



Transport
for NSW

Sydney Light Rail

Public Private Partnership

Project Deed

Schedule F Initial Project Plans

Schedule F1 – Project Plan Commitments

Document Number: 3129192_9
Execution Version

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1. Project Plan Commitments

- (a) The matters identified in Table 1 below must be addressed, in addition to any other obligations set out in the deed, in the preparation of the relevant Project Plans identified in section 2 of SPR Appendix 43 (*Project Plan Requirements*), and implemented during the delivery and operations of the SLR.
- (b) Nothing in this Schedule F1 limits the warranty given by OpCo under clause 8.4 of the Operative Provisions that the Project Plans will, at all times, be fit for the purposes set out in clause 8.1 of the Operative Provisions.
- (c) The identified matters to be addressed are not exhaustive and TfNSW does not warrant that:
- a. it has checked the relevant documents for compliance with the requirements of the deed; or
 - b. compliance with the requirements of this Schedule F1 will ensure that OpCo fulfils all the deed requirements.
- (d) In this Schedule F1 a reference to an “Attachment” is a reference to an Attachment to this Schedule F1.

Table 1 Project Plan Commitments

Project Plan	Commitments
AEO Authorisation Management Plan	In preparation of the AEO Authorisation Management Plan OpCo must incorporate the commitments detailed in section 6.4(s) (<i>Obtain and Maintain AEO Status</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.
Accreditation Management Plan	In preparation of the Accreditation Management Plan OpCo must: <ul style="list-style-type: none"> • incorporate the commitments detailed in 6.4(t) (<i>Obtain and maintain accreditation</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1; and • identify the processes for undertaking a quantitative risk assessment as required by section 11.9(b) of the SPR.
Safety Management Plan	In preparation of the Safety Management Plan OpCo must address the WHS leadership and WHS programs detailed in section 6.4(q) (<i>Establish WHS leadership and culture on the project, including associated WHS programs</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.

Project Plan	Commitments
Stakeholder and Community Engagement Plan	<p>In preparation of the Stakeholder and Community Engagement Plan OpCo must incorporate:</p> <ul style="list-style-type: none"> • communication and coordination of community and stakeholder liaison during construction as detailed in section 6.4(b) (<i>Our communication and coordination of community and stakeholder liaison with construction activities, particularly in critical areas</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1; • liaison with Authorities detailed in 6.4(f) of Attachment 1; and • cooperation and partnership with Stakeholders and TfNSW detailed in 6.4(o) of Attachment 1.
Delivery Phase Sustainability Plan	<p>In preparation of the Delivery Phase Sustainability Plan OpCo must incorporate:</p> <ul style="list-style-type: none"> • the commitments made in section 6.4(r) (<i>Achieve the sustainability targets specified in SPR Appendix 7 (Sustainability), including the intended target values</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1 including how OpCo will achieve the Sustainability Targets specified in SPR Appendix 7 (<i>Sustainability</i>); and • where relevant to the Delivery Activities, the Sustainability Report in Attachment 3.
Interface Management Plan	<p>In preparation of the Interface Management Plan OpCo must incorporate the commitments made in 6.4(m) (<i>Manage and construct the IWLR interface, including maintaining IWLR operations</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1, and in particular those commitments relating to the management and construction of the IWLR interface including maintenance of IWLR operations.</p>
Delivery Management Plan	<p>In preparation of the Delivery Management Plan OpCo must incorporate:</p> <ul style="list-style-type: none"> • OpCo’s Mobilisation Plan commitments detailed in: Section 6.4(a) (<i>Structure and mobilise its delivery team</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 2; • the commitments regarding management of public and community safety during delivery detailed in section 6.4(p) (<i>Manage public and community safety during the delivery</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.

Project Plan	Commitments
Construction Management Plan	<p>In preparation of the Construction Management Plan OpCo must address:</p> <ul style="list-style-type: none"> • the management of construction activities to accommodate Special Events detailed in section 6.4(d) (<i>Deal with special events including New Years Eve and deal with regular events, including those in the Moore Park precinct and at Randwick racecourse</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1; • the construction methodology for the Bridge over Eastern Distributor and associated civil works on South Dowling Street as detailed in section 6.4(j) (<i>Construct the bridge over the Eastern Distributor and associated civil works on South Dowling Street</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1; • the separation of the constructions activities from public space as detailed in section 6.4 (l) (<i>Provide visual and safe separation of the construction activities from public space</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1; • the structure of OpCo’s compounds including that: <ul style="list-style-type: none"> - the project / design office which will be located in commercial building in or around Central Station / Surry Hills precinct and which will be housing staff inclusive of, but not limited to, the following teams: project management, design, safety, environmental, community, quality, management and coordination; - zone construction offices which will house the construction management staff for each zone and will be located along the route including, but not limited to, the following: <ul style="list-style-type: none"> ○ Route A - which will occupy a small tenancy in a commercial building at either Prince Alfred Park or the CBD South; ○ Route I2 – which will be a tunnel compound located at Moore Park West; and ○ Route O2 & M – located at the Randwick stabling; and - workforce compounds and storage areas located along the route as detailed in Attachment 4
Manufacturing and Procurement Plan	<p>In preparation of the Manufacturing and Procurement Plan OpCo must address the procurement and delivery of the CSELRVs including the process for any required design development and validation as detailed in section 6.4(g) (<i>Procure and deliver the CSELRVs including the process for any required design development and validation</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.</p>

Project Plan	Commitments
Design Management Plan	In preparation of the Design Management Plan OpCo must detail how it will manage, coordinate and optimise design solution as detailed in section 6.4(c) (<i>Manage, coordinate and optimise design solutions</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.
Testing and Commissioning Plan	In preparation of the Testing and Commissioning Plan OpCo must address the testing and commissioning of the CSELR as detailed in 6.4(n) (<i>Test and commission the CSELR</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.
Incident Management Plan	In preparation of the Incident Management Plan OpCo must address incident and emergency response management as identified in section 6.4(e) (<i>Respond to incidents and emergencies</i>) of the document titled “6.4 Other Project Plan Commitments” in Attachment 1.

ATTACHMENT 1 – Other Project Plan Commitments – Part A



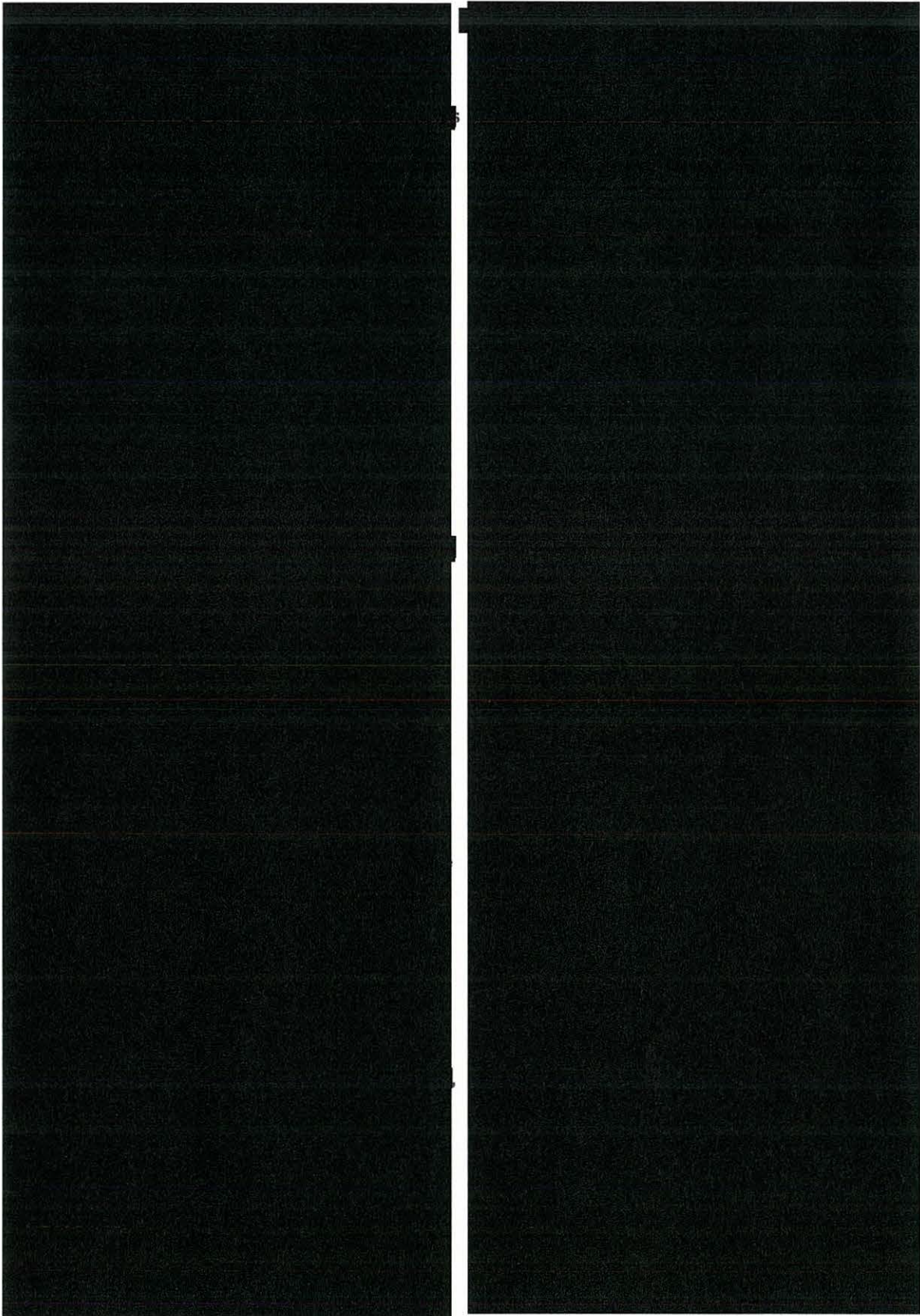
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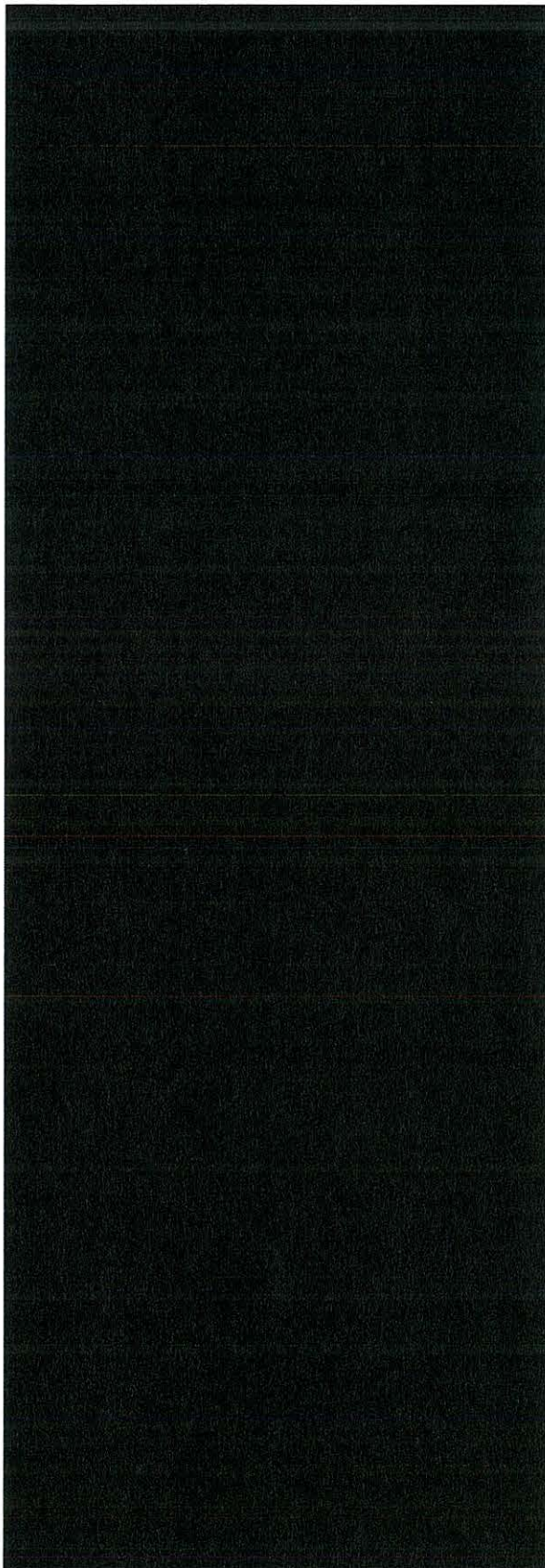
6.4 Other Project Plan Commitments (Deed Schedule F1)

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6.4 (b) Our communication and coordination of community and stakeholder liaison with construction activities, particularly in critical areas

Key Issues:

SLR will be constructed and operated in an extremely busy and diverse environment presenting a number of challenges.

While many stakeholders along the SLR route are known and can be readily engaged, reaching intermittent visitors to the key sites (or less frequent users of roads along the route) is a more complex communication task.

Managing high-impact (and at times late night or continuous works) in residential and business areas requires thorough planning, timely communication and effective relationships between stakeholders, communities and the Connecting Sydney team.

Work undertaken by TfNSW to date has produced a solid foundation of engagement on which to build, including TfNSW's constructive relationships with City of Sydney (CoS) and Randwick City Council (RCC), Centennial and Moore Park Trust, the Australian Turf Club, NSW Health and UNSW.

Connecting Sydney will implement a proactive stakeholder communications and relations program designed to:

- establish realistic expectations;
- keep people informed; and
- respond promptly to queries and concerns.

We will liaise with stakeholders and the community through a combination of focused, face-to-face engagement by Place Managers, as well as taking opportunities to use emerging technologies for broader communications and engagement.

Methodology:

We will focus consistently on anticipating, managing and responding to stakeholder and community issues at a number of levels.

At a strategic level, a Stakeholder Relationship Manager will coordinate and communicate Connecting Sydney's activities with critical stakeholders, including:

- Department of Premier and Cabinet's Events Operation Group and Events Communications Group, and the Moore Park Event Operations Group;
- project partners including local councils, Centennial Park and Moore Park Trust,



Sydney Cricket and Sports Ground Trust, Australian Turf Club, University of NSW and Prince of Wales Hospital; and

- peak bodies representing retail and business groups and peak industry bodies for the taxi, coach, hotel, tourism and courier sectors.

On the ground, an intensive community relations program will address the needs of the local communities directly impacted by works. This program will be overseen by the Precincts Manager and delivered by a team of Place Managers. As the 'face of the Project, Place Managers will serve as the single point of contact for local communities along the route. They will act as the 'eyes and ears' of the Connecting Sydney team, working side-by-side with the construction team. Our community relations program will:

- contribute to Tool box meetings and awareness training for Connecting Sydney personnel;
- manage day-to-day issues within precincts;
- investigate and respond to enquiries and complaints;
- provide timely notification of scheduled works and communicate with local residents and businesses regarding unscheduled and emergency works;
- maintain positive relationships with precinct committees, resident associations and local businesses;
- work closely with sensitive receptors to accommodate their specific needs; and

- deliver education and safety programs.

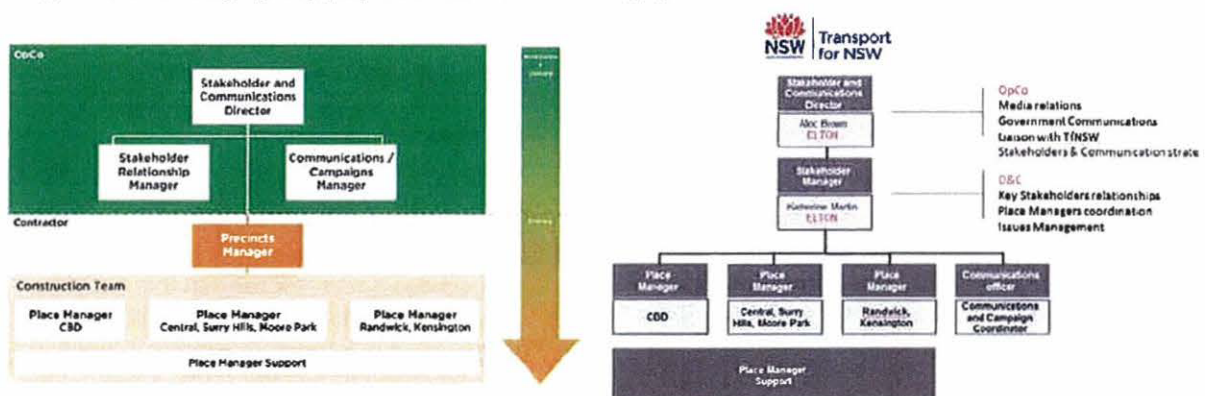
Broad reach communications will be used to inform intermittent CBD and the south eastern suburbs' visitors and road users. The Community Manager will develop and implement campaigns to inform people about the Project using various and appropriately selected communication channels. We will also work with TfNSW to use online and social media to enhance the effectiveness and reach of project messages.

In this way, Connecting Sydney will inform users of traffic delays, unscheduled works, incident management and changed access arrangements; as well as provide general project information, regular project updates and notifications of scheduled works.

The team will be led by a Stakeholder and Communications Director who will work closely with TfNSW to ensure:

- forward planning of all communications and engagement activities, in accordance with the Stakeholder and Community Engagement Plan;
- organisational charts are in place to promote effective communication of both scheduled and unscheduled activities amongst working groups;
- coordinated communication across project partners;
- prompt response to any Ministerial matters; and
- meeting TfNSW's reporting requirements.

Figure 2: Connecting Sydney proposed Stakeholder and Engagement Team structure.





Within the framework of the Stakeholder and Community Engagement Plan (to be developed with TfNSW within 50 days of appointment), we will:

- prepare a milestone calendar of key construction activities and deliver communications. This includes updates, newsletters, advertisements and engagement activities, such as community and business forums and liaison with key stakeholders;
- sequence engagement activities to provide ample notice of works in specific locations; and
- prepare protocols to guide notification of unscheduled works.

As part of the Plan, the Engagement team will hold weekly meetings with the construction teams to plan a rolling schedule of stakeholder engagement and communications activities across all precincts. This will support a forward program of construction works on a quarterly, monthly, fortnightly and weekly basis. Information will be coordinated with TfNSW, enabling joint strategy/actions to be agreed and implemented.

Work planning for engagement and communications will not only anticipate impacts arising from CSELR activities, but also take into account interactions with other construction projects within the vicinity of CSELR work sites.

A location profile will be provided to the Project team as Site-specific construction plans are prepared. This will ensure that works methodologies and programming incorporate mitigation and timing measures relevant to the specific nature of each area, and the needs of sensitive receptors such as hotels, schools and child care centres.

Prior to the commencement of construction, Connecting Sydney will set up a 24-hour hotline, through which we will receive and respond to enquiries and complaints in connection to construction activities. A flow chart will be formed, identifying a step-by-step model for response to the enquiries and concerns of the community.

Throughout Site works, Place Managers will be on hand to gain feedback from affected businesses and residents, enabling refinements and modifications to works methodologies where appropriate.

Outcomes:

Connecting Sydney's strategies will:

- facilitate timely and effective communication with stakeholders along the route and in each

precinct, ensuring parties know what to expect and when works will occur;

- establish realistic expectations of potential challenges during works through clear, direct communications, while on-the-ground Place Managers assist community and business stakeholders to plan accordingly;
- promote coordination by appointing the dedicated Stakeholder and Engagement Team to facilitate continuous communication with the construction team on-the-ground;
- guarantee focus on two-way communications through dedicated Place Managers and Stakeholder Managers providing a 'face' to the project and a single point of contact for stakeholders, enabling the construction team to focus on its job.

Evidence:

This methodology responds to TfNSW's SLR Stakeholder and Community Engagement Strategy. It also draws upon Elton Consulting's experience in successfully developing and implementing engagement and community liaison strategies, as demonstrated in the planning for CSELR, as well as the NWRL and Sydney Metro.

6.4 (c) Manage, Coordinate and Optimise Design Solutions

Awareness of key issues

Connecting Sydney has engaged the expertise of its GHD SKM Design Joint Venture (JV) to develop an engineering design that simplifies construction while improving reliability, durability and maintainability with Alstom's inhouse, CRV, systems, power and signalling expertise providing technical capacity in these areas and informing the Civil design team. Supported by Cardno (Utilities), Aspect (Urban Design), Grimshaw (Architecture), Edge (Sustainability) and a raft of specialised sub consultants, the result is whole-of-life (WoL) value for money solution for TfNSW, investors and customers.

To generate and evaluate ideas during the RFP process, we have carried out a top-down evaluation of our Initial Concept Design across a range of required functional outcomes. During detailed design we will refresh this exercise by assessing and ranking (or discarding) the outcomes of this process against agreed criteria. This exercise informs the project team of the risks, opportunities and areas requiring further development and/or investigation, leading to efficient allocation of time and resources for construction mobilisation and delivery.



Response/methodology

Developing a coordinated and optimised design solution will be a key element for successful project delivery. Our proposed methodology to achieve this within the design team will:

- confirm the design package breakdown and submission program in collaboration with the Independent Certifier, with the objective of submitting documentation at a consistent rate that allows reasonable opportunity for review;
- confirm the relationship between design packages and that all the SPR requirements are addressed;
- confirm scope allocation between design team;
- review the Concept Design and confirm any alternatives proposed in the RFP to be incorporated in the detailed design development;
- early development of the SLR RAATM/Engineering Assurance Register and allocation of requirements to design packages so that they are incorporated progressively during design development;
- form a fully integrated design team with matrix structure (i.e. based on discipline and Route). Clear roles and responsibilities and workshops to align the design team on those responsibilities (e.g. the difference between a team lead, designer, checker and verifier);
- design constructability workshops for each design package during Stage 1 and Stage 2 development to integrate the design and construction methodologies;
- design team workshops to identify potential coordination issues and develop predetermined methods to address them progressively during design development;
- use shared design models incorporating all key elements for design coordination;

- conduct pre-submission reviews of all design packages by OpCo, O&M Contractor and D&C Contractor including interdisciplinary design coordination workshops; and
- implement a design change request process to review proposed changes for value for money before they are incorporated in the design development.

Clear objectives and measurement processes will be key to achieving value for money outcomes. These outcomes hinge upon the whole project team sharing a clear and thorough understanding of TfNSW and key stakeholders' expectations, constraints and priorities. It is imperative that the spectrum of Project objectives are considered at every step of the process outlined above. This will be achieved by reviewing the status of Project development and progress against the Project Objectives and their inter-relationships. These exercises involve senior level participation and are relayed to each work group to ensure efficient and thorough execution of construction.

Outcome

On-time and on-budget delivery will be achieved through Connecting Sydney's strength in planning, implementing and delivering quality, health, safety and sustainability performance. The design phase considers all of these elements to deliver innovative outcomes; it is critical that the project delivery team sustain these processes to achieve project objectives and compliance at all times.

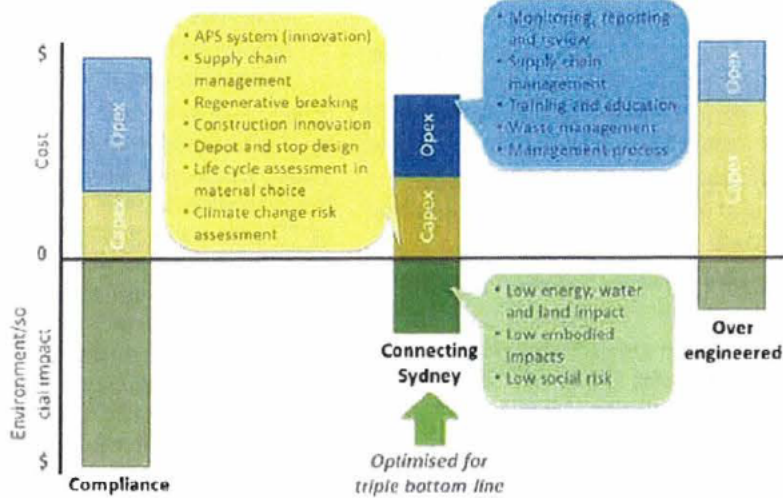
Evidence

Triple bottom-line lifecycle assessment recognises fulfilment of this core objective as key to maximising economic, environmental and social benefit to achieve WoL optimisation. Figure 6.4 (c) illustrates the benefits achieved in Connecting Sydney's approach, ensuring WoL value for money.



Figure 3: Optimising Connecting Sydney's design solution in delivery with innovative and sustainability initiatives to achieve WoL value for money.

Whole of Life Optimisation – Maximises economic, environmental and social benefit using triple bottom line life cycle assessment. Optimising the cost of sustainability



6.4 (d) Deal with Special Events including New Year's Eve and deal with regular events, including those in the Moore Park Precinct and at Randwick Racecourse

Awareness of key issues

The CSELR will travel through some of Sydney's busiest commercial, recreational, educational and health precincts, which also accommodate many of the city's largest public events. Such events are part of the fabric of the city's cultural and recreational life and are important contributors to the tourism economy.

While some work programs can be modified to avoid or minimise construction activities in certain locations for one-off events (such as New Year's Eve), large events are a weekly occurrence in the Moore Park and Alison Road precincts.

In dealing with these key events, we recognise the following issues:

- providing commuters with safe and secure alternative access;
- ensuring security around sites, particularly when alcohol consumption and very large crowds are involved;
- scheduling works to avoid key events while minimising disruption to the program;
- impacts of construction staging for events that are unknown or unscheduled at this point in time;

- working with organisers, venues and ticketing agencies to provide information to event goers prior to events; and
- contingency for immediate response to unscheduled events.

Event Planning

The following measures will be put in place to plan for events:

- the Stakeholder Relationship Manager will coordinate and communicate Connecting Sydney's activities with critical stakeholders including:
 - Department of Premier and Cabinet's Events Operation Group and Events Communications Group, and the Moore Park Event Operations Group; and
 - project partners including local councils, Centennial Park and Moore Park Trust, Sydney Cricket and Sports Ground Trust, Australian Turf Club, University of NSW and Prince of Wales Hospital.
- working with stakeholders, we will build an annual calendar of major events such as (New Year's Eve, Vivid, Australia Day) and review the information quarterly to feed into the delivery of the program;
- we will capture all key and regular events interfacing with the Light Rail alignment as part of the Major Event Action Plan. This Plan



will help to understand constraints and potential cumulative impacts. Standard procedures for regular events, particularly those at Moore Park and the racecourse will also be outlined, while specific plans will be developed with organisers of key events such as Vivid, New Year's Eve and Anzac Day. The plan will address direct impacts to the immediate vicinity of a work site, as well as assessing distant interactions or downstream impacts. For example, while much of the Mardi Gras Parade traverses Hyde Park and Oxford St, CSELR works in George Street will affect alternative access routes and temporary traffic diversions.

- we will develop a risk management framework for major events to ascertain whether work can proceed prior to, or during the major event. This framework will include a checklist for worksites and team briefings prior to an event if work is to occur during the event. Site inspections will be conducted at construction zones where they interface with event activities to ensure compliance with public safety. Consideration will also be given to the scale and nature of the event and whether security may be required at construction zones to ensure public safety. This is particularly important where the event may entail alcohol or drug consumption such as NYE, Mardi Gras, Melbourne Cup, Future Music, Spring Carnival.
- following this assessment, the work program may be modified where applicable to avoid or accommodate these events.
- protocols for dealing with Site emergencies during events will be prepared as part of the Incident Response Plan.

Leading up to and during events measures will be put in place such as:

- developing a pre-event communication program containing information on alternative pedestrian and vehicle access routes, additional time required to reach a destination, and revised transport arrangements. This will be issued to the public well in advance by:
 - providing event organisers and ticketing agencies with ready-to-use information to publish on their websites;
 - uploading information on the SLR website and issuing newsletters, advertisements and updates;

- placing information on variable signage along the route and major arterials leading into the city; and
- erecting signage in and around construction sites.

- clear the Site and initiate Site lockdown in advance of the event if works are suspended;
- initiate an 'event mode' when necessary to continue Site works during an event. This includes heightened safety and vehicle access precautions as well as installation of crowd control barriers to keep the public at a safe distance;
- implement appropriate safety initiatives including Site safety signage and, if necessary, security; and
- provide alternative way-finding information and where necessary, secure pathways by installing barricades and boardwalks.

Subsequent to each key event, in the first year of construction, we will construct a review with relevant agencies and stakeholders, identifying areas for improvement and successes that can be built upon in future events.

Outcome

Effectively managing the interaction of CSELR construction and large events will ensure:

- community safety is secured at all times;
- traffic flows are maintained and suitable alternative pedestrian connections provided;
- work sites are attractively presented so as not to detract from the experience of the event;
- event-goers receive quality information about the project and its implications, to assist in planning their journey and participation well in advance of the event; and
- event organisers develop a constructive and cooperative working relationship with Connecting Sydney, contributing to the continual improvement of event management.

Evidence

Acciona has successfully managed construction with many large scale events at its Legacy Way project in Brisbane where Suncorp Stadium is located 2.5 km from the Eastern Worksite. Every 6 months the Community Engagement and Stakeholder Management Team review the scheduled events for the coming 6 months at Suncorp Stadium in order to coordinate the construction program. The program is then



planned to avoid lane closures that may coincide with the stadium events.

Legacy Way's proximity to the Brisbane Showgrounds means that works are planned to completely avoid impacts on traffic during the Brisbane Show (EKKKA), held annually to mitigate any further congestion that occur as the city's residents flock to the event.

6.4 (e) Respond to Incidents and Emergencies

Awareness of key issues

Anticipating and preparing for unlikely but possible incidents and emergencies is core to Connecting Sydney's proactive management of risk and recognition of the highly sensitive and complex environment of the SLR PPP.

Connecting Sydney is committed to mitigating all safety issues, hazards and risks and requirements relating to safety during construction, testing and commissioning, operation and maintenance, hand back and decommissioning of the SLR PPP.

Response /methodology

As part of Connecting Sydney's Safety Management Plan, incidents and emergencies involving construction workers and the general public will be addressed through comprehensive procedures established in OpCo's Safety Management System (SMS). Covering incident reporting and investigation, emergency and crisis management, the SMS will be a component of the SLR PPP Integrated Management System. In addition, location-specific incident plans will be formed for key locations prior to work commencing. These plans will:

- identify and rate potential risks for each location;
- establish a central and local liaison point for each of the relevant utilities and authorities; and
- outline key stakeholders and sensitive receptors such as childcare centres, schools, hospitals and aged care centres and contact details for relevant personnel. In the case of major institutions such as Prince of Wales Hospital, the Plan will reference the facilities' internal emergency protocols.

For highly sensitive worksites such as George Street, the Eastern Distributor Bridge, Alison Road/Anzac Parade intersection and the Prince of Wales Hospital, we will implement a Site-specific induction for the labour work group, highlighting Site-specific risks, incidents and emergency protocol.

Incidents include any unplanned event which results in, or has the potential to result in injury, ill health, damage to property or the environment or interruption to operations. An incident also includes a near-miss or failure of processes. Emergency management means preparing for and responding to situations that are immediately threatening to personal safety, assets or the environment.

Connecting Sydney has obligations under the *WHS Act*, *Rail Safety National Law* and the *Environment Protection Act* to report notifiable incidents to the appropriate regulatory body. Our procedures will meet these obligations. In addition, all incidents will be reported using the Project incident reporting platform, enabling incidents to be tracked, analysed, and corrective actions taken.

All safety incidents involving construction workers and the public will be reported promptly, with immediate action taken to ensure safety and security. An investigation will be commenced to determine the root cause and ensure that required actions are in place to prevent a recurrence. The level of investigation will be determined by the events consequence potential, based on Connecting Sydney's integrated risk matrix.

Accountabilities for incident reporting and investigation and for emergency and crisis management will be consistent with the WHS requirements of the Deed. All contractors will establish local reporting, investigation and emergency management processes, incorporated into the Site-specific Safety Management Plan and Incident Management Plan. Employees, supervisors and managers will receive training regarding the following procedures and acknowledge and accept their responsibilities to report, investigate and manage such occurrence:

- employees must initially report incidents to their immediate supervisor as soon as practicable;
- supervisors must secure the safety of the Site and ensure that the immediate welfare of workers or the public is protected;
- supervisors must inform their manager and record the incident using the Incident reporting form; and
- managers must determine if the incident is notifiable to regulators and the appropriate level of response and investigation required (Investigation Report Template).

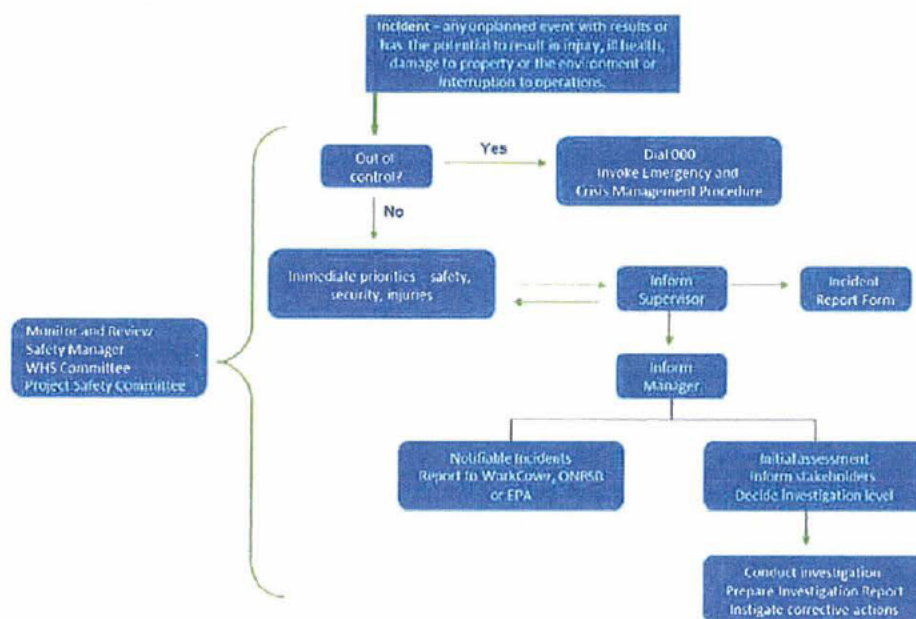


This process is demonstrated in the below. Emergency Response Plans will address, as a minimum, potential emergency scenarios and likely impacts, roles and responsibilities, emergency response procedures, emergency equipment, emergency service call out and liaison, Site security, training and simulation and elevation of an emergency to crisis status.

All incident and investigation reports will be reviewed by the Project Safety Manager, the WHS Committee and the Project Safety Committee to ensure that regulatory bodies have been notified where required, and that appropriate follow-up actions are in place.

Figure 4: Incidents and Emergencies Management

INCIDENT AND EMERGENCY MANAGEMENT OVERVIEW



At stakeholder and community level, the Stakeholder and Community Engagement Plan for both delivery and operation phases will also outline procedures for crisis management of incidents and emergencies. This will be developed in consultation with TfNSW. It will contain protocols for:

- immediately advising TfNSW of any incidents;
- clearly delineating responsibilities regarding media liaison for respective TfNSW and Connecting Sydney staff;
- advising and working with utilities authorities and emergency services;
- advising and working with sensitive receivers - notably schools, hospitals and the University; and

- ensuring operational staff are free to expediently address the problem without being held up by communication tasks.

In addition, the plan will address procedures for informing stakeholders who may experience downstream impacts such as service interruption or traffic disruption.

Outcome

Collectively, the implementation of these procedures by the construction team; and the application of response protocols to incidents and emergencies, by the Stakeholder and Community Management team, will ensure OpCo:

- minimises harm to workers, the public and the environment while satisfying regulatory obligations;
- is prepared with a practical and agreed workable, easy-to-deliver strategy for



informing and responding to stakeholder issues arising from possible incidents; establishes working relationships with authorities and key stakeholders and is familiar with procedures;

- has a coordinated media relations procedure; with clear responsibilities for producing a single and rehearsed message; and
- offers a single point of contact for stakeholders.

Evidence

An example successful incident management can be drawn from Acciona's role a lead partner at the Transcity JV on the Legacy Way Project in Brisbane where, during the dismantling of an acoustic shed, cladding caught alight approximately 8 metres in the air whilst a oxy-acetylene cutter was in use. In response to this incident, in order of occurrence:

- the smoke detection alarm sounded;
- the work group supervisor immediately called the internal safety hotline (maned 24 hours a day 7 days a week);
- the safety officer immediately notified the Queensland Fire and Rescue Service (QFRS); and
- The QFRS arrived within 10 minutes. In the meantime the fire was extinguished and area controlled by internal personnel, using water hose that was available and 2 fire extinguishers.

Work was halted for the remainder of the day shift and recommenced in line with the next shift whilst project Safety Team performed an incident investigation and ensured it was secure.

A written report was completed and WPH&S was advised of the incident within an hour of occurring.

Like the high profile urban environment that will become the SLR construction site, this incident did not go unnoticed by the community, since smoke was visible from Brisbane's Centenary Freeway, the major arterial road connecting the Brisbane's western suburbs to its CBD. Whilst there was no risk of harm to the public, passing traffic slowed down to look. Transcity Stakeholder and Community Engagement team responded by reporting the slow down to the Brisbane Metropolitan Traffic Management Centre (BMTMC) and worked closely with them to provide updates on traffic flow that were relayed to commuters. No comments about the cause of

the smoke were released until the safety investigation was completed. The team also liaised with other media agencies to ensure a united front in terms of messaging and information communicated to the greater community.

6.4 (f) Liaise with Authorities

Issues: Complexity

Throughout the Delivery Phase, Connecting Sydney, in consultation with TfNSW, will work cooperatively with:

- relevant government agencies including the Department of Planning and Environment, Roads and Maritime Services (RMS) and Sydney Buses;
- safety and environmental regulators;
- City of Sydney, Randwick Council and Centennial and Moore Park Trust;
- utility operators; and
- emergency services.

The focus of these relationships will be to:

- work collaboratively through potential planning refinements and seek relevant concurrences;
- coordinate traffic and transport changes during construction and into the Operations Phase with TfNSW, Transport Management Centre, RMS and local councils;
- involve utility operators in the development of detailed Site work plans;
- provide utility operators with advance notice of Site works to accommodate potential disruption to services;
- coordinate notification processes with utility providers regarding disruption to services; and
- orientate emergency services to the project and work consultatively to develop incident response plans.

Methodology:

We will keep TfNSW informed and seek clearance for meetings with government agencies and authorities throughout all stages, as set out in SPR Appendix 8.

Our collaborative approach to working with project partners includes:

- establishing task and issue-focused working groups involving Connecting Sydney, TfNSW and relevant agencies and authorities;



- identifying key contacts and liaison/project officers within authorities at both central and local levels (Connecting Sydney's corresponding relationship managers will maintain relationships with these key contacts);
- working with TfNSW and relevant agencies to establish procedures for more informal liaison between their teams and the Connecting Sydney team;
- providing regular updates and reports to TfNSW on the status of formal and informal discussions with agencies and authorities;
- inviting TfNSW representatives to attend all meetings; and recording contact details and meeting notes in the consultation manager database.
- The stakeholder relationship manager and precincts manager will:
 - work with utility providers' communications teams to coordinate service disruptions notifications;
 - keep a calendar of scheduled meetings with authorities and ensure it is adhered to; and
 - collaborate with local councils to extend the reach of our communication and engagement campaigns by using their existing community networks.

Outcomes

Effective management of the interaction between Connecting Sydney and authorities will:

- promote a culture of cooperation and constructive partnership;
- bring the valuable local knowledge of agencies and authorities to the Project;
- provide a forum to raise and address potential issues before they become problems;
- eliminate surprises by proactively informing agencies about all aspects of the Project; and
- avoid duplication and misinformation by establishing formal channels for dialogue regarding SLR.

Evidence:

Based on Acciona's experience on the Legacy Way project in Brisbane, we believe that strong relationships are essential to working proactively and collaboratively on a daily basis. We prioritise forward planning as much as possible to mitigate any foreseeable impacts to service and utility.

- 6.4 (g) Procure and deliver the CSELRVs including the process for any required design development and validation

Awareness of key issues

Connecting Sydney understands that the timely delivery of CSELRVs is a critical component of the SLR PPP's delivery. The first two CSELRVs will be delivered once construction of the Randwick Stabling Facility depot is complete, enabling continuity of the Site testing and commissioning of the LRVs.

Response/methodology

The procurement and delivery of LRVs is integrated into the overall project methodology. Linked with the initial requirements of the definition and design process, it is followed with a robust 'make or buy' assessment of major components and a capacity analysis of the manufacturing and supply chain.

The results of these studies form the basis of the selection of internal and external suppliers based on:

- value for money;
- service and delivery; and
- quality and sustainability.

Alstom designs and manufactures the majority of major systems and technologies for the Citadis 305. Overall vehicle design is carried out in the Alstom platform for LRV development. This is the centre of excellence, located at La Rochelle in France. The platform oversees the key aspects of the LRV development process, including:

- vehicle dynamics and performance;
- structural design; and
- electrical system design.

The other key elements of LRV design and development include:

- traction power system – located at Charleoi in Belgium;
- bogies – from Le Creusot, France;
- traction motors – from Ornans, France;
- passenger and electronic systems – Valenciennes, France; and
- LRV manufacture and assembly – Barcelona, Spain.

Each separate centre of excellence is responsible for design, procurement, development and testing of the major subsystem. This approach and commitment to internal product development means that Alstom is able to integrate design



performance into the major technologies which impact the LRV's performance.

Other key systems manufactured by third parties include:

- passenger doors;
- LRV brakes; and
- heating, ventilation, and air conditioning (HVAC).

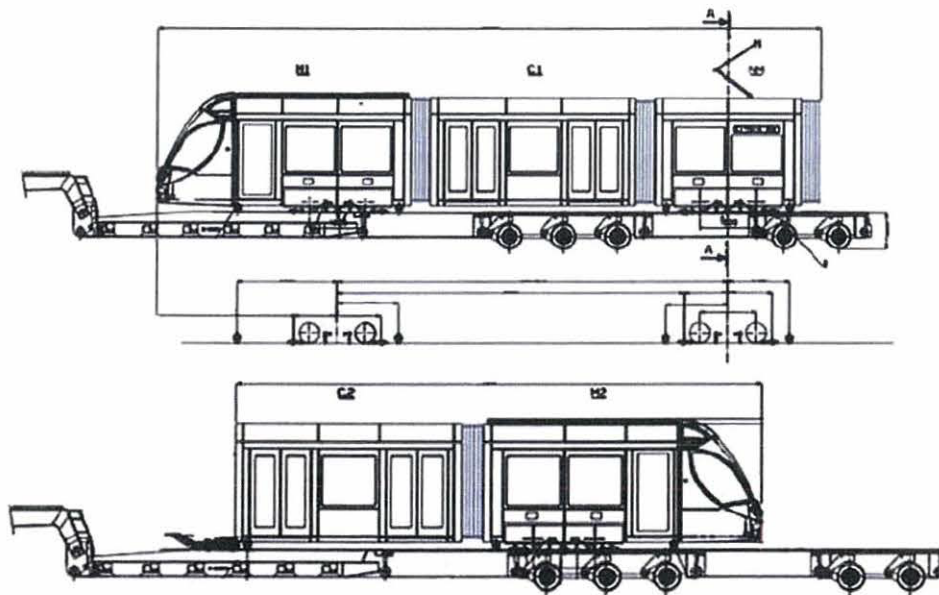
Our integrated program for LRV supply will ensure that all components, internal and external

supply will be marshalled at Barcelona for assembly, integration and testing in order to meet the manufacturing and delivery schedule.

Following the commencement of serial production, the delivery and shipping arrangements will be established to ensure each LRV reaches Australia according to the schedule.

For transport to Australia, each LRV is loaded onto trailers in two parts. A proven packing procedure is used to ensure the LRV is packed safely for transportation to the port.

Figure 5: LRV packaging



Following arrival at the port, and for sea transport, LRVs are lashed onto multipurpose bogies, which are loaded on the under deck on 'roll on – roll off' vessels (ro-ro), which are less than 25 years old. Vessels for this project must hold a certificate indicating that they are in accordance with the ISM standard.

The vehicles will be delivered to the port of Sydney and on arrival, they will undergo an unloading process which reverses the loading. Following customs clearance, the vehicles will be transported to Randwick Stabling Facility, where they will be unloaded.

Coordination of design effort and quality

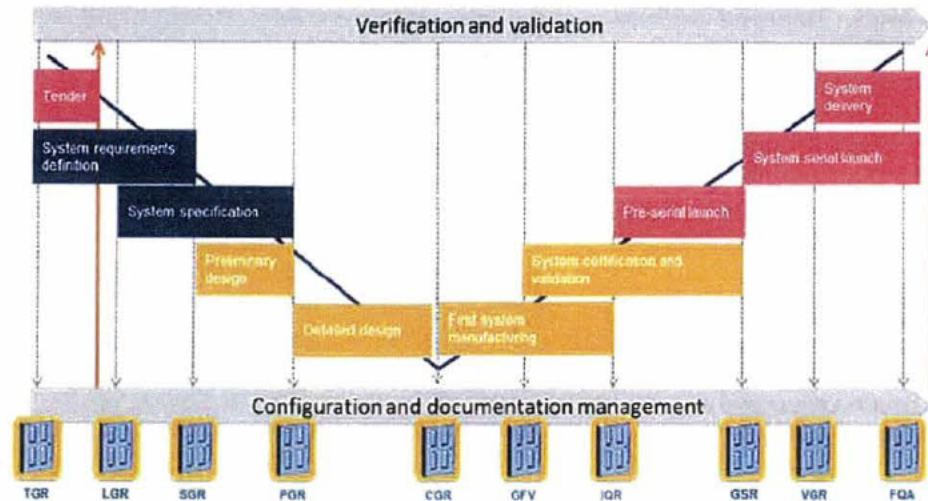
In order to coordinate the design effort and to control the quality assurance Alstom Transport follows a strict process called Design For Quality (DFQ). The key focus is the V-Cycle development approach.

The V-Cycle is commonly described in standards like ISO 15288, which defines the high-level decomposition of the process into three main steps:

- Specification:
 - establish the statement of needs; and
 - specify a solution;
- Realisation:
 - select and validate a technical solution and develop the detailed design;
 - manufacture, code or acquire the product according to the design description;
 - manage product acceptance for integration;
- Integration and Validation phase:
 - ensure product integration; and
 - test and to validate the integrated product.



Figure 6: Configuration and documentation management



Alstom's DFQ guidelines aim to master project risks and take appropriate corrective measures when required. These milestones are called 'Gate Reviews'.

The V-Cycle and Gate Review milestones include the following objectives:

- technology and product development;
- support system/sub-systems engineering, sourcing, industrialisation, manufacturing;
- synchronise progress at system and sub-systems levels; and
- authorise modifications for product and technology development needs.

Figure 7: Outlines the generic Gate Reviews main objectives and maturity state.

Gate Review	Gate Review name	Review main deliverables	Maturity State
TGR	Tender Gate Review	Technical feasibility confirmed Solution is free for tender PFO Planning Scope (Gap analysis) Risk analysis defined Project Manager is identified Preliminary project resource plan is prepared	GO for: Tender Review Meeting
LGR	Launch Gate Review	Customer requirements are assigned and shared with all stakeholders Scope, Planning are clear, shared and agreed, resources are in line with project needs (all Alstom UK) Safety Mgr appointed - Preliminary Hazard analysis and Safety Plan Preliminary list of contractual documentation is shared with the Customer	GO for: Project launch
SGR	Specification Gate Review	System reqs (by RAMS) are allocated and agreed with intent sub syst. Syst specification is defined System architecture is defined All sub system specifications/interfaces are defined and agreed (mass, weight, volume, part #) Safety plan and Hazard log updated	GO for: preliminary design
PGR	Preliminary Gate Review	System specification are completed and released Architecture is frozen Critical gaps or technical risks validation/certification plan and schedule is completed Detailed interfaces are frozen	GO for: detailed design
CGR	Critical Gate Review	System Design completed, frozen and released including 1st system applicable configuration Validation detailed plan is frozen Spare part / Consignment and special tool list are frozen and orders placed All documentation for 1st system production released	GO for: 1st system(s) manufacturing
GFV	GO For Validation	Physical objects (including config) have required level for validation & certification tests (serial, type) Handover approved by validation manager to start train validation All mounting validation (FAR) are OK and external supplier parts/process are validated (FAI) Validation & Certification (including peer tests) are OK (on track or other reasons on Customer track)	GO for: Validation and Certification test
IQR	Internal Qualification Review	Physical Object is representative of serial manufacturing All design documentation for Certification is officially submitted	GO for: final Certification tests & 1st serial manufacturing
GSR	GO Serial Review	Manufacturing workshope/positions are validated ("informal FAI" are GO) Industrial process is validated and frozen	GO for: Serial Manufacturing
VGR	Validation Gate Review	Certification granted by relevant authority All contractual documentation submitted to the Customer Necessary After Sales means are ready to support Revenue Service	GO for: Revenue service
FQA	Final Quality Approval	Reliability and Availability performance are shared and confirmed by the Customer All contractual documentation updated, completed and approved by the Customer REX completed Remaining open items are listed and agreed with the Customer	All performance targets/levels reached and accepted by Customer "GO home"



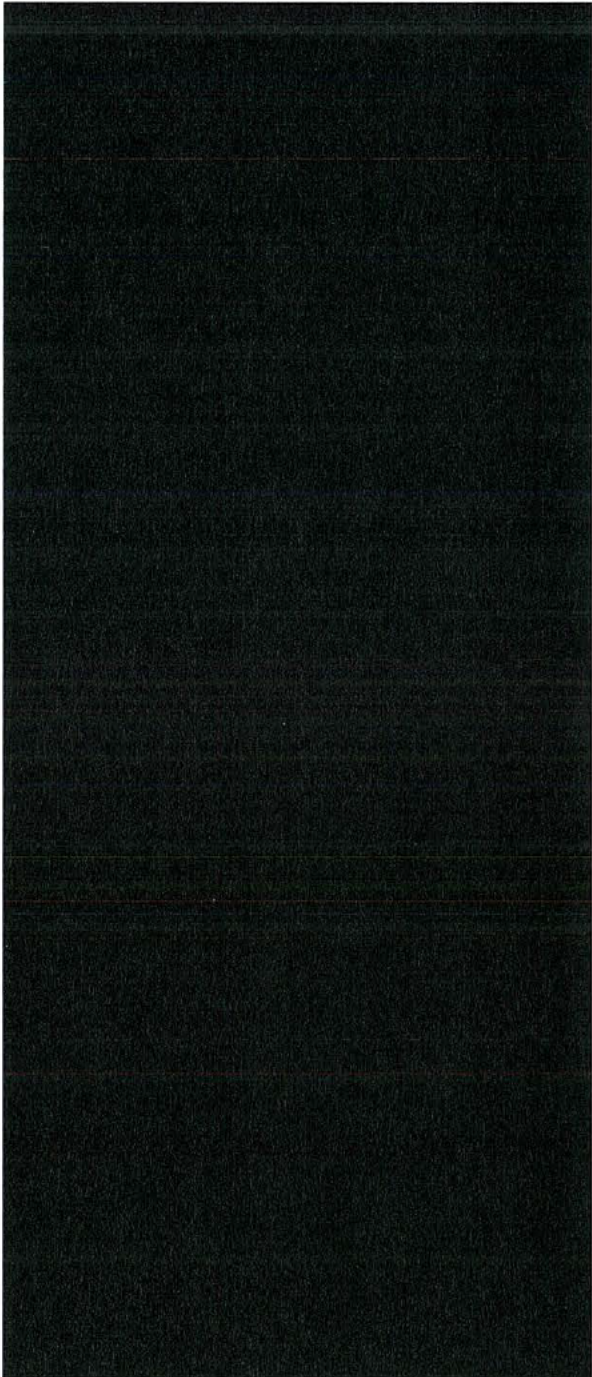
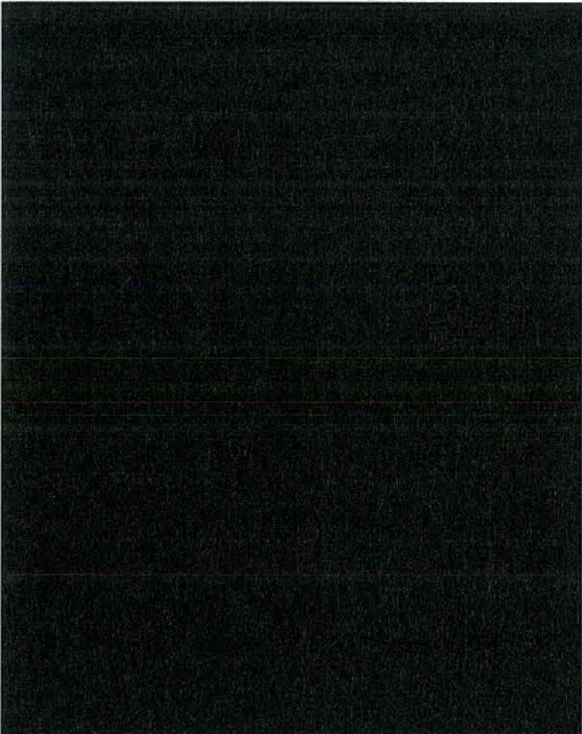
The V-Cycle approach and the specification Gate Review ensures Alstom Transport solutions incorporate all specification requirements.

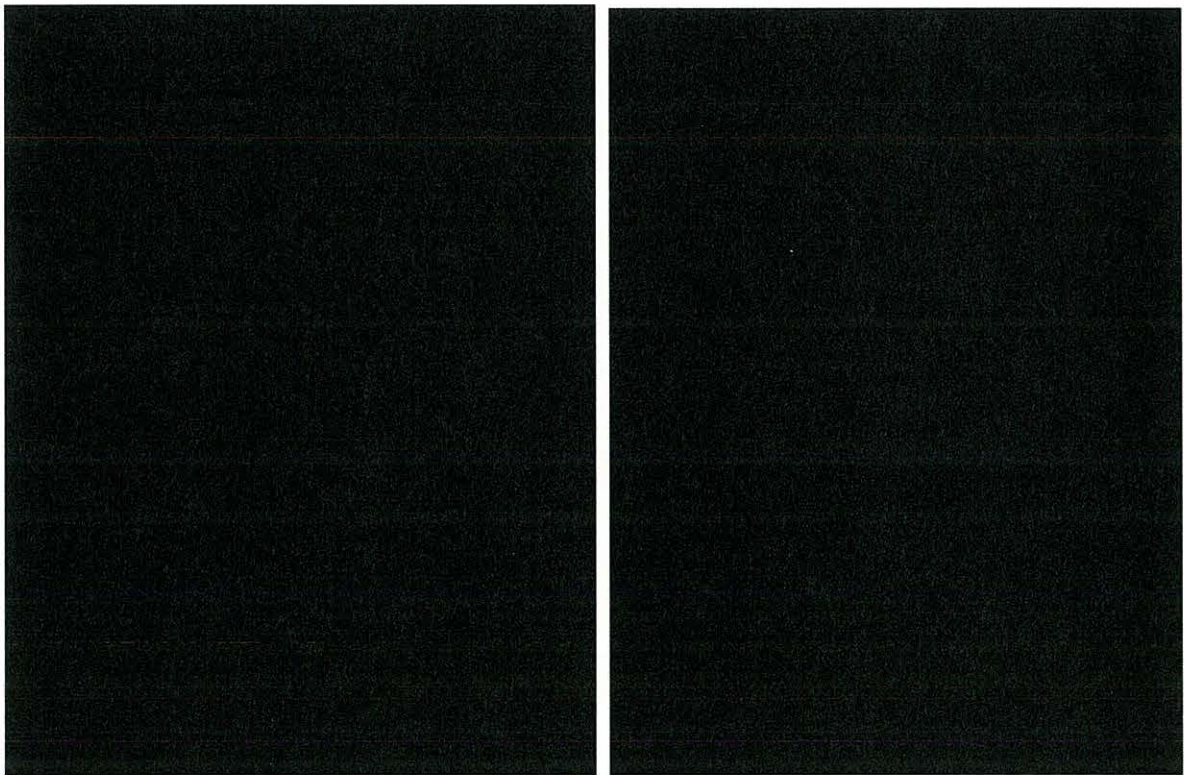
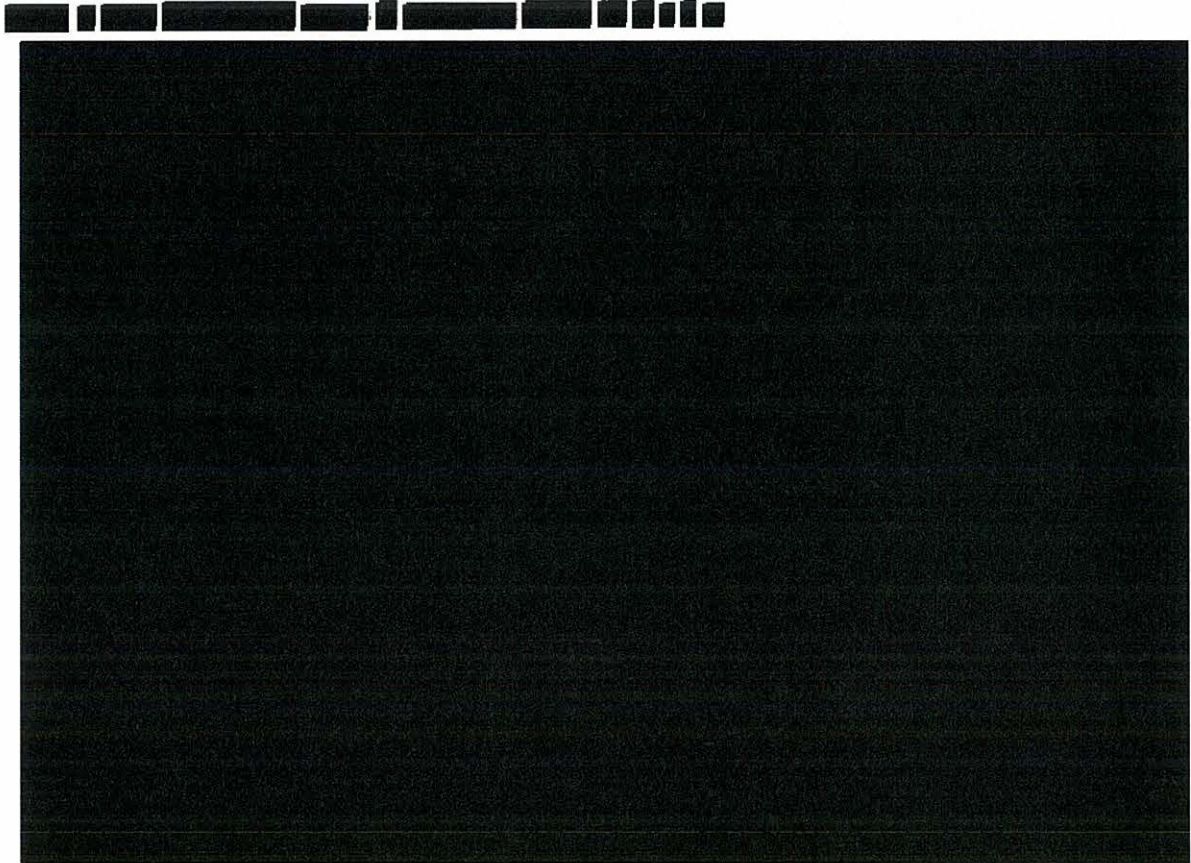
The DFQ process applies to all Alstom Transport units. Each unit performs its own cycle, and they are bound together to ensure optimal coordination and project success.

