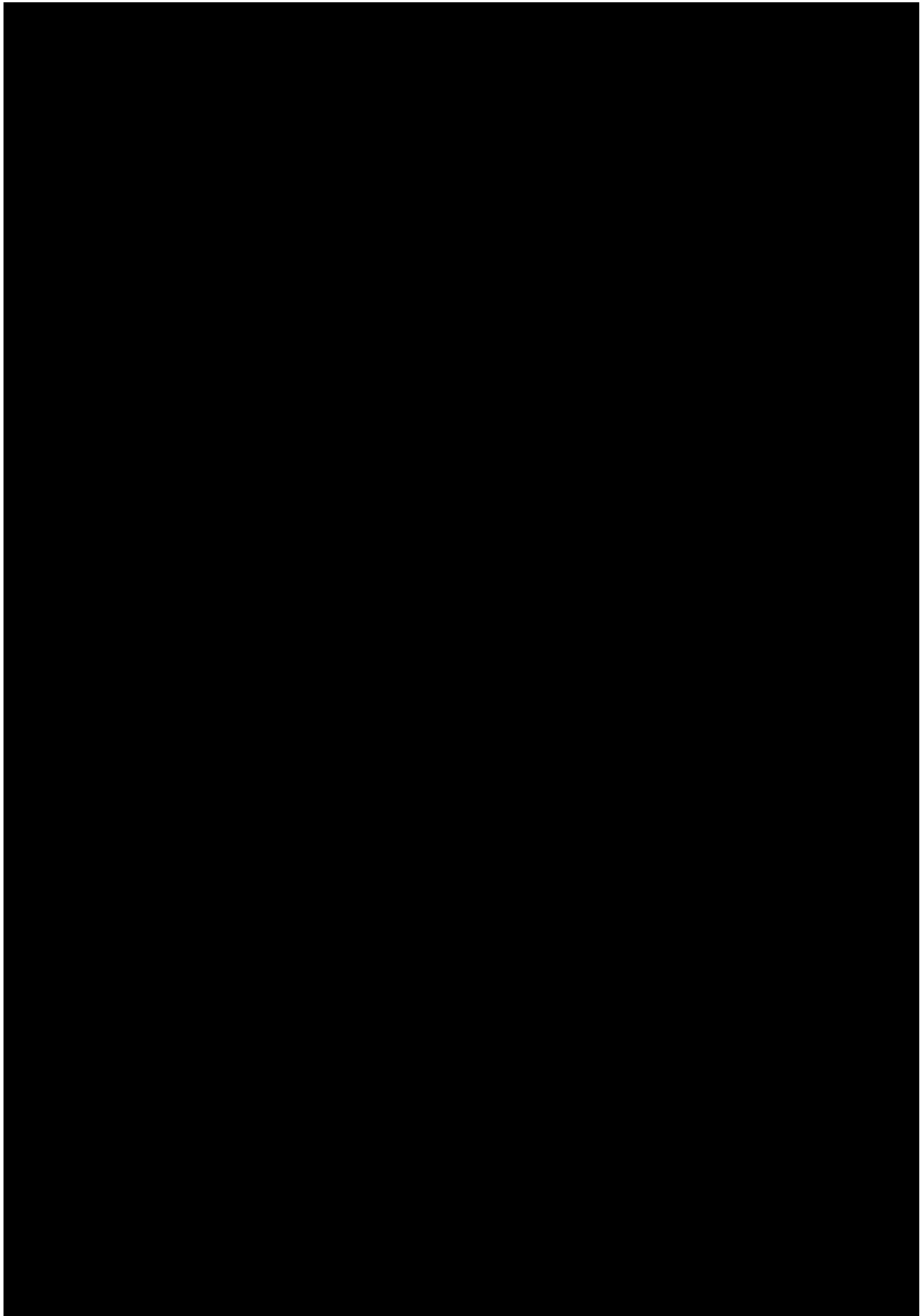


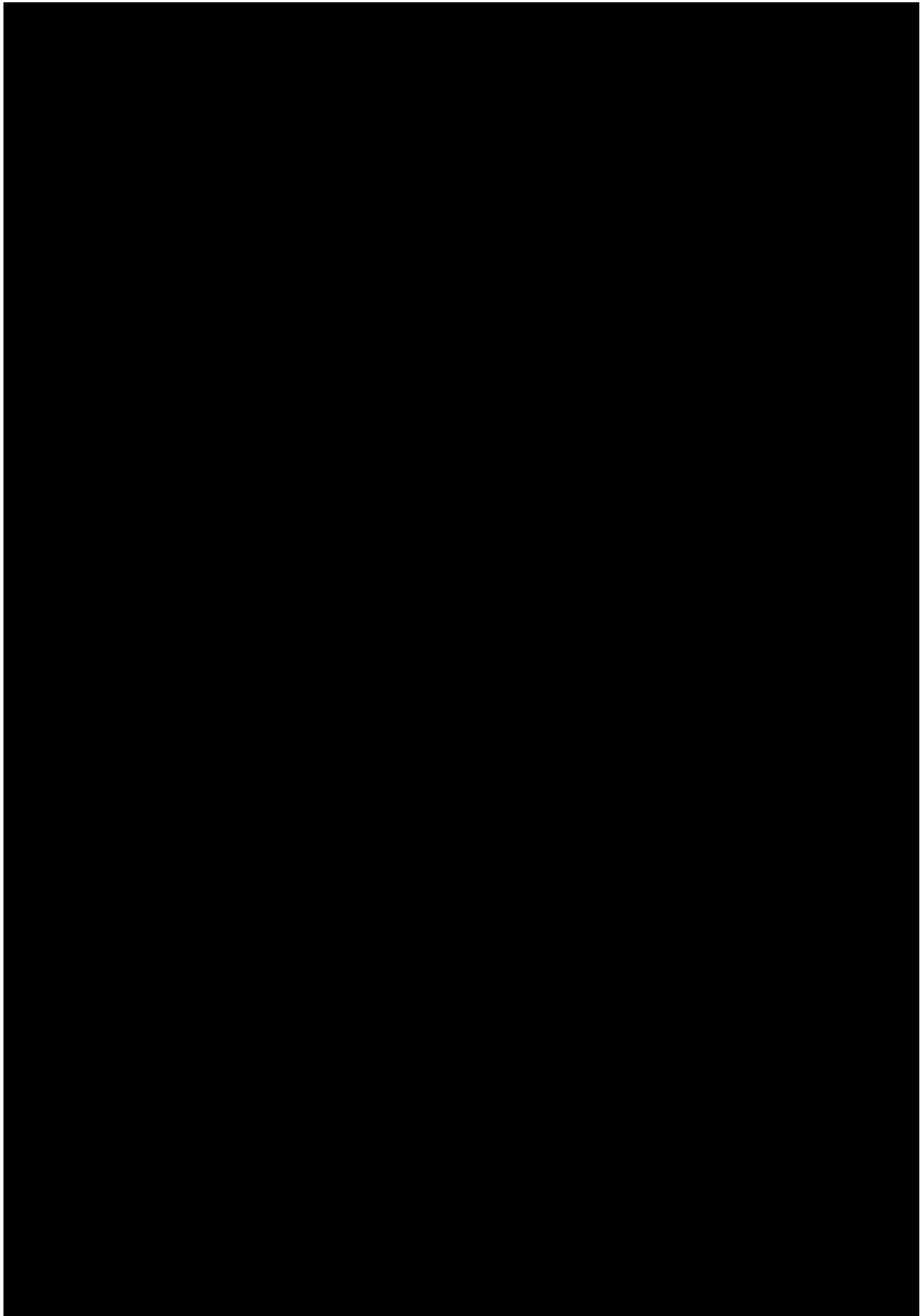


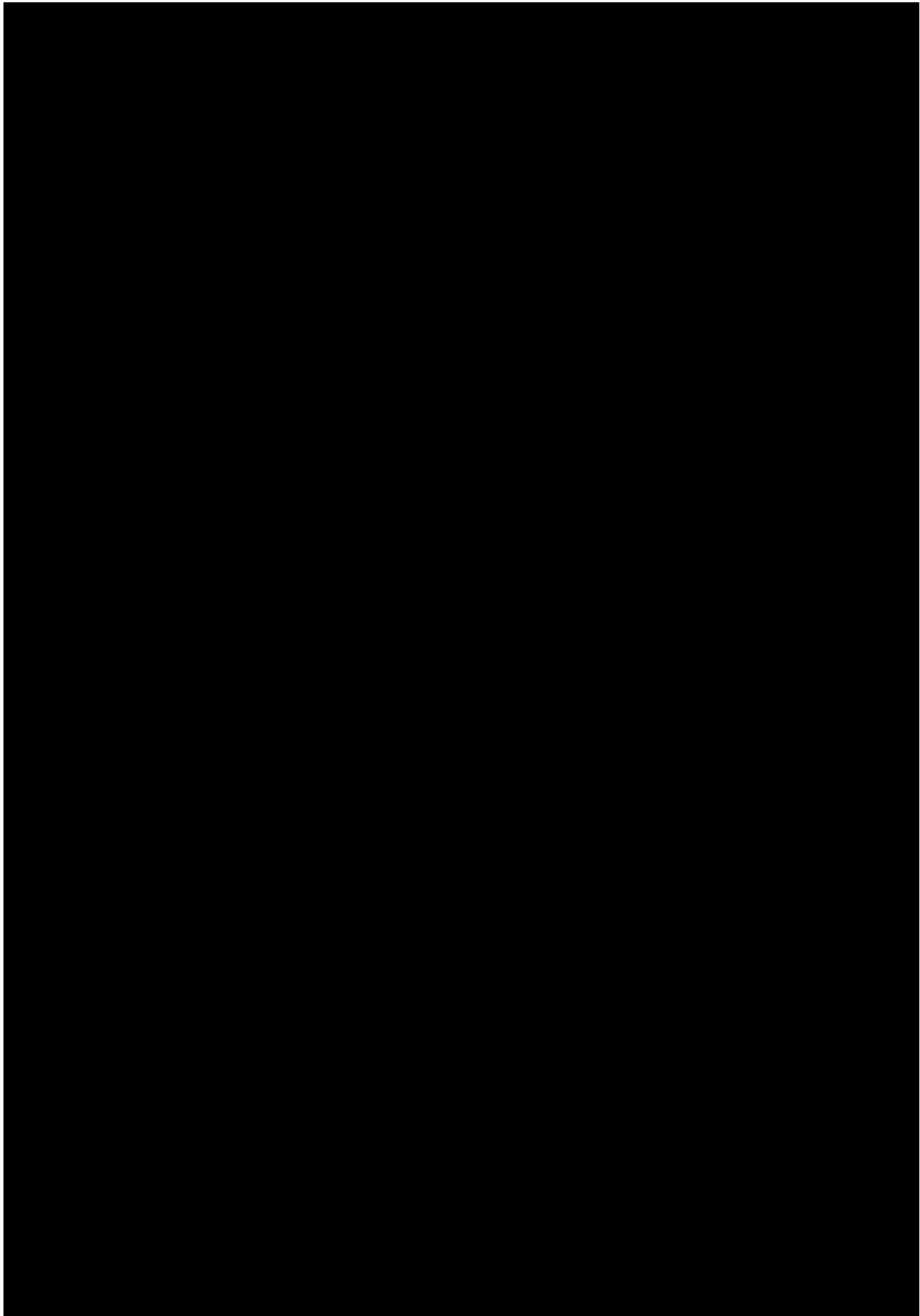


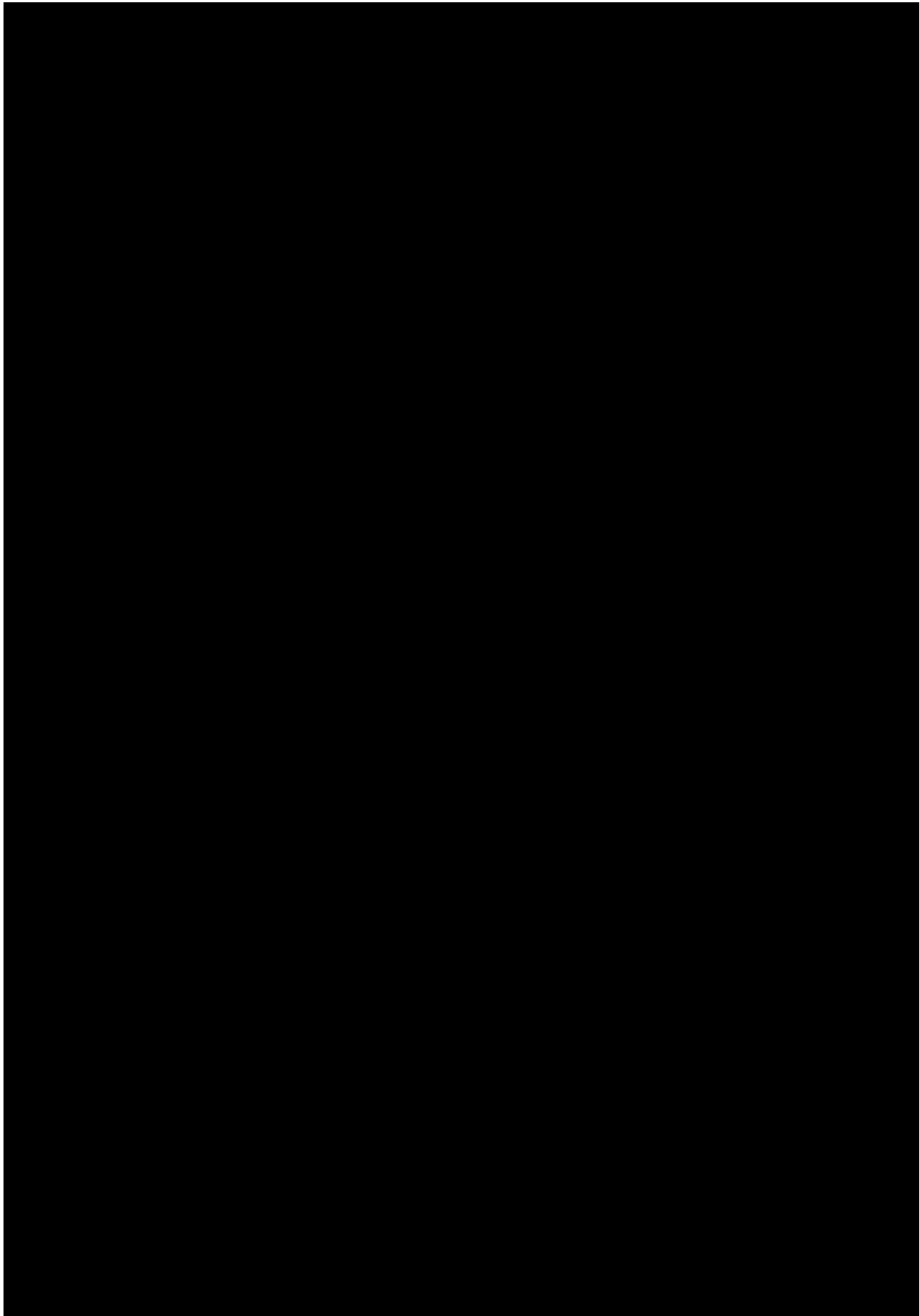


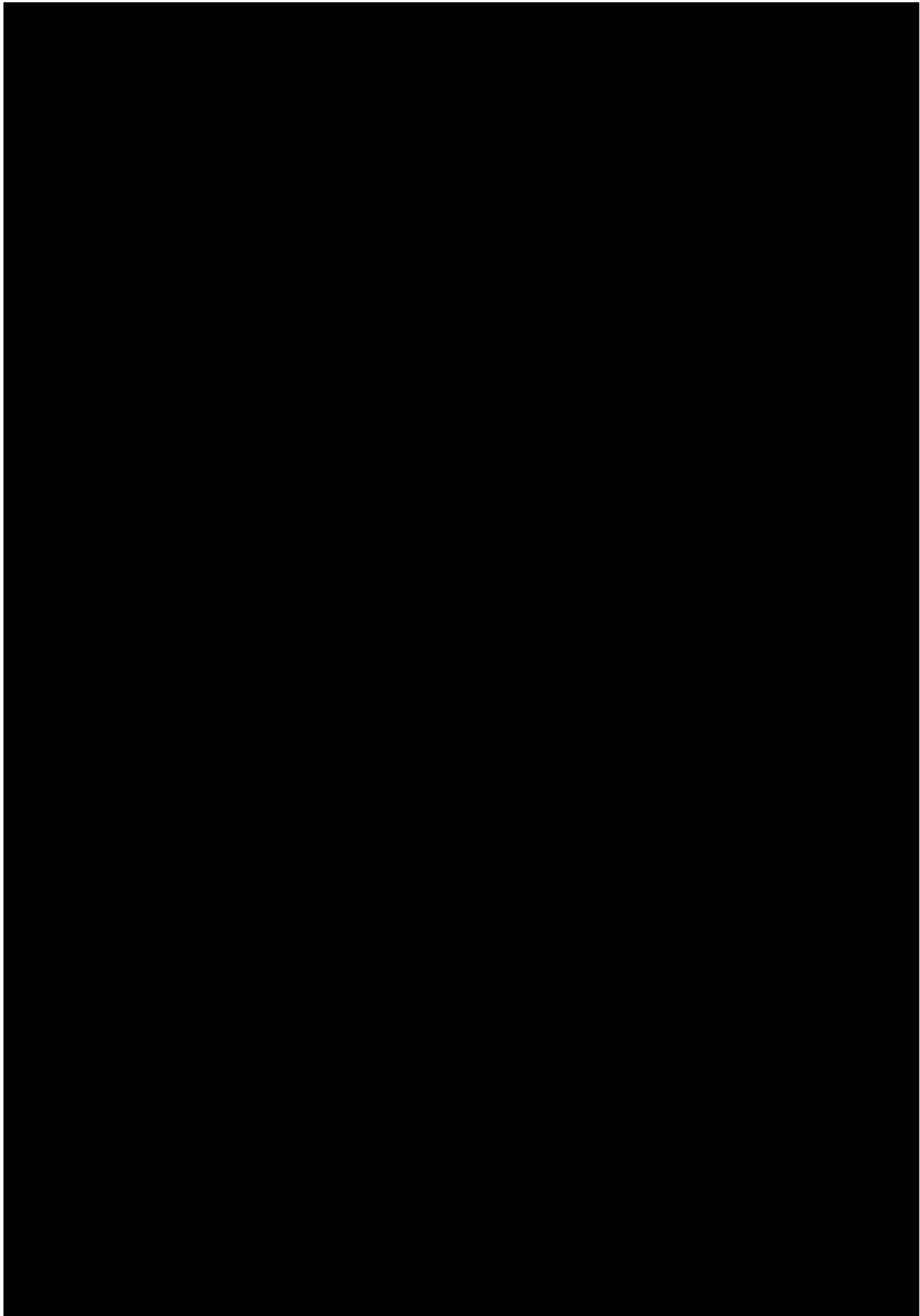


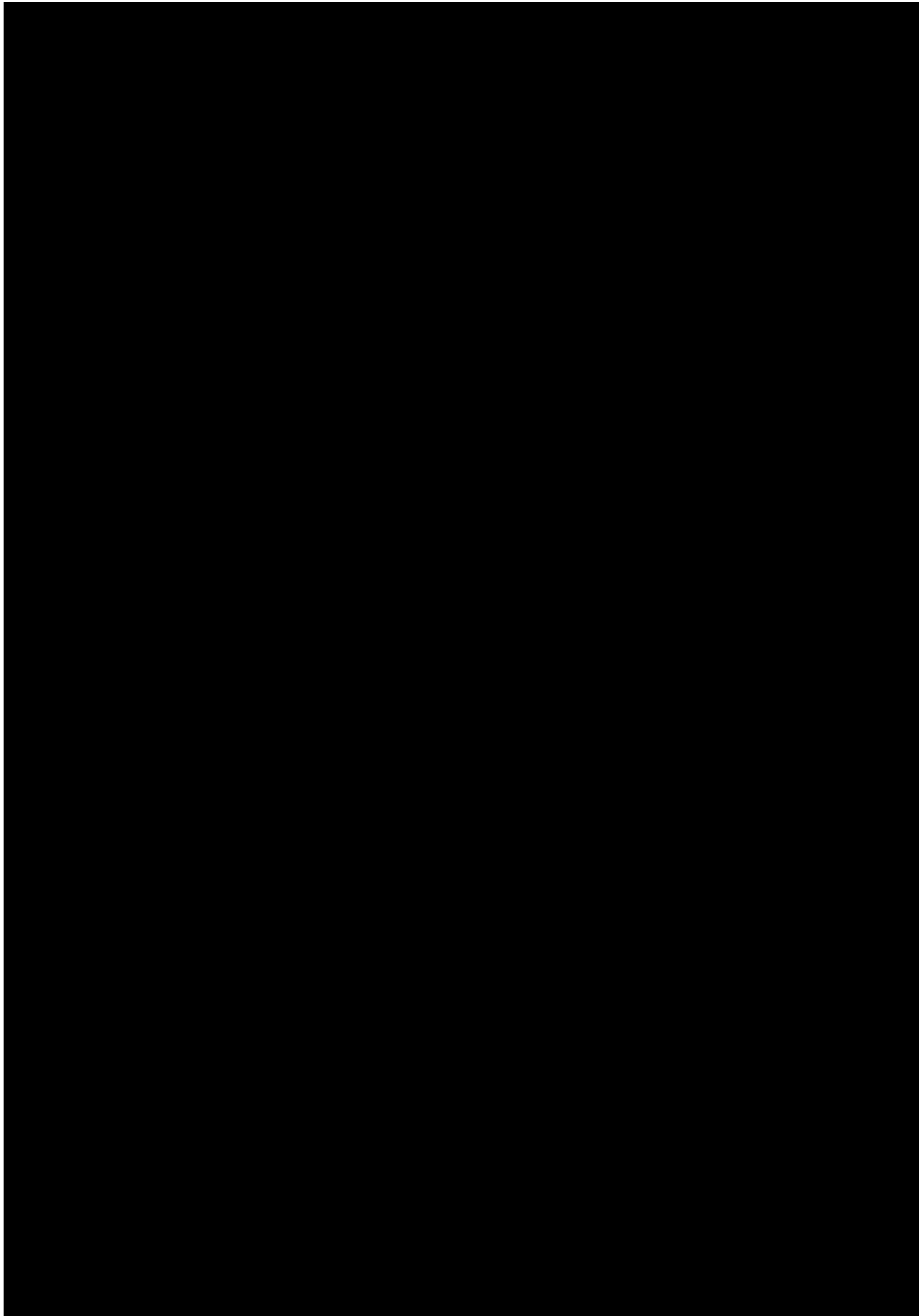


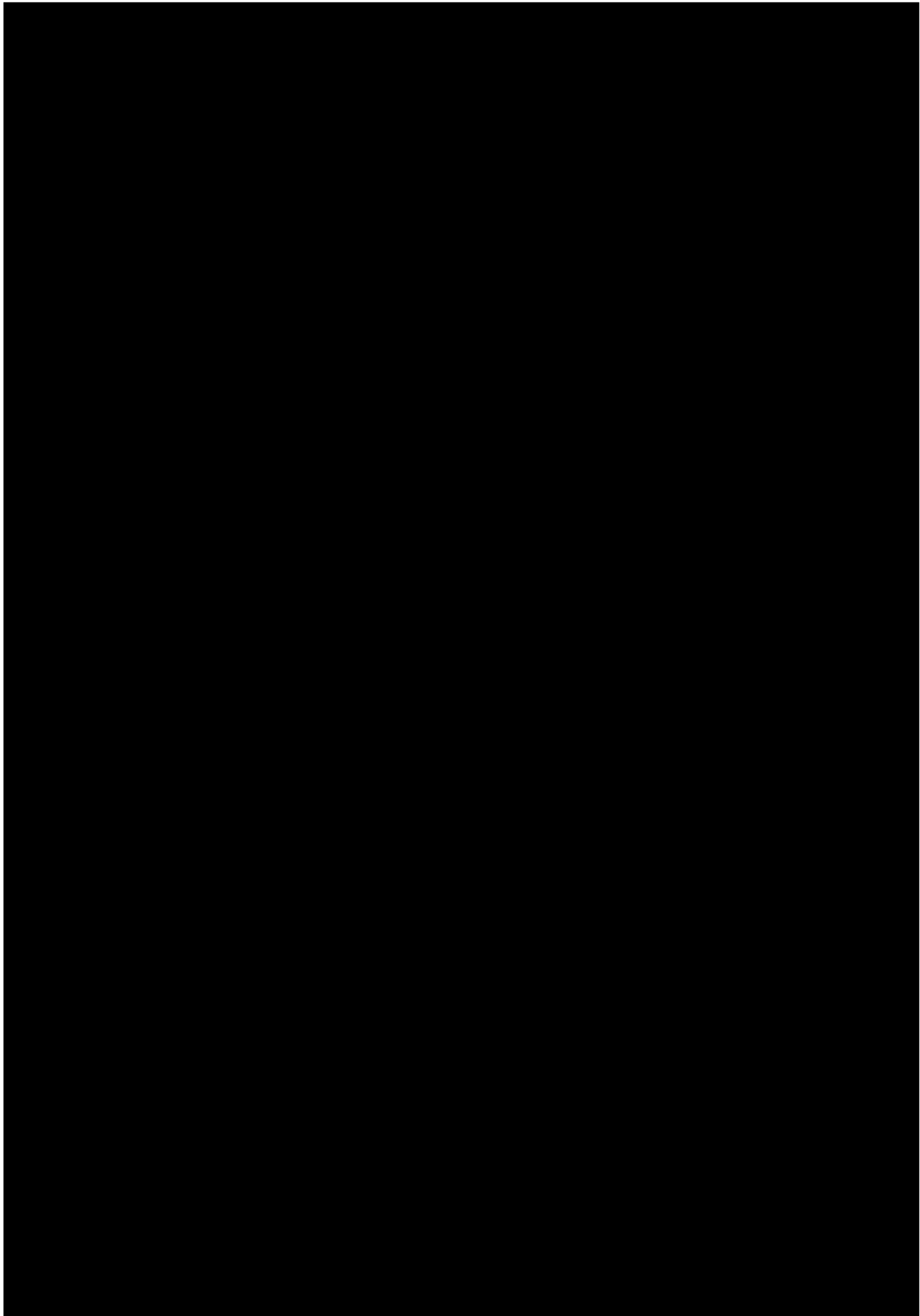


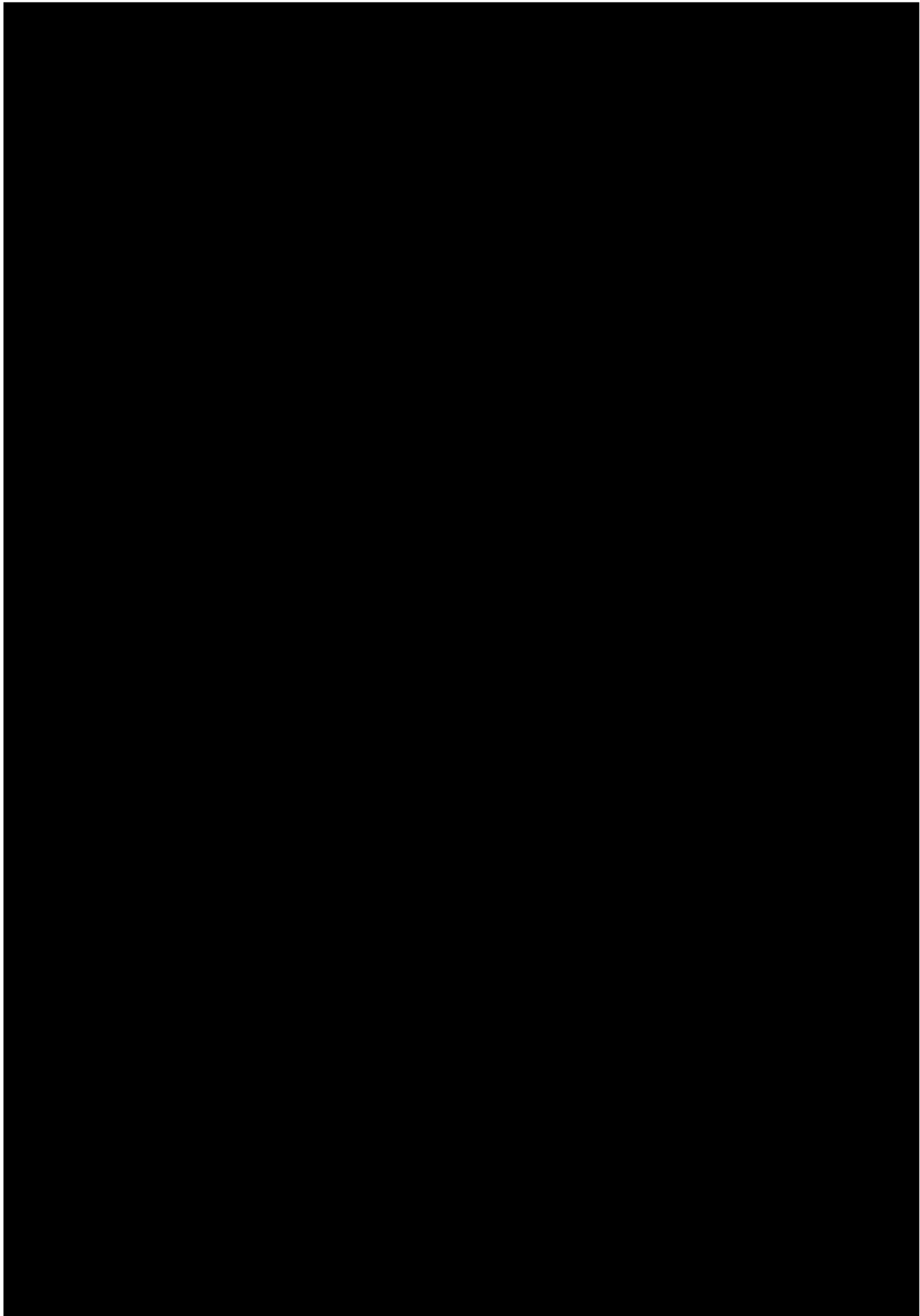


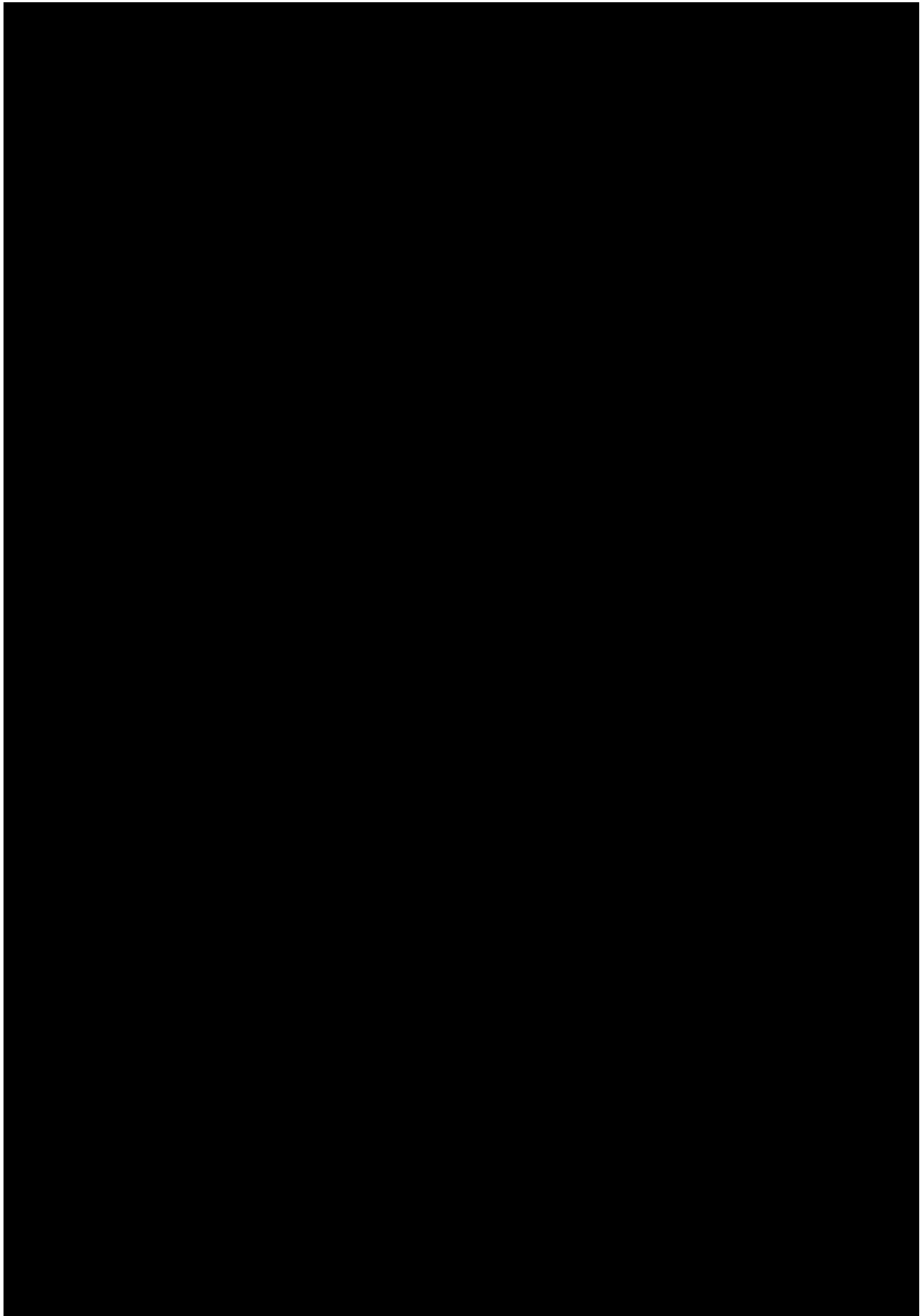


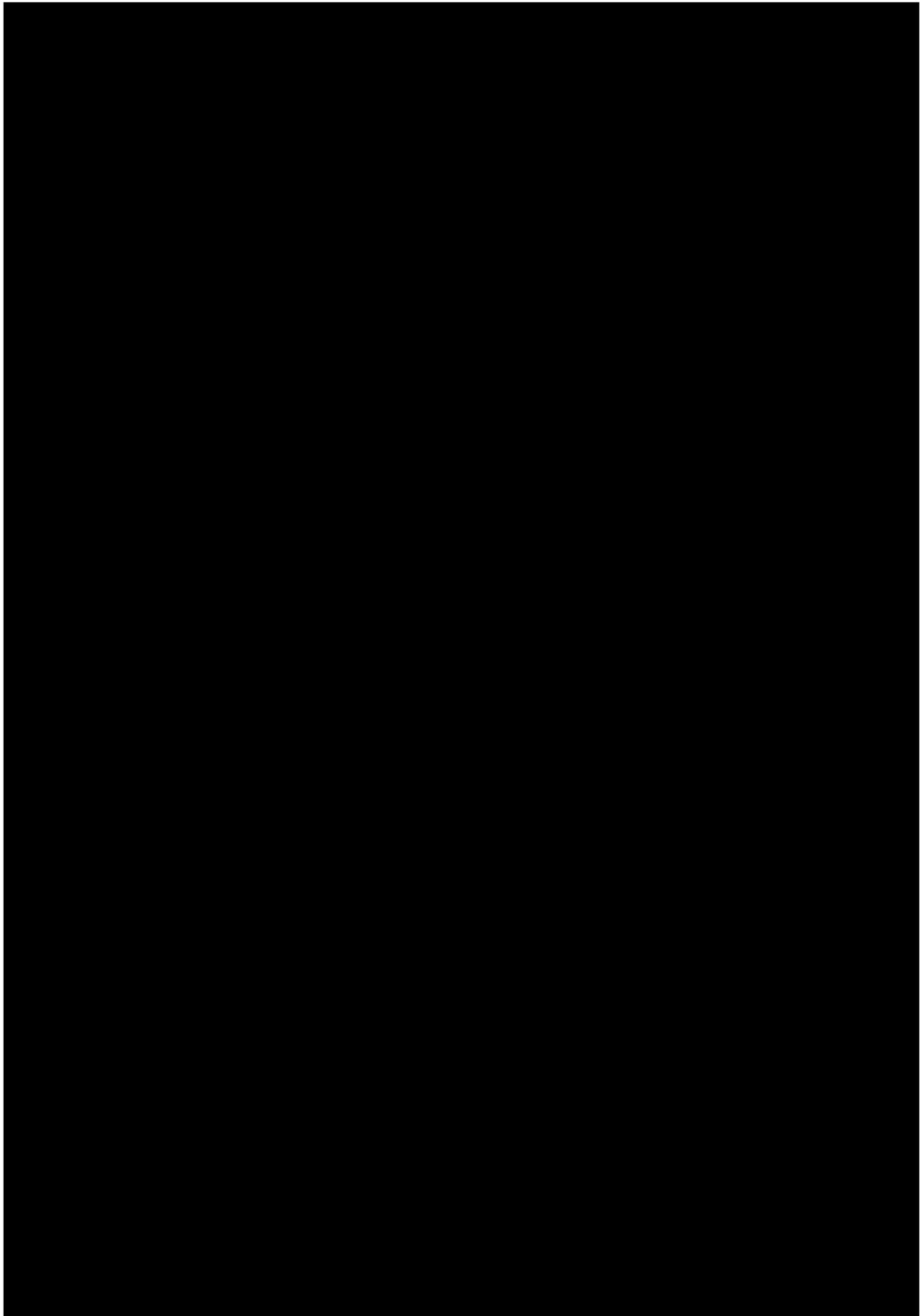


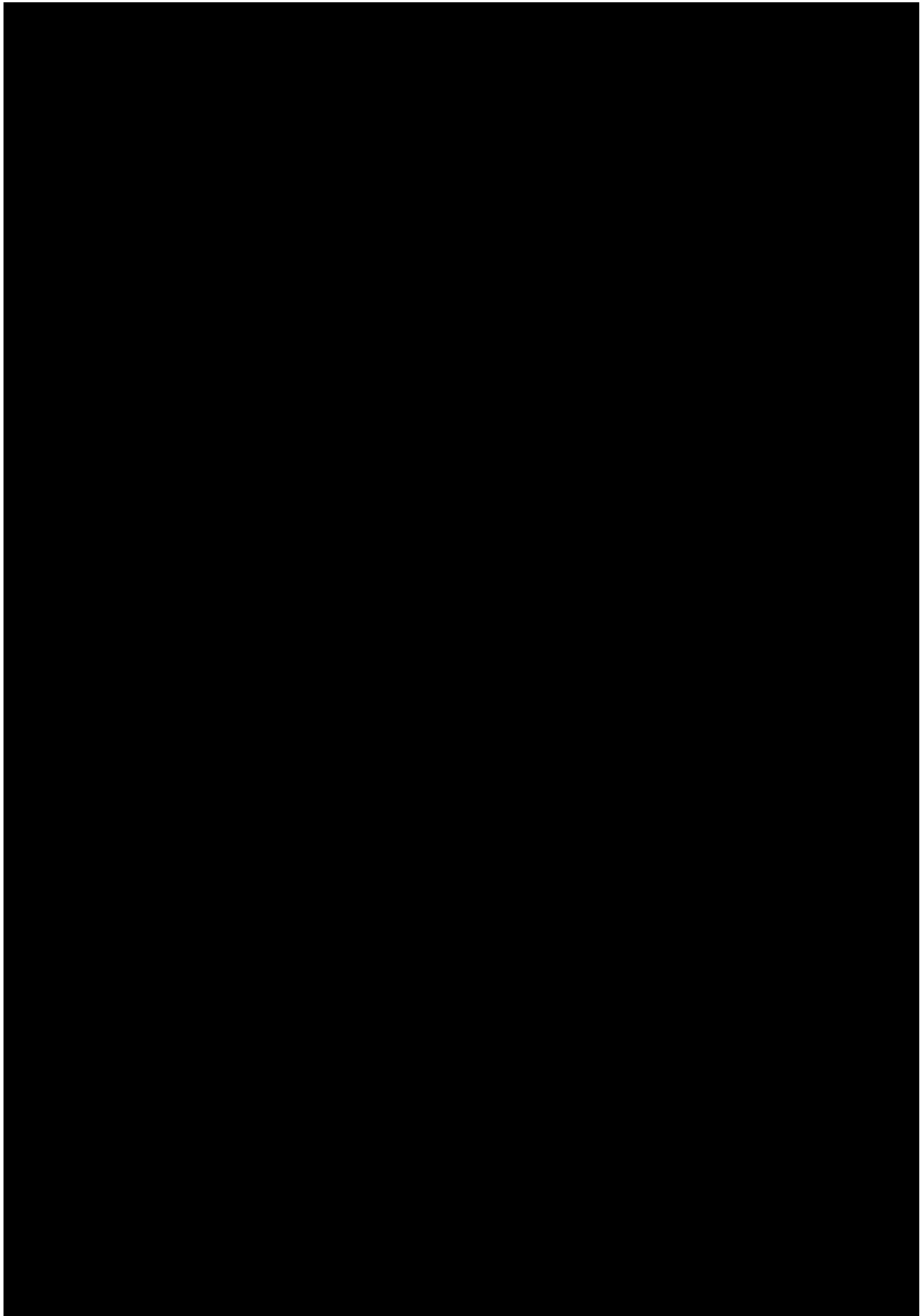


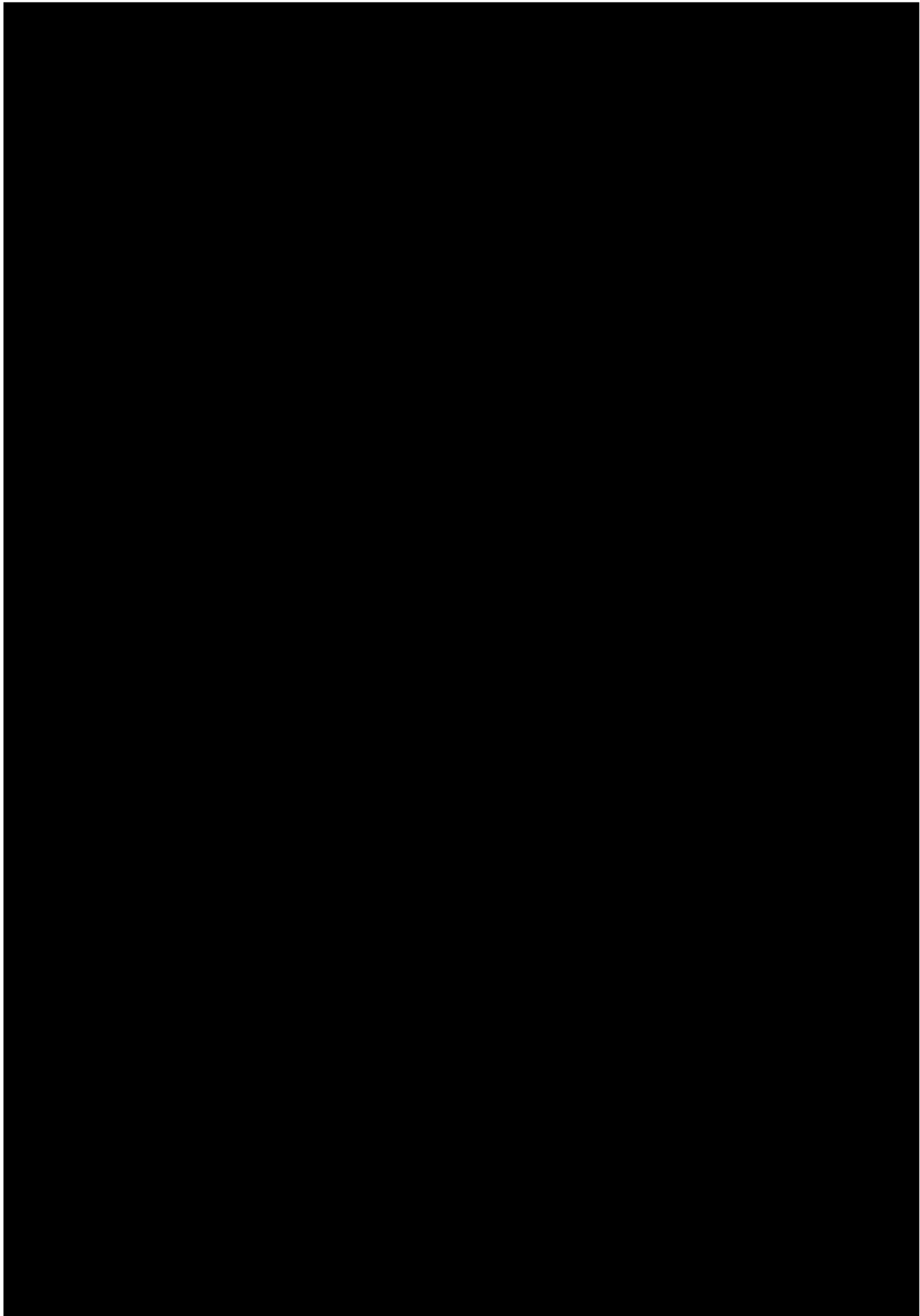


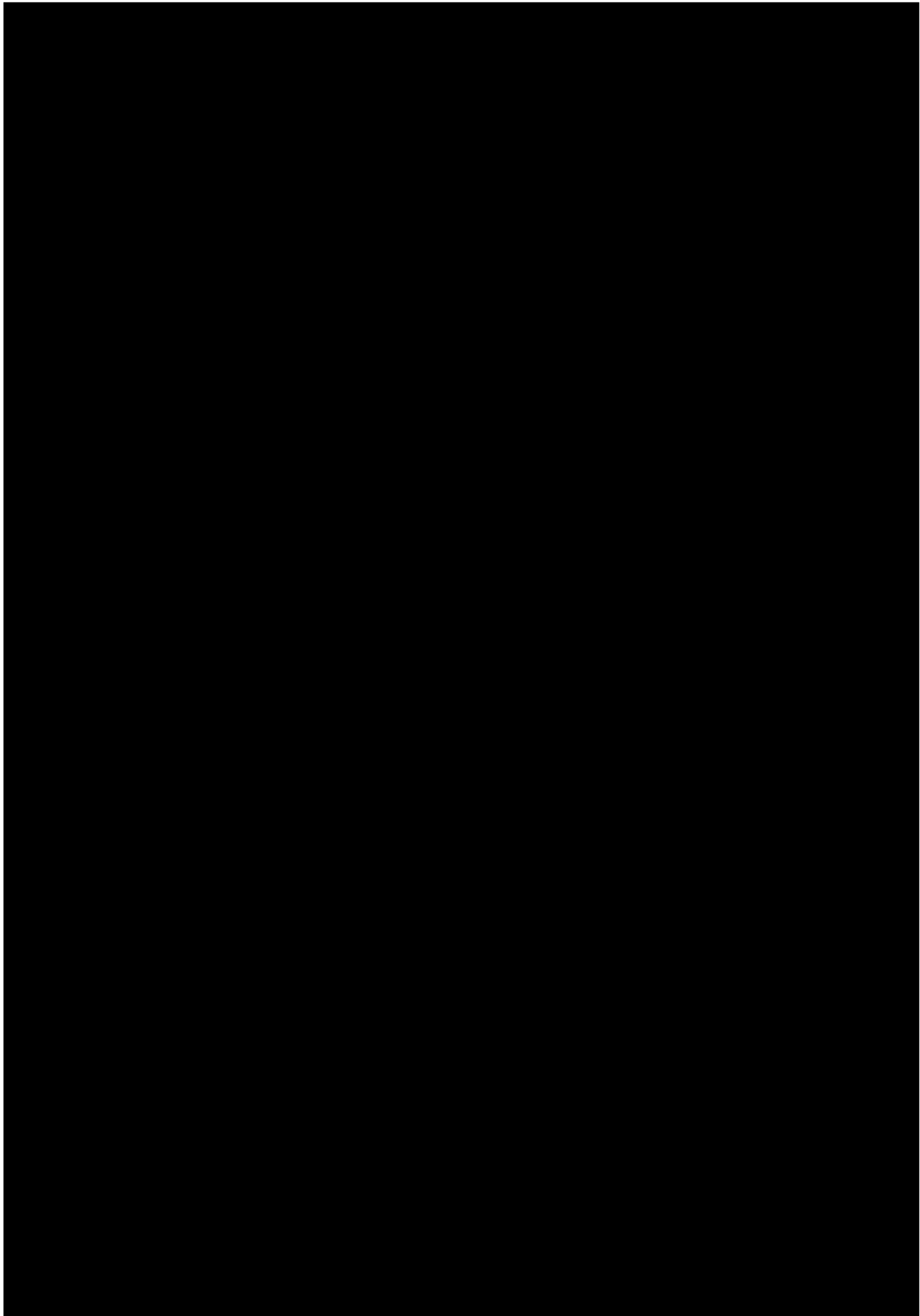


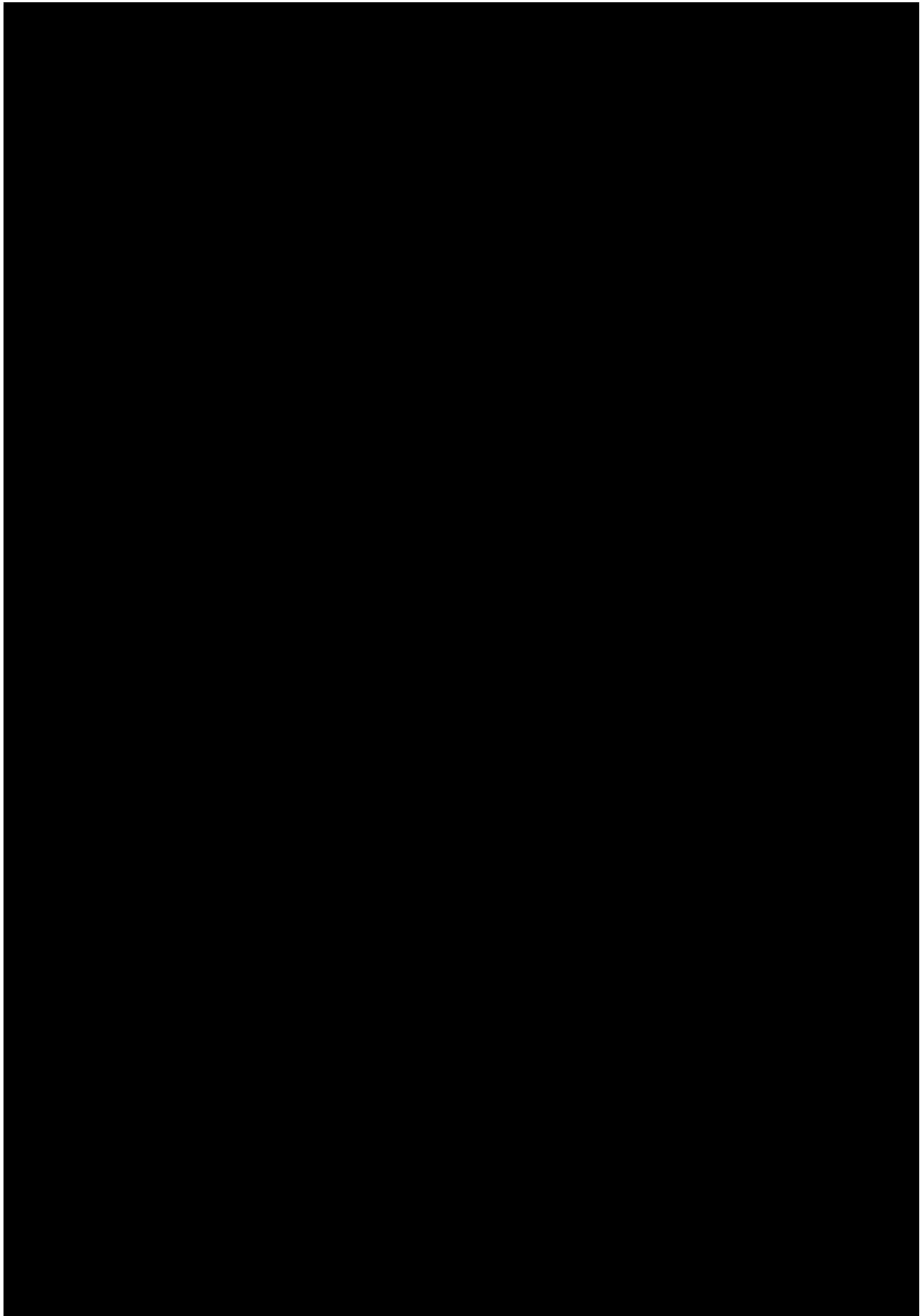


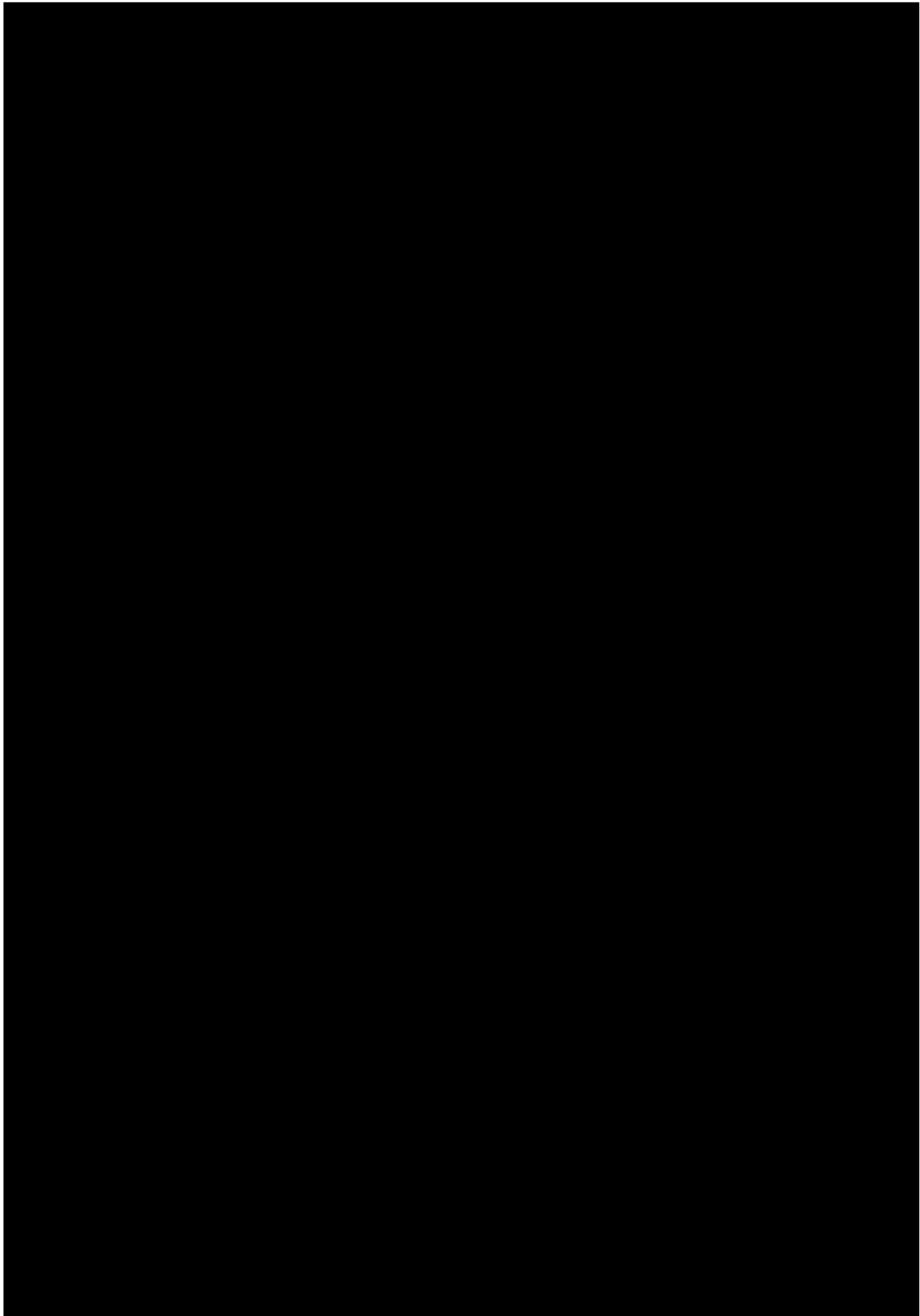


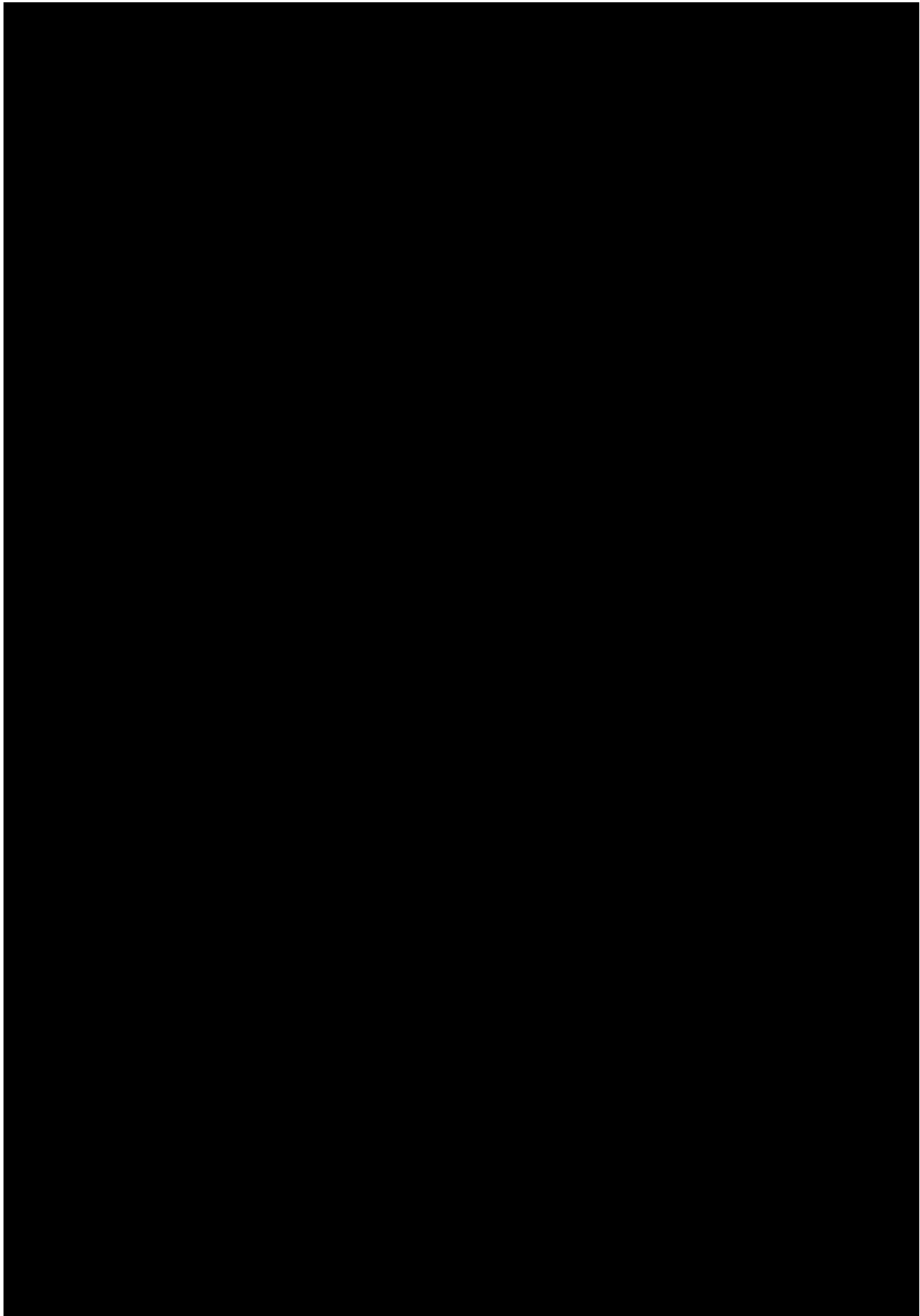


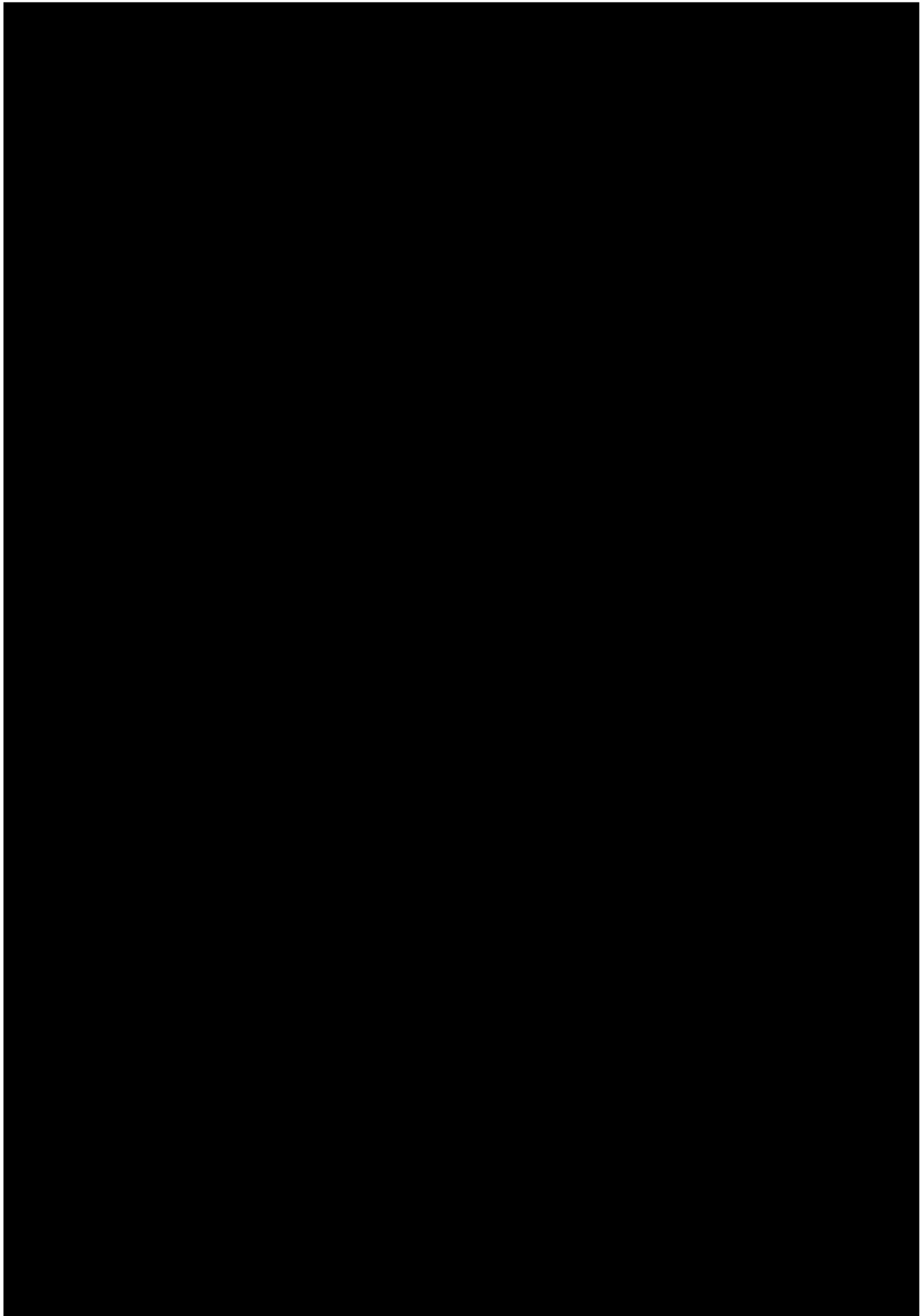


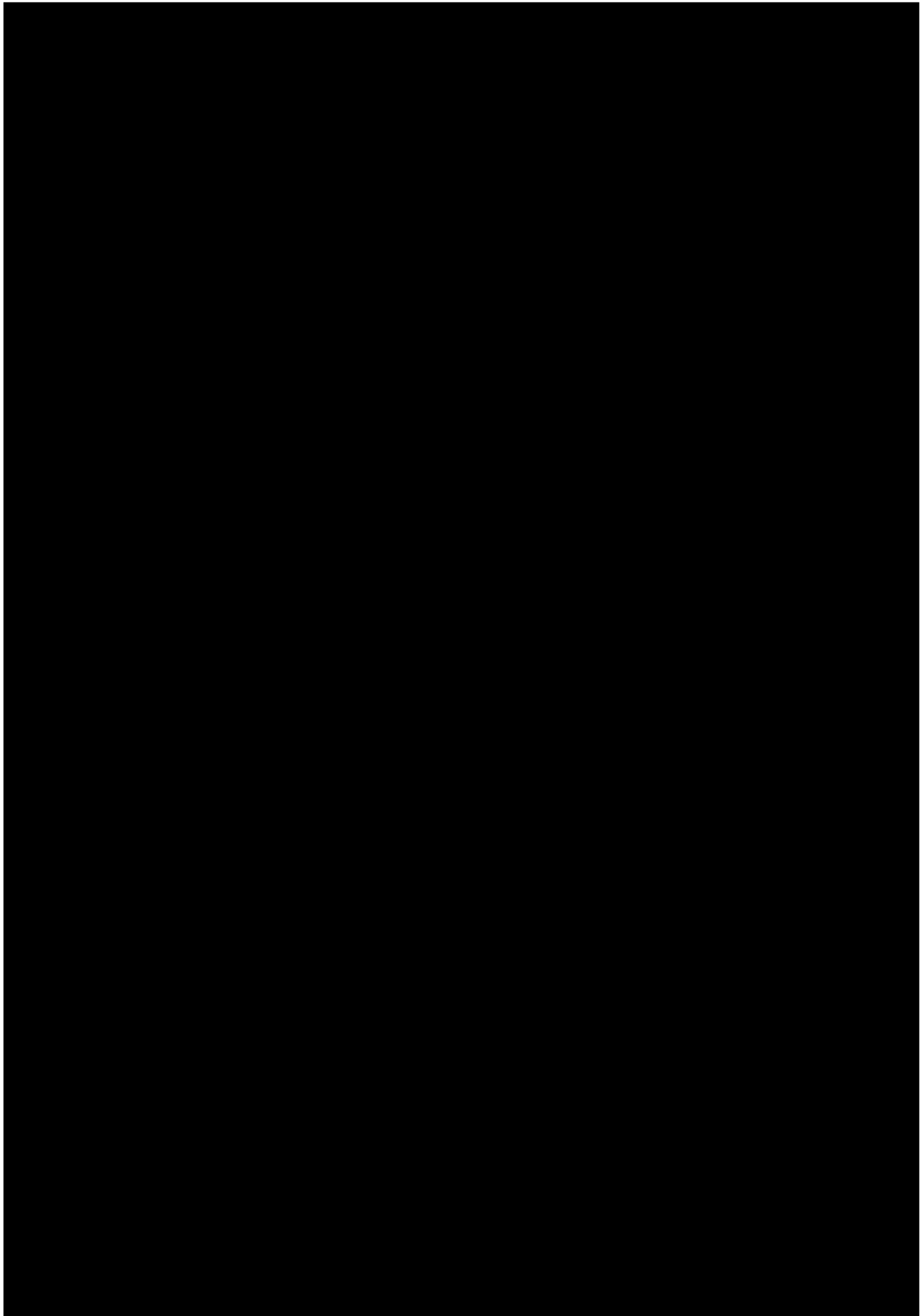


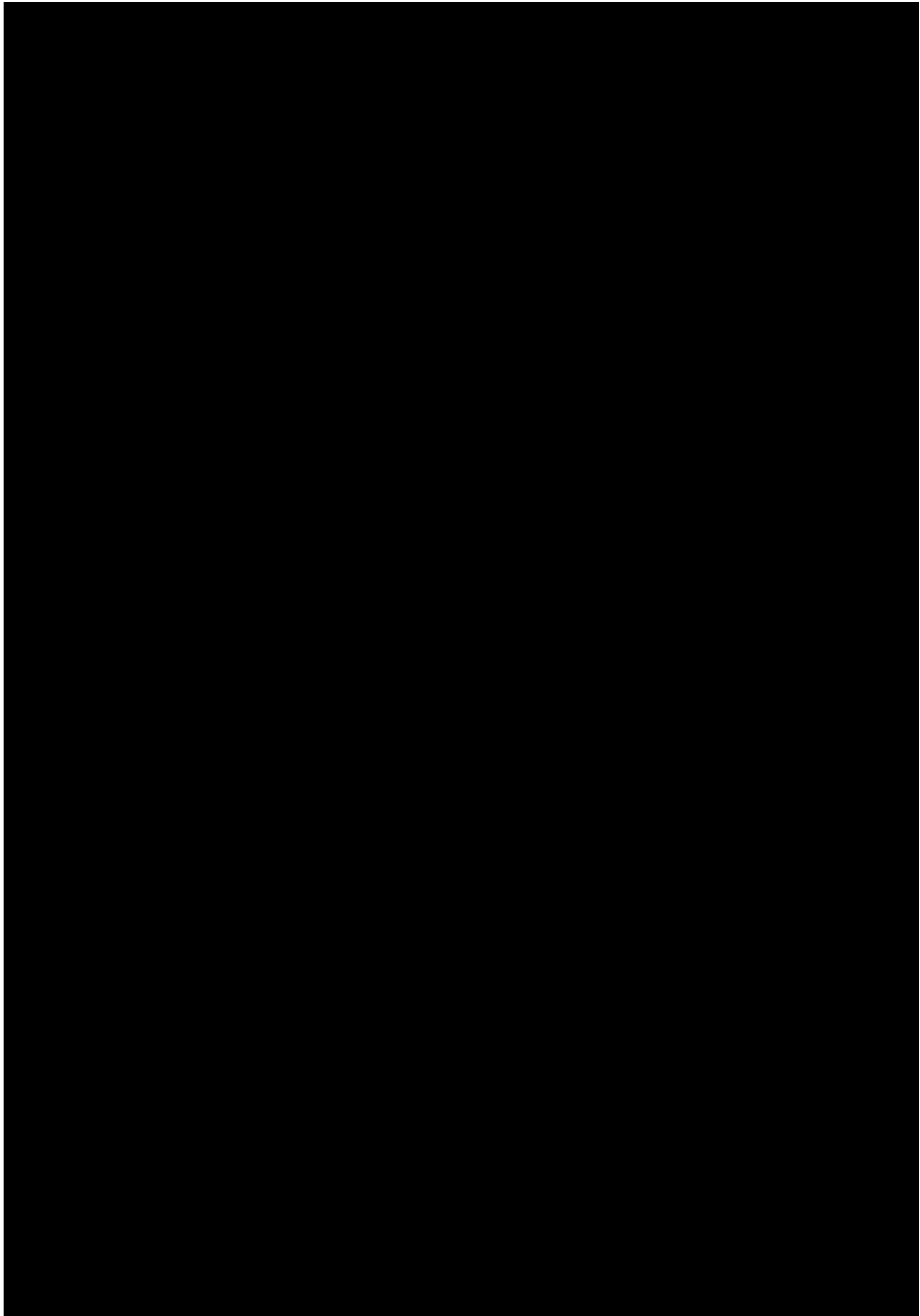


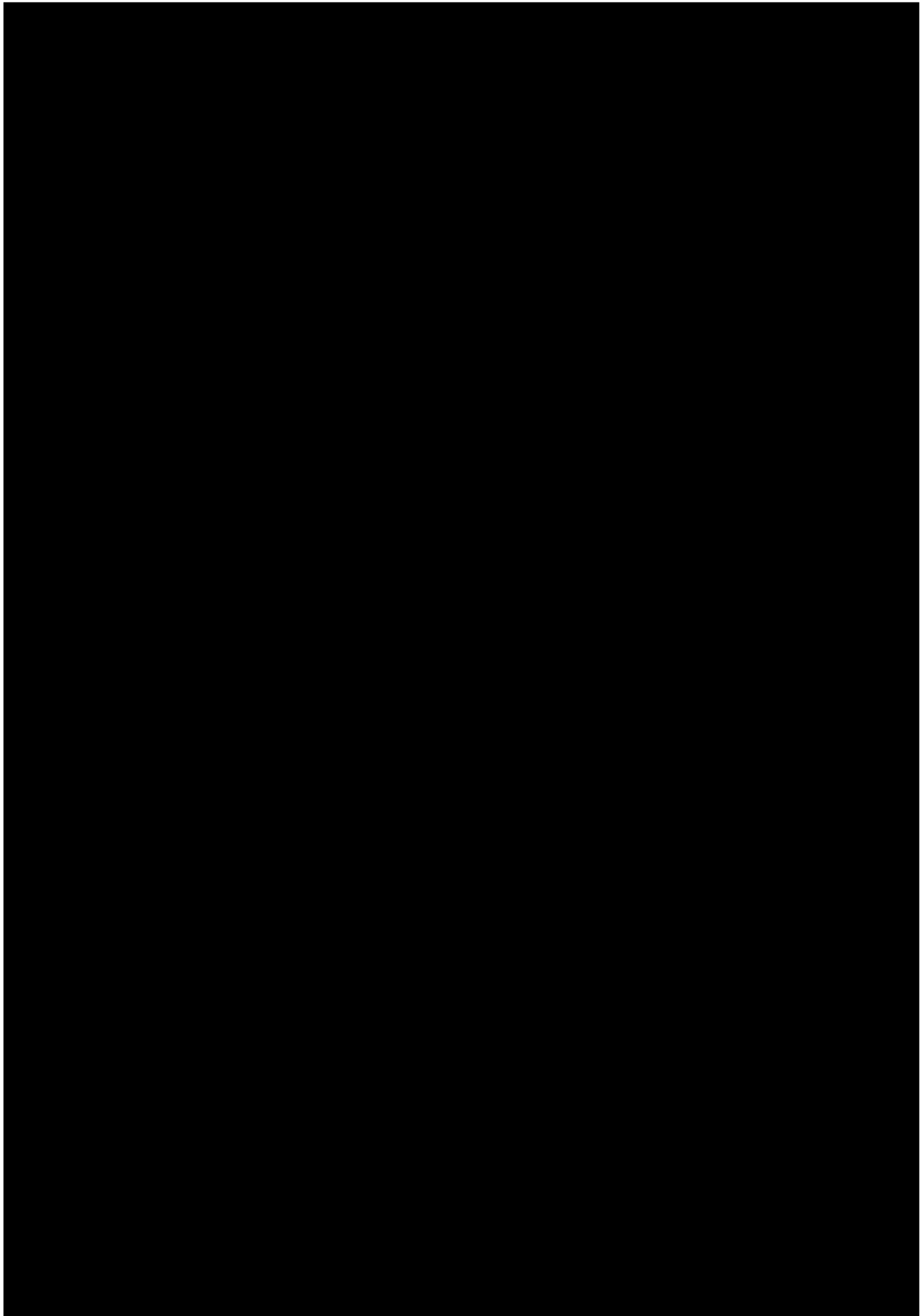


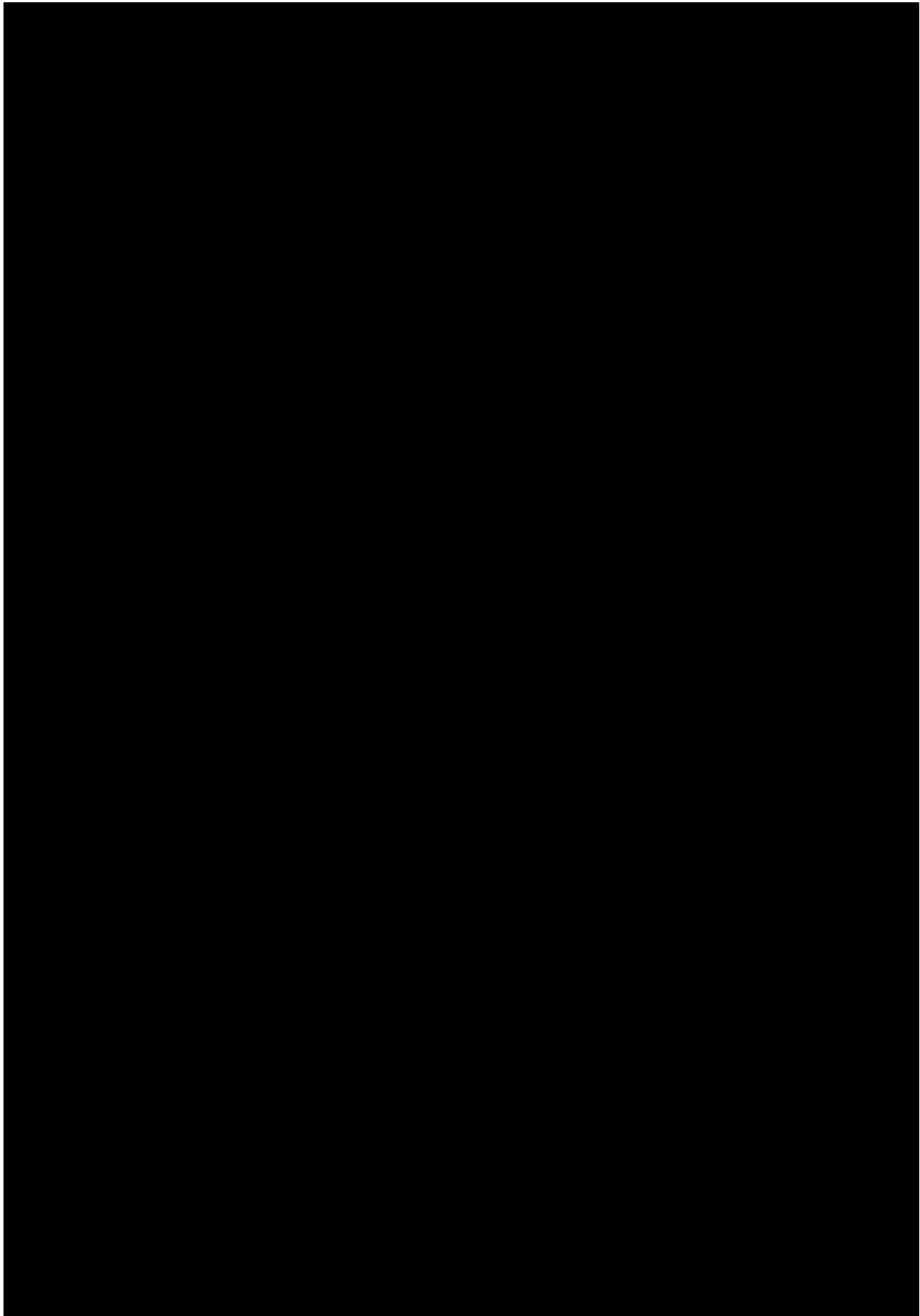


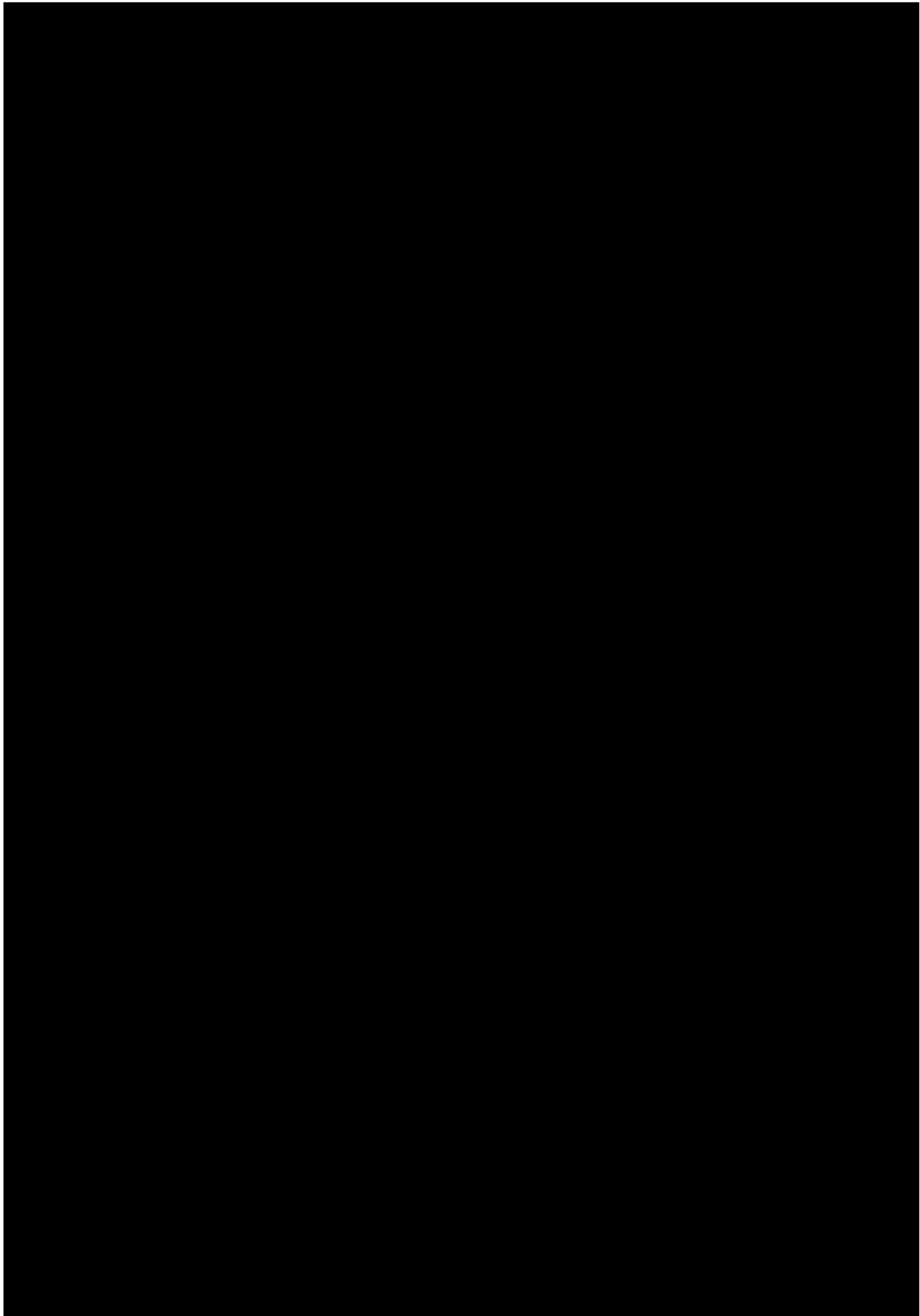


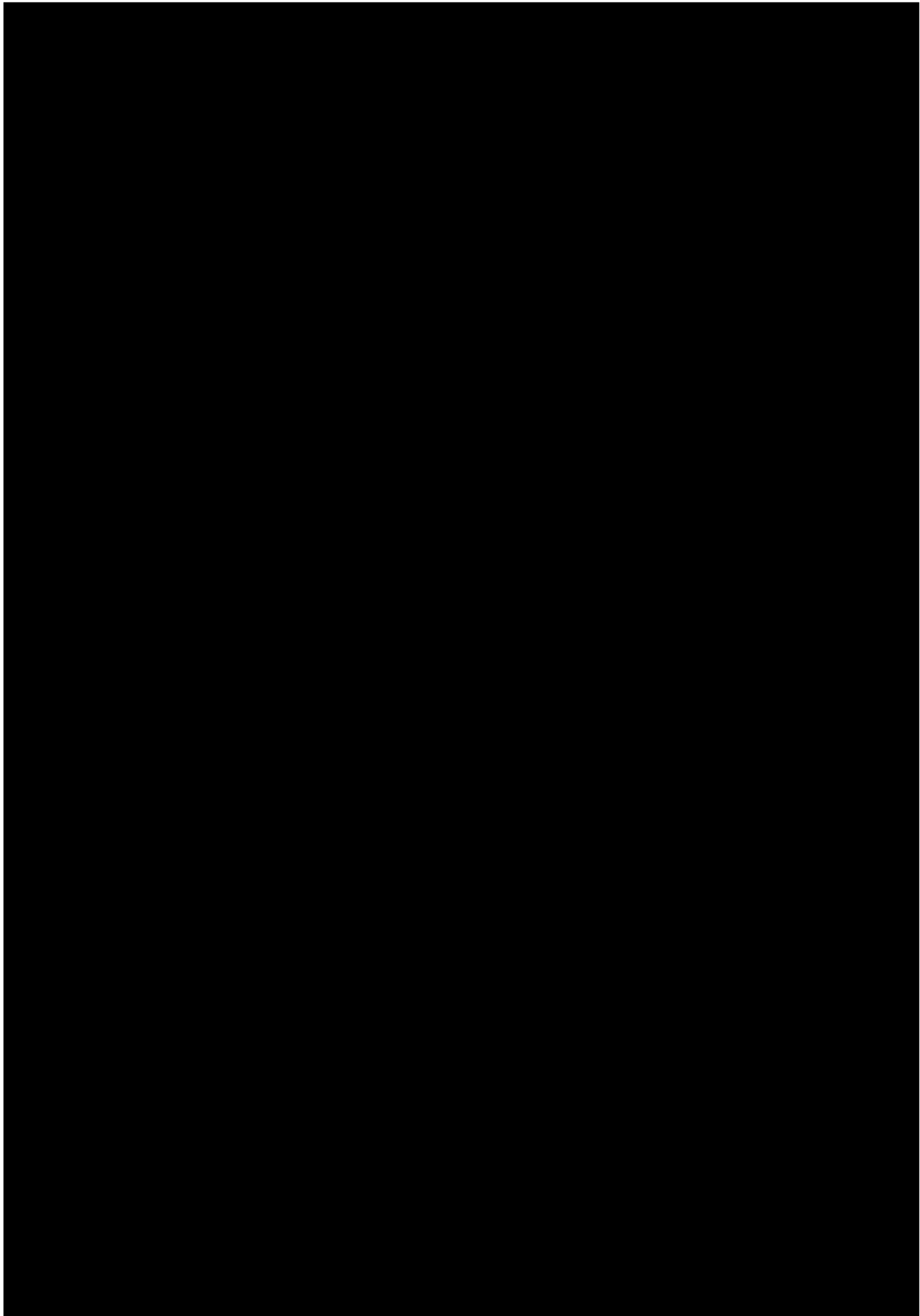


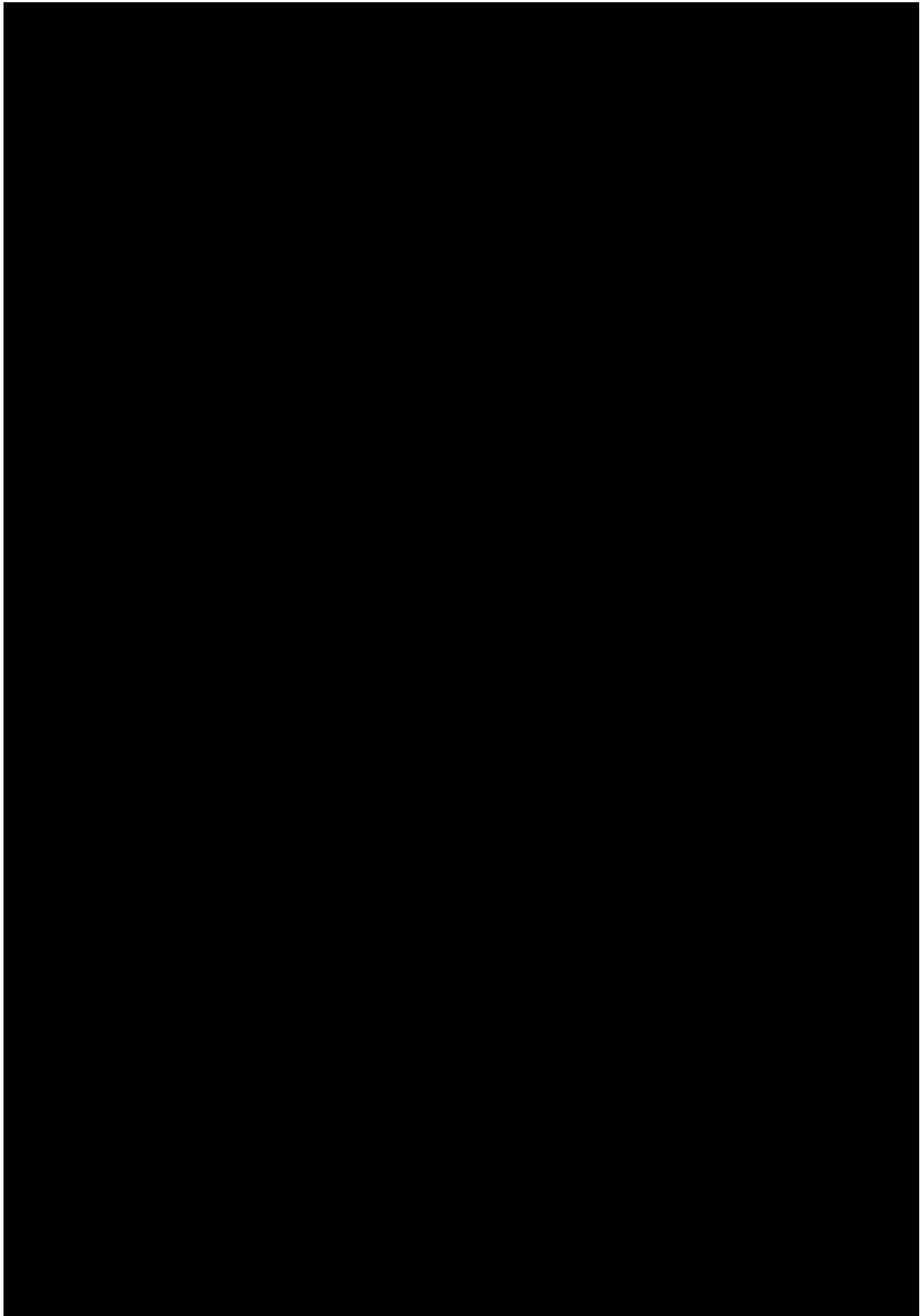


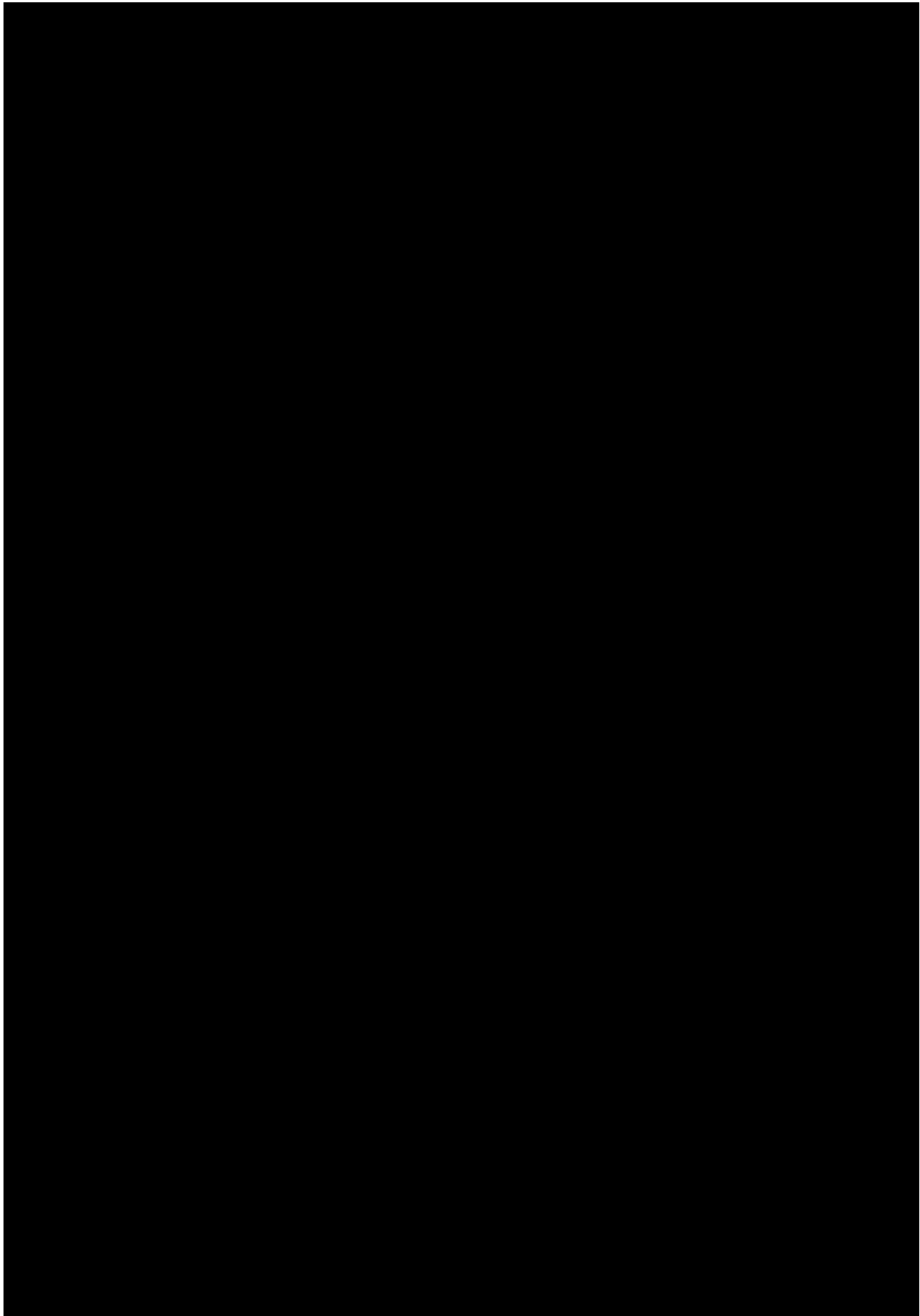


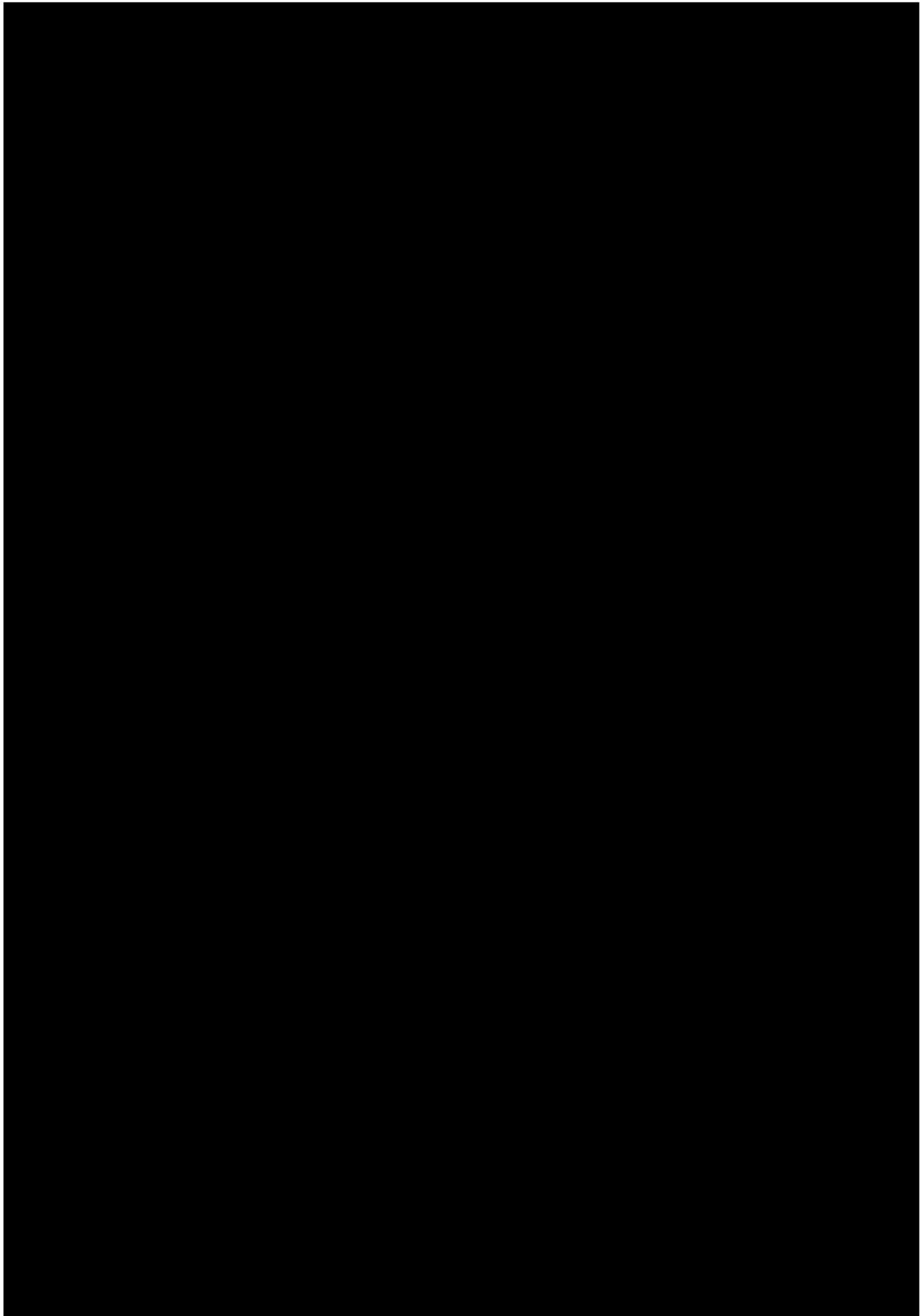


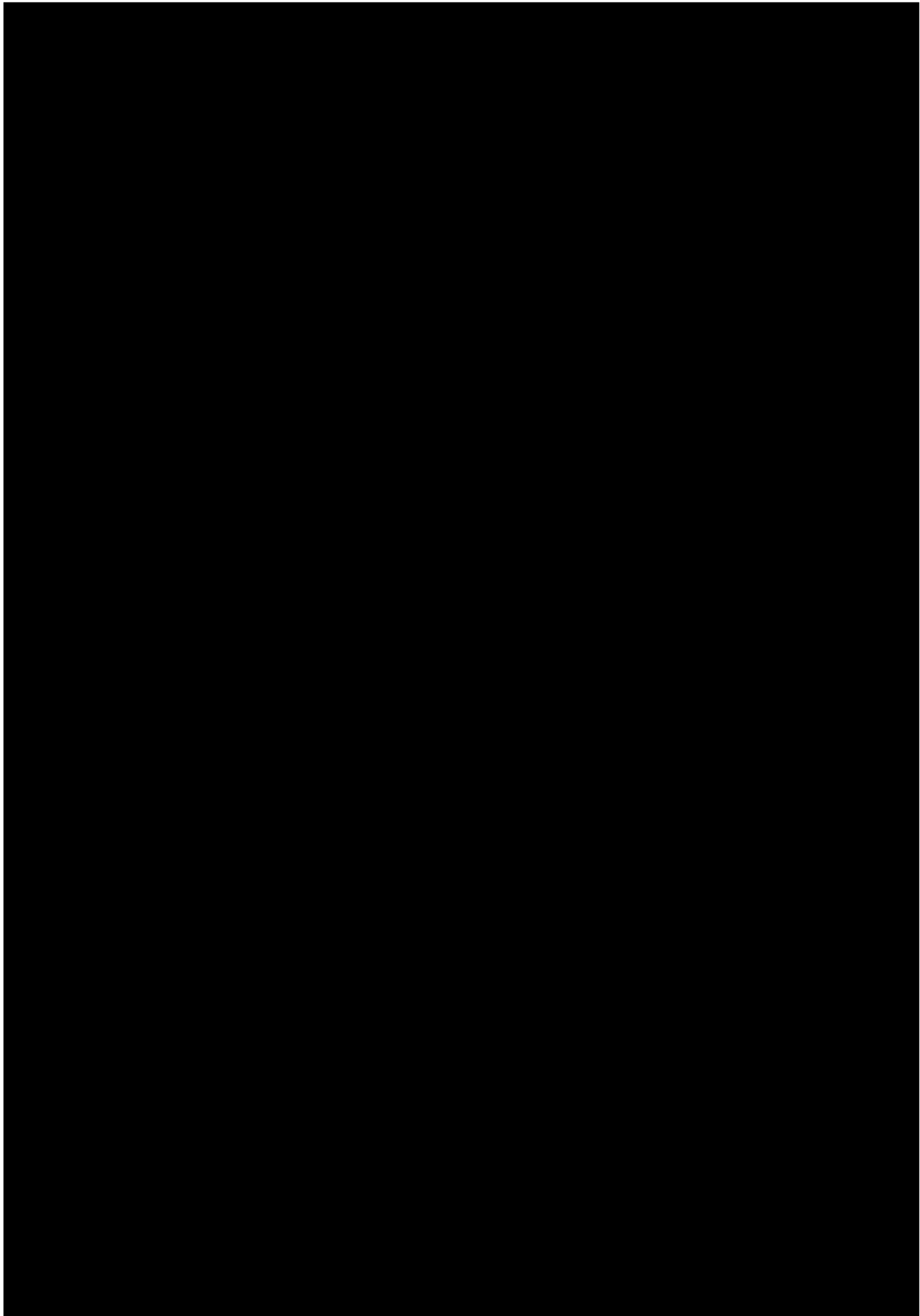


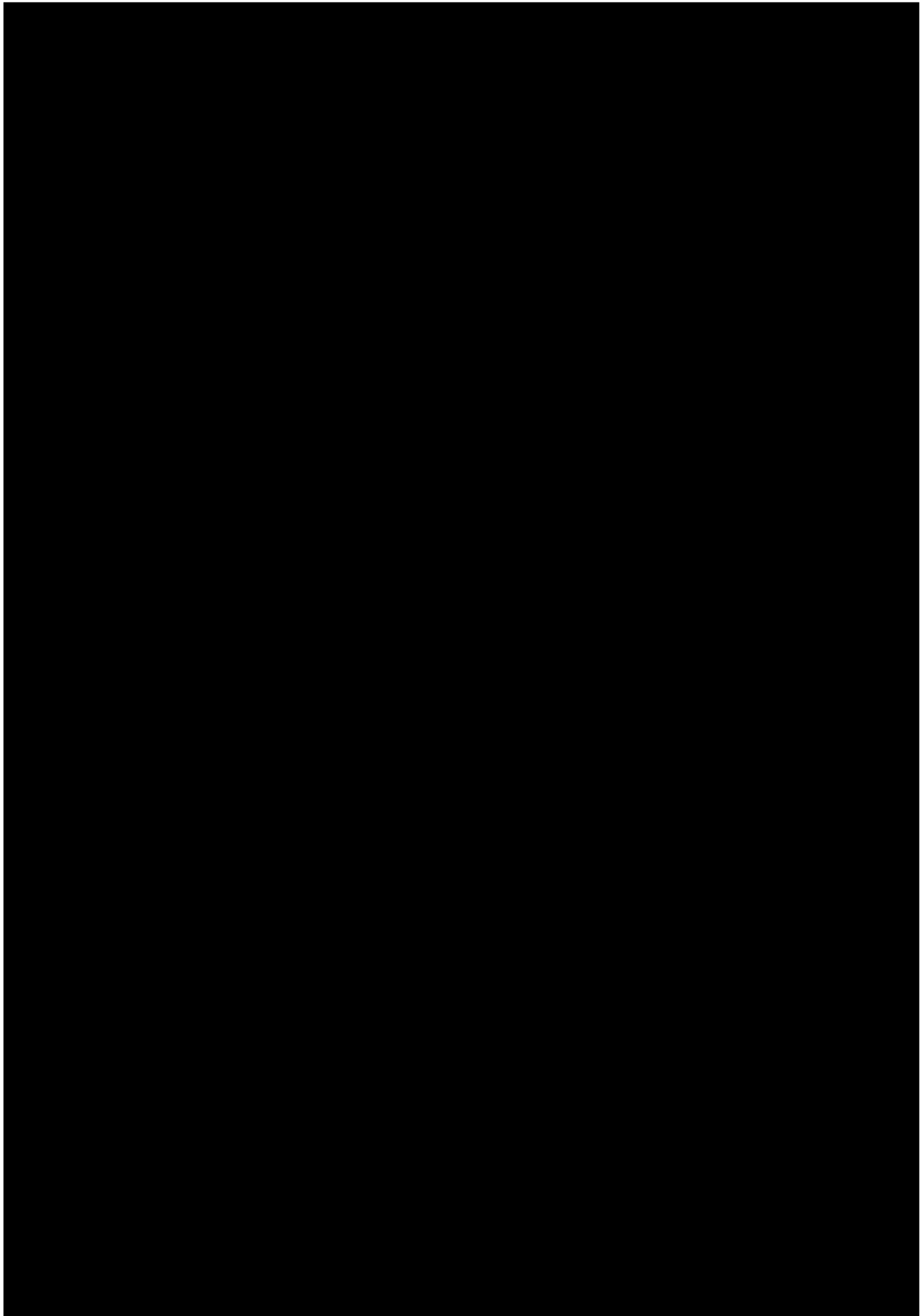


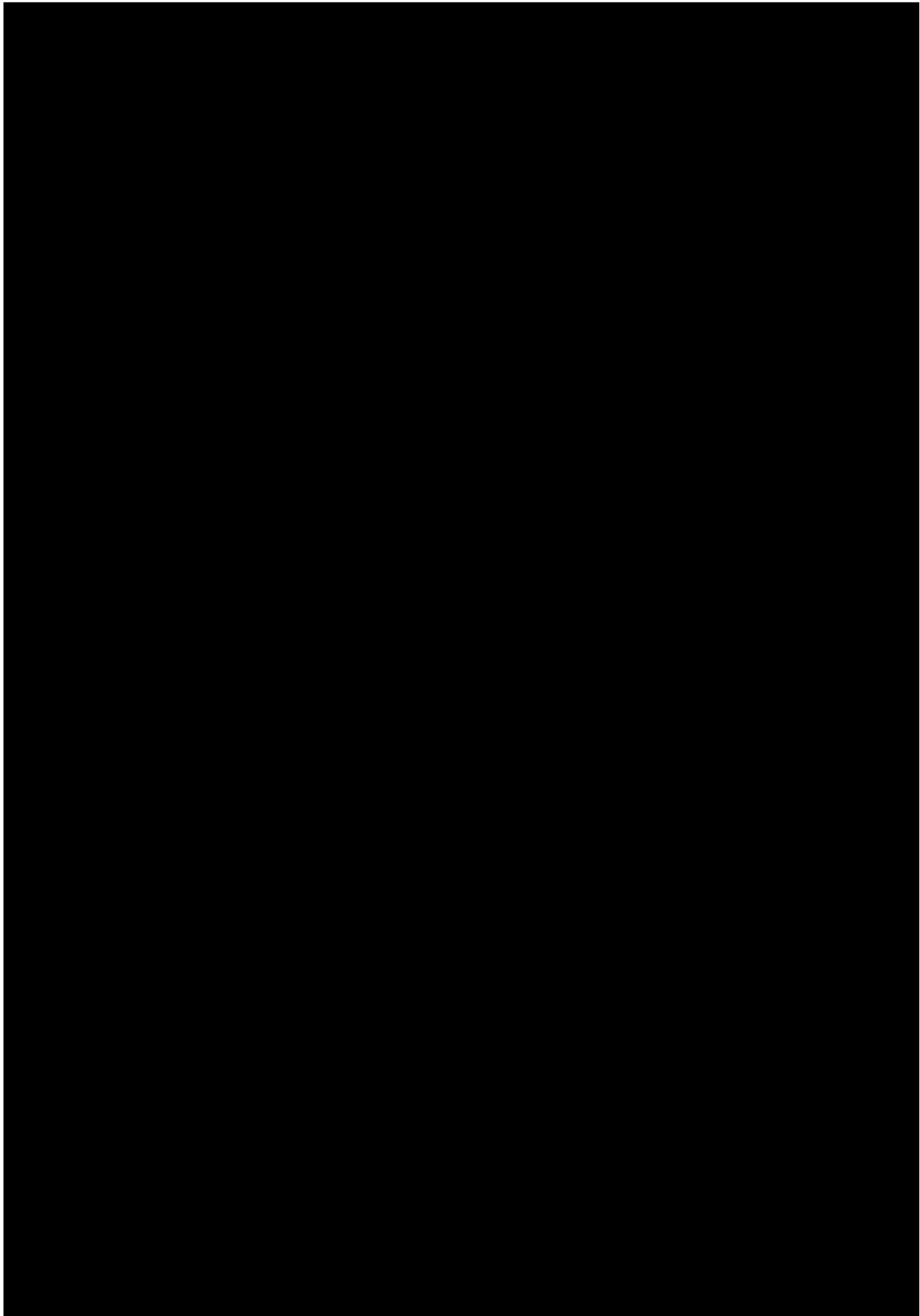


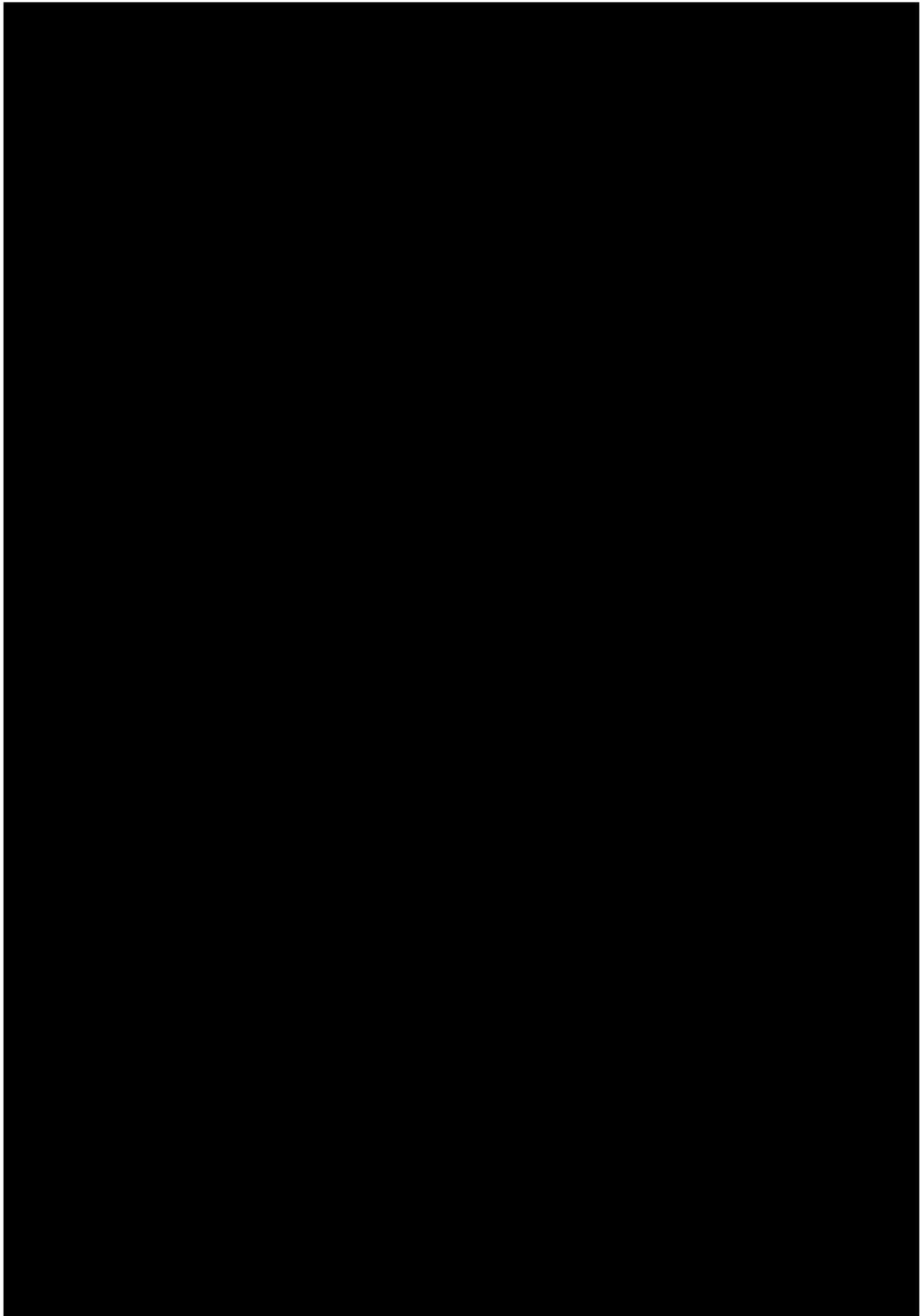


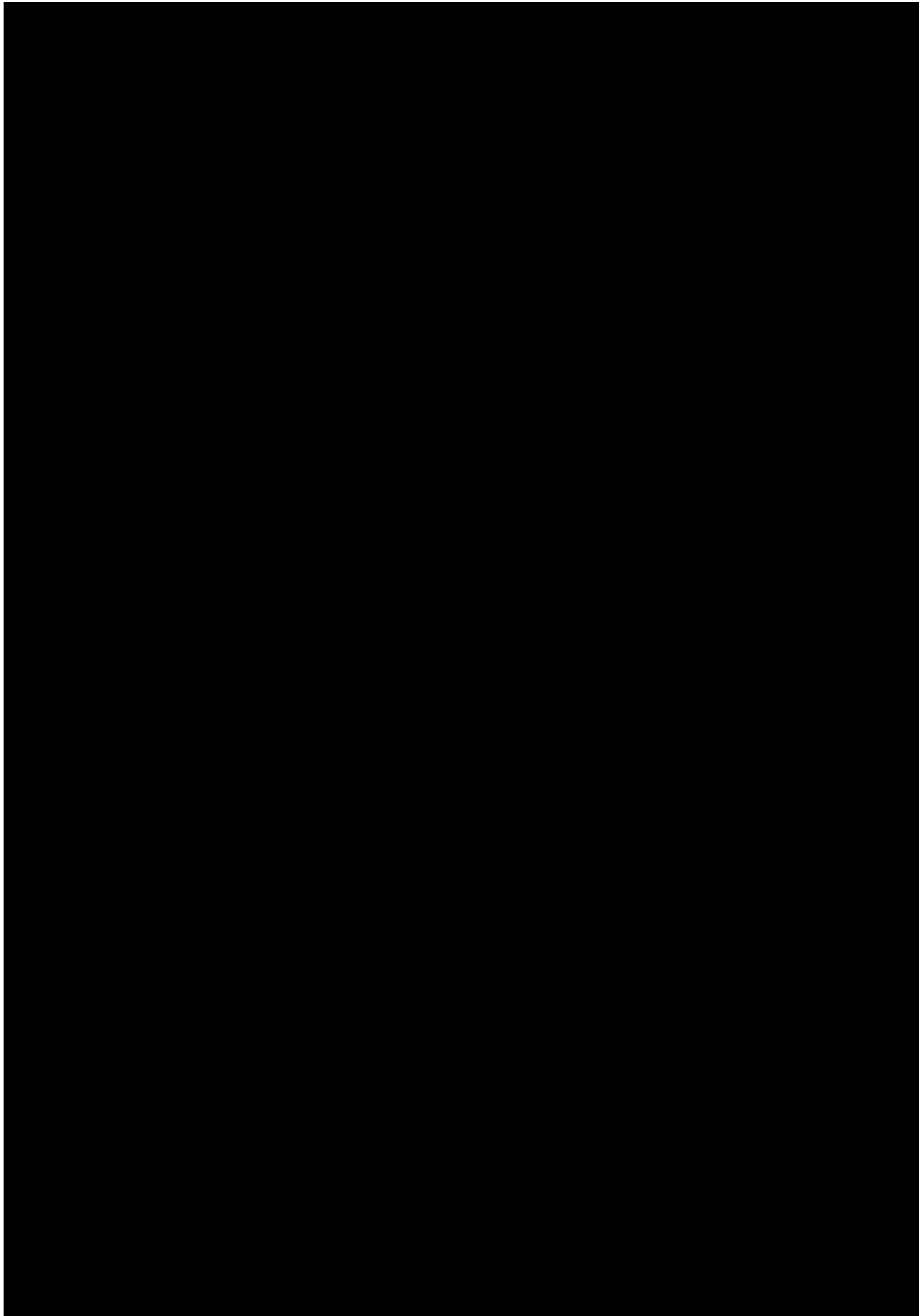


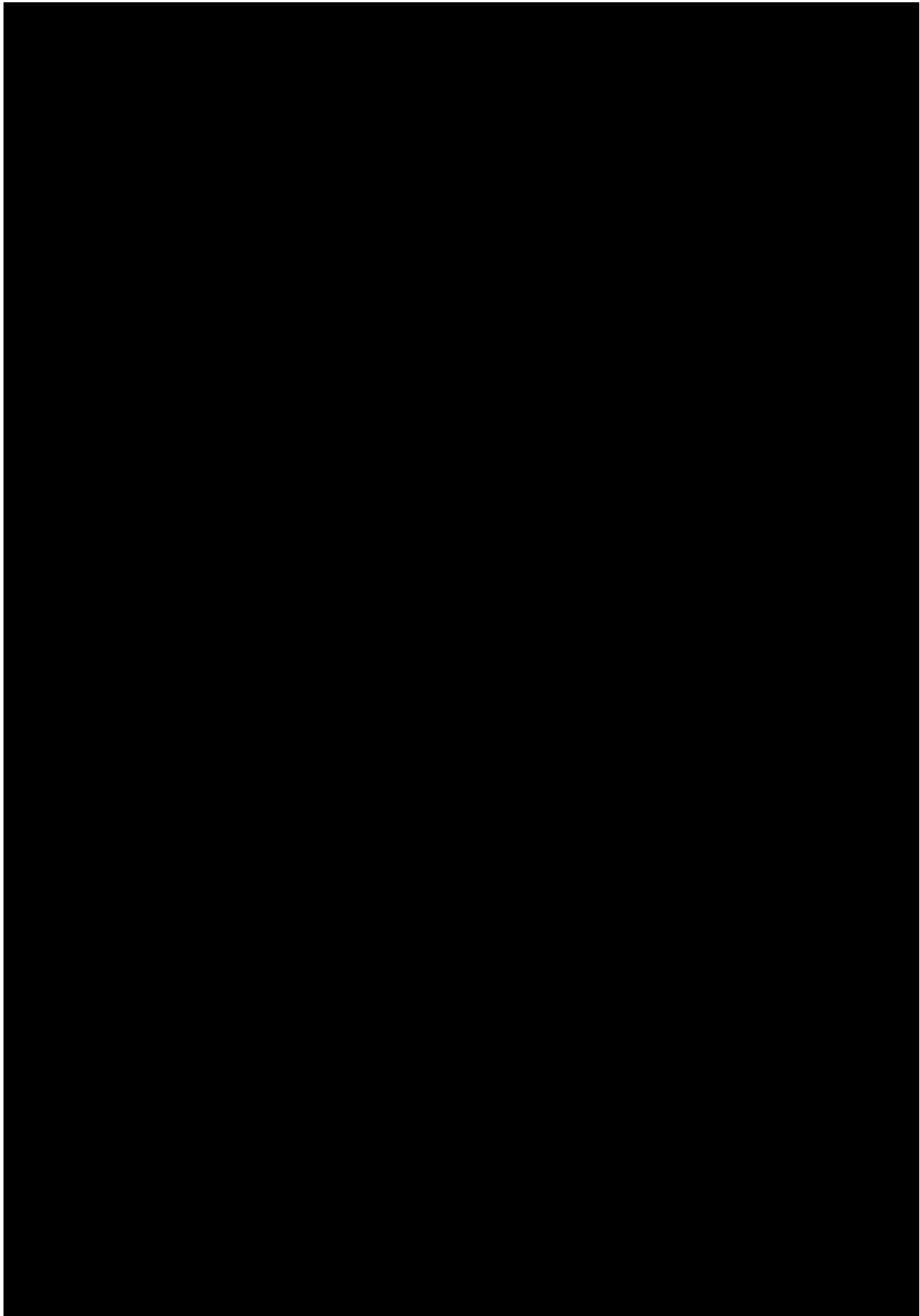


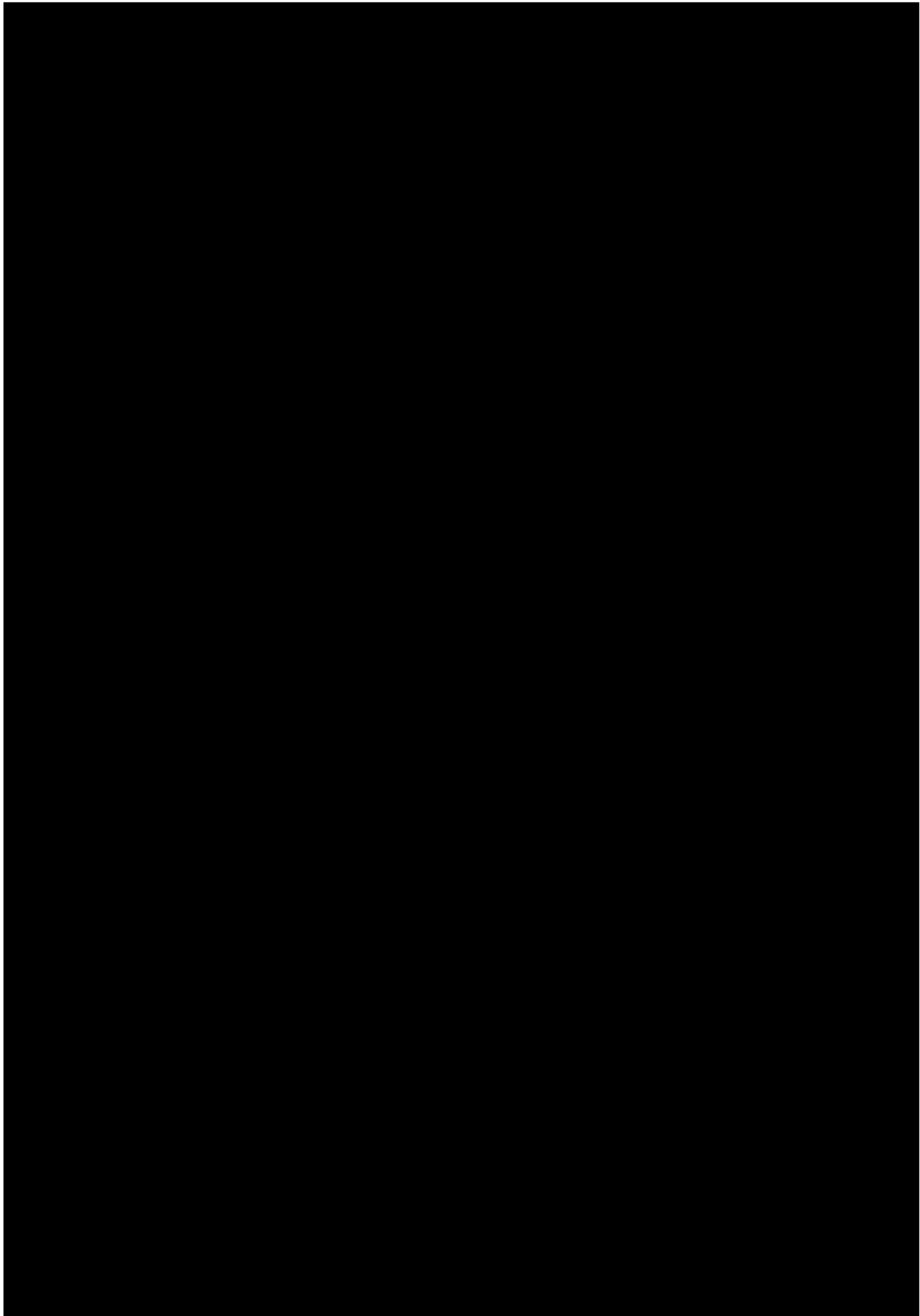


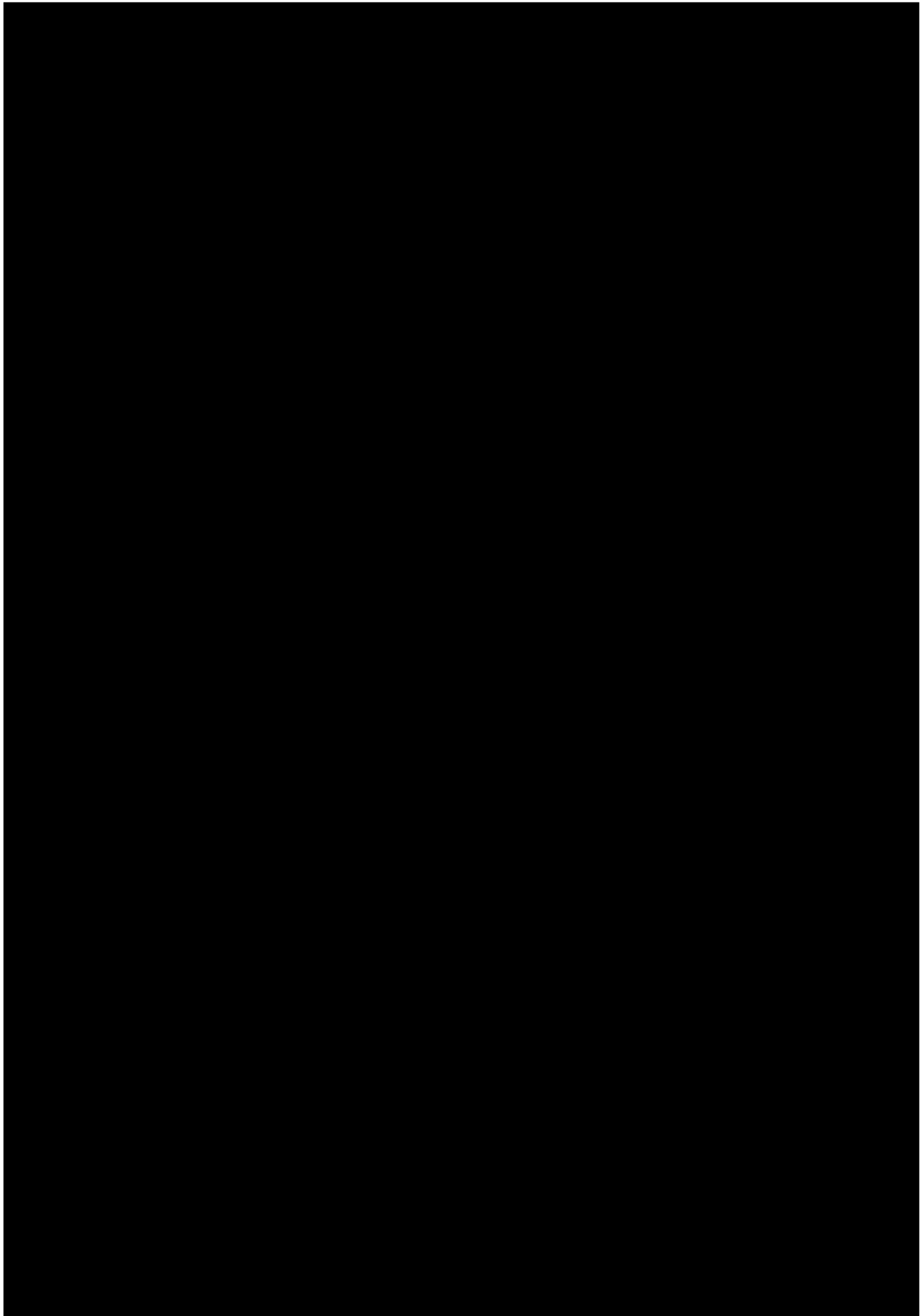


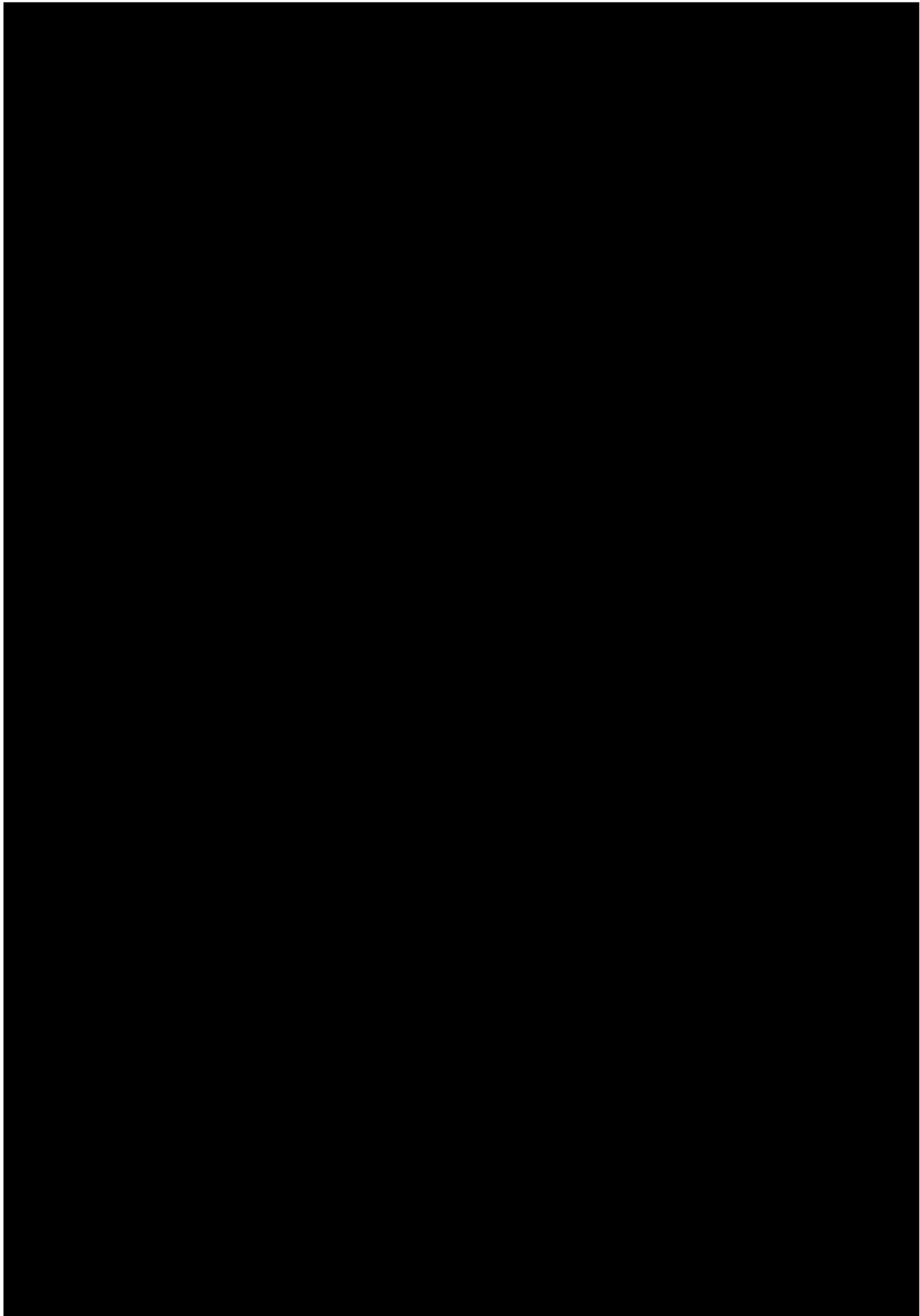


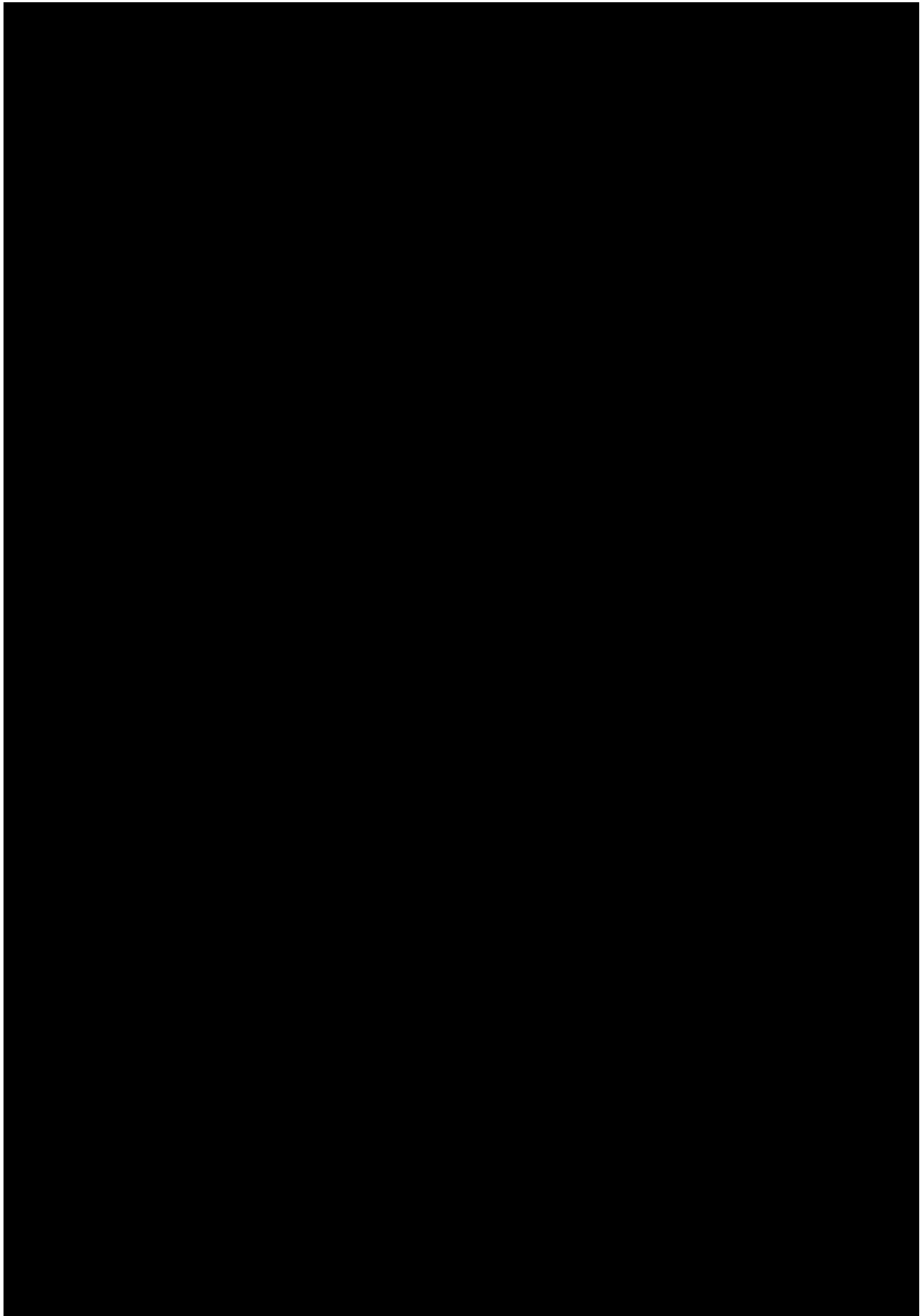


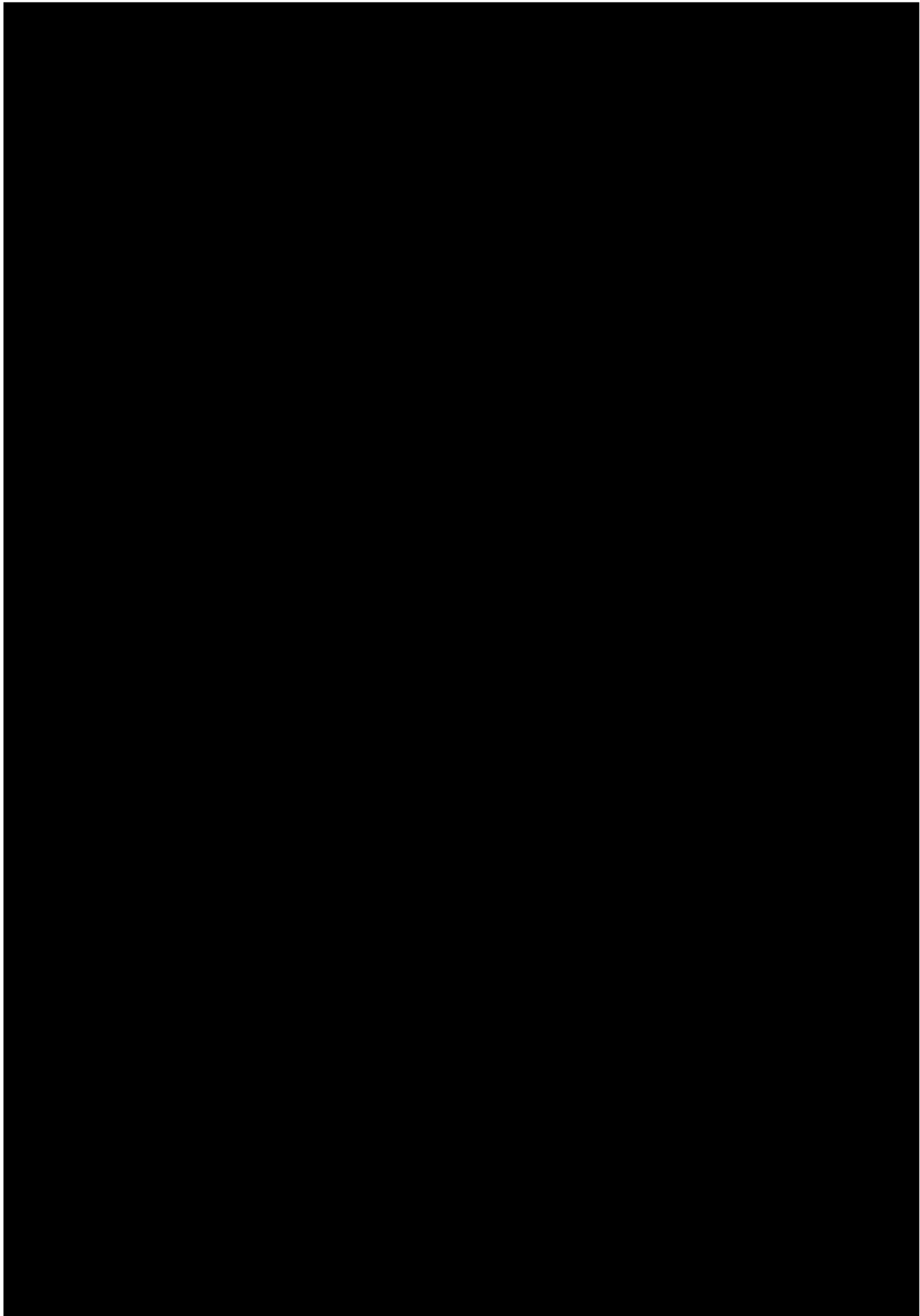


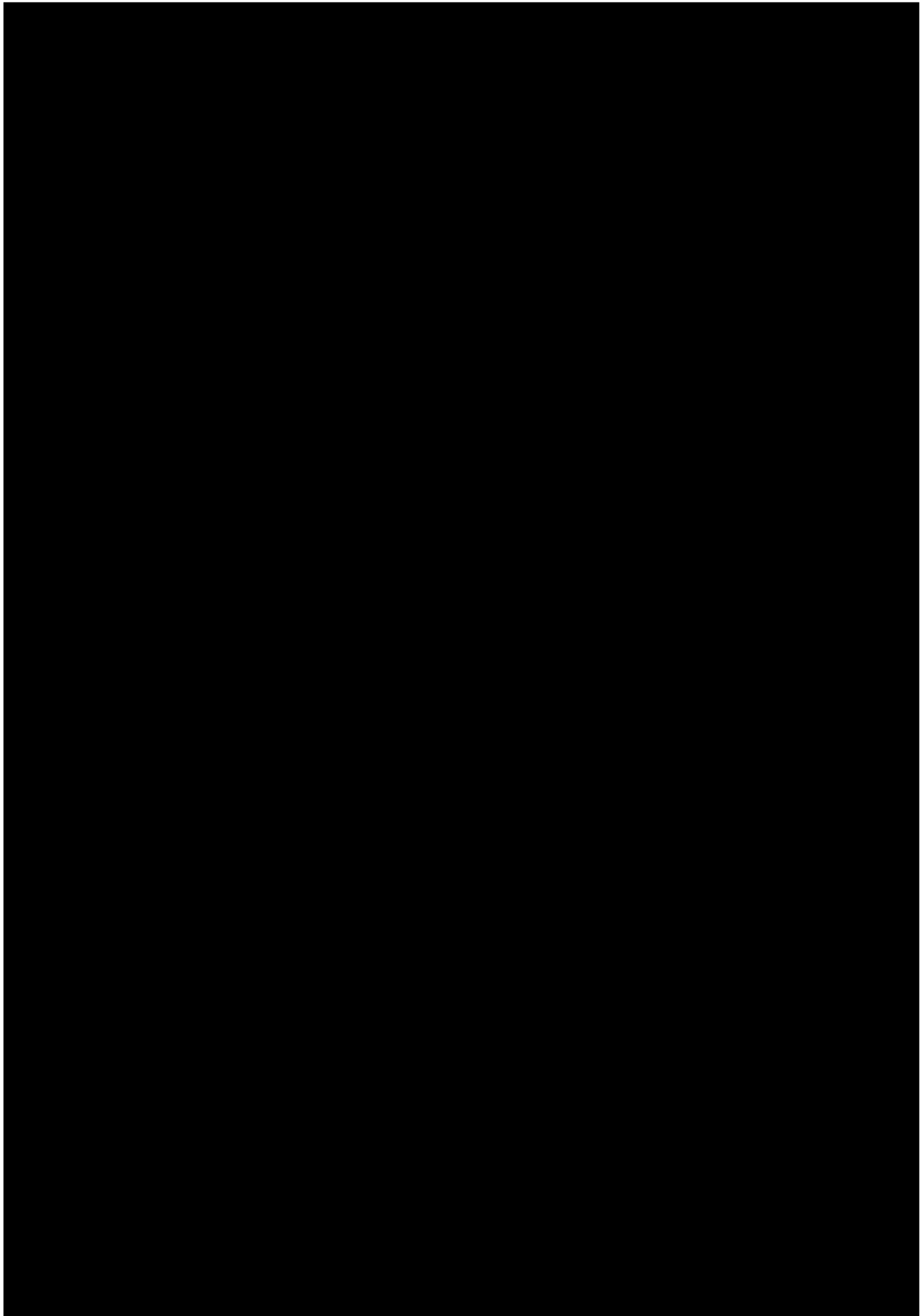


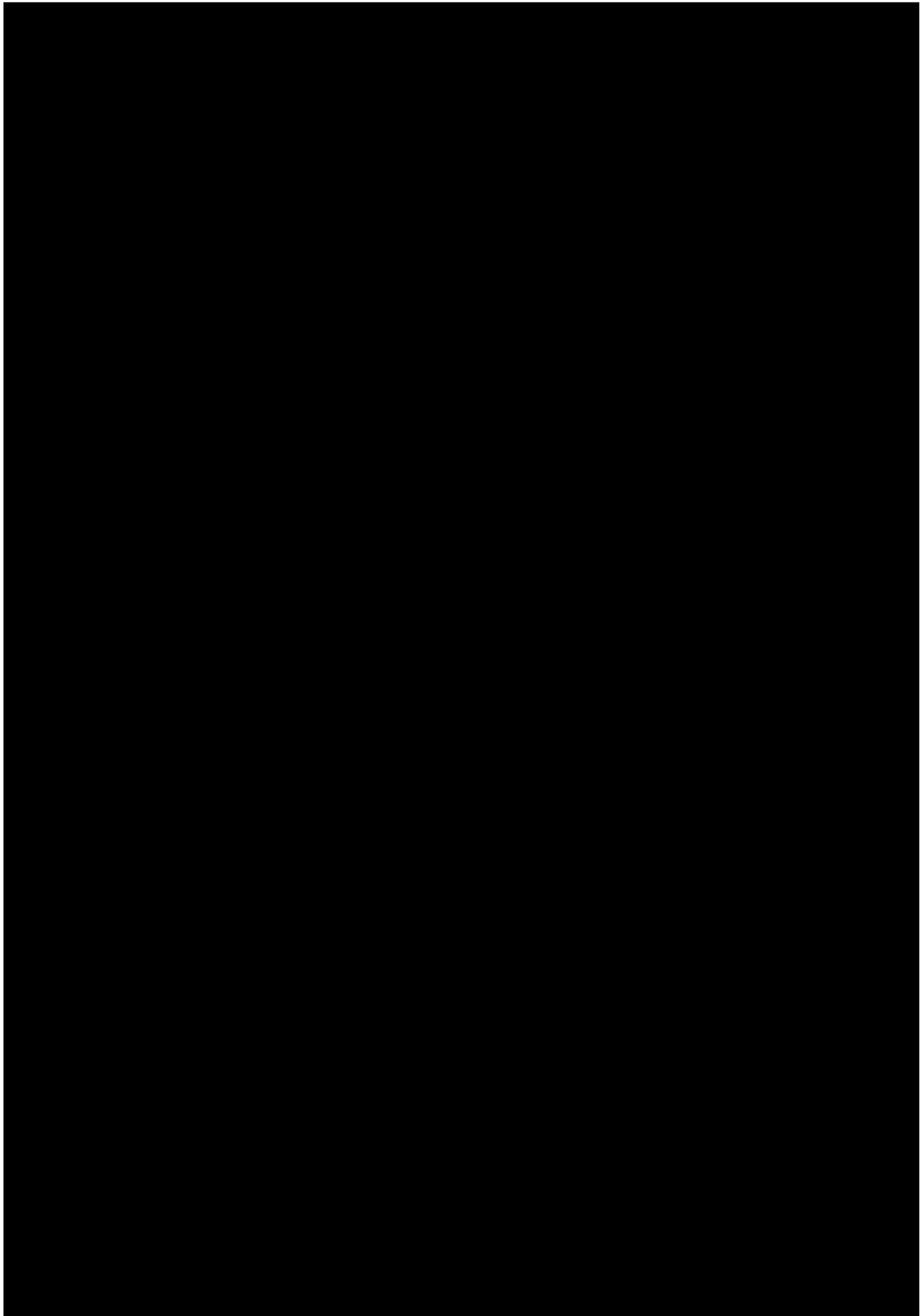


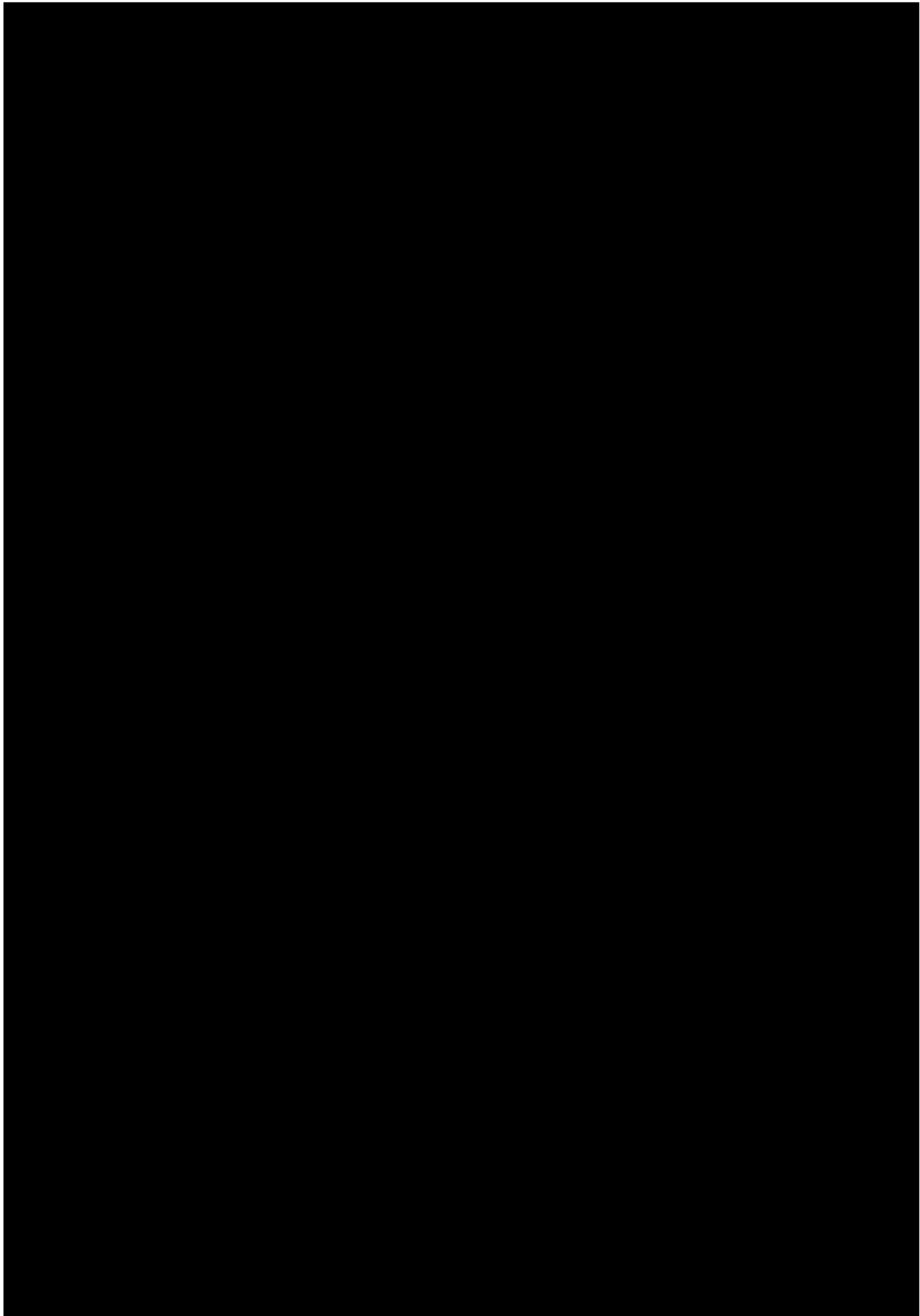


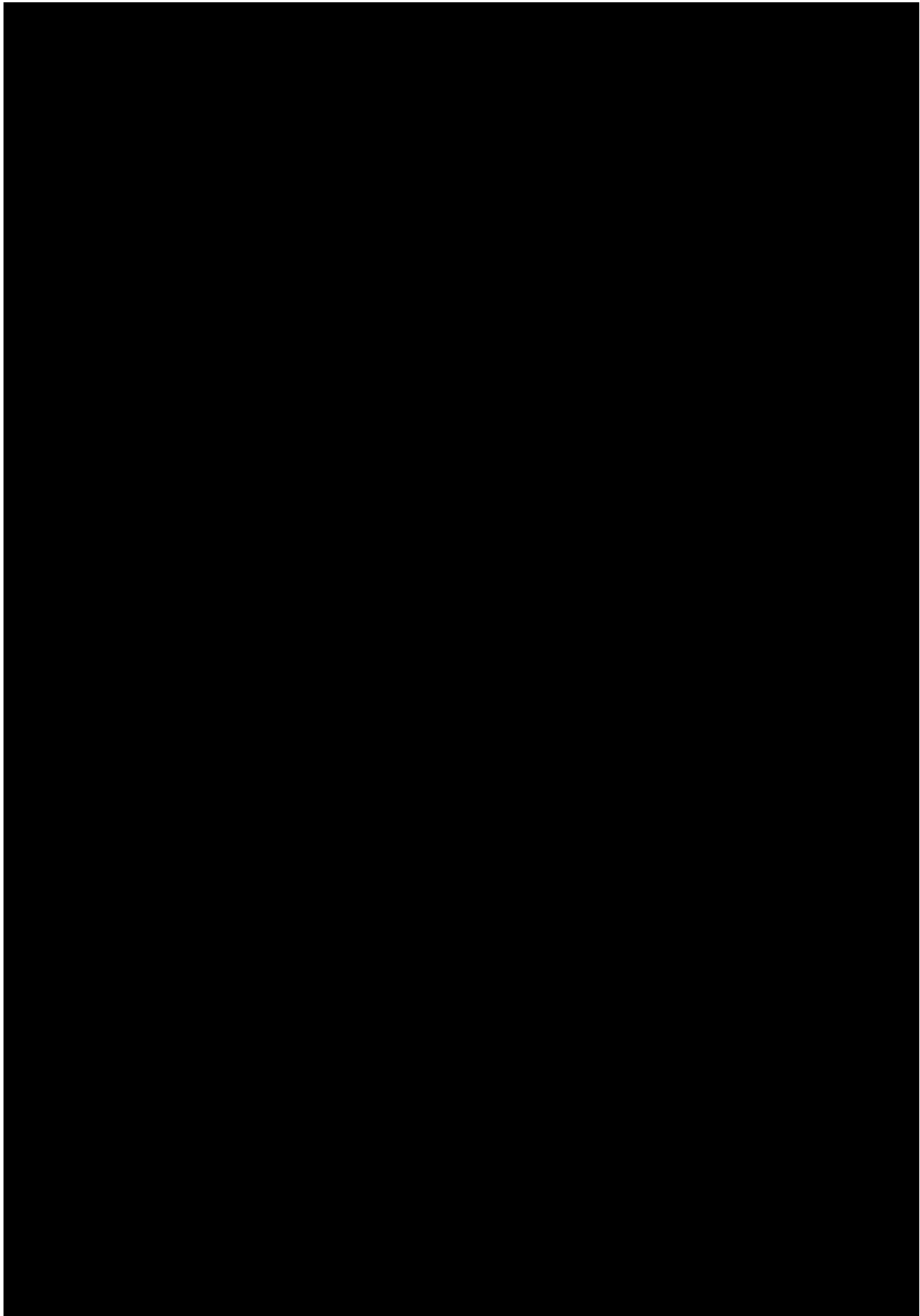


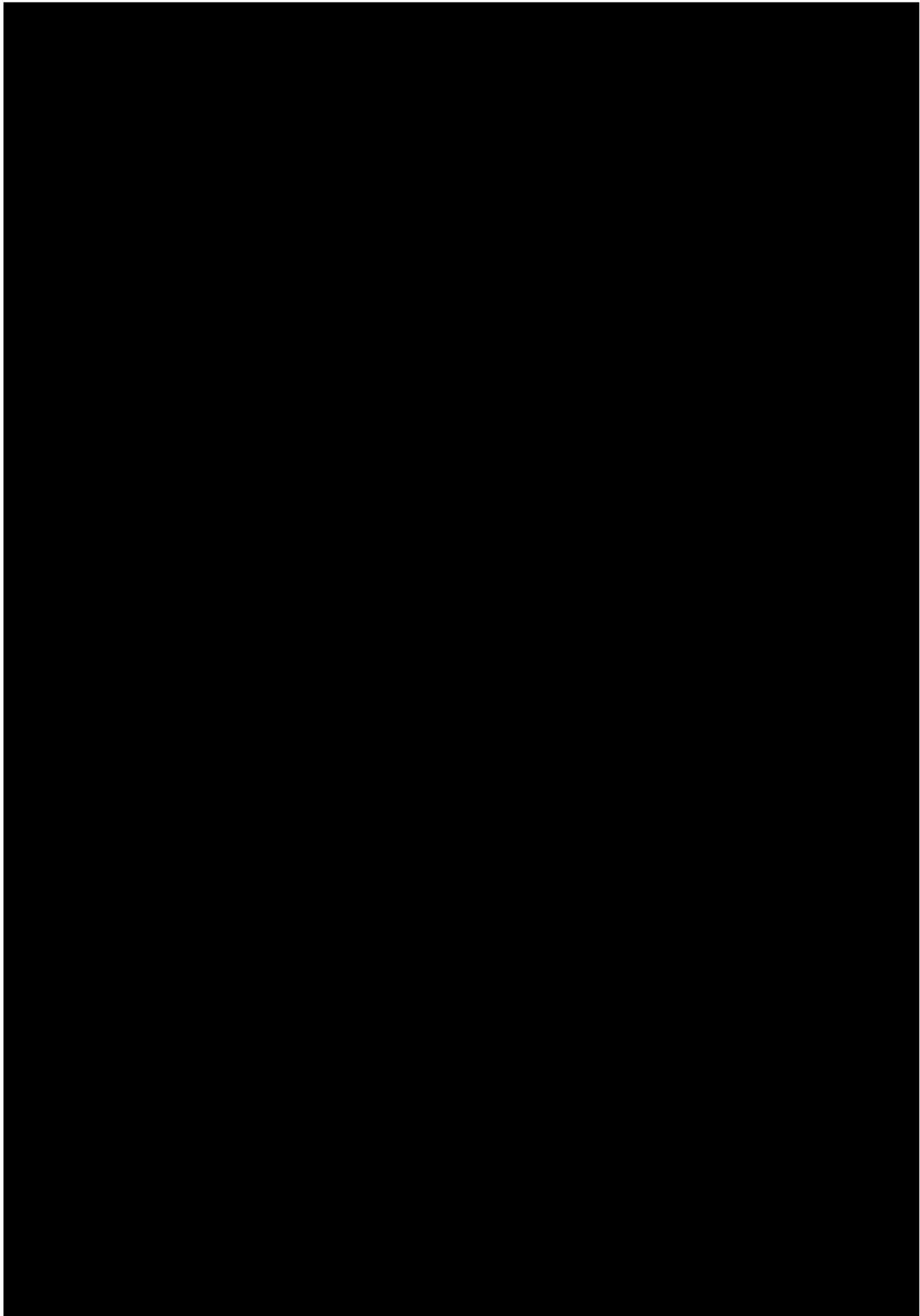


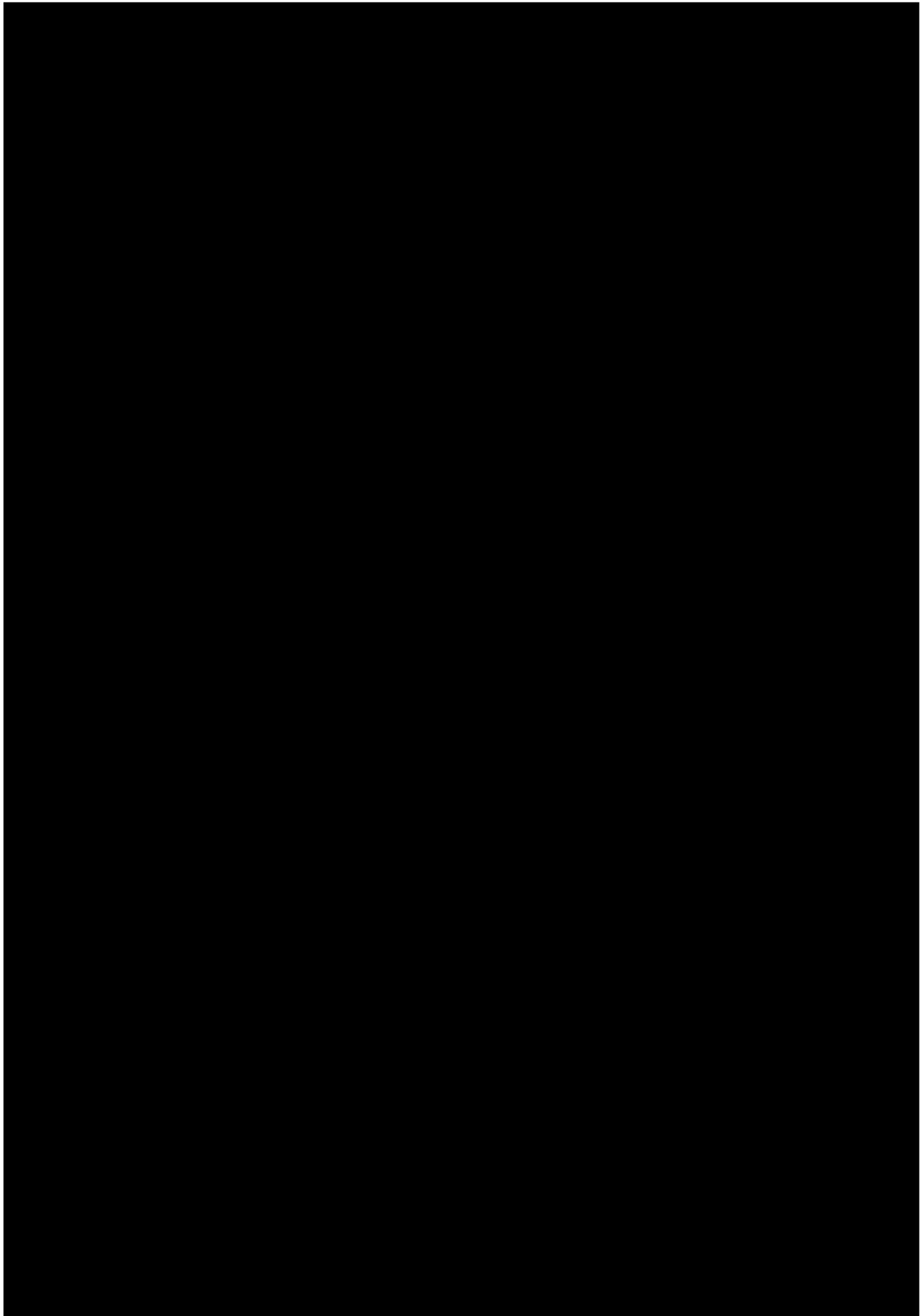


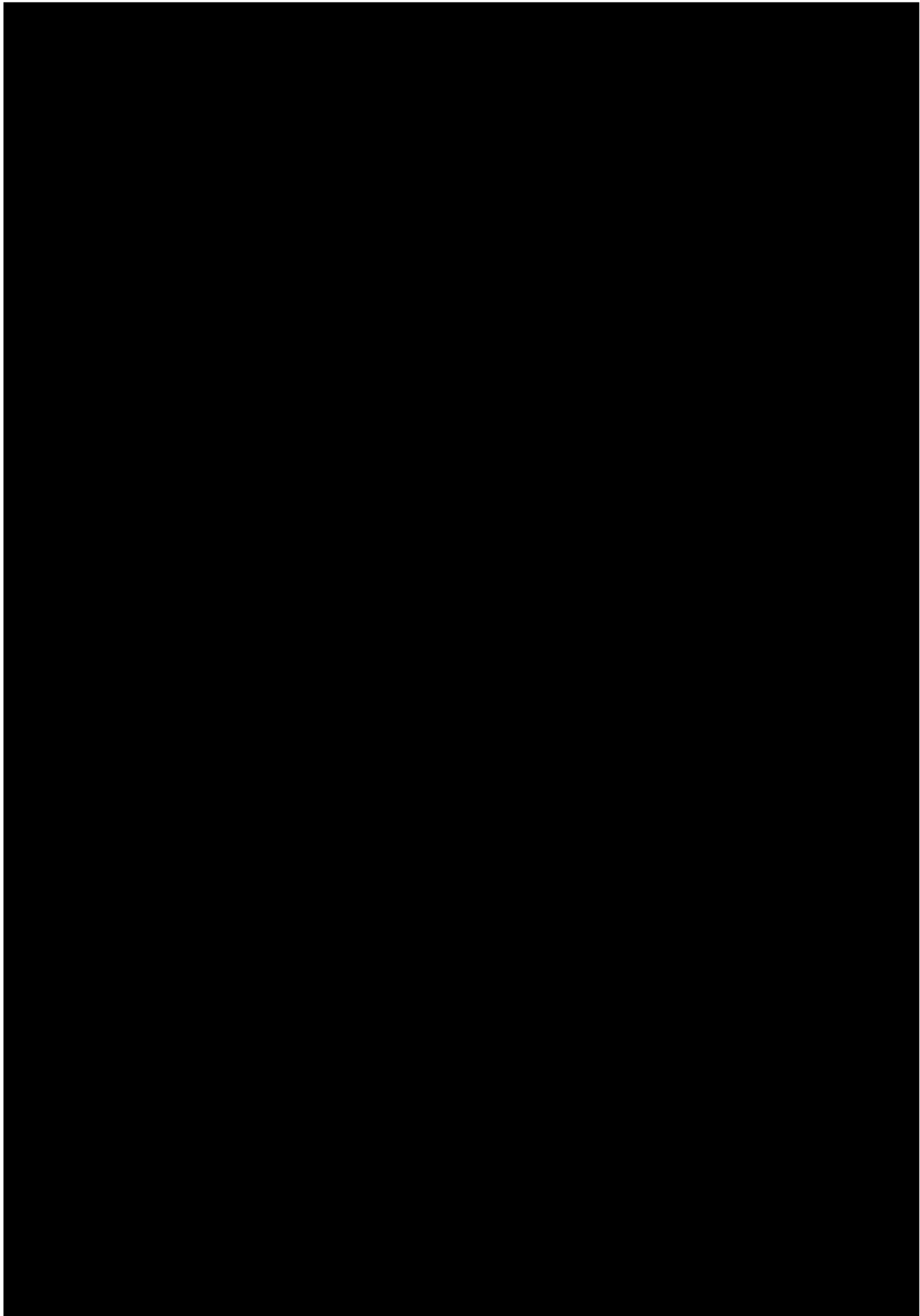


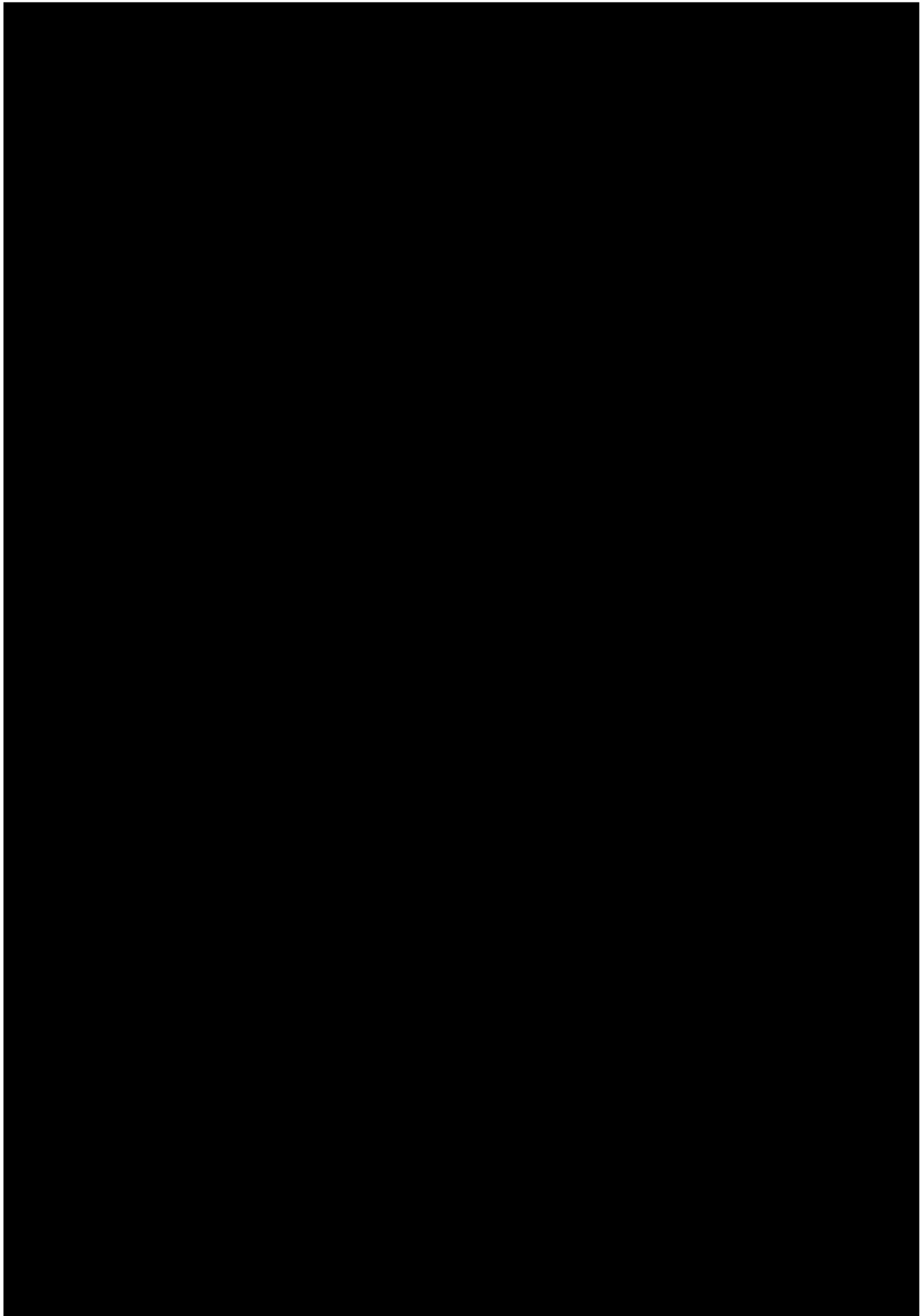


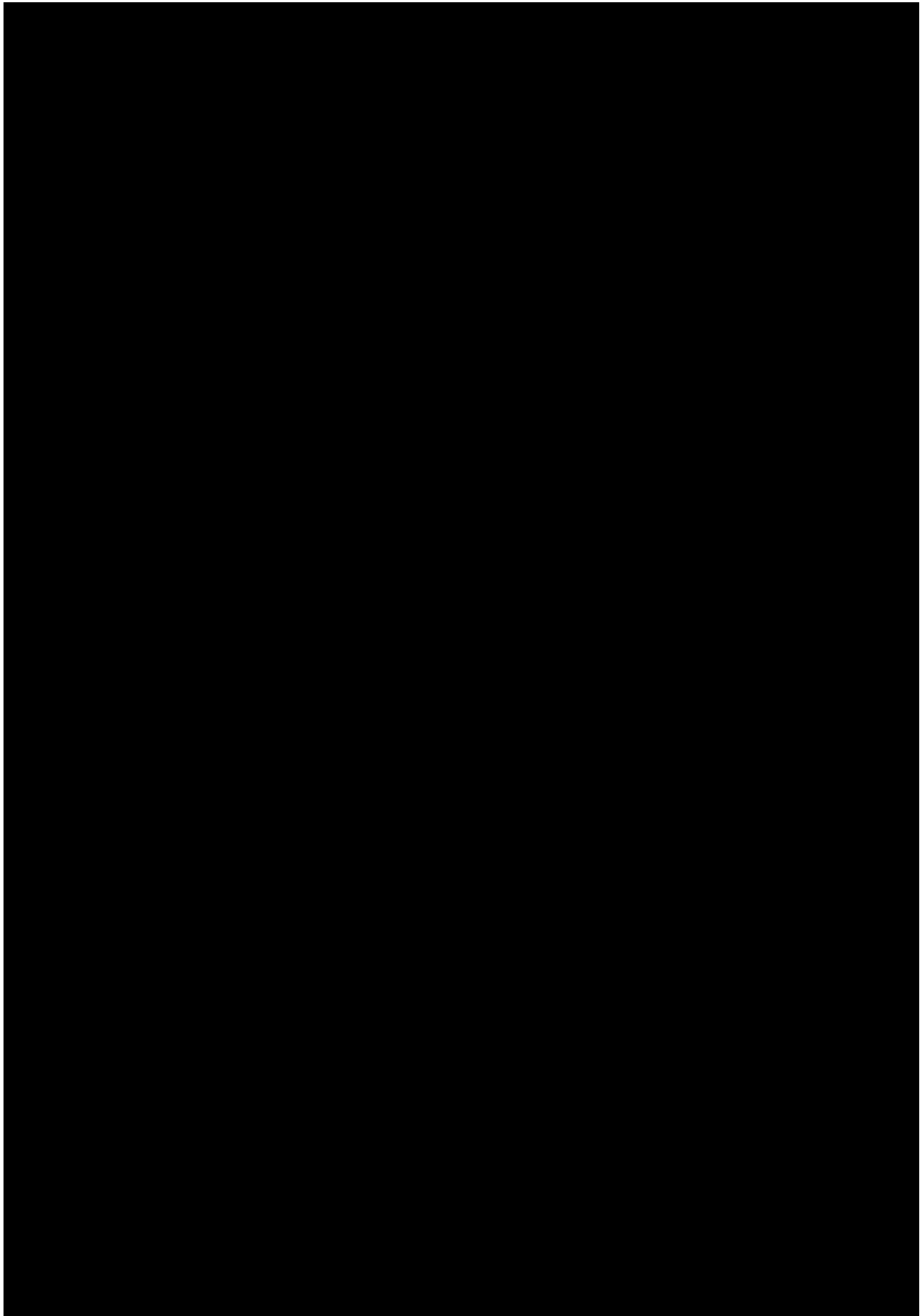


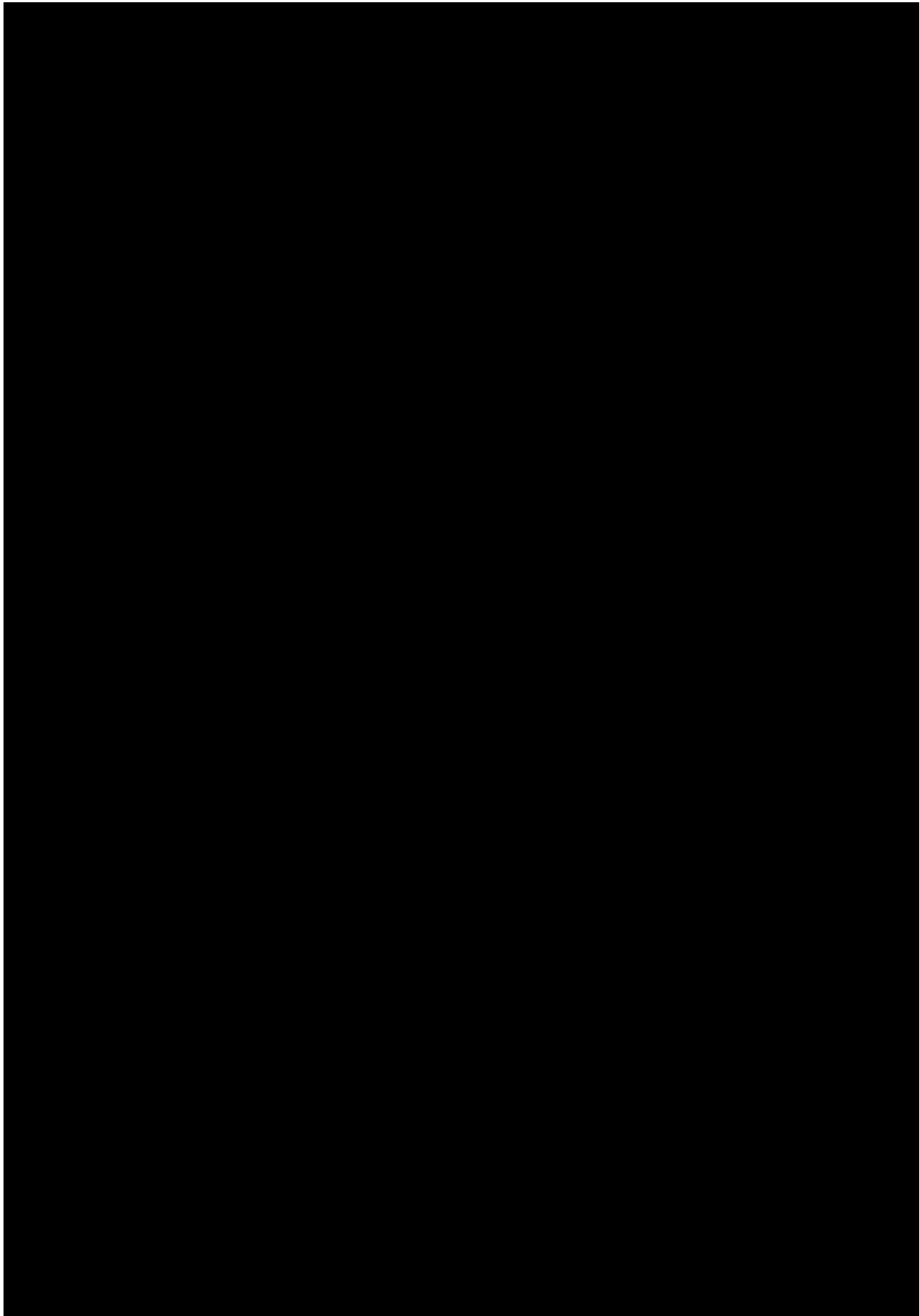


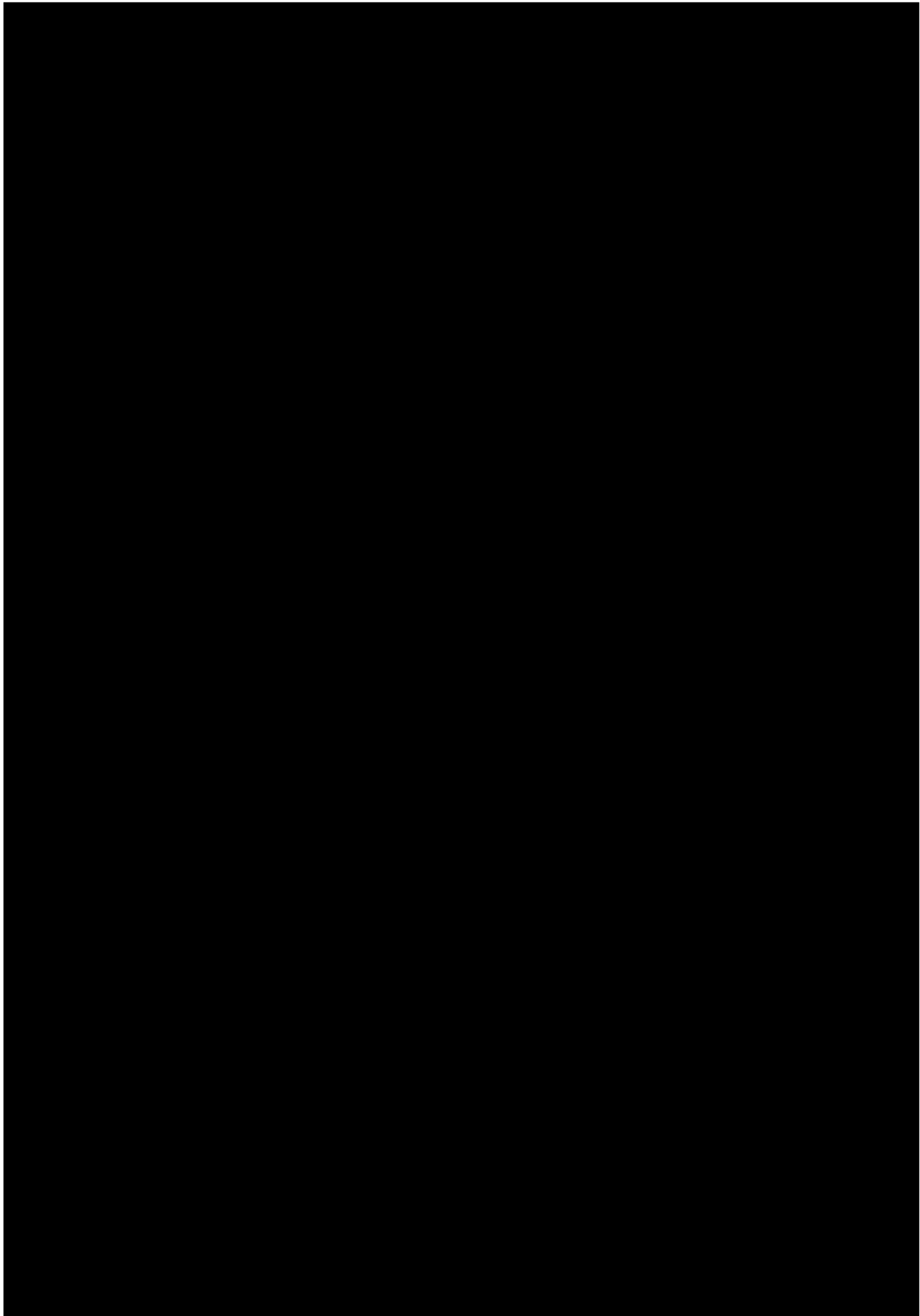


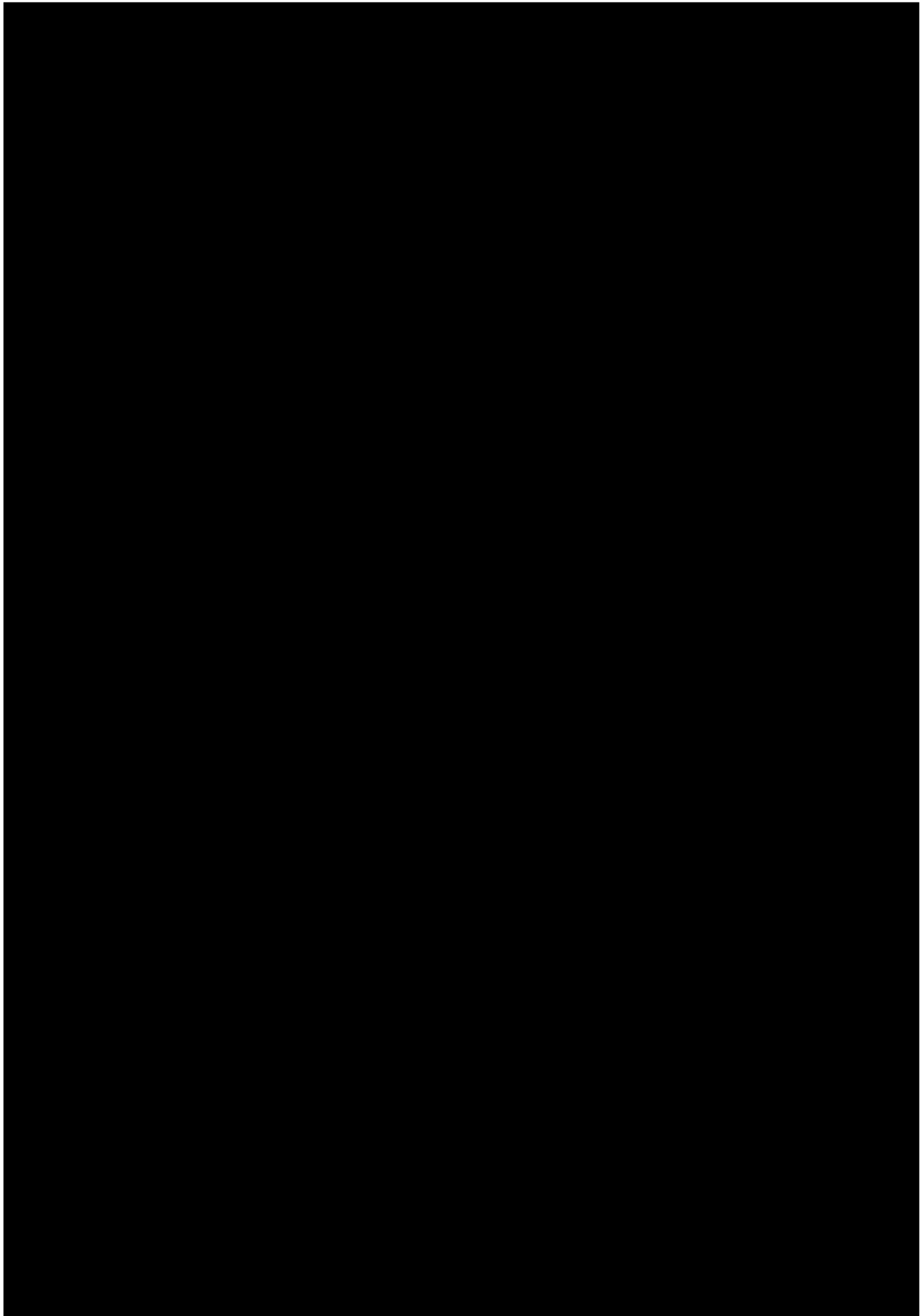


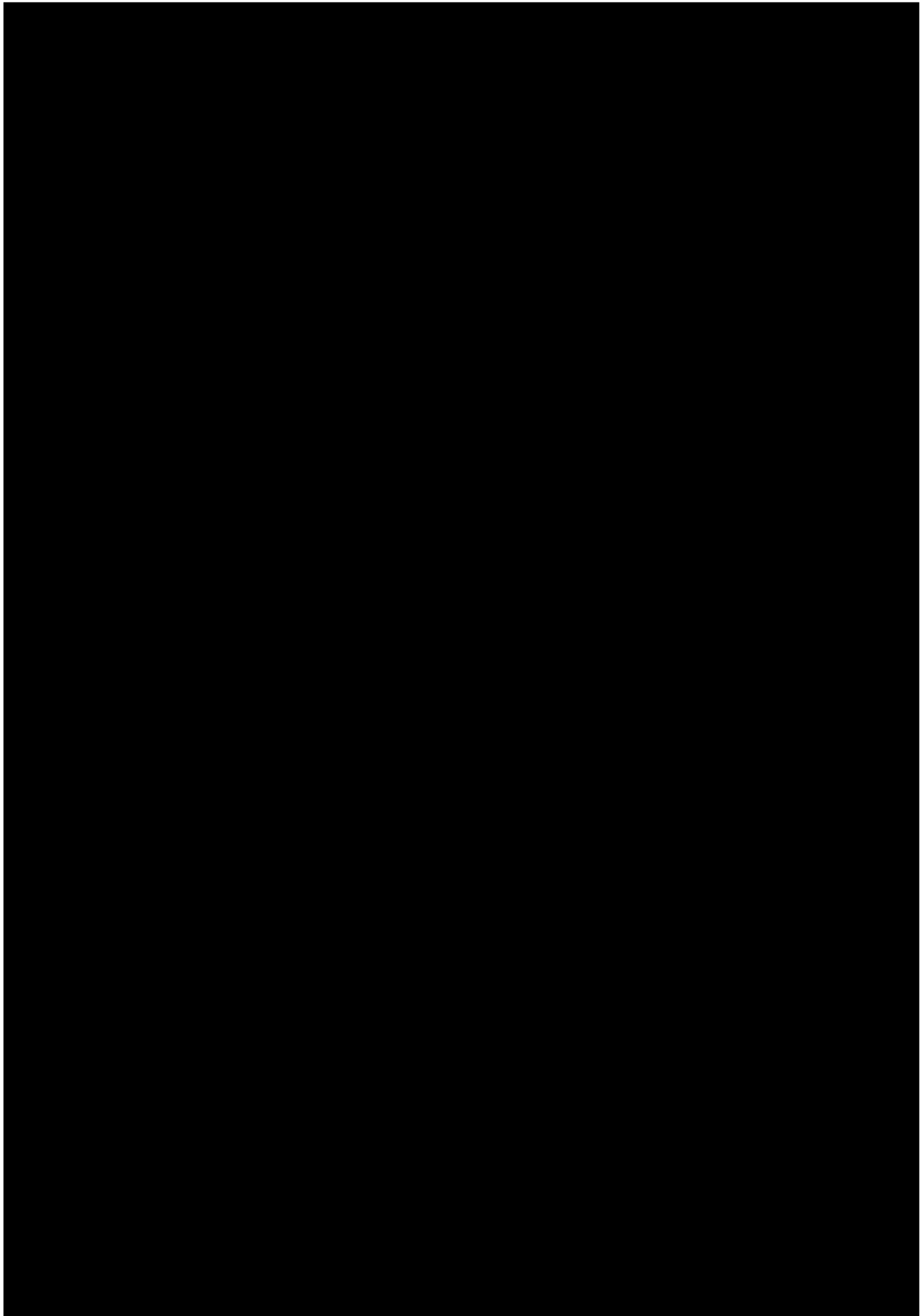


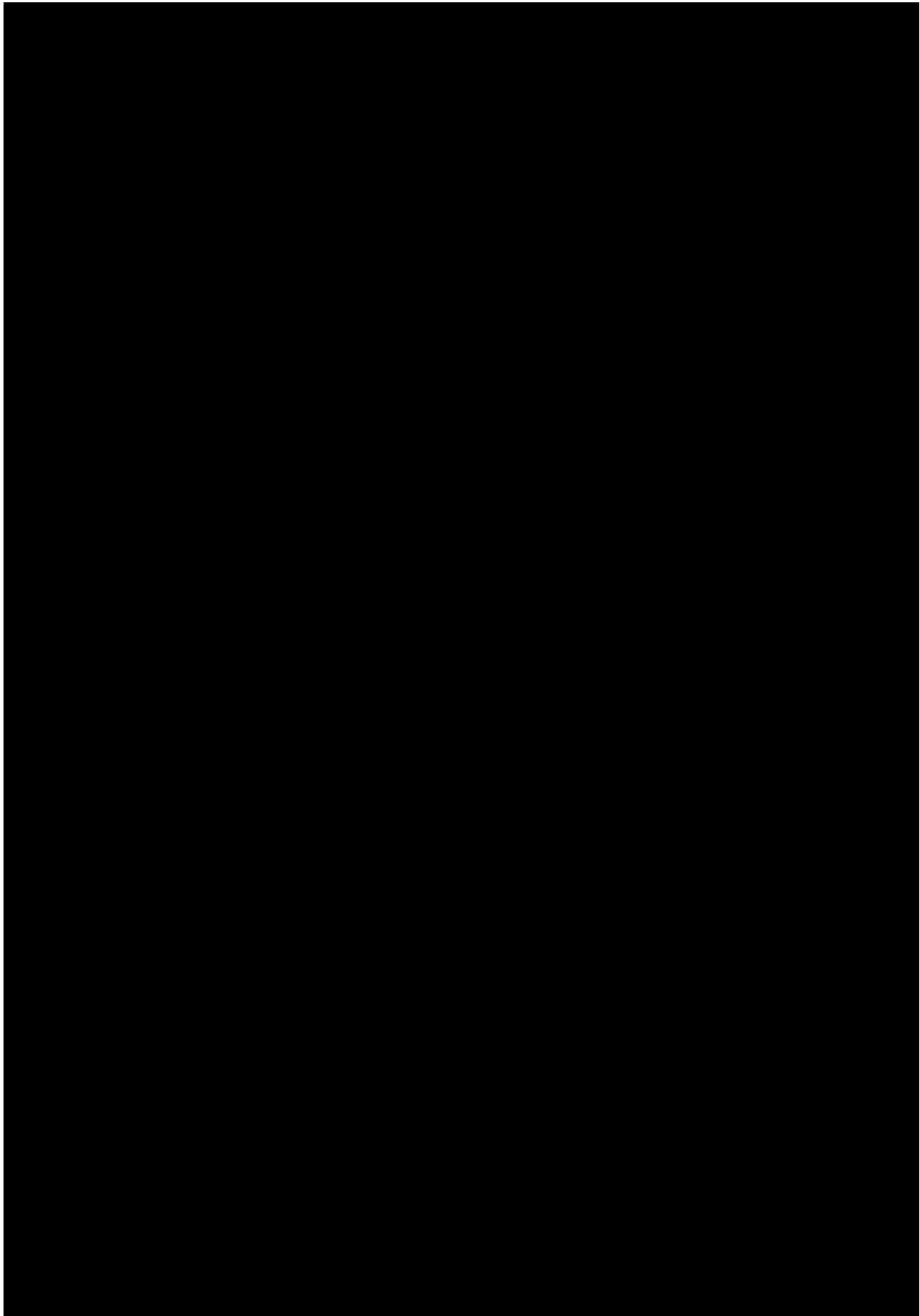


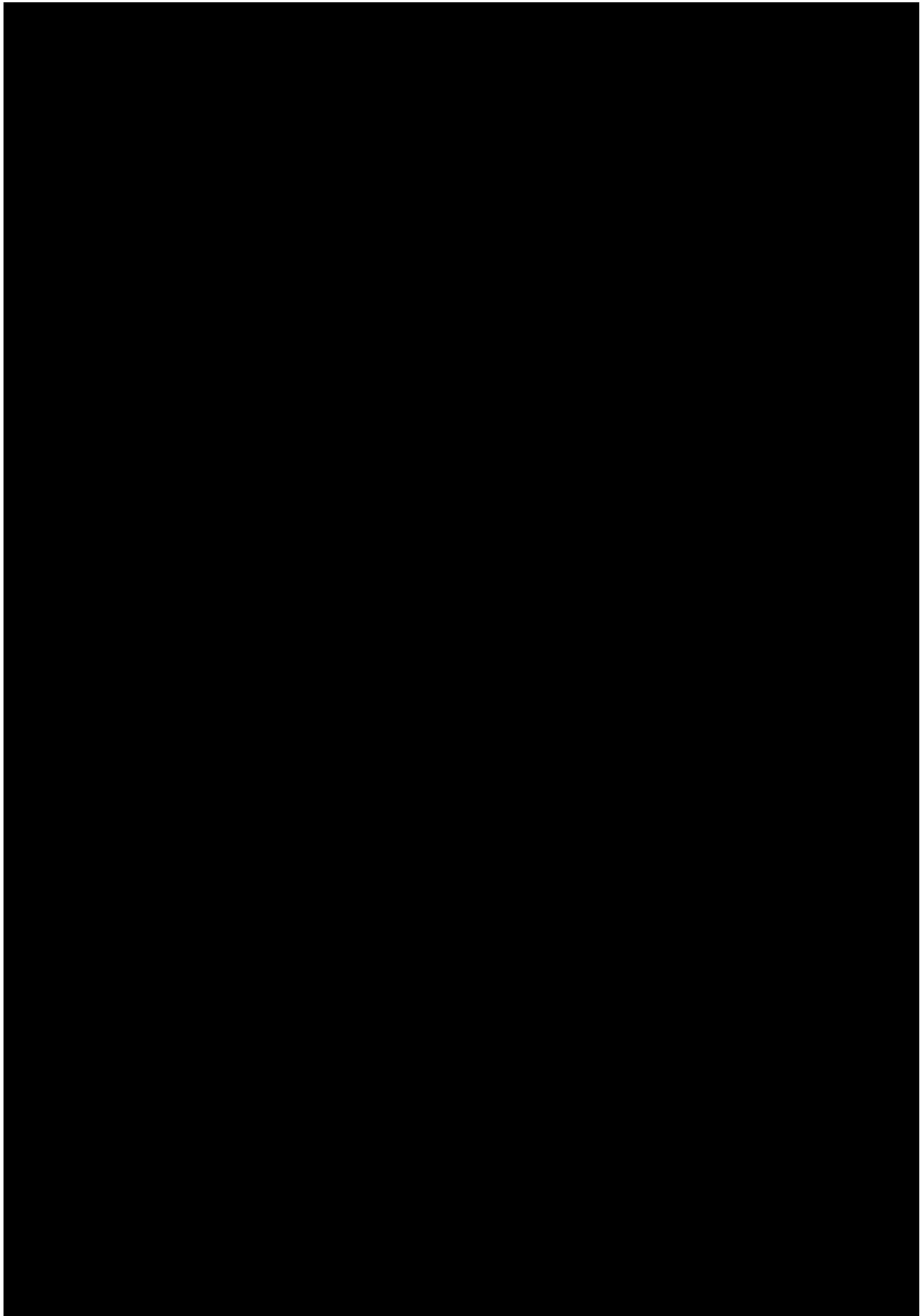


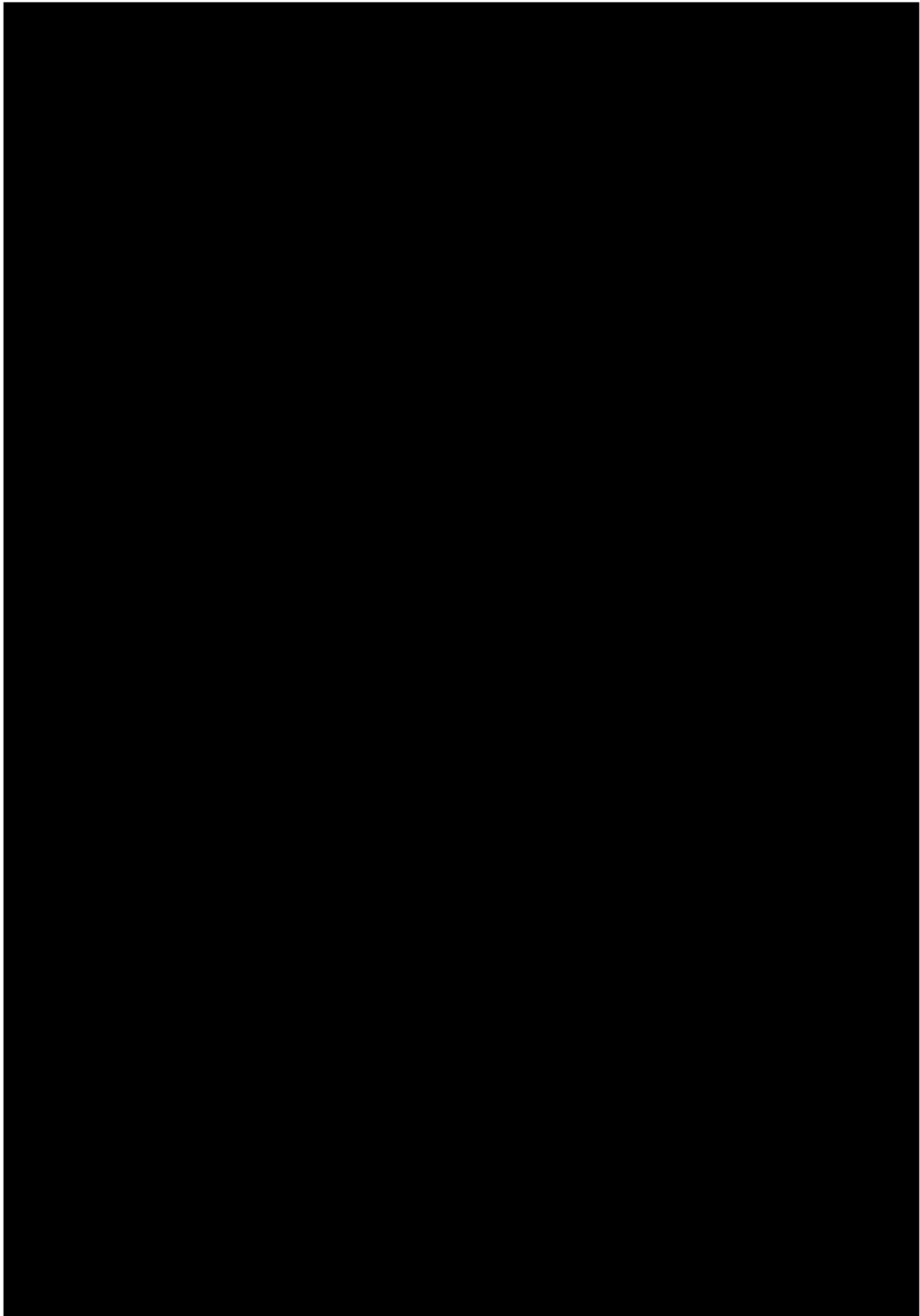


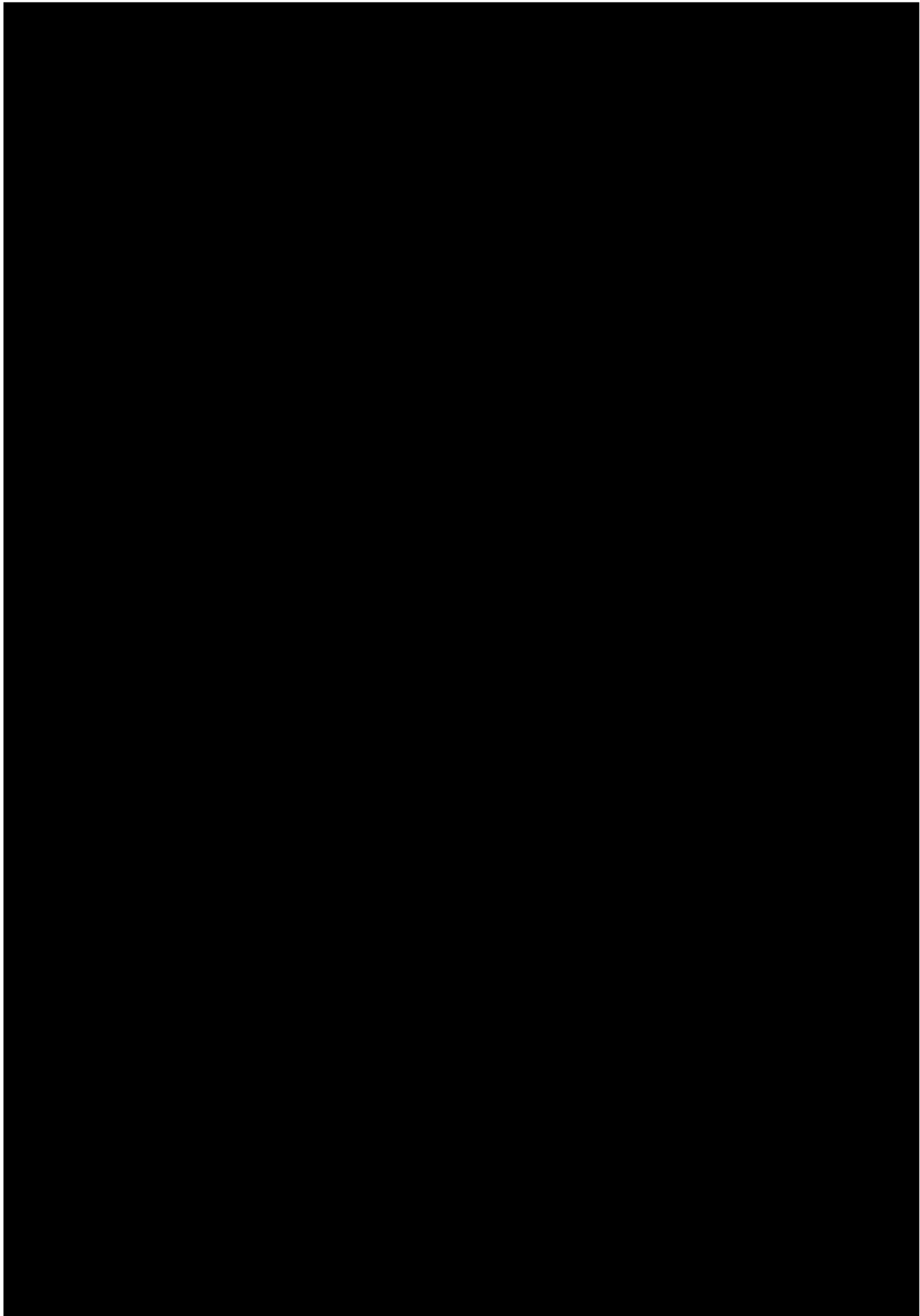


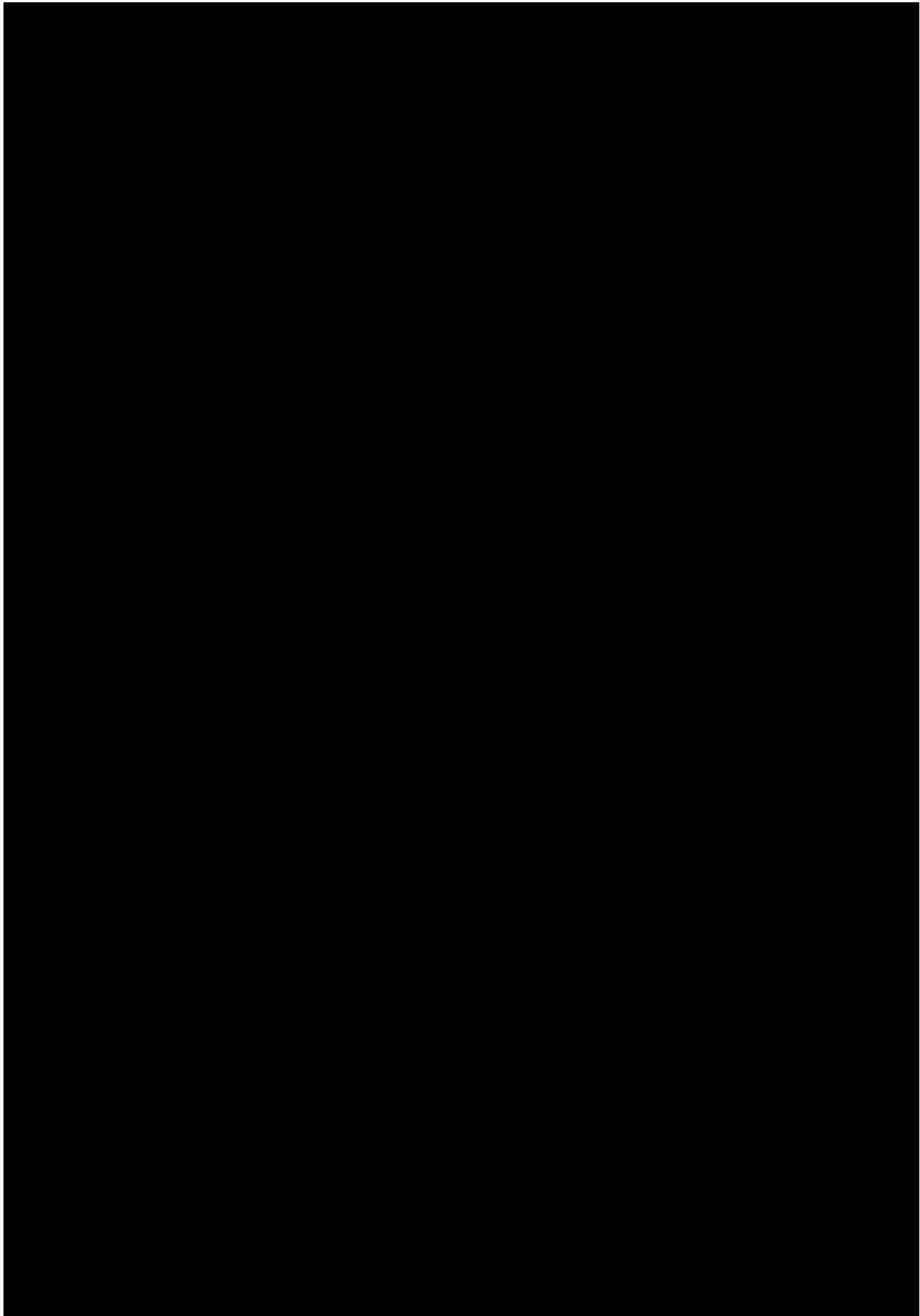


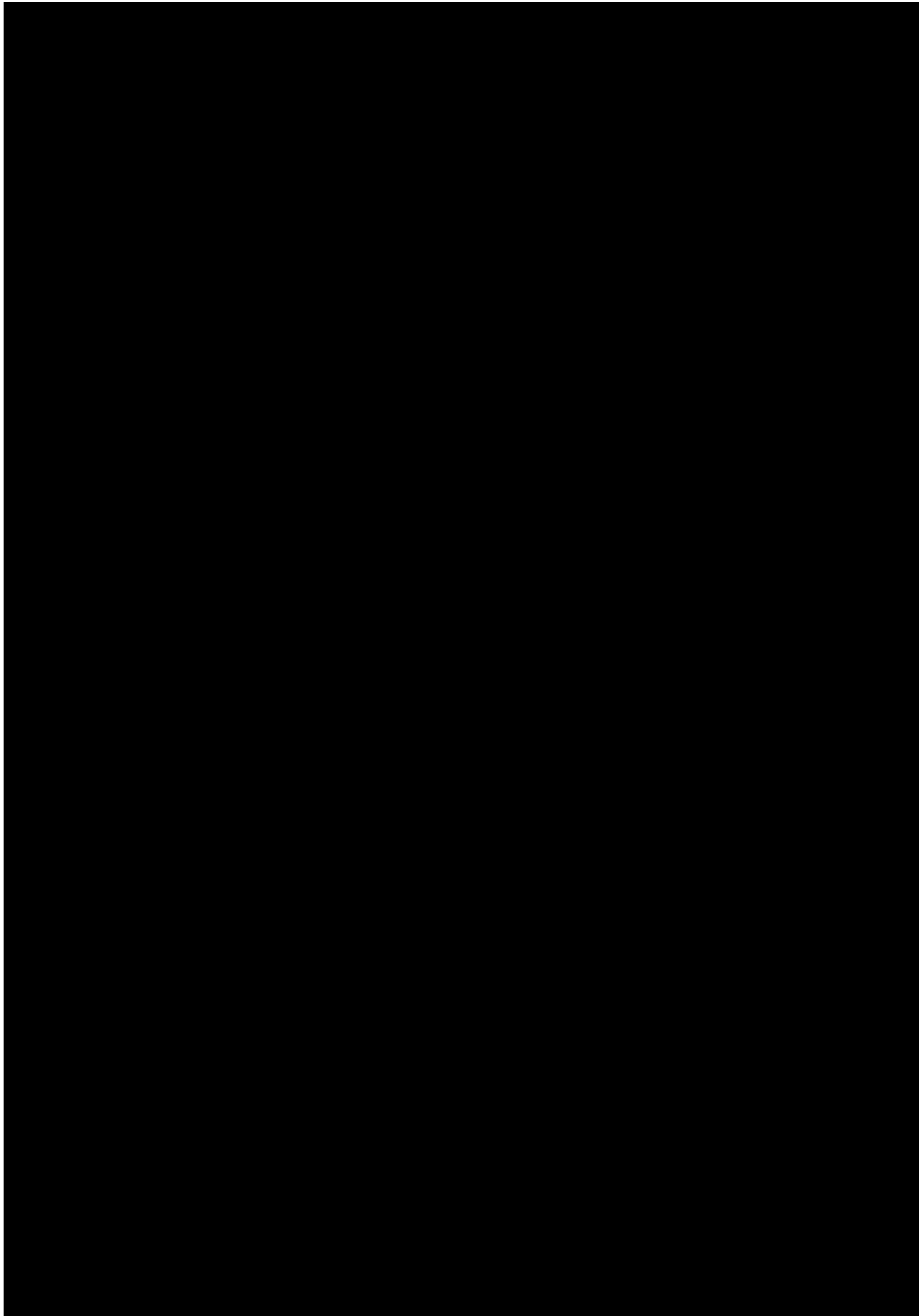


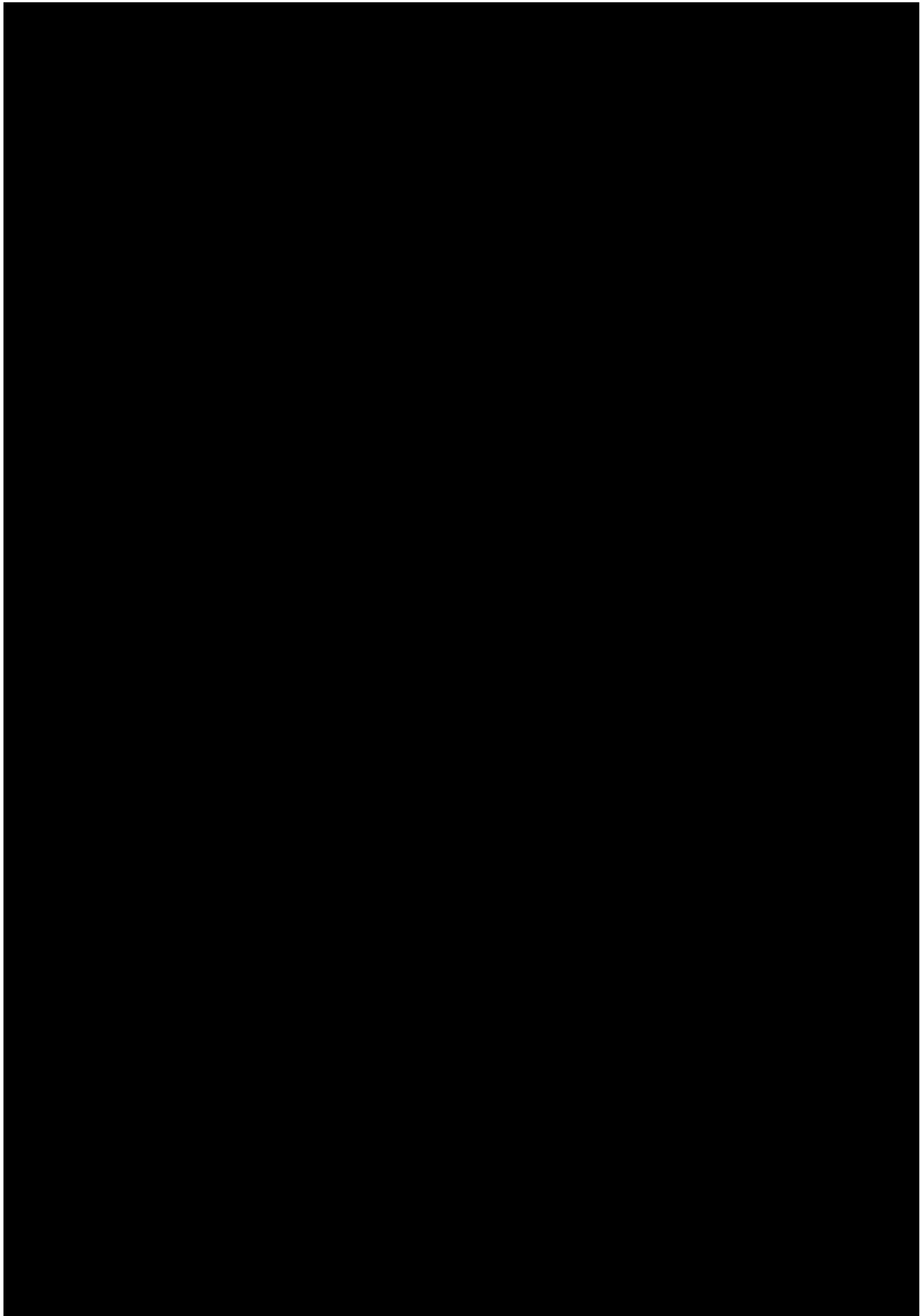


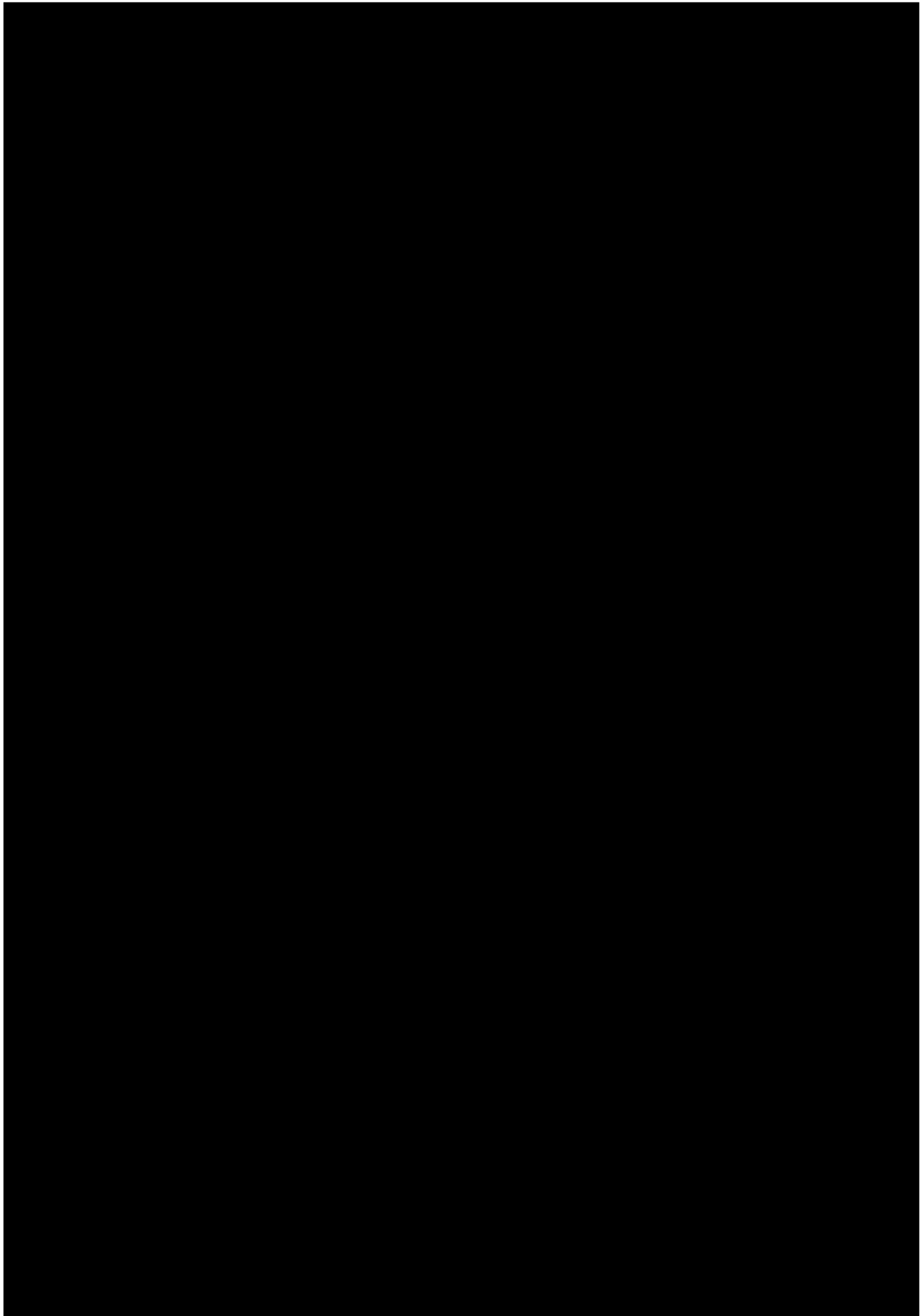


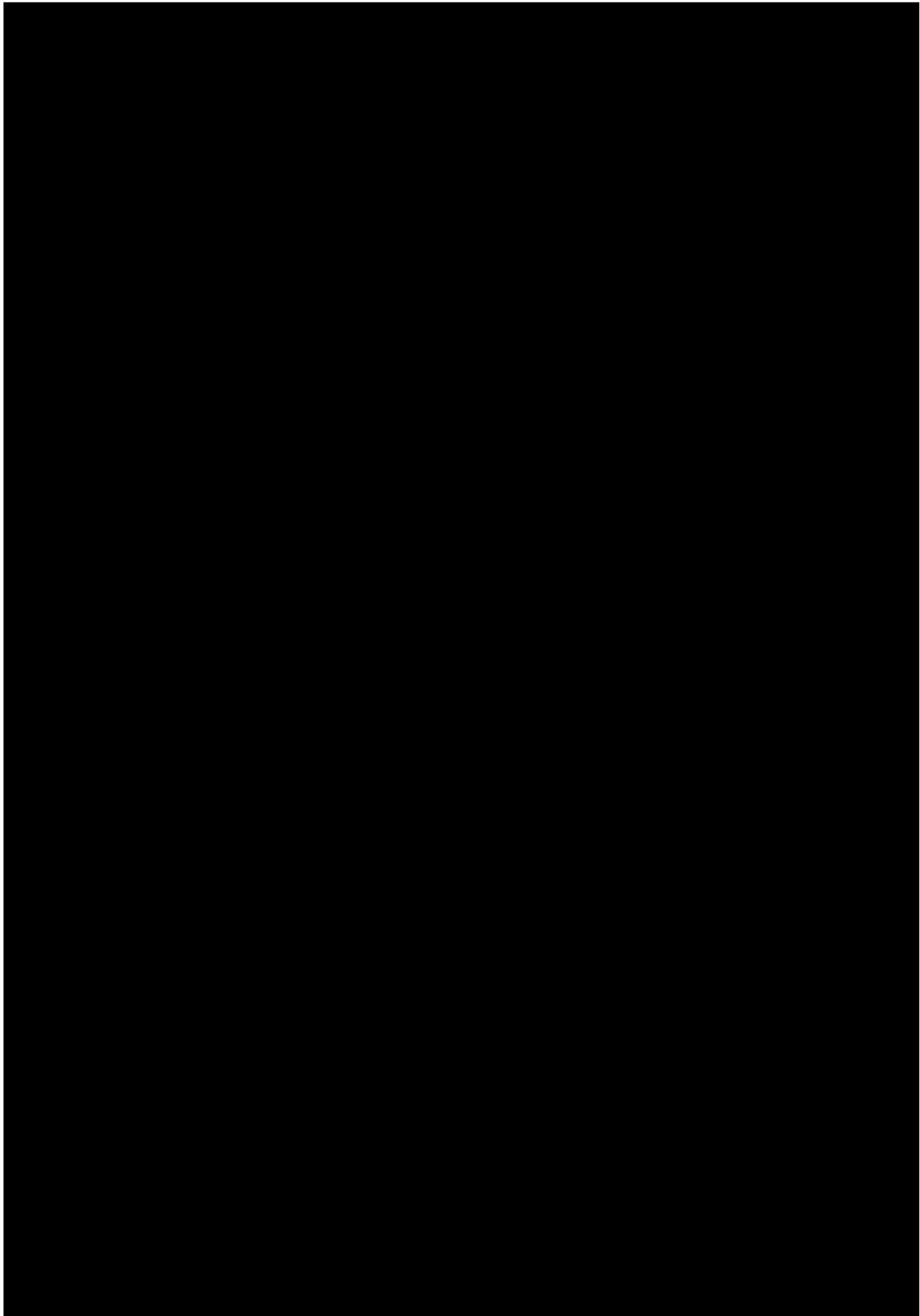


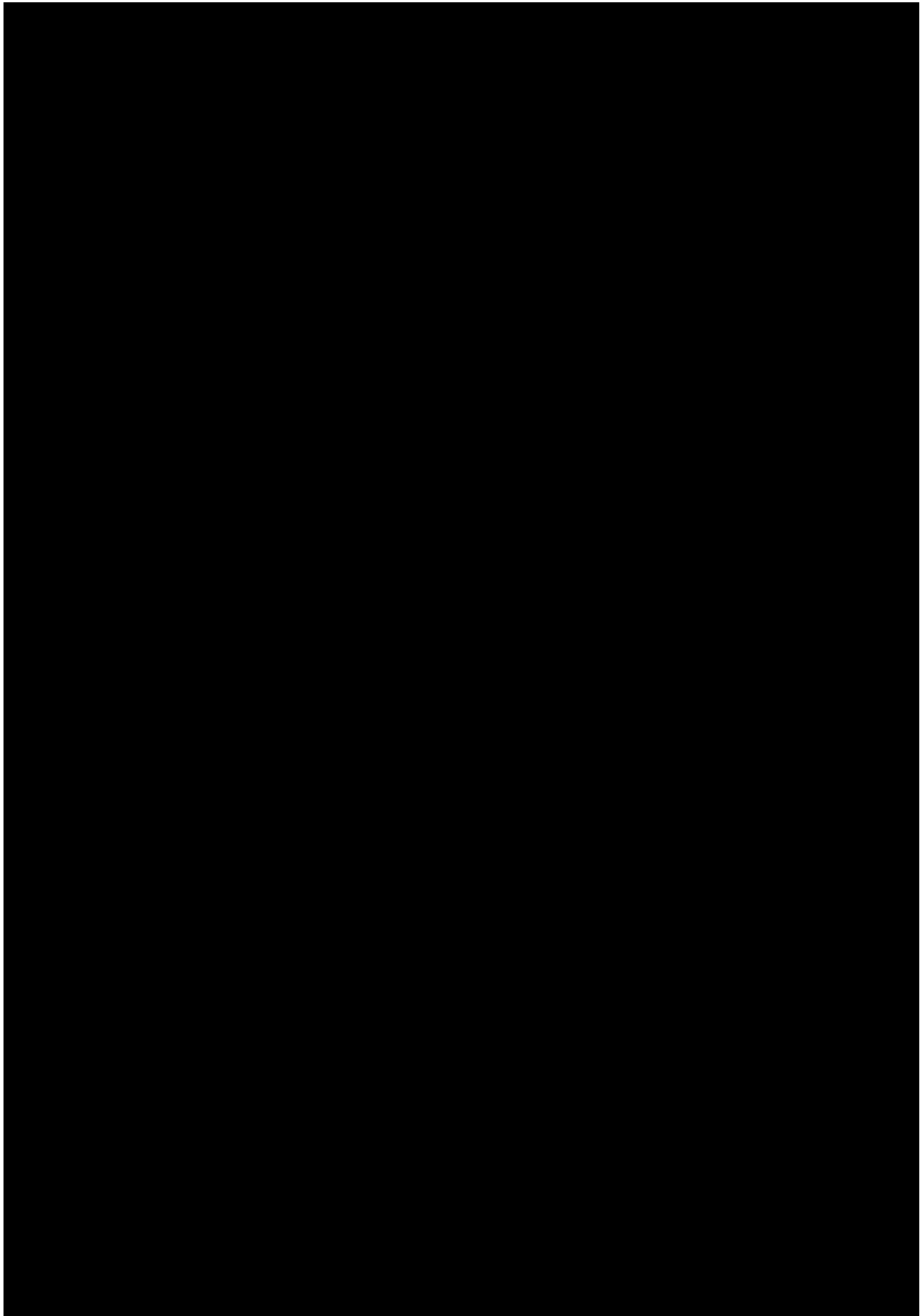


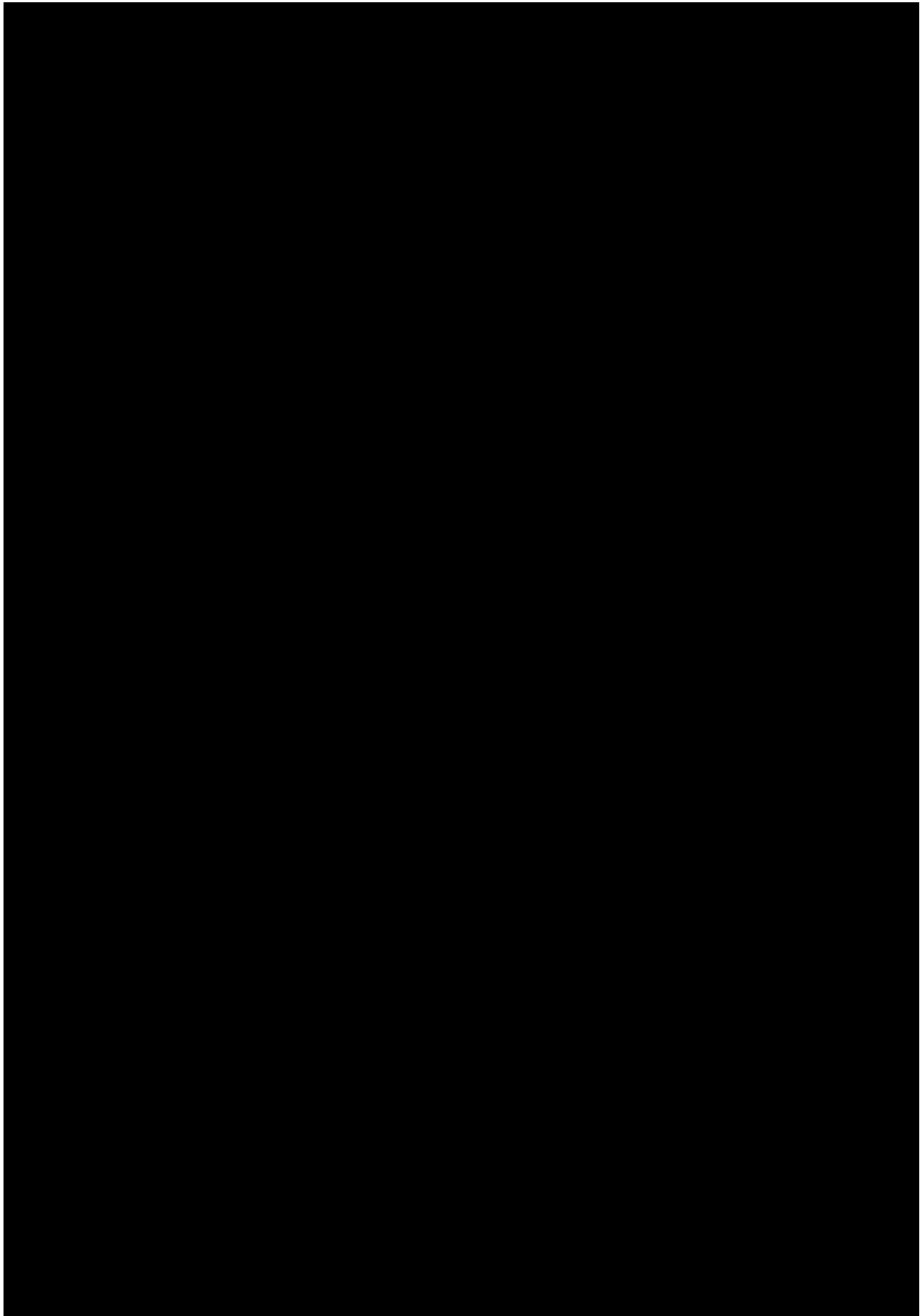


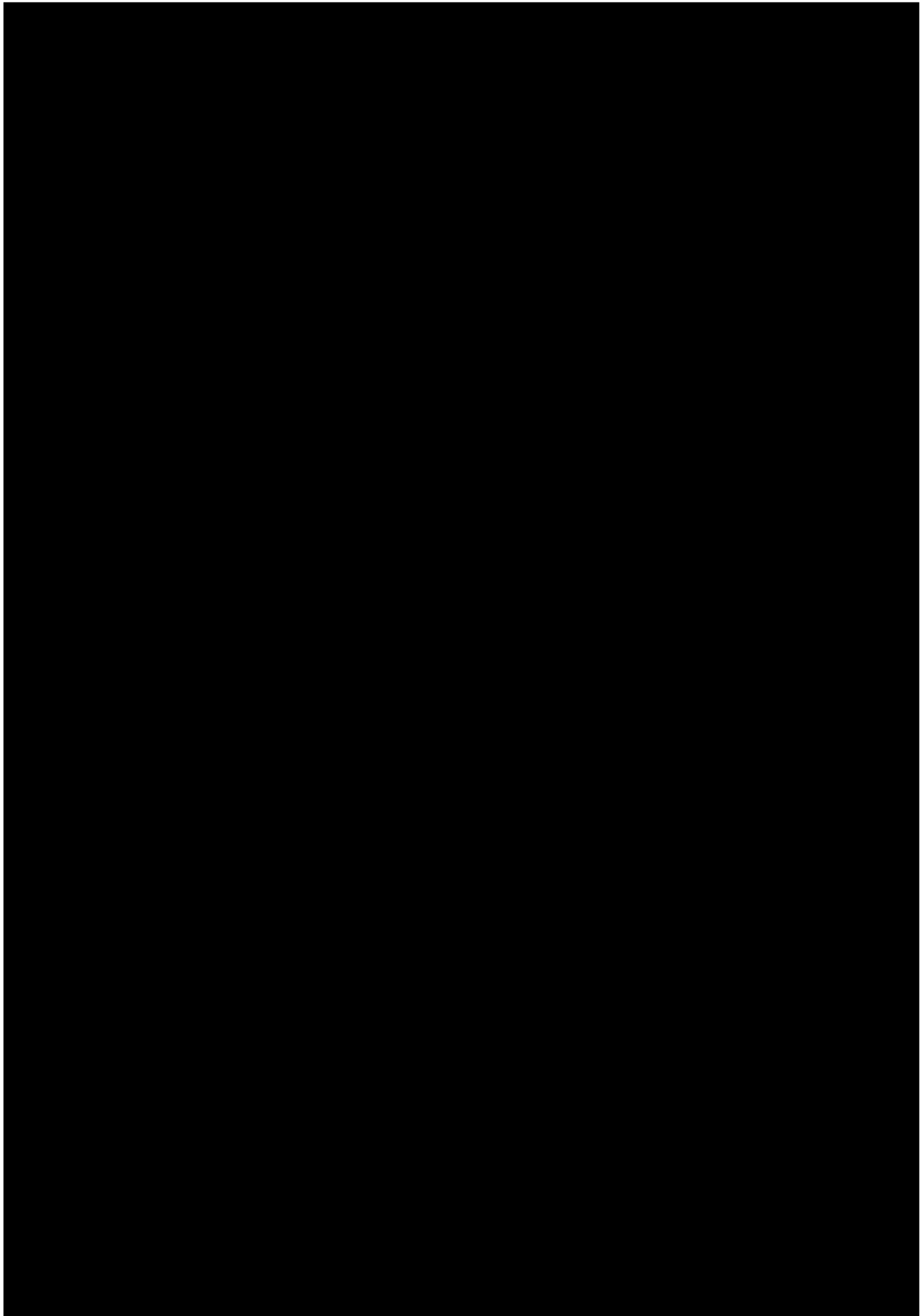


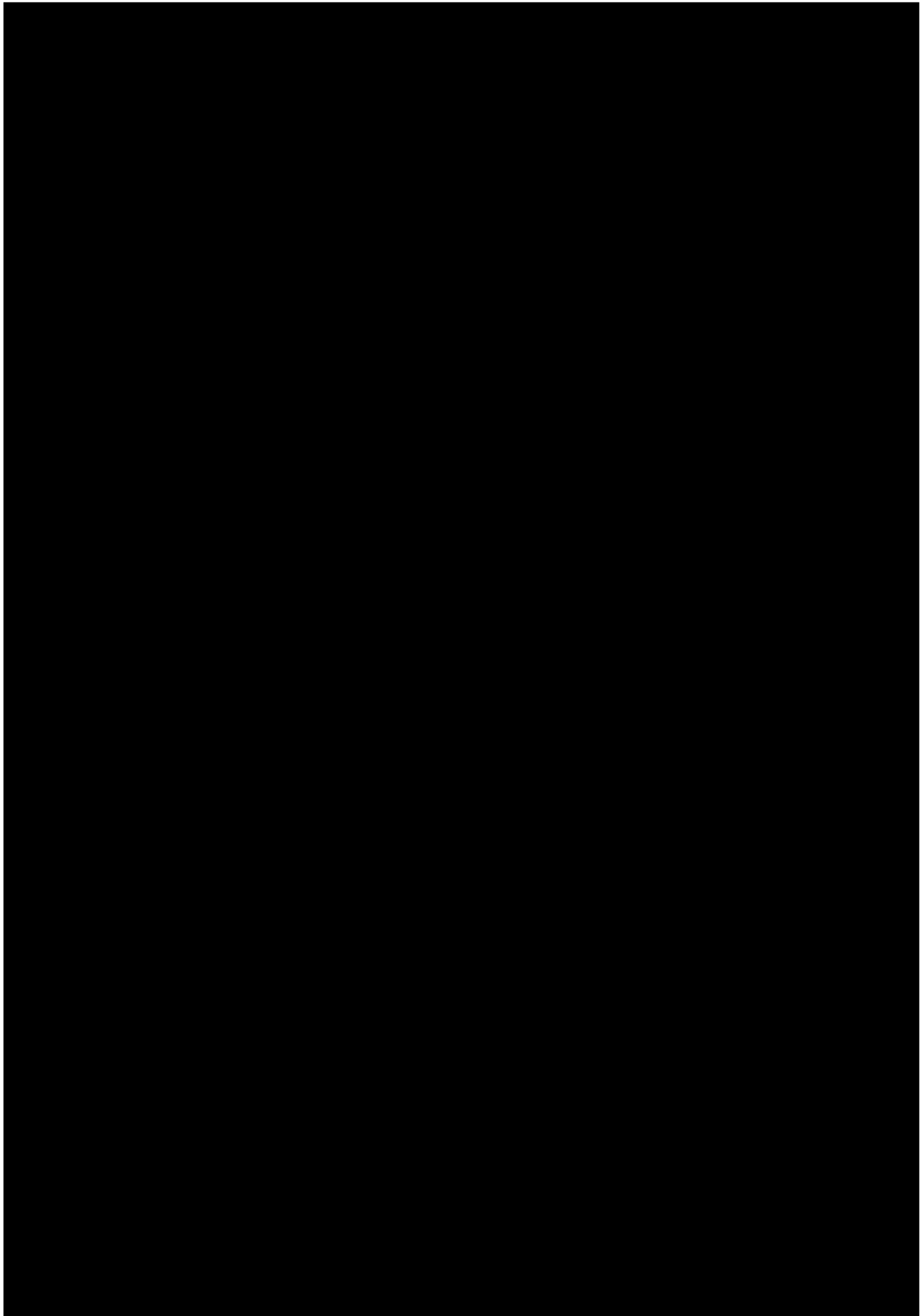


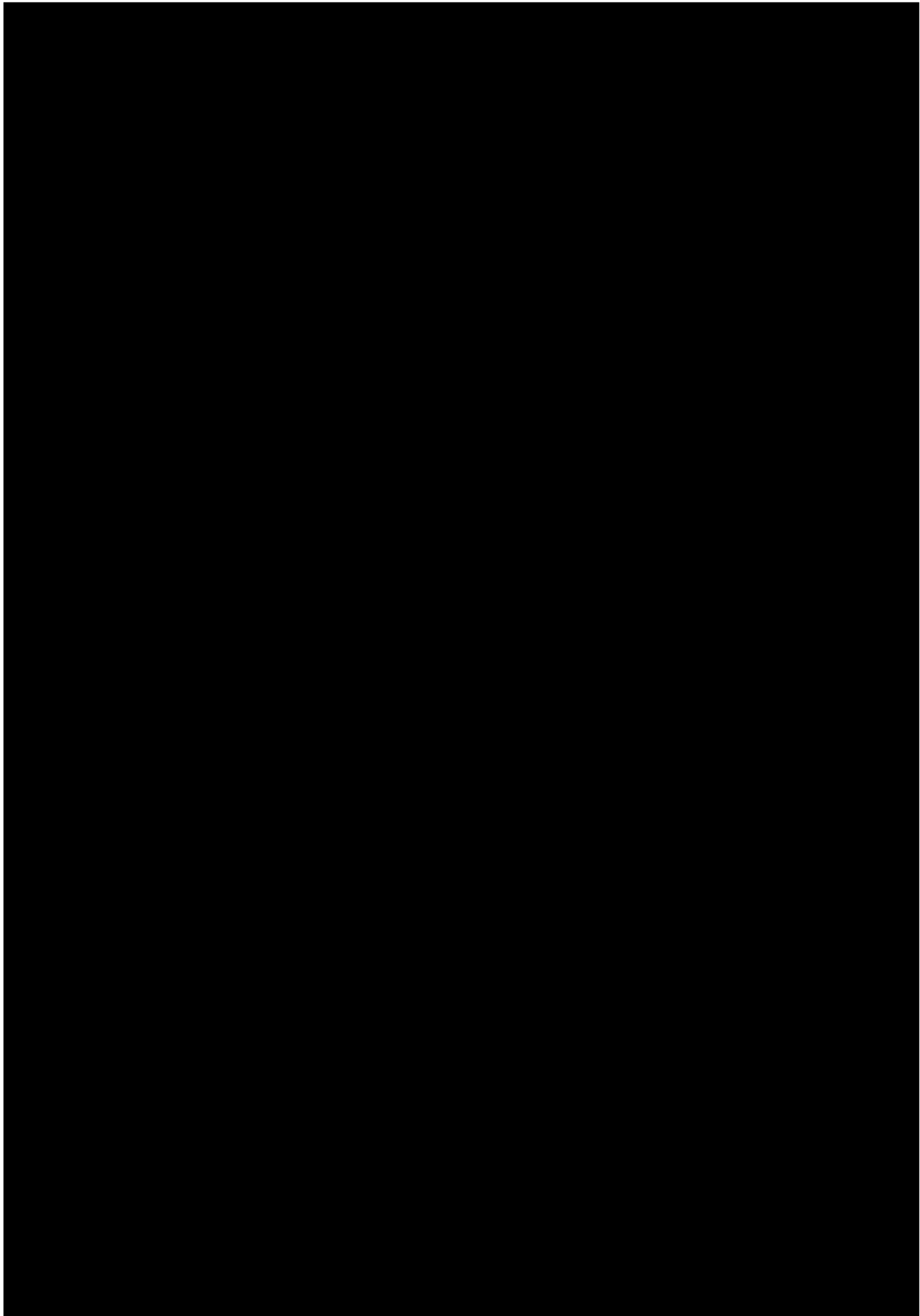


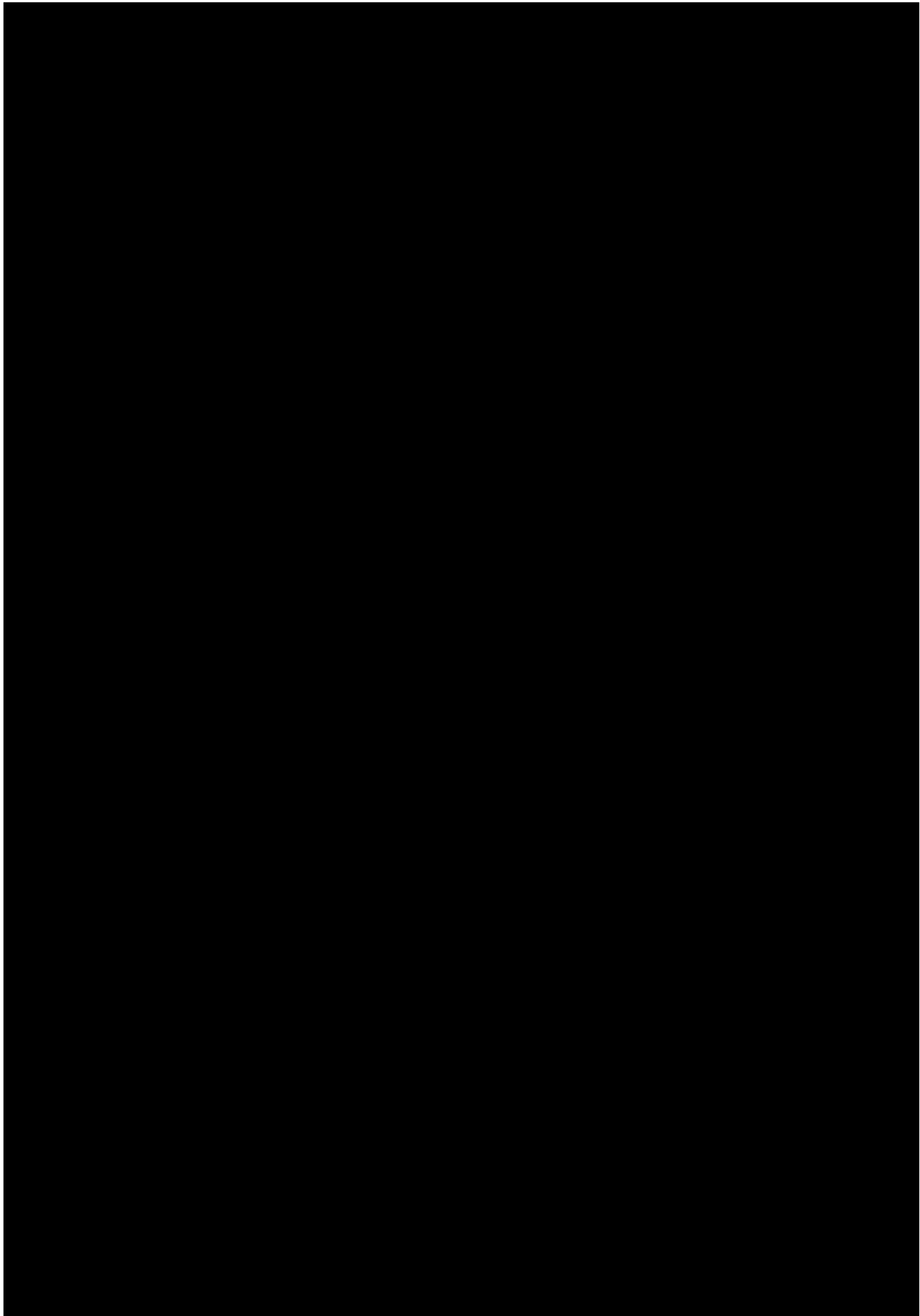


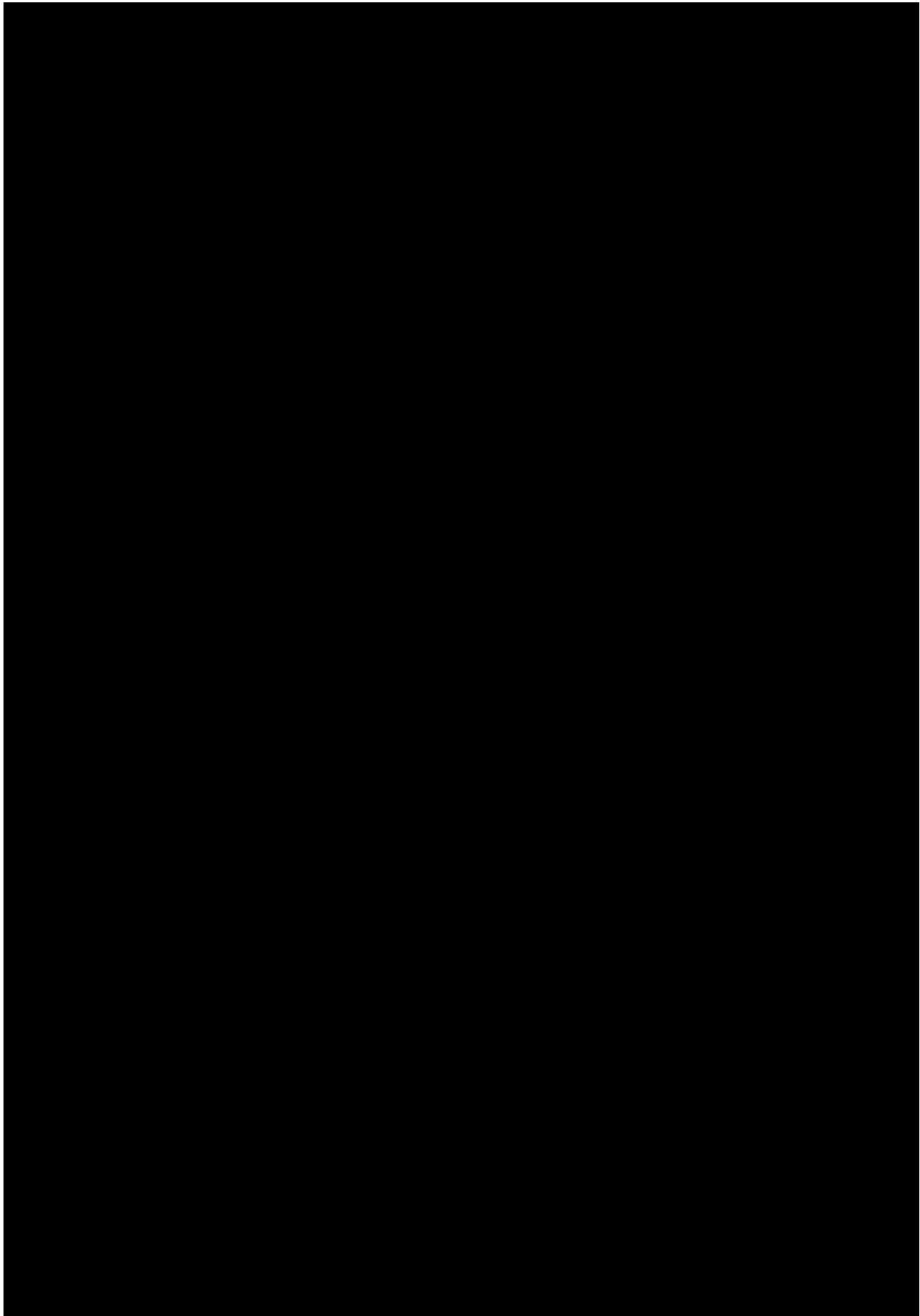


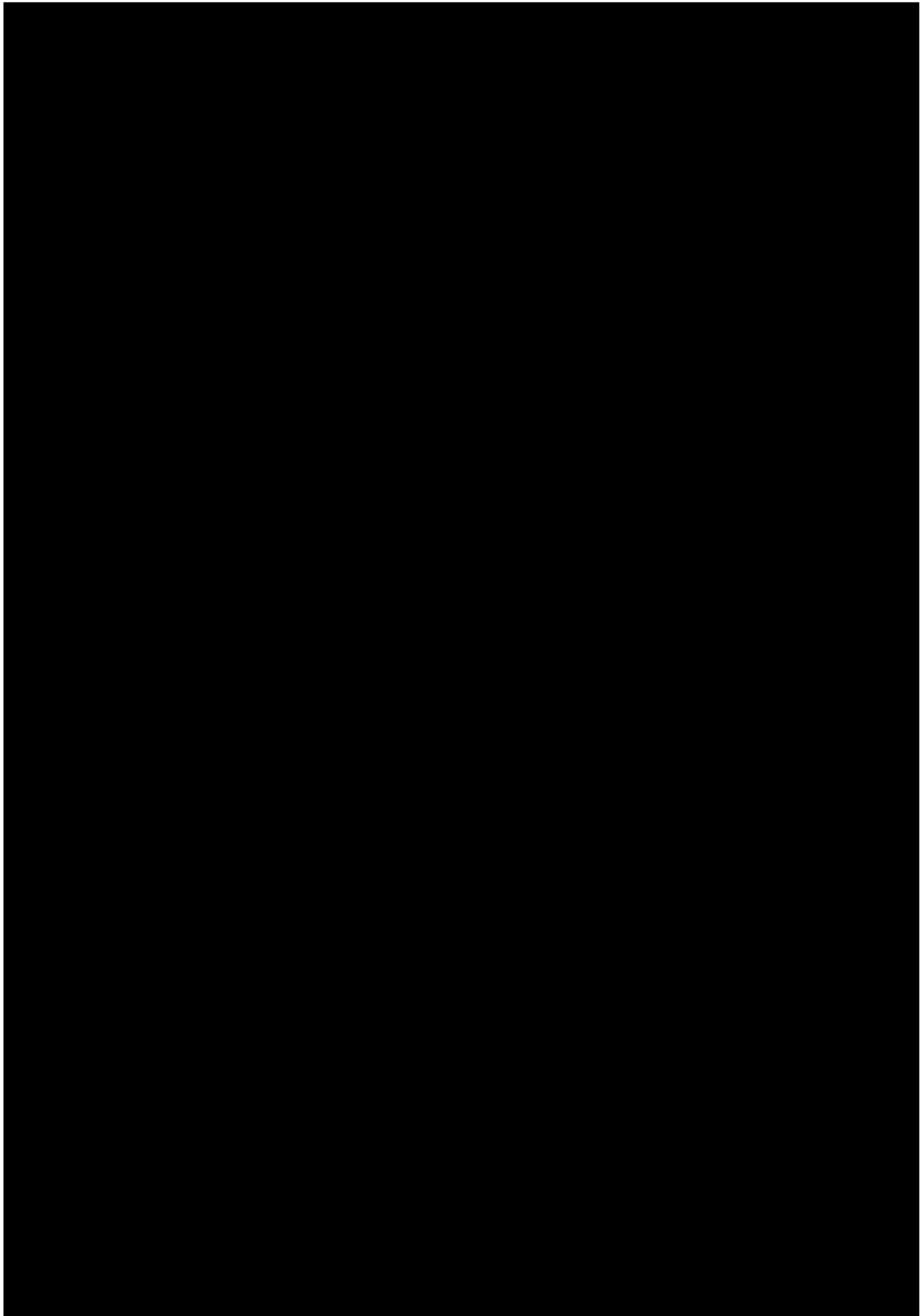


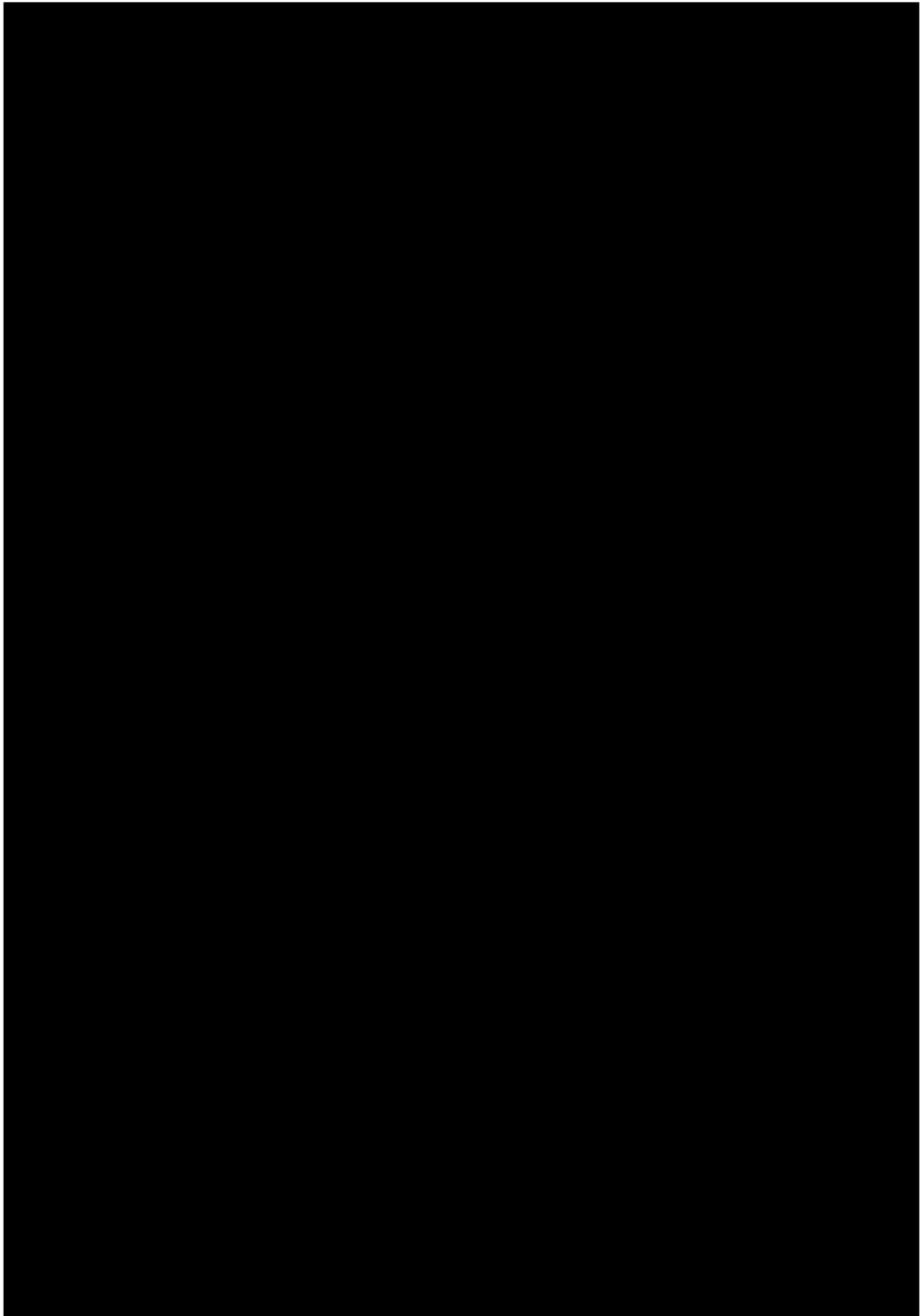


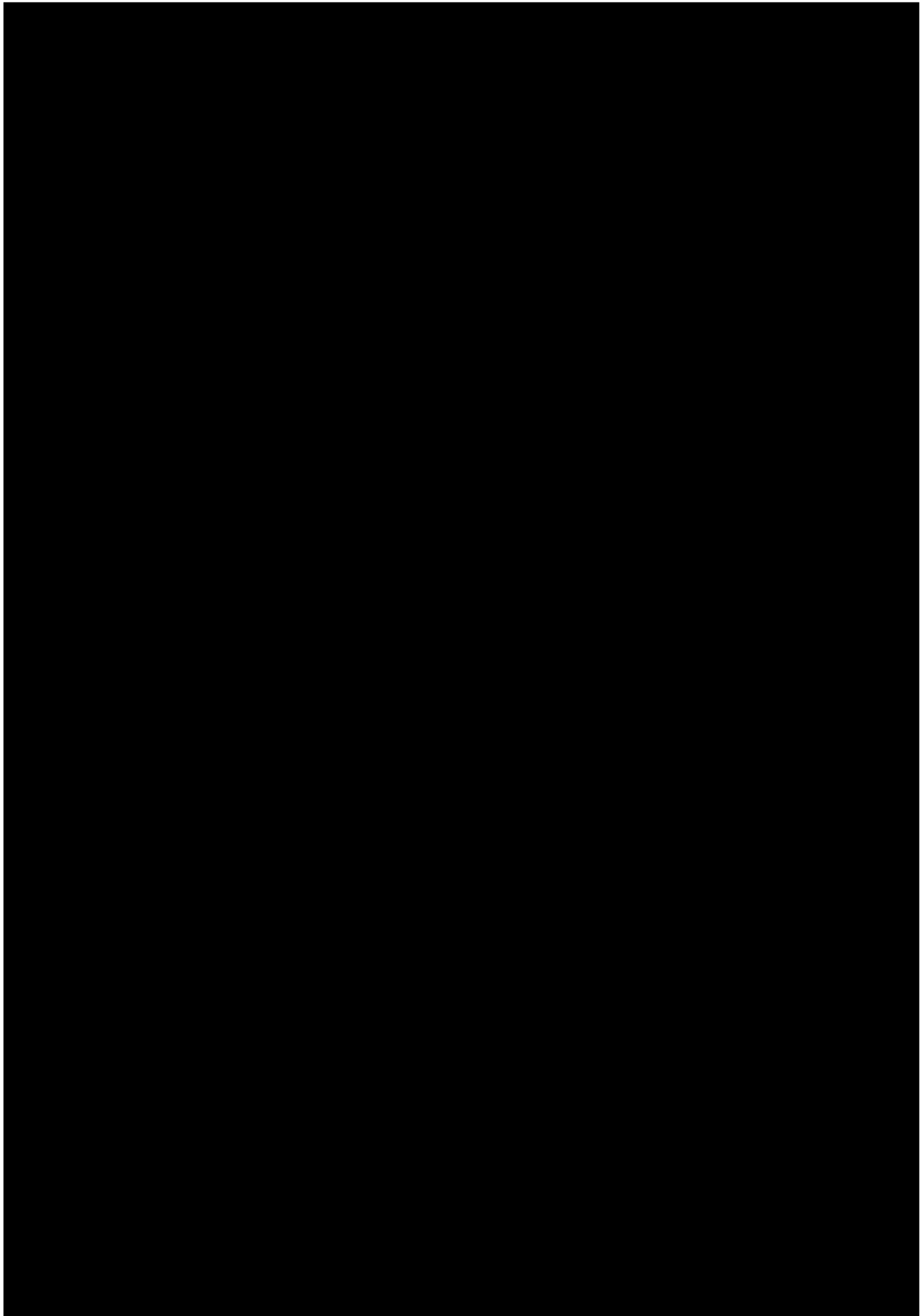


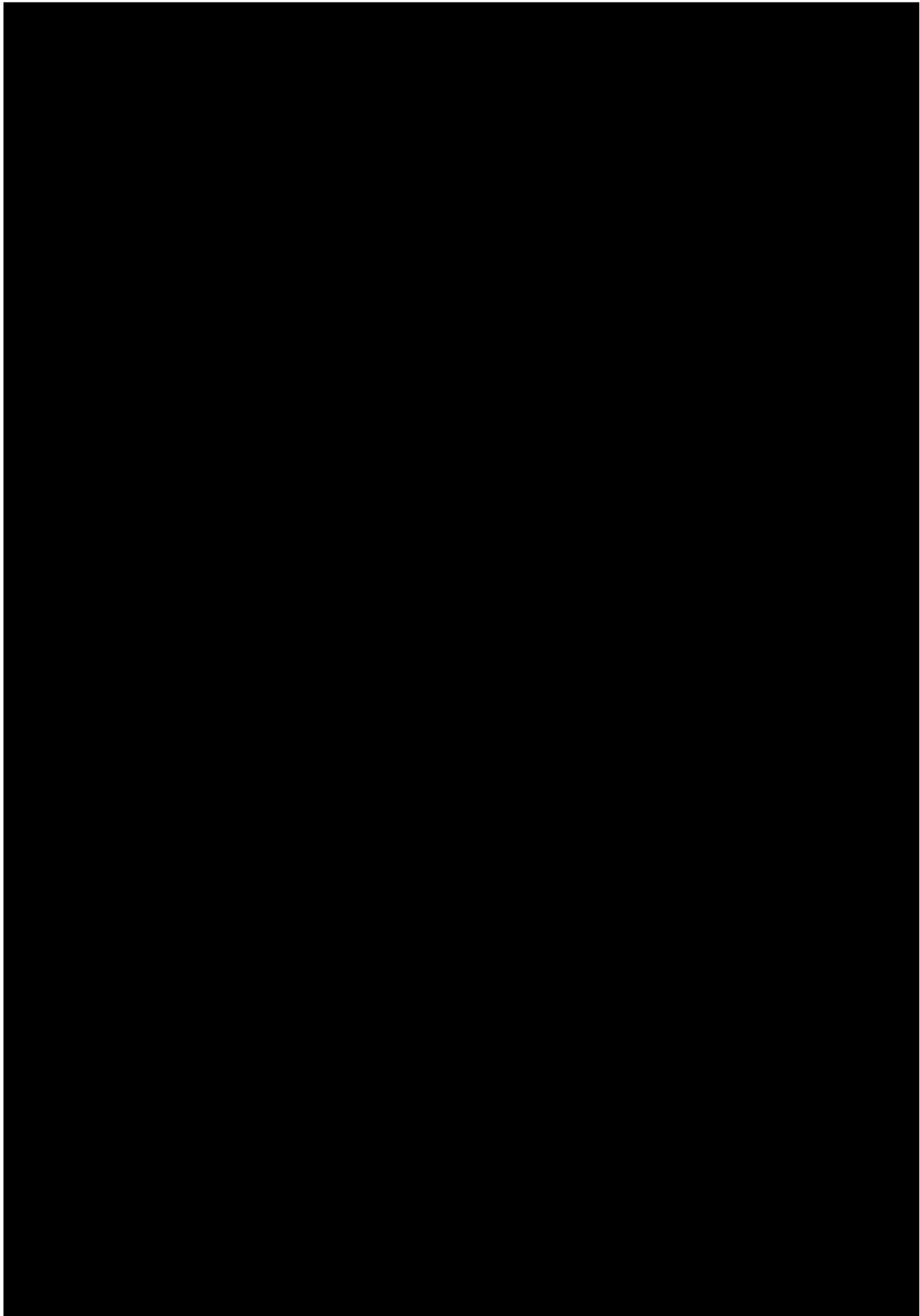


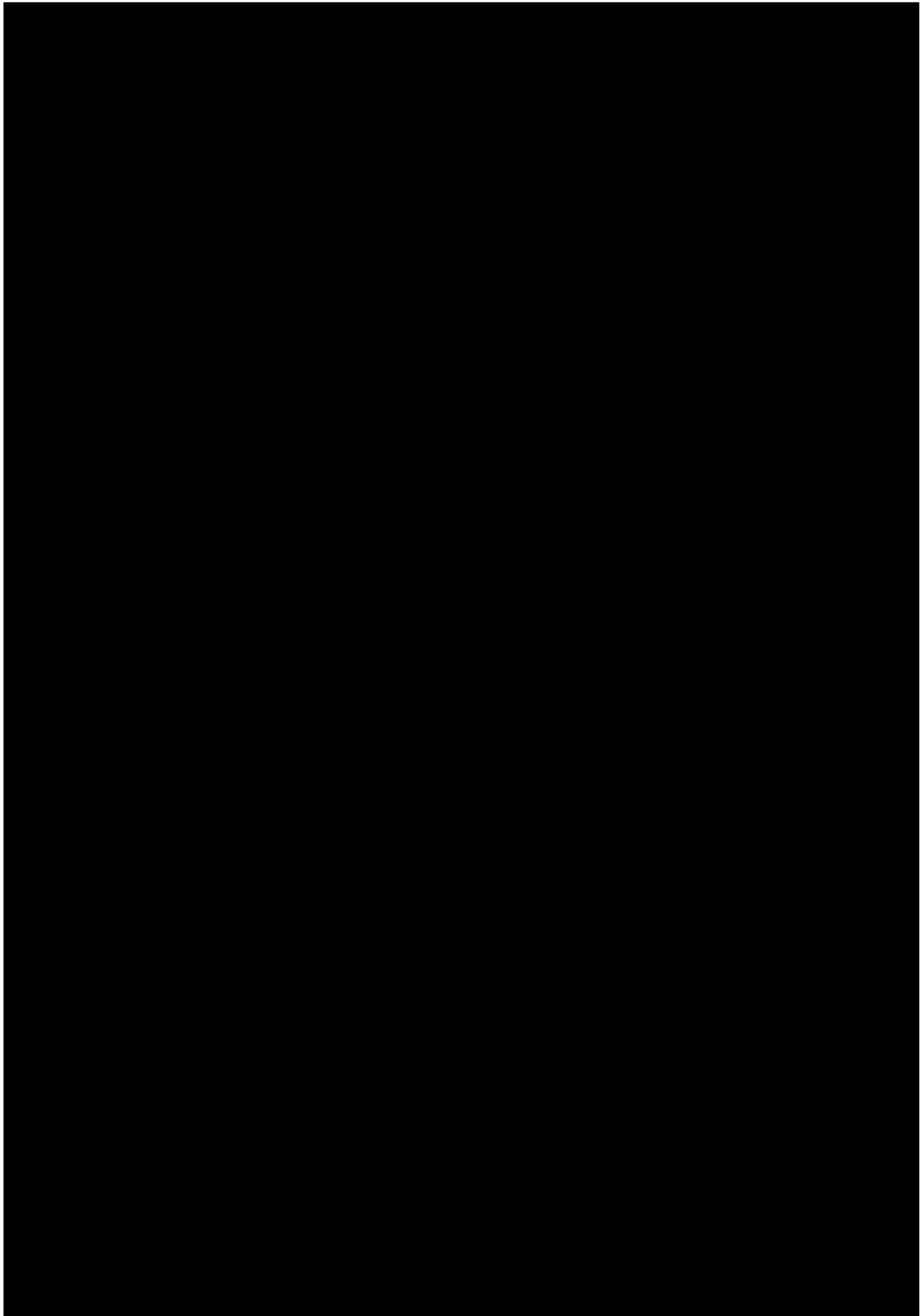