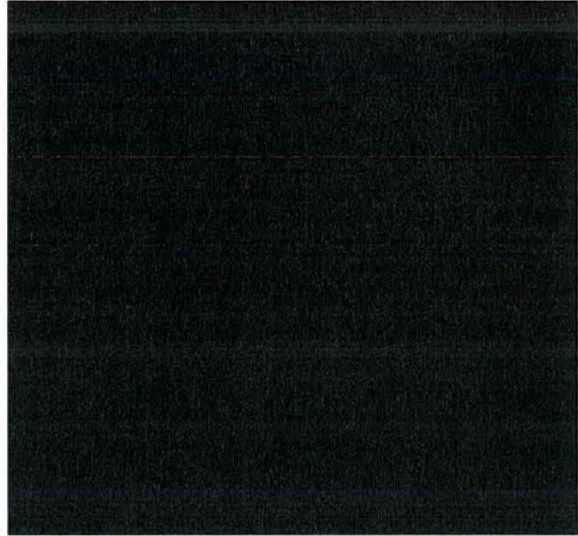
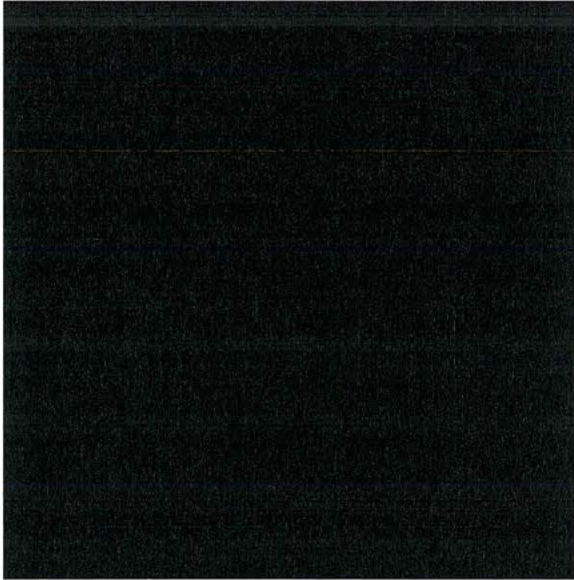
'GO/NO GO' decisions are based on the main issues to be answered for a given Gate Review.

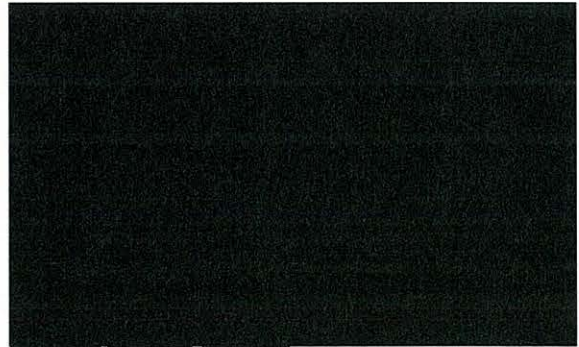
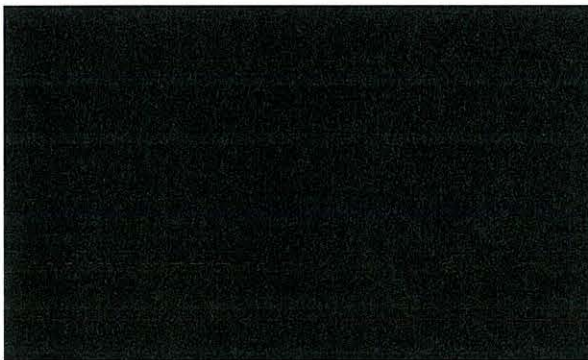
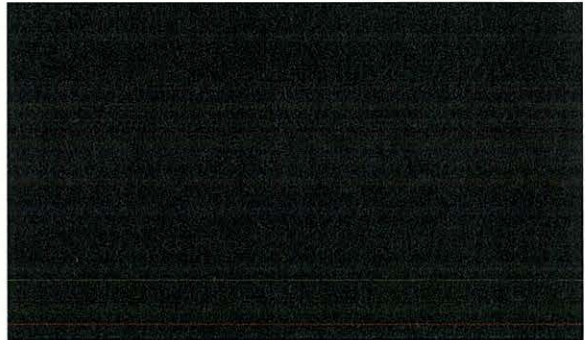
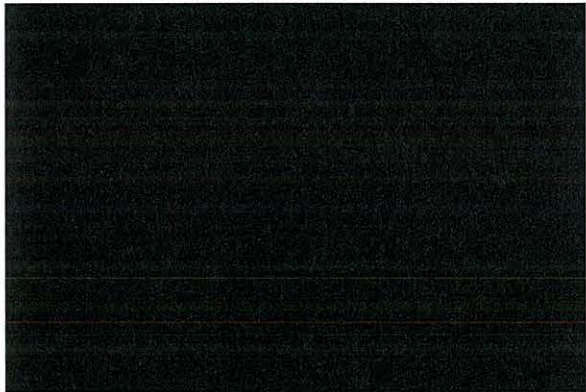
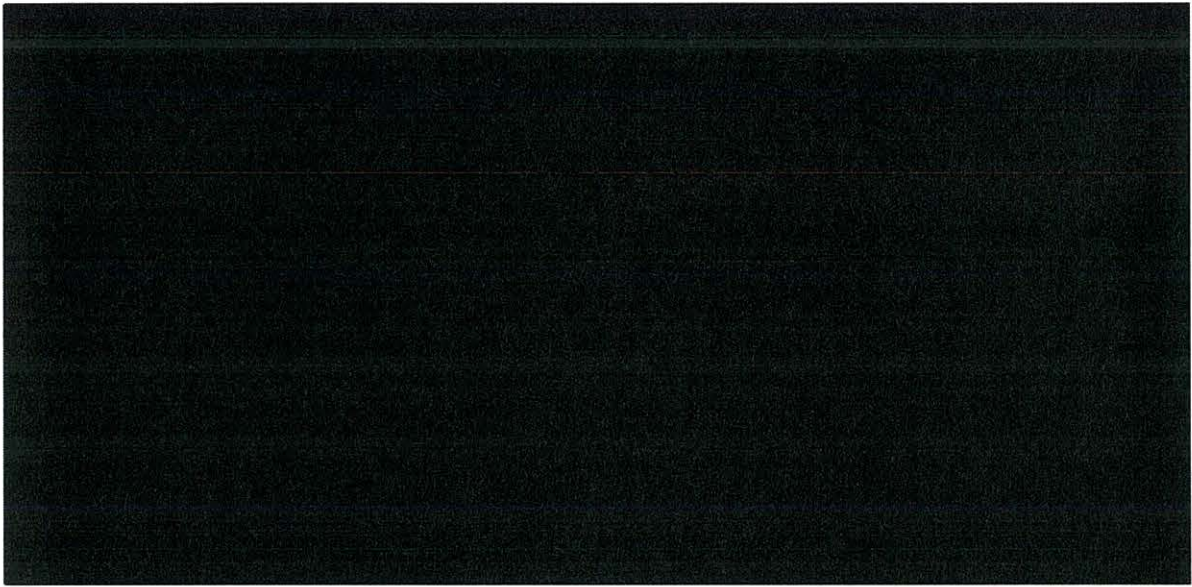
Outcome

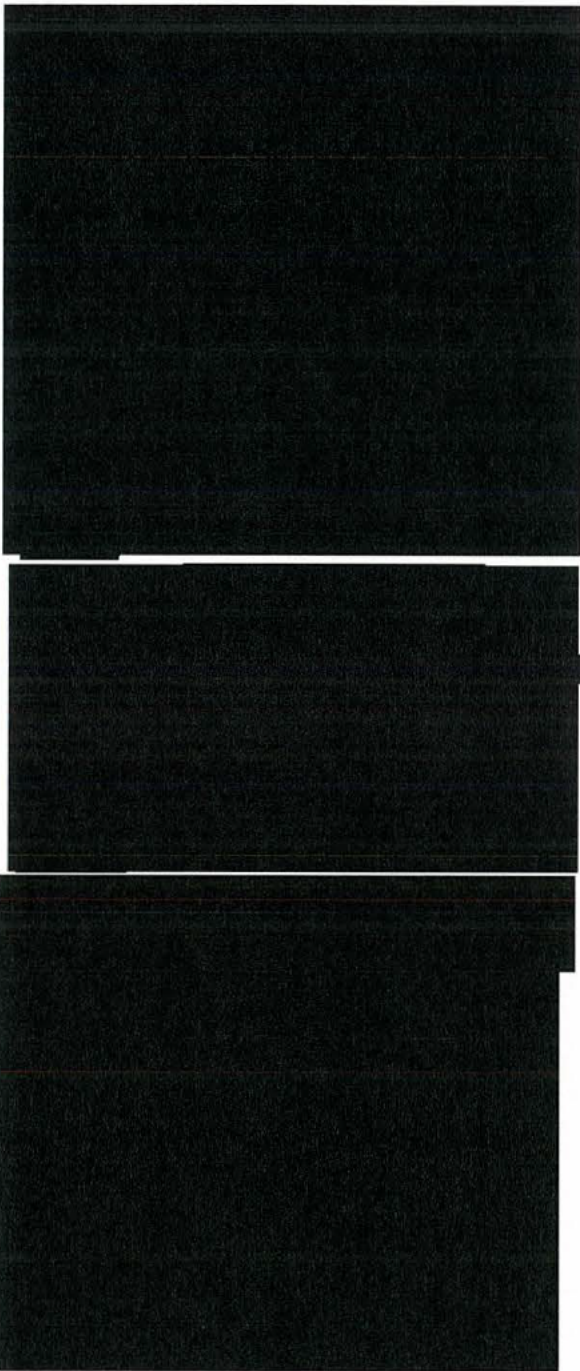
Connecting Sydney Participant Alstom have applied this methodology to successfully design, procure, deliver and validate the CSELRVs to 14 turnkey projects around the world including Dubai LRT and Metro Panama among others.











6.4 (j) Construct the bridge over the Eastern Distributor and associated civil works on South Dowling Street

Construction of the bridge over the Eastern Distributor will consist of three precast girders covering the whole length, precast planks between girders, and steel bolted wings on the outer edge of the girders to create two pedestrian passes (one each side of the bridge).

The whole system is designed over one span, northbound to southbound over the Eastern Distributor, resting on foundations of deep piles with headstock/abutment joining the piles together.

We have chosen this typology to reduce interfaces with the Eastern Distributor and South Dowling Street and to maintain a traffic flow which is as close to normal as possible during construction.

Once the bridge is finalised and open to pedestrians, the existing bridge over the Eastern Distributor will be demolished.

The design of the foundations consists of four CFA piles per abutment, 25m deep with socket into rock. Permanent steel casing is only needed on the upper 6m, isolating it from any interaction with the walls of the Eastern Distributor.

The headstock/abutment will be executed by joining the piles. The deck rests over these and precast transition slabs are installed between the deck and South Dowling Street.

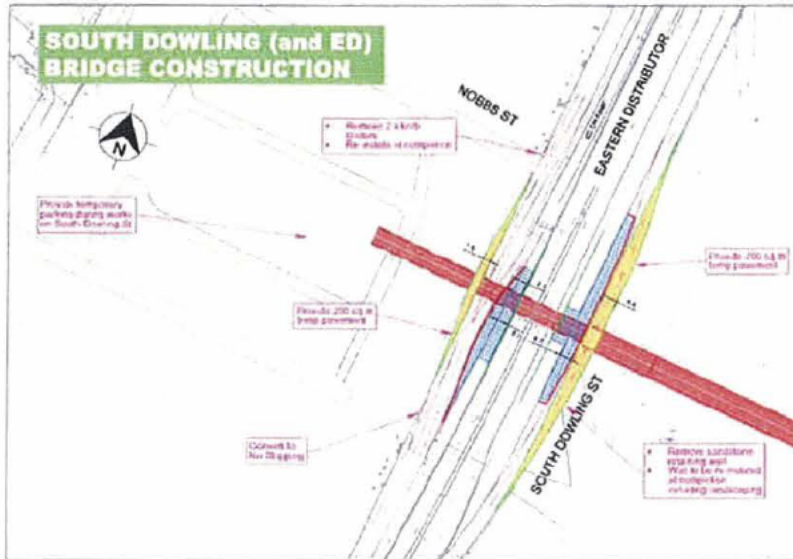
Traffic diversions for the foundations

Western side:

The western side of this area, while narrow, allows the foundations to be constructed without building a new pavement. As South Dowling Street consists of three traffic lanes and a fourth lane for parking, we will use the parking lane, plus the adjacent lane for through traffic, providing two lanes for traffic at all times. The remaining two lanes closest to the Eastern Distributor wall will be occupied for the construction works. As reflected in Figure 6.4 (j), this configuration allows all construction works to be carried out within day shifts in a safe way, creating minimum disturbance to traffic and avoiding the noise generated by night works.



Figure 15: South Dowling Street (and ED) - bridge staging.



This approach also allows us to meet the requirement to raise the pavement level in this construction area, again avoiding traffic disruption.

Rising level works will be undertaken and track slabs installed in the area where traffic was previously diverted, concluding all northbound construction on South Dowling Street.

Eastern side

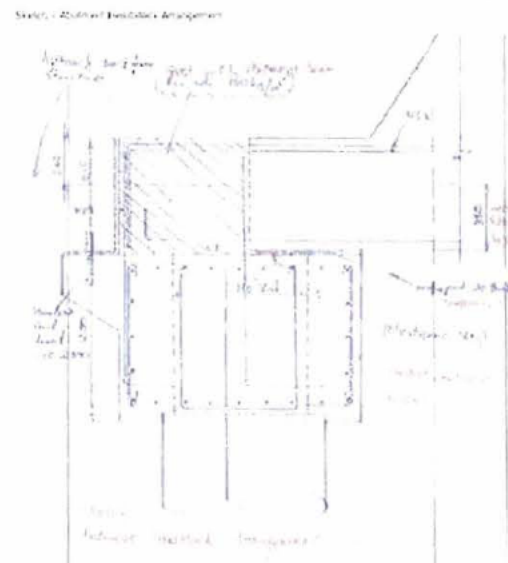
On the Eastern side, South Dowling Street consists of two traffic lanes only, eliminating repetition of the approach taken on the western side. Temporary pavement will be constructed to the east in the area of the future portal to divert traffic of the existing two lanes to enable them to be turned into a construction zone.

The methodology is then similar to the western side of South Dowling Street, where we will proceed to execute the piles, headstock, and transition slab, raising the road levels and track slabs. Once these activities are complete, traffic will be re-established over the old alignment and the temporary road demolished.

Structural Deck

The structural deck consists of three precast girders, 2m deep, each forming the skeleton of the deck. A girder will be situated at either external side of the abutments, with a third one in the centre. This arrangement is reflected in the sketch in Figure 17.

Figure 16: Sketch – Abutment Headstock Arrangements



Once the girders are erected, precast panels will be installed between the beams and the system will be locked up with a cast in situ slab installed above the planks during nightshifts.

Steel brackets will be bolted to the external girders and precast planks laid over them to form two pedestrian walkways – one each side of the main alignment on the bridge.

By employing this methodology for the main deck, impact on traffic is reduced to night closures of the Eastern Distributor, for an estimated three weeks of intermittent night closure. During these closures, girders will be erected, followed by the



planks; the composite slab will be poured above the girders; and the bolts, brackets and walkway planks will be installed.

Following execution of the structure, an additional two weeks of intermittent night closures will be required to install the handrails and safety screens. The main track installations, mechanical and electrical works will be conducted safely during day shifts without any effect on the Eastern Distributor.

Demolition of pedestrian bridge over Eastern Distributor

The existing Eastern Distributor bridge consists of a steel structure, comprising a layer of precast planks and an in situ slab locking the structure in place. To demolish the in situ slab, each of the precast plank joints will require, saw cutting, enabling each piece of slab to be removed – panel by panel – during a nightshift road closure.

Subsequently, the bridge barriers and screens will be removed and the final component – the structural steel – extracted using a crane extending from Moore Park. From there, it will be separated into smaller, more transportable pieces and sent off-Site for recycling as scrap metal.

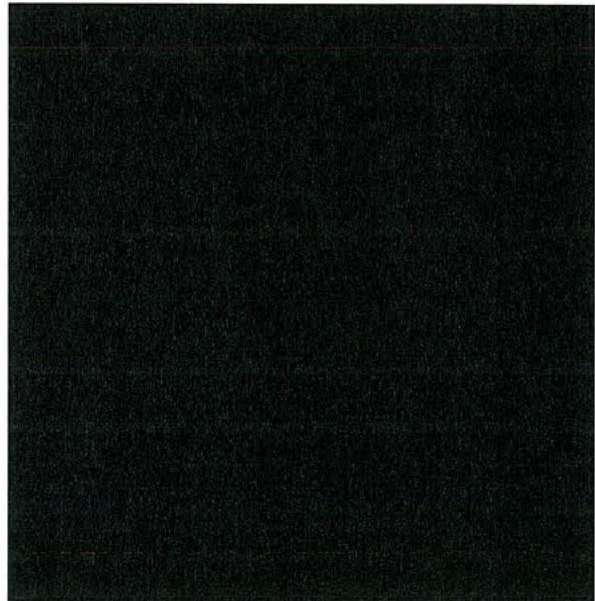
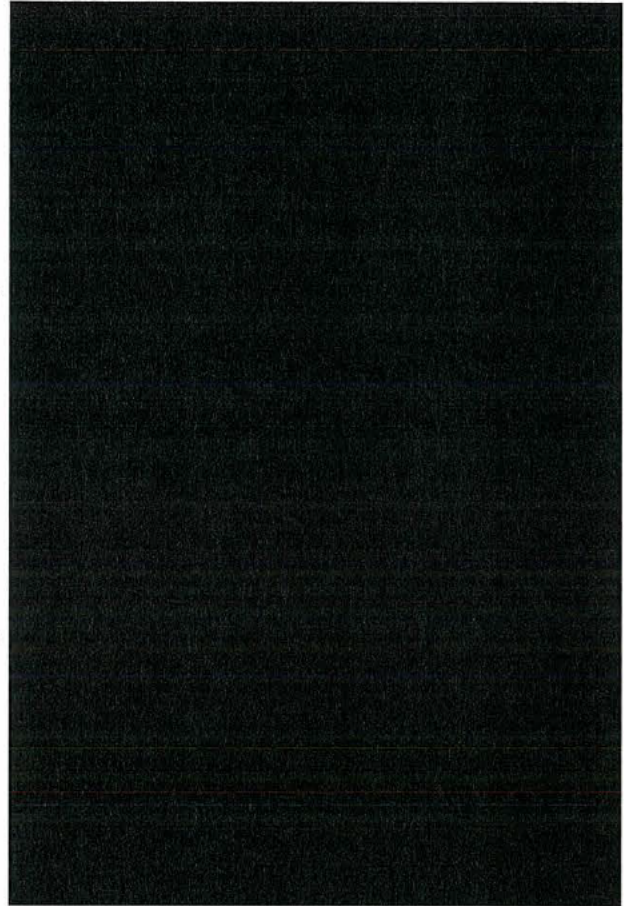
The Eastern Distributor walls will be raised to match adjacent levels; the slab demolished and vegetation and landscaping restored to finalise the demolition process. This process will take approximately two weeks of intermittent night closures.

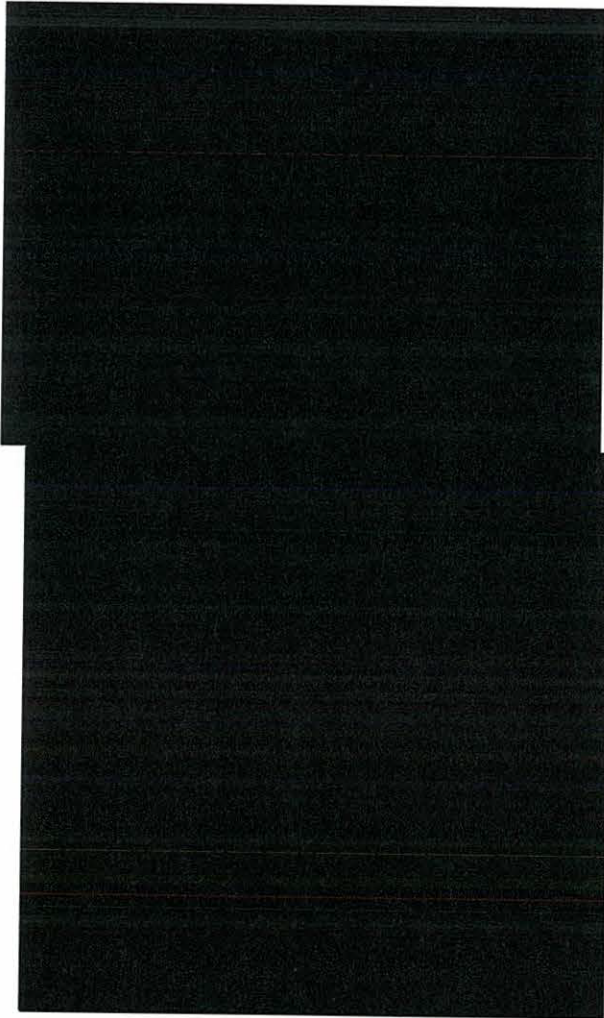
The works will be carried out as follows:

- preliminary works: consisting of constructing temporary access to Site, erection of noise wall barriers and safety fences, demolish structures and existing buildings, remove trees and relocate utilities. In this phase, the drainage works, plus the first stage of flood mitigation and where possible permanent noise wall erection completed.
- earthworks and piling: grading work to the required platform level and compaction of the ground, the piling and beam installation to support the suspended slab. The works will be carried out through five different working areas.

Benefits

Using the methodologies explained above, we reduce traffic disruptions to a bare minimum.





Response/methodology – use flow charts/diagrams where possible

The temporary boundaries will reduce the visual impact to passers-by, retaining a seamless urban landscape. Made of vinyl or shade cloth the hoardings will feature a clean, minimal design and include wayfinding signage to direct pedestrian and vehicle traffic around the construction activity. Printed branding on the exterior will comply with the TfNSW Transport Project's Style guide for Contractors and Consultants, and the Sydney Light Rail Stakeholder and Community Engagement Strategy.

At the conclusion of works each day, the hoarding barriers will be inspected by each supervisor, ensuring the Site is secure and preventing unlawful or accidental access. Offensive graffiti and unauthorised advertising on the hoardings will be identified and removed, or, where necessary, involve the replacement of shade cloth or vinyl.

Connecting Sydney has identified an opportunity to involve the University of NSW College Of Fine Arts, requesting input for the graphic artwork for the hoardings exterior, creating feature street art and allowing the community to embrace the hoarding as a positive point of interest, ultimately creating a favourable association towards the SLR PPP and maximising community involvement.

Through our 'safety first' culture, zero harm safety campaign and the activities described above, we will ensure public safety throughout construction, testing and commissioning is a priority for all Site staff. Construct in the areas of live traffic and pedestrian movements

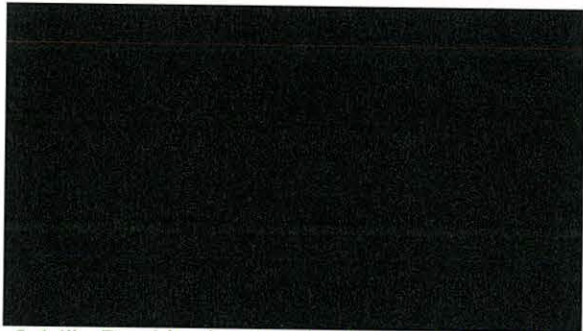
Awareness of key issues

Impacts of construction on live traffic unavoidable for the delivery of the SLR PPP, we have aligned our program and construction methodologies to mitigate the effects wherever possible.

Response/methodology – use flow charts/diagrams where possible

The Initial Traffic and Transport Management Plan identifies the establishment of sufficient space in which to undertake the construction while allowing the road network to function through the following measures:

- no more than one lane will be closed in each direction at a time between the nine ways junction at Kingsford and Todman Avenue along Anzac Parade. In addition, this stretch



6.4 (l) Provide visual and safe separation of the construction activities from public space

Awareness of key issues

Connecting Sydney is acutely aware of our responsibility to maintain public safety throughout construction, by delineating clear boundaries between construction sites and public spaces.

Upon commencement of works at each location, temporary barriers and or fencing will be erected, clearly demarcating construction zones.



will be constructed in two separate sections, minimising the time each lane is closed.

- All properties with direct driveway access to Devonshire Street will be maintained throughout construction, while detours via parallel streets such as Cleveland, Foveaux and Albion will facilitate through-traffic alternatives.
- Footpaths adjacent to worksites, with high volumes of construction vehicle movements, will be managed by traffic controllers.
- Construction works along High Street will be undertaken progressively in 100m segments. This will allow traffic to pass around the worksites and minimise the parking occupation of High Street and, in the case of the Prince of Wales Hospital, to maintain vehicle access at all times.
- Erecting temporary barriers in dense urban zones (e.g. along George Street and in the Central Station vicinity). The barriers will be sectioned off at either end to allow for existing controlled pedestrian crossings through the worksite to continue as usual.
- Pedestrian capacity on footpaths will be enhanced by the removal of bus stops and increased crossing opportunities at intersections, to mitigate reduction or elimination of George Street traffic movements.

Connecting Sydney will work closely with the Transport Management Centre (TMC), seeking its input on mitigation measures to ensure traffic and pedestrians are offered detours where possible. In addition, secure separation of work zones as well as traffic control personnel for roads and footpaths will be implemented.

Traffic Controller contractors engaged by Connecting Sydney will demonstrate current registration under RMS Registration scheme category G 'Traffic Control' and will wear fluorescent vests in compliance with AS/NZS4602 and RMS standards.

Outcome

Collectively, the measures discussed above will ensure Connecting Sydney achieves our construction milestones and simultaneously manages areas in a way which ensures the safe movement of traffic and the protection of people and property.

6.4 (m) Manage and construct the IWLR interface, including maintaining IWLR operations

Awareness of key issues

Connecting Sydney recognises that construction of the track along George Street will impact the existing IWLR at its intersection with Hay Street. We have identified the following priorities as key to managing this interface:

- maintain a high level of customer service on the IWLR where construction of the CSELR will impact business as usual operations to:
 - timetables;
 - SLR Customers and staff;
 - Transdev Sydney maintenance activity;
 - IWLR stop accessibility; and
 - methods of communicating change to customers, and related operators and transport agencies.
- A balanced approach, minimising disruption while employing efficient construction methodologies that guarantee the highest quality assurance.

Response/methodology – use flow charts/diagrams where possible

Following a review of IWLR patronage data, seasonal weather patterns, other events such as Chinese New Year celebrations, construction of the new Sydney Exhibition Centre and the costs associated with numerous shutdowns, Connecting Sydney has determined the CSELR track installation at Hay Street and George Street intersection will be undertaken in January 2017. Connecting Sydney has selected a timeframe when customers will be least inconvenienced.

During a seven day period, buses will replace the IWLR service between Central and the Exhibition Centre, allowing sufficient time to execute works at this intersection.

Connecting Sydney will organise a high-quality bus replacement service between Stops at Central and the Exhibition Centre. The Operations Control Centre (OCC) will closely coordinate replacement buses, transferring customers the short distance between the two Stops via an alternate Stop in the vicinity of Chinatown.

The community interface at this intersection will be managed by the CBD Place Manager from the Stakeholder and Community Engagement team, who will liaise directly with the O&M team.

Connecting Sydney's Stakeholder and Community Engagement team, in consultation



with TfNSW, will implement a communications strategy to keep IWLR Customers, the Transport Management Centre (TMC), emergency services, other transport operators and local businesses informed. Leading up to this shutdown, Connecting Sydney will utilise on-board notifications, signage and online updates.

The information provided to customers via these mediums will include:

- duration of change to the normal service;
- changes to service running times and stopping patterns;
- information regarding any Stops that are closed;
- changes to the hours of operation; and
- changes to the access to a Stop or other facility.

During the shutdown, Customer Service Officers will inform customers at the impacted Stops of the changes to normal services. Communication to other authorities directly impacted by the shutdown of the intersection of George and Hay streets will be coordinated through the TMC.

Connecting Sydney's efficient construction solution will ensure there are no disruptions to the IWLR operations for construction of the new depot and associated tracks at Rozelle. An existing siding not in use will be utilised to build the new track into the depot.

A temporary facility will be established during the construction of the Rozelle depot, enabling IWLR drivers to sign on and start their shifts at the depot. This saves them from signing on at Trandev Sydney's existing operations in Pymont and then having catch the Light Rail to Rozelle to start their shifts, providing a more efficient and cost-effective solution for TfNSW.

The testing/delivery of new LRVs on the existing system will be carried out at Randwick to avoid interruptions to the IWLR operations.

Outcome

This approach allows construction of the CSELR and operation of the IWLR to be carried out in parallel and at optimum efficiency. The temporary bus service will take a route that averts customers from this intersection, thereby reducing safety risks with the potential to compromise customers, operators, construction workers and pedestrians.

Evidence

We are confident this solution will not inconvenience customers beyond what TfNSW

Customers consider 'usual' disruption when it comes to investing in significant infrastructure upgrades. Connecting Sydney will further soften the impact to Customers by effectively communicating the temporary alternate arrangement, leveraging TfNSW Customers' high level of confidence in the provision of safe, quality and efficient alternatives during maintenance and improvements to Sydney's transport infrastructure.

6.4 (n) Test and commission the CSELR

Connecting Sydney is fully aware of our testing and commissioning scope at a systems level, and has a process to verify systems with the Technical Specifications prior to the System hand-over to the Operator.

Organisation

Testing and commissioning is divided into three parts under the System T&C Manager:

- system test engineers;
- system support (administrative, schedule, configuration management); and
- Operation and Safety (OCC operators, Line regulators, electrical isolation and staff protection.

Tests Chronology

The sequence of the T&C process begins with qualification and factory tests. All definition and design phases are completed and validated prior to the beginning of this phase. Production of components will therefore not start if the design phase is not already closed and validated. Several processes may be running in parallel, however, allowing one process to be in design phase while another proceeds to validation phase, provided that no dependence exists between the two processes.

Factory tests

The test plan designates the first article and factory testing to be implemented before the shipment and installation of equipment on site. The main purpose of these tests is to validate the functionality, thus reducing the risk of future failures on-site as well as reducing the duration of on-site testing. The following outline describes a typical factory test regime off site, prior to shipment:

- type tests for performance and safety;
- first article inspection (FAI);
- factory integration tests; and
- factory acceptance tests.



On-Site tests

Tests that occur on Site are:

- sub system and system static test;
- sub-system acceptance tests;
- system integration tests;
- capacity performance tests;
- trial running and initial performance tests; and
- final performance tests.

Test methodology

Tests, at sub-system or system level, may be undertaken by:

- inspection;
- examination/analysis;
- functional test; and
- verification.

Dynamic Testing

The dynamic tests will be performed progressively by opening successively part of the line which will be divided into zones.

The test zones defined shall be formally open to tests. Responsibility and decision of opening a zone for testing will be based on the progress of construction and installation works.

Following this initial testing, system acceptance testing will be completed. The minimum steps of the opening process of a test zone are:

- gauge clearance verification;
- first powering tests;
- first train run on the test zone; and
- first train runs at increased speed.

Once minimum steps are successfully completed, the Test Zone can be declared open for Site Acceptance Tests. From this point of time the Test Zone will always be in the default state "line energised". Therefore this part of the line is submitted to specific safety and operational rules for any activity in the zone. All activities in this zone are then placed under the responsibility of the Operation and Safety Manager.

Operation and safety during the dynamic tests

In order to take into account and mitigate the dangers linked to LRV movement and line energisation, an Operations and Safety team is established to:

- coordinate and implement the safety rules and procedures on test zones;
- administer the permit to work management in the test areas;

- manage the overall space/time allocation on test zones;
- coordinate the shared logistics during Site tests;
- control operations and safety coordination related to the traction power network on test zones (including electrical isolation management);
- protect personnel from danger of electrocution; or running rail vehicle (LRV);
- protect the public at road crossings when dynamic testing is conducted outside the Stabling Facility; and
- protect the tested equipment from being tampered with and invalidating the tests.

Outcome

These systems and procedures ensure that the CSELR will open at its full functioning and optimal performance.

These procedures have been developed Alstom's strong return on experience in LRV project.

6.4 (o) Promote a culture of cooperation and partnership with Stakeholders and TfNSW

Awareness of key issues

TfNSW has acknowledged that early and frequent communication and engagement with Stakeholders and the community is critical to the successful delivery of the CSELR. The State has been open with the public about the potential impacts of constructing the Light Rail along this route.

While clearly demonstrating that the long-term gains will be worth the short-term disruption and inconvenience, the State has acknowledged the importance of minimising these impacts as much as possible. TfNSW has identified adverse Stakeholder responses to construction as one of the primary external risks to the project.

As such, the State has engaged extensively with local councils, key stakeholders, businesses and the community during the planning phase of the project. Due to the success of this approach, Stakeholders and the community will continue to expect this level of proactive engagement and responsiveness into the delivery and operations phases.

Connecting Sydney will build on the collaborative approach established by TfNSW. We fully subscribe to the principles outlined in the SLR Stakeholder and Community Engagement Strategy and understand the importance of developing responsive, transparent and



accountable relationships with project partners, key Stakeholders and members of the public. We see this as an extension of the State's guiding principle: 'the Customer is at the heart of everything we do'.

Connecting Sydney recognises our responsibility as the on-the-ground contact and the 'face' of a high-profile and high-impact NSW Government project. We also acknowledge our role in maintaining the State's reputation.

Response/methodology

Working in partnership with TfNSW

The SPRs outline a number of communication protocols and reporting requirements for the D&C Contractor. Connecting Sydney's approach to working in partnership with TfNSW over the four year construction period and through the operations phase will exceed these compliance level requirements. Put simply, our customer - TfNSW and its Customers - will be at the heart of everything we do.

We will instil our core values and commitment to partnership through a series of culture workshops attended by Connecting Sydney staff and contractors, ensuring these principles are upheld consistently across all areas of the project. Comprehensive induction sessions will also ensure our staff are aware of, and act in accordance with, these values.

We will work with TfNSW to establish protocols defining proactive and regular communication at all interface levels, keeping TfNSW well informed, and creating regular opportunities to participate in relevant discussions and decision-making throughout the project.

In the first year, we will undertake two surveys to evaluate and identify potential areas of improvement within our workplace culture and relationships with TfNSW and Stakeholders, with annual reviews to follow. The survey results will be reviewed by the Connecting Sydney Steering Committee, and any feedback considered, agreed and implemented within the consortium.

Working in partnership with Stakeholders

Proactive communication with Stakeholders is central to Connecting Sydney's approach to working with communities along the CSELR route. Fundamentally, we will provide a single point of contact for local businesses, community groups, residents and property owners.

Dedicated Place Managers will work alongside construction teams in each precinct, acting as the 'eyes and ears' of Connecting Sydney. Working

closely with the community and stakeholders, they will anticipate, manage and respond to issues. They will:

- conduct toolbox meetings and awareness training for Connecting Sydney staff;
- manage day-to-day issues within precincts;
- investigate and respond to queries and complaints;
- provide timely notification of scheduled works and communicate regarding unscheduled and emergency works;
- maintain positive relationships with precinct committees, resident associations and businesses at the local level;
- work closely with sensitive receptors to accommodate their specific needs; and
- deliver education and safety programs.

At a strategic level, a dedicated Stakeholder Relationship Manager will coordinate and communicate Connecting Sydney's activities with critical stakeholders including:

- Department of Premier and Cabinet's Events Operation Group and Events Communications Group, and the Moore Park Event Operations Group;
- key Stakeholders, including local councils, Centennial Park and Moore Park Trust, Sydney Cricket and Sports Ground Trust, Australian Turf Club, University of NSW and Prince of Wales Hospital; and
- peak bodies representing retail and business groups and peak industry bodies for the taxi, coach, hotel, tourism and courier sectors.

Working closely with TfNSW, the Stakeholder Relationship Manager will facilitate regular interactions with key Stakeholders, negotiate resolution of potential issues and encourage key Stakeholders to 'take ownership' of the project. This may include seeking input to refinements to design and operational regimes within the parameters of higher approvals.

Where appropriate, Connecting Sydney will seek opportunities for broader community participation in finalising designs, particularly with residents and Stakeholders directly impacted by Light Rail-related infrastructure.

Outcome

Our effective and cooperative approach to partnerships guarantees:



- 'no surprises': Stakeholders and the community are informed of the benefits and challenges of the project;
Stakeholders 'take ownership' and as appropriate, provide input into the project and are involved in cooperatively developing solutions; and
- Stakeholder and community concerns are anticipated and addressed early.

6.4 (p) Manage public and community safety during the delivery

Awareness of key issues

Connecting Sydney is aware of public and community safety risks accompanying the delivery of a major infrastructure facility among the most densely populated and busiest area of Australia. We approach these challenges with respect to the behaviour of third-party road users, pedestrians, cyclists and residents. To mitigate these challenges during both the construction and operating phases, we will utilise awareness and education programs to improve community understanding of how to safely continue 'business as usual' activities and interaction during the construction phase and with upgraded SLR infrastructure and LRVs during the operating phase – whether by foot, bicycle, motorbike, car or truck. These programs will be tailored specifically to location and user groups and involve:

- working closely with traffic and pedestrian management teams in the delivery phase to provide additional communications support (if required) such as signage, advertisements, notifications, and social media updates;
- developing public safety awareness campaigns in consultation with TfNSW – e.g. 'watch out, roadwork about'.
- working closely with TfNSW to support its public awareness campaign with posters, leaflet distribution (such as 'see a track, stand back' safety education programs for universities, schools etc.).

Response/methodology

Post Financial Close and ahead of delivery mobilisation, Connecting Sydney will undertake a comprehensive risk assessment to fully identify, assess and develop appropriate controls for all construction safety risks in relation to the public and community.

Construction zones will be established, secured and clearly delineated from public and community precincts to eliminate construction risks which will

impact the public or the local communities along the construction corridor.

Light Rail infrastructure, LRVs and rail systems, public and community safety issues have been identified in the initial design, and in some cases designed out of the alternative solution. In construction, safety is a key driver in the development of program sequence and construction methodologies. Connecting Sydney's Safety Manager will work with each of the Place Managers to undertake a safety risk analysis across all work sites prior to mobilisation of the delivery team, to ensure an induction that educates all construction teams about the major and minor risks across both the SLR delivery and specific to each precinct. Through our consultation process, we will liaise closely with Project stakeholders to gain full input into securing public and community safety and to monitor, promptly address and prepare for any incidents that may arise.

Outcome

Through these promotional and educational activities with the delivery workforce, schools, universities, and daily commuters (in combination with Connecting Sydney's strict Site-specific Safety Management Plans) our activities will put safety at top-of-mind for on-site personnel and civilians alike. The safety culture within and beyond Connecting Sydney's activities will be extended to consider any additional community safety concerns by providing a 24-hour Connecting Sydney hotline, managed by our Stakeholder and Community Engagement Team, and ensuring all concerns are considered and addressed in an effective and efficient manner.

Evidence

Acciona employ a 24-hour hotline on the Legacy Way tunnelling project in Brisbane, which similarly involves construction in dense urban communities. Through this experience, we understand that while a hotline is an excellent service to provide in a project of this size, it is imperative that each and every enquiry be acknowledged and managed effectively via the construction interface, acted on and followed up to optimise community satisfaction.

6.4 (q) Establish WHS leadership and culture on the project, including associated WHS programs

Awareness of key issues

Safety is paramount in the development and delivery of the SLR PPP. Our ethos and safety management approach focuses an integrated



approach to systems and safety assurance, including the design of safe methodologies from project outset, ensuring safety in design, procurement, construction and handover.

Response/methodology

Recognising that people are key to achieving desired health and safety outcomes, Connecting Sydney will implement a Behavioural Based Safety (BBS) program driven by positive leadership and a continuous improvement culture where individuals are empowered to make decisions and enact them, including ensuring high levels of safety performance. Core elements of the BBS program include:

- ensuring that all workers are aware that safety is the core value and will never be subordinate to other business requirements (including time and cost);
- establishing and encouraging an 'open door' policy across the Site;
- ensuring that communication channels between all facets of the project remain open;
- recording health and safety statistics for the project and publishing the statistics across the Site;
- commencing all formal meetings with a discussion on health and safety;
- providing immediate feedback to team members on both desired and 'at-risk' behaviours;
- providing opportunities for peer-to-peer observation and discussion;
- training observers in hazard identification;
- sharing knowledge of people-based safety principles;
- involving all key stakeholders in the program, including employees, supervisors and subcontractors; and
- using correct behaviours as a basis for the reward and recognition of individual or team safety excellence.

We strive for zero harm to our employees, operators, subcontractors, client, and communities – all who are in any way affected by our activities.

The Safety Management Plan sets out the framework for successful safety management. Only by developing a strong safety culture throughout every level of the organisation and within every team, will safety on the project be a true success.

Our senior management team is passionate about safety and will lead by example, providing a visible presence on the project. Safety cannot be managed from an office; it is through true leadership and communication with personnel in the field that a culture will be established and developed.

Outcome

The commitment and presence of our senior management team will be disseminated throughout the wider project team, with all managers seen actively in the workplace discussing safety and conducting safety inspections on a regular basis.

Evidence

A strong safety culture will be evidenced by zero harm to employees, visitors and contractors and no lost time to the project from safety incidents or injuries.

6.4 (r) Achieve the sustainability targets specified in SPR Appendix 7 (Sustainability), including the intended Target Values

Awareness of key issues

Connecting Sydney is committed to embedding sustainability within all aspects of the project, from the Proposal Phase through project inception to decommissioning. We are committed to achieving the targets set against each objective in SPR Appendix 7, including a rating of 65 points under the Infrastructure Sustainability Council of Australia (ISCA) IS scheme for design and 'as-built' and achieving a 'Gold' rating under the TfNSW SDG.



Figure 20: Connecting Sydney approach to embedding sustainability in the SLR PPP





Response/methodology

Connecting Sydney is committed to embedding sustainability within all aspects of the project, from the Proposal Phase through project inception to decommissioning. We are committed to achieving the targets set against each objective in SPR Appendix 7, including a rating of 65 points under the ISCA IS scheme for design and as-built and achieving a 'Gold' rating under the TfNSW SDG.

We have taken a WoL costing approach to implementing sustainability initiatives into the design, construction processes and operation of the CSLER. This approach includes lifecycle assessment (LCA) techniques that can consider environmental and social factors in addition to the financial cost throughout the life of the project. During the proposal phase, WOL cost approach has been applied to the LRV power solution (including HESOP and the APS), depot design and materials selection for the Stops, demonstrating Connecting Sydney's capability to deliver an optimised solution at detailed design. The main features of Connecting Sydney's approach to sustainability are:

- appointing a committed sustainability manager at proposal, delivery and operation phase
- implementing sustainability management and governance processes, including reporting frameworks, developing a draft policy and Stakeholder engagement
- embedding sustainability into relevant Project Plans to ensure sustainability targets can be achieved. An experienced sustainability team will transition throughout the project stages from Proposal phase, to design and delivery through to operations phase. This will provide continuity and commitment to sustainability throughout the project's life;
- architecture maintenance and stabling facilities which incorporates rainwater harvesting, passive performance, natural ventilation, climate change risks and reduced energy demand;
- an initial carbon footprint of delivery and operations based on concept design
- material and equipment selection which considers lifecycle impact and climate change risks;
- landscaping and stormwater drainage incorporating water-sensitive urban design to provide visual amenity for customers, improve

the ecological value of existing land and prevent flooding;

- a workforce skills and sustainable procurement strategy developed in collaboration with Human Resources and procurement to facilitate market transformation for supply chain management and to create a workforce skills legacy.

Connecting Sydney has committed to achieving the targets specified in SPR Appendix 7. [REDACTED]

Further detail on the sustainability initiatives undertaken at Proposal stage (and proposed during design, construction and operations to meet the associated targets and objectives) are outlined in the Draft Sustainability Management Plan in Appendix G This will provide the framework for the delivery and operations phase sustainability management plans, to be developed on contract award.

6.4 (s) Obtain and Maintain AEO Status

Awareness of key issues

Each of Connecting Sydney's delivery and operational participants has either commenced or completed the process to register as an Authorised Engineering Organisation (AEO) with TfNSW's Asset Standards Authority (ASA).

Response/methodology – use flow charts/diagrams where possible

An AEO Engineering Service Scoping Matrix will be fully achieved across the following asset lifecycle stages of the SLR PPP:

- design;
- fabrication and manufacturing;
- installation;
- integration, testing and commissioning;
- asset maintenance; and
- decommissioning and disposal.

Figure 6.4 (t) outlines Connecting Sydney's AEO scope allocation to fulfil accreditation requirements, specific to achieving AEO accreditation in order carry out delivery and operations of the SLR PPP.

In summary, Connecting Sydney Participant Alstom and Connecting Sydney Providers GHD Jacobs and Sinclair Knight Merz are registered AEOs in the nominated categories. Areas that contain a colour and pattern will be obtained by the relevant Participant or Provider. Participant Acciona and Provider Opus also commit to obtaining AEO status prior to Financial Close,



should Connecting Sydney be named Preferred Proponent for associated categories as reflected in Appendix M – ‘Connecting Sydney AEO Engineering Service Matrix’ of Returnable 6.

Outcome

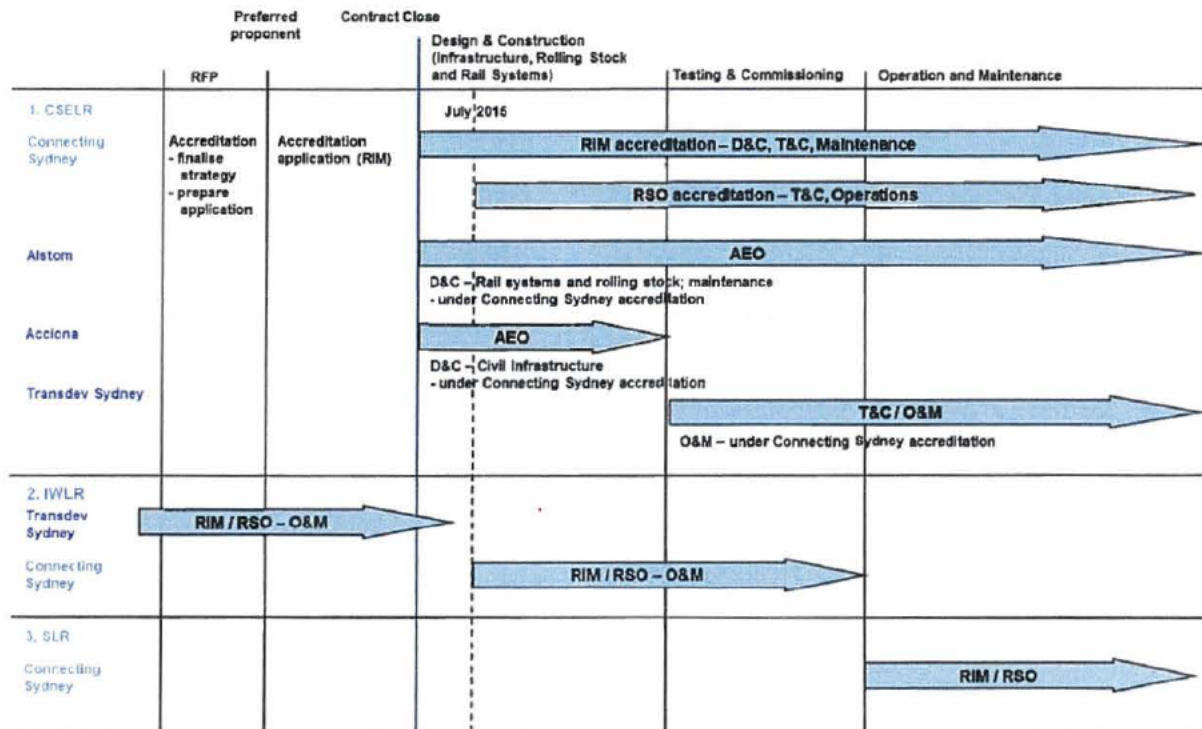
Each Participant’s specialist scope enables Connecting Sydney’s successful delivery of this Project as an AEO. In line with the SPR, we will obtain and maintain AEO status for the duration of the SLR Works. This approach to AEO status

offers TfNSW full assurance that Connecting Sydney’s technical capabilities are covered without question.

6.4 (t) Obtain and maintain accreditation

In line with Rail Safety National Law (NSW), Connecting Sydney will pursue the accreditations for rail infrastructure manager (RIM) and rolling stock operator (RSO) for the CSELR, IWRL and the entire SLR. Our plan for accreditation so is outlined in Figure 6.4 (u) 1.

Figure 21: Connecting Sydney’s accreditation plan overview



Methodology

Accreditation responsibilities for the CSELR will be driven by Connecting Sydney’s business model. Throughout the key project stages, Connecting Sydney will retain effective management and control of project delivery. This management and control will be exercised through contractual relationships; comprehensive contractual oversight; establishment, monitoring and review of performance requirements and implementation of a comprehensive Systems and Safety Assurance Management Plan.

In the eight week period prior to announcement of the SLR PPP Preferred Proponent, Connecting Sydney will prepare system requirements necessary to meet the

provisions of the Rail Safety National Law (NSW). These requirements are drawn from our project partners’ proven systems, including Transdev Sydney (which is currently accredited under law for the O&M of the IWLR).

A specialist working group, comprised of existing staff from the core project Participants will be dedicated to this task to ensure that Connecting Sydney will be prepared to engage with Office of the National Rail Safety Regulator (ONRSR) to commence the accreditation process, immediately on being announced as the preferred project proponent.



Connecting Sydney will initially apply for accreditation as a RIM to support the D&C, testing and commissioning and O&M of the CSELR (infrastructure, rail systems and rolling stock). To support our application, Connecting Sydney will develop a Safety Management System in compliance with the requirements of the Rail Safety National Law (NSW), underpinned by the proven systems of our project partners to achieve the safety systems and assurance required to meet our obligations to deliver the CSELR safely, so far as is reasonably practicable (SFAIRP).

While ONRSR has a statutory timeframe of six months within which to consider and evaluate on an accreditation application, experience shows, provided an applicant works closely with ONRSR in preparing its application and has suitable and comprehensive systems meeting the requirements of the law, accreditation can be achieved quickly. In this context a period of 12 weeks for ONRSR consideration is not unreasonable (assuming that key staff are available over the intervening Christmas period).

Connecting Sydney will discuss our proposed timeframe with ONRSR and the actions necessary to achieve RIM accreditation by Financial Close (12 February 2015).

Provided the systems which underpin the application are adequate, ONRSR may issue an initial exemption from accreditation to undertake preliminary works, while ONRSR continues to consider the application. This may not be required; however, given the only activities programmed during the remainder of 2015 are design and some limited utility relocations actions.

Depending on the adequacy of the accreditation application and underpinning systems, ONRSR may approve the application subject to conditions which require Connecting Sydney to provide further information or undertake certain activities to satisfy ONRSR conditions.

IWLR – RIM/RSO

Transdev Sydney is currently the accredited operator and maintainer (RIM/RSO) of the IWLR. Transdev Sydney has proven to ONRSR that it has the capability and systems to support safe operation and maintenance of the IWLR in accordance with the provisions of the law.

While ONRSR is assessing Connecting Sydney's RIM application for the CSELR, we will prepare an application for accreditation as the RIM/RSO for the O&M of the IWLR.

Immediately upon achieving RIM accreditation, Connecting Sydney will approach ONRSR to vary our accreditation to encompass RIM/RSO responsibilities for the IWLR. We will be able to clearly demonstrate our capability and systems to expand the scope of our operations to support variation of accreditation.

From 1 July 2015, Transdev Sydney will continue responsibility for the O&M of the IWLR (as the accredited entity). The target date for OpCo achieving accreditation will be prior to completion of the CSELR, at which stage Connecting Sydney will become the accredited entity for the O&M of the IWLR. Existing technical, engineering and operational systems and standards will remain in place, underpinning the continued safe operation of the IWLR.

CSELR - RSO

Following accreditation as the RIM/RSO for the IWLR, Connecting Sydney will prepare our application and submit to ONRSR to vary our accreditation to encompass responsibilities as the RSO for the testing, commissioning, integration and eventual operation and maintenance of the CSELR. Connecting Sydney will be able to clearly demonstrate our capability and systems to expand the scope of our operations to support RSO accreditation underpinned by the proven systems of our project partners. This will include the technical, engineering and operational standards required for O&M of the passenger Light Rail system, based on the systems in use on the IWLR.

The target date for achieving accreditation will be early 2016, at which stage Connecting Sydney will become the accredited entity for the O&M of the CSELR.



SLR

To facilitate seamless integration of the CSELR and IWLR into the SLR, Transdev Sydney will, while maintaining the operations of the IWLR, work closely with Connecting Sydney and other project Participants to provide input into the design and construction of the CSELR.

Following successful integration and continuing O&M of the IWLR, Connecting Sydney will prepare the systems necessary for the O&M of the full SLR network. Again these will be based on the proven systems of the project partners, including for the O&M of the IWLR.

At an appropriate point during 2016, Connecting Sydney will approach ONRSR to vary our accreditation to encompass responsibility for the O&M of the integrated

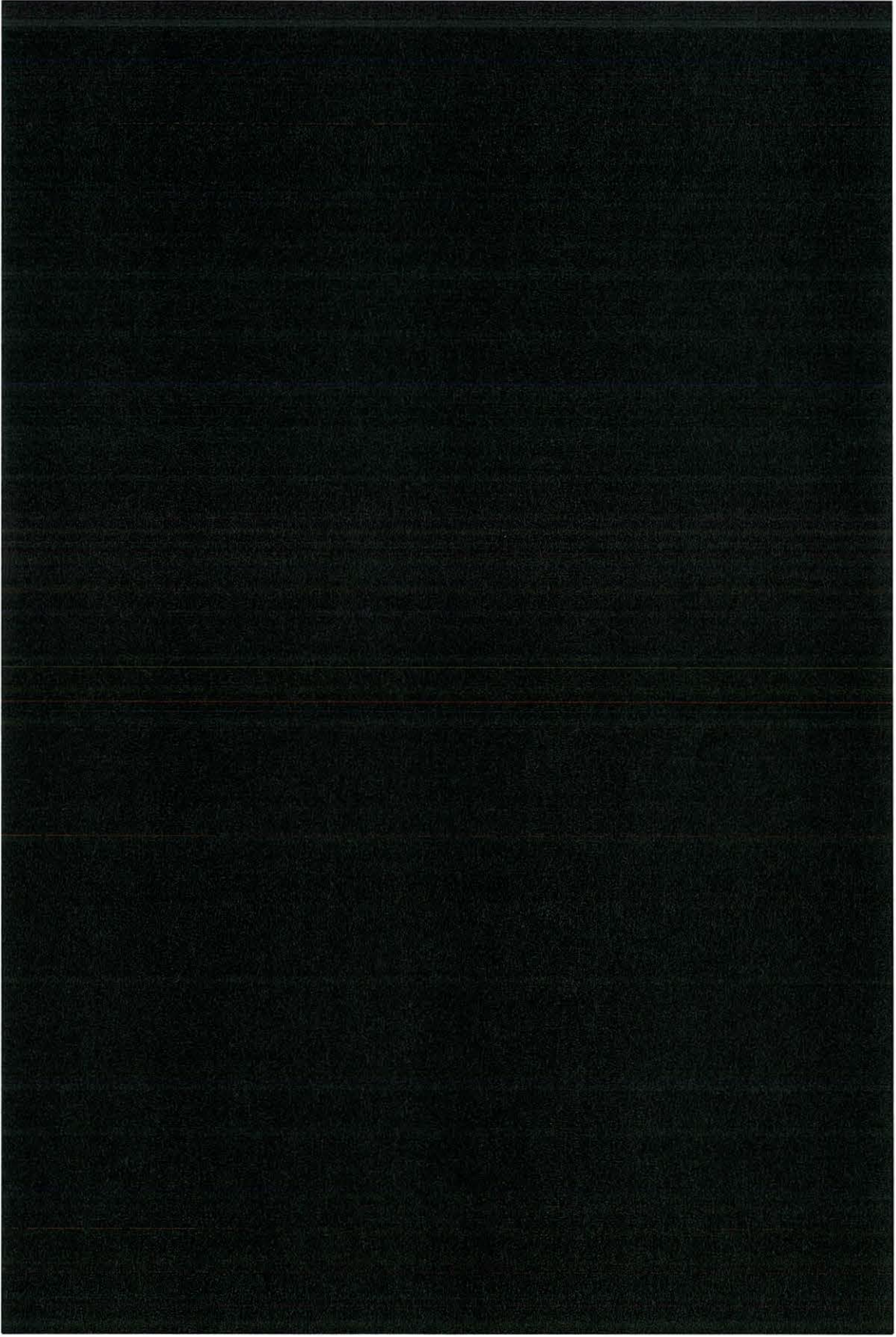
SLR network, again underpinned by proven systems to meet the requirements of the law.

We propose that Connecting Sydney will achieve full accreditation as the RIM/RSO for the integrated network by early 2017, facilitating testing and commissioning of the integrated network and full O&M by 2019/2020.