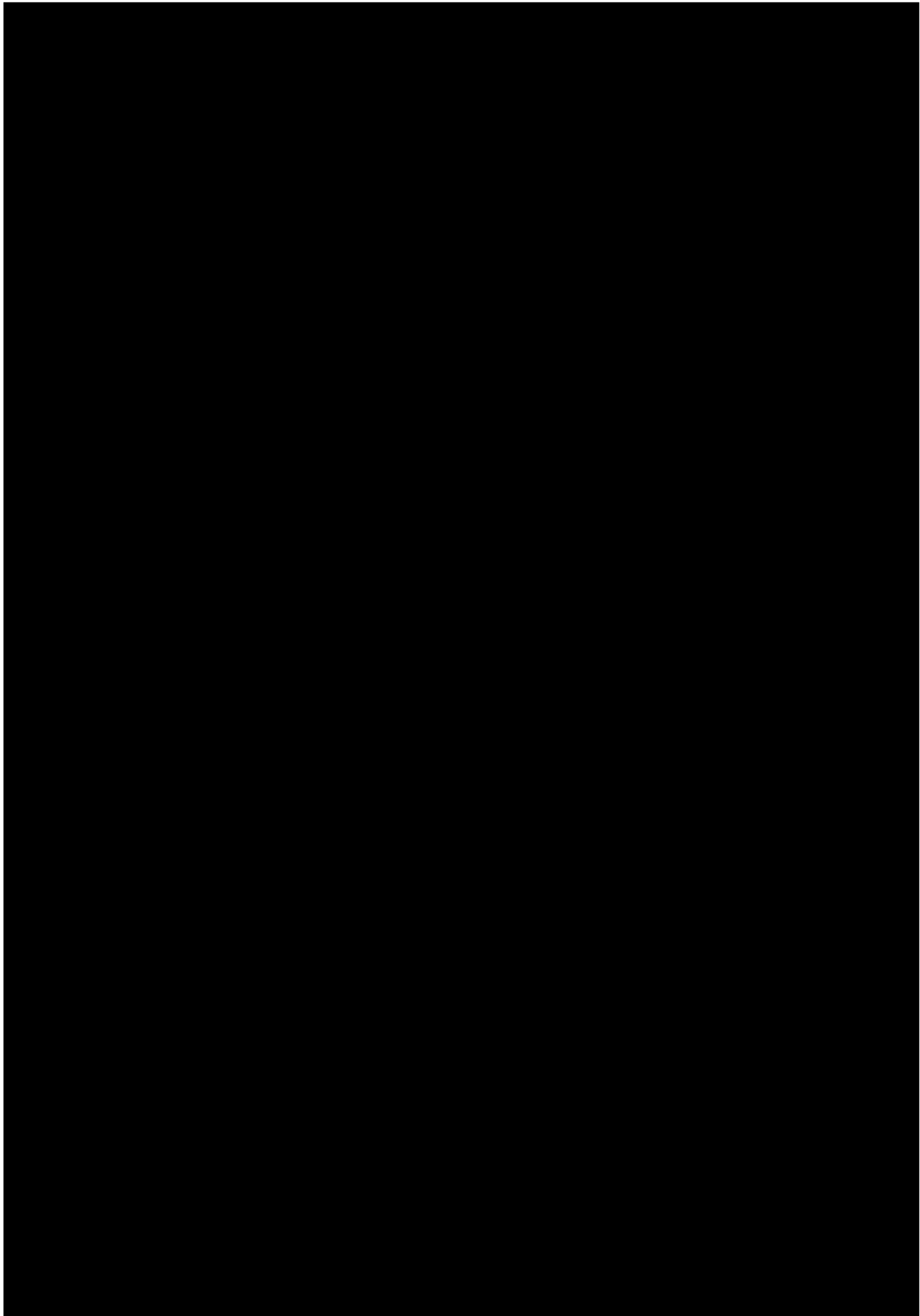


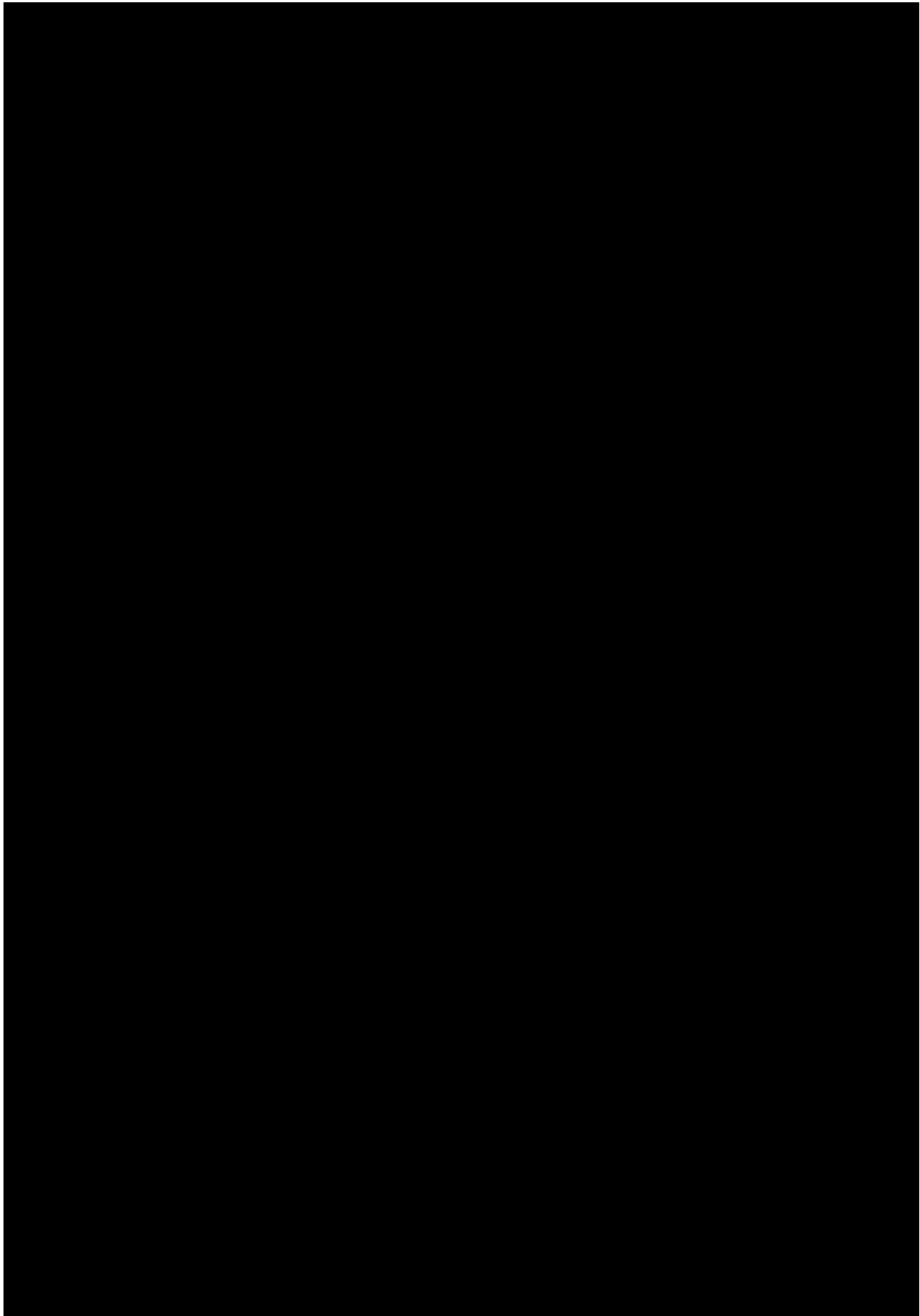


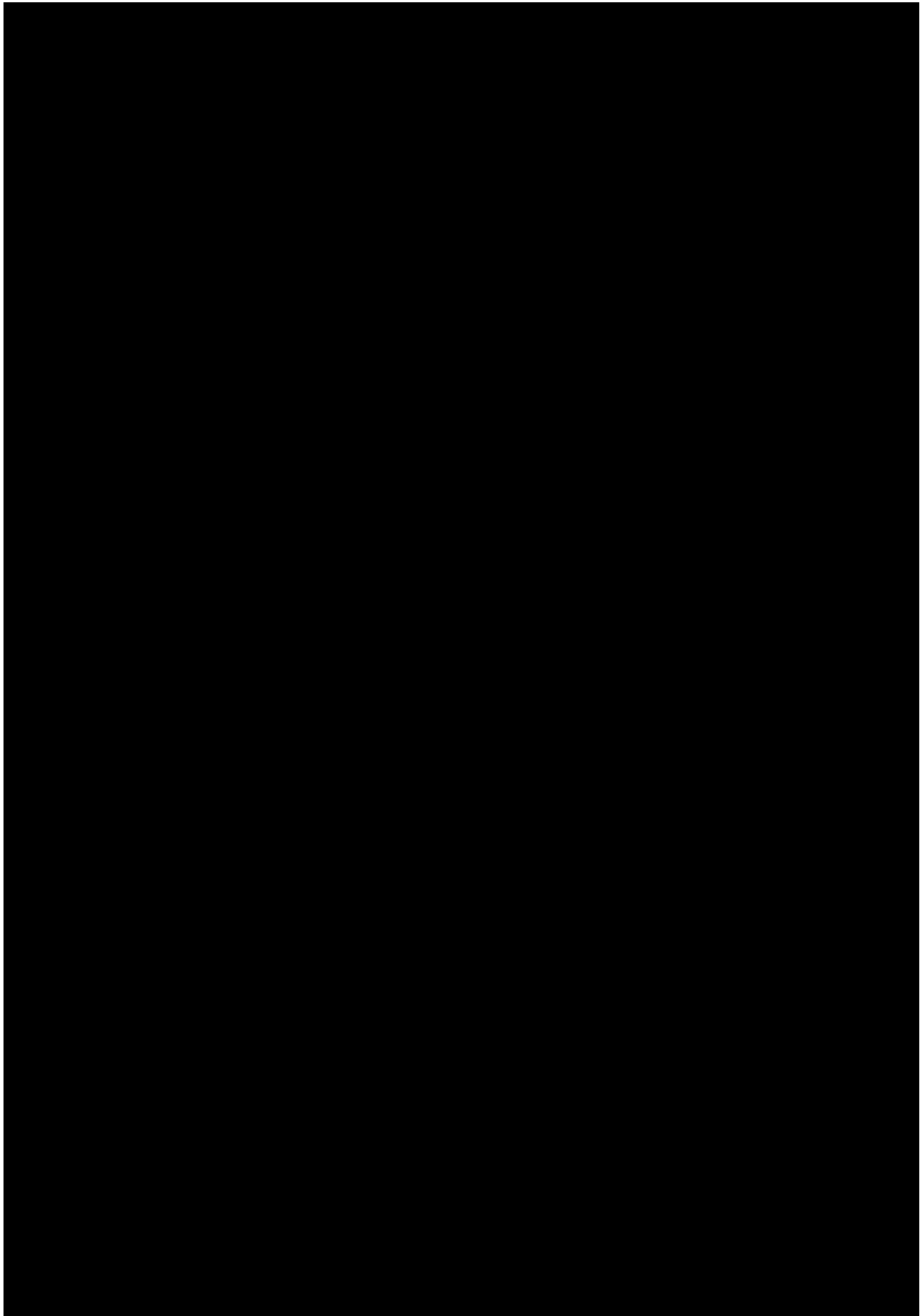


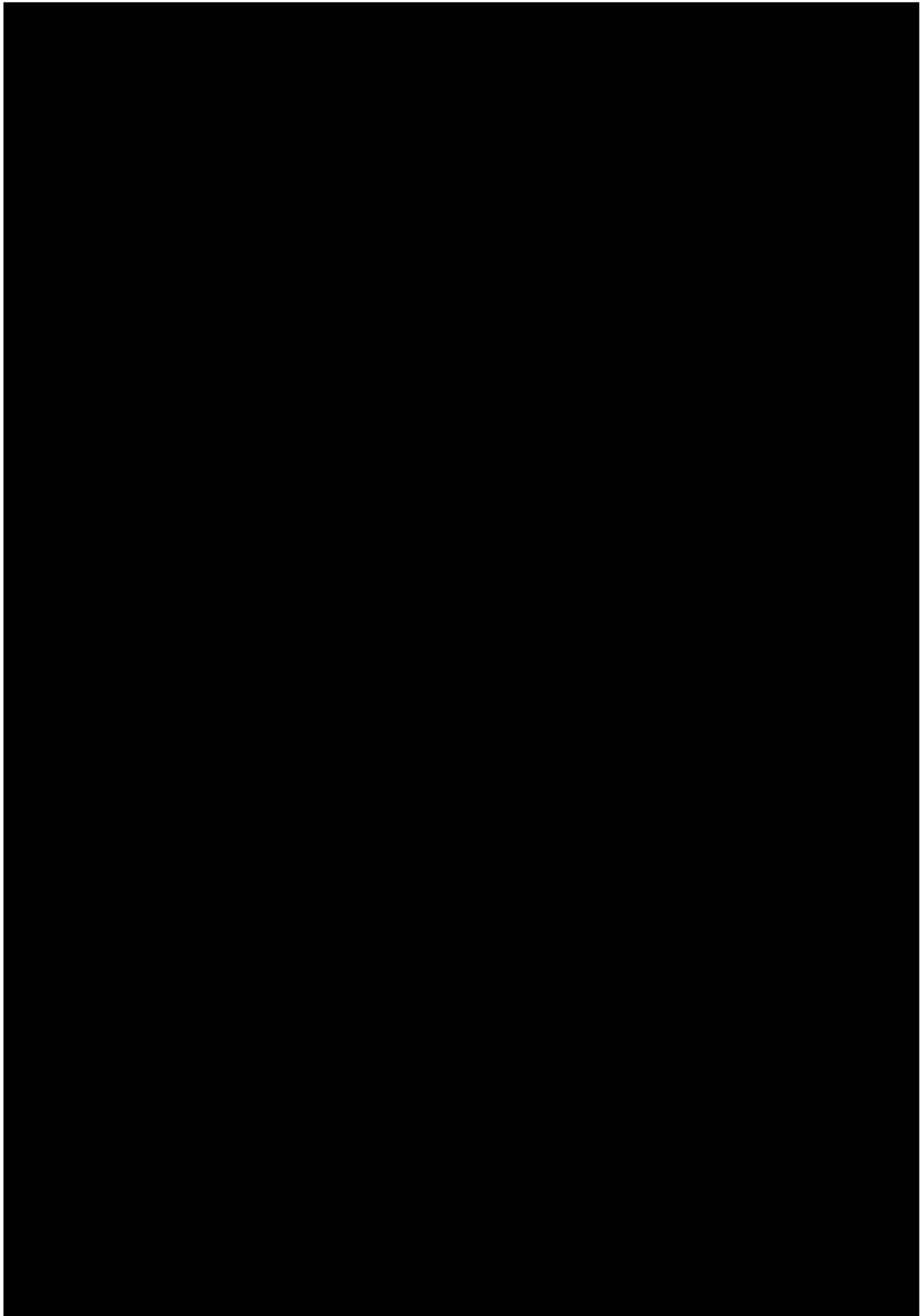


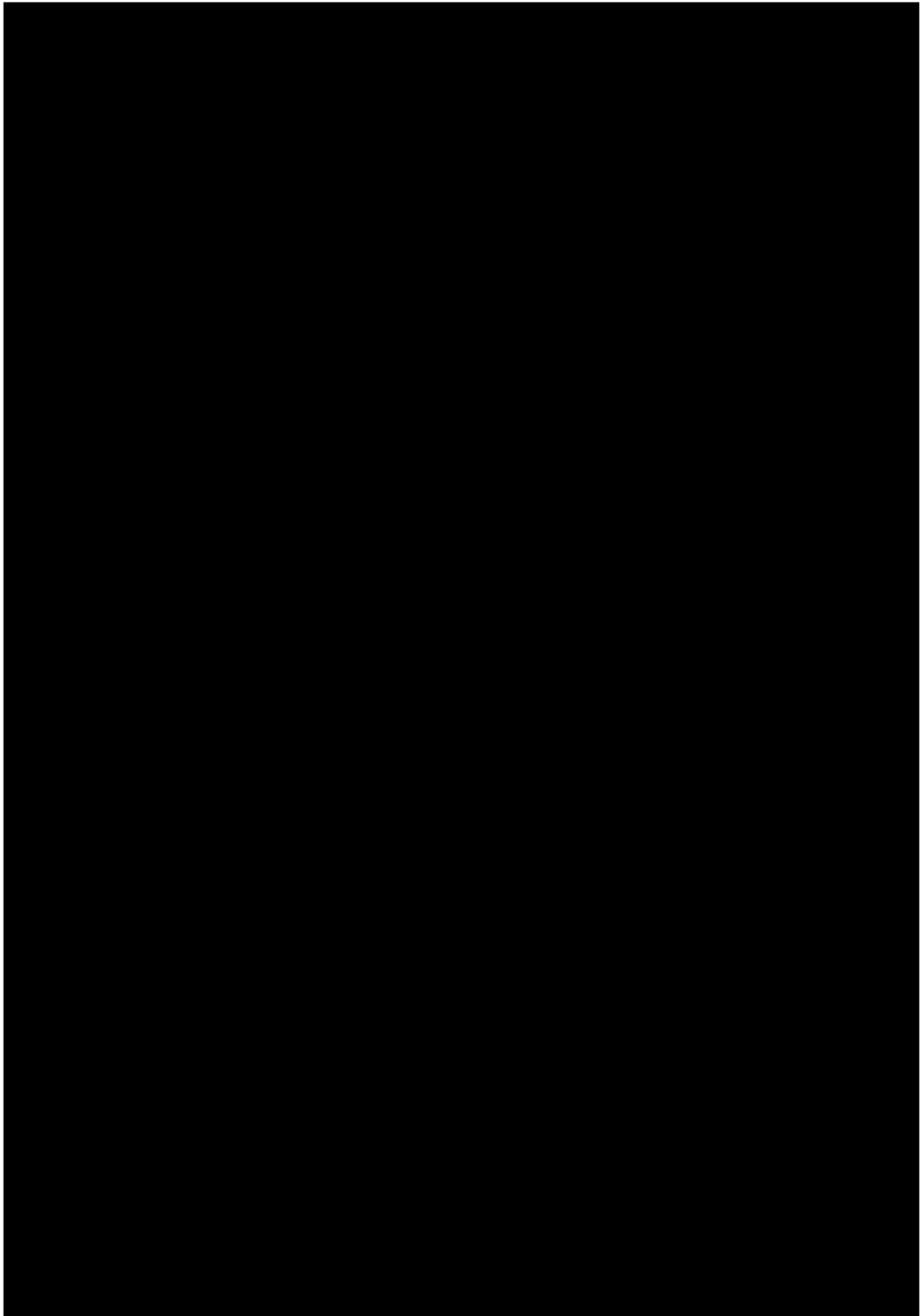


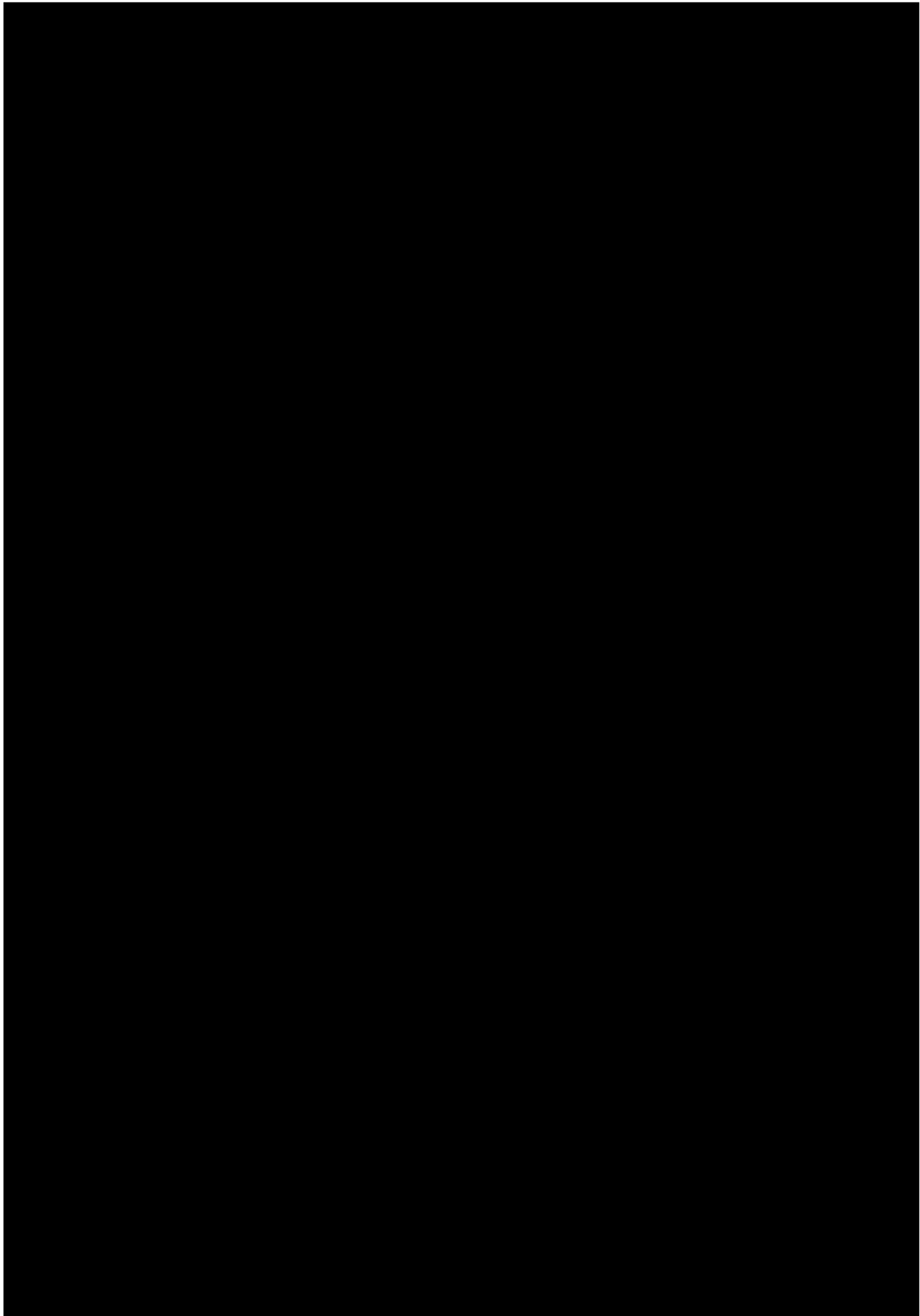


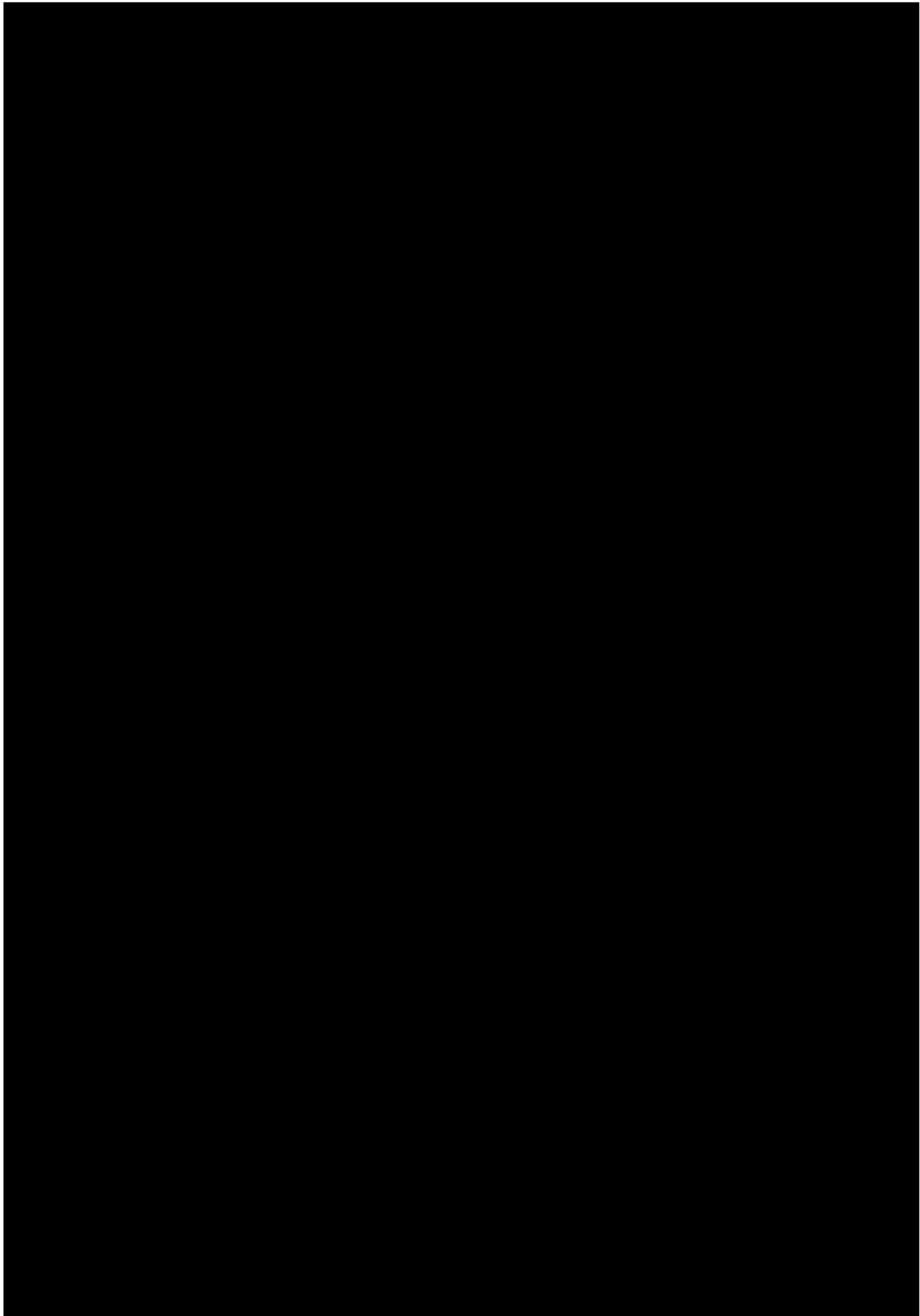


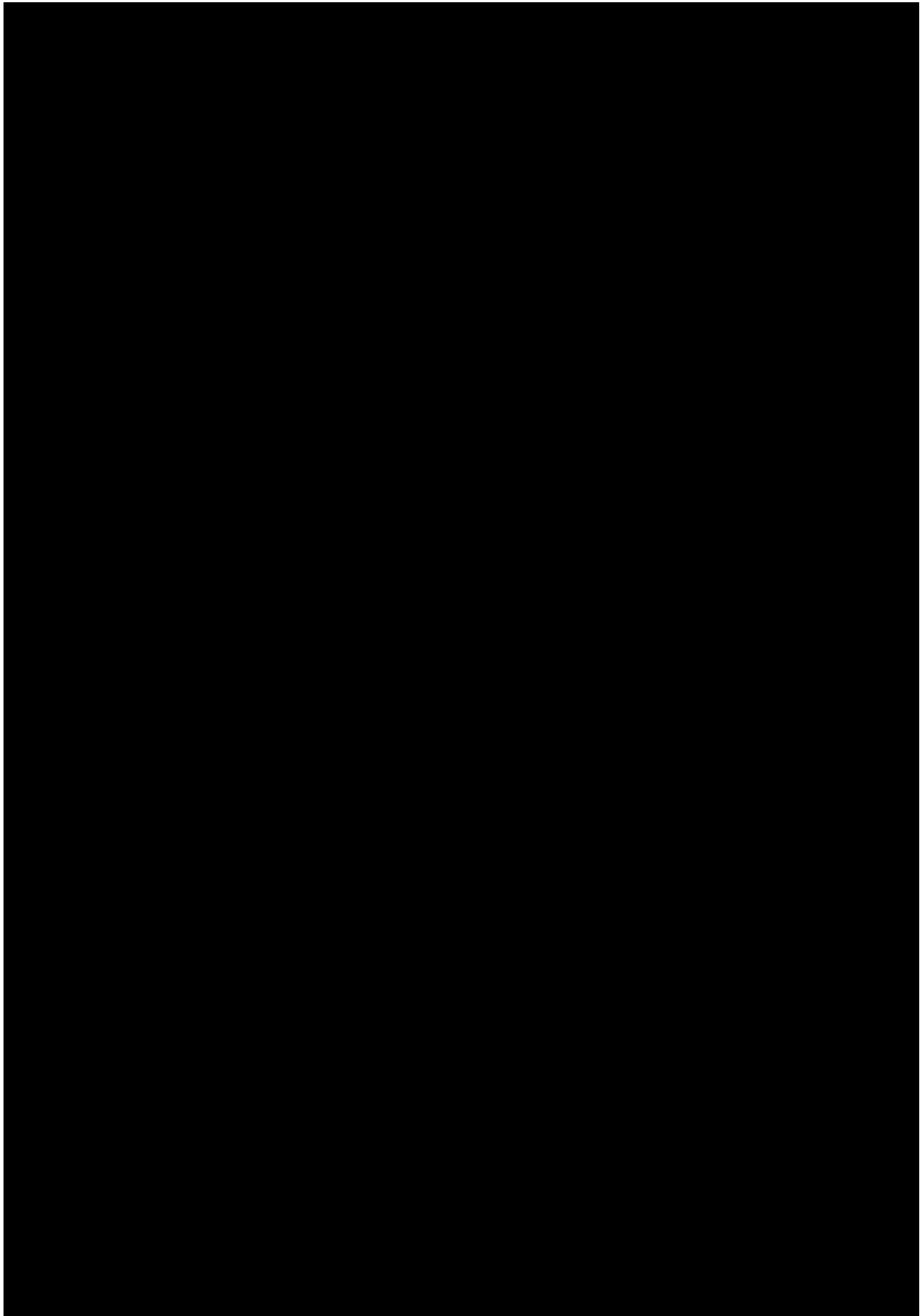


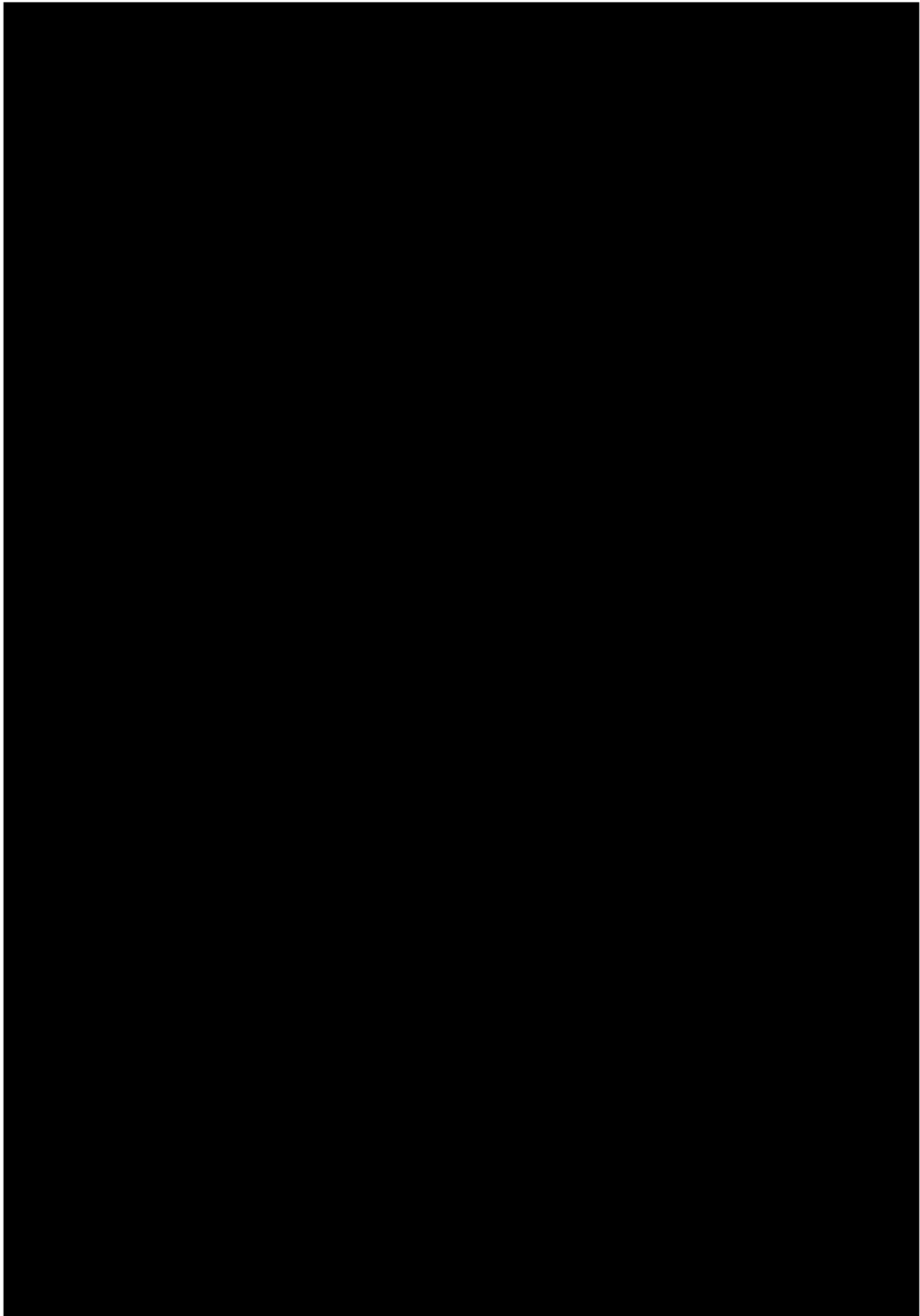


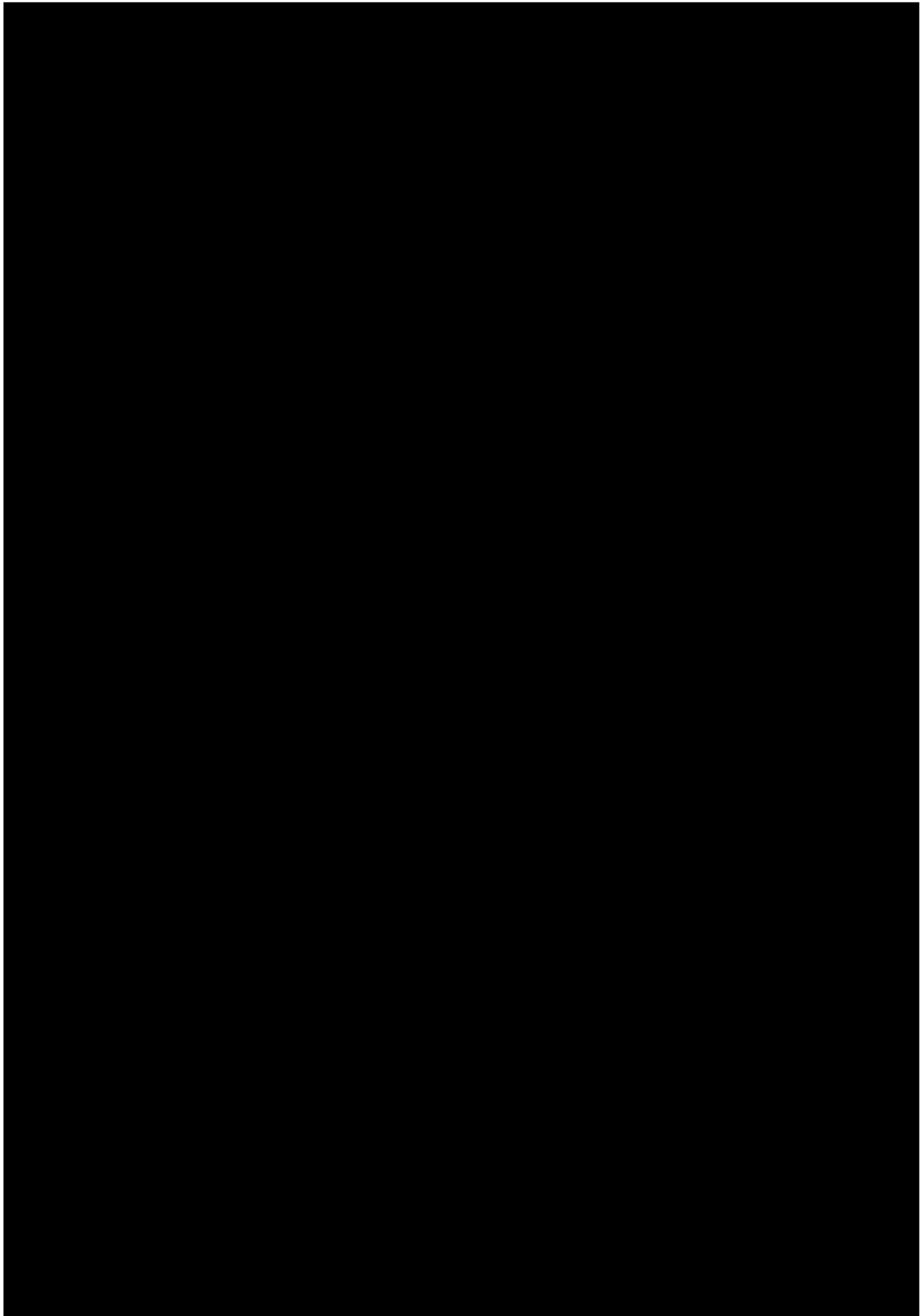


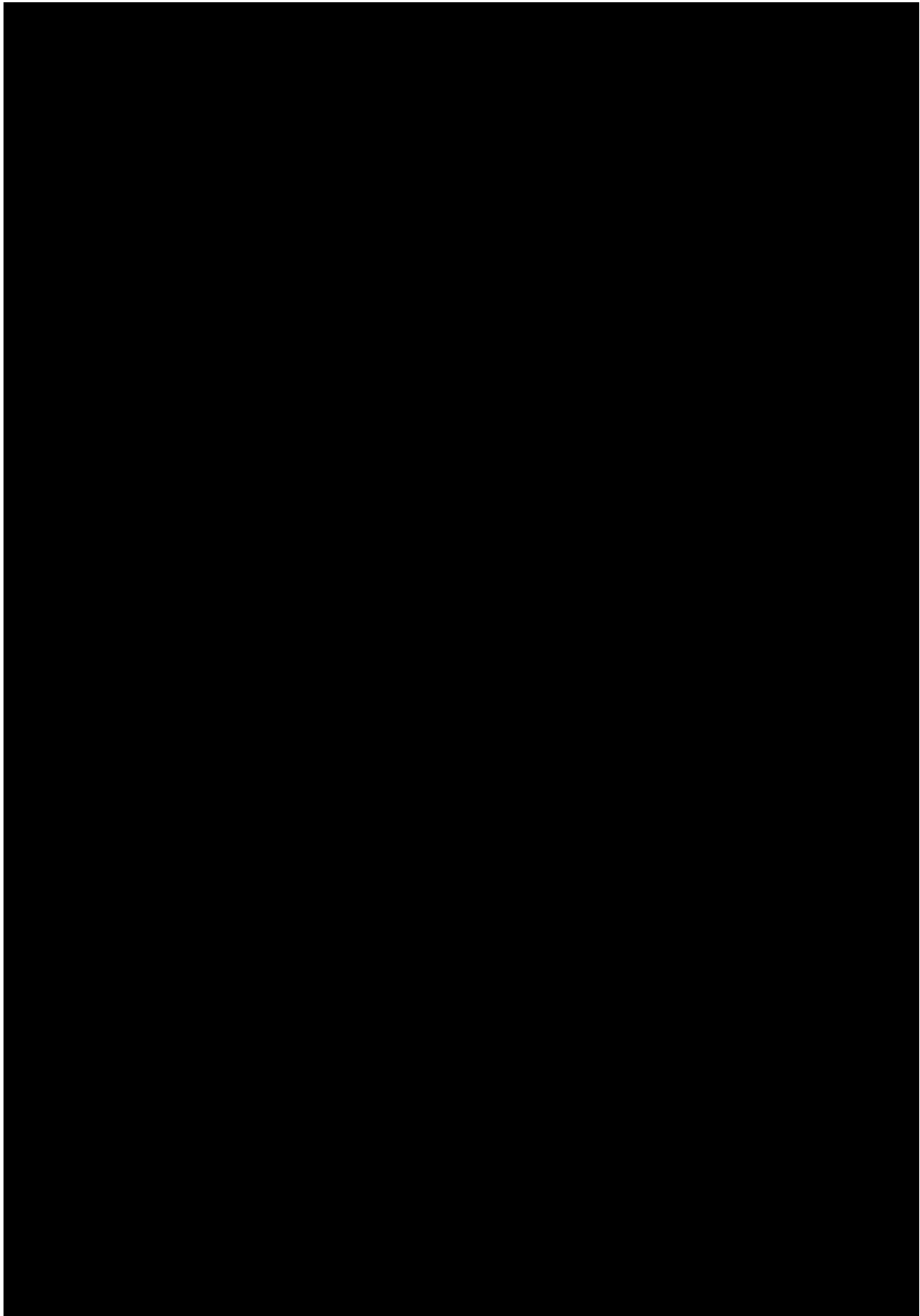


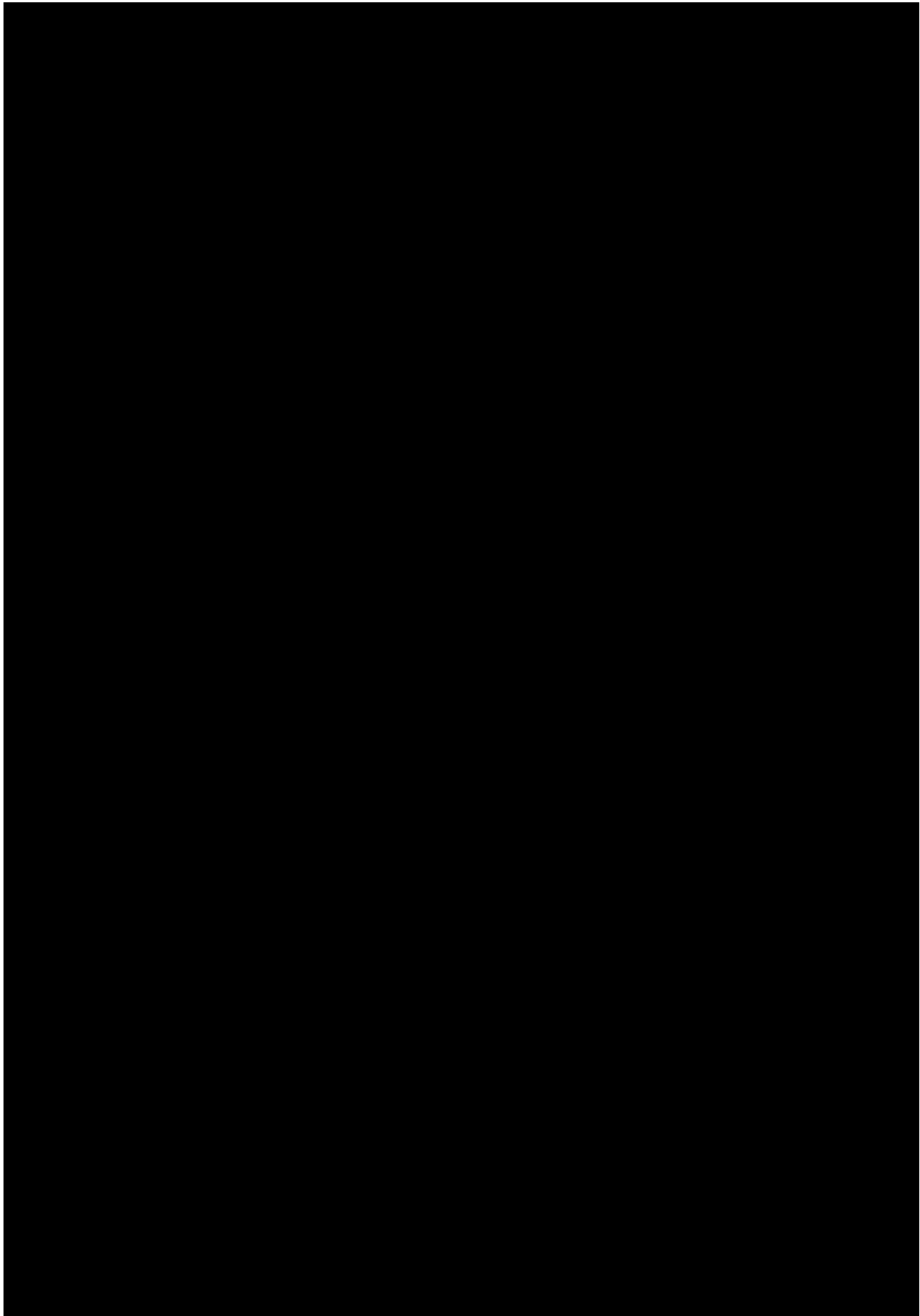


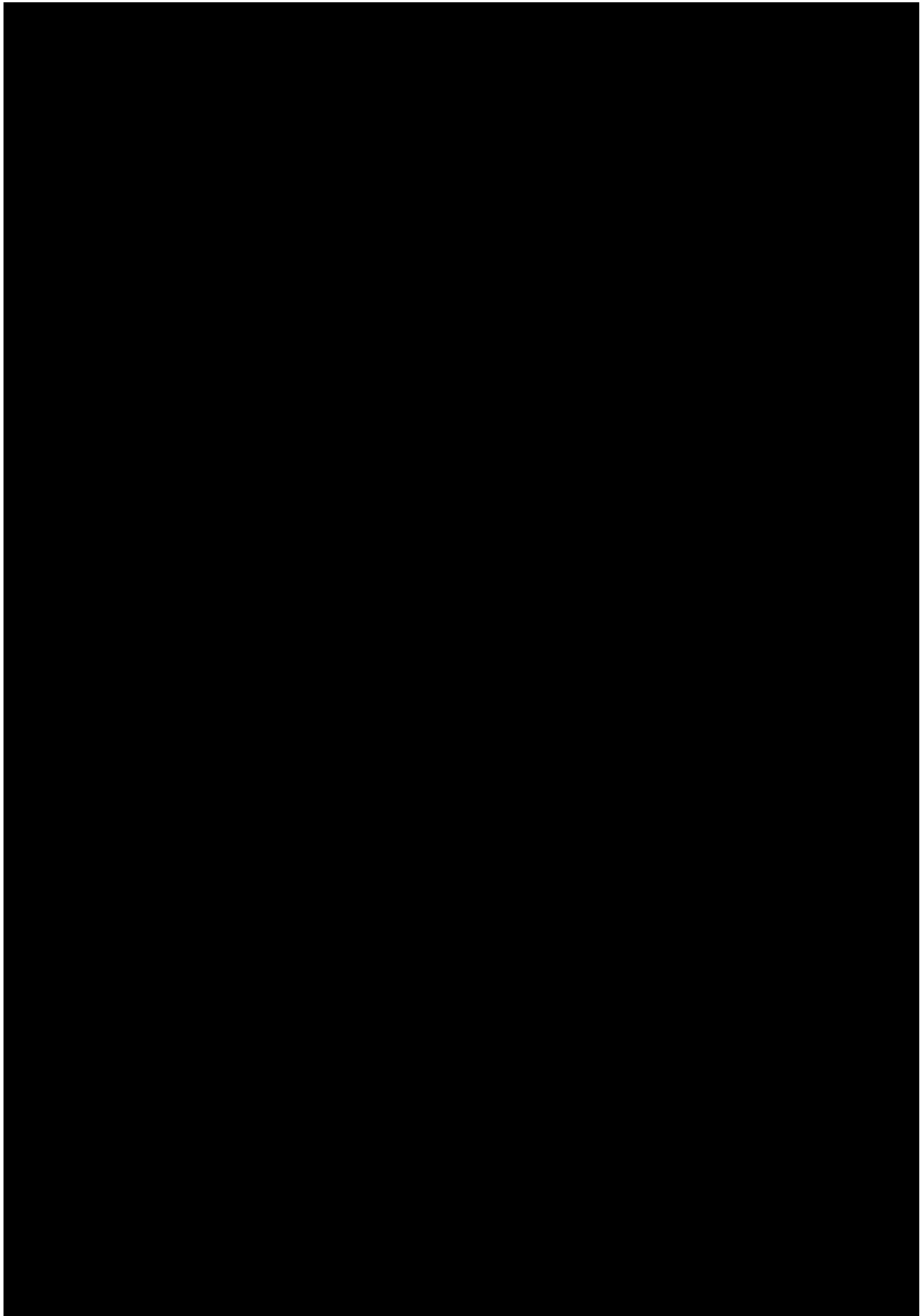


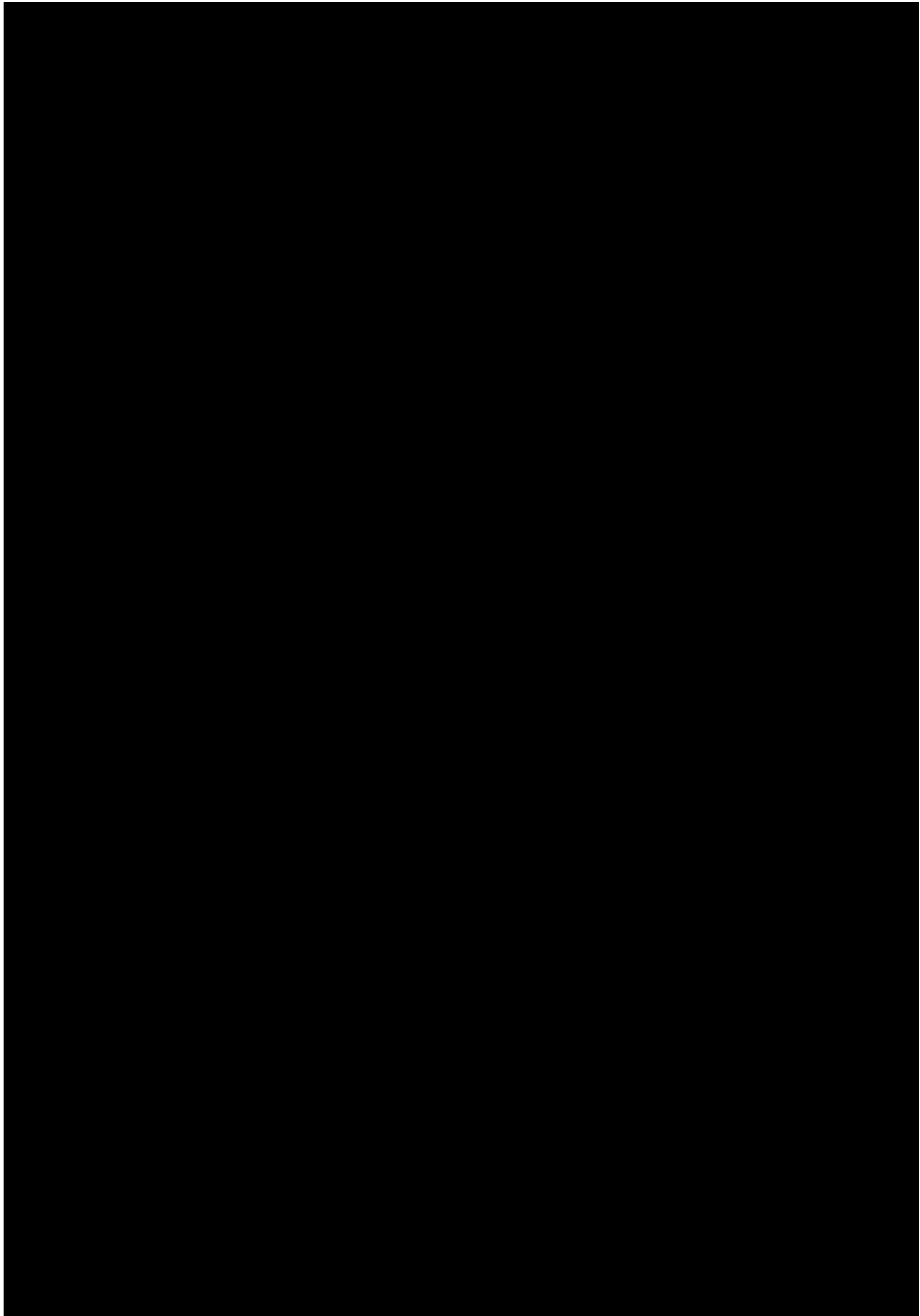


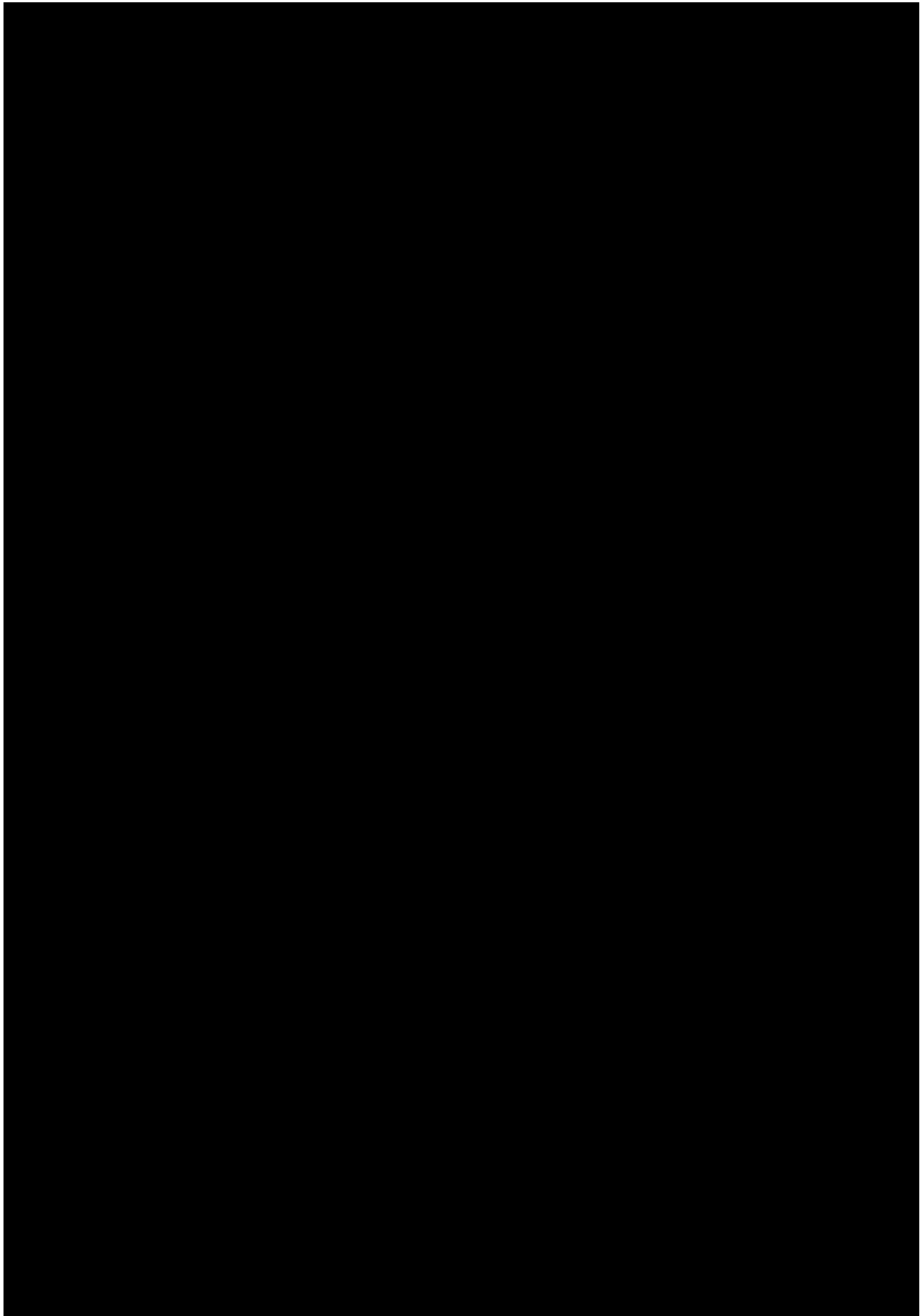


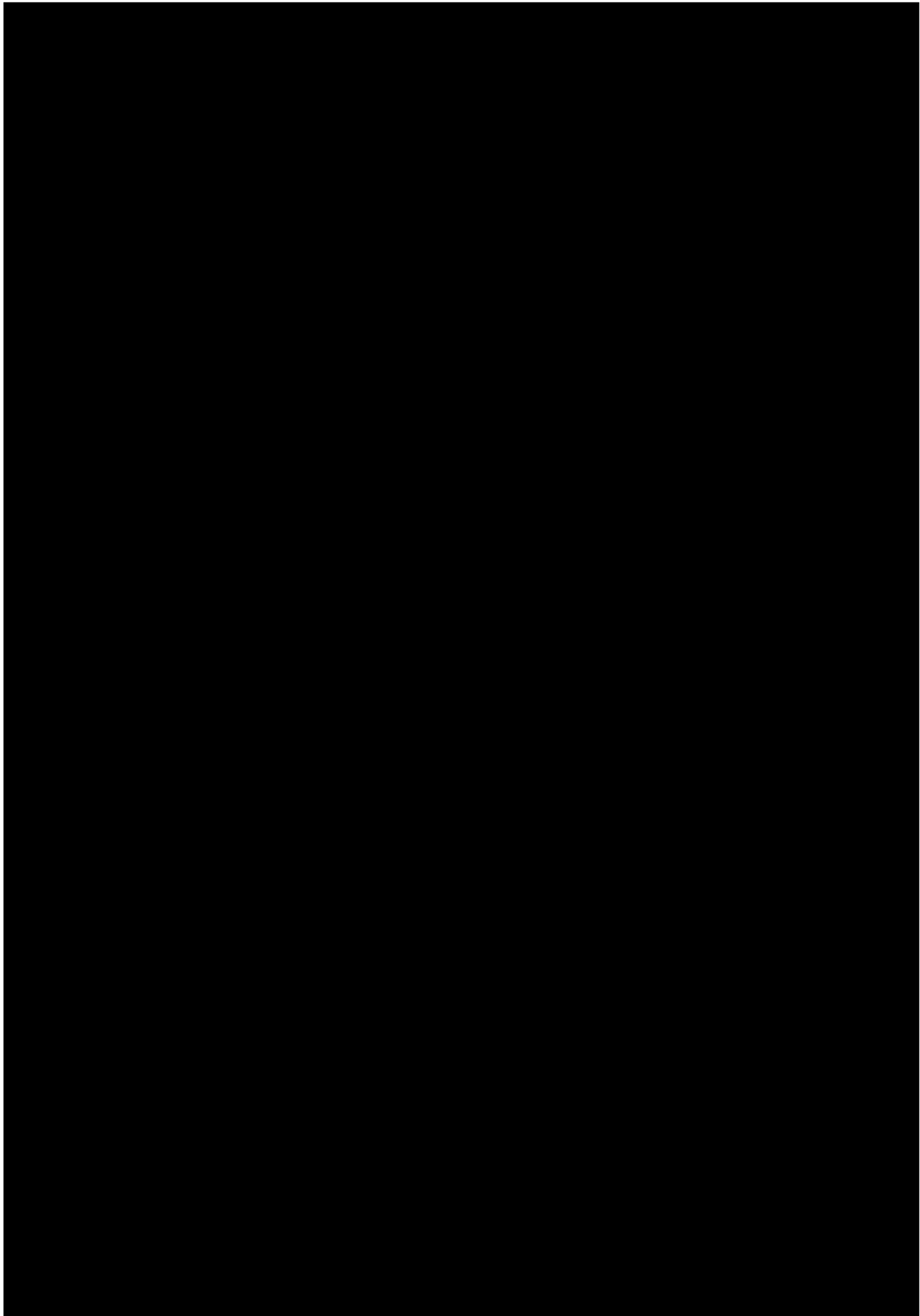


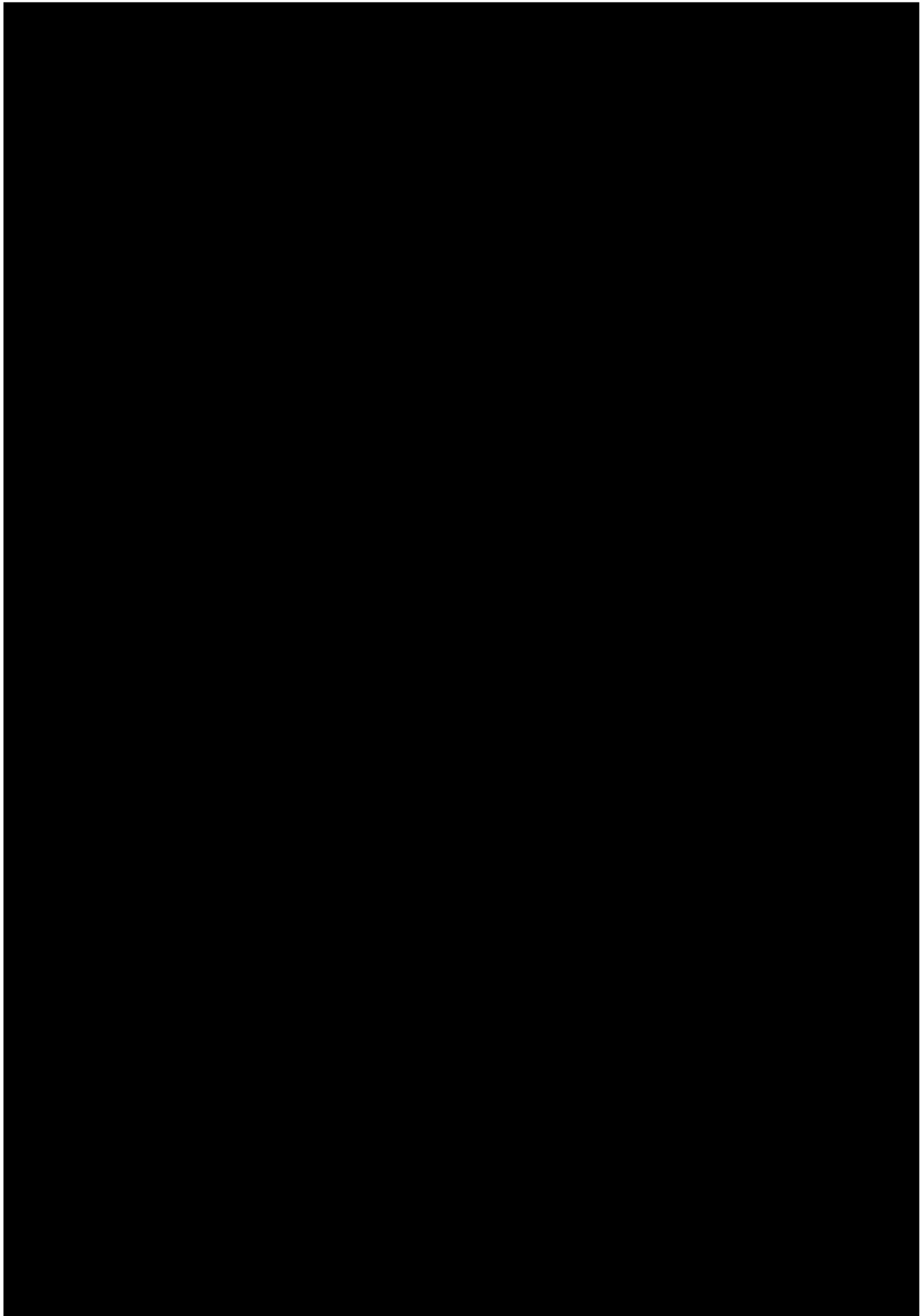


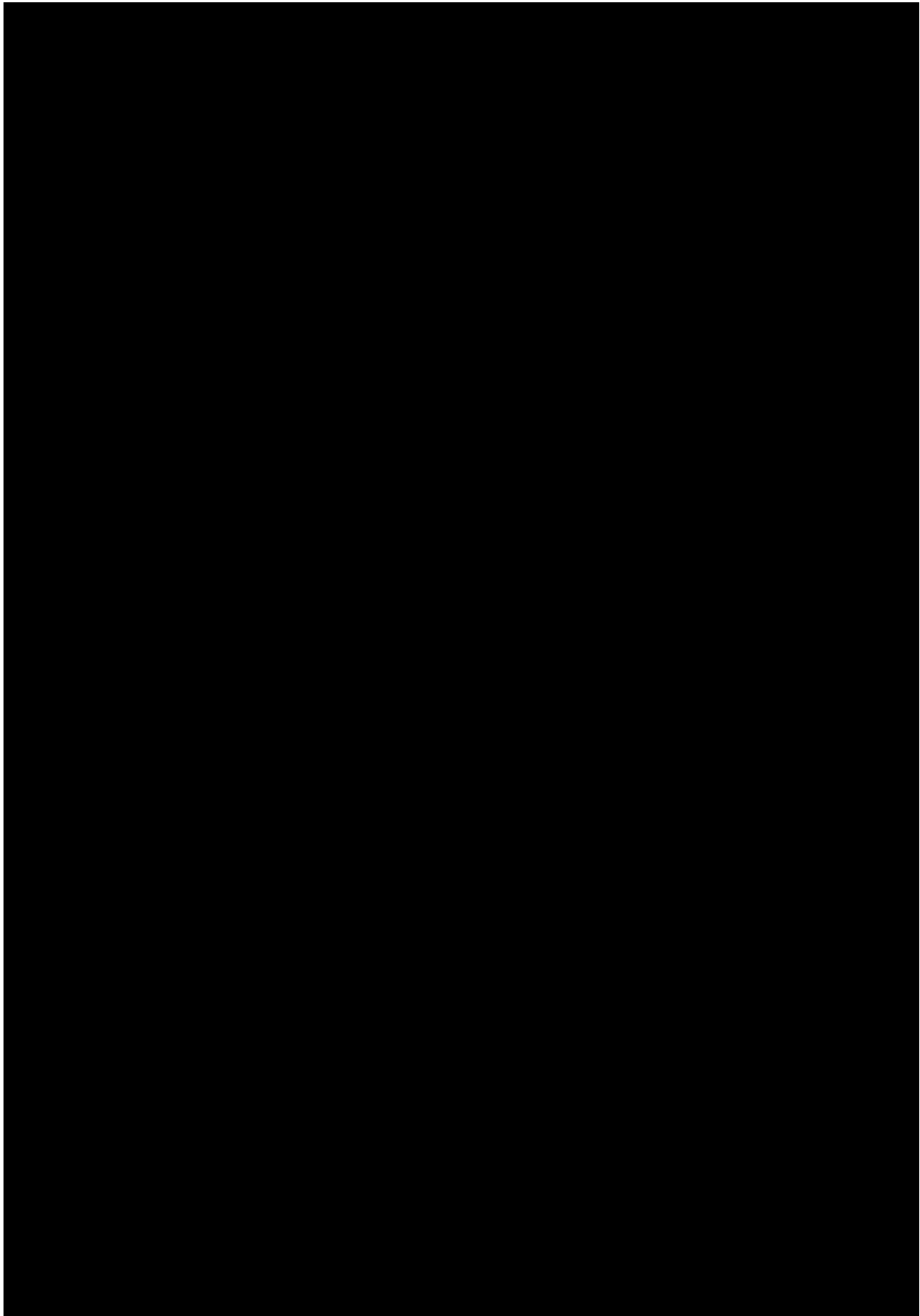


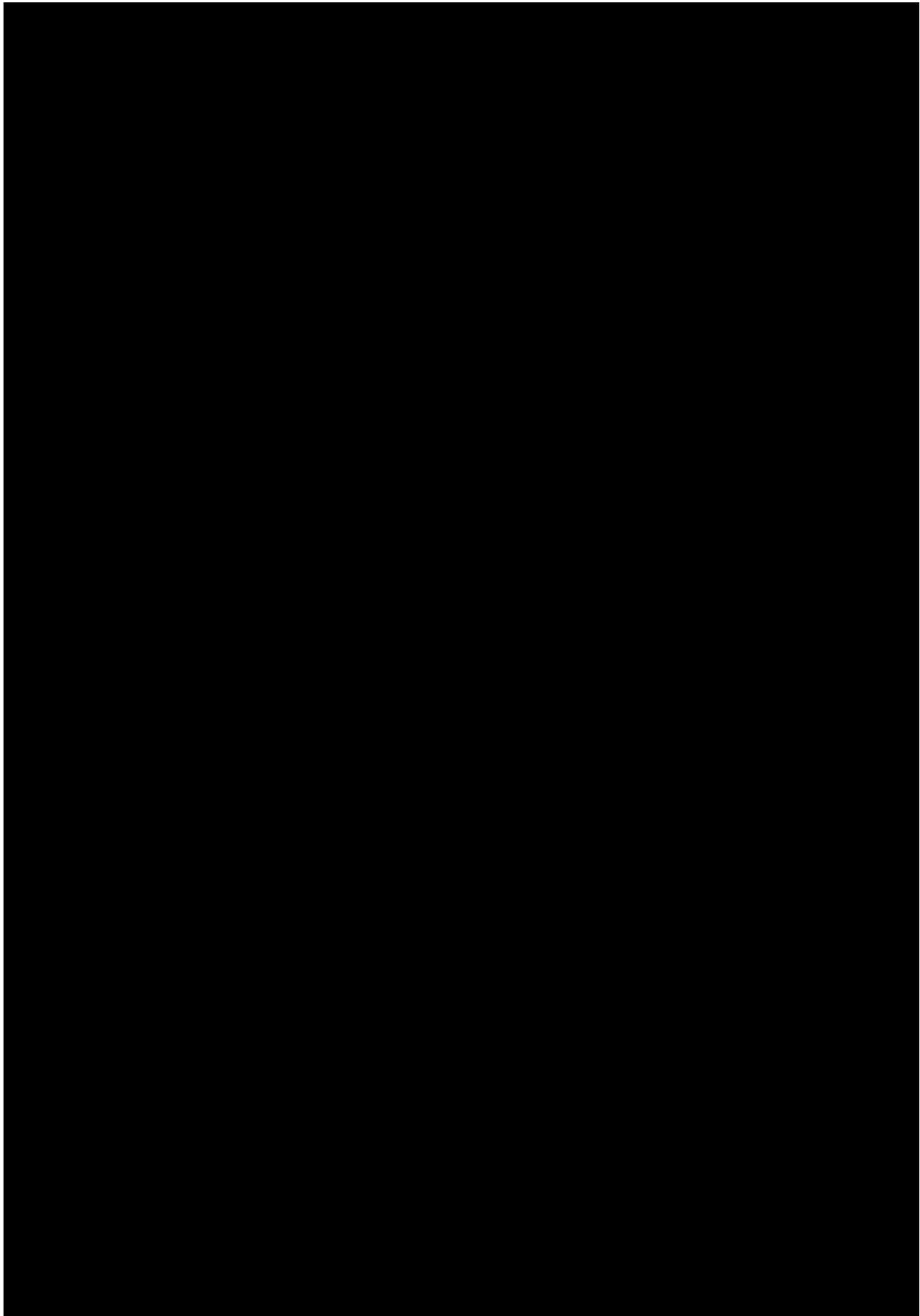


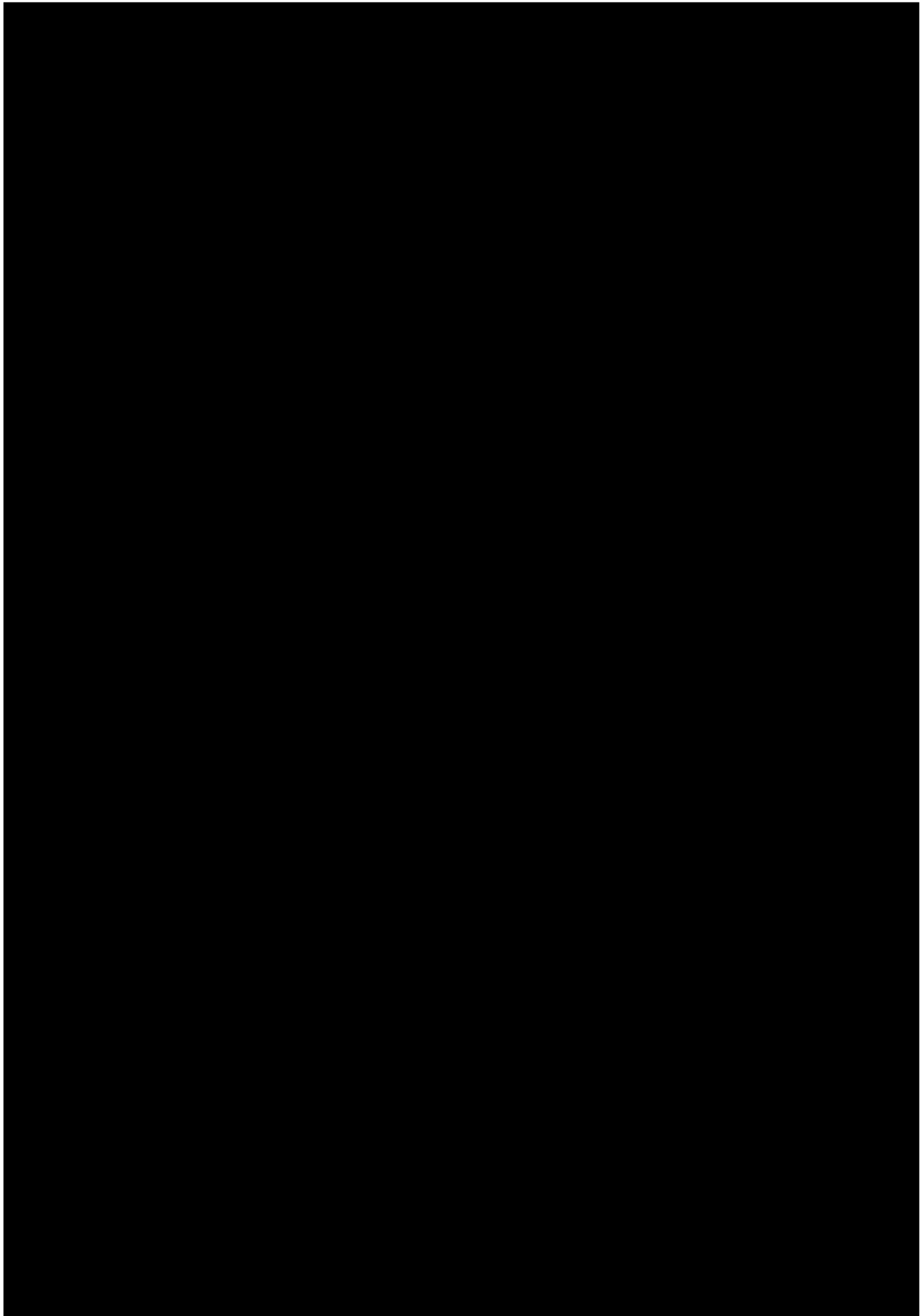


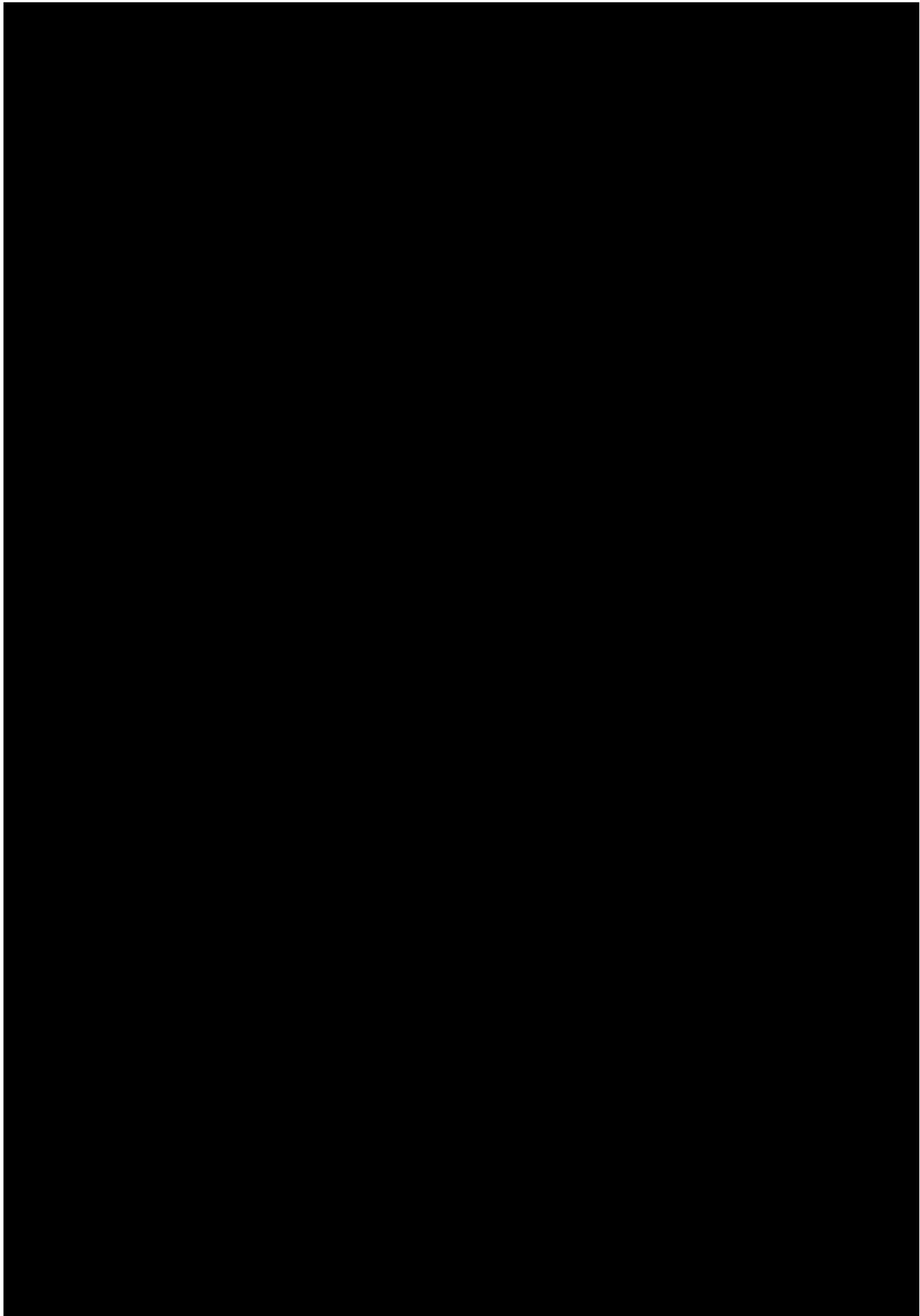


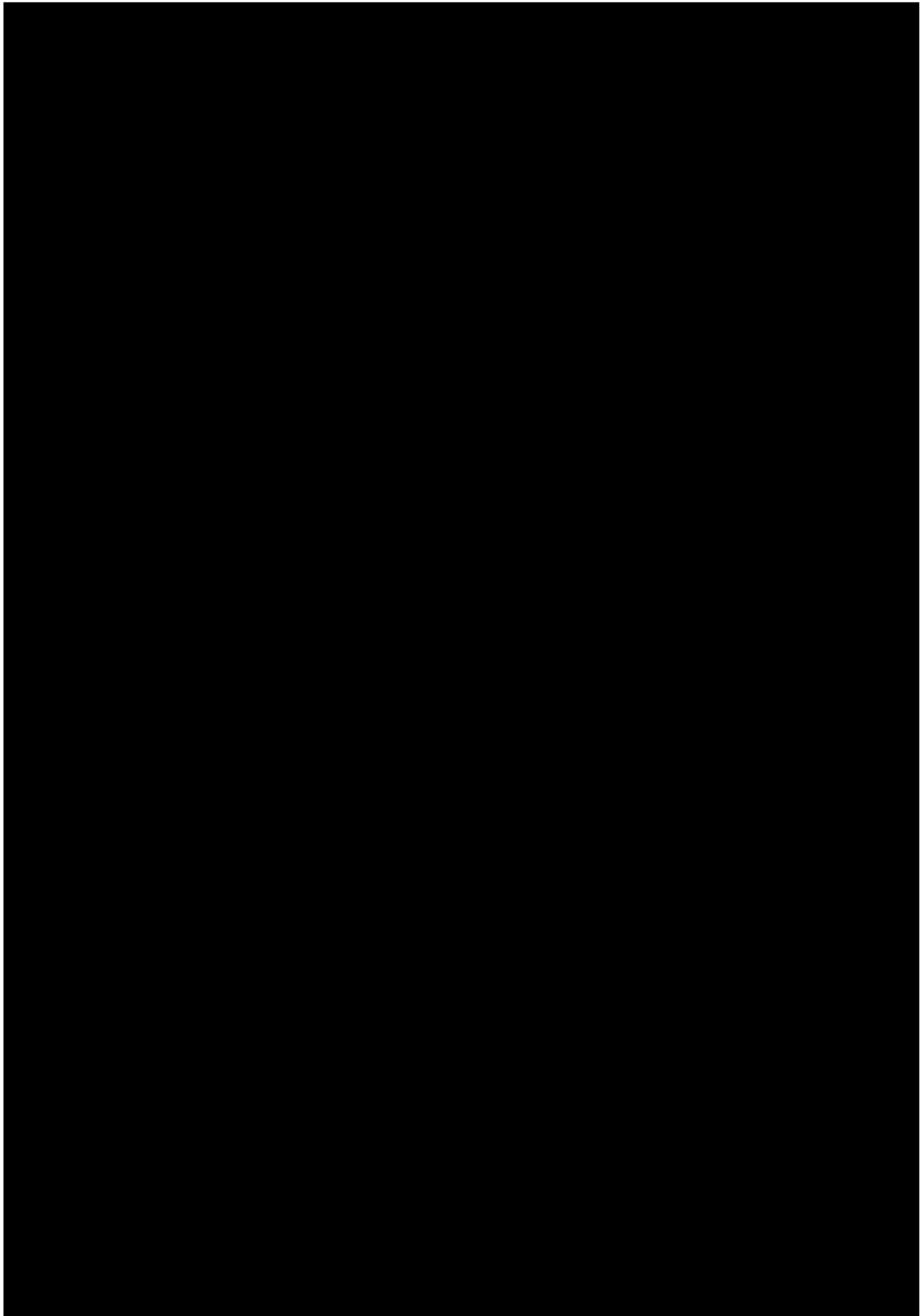


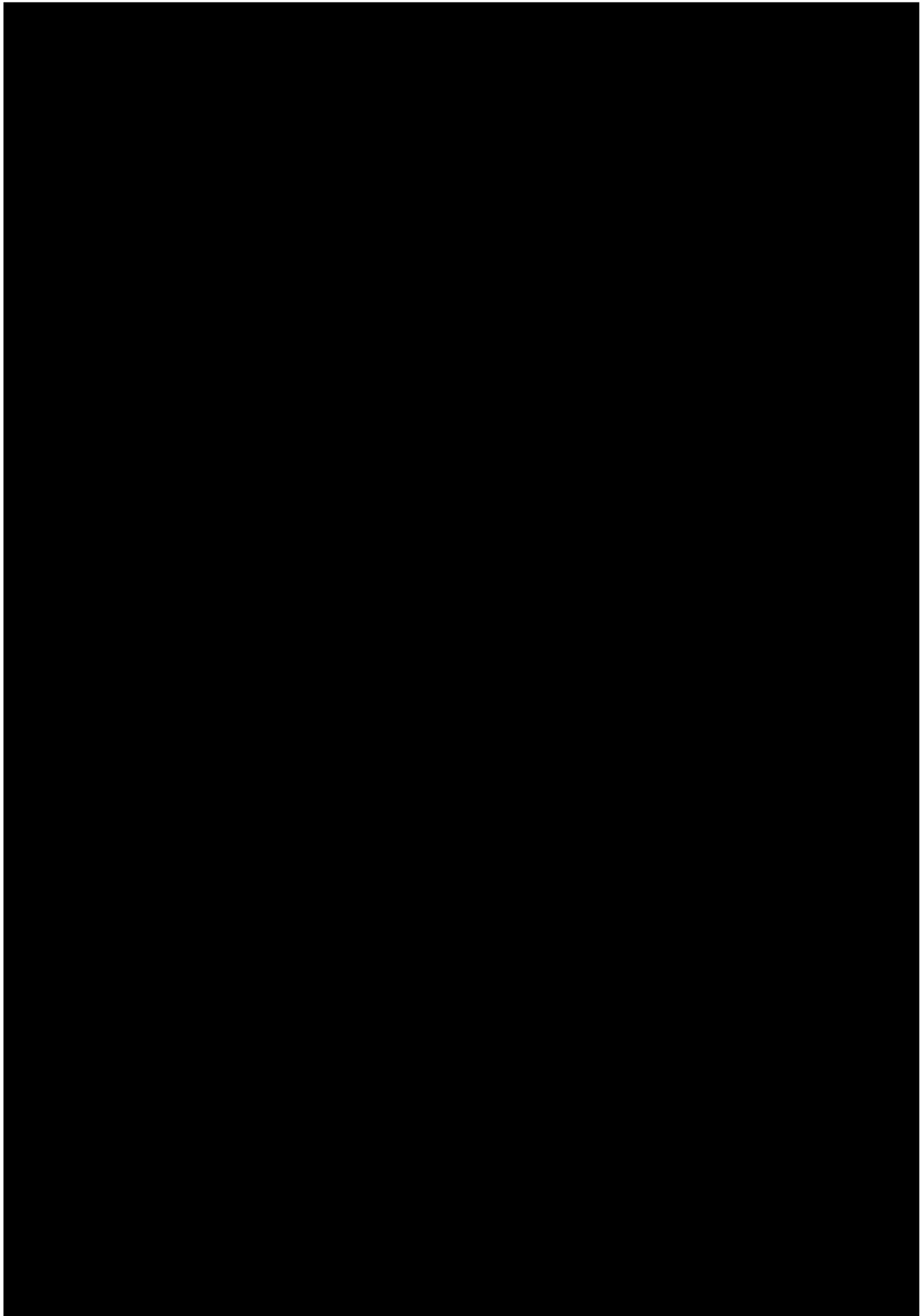


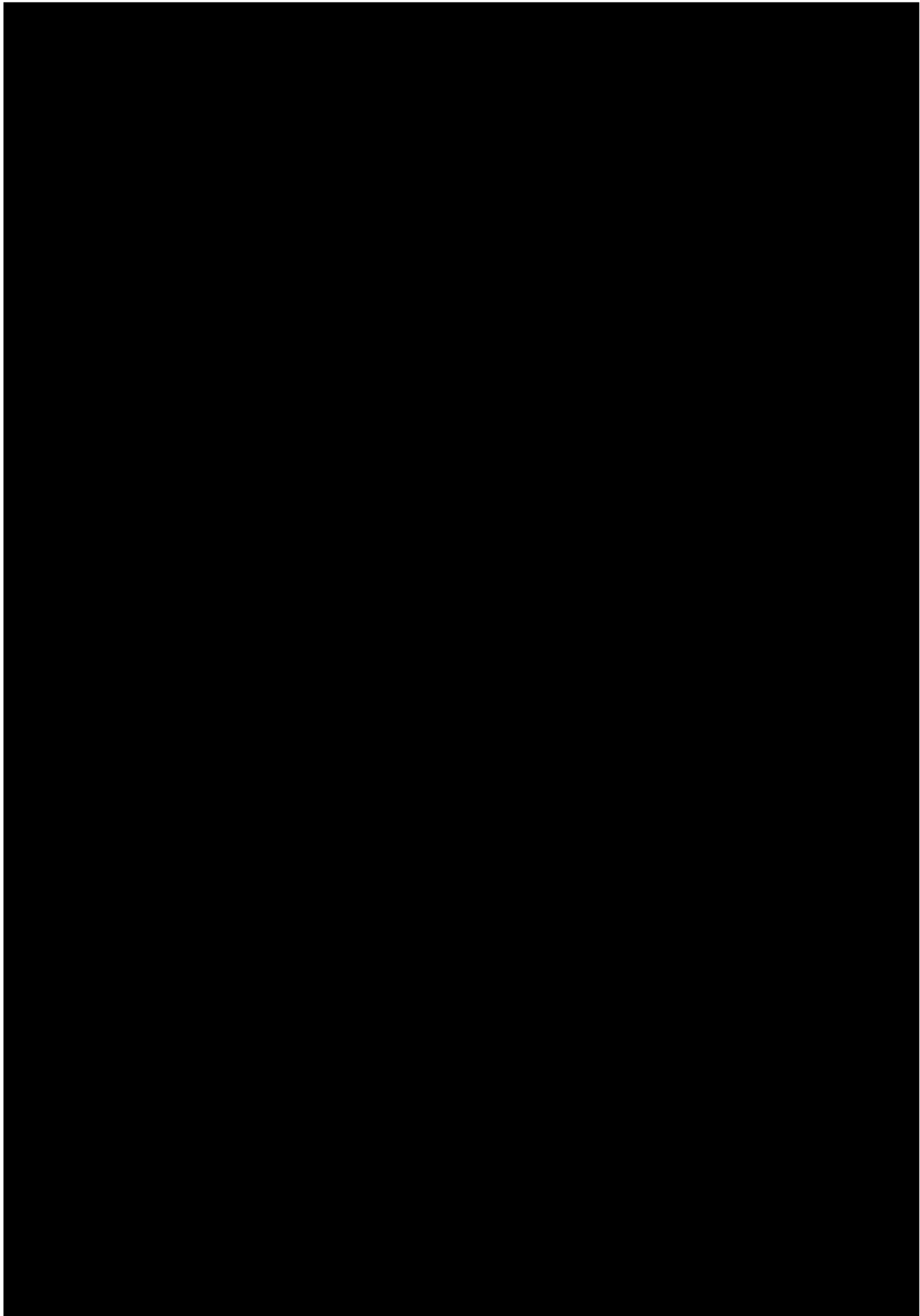


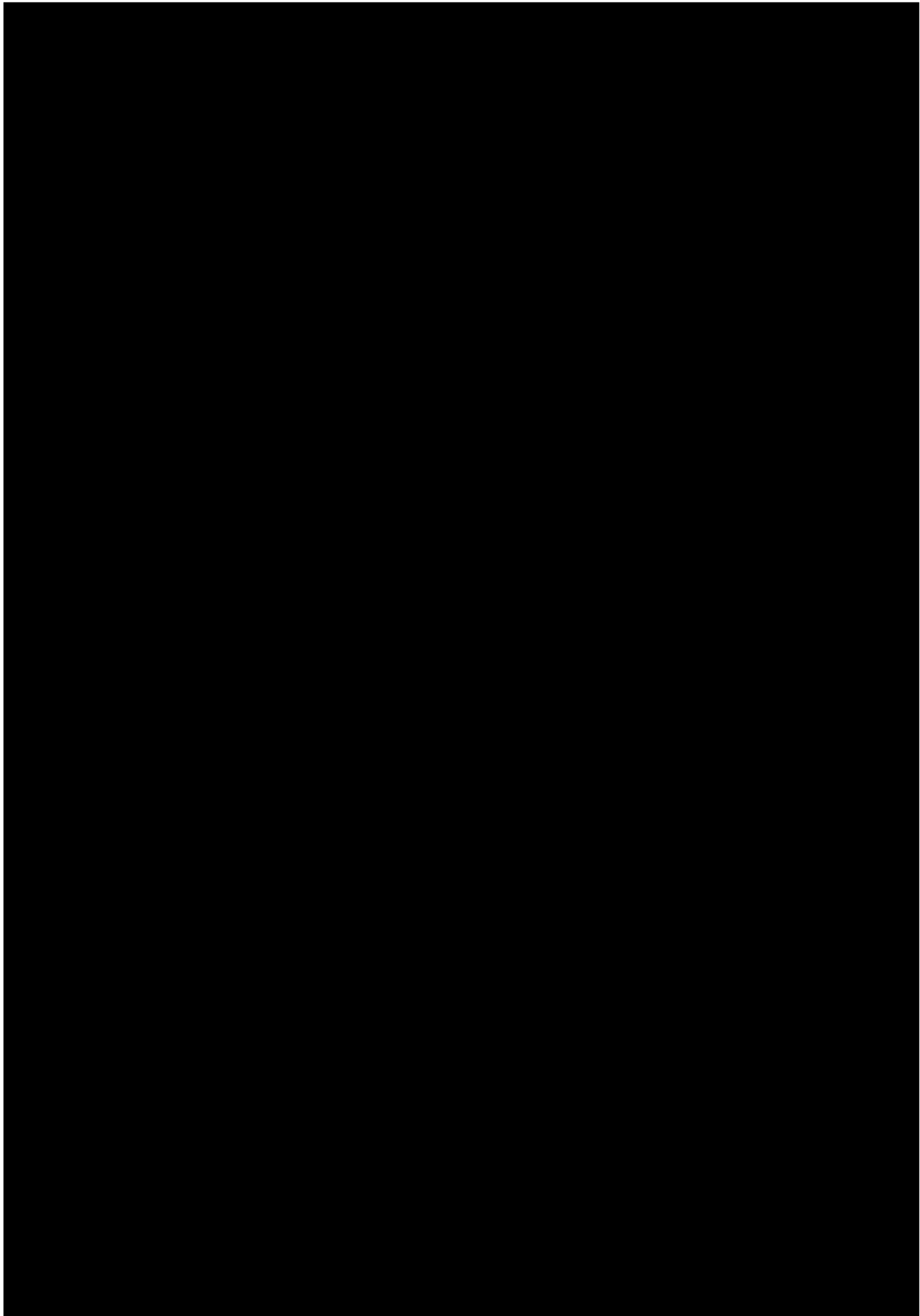


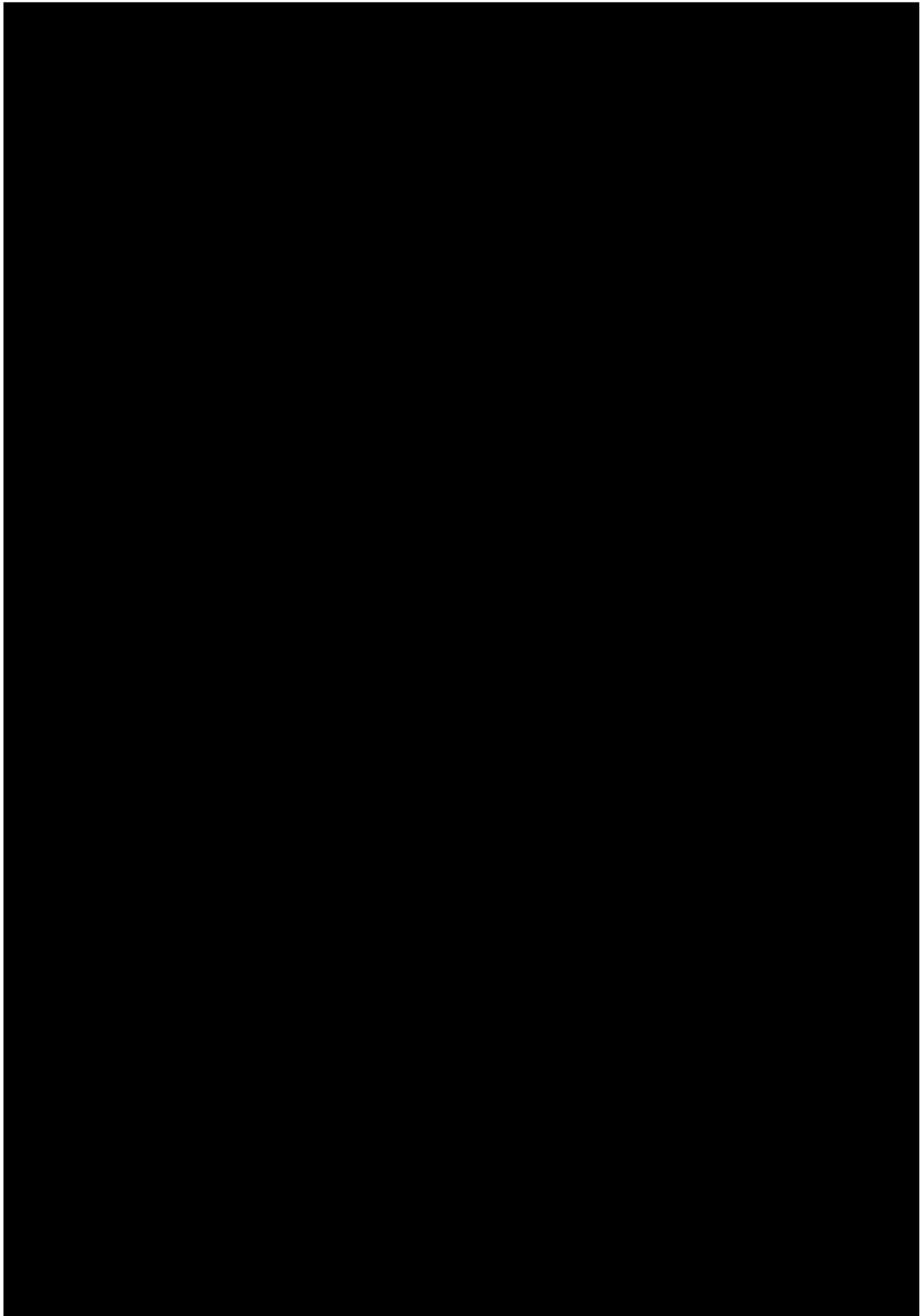


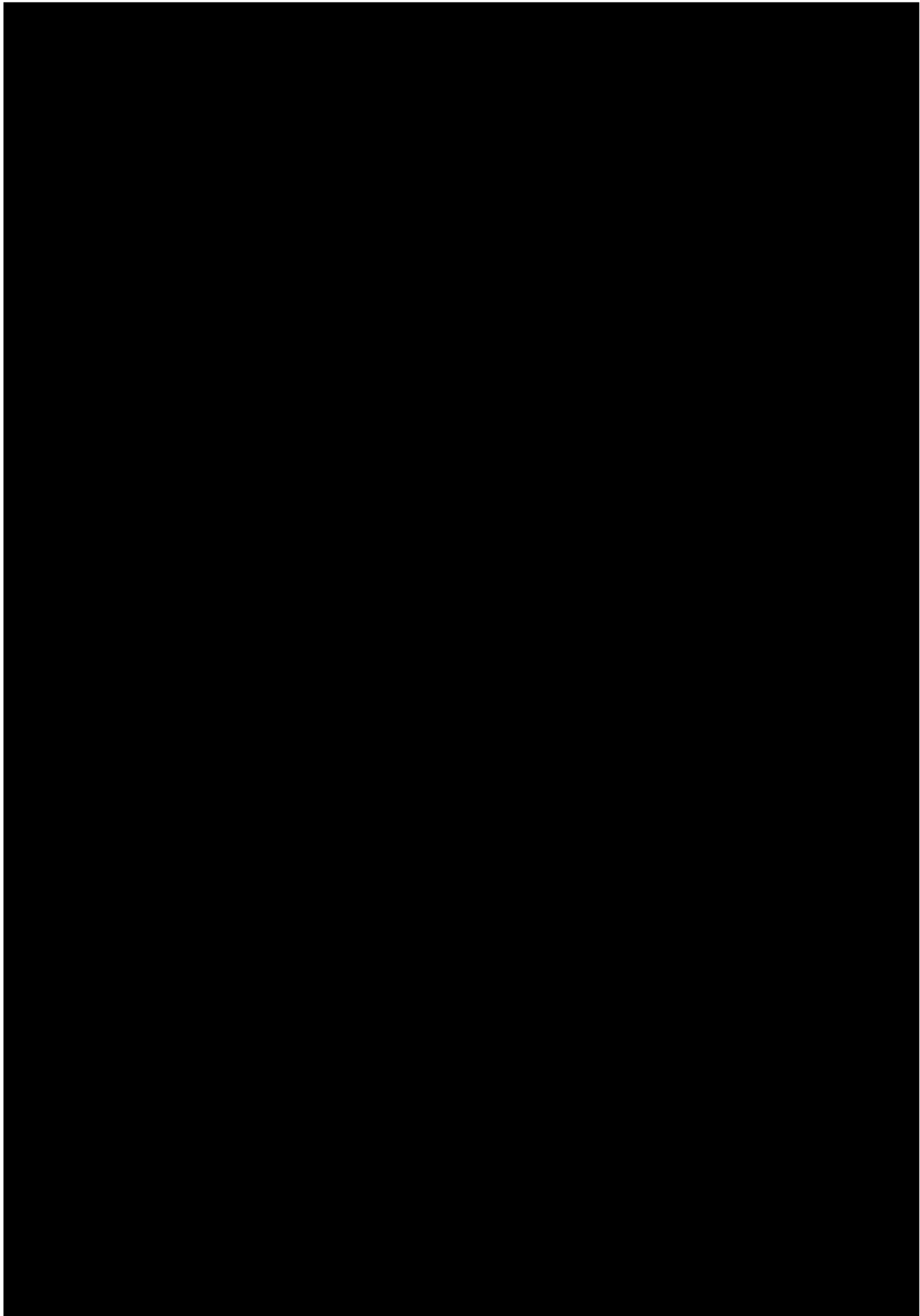


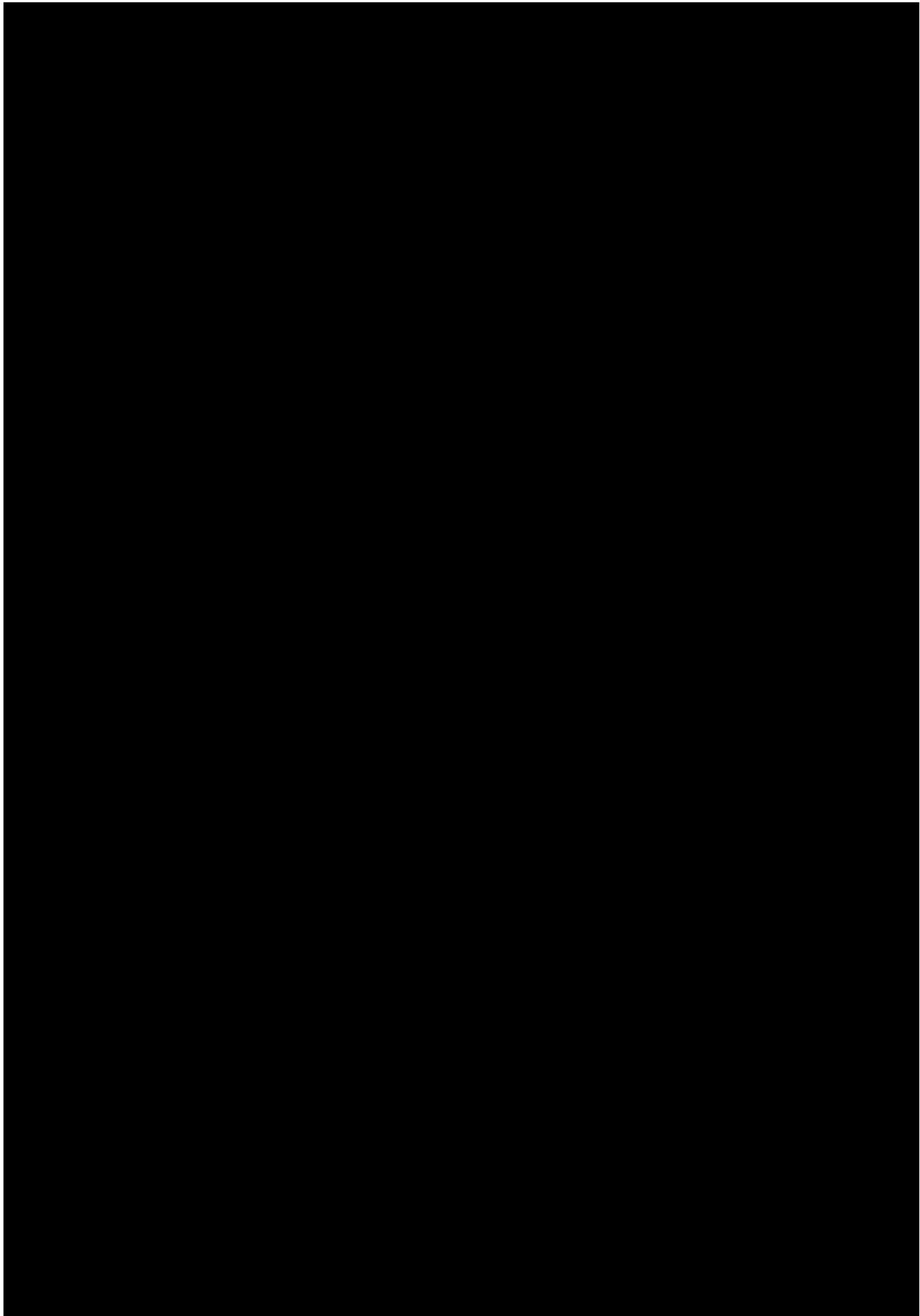


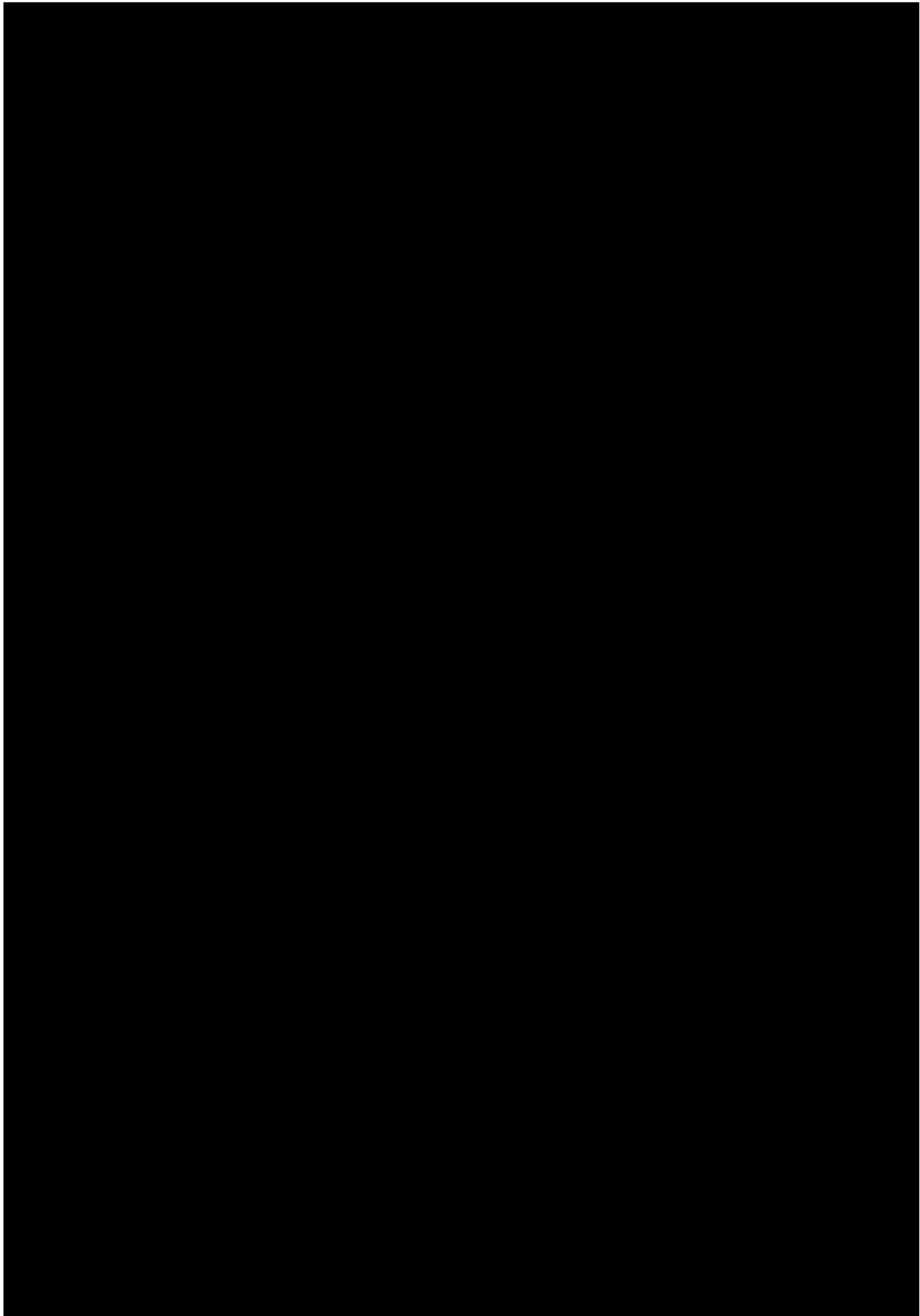


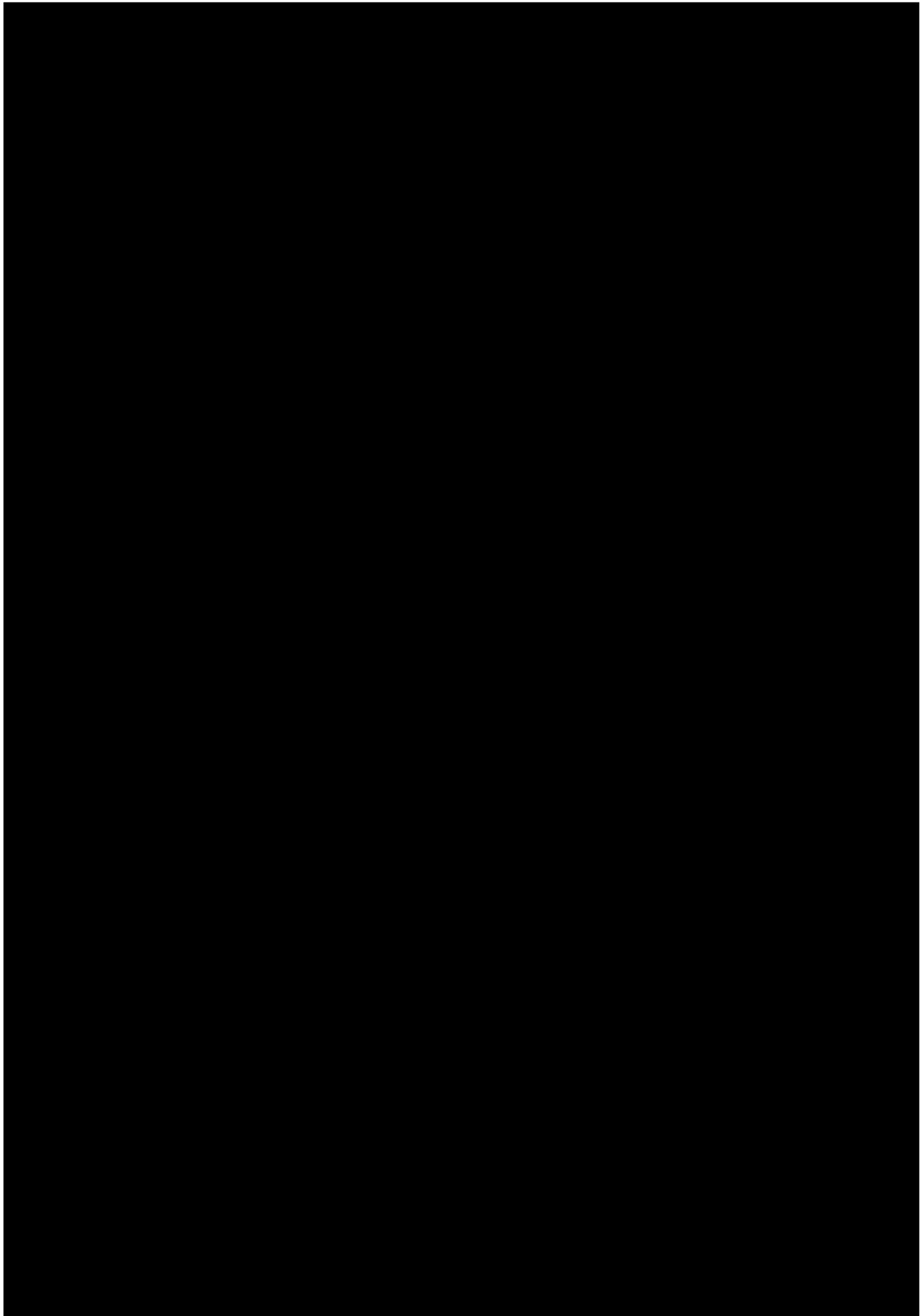


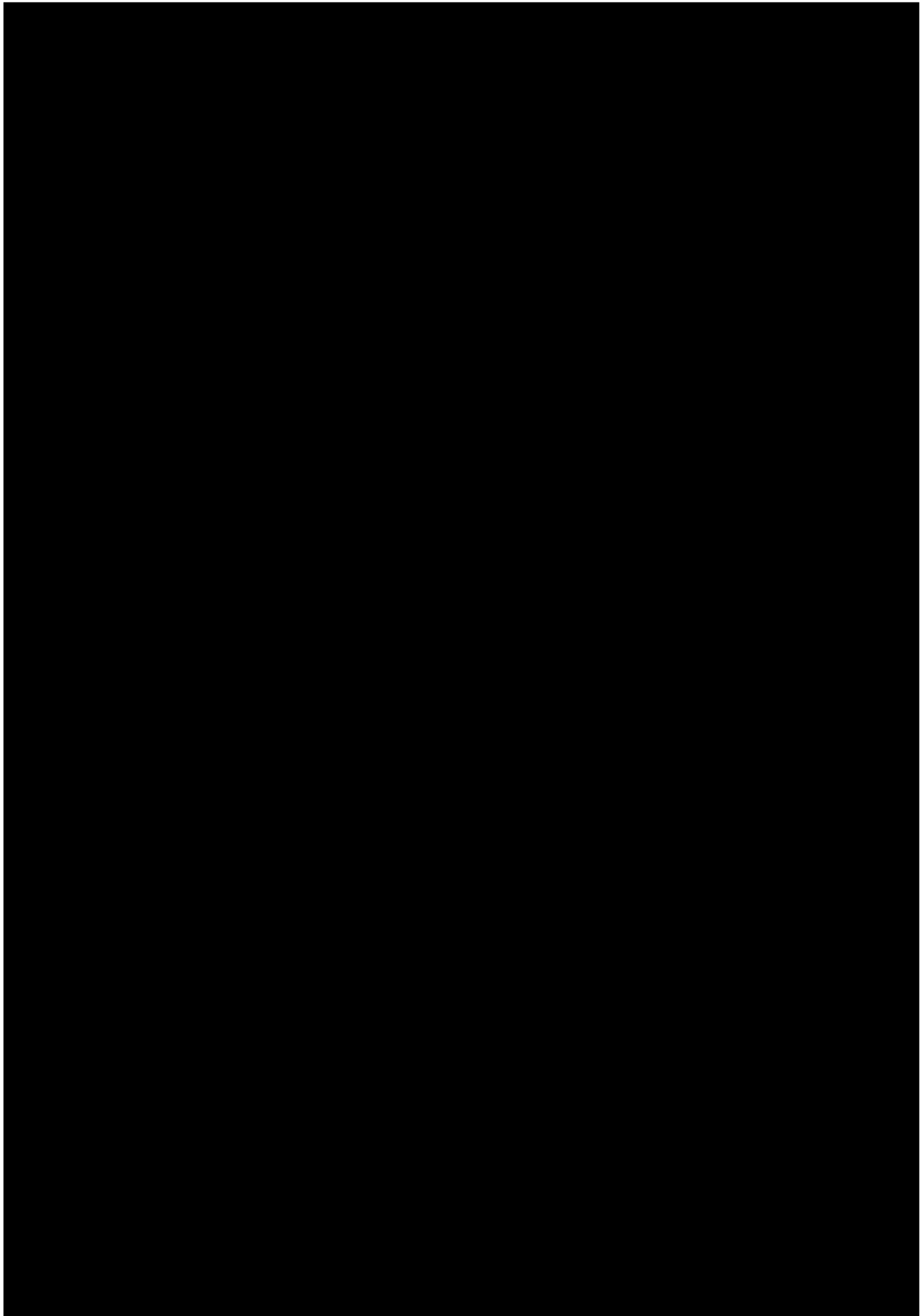


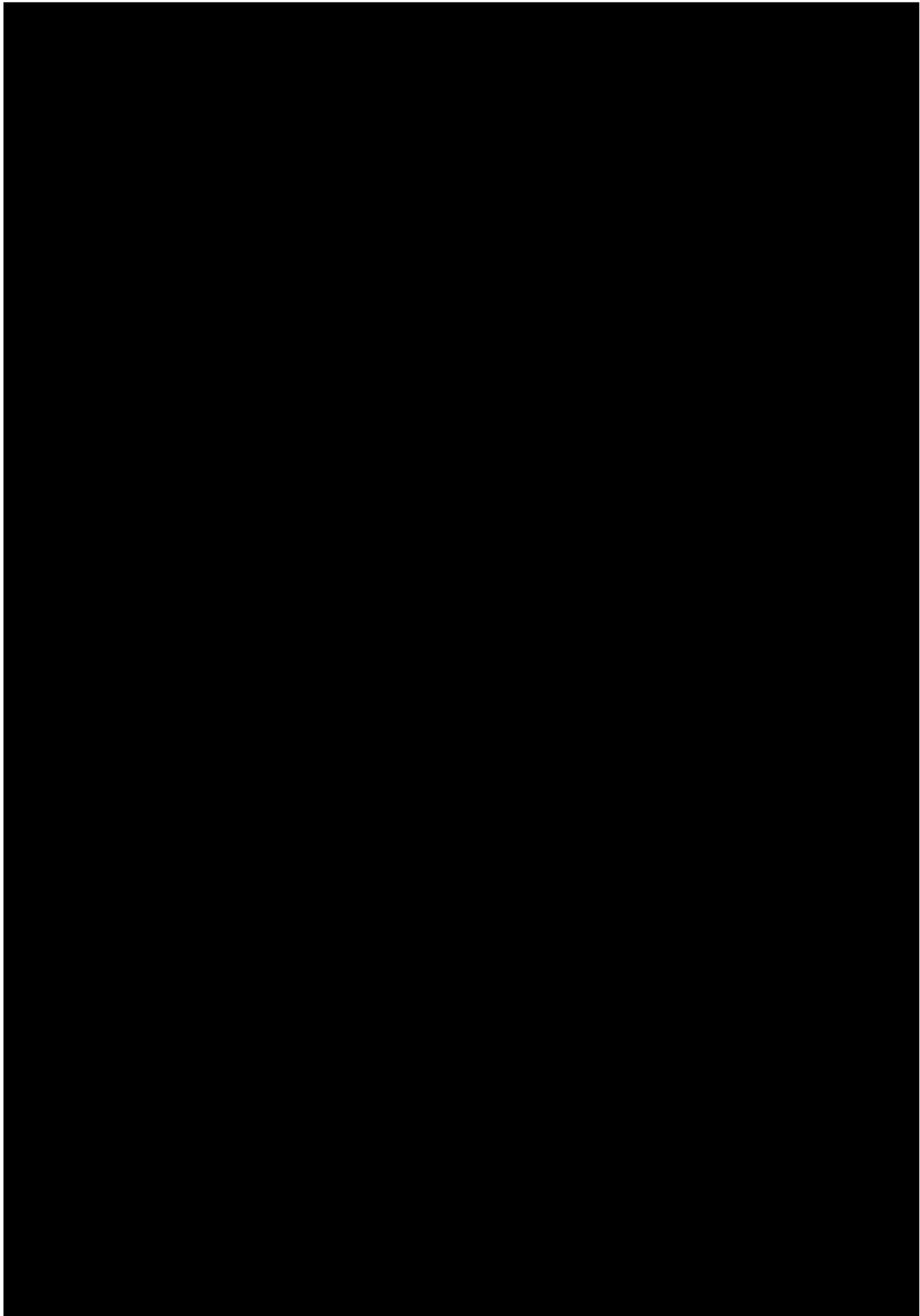


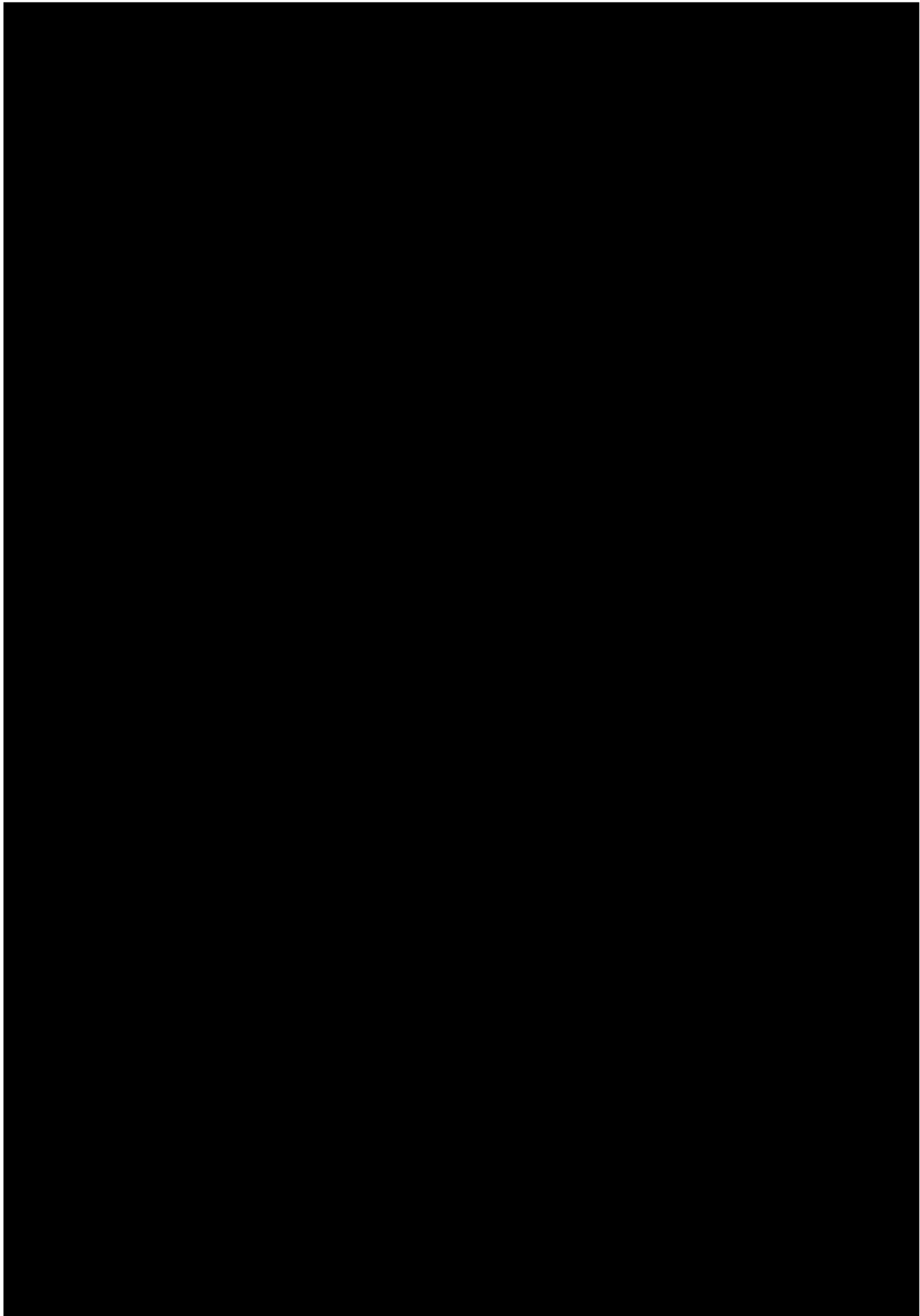


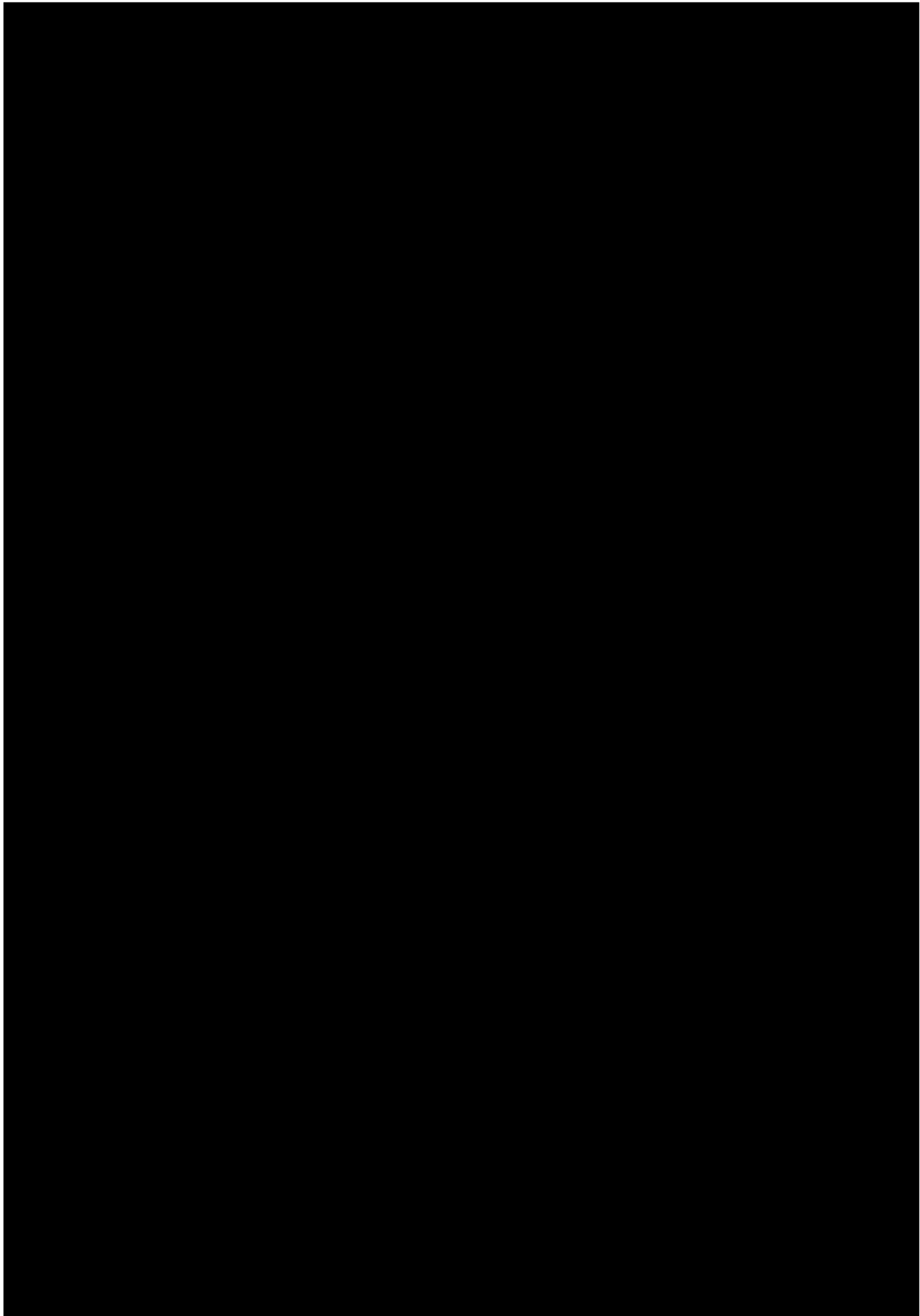


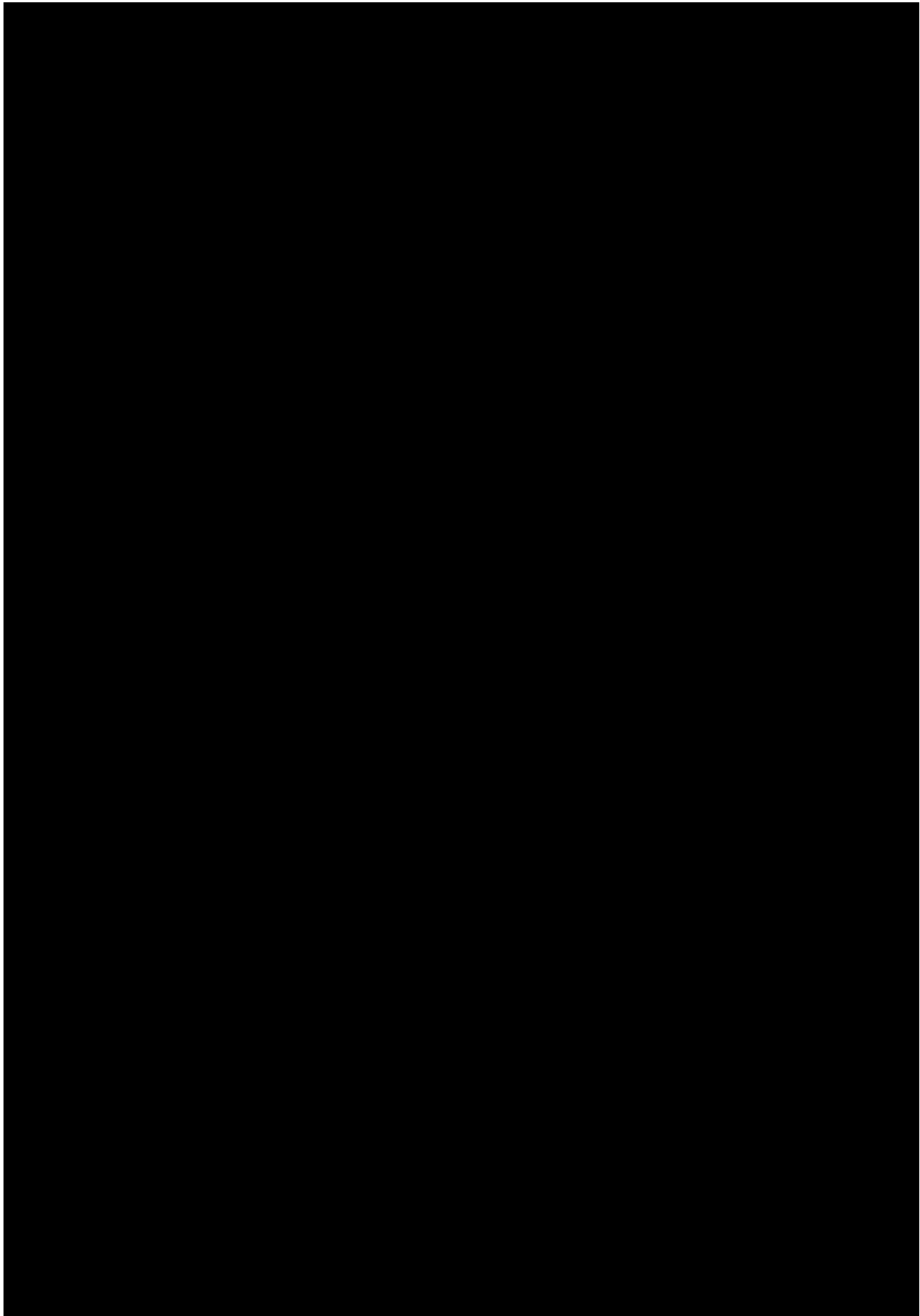


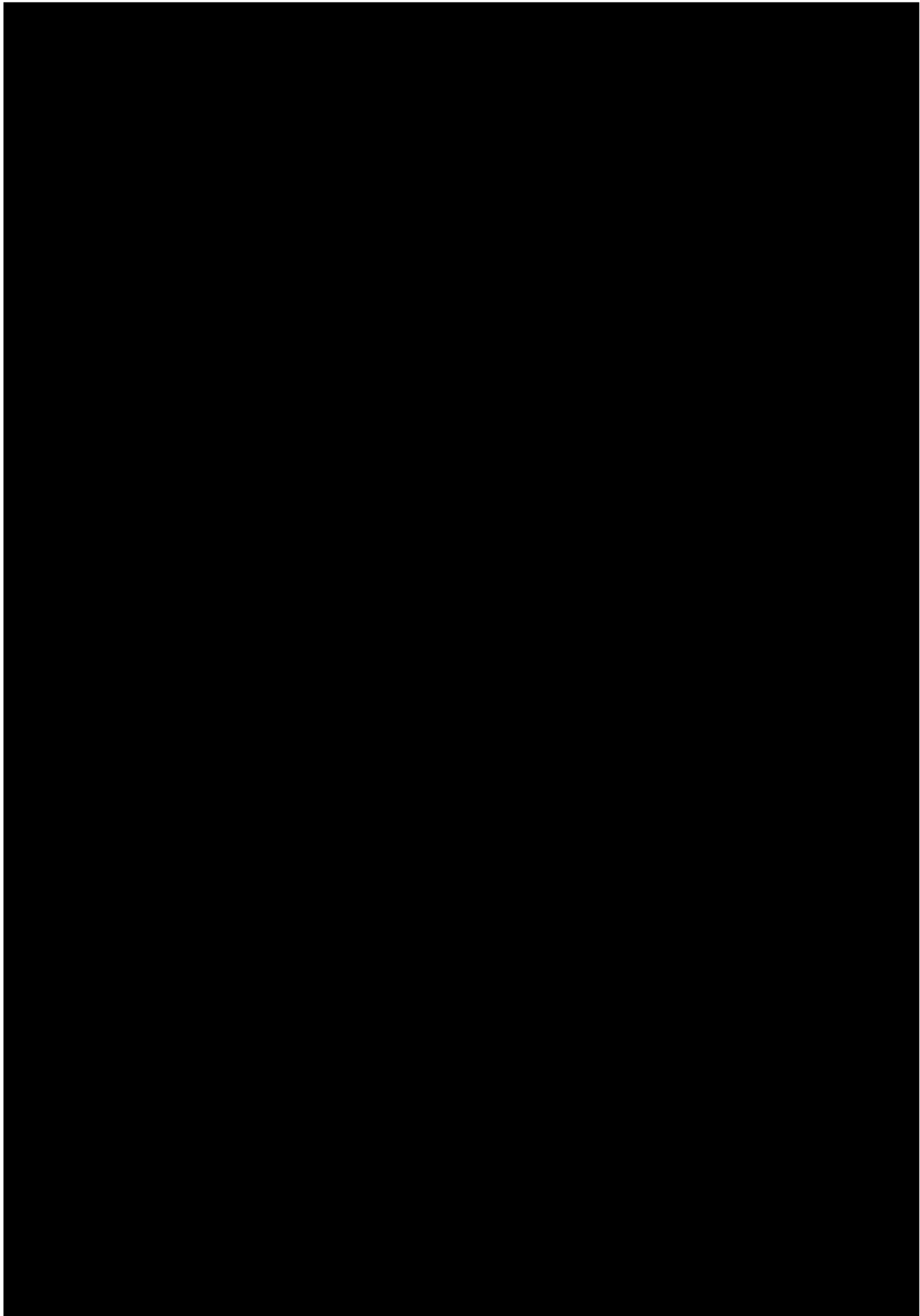