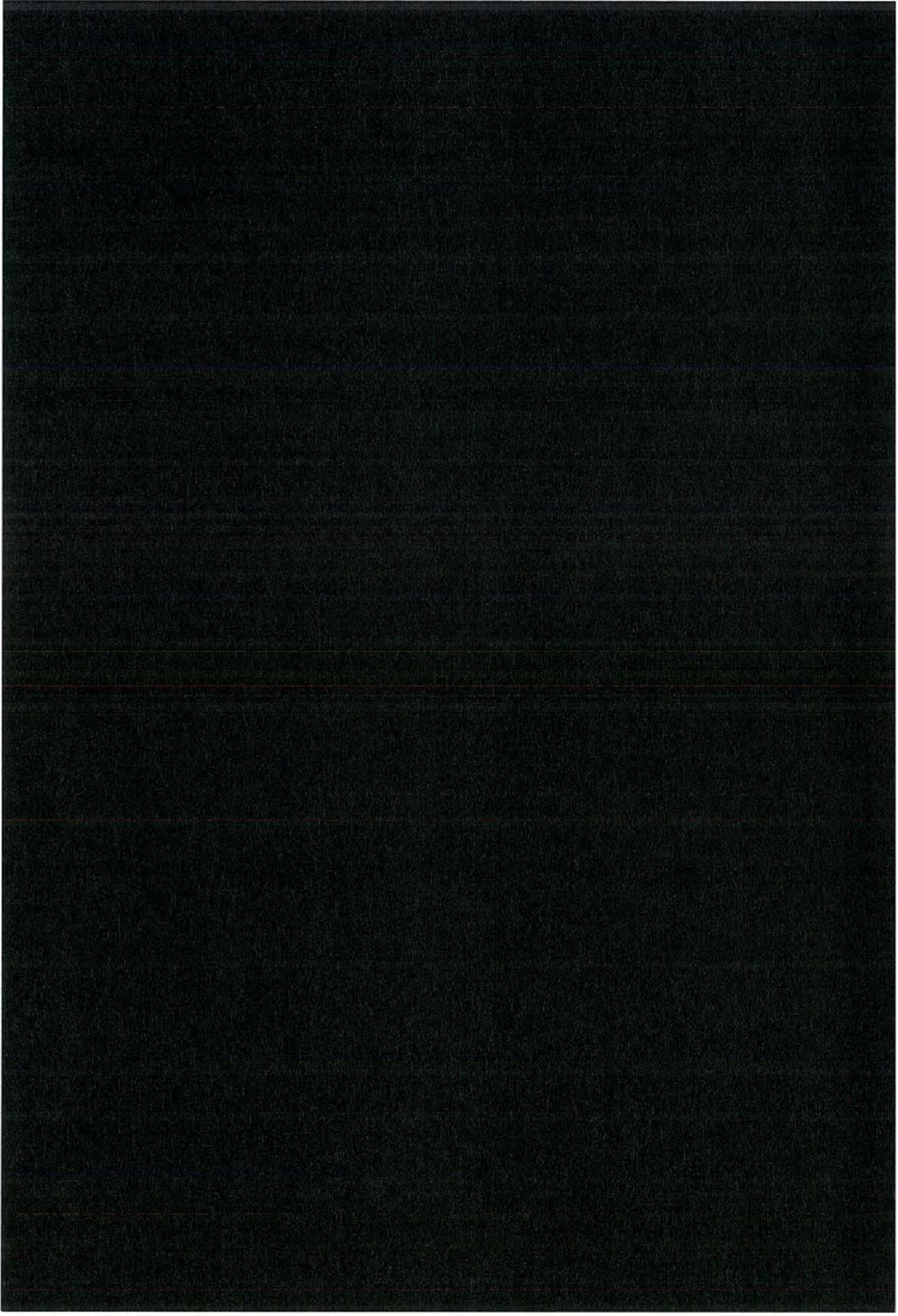
We propose that Transdev Sydney will be responsible for the O&M of the SLR network under the effective management and control of Connecting Sydney as the accredited entity.



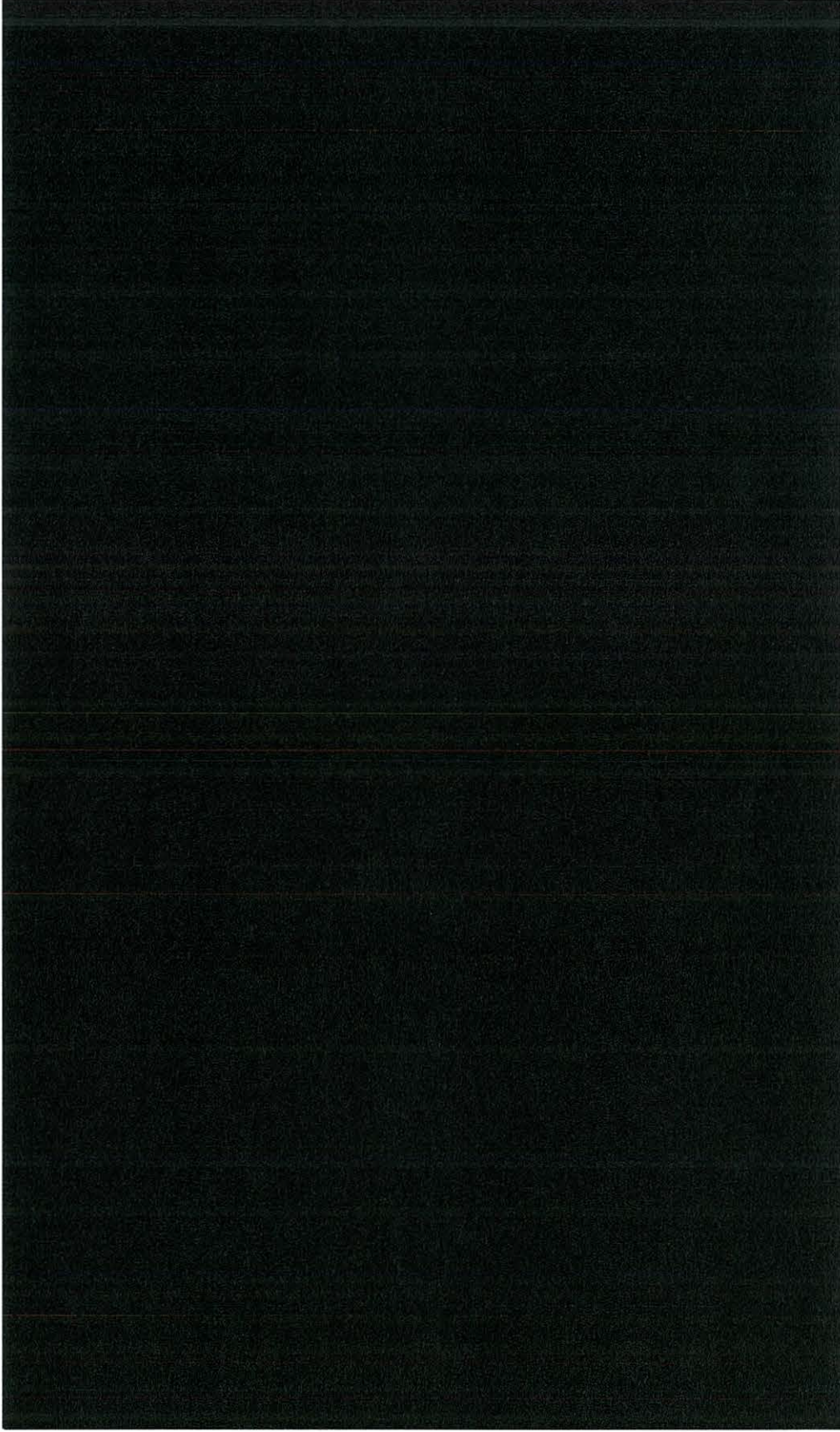
the experience is everything

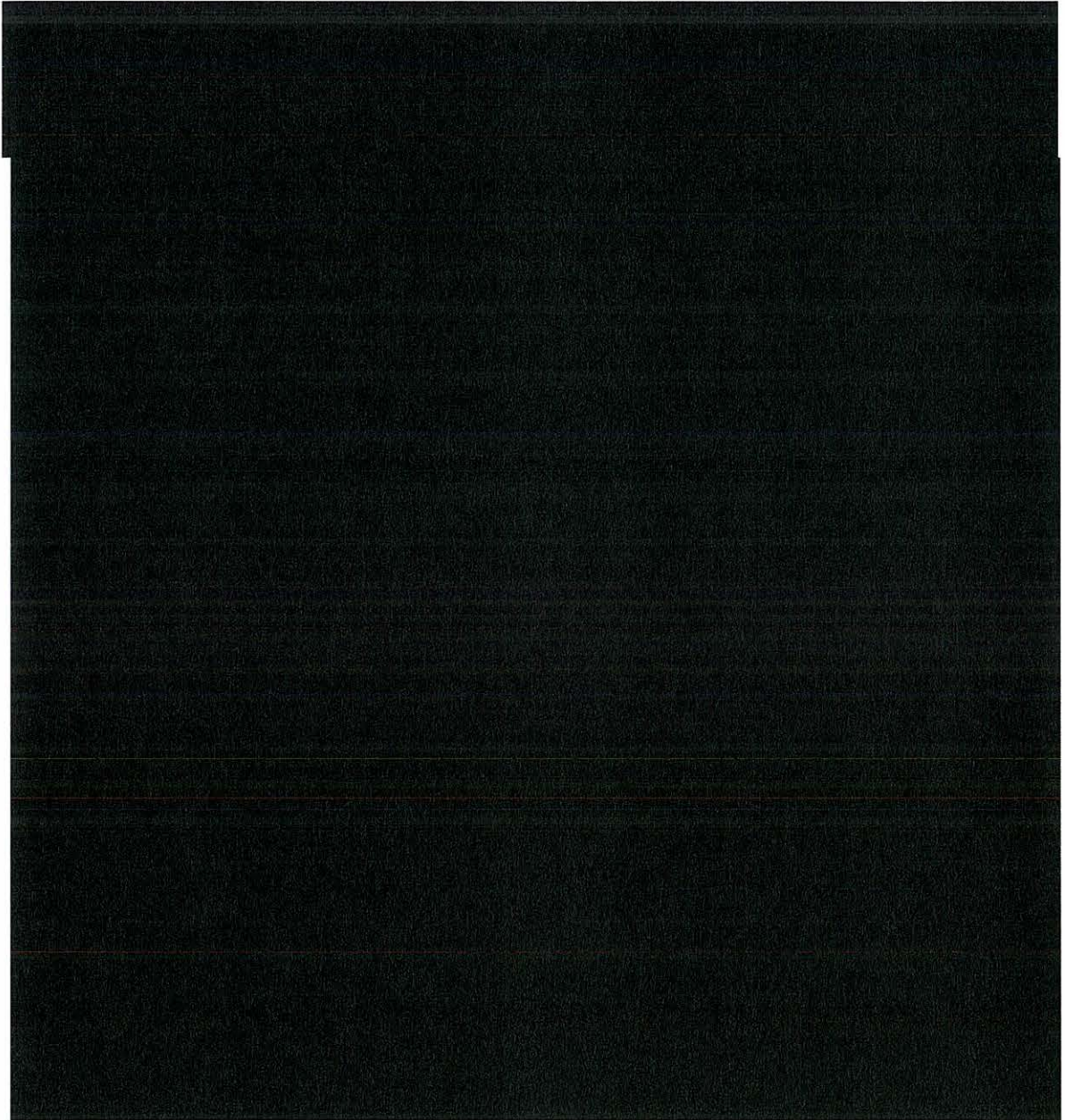


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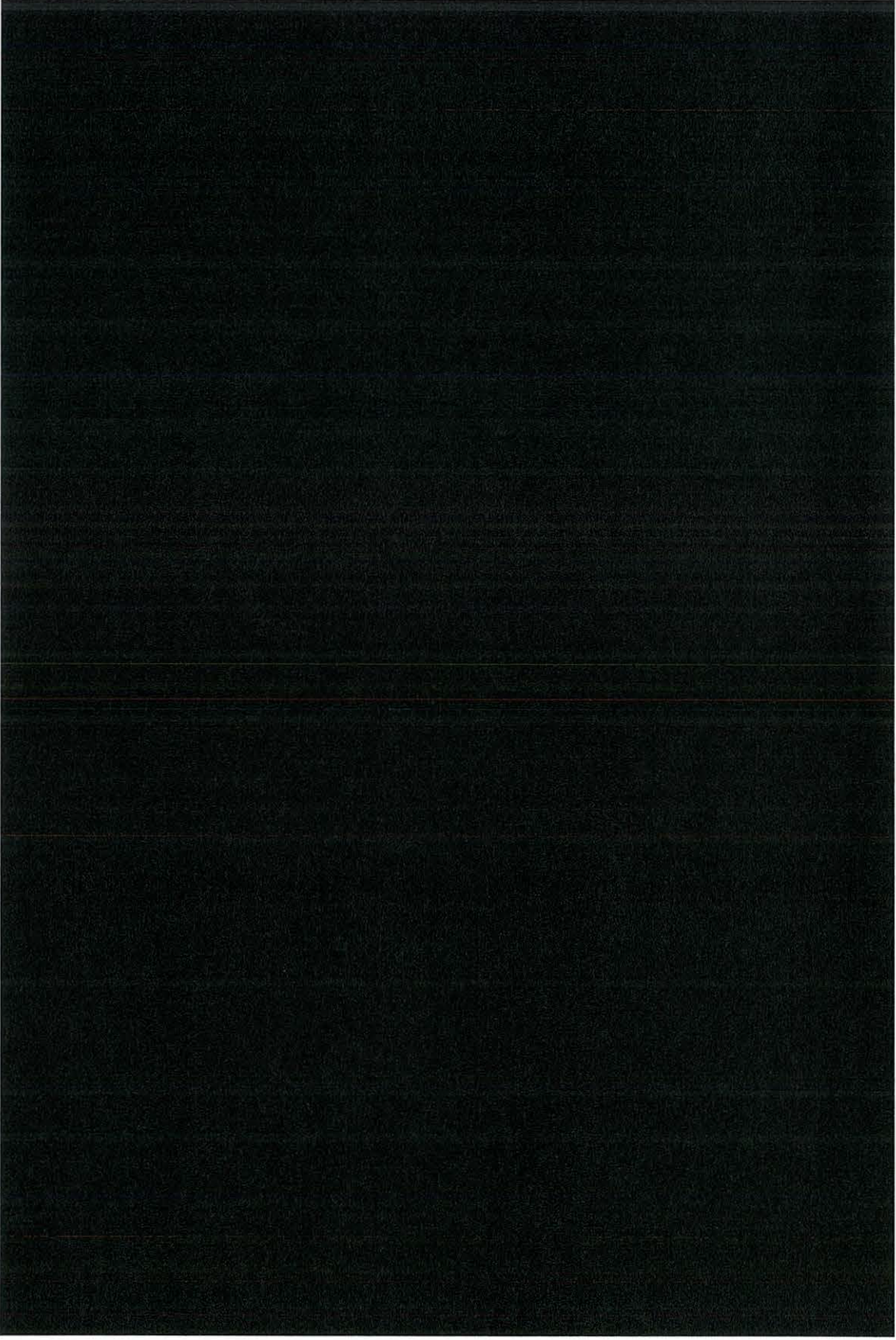


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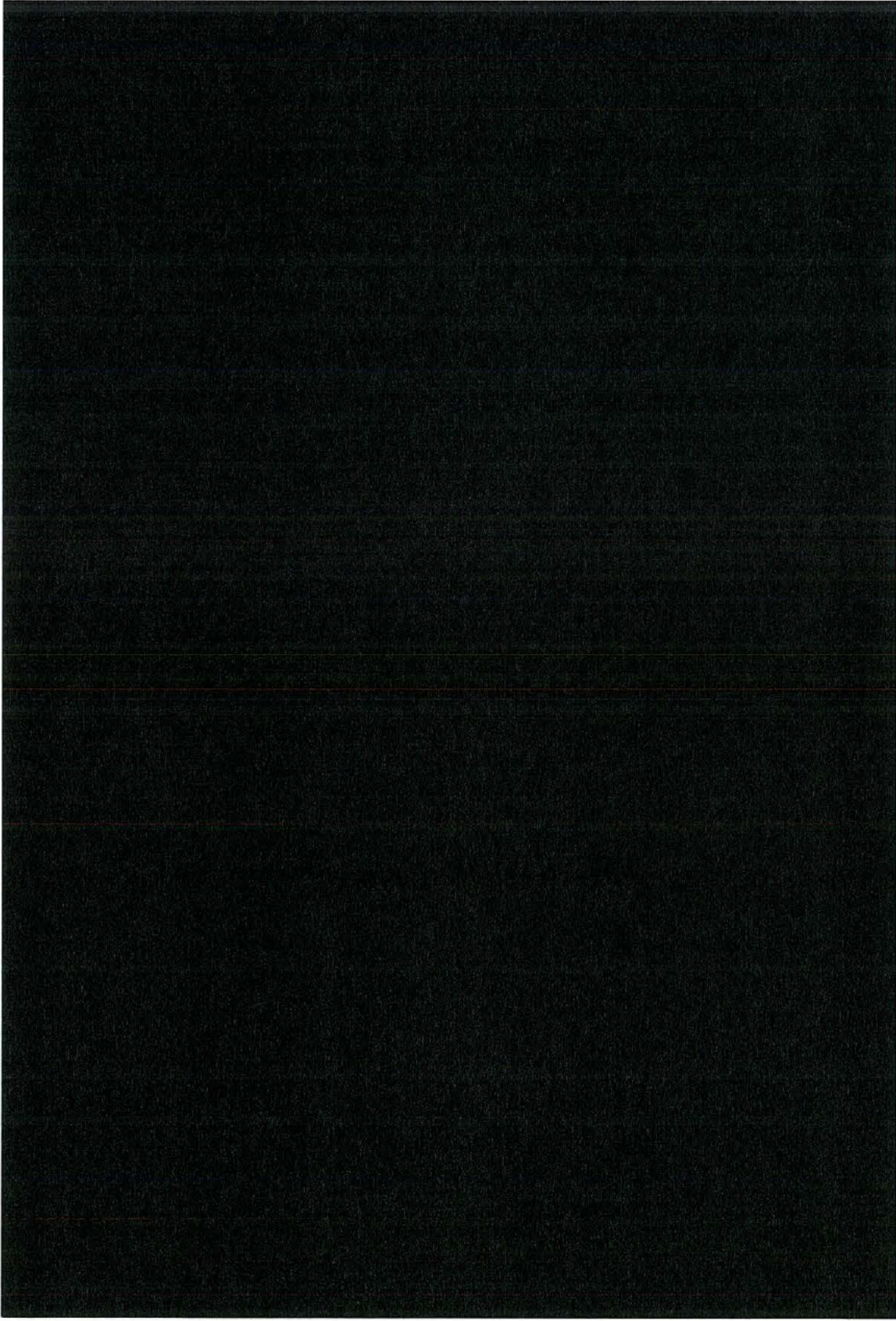




The experience is everything

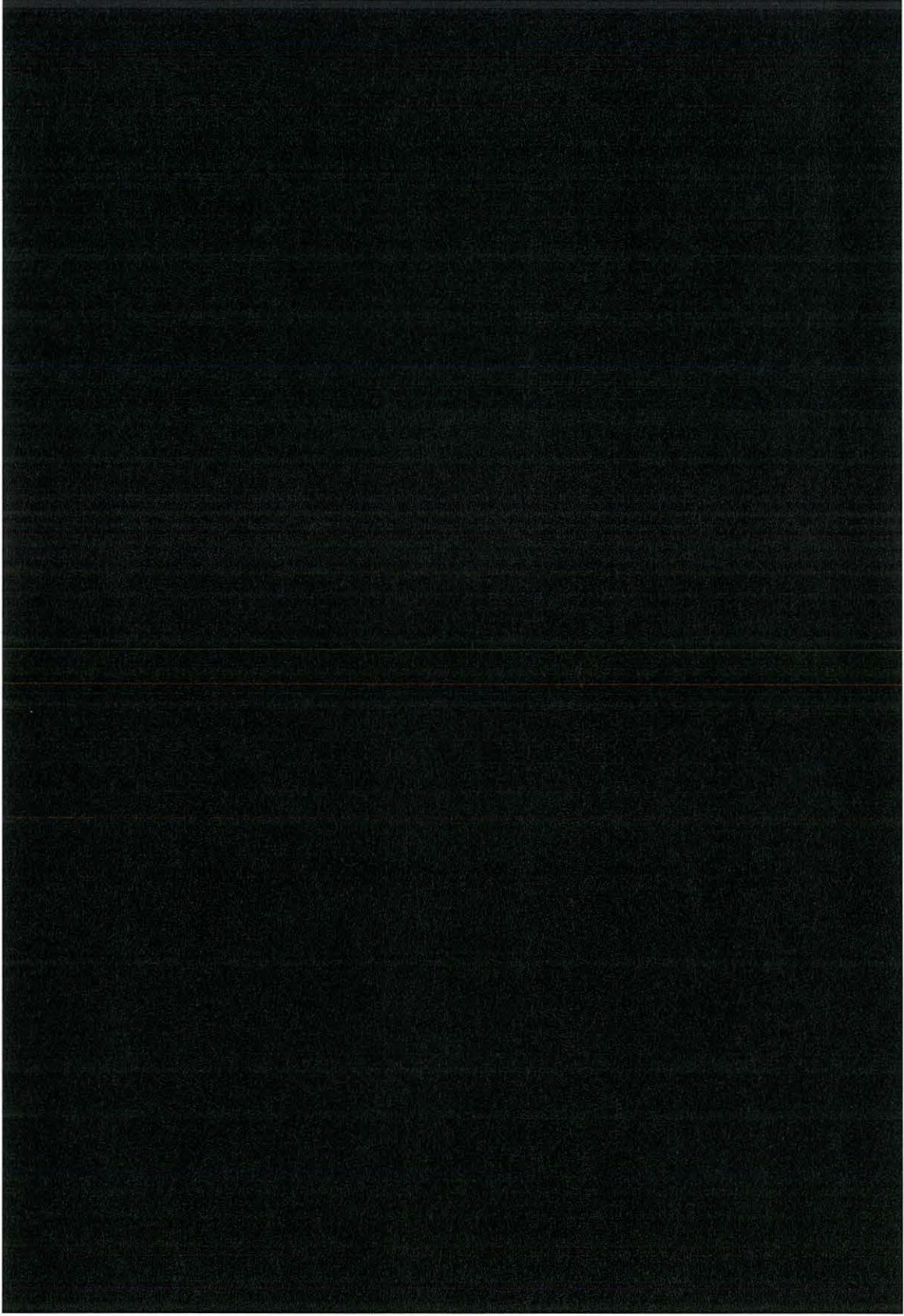


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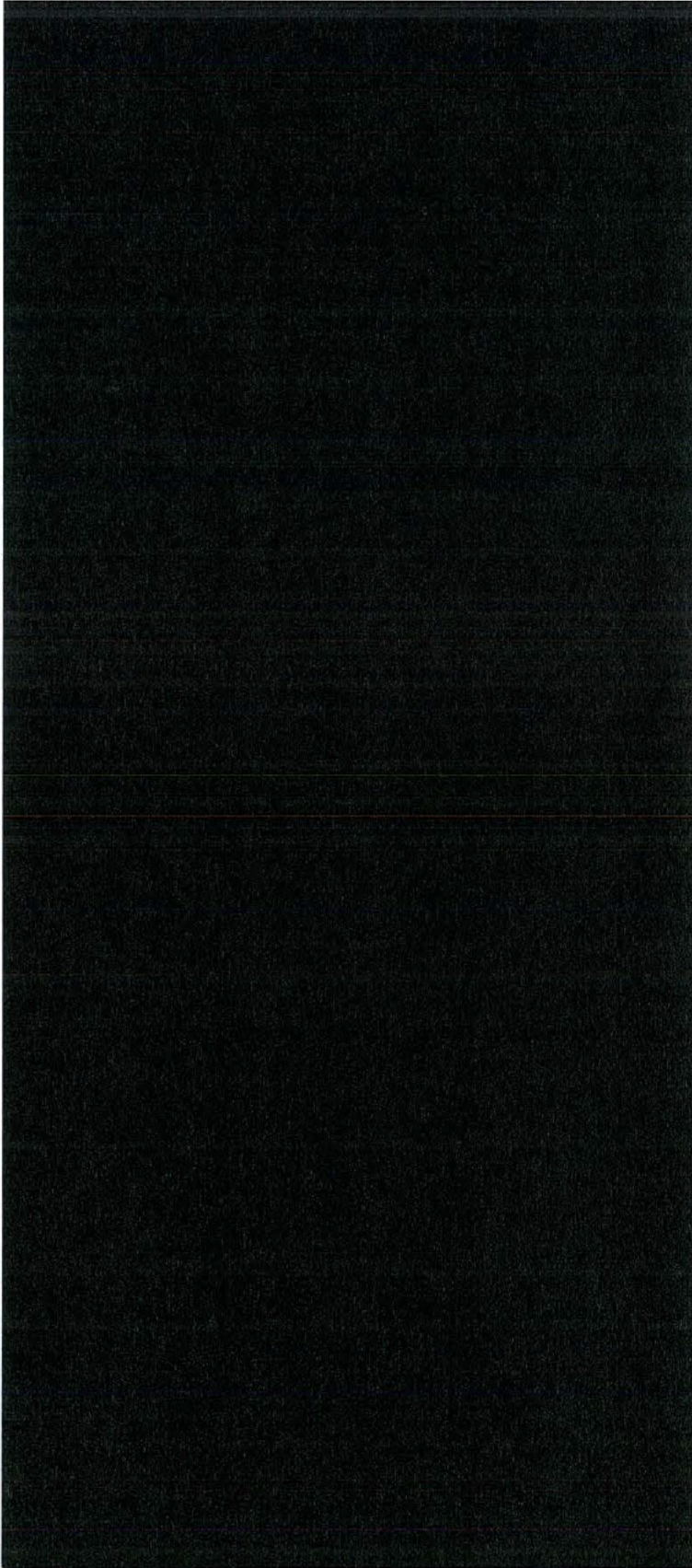
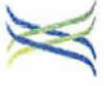




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ATTACHMENT 2 –Other Project Plan Commitments – Part B



[REDACTED]

[REDACTED]

6.4 Other Project Plan Commitments

[REDACTED]

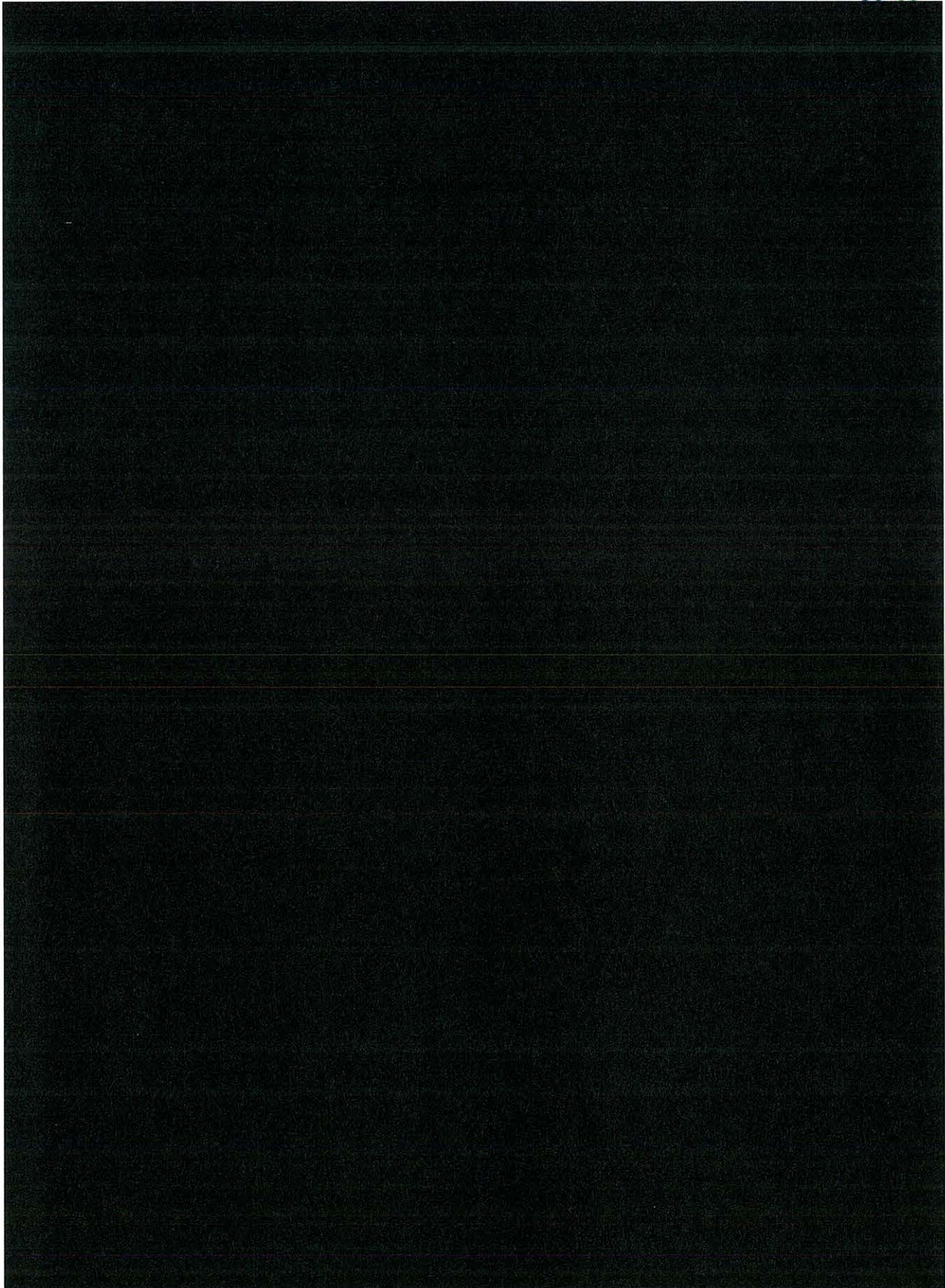
Connecting Sydney has made changes to the following sections only;

6.4 (a) Structure and Mobilise its Delivery Team

Connecting Sydney has prepared a detailed Mobilisation Plan outlining activities and milestones for the first 100 days post contract award. It focuses on early design and engagement with key stakeholders with regards to the proposed plans for early works, site establishment and enabling works in each Work Zone that align with Connecting Sydney's Initial Delivery Program. The Mobilisation Plan is Appendix P.

[REDACTED]

[REDACTED]

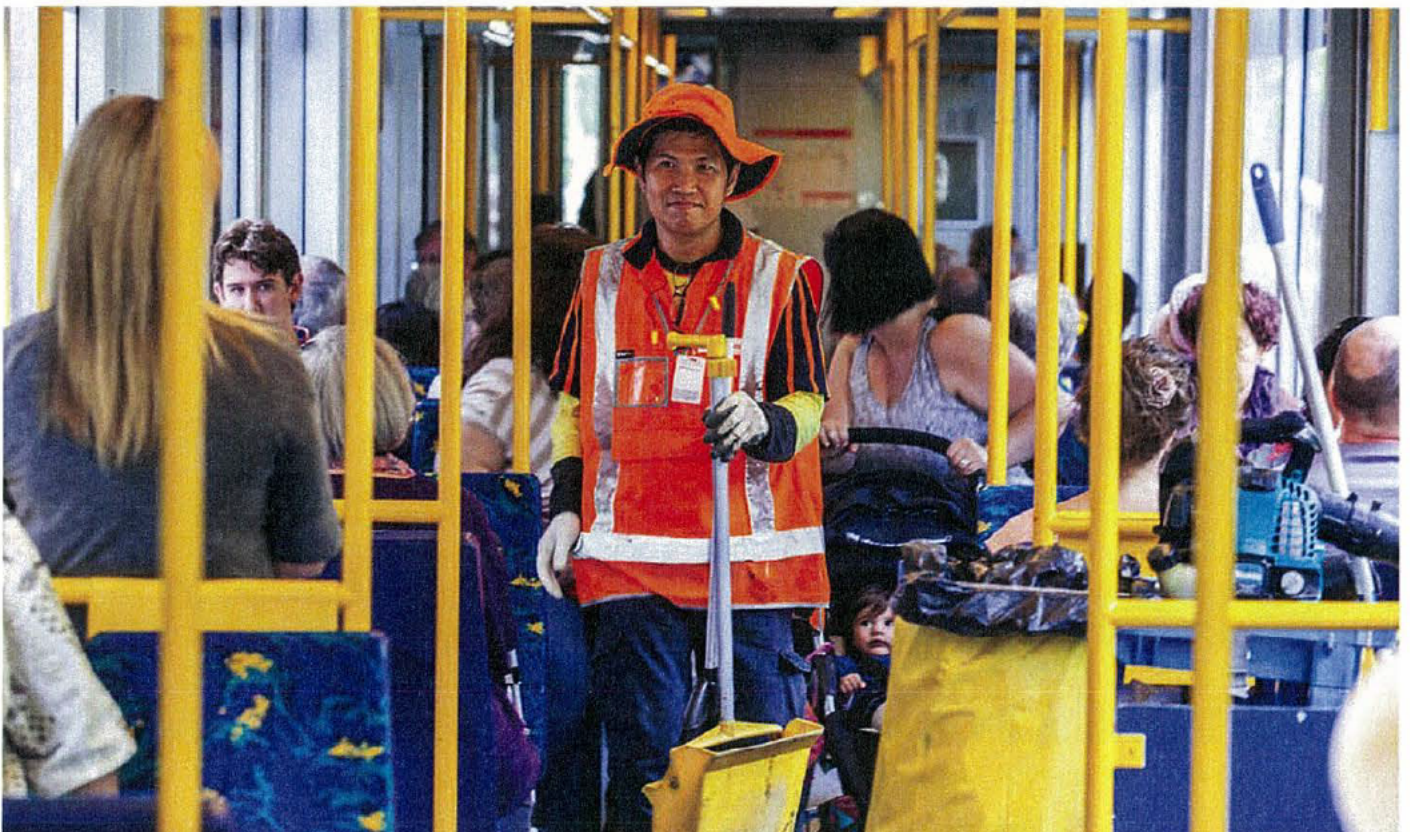


APPENDIX P | MOBILISATION PLAN
SLR PPP FIRST 100 DAYS

6.4 OTHER PROJECT PLAN COMMITMENTS



CONNECTING
SYDNEY





Mobilisation Plan

SLR PPP First 100 Days

Document No#	CS-MOB-041
Revision:	B
Date:	5 Sep 14



MOBILISATION PLAN – SLR PPP FIRST 100 DAYS

PLAN CONTROL AND AMENDMENT

The current reviewed and approved version of this Plan is available on the collaborative system for all project personnel to access. Downloaded Plans are deemed uncontrolled and it is the responsibility of the user to ensure they are using the latest revision.

The responsibility for maintenance, review, update and approval of this Plan is as per the Delegation of Authority Matrix.

All changes to this document are noted in the below table.

Revision	Date	Description	Page	Section
A	23/08/14	Mobilisation Plan First 100 Days – Draft	1-15	
B	4/09/14	Mobilisation Plan First 100 Days – Program added	16	Attachment 1

Prepared by	Approved by	Signature
Construction Manager – Miguel Angel Queija	Project Director – Matthew Saviana	
	Deputy Project Director – Nouredine Benkaza	



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1 EXECUTIVE SUMMARY

The 100 day Mobilisation Plan for Connecting Sydney is predominantly focused on the early design and engagement with key stakeholders with regards to the proposed plans for early works, site establishment and enabling works in each of the Work Zones to commence in line with the proposed delivery program.

The Southern Connection's critical path (between Moore Park & Randwick) is centred around the construction of the bridge connecting Devonshire St to Moore Park over the Eastern Distributor (ED). This will provide access to shifting the excavated material from the tunnel over the ED to build up to vertical grade line at the Olivia Gardens demolished residential area.

There are a number of key activities for the Southern Connection that will need to commence between Contract Close and Financial Close to enable a rapid mobilization to site in August 2015 to commence bridge works. These activities will be described within this document, but are predominantly those related to the team mobilization, service authority interfacing to agree on Early Works programs and site establishment for design and engineering personnel.

The Northern Connection's critical path (Circular Quay to Moore Park) is centred around service validation and relocation along George and Devonshire Street's. The establishment of an integrated services model will depend on further validation of existing services to inform the design to provide certainty on spatial requirements for all design elements.

The key activities at the Northern Connection that will need to commence between Contract Close and Financial Close to enable a rapid mobilization to site to commence service relocations at six intersections along George Street in July 2015. These activities will be described within this document, and as per the Southern Connection it includes team mobilization, service authority interfacing to agree on Early Works programs, site establishment for design and engineering personnel and mobilization of a Services Team to commence on site validation through potholing, design and interface meetings with the relevant authorities and RMS.

It is anticipated that the service relocation and validation activities will require a large amount

of engagement with affected key stakeholders to finalise a preferred design / staging solution, and as such the period between Contract Close and Financial Close will be utilized in preparing designs that can be issued for internal/external review and approval to ensure time critical activities can commence when access is granted.

Key stakeholders which will be contacted in consultation with TfNSW during the period between Contract Close and Financial Close include (but not limited to) City of Sydney, Randwick City Council, UNSW, Princess of Wales Hospital, Transurban, Centennial Park Trust and Sydney Cricket Stadium Trust to ensure adequate information transfer in relation to the Early Works. The team will mobilise a senior Stakeholder/Precinct Manager to take responsibility of this process at Contract Close.

2 OPERATIONAL SET UP

To ensure an immediate start at Financial Close, the following tasks are deemed to be essential (in no particular order) and will commence at Contract Close. Many will continue through the first 100 days and others will be complete prior to Financial Close in February 2015.

- Early Works development, including:
 - Agree Early Works program and scope finalization
 - Stakeholder Interface for Early Works with stakeholders such as RMS, Service Authorities and key stakeholders
 - Mobilise the key staff and subcontractors achieve the Early Works Program Scope
- Develop & implement project wide strategies, including:
 - Early Works delivery;
 - Stakeholder Interface for Early Works;
 - Design management – including internal and external approval processes;
 - Communication in consultation with TfNSW – internal and external, stakeholder, approvals, etc;
 - Procurement / contracting – including establishment, buying gains, etc;



- Commercial frameworks – subcontracts for consultants, suppliers and subcontractors;
- Traffic management – consultation with RMS to commence as fast as reasonably practicable; and
- Enact Employment Strategy – local staff and international resource deployment.
- Establish delegation of authority matrix, including:
 - Roles and responsibilities;
 - Limits of authority; and
 - Approval and Commercial protocols.
- Communication protocol, including:
 - Inductions for Early Works Packages;
 - Introduction pack; and
 - Weekly toolbox.
- Develop standard systems, including:
 - Document filing system;
 - Operating procedures;
 - Templates; and

- Writing the Project Policies.

At Contract Close there will be an agreed program and budget for the period to Financial Close, so that the team and deliverables can be monitored and reviewed against the forecasted time line on a weekly basis.

3 ORGANISATIONAL CHART DURING THE FIRST 100 DAYS

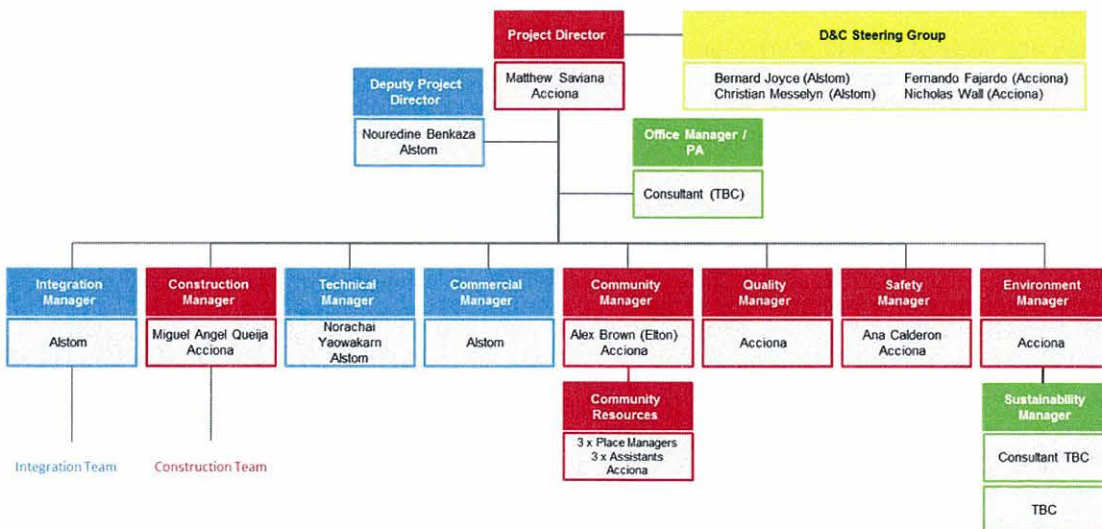
The organisation structure below will commence mobilizing at Contract Close. The senior representatives will engage direct reports from parent organisations to attend to early works, design and mobilization. The organization structure will grow to and staff will on-board during the period between Contract Close and Financial Close and endeavour to have the team 70% resourced within the first 100 days from Financial Close.

Key staff from interstate and international locations will commence the relocation process in line with the project resource strategy to ensure that during the first 100 days post Financial Close the appropriate level of design and technical expertise are fully on-boarded with the 100 Day Mobilisation Phase.

Reporting format to OpCo - including health and safety, environment and sustainability, quality, financial and schedule Develop Project Policies; and

Figure 1: Connecting Sydney D&C Delivery Senior Management Team

DELIVERY D&C SENIOR MANAGEMENT TEAM





4 CONTRACT CLOSE

4.1 Detailed Design on Early Works Packages

4.1 (a) Utility Services

There are numerous utilities to relocate across the project that are programmed to occur in advance of the civil and rail system works. The critical early works require validation of services at intersections along Route A. There are six intersections identified along George St including Grosvenor and Bridge Streets, Hunter & Margaret Streets, King St, Bathurst St, Liverpool St and Goulburn St. The early works of physical validation/potholing during the January 2015 period is required to inform design at Financial Close and to commence the service relocation works in July 2015. The early works will provide program savings to Critical Path and benefit future traffic staging by delivering a number of intersection works earlier to provide alternate traffic routes.

Works on mobilizing the services design and delivery team will occur during our mobilization period post Contract Close. The role of the team will be to commence the procurement process for the relocation of utilities in these areas and seek alignment of Third Party Agreements for Contestable and Non-contestable works, including:

- Ausgrid;
- Jemena;
- Telstra;
- Optus;
- City of Sydney (Drainage); and
- Sydney Water.

During the RFP Phases, draft Third Party Agreements from each of the respective Utility Providers were sighted and upon announcement at Contract Close, the Service Manager will commence to finalise negotiations with each of the respective parties to align on Terms and Conditions to avoid any significant delays.

4.2 Design Consultants

Cardno has been engaged by Acciona to coordinate design and relocation works for utilities across the project. Cardno will commence mobilising their team post Contract Close to focus on preparing for the early works scope design mobilisation.

Procurement of specialist subcontractors to complete the specialist pot holing tasks and

surveyors will be required during this period. Discussions between RMS, key stakeholders and Service Authorities will also commence from mid-December 2014 onwards to ensure that early works along George St can commence in January 2015.

4.2 (a) Existing Utility Service Asset Identification

Cardno will be undertaking further Non-Destructive digging along the project to validate existing service assets which currently have not been identified and sighted by the works carried out by TfNSW. This in parallel with the team mapping all the existing information we have on the existing service assets along the corridor will enable Cardno, Jacobs and GHD to commence building the integrated services model for spatial proving. In addition it is critical that both Cardno and the design consultants mobilise during the period post Contract Close to commence this work at Financial Close. Undertaking this work early will have a threefold benefit.

- Inform the team early in the development of design on existing assets and enable the design team to either:
 - Avoid the existing asset clashes;
 - Minimise impact upon the existing asset; and
 - Confirm the scope for relocation works for the existing asset
- Inform the design to enable design to proceed unimpeded;
- Inform authorities as to the impact upon their assets, enabling detailed planning with Service Authorities to commence

The procurement strategy will consider:

- Cardno resources required to undertake the locating works and the early procurement of plant and equipment (i.e. Vacuum trucks);
- Subcontractor resource for traffic management; and
- Subcontractor resource for survey.

A resource will also be required to develop abridged Management Plans to satisfy RMS that all facets have been addressed to enable the early works to commence. Discussions will commence with RMS on the content of these plans at Contract Close addressing, safety, environment and protection of assets during the Early Works.



4.3 Authority Approvals on Early Works Packages

4.3 (a) Route A - George Street Service Validation

To enable the immediate design priorities as outlined above, it is imperative that the following stakeholders are engaged at Contract Close in December 2014. The following activities require development prior to stakeholder engagement to ensure that the stakeholder can be engaged with sufficient information.

RMS

Scope of approval

- Review and approval required for the proposed potholing works at the six intersections along George St – traffic staging options and timing/duration of road closures.
- Sequencing of intersection works along George St and RMS preferred staging and sequencing

Timing

Intersection traffic staging concepts prepared for RMS discussion December 2014 for works to commence in mid-January 2015

Reason for Early Works Approval

Relocation of the service utilities at six intersections along George St in July 2015 to provide alternate traffic routes when programed civil and rail system works commence in early 2016.

Timing

Discussions to commence immediately at Contract Close as the outcomes will inform the extent of early works scope and design inputs. These discussions are required prior to commencement of design at Financial Close.

Service Providers – Jemena, Telstra, Ausgrid, Optus and Sydney Water

Scope of approval

Review and approval required for the potholing at six intersections along George St – to expose the Service Authorities assets and confirm their location. Determination from Service Authorities whether the asset needs to be isolated and customer notification periods are applicable.

Timing

Intersection traffic staging design and impact assessment of assets prepared for Service Authority discussions in December 2014 for works to commence in mid-January 2015.

Reason for Early Works Approval

Relocation of the service utilities at six intersections along George St in July 2015 to provide alternate traffic routes when programed civil and rail system works commence in early 2016.

Timing

Discussions with the authorities will commence immediately at Contract Close as the outcome will inform the extent of early works scope and design inputs required. The discussions and approvals are required prior to the commencement of design at Financial Close.

Key Stakeholders – City Of Sydney, Local Businesses, Bus Operators and Taxi Association

Scope of approval

- Review and approval required for the proposed potholing works at the six intersections along George St – traffic staging options and timing/duration of road closures and impact to local businesses.
- Sequencing of the works along George St and the associated intersections to minimize the impact on businesses and key stakeholders

Timing

Intersection traffic staging design prepared for discussion in December 2014 for potholing works to commence in mid-January 15

Reason for Early Works Approval

Relocation of the service utilities at six intersections along George St in July 2015 to provide alternate traffic routes when programed civil and rail system works commence in early 2016.

Timing

Discussions to commence immediately at Contract Close as the outcomes will inform the staging of the early works scope and duration. These discussions are required prior to commencement of design at Financial Close.



4.4 Site Establishment

4.4 (a) Establishment of Project Office and Compounds

Project Office

During the Project there will be one central Project Office based in close proximity to the Sydney CBD and the project which will have the project personnel including the D&C Project Director, direct reports and also engineering, finance and administration support roles required to deliver the works. In addition the Project Office will be supported with remote site compounds and satellite offices which will have office facilities for teams of engineers and supervisors to co-locate.

At Contract Close the project will have 2 project offices located in Castlereagh St Sydney CBD and in Herbert St Artarmon which will accommodate up to 80 designers and engineers for the first 100 days. There will be co-location of designers and delivery personnel at both offices.

The project has identified various sites which have the functionality and location benefits as the main Project Office and will endeavour to execute a Lease Agreement by mid-January 2015. Post the execution of the Lease a Mobilisation Plan to relocate the team post Financial Close will be developed. The interim period between Contract Close and Financial Close will be at the temporary project offices which have all the IT and functional requirements to deliver the early works and commence the design.

Site Compounds

Site compounds and storage locations have been selected during the RFP Phase. They have been strategically located to minimise travel and disruption to the local community and provide an opportunity for early procurement of long lead item materials.

During the early works there will be very little demand for storage and the project will ensure that the subcontractor completing the works make their own allowances storage to service the project. The site compounds and storage site will come on line progressively from mid-2015.

4.5 Stakeholder and Community Engagement

A rapid response to the engagement with key stakeholders and community members will be required at Contract Close. Team members will be engaged immediately to work with TfNSW to facilitate early works in January 2015. The mobilisation of the Stakeholder and Community Team will rapidly occur to ensure that key stakeholders and community members are informed of the program of works during the mobilisation phase (first 100 days).

In Section 7 of this plan *Stakeholder and Community Engagement 100 Day Mobilisation Plan* there is a detailed approach to the mobilization of the team and the key milestones which will be achieved in the first 100 days to ensure successful ramp up.

4.6 Project Director Budget Finalisation

Post Contract Close the mobilized team will review the tender Direct Costs in order to confirm the reliability of the tendered costs. The intention is to identify:

- Rate anomalies – correct any errors so correct rates used;
- Gaps in scope – identify additional works required to complete scope;
- Additional allowance – identify any areas where additional scope has been included; and
- Methodology errors – amendments to the methods and inclusions.

The team will provide a report identifying the cost amendments against the current work breakdown structure (WBS) so that agreement can be made to transfer costs, remove or increase allowances, and provide a true reflection of the expected construction costs.

Where the tender does not have supply and/or subcontractor price coverage, the team will validate the pricing against current market rates.

In line with the Direct Costs review, the Overhead and Preliminary Costs and Risk and Opportunity Allowance will also be reviewed for the same purpose.

4.7 Cost Code Definitions / Allocations

In line with the cost review, the WBS will also be reviewed to ensure that is it developed in



line with the construction teams' intentions and program expectations.

The WBS will reflect the construction teams' intention on the how they endeavour to procure and deliver the works. Once the costs have been reviewed and the WBS has been confirmed the Project Cost Codes can be assigned and aligned with the revised organisation structure.

5 FINANCIAL CLOSE

5.1 Interactive Collaborative Workshop

To instil our core values and commitment to the partnership at Financial Close a series of culture workshops to be attended by TfNSW representatives and senior Connecting Sydney Management ensuring these principles are upheld consistently across all areas of the project will be facilitated by the Stakeholder Director. The collaborative workshop will commence being developed during the period post Contract Close and facilitated post Financial Close. Arrangements will be consulted with TfNSW in advance.

5.2 HR/IR

The on-boarding process will commence at Contract Close and continue through Financial Close. Key local and international resources will continue to on-board as per the resource strategy. During the first 100 days the project will be on-boarding key local representatives who are familiar with the local Service Authorities to act as Interface Managers. The project will also be discussing secondment opportunities with the relevant Service Authorities with the first 100 days to ensure that the authorities have adequate time to consider the proposal and nominate personnel.

Finalisation of the Industrial Agreement and subcontract on-boarding strategies will also be finalized during the first 100 days and

implemented. To successfully deliver this challenging program, the Project will be well planned and continuously monitored through the use of short-term, mid-term and long-term programs.

Connecting Sydney has an extensively skilled resource pool available through our Core Contractors from the existing workforce based both within Australia and overseas. These resources will be complemented by a comprehensive recruitment campaign designed to source the highest quality candidates available in the market to bridge any skill gaps with a best-for-Project approach to selection. This will be managed by two Human Resources (HR) representatives from the D&C Joint Venture, and one from O&M.

5.3 Services/Utilities

Services early works will continue through Financial Close and in parallel the project will be establishing with the Service Authorities a process to ensure progress in design, spatial modelling and relocation works in July 2015 are being attended to and approved.

Key elements to be finalised post Financial Close include:

- Establish Utility Reference Group (URG) & Agree A Project Charter between the D&C and Service Authority Representatives;
- Establish a utility technical group with Service Authorities; and
- Third Party Agreement finalisation.

5.4 Key Dates in First 100 Days

Table 1 summarise the key milestones within the first 100 days of the project mobilisation that are critical to ensure design and service validation works remain on track to allow the commencement of the early works on George St intersections in July 2015 and the Eastern Distributor Bridge construction in August 2015.

Table 1: Key milestones within the first 100 days

Activity	Start Date	Reason for Criticality
Site Access		
Contract Close	15 Dec14	Required to achieve Trial Run Completion in 28 Feb 2019
Interim Site Office relocation	16 Dec 14	The team mobilized rapidly to deliver on early



commence		works
Approvals		
Early works approval from TfNSW, RMS, Service Authorities & key stakeholders	23 Dec 14	Required to commence potholing along George Street on the 12 Jan 15.
AEO Approval for Acciona Infrastructure	14 Apr 15	Approval required prior to commencing civil works
D&C Mobilisation		
Early works for service validation on George St	12 Jan 15	Commence service relocation at six intersections in Jul 15
Design to commence at Financial Close	12 Feb 15	Delay will impact programed works in Jul and Aug 15
Alstom to confirm system requirements, power consumption & substation detail	1 Jun 15	To develop design to DS2 Alstom need to confirm requirements
Key Project Management Plans complete	1 Aug 15	To facilitate works along the project route
Noise & Vibration Monitoring complete	1 Aug 15	Analysis and finalise the noise treatment along the route
Establish Utilities Reference Group (URG)	14 Apr 15	Group will need to be established prior to any significant relocation works commence
Finalisation of Third Party Agreements	30 Apr 15	Delay will impact the progression of detailed design for the service relocations
Develop the RAATM for the Project	24 Jul 15	Delay in Project Requirement and Allocation Schedule – may compromise the traceability and evidence based approach

5.5 Mobilisation of Project Office, Including Design Team

In this period the main office mobilisation strategy and plan will be implemented.

The main project office will include accommodation for project wide management team, critical design team members and will aim to provide seats for the northern and southern site teams as they ramp up and until such time as they relocate to satellite offices.

At Financial Close:

- Relocate to main project office – this will include the full project team and specific design resources;
- Confirm mobilisation plans for area / zone/ satellite offices; and

- As program dictates establish area / zone/ satellite offices and relocate specific resources.

Office / compound mobilisation plans to include:

- site and office layouts produced;
- car parking arrangements;
- storage arrangements confirmed;
- amenities such as toilets and kitchens;
- fencing / hoarding / temporary barriers /access gates /lights / signs procured;
- covered walkways / footpaths / commune areas; and
- access arrangements.
- Office services, such as:



- IT, power, water, communications and other
 - Security system / CCTV / PA / furniture.
- The main office mobilisation plan will need to be established pre-Financial Close so that at the earliest possible time post Financial Close the team can mobilise to the office without delay. The team will only leave the 2 interim project offices once all systems are up and running in the new facility.

5.6 Operation & Maintenance Mobilisation

Prior to Contract Close Transdev will mobilise a Transition Manager in readiness to on-board a team to commence the transition process of the existing IWRM Operations. During this transition period, there a number of significant milestones which will need to be achieved. These milestones are outlined in table 3 below.

Table 3: Transition milestones

Transition Milestones	Date Required
Transition Manager and Support in place	Mon 03-Nov
Mobilise Transition Staff and Consultants	Fri 14-Nov
Establish Configuration Change Board	Mon 01-Dec
Develop Communications Plan and Protocols	Mon 15-Dec
Full Audit of Existing infrastructure	Mon 05-Jan

5.7 Key Procurement

5.7 (a) Key Procurement Dates in First 100 Days

Procurement lead times are an integral component that, if not properly planned, can have a detrimental effect on the delivery timetable. Procurement plans will be developed, detailing the procedures and documents to be used for the evaluation, award and contract management of main elements of the works. These plans will include the process for program integration between construction, cost control and forecasting and will comply with the planning

requirements set out in SPR and its appendices.

Procurement will generally commence on completion of Design Stage 2 to enable a thorough review and evaluation process to occur parallel to the finalisation of the design process, such that subcontract award can occur around the same time as Design Approval, however there are a number of key procurement deliverables which the project will need to commit to in advance to ensure timely supply.

These deliverables are listed in the table 4 below.

Table 4: Key procurement deliverables

Key Subcontractor and Supplier	Contract Execution Date	Reason for Criticality
Alstom LRV Supply Timeline Confirmation	12 Feb 2015	Manufacturing timeline
Alstom Rail System Equip (Long Lead Items) Confirmation	20 April 2015	Long Lead Items (8-12 months)
Coleman Rail	1 April 2015	To commence the procurement of the Depot and Maintenance Facility
TATA Steel Engagement (Rail Supply)	1 April 2015	Long Lead Item (8 months)



Key Subcontractor and Supplier	Contract Execution Date	Reason for Criticality
Voest Alpine (Switches)	1 April 2015	Long Lead Item (8-12 Months)
Rubber Boot Supplier Engagement - Design Support	9 March 2015	Long Lead Item (8-12 Months)
Precast Slab for LRV Track	9 March 2015	Design support during development

In the first 100 Days the project will only engage the subcontractors and suppliers which are required to inform design and/or have long lead items that influence the start date on the program. The project will continue to review the suppliers through the phase to ensure that value for money is being achieved.

5.8 Cost Planning

Through the exercise carried out post Contract Close the Direct Costs will be rationalized and committed against the preferred WBS and cost code system ahead of Financial Close.

The team responsible for the agreed costs will then be given ownership and will be required to produce a forecast cost to complete for their works based on the an agreed program.

At the commencement of the mobilization period the system and reporting timeframes will need to be established and communicated to the team responsible. Teams will establish weekly control systems based on the program and forecast costs.

This protocol and reporting system will need to be established within the first 100 days after Contract Close so that the forecast cost to complete can be established immediately.

5.9 Transfer of Estimate into Financial Control System

Similarly to the cost planning system, the financial control system needs to be identified and set up immediately post Financial Close. Upon establishment of the Financial System the Budget Estimate can be transferred and monitoring will commence.

6 DESIGN MANAGEMENT

6.1 General

At Financial Close the protocols and timeline objectives for design management will be communicated to ensure that the wider team is aware of their inputs and expectations. These expectations are underlined by 2 key dates in design for Year 1 which is Service Relocations

design complete by Jul 2014 for Early Works (six) intersection relocations and new bridge over the Eastern Distributor for August 2014. To achieve these 2 key dates and a DS2 completion by November 2014 the following will need to be achieved in the 100 Mobilisation Period:

- Design functions and how these requirements be procured;
- Roles and responsibilities within organisational structures;
- Design break down structure – confirmation as to what will be provided;
- Design teams – Design organisation chart locked in;
- Timeframes – confirmation as to the required deliverable and the program requirements for all inputs;
- Reporting – updates to program and regular reporting against milestones;
- Reviews – who is involved from a construction, independent reviewer, stakeholder perspective;
- Approvals – who is required to approve designs from both an internal and external perspective;
- Communications - establish lines of communication and expected timeframes; and
- Roll out of Systems.

A design management plan will be completed by the 22 March 2015. The task of setting up and delivering this plan will need to be allocated to the Design Manager who will allocate responsibility to the appropriate member/s of his/her team.

The design team will be mobilised progressively from Contract Close to be fully mobilized and working in parallel at Financial Close.



The immediate focus within the first 100 days includes getting to DS1 by end of July 15 on the following design packages:

- early works;
- utility relocation and protection works;
- main construction works on Critical Elements;
- rail systems; and
- urban design and architecture.

The utility design will involve designing Combined Utilities Design Packages for each route, including detailed design for Power, Water and Sewer, Gas and Telecommunication utilities relocations and submitted for DS1 Approval by July 2015.

Main construction design works will be split into routes to match the reference design, structures, and major facilities. The design will be developed in three stages. There will be separate packages for road design, track design, civil and structural design and urban design work for each route, as well as separate design packages for tunnel, bridge

and maintenance facilities at the Randwick Stabling and Maintenance Facility and Rozelle Depot.

The signalling, earthing, bonding and traction power design will be carried out in house by Alstom. All designs will be collated in the same office, enabling ease in coordination and ensuring integration with main construction design.

Both main construction design and Alstom in house design deliverables will be delivered to inform DS1 between March and July 2015.

6.2 Key Investigation and Survey

The key investigations which need to be commenced in the first 100 days of Financial Close are included in the table below. The criticality of the starting the investigation is directly related to the DS2 Approval for the Design Packages.

Table 5: Key investigation and survey commencement dates

Key Investigation and Survey	Commencement Date
Noise & Vibration Monitoring	Mon 16-Feb
Feature Survey of Light Rail Corridor	Mon 16-Feb
Site Contamination Assessment	Mon 02-Mar
Traffic & Pedestrian Modeling	Mon 23-Feb
System Requirements Specification (SRS)	Mon 23-Feb
Business Requirements Specification (BRS)	Mon 23-Feb
Wheel/Rail Interface Report (Alstom to Supply)	Mon 23-Feb
Existing Stray Current Monitoring (Alstom)	Wed 04-Mar
Project Hazard Log	Mon 16-Mar
Flood studies and flood modeling	Mon 02-Mar
Liaise with Moore Park Trust regarding levee/flooding	Mon 02-Mar



7 STAKEHOLDER AND COMMUNITY ENGAGEMENT 100 DAY MOBILISATION PLAN

TfNSW has acknowledged that early and frequent communication and engagement with stakeholders and the community is critical to the successful delivery of the Sydney Light Rail. Preparing the required stakeholder engagement plan, providing input to other associated plans where they interface with stakeholders and the community and in some instances potentially initiating engagement will be key tasks within the initial 100 day mobilisation period.

Given the lead times required to build relationships, seek necessary approvals and provide adequate notification, the comprehensive planning undertaken across this period will be essential to enabling Connecting Sydney to hit the ground running when works formally commence.

The following table in conjunction with the Mobilisation Plan in Attachment 1 provides an overview of key steps in the communications and stakeholder engagement stream that are designed to generate awareness and acceptance within the community, enabling Connecting Sydney to secure a social license to operate in advance of major works beginning.

Table 6: Key steps to early engagement the community and stakeholders.

Timing	Project Focus And Key Activities
Days 1-20	<p>Assemble a core team of engagement and communications experts</p> <p>Appoint and induct:</p> <ul style="list-style-type: none"> • Senior Stakeholder and Communications Manager <ul style="list-style-type: none"> – CBD Place Manager – Information Centre Attendant – Commence discussions with RMS, business owners and City of Sydney regarding early works in January 2015.
Days 20 – 50	<p>Project familiarisation and planning</p> <ul style="list-style-type: none"> • Implement the relevant style guides and final development of templates for collateral consistent with style guides • Workshop with TfNSW and early works contractor to ensure Stakeholder and Community Engagement Strategy builds on the effective engagement and communication mechanisms utilized to date • Prepare Stakeholder and Community Engagement Strategy including protocols for: <ul style="list-style-type: none"> – TfNSW approval of communications and engagement activities; – notification of both planned and unscheduled works; – escalation of issues to project team and TfNSW; – crisis management communications; and – media enquiries. • Prepare and implement, subject to approval by TfNSW, an Interim Stakeholder and Community Engagement Action Plan to guide short-term, limited investigation works that Connecting Sydney aims to commence in January 2015 • In partnership with TfNSW, commence dialogue with authorities, agencies, utilities and key project partners including but not limited to the City of Sydney, Transurban, Stadium and Cricket Ground Trust, Centennial Parklands, Randwick Council, Australian Turf Club, UNSW and Prince of Wales Hospital,



Timing	Project Focus And Key Activities
	<p>to ensure their requirements for notification and mitigation are factored into the Engagement Strategy and works programming</p> <ul style="list-style-type: none"> • Engagement of team to provide input with a “stakeholder perspective” into the finalisation of works methodology • Prepare key events calendar up to December 2015 to inform works programming and, in partnership with TfNSW, seek input with the following groups to inform a Major Events Plan as described in Schedule 6.1.4 (d): <ul style="list-style-type: none"> – Transport Management Centre, Department of Premier and Cabinet’s Events Operation and Events Communications Groups, and Moore Park Event Operations Group – Project partners including local councils, Centennial Park and Moore Park Trust, Sydney Cricket and Sports Ground Trust, Australian Turf Club, University of NSW and Prince of Wales Hospital. • As per Schedule 6.1.4 (e) provide stakeholder and communications input to preparation of an overall Incident Response Plan and location specific Incident Response Plans, and liaise with sensitive receptors such as Prince of Wales Hospital where appropriate; • Identify the major development projects planned along the route over the course of the project, to inform works programming and mitigation strategies to address potential cumulative impacts; and • Establish relevant databases such as Consultation Manager and where appropriate migrate stakeholder information from TfNSW and Early Works Managing Contractor.
Days 30 – 80	Relationship building
Days 30-80:	<p><i>Internal relationship building</i></p> <ul style="list-style-type: none"> • Connecting Sydney will collaborate with senior representatives of TfNSW to develop an SLR Partnership Charter that: <ul style="list-style-type: none"> – reflects the values of both organisations; – establishes guidelines for a respectful and constructive working relationship; and – draws on existing partnering frameworks such as: <ul style="list-style-type: none"> - The UK Institute for Collaborative Working; - Network Rail Infrastructure Collaborative Working Policy; and - British Standard BS 11000-1:2010, Collaborative Business Relationships. • Senior members of Connecting Sydney and TfNSW jointly participate in two half-day culture and leadership alignment sessions prior to devising the charter; and • We will hold a series of culture workshops for Connecting Sydney staff and contractors to ensure our core values and commitment to partnership are upheld consistently across all areas of the project.
Days 30 – 80	<p><i>External relationship building</i></p> <ul style="list-style-type: none"> • Commence a program of introductory meetings in partnership with TfNSW, with: <ul style="list-style-type: none"> – Transport Management Centre, Department of Premier and Cabinet’s Events Operation Group and Events Communications Group, and the



Timing	Project Focus And Key Activities
	<p>Moore Park Event Operations Group</p> <ul style="list-style-type: none"> - City of Sydney and Randwick Council - Project partners including local councils, Centennial Park and Moore Park Trust, Sydney Cricket and Sports Ground Trust, Australian Turf Club, University of NSW and Prince of Wales Hospital - Transurban - Service Authorities such as Ausgrid, Jemena, Telstra & Sydney Water - Emergency services - Peak bodies representing retail, business groups and the taxi, coach, hotel, tourism and courier sectors - Groups such as RSL and ANZAC Day Committee. - Sensitive receptors, major property owners/managers and developers of major projects along route - TfNSW community and business forums
Days 60 -100:	Project initiation, site establishment and commencement of works
	<ul style="list-style-type: none"> • Fully implement Stakeholder and Community Engagement Strategy; • Undertake all required communications, notifications, signage etc. and support timely commencement of initial works; • Run comprehensive induction sessions for new staff and contractors, to ensure all personnel working on the project are aware of, and act in accordance with, TfNSW's requirements and project values; and • Undertake emergency services orientation to work sites.

8 MANAGEMENT PLANS AND SYSTEMS

8.1 Preparation of Project Plans

As detailed in the 100 Mobilisation Program (Attachment 1), there are numerous management plans that will need to be established and approved within a certain

timeframe ahead of commencing activities on and off site. The management plans are outlined in table 7 below.

Table 7: Preparation of Management Plans

No	Management Plan	Start Date (2015)	Finish Date (2015)
1	Strategic Business Plan	12-Jan	22-Mar
2	Quality Plan	12-Jan	22-Mar
3	Construction Environmental Management Plan	12-Jan	06-Apr
4	Safety & System Assurance Plan	12-Jan	22-Mar
5	Accreditation Management Plan	12-Jan	22-Mar
6	Risk Management Plan	12-Jan	22-Mar
7	Stakeholder Management Plan	12-Jan	06-Apr
8	Safety Management Plan	12-Jan	22-Mar
9	Configuration Management	12-Jan	06-Jun
10	Delivery Phase Sustainability Management	12-Jan	06-Apr



	Plan		
11	Training Management Plan	12-Jan	06-Apr
12	ICT & Software Management Plan	12-Jan	06-Jun
13	Interface Management Plan	12-Jan	22-Mar
14	Workplace Relations Management Plan	12-Jan	06-Jun
15	Human Resource Plan	12-Jan	06-Jun
16	Business Continuity Management Plan	12-Jan	22-Mar
17	Operations Phase Environmental & Sustainability Plan	12-Jan	06-Apr
18	Skills & Employment Delivery Plan	12-Jan	06-Jun
19	Delivery Management Plan	12-Jan	22-Mar
20	Construction Management Plan	12-Jan	06-Jun
21	Utility Service Treatment Plan	12-Jan	22-Mar
22	Manufacturing & Procurement Plan	12-Jan	06-Jun
23	Design Management Plan	12-Jan	22-Mar
24	Traffic & Transport Management Plan	12-Jan	22-Mar
25	Testing & Commissioning Plan	12-Jan	21-Aug
26	Electromagnetic Compatibility Plan	12-Jan	15-Jan
27	Stray Current Plan	12-Jan	06-Jun
28	Property Management Plan	12-Jan	22-Mar
29	Transport Integration Plan	12-Jan	15-Jul
30	Transition Out Management Plan	12-Jan	06-Jun
31	Operations Management Plan	12-Jan	06-Jun

The authors of each will be in line with the topic, i.e. traffic management plan will be developed by the Traffic Manager, the Design Management Plan will be developed by the Design Manager.

At Financial Close the authors of the plans will be well advanced in developing and finalizing the management plans but having adequate time to amend and/or alter the management plans prior to works starting on site.

The document control system will also need to be established to control the development and distribution of the documents, reporting to the wider team.

8.1 (a) Set up document / filing structure for the project

At Contract Close the project with its JV member will establish the filing structure for the project. This will be complete 30 days post Financial Close.

8.1 (b) Develop all standard templates to be used on the project

At Contract Close the project with its JV partners will the standard branding and templates to be used for internal and external communications. This will be complete 30 days post Financial Close.

8.2 Traffic Management Planning

Similar to previous sections, protocols need to be established to manage the traffic management process. The process should highlight the following as a minimum:

- confirm traffic management / resourcing strategy;
- traffic management requirements;
- procurement options and process – when to hire or purchase;
- set up templates;
- design inputs and review – internal;
- who has ownership and responsibility in the works areas;
- approvals – internal and external, including TfNSW, RMS, local councils and Transurban; and
- Communications - establish lines of communication (internal and external) and expected timeframes.

In the early part of the period after Contract Close the protocols around traffic management design and implementation will be established to ensure that the entire team is aware of their inputs and expectations. The task of setting up and delivering this protocol will be allocated to the Traffic Manager and will be responsible for



educating the new team members mobilizing during the 100 Mobilisation Program.

9 RISK AND OPPORTUNITIES

The risk and opportunity register will be a live document and will be managed by the respective Construction Manager. The protocol for the management of this process needs to be established to provide clear direction as to how risks and opportunities are identified, measured and included in the register.

The register will be a live document that is reviewed internally by the relevant team members on a weekly basis and then reported to the Project Management Team as part of the end of month process. This process will commence during the 100 Day Mobilisation Period.

The costs associated with either the risk or opportunity will be captured on the register and will stay alive until such time as the event is eliminated or passes. The allowance will then be removed as either a direct costs or returned to a contingency code.

Post Financial Close the protocols around risk and opportunity management will be established to ensure that the entire team is aware of their inputs and expectations. The task of setting up and delivering this protocol will be allocated to the Commercial Team.

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ATTACHMENT 1 - PROGRAM FOR FIRST 100 DAYS

Task Name	Start Date	End Date	Task Details
Traffic & Transport Management Plan	Thu 15-Jan	Wed 25-Mar	
Testing & Commissioning Plan	Thu 15-Jan	Mon 24-Aug	
Electromagnetic Compatibility Plan	Thu 15-Jan	Mon 18-Jan	
Stray Current Plan	Thu 15-Jan	Tue 09-Jun	
Property Management Plan	Thu 15-Jan	Wed 25-Mar	
Transport Integration Plan	Thu 15-Jan	Sat 18-Jul	
Transition Out Management Plan	Thu 15-Jan	Tue 09-Jun	
Operations Management Plan	Thu 15-Jan	Tue 09-Jun	
Transition In Management Plan	Thu 15-Jan	Tue 09-Jun	
Operational Readiness Plan	Thu 15-Jan	Tue 09-Jun	
Customer Management Plan	Thu 15-Jan	Wed 25-Mar	
Revenue Protection Plan	Thu 15-Jan	Tue 09-Jun	
Asset Management Plan	Thu 15-Jan	Tue 09-Jun	
Maintenance Plan	Thu 15-Jan	Tue 09-Jun	
Security Management Plan	Thu 15-Jan	Tue 09-Jun	
Incident Management Plan	Thu 15-Jan	Tue 09-Jun	
Safety & System Assurance			
Develop (Reqmt & Allocation Traceability Matrix - RAATM)	Thu 29-Jan	Mon 27-Jul	
Authorised Engineering Organisation Application			
AEO Application to ASA - (under Jacobs/Alstom until approval)	Fri 26-Sep	Tue 14-Apr	
AEO Application Approval	Tue 14-Apr	Tue 14-Apr	
Key Investigations & Survey			
Noise & Vibration Monitoring	Thu 19-Feb	Mon 17-Aug	
Feature Survey of Corridor	Thu 19-Feb	Mon 01-Jun	
Site Contamination Assessment	Thu 05-Mar	Fri 18-Sep	
Traffic & Pedestrian Modelling	Mon 23-Feb	Thu 18-Jun	
System Requirements Specification (SRS)	Mon 23-Feb	Fri 24-Apr	
Business Requirements Specification (BRS)	Mon 23-Feb	Fri 10-Apr	
Wheel/Rail Interface Report (Alstom to Supply)	Mon 23-Feb	Fri 10-Apr	
Existing Stray Current Monitoring (Alstom)	Wed 04-Mar	Fri 05-Jun	
Project Hazard Log	Mon 16-Mar	Fri 12-Jun	
Flood studies and flood modelling	Mon 02-Mar	Mon 22-Jun	
Liaise with Moore Park Trust regarding levee/flooding	Mon 02-Mar	Mon 15-Jun	
Procurement			
Alstom LRV Supply Timeline Confirmation	Thu 12-Feb	Fri 15-May	
Alstom Rail System Equip (Long Lead Items) Confirmation	Mon 20-Apr	Fri 17-Jul	
TATA Steel Engagement (Rail Supply)	Wed 01-Apr	Fri 01-May	
Voest Alpine (Switches) Engagement	Wed 01-Apr	Mon 27-Apr	
Rubber Boot Supplier Engagement - Design Support	Thu 12-Mar	Fri 03-Apr	
Precast Slab Section LRV Supplier Engagement - Design Support	Thu 12-Mar	Fri 10-Apr	
Mobilisation of Key Subcontractors - Including Early Works			
Cardno Services Subcontract Engagement - Inc Early Works	Fri 19-Dec	Tue 23-Dec	
Early Works Approval RMS, TfNSW & Stakeholders Traffic Closure Route A	Mon 15-Dec	Thu 15-Jan	
Cardno Potholing & Investigation Early Works Route A - 6 no. Intersections	Thu 15-Jan	Fri 13-Feb	
Coleman Rail Engagement	Mon 02-Mar	Fri 26-Jun	
Piling Contractor (Moore Park & ED Bridge) Engagement	Mon 01-Jun	Fri 26-Jun	
Traffic Management Services Engagement	Mon 20-Apr	Fri 05-Jun	
Non Destructive Digging Services Engagement	Mon 20-Apr	Fri 05-Jun	
Public Utilities/Services			
Establish Utility Reference Group (URG) & Agree A Charter	Mon 30-Mar	Tue 14-Apr	
Establish a utility technical group with Service Authorities	Wed 15-Feb	Thu 01-Mar	
Third Party Agreement finalisation	Thu 12-Feb	Mon 13-Apr	
Establish service utility secondment model and execute	Mon 16-Mar	Thu 30-Apr	
PPP Early Works Design - 6 no. CBD Intersections	Fri 30-Jan	Fri 01-May	
PPP Early Works Team Mobilisation	Thu 15-Jan	Mon 02-Feb	
Utility Field Investigation & Survey of Utilities	Tue 23-Dec	Wed 18-Mar	
Spatial coordination for services at early works intersections	Thu 05-Mar	Thu 09-Apr	
O&M Mobilisation			
Transition Manager and Support in place	Mon 03-Nov	Mon 17-Nov	
Mobilise Transition Staff and Consultants	Fri 14-Nov	Fri 09-Jan	
Establish Configuration Change Board	Mon 01-Dec	Mon 15-Dec	
Develop Communications Plan and Protocols	Mon 15-Dec	Mon 12-Jan	
Full Audit of Existing Infrastructure	Mon 05-Jan	Sun 05-Apr	

ATTACHMENT 3 – Sustainability Report

This Attachment 3 comprises the following documents (which collectively are the Sustainability Report):

1. Workforce needs assessment;
2. ATTACHMENT A – ISCA IS RATING TARGET INITIATIVES; and
3. ATTACHMENT B – TFNSW SDG TARGET INITIATIVES.

In relation to items 2 and 3 above, refer to separate electronic disc titled “*Sydney Light Rail – Schedules Electronic Documents*”, dated the date of this deed, electronic folder named “*Schedules Part F – Schedule F1 (Project Plan Commitments)*”, electronic files named “*ATTACHMENT A – ISCA IS RATING TARGET INITIATIVES*” and “*ATTACHMENT B – TFNSW SDG TARGET INITIATIVES*” respectively.



1 DEFINITIONS

Acronym	Definition
ANZ SME	Australian and New Zealand Small and Medium Enterprise
CAPEX	Capital Expenditure
CCAA	Cement Concrete and Aggregate Association of Australia
CCRA	Climate Change Risk Assessment
CCRAAS	Climate Change Risk Assessment and Adaptation Study
CEMP	Construction Environmental Management Plan
CSELR	CBD and Sydney East Light Rail
CRESS	Construction and Real Estate Sector Supplement
DPI	NSW Department of Primary Industries
EPA	NSW Environment Protection Authority
ESC	Environmental Sustainability Charter
FSC	Forest Stewardship Council
GBCA	Green Building Council of Australia
GRI	Global Reporting Initiative
ICN	Industry Capability Network
ICNNSW	Industry Capability Network New South Wales
IS Rating Tool	Infrastructure Sustainability Rating Tool
ISCA	Infrastructure Sustainability Council of Australia: formerly the Australian Green Infrastructure Council (AGIC)
ISO	International Standards Organisation
LCA	Life Cycle Assessment
LCC	Life Cycle Cost
LRV	Light Rail Vehicle
NCIE	National Centre for Indigenous Excellence
NOW	NSW Office of Water
OEH	NSW Office of Environment and Heritage
PV	Photo Voltaic
RECS	Renewable Energy Certificates
REMM	Revised Environmental Mitigation Measure(s)
SDG	Transport for NSW – NSW Sustainable Design Guidelines for Rail Version 3.0
SLR	Sydney Light Rail
SME	Small and Medium Enterprise



SROI	Social Return on Investment
SSI	State Significant Infrastructure
TAFE	Technical and Further Education
TNA	Training Needs Analysis
VOC	Volatile Organic Compound

2 INTRODUCTION

This Sustainability Management Plan (SMP) outlines the sustainability management arrangements by which Connecting Sydney (CSY) will, in partnership with Transport for NSW (TfNSW), successfully deliver the Sydney Light Rail (SLR) Project.

Sustainability management will be carried out in accordance with TfNSW's objectives, contractual requirements and technical criteria, whilst at the same time meeting the project's safety, quality, environmental and risk management requirements as defined in CSY's suite of project plans.

CSY have adopted a whole of life approach to sustainability through design, construction and operation throughout the project life. Sustainability is embedded throughout each stage of the project to provide certainty in meeting the required outcomes and targets. The approach promotes whole of life decision making in design; which may result in significant reductions in environmental impacts and increases in social benefit during the construction and operational phases. This is illustrated through our whole of life examples for the depot design, stop materials and wire free solution developed at tender design stage. Engagement with TfNSW during detailed design within this approach, will result in sustainability value beyond the period of this contract to create a lasting legacy for Sydney Light Rail.

2.1 CSELR

The Project plays a central role in the future of transport in Sydney. It is a high capacity, reliable and sustainable mode of public transport that will ease the pressure on Sydney's roads by reducing the city's reliance on buses.

The project includes all works associated with the design, construction, customer service delivery, operations, and maintenance of the

Sydney Light Rail, including the integration and operation of the Inner West Light Rail (IWLR).

2.2 Purpose

This plan represents a draft approach to sustainability for the SLR Public Private Partnership (PPP). On contract award, a separate management plan will be developed for delivery (DSMP) and operation (OSMP) phases of the project based on the information in this SMP.

The SMP describes the functional approach to sustainability management and associated targets for the SLR PPP. It identifies how CSY will comply with the sustainability requirements of the project.

The SMP also details the roles of personnel and their authority levels, strategies, methodologies, processes and procedures, which will help to deliver these targets.

2.3 Scope and Objectives

This draft SMP addresses the scope and performance requirements outlined in *Appendix 7 - Sustainability of the Project Deed*. The full SMP's for Delivery and Operation will address any remaining requirements *Appendix 43 - Project Plan Requirements*

The objectives of the SMP's are to ensure:

- delivery and operational phase sustainability objectives and targets have been clearly established;
- initiatives to achieve these targets have been outlined;
- A management and reporting structure to implement and measure the effectiveness of these initiatives is outlined.

2.4 Connecting Sydney Integrated Management System

In accordance with the management requirements set out in the *SLR PPP - Project Deed, Schedule E1 Scope and Performance Requirements*, CSY must implement and maintain an effective Integrated Management



System, which addresses all of its obligations under the Deed. It must seamlessly integrate all systems and processes, including those related to rail safety and rail accreditation quality, environmental, sustainability, health and safety. The system must comply with relevant laws and accommodate, coordinate and give effect to all project plans.

Connecting Sydney will implement an overarching management system on the SLR PPP. It will combine the delivery and operations management systems currently used by the Acciona and Transdev respectively to produce a seamless integrated system throughout the project life. The SMP's will sit within the integrated management system alongside the following documents and procedures at minimum:

- SAFETY Management;
- Workplace Emergency Response;
- Statutory Compliance;
- Environmental Management;
- Stakeholder and External Relations;
- Staff Resources Management;
- Risk Management;
- Program Management;
- Project Information Management;
- Management Review and Improvement;
- Design Management;
- Construction Management;
- Testing and Commissioning Management;
- Handover of completed works;
- Operations Management.

Plans will be integrated with each other where relevant and where there is overlap.

2.5 Update and Ongoing Development

This plan will be updated regularly in accordance with the requirements of *SLR PPP Project Deed, Schedule E.1 Scope and Performance Requirements, Appendix 43 – Project Plan Requirements, Section 3.1.11*, or where reasonably requested or required by TfNSW's Representative or any Authority.

The Sustainability Manager will undertake the ongoing development, amendment and updating of the SMP's to ensure they remain

consistent with project priorities, risk management procedures, client requirements and project objectives. It will take into account:

- the status and progress of CSY's Activities;
- changes in the design, delivery and operations processes and conditions;
- lessons learnt during delivery and operations;
- changes in other related project plans;
- requirements and matters not covered by the existing project plans;
- changes to the project plans as directed by TfNSW's Representative under the deed.

2.6 Approval

OpCo will approve the SMP's before they are submitted to TfNSW.

2.7 Submission and Review

The full SMP's will be submitted to TfNSW, for certification by the OTS Independent Certifier, no later than 60 Business Days from the date of the deed. They will be reviewed and updated annually until completion of the contract term.

3 SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT

Connecting Sydney considers effective sustainability and environmental management essential to sound business operations; and for providing an efficient and effective transportation system for TfNSW and its customers. Connecting Sydney has developed a draft environmental policy, which will be met through the following activities:

- implementing, maintaining and continuously improving the SMP's to undertake business activities in an environmentally sound and responsible manner;
- meeting the customers needs whilst minimising the impact of CSY operations on the surrounding communities and environment;
- complying with all Deed requirements, relevant environmental legislative requirements and national and international environmental standards and guidelines;
- assessing and monitoring the environmental impacts or potential impacts of operations through on-going risk



- assessment and compliance with management procedures;
- conducting regular audits and monitoring of the SMP, the Environmental Management System, and other relevant plans and processes by qualified staff;
- management and reporting of corrective actions and non-conformance;
- advising, engaging and communicating with staff, customers, contractors and other stakeholders to align expected environmental practices and behaviour;
- considering environmental and sustainability criteria when procuring goods and services, taking into account the environmental, social and economic costs of products and services over the whole life cycle;
- setting long term objectives and annual targets against which continuous improvement can be reported and monitored;
- conducting a quarterly review of environmental and sustainability practices and performance.



3.1 Connecting Sydney Sustainability Policy

Figure 1: Connecting Sydney Environment and Sustainability Policy

Connecting Sydney – Environment and Sustainability Policy

Transport for NSW aims to build and operate a world class sustainable transport system that meets customer expectations and optimises the economic development of NSW. Transport provides access to jobs, housing, goods and services; and also contributes to improvements in the quality of life for its customers and communities.

Sustainability is a central tenant to achieving this vision and is part of everything that Transport for NSW do: from planning, designing, building, maintaining and operating transport infrastructure. We acknowledge this vision and are committed to achieving the sustainability outcomes for the Sydney Light Rail project.

Connecting Sydney's policy is to integrate governance, environmental, social and economic sustainability considerations at every level of the project and across its life cycle.

Connecting Sydney is committed to:

- Demonstrating sustainability leadership in light rail infrastructure
- Minimising operational, construction and embodied carbon emissions over the life of the asset
- Promoting productivity and liveability benefits of urban renewal and transport investment
- Improving public transport patronage by leveraging connectivity and interchange capabilities
- Building in resilience to climate change impacts
- Providing community benefits through transport amenity and reliability, healthy living, community safety, community engagement and involvement, accessible design and social inclusion
- Minimising potable water consumption
- Minimising materials use and waste through the project life-cycle
- Protecting and promoting local heritage through appropriate design, planning and management controls
- Minimising pollution, environmental harm and social risk over the life of the asset
- Achieving Excellent ratings under the ISCA IS Rating tool and achievement of Gold standard against the TfNSW Sustainable Design Guidelines
- Refining Connecting Sydney systems and processes to ensure that sustainability is integrated into day-to-day operations
- Periodically reviewing and evaluating Connecting Sydney's sustainability policy and management systems to ensure continual improvement. Drawing on international best practice through global industry and professional networks.
- Implementing a sustainability education and capacity building program for employees, contractors and delivery partners.
- Working proactively with key Government Regulatory Agencies, TfNSW, Business Community Stakeholders to identify sustainability issues and opportunities, including ways to future-proof the project in the face of a changing climate and growing population



3.2 The Connecting Sydney Environment and Sustainability Team

Primary responsibility for environment and sustainability performance will sit with the Sustainability Manager during Delivery and Operations. The Environment and Sustainability Manager will report directly to the Quality/Sustainability Manager. Figure 2 shows the proposed governance and reporting structure.

Figure 2: Connecting Sydney Environment and Sustainability Proposed Organisational Chart

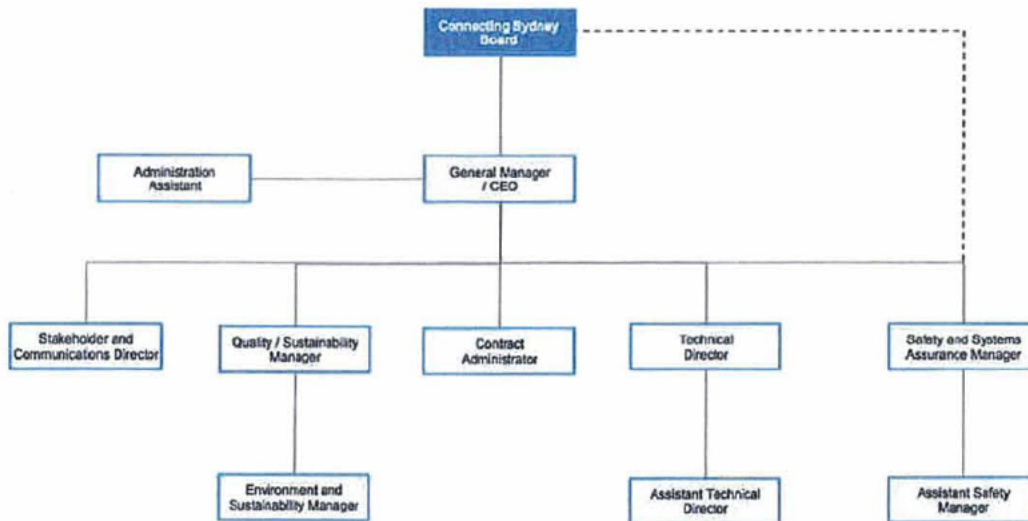


Table 1 outlines the roles and responsibilities of the Environment and Sustainability Manager relating to environment and sustainability performance during delivery and operation.

Table 1: Connecting Sydney Environment and Sustainability Manager Roles and Responsibilities

Environment and Sustainability Manager - Delivery	
Role	Accountable for managing all aspects of environment and sustainability management across the SLR delivery works
Responsibility	<ul style="list-style-type: none"> work with the Management Team and all staff with regard to environmental outcomes of the Project; principally accountable for meeting the sustainability objectives of the project and reporting back to the Board; provide specialist environment, planning and sustainability advice to the Project Director and other functional managers to facilitate design and construction; lead a consultative and proactive culture that ensures environmental compliance and 'No Harm' as a driver of work behaviours; develop and manage a team of planning, environmental and sustainability personnel and specialist consultants that are able and capable of leading contemporary innovative approaches and practices; prepare the Construction Environment Management Plan - CEMP (including associated documentation) and implement the Project EMS; prepare the Delivery Phase Sustainability Management Plan - DPSMP (including associated documentation) and ensure that sustainability obligations are met; review strategy and policy annually; liaise and consult with TfNSW, DP&I, regulatory agencies and other relevant stakeholders;



- ensure that all environmental licences, statutory obligations and requirements are met;
- facilitate environmental and sustainability training/induction;
- preparation and Implementation of the Pollution Incident Response Management Plan (PIRMP) for any environmental incidents;
- manage environmental and sustainability sub-consultants;
- prepare documentation to demonstrate compliance and report on compliance;
- conduct site inspections and CEMP environmental audits;
- ensure corrective actions are implemented;
- ensure data collection and reporting requirements are met;
- secure ongoing environmental approvals;
- stop work immediately if an unacceptable impact is likely to occur or to require other reasonable steps to be taken to avoid or minimise any adverse impacts.

ISCA/TfNSW responsibilities

- implementation and management of the Delivery Sustainability Management Plan;
- implementation and management of Management System Certifications;
- integration of sustainability and environmental risks into the risk management framework;
- undertake internal and external sustainability knowledge sharing presentations and other initiatives;
- administration of TfNSW SDG and ISCA reporting requirements;
- integration of environmental and social issues into procurement. Engagement with suppliers around sustainability;
- undertake internal sustainability inspections and audits as required under ISCA;
- monitor and report on energy, water, greenhouse gas and waste;
- undertake climate change risk assessment workshops.

Environment and Sustainability Manager - Operations

Role	Accountable for managing all aspects of environment and sustainability management across the SLR operation
Responsibility	<ul style="list-style-type: none"> • principally accountable for meeting the environmental and sustainability objectives of the project and reporting to the CEO; • develop and implement the Operations Phase Environmental and Sustainability Management Plan (including the Carbon and Energy Management Sub-Plan and Noise and Vibration Sub-Plan) so that it is consistent with other plans; • review strategy and policy annually; • respond to legislative changes; • establish program controls and reporting systems across project for performance monitoring against targets; • demonstrate continuous improvement to management systems as a result of senior management reviews;



Sustainability Policy Objective	INITIATIVES AND IMPLEMENTATION PLAN (BY PHASE)		
	Tender (Completed)	Design and Construct	Operation
timber products from re-used timber, post-consumer recycled timber or from Forest Stewardship Council (FSC) certified timber where practicable		<p>project completion;</p> <ul style="list-style-type: none"> • manufacture LRVs without using environmentally degrading substances. 	
Objective 7: Emissions, Pollution and Waste			
<p>7.1 Target zero major pollution incidents</p> <p>7.2 Ensure at least 95% of inert and non-hazardous construction waste, excluding spoil, an at least 80% of office and kitchen waste (by weight) is recycled or alternatively beneficially reused during delivery</p> <p>7.3 Ensure that 80% of office and kitchen waste (by weight) is recycled or alternatively beneficially reused during Operations phase</p> <p>7.4 Achieve an 1% reduction in the temporary project footprint against the bid design (9.31 Ha); to be reconsidered in detailed design</p> <p>7.5 Target zero hazardous waste production</p>	<ul style="list-style-type: none"> • establish awareness of target among delivery team members; • include risk mitigation measures in risk assessment; • investigate innovative recycling and waste management initiatives; • identify potential opportunities to reduce land take; to be assessed during detailed design. 	<ul style="list-style-type: none"> • develop waste strategy as part of Construction Management Plan; • include requirements in Construction Environmental Management Plan; • embed initiatives in detailed design and Delivery Phase contracts; • ensure all clean spoil is beneficially re-used either on site or off-site; a specific project position to be responsible for this; • monitor and report on-site and off-site reuse rates; • strongly encourage and enforce on-site waste collection, separation and recycling by all parties; • monitor and report construction and demolition volumes and rates; • Include risk mitigation measures in Construction Environment Management Plan and Construction Management plan; • embed initiatives and procedures in detailed design and Delivery Phase contracts; 	<ul style="list-style-type: none"> • provide active encouragement for maximum recycling of all waste in accordance with a Waste and Recycling Plan and ensure at least 80% of recyclable waste is actually recycled; • implement and strongly encourage and enforce on-site waste collection, separation and recycling by all parties; • negotiate and implement packaging take-back arrangements, where practicable, with suppliers; • monitor and report total waste and waste recycling volumes; • implement all project processes and procedures relevant to the prevention of pollution incidents; • conduct quarterly auditing and reporting as part of the EMS.



Sustainability Policy Objective	INITIATIVES AND IMPLEMENTATION PLAN (BY PHASE)		
	Tender (Completed)	Design and Construct	Operation
		<ul style="list-style-type: none"> • negotiate and implement packaging take-back arrangements, where practicable, with suppliers; • implement the CEMP to ensure pollution incidents are proactively prevented; • identify and implement initiatives to reduce project footprint; • conduct quarterly auditing and reporting as part of the EMS. 	
Objective 8: Ecology			
8.1 No net change in ecological value of site	<ul style="list-style-type: none"> • identify ecological value of the site. 	<ul style="list-style-type: none"> • develop Urban Design and Landscaping plan to maximise native landscaping, wetlands and native species retention; • conduct change of ecological value calculation (ISCA); • embed initiatives in detailed design and Delivery Phase contracts; • implement the CEMP to ensure pollution incidents are proactively prevented; • conduct quarterly auditing and reporting. 	<ul style="list-style-type: none"> • N/A
Objective 9: People and Place			
9.1 Actively engage local communities, potential customers and other stakeholders during the development and	<ul style="list-style-type: none"> • develop Stakeholder and Community Liaison plan to incorporate targeted ISCA IS Rating tool stakeholder engagement credits; 	<ul style="list-style-type: none"> • finalise and implement Stakeholder and Community Liaison plan; • finalise and implement Urban Design and Landscaping plan; 	<ul style="list-style-type: none"> • maintenance of secure cycling bays and associated infrastructure; • publicly report on environmental and sustainability performance on an



Sustainability Policy Objective	INITIATIVES AND IMPLEMENTATION PLAN (BY PHASE)		
	Tender (Completed)	Design and Construct	Operation
<p>implementation of the project</p> <p>9.2 Identify opportunities to enhance heritage values and show evidence of implementation</p> <p>9.3 Identify and implement Urban Design strategies that facilitate the inherent sustainability of Light Rail through the consideration of passenger access to/from active transport modes</p> <p>9.4 Provision for 318 secure cycle parking spaces</p> <p>9.5 Create 2.12 ha of new landscape/public open space</p>	<ul style="list-style-type: none"> develop Urban Design and Landscaping plan to incorporate targeted ISCA IS Rating tool heritage credits; identify potential opportunities facilitate the inherent sustainability of Light Rail through consideration of passenger access in the design and operations activities; incorporate cycle parking bays as part of urban design, landscaping and depot design. 	<ul style="list-style-type: none"> finalise and implement design and construction of secure cycling bays and associated infrastructure; monitor and report key performance indicators for the IS Rating; monitor and report key performance indicators for the SDG Rating. 	<p>annual basis;</p> <ul style="list-style-type: none"> implement actions and activities as outlined in the Public Art and Stakeholder and Community Liaison Plan; monitor and report key performance indicators for the IS Rating.
Objective 10: Skills and Employment Development			
<p>10.1 Greater Sydney residents to make up 20% (approx. 122 jobs) of the overall workforce (approx. 606 jobs)</p> <p>10.2 Apprentices/trainees to make up 10% of the trades workforce</p> <p>10.3 Graduates, scholars or cadets to make up 5% of the relevant workforce. 20% of these streaming into the graduate pool</p> <p>10.4 Women to make up 10% of the senior leadership and management roles</p>	<ul style="list-style-type: none"> consider appropriate workforce procurement guidelines and processes; engagement and buy-in from human resources departments for Acciona, Transdev and Alstom; consider appropriate workforce skills competency assessment, training needs analysis and training programs; include costs associated with training in bid. 	<ul style="list-style-type: none"> develop Construction Management Plan to incorporate targeted ISCA IS Rating tool procurement credits and Connecting Sydney Environment and Sustainability Policy; conduct appropriate advertising; finalise procurement protocols; apply Greater Sydney residency as an evaluation criterion in the engagement of Workforce; develop the project organisation chart to include the number of apprentices required Target workforce recruitment towards 	<ul style="list-style-type: none"> conduct appropriate advertising; finalise procurement protocols; apply Greater Sydney residency as an evaluation criterion in the engagement of Workforce; develop the project organisation chart to include the number of apprentices required; target workforce recruitment towards achieving the 20% diversity goal; target workforce recruitment towards achieving the 5% disadvantaged workers goal;



Sustainability Policy Objective	INITIATIVES AND IMPLEMENTATION PLAN (BY PHASE)		
	Tender (Completed)	Design and Construct	Operation
<p>10.5 Workforce diversity to reach 20% of the overall workforce where practicable</p> <p>10.6 Disadvantaged workers to make up 5% where practicable</p> <p>10.7 20% of the workforce to participate in nationally recognised accredited training were required</p> <p>10.8 Ensure sustainability and environment performance criteria and the Connecting Sydney Environment and Sustainability policy are passed on to all suppliers.</p>		<ul style="list-style-type: none"> achieving the 20% diversity goal; target workforce recruitment towards achieving the 5% disadvantaged workers goal; conduct skills assessment, training needs analysis and training to meet or exceed required target; monitor and report performance against set targets; increase engagement if targets are not being met. 	<ul style="list-style-type: none"> conduct skills assessment, training needs analysis and training to meet or exceed required target; monitor and report performance against set targets; increase engagement if targets are not being met.



5.2 Governance Initiatives

To ensure environmental and sustainability management practices during the Operations Phase are at best practice levels, CSY has committed to delivering a design and as-built rating of at least 65 using the ISCA Infrastructure Sustainability (IS) Rating tool. It has also committed to implementing an integrated management system certified to ISO 14001, ISO 9001 and AS/NZS 4801. Regular reporting will be undertaken in line with the GRI and AA1000 AccountAbility Standards. Policies and plans will be reviewed at OpCo level. Performance review will be undertaken quarterly.

5.3 Sustainability Rating Management

One of the key responsibilities of the D&C Contractor's Sustainability Manager is to ensure the project achieves the following sustainability ratings during the Delivery phase:

- an ISCA IS "design" rating score of at least 65;
- an ISCA IS "as built" rating score of at least 65;
- a Gold rating under the Transport for NSW's - NSW Sustainable Design Guidelines for Version 3.0.

The following sections outline the processes that will be employed to achieve these targets.

5.3 (a) ISCA Infrastructure Sustainability (IS) Rating Management

The IS certification process can be summarised by the following steps:

- **Registration**
 - register interest with ISCA;
 - sign rating agreement.
- **Assessment**
 - kick-off workshop to establish parameters and to clarify scope, timing, and reference design and footprint;
 - self-assess using the IS rating tool;

- ISCA provides technical support during the assessment phase.

- **Verification**

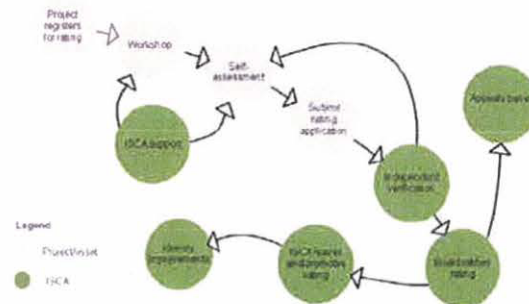
- submit assessment to ISCA for verification;
- ISCA coordinates independent verification by industry specialists;
- feedback provided to seek additional information and clarification;
- final submission submitted;
- Verifiers' recommendation provided to ISCA.

- **Certification**

- verifiers' recommendations reviewed by ISCA;
- ISCA certify rating according to score obtained;
- appeals process available if dissatisfied with rating or process.

Figure 3 provides a flowchart of the process.

Figure 3: ISCA Infrastructure Sustainability rating process



Connecting Sydney has developed a strategy to achieve a minimum of 65 points under the IS rating tool. Table 4 outlines the key steps required to achieve the IS design and as-built ratings.



Table 4: ISCA IS Rating Management Plan

Certification Phase	Actions Completed	Delivery Phase Actions
Registration	Nil	<ul style="list-style-type: none"> • register the project with ISCA for a design rating (including payment and contract finalisation); • include IS requirements in relevant contract documentation to ensure project team members will deliver what is required.
Assessment	<ul style="list-style-type: none"> • review of ISCA IS approach within the SLR Sustainability Strategy; • RFP Phase IS rating workshops across the Connecting Sydney team; • IS rating value engineering sessions; • embedding target credits into all teams; • IS rating Self Assessment. 	<ul style="list-style-type: none"> • IS Rating Tool briefing sessions; • embedding target credits into design documentation; • embedding target credits into management processes; • compiling relevant documentation during design stages; • auditing to ensure credits are being achieved (monthly).
Verification	Nil	<ul style="list-style-type: none"> • internal review of draft submission by an ISAP at approximately 90% design completion; • submit assessment to ISCA for verification at 100% design completion; • ISCA coordinates independent verification by industry specialists; • feedback provided to seek additional information and clarification; • final submission submitted; • verifiers' recommendation provided to ISCA.
Certification	Nil	<ul style="list-style-type: none"> • verifiers' recommendations reviewed by ISCA; • ISCA certify rating according to score obtained (minimum 65 points).

Figure 4 outlines the results of the Connecting Sydney-self assessment at concept design stage against the ISCA IS Rating tool v1.0 for As-built. Currently, the project would qualify to achieve an *Excellent* rating of 69.8.



Figure 4: ISCA IS Rating Tool Performance Summary



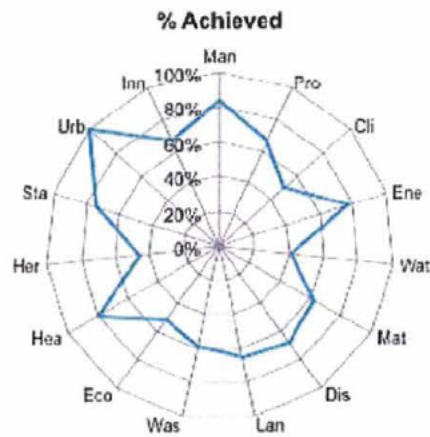
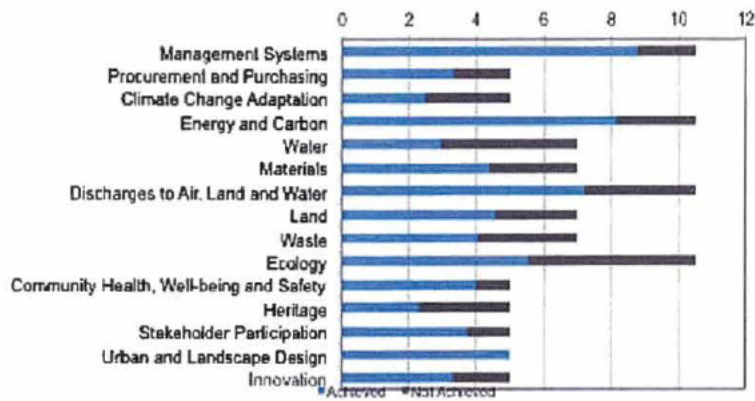
**Infrastructure Sustainability Rating Tool Scorecard
Credit Summary**

As Built
69.8
EXCELLENT

Project/asset: **CBD & East Sydney Light Rail**

Location:


Submission date:



More detail is provided in Table 5. This will be reviewed regularly during detailed design and construction to further improve on the rating where possible.



Table 5: ISCA IS Rating Tool Scorecard Credit Summary for CSY Concept Design "As-Built"

 Infrastructure Sustainability Rating Tool Scorecard Credit Summary		Project GBD & East Sydney Light Rail Location Submission date	Infrastructure Sustainability Rating Credit Summary	Score 69.8 Level EXCELLENT	
Category	Credit	Scoped Out or N/A?	Score Possible	Level Achieved	Points Achieved
Management Systems					
Man-1	Sustainability leadership and commitment	N	1.07	3/3	1.07
Man-2	Management system accreditation	N	0.43	1/1	0.43
Man-3	Risk and opportunity management	N	0.86	2/2	0.86
Man-4	Organisational structure, roles and responsibilities	N	1.07	2/3	0.71
Man-5	Inspection and auditing	N	0.86	2/2	0.86
Man-6	Reporting and review	N	0.86	2/3	0.57
Man-7	Knowledge sharing	N	2.14	3/3	2.14
Man-8	Decision-making	N	3.21	2/3	2.14
	Sub-total	0	10.50		8.79
Procurement and Purchasing					
Pro-1	Commitment to sustainable procurement	N	1.25	3/3	1.25
Pro-2	Identification of suppliers	N	1.25	3/3	1.25
Pro-3	Supplier evaluation and contract award	N	1.25	1/3	0.42
Pro-4	Managing supplier performance	N	1.25	1/3	0.42
	Sub-total	0	5.00		3.33
Climate Change Adaptation					
Cli-1	Climate change risk assessment	N	2.50	2/3	1.67
Cli-2	Adaptation options	N	2.50	1/3	0.83
	Sub-total	0	5.00		2.50
Energy and Carbon					
Ene-1	Energy and carbon monitoring and reduction	N	4.67	2/3	3.11
Ene-2	Energy and carbon reduction opportunities	N	4.67	3/3	4.67
Ene-3	Renewable energy	N	1.17	1/3	0.39
	Sub-total	0	10.50		8.17
Water					
Wat-1	Water use monitoring and reduction	N	2.92	1/3	0.97
Wat-2	Water saving opportunities	N	1.75	2/3	1.17
Wat-3	Replace potable water	N	2.33	1/3	0.78
	Sub-total	0	7.00		2.92
Materials					
Mat-1	Materials footprint measurement and reduction	N	6.26	2/3	4.17
Mat-2	Environmentally labelled products and supply chains	N	0.74	1/3	0.25
	Sub-total	0	7.00		4.42
Discharges to Air, Land & Water					
Dis-1	Receiving water quality	N	2.92	2/3	1.94
Dis-2	Noise	N	2.33	2/3	1.56
Dis-3	Vibration	N	2.33	2/3	1.56
Dis-4	Air quality	N	2.33	2/3	1.56
Dis-5	Light pollution	N	0.58	1/1	0.58
	Sub-total	0	10.50		7.19
Land					
Lan-1	Previous land use	N	2.50	3/3	2.50
Lan-2	Conservation of on site resources	N	0.50	3/3	0.50
Lan-3	Contamination and remediation	N	2.50	1/3	0.83
Lan-4	Flooding design	N	1.50	1/2	0.75
	Sub-total	0	7.00		4.58
Waste					
Was-1	Waste management	N	3.50	1/2	1.75
Was-2	Diversion from landfill	N	2.33	2/3	1.56
Was-3	Deconstruction/ Disassembly/ Adaptability	N	1.17	2/3	0.78
	Sub-total	0	7.00		4.08
Ecology					
Eco-1	Ecologically sensitive sites	N	1.50	1/1	1.50
Eco-2	Ecological value	N	3.00	2/3	2.00
Eco-3	Biodiversity enhancement	N	3.00	1/3	1.00
Eco-4	Habitat connectivity	N	3.00	1/3	1.00
	Sub-total	0	10.50		5.50
Community Health, Well-being and Safety					
Hco-1	Community health and well-being	N	1.50	1/3	0.50
Hco-2	Crime prevention	N	1.50	2/2	1.50
Hco-3	Community and user safety	N	2.00	2/2	2.00
	Sub-total	0	5.00		4.00
Heritage					
Her-1	Heritage assessment and management	N	3.06	1/3	1.02
Her-2	Monitoring and management of heritage	N	1.94	2/3	1.30
	Sub-total	0	5.00		2.31
Stakeholder Participation					
Sta-1	Stakeholder engagement strategy	N	1.50	2/3	1.00
Sta-2	Level of engagement	N	1.10	3/3	1.10
Sta-3	Effective communication	N	1.15	2/3	0.77
Sta-4	Addressing community concerns	N	1.25	2/3	0.83
	Sub-total	0	5.00		3.70
Urban and Landscape Design					
Urb-1	Site and context analysis	N	1.00	1/1	1.00
Urb-2	Site planning	N	1.00	3/3	1.00
Urb-3	Urban design	N	2.00	3/3	2.00
Urb-4	Implementation	N	1.00	3/3	1.00
	Sub-total	0	5.00		5.00
Innovation					
Inn-1	Innovation	N	5.00	2/3	3.33
	Sub-total	0	5.00		3.33
	Grand-total	0	105.00		69.8
	Score*			69.8	
	Rating			EXCELLENT	



5.3 (b) Sustainable Design Guidelines (SDG) Rating Management

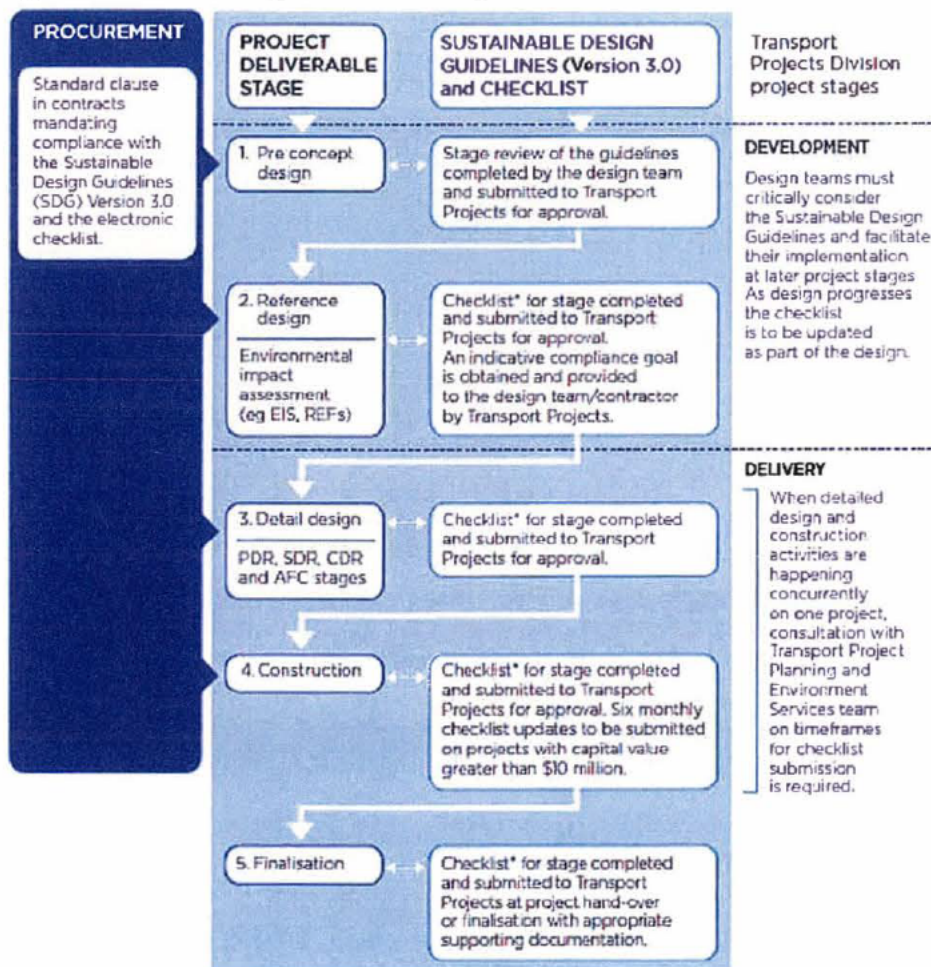
Connecting Sydney has committed to a gold rating in the TfNSW SDG rating system for delivery. Table 6 summarises the SDG rating deliverable stages in relation to the project phases.

Table 6: SDG Rating Deliverable Stages in Relation to the OTS PPP Project Phases

STAGE	PROJECT DELIVERABLE STAGES	PROJECT STAGES
1	Pre concept design	Development
2	Reference design and environmental impact assessment	
3	Detail design (SDR, PDR, CDR, AFC)	Delivery
4	Construction	
5	Finalisation	

Figure 5 provides a flowchart of the SDG rating process.

Figure 5: Sustainable Design Guidelines Rating Process



Connecting Sydney has developed a strategy to achieve a Gold rating under the TfNSW Sustainable Design Guidelines. Table 7 outlines the key steps required to achieve the Gold rating.



Table 7: SDG Gold Rating Management Plan

Certification Phase	Actions Completed	Delivery Phase Actions
Detailed Design	<ul style="list-style-type: none"> • review of SDG approach within the SLR Sustainability Strategy; • RFP Phase SDG rating workshops across the Connecting Sydney Teams; • SDG value engineering sessions; • embedding target credits across all teams; • SDG self assessment. 	<ul style="list-style-type: none"> • engage with TfNSW to commence the 'Delivery' Phase activities of achieving the SDG rating, building on the work that has already been completed during the 'Development' Phase; • include SDG requirements in relevant contract documentation to ensure project team members will deliver what is required; • SDG briefing sessions; • embedding target credits into design documentation; • embedding target credits into management processes; • completing Design stage checklist for submission to TfNSW.
Construction	Nil	<ul style="list-style-type: none"> • compiling relevant documentation during construction; • auditing to ensure credits are being achieved (quarterly); • completing Construction stage checklist for submission to TfNSW every 6 months.
Finalisation	Nil	<ul style="list-style-type: none"> • compiling all relevant documentation for the Finalisation checklist; • internal review of draft Finalisation checklist at approximately 90% practical completion; • submit Finalisation checklist and appropriate supporting documentation at 100% design completion.

Table 8 compares the proposed Connecting Sydney concept design self-assessment against the TfNSW Sustainable Design Guidelines v3.0. Currently, the project has targeted sufficient points to achieve a Gold rating. A full list of target credits can be found in Appendix B.

Table 8: SDG Rating Tool Performance Summary

SDG Asset Type	Target Rating
Light Rail (Compulsory)	100%
Light Rail (Discretionary)	81%
Tunnel (Compulsory)	100%
Tunnel (Discretionary)	82%



5.3 (c) Reporting

Connecting Sydney's sustainability reporting framework will be designed to interface with TfNSW's Transport Projects' Strategic Sustainability Framework.

Reporting will occur at OpCo level via the Sustainability Manager. As a minimum, reporting will meet the sustainability reporting requirements identified in SPR Appendix 10 – Reporting Requirements. The sustainability section of the Delivery Phase Progress Reports must, as a minimum, address and detail:

- the performance of OpCo against all sustainability targets relating to the Delivery Activities specified in the Construction Environmental Management Plan and the Delivery Phase Sustainability Management Plan;
- data to support reporting on targets, and an analysis of trends including actions to be undertaken to improve performance, for the following:
 - electrical energy consumption and generation, including any on-site renewable energy generation and any renewable energy sourced for the Delivery Activities and performance against energy consumption reduction targets;
 - the current level of carbon emissions and performance against the carbon emission reduction targets;
 - the current level of energy use and performance against the energy reduction target identified in the Delivery Phase Carbon and Energy Management Plan;
 - fuel consumption and performance against fuel consumption reduction targets;
 - volume of potable and non-potable water consumed including details of the sources of potable and non-potable water consumed and harvested and performance against water consumption reduction and water consumption and harvesting targets;
 - quantities of waste recycled, beneficially re-used or disposed of and performance against waste targets;
 - the actual volume of spoil reused within the Construction Site, beneficially reused off-site or disposed of off-site

against the spoil targets identified in the Spoil Management Plan.

- "Design" and "As Built" performance against the Infrastructure Sustainability Council of Australia rating tool;
- performance against the "compulsory initiatives" and the "discretionary initiatives" required by the Transport for NSW - NSW Sustainable Design Guidelines for Rail Version 3.0 for civil infrastructure corrective actions taken where non-conformances in the design of construction of PPP Works and the Temporary Works were identified;
- current workforce status and performance against workforce participation targets for the delivery activities outlined in SPR Appendix 7 (*Sustainability*), including current levels of:
 - new recruitments;
 - apprentices;
 - trainees;
 - proportion of workforce participating in structured training;
 - workforce diversity;
 - workforce disadvantaged groups;
 - work experience placements.
- corrective actions taken where non-conformances in the design of construction of the SLR Works and the Temporary Works were identified.