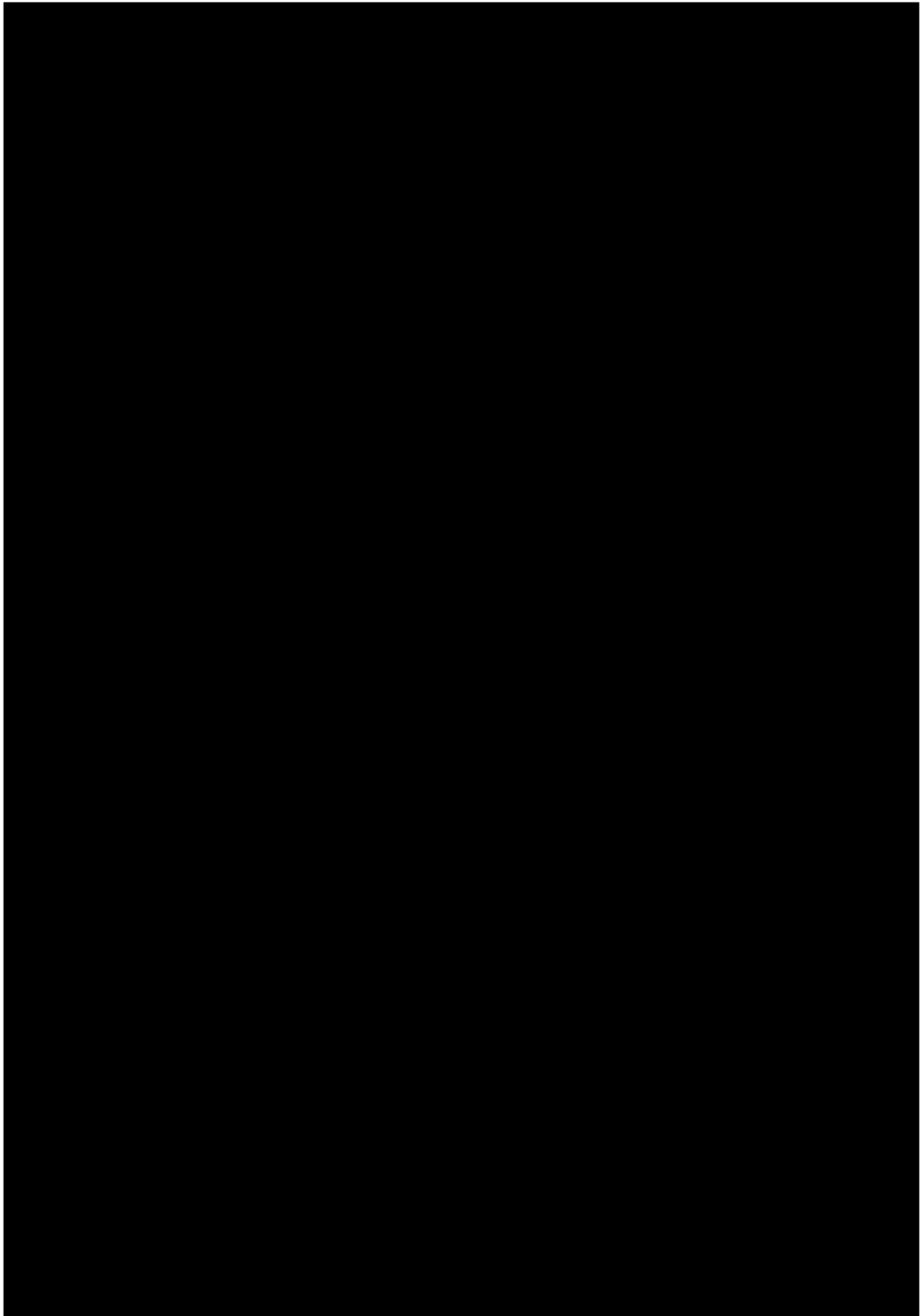


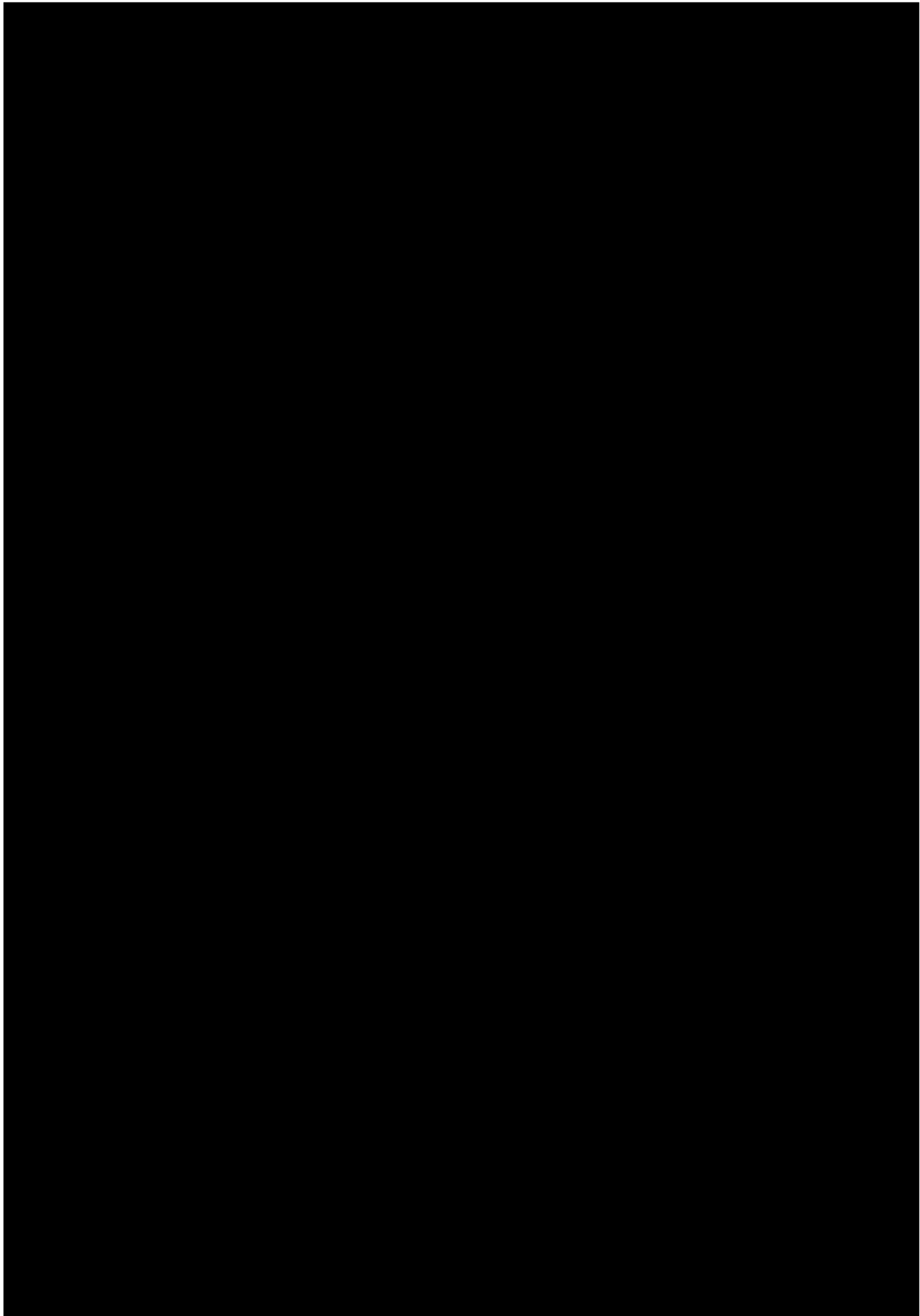


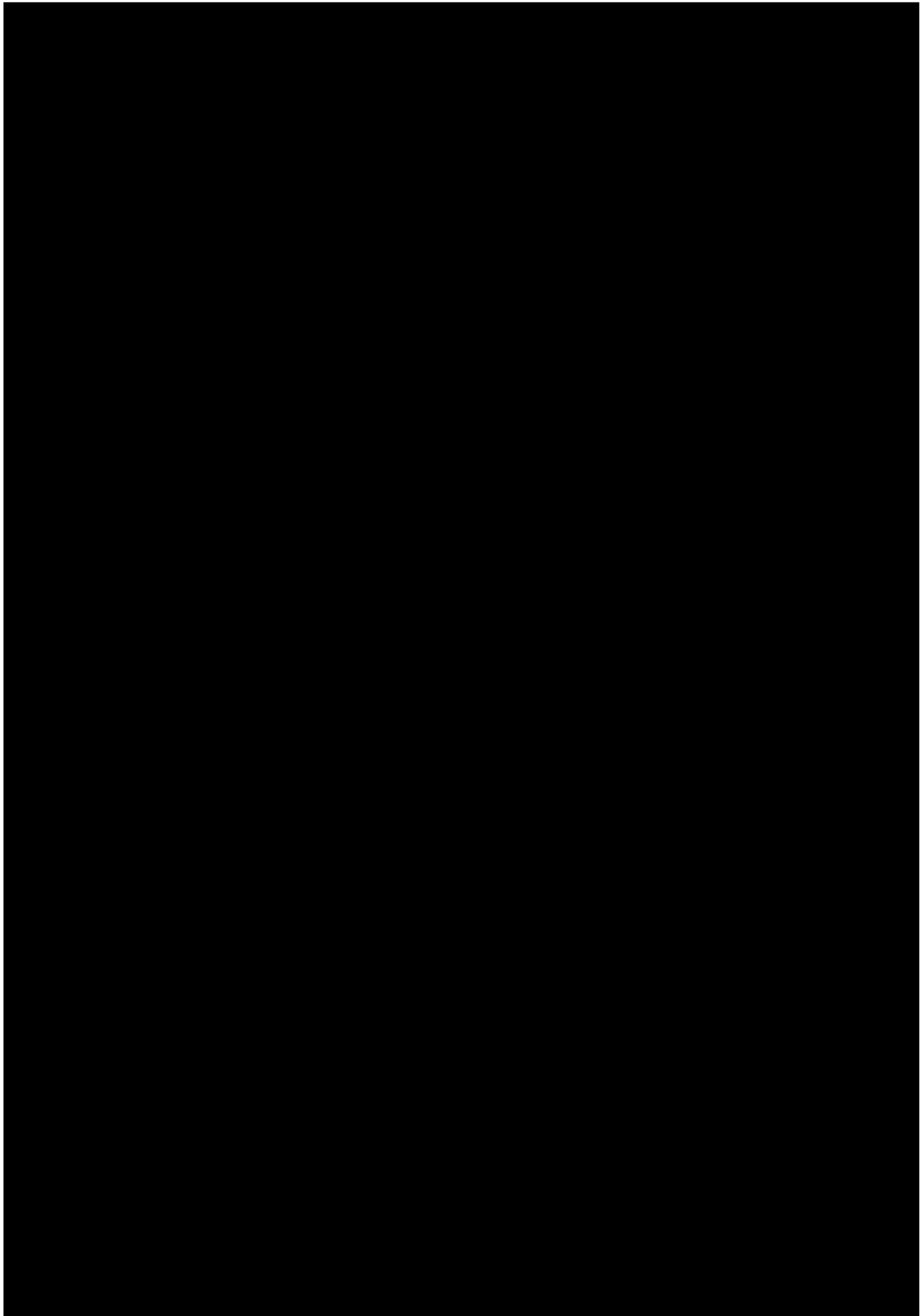


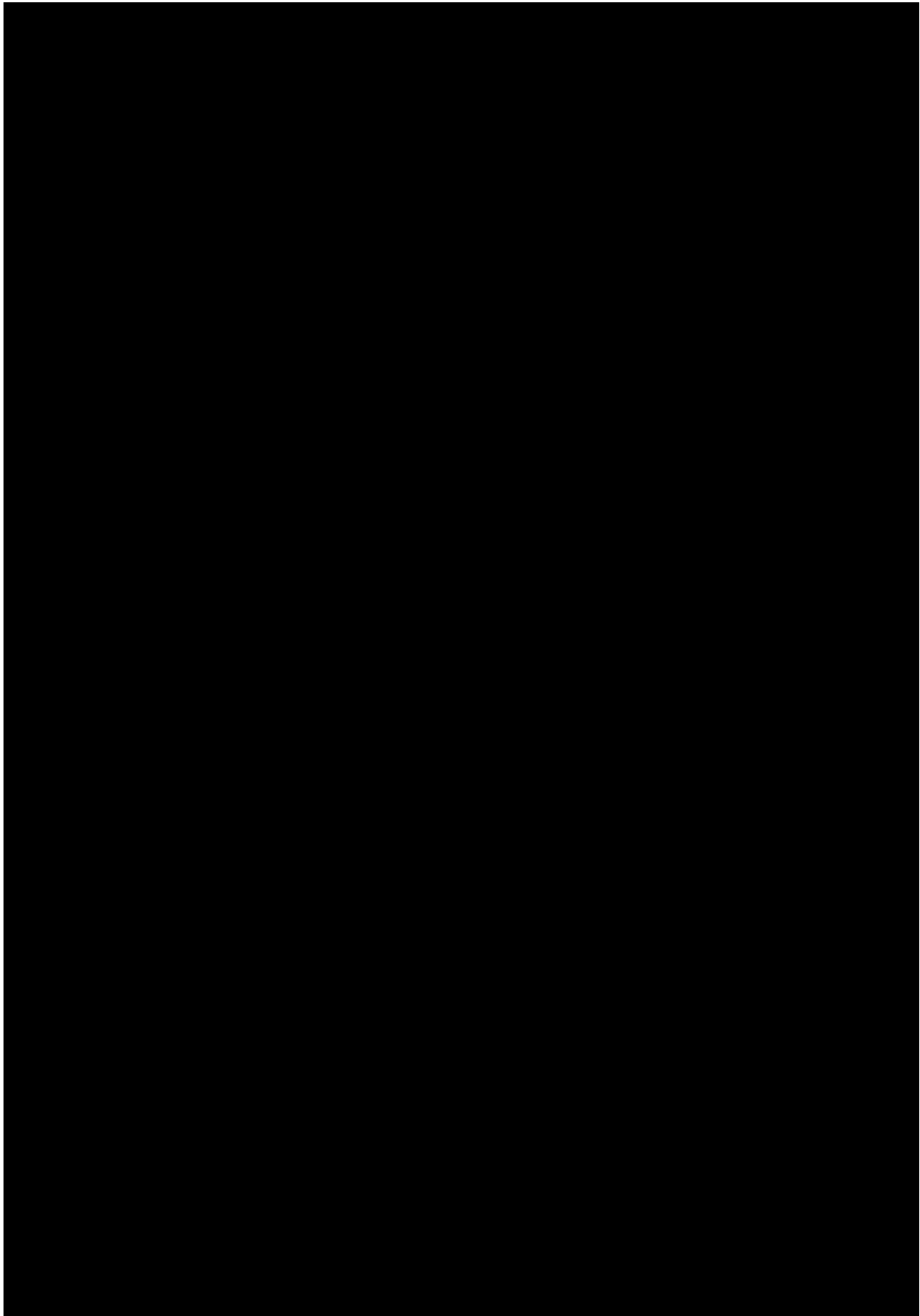


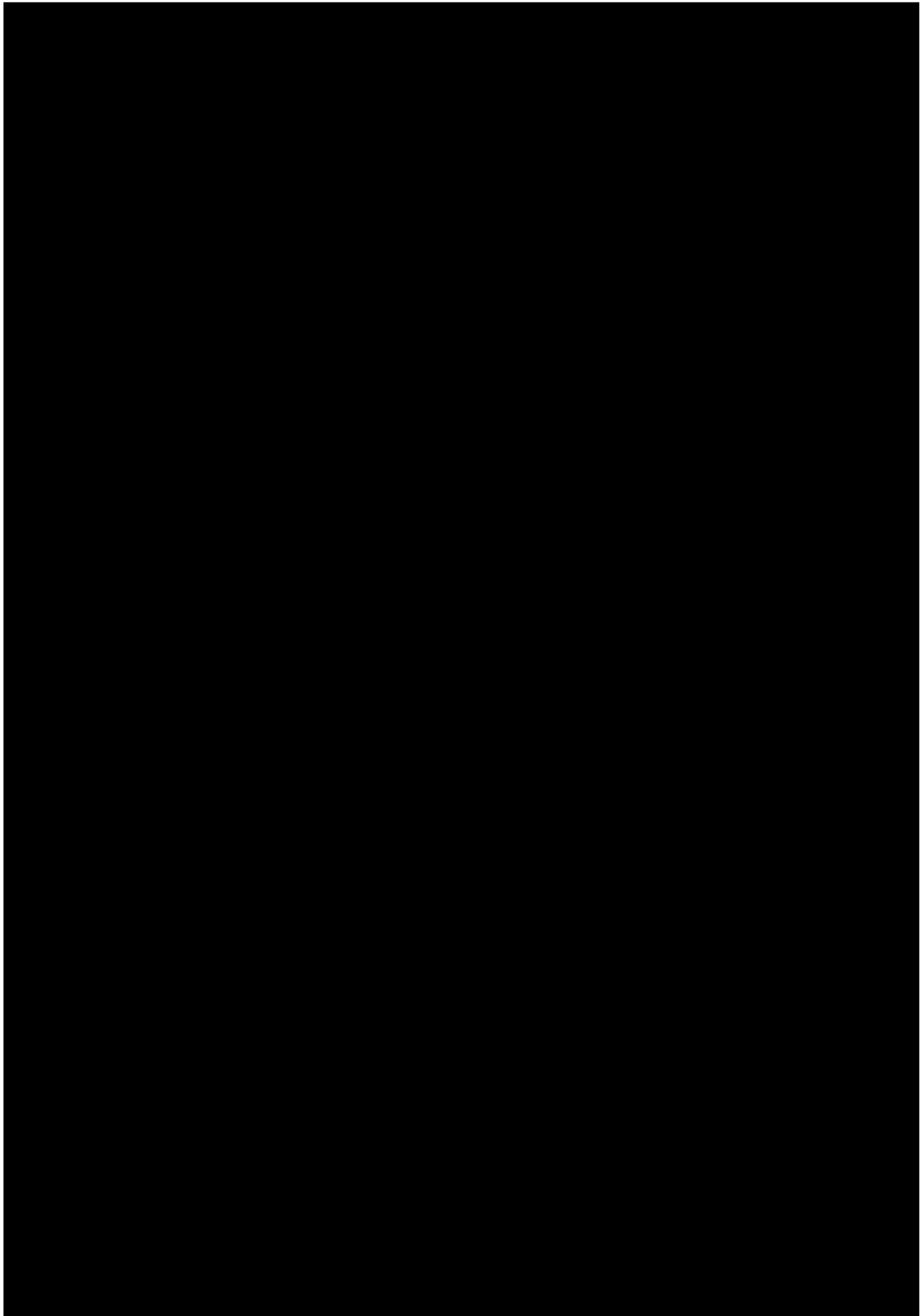


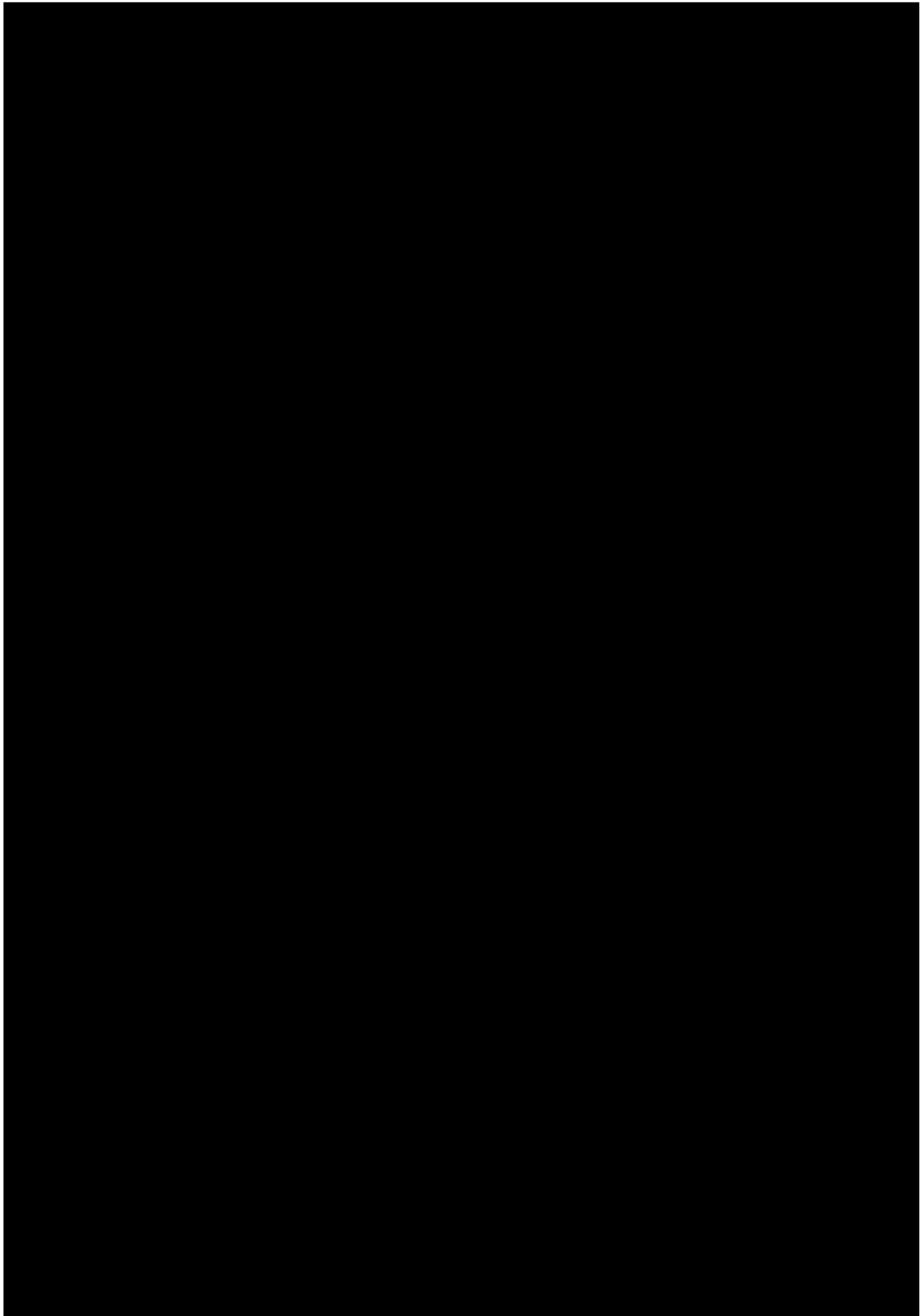


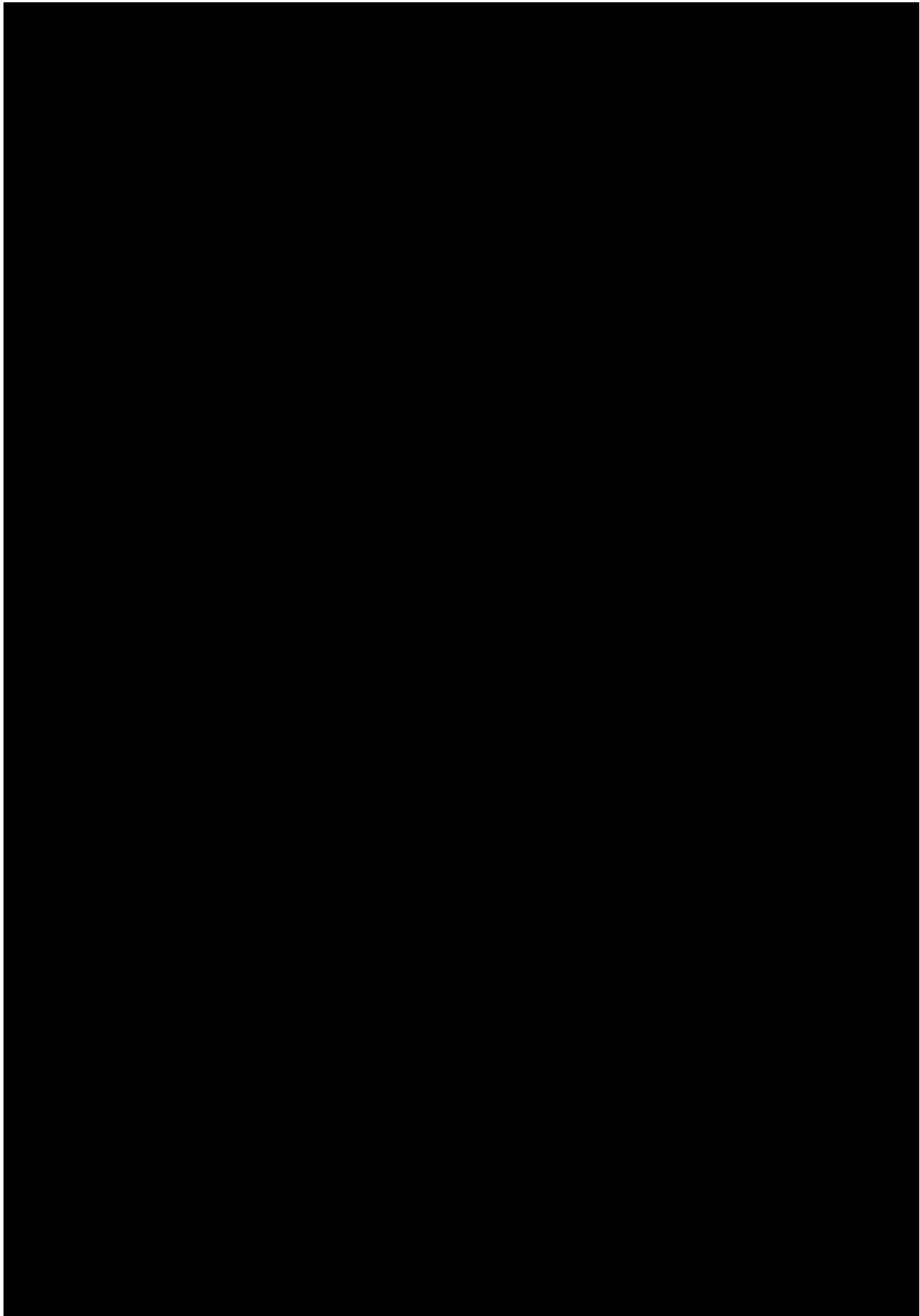


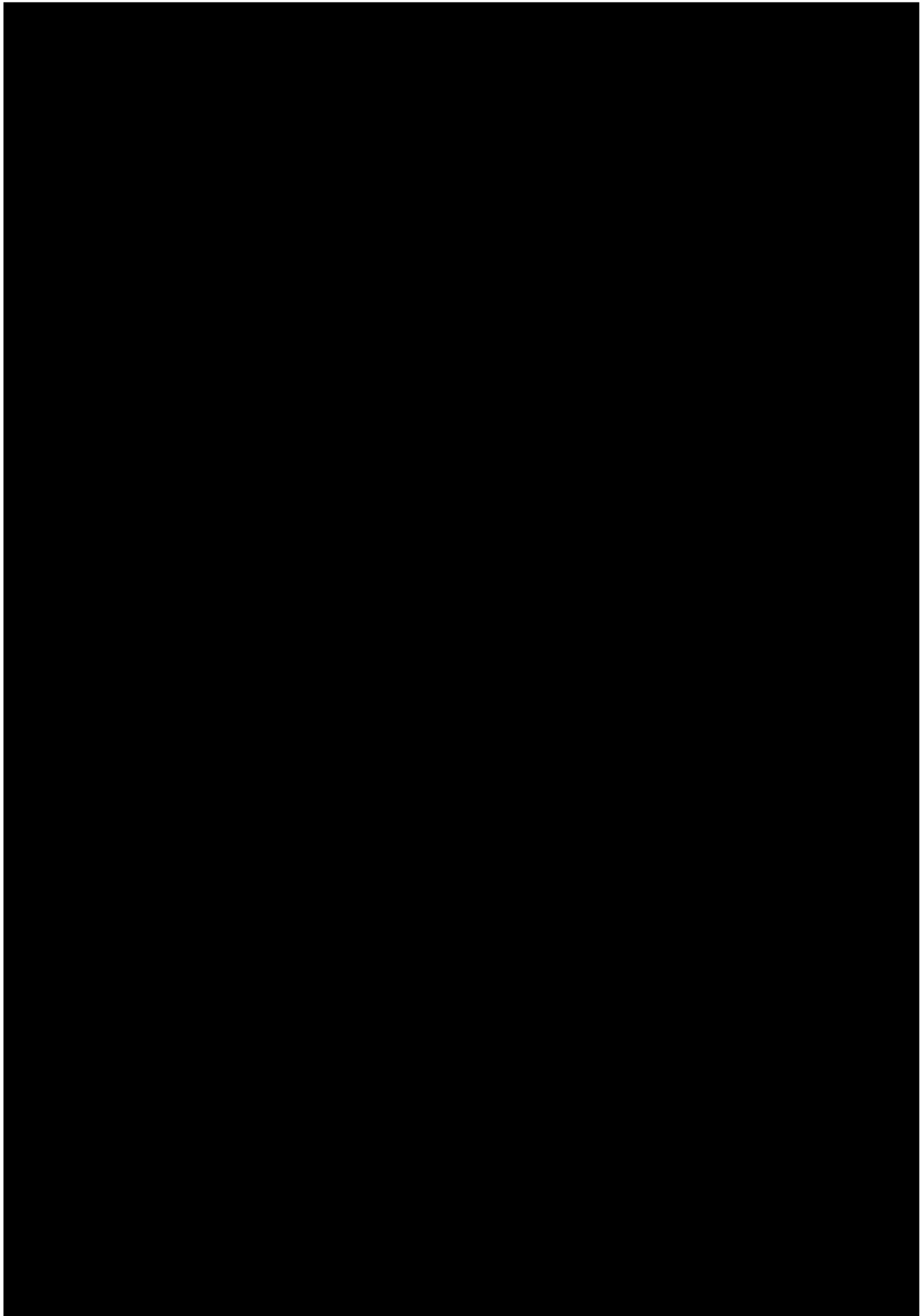


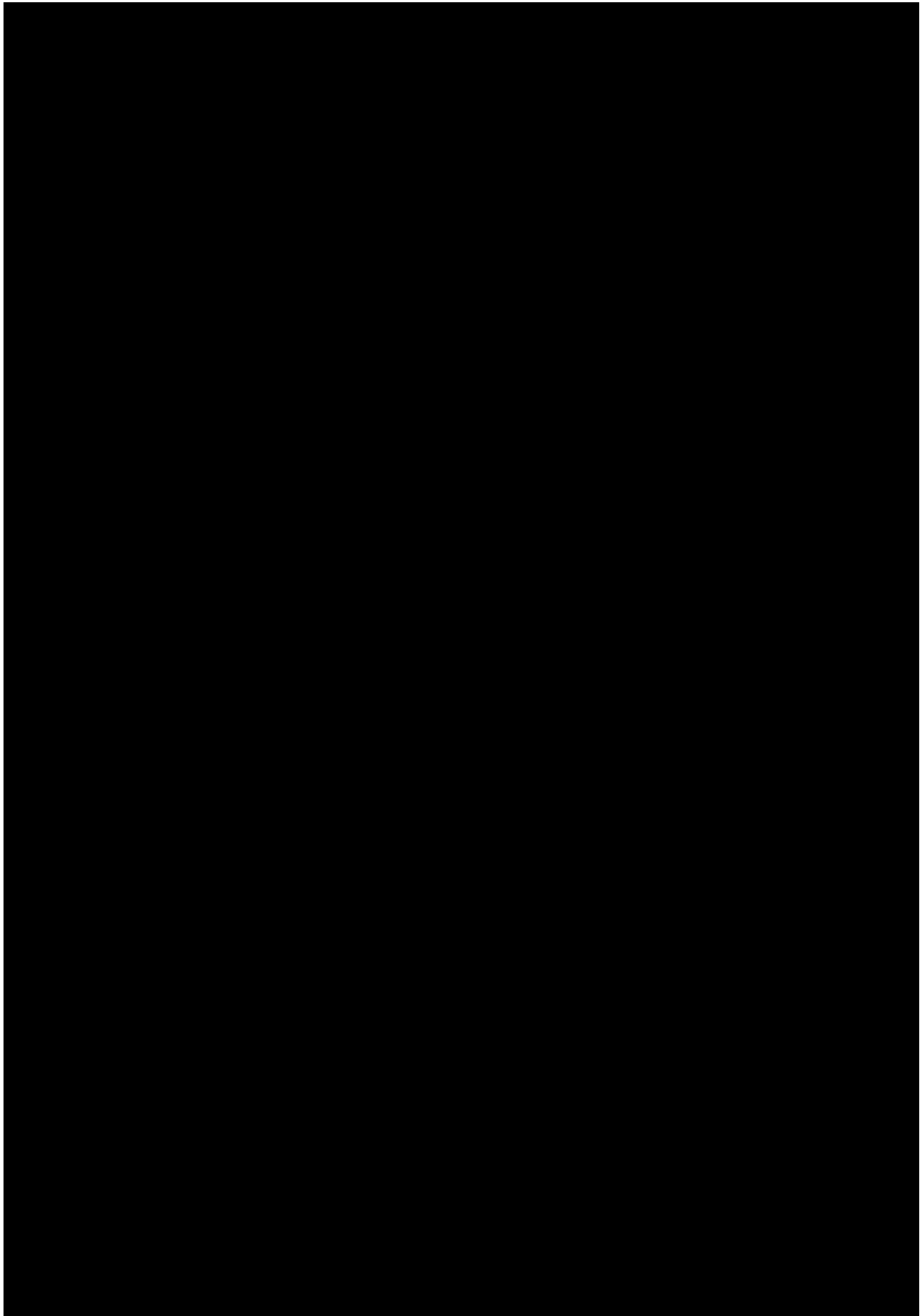


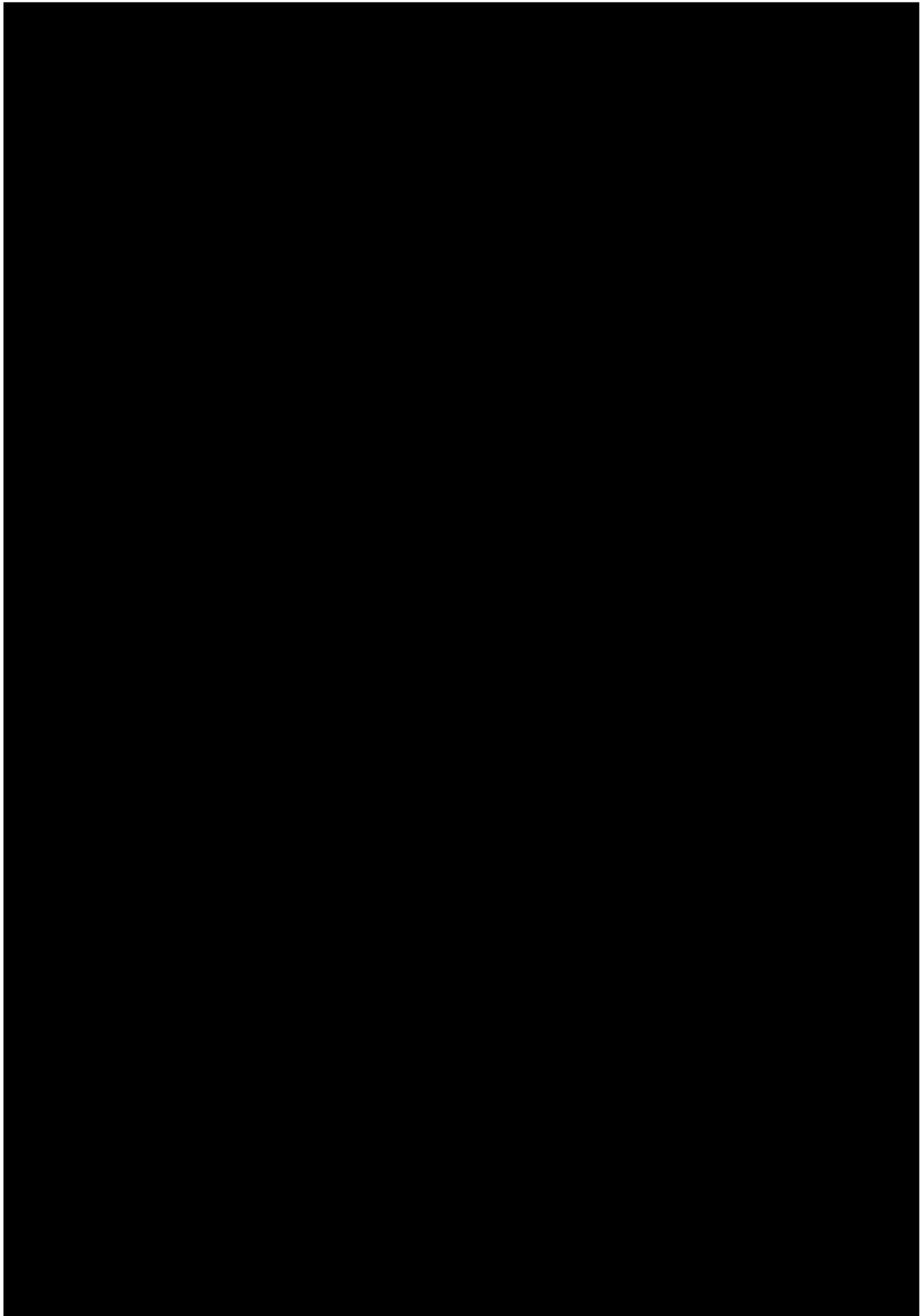


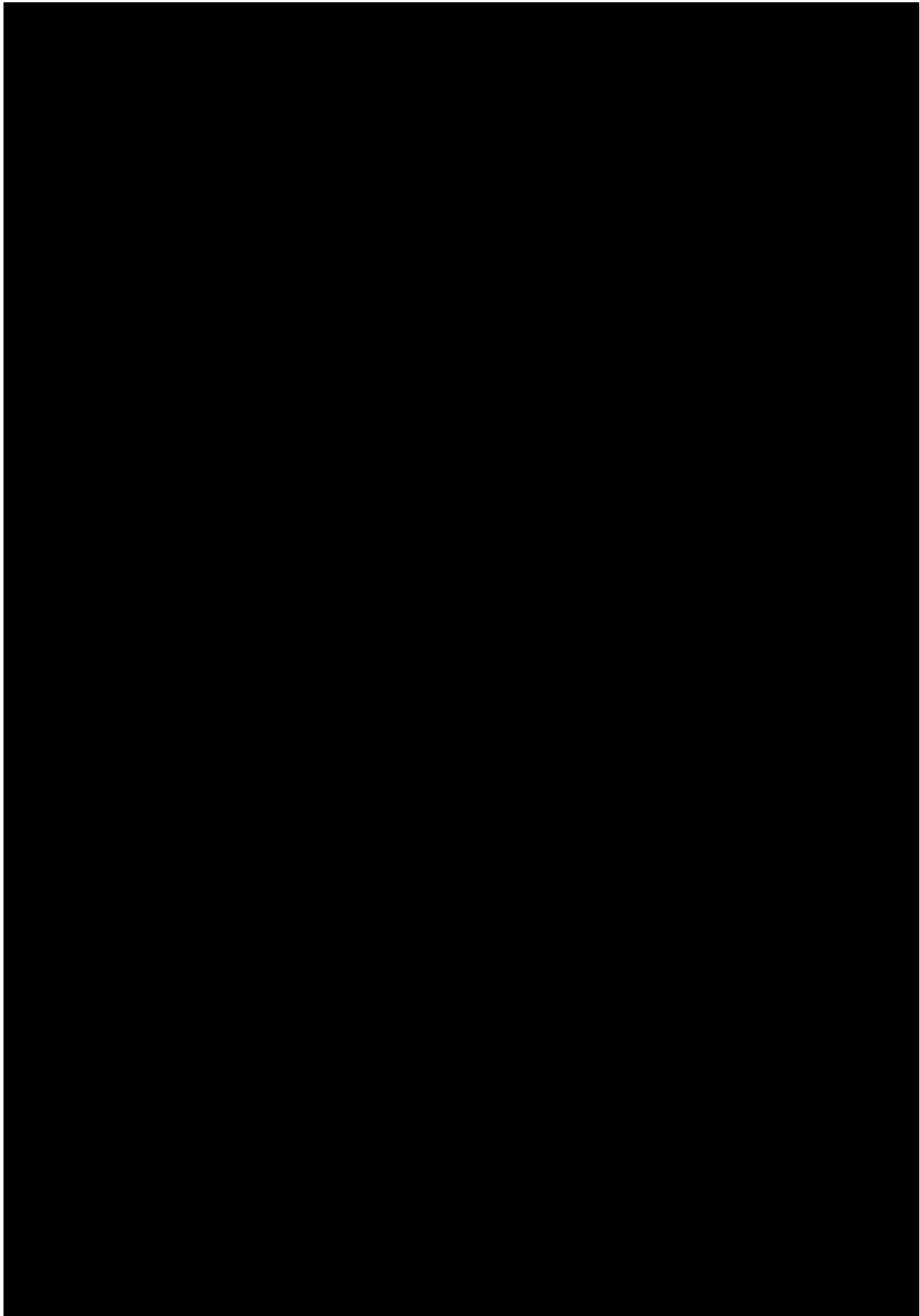


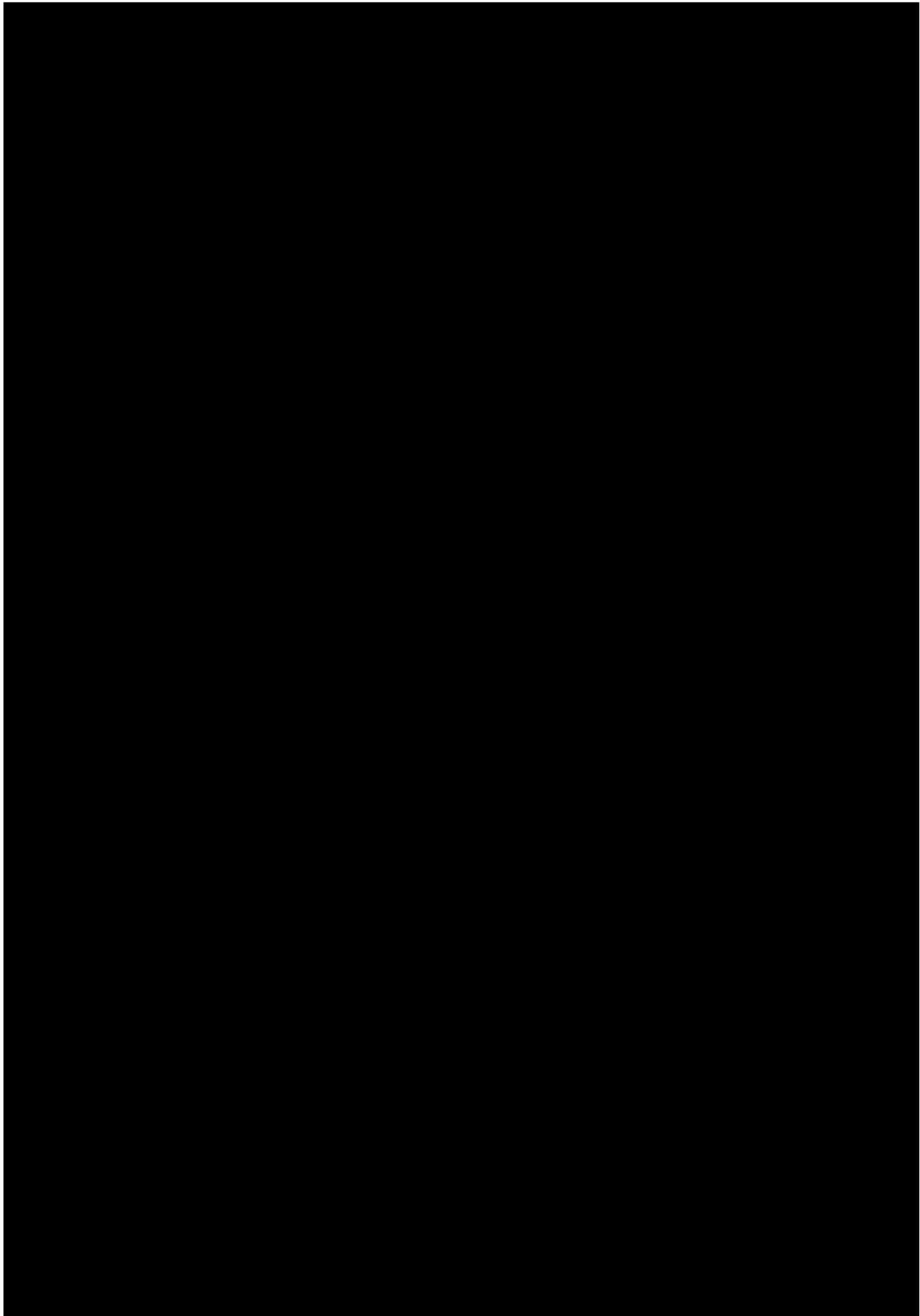


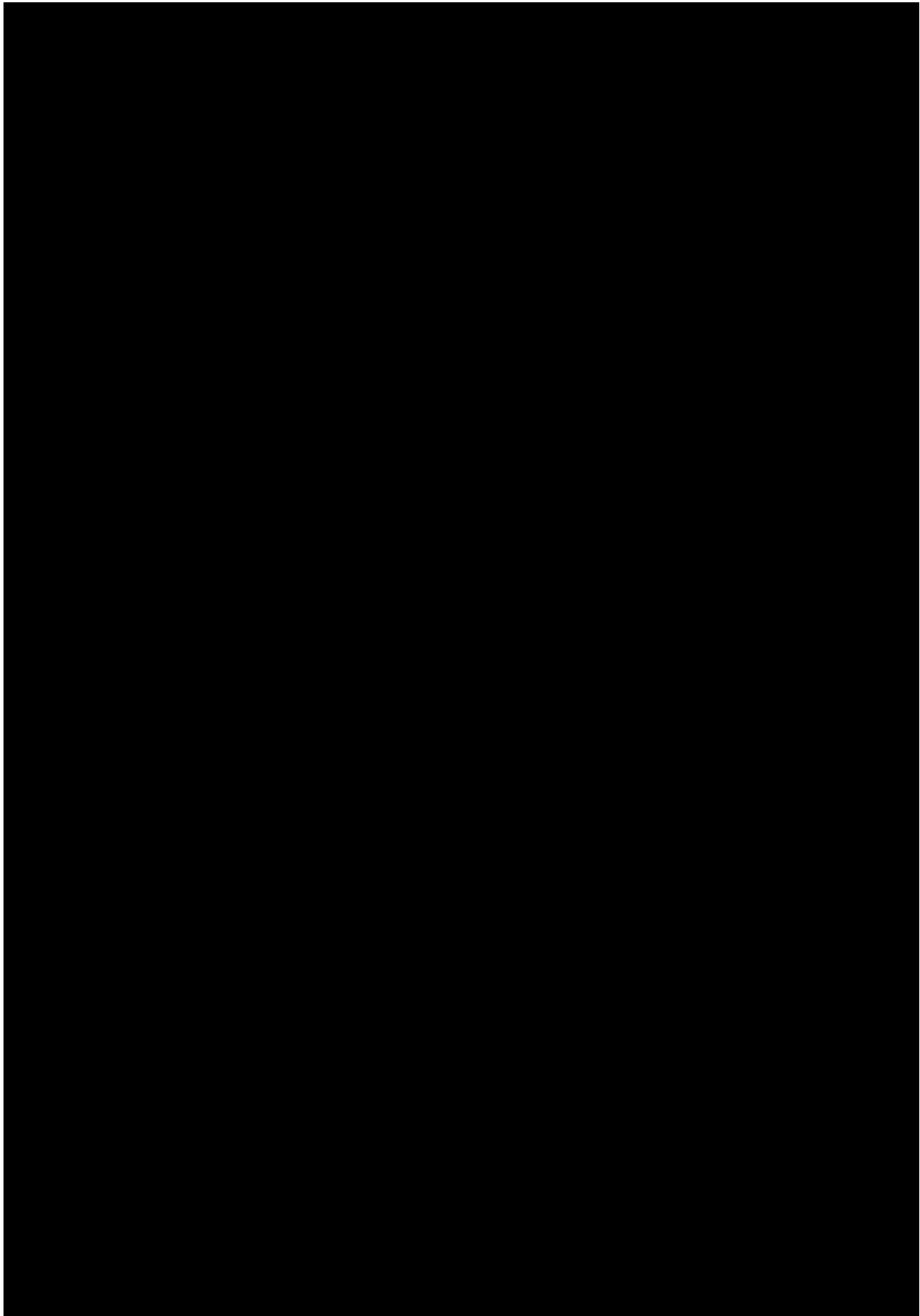


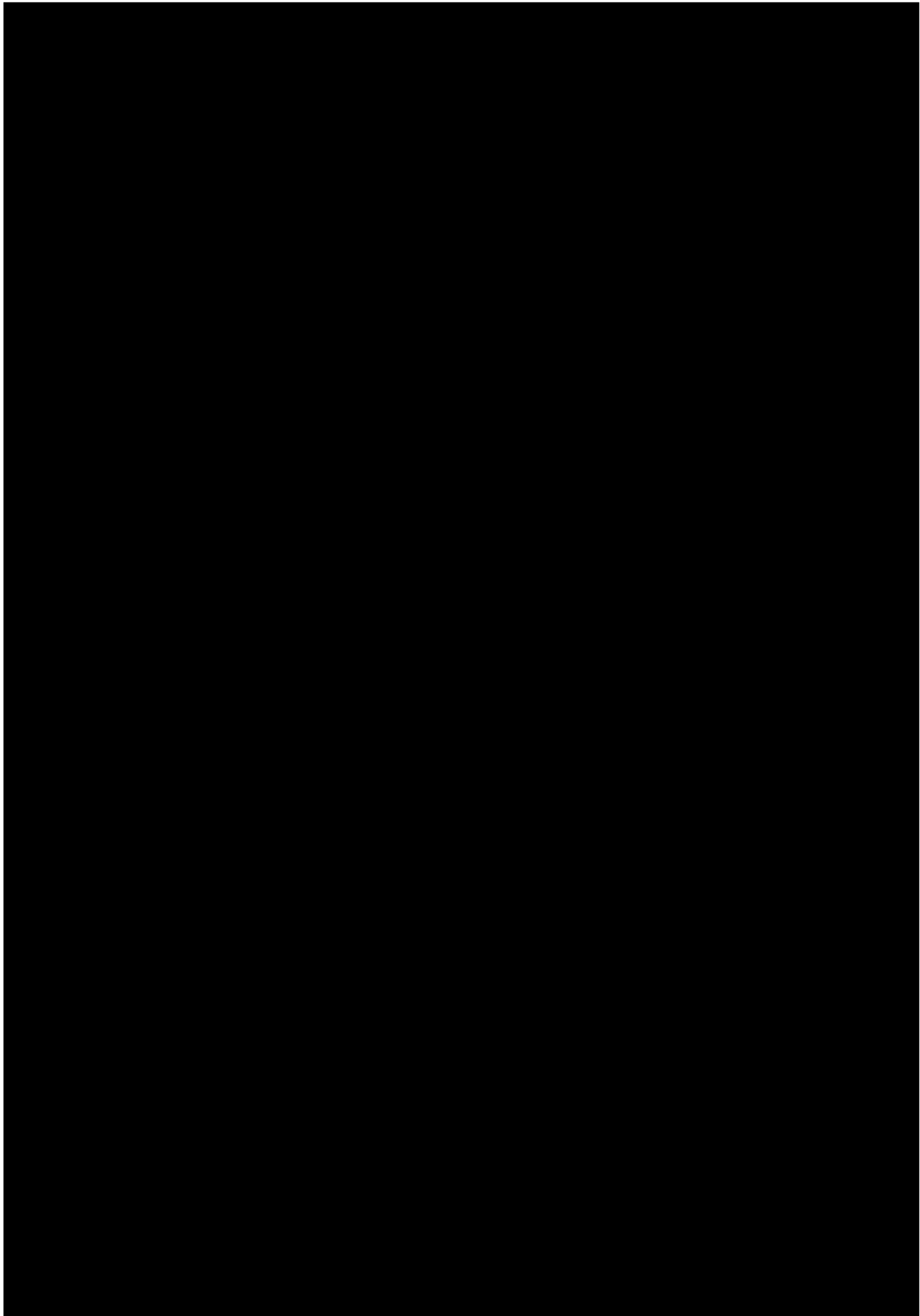


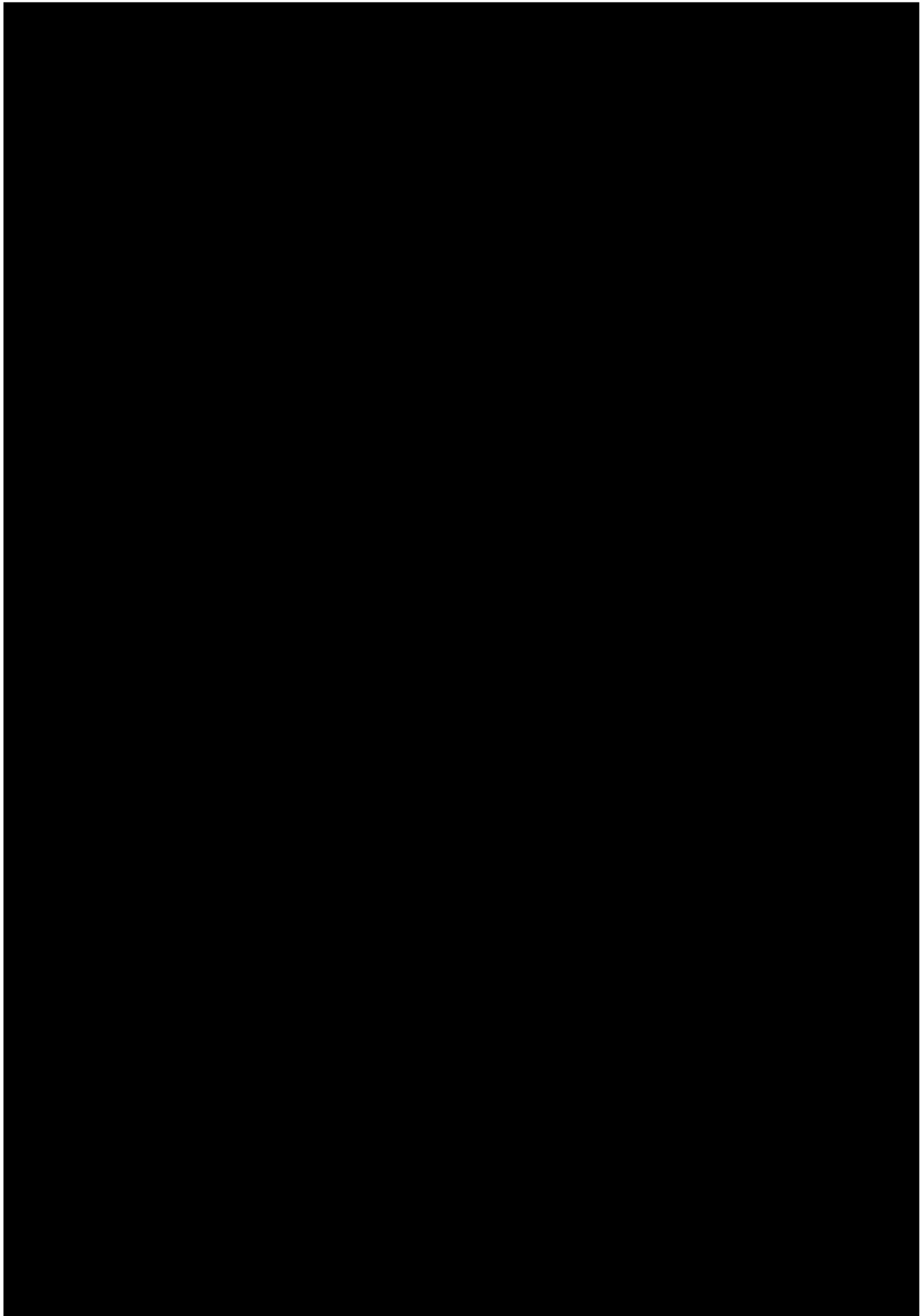


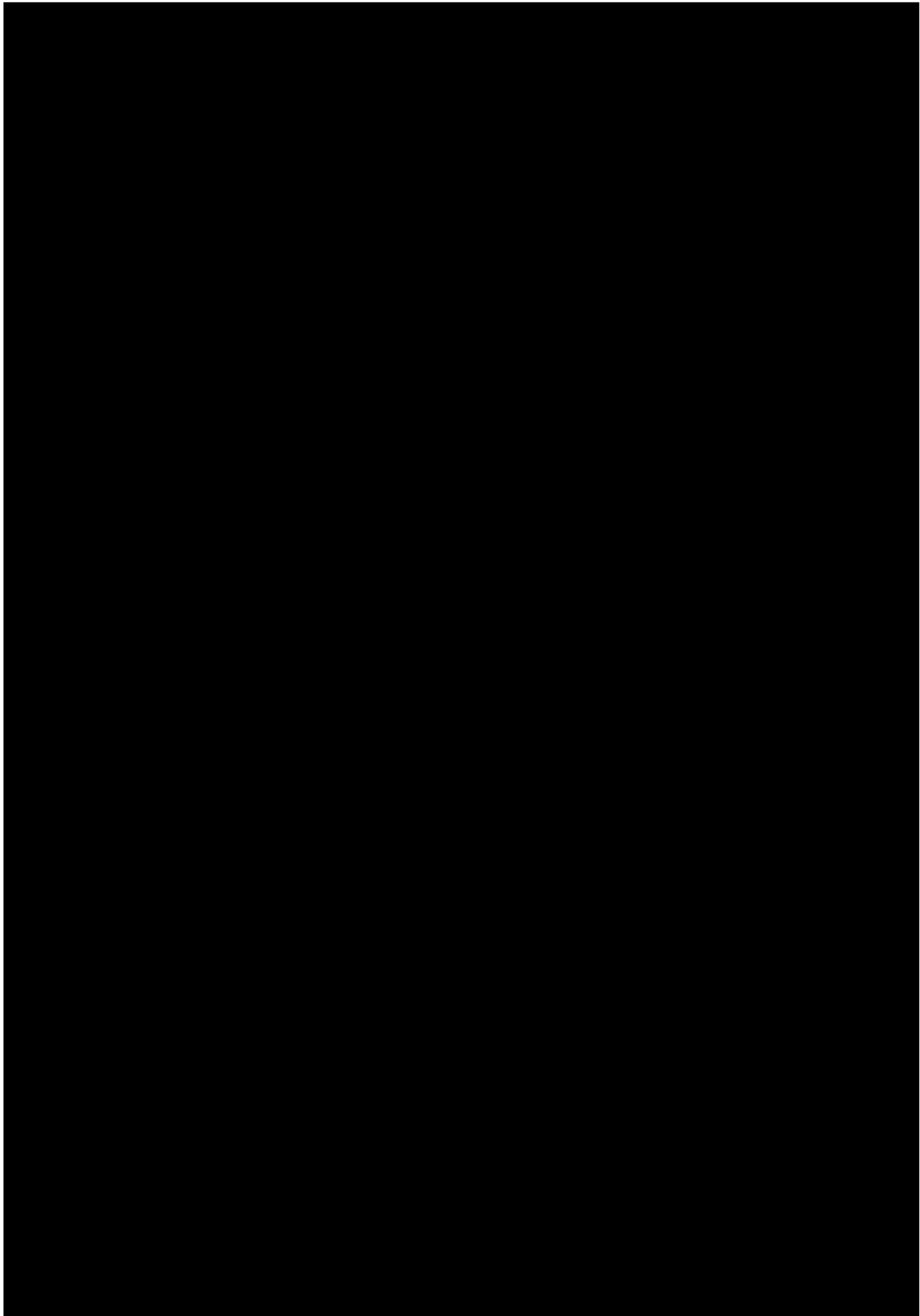


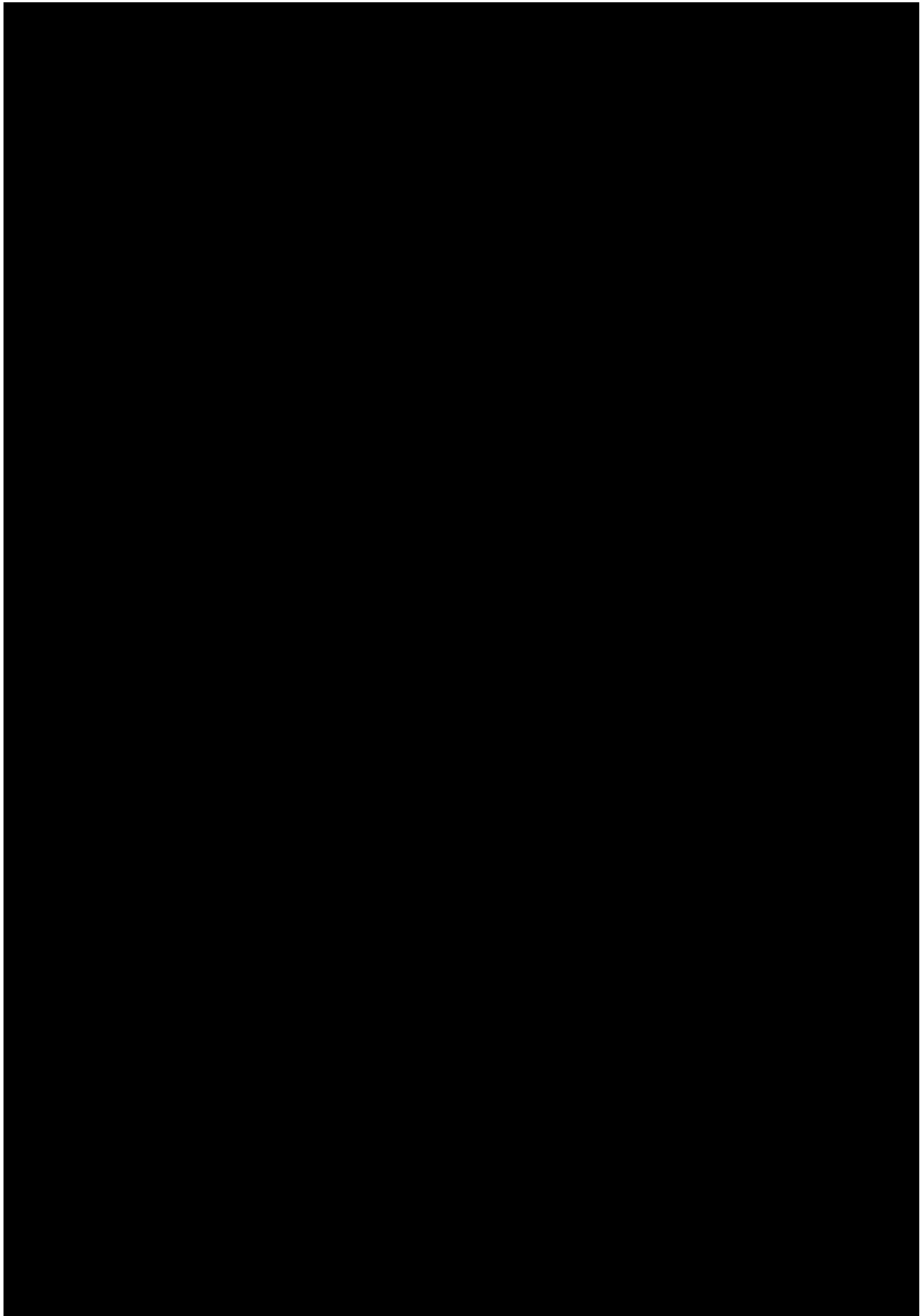


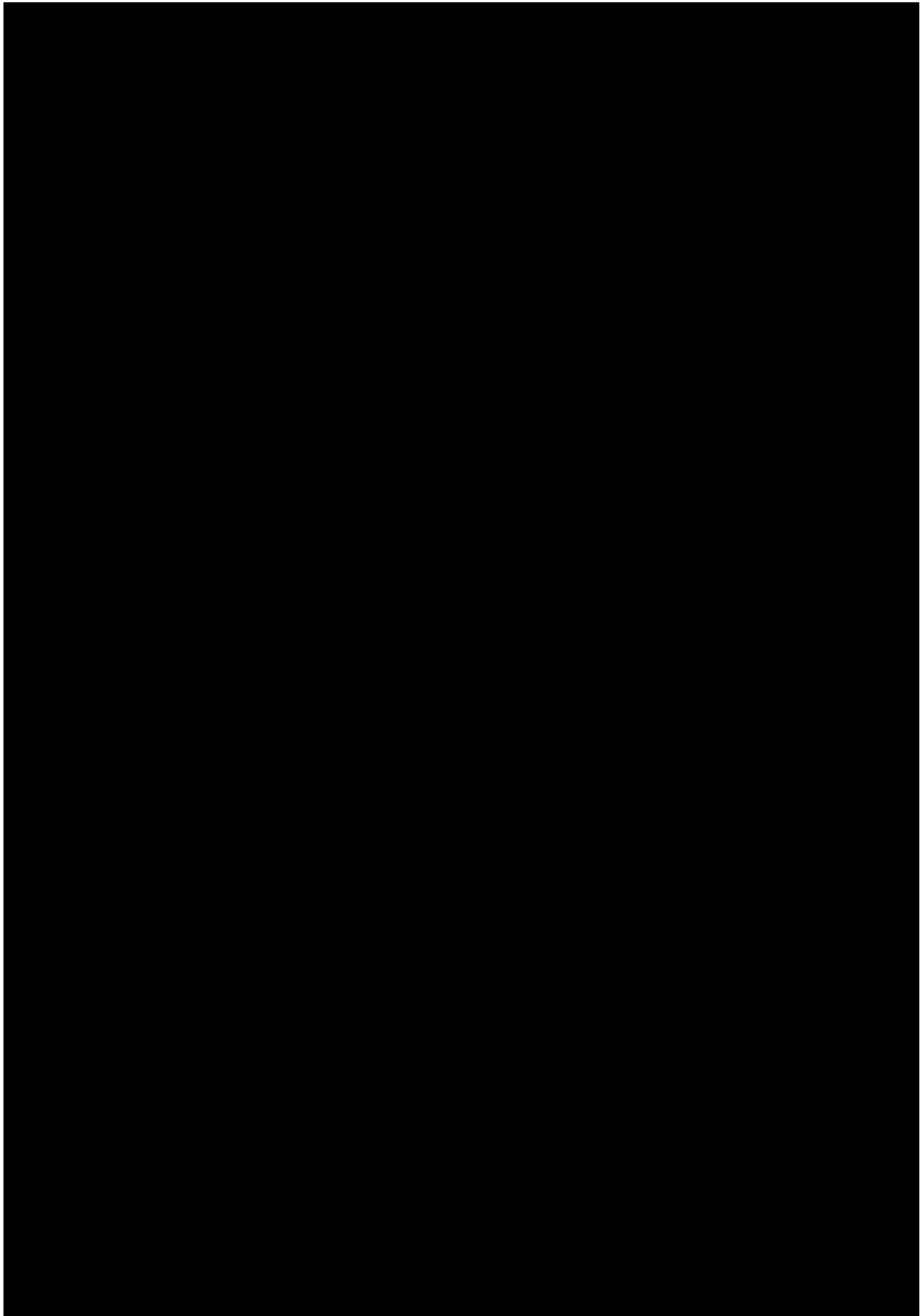


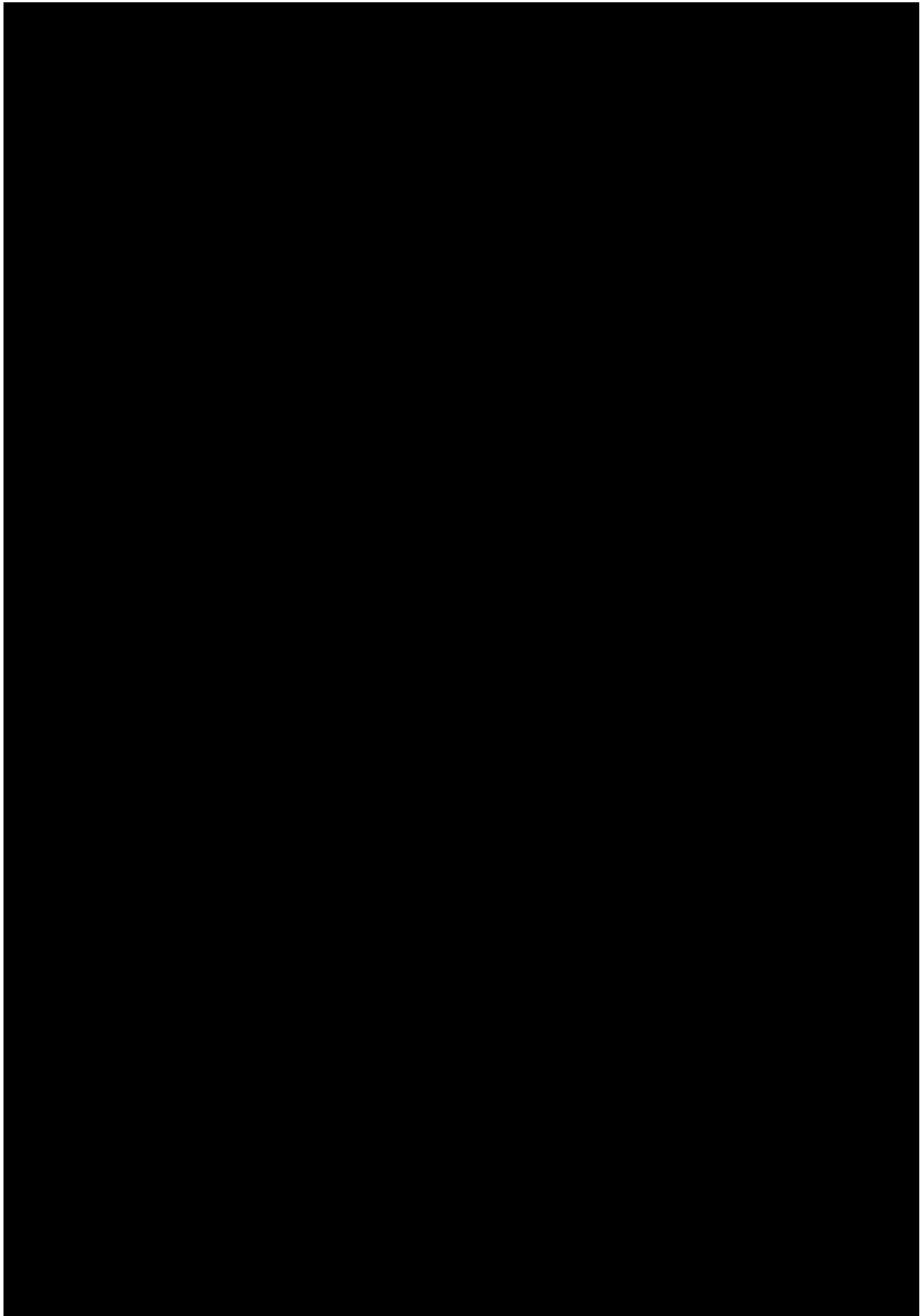


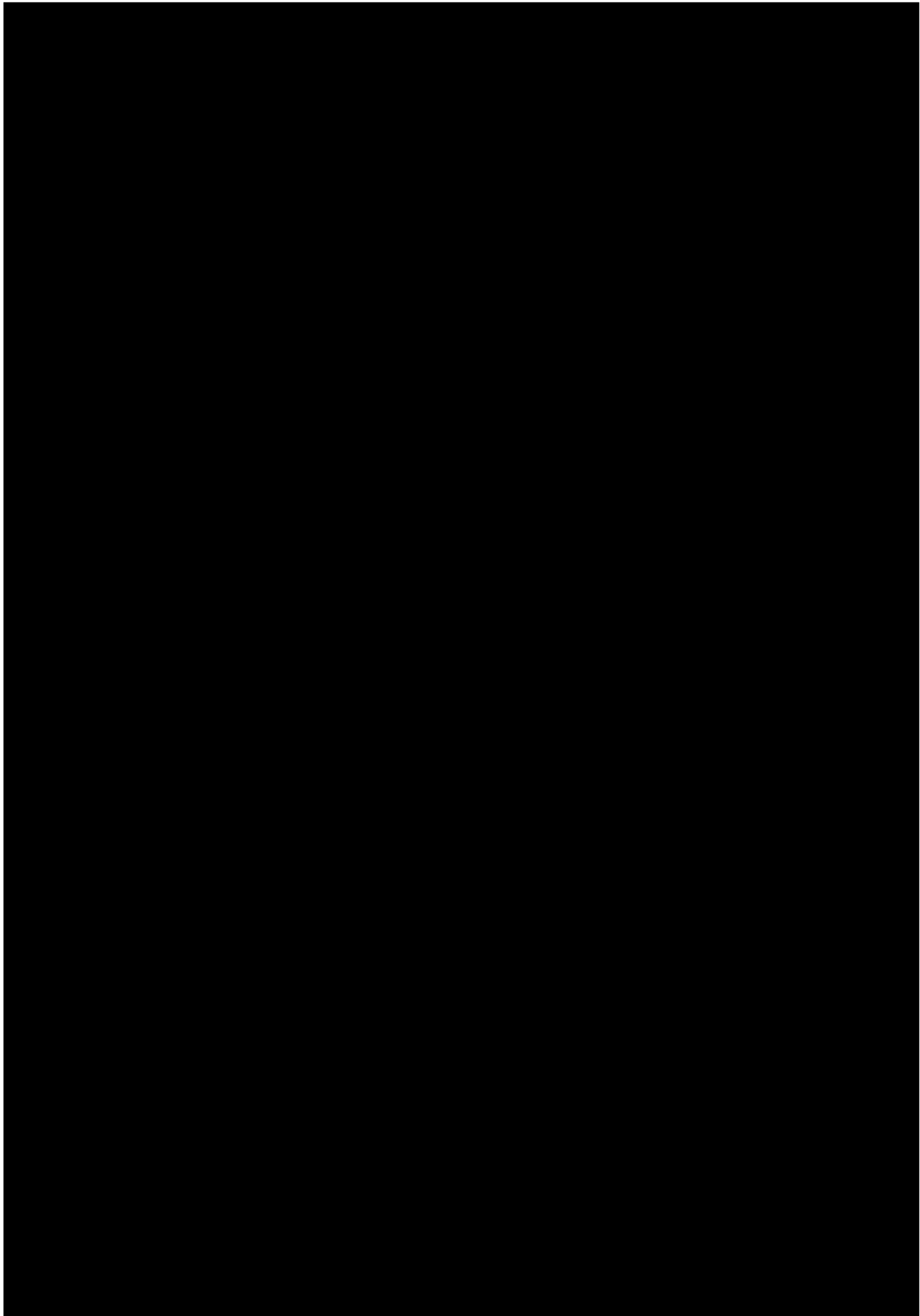


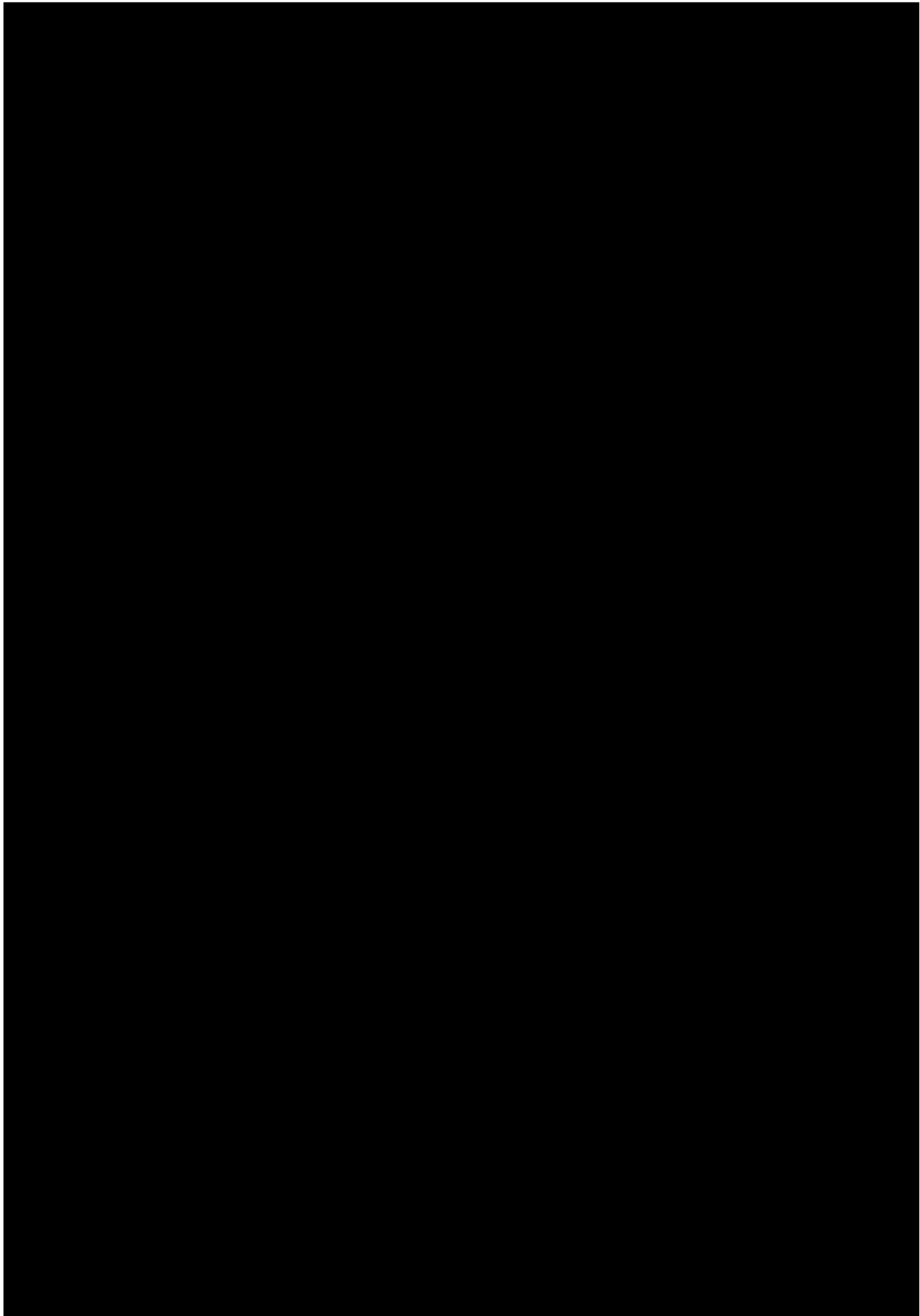


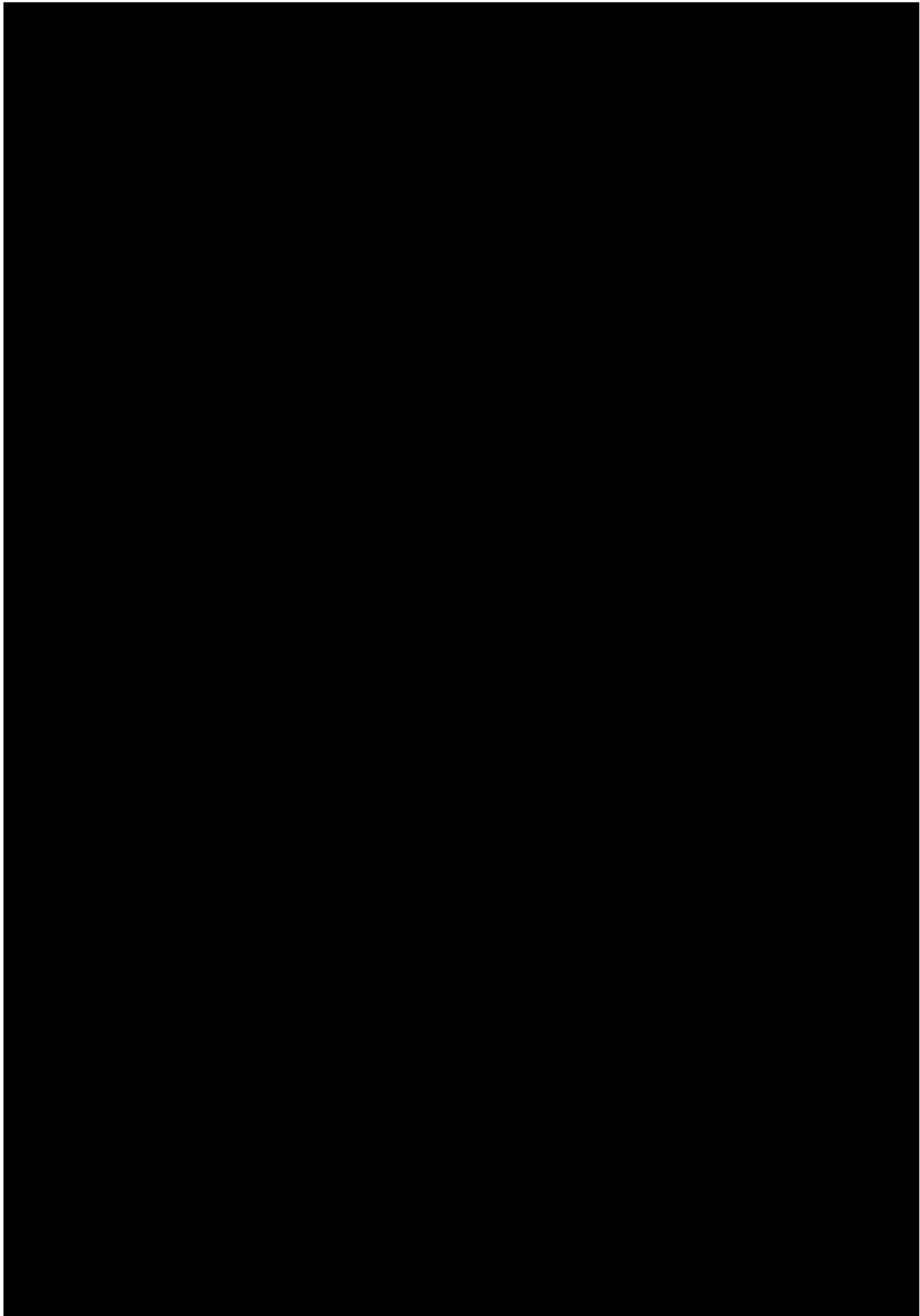


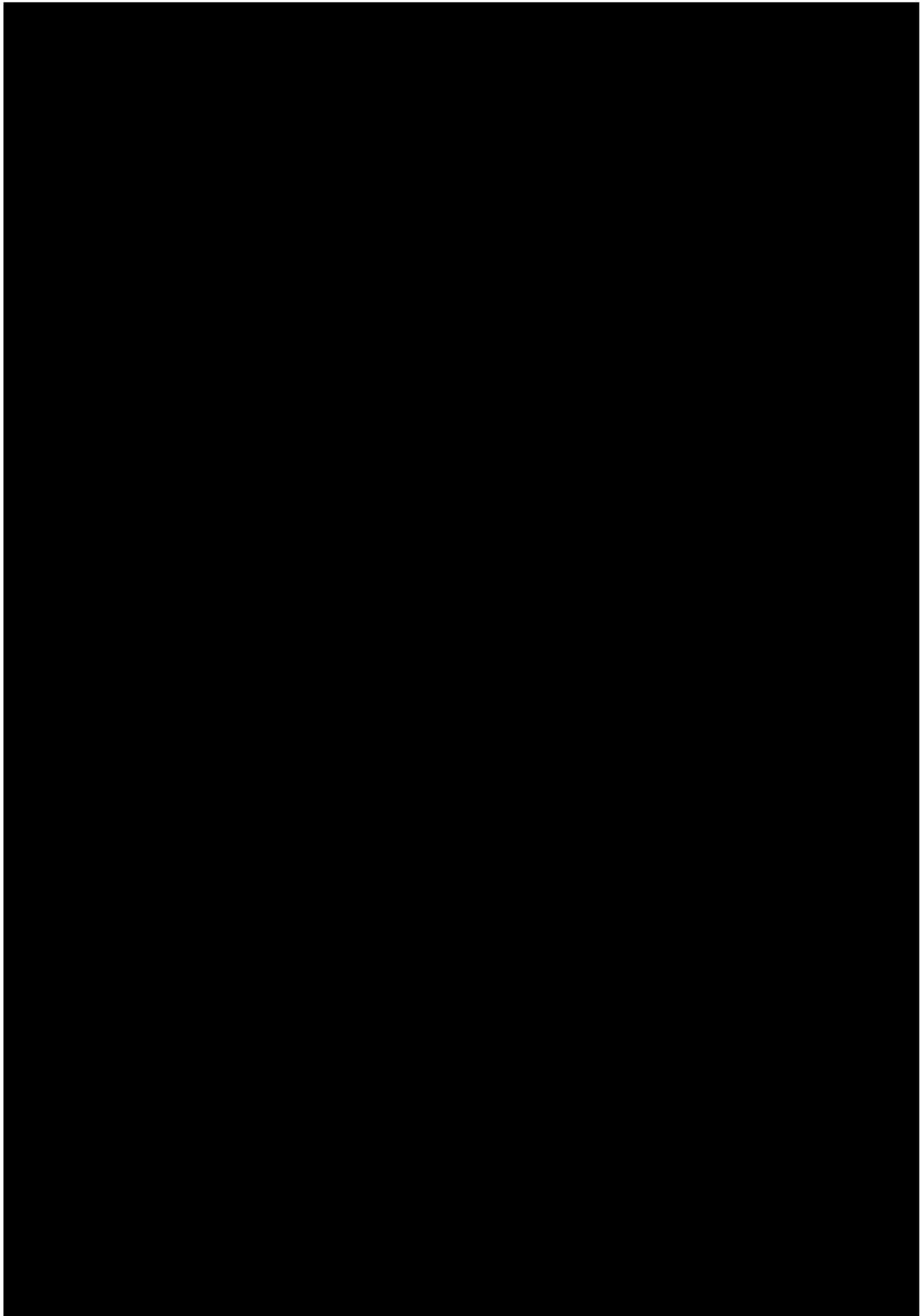


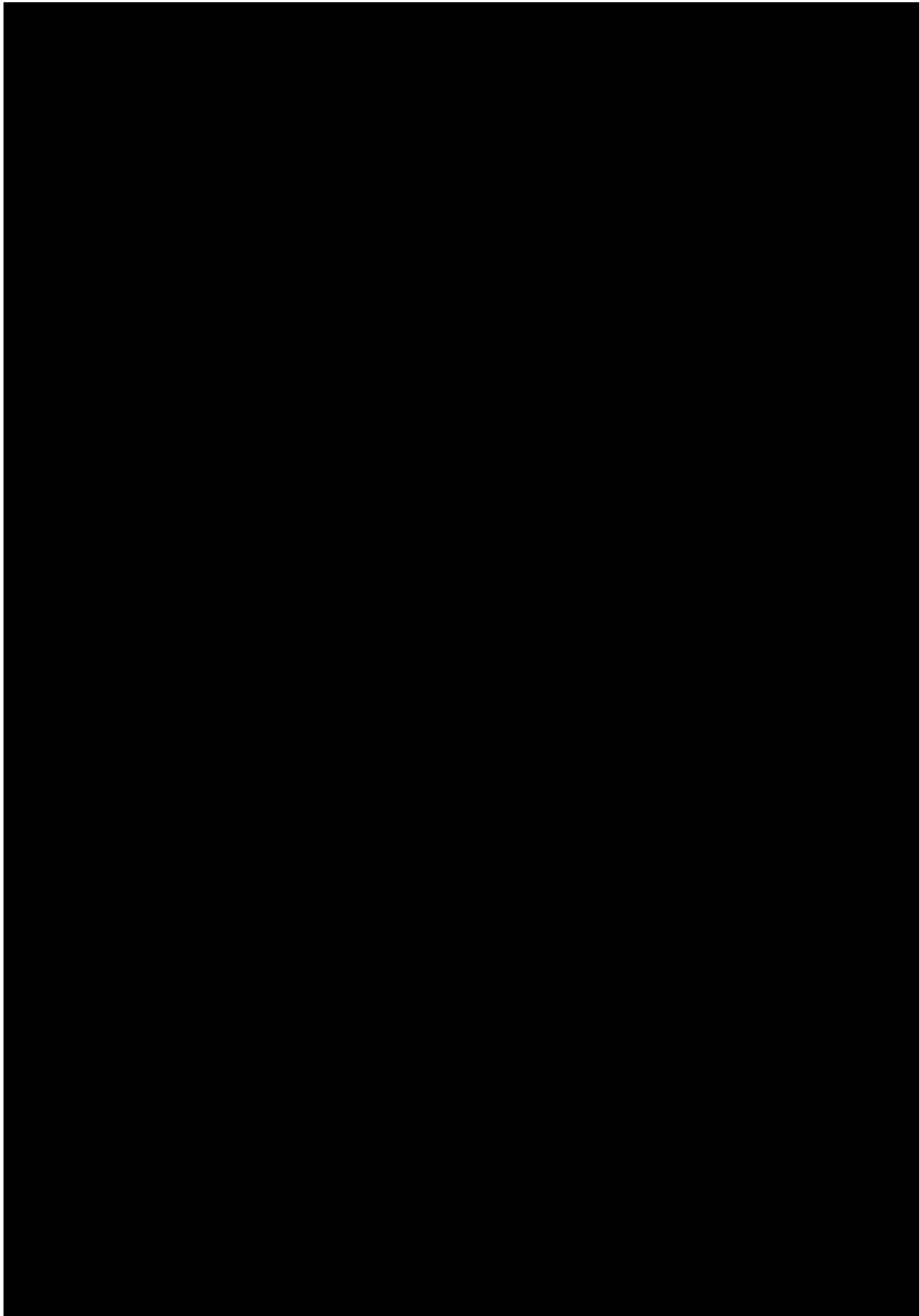


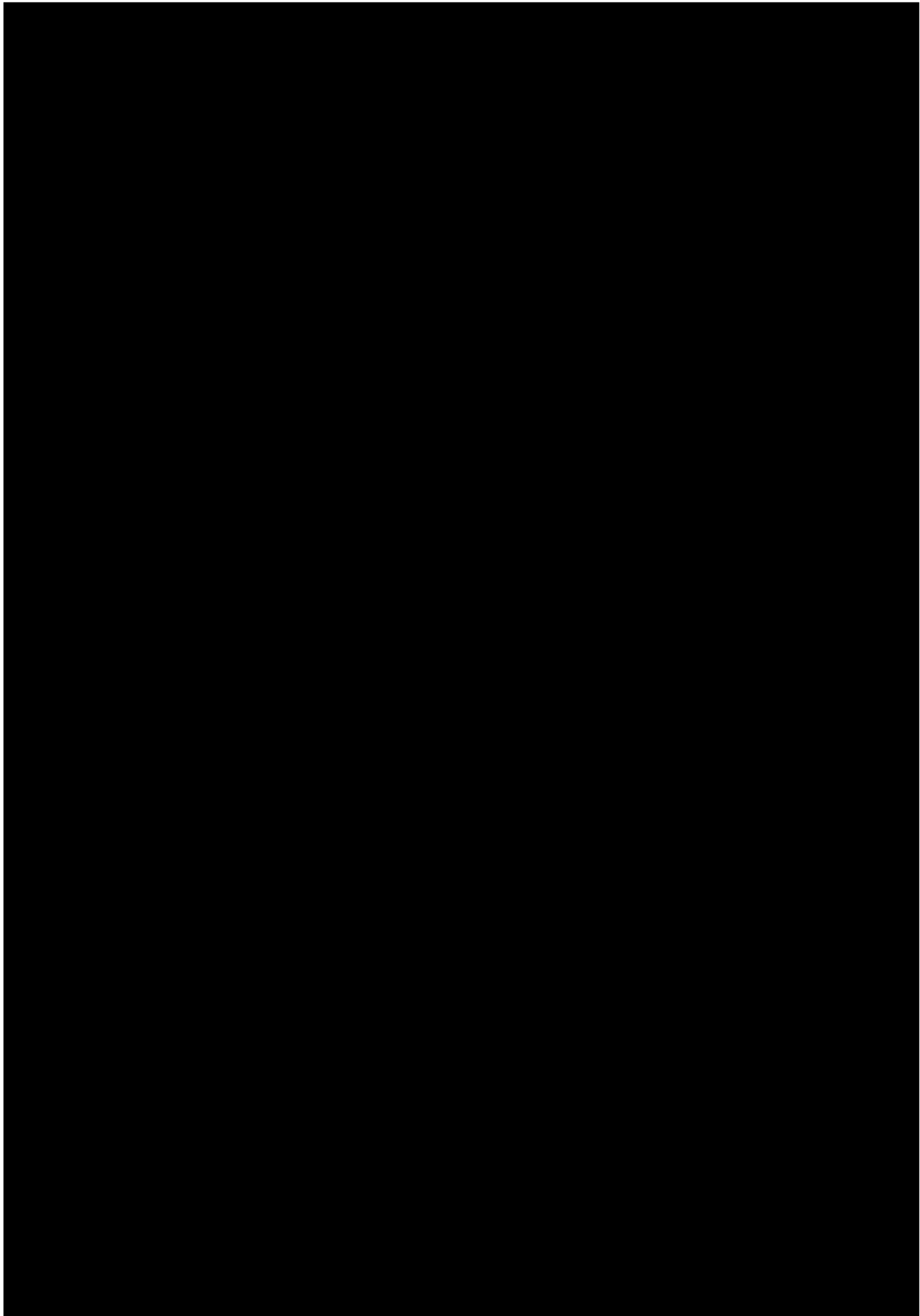


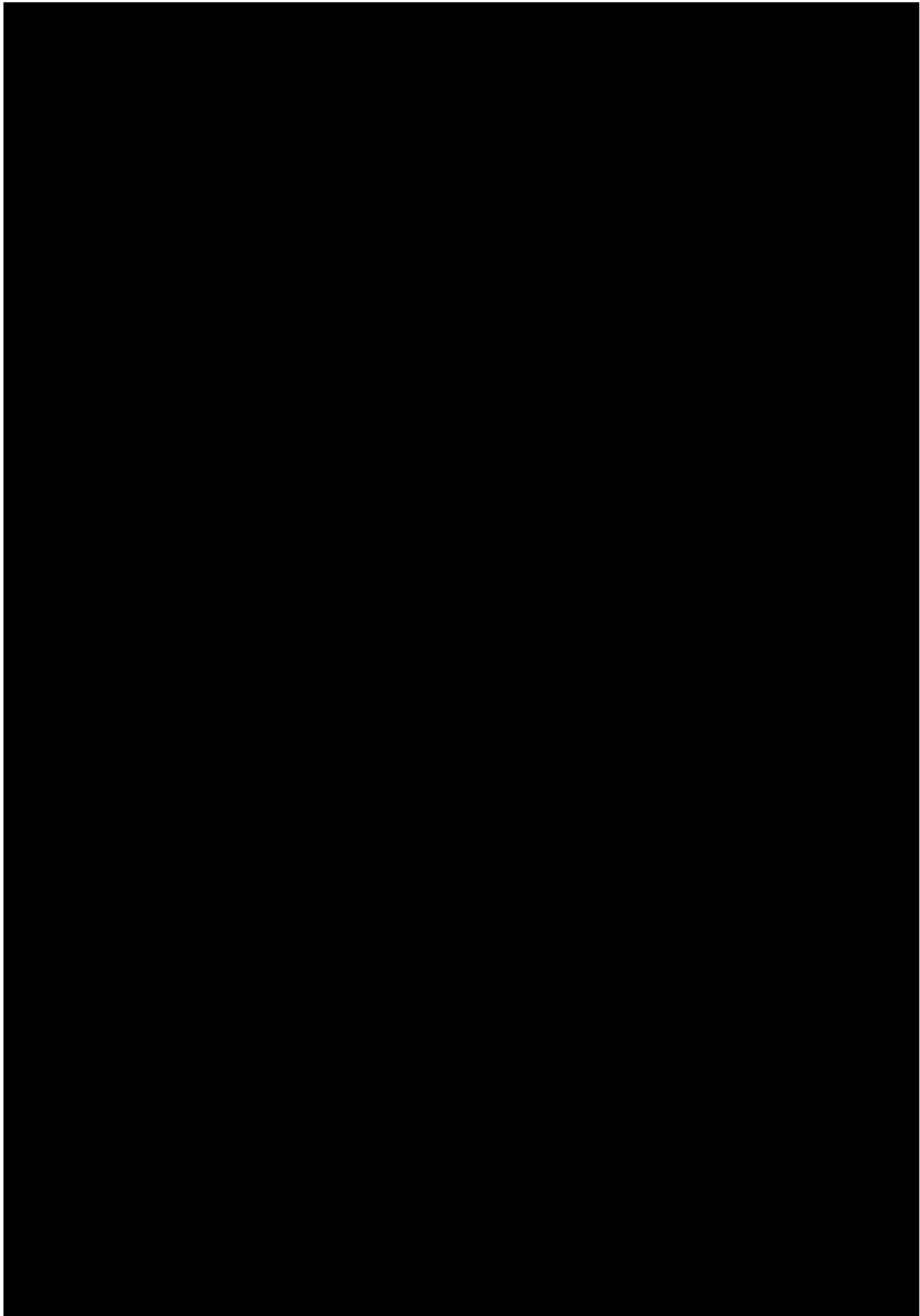


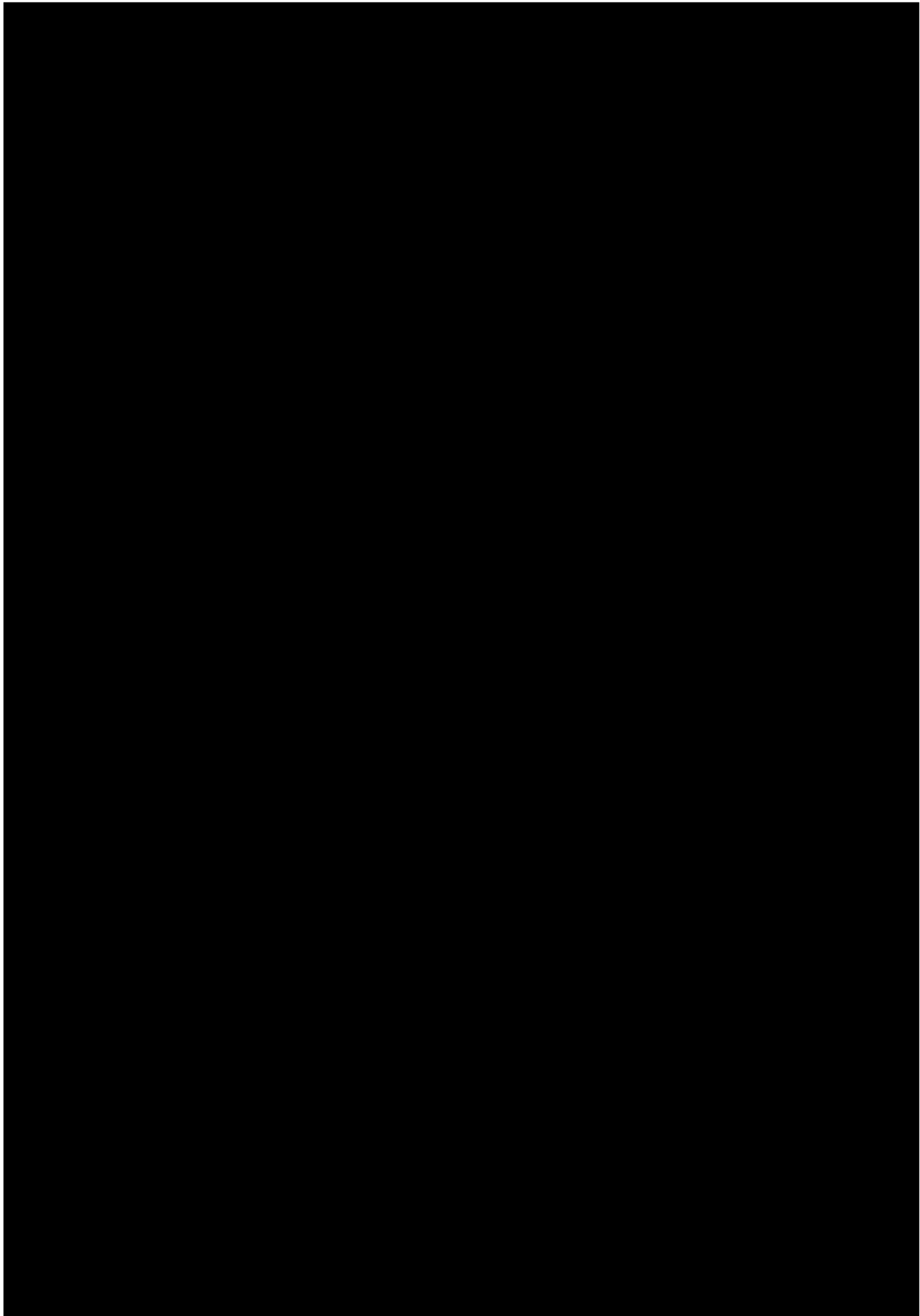


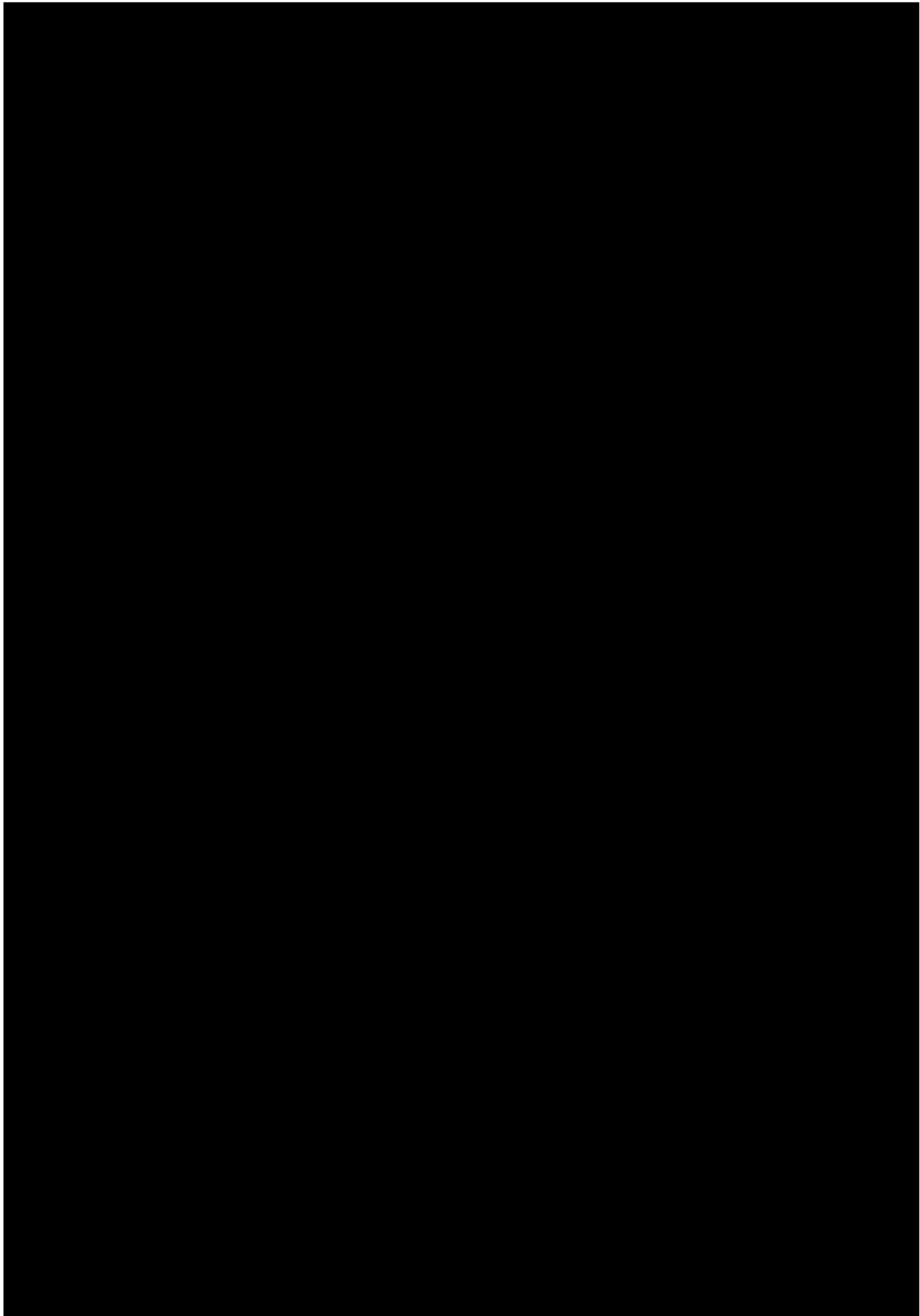


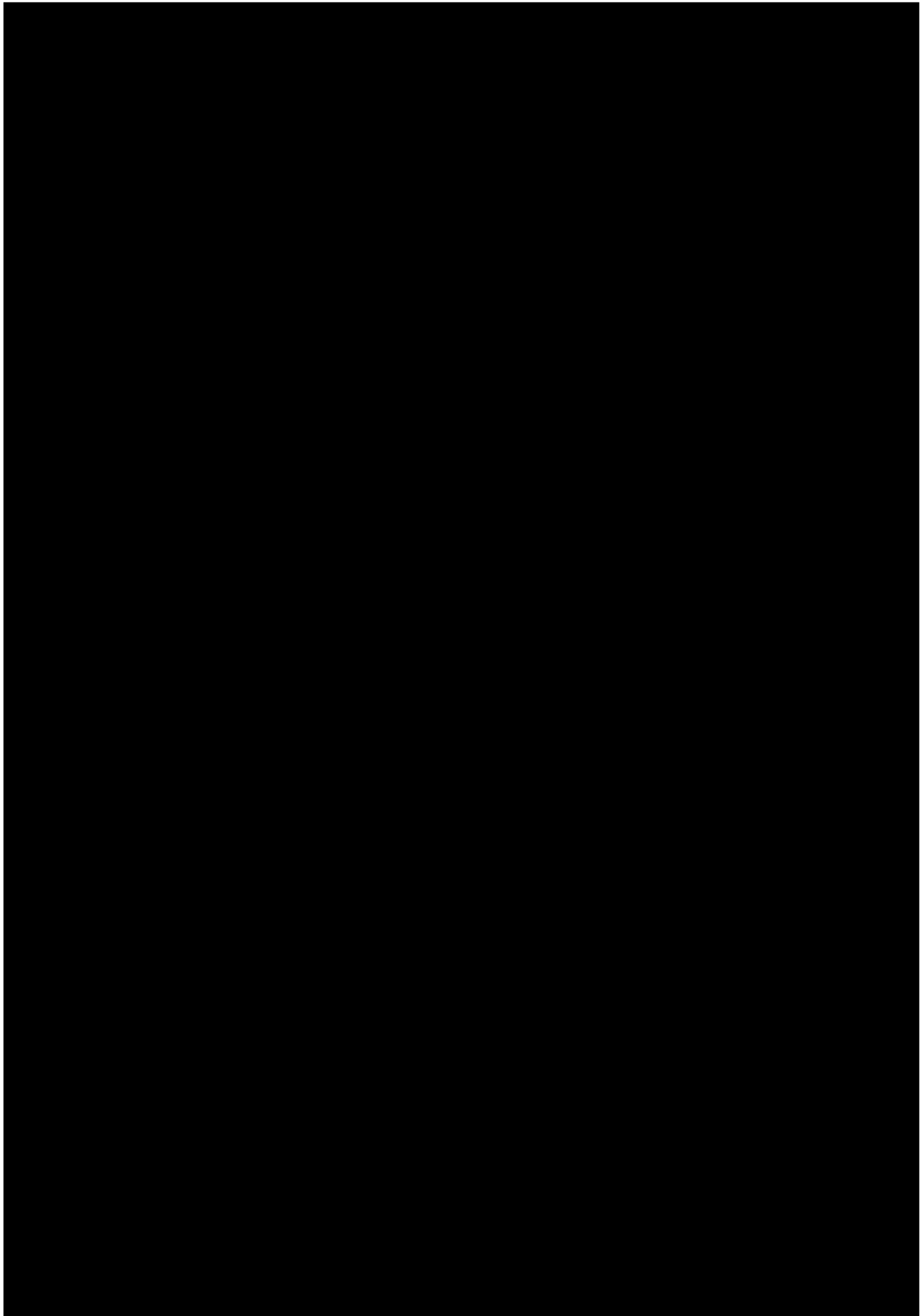


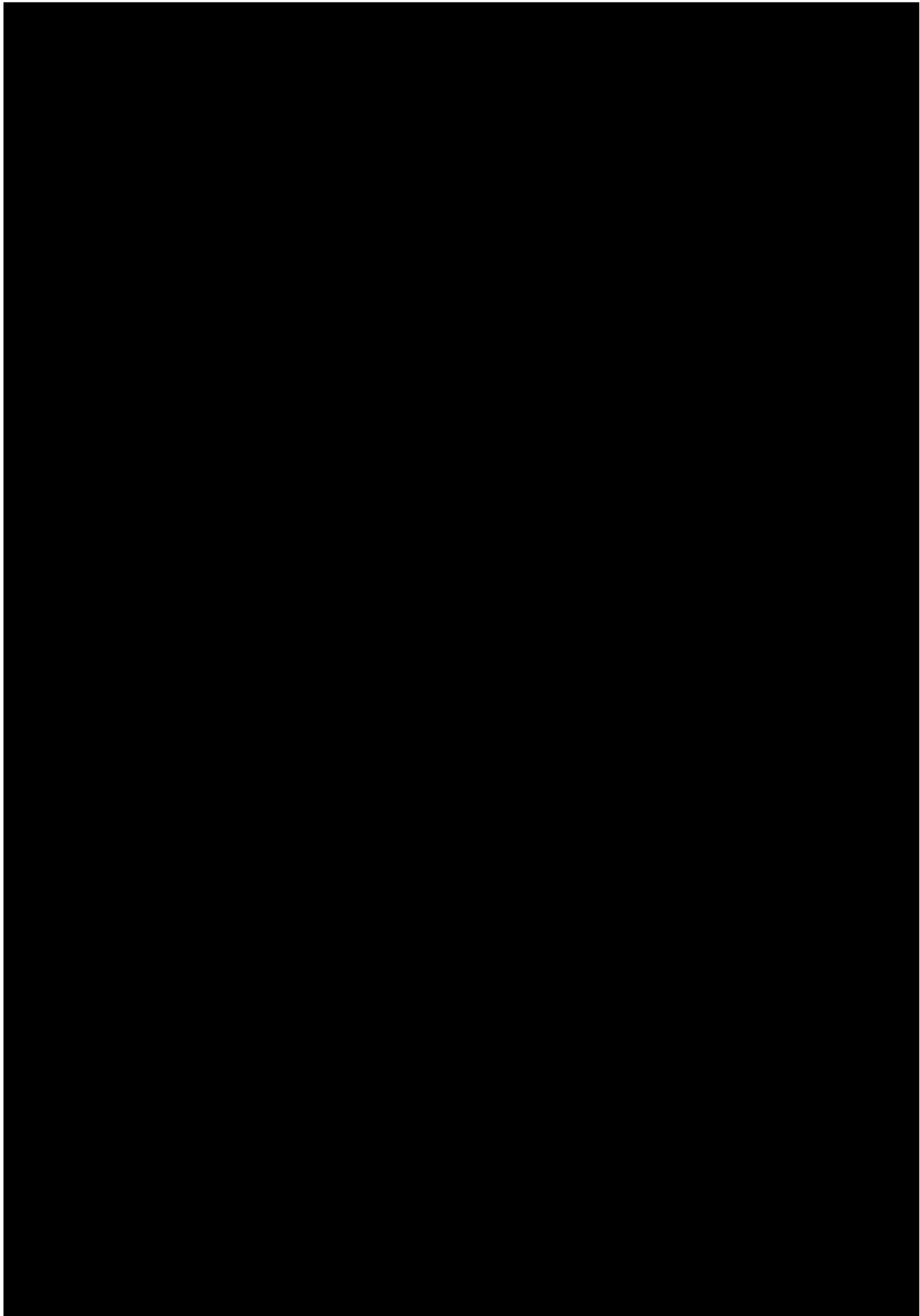


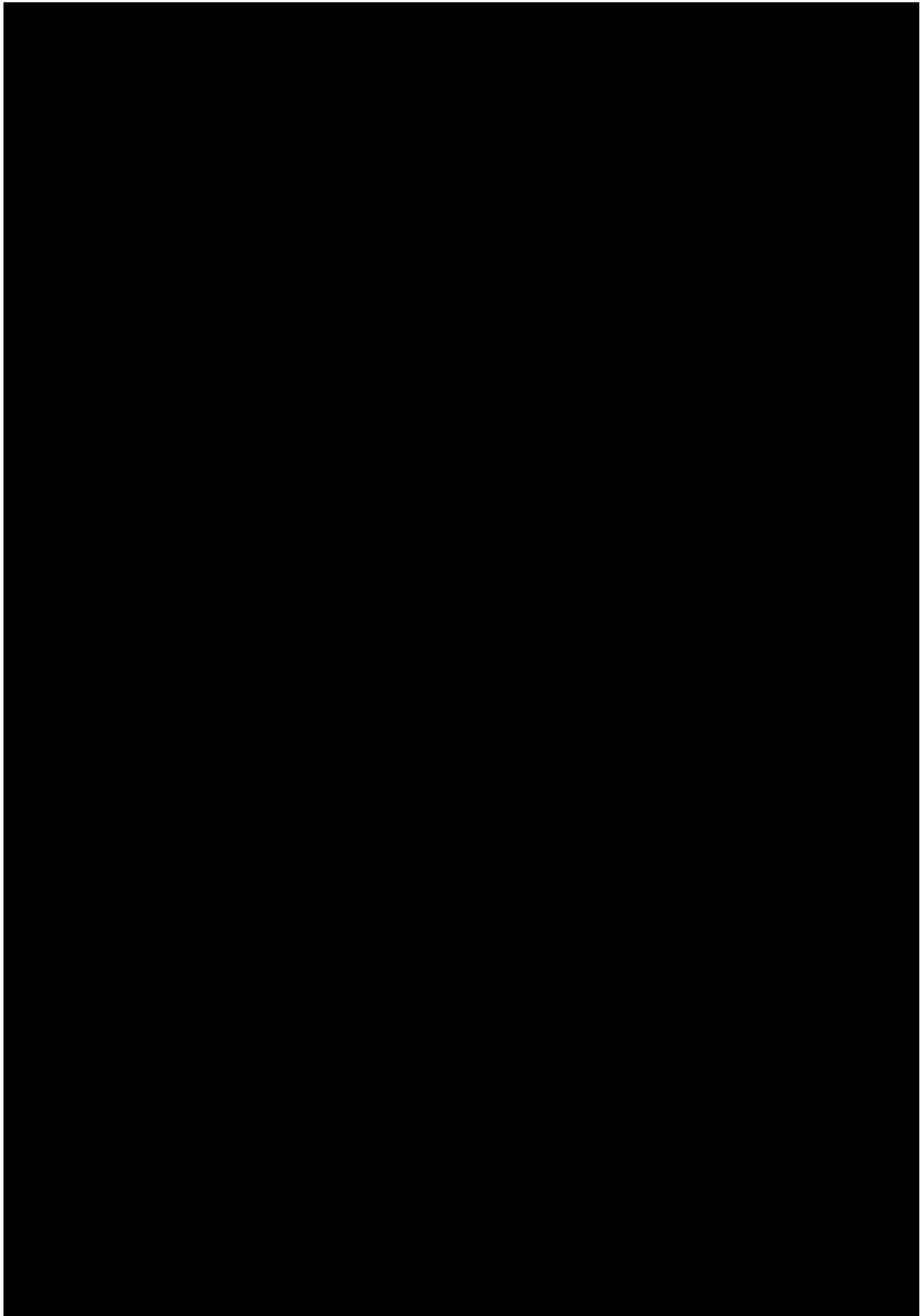


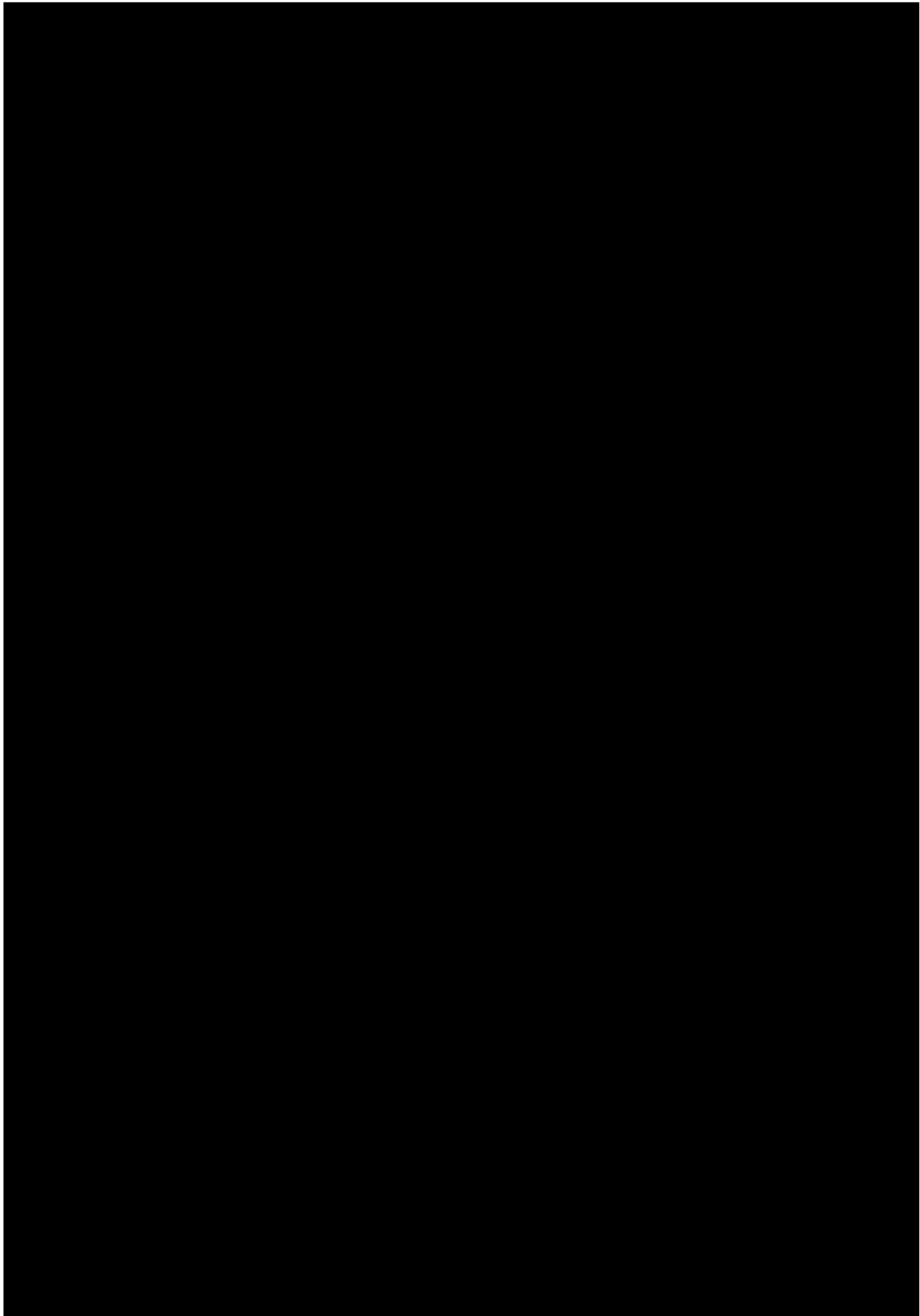


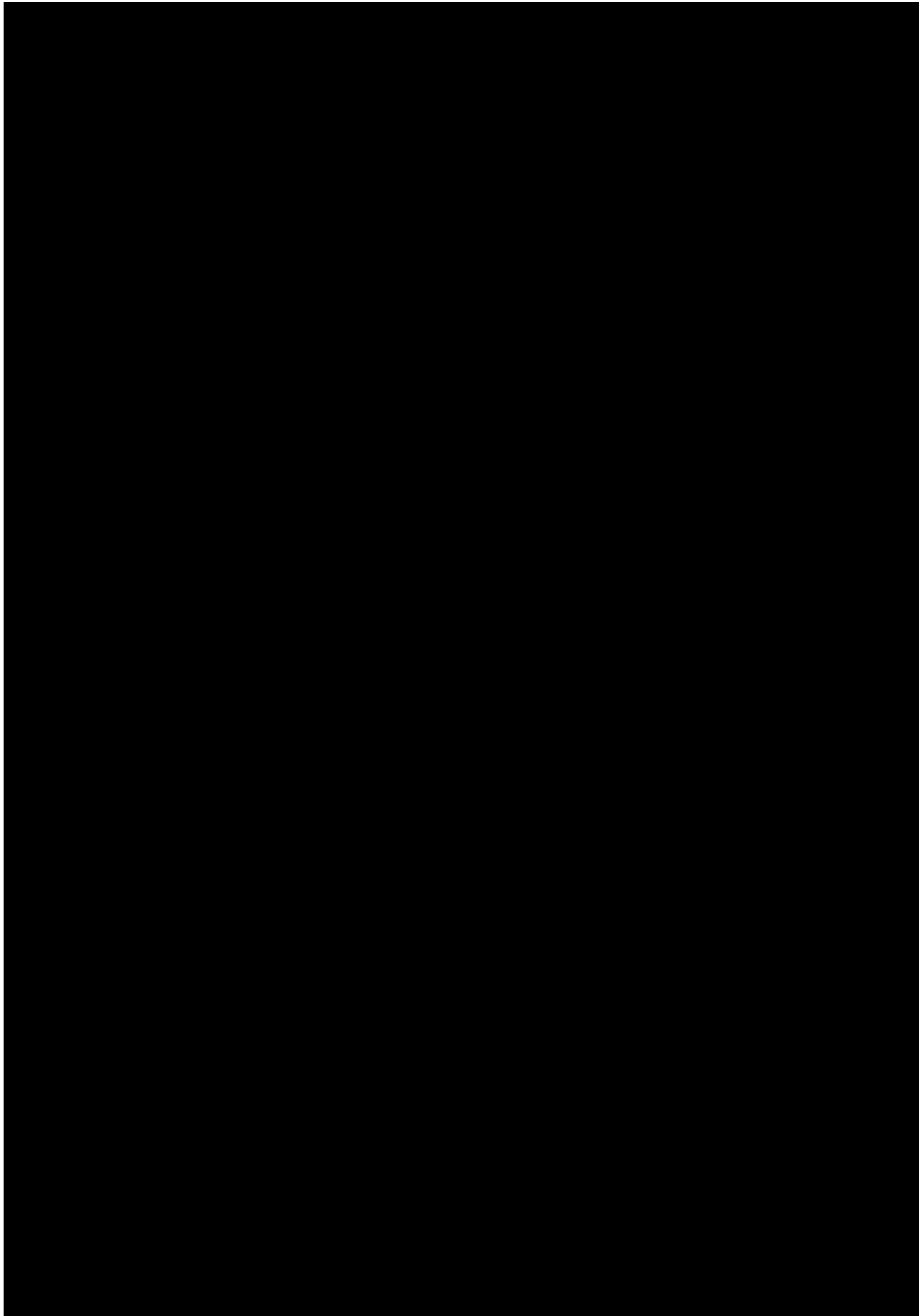


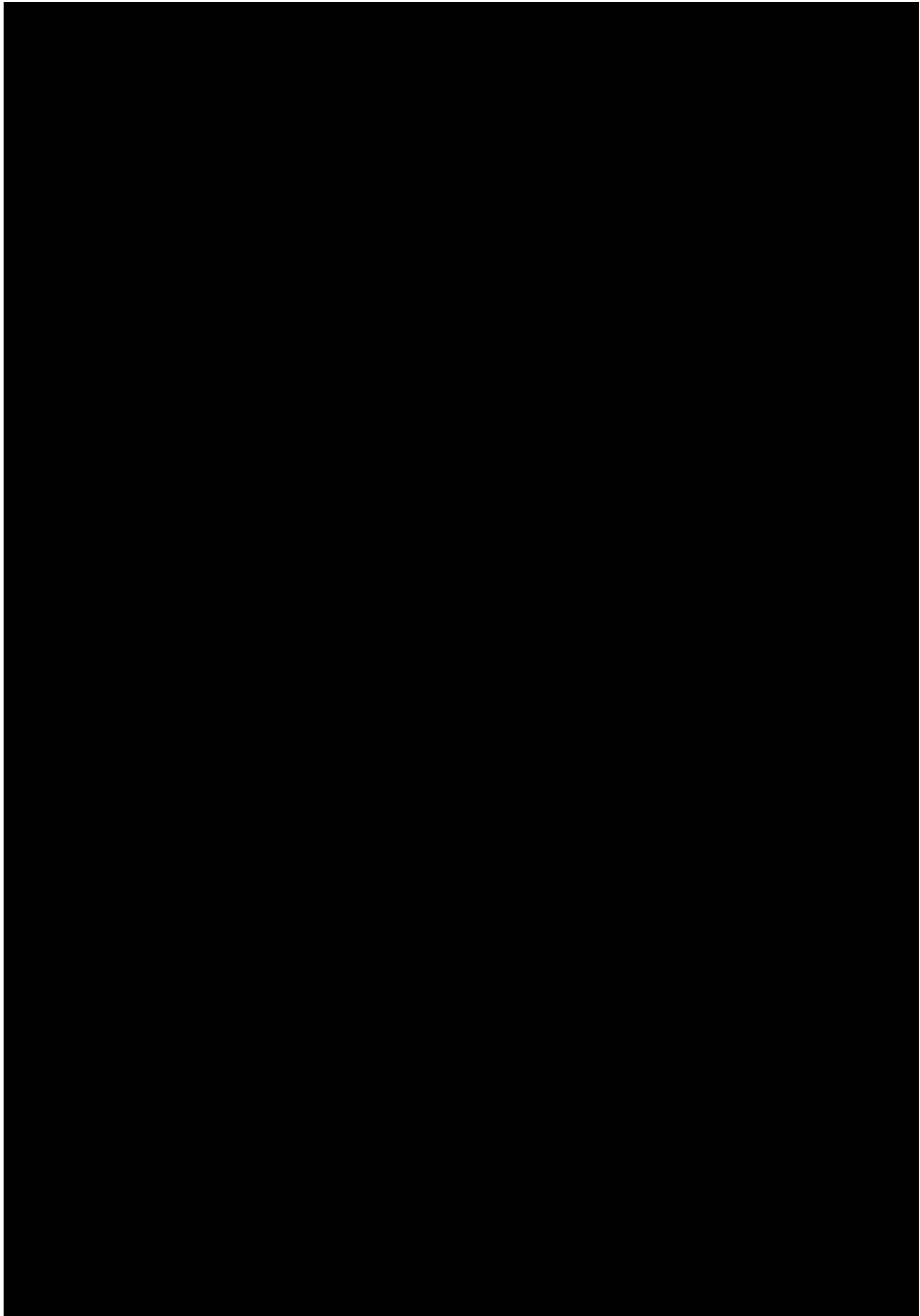


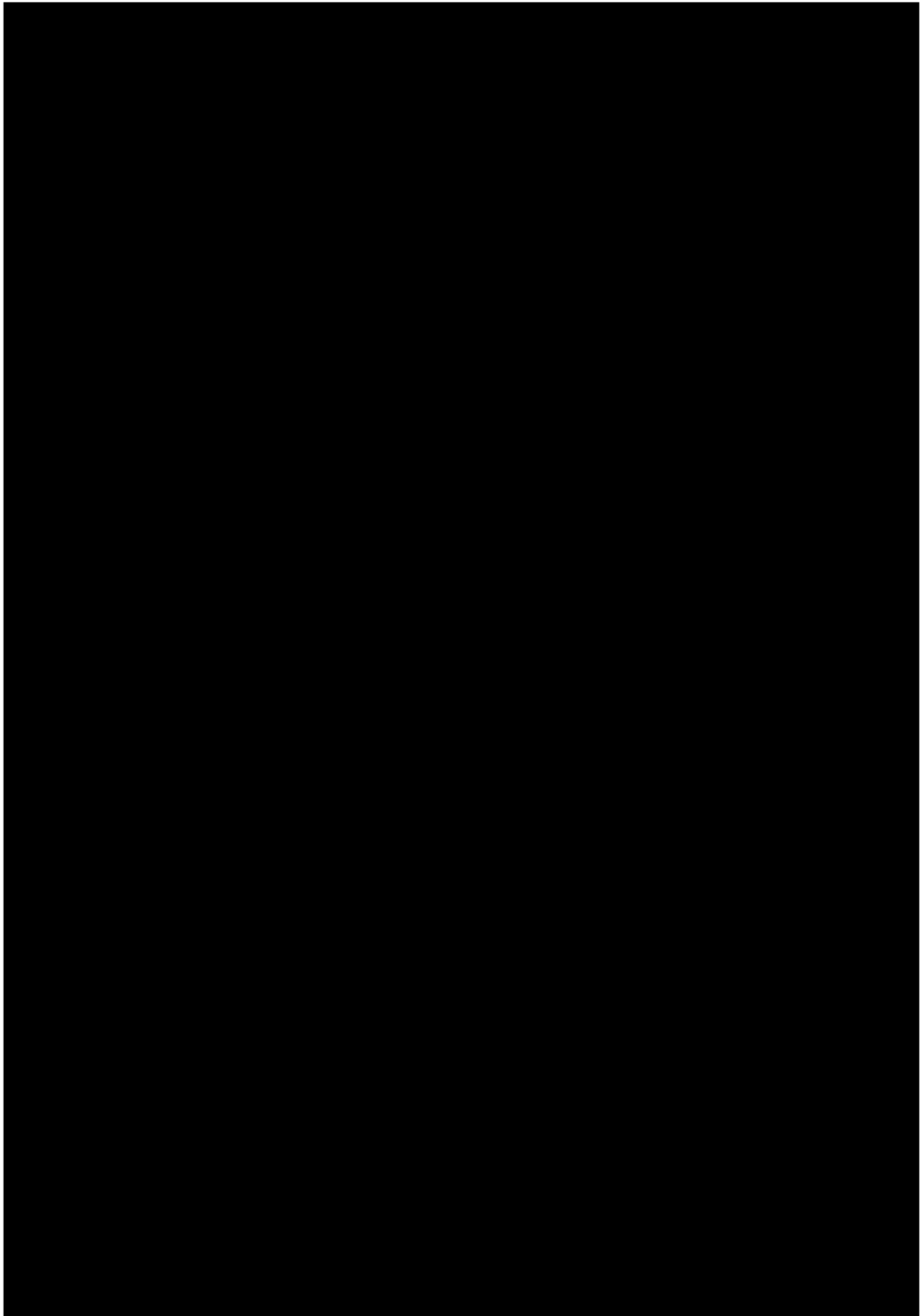