Reporting will also feed into the relevant requirements outlined in the Environmental Management reporting requirements in Appendix 10. These include, at a minimum, input into the Greenhouse Gas Management Plan and the Construction Materials Sustainable Procurement Plan.

5.3 (d) Continuous improvement

New risks and opportunities identified during the Project will be compiled into a Sustainability Risks and Opportunities Register, with the aim of continuously improving sustainability performance. These registers will be live documents throughout the project delivery period and will be tracked in the overall risk management system. All sustainability opportunities identified will be reported to the board and reviewed for approval, where necessary, subject to further cost/benefit assessment.



Assessment

Sustainability initiatives over and above mandatory project requirements will be subject to ongoing assessment to determine whether the initiative is considered to be *Feasible and Reasonable*.

- **feasible** relates to engineering considerations, what is practical to build and whether or not project-specific technical criteria can be met;
- **reasonable** requires judgment on the total cost of the initiative versus benefits provided as well as the nature and extent of potential improvements and value for money.

Engagement and tracking

There will be an ongoing engagement process to recognise sustainability risks and opportunities, which will be led by the Sustainability Manager. Engagement and tracking will use the AA1000 AccountAbility Principles Standard (2008) and Global Reporting Initiative's sustainability reporting guidelines Construction and Real Estate Sector Supplement (GRI CRESS) Performance Indicators.

The approach considers issues identified through community stakeholders, media, regulations, peer performance and operational activities, and assists with prioritising the issues identified. The key issues highlighted by GRI CRESS will be used to focus the engagement process. Formal engagement will be undertaken on a quarterly basis to report on sustainability targets.

5.3 (e) Monitoring and Measurement

Key sustainability performance indicators will be monitored and measured against the targets set out in this plan. These targets will be further developed to monitoring requirements, including:

- activity being monitored;
- location (site);
- equipment to be measured;
- frequency of monitoring or measurement;
- records to be maintained;
- responsibility for ensuring monitoring or measurement occurs as required;
- reference document (if applicable).

The plan will also identify data collection requirements to meet legislative reporting obligations as well as business-wide sustainability performance monitoring needs.

5.3 (f) Auditing and compliance review

The proposed system for auditing and managing compliance will include:

- regular inspection, including:
 - responsibilities to ensure site inspections are planned, scheduled, undertaken and documented;
 - frequency of inspections;
 - requirement for functional or area-specific inspection checklists to be utilised for each inspection; this will provide clear guidance and a simple mechanism for recording findings
 - follow up requirements;
 - record keeping requirements.
- internal and external audits, in line with ISCA IS credit requirements;
- complaints management;
- review of legislative compliance.

5.3 (g) Non-Conformances, Preventative and Corrective Actions

Connecting Sydney will develop requirements for managing non-conformances and for taking corrective and preventative actions. Non-conformances, actions, close-out details and verification will be documented in the Non-Conformance Register which is overseen by the Environment and Sustainability Manager.

A non-conformance is defined as:

- failure to comply with relevant sustainability requirements, including targeted ISCA IS credits, SDG credits and all other targets set out in this plan.

5.4 Climate Change Resilience Initiatives

Consideration of climate change in the design and construction of infrastructure is essential due to its long asset life of up to 100 years (depending on the structure or component). Connecting Sydney recognises the project objective, detailed in the CESLR Climate Change Risk Assessment and Adaptation Study (CCRAAS), to ensure the project is resilient to potential climate change impacts and that infrastructure vulnerability is managed. A climate change risk workshop has been



conducted to identify impacts and specific risks to Connecting Sydney's design.

The workshop investigated the climate change risks identified in the reference design and proposed adaptation actions to ensure that the project works and temporary works are resilient to these effects. Risks rated 'extreme' and 'high' will be mitigated to an acceptable level as far as is reasonably practicable. These risks and adaptation actions were reviewed and acknowledged during the bid design.

A full climate change risk assessment and adaptation plan will be conducted during detailed design.

5.5 Carbon and Energy Management Initiatives

A Carbon and Energy Management Plan (CEP) will be developed for delivery and operation. It will outline the approach to carbon and energy management. A summary of the proposed management framework and targets has been provided in this section.

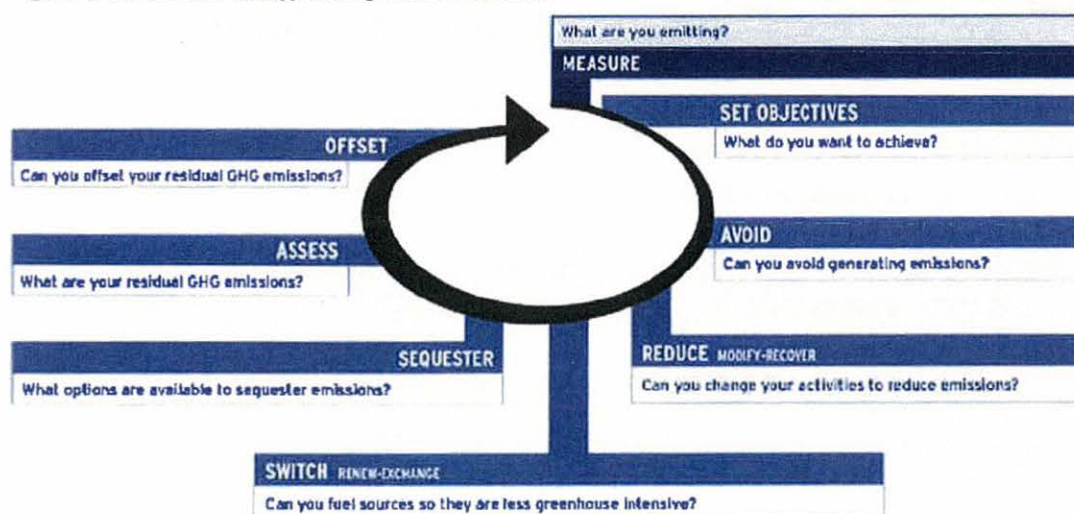
The carbon and energy management framework for this plan will be developed in accordance with carbon management

principles and the Sydney Light Rail sustainability strategy. This framework is summarised in Figure 6.

The CEPs will be designed to incorporate continual improvement. Carbon emission and energy use will be monitored throughout the operational timeframe and the plan will be reviewed and updated regularly to incorporate any changes in process and technology. The main components of the plan are summarised below and described in further detail within the plan.

- **Measurement:** Understanding the carbon and energy profile will help identify major energy use and carbon emissions for management and reduction over the operational life. Initial carbon and energy has been estimated to understand the project profile and to identify savings opportunities at bid. This profile will be improved throughout delivery and operations through ongoing data collection. It is developed in accordance with ISO14064-2 standard for greenhouse gas assessment of projects.

Figure 6: Carbon and energy management framework



- **Set Objectives:** Once the carbon and energy profile is understood, objectives and targets are set to manage carbon and energy. Objectives have been developed on the basis of the carbon and energy risks to Sydney Light Rail operations;
- **Carbon and energy reduction strategy:** The carbon reduction strategy outlines a clear pathway to managing and reducing carbon emissions and energy use throughout operation. It follows the management hierarchy outlined below:
 - **Avoid:** The most effective way to reduce carbon impact and energy use is



to avoid them. Avoidance includes opportunities such as turning off equipment when not in use, timers and motion-operated sensors;

- **Improve Efficiency:** Opportunities to improve efficiencies can be identified throughout project operation. This can include actions such as purchasing, maintaining and modifying equipment so that it runs more efficiently;
- **Source Low Carbon Energy Onsite:** Sourcing low carbon on-site is about identifying where low emission alternatives can be used through operation. An example of this is the use of biofuel instead of diesel. This could also include the use of PV on site;
- **Source Low Carbon Energy Offsite:** Sourcing low carbon off site includes the use of Green Power for electricity use during operation;
- **Carbon Offsets:** Offsetting is usually considered as a last resort to managing

carbon emissions. Offset credits should be purchased from an accredited offset scheme provider.

- **Monitor and Review:** Monitoring and review is vital in any plan to facilitate continual improvement. Carbon and energy data will be collected throughout the operations period to build an accurate carbon and energy profile. Performance will be reviewed regularly to track progress against objectives. Monitor and review will identify further opportunities and actions throughout operations to facilitate continual improvement.

During the tender phase, data was acquired from cost estimates to understand the carbon emissions associated with delivery and operation at concept design. Operational emissions were estimated from preliminary energy modelling. The preliminary carbon and energy assessment is summarised in Table 9. These will be refined during detailed design and used as benchmarks for monitoring during delivery and operation.

Table 9: Estimated Delivery and Operational Phase carbon emissions

	Estimated Carbon Emissions (tCO ₂ e)
Delivery	
Scope 1 (tCO₂e) - Direct carbon emissions associated with fuel use in vehicles, machinery and generators	1,526
Scope 2 (tCO₂e) - Indirect carbon emissions associated with electricity use	1,499
Scope 3 (tCO₂e) - Other indirect carbon emissions including embodied carbon of construction materials	35,191
Total estimated emissions	38,216
Operation	
Scope 1 (tCO₂e) - Direct carbon emissions associated with fuel use in vehicles, machinery and generators	14/year
Scope 2 (tCO₂e) - Indirect carbon emissions associated with electricity use	21,862/year
Scope 3 (tCO₂e) - Other indirect carbon emissions	4,523/year
Total estimated emissions	26,399/year



5.6 Water Efficiency Initiatives

Connecting Sydney's approach to water management is to:

- reduce the requirement for water wherever practicable;
- use non-potable water in place of potable water wherever practicable;
- capture and process all groundwater, stormwater and process water for treatment for use for non-potable purposes.

Water efficiency initiatives including demand management, rainwater harvesting and LRV wash water recycling have been included in the concept design.

5.7 Supply Chain and Workforce Legacy Initiatives

5.7 (a) Sustainable Procurement

Connecting Sydney has committed to the following requirements, based on the procurement credits in the ISCA IS Rating Tool and SPR Appendix 7 - Sustainability:

- Pro-1 Commitment to Sustainable Procurement;
 - there is a commitment to consider environmental aspects in the procurement process;
 - the commitment also requires social and economic aspects to be considered in the procurement process;
 - the sustainable procurement commitments are publicly stated;
 - sustainable procurement commitments are embedded within sustainability objectives and/or targets.
- Pro-2 Identification of Suppliers;
 - potential suppliers requested to provide details of their environmental policies and implementation measures;
 - potential suppliers requested to provide details of their sustainability policies and implementation measures;
 - forward commitment procurement is used to help stimulate innovation in relation to sustainability through the procurement process;
 - engagement with potential suppliers is undertaken to explain sustainability requirements and expectations, and

their importance in the bid process in more detail.

- Pro-3 Supplier Evaluation and Contract Award;
 - supplier evaluation considers sustainability aspects through use of multi-criteria analysis or other scored means
 - supplier evaluation considers whole of life of product/service where relevant and possible
- Pro-4 Managing Supplier Performance;
 - suppliers have sustainability objectives and/or targets;

The Connecting Sydney Sustainable Procurement Strategy has been developed in accordance with British Standard BS8903 as required under Appendix 7 of the SPRs. This is outlined in Figure 7.

Figure 7: British Standard BS8903 Sustainable Procurement Framework



BS 8903 provides guidance on sustainable procurement principles and practices for any size and type of organisation. It covers all stages of the procurement process and is applicable across public and private sector organisations.

The British Standard framework is used to assess whether to source materials or services at a central (e.g. Head contractor) level or at a local (e.g. sub-contractor) level. Expenditure that is best managed at a central level covers items that are consistent across the whole



network. This may include bulk purchase of fuel for maintenance vehicles and light vehicle fleet. Expenditure that is best managed at a local level covers elements that are geographically specific and that are particular to individual elements of the SLR. These may include local suppliers of materials and may also reduce transport distances of procured goods.

Suppliers are identified that are capable of meeting the principles of BS 8903 and are consistent with high social and environmental standards. Suppliers will be selected on the basis of a balanced scorecard or weighted

evaluation process that incorporates sustainability. This approach allows sustainability to be assessed, and then monitored, alongside indicators such as cost, service, quality delivery and technical requirements. The assessment criteria will be guided by the SLR Sustainable Procurement Strategy. An example of the environmental and social criteria that could be used for the selection of Subcontractors is outlined in Table 10. These criteria will be adjusted as appropriate to reflect the priorities in each expenditure category.

Table 10: Sample balanced scorecard criteria

	Weighting or pass/fail	Score 1-5
<i>Economic Criteria</i>		
Initial Cost		
Whole of Life Cost		
<i>Environmental Criteria</i>		
Carbon Emissions		
Water Use		
Social Criteria		
<i>Trainee Development</i>		
Diversity		
ANZ SME		
<i>Management Systems Criteria</i>		
Timely Delivery		
Reporting systems		

Supply chain management will be strategically aligned with the project timelines to ensure efficient procurement processes.

Suppliers will be screened through the procurement process. Where suppliers represent a potential risk to the project they will undergo a risk assessment process ensure that social and environmental supplier risks are considered alongside other project risks. Supplier engagement activities will focus particularly on those sourcing categories and suppliers that are high risk or high material impact, including: materials (concrete and steel), fuel, electricity and workforce development (including SMEs, diversity and

trainee targets). Supplier engagement will extend to Tier 2 and Tier 3 suppliers to ensure sustainability requirements are met at all levels and encourage suppliers to reflect sustainability across their own supply chain.

Connecting Sydney is also committed to a process of continual improvement with respect to procurement practices and will engage with, and seek feedback from, key suppliers and service providers in relation to the Connecting Sydney approach to sustainable procurement.



5.7 (b) Rolling Stock Environmental Performance

Initial environmental performance declaration

Connecting Sydney, with the support of Alstom, commits to delivering an environmental performance declaration (EPD) for the Citadis tram with respect to ISO 14025:2006 – Environmental Labels and Declarations – Type III Environmental Declarations Principles. To complete the EPD in accordance with the standard, an initial Life Cycle Assessment (LCA) will be developed. This will assess the activities involved in the production, delivery and support of the train.

Alstom has integrated eco-design into the engineering organisation since 1994 and issued its first eco-design policy in 2008. A strong framework for eco-design has been developed and today more than 60 experts collaborate to continually improve the environmental performance of Alstom products. The approach for the Citadis will reflect Connecting Sydney's objective to deliver the best possible environmental and recyclable outcomes.

Recyclability of the train over the life cycle

The Citadis tram has a 35-year design life that is supported by a maintenance, overhaul and end-of-life plan for components and systems. At the end of life, the train can be greater than 91% recyclable.

Figure 8: Citadis Approach to Sustainability



The Citadis tram will be designed and developed to maximise sustainable principles and to optimise component use and reuse throughout the life of the project.

Connecting Sydney's commitment to recyclability will ensure that the Citadis tram sustains high levels of recyclability and takes advantage of value-based opportunities to improve the level of performance over time.

The tram condition and faults will be under constant review across Alstom's worldwide fleet. This review will make technical recommendations for asset maintenance, overhaul and component life expectancy to maintain the original train performance.

Hazardous material avoidance

Alstom has provided a 'declaration of dangerous substances' for the Citadis tram to demonstrate compliance with the SPR Appendix 7:

The proponent must not use materials in the manufacture of the LRVs that contain and/or have been produced using asbestos, lead, cadmium, cyanide, mercury, halons, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), polychlorinated biphenyls (PCBs), chlorinated solvents or other environmentally degrading substances

Other Environmental Benefits

Specifications for the Citadis will be finalised on contract award, however the LRV can be designed to include the following environmental initiatives:

- traction and gearbox improved efficiency leads to 4% energy saving compared to the best coiled traction motors;
- air-conditioning control taking into account passenger load (CO₂ measurement);
- LED lighting;
- indication to the driver of energy consumption and dedicated training (eco-driving : up to 15% saving);
- regenerative braking for energy recovery;
- REACH compliant (Europe's most stringent regulation on hazardous substances/ hydro paint & coatings);
- recyclability >91%;
- recoverability at 99% (including energy recovery);
- no Visual pollution: catenary-less;
- water-based paints/coatings;



- 4 times less energy than a bus, 10 times less energy than a car (KWh/seated passenger);
- 99% of braking energy recovered with HESOP technology;
- 10 - 15% energy savings with energy monitoring and Eco-driving;
- magnetic motors for high performance traction:96% efficiency (PMM 3% extra efficiency versus asynchronous motors);
- electrical braking more powerful with new motors;
- optimised sleeping mode and option for remote tram preparation;
- extended wheel-life compared to previous versions.

5.7 (c) SMEs and Social Enterprises

Connecting Sydney has leveraged the skills of the Industry Capability Network NSW (ICNNSW) to assist in developing the Workplace Relations Management Plan that will help ensure that local Small and Medium Enterprises (SMEs) and Social Enterprises are aware of the opportunities presented by the project, as well as its mission, values and key drivers in procurement. In addition, the plan identifies strategies and pathways for engaging indigenous businesses.

First tier tenderers will be expected to give local suppliers full, fair and reasonable opportunities in preparing their bids and will be encouraged to contact the ICNNSW about the best ways of identifying and engaging local capabilities.

Key strategies to encourage return on investment and tenders from SMEs and Social Enterprises include:

- identification of opportunities through projected work and procurement schedules;
- communication of opportunities via:
 - dedicated online portal ICN gateway;
 - nationally certified indigenous suppliers;
 - existing databases of preferred SME and indigenous suppliers among Connecting Sydney organisations.
- scoping of work packages to allow for maximum participation;

- access to S.E via TAFE, schools and community groups to undertake tree planting and other offset initiatives.

5.7 (d) Workforce development

The workforce development strategy will ensure that:

- the Connecting Sydney team is provided with the opportunity to up-skill or learn new skills;
- an appropriately skilled workforce is available to deliver the Project;
- a positive legacy is left in the Greater Sydney area;
- a diverse and inclusive workplace is developed;
- the Connecting Sydney team develops an understanding of sustainability issues on major projects via the sustainability education program.

A workforce needs assessment has been undertaken as part of the Tender Phase, and will be further refined during detailed design. The initial assessment defines the qualifications, skills and experience required to deliver each stage of the project on a site-by-site basis. The assessment also includes the duration and timing requirements for each role. This whole-of-project approach means that efficiencies can be understood, and capitalised on, between sites, while delivering on overall project outcomes.

Connecting Sydney's initial assessment indicates that the workforce will peak at approximately 606. It is anticipated that apprentices/trainees will make up 10% of the Delivery Phase trades workforce. Apprenticeships targets will be achieved across the duration of the delivery phase in line with the nature of work and delivery program.

Assessment

Competency assessments will be undertaken in accordance with best practice to ensure that all staff are assessed appropriately. Supervisory staff will undertake interview-based assessments, while trades and plant operators will undertake practical assessments. Actionable professional development plans will subsequently be developed and implemented.



Monitoring and reporting

Human resources personnel will regularly review the competency assessments to detect emerging gaps in the workforce.

Professional development plans will be revised on an annual basis and reviewed by the staff member and its direct management on a quarterly basis to ensure that development goals are being reached. Evidence of competency assessments and changes to an individual's qualifications or skills will be collected in the project training database accessible in a central location.

Industry partnerships

Industry associations will be engaged as needed to support specific training programs for the workforce. They include:

- The Construction Industry Training Board;
- The Master Builders Association;
- National Association of Women in Construction.

ATTACHMENT A – ISCA IS RATING TARGET INITIATIVES

Can be provided upon request

ATTACHMENT B – TFNSW SDG TARGET INITIATIVES

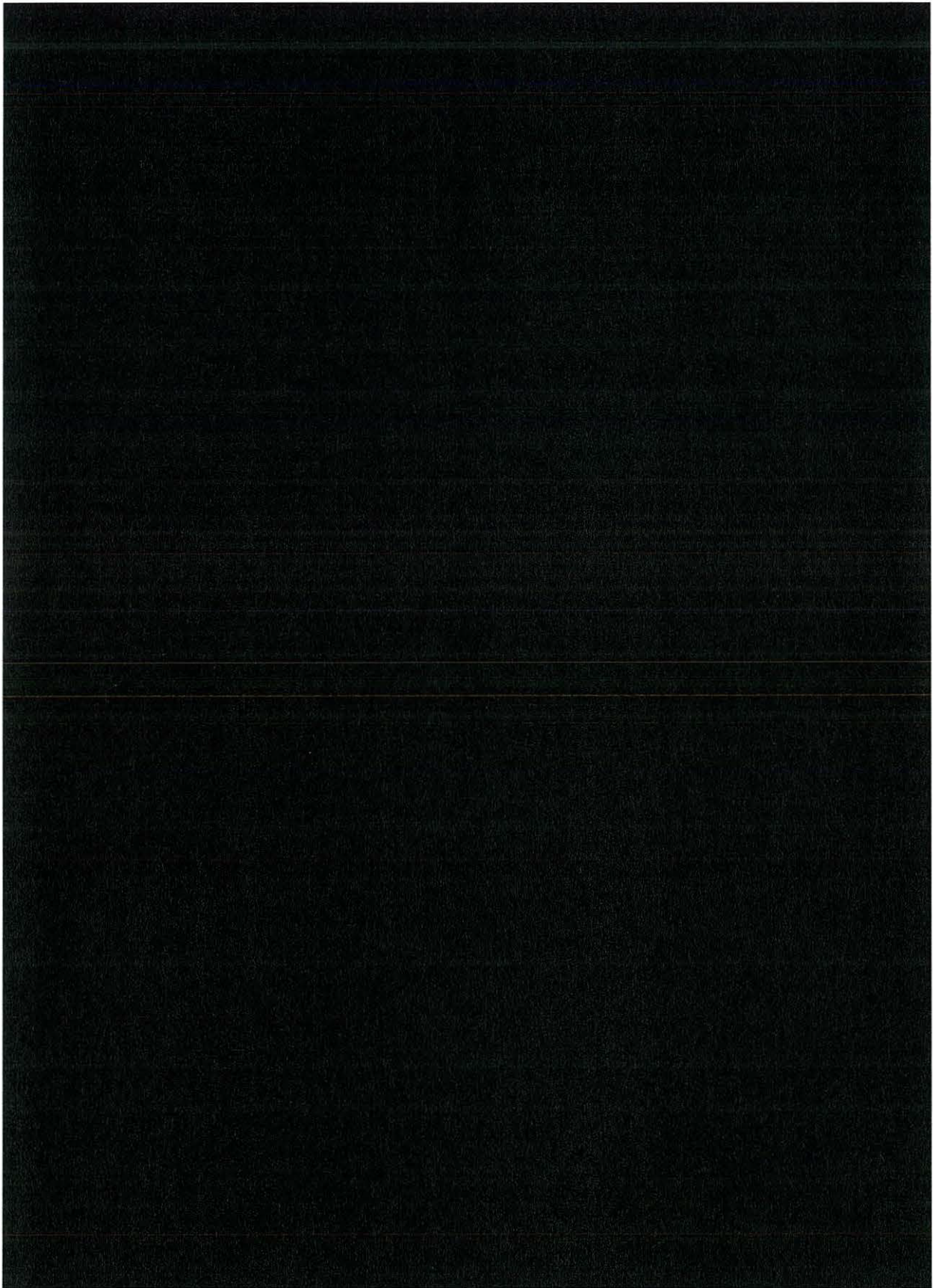
Can be provided upon request

Government programs

The Human Resources Manager will initially seek to engage with the relevant Government agencies to assist in delivering the desired workforce development outcomes.

Potential partners identified will be approached to contribute to the overall workforce development strategy. They include:

- NSW Department of Education and Communities' State Training Services;
- National Apprenticeships Program;
- National Workforce Development Fund;
- Workplace English Language and Literacy;
- Investing in Experience;
- Accelerated Apprenticeships and Australian Apprenticeships Mentoring;
- Australian Apprenticeship Scheme;
- Koori Job Ready.



Initial Delivery Workforce Needs Assessment

An initial workforce needs assessment was undertaken as part of the Tender Phase, and will be further refined during detailed design. The initial assessment defined the qualifications, skills and experience required in the delivery stage of the project on a site-by-site basis. The needs assessment was undertaken through consultation with the Human Resources and Staffing departments of Acciona, Transdev and Alstom. This was not documented as part of the bid process as it was not required as a returnable. The below outlines the process used to determine the targets outlined in the Scope and Performance Requirement.

SLR's initial assessment indicates that the delivery workforce will peak at approximately in the 3rd quarter of 2016. It is anticipated that apprentices/trainees will peak at 25% of the overall Delivery Phase workforce and apprentices to make up 10% of the Trades workforce. Figure 8 identifies the proposed delivery workforce profile. Apprenticeships targets will be achieved across the duration of the delivery phase in line with the nature of work and delivery program. Similar assessments will be undertaken for each of the workforce targets to meet the requirements set out in the Delivery Sustainability Management Plan. Monitoring and reporting will be undertaken to identify any gaps in the planning and implementation of workforce initiatives.



Figure 1 Delivery workforce profile

ATTACHMENT 4 – Construction Compounds



Location	TfNSW Land Identifier	Size (m2)	Parking (lots)	Storage amenities	Site amenities	Access and egress arrangements	Indicative occupation period (months)
Route A: CBD North construction storage area	TA / CB01	500	10	Yes	Yes	Public Road Network	42
Route A: CBD South (if required) construction storage area	TA / CB02	500	10	Yes	Yes	Public Road Network	42
Route I2: Devonshire construction storage area	TA / SE03 TA / SE15	500	10	Yes	Yes	Public Road Network	42
Route I2; Moore Park Tunnel construction storage area	TA / SE02	1000	50	Yes	Yes	Public Road Network	42
Route I2; Anzac Parade/Moore Park Stop construction storage area	TA / SE05	500	20	Yes	Yes	Public Road Network	42
Rozelle Depot construction storage area	PS / IW01	1000	50	Yes	Yes	Public Road Network	42
Randwick Stabling construction storage area	PS / SE26	2000	50	Yes	Yes	Public Road Network	42
Route O2; Randwick/Kingsford construction storage area	TA / SE10 PS / SE22	1000	10	Yes	Yes	Public Road Network	42
Main storage area (if required)		10000	100	Yes	Yes	Public Road Network	42

The main storage area (if required) will be located remote from the project (eg in an Industrial Area).

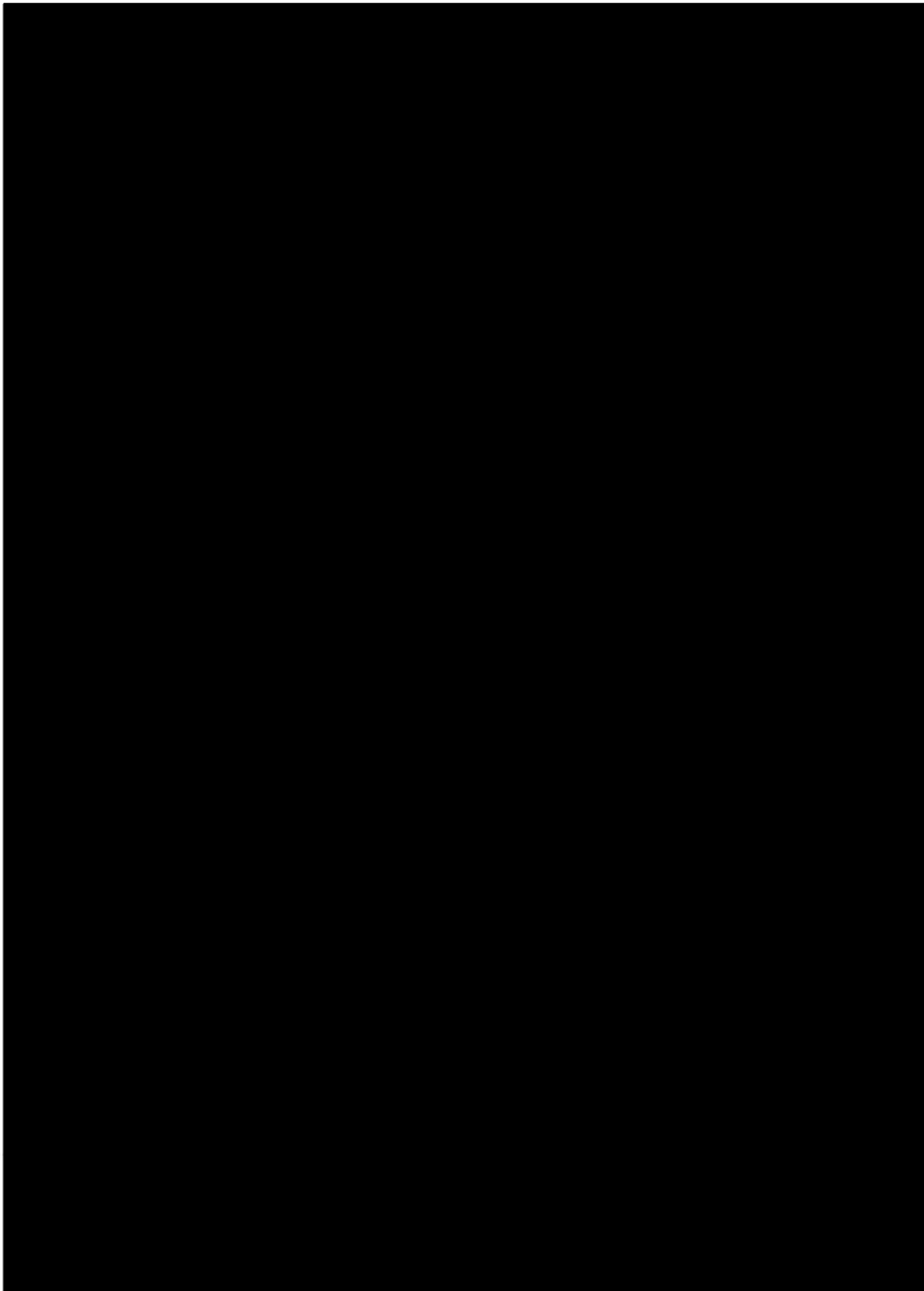


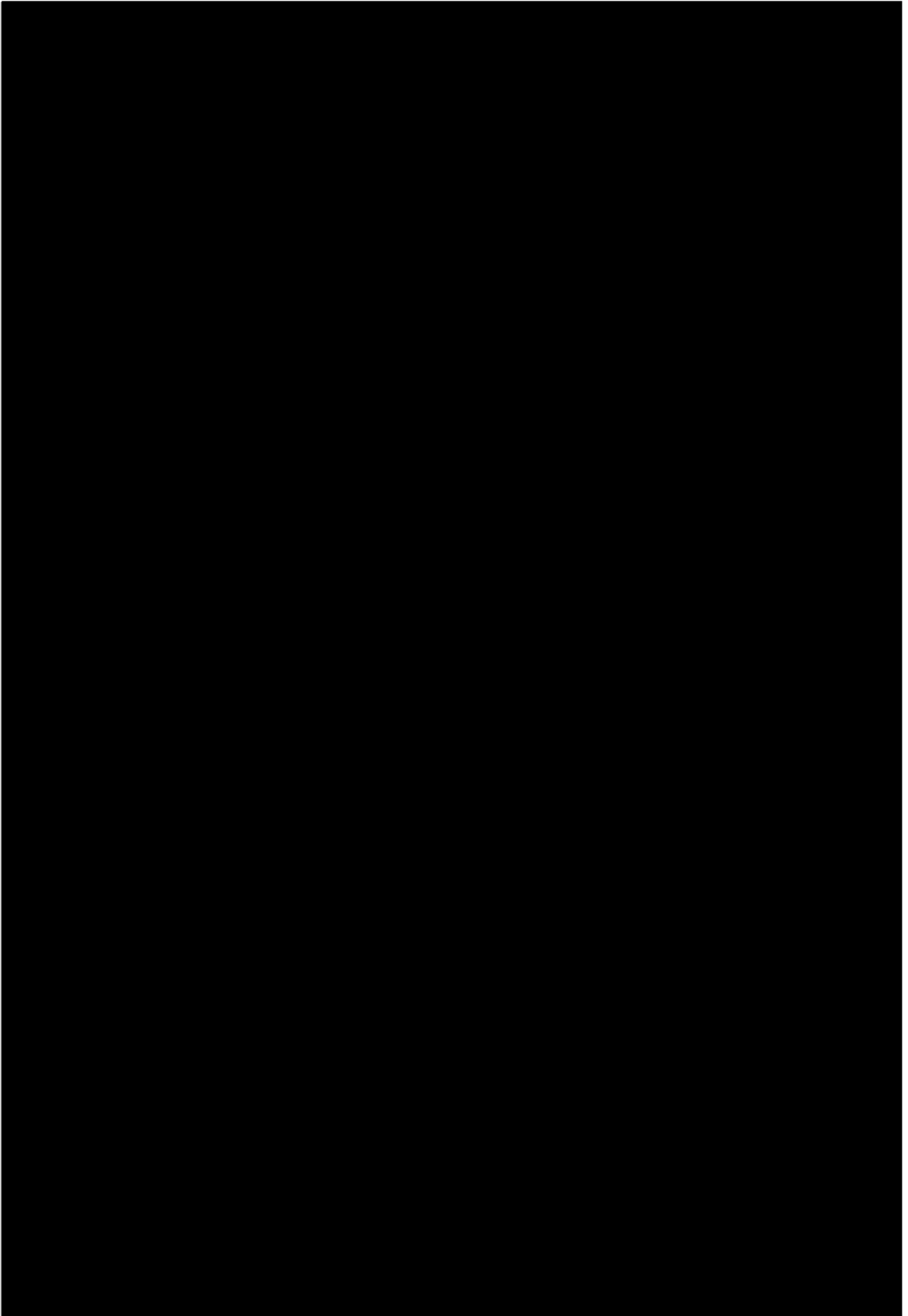
**Transport
for NSW**

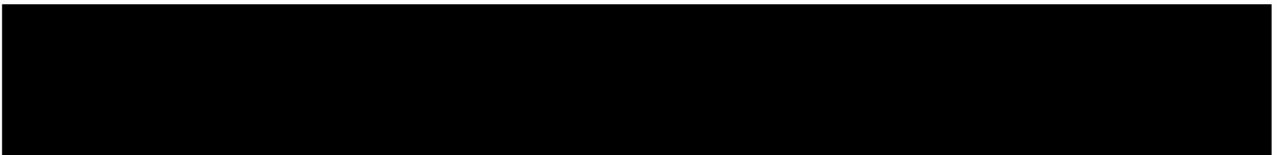
Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F2 – Initial Customer Service Plan

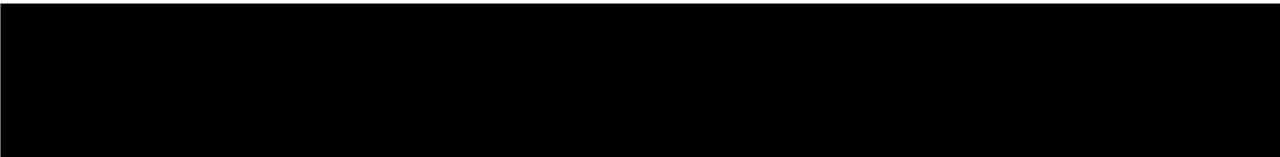
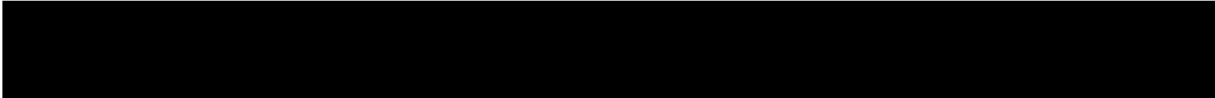
Document Number: 3129226_11
Execution Version

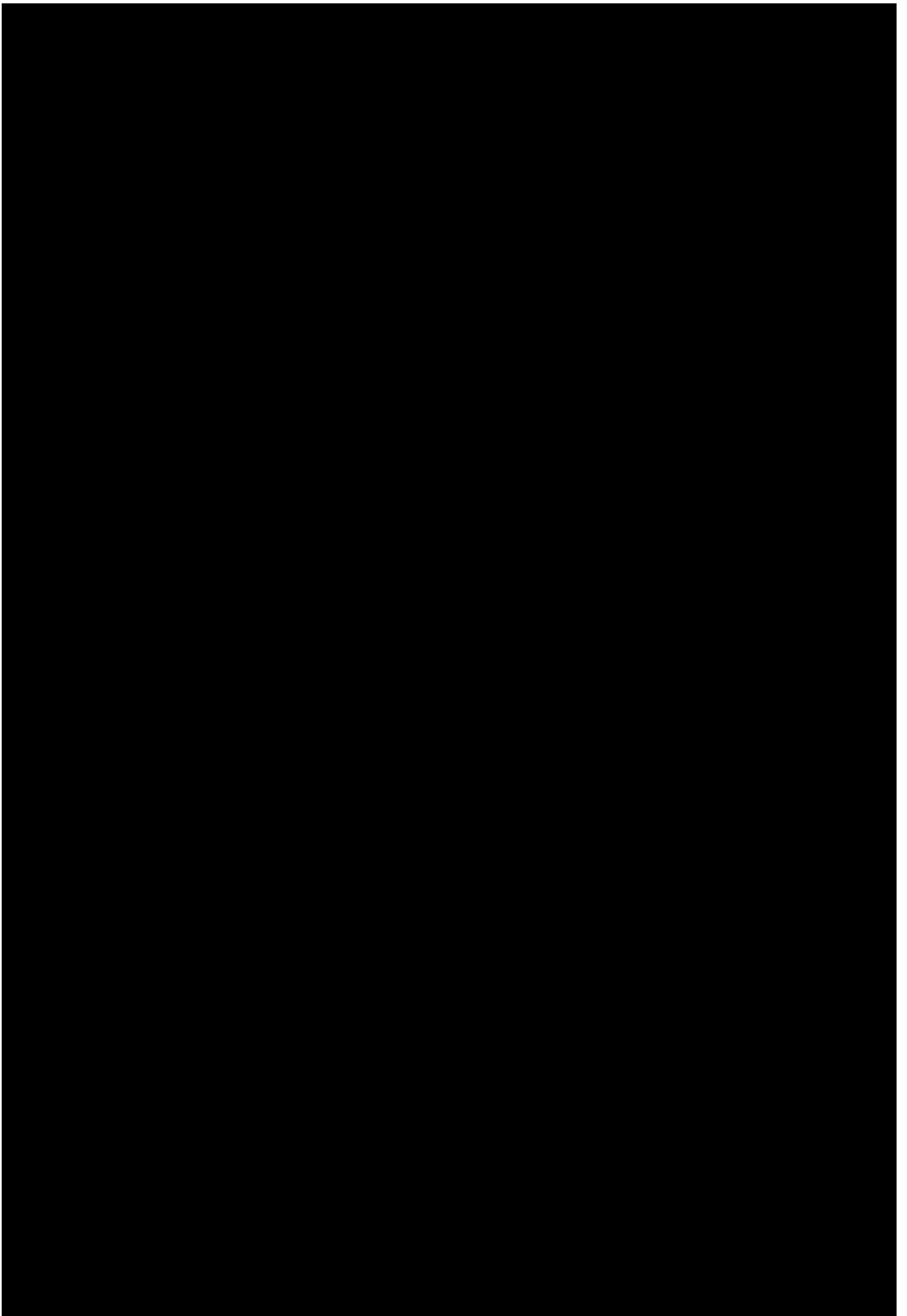


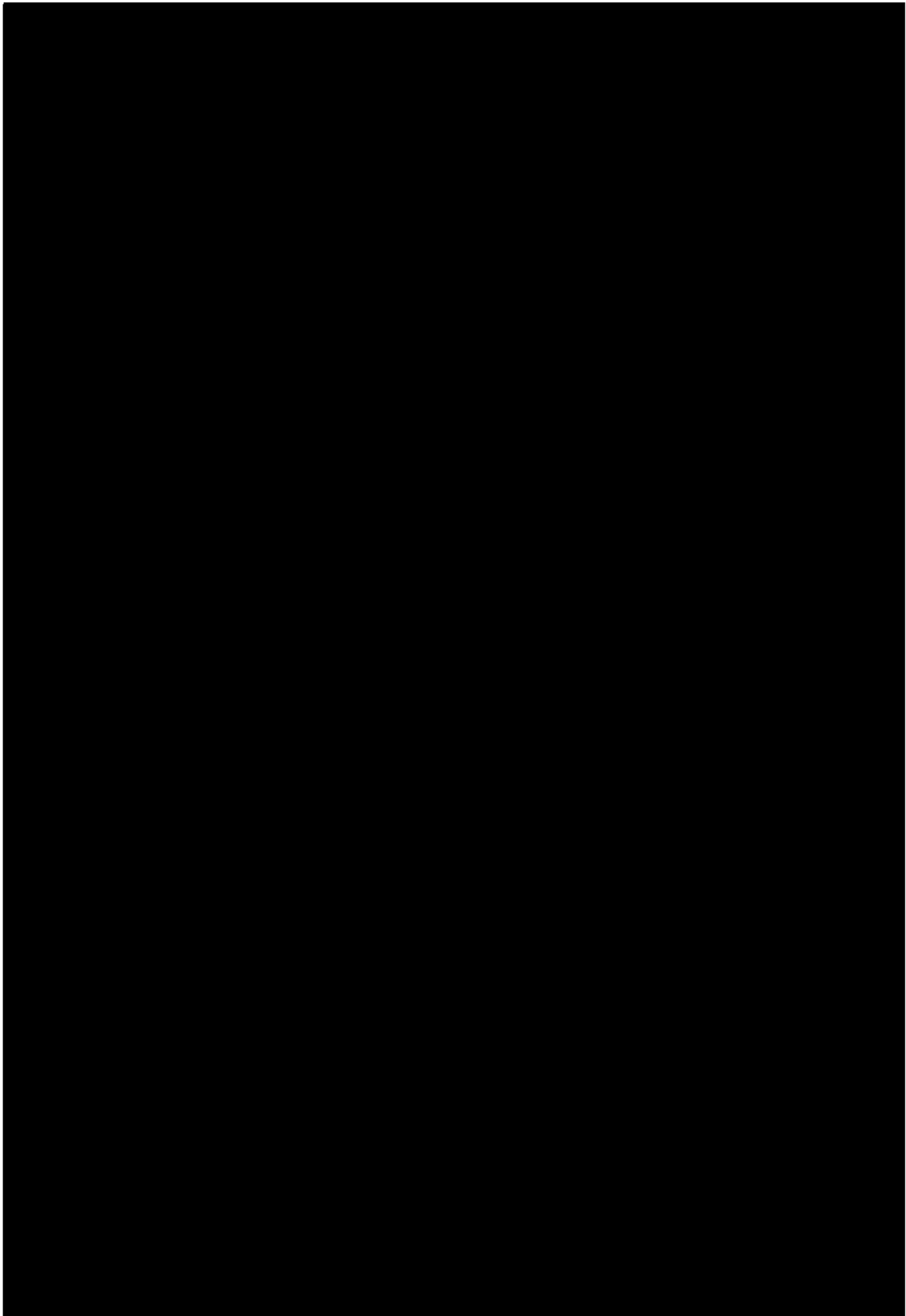


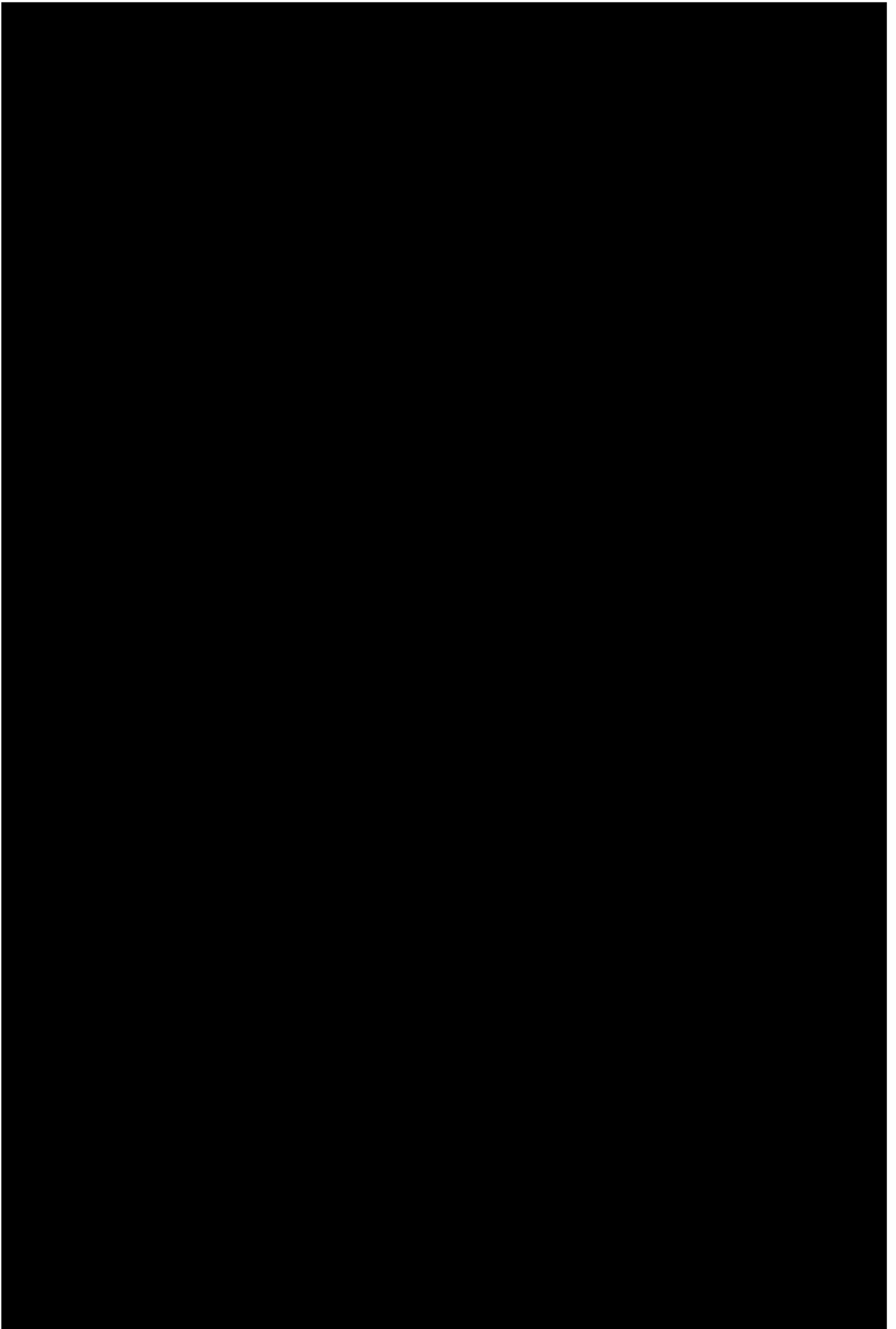


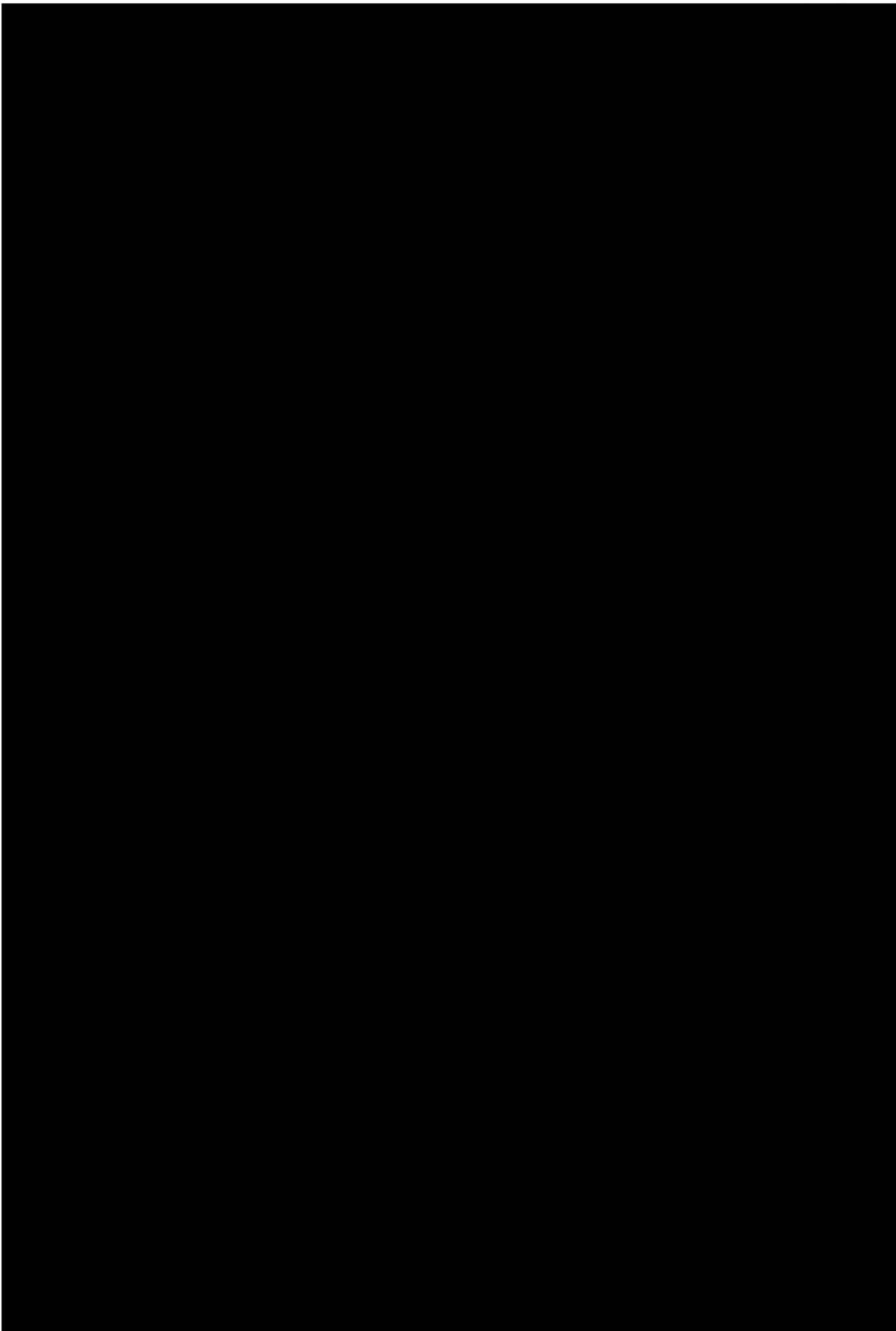


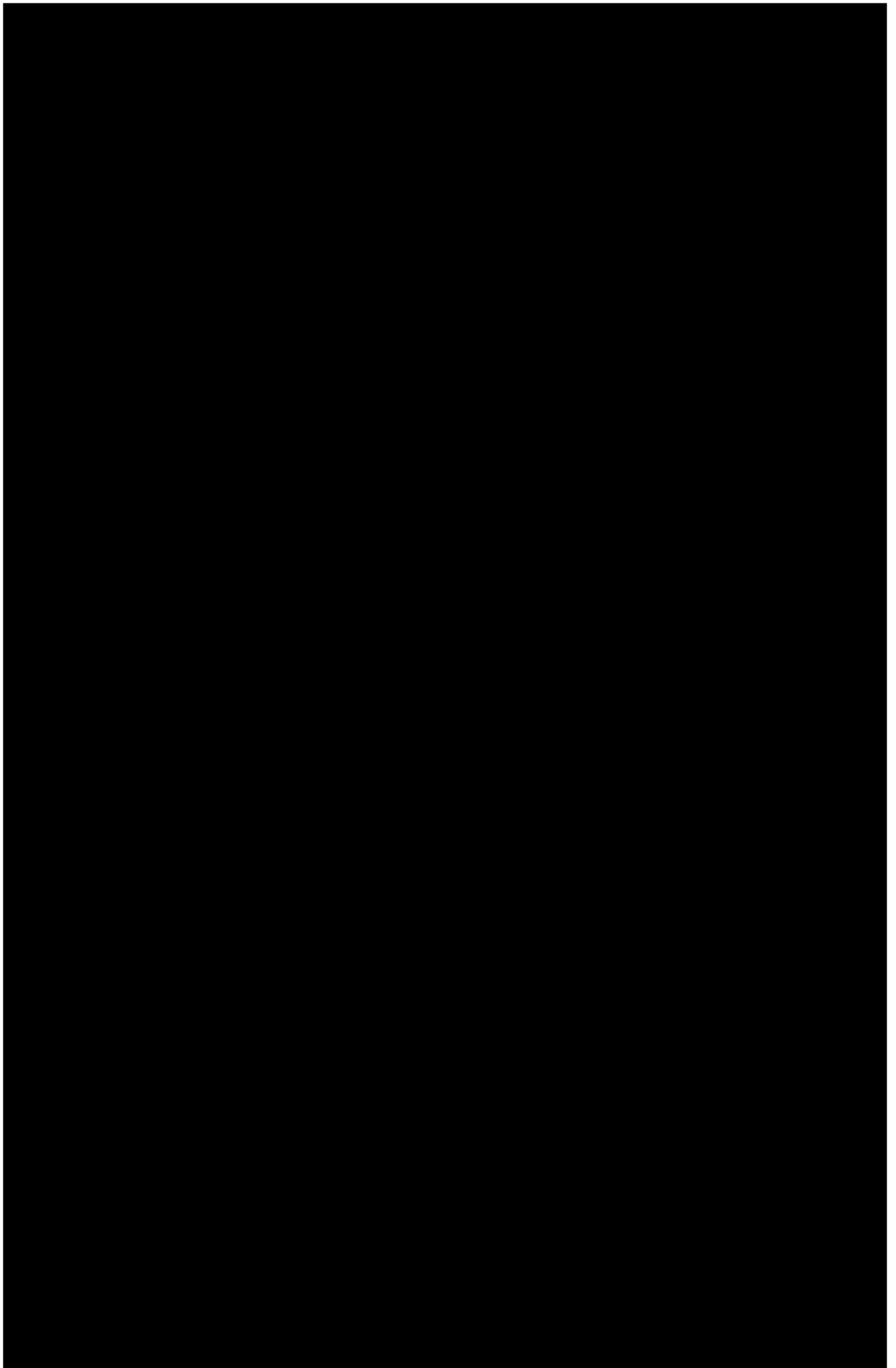


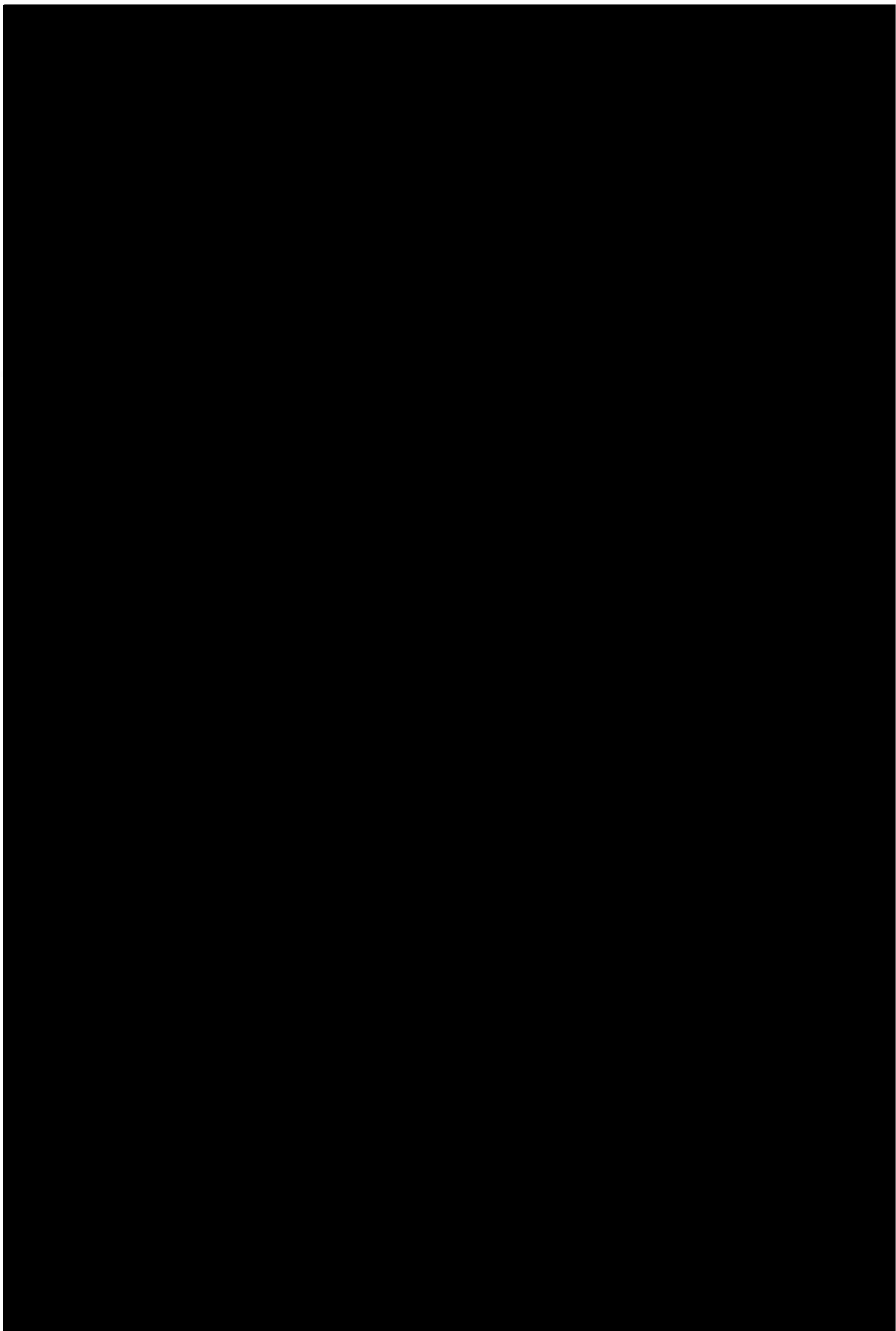


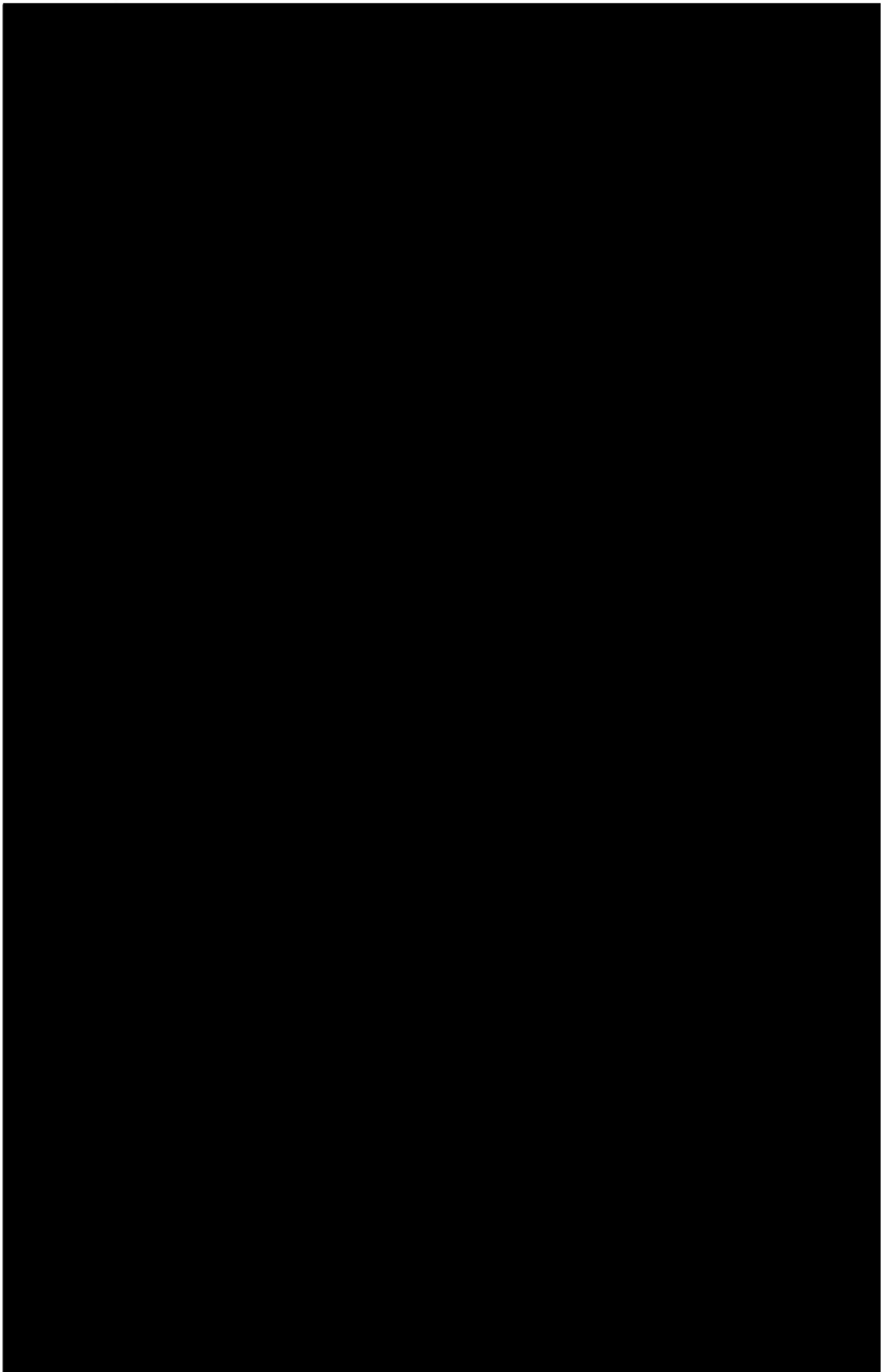


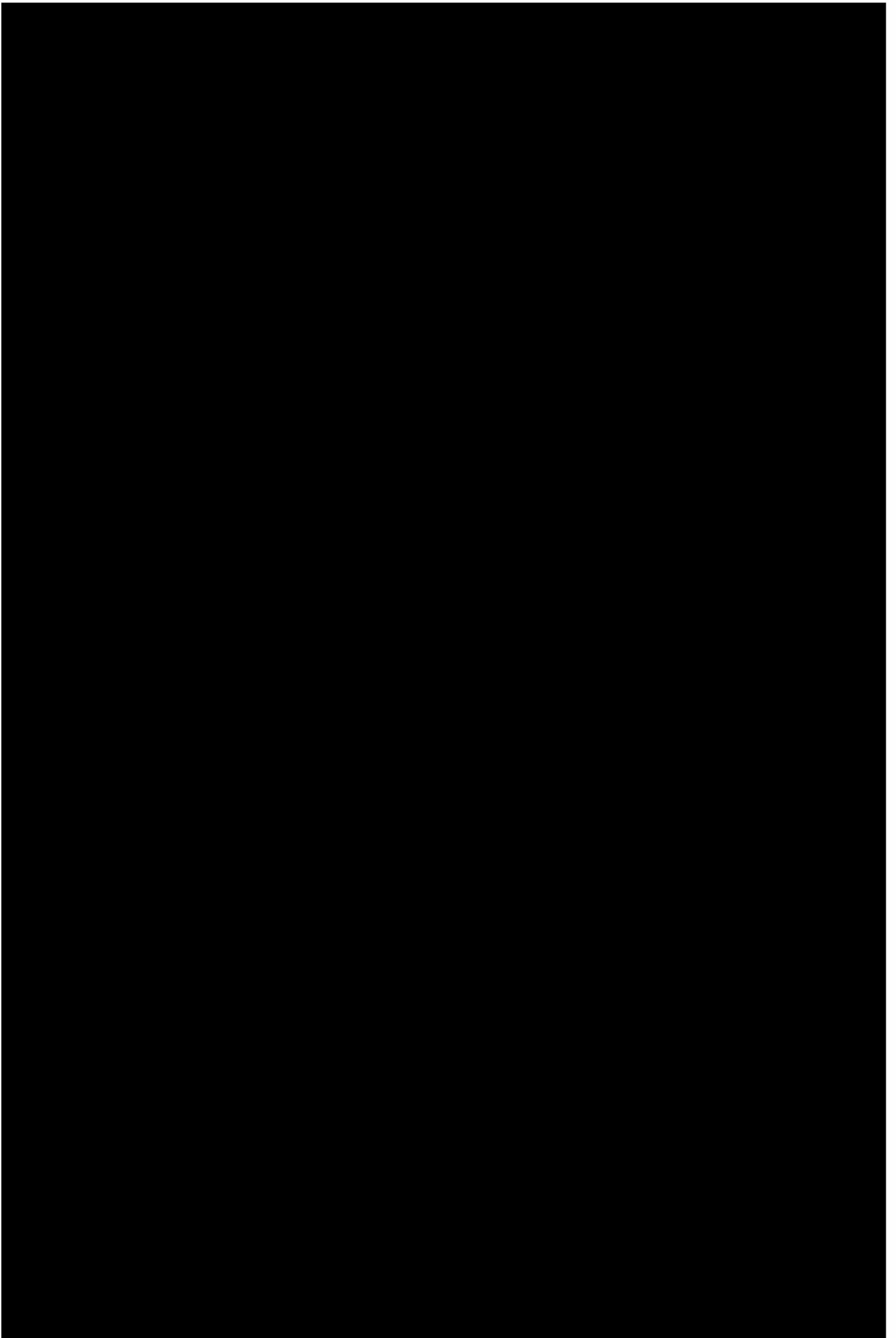


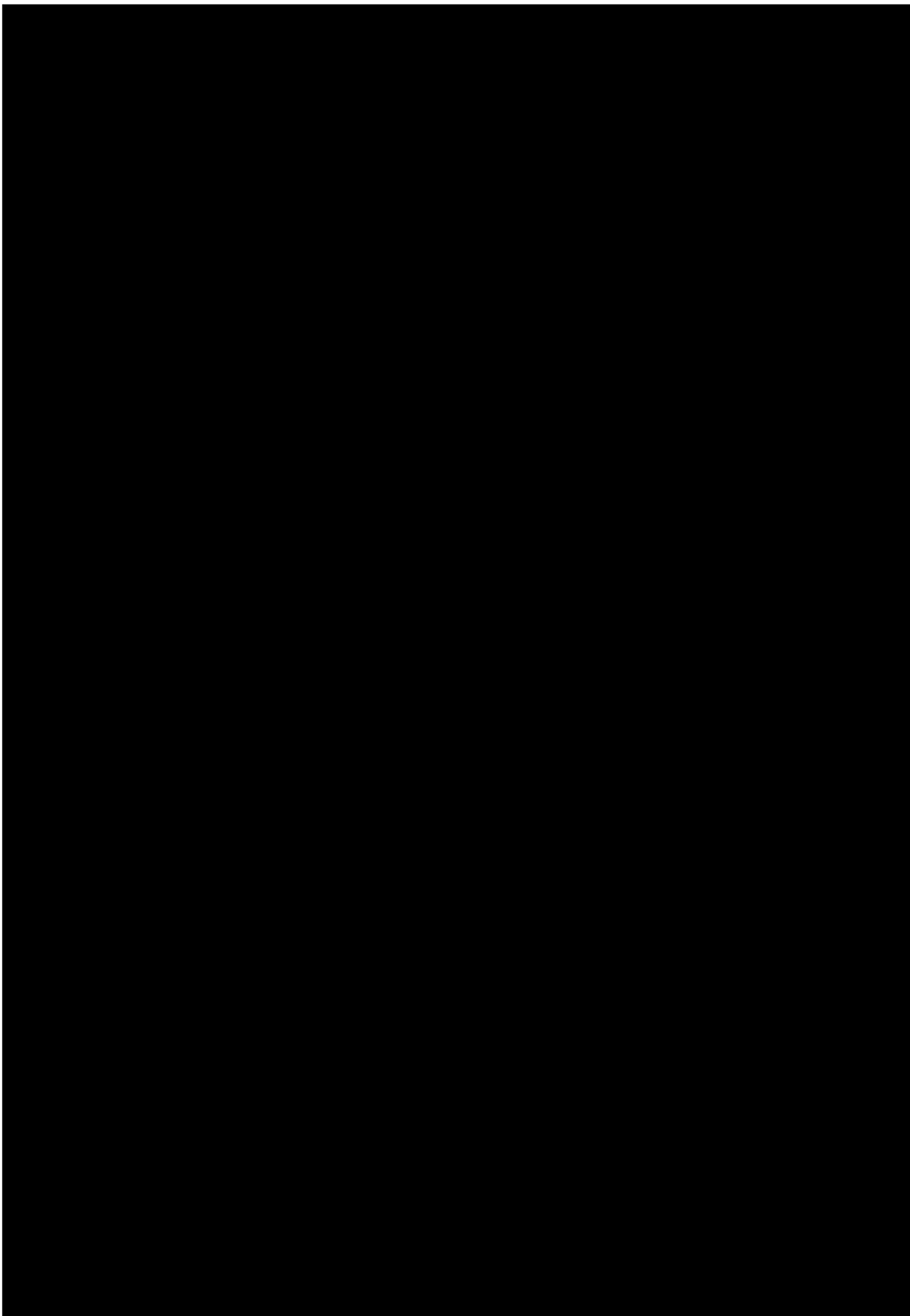


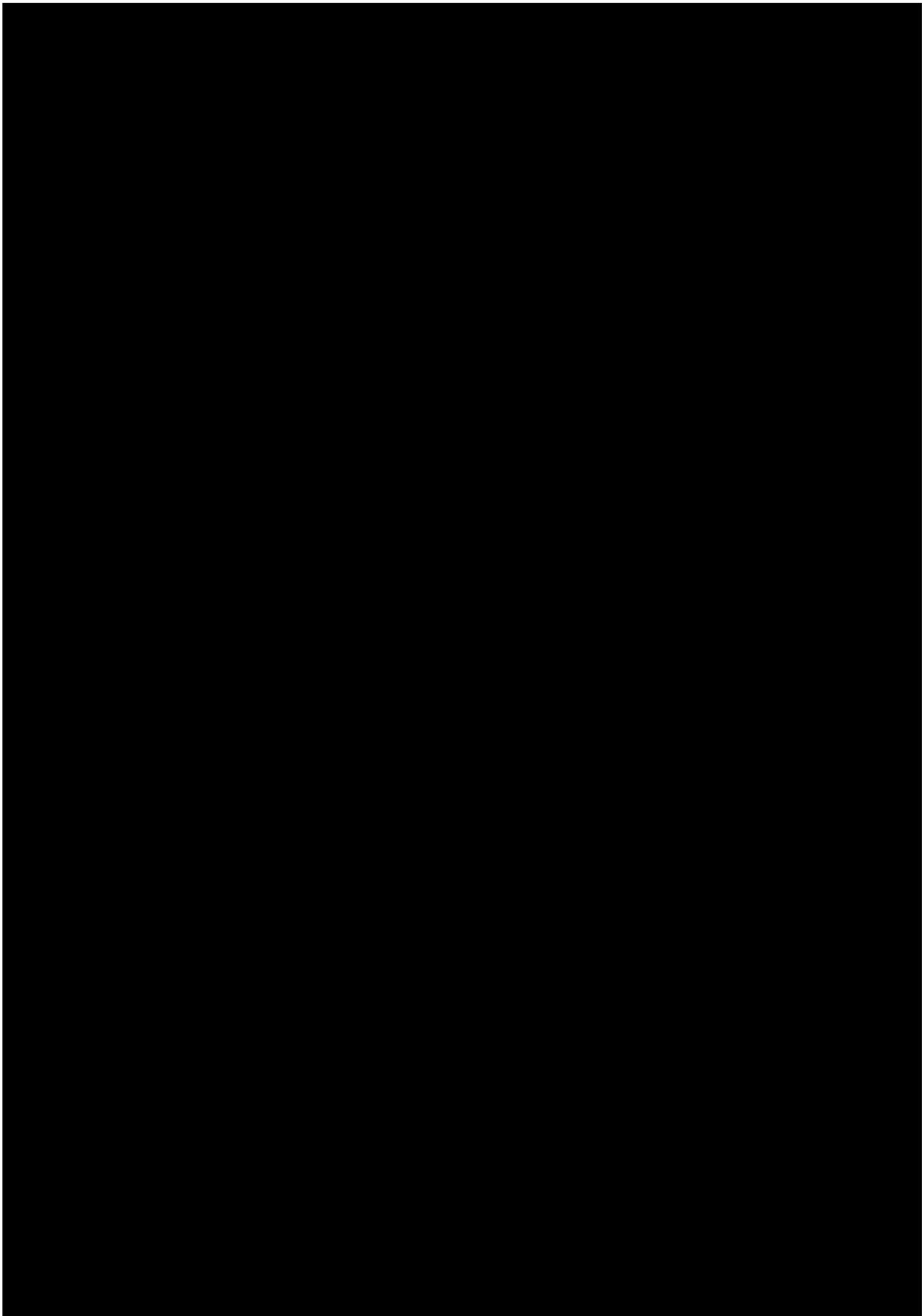


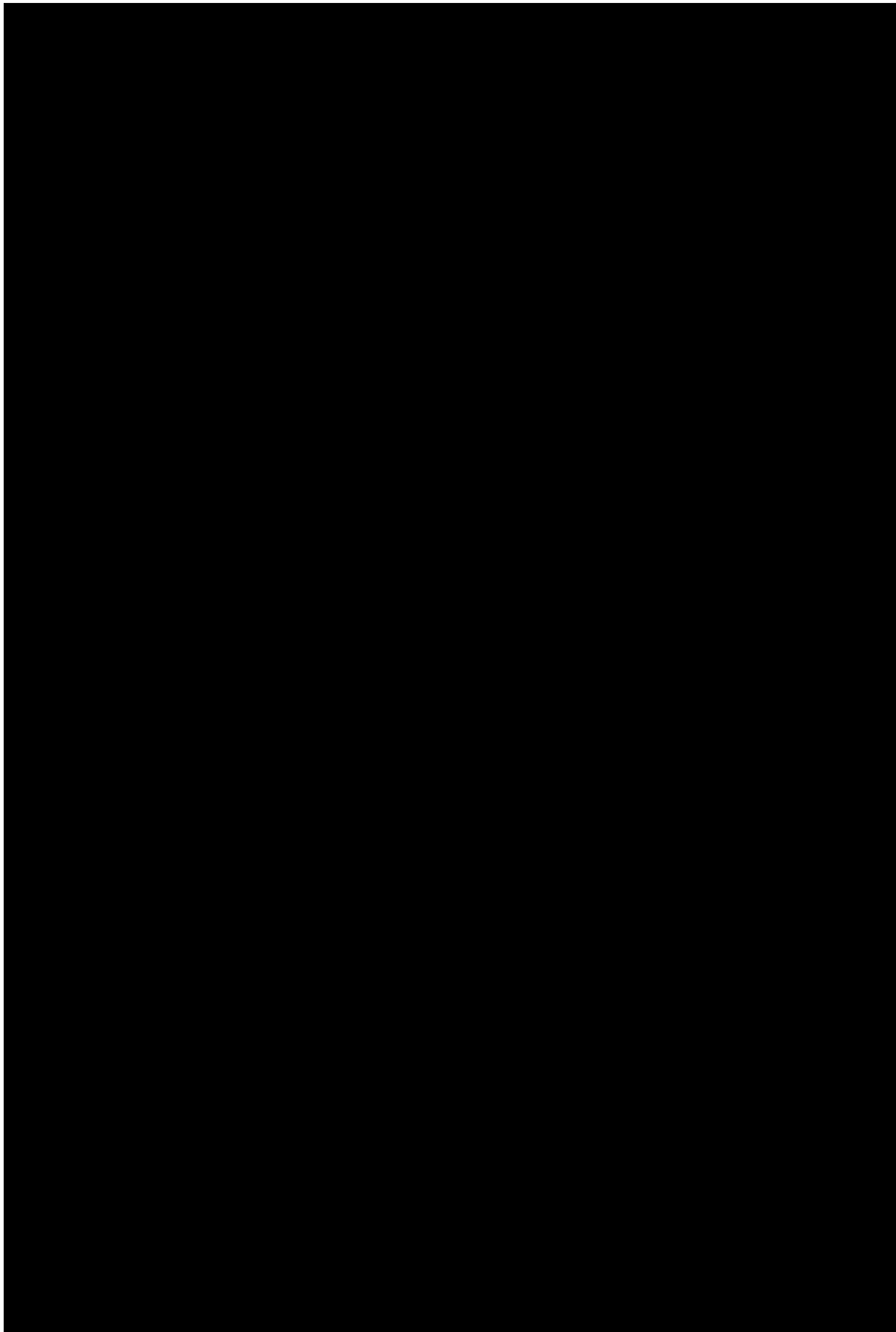


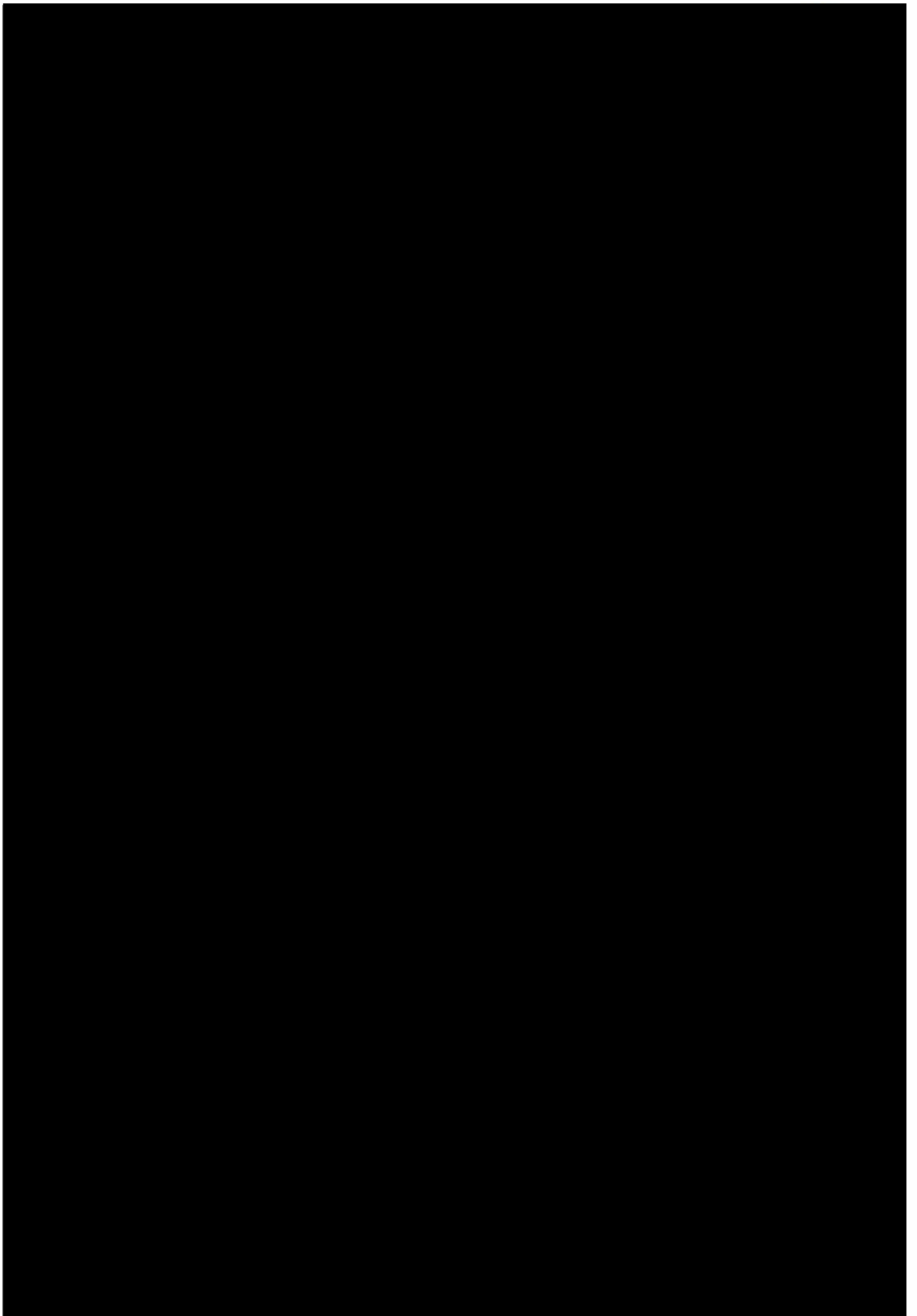


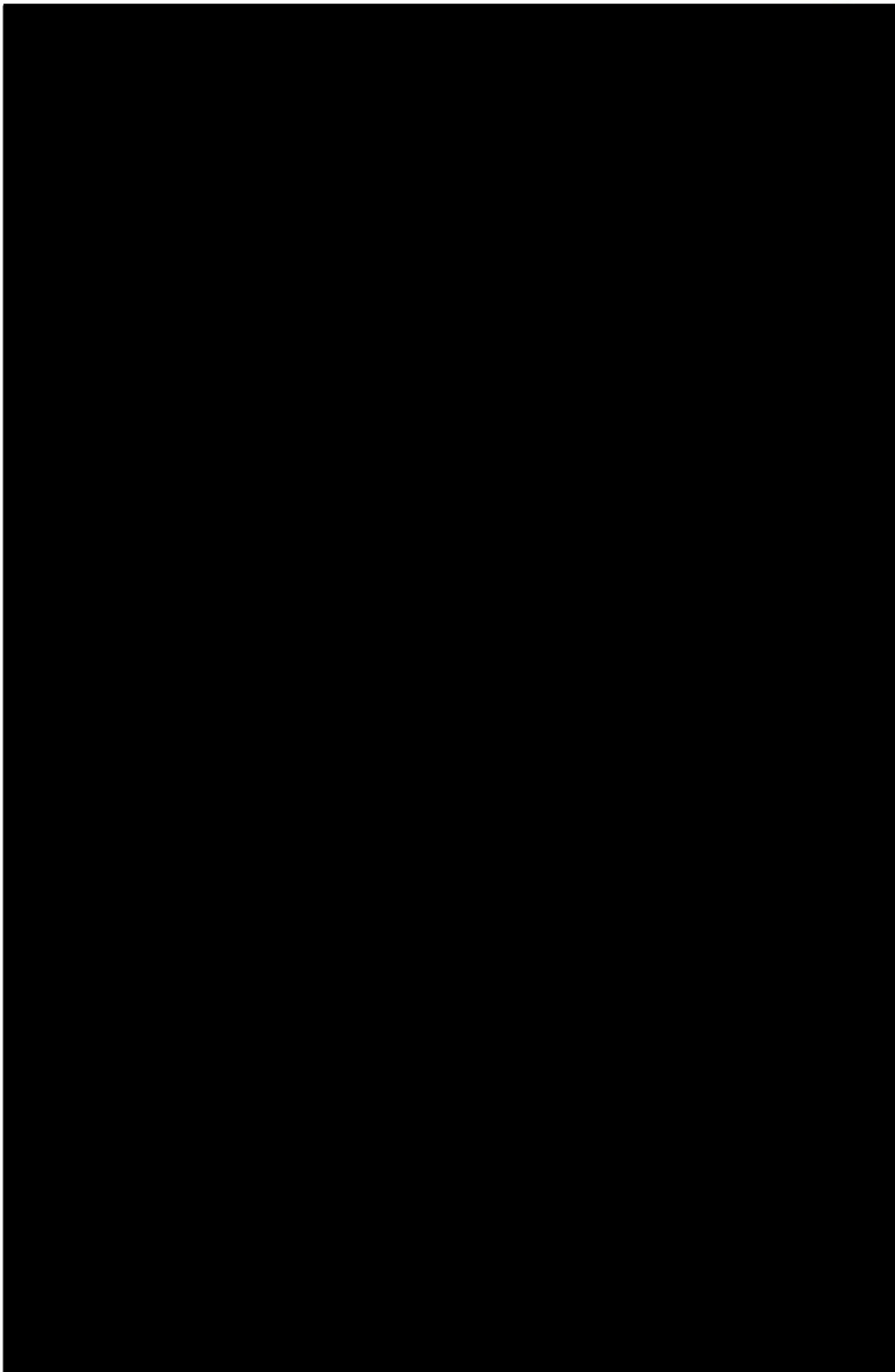




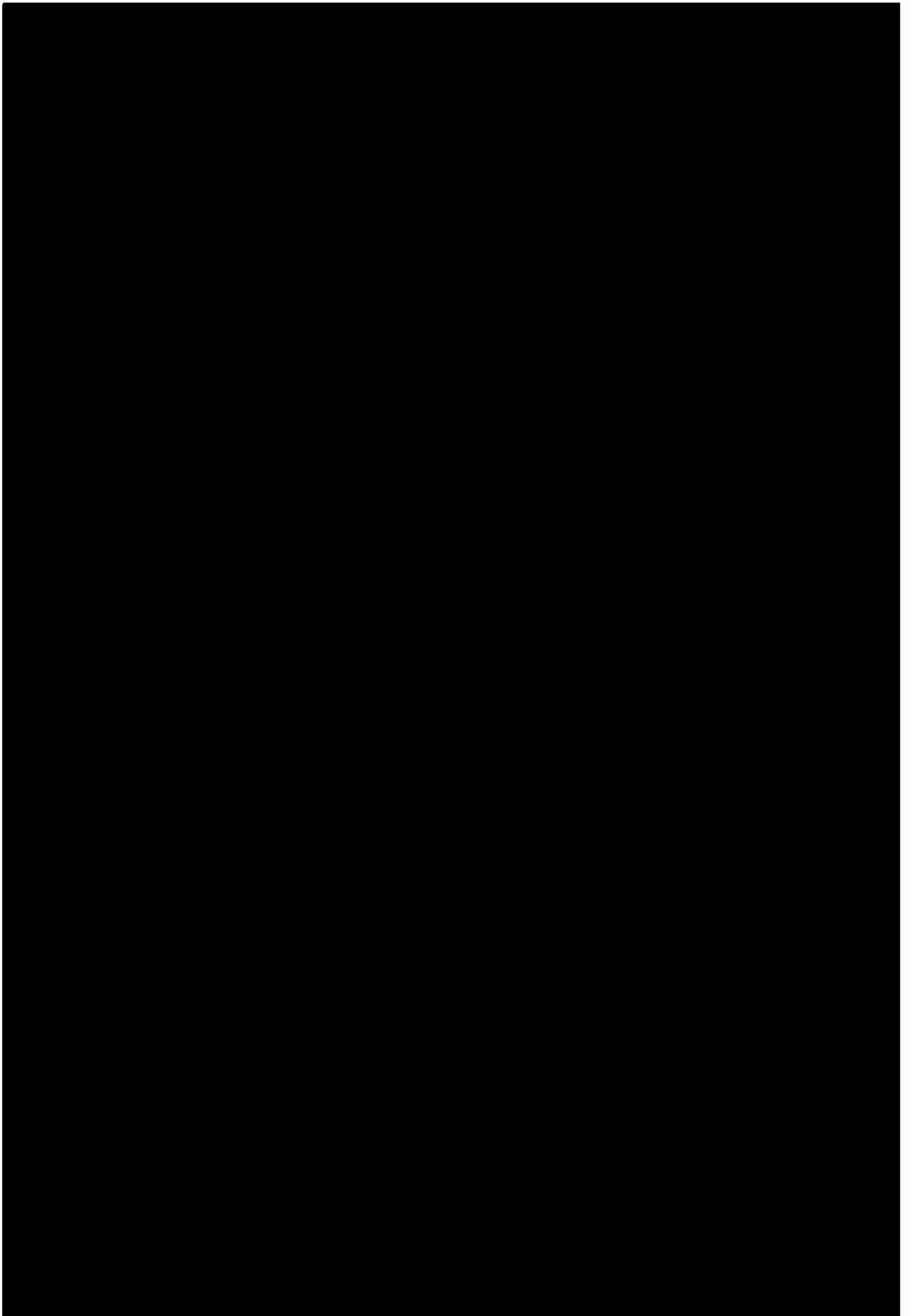


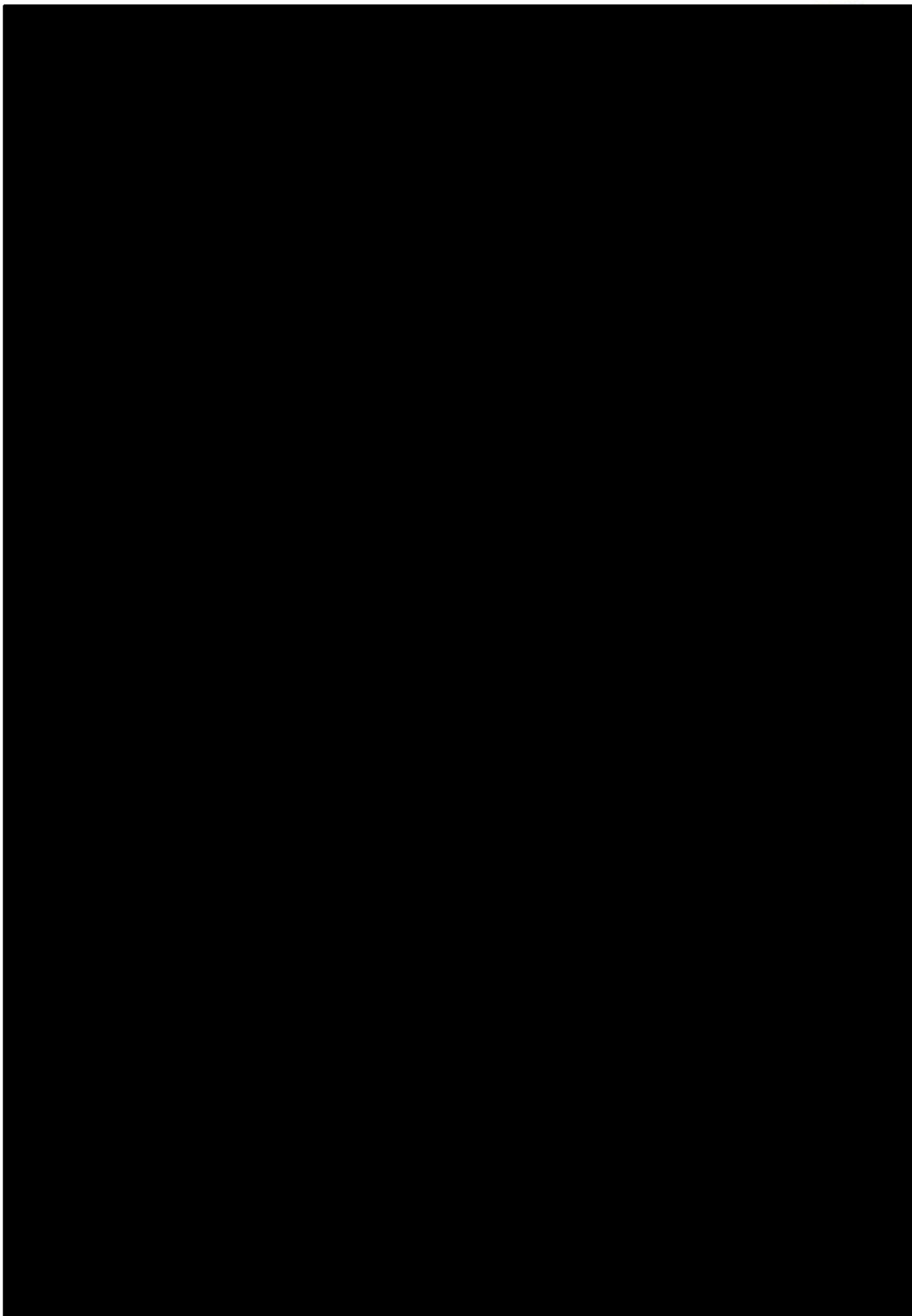


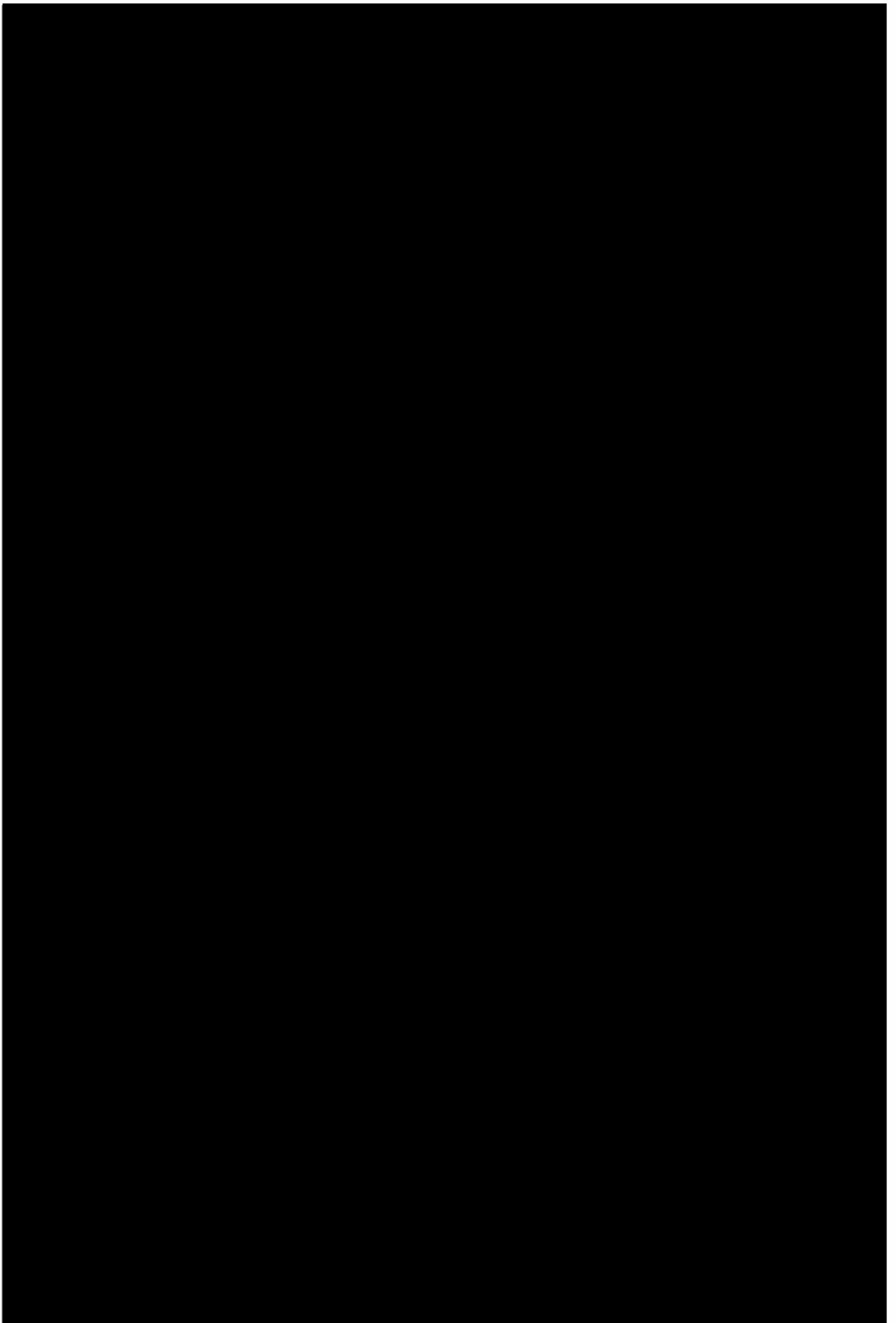