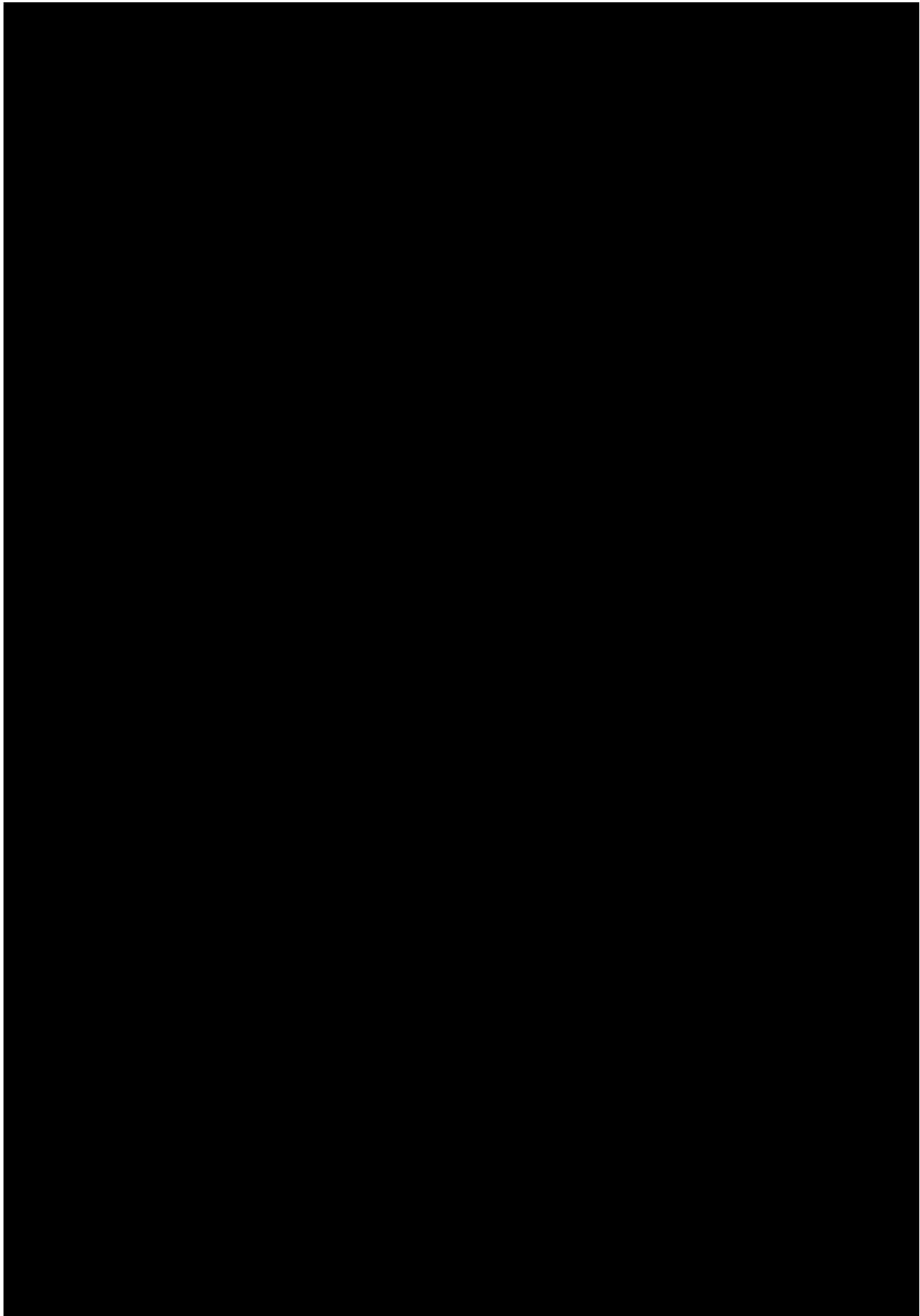


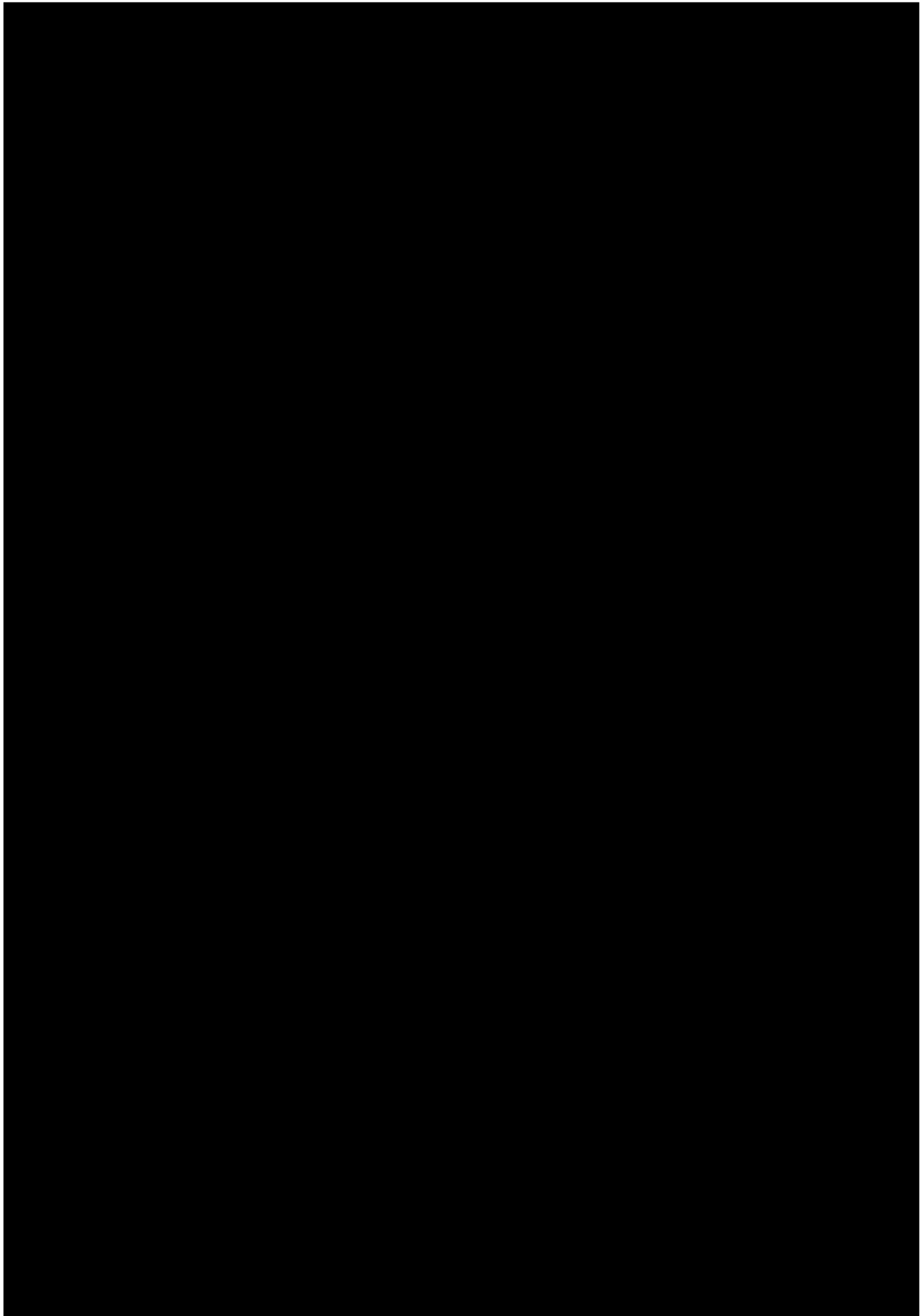


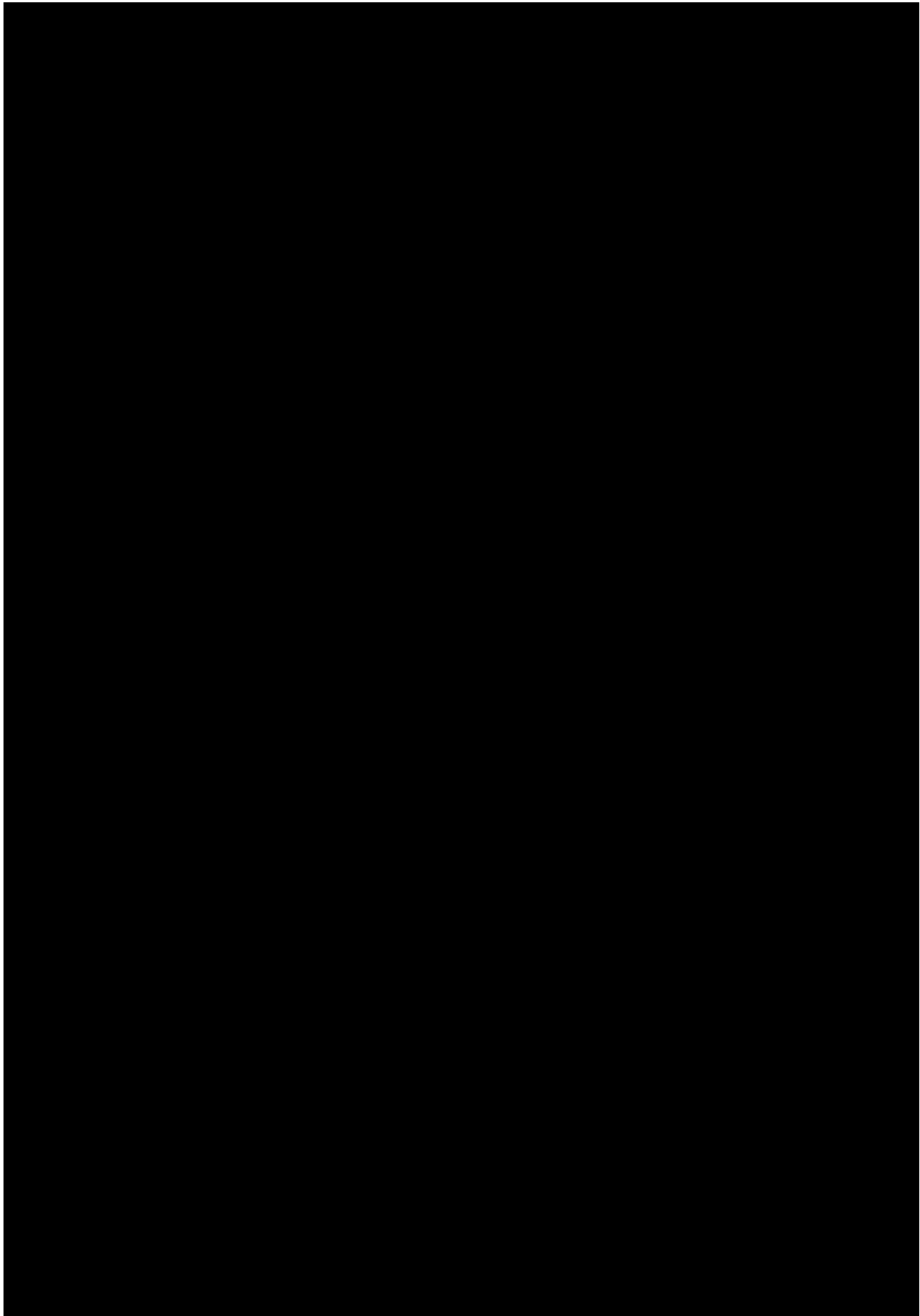


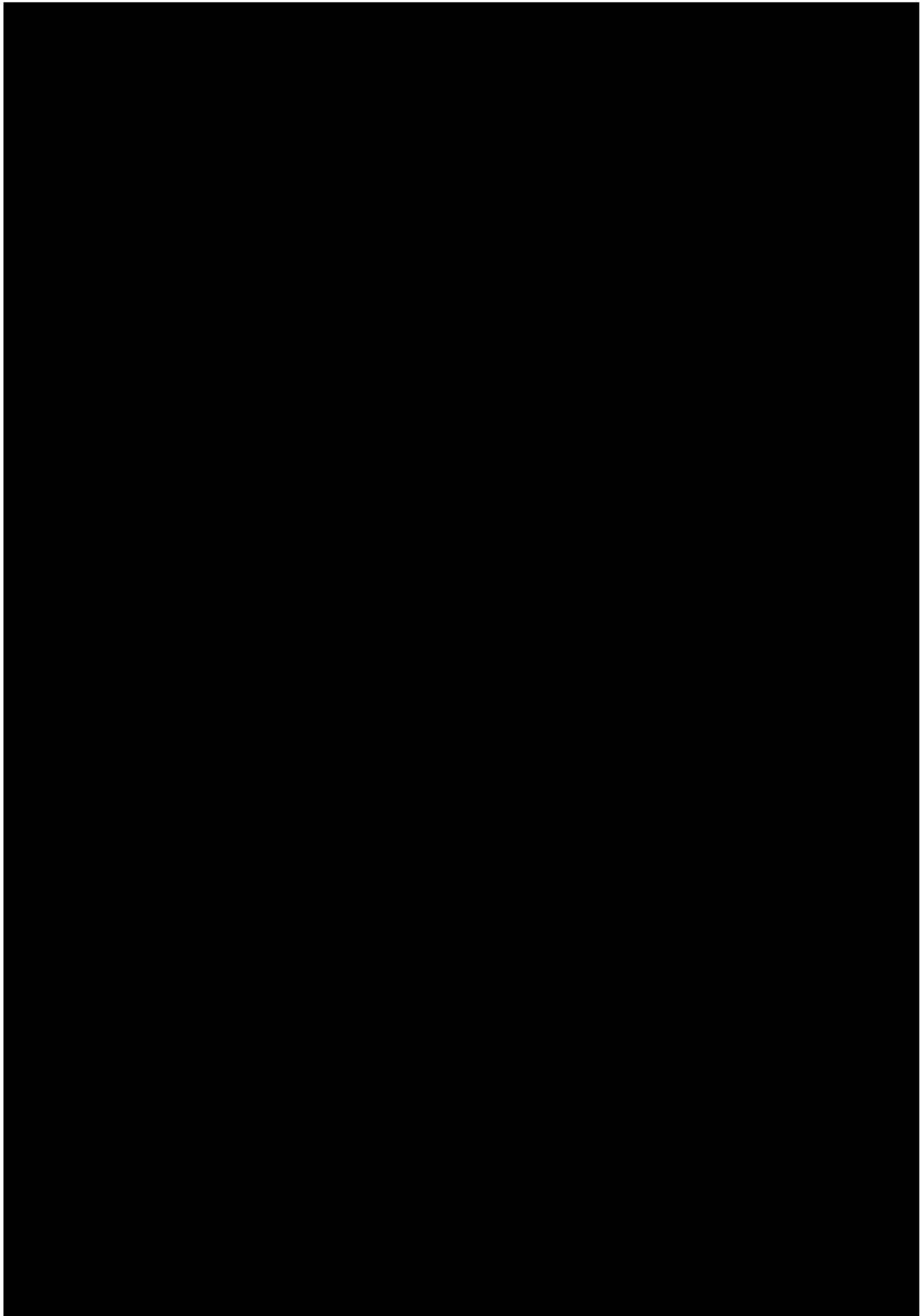


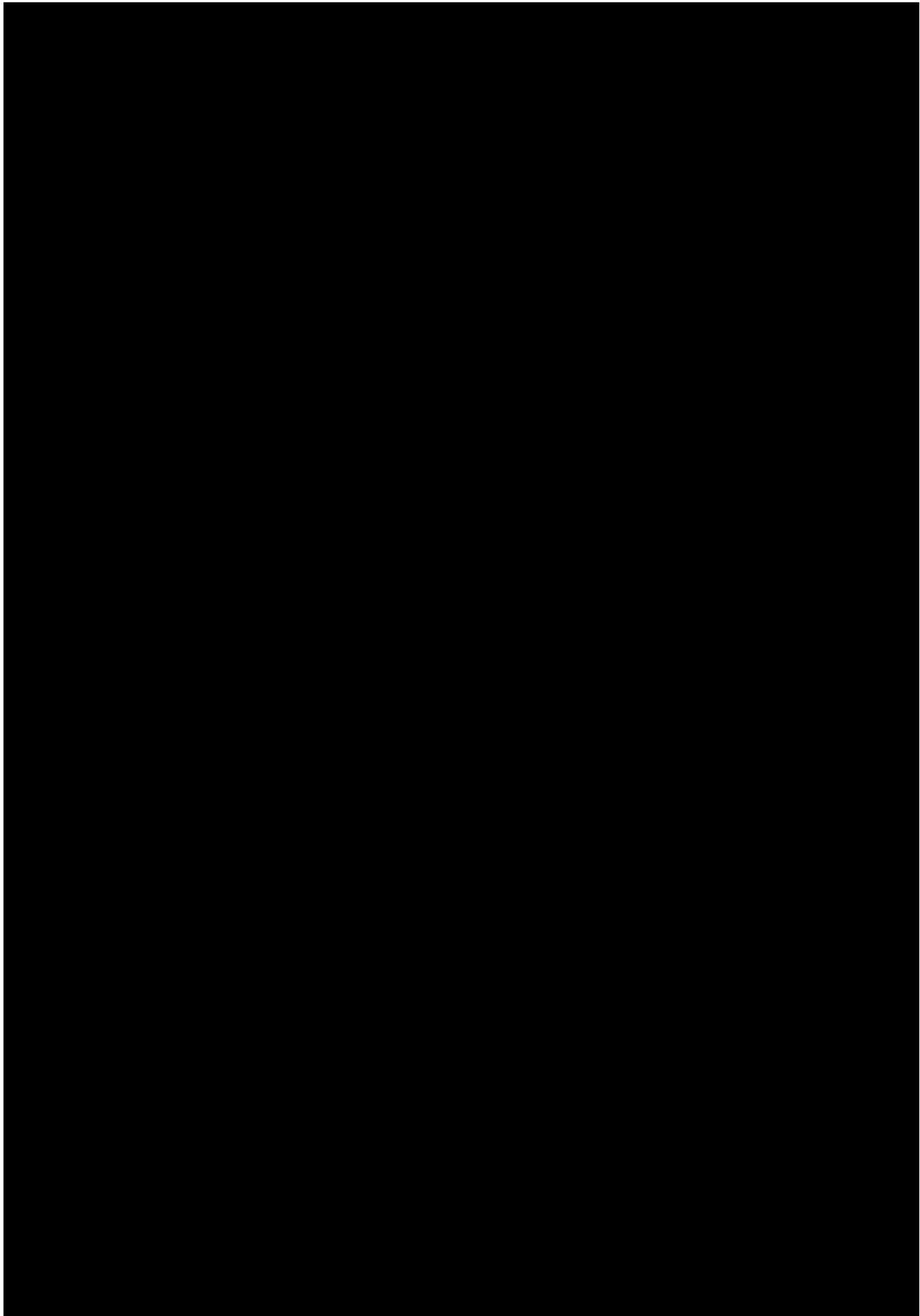


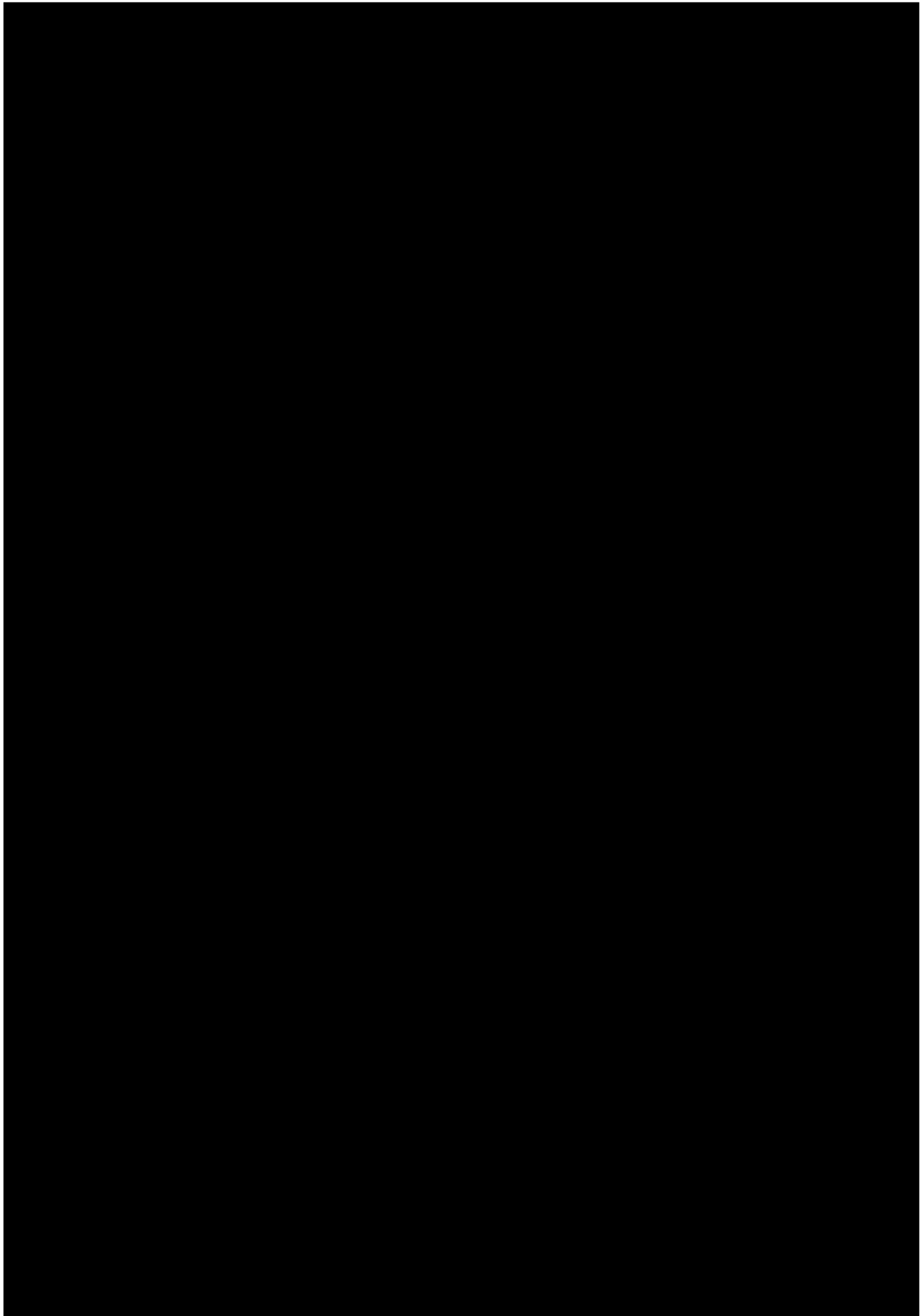


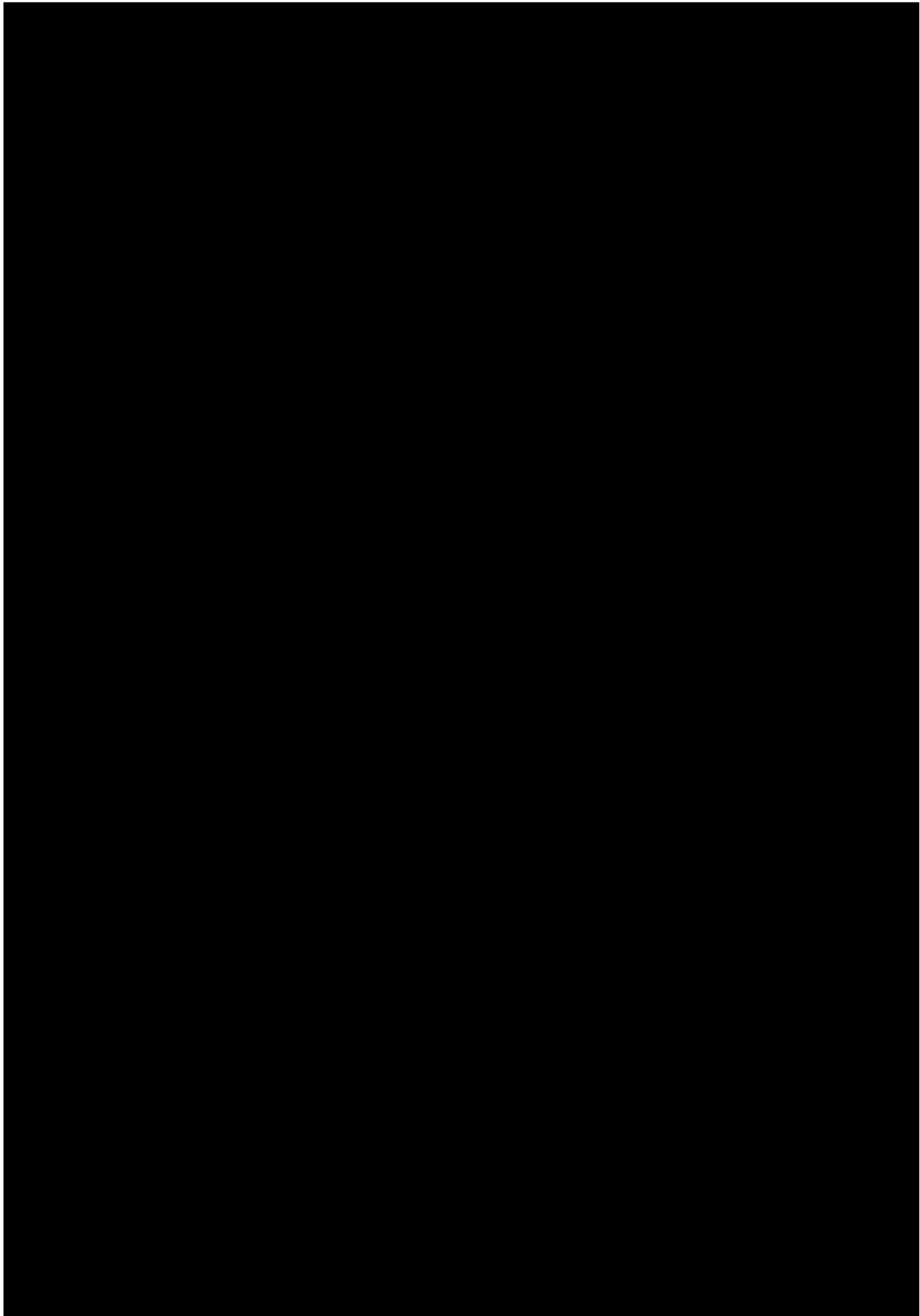


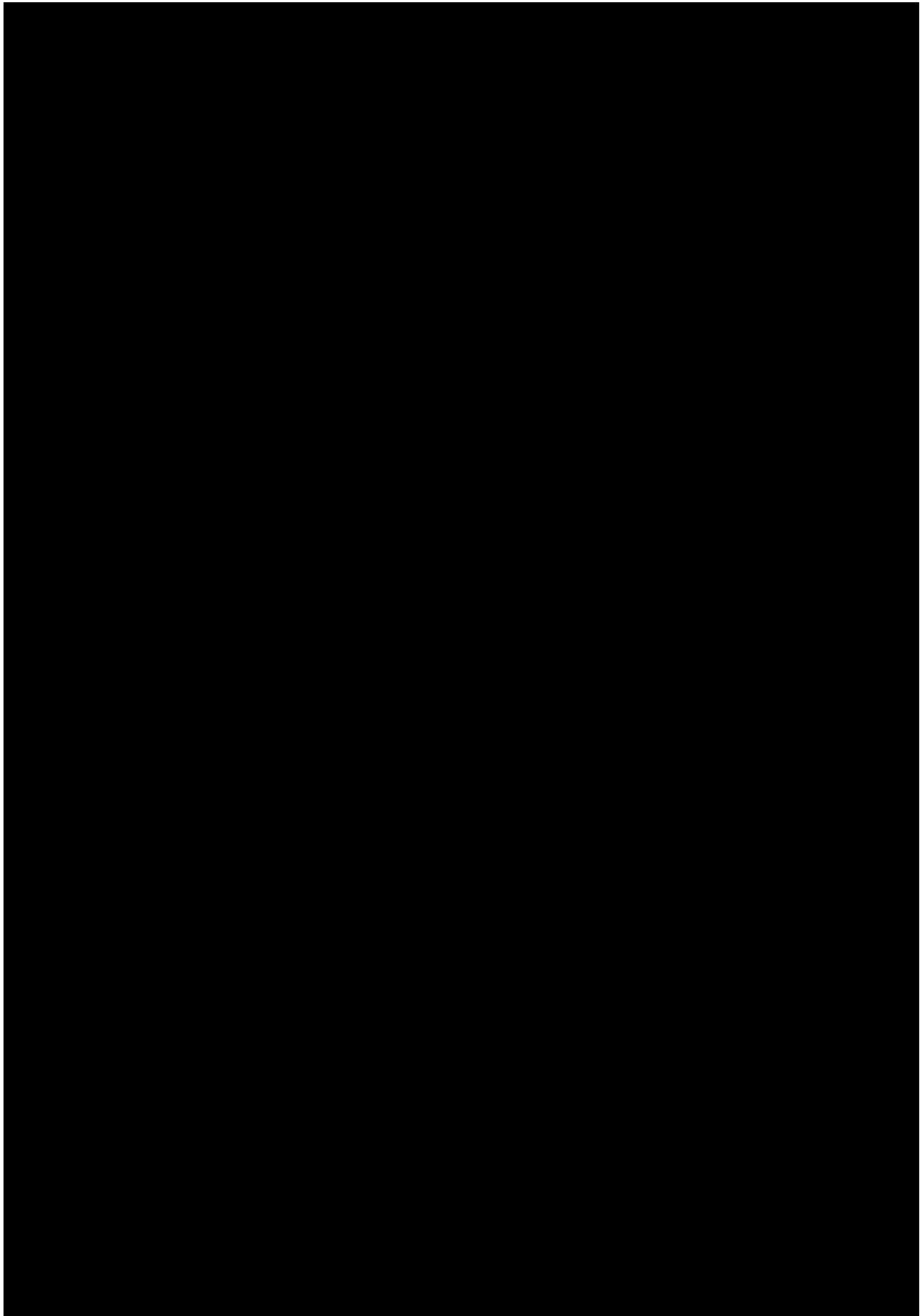


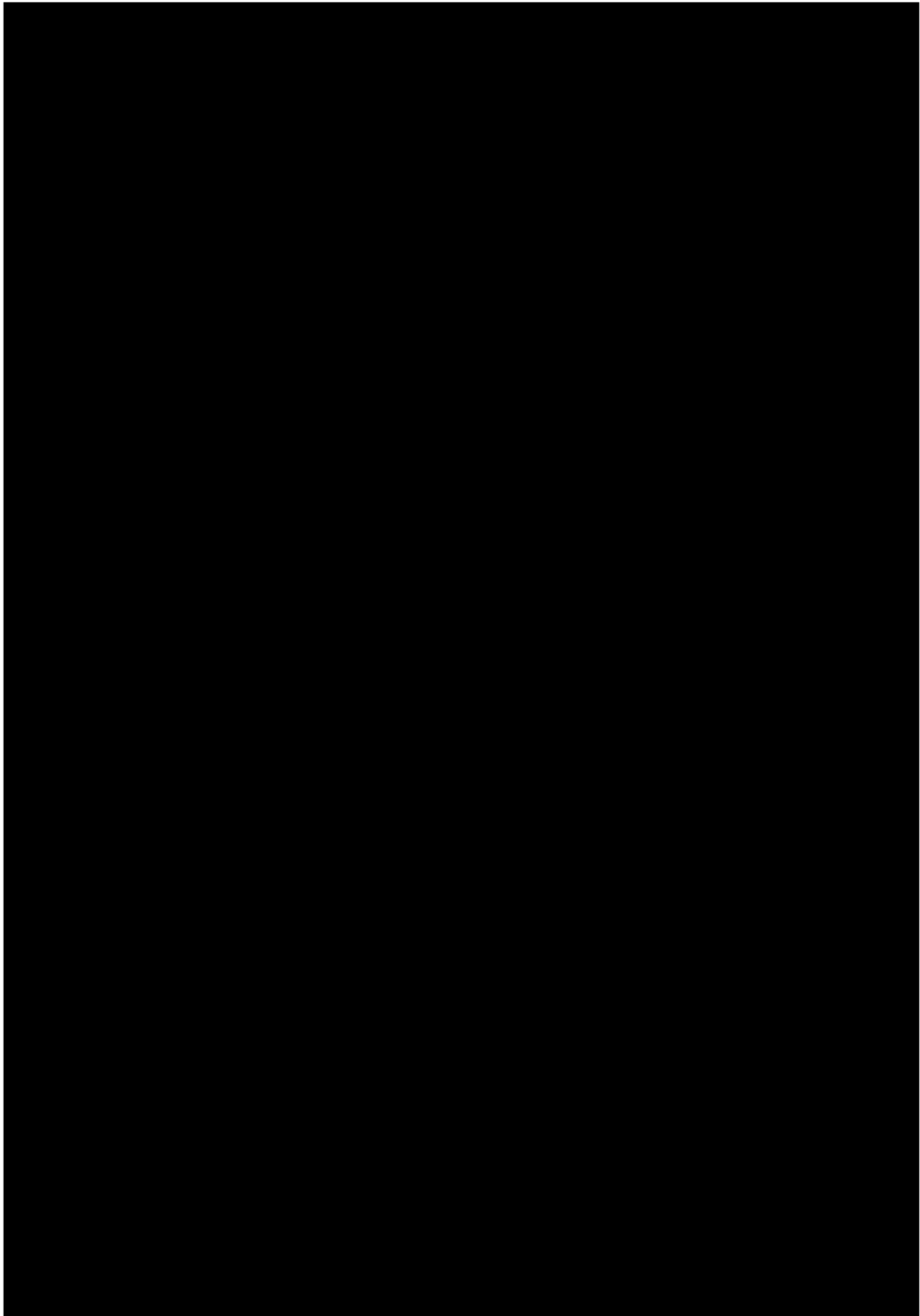


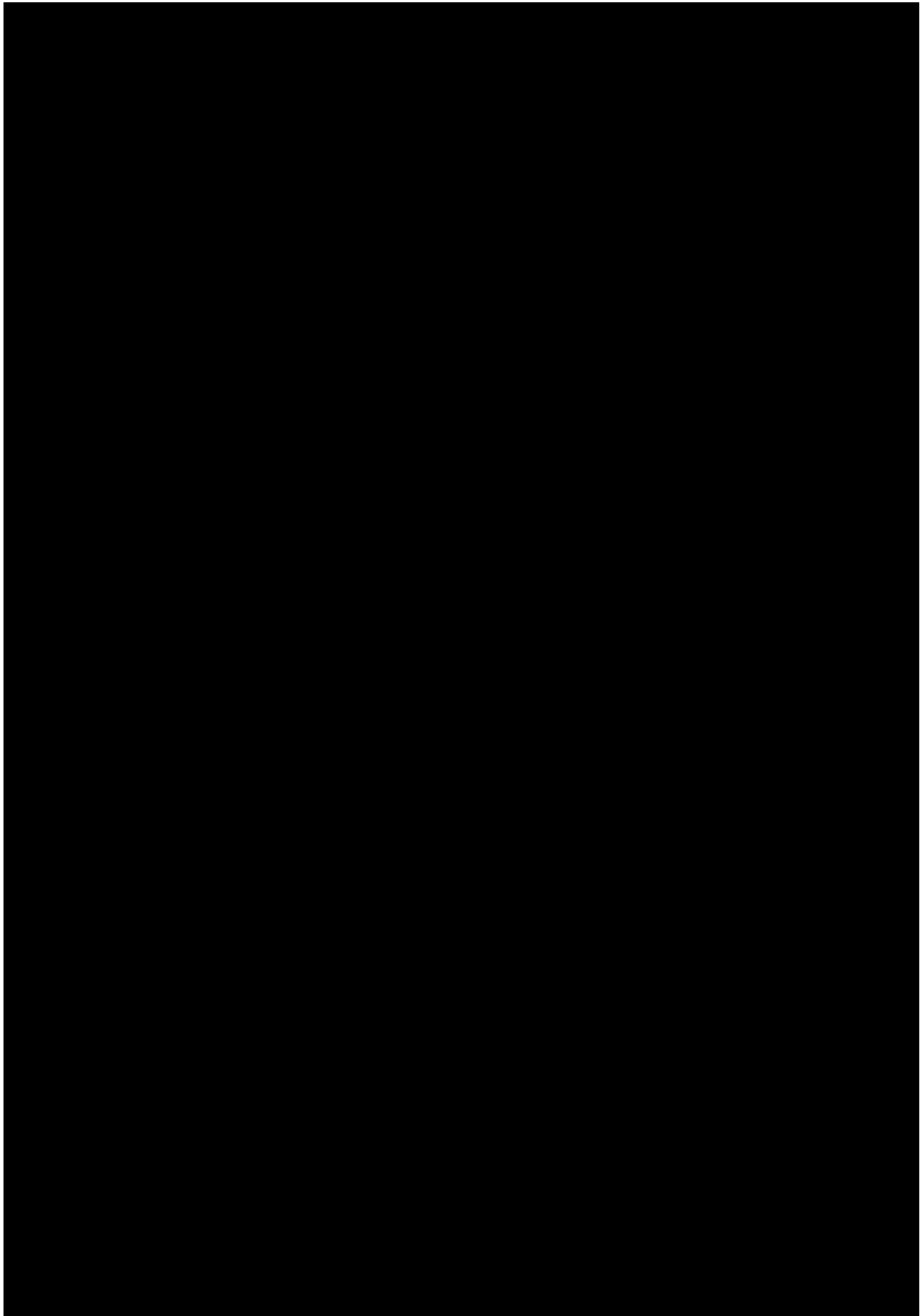


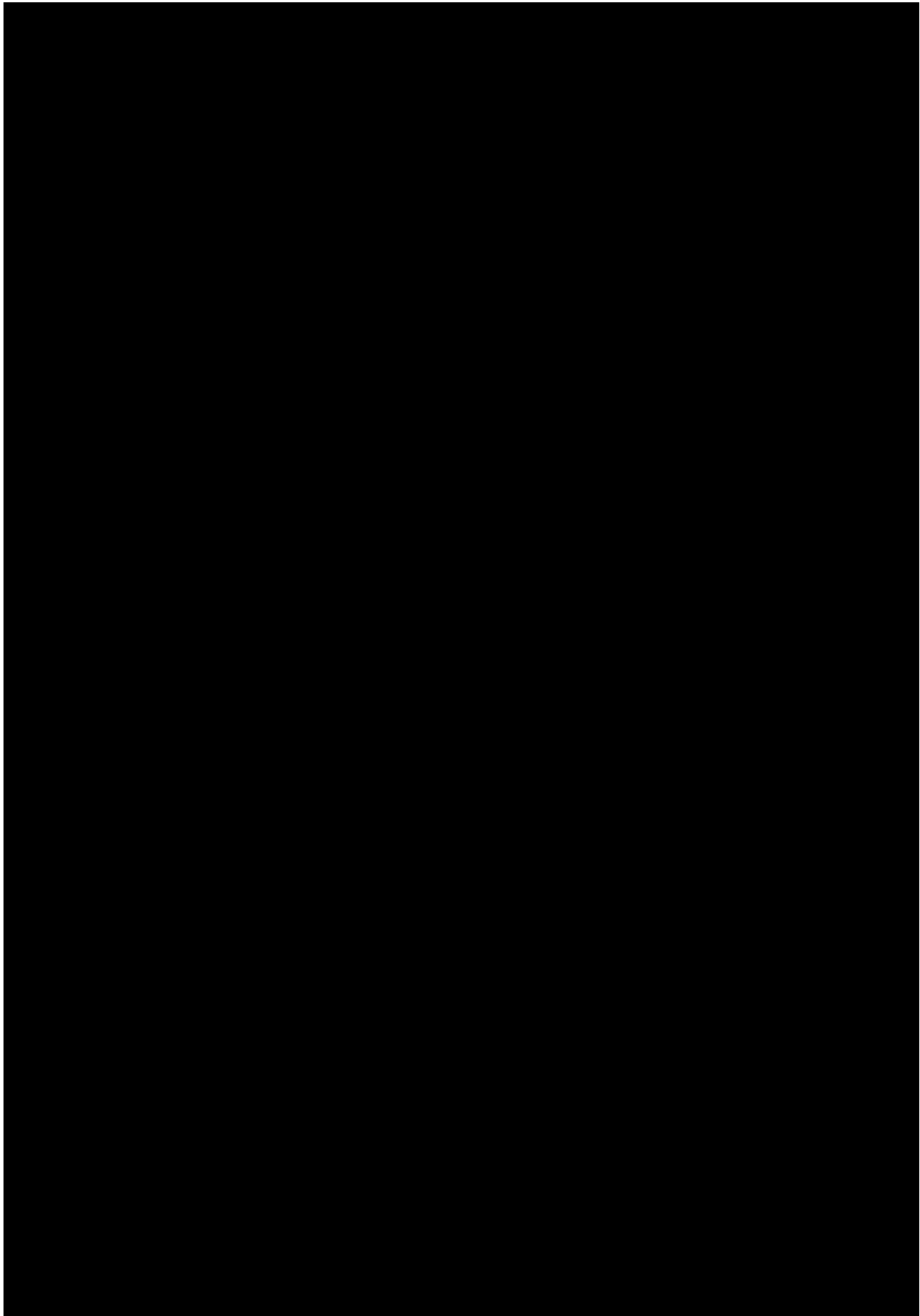


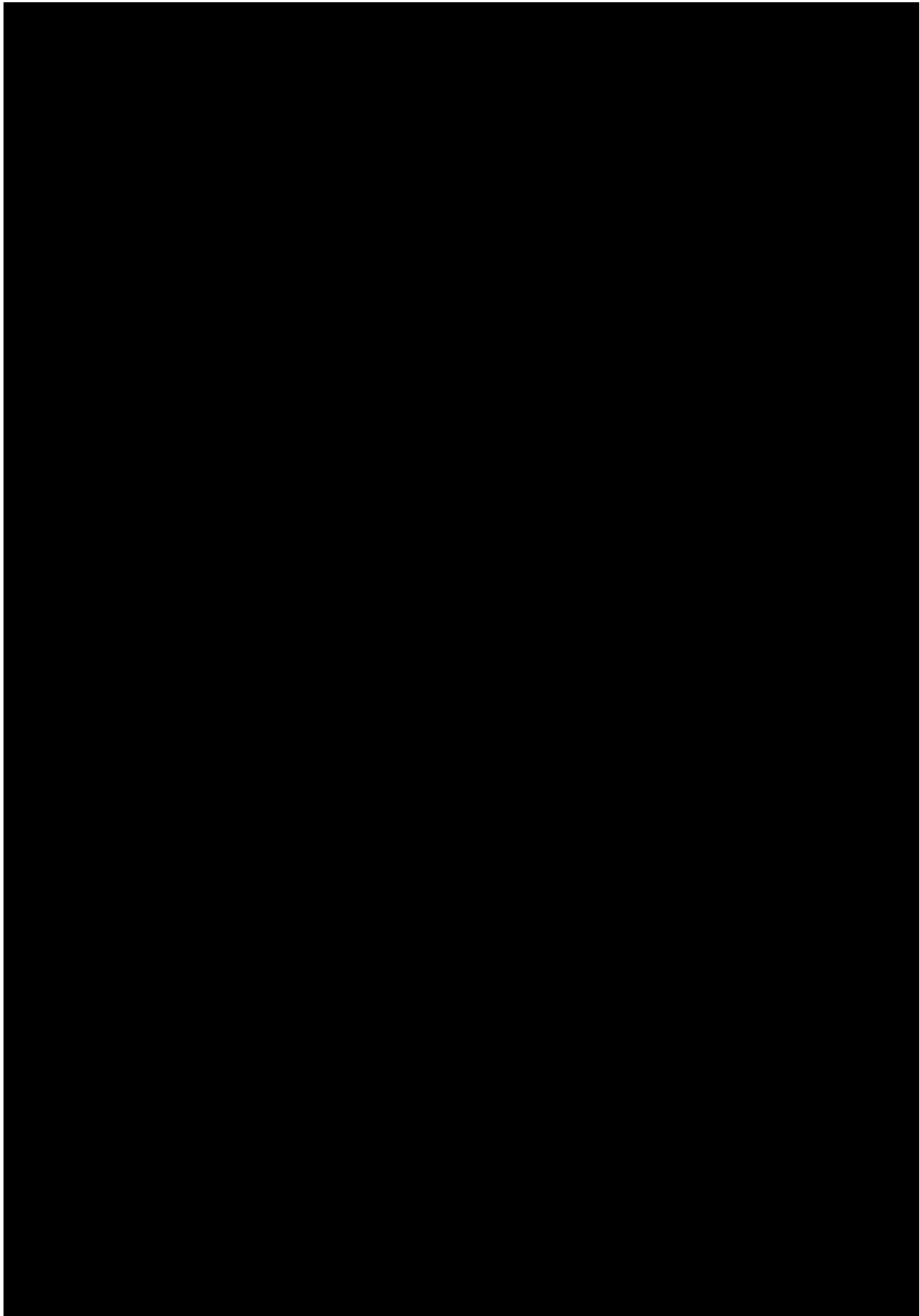


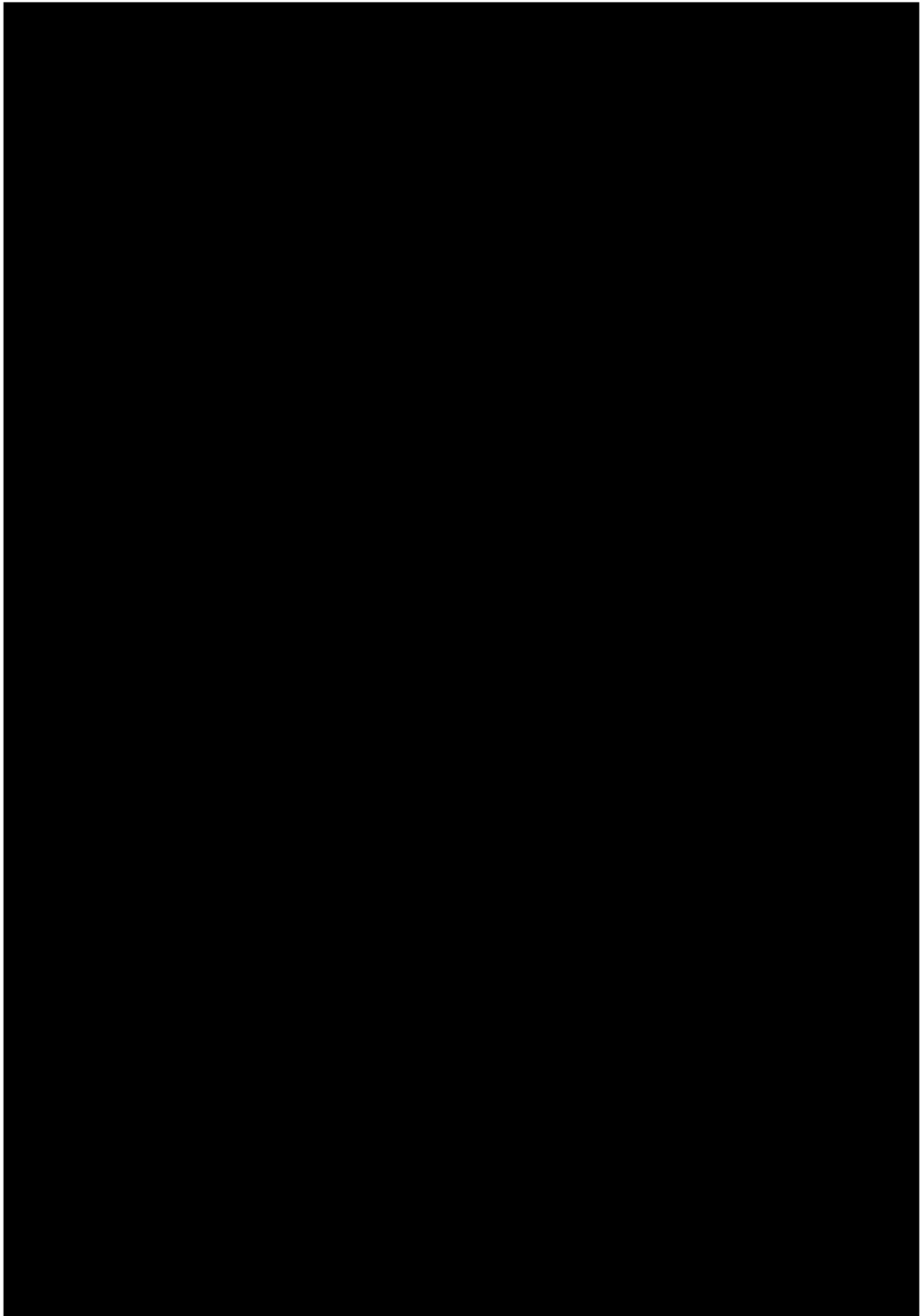


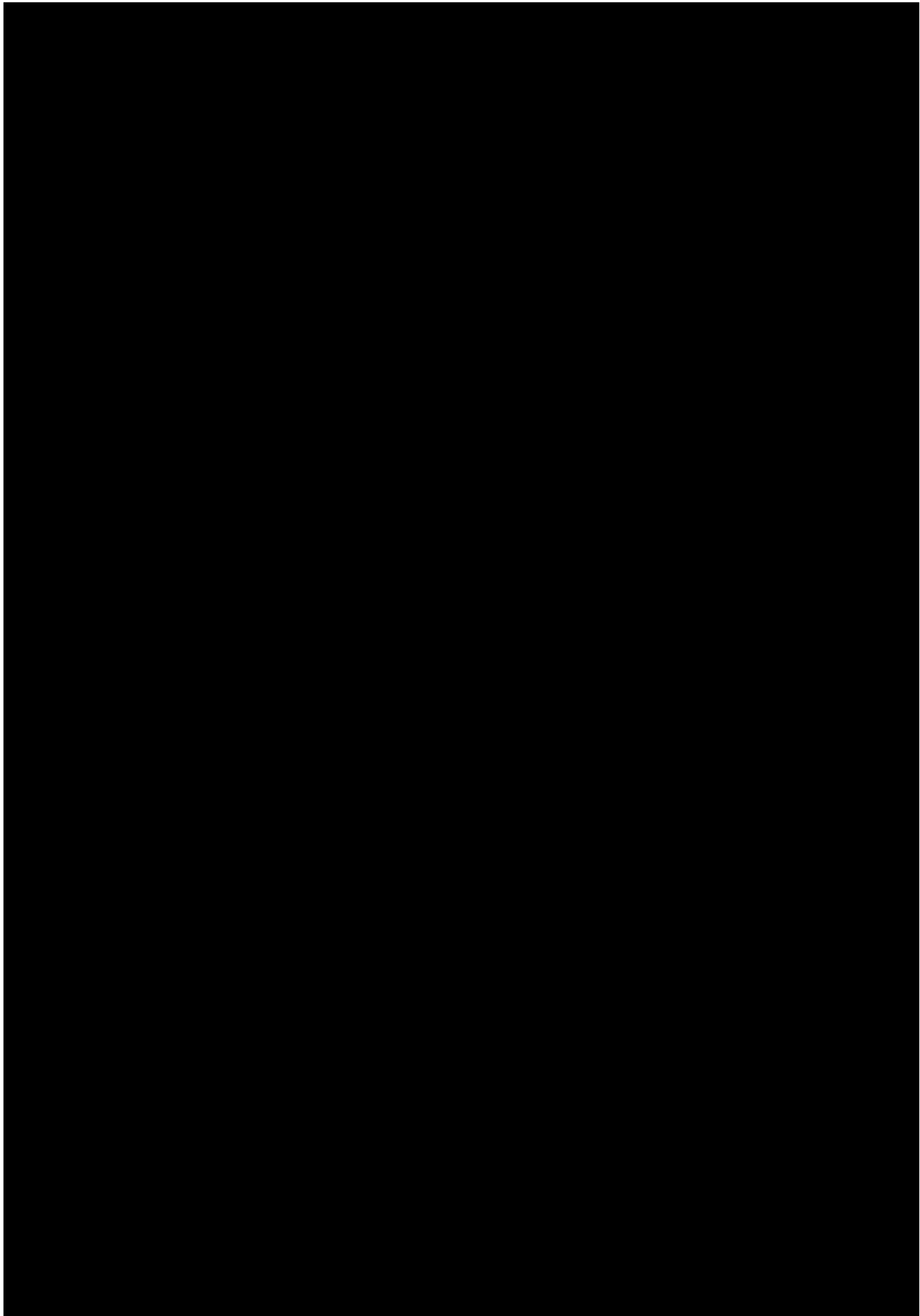


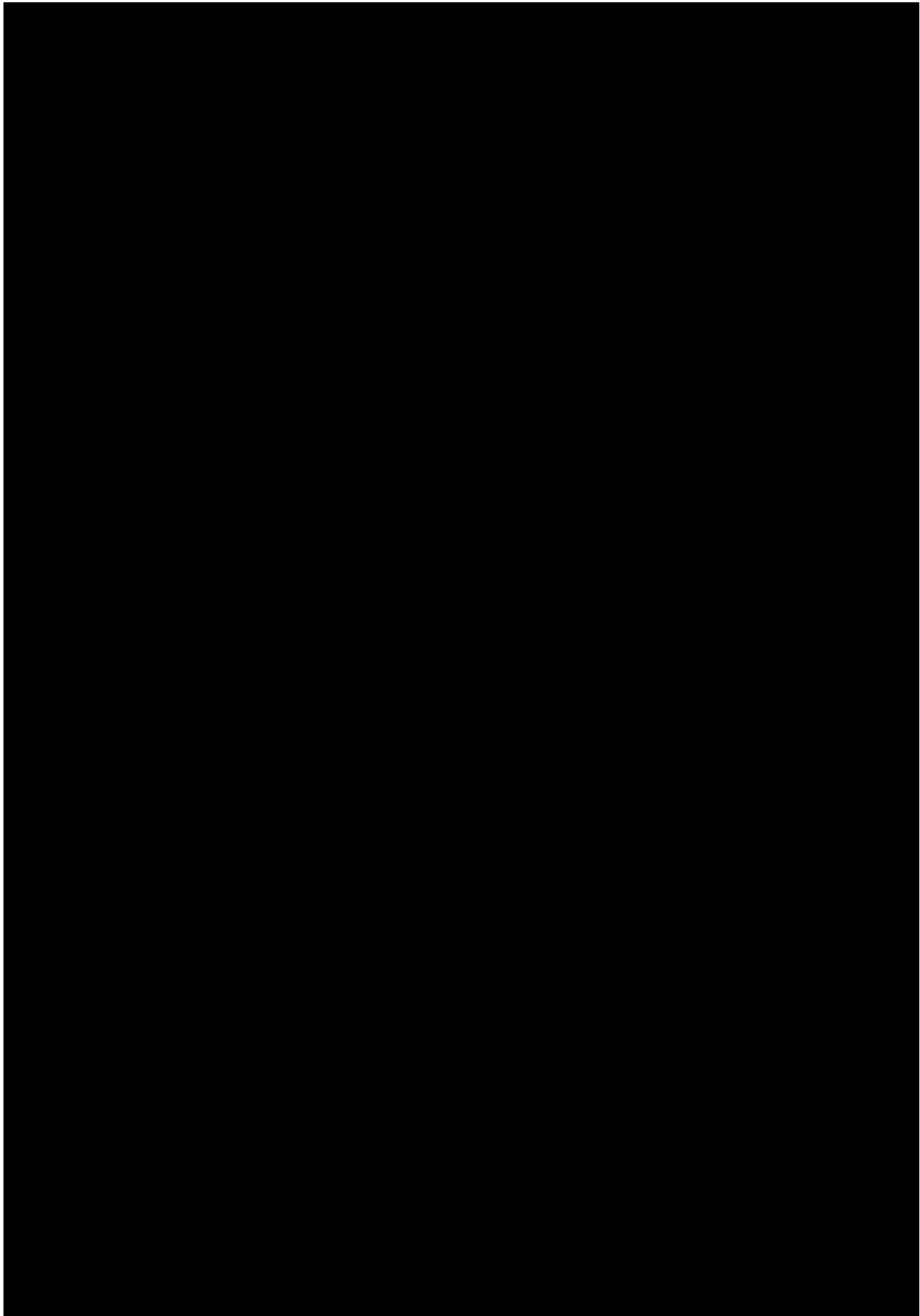


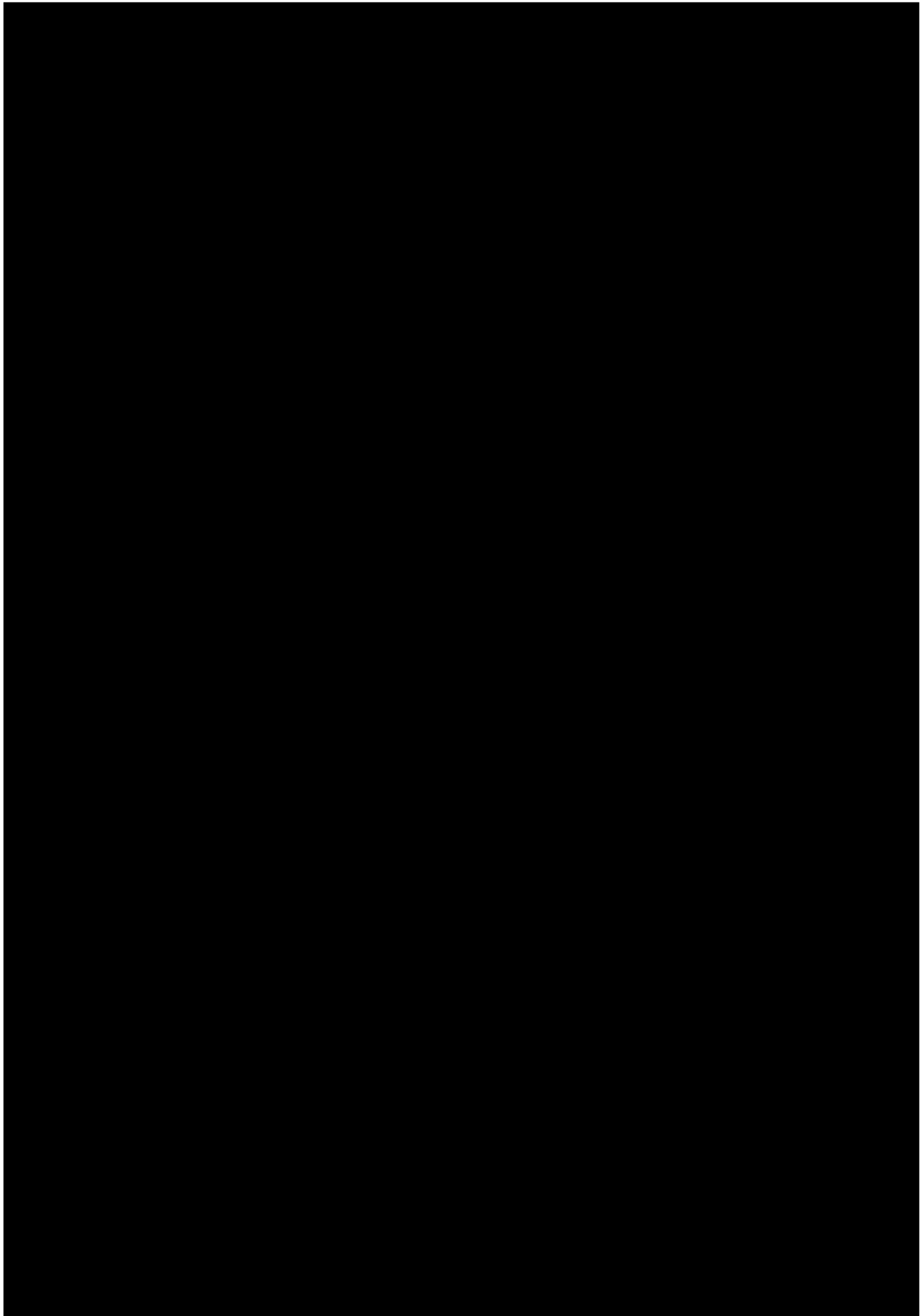


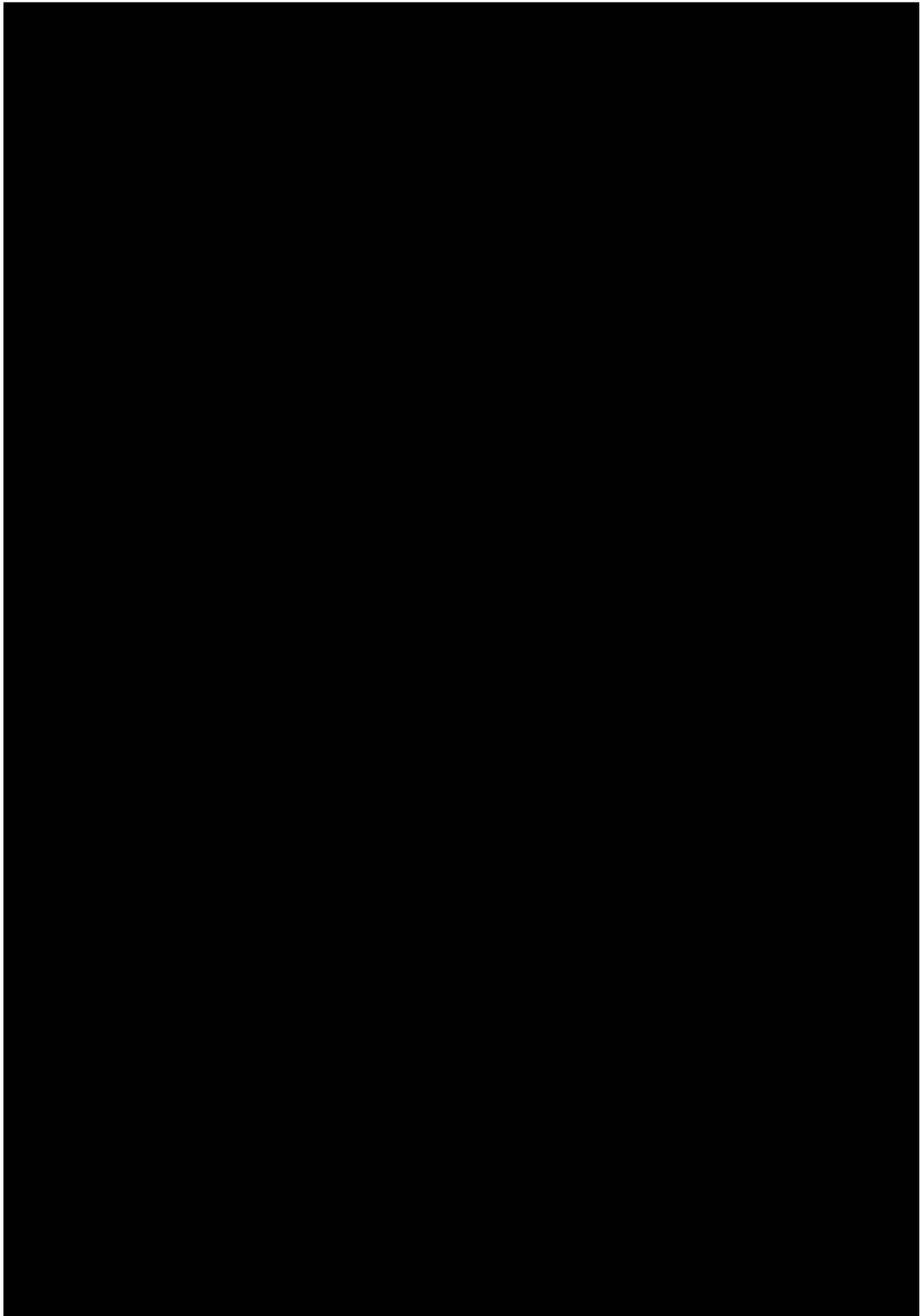


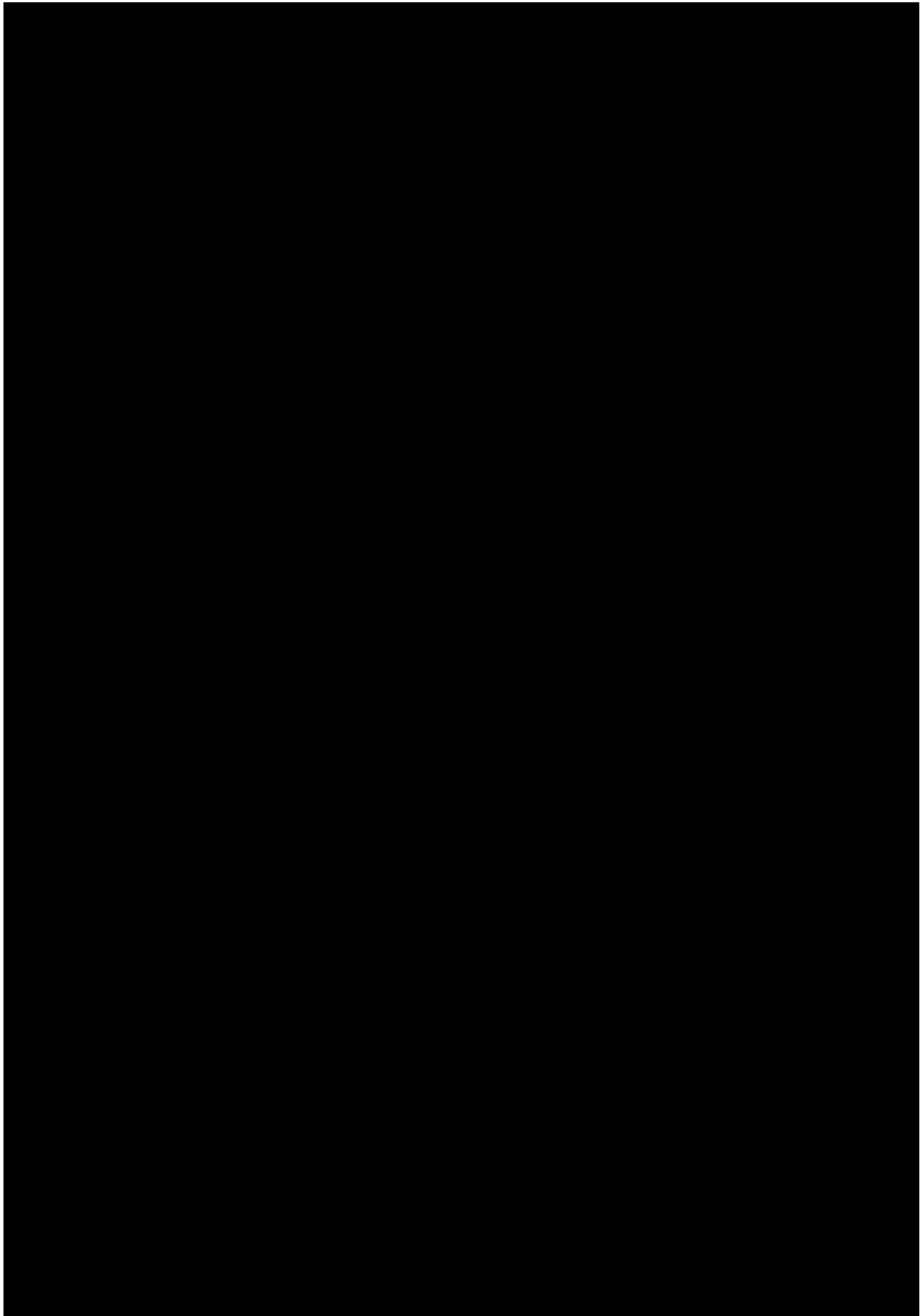


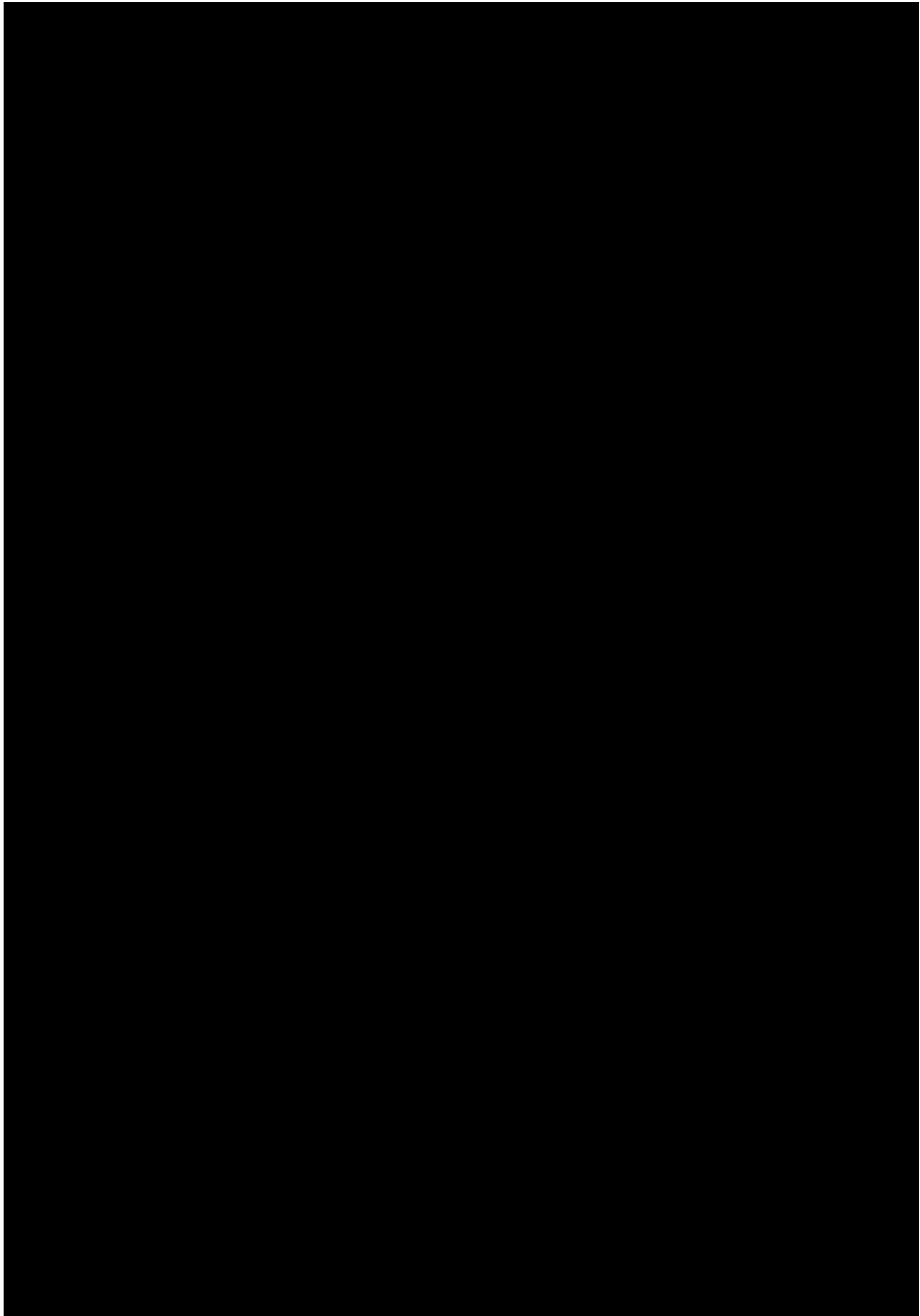


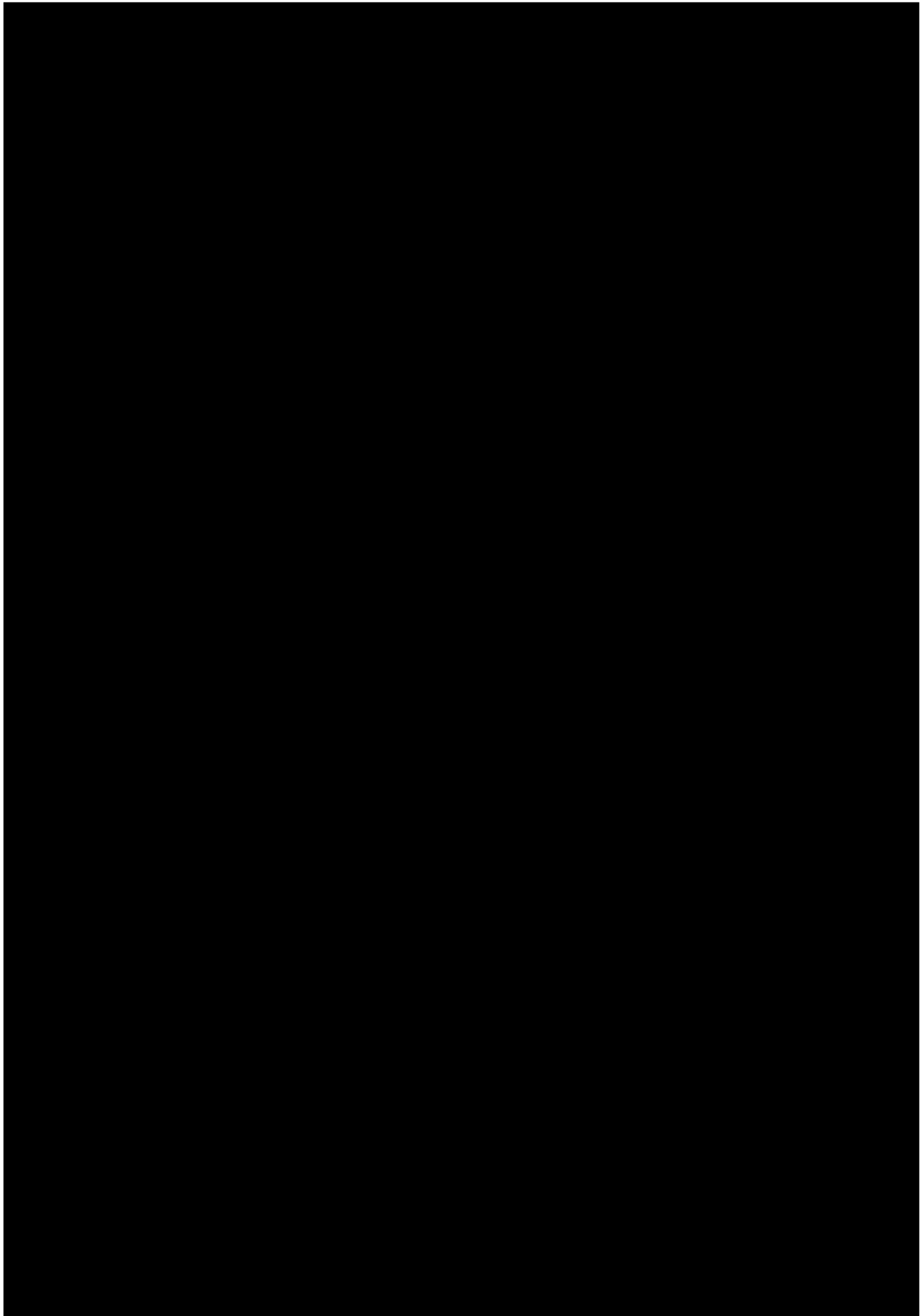


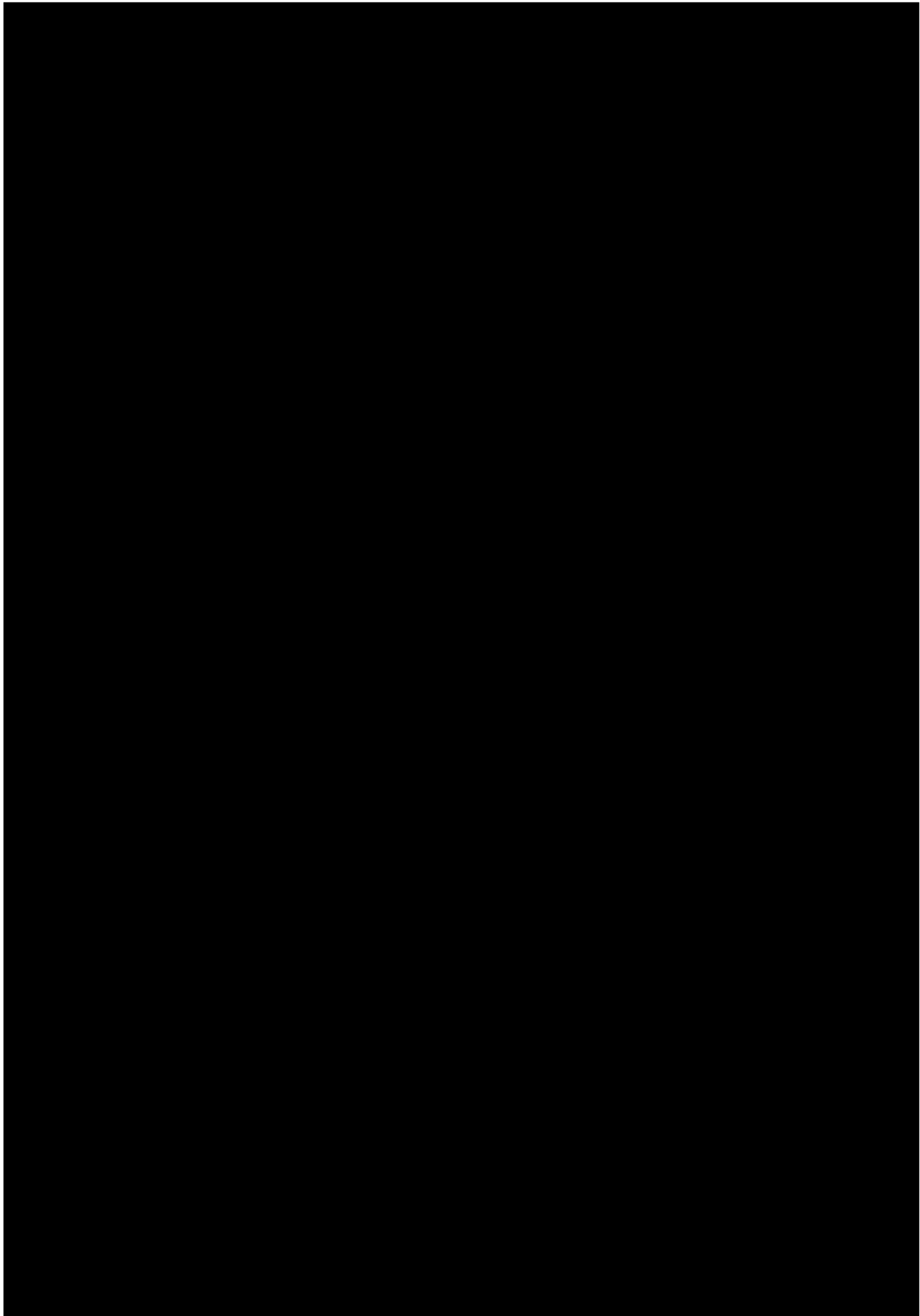


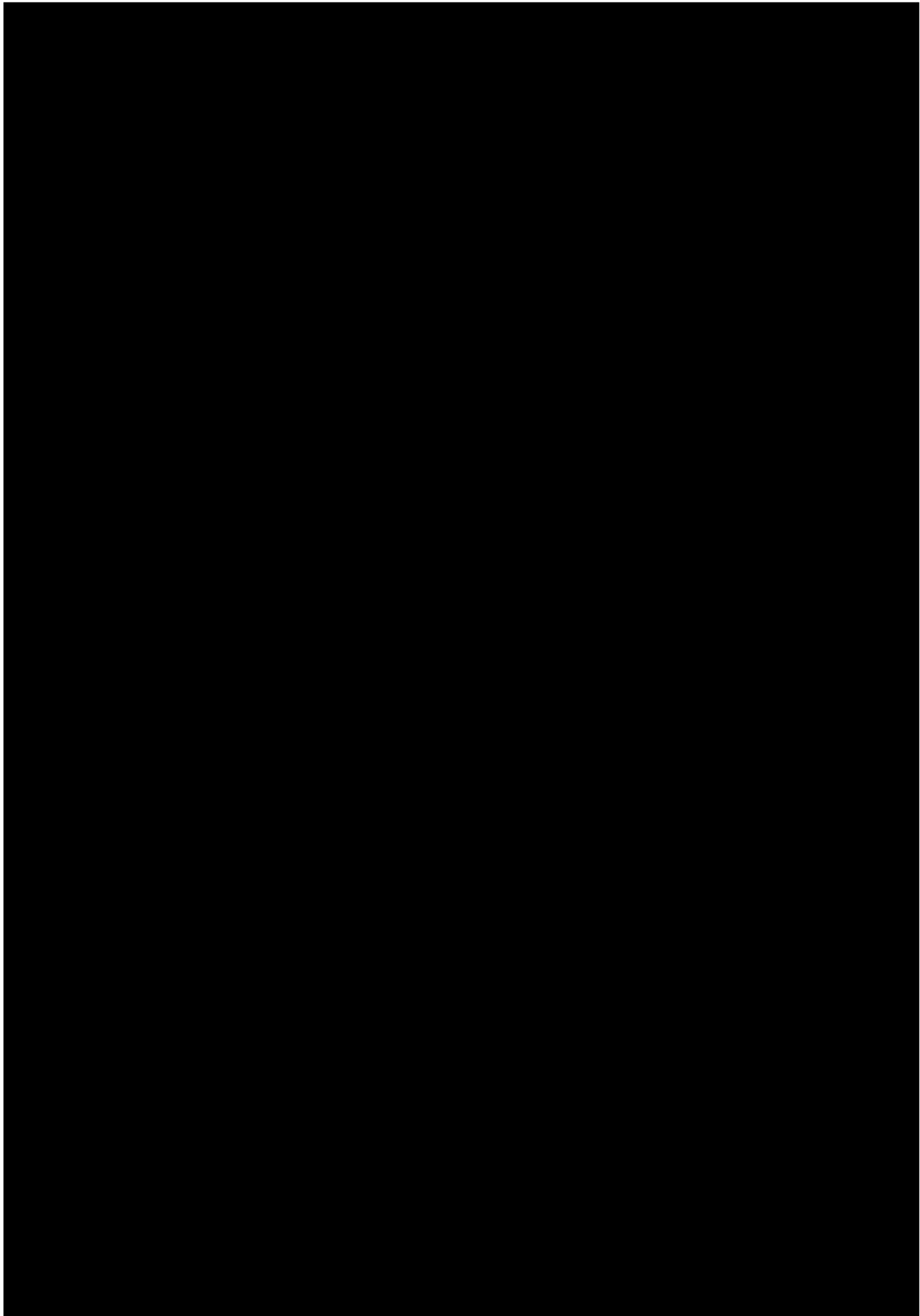


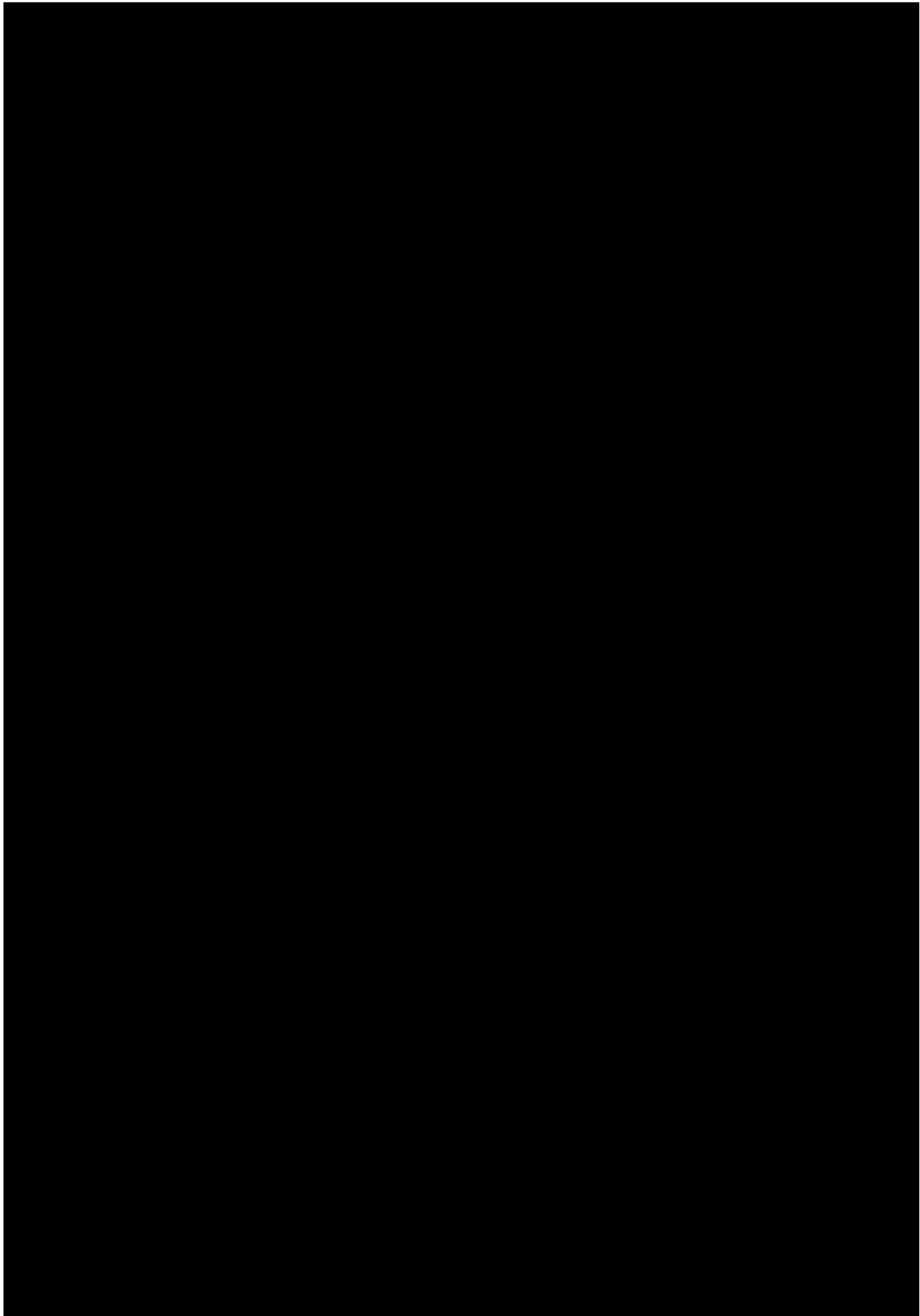


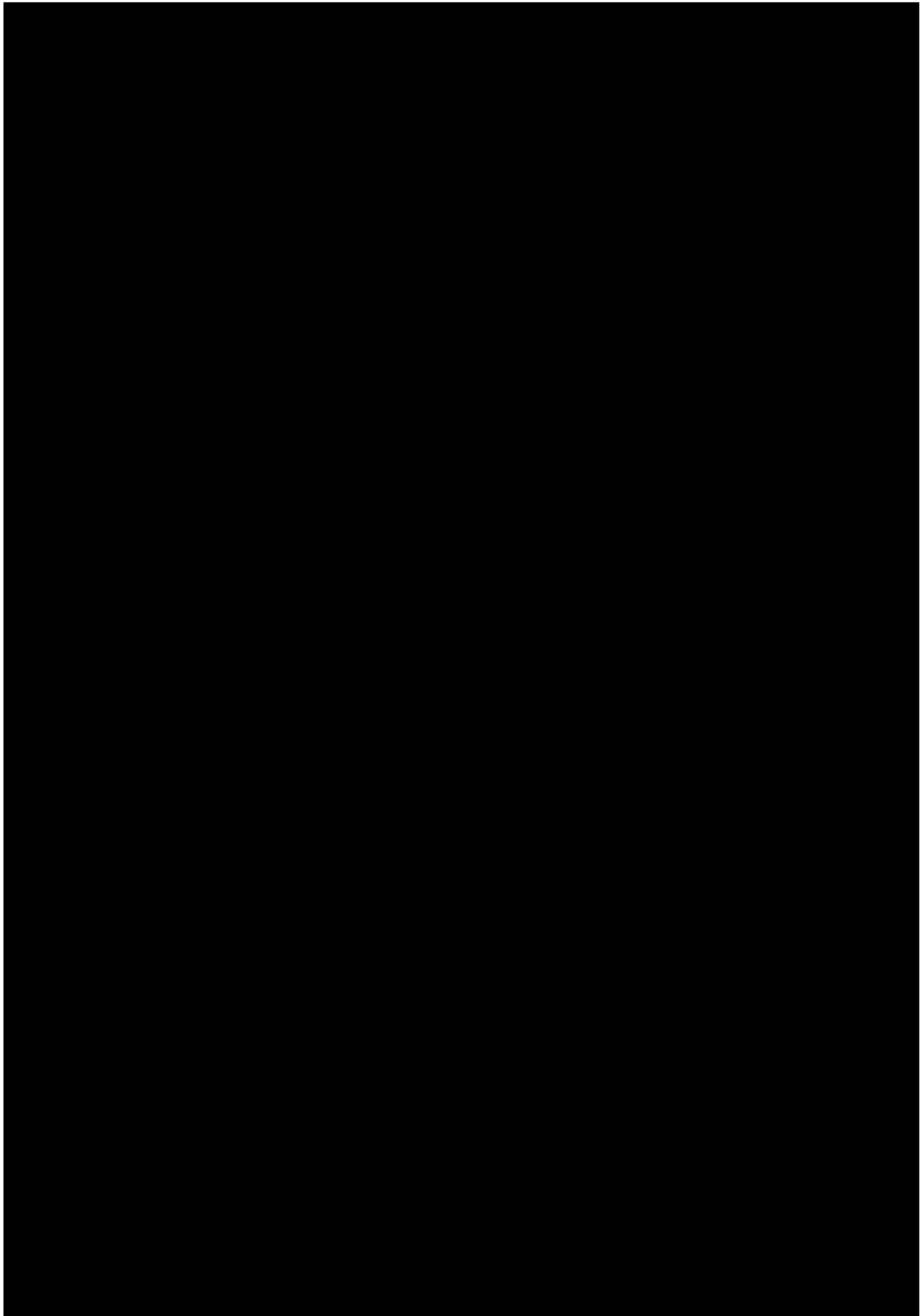


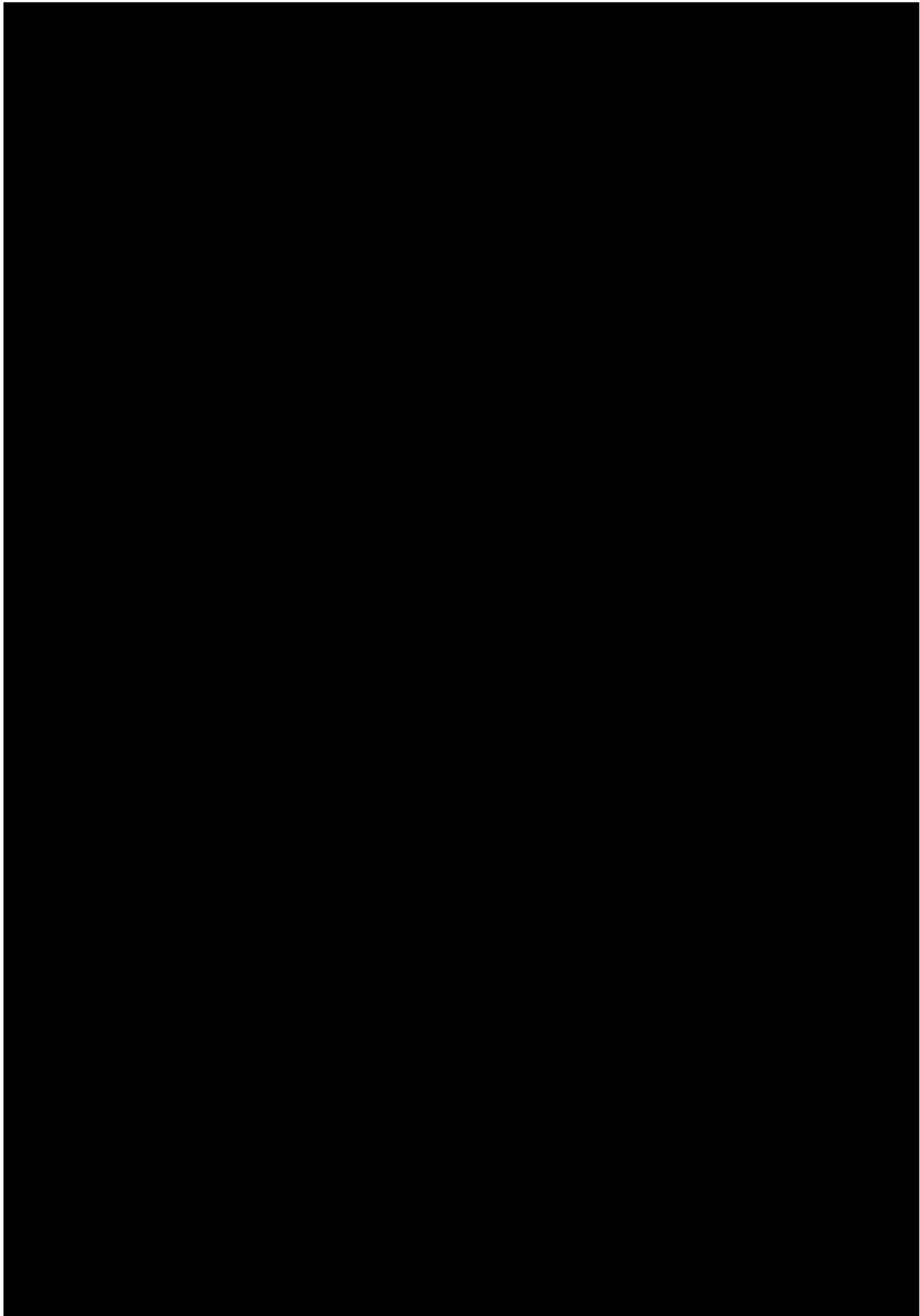


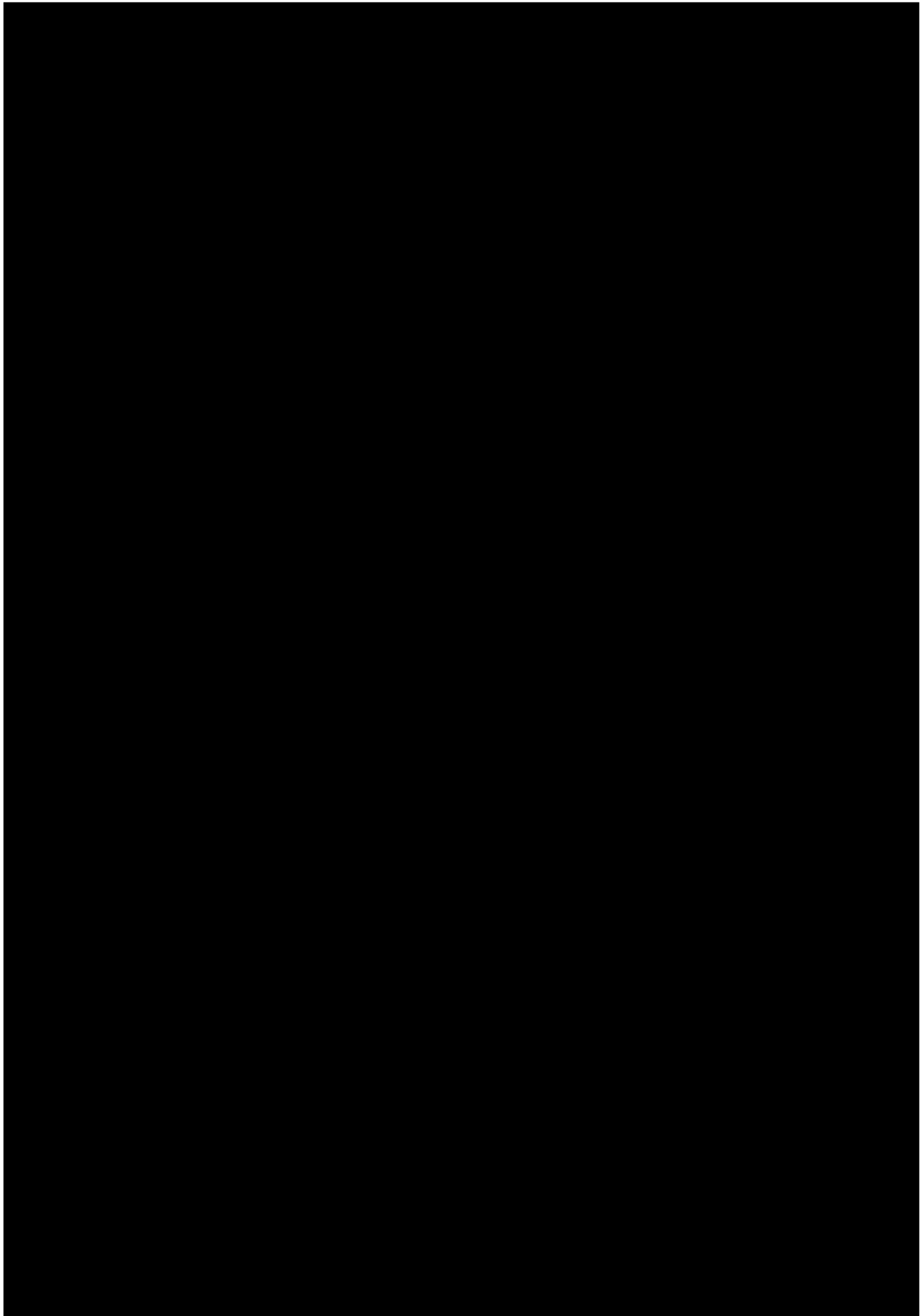


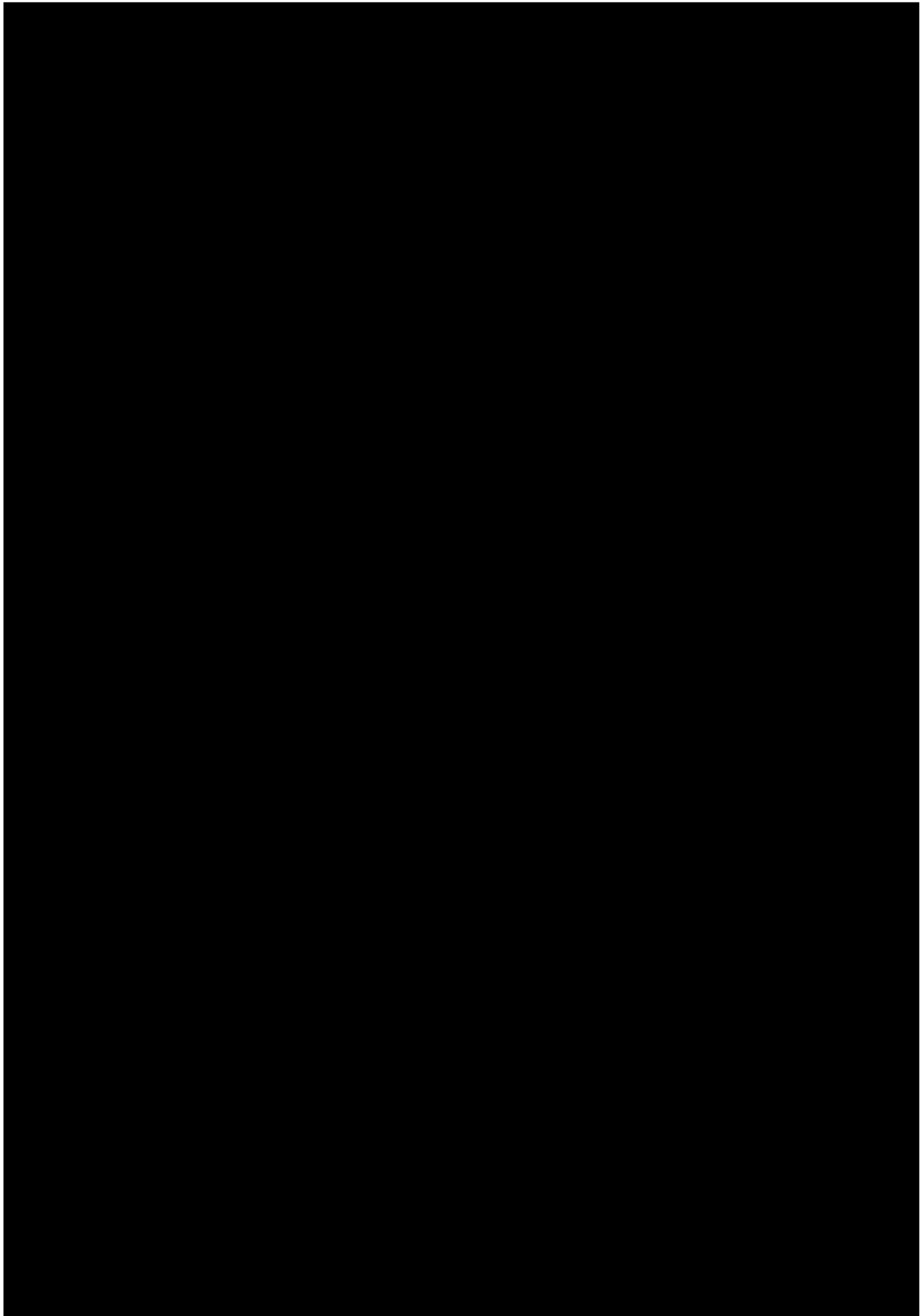


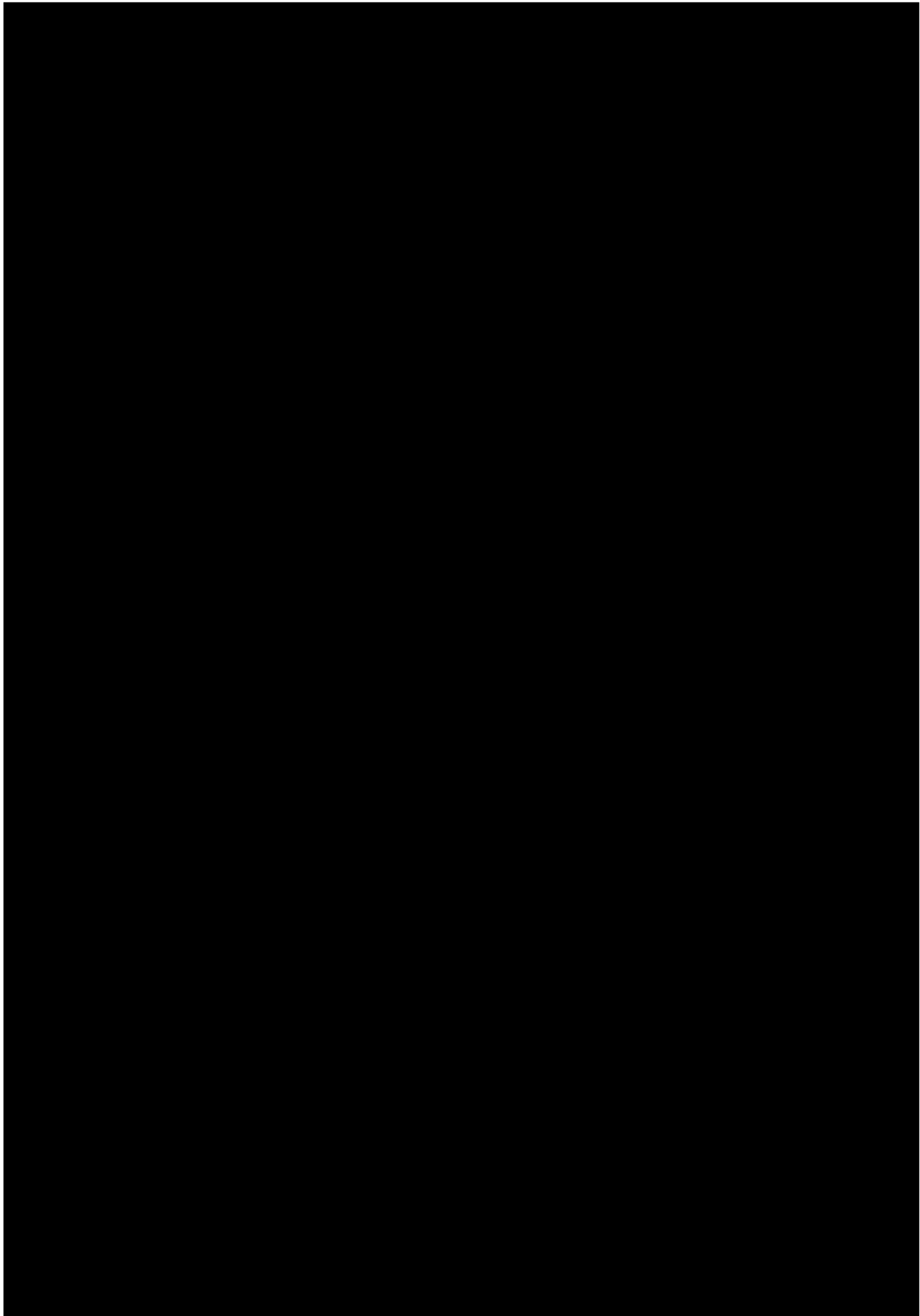


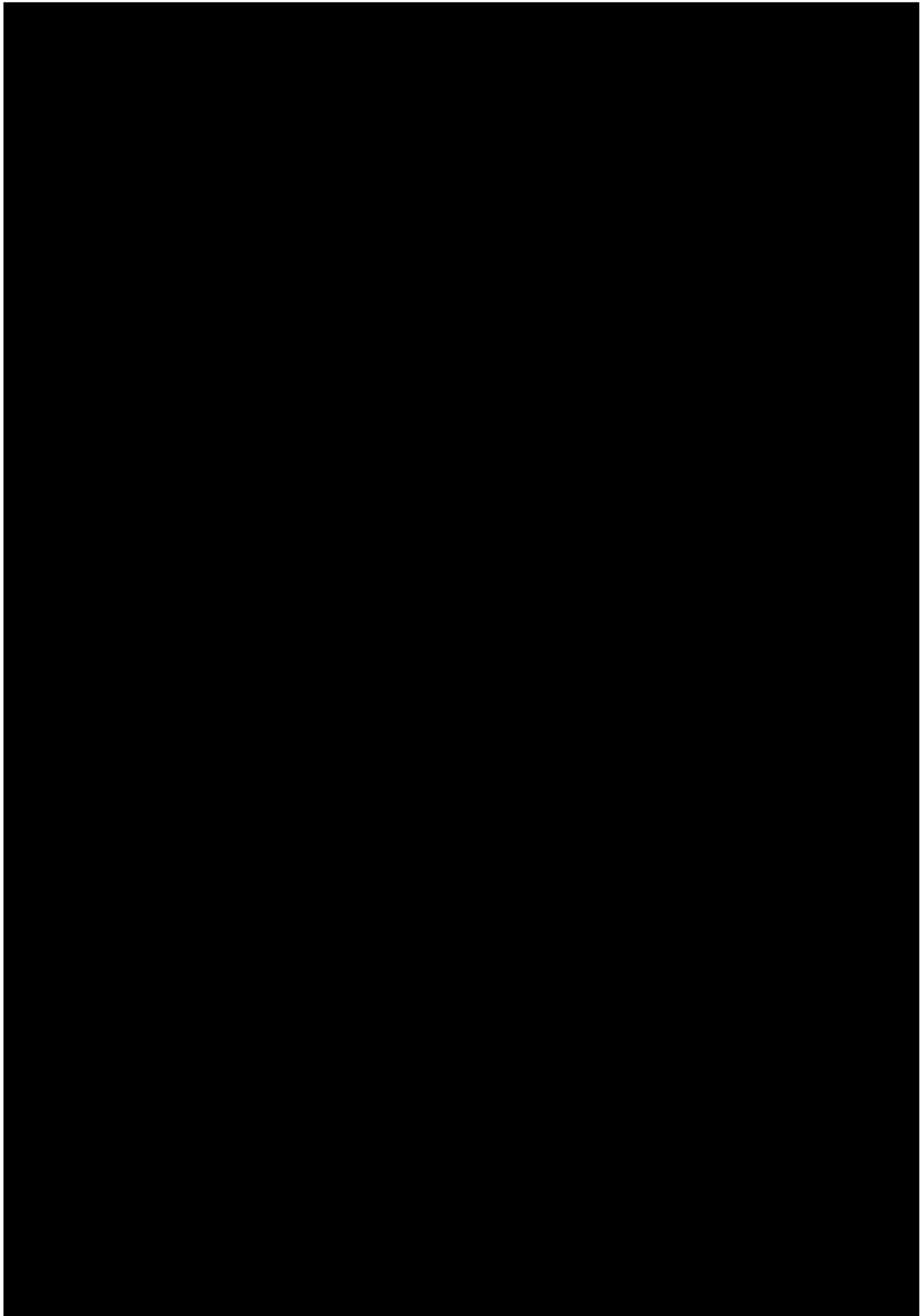


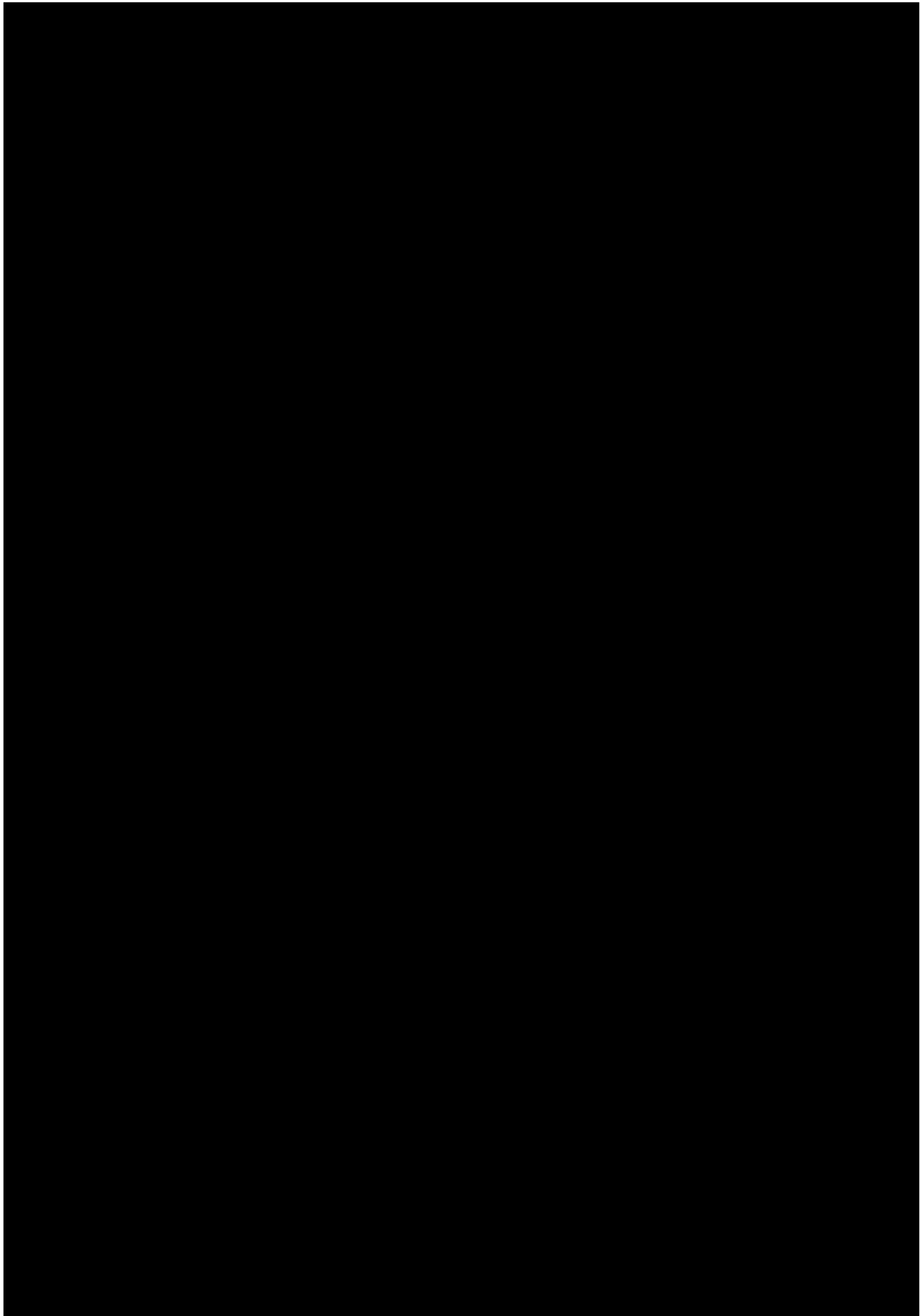


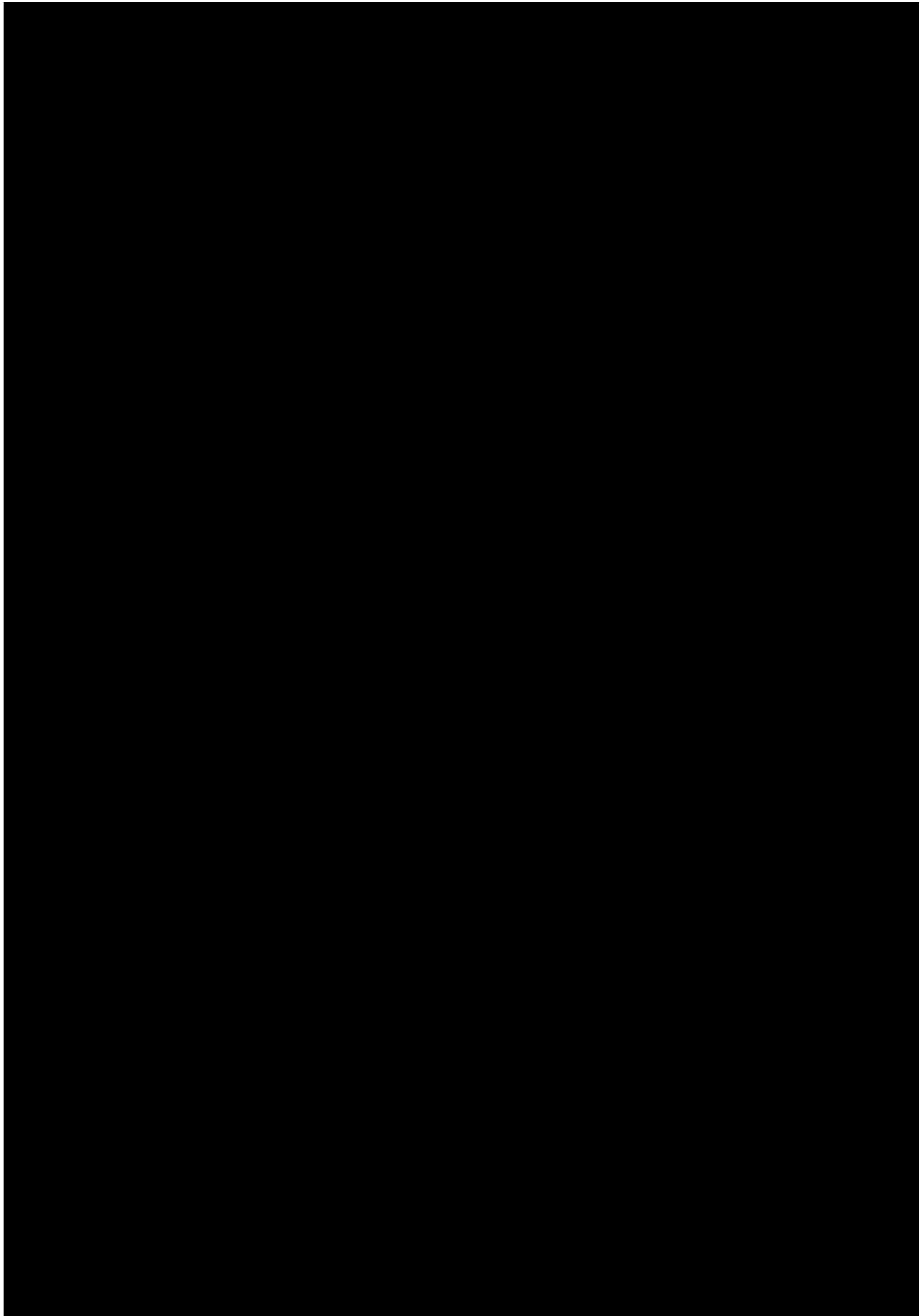


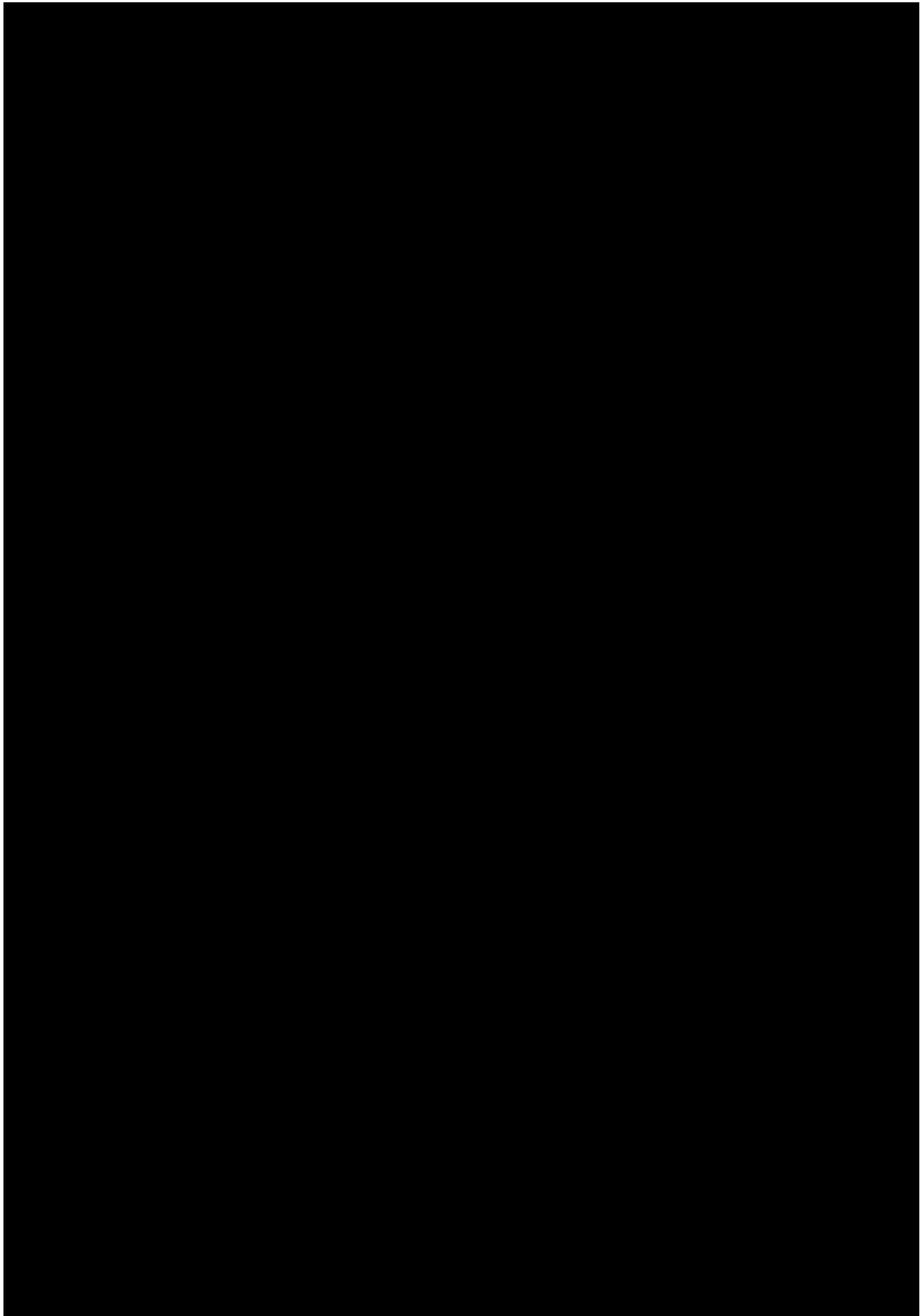


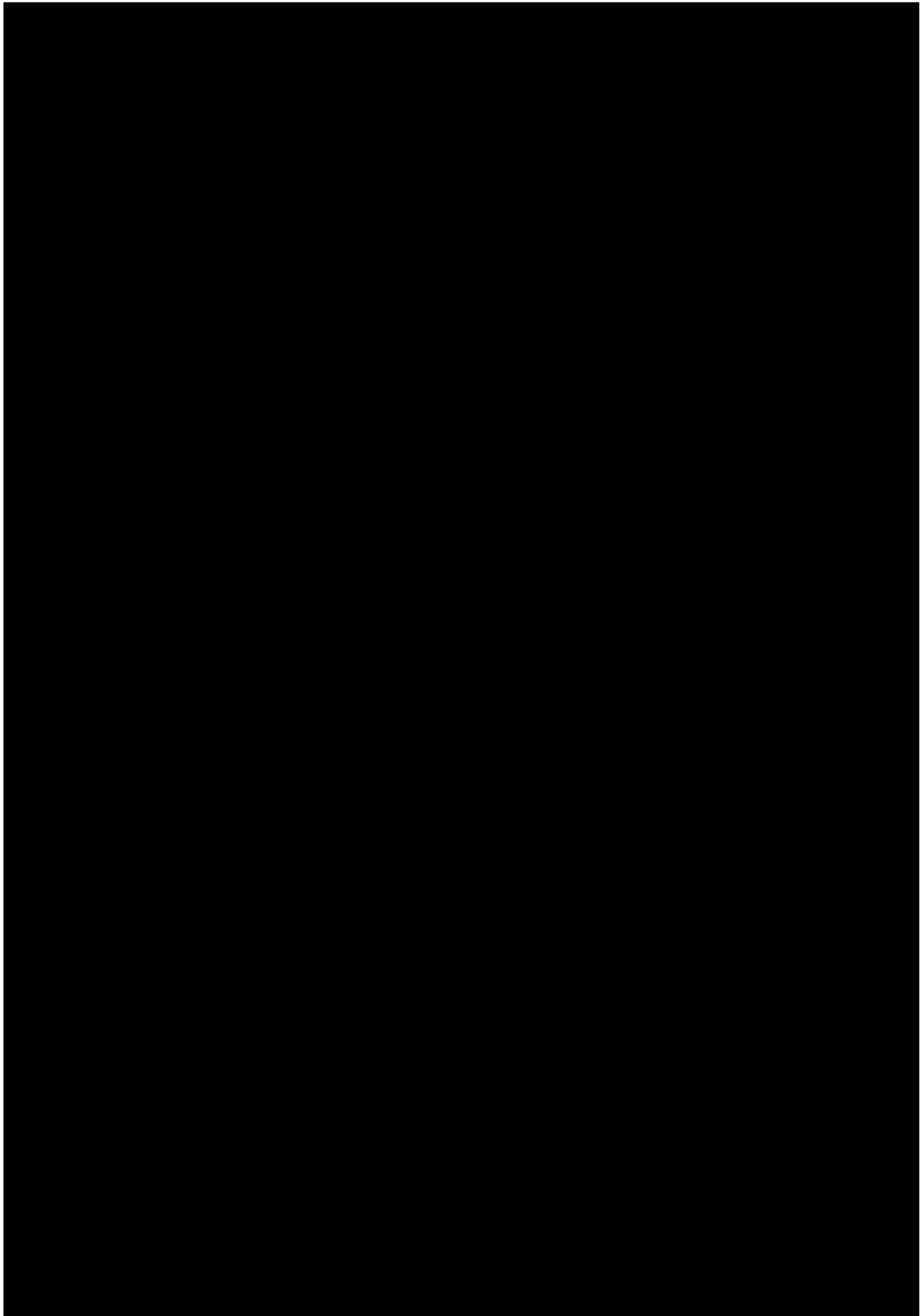


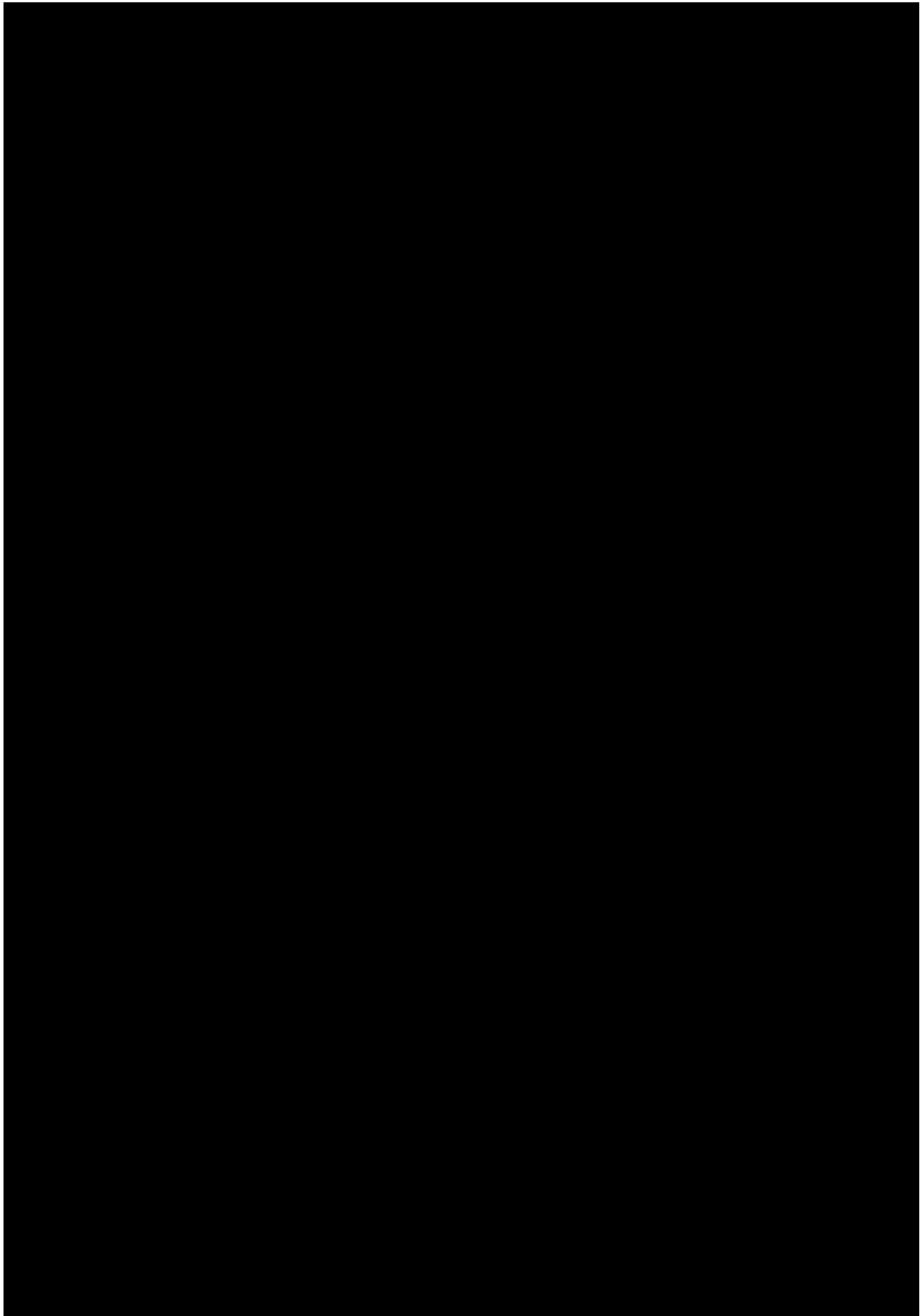


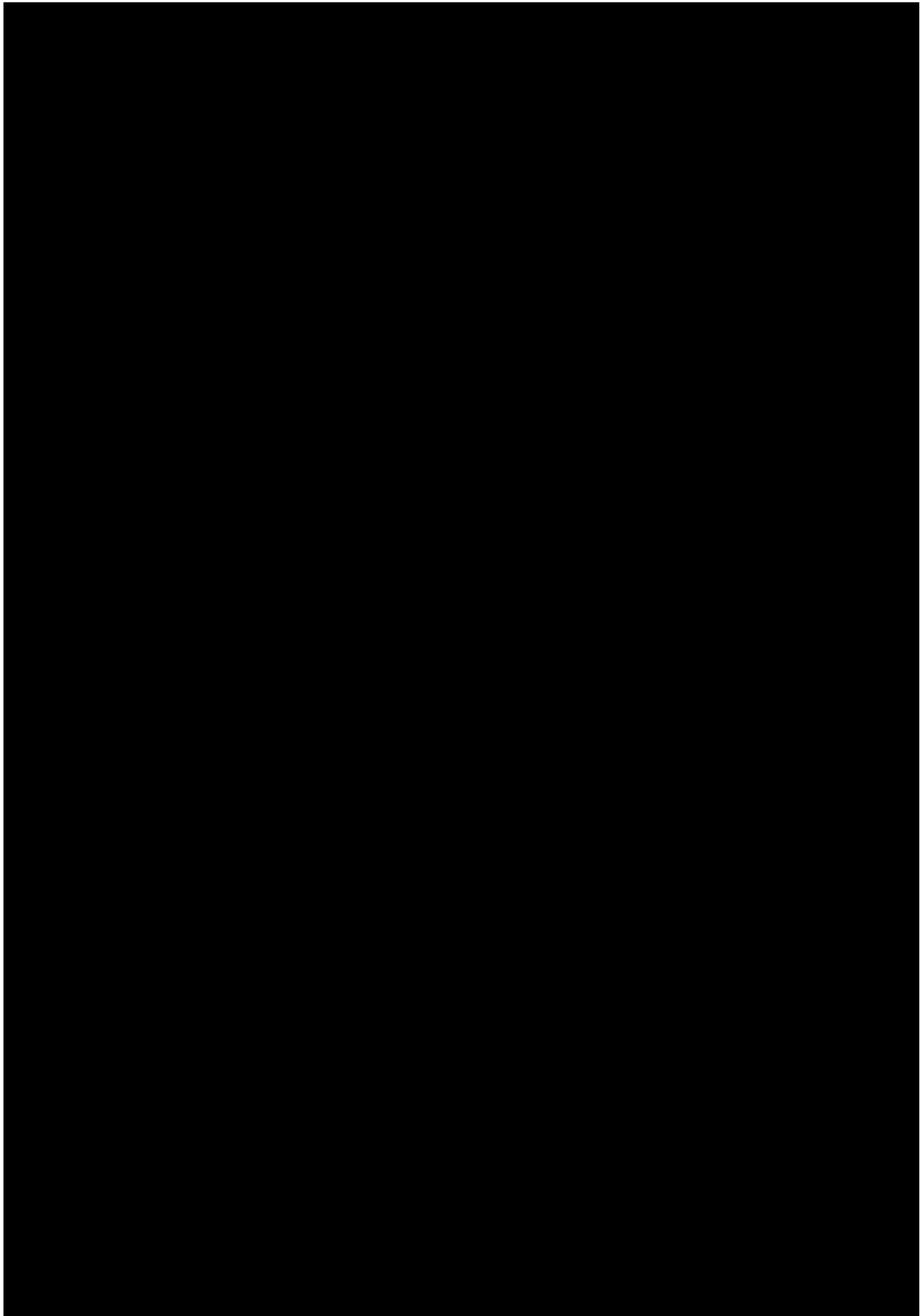


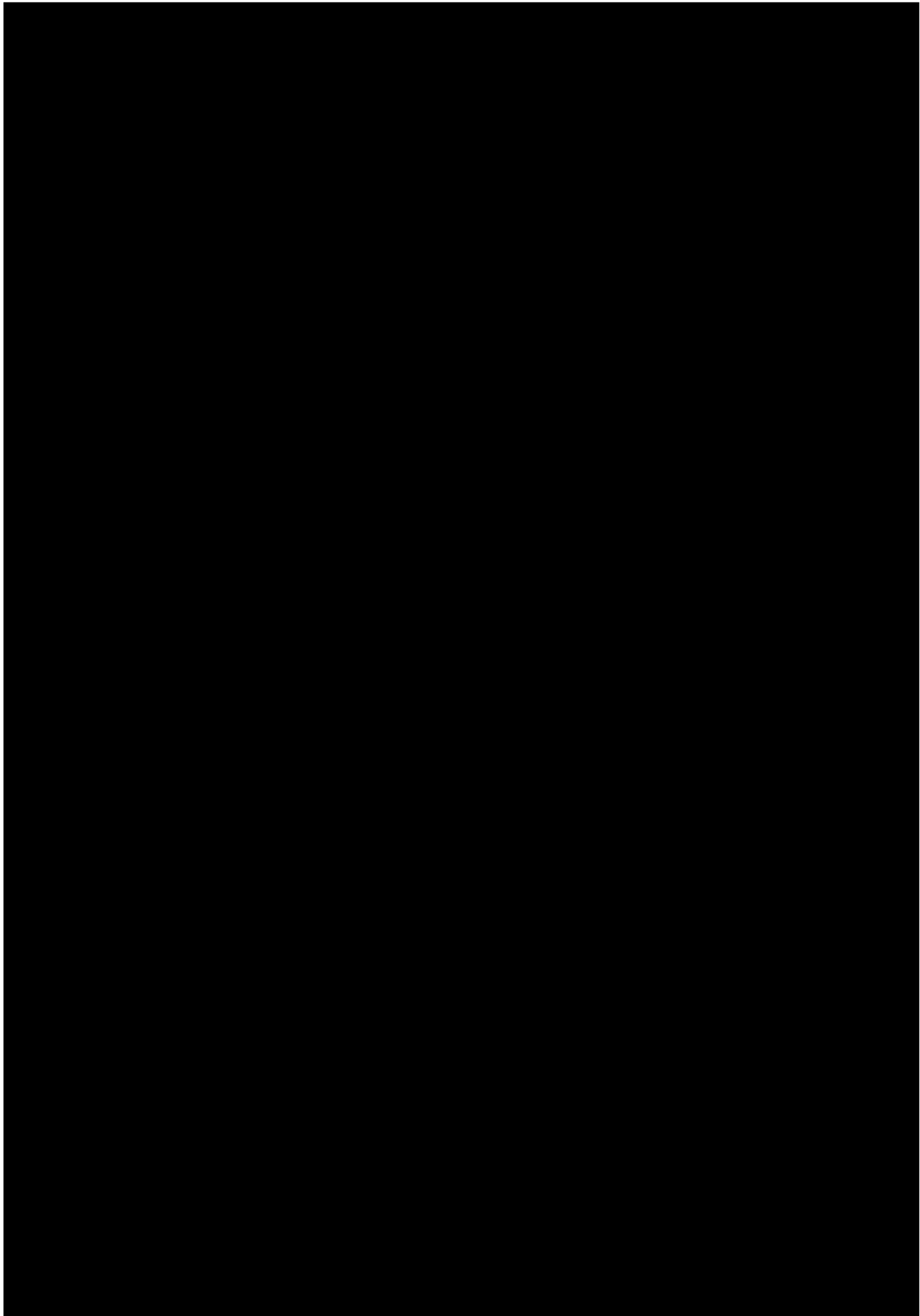


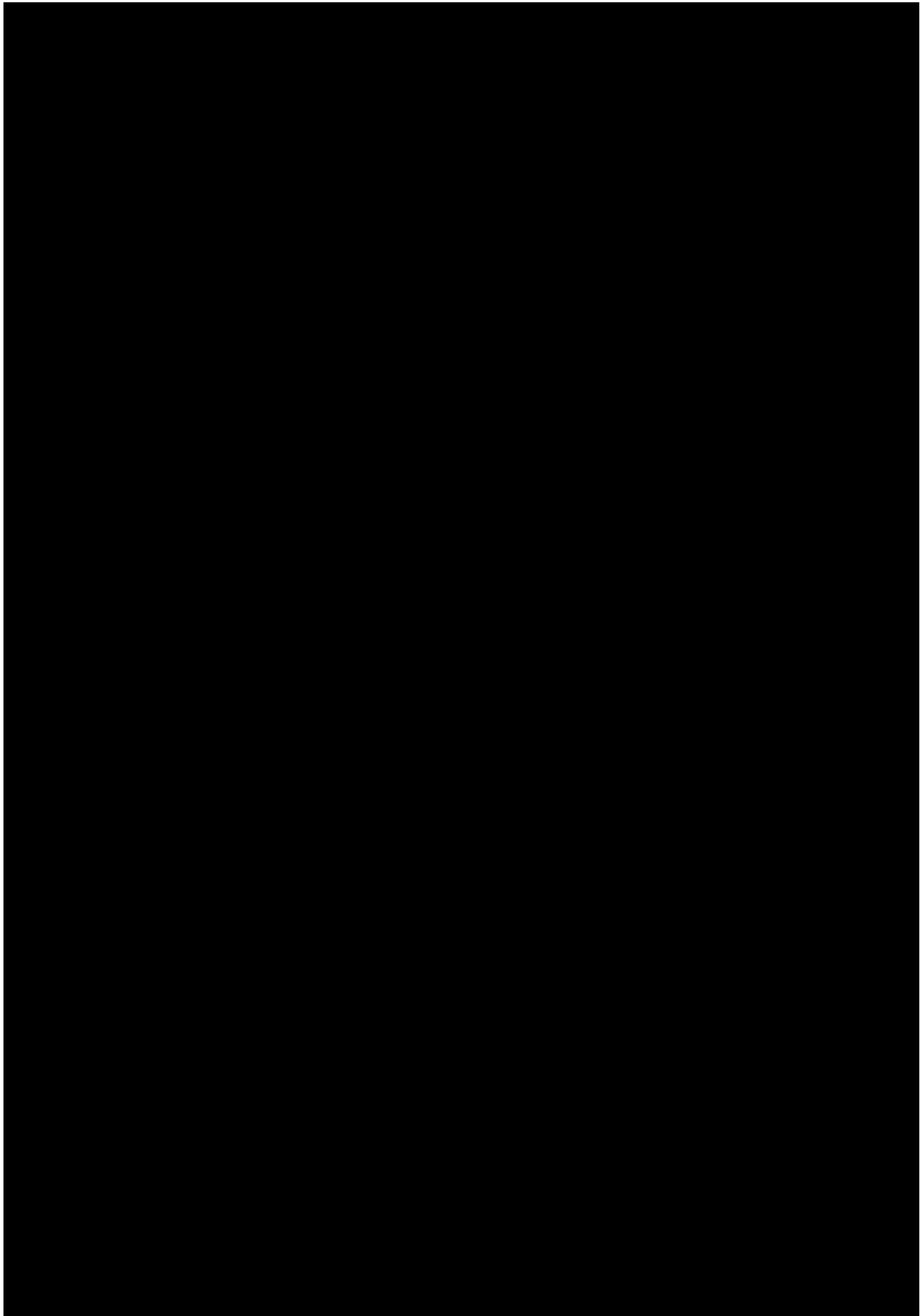


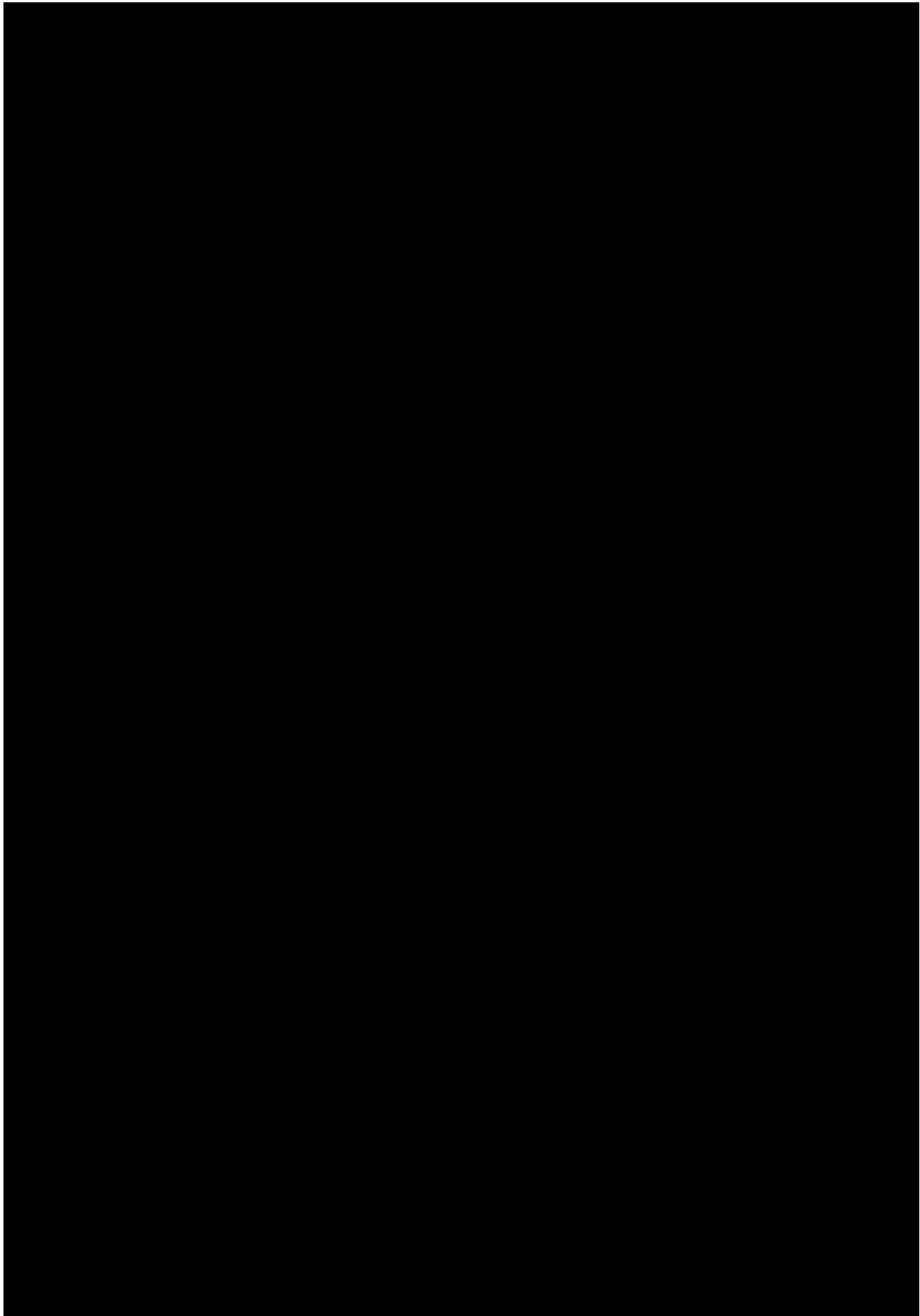


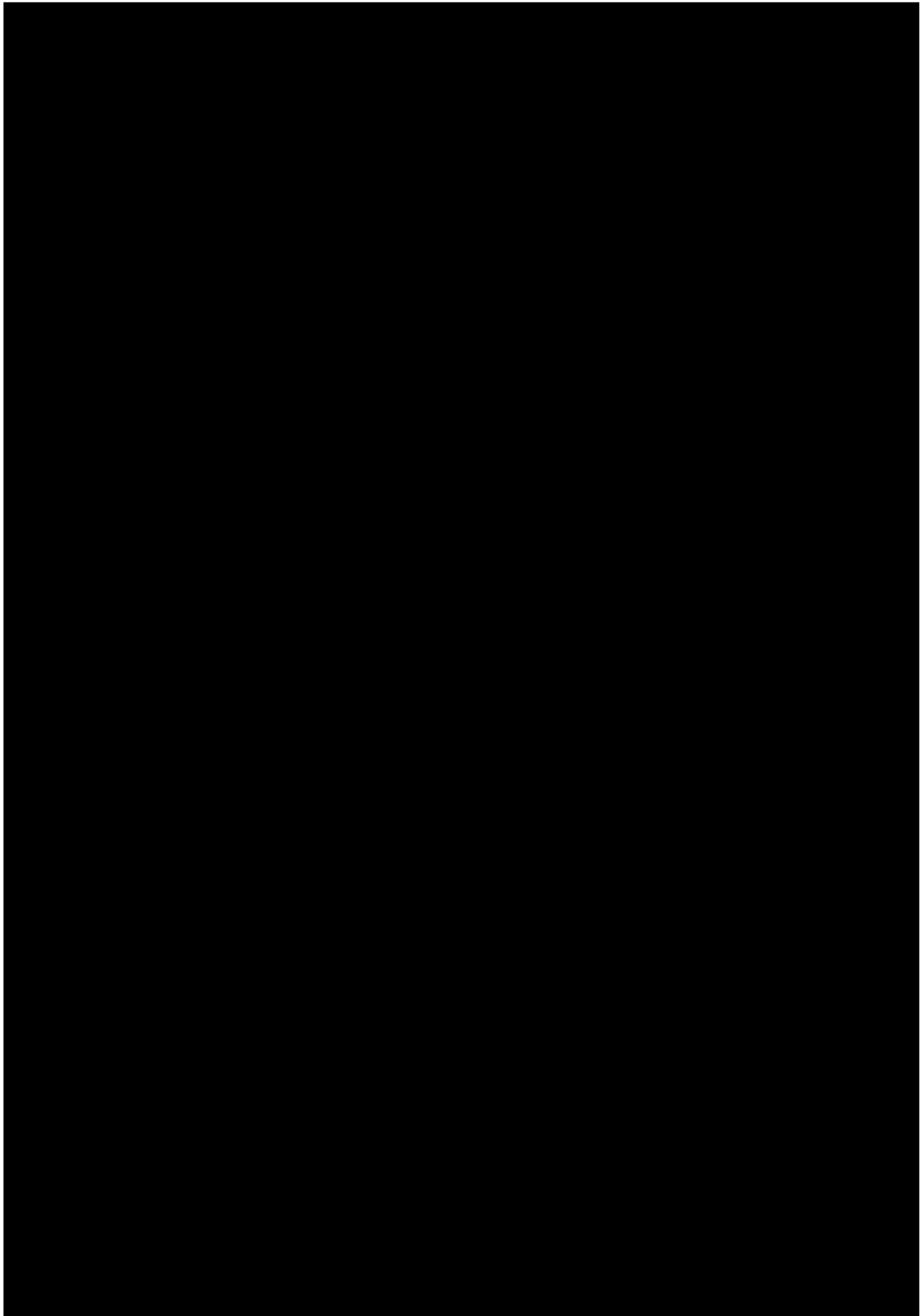


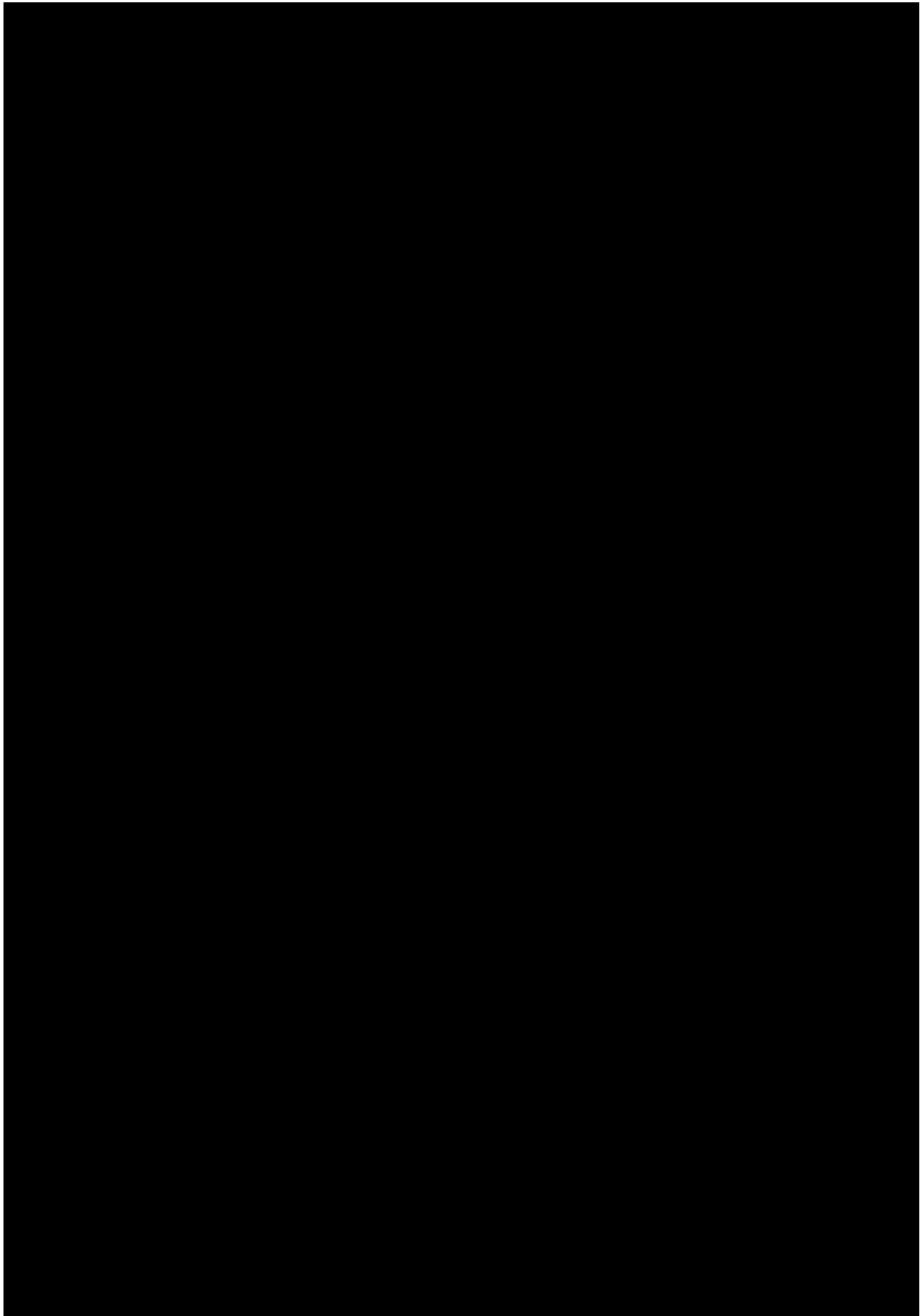


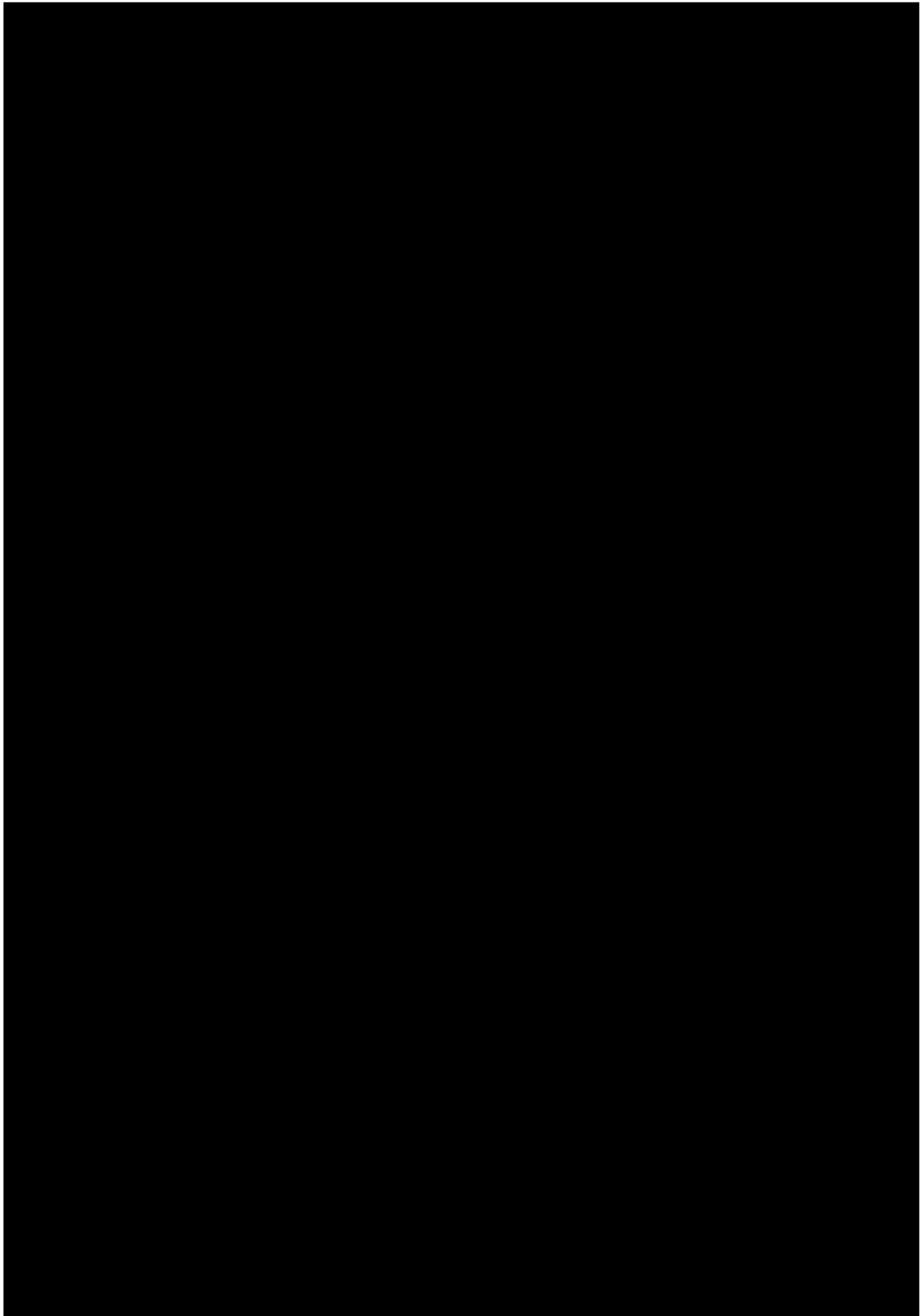


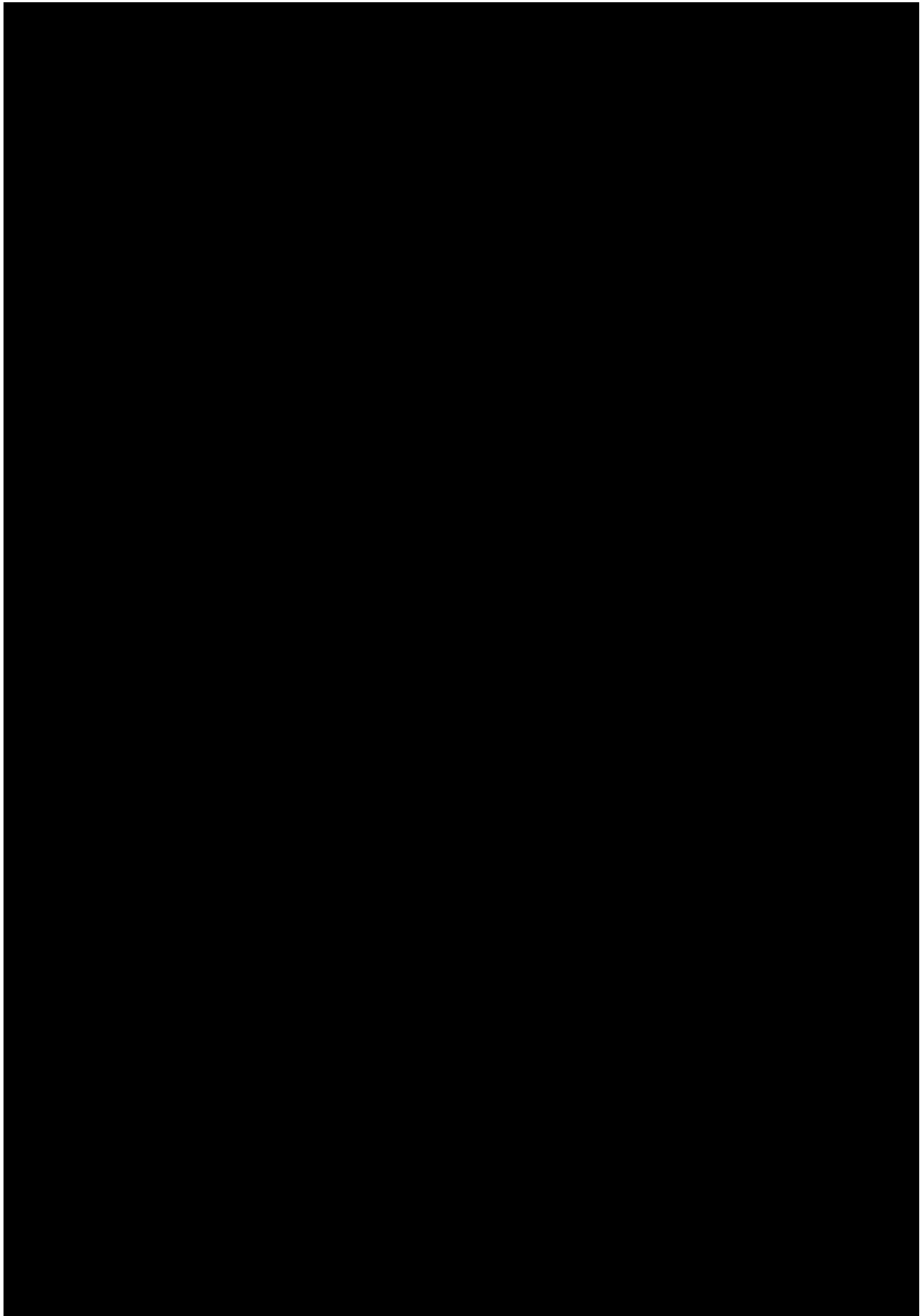


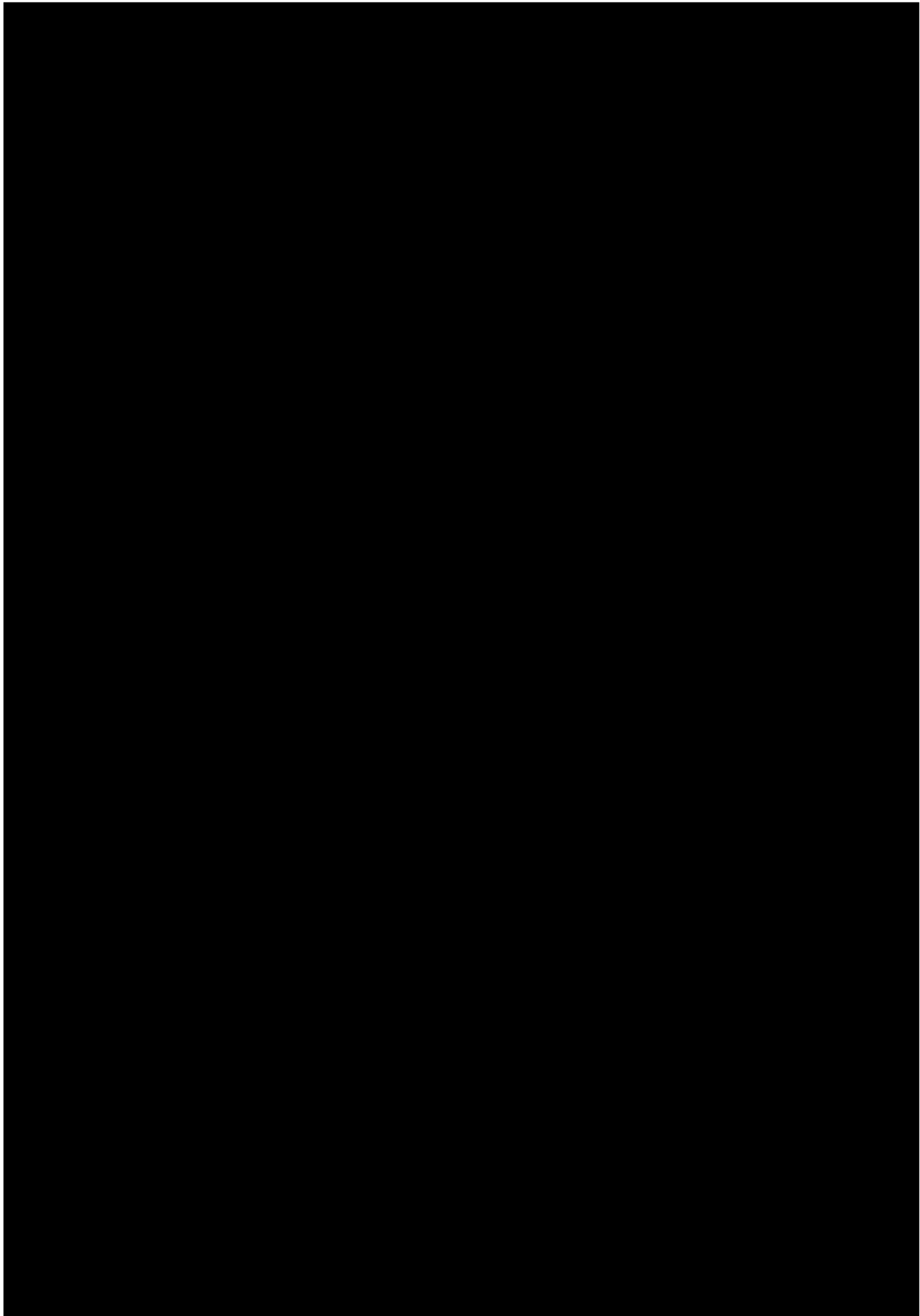


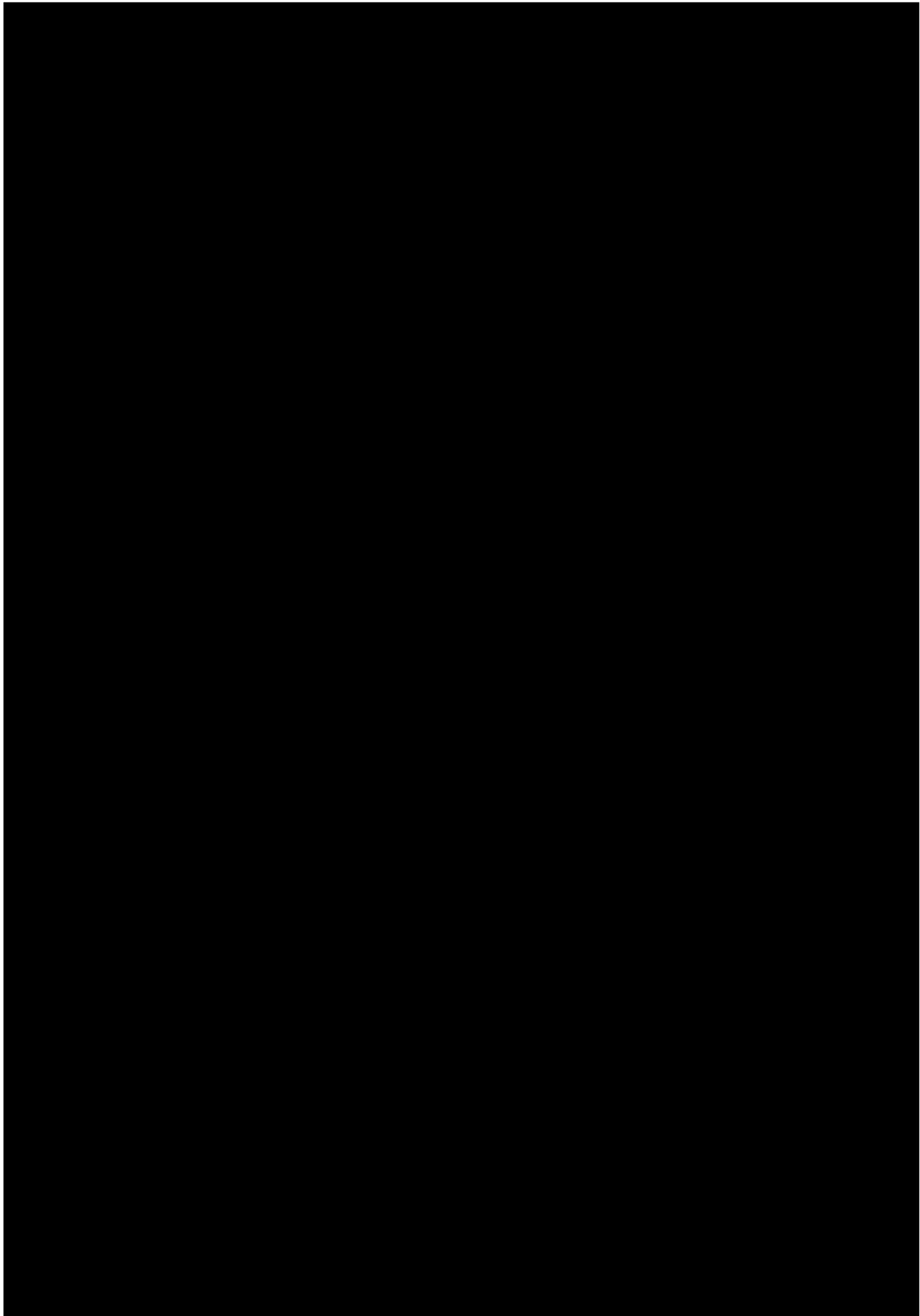


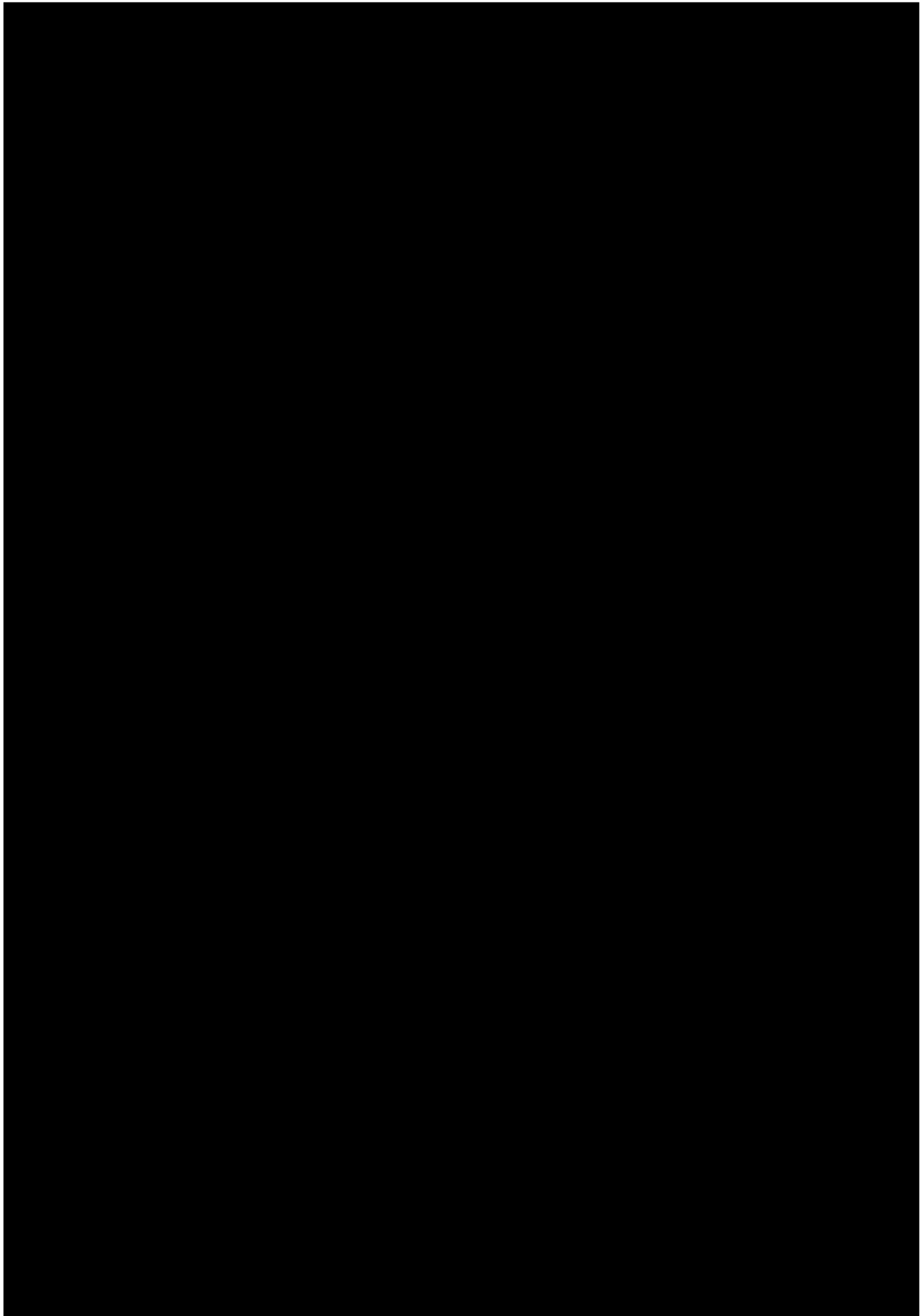


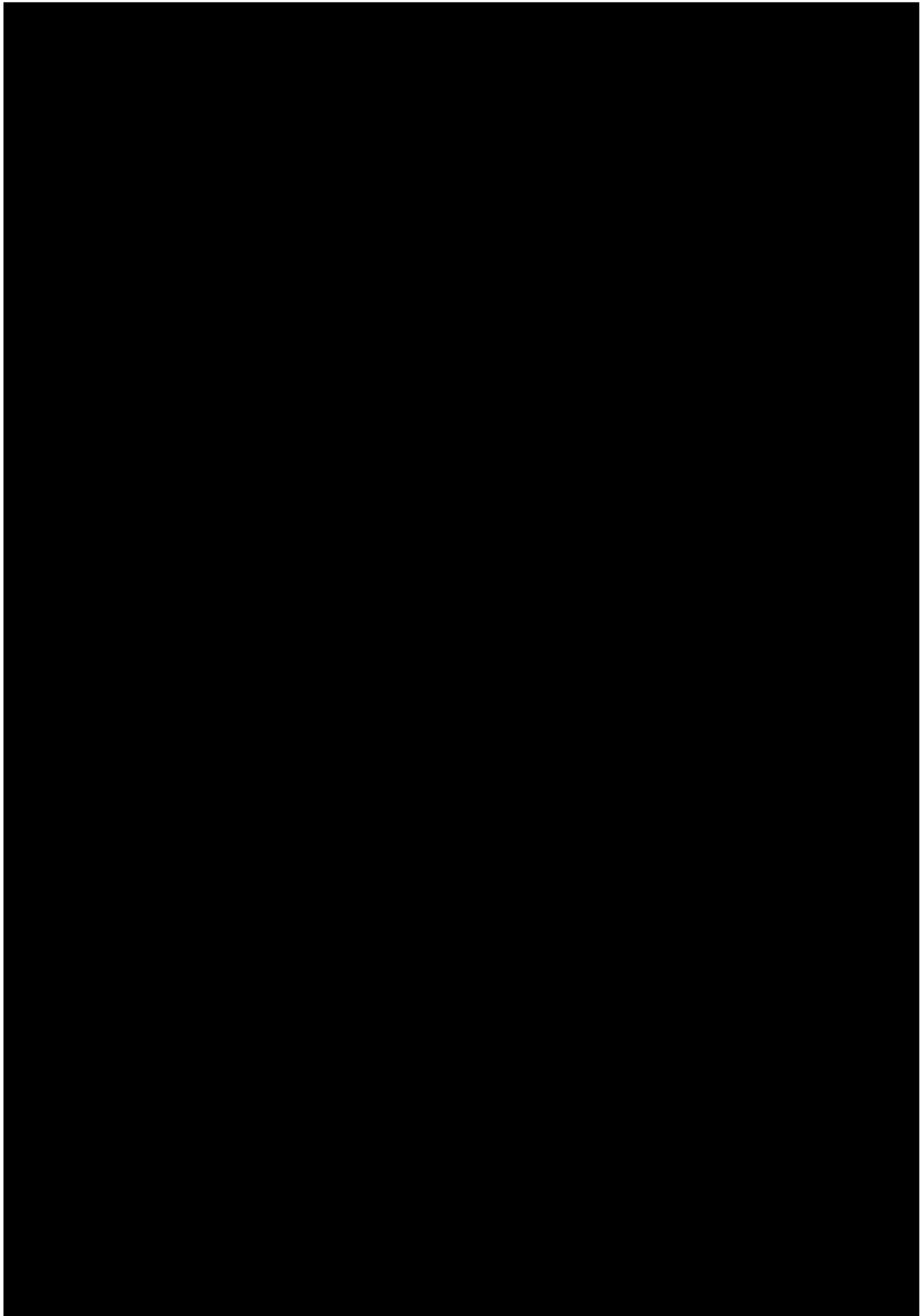


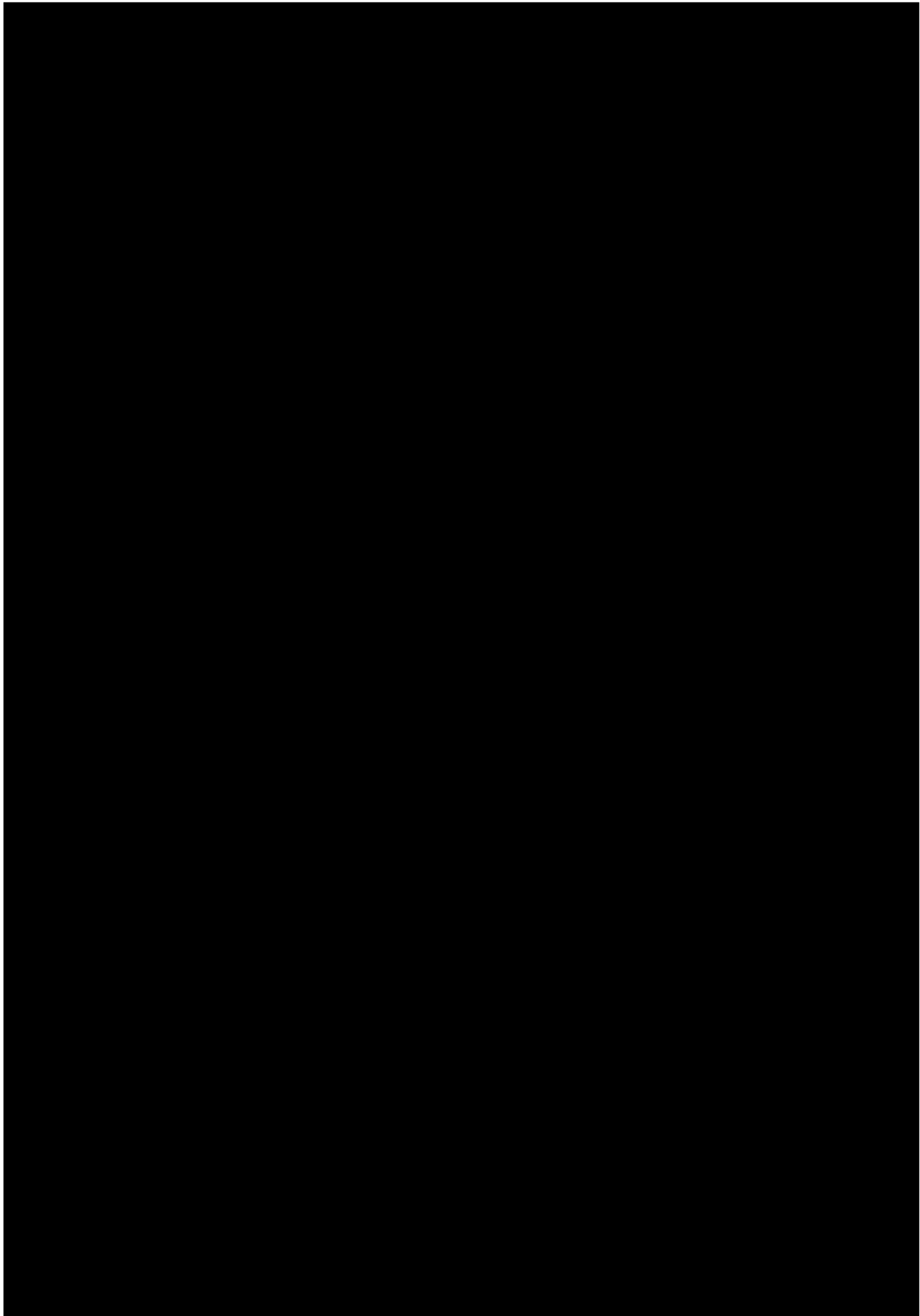


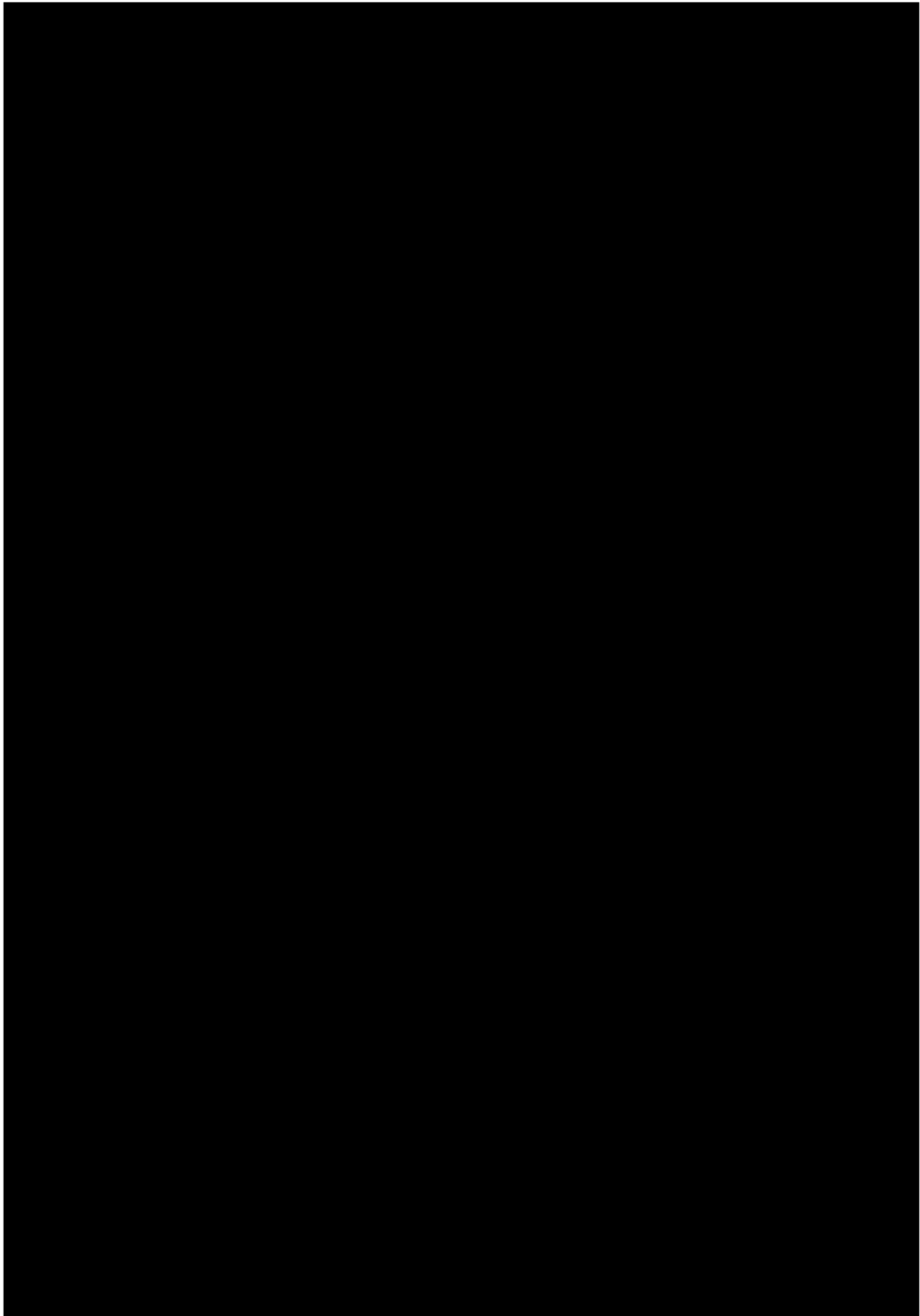


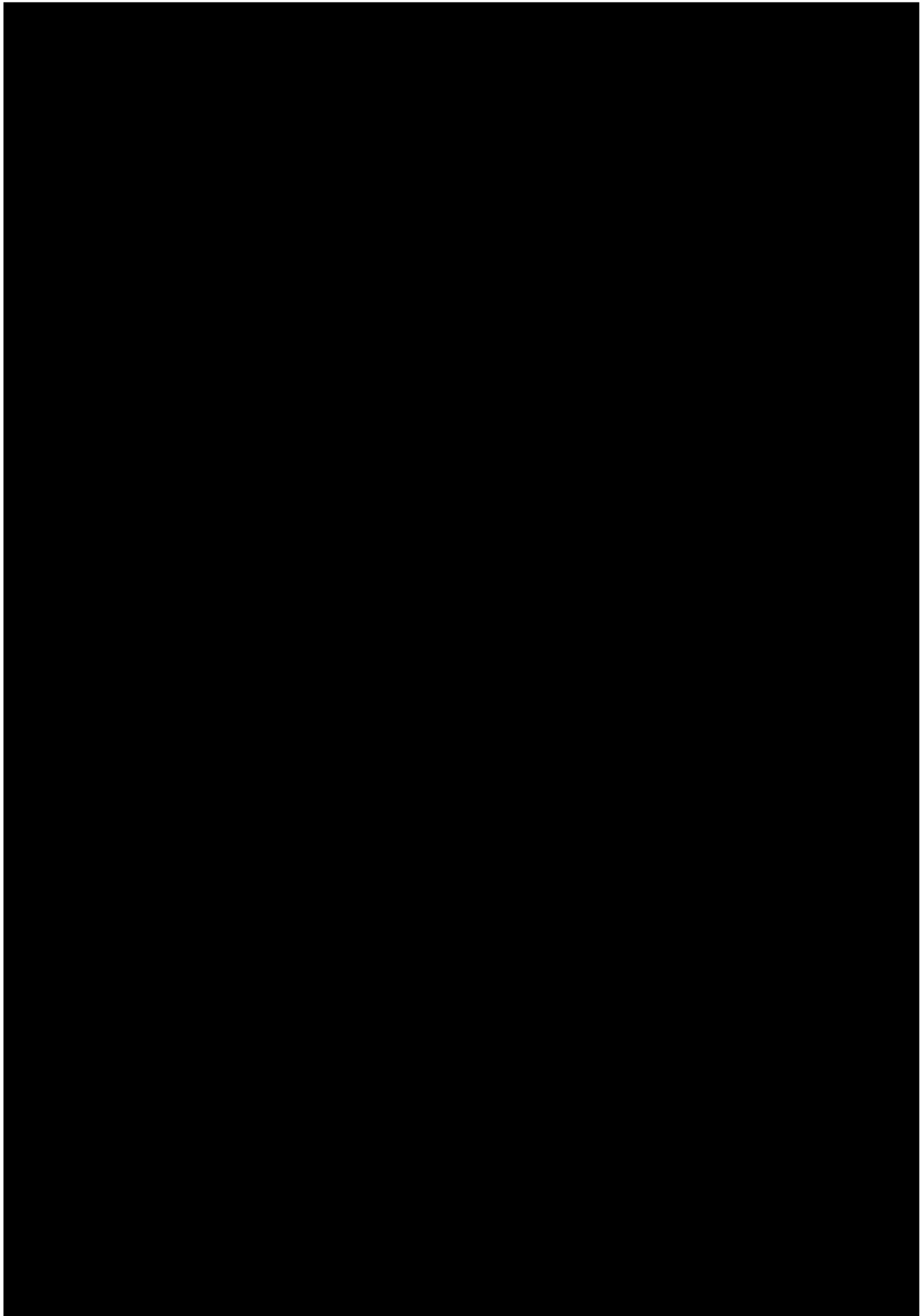


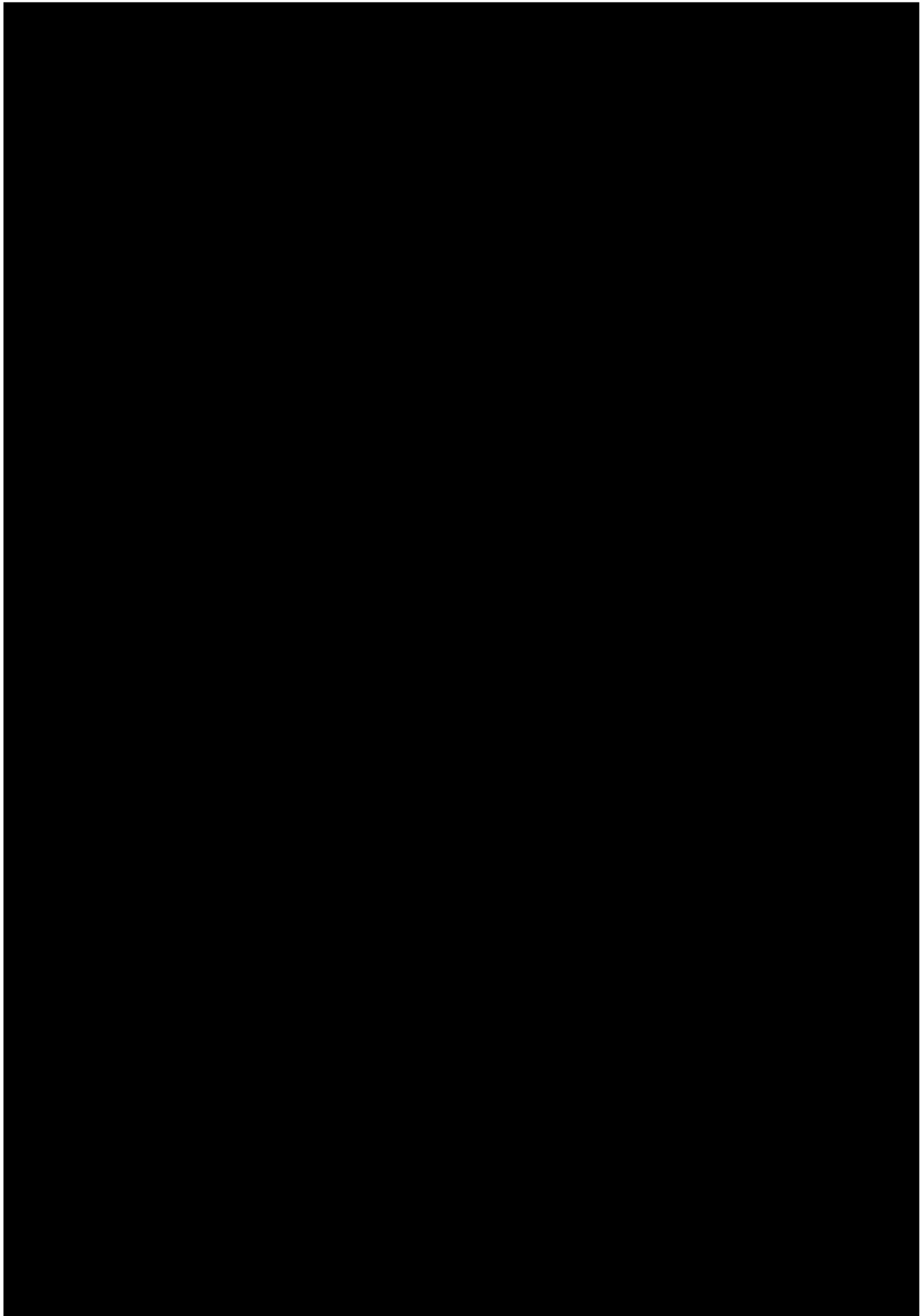


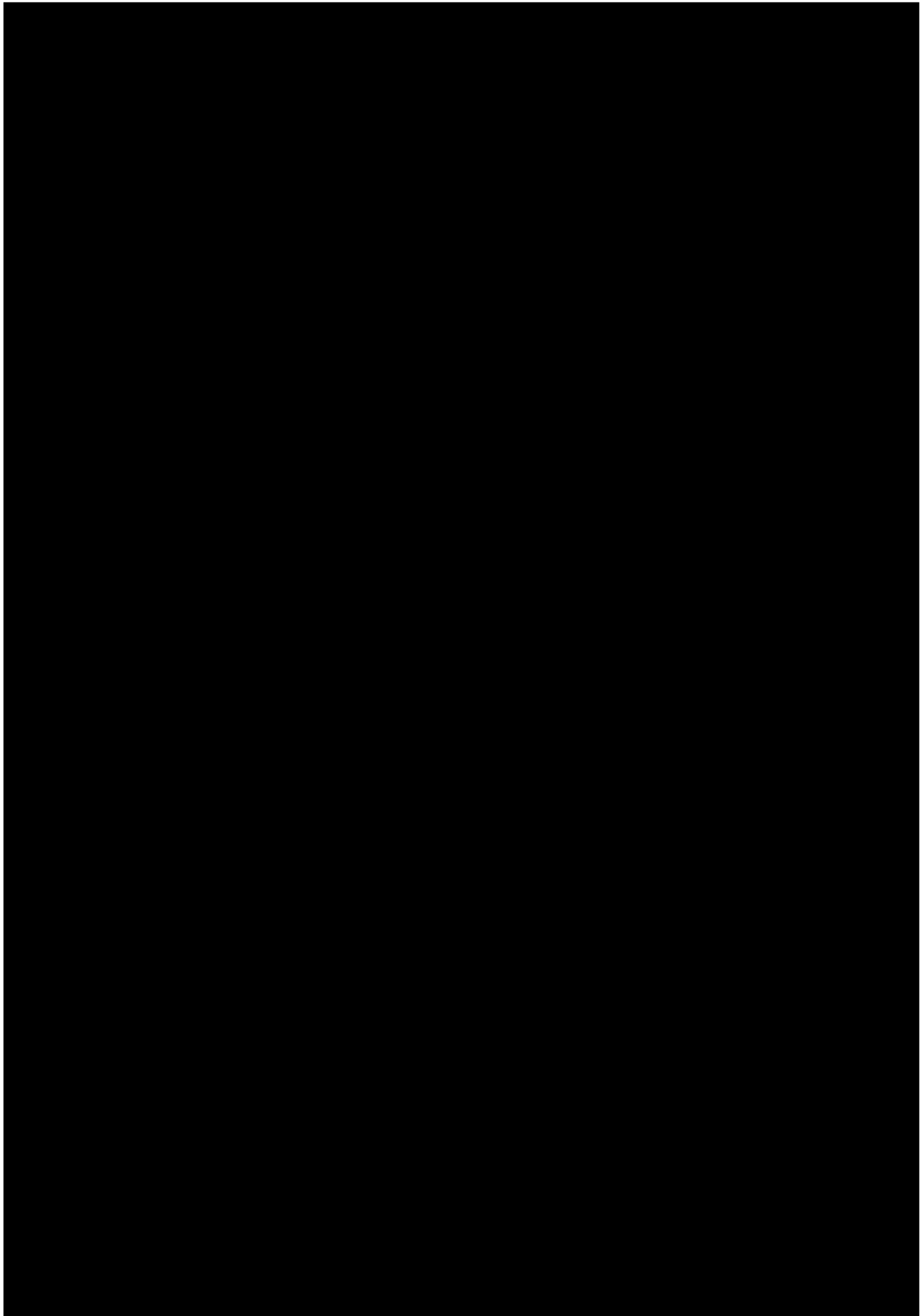


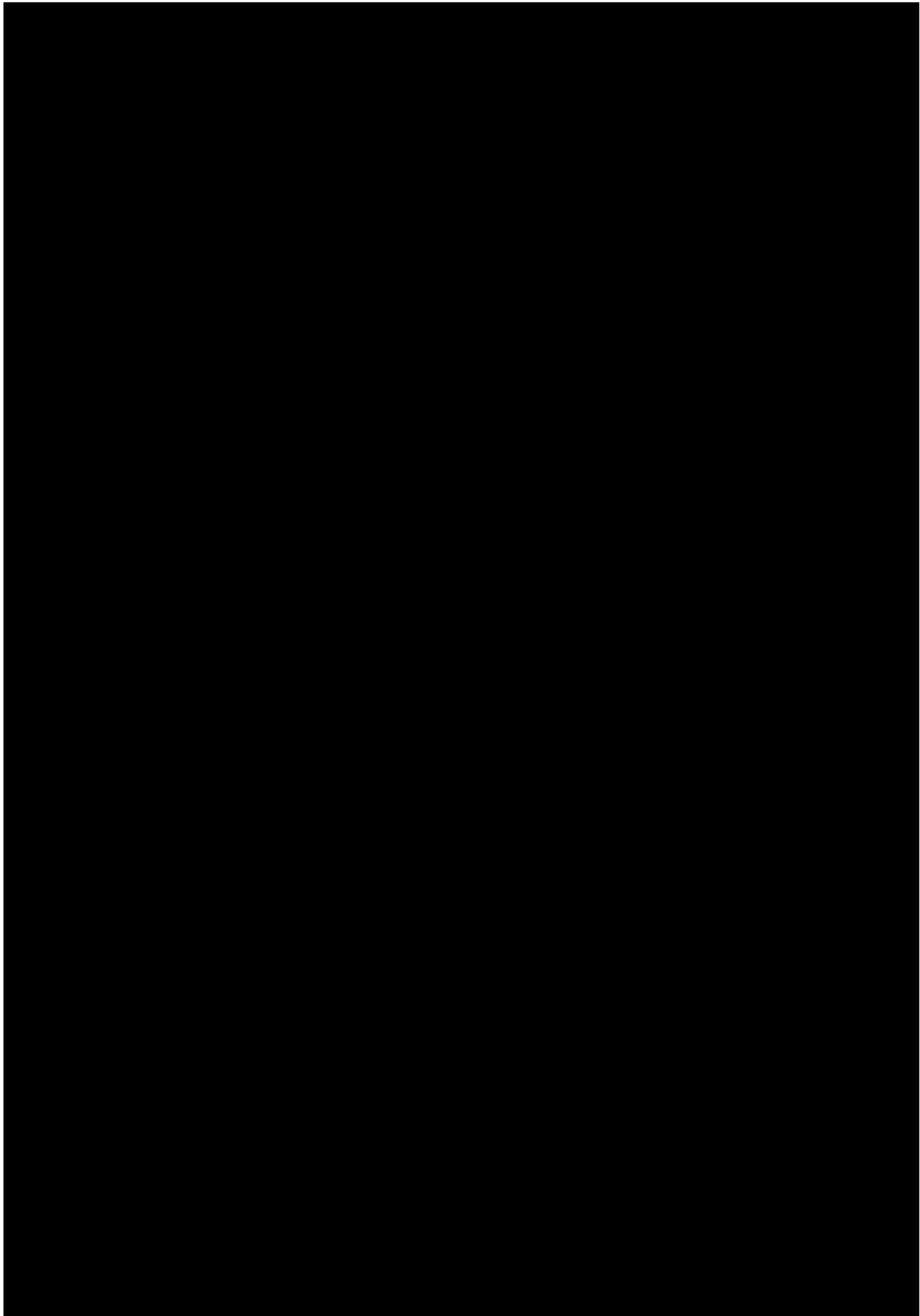


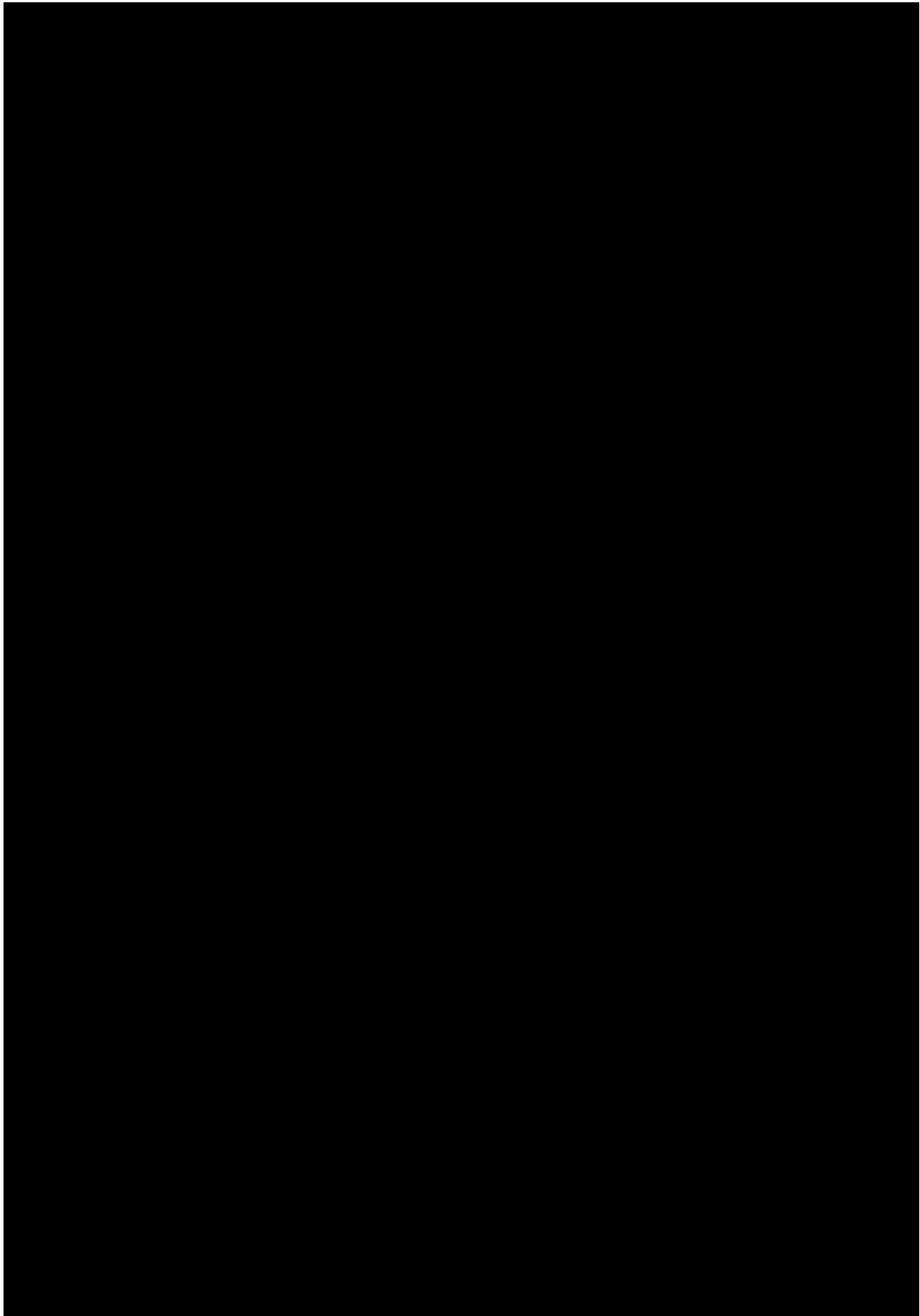


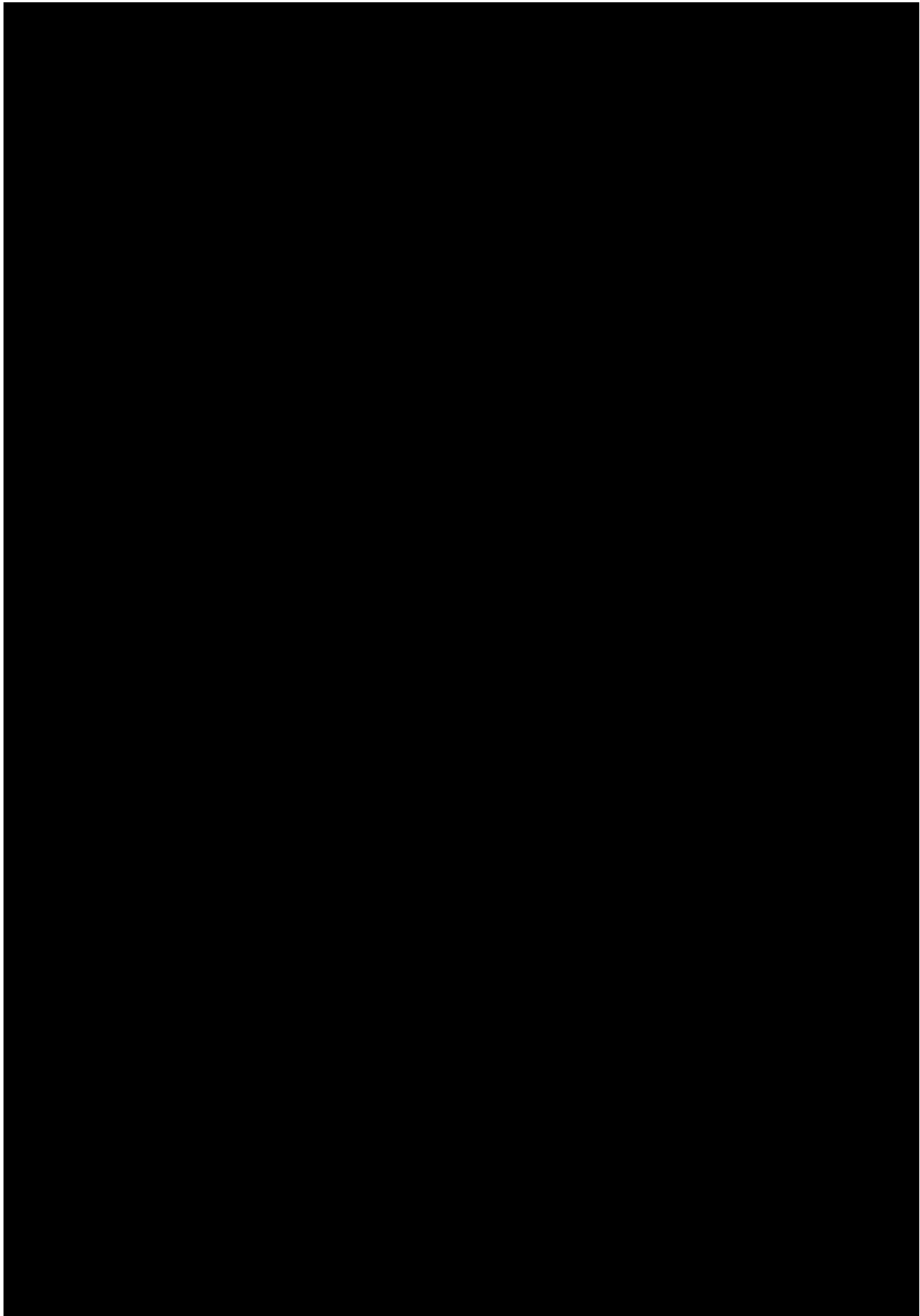


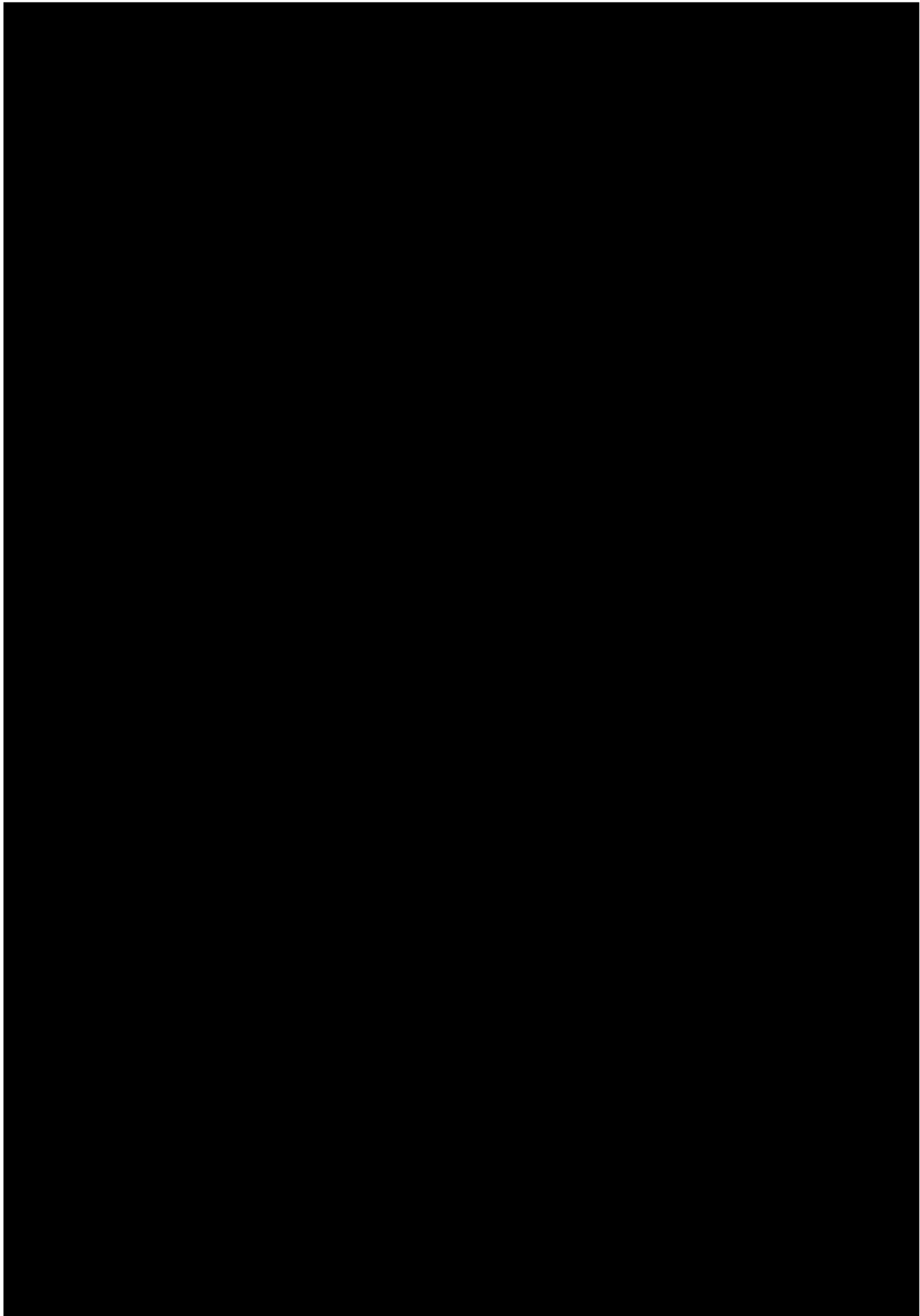


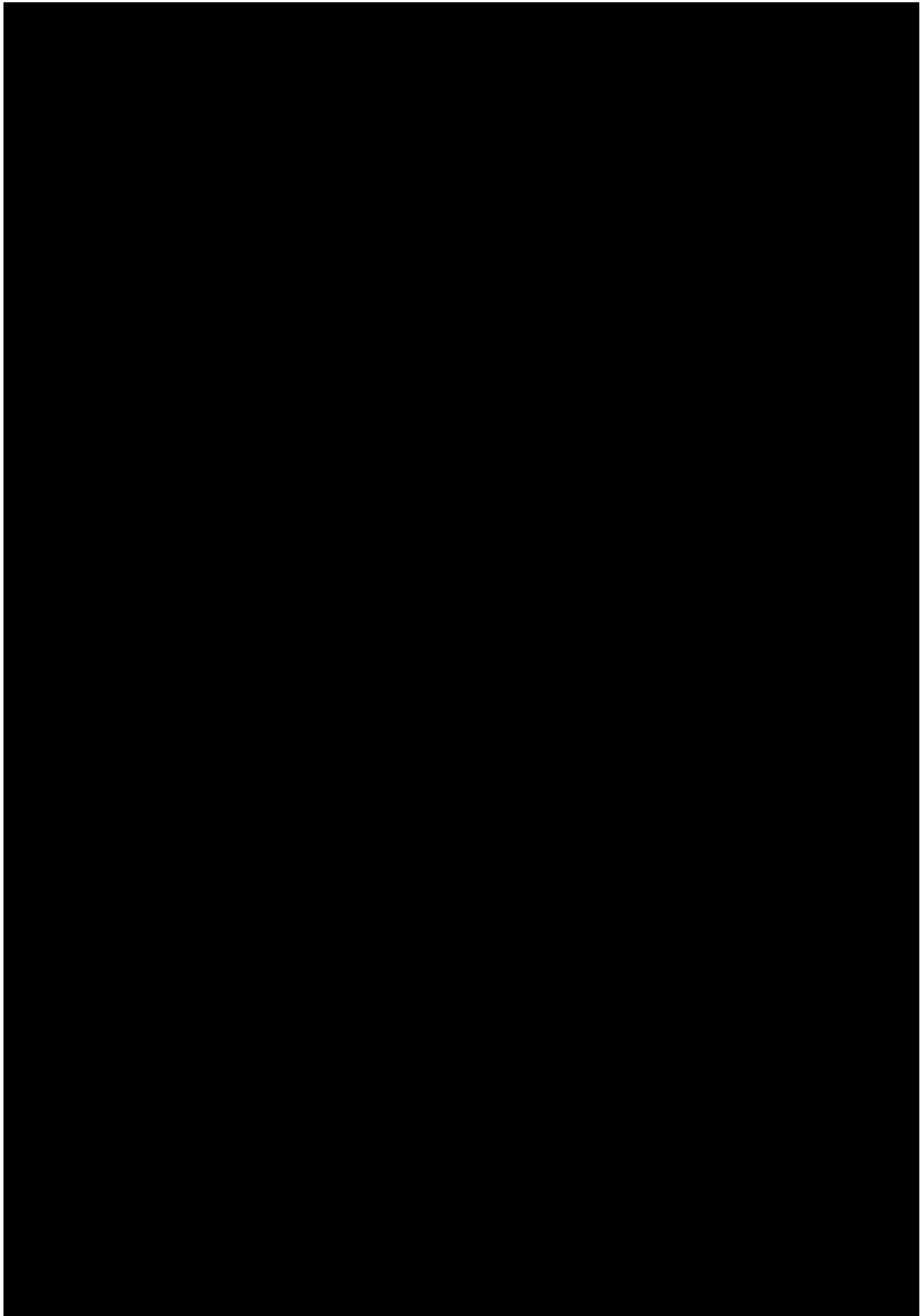


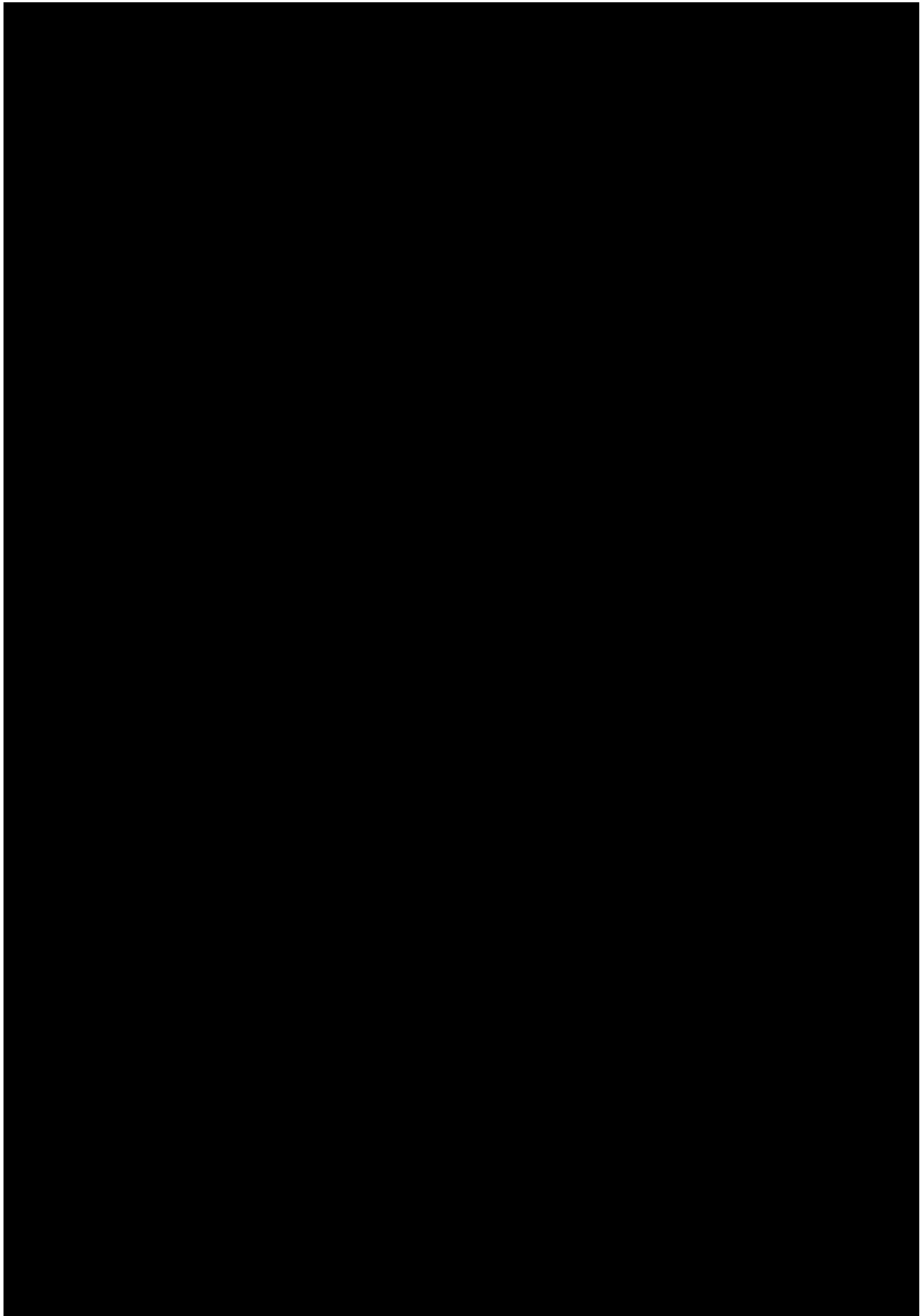


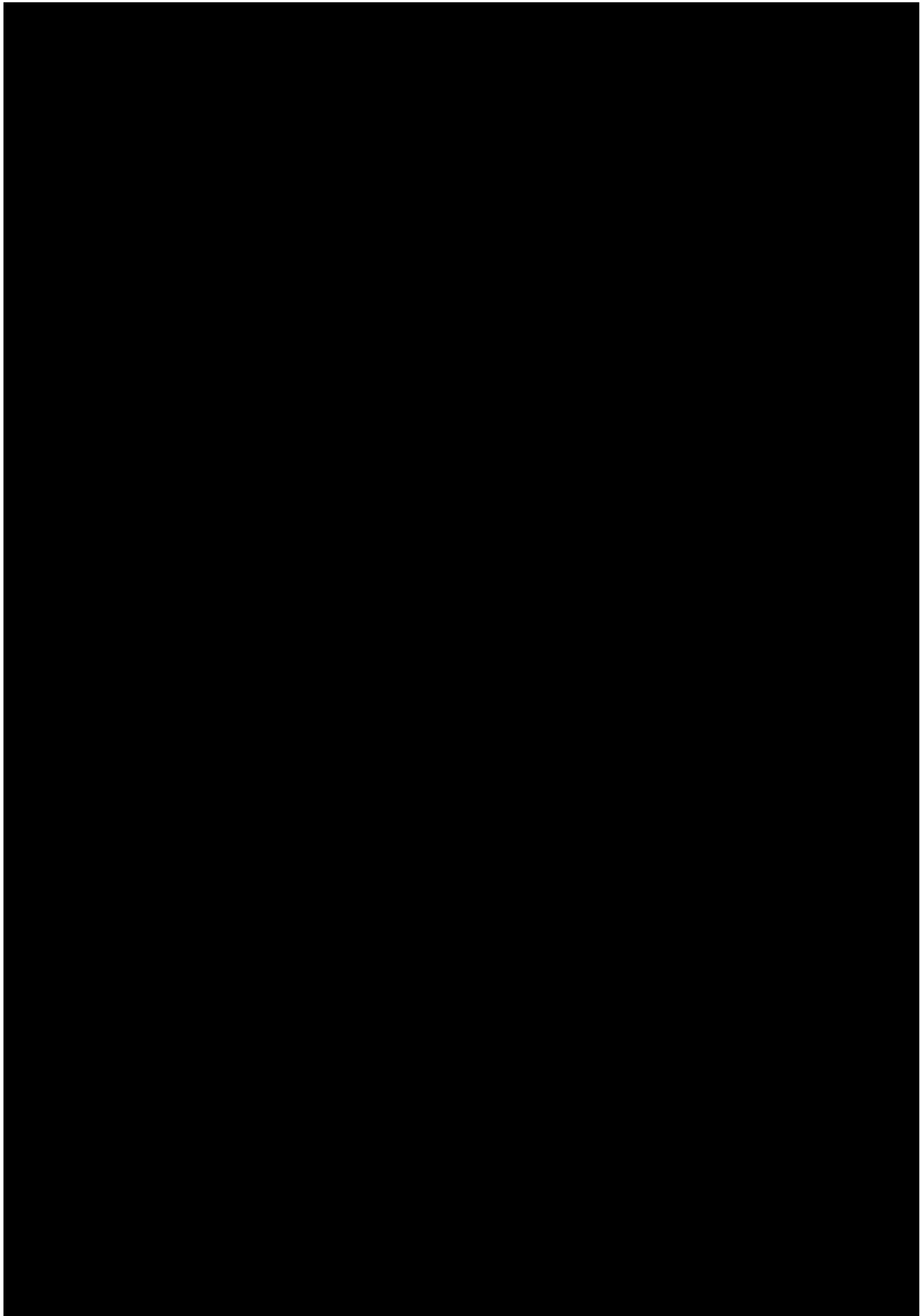


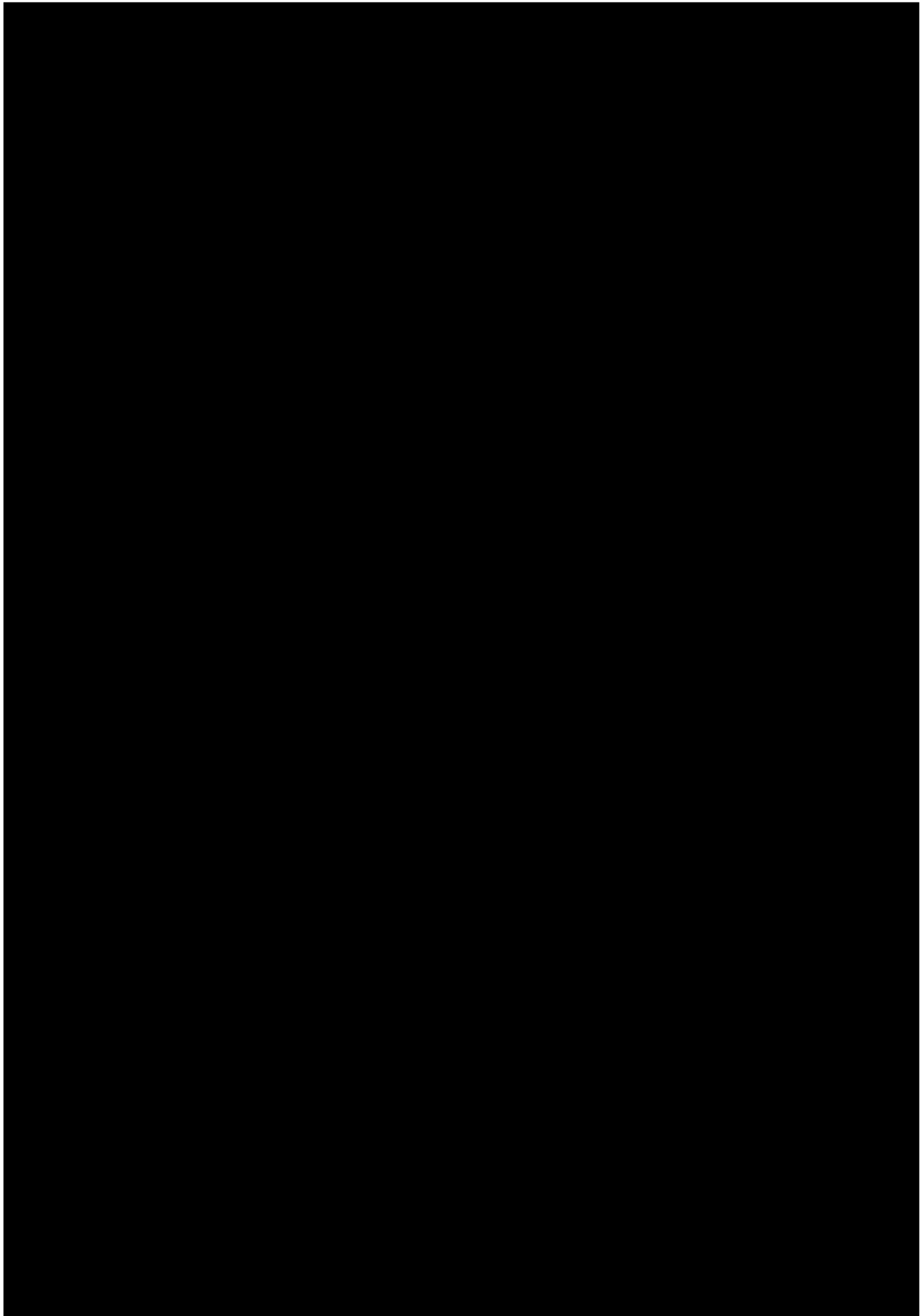


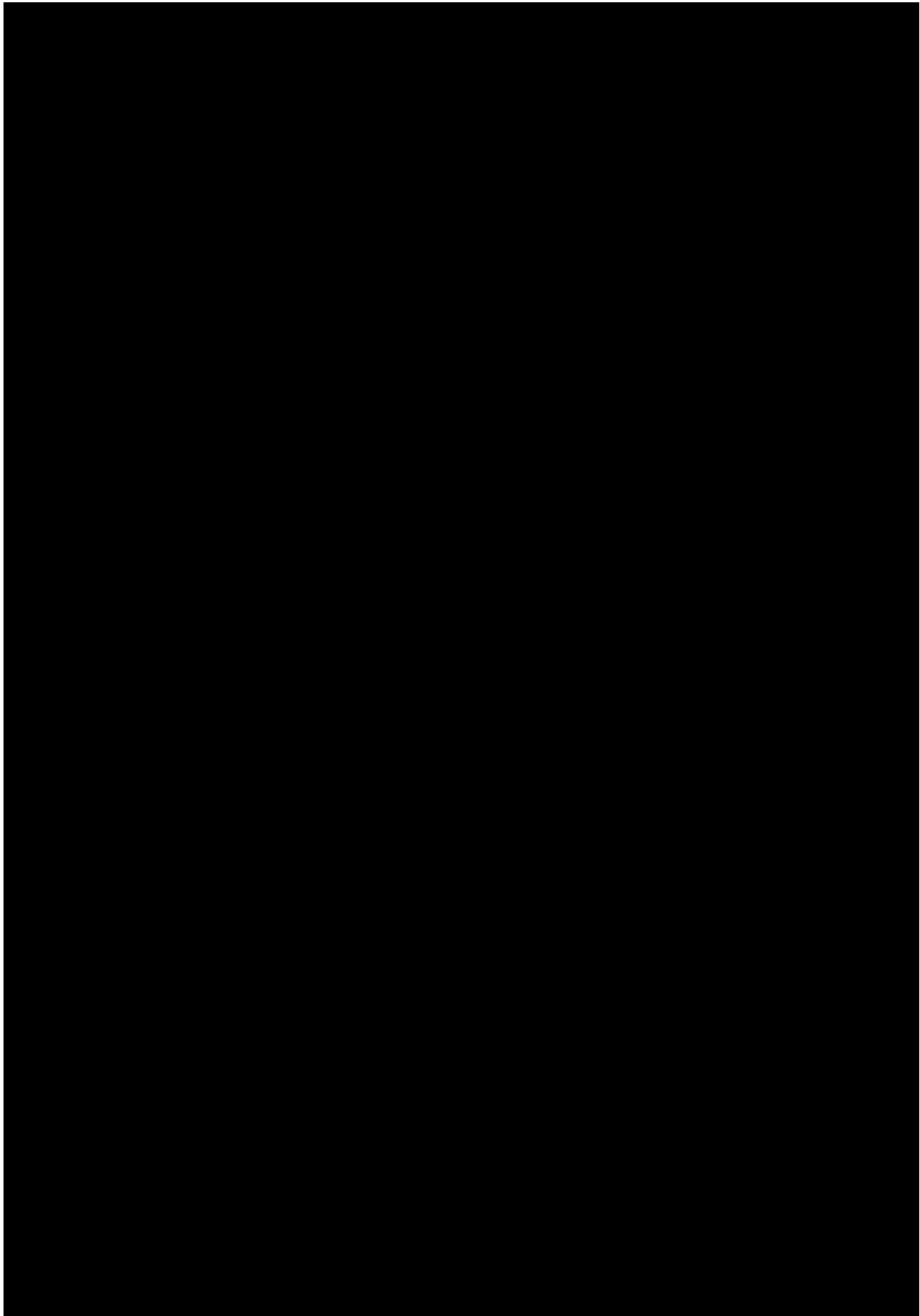


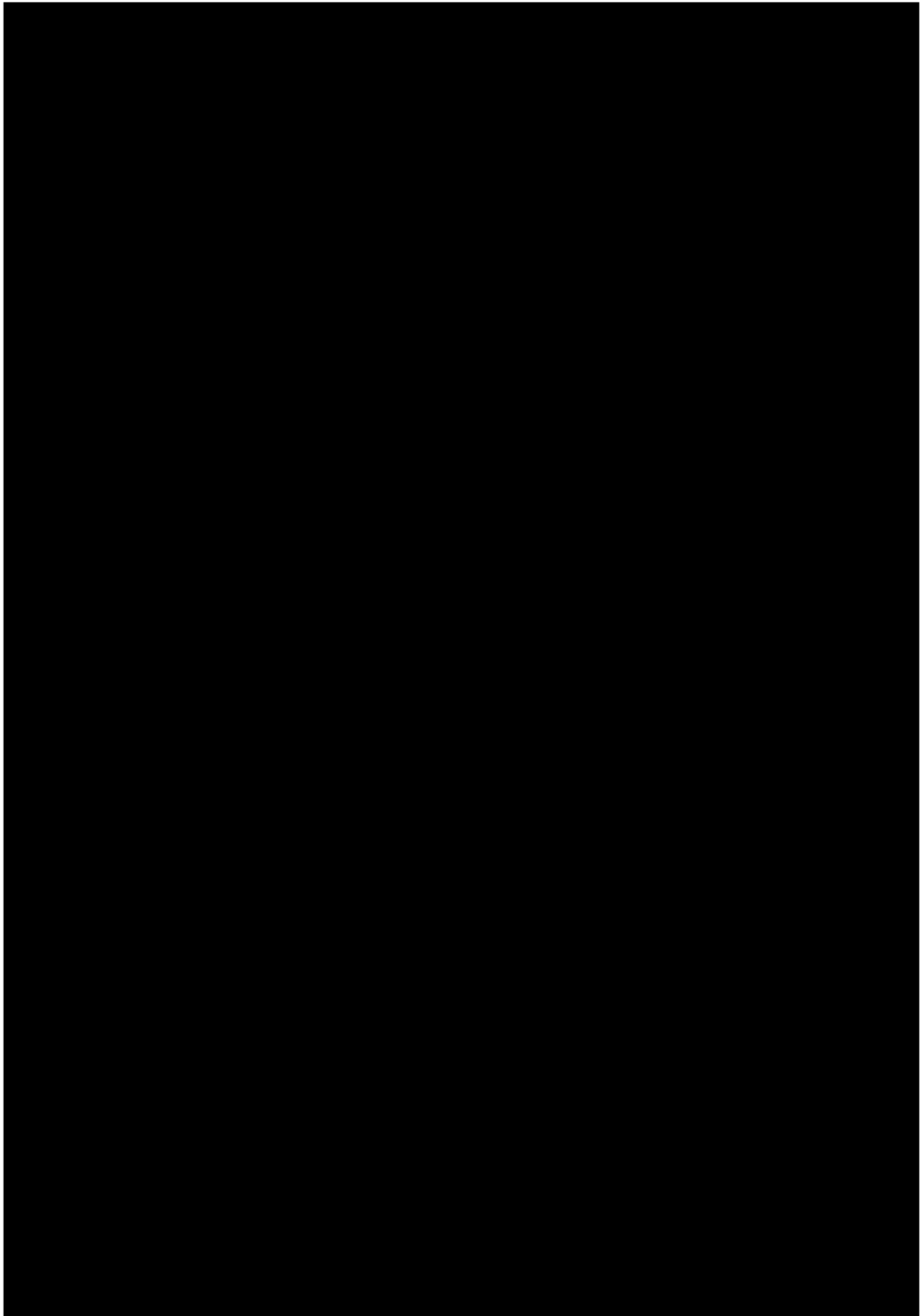


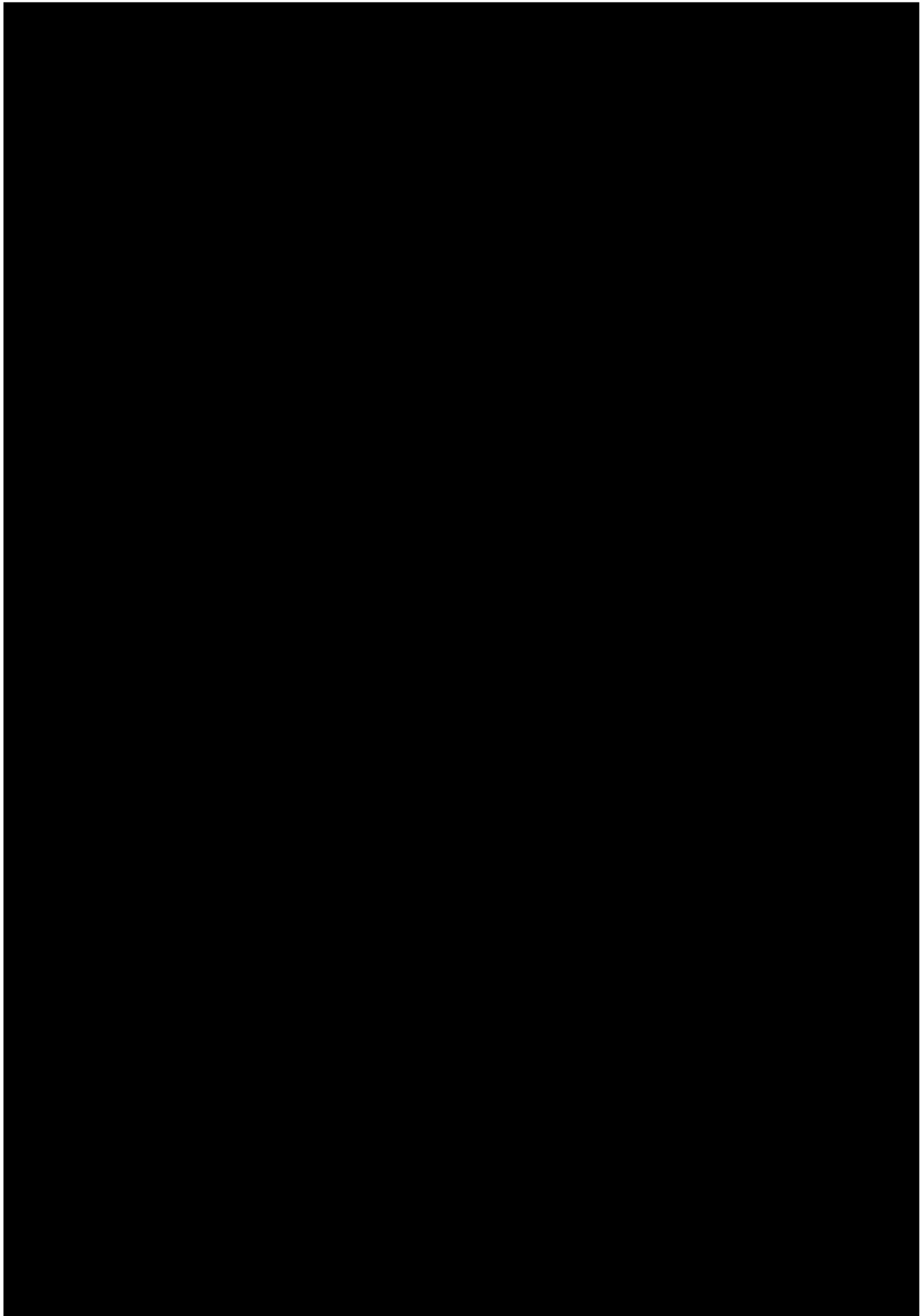


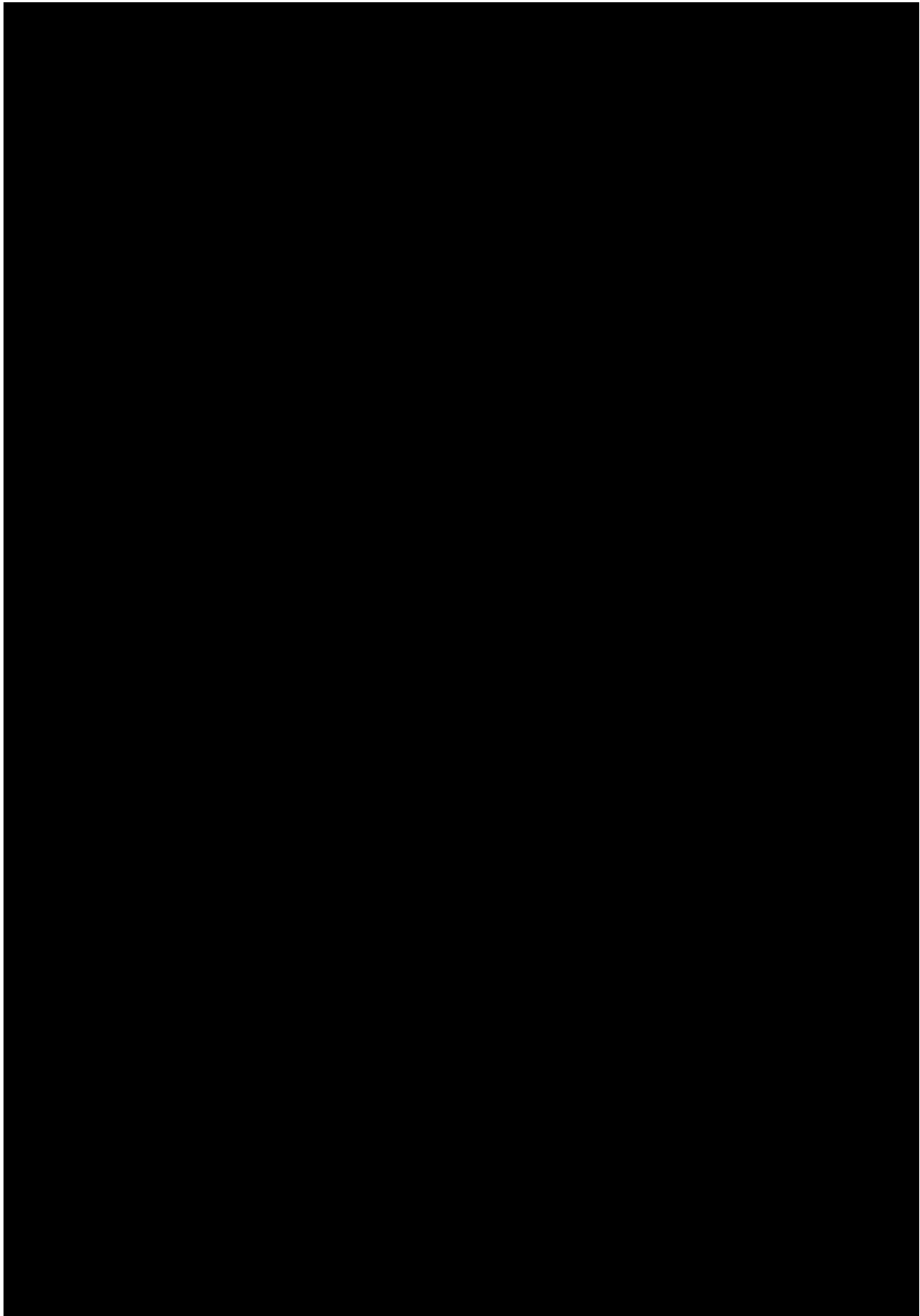


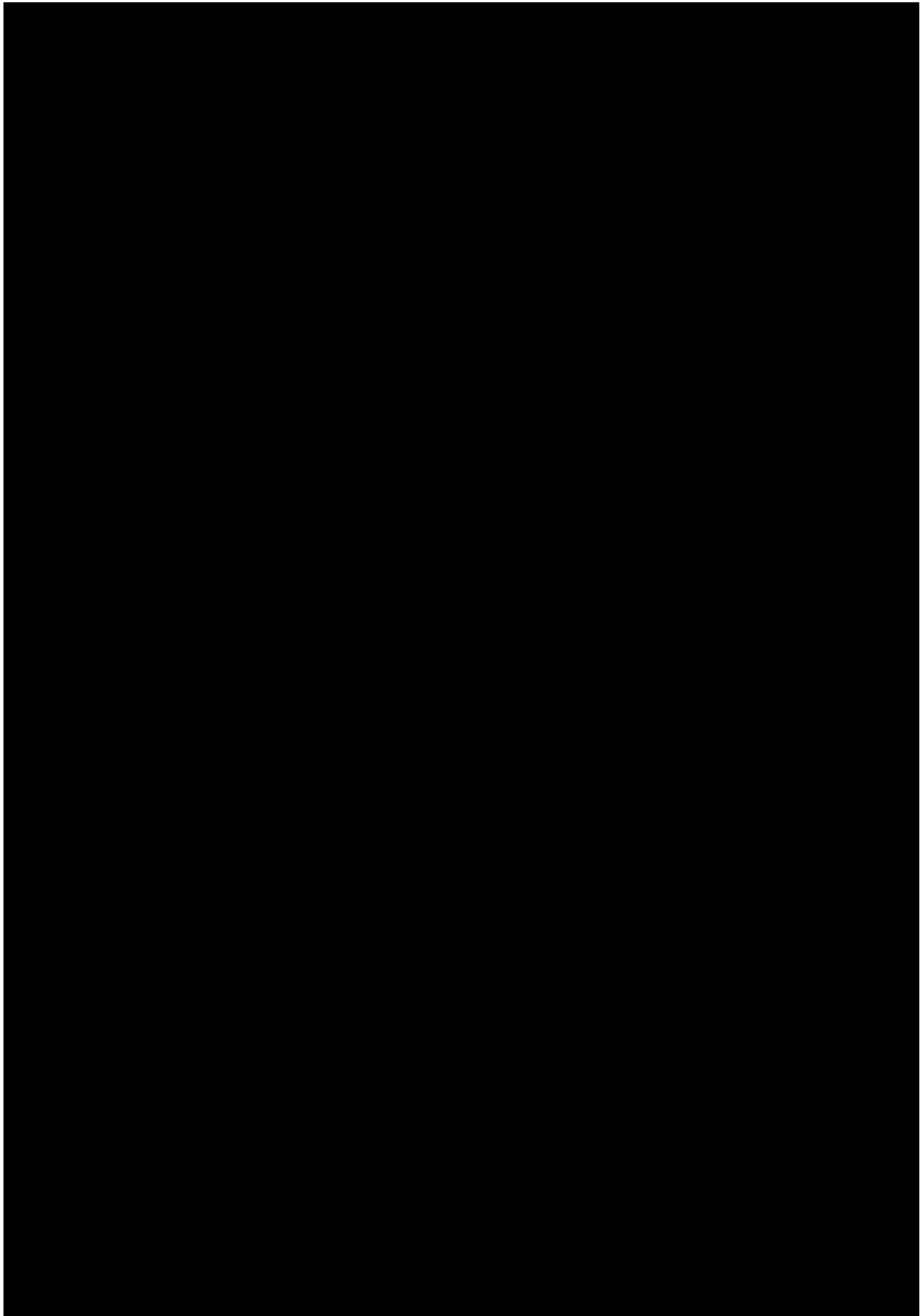


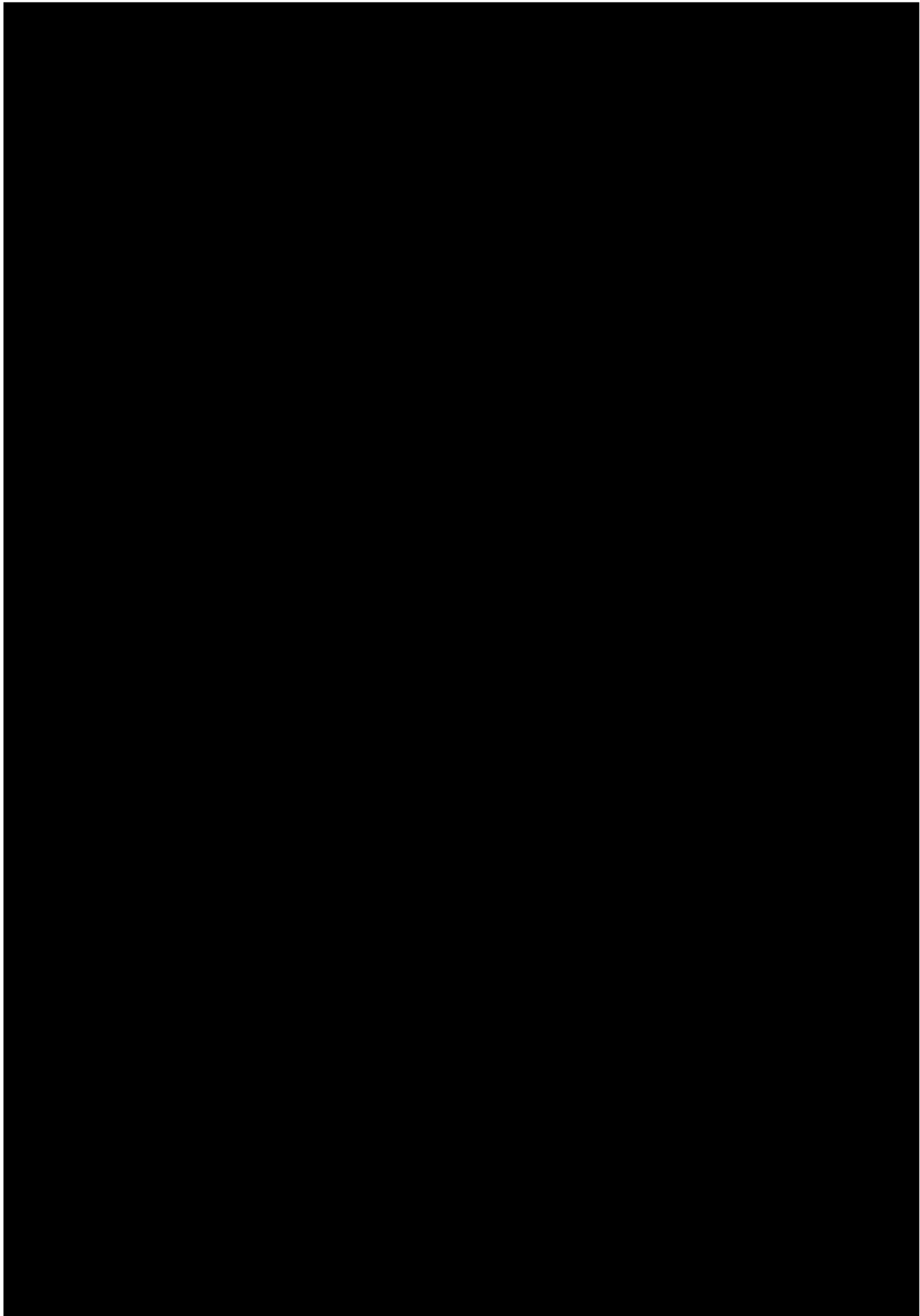


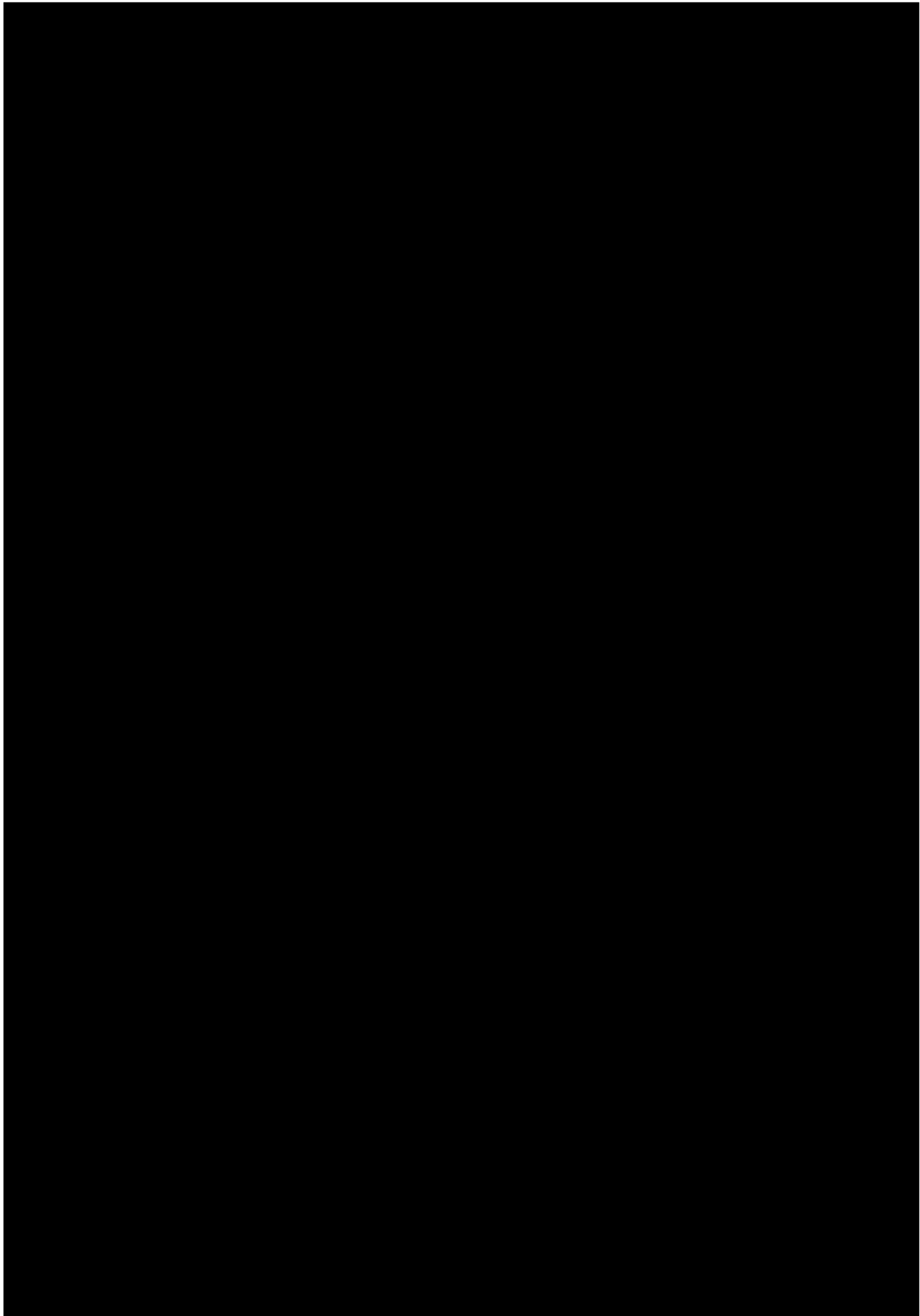


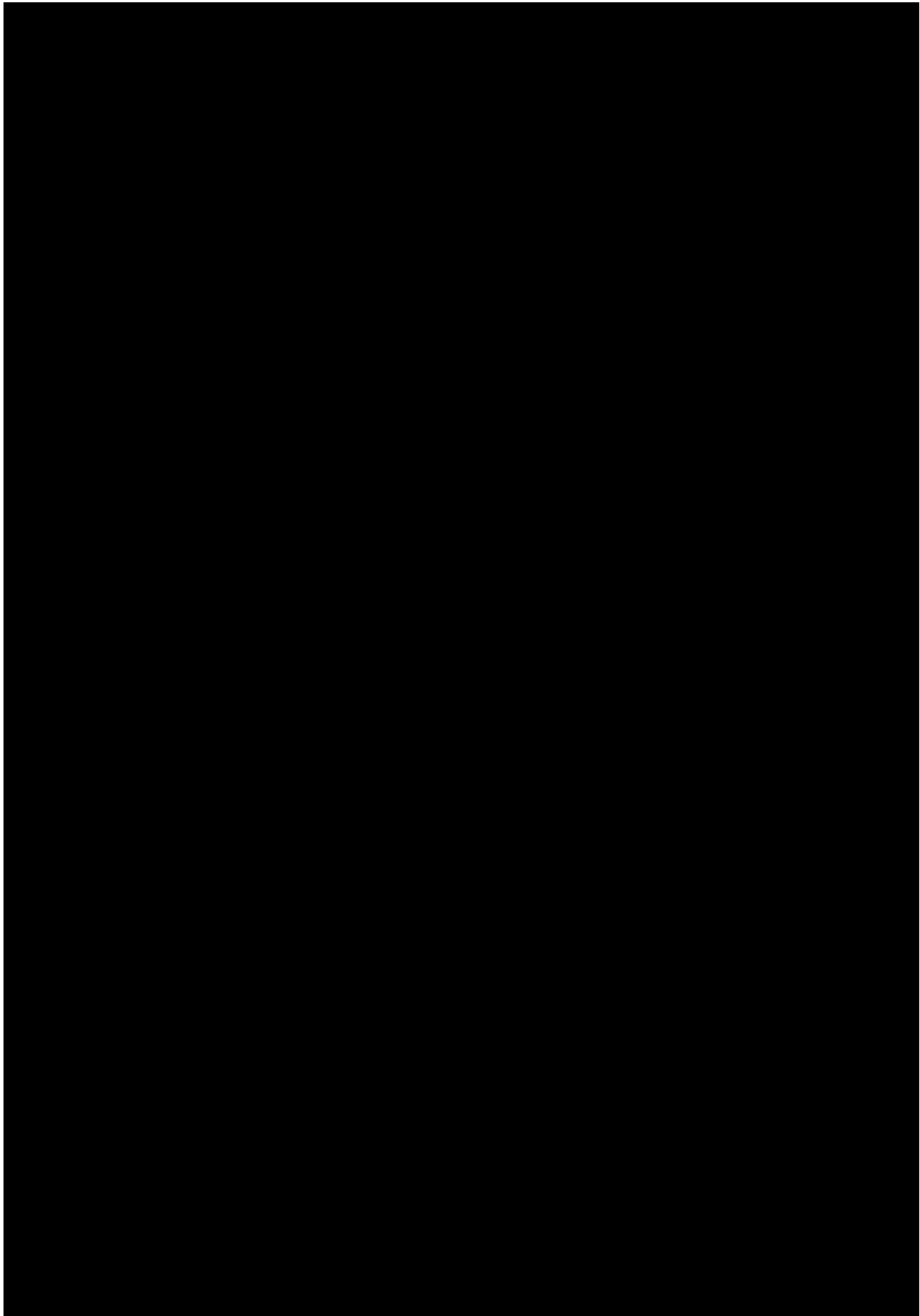


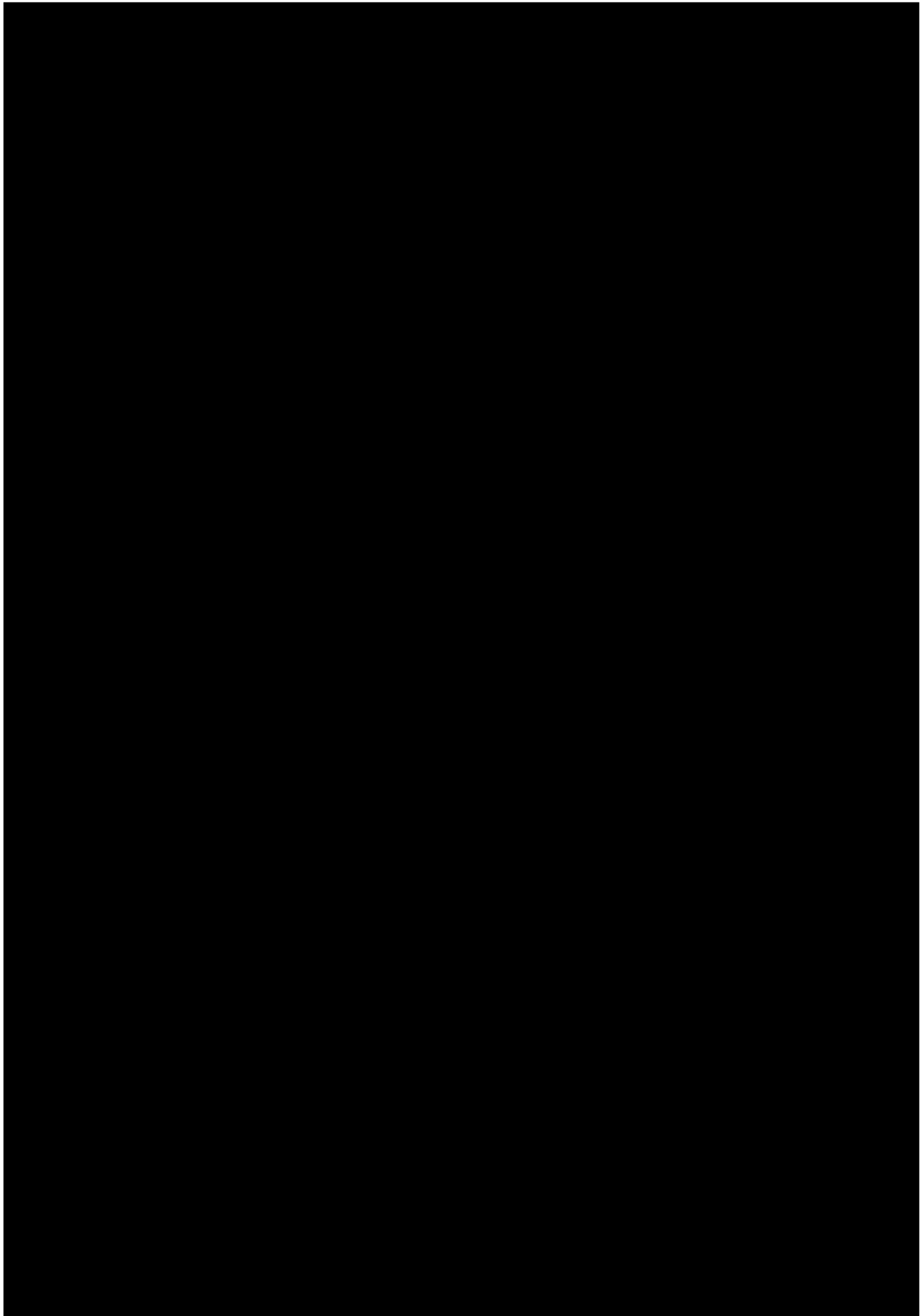


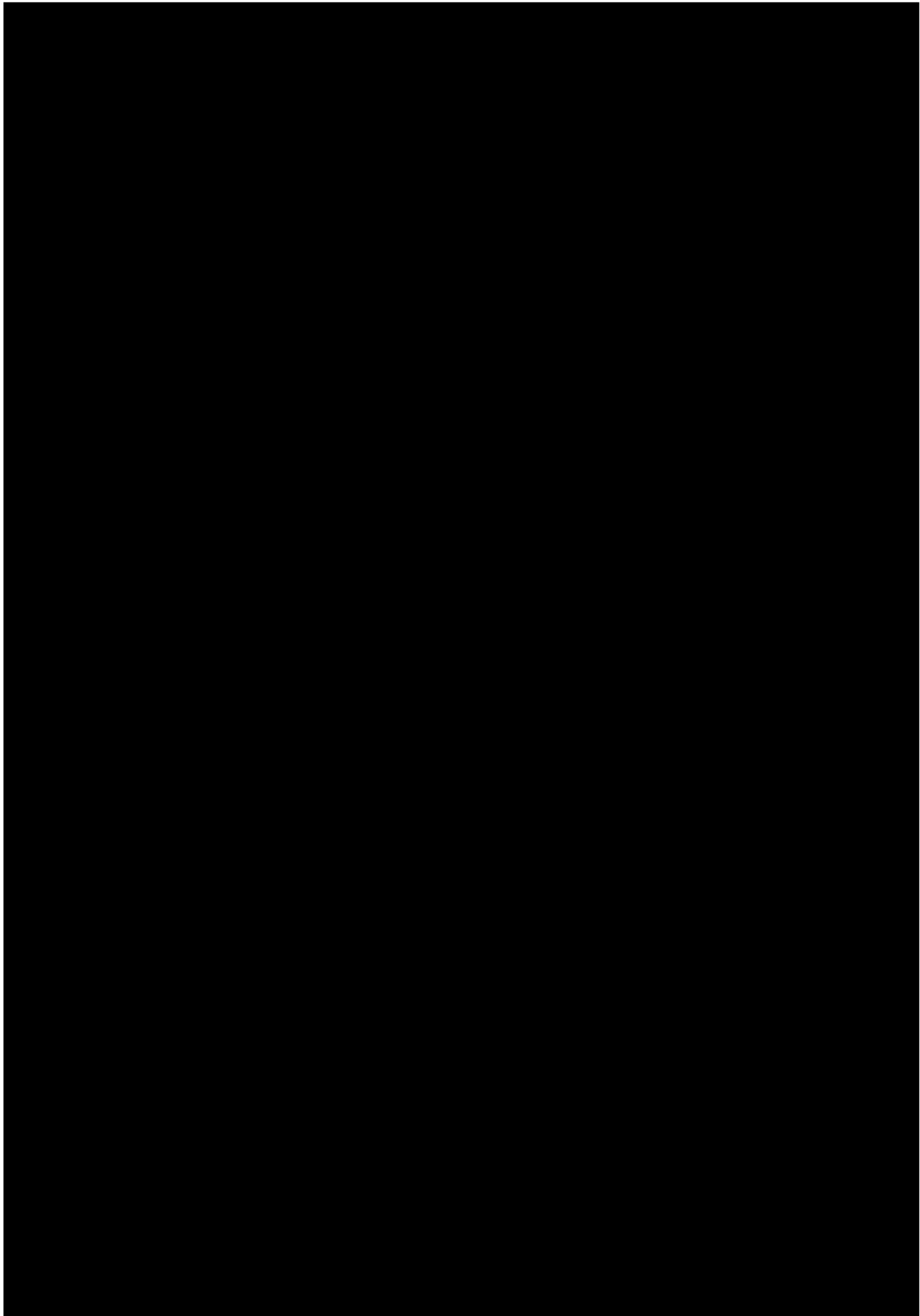


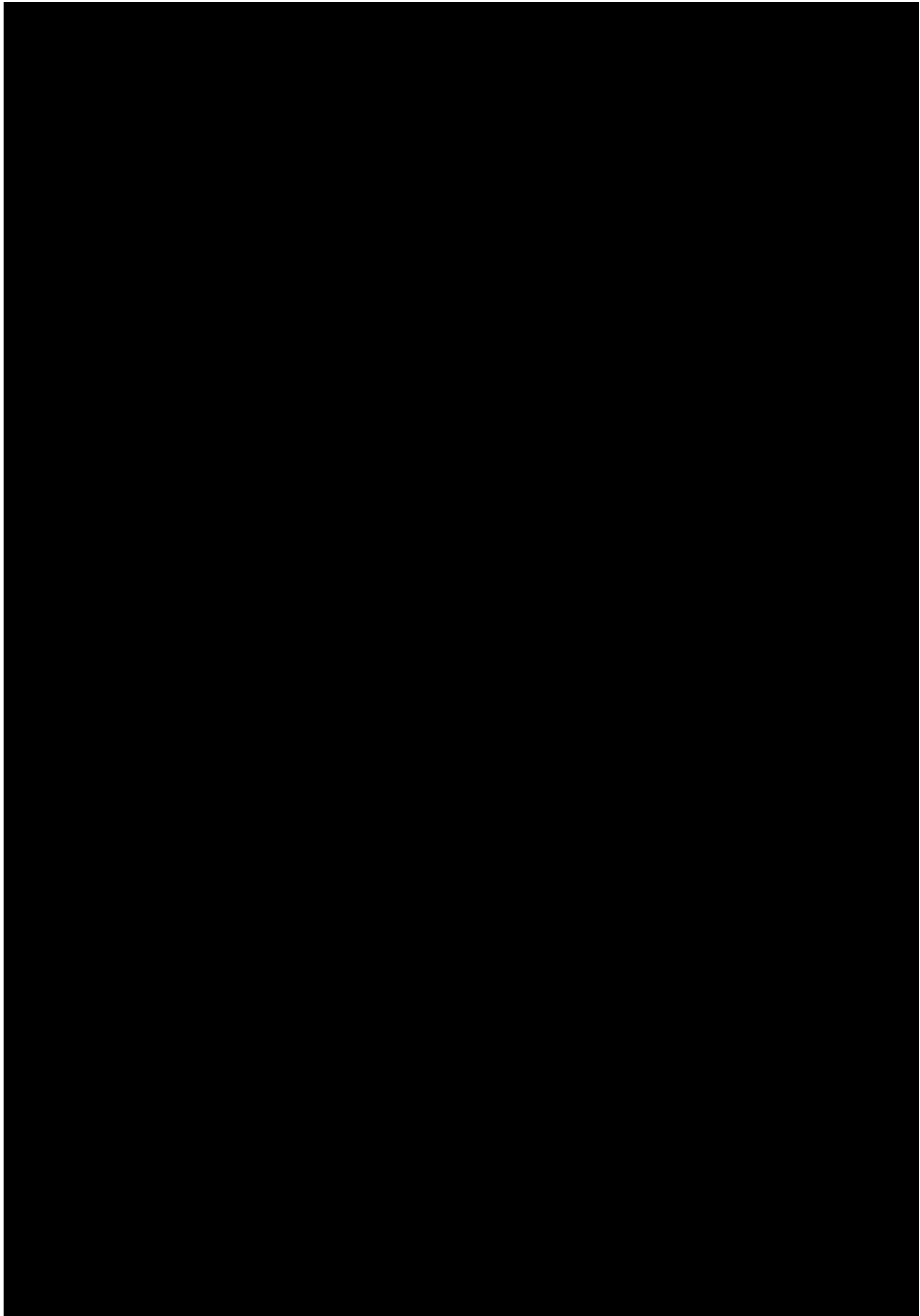


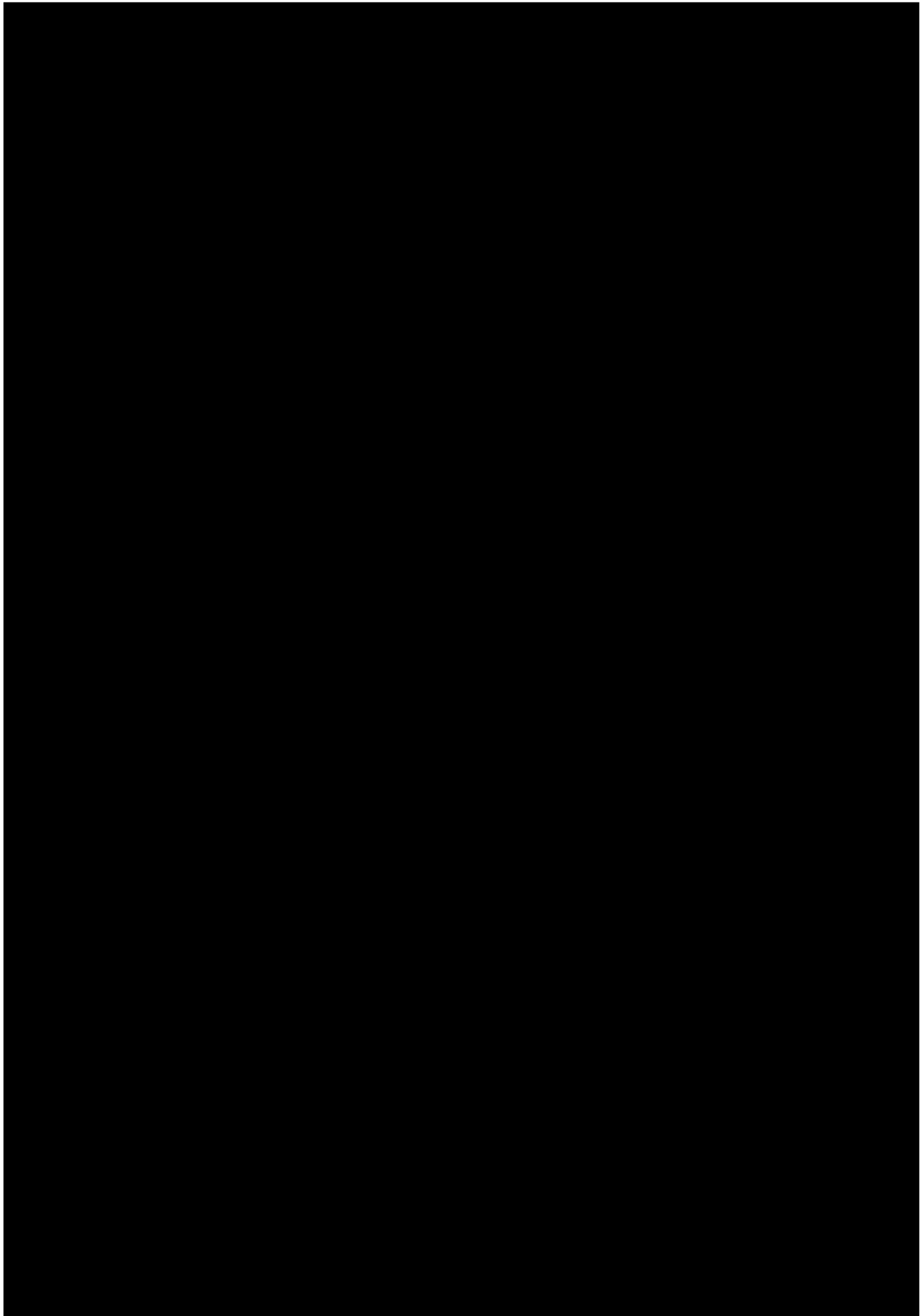


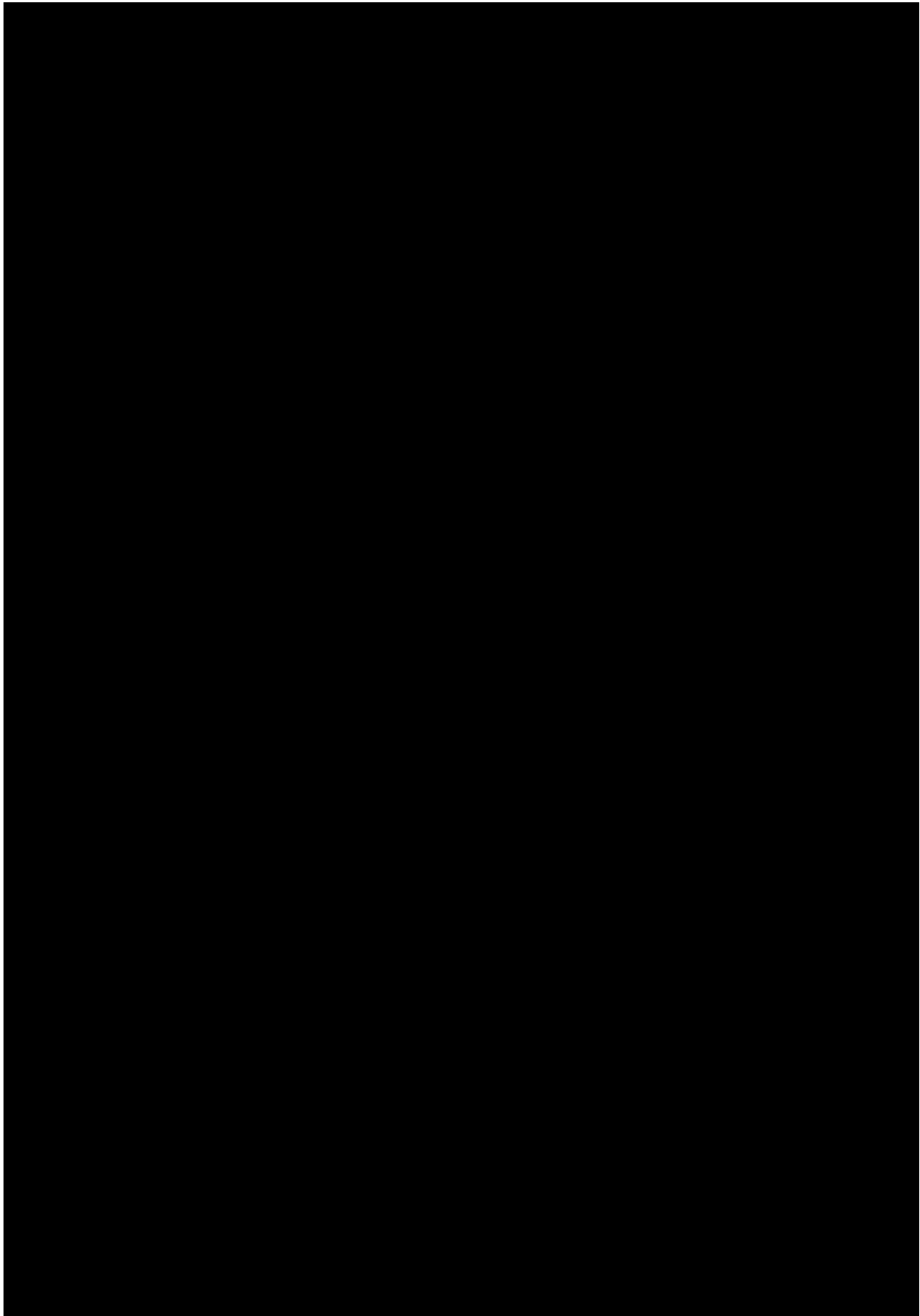