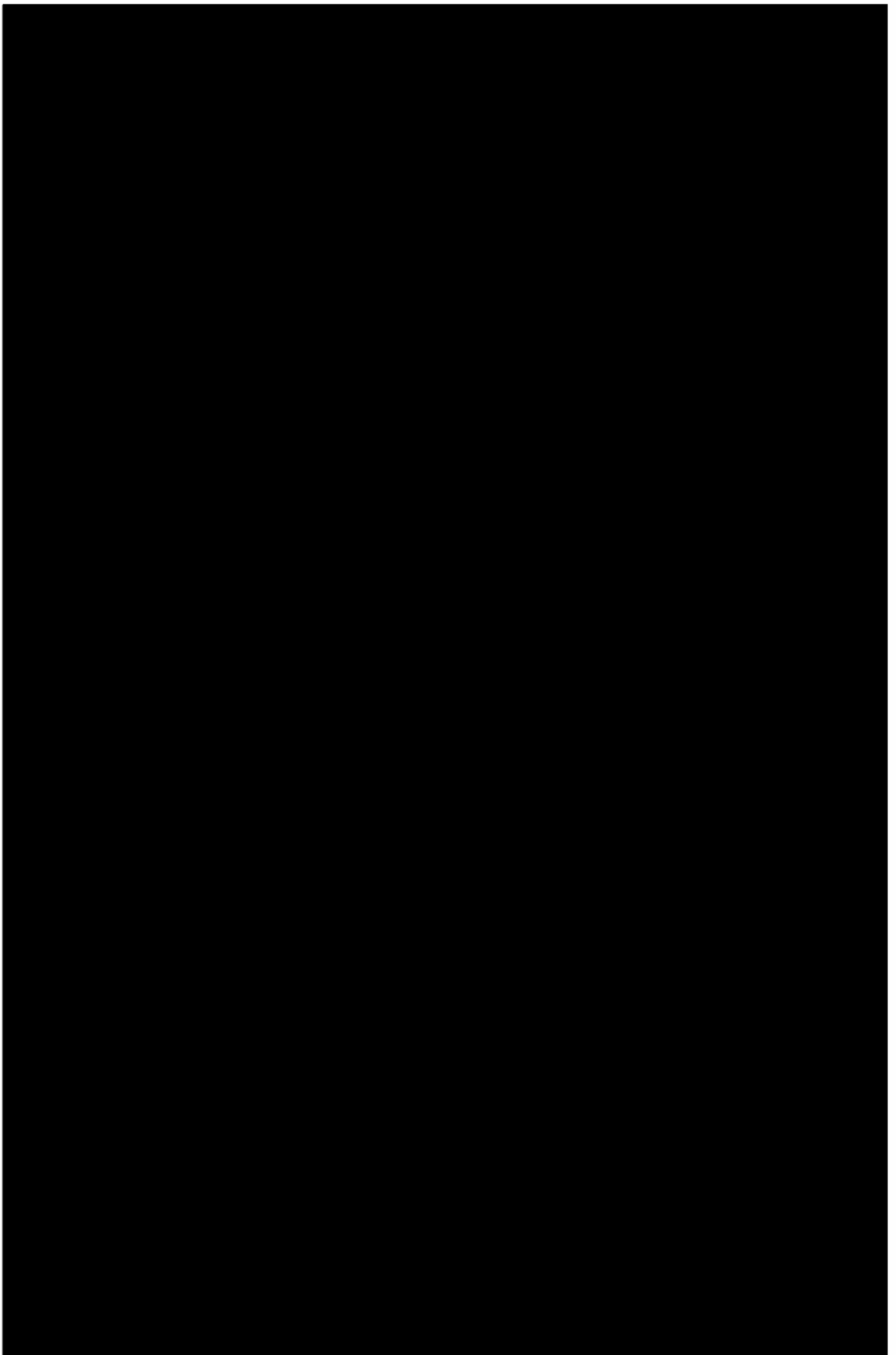


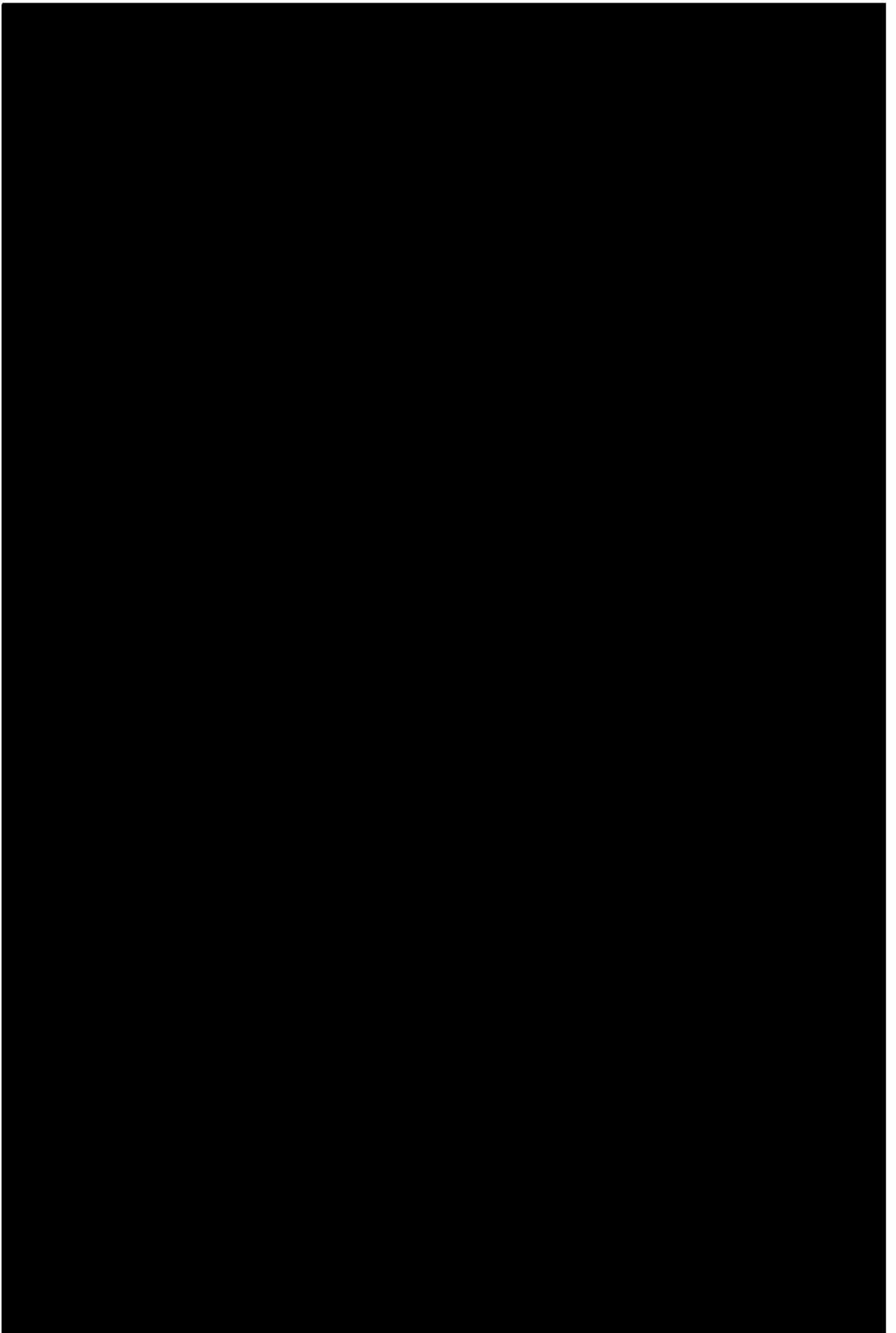


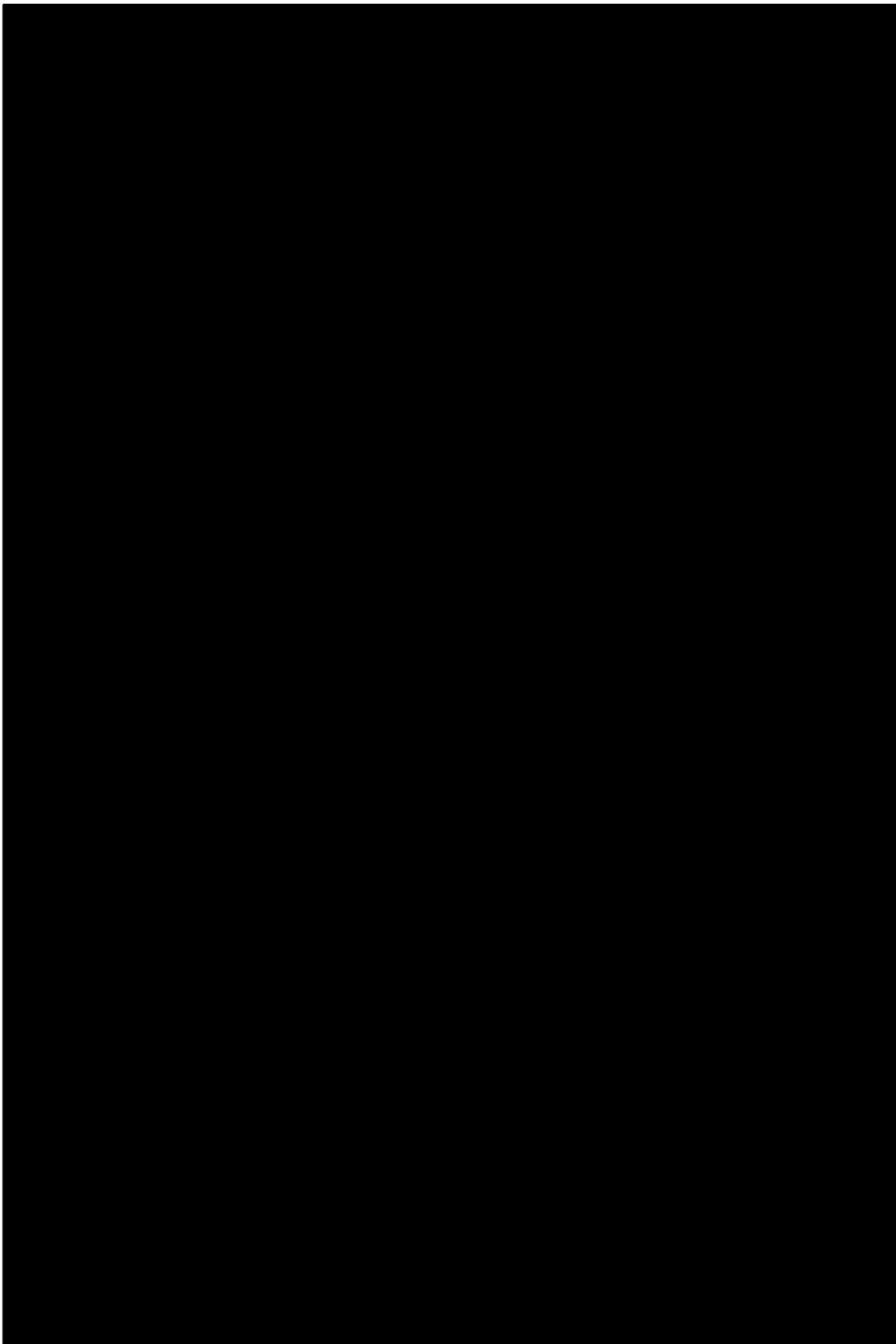


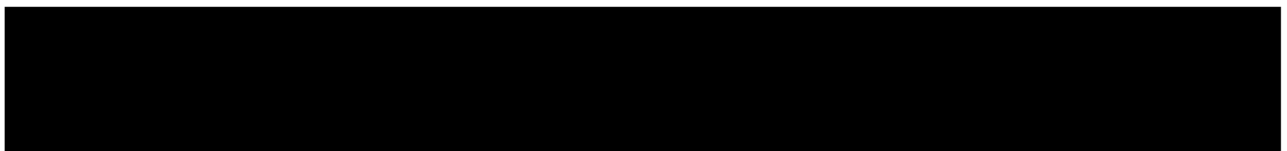


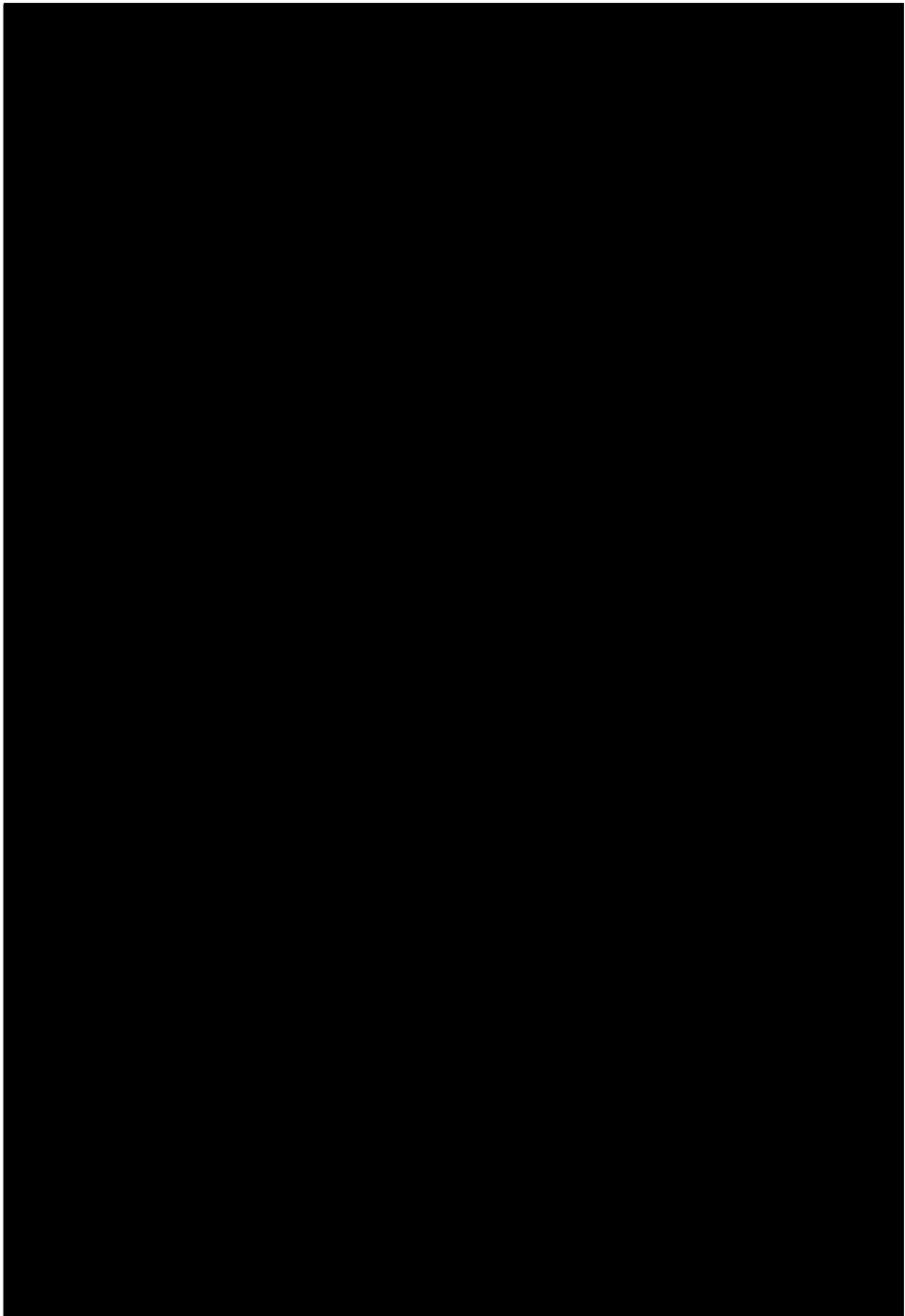


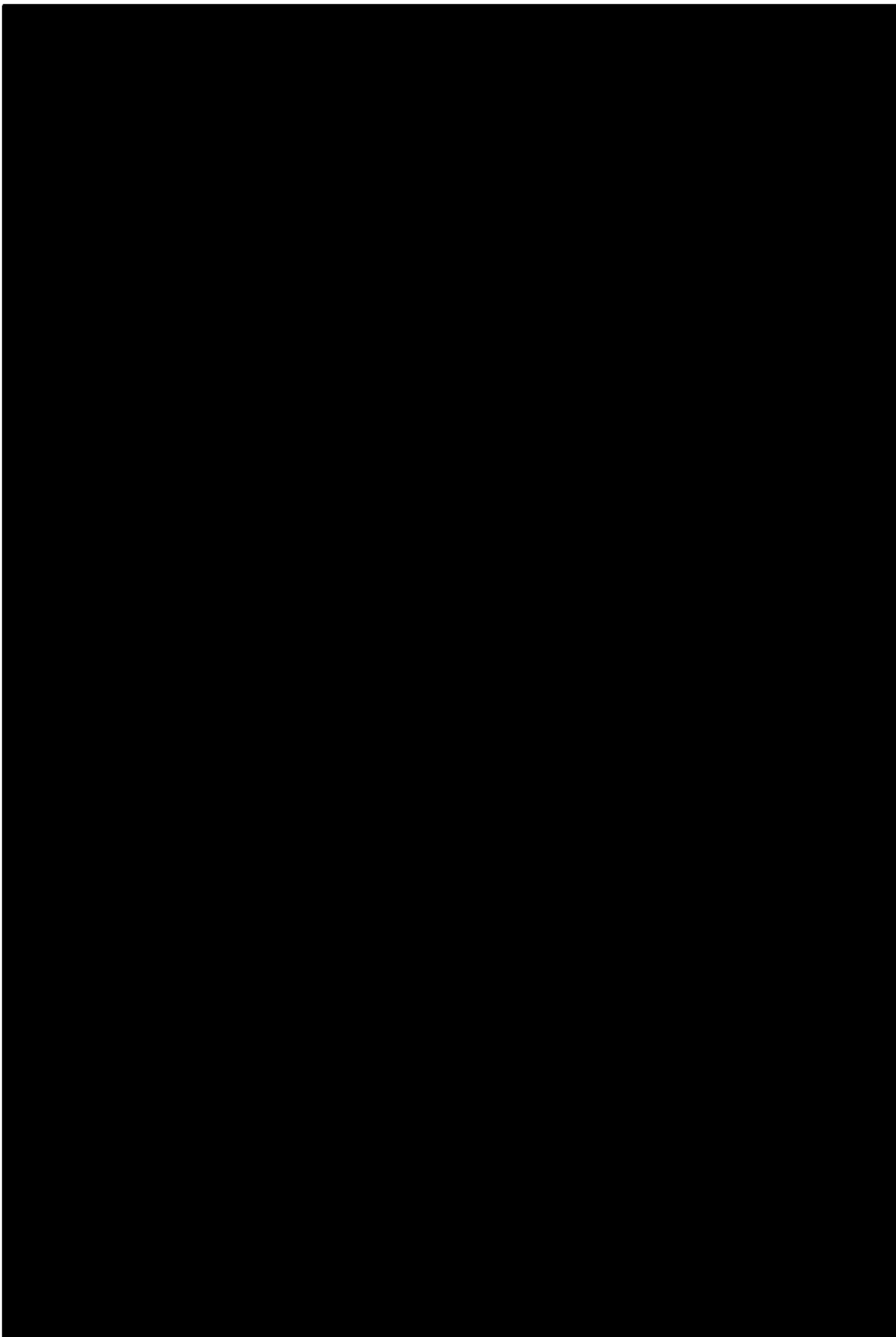


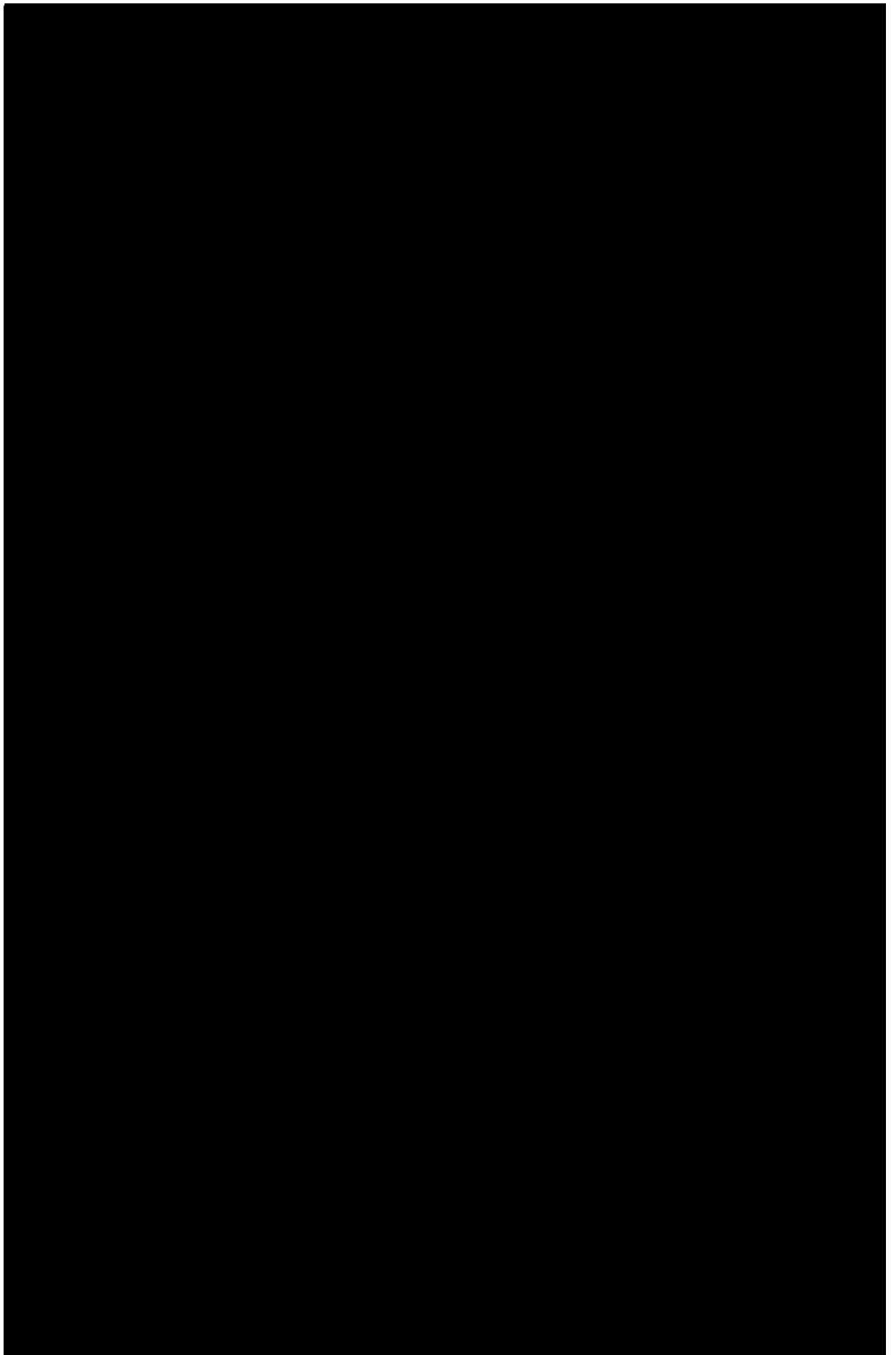


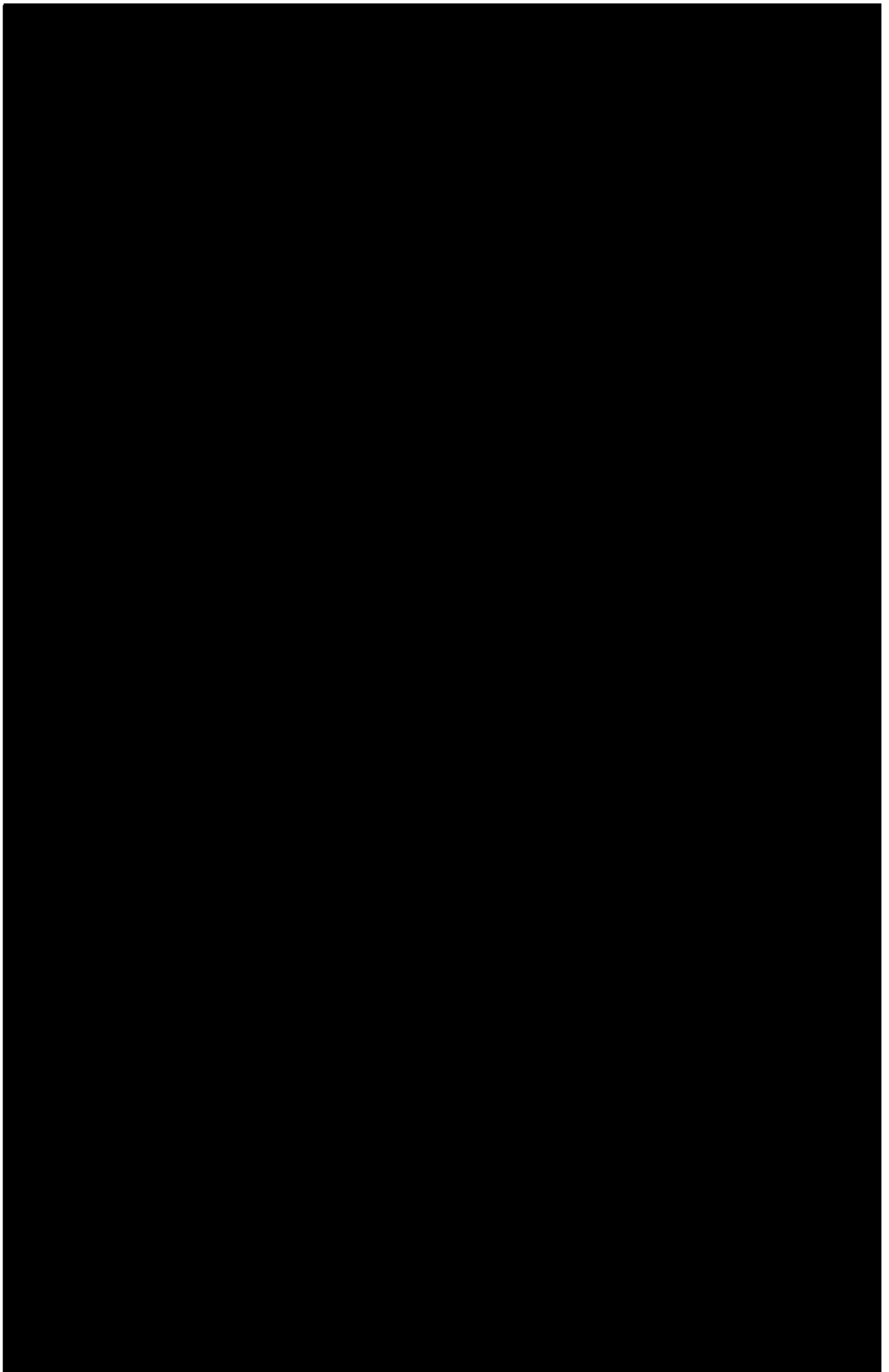


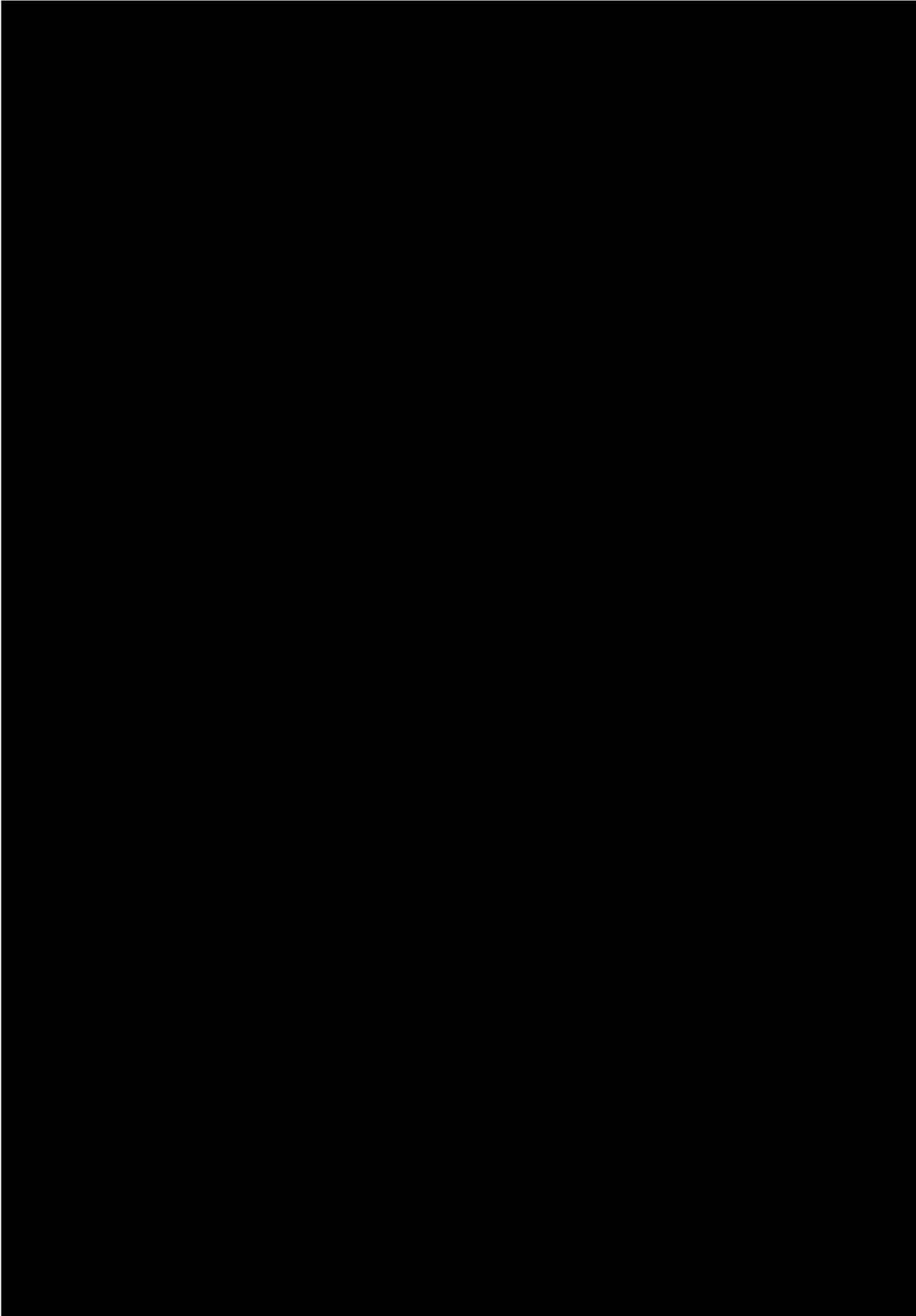


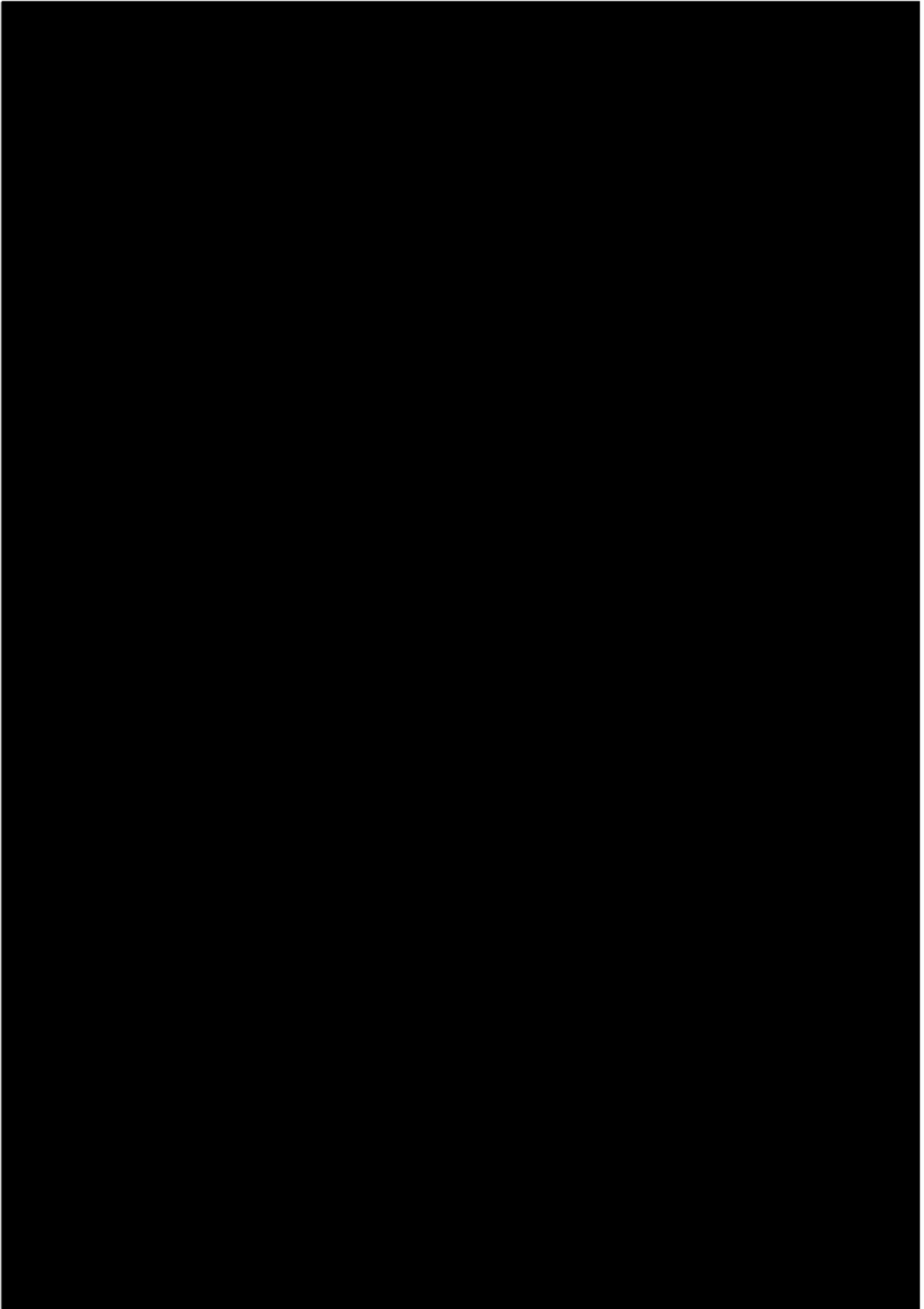


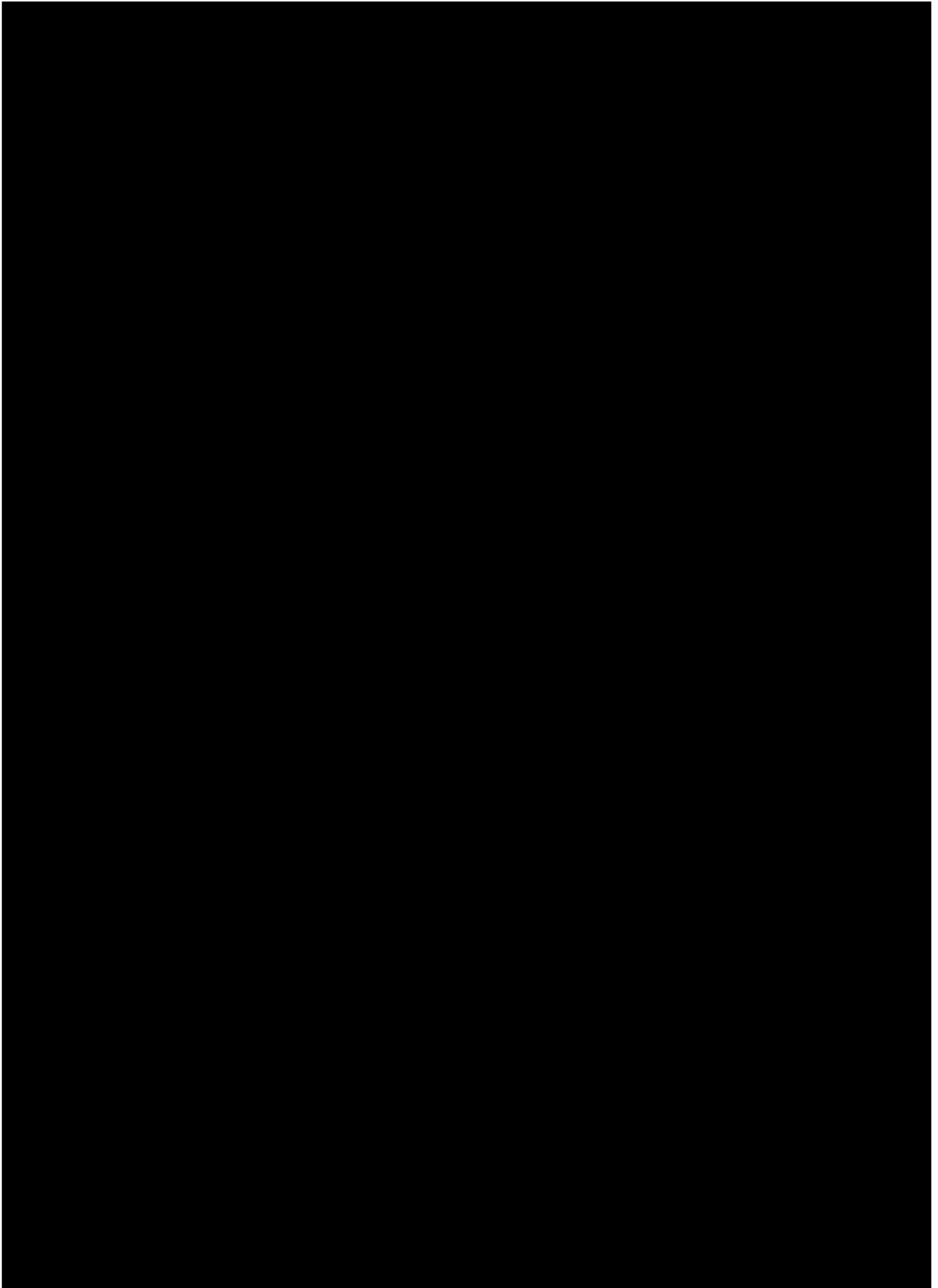












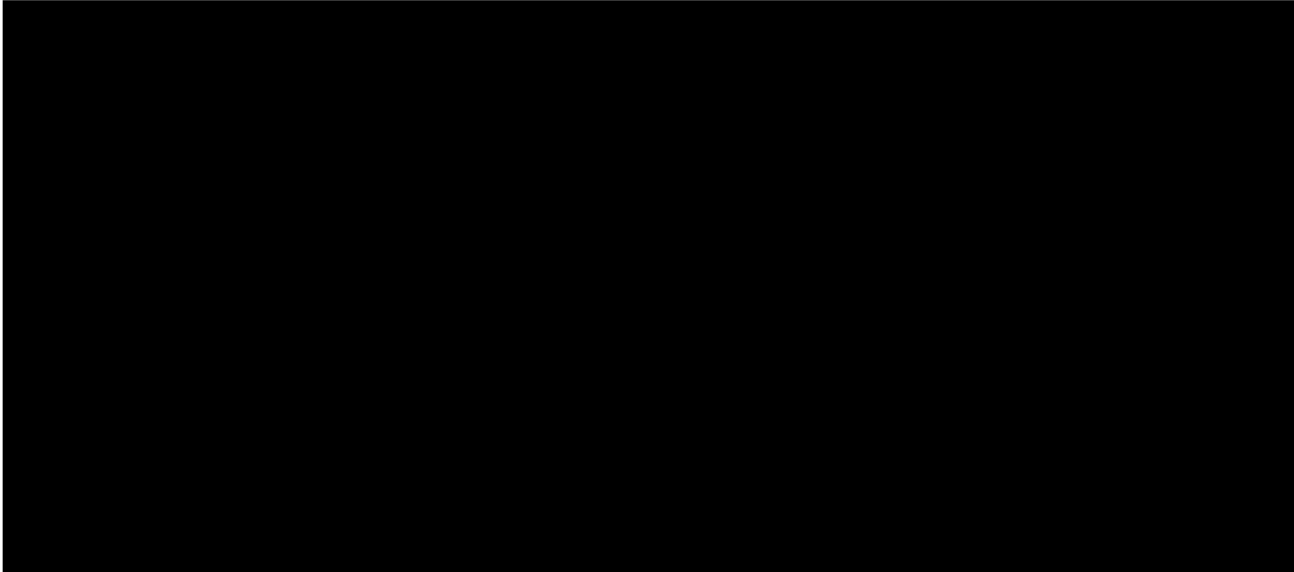


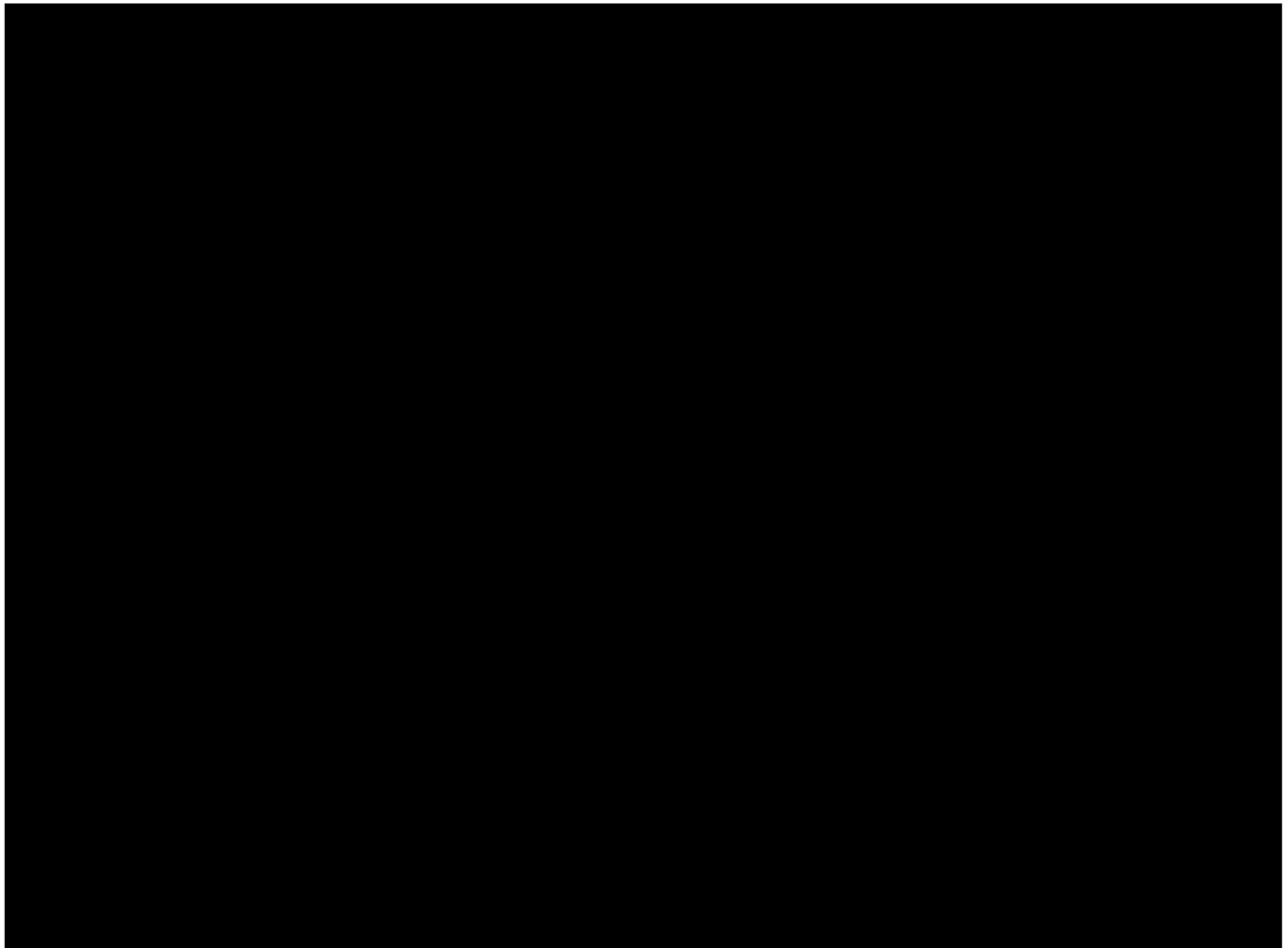
**Transport
for NSW**

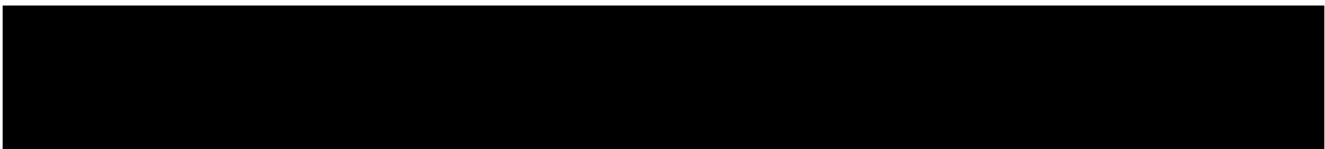
Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F3 – Initial Transition-In Management Plan