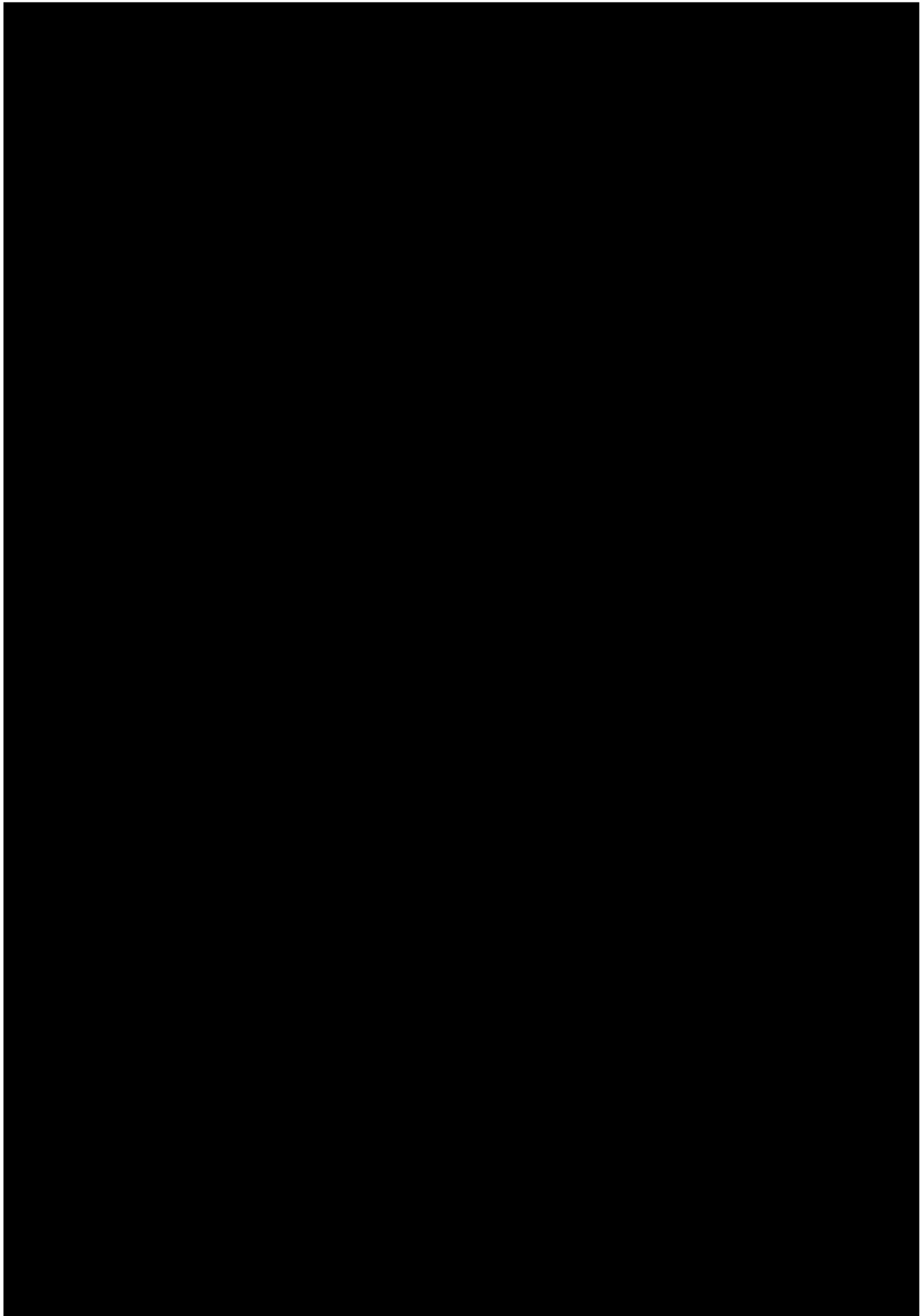


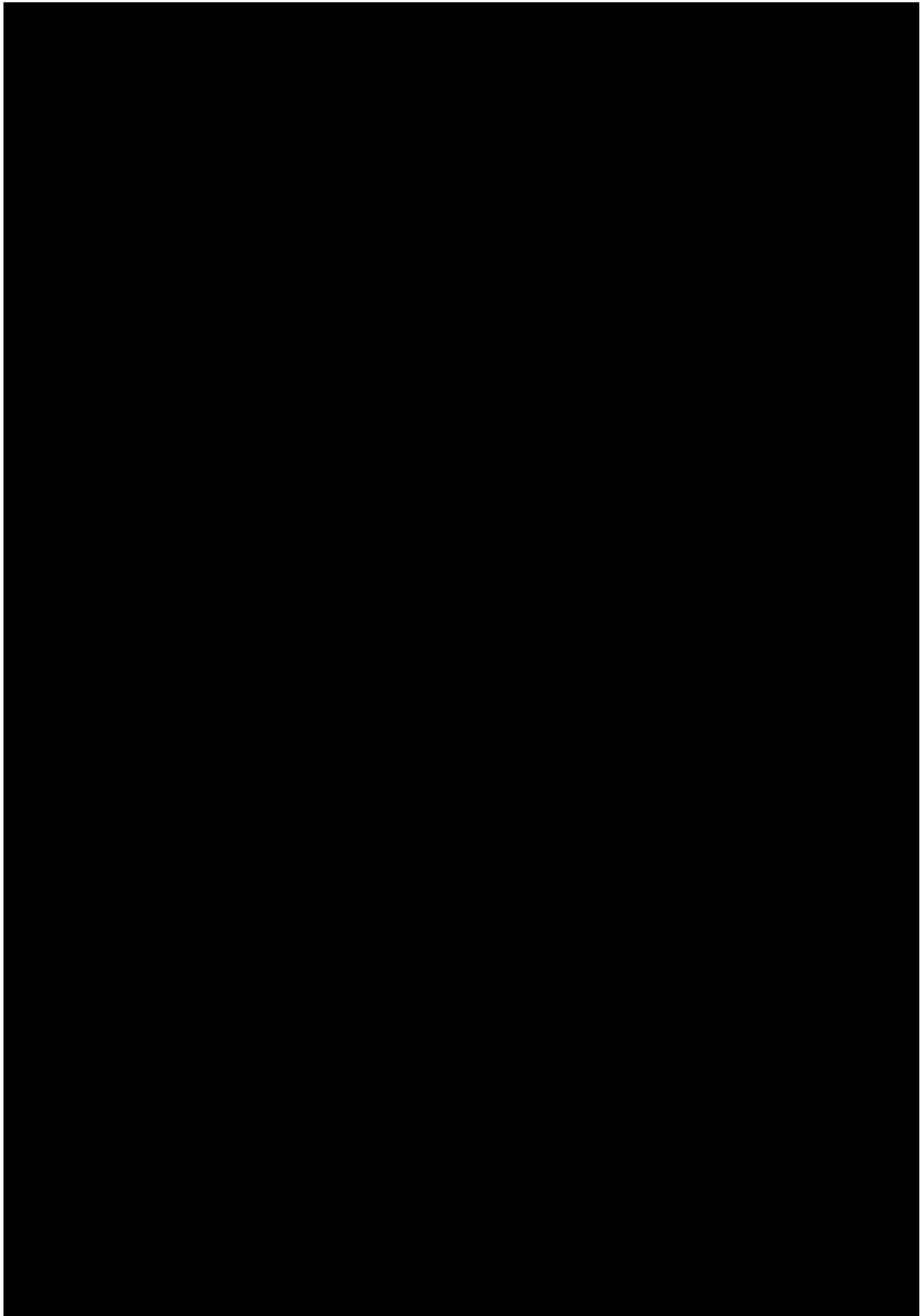


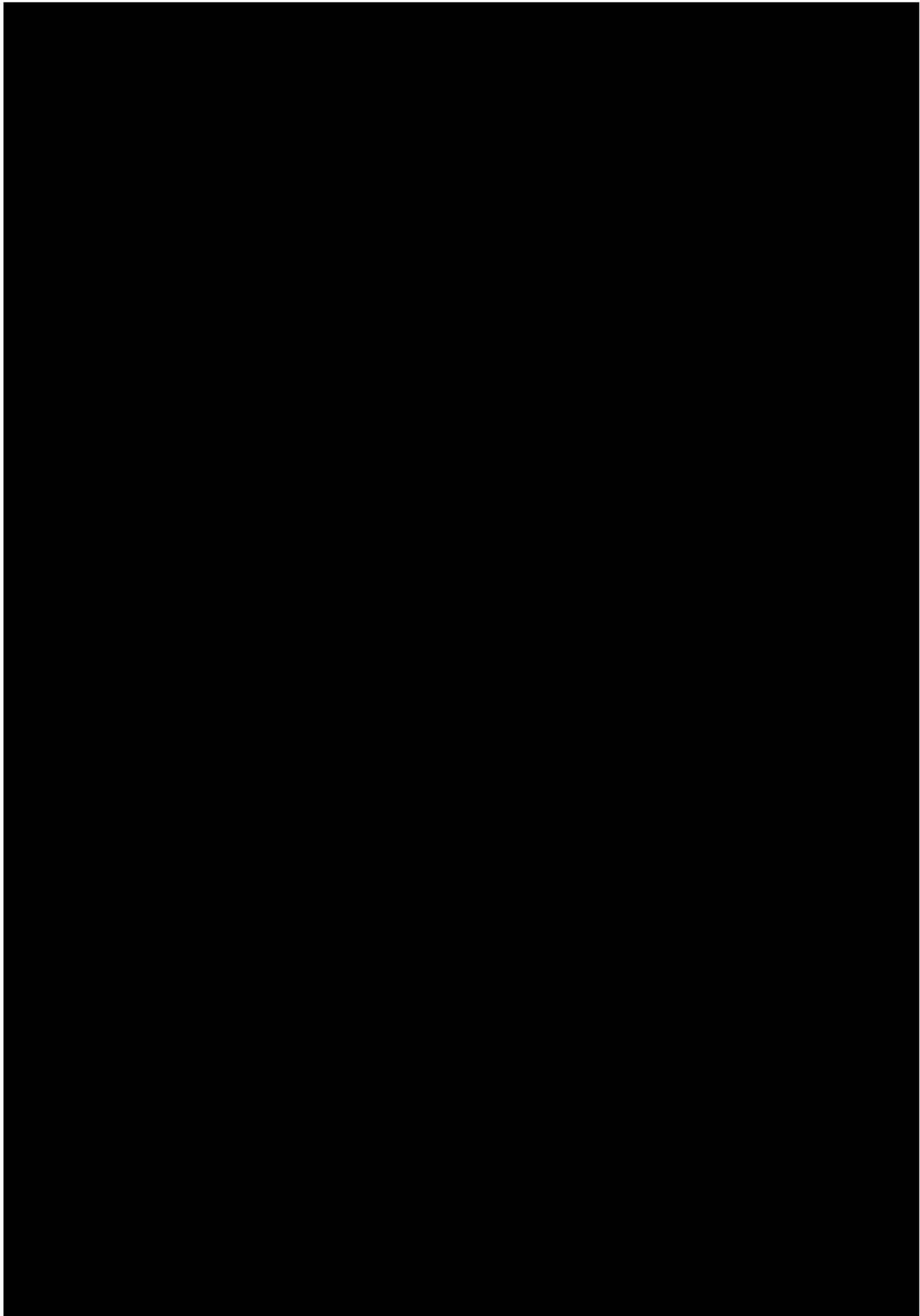


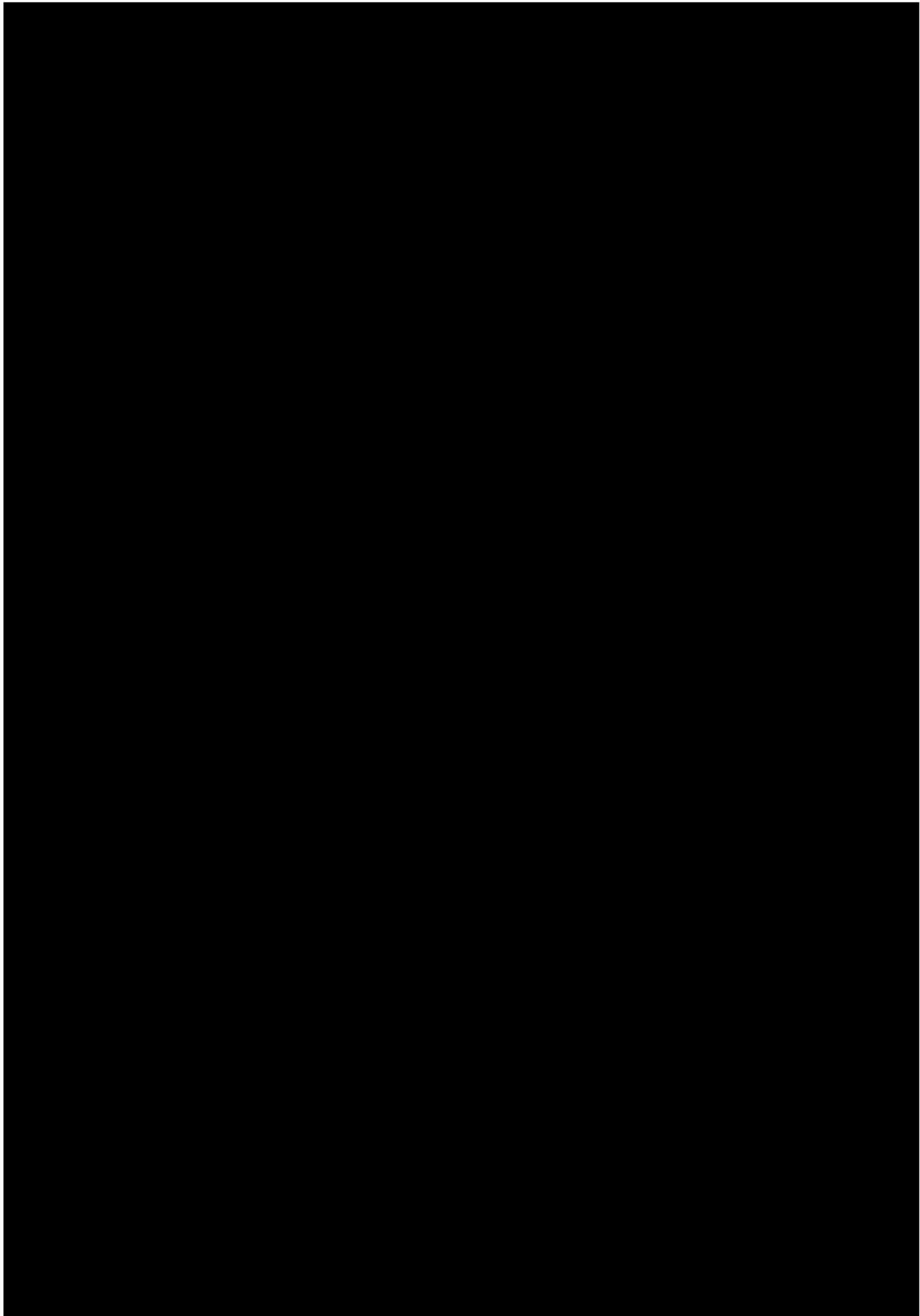


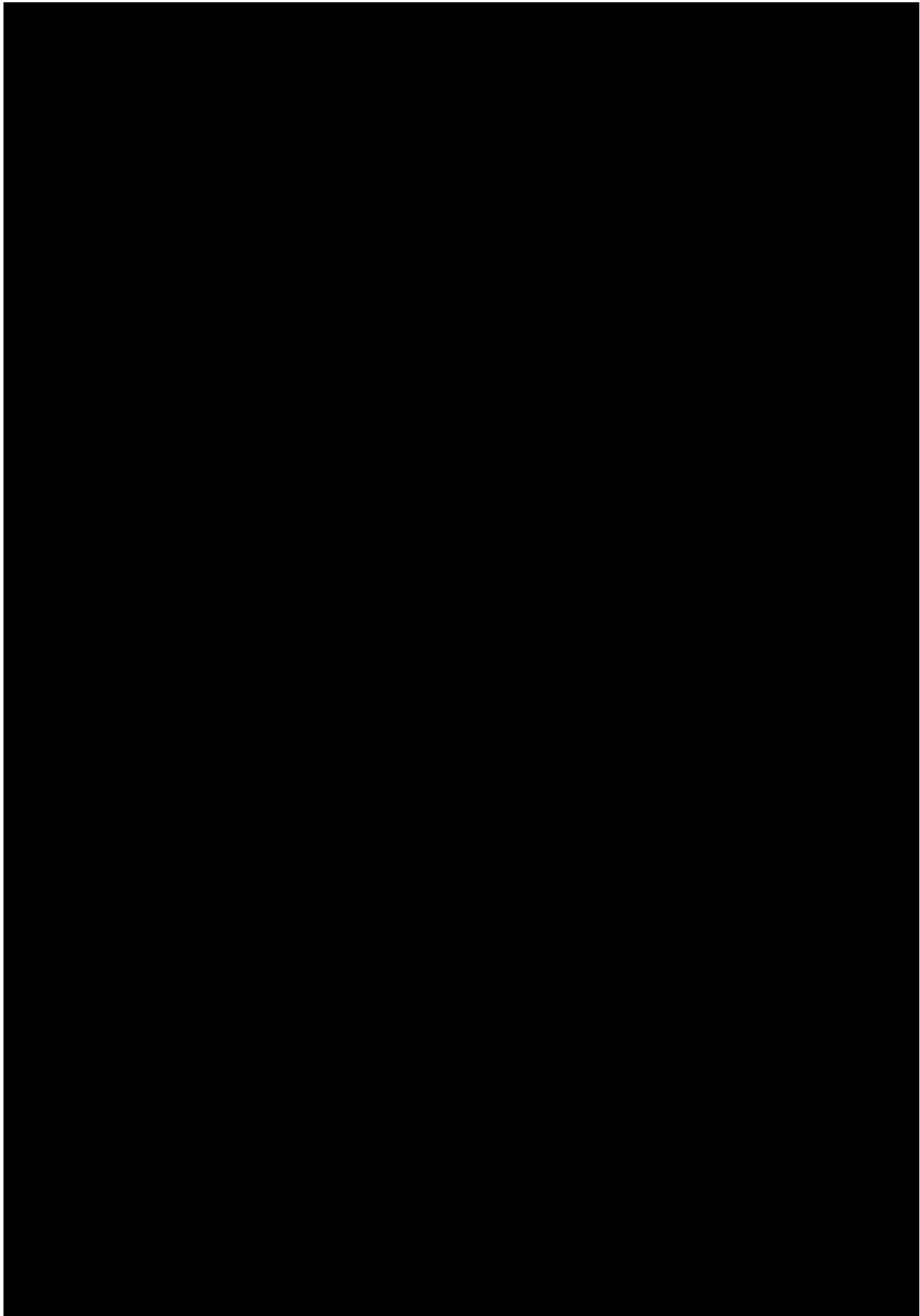


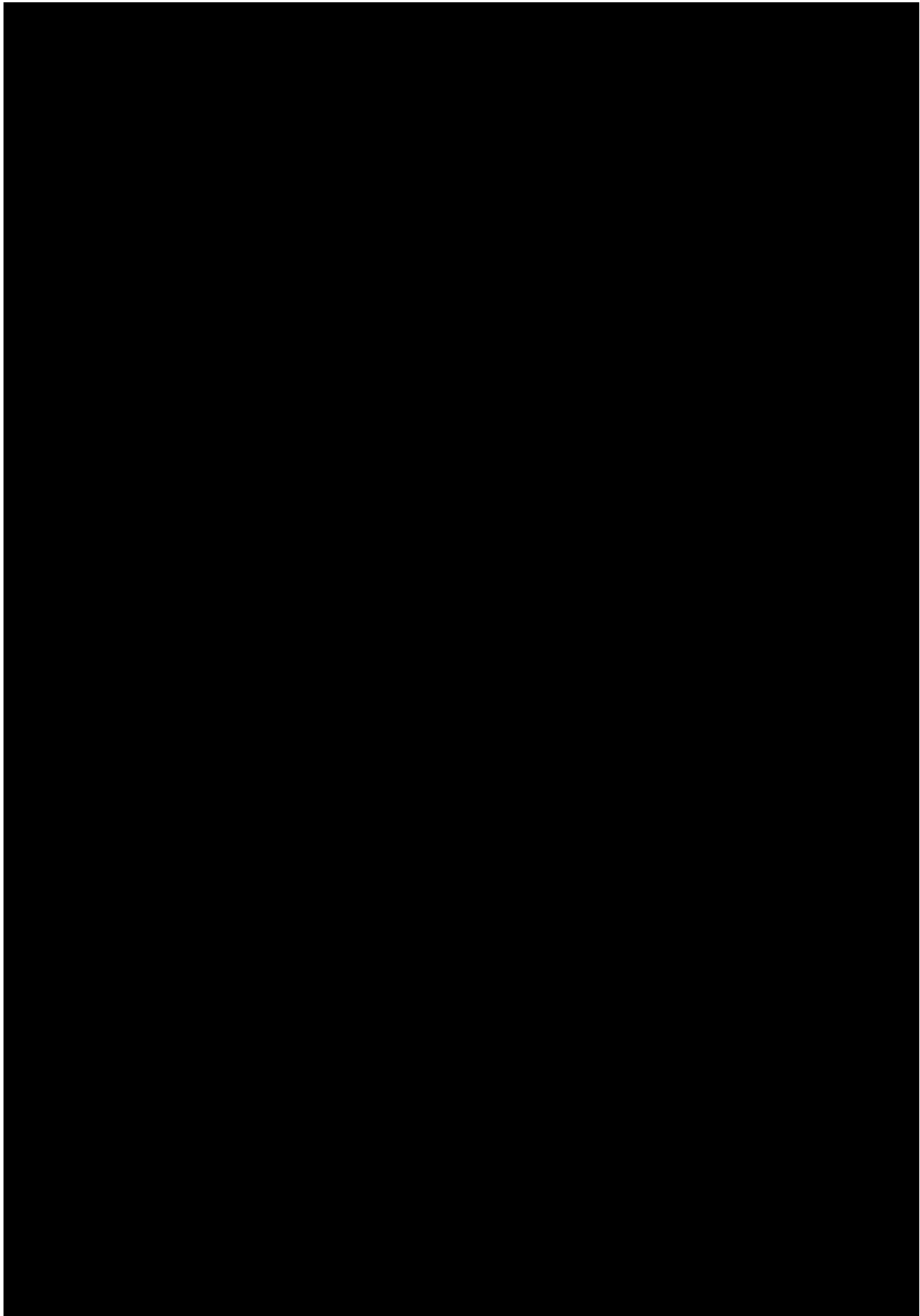


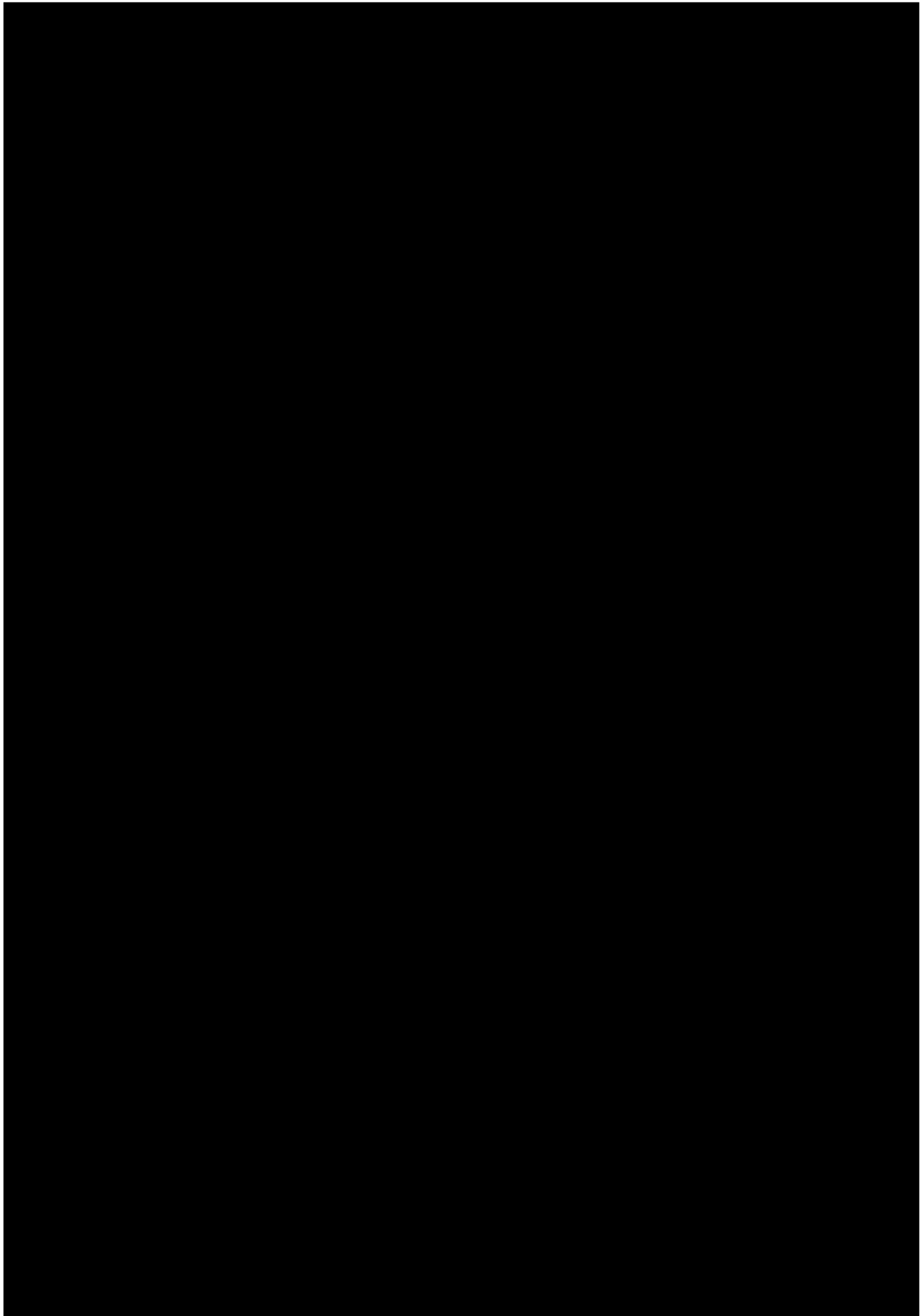


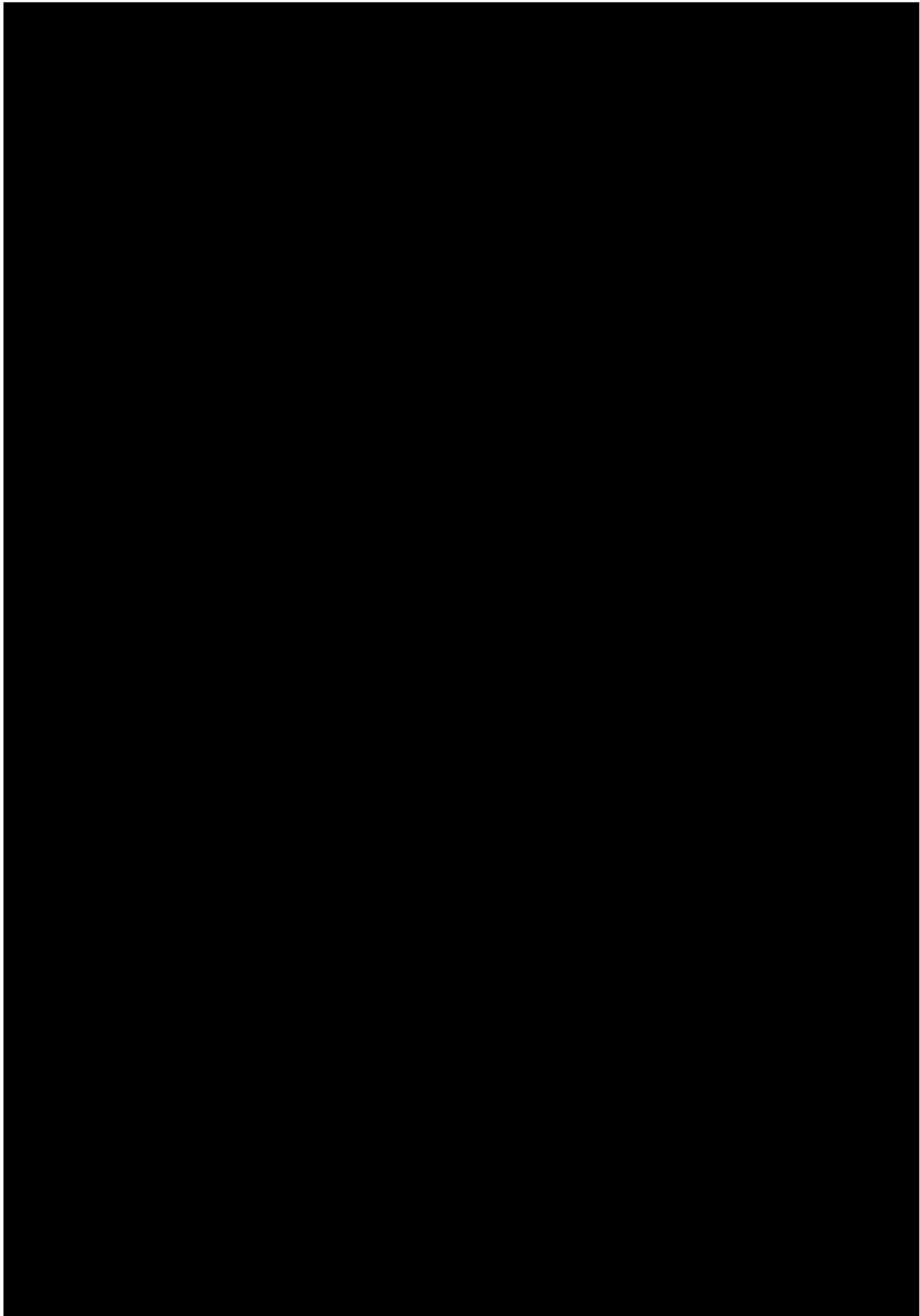


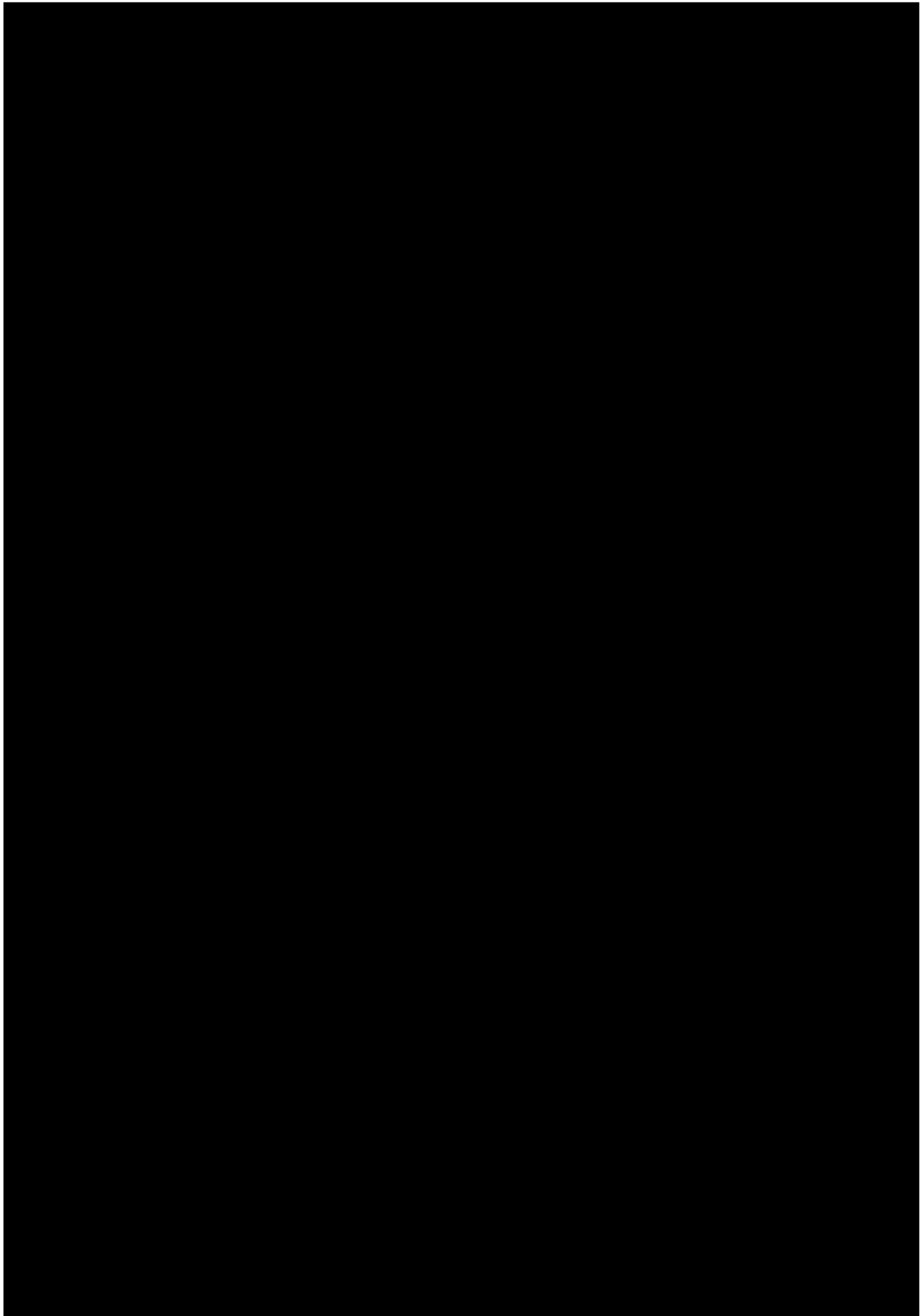


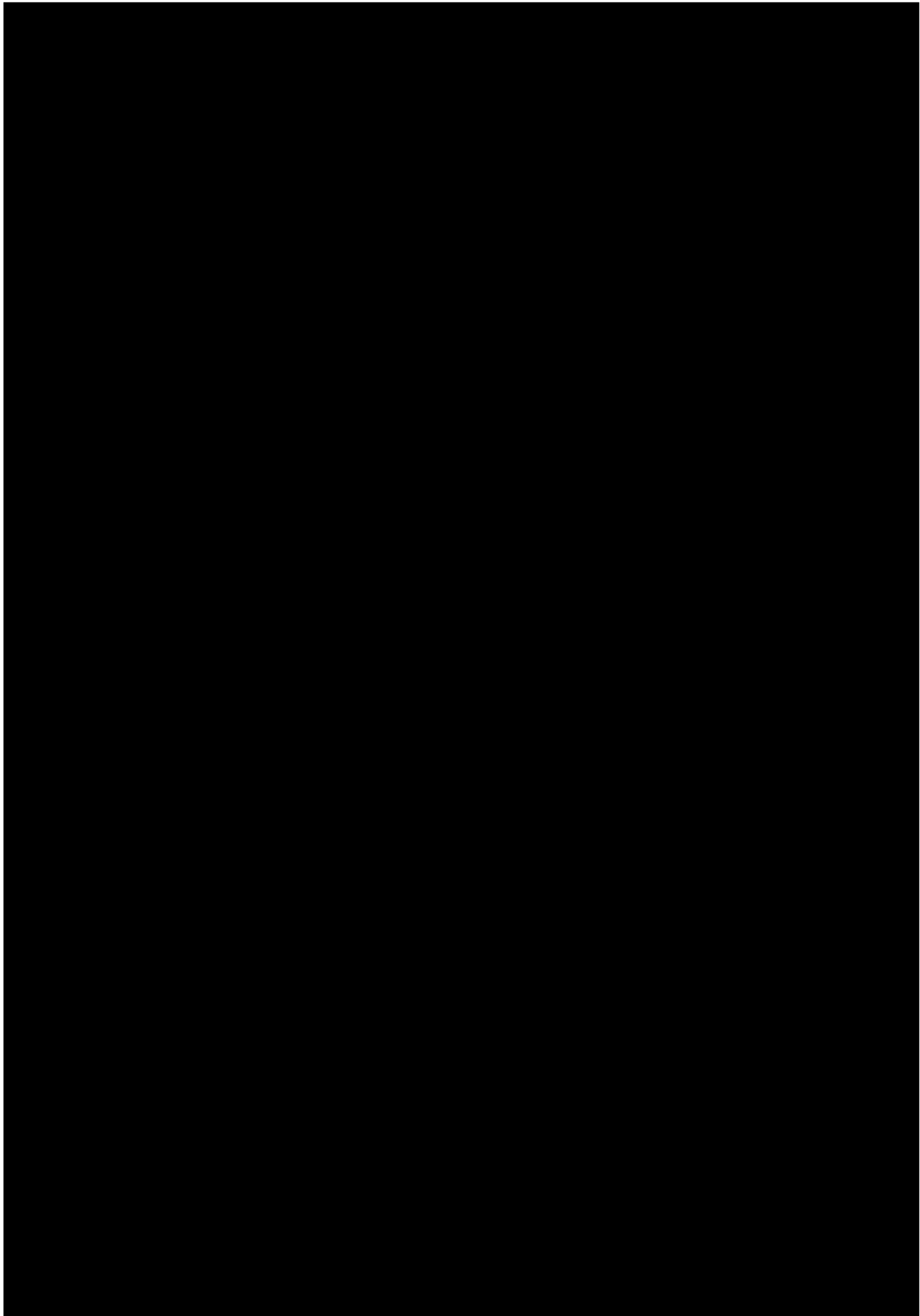


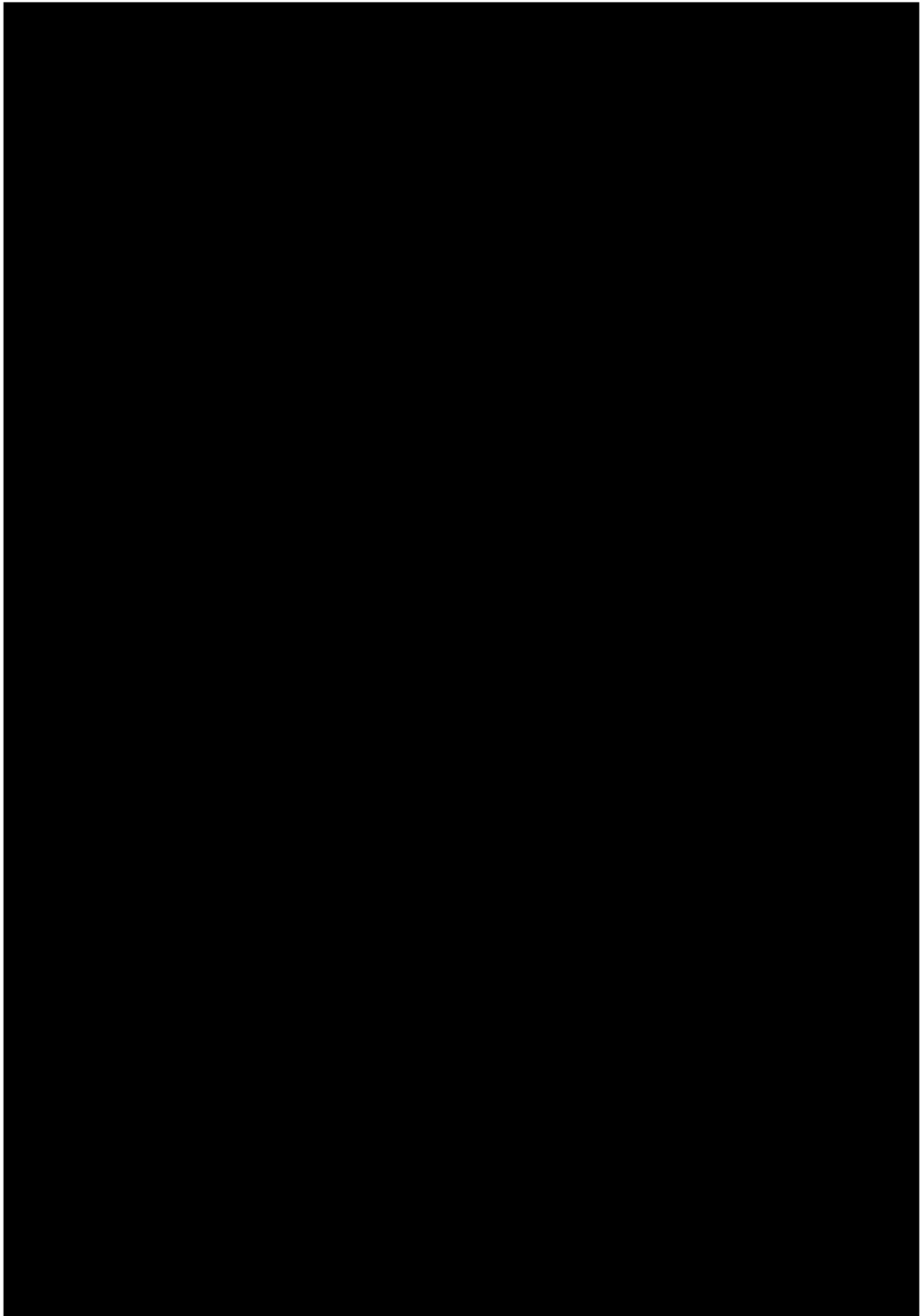


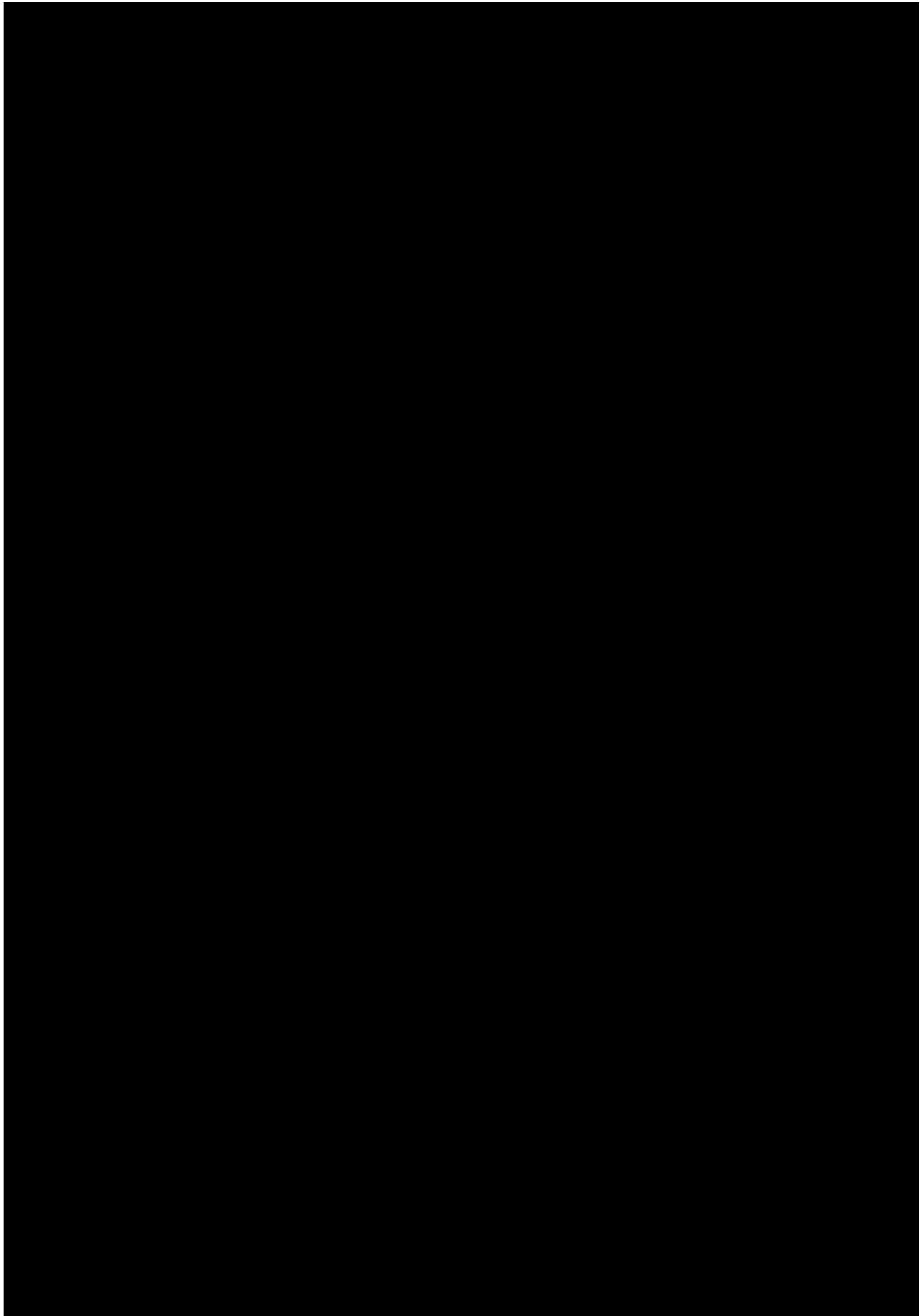


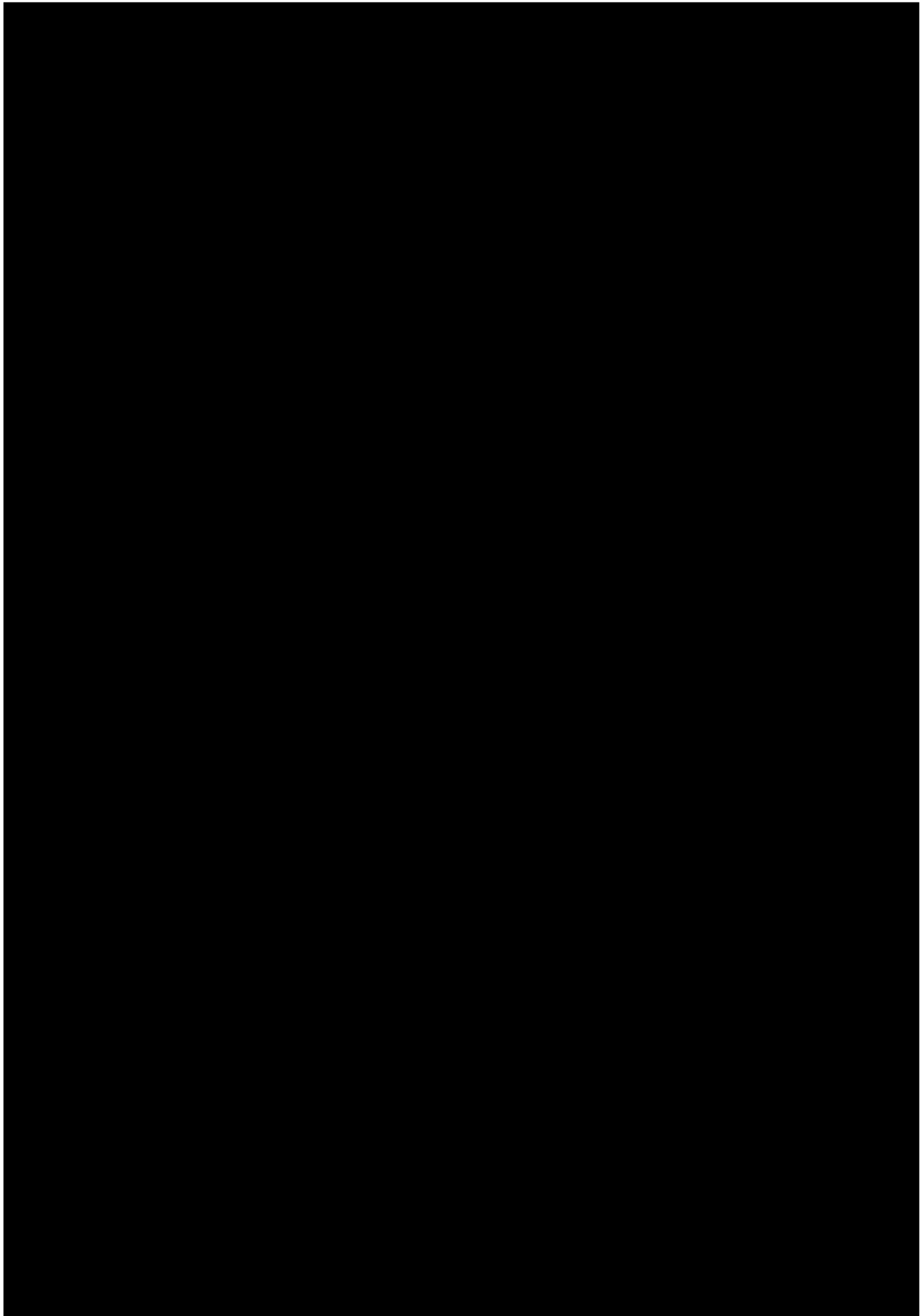


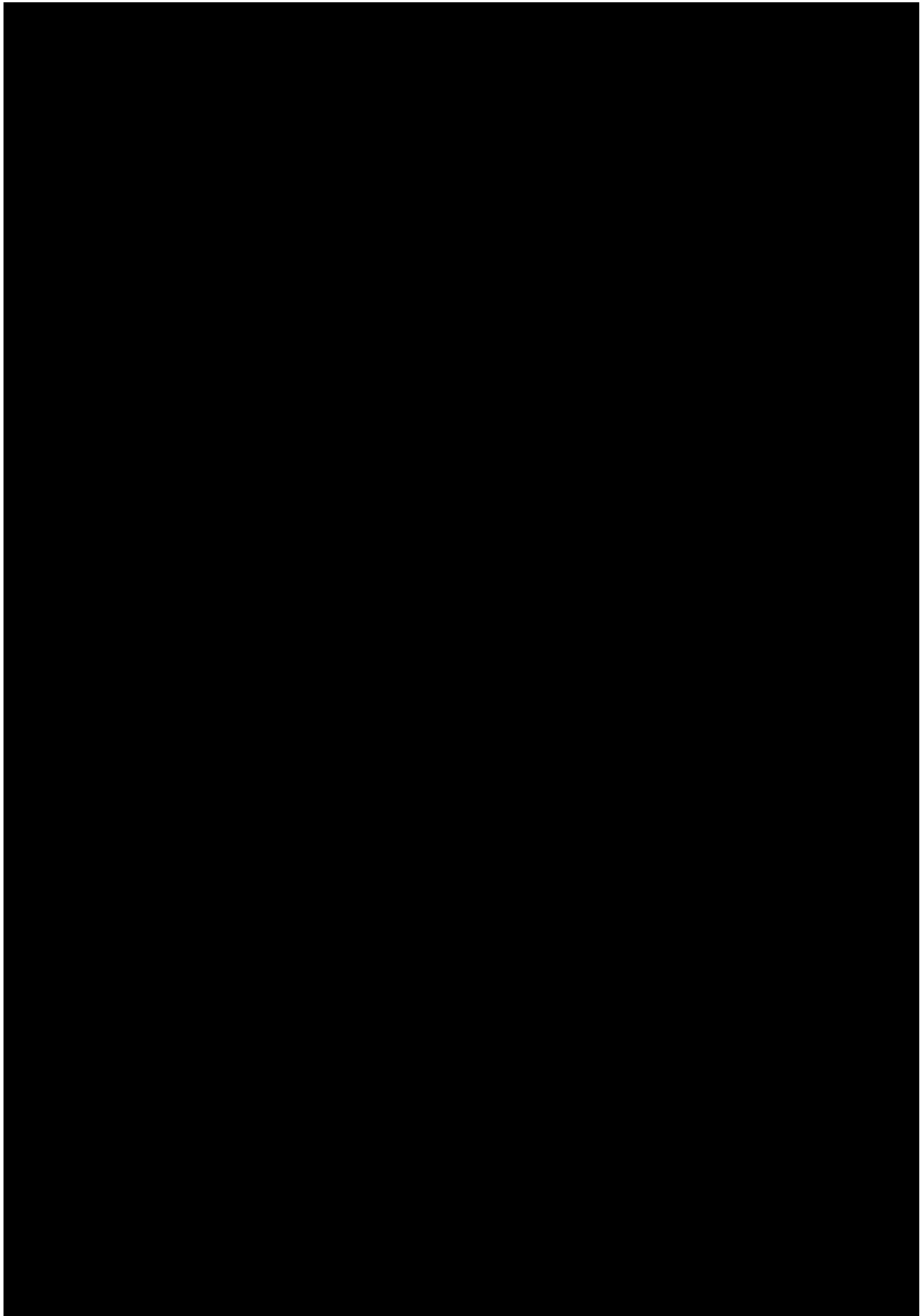


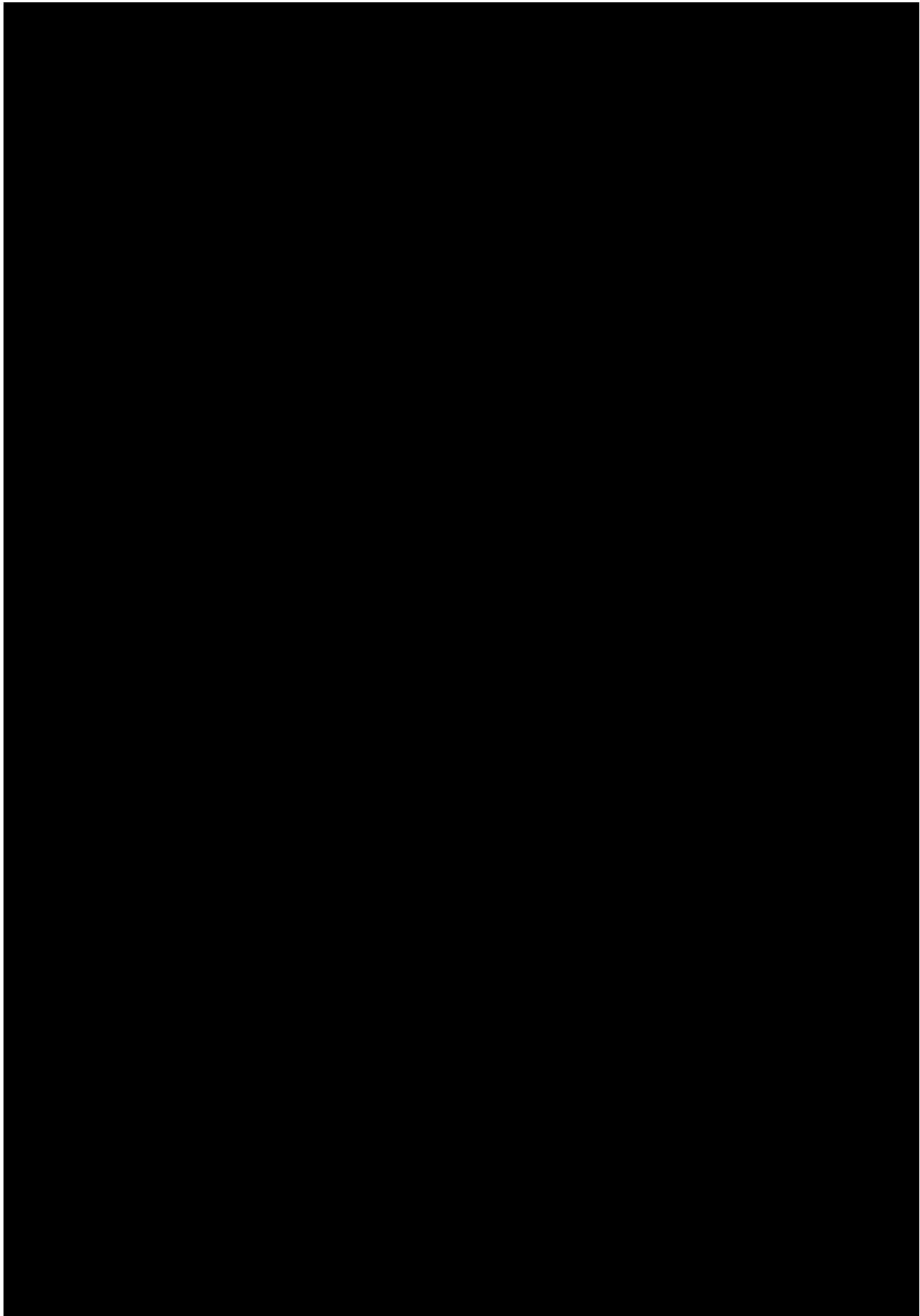


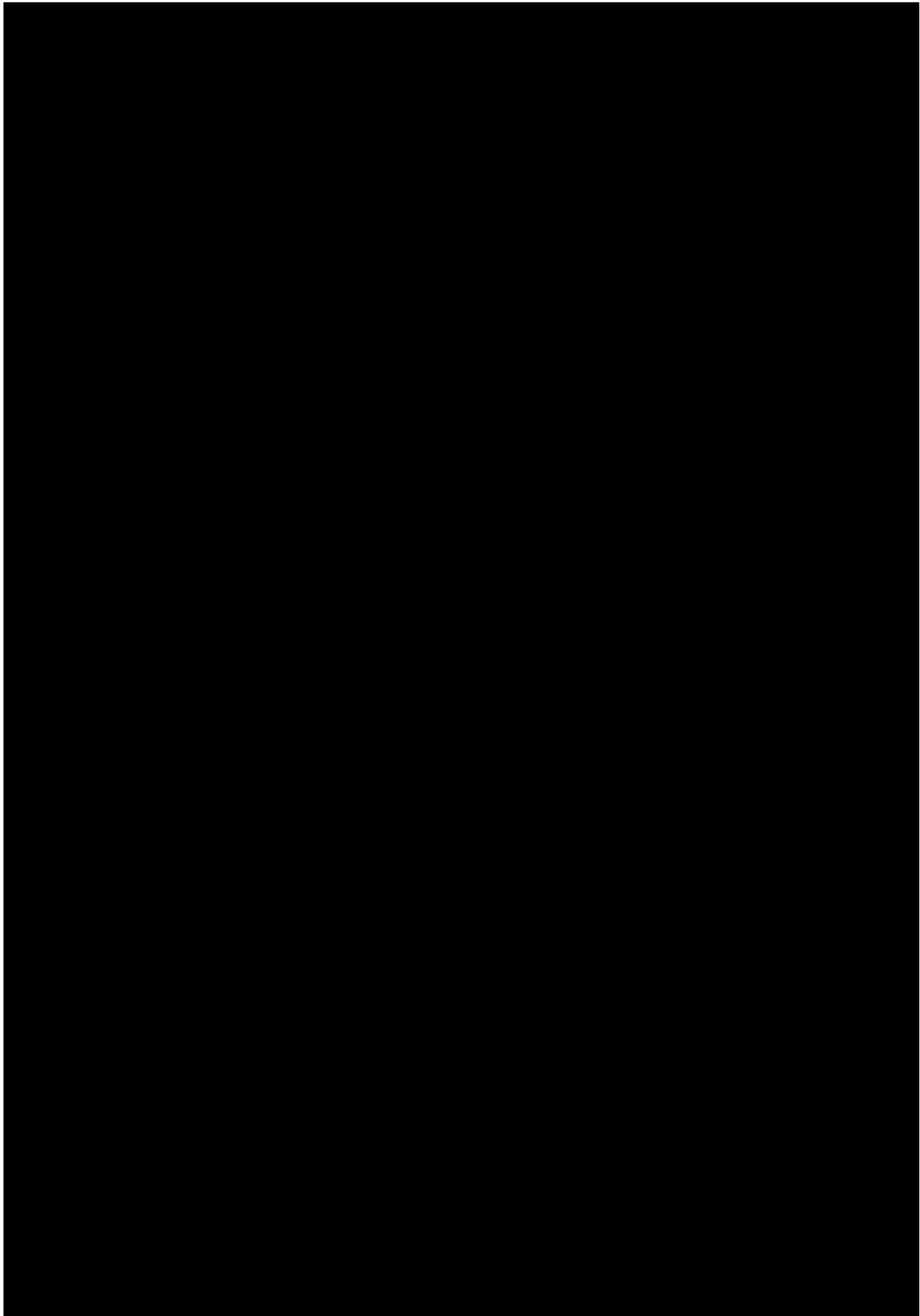


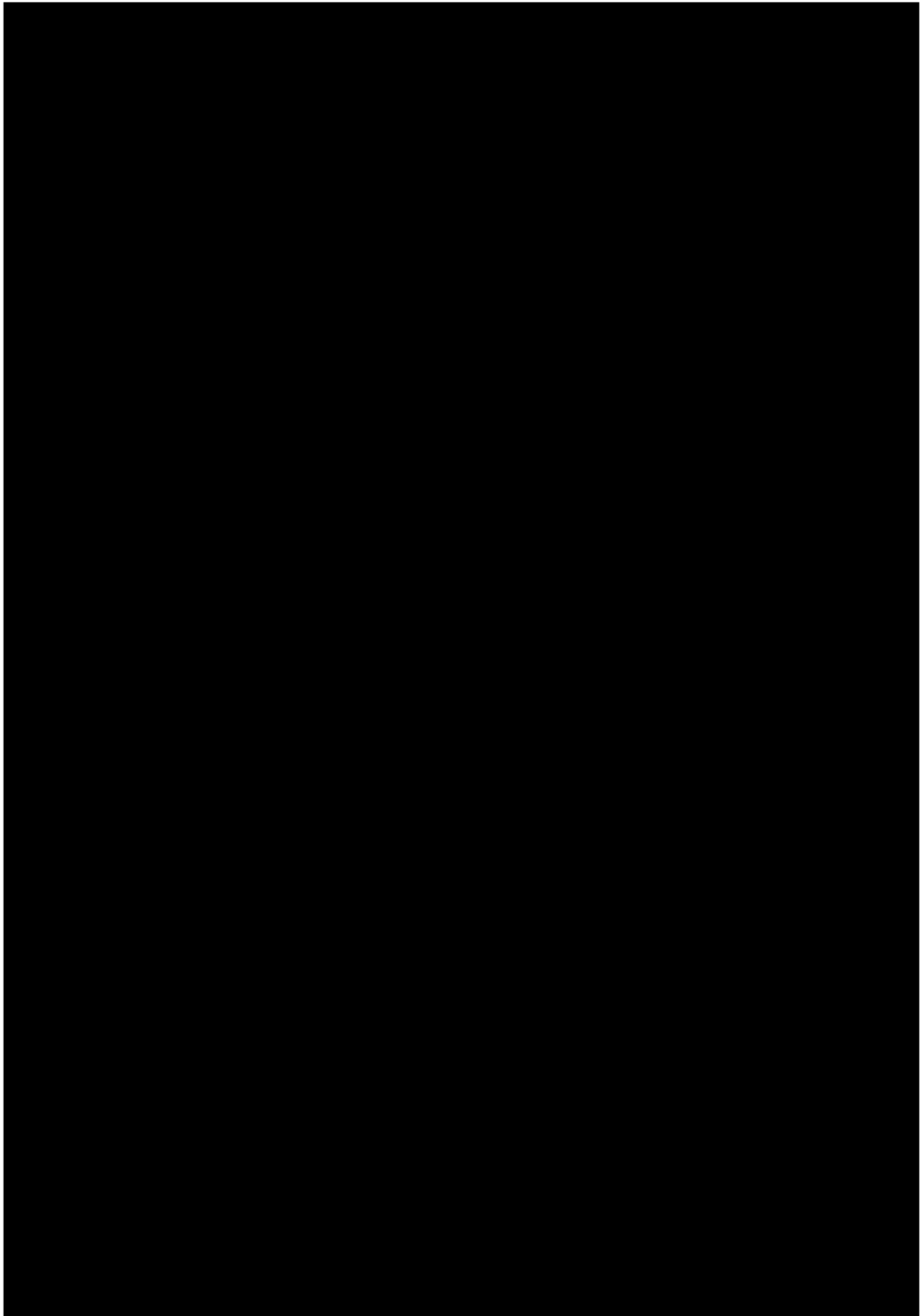


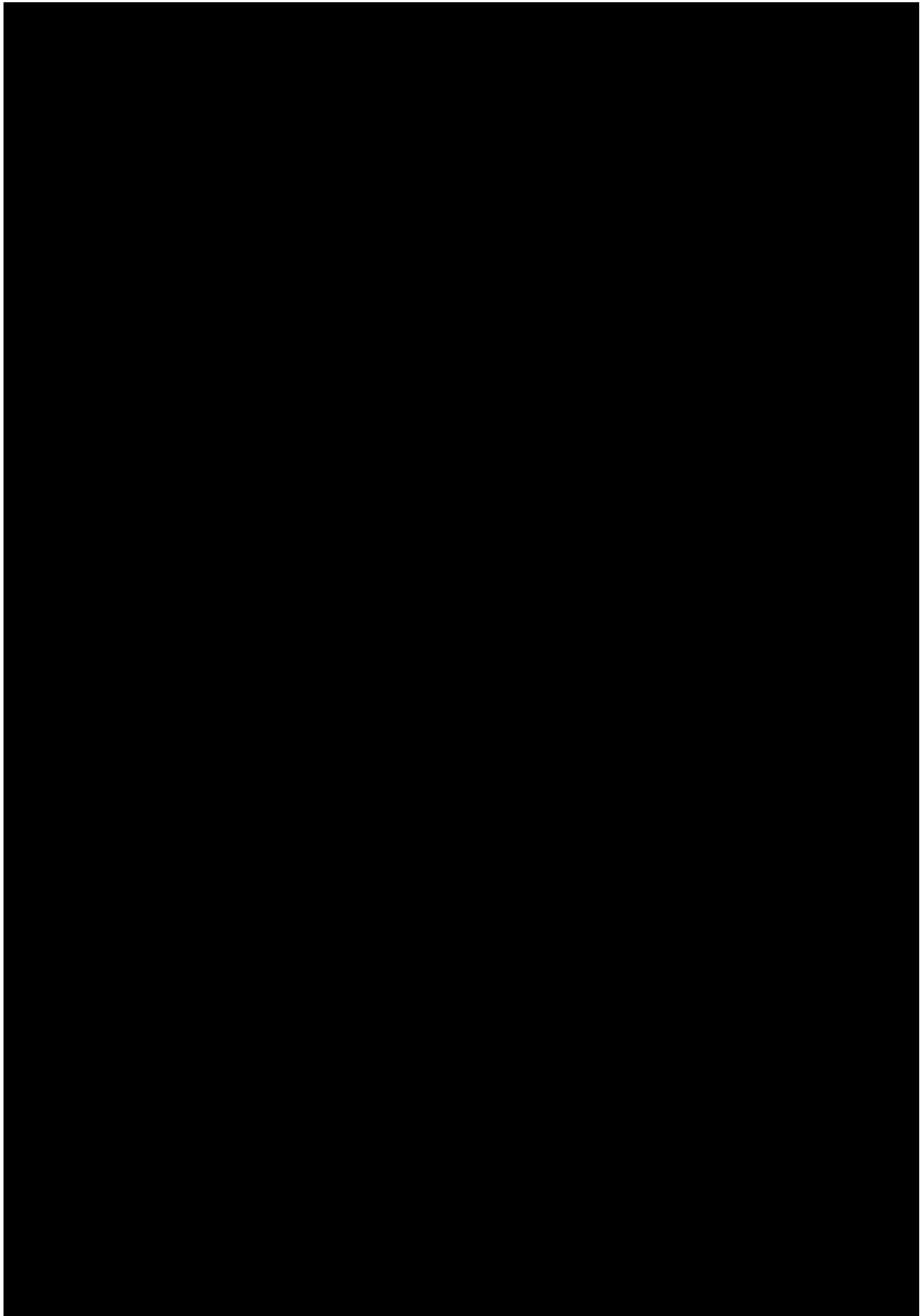


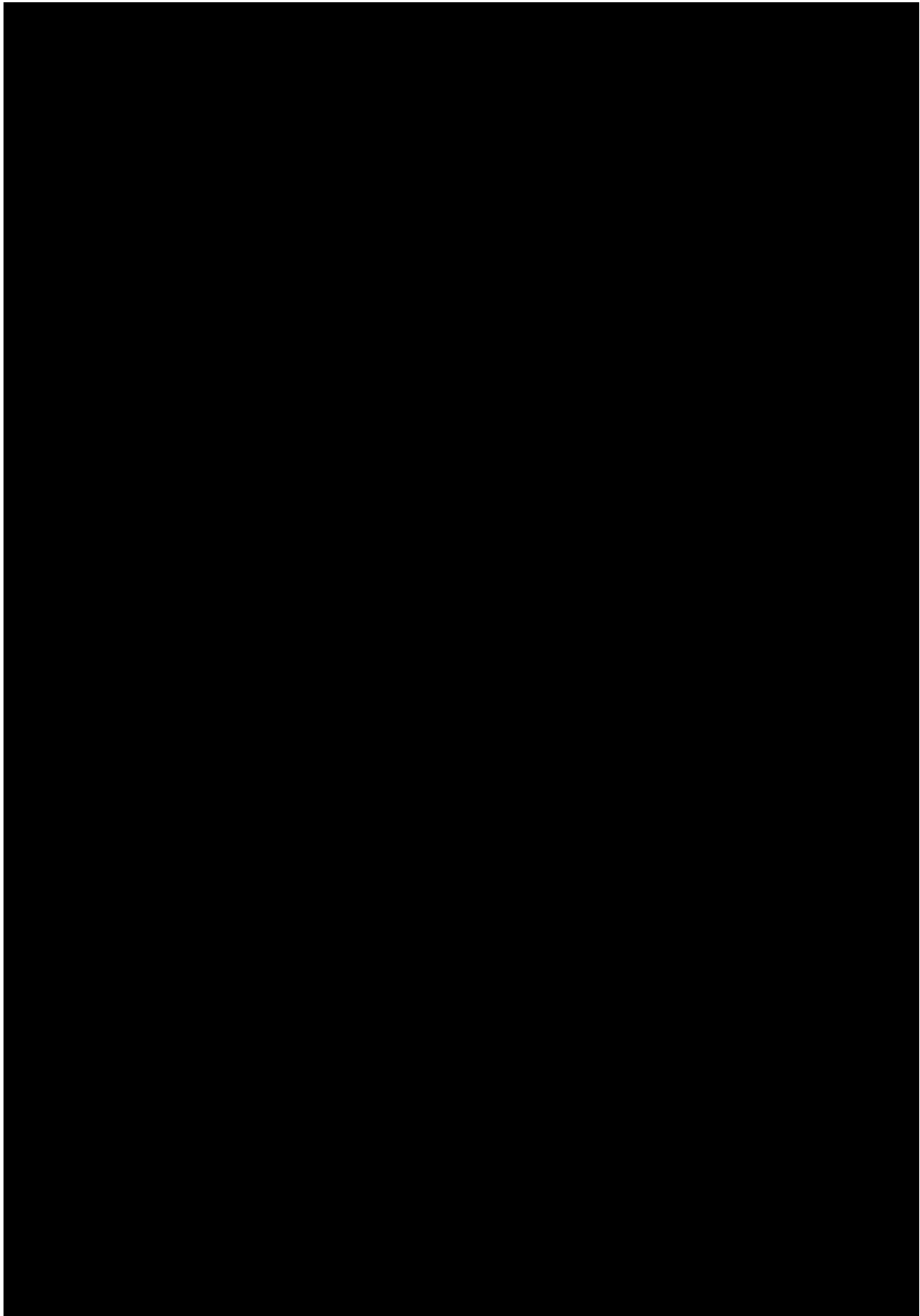


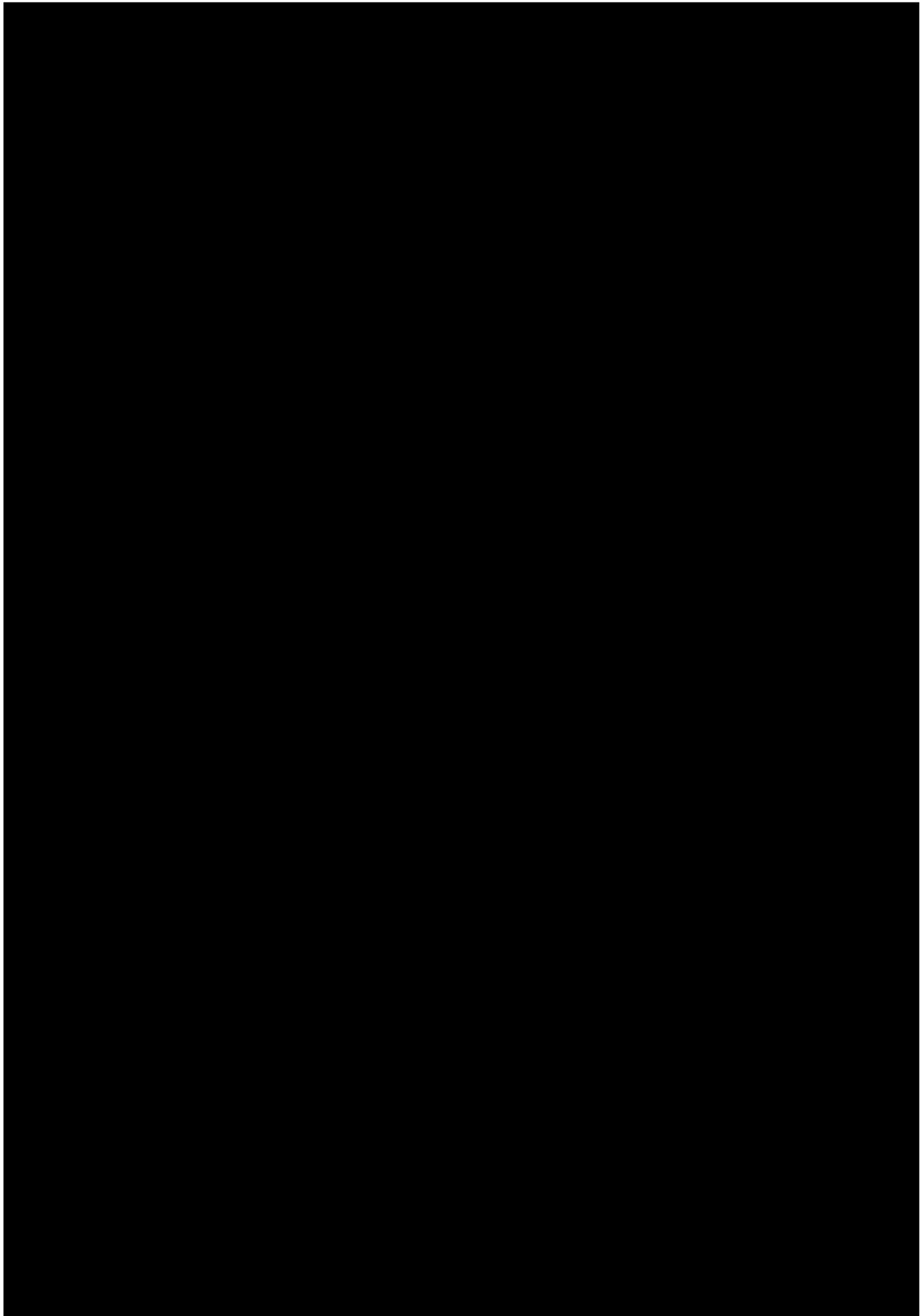


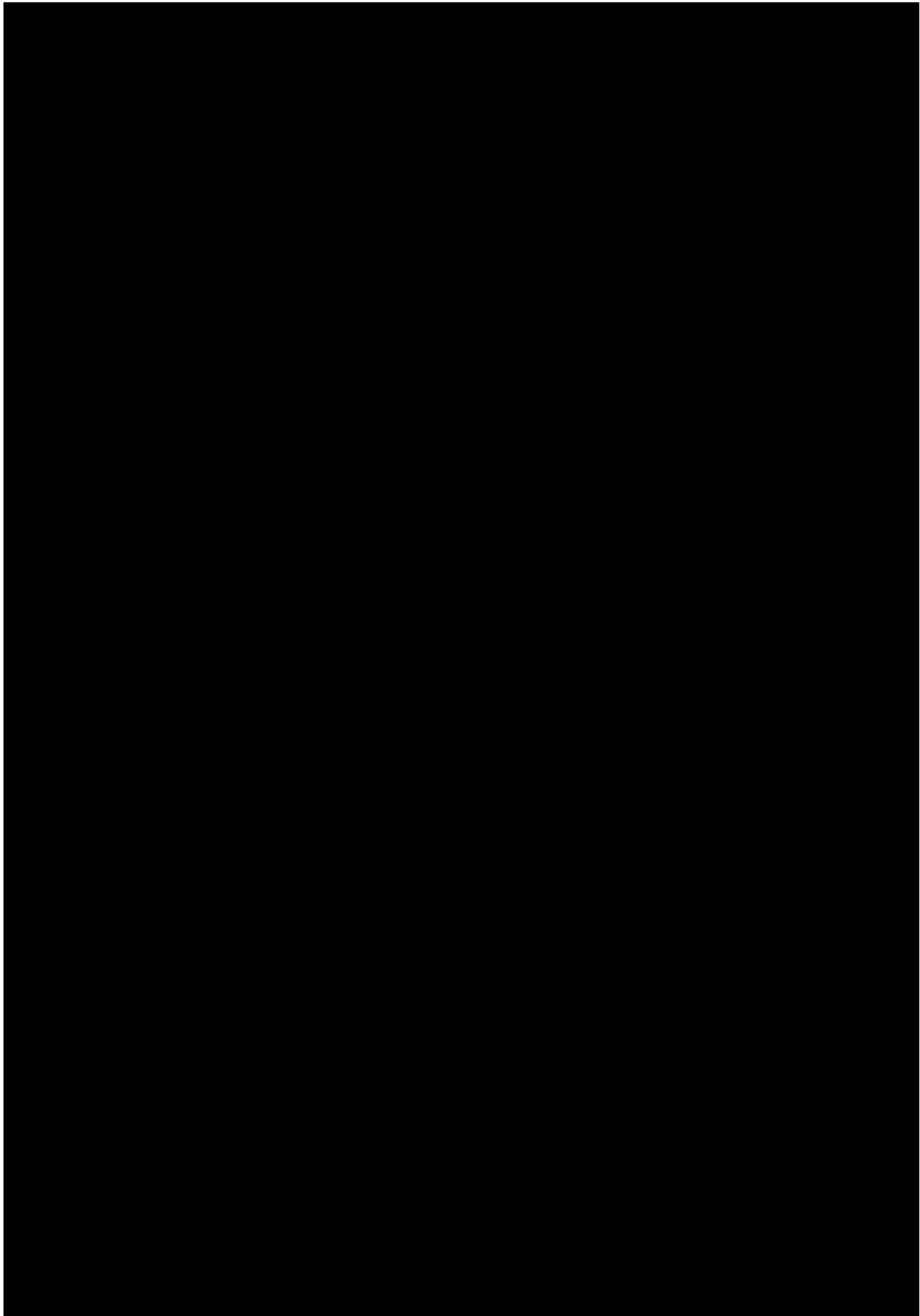


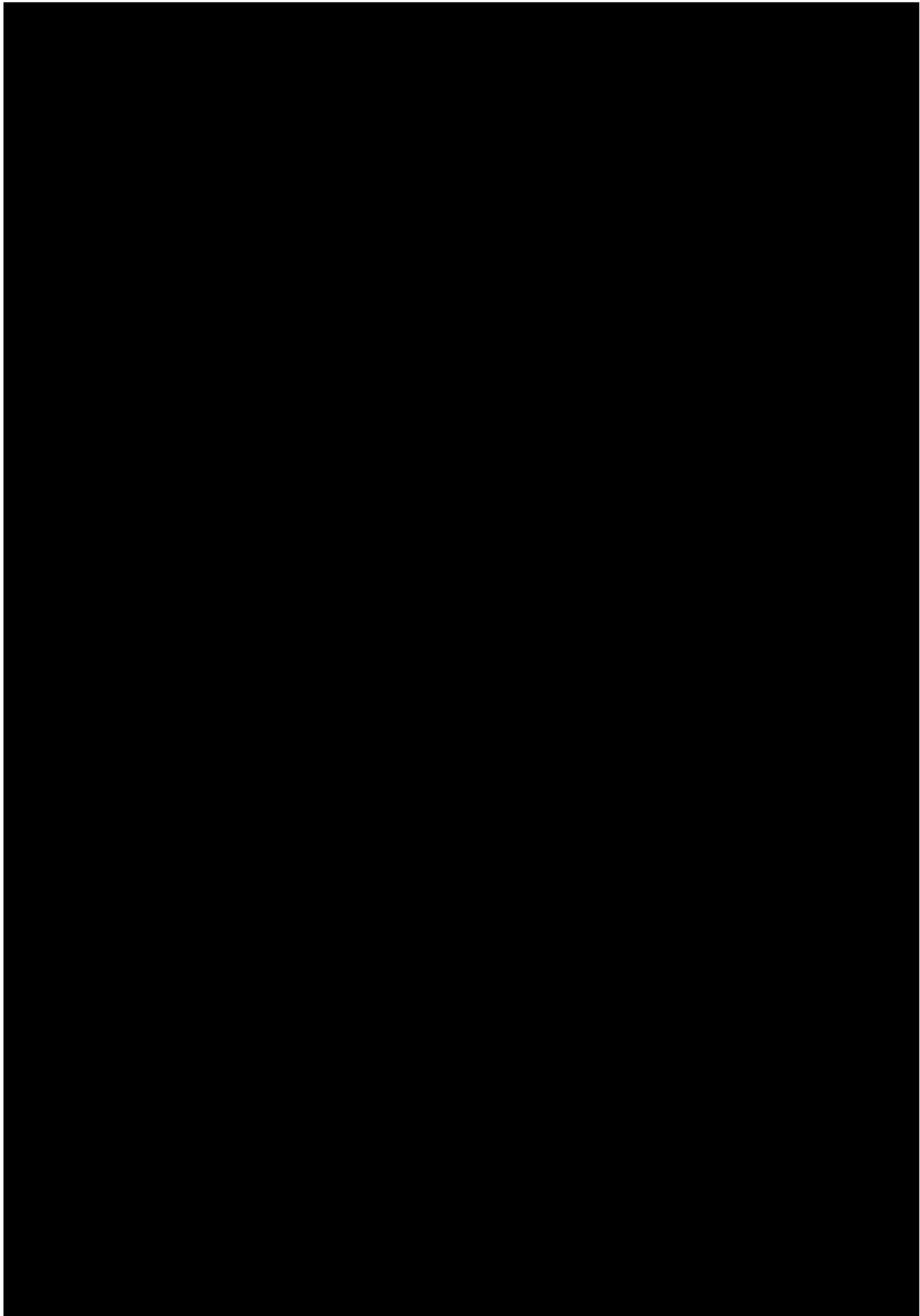


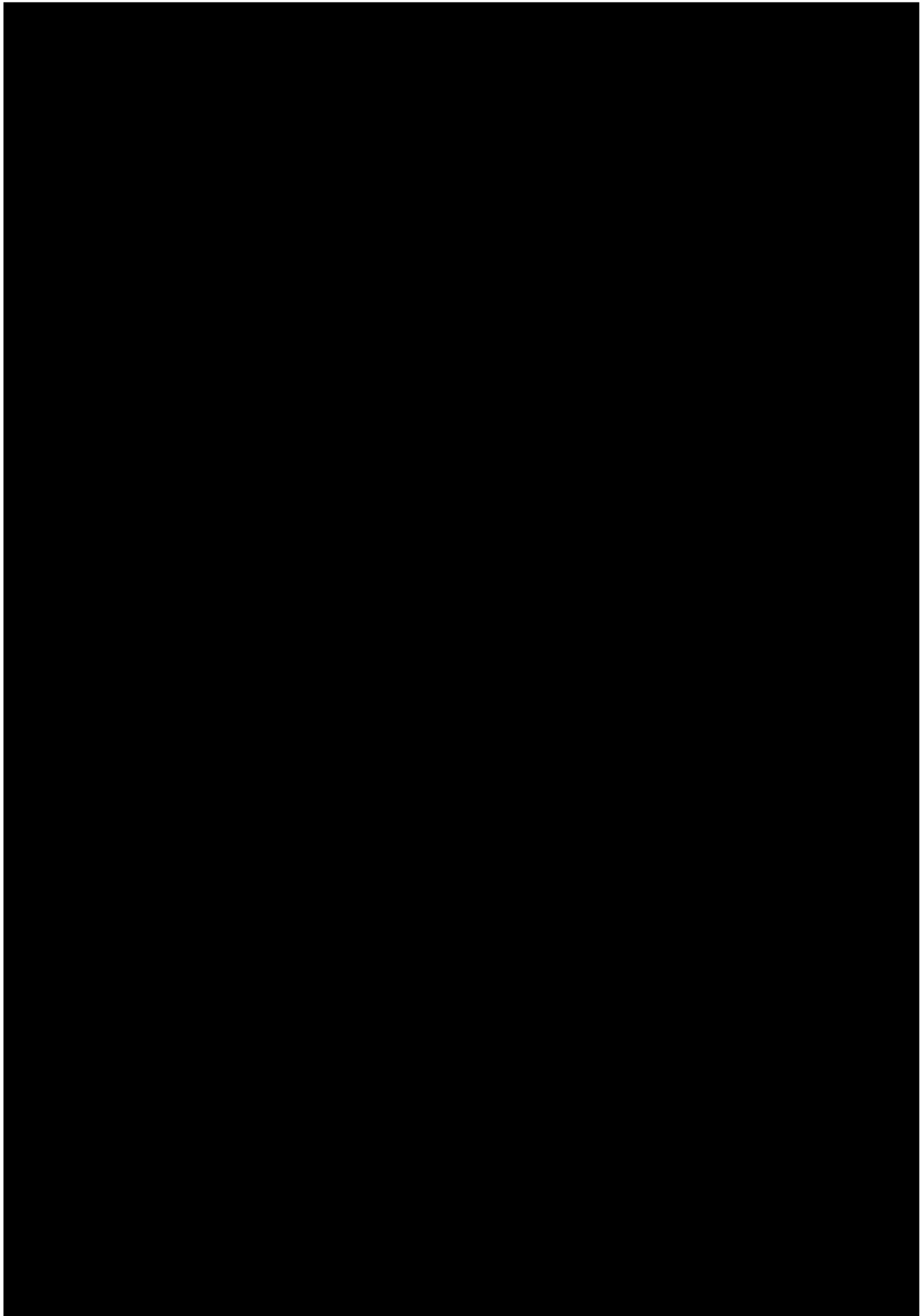


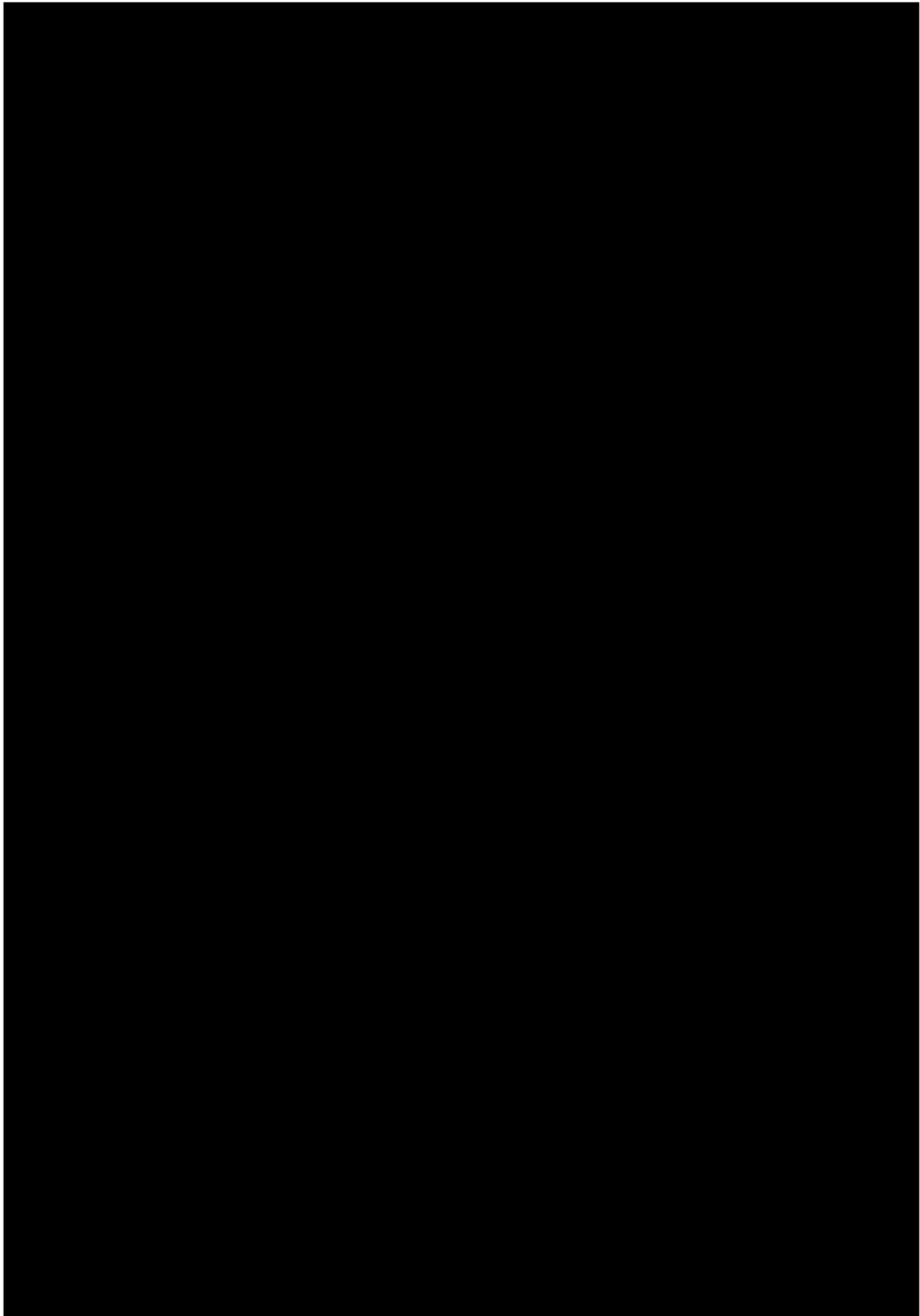


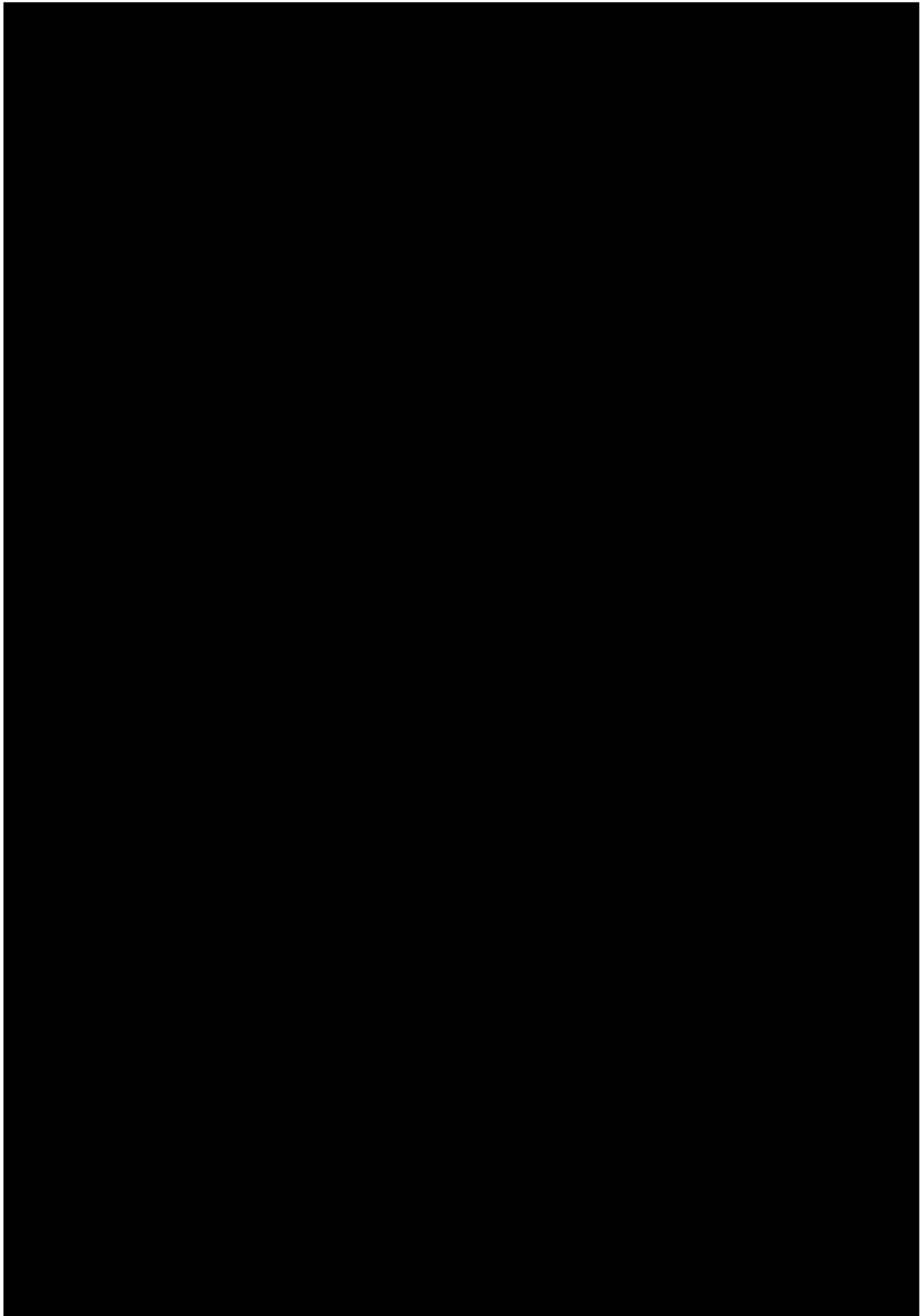


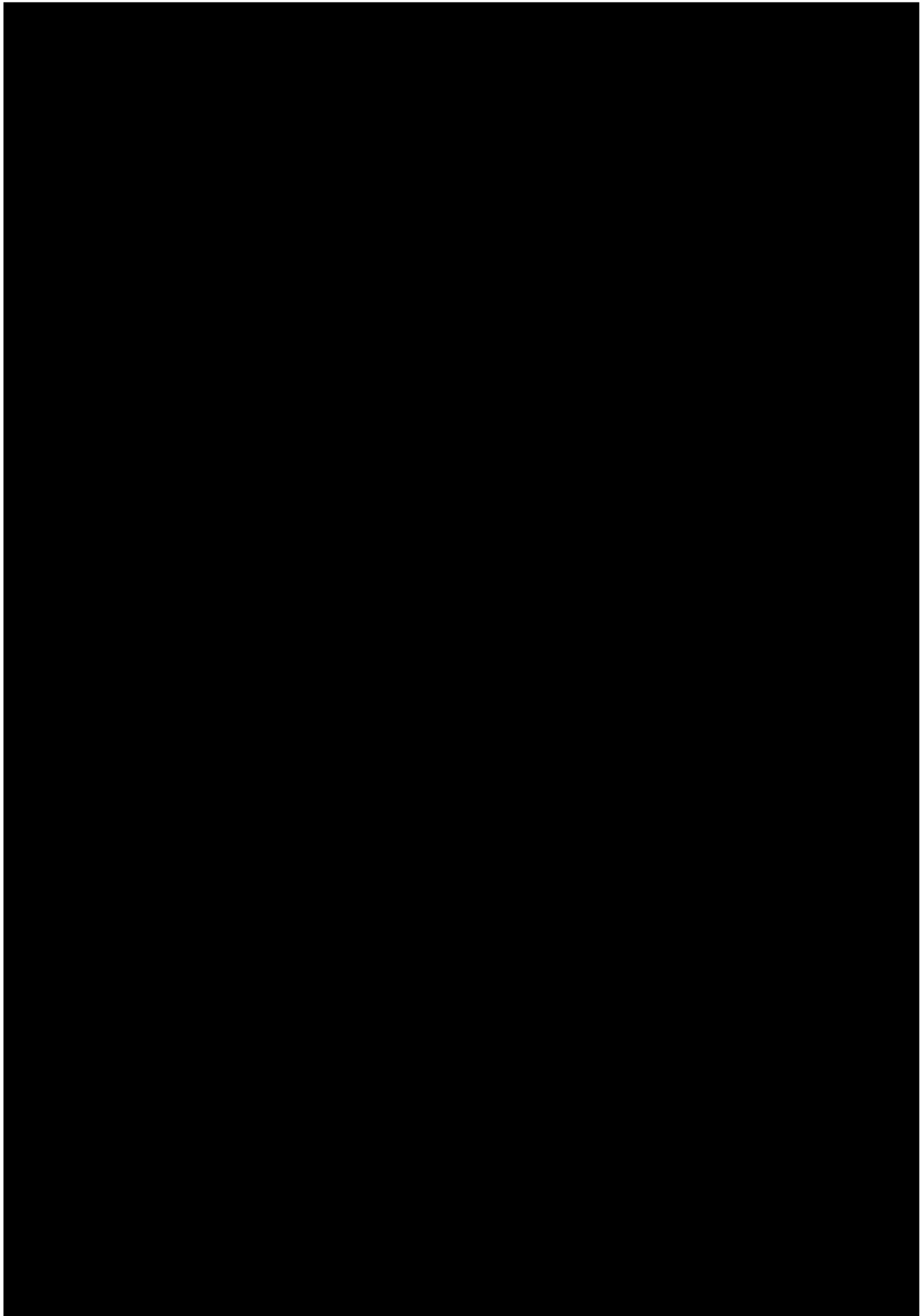


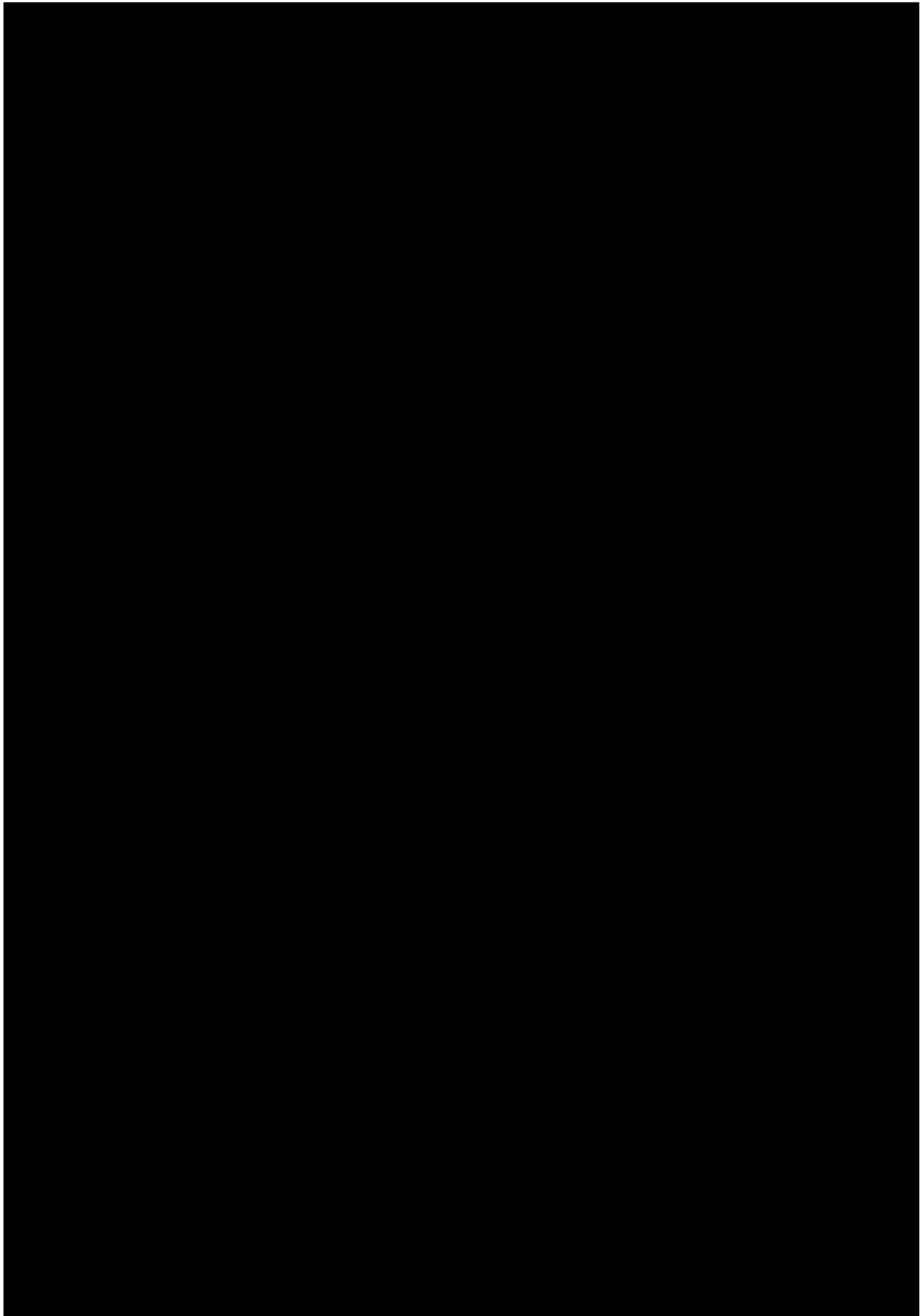


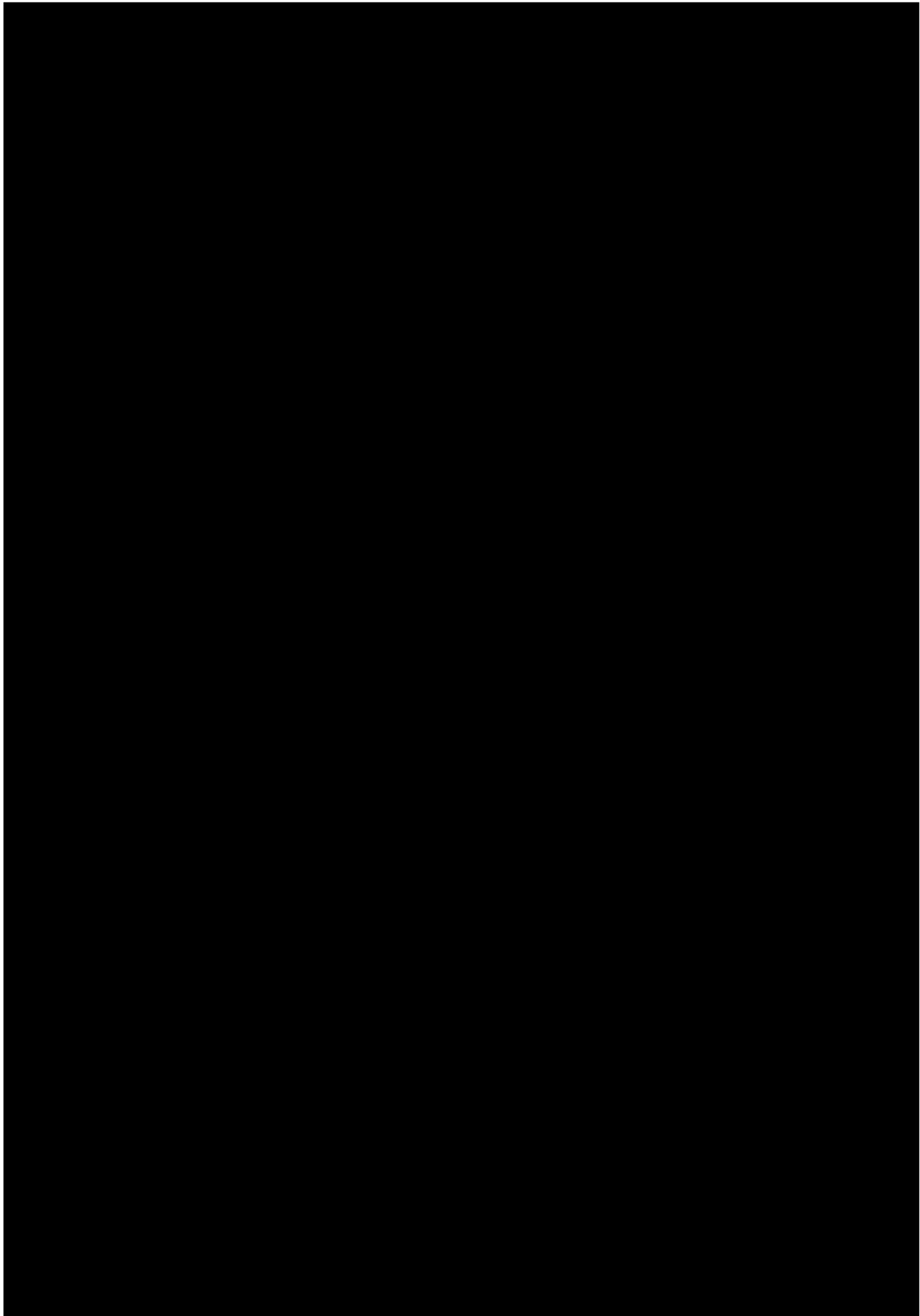


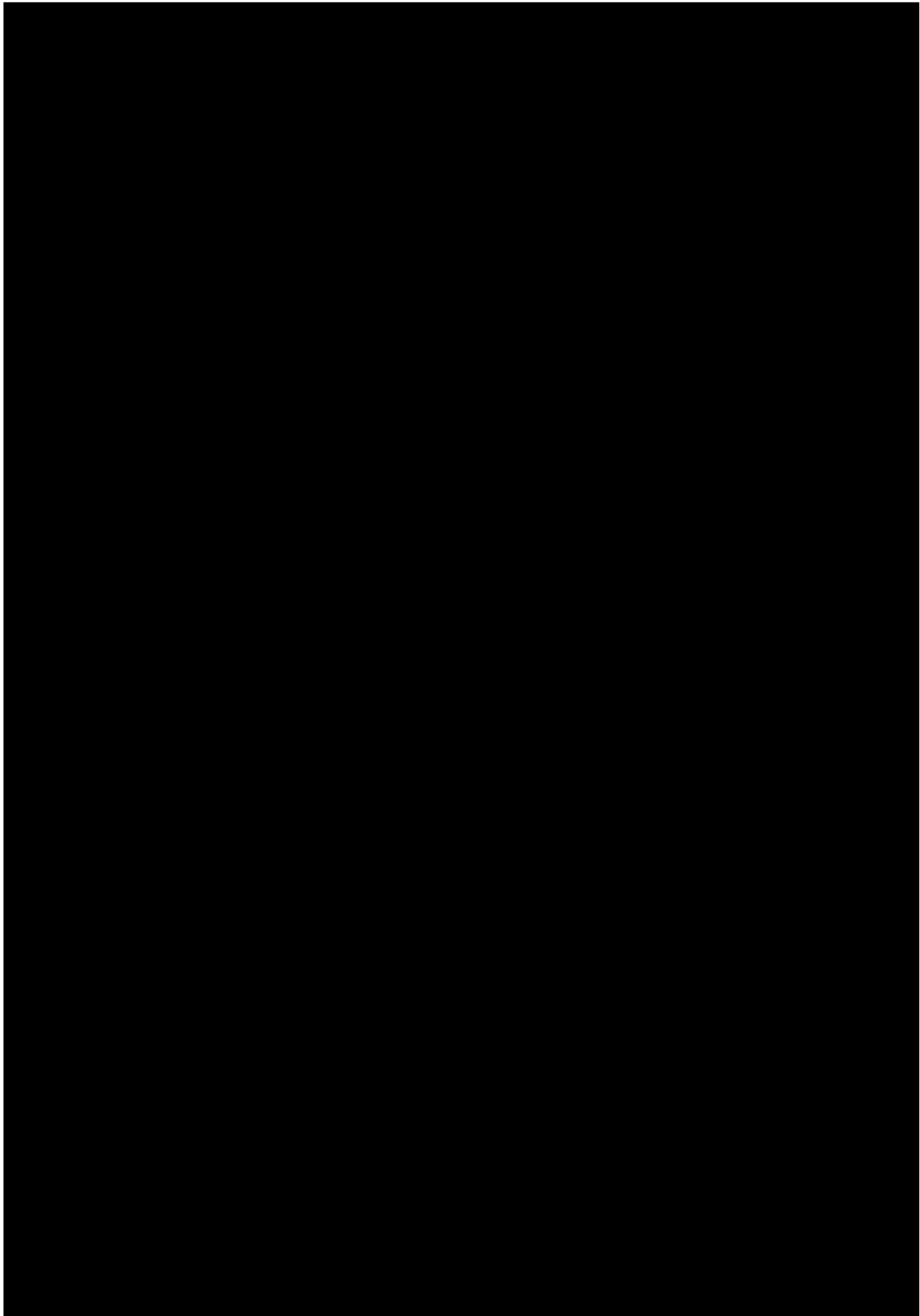


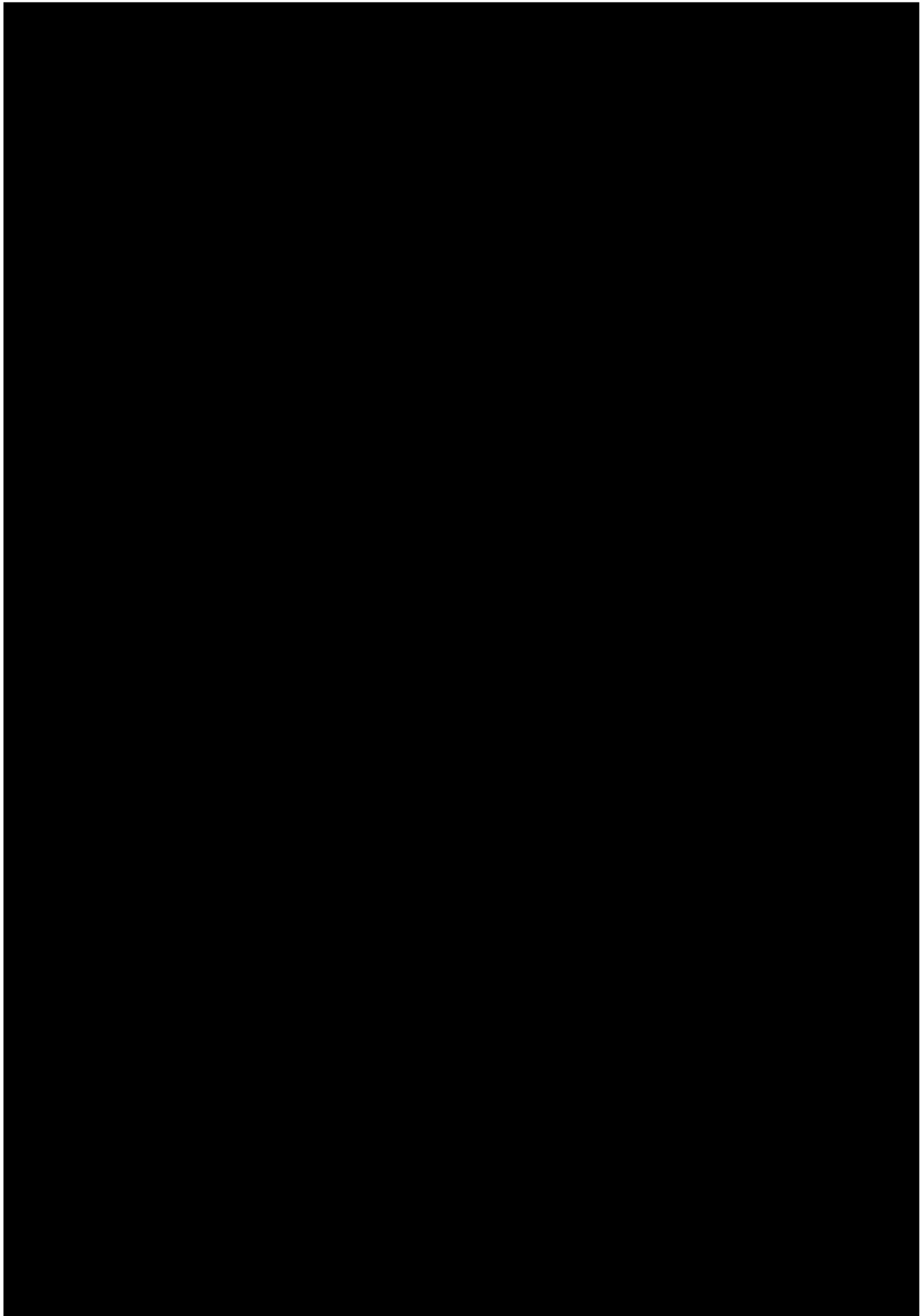


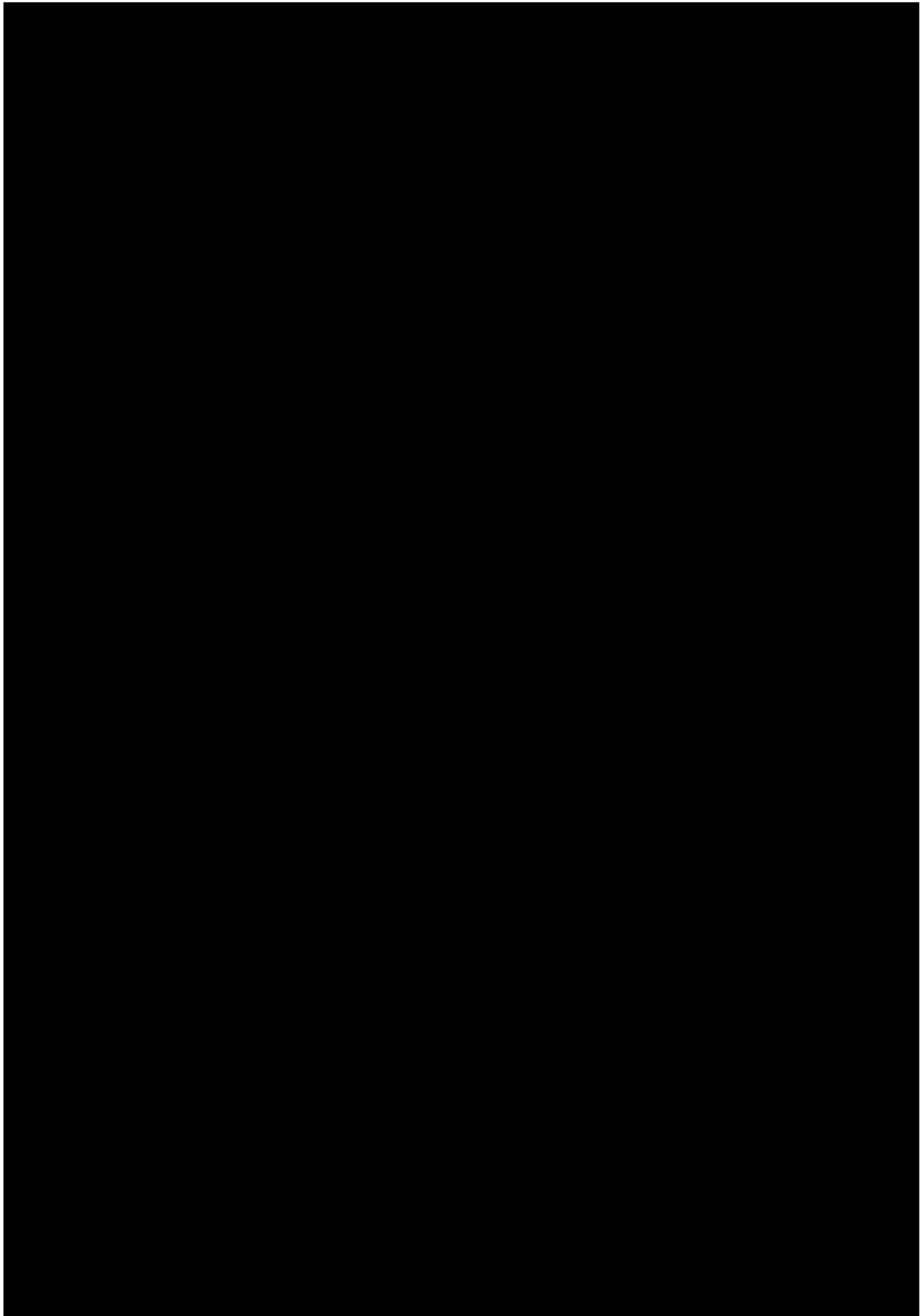


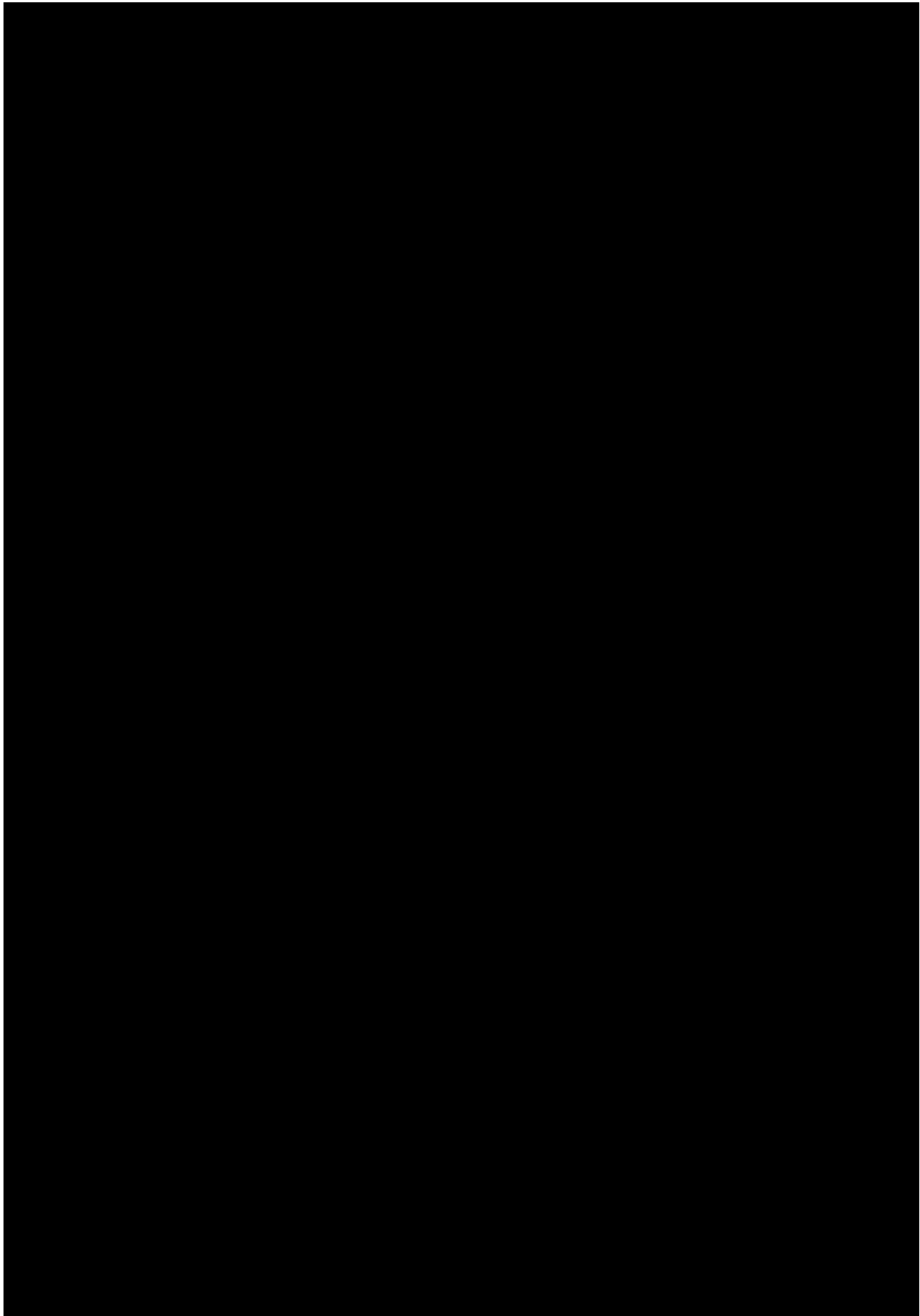


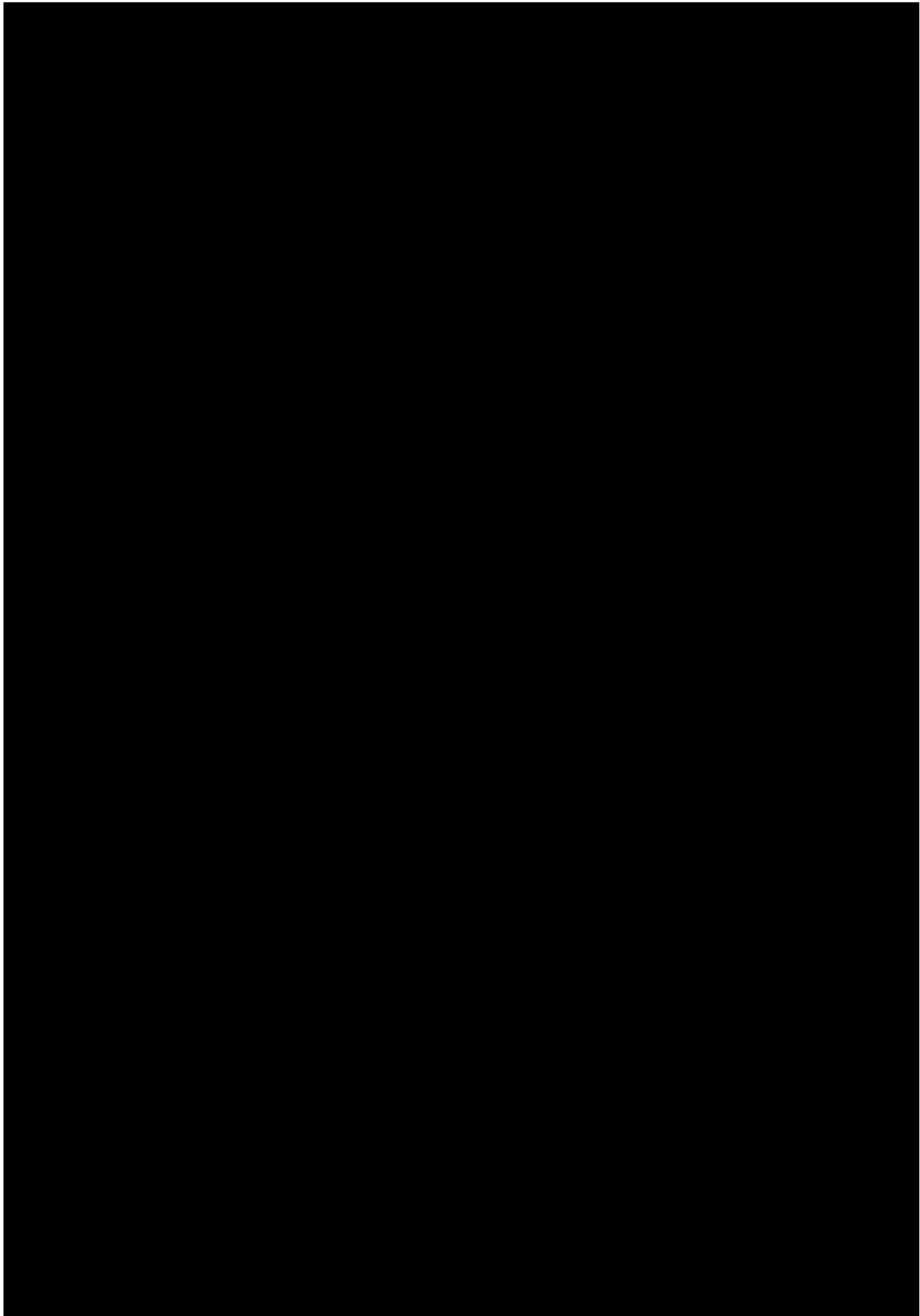


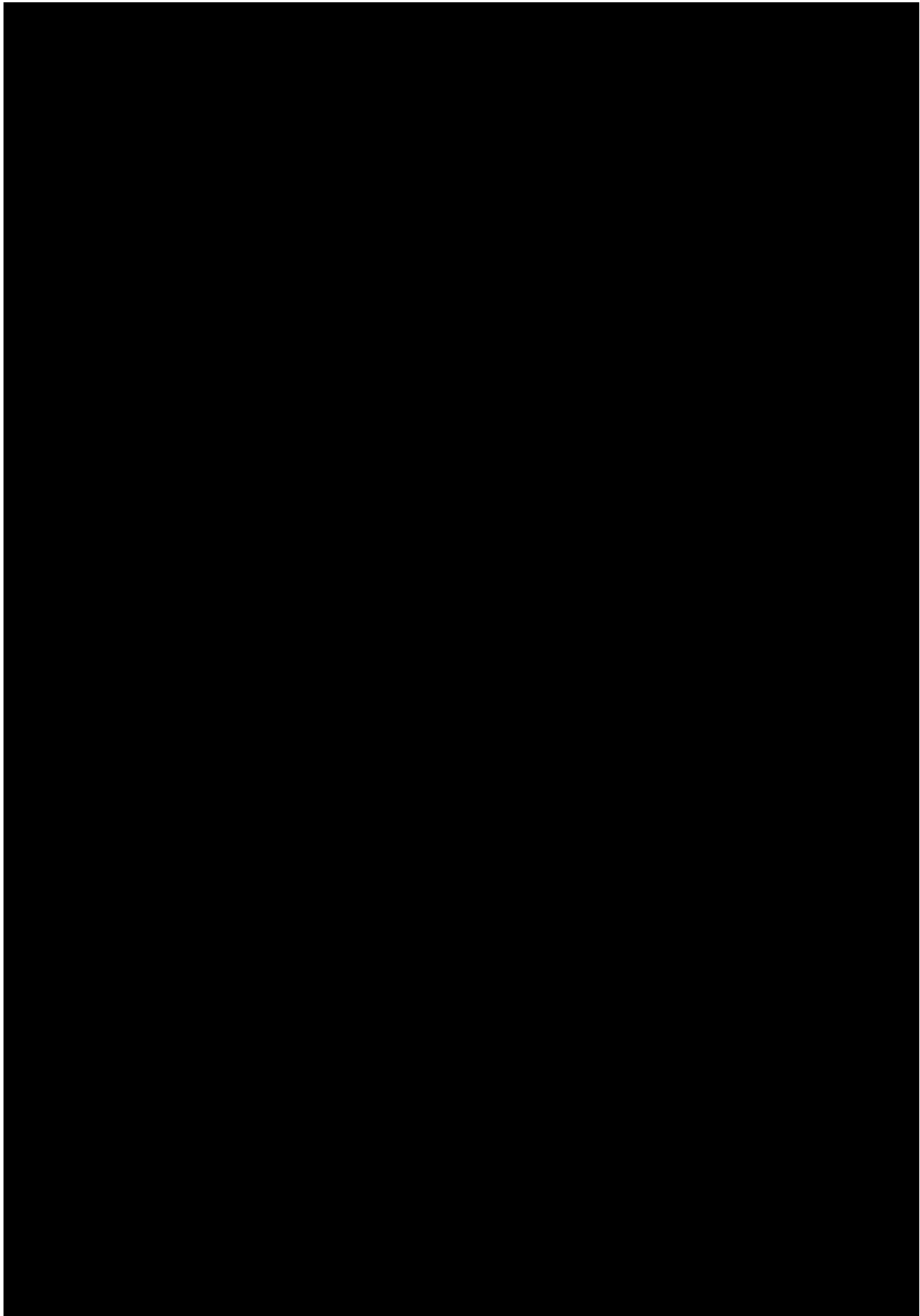


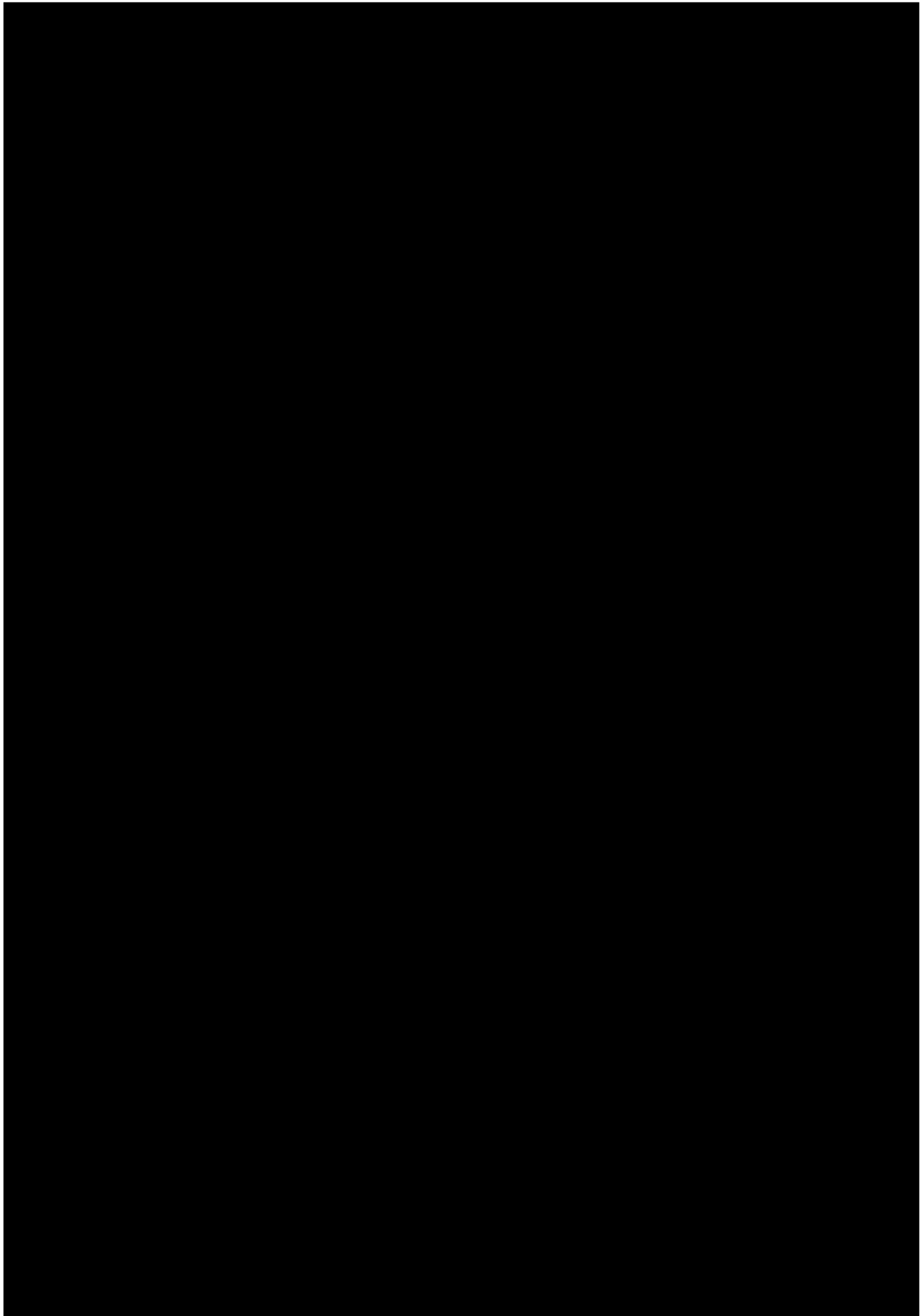


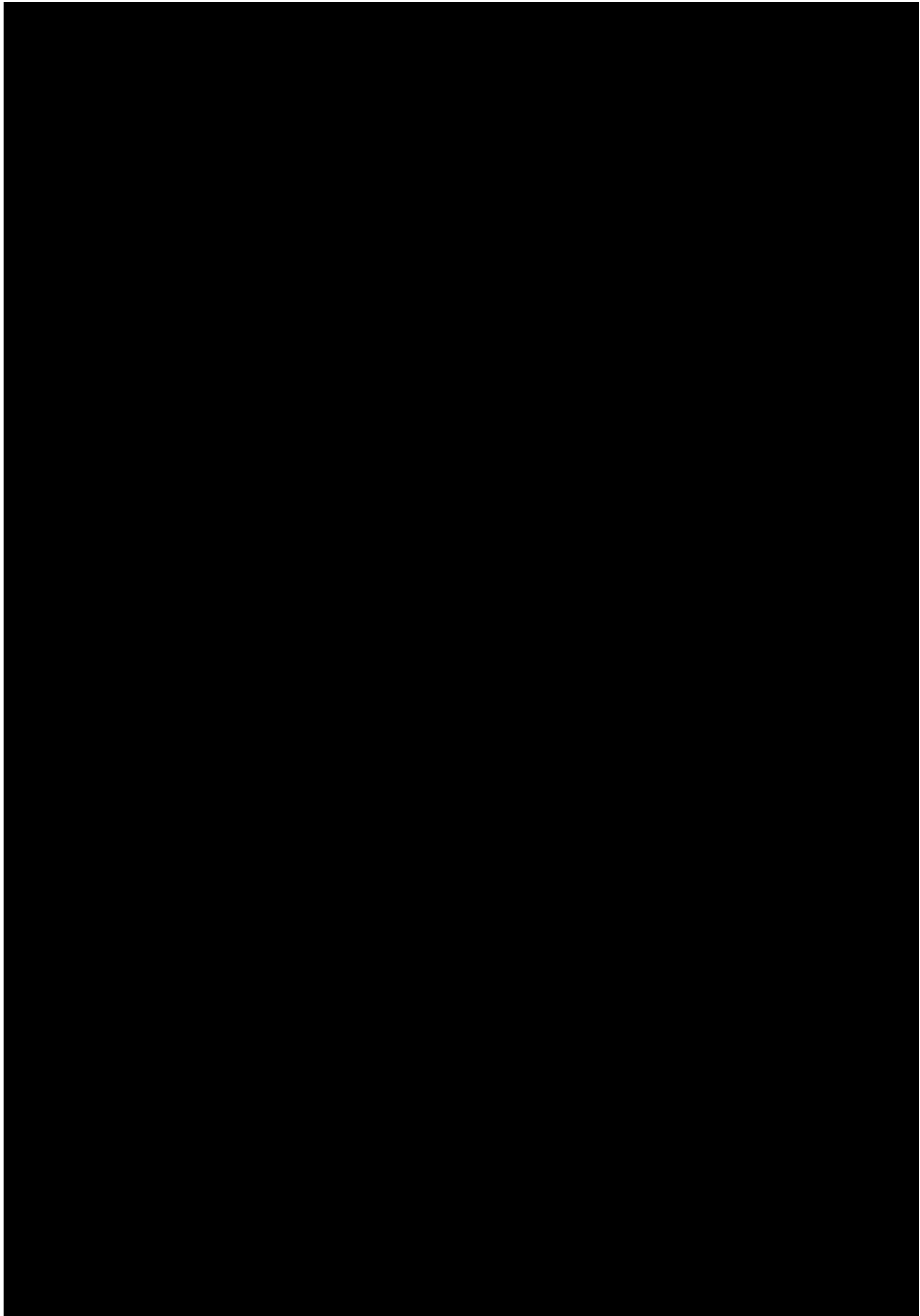


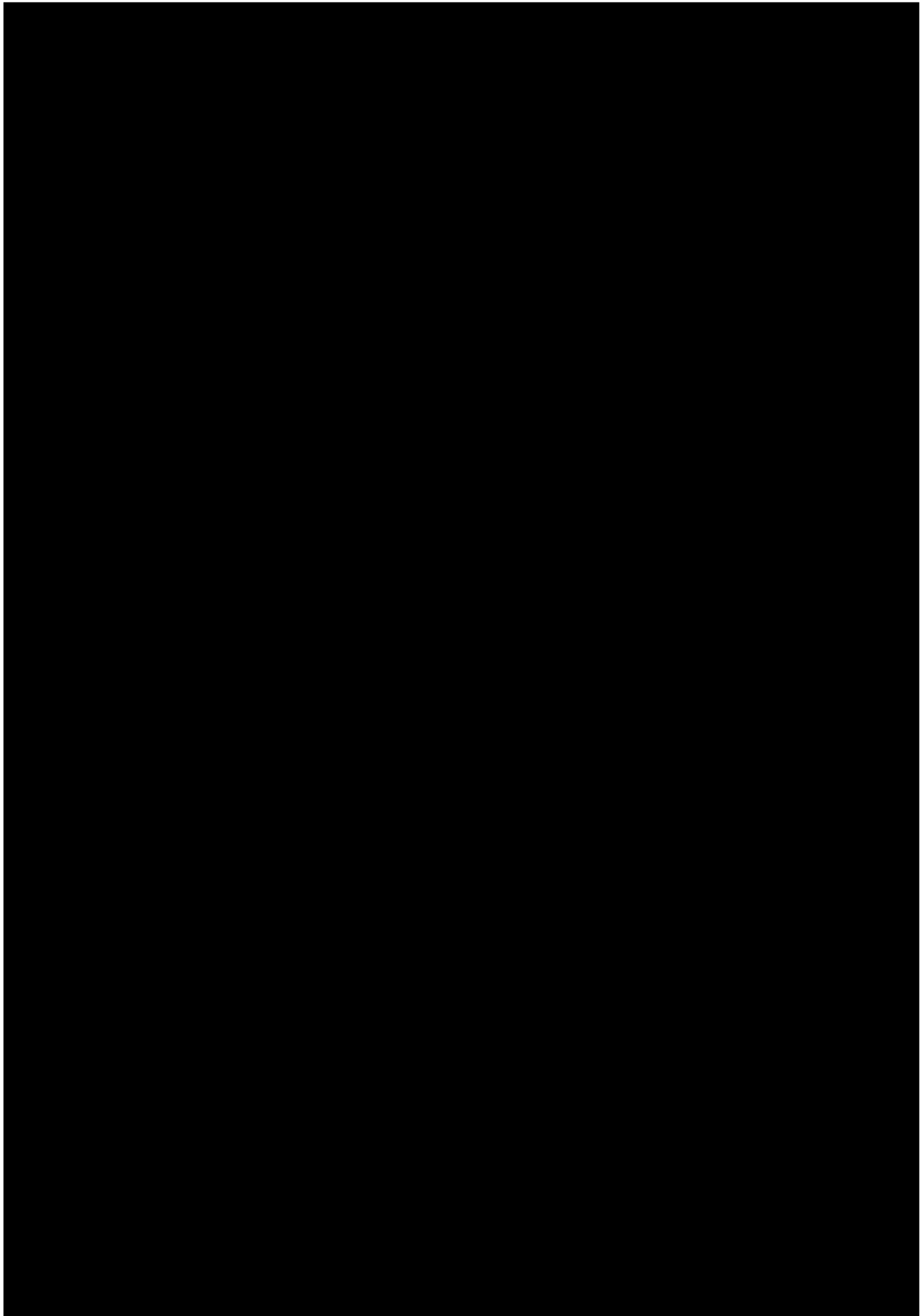


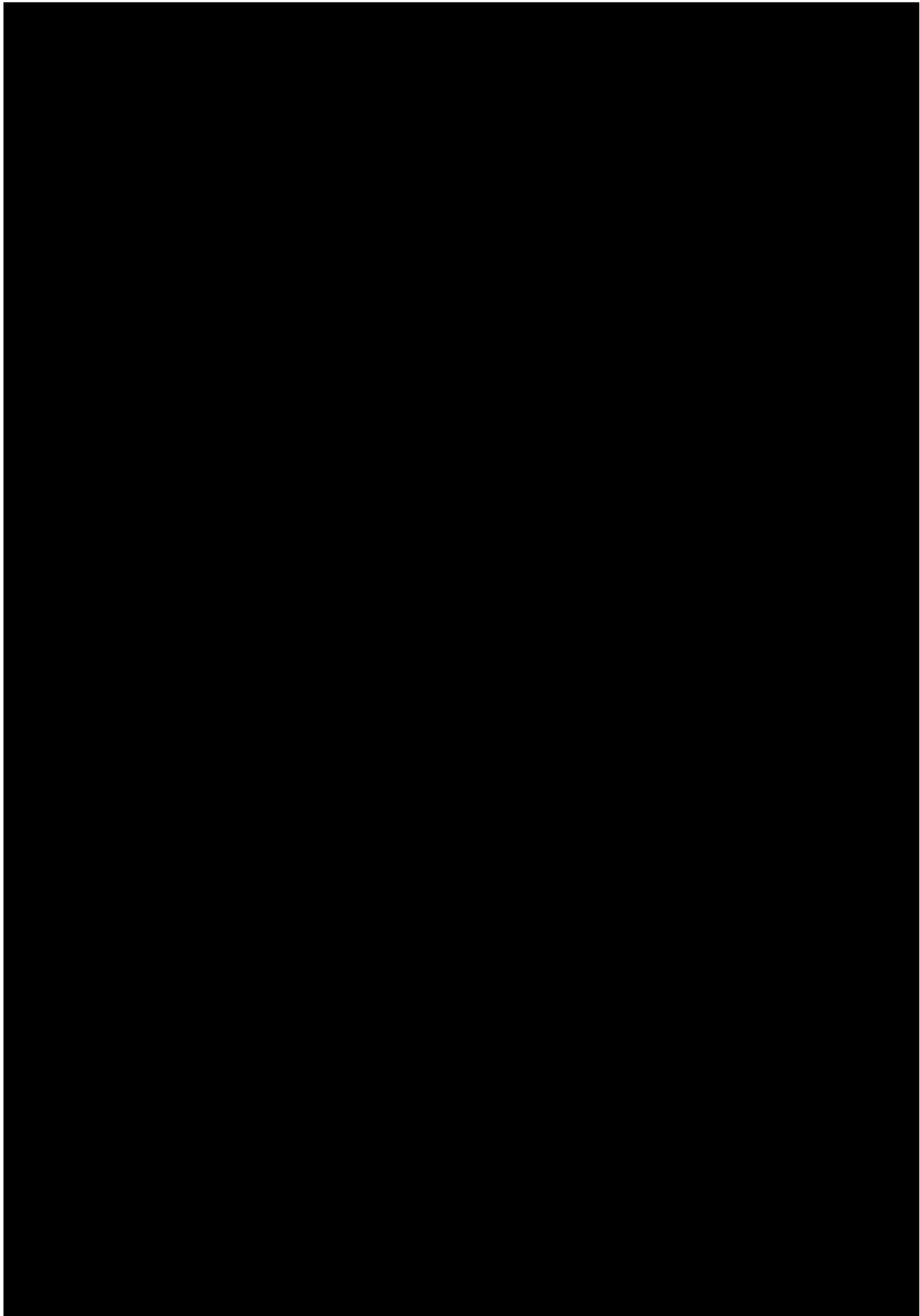


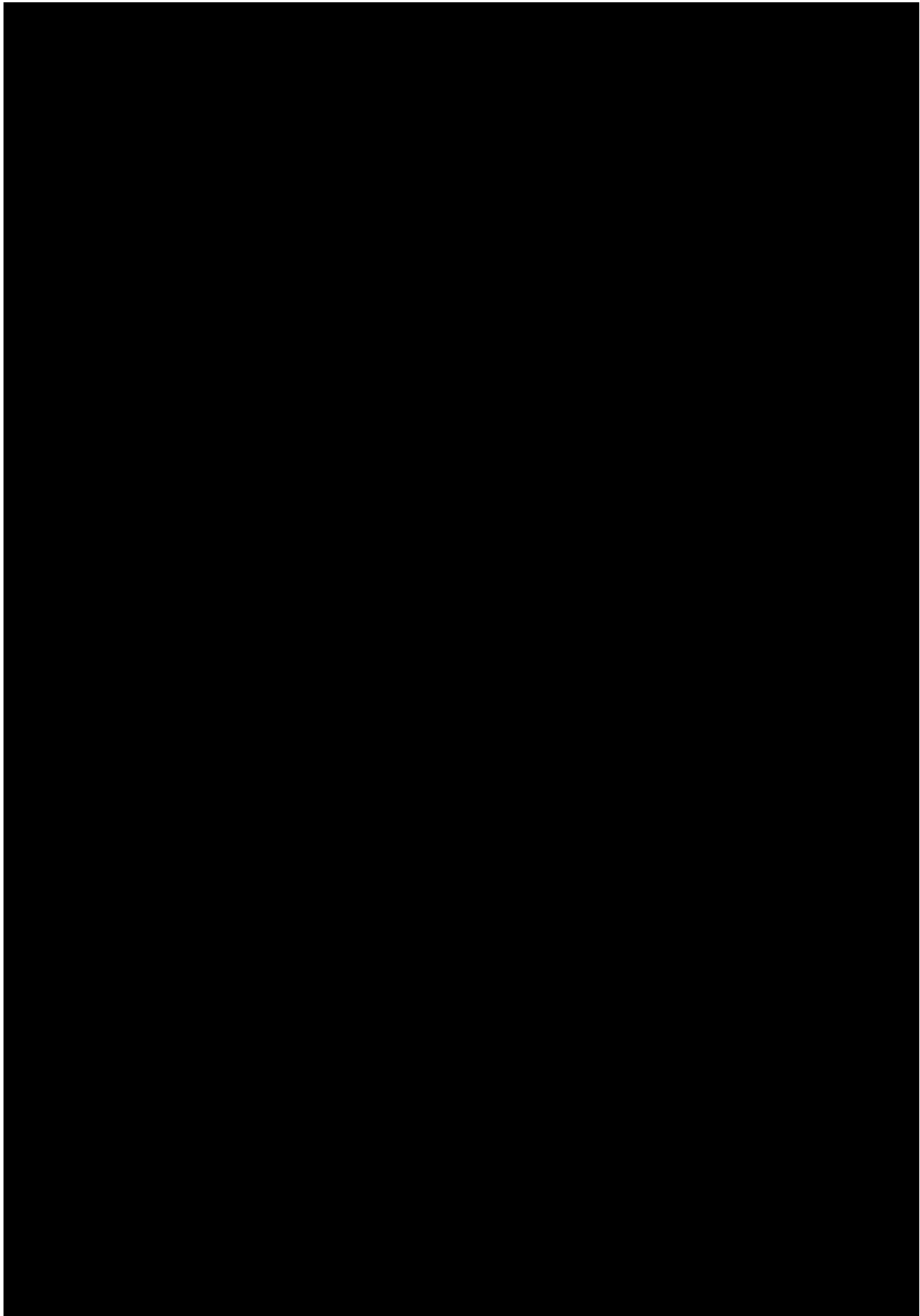


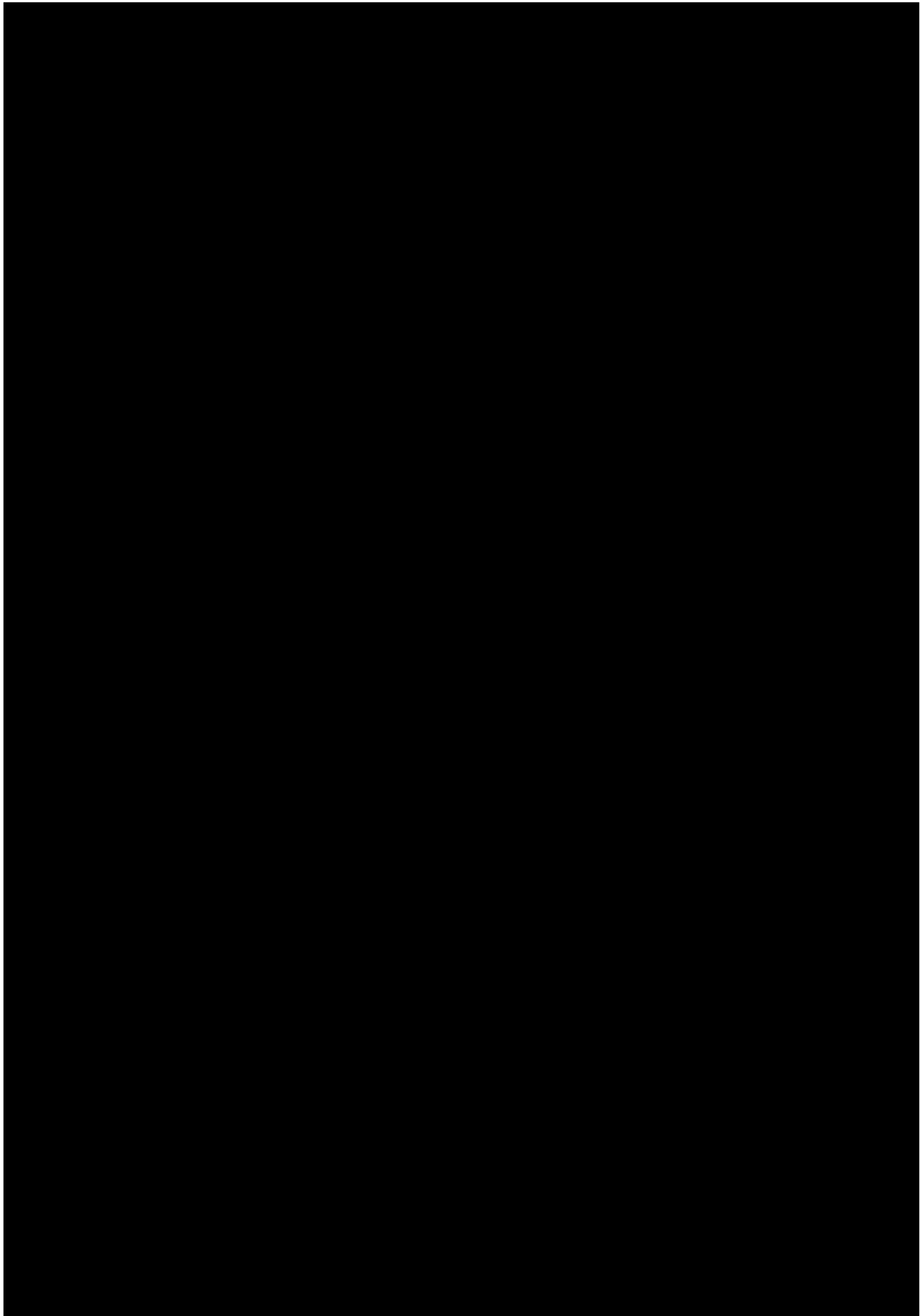


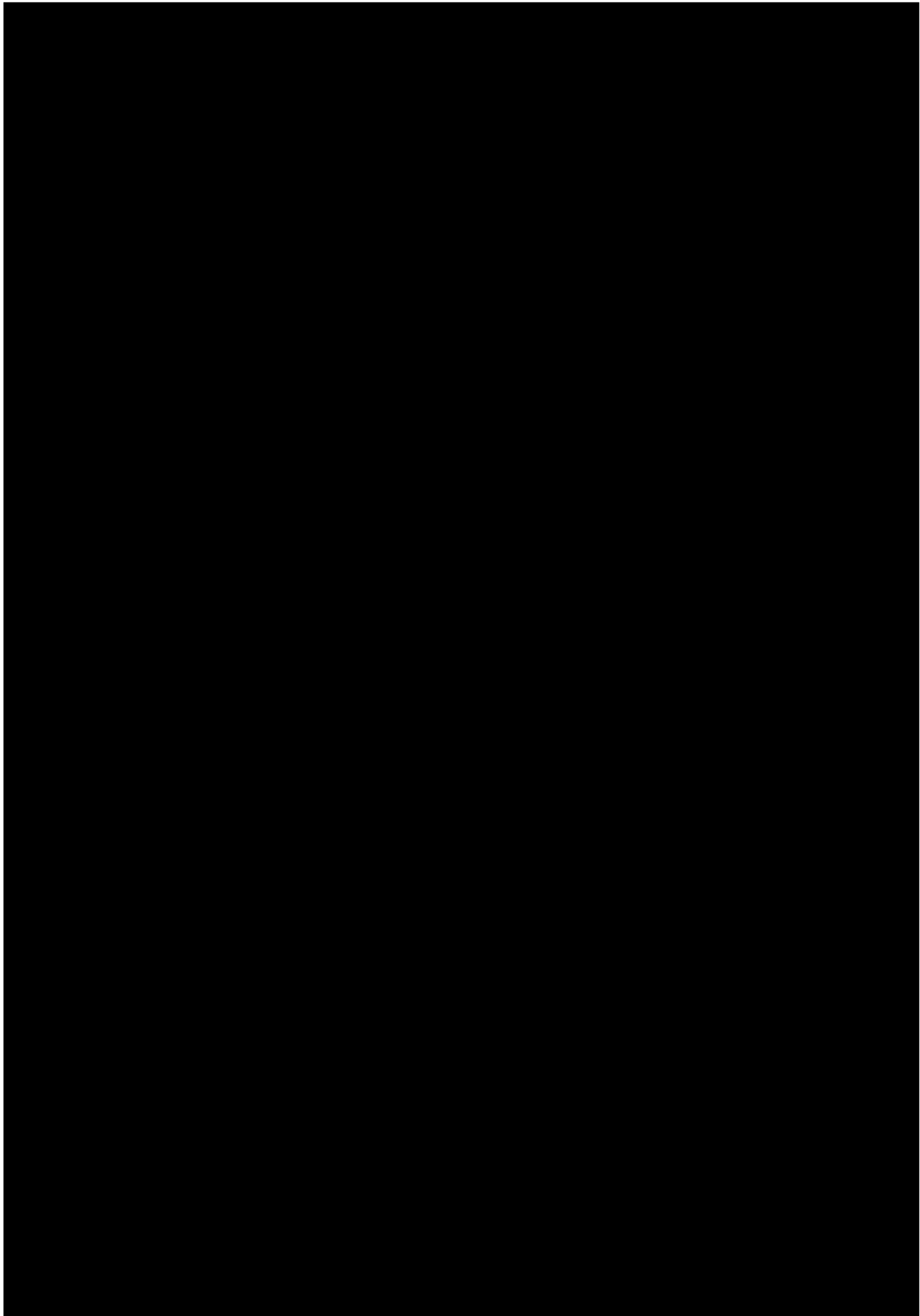


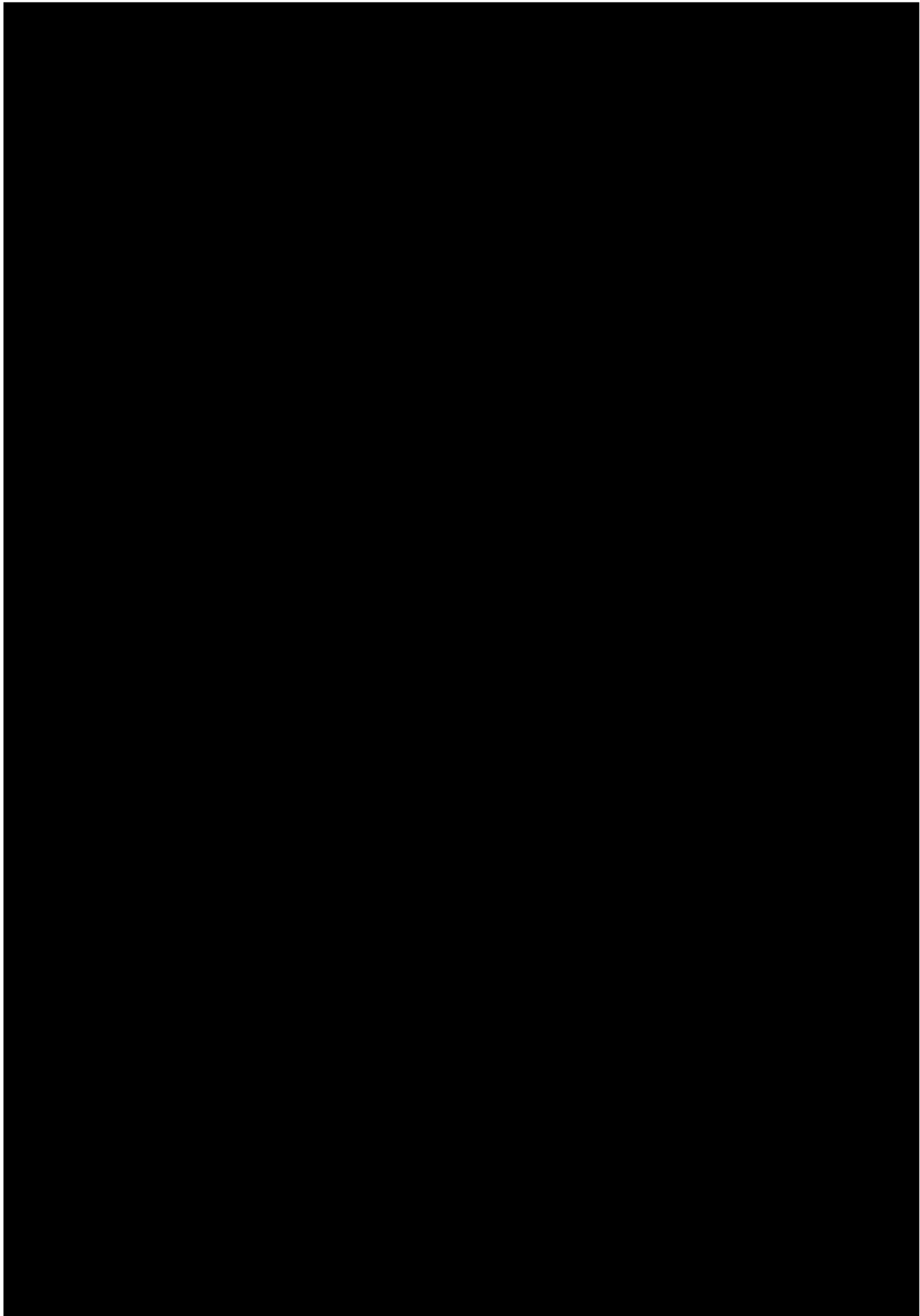


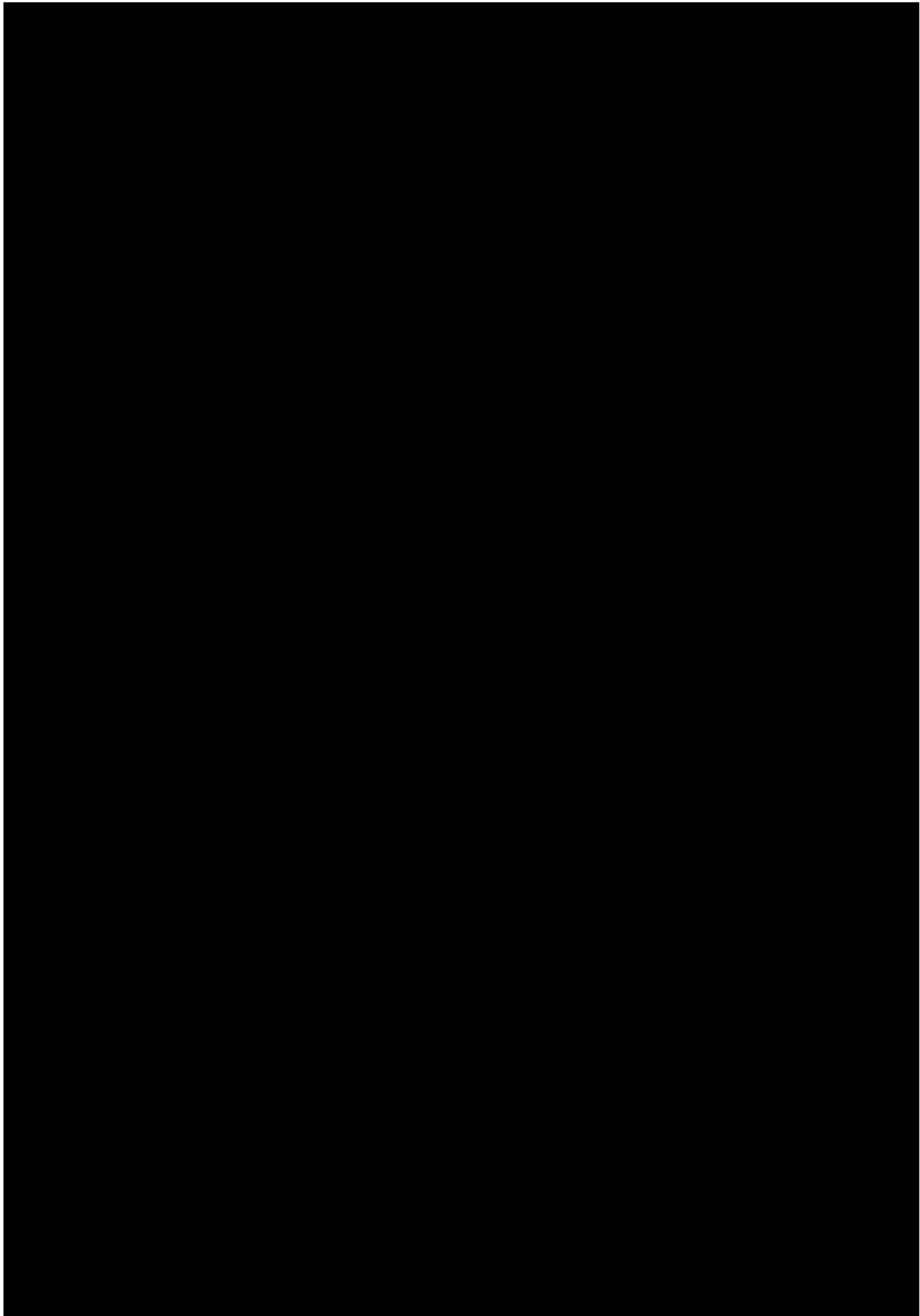


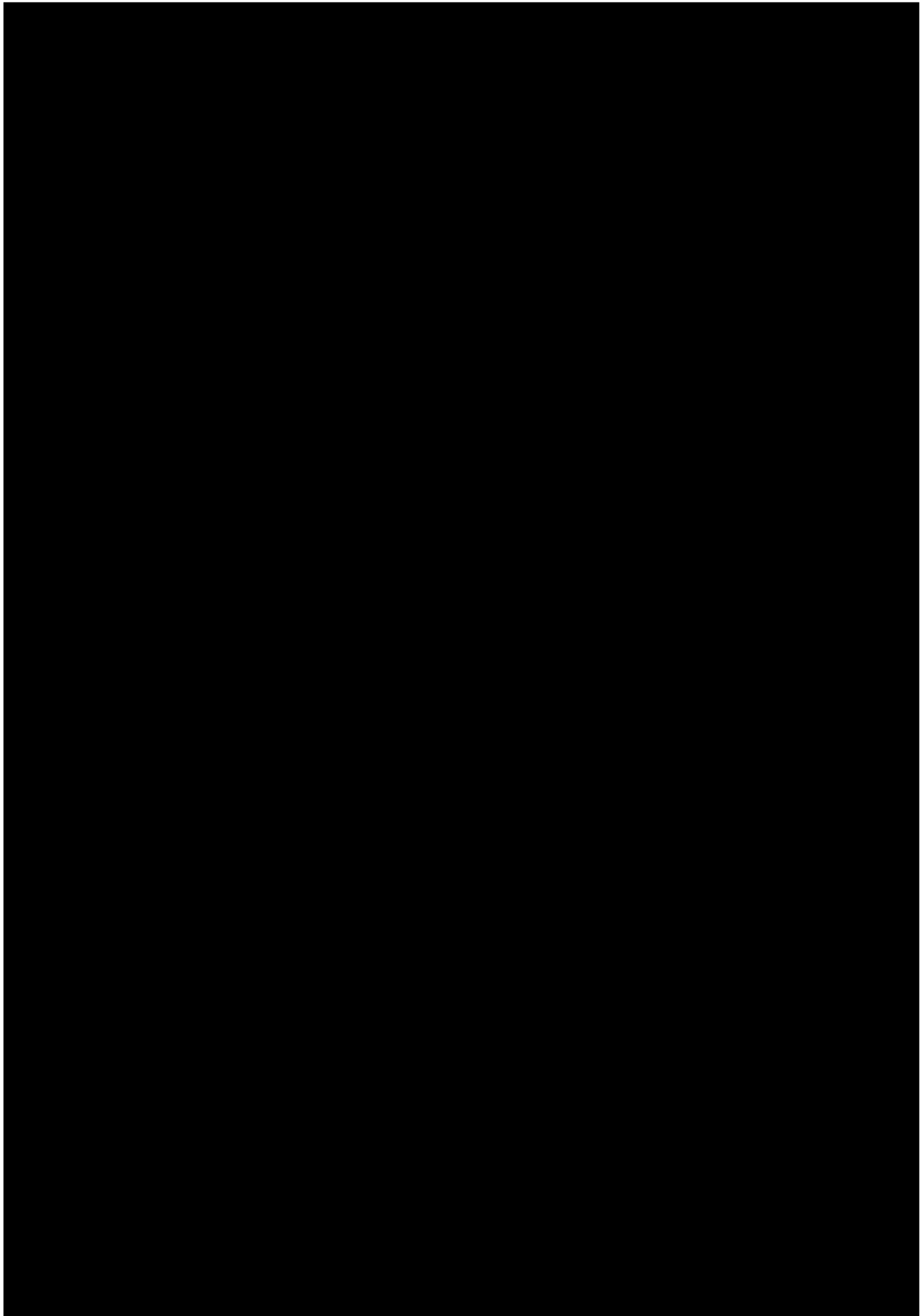


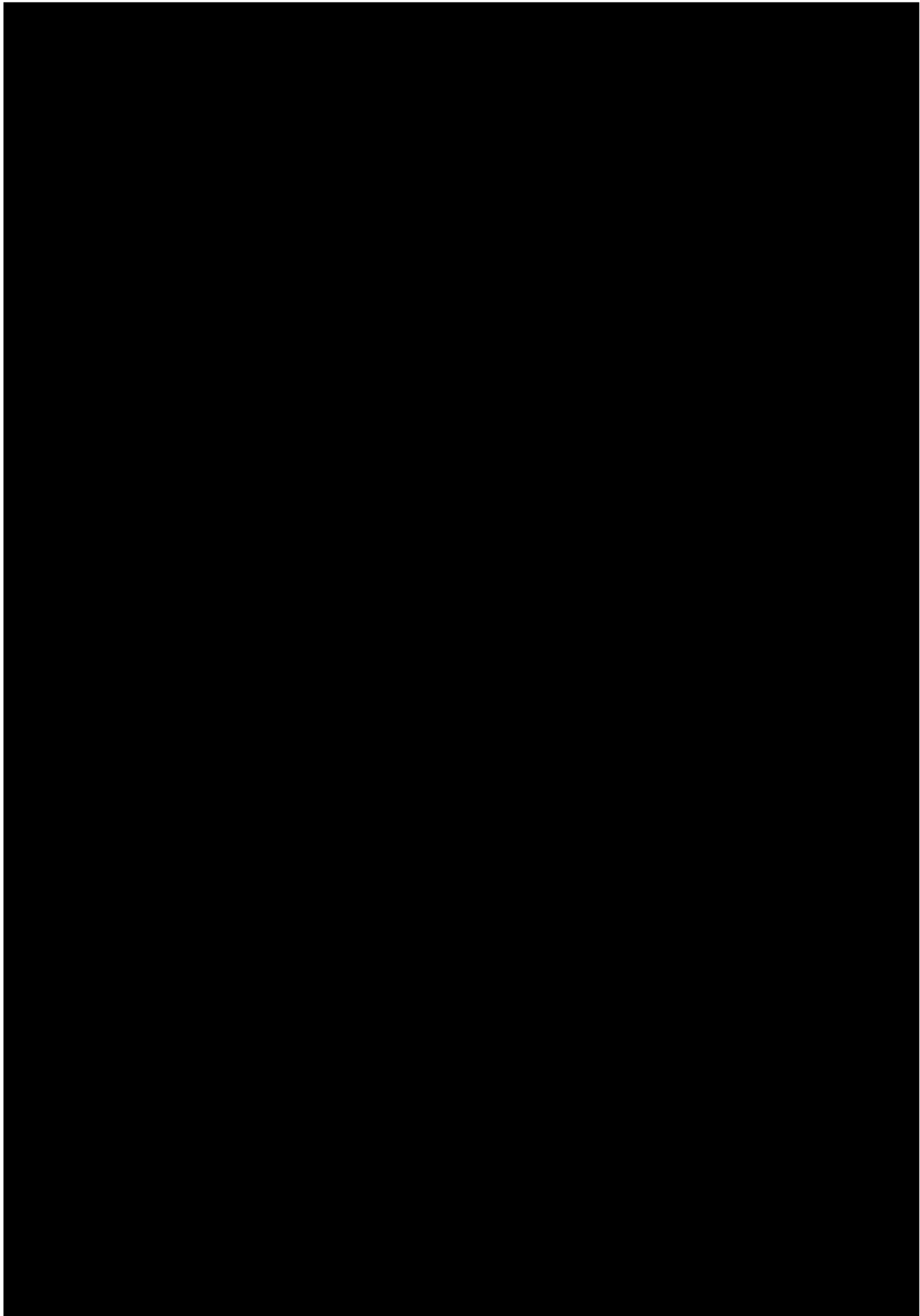


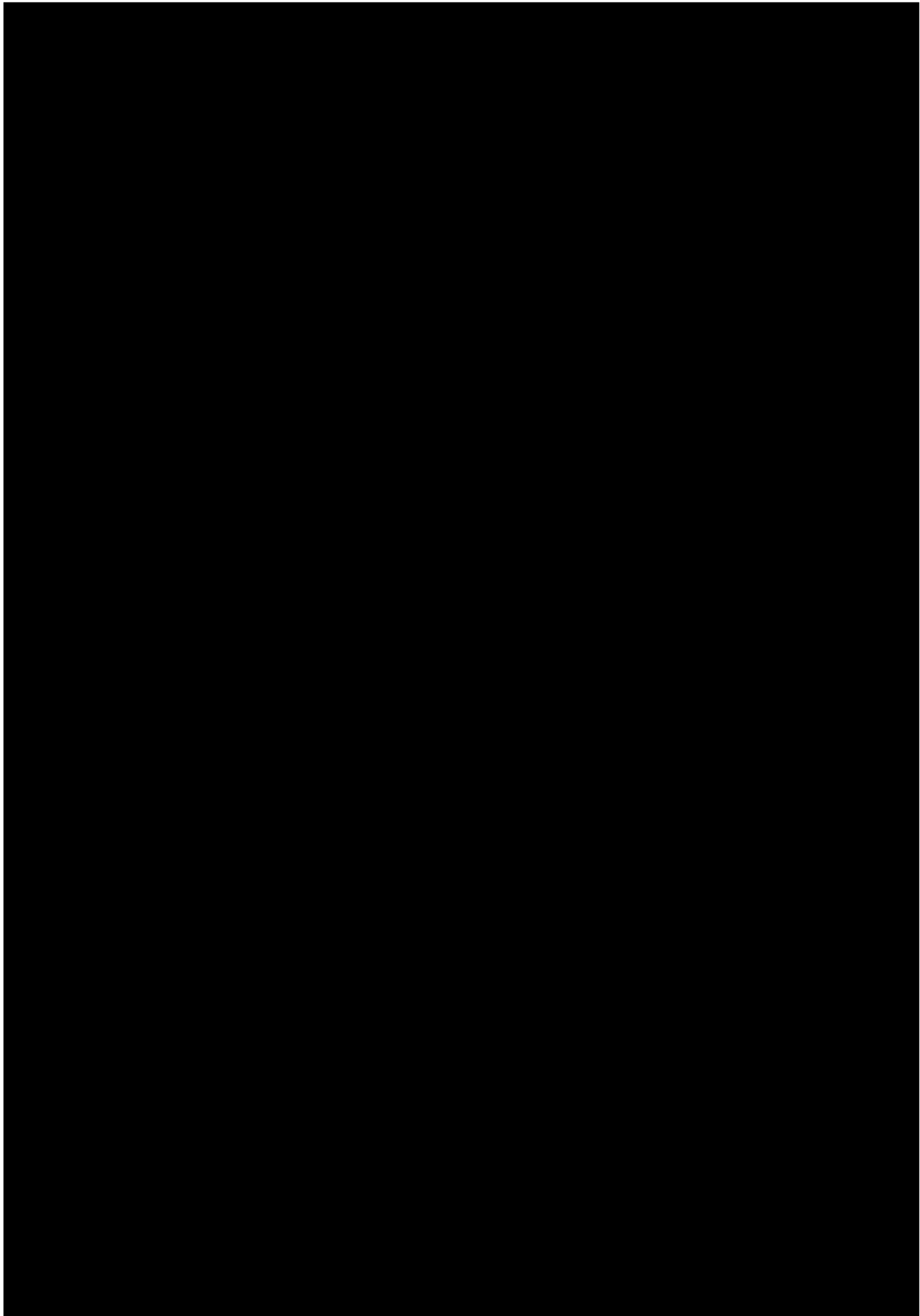


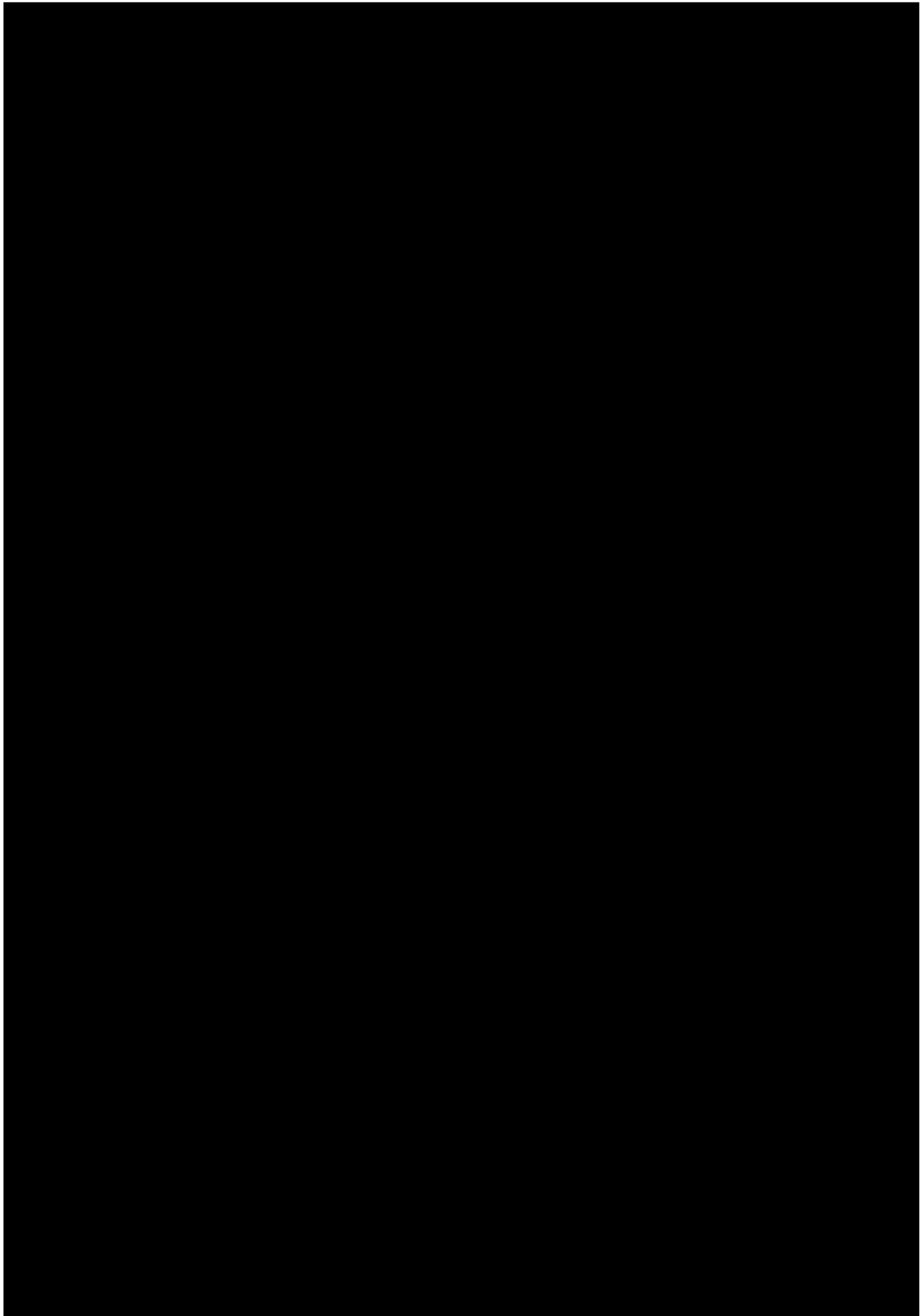


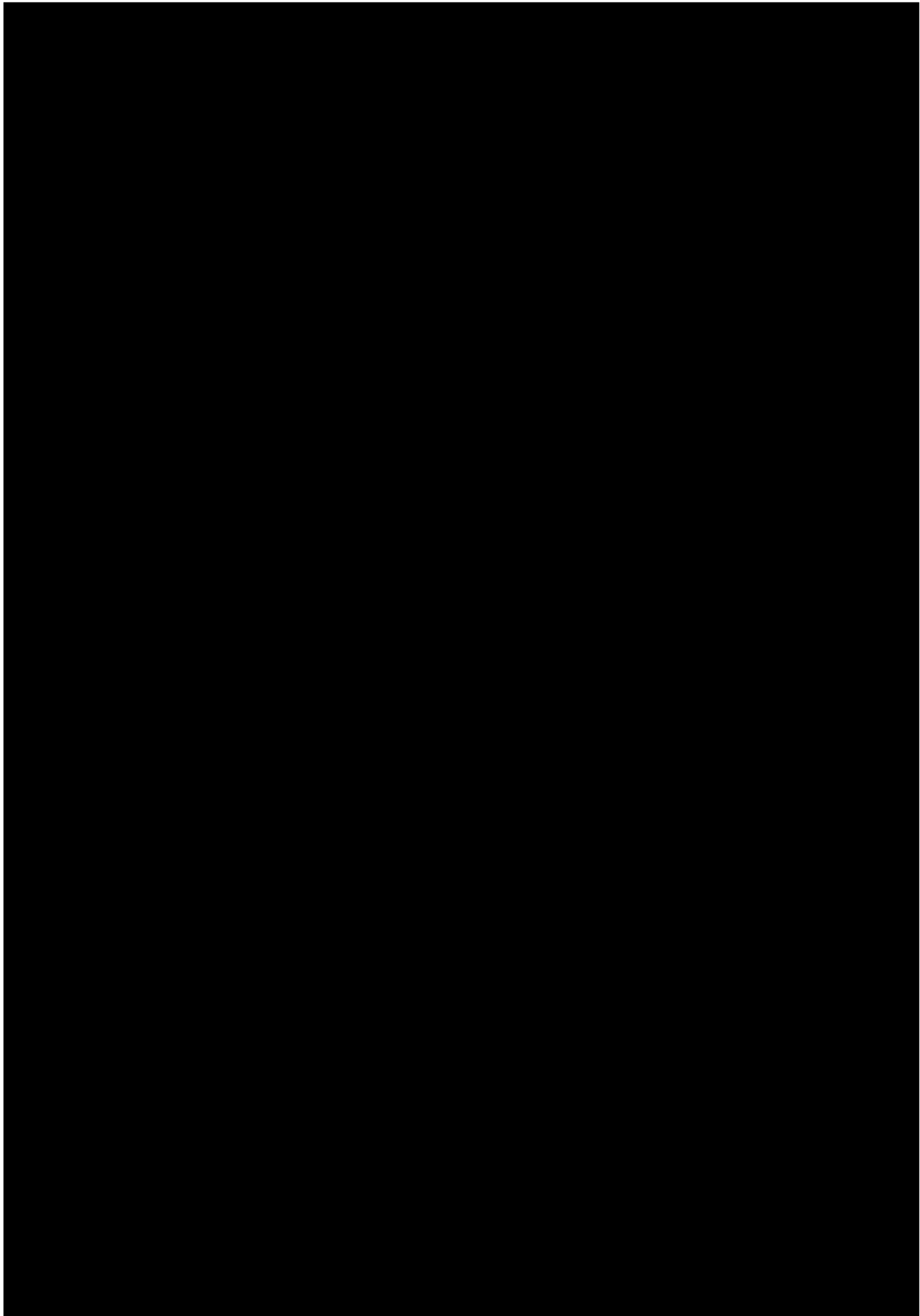


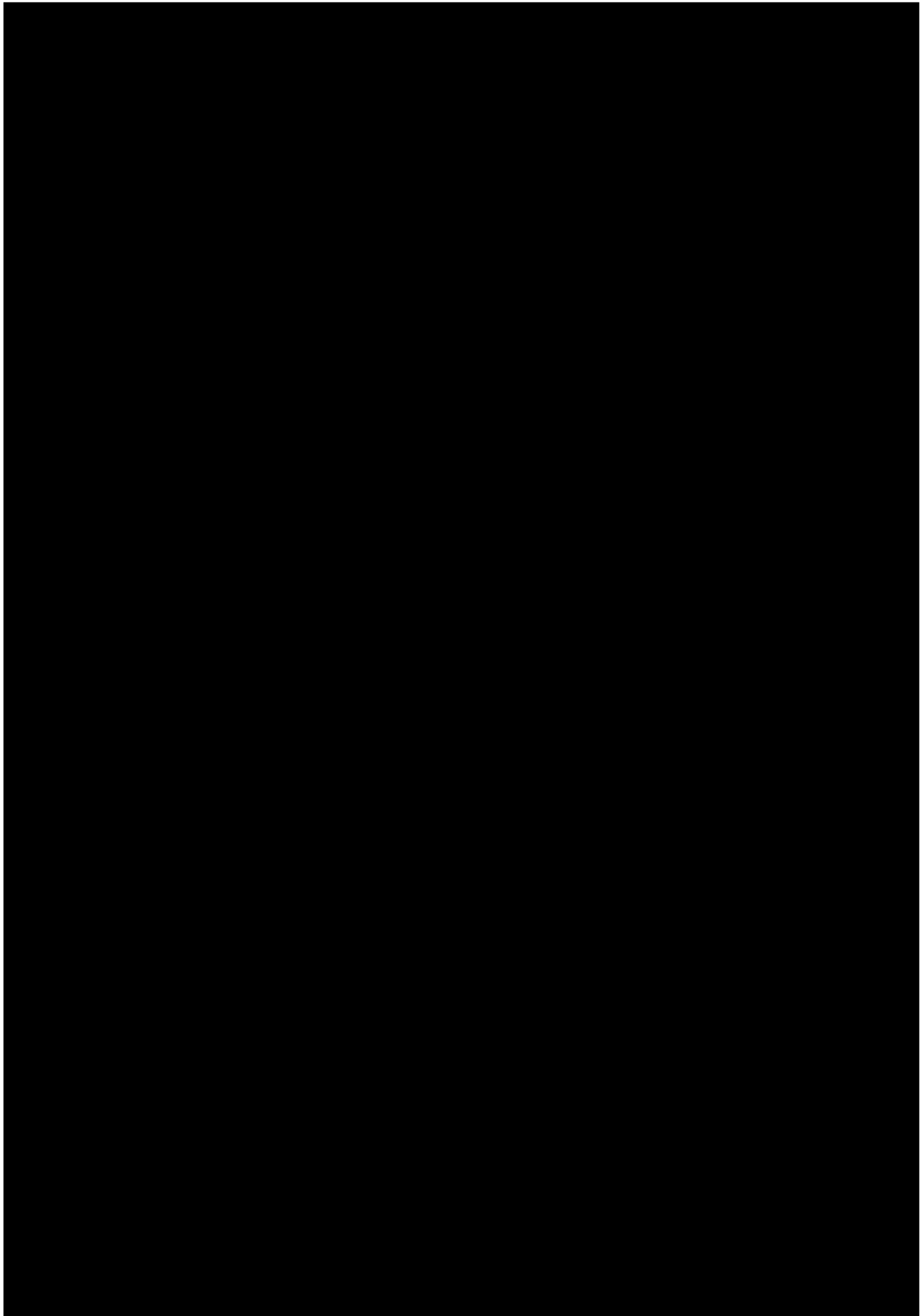


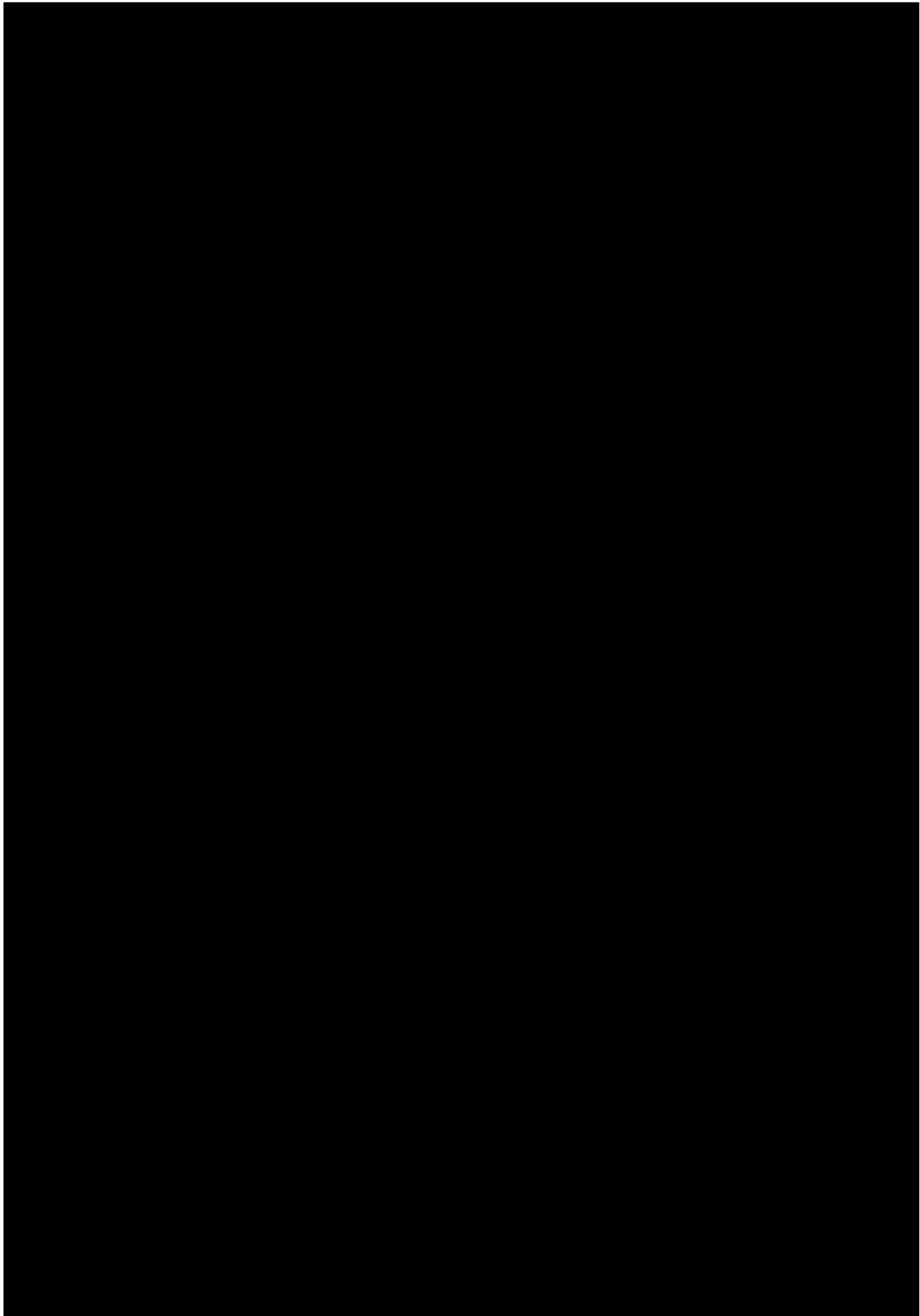


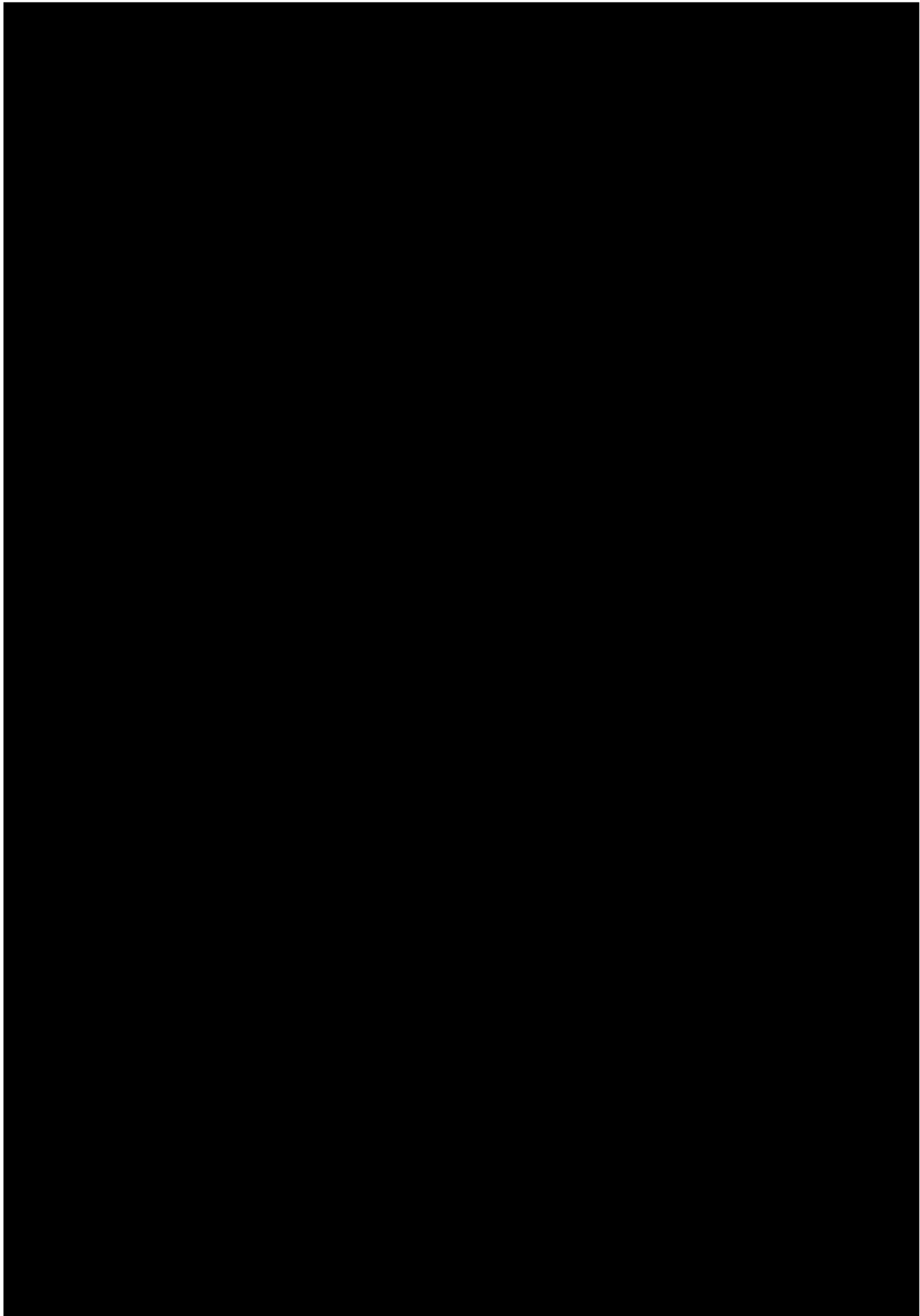


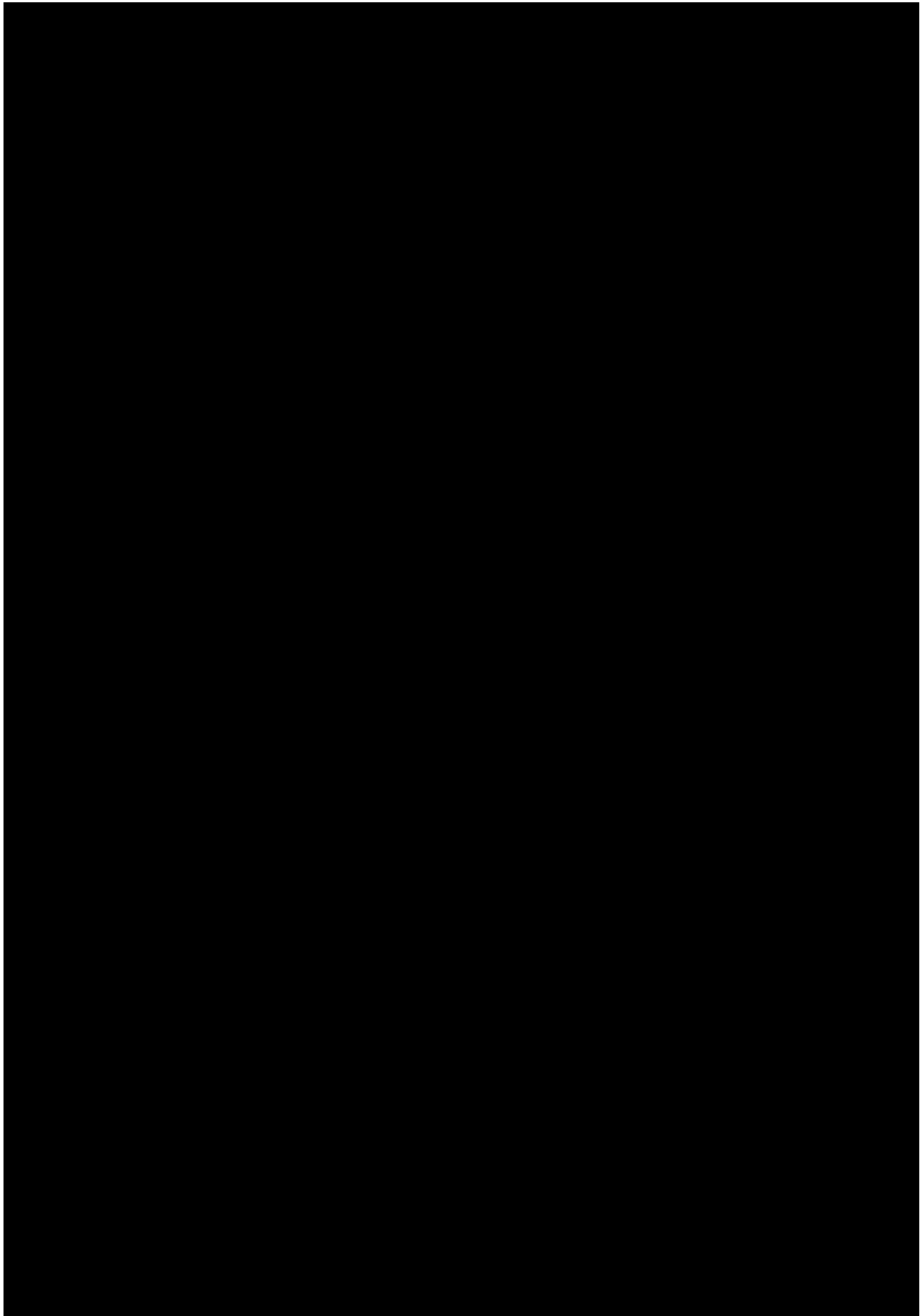


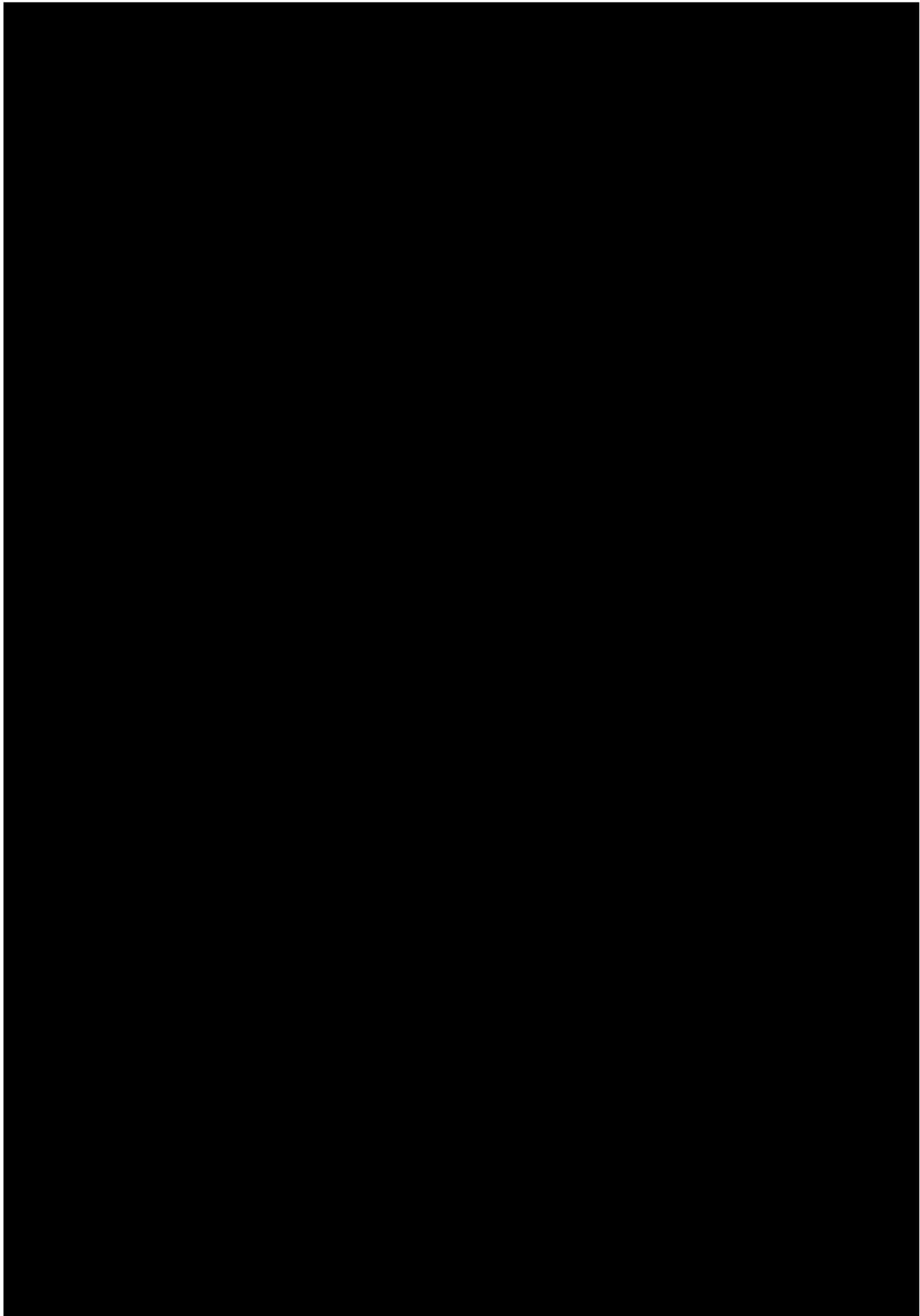


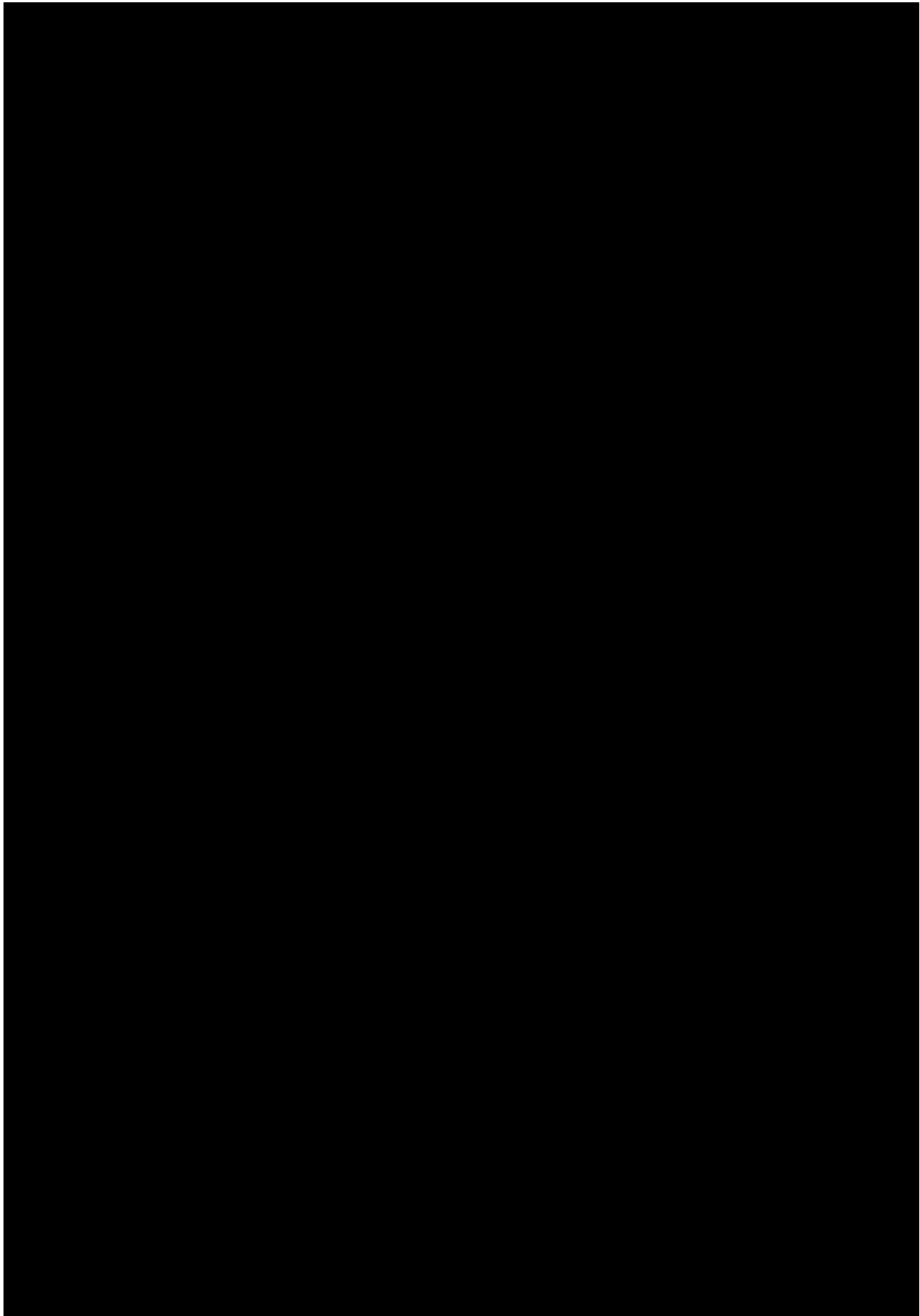


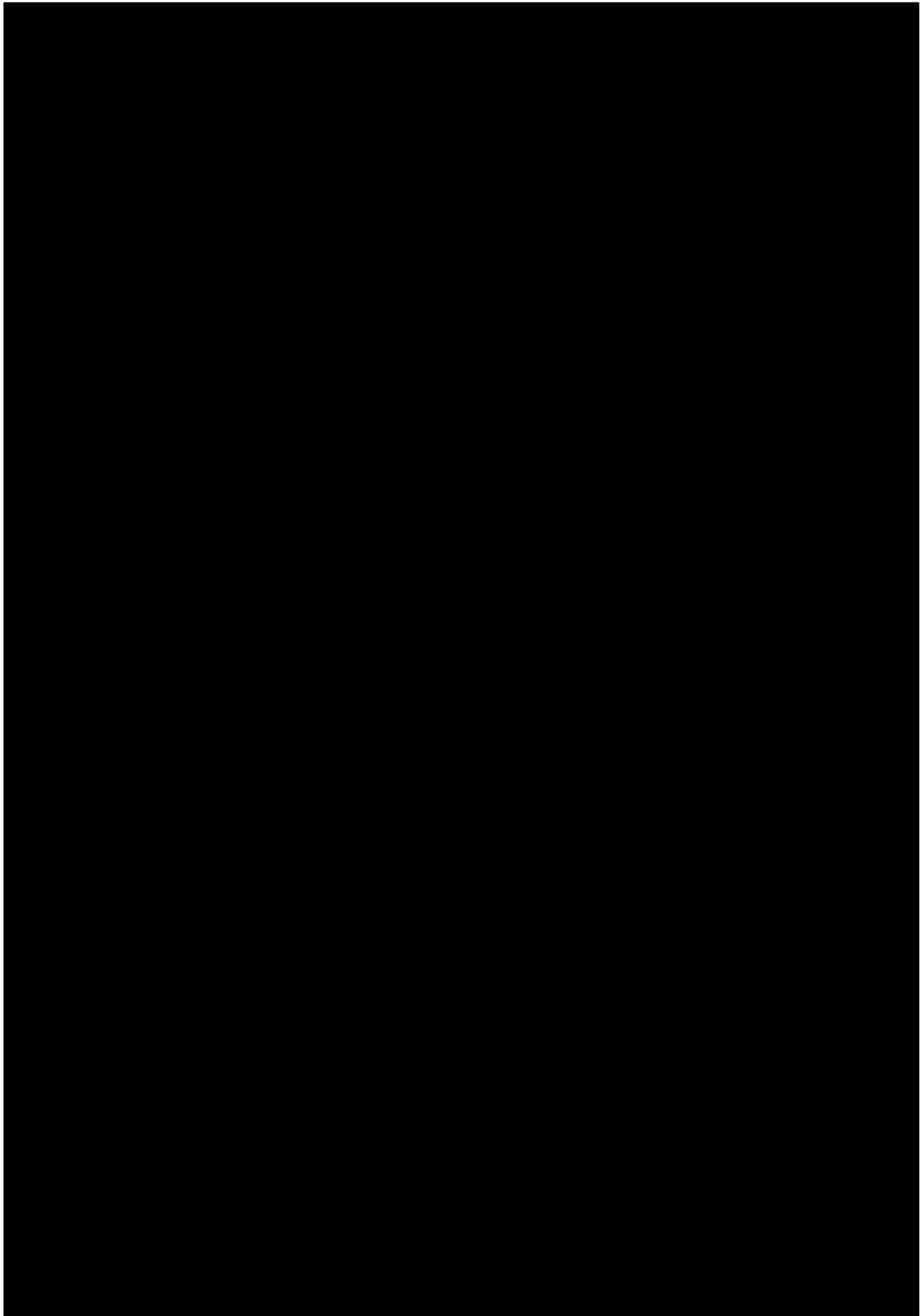


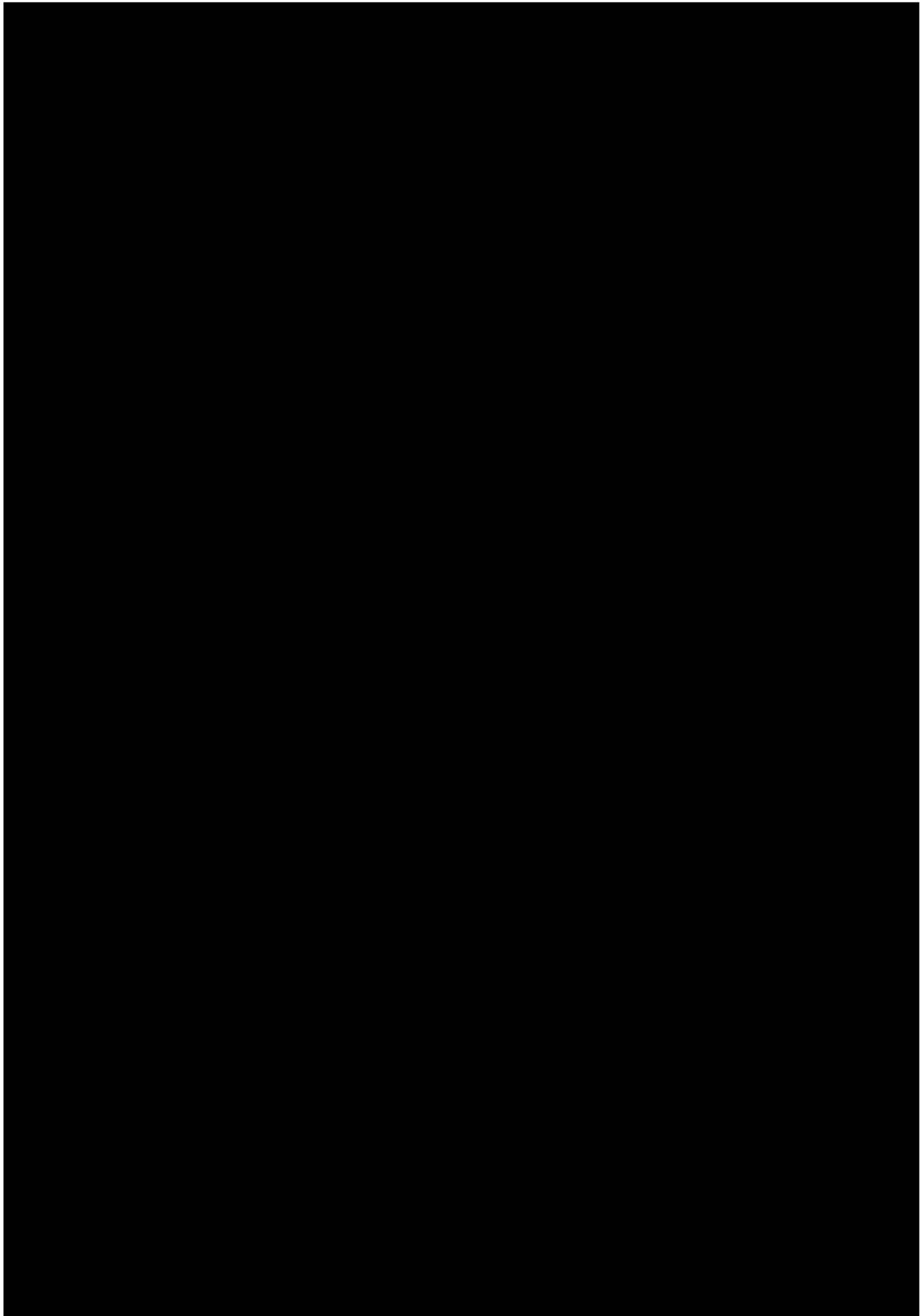


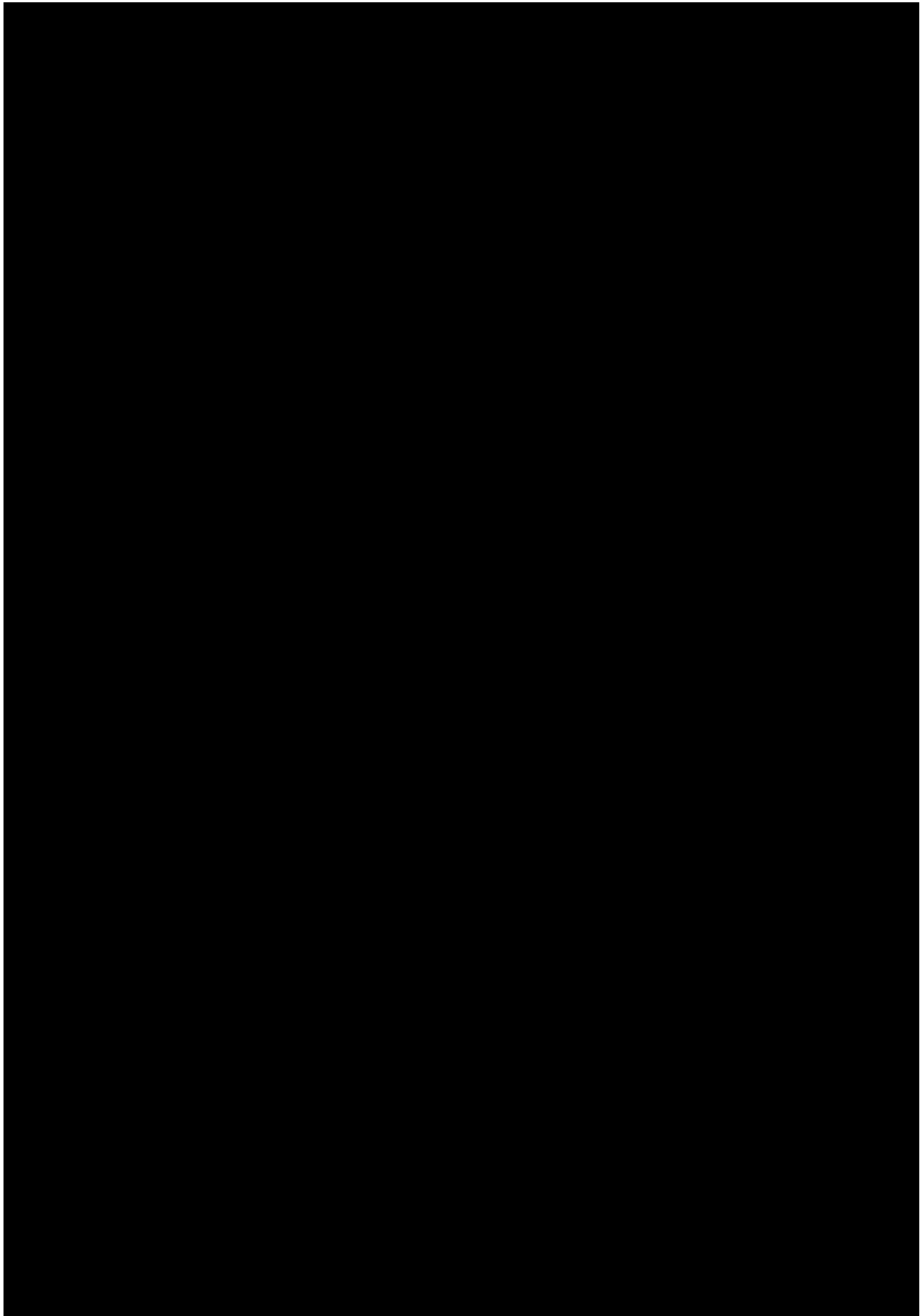


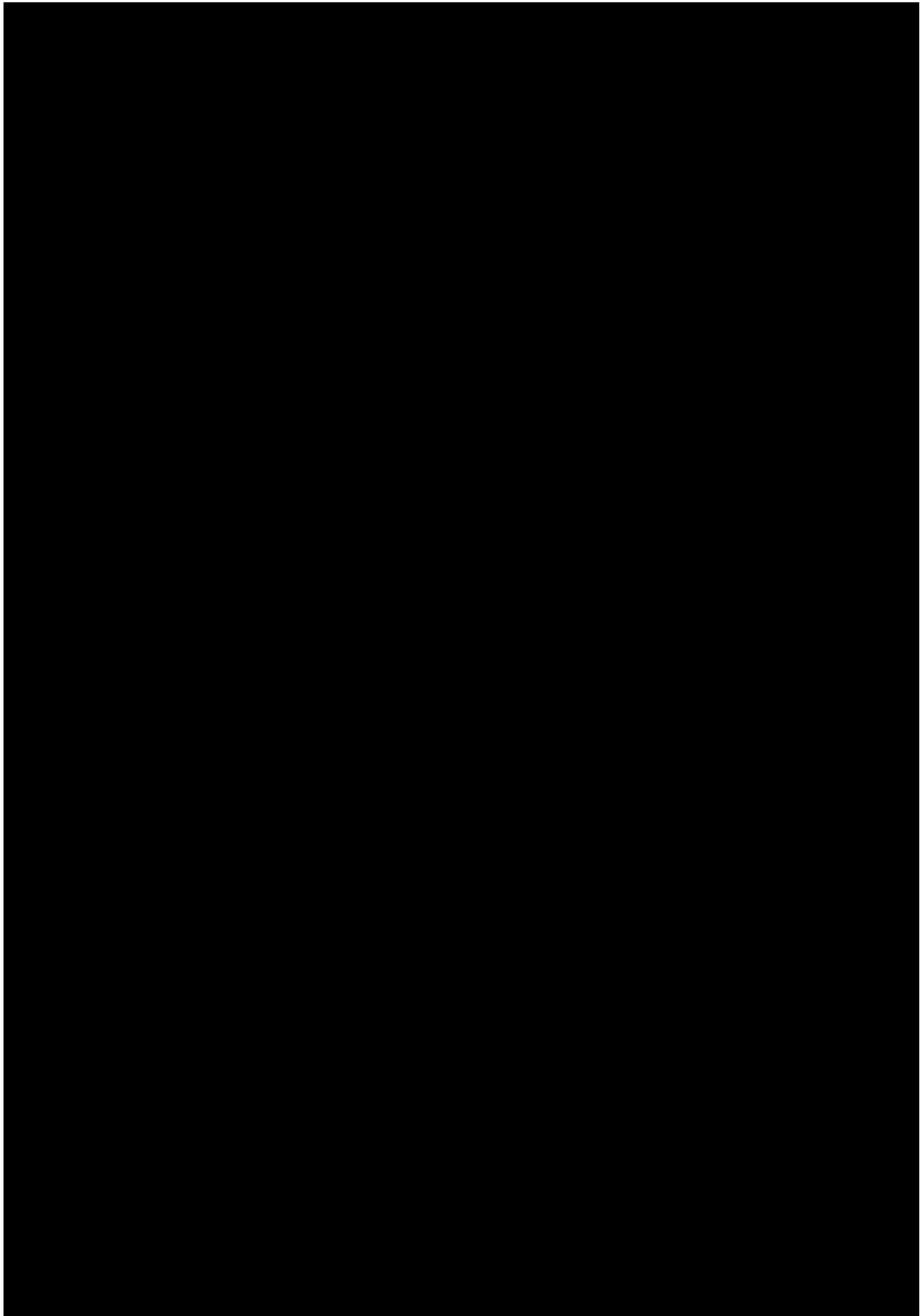


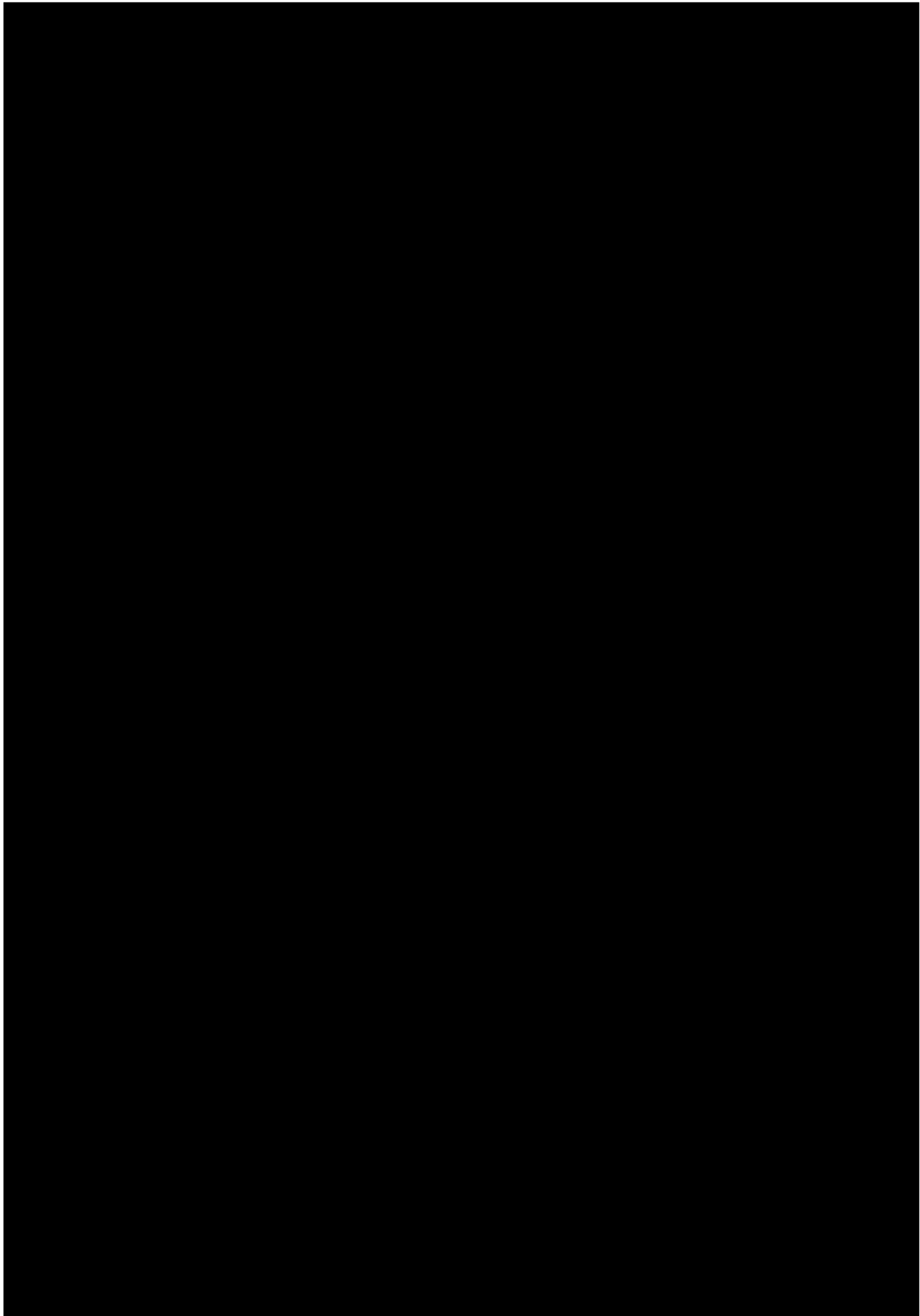


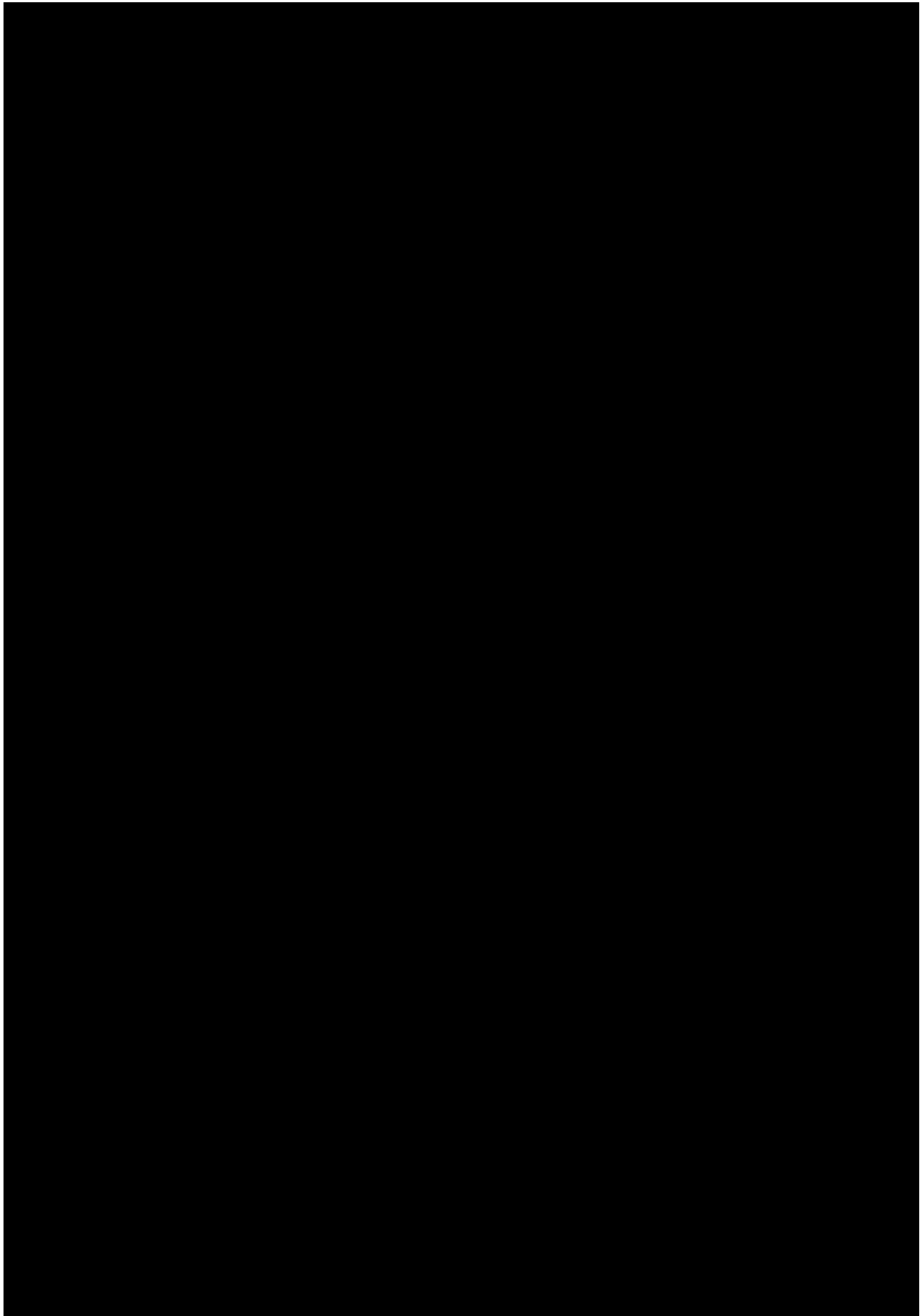


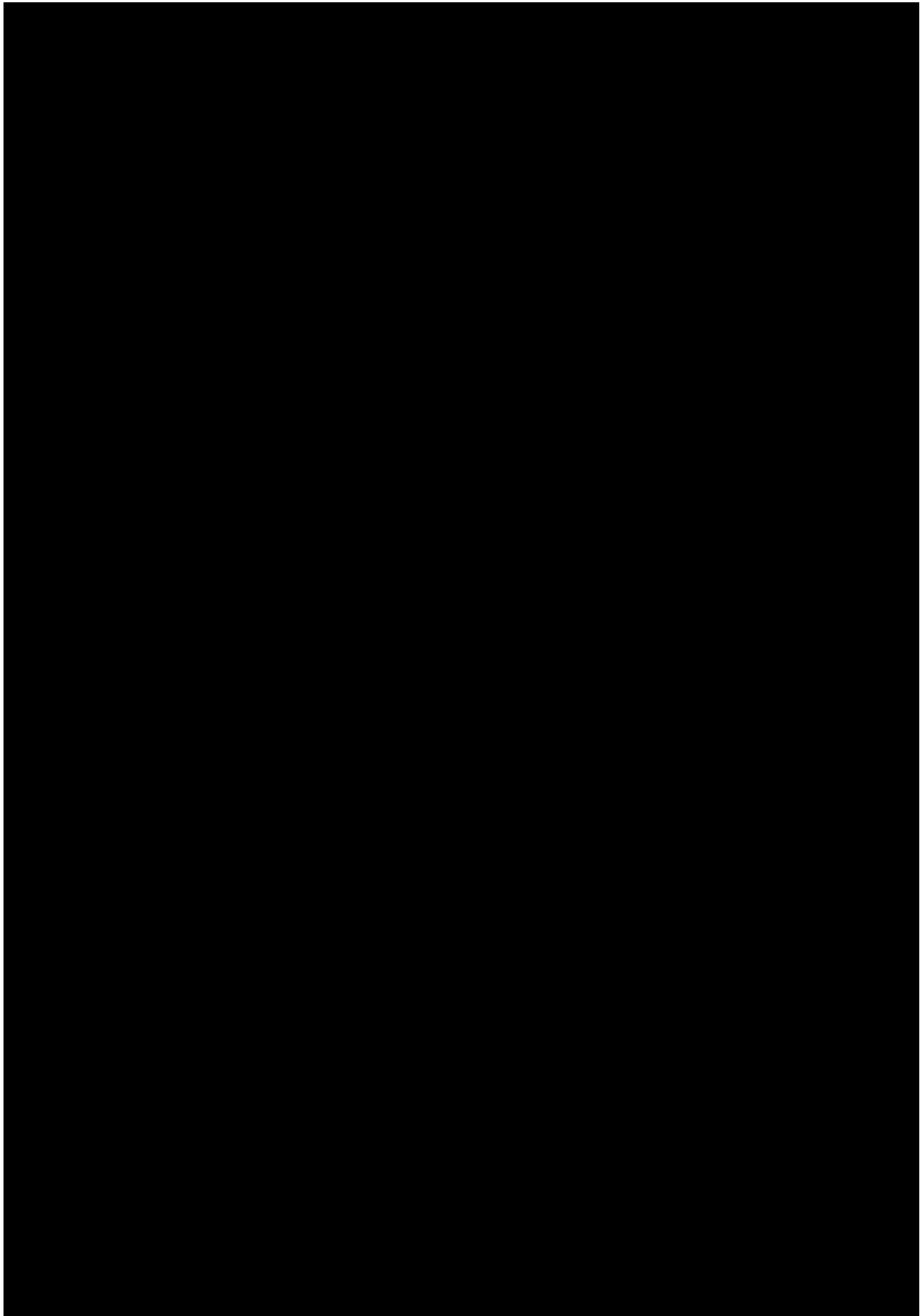


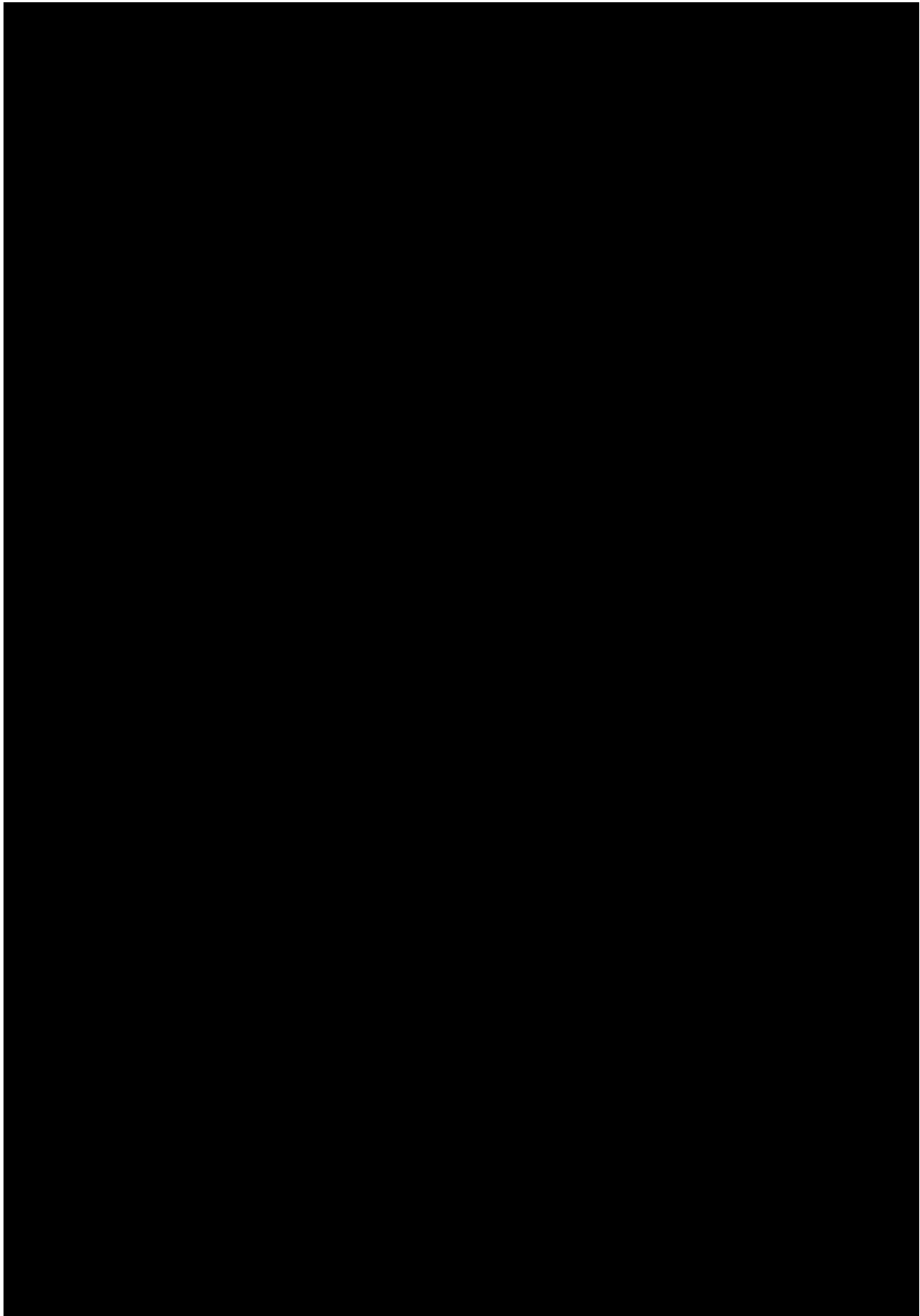


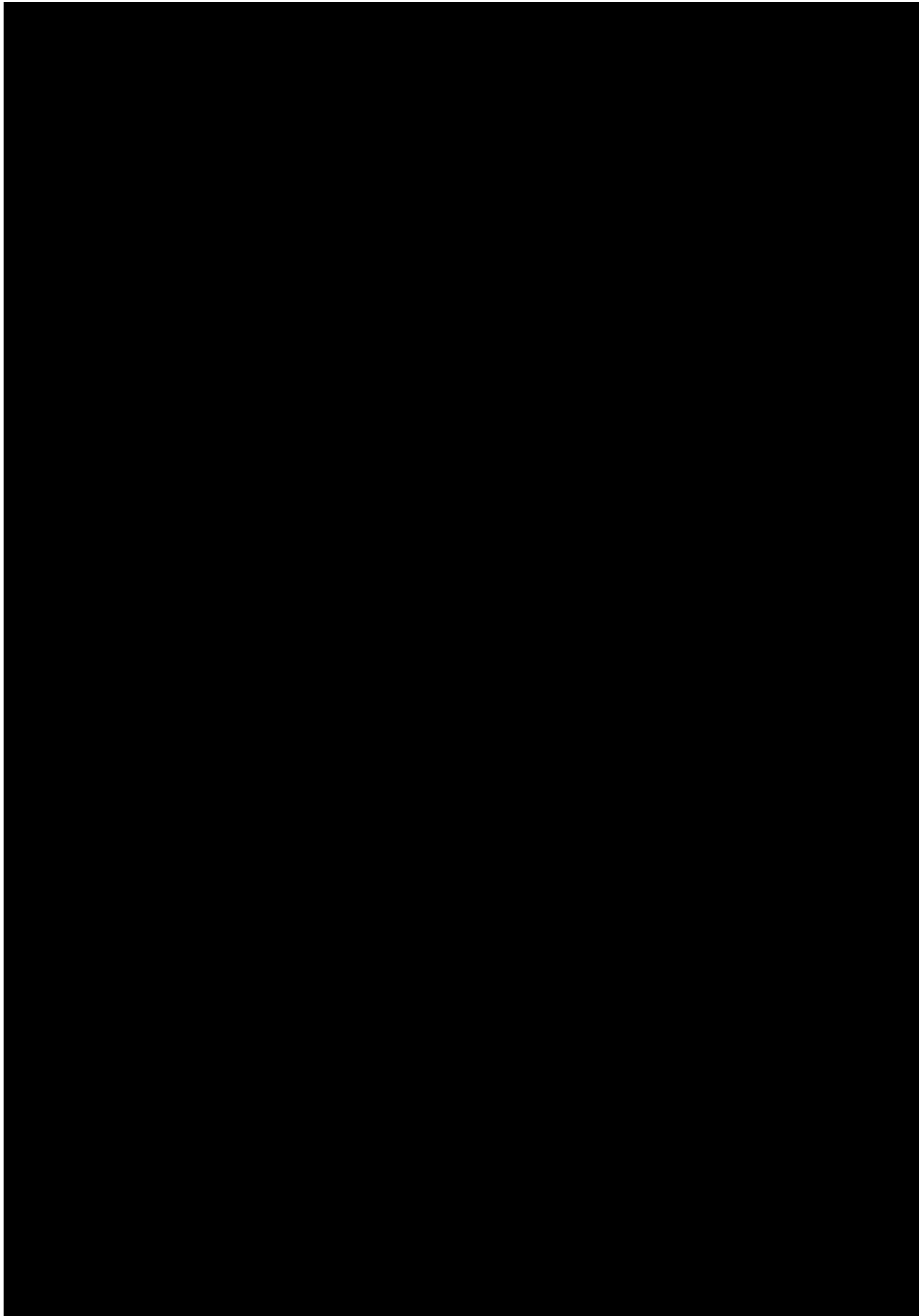


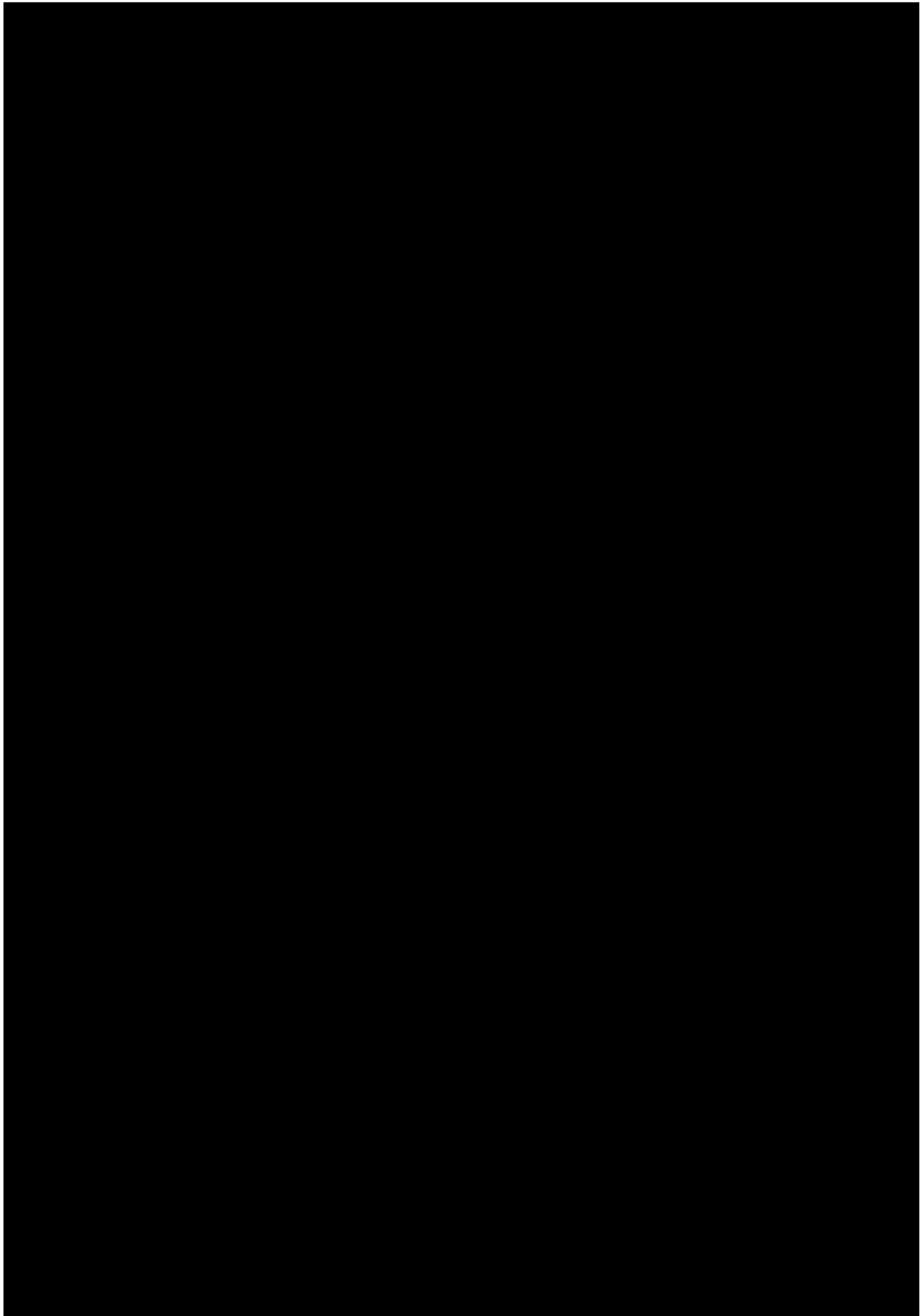


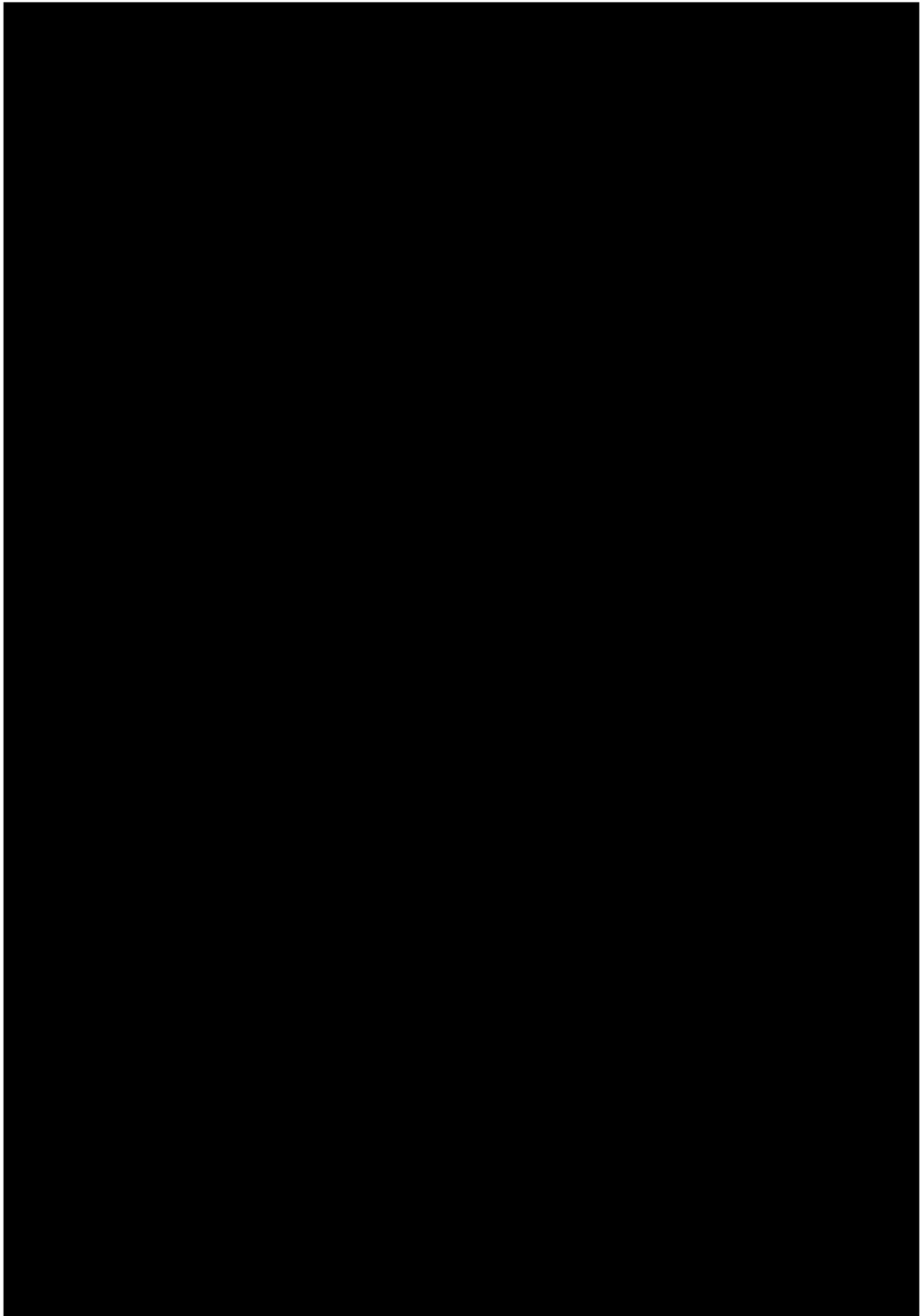


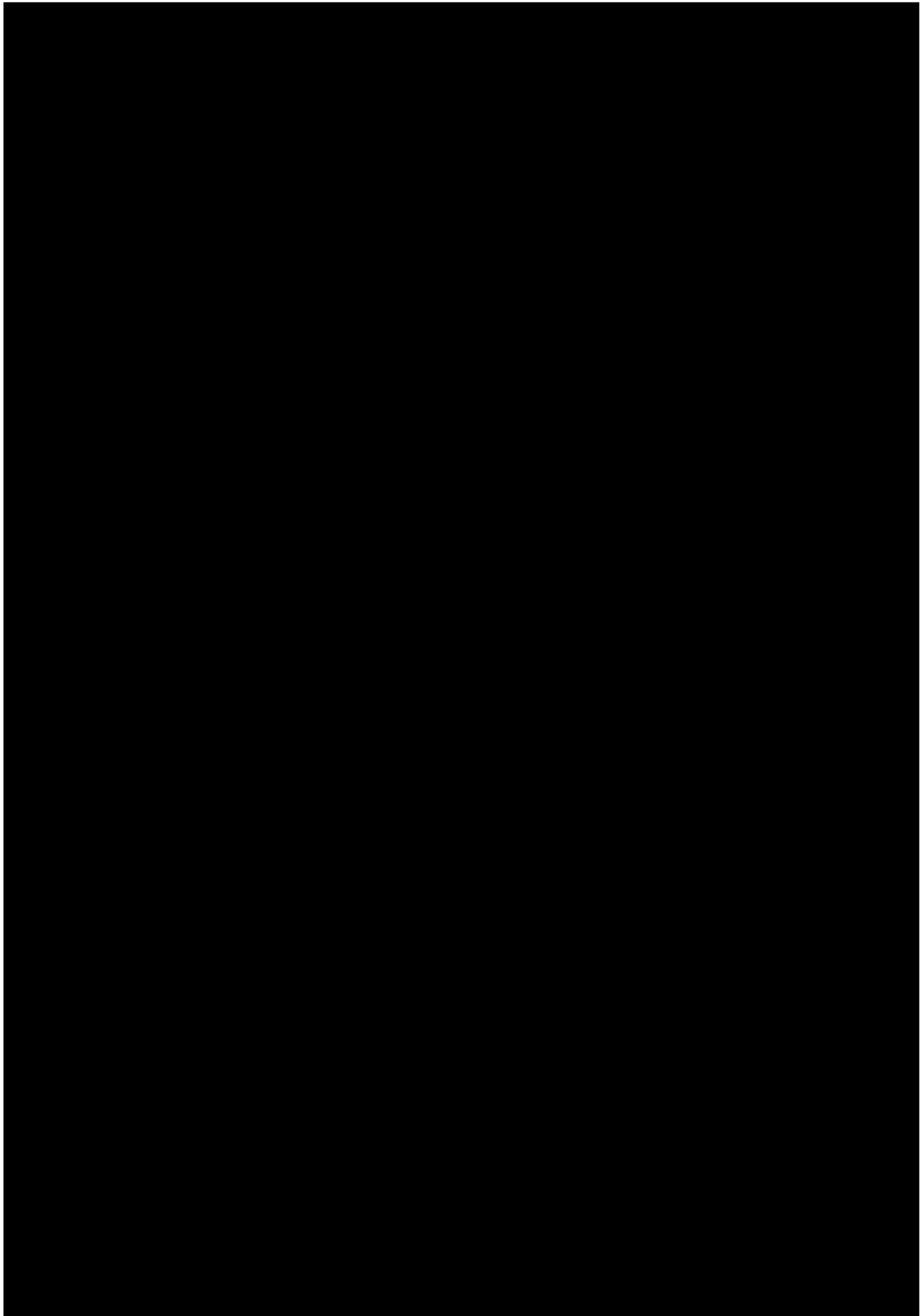


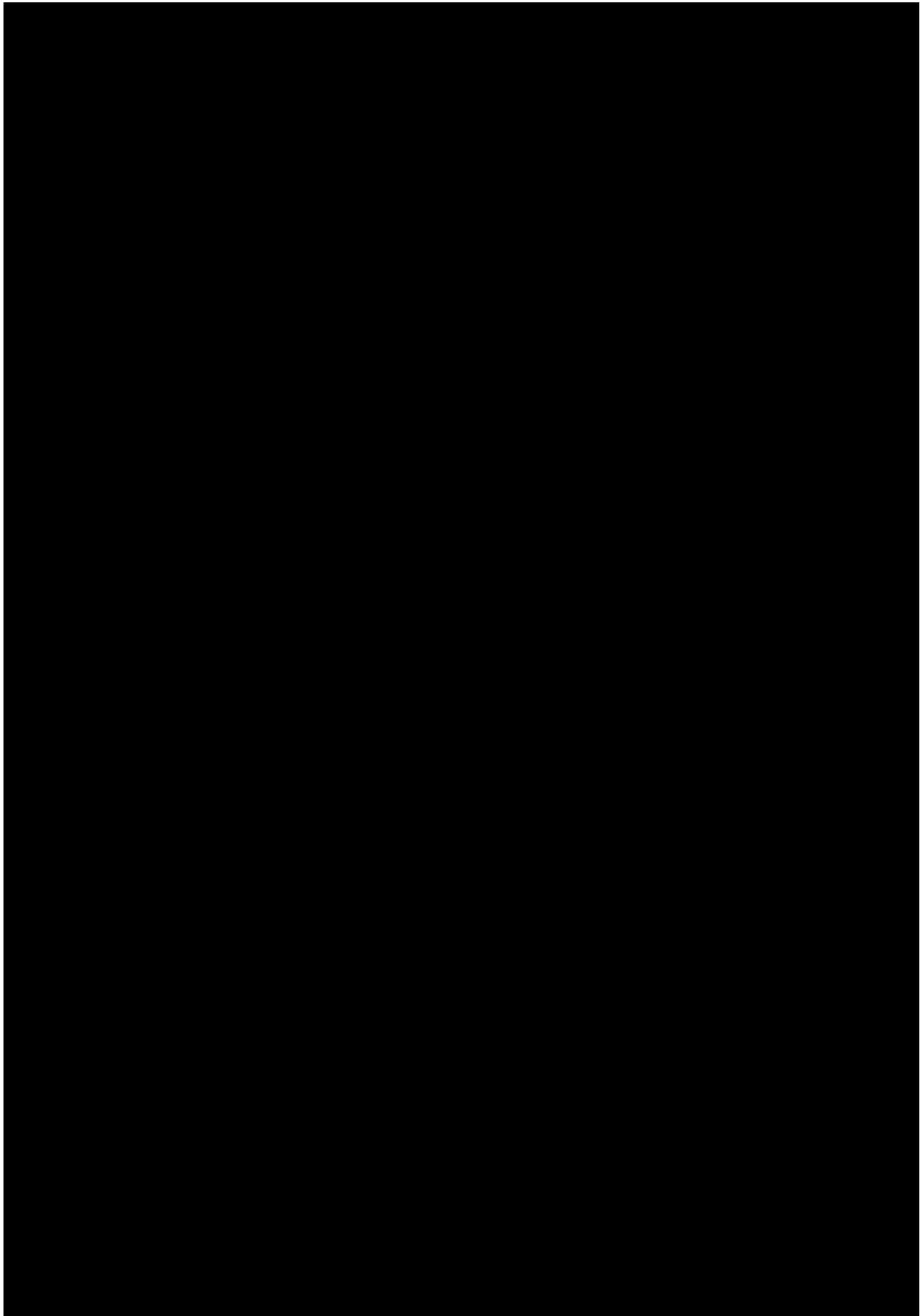


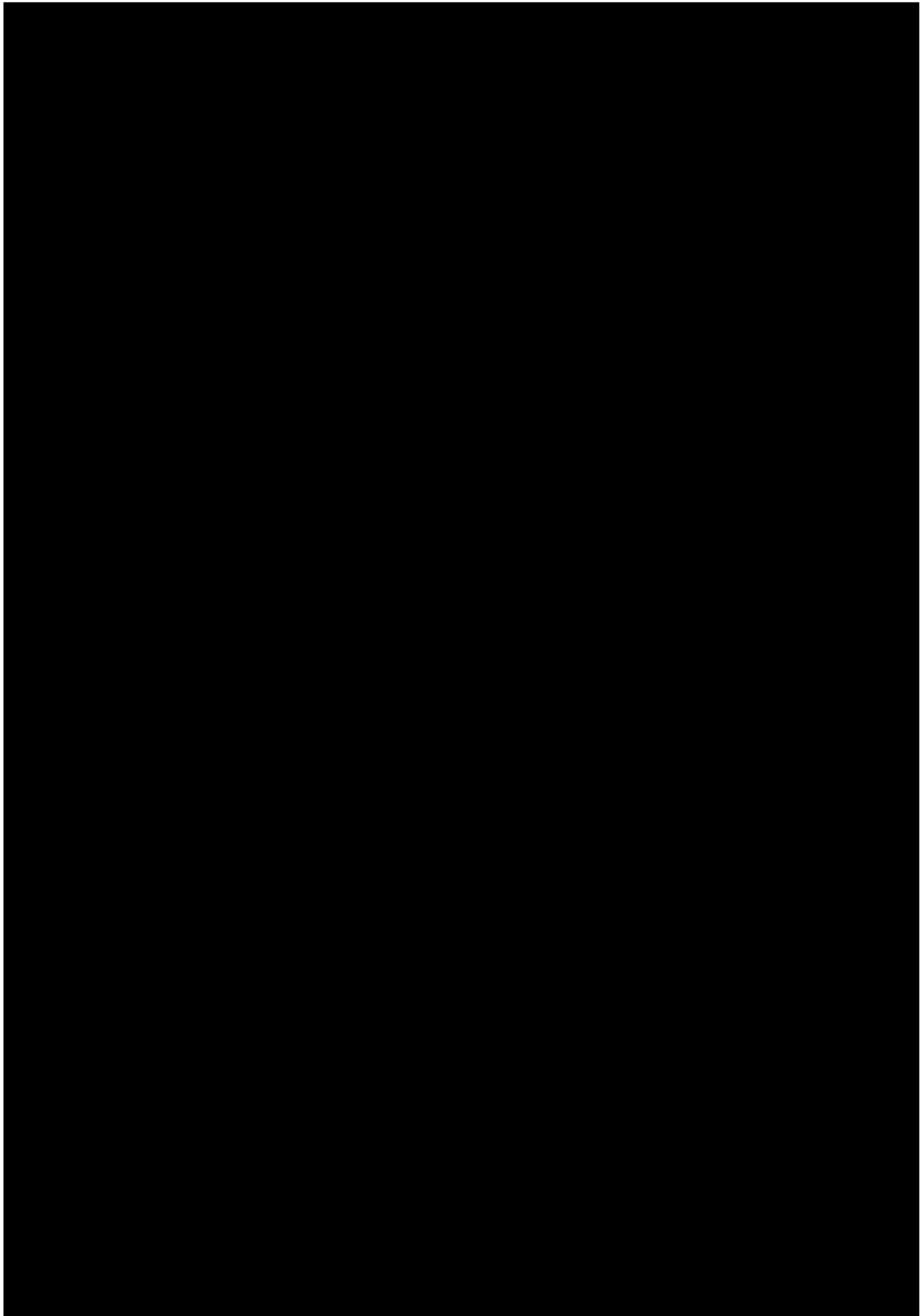


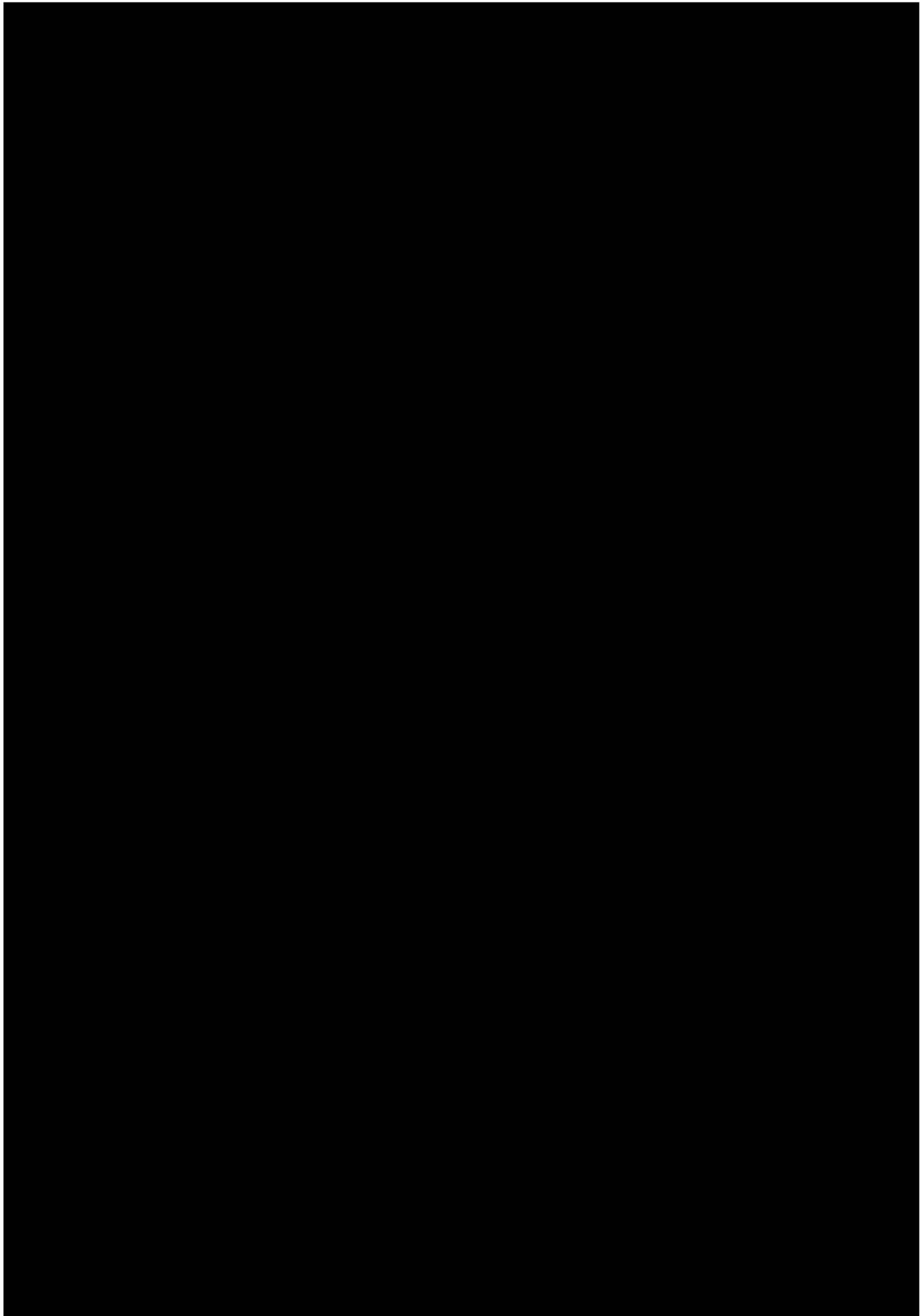


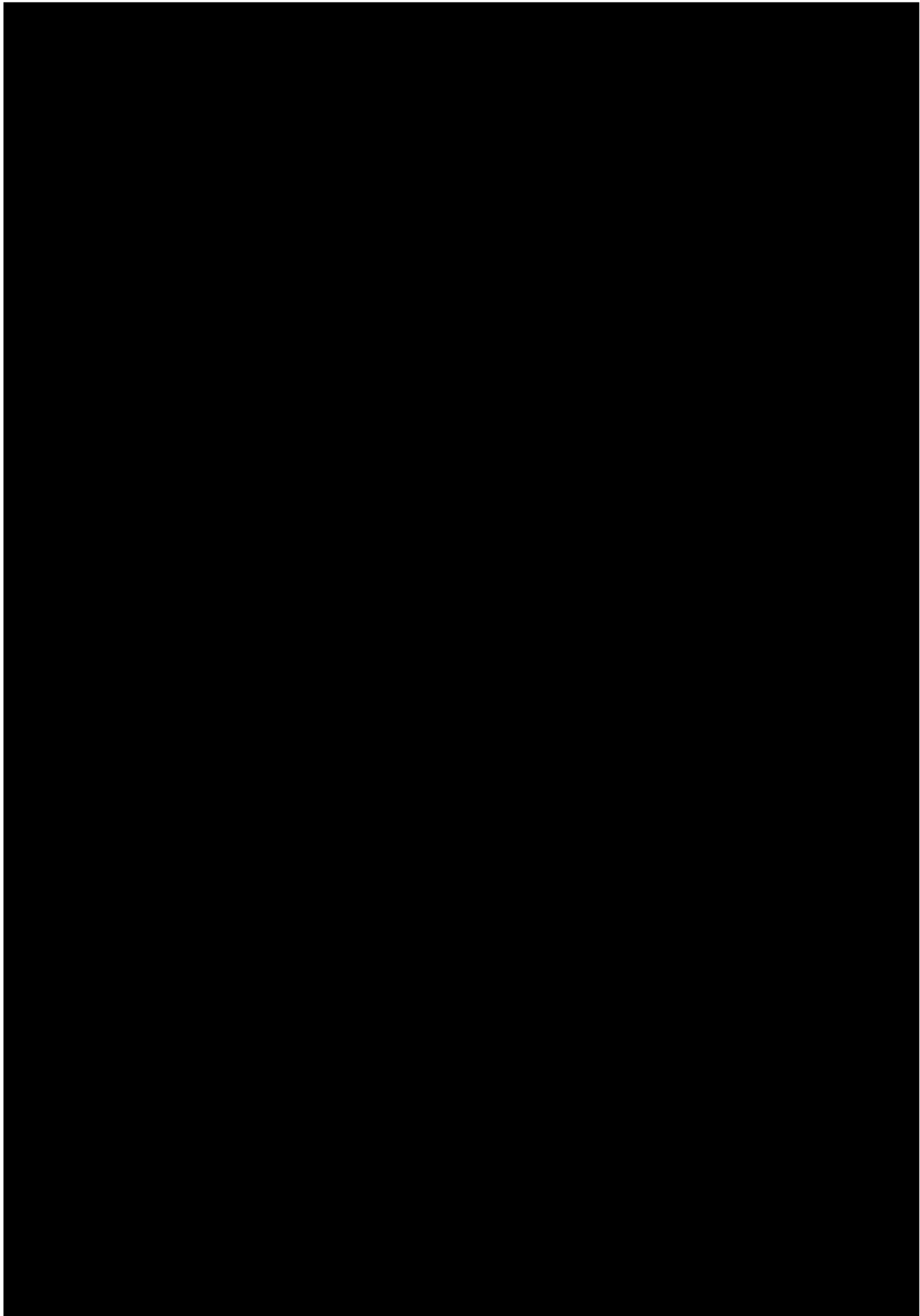












Appendix E Archaeological report