Document Number: 3129228_10
Execution Version

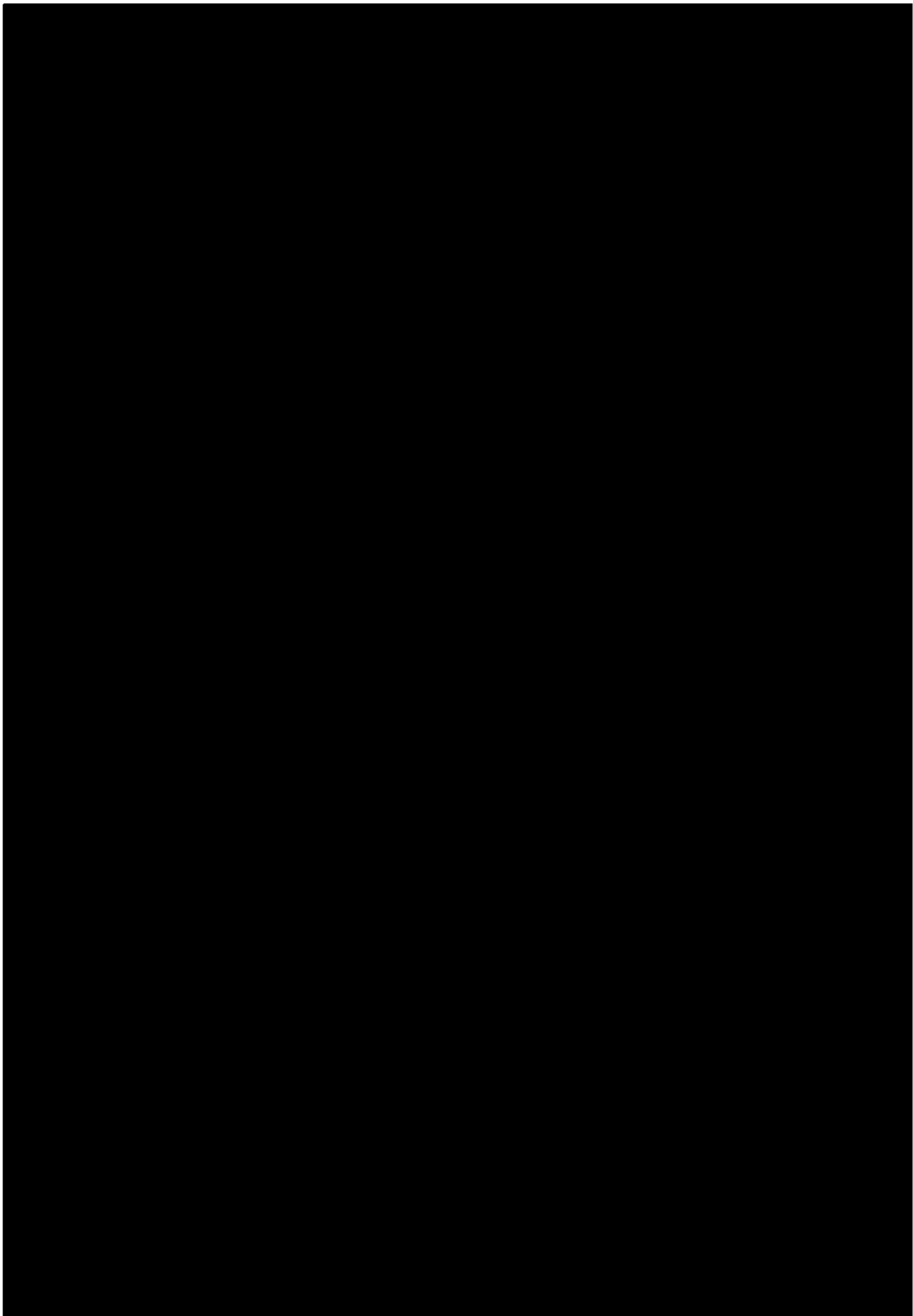


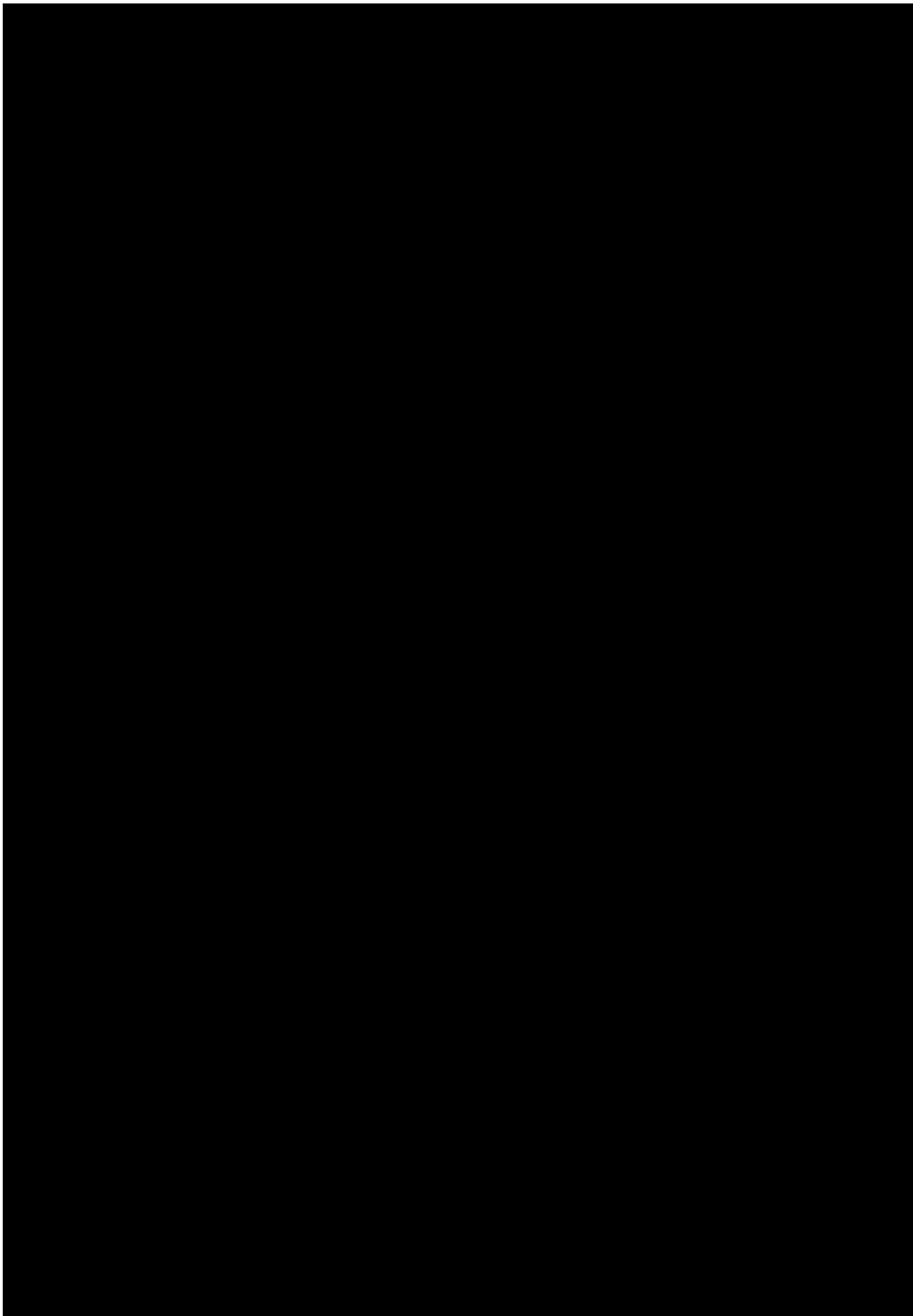


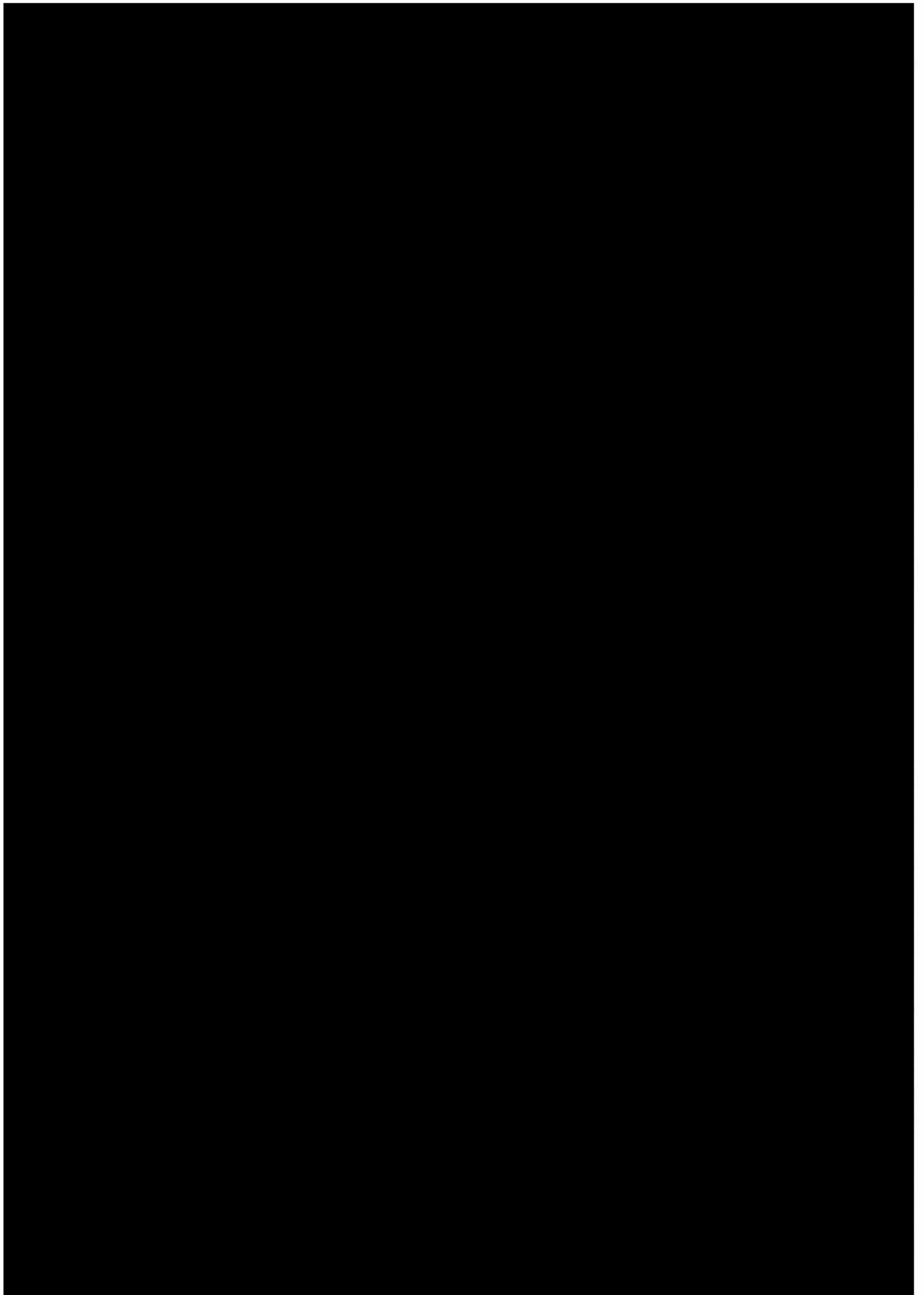


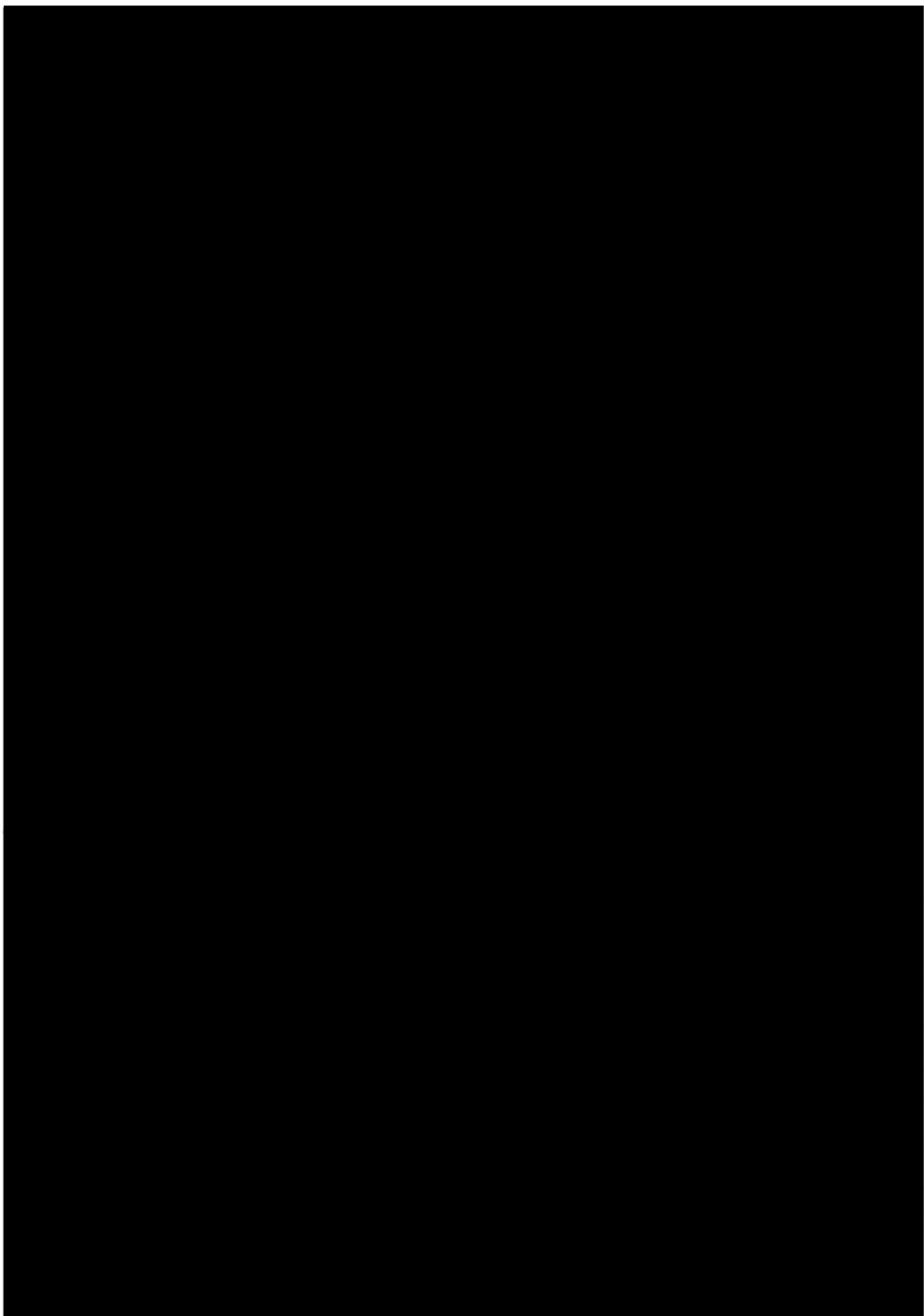


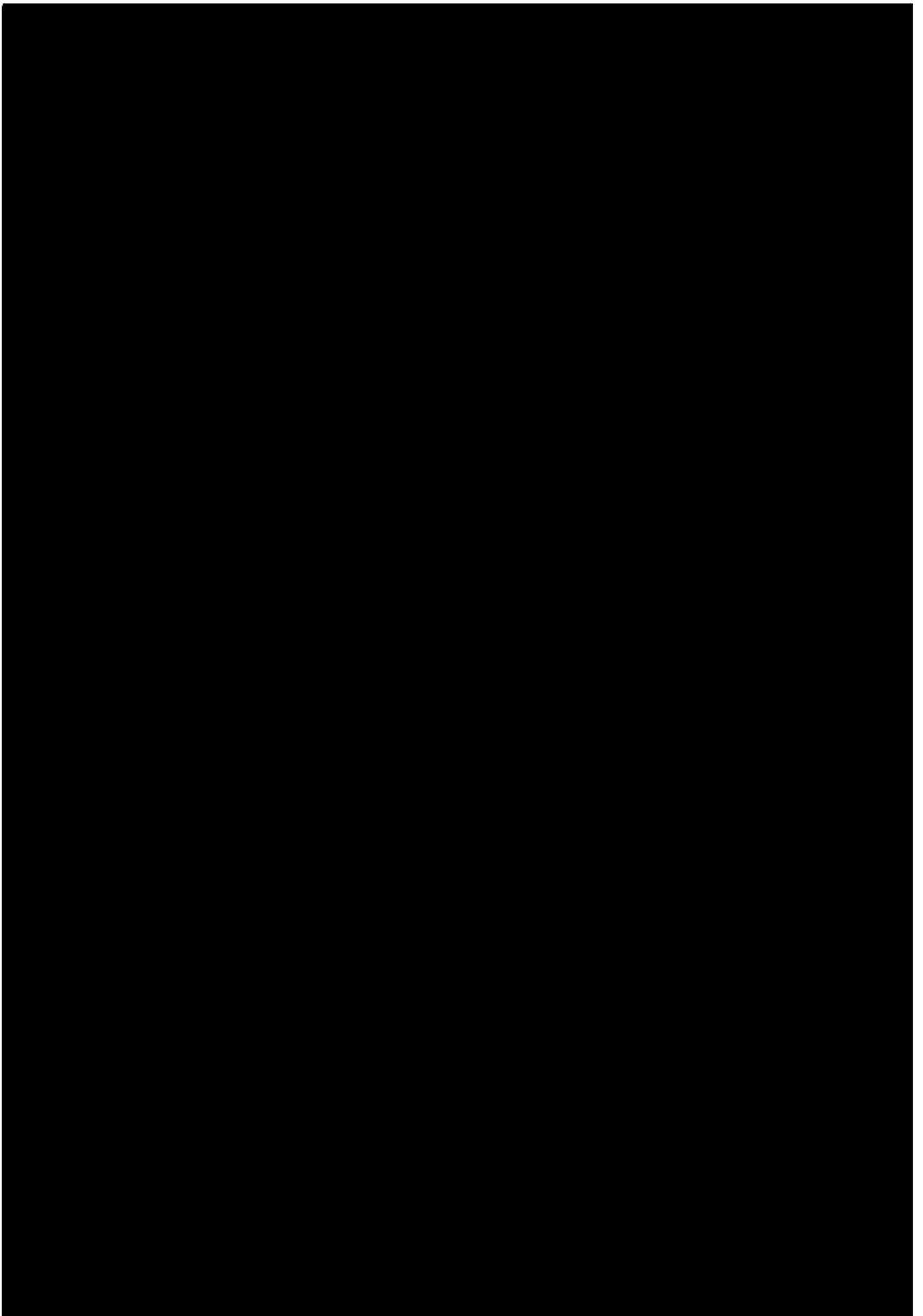


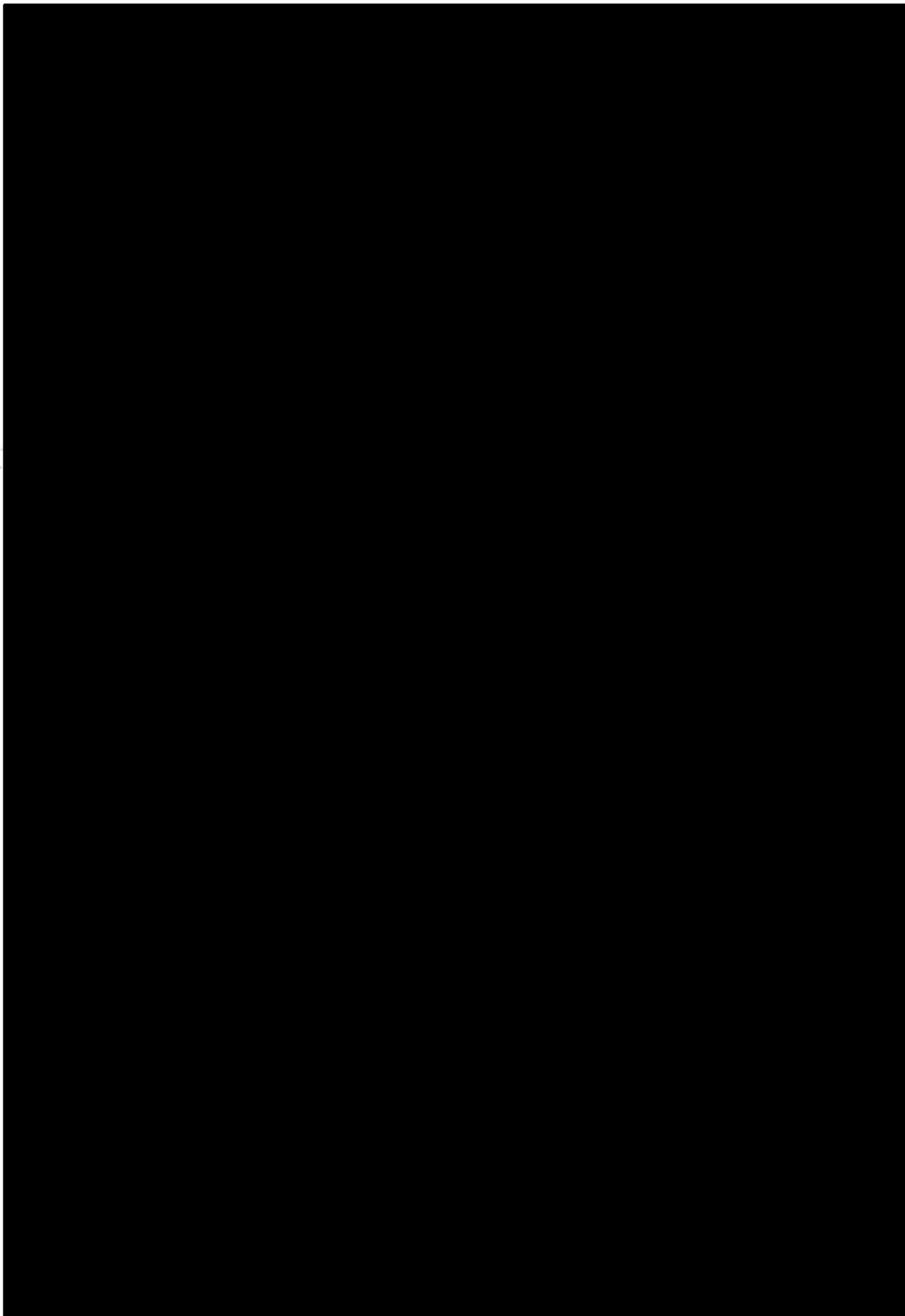


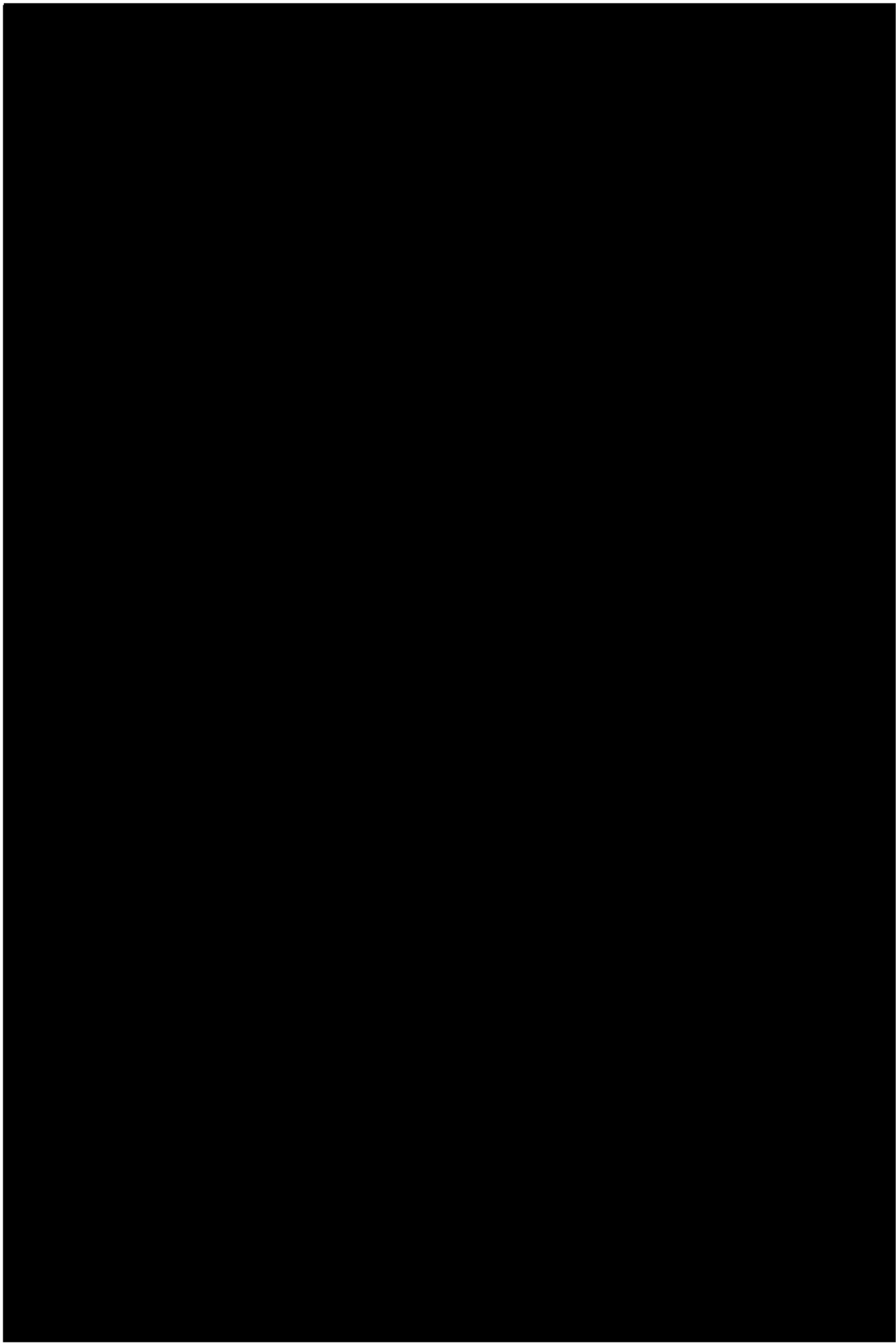


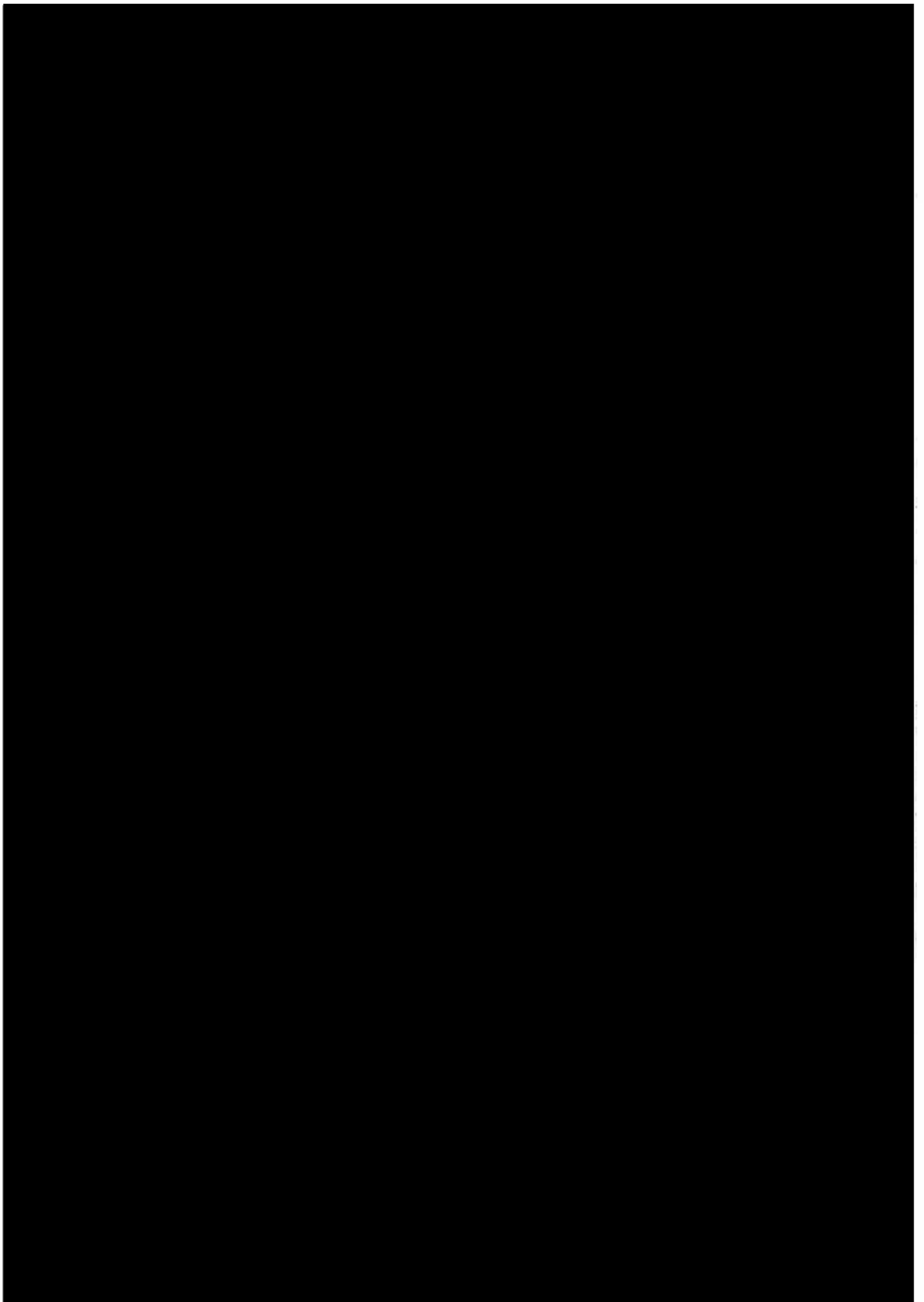


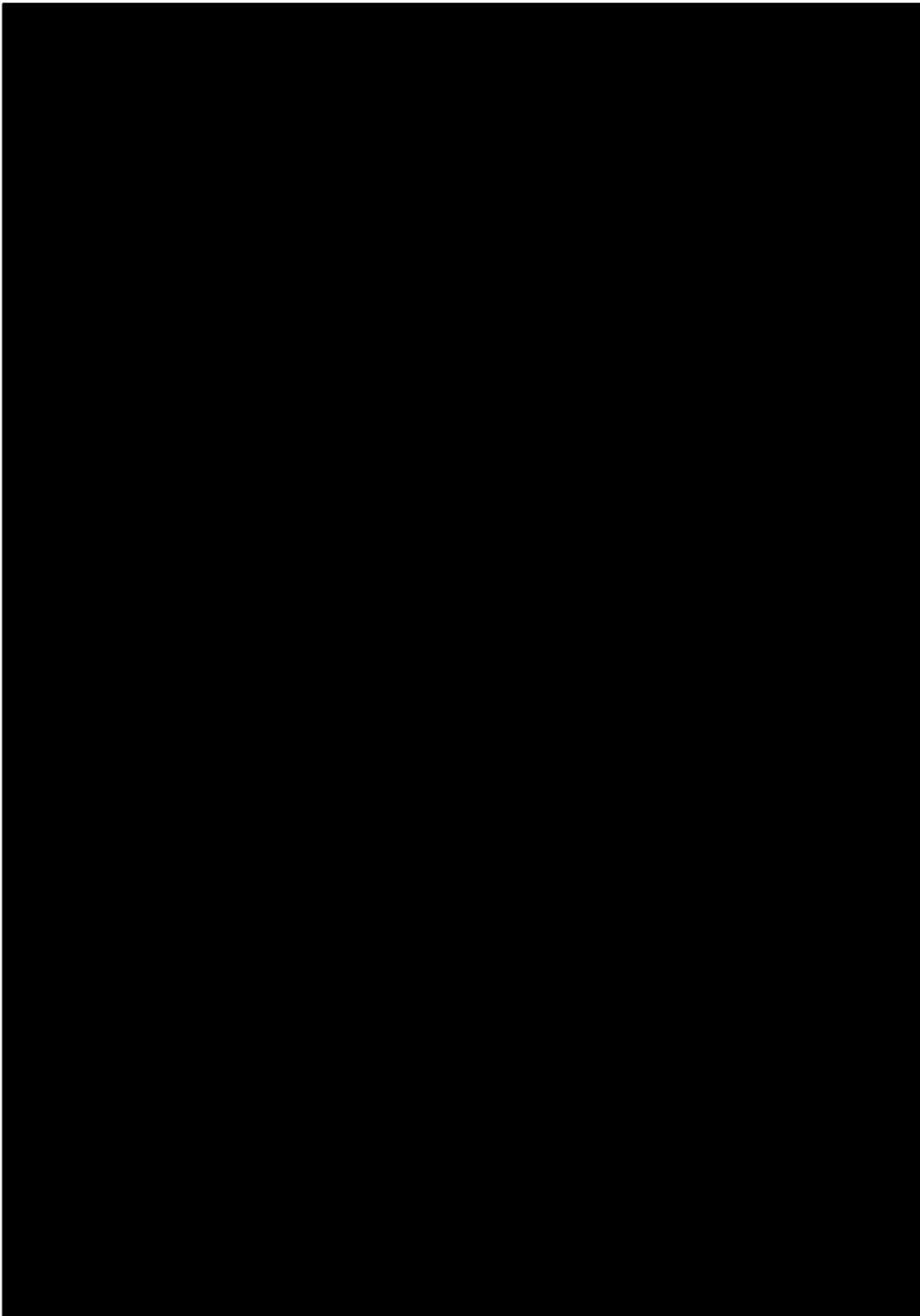


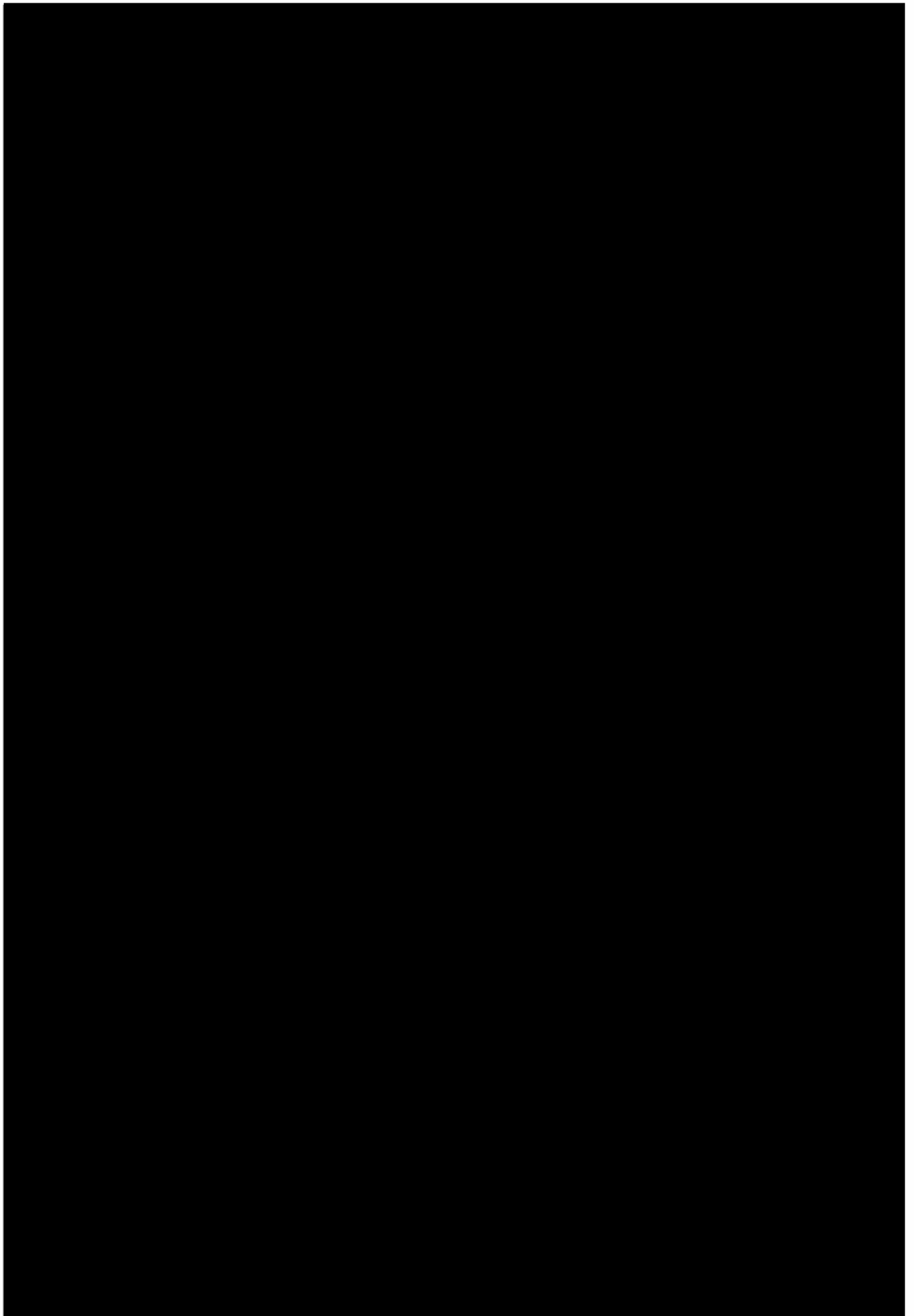


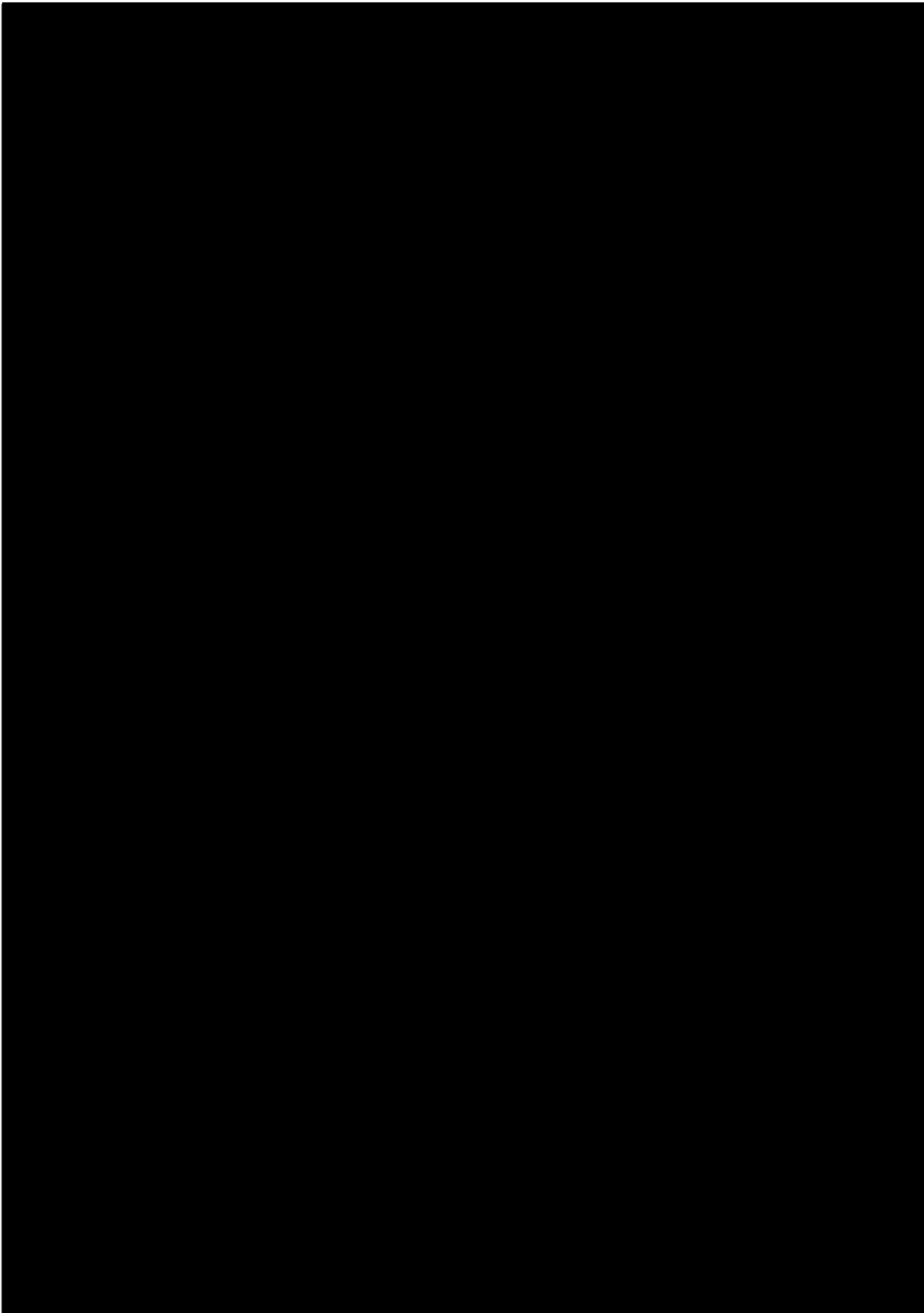


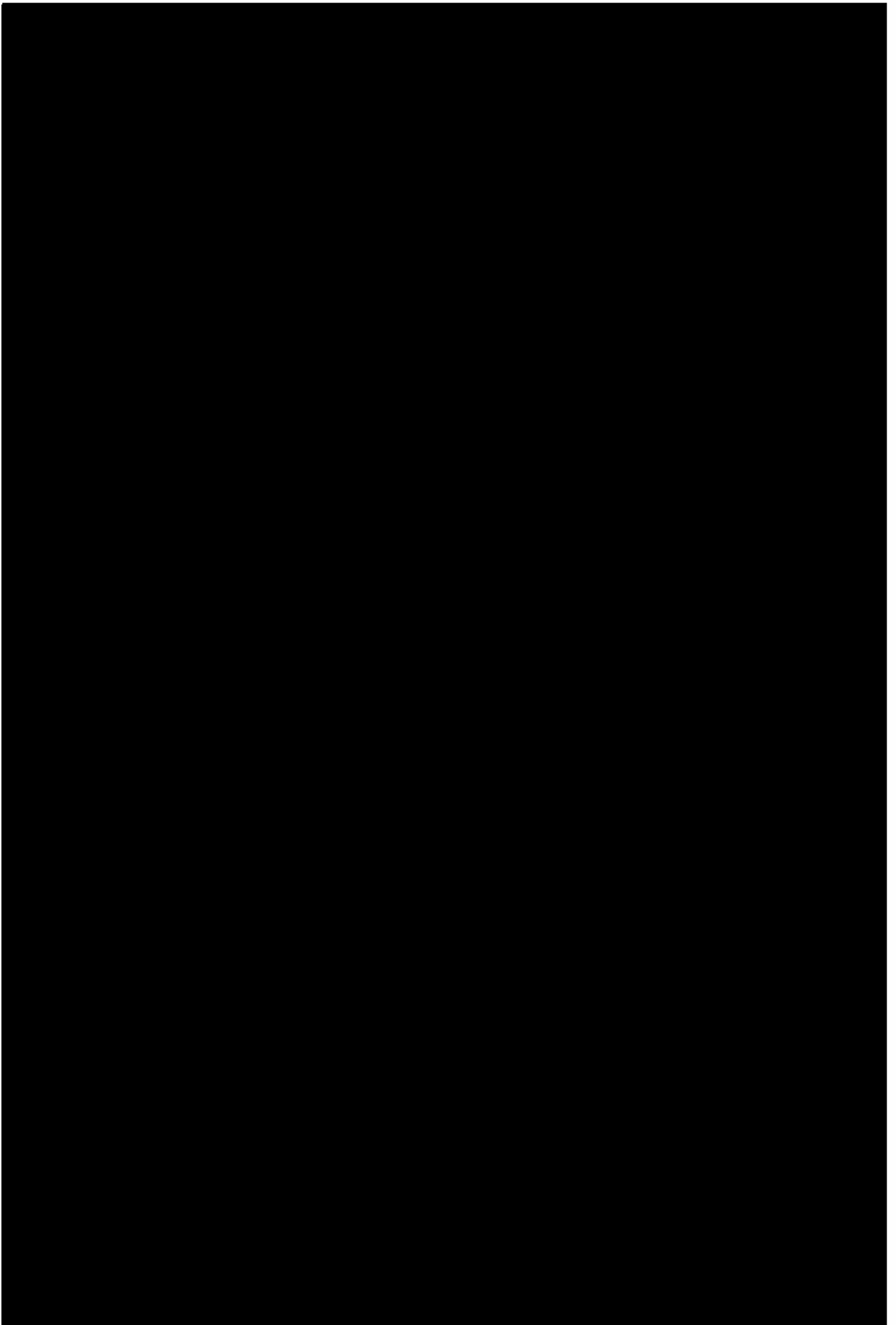


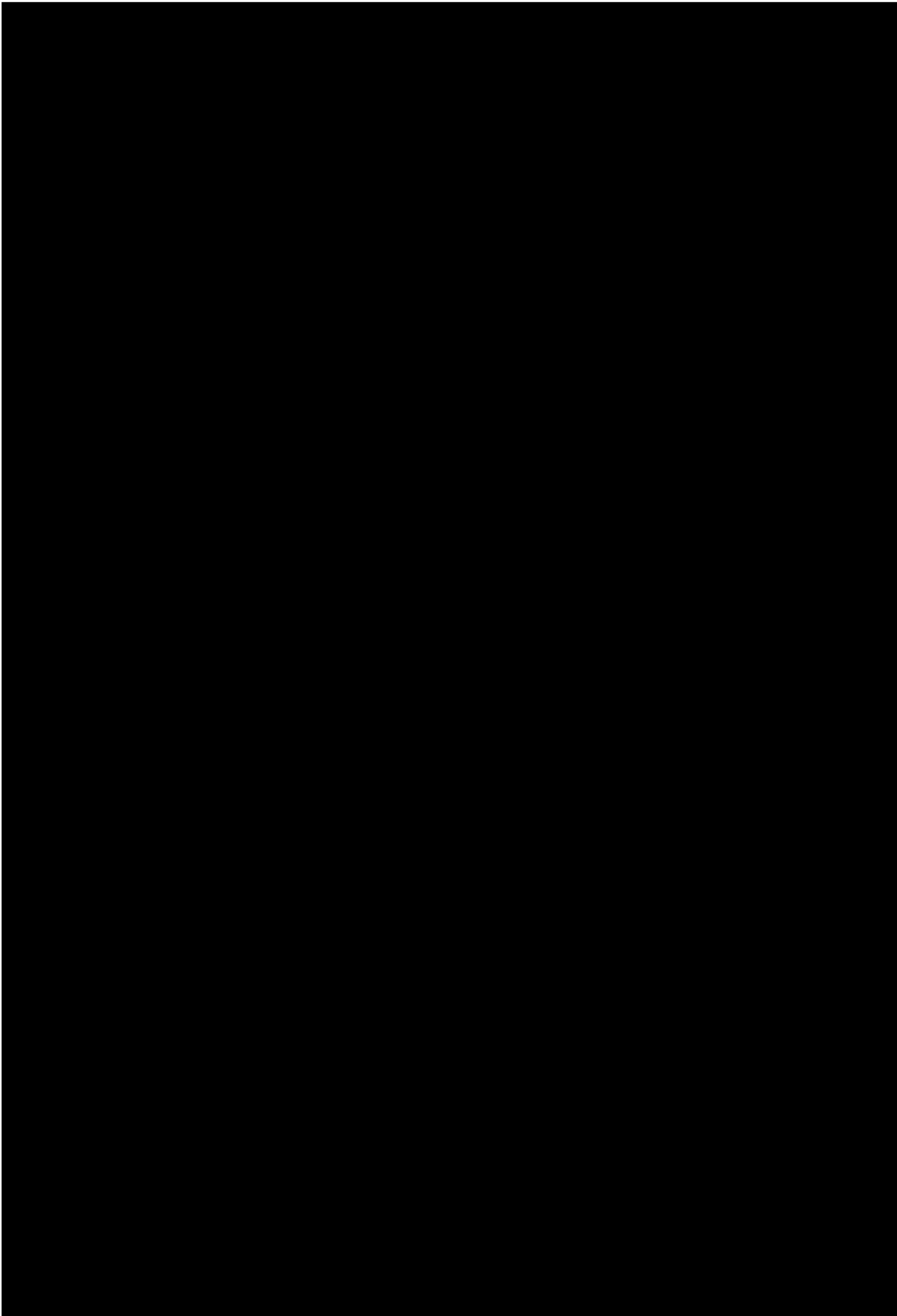


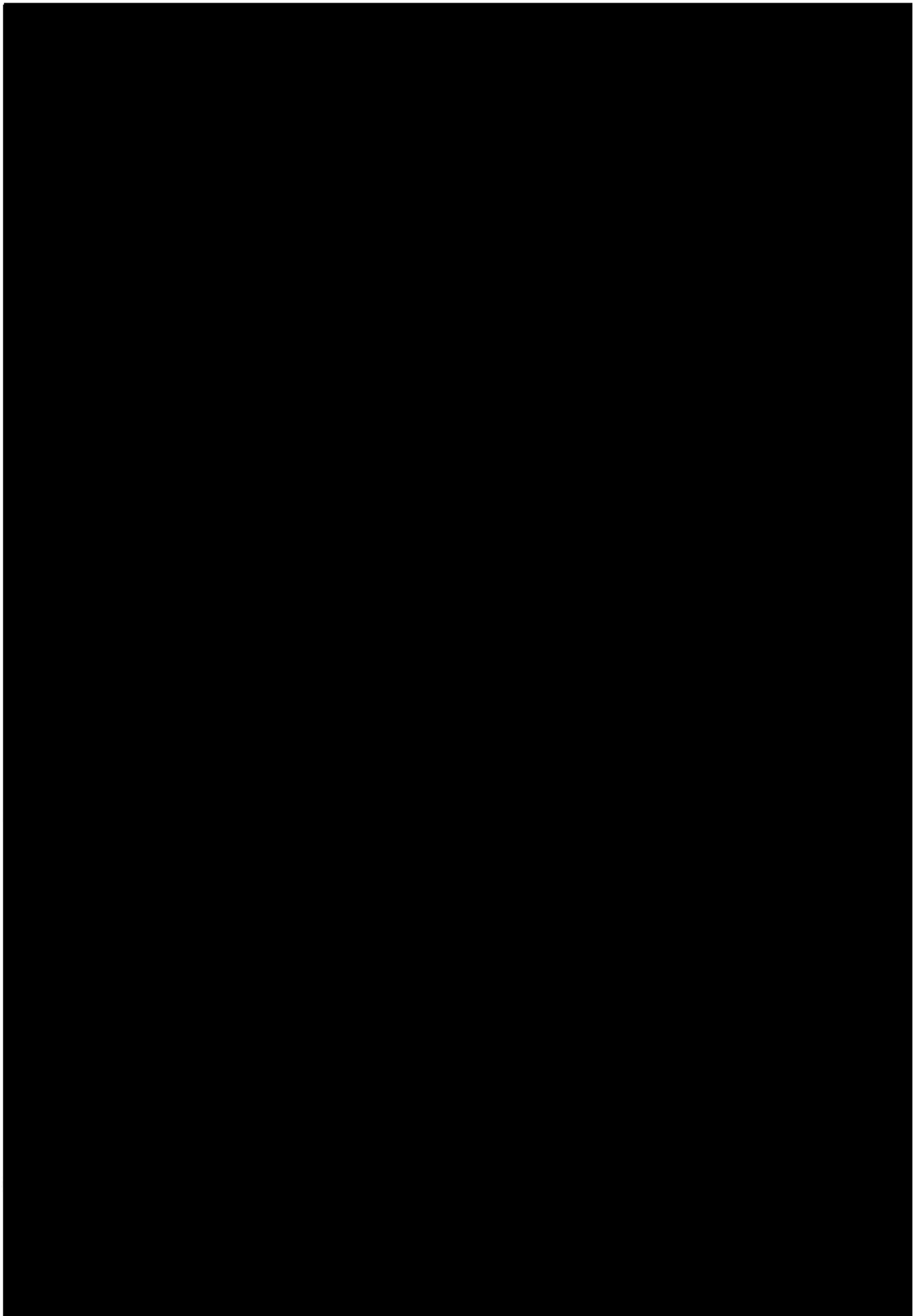


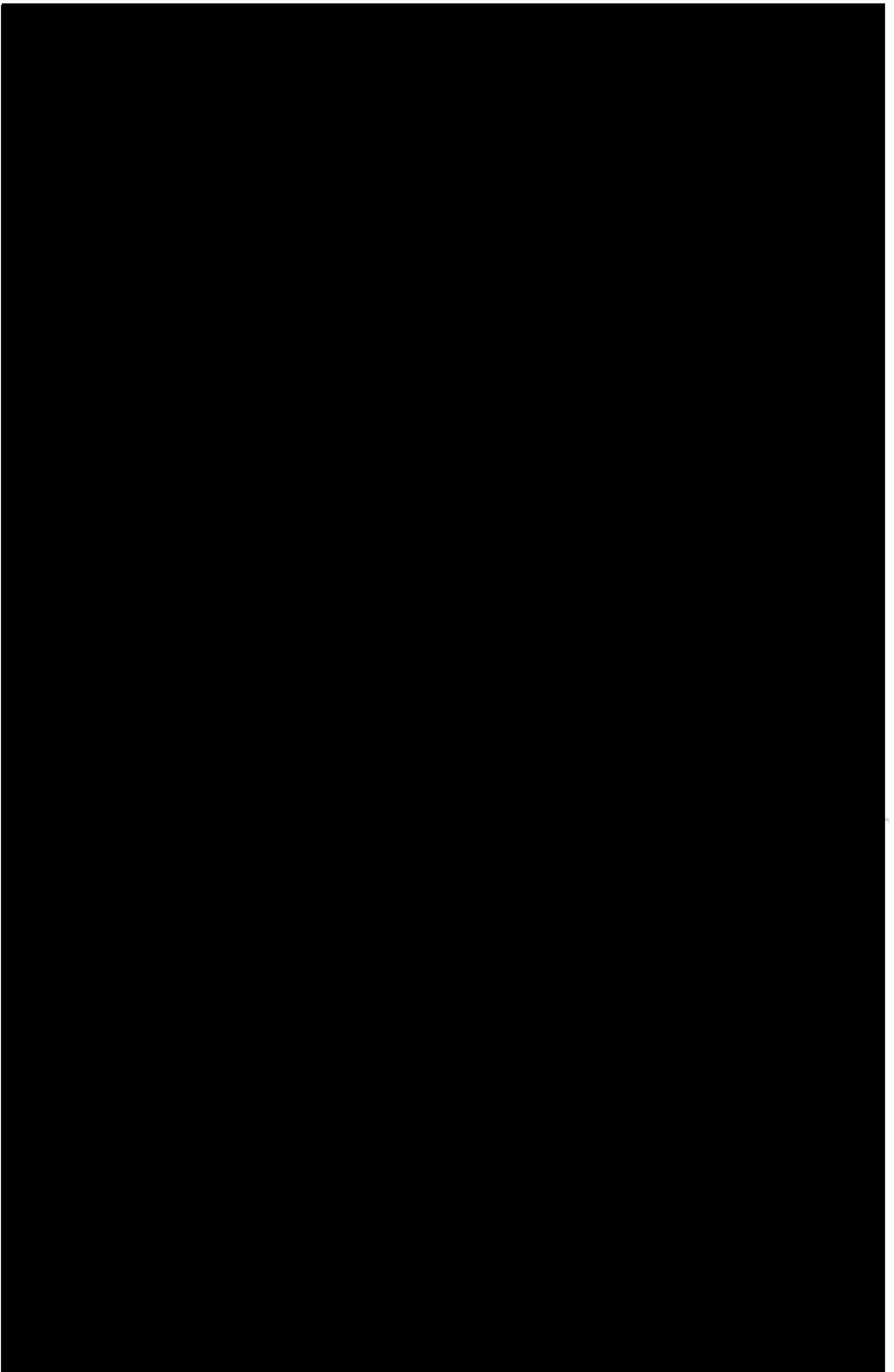


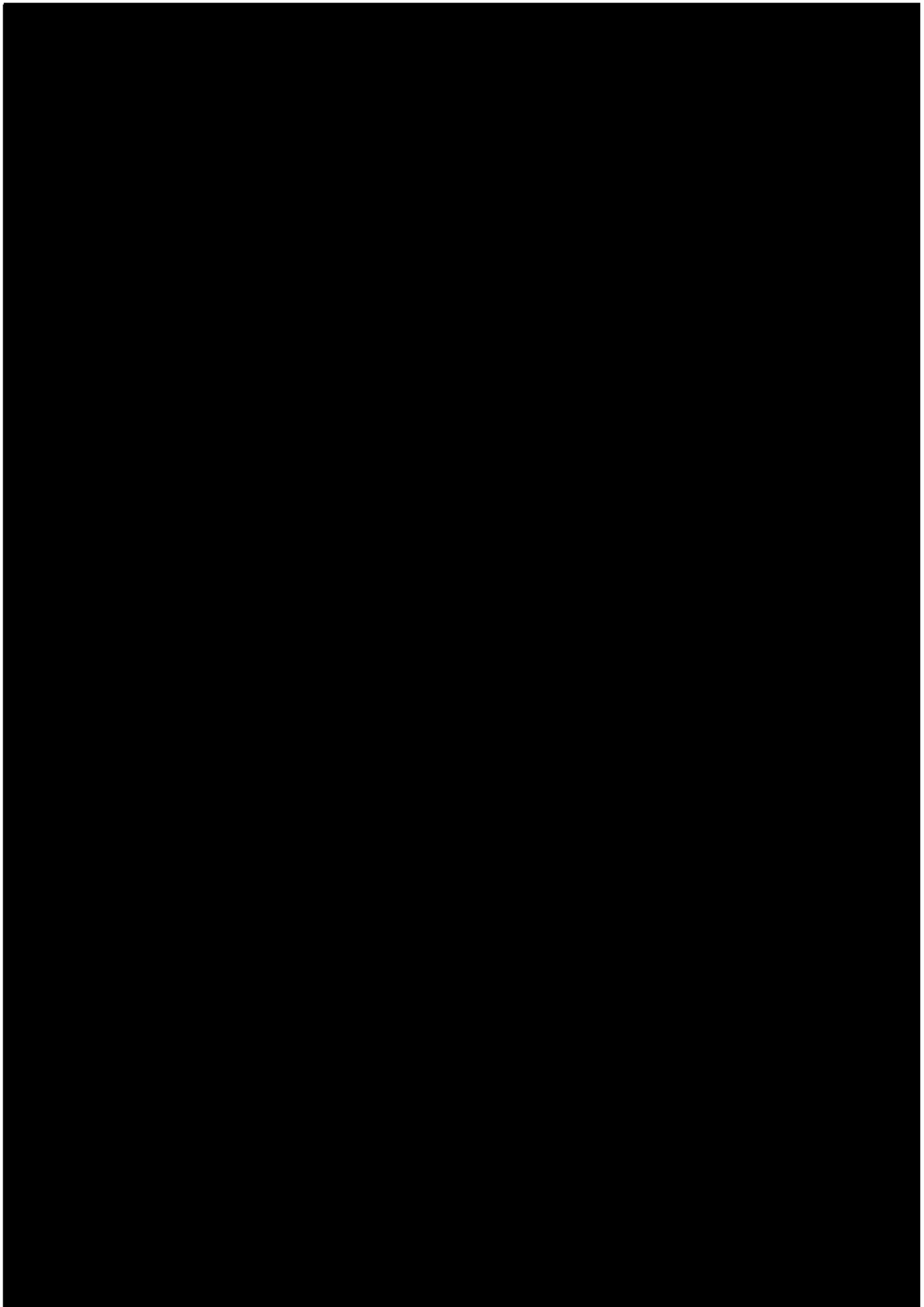


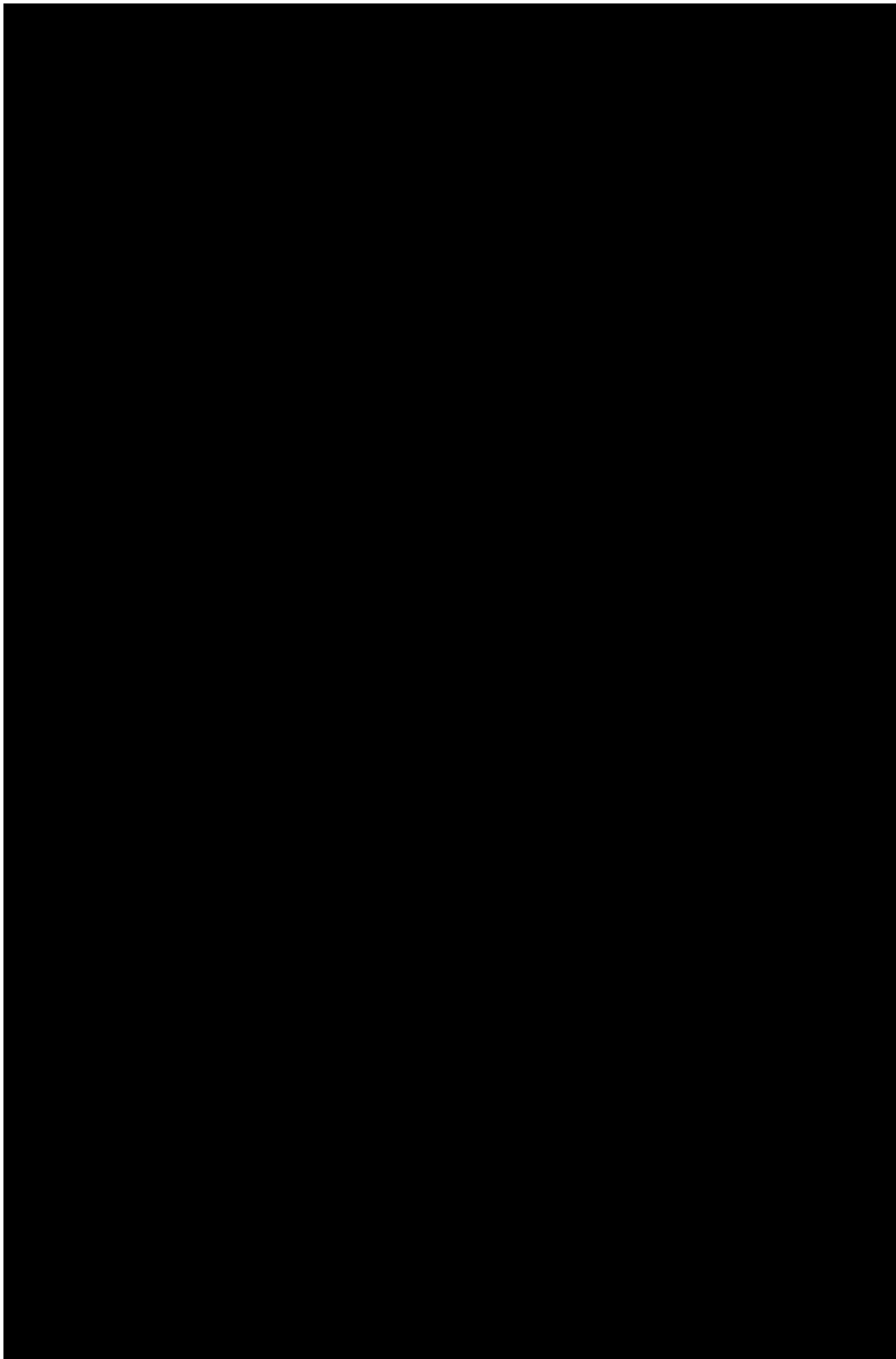


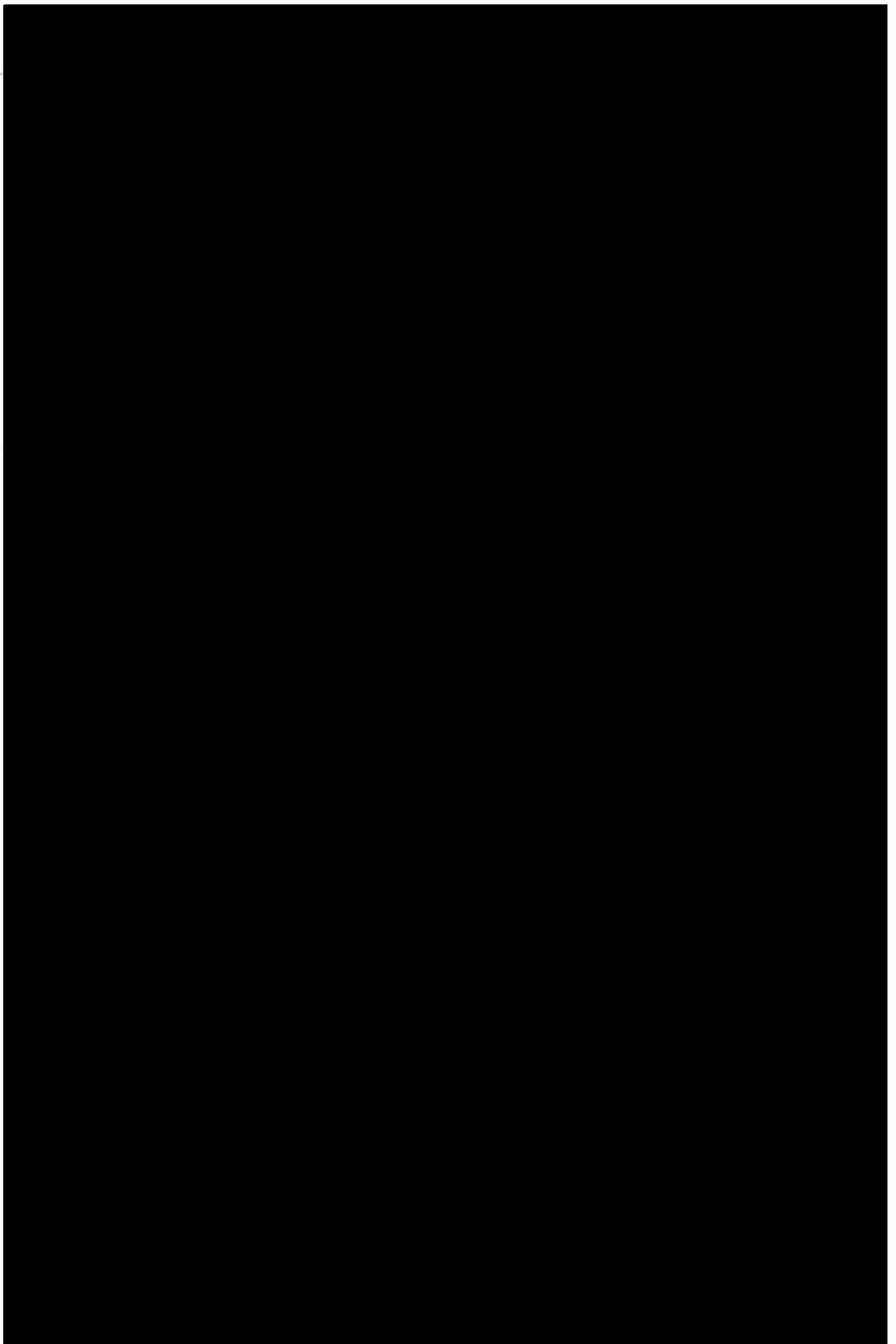


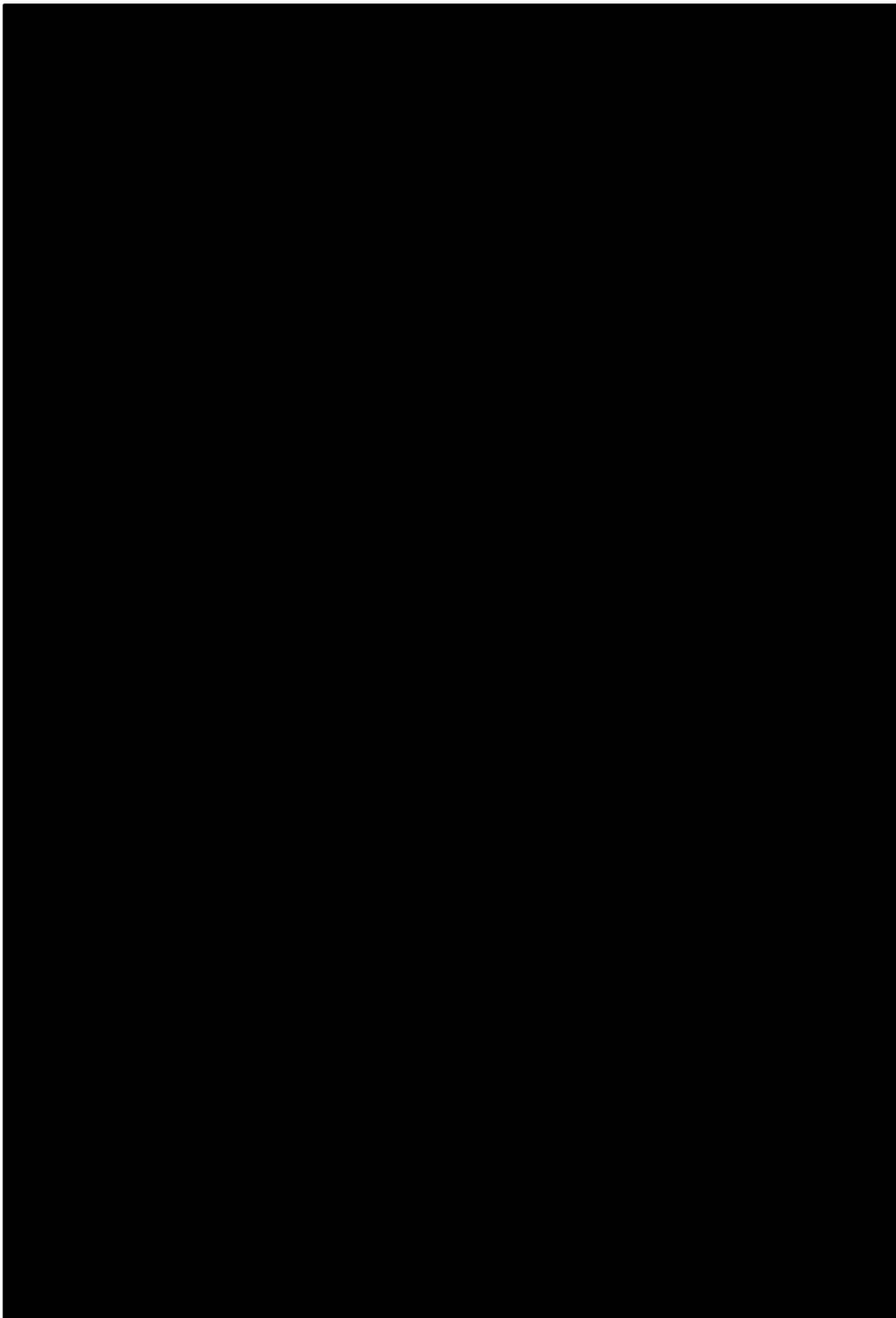


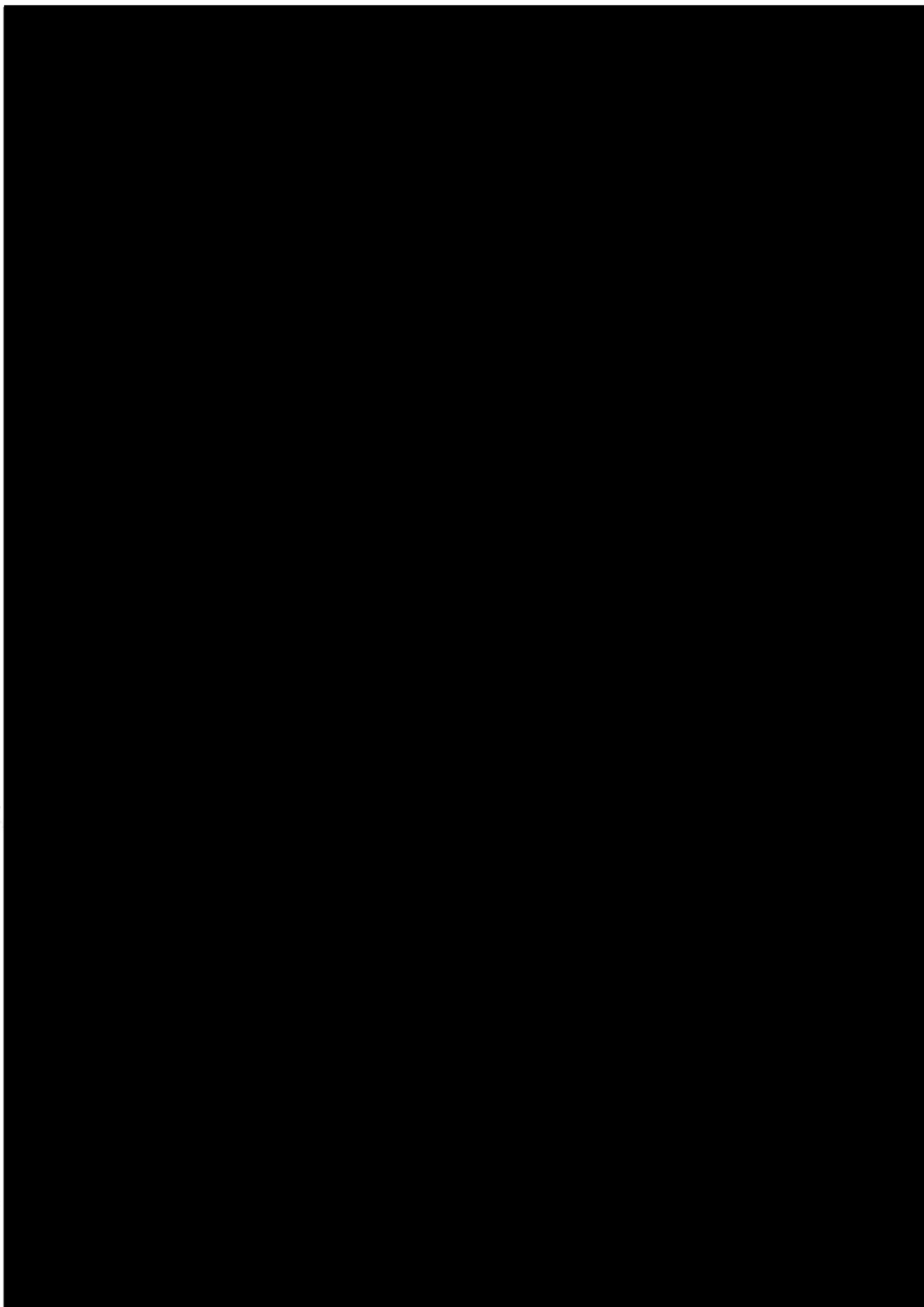


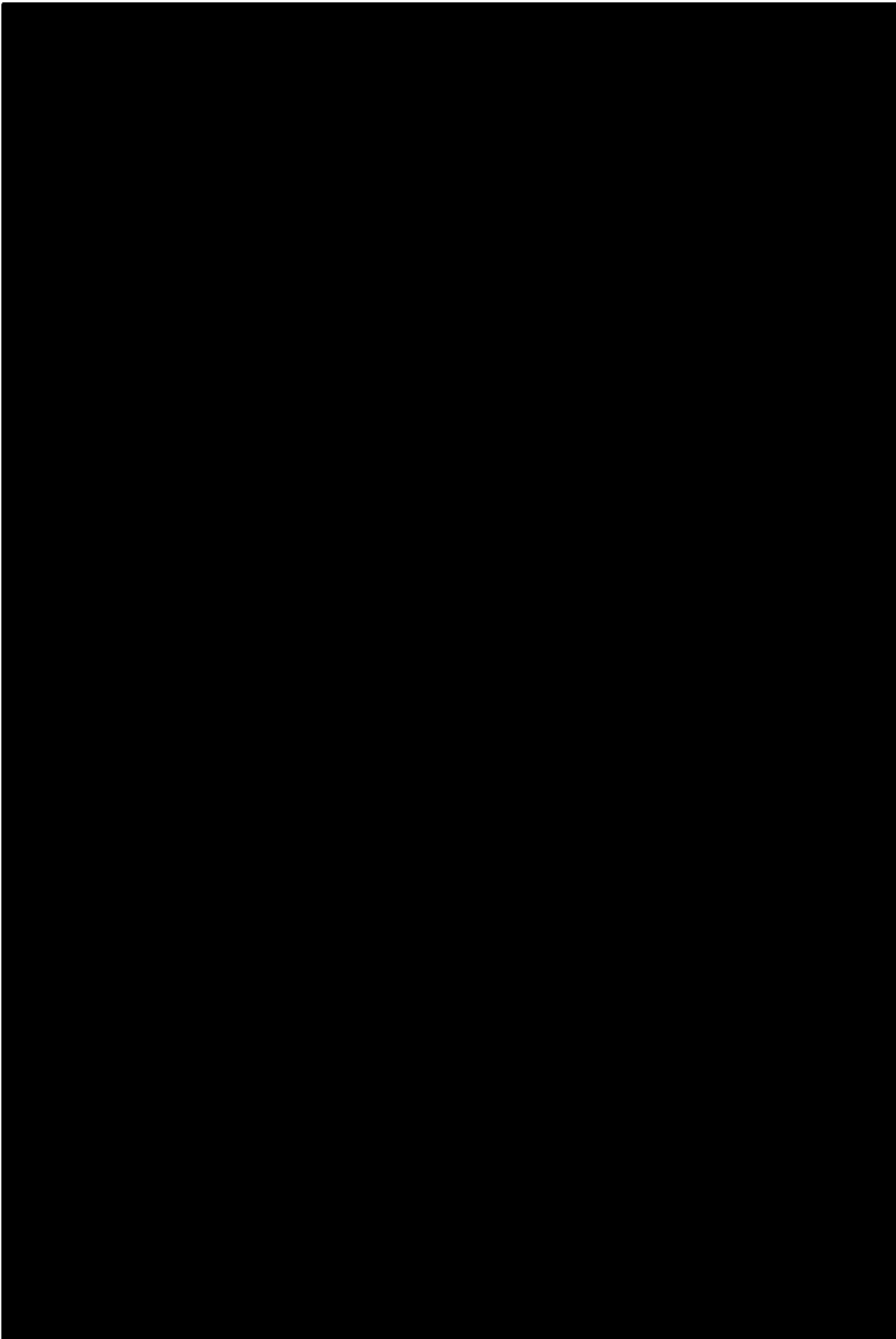


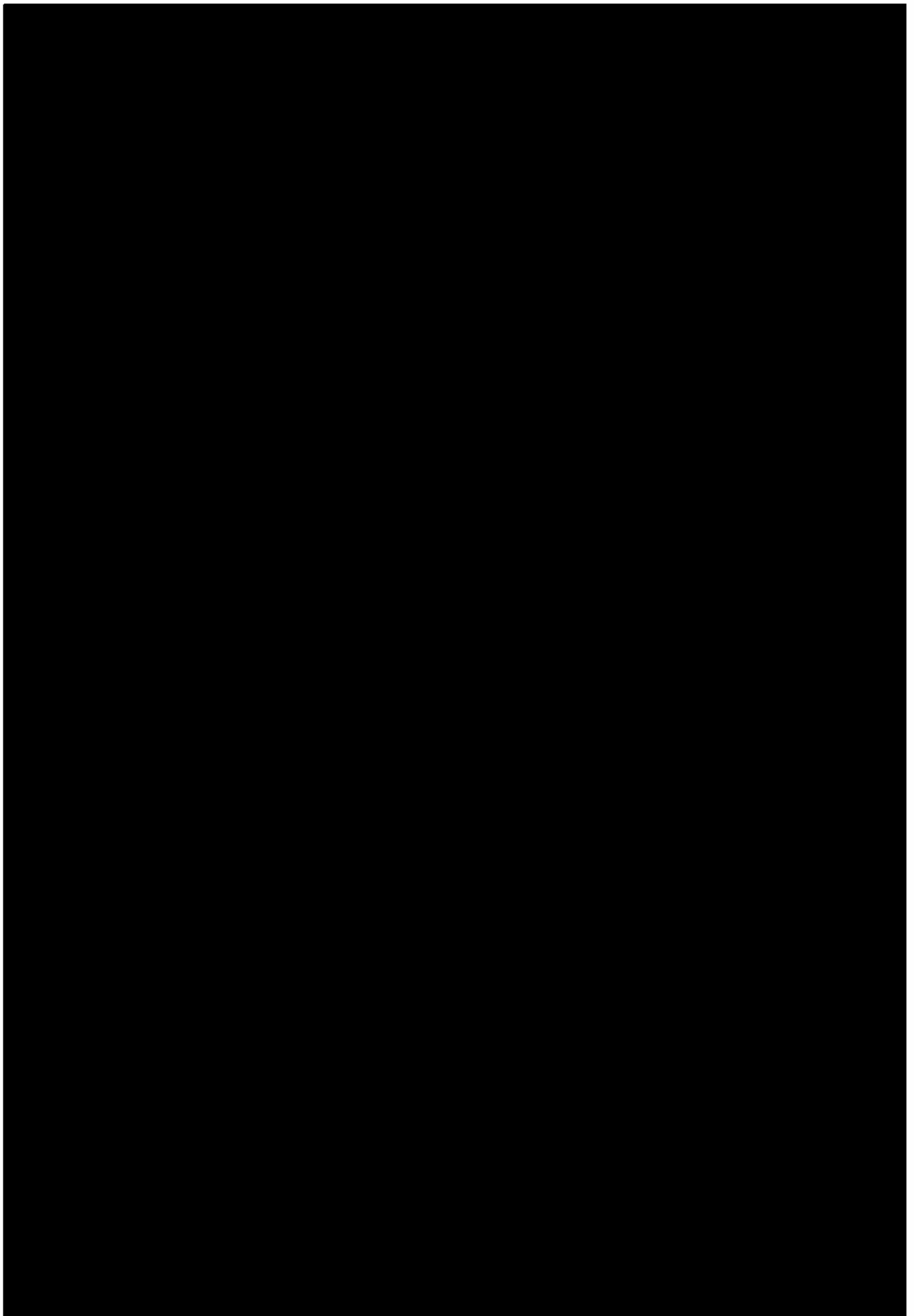


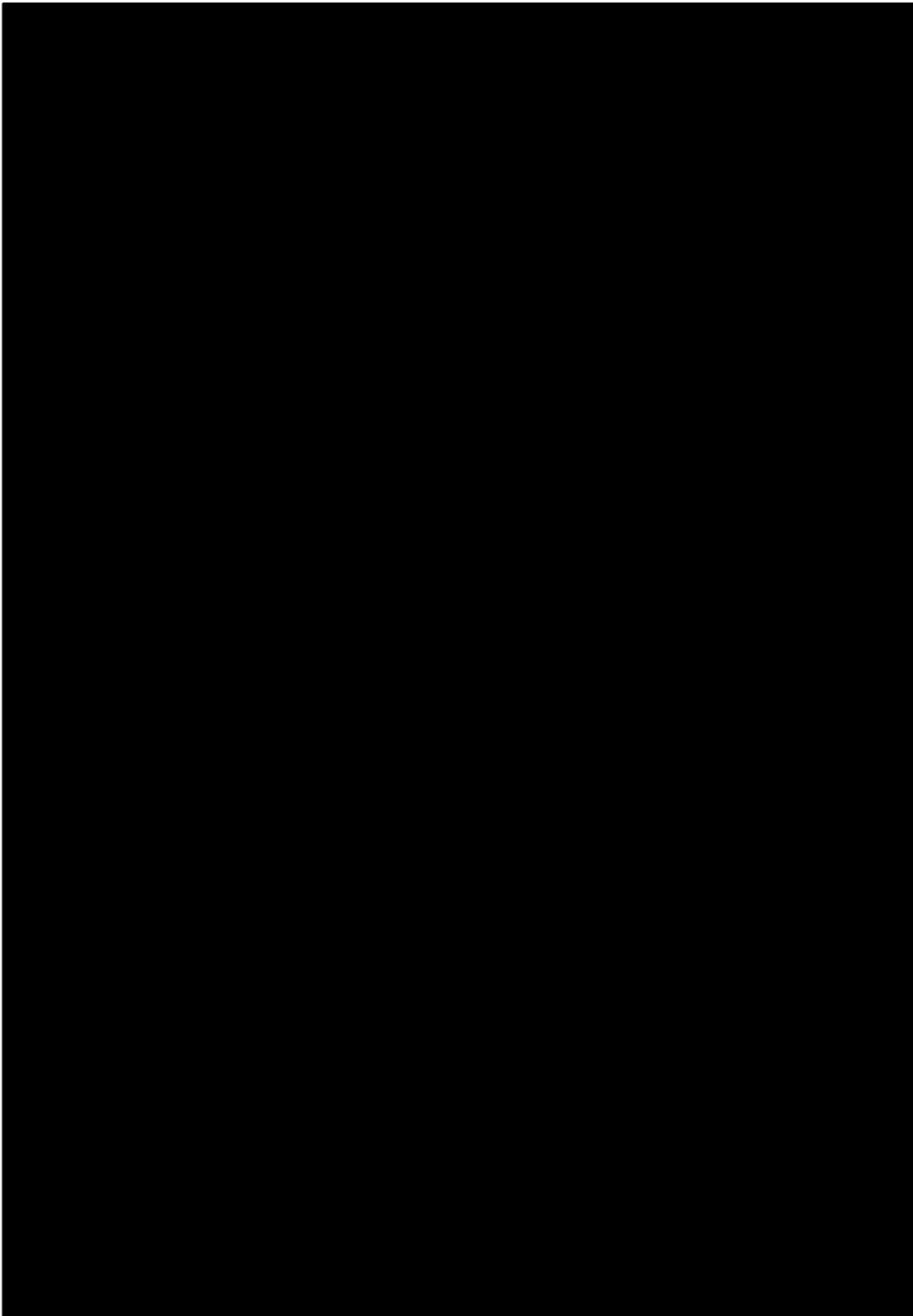


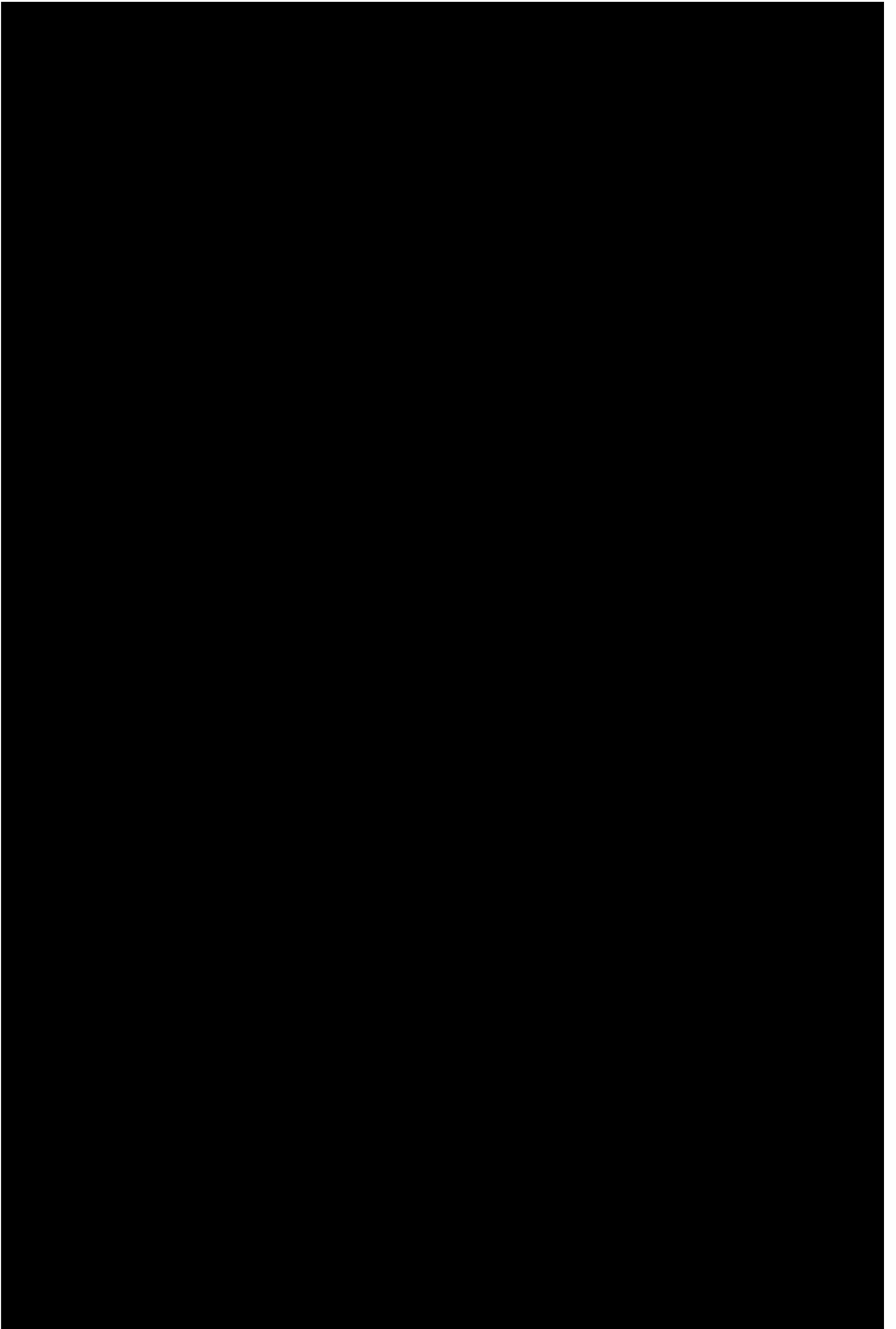


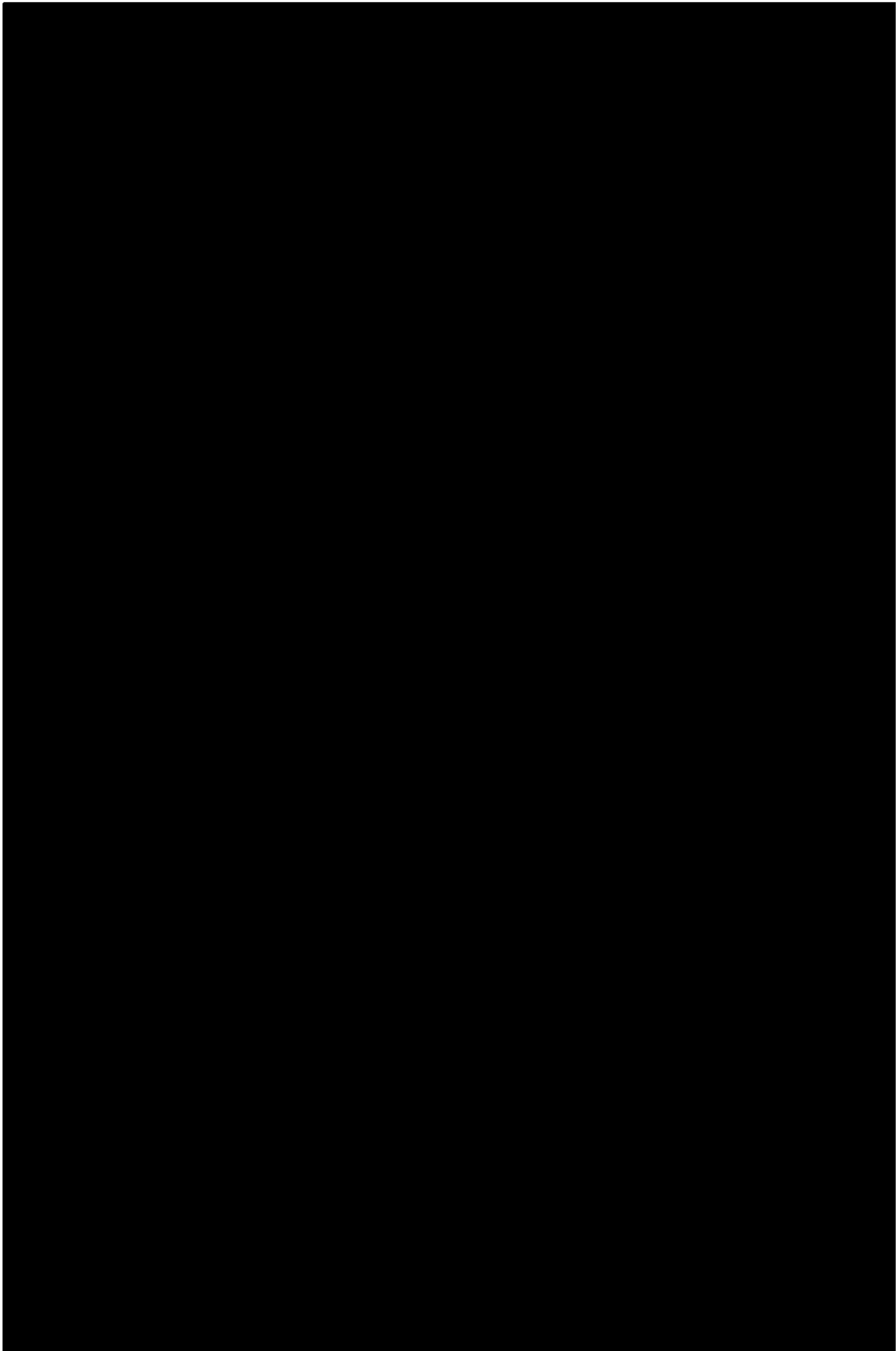


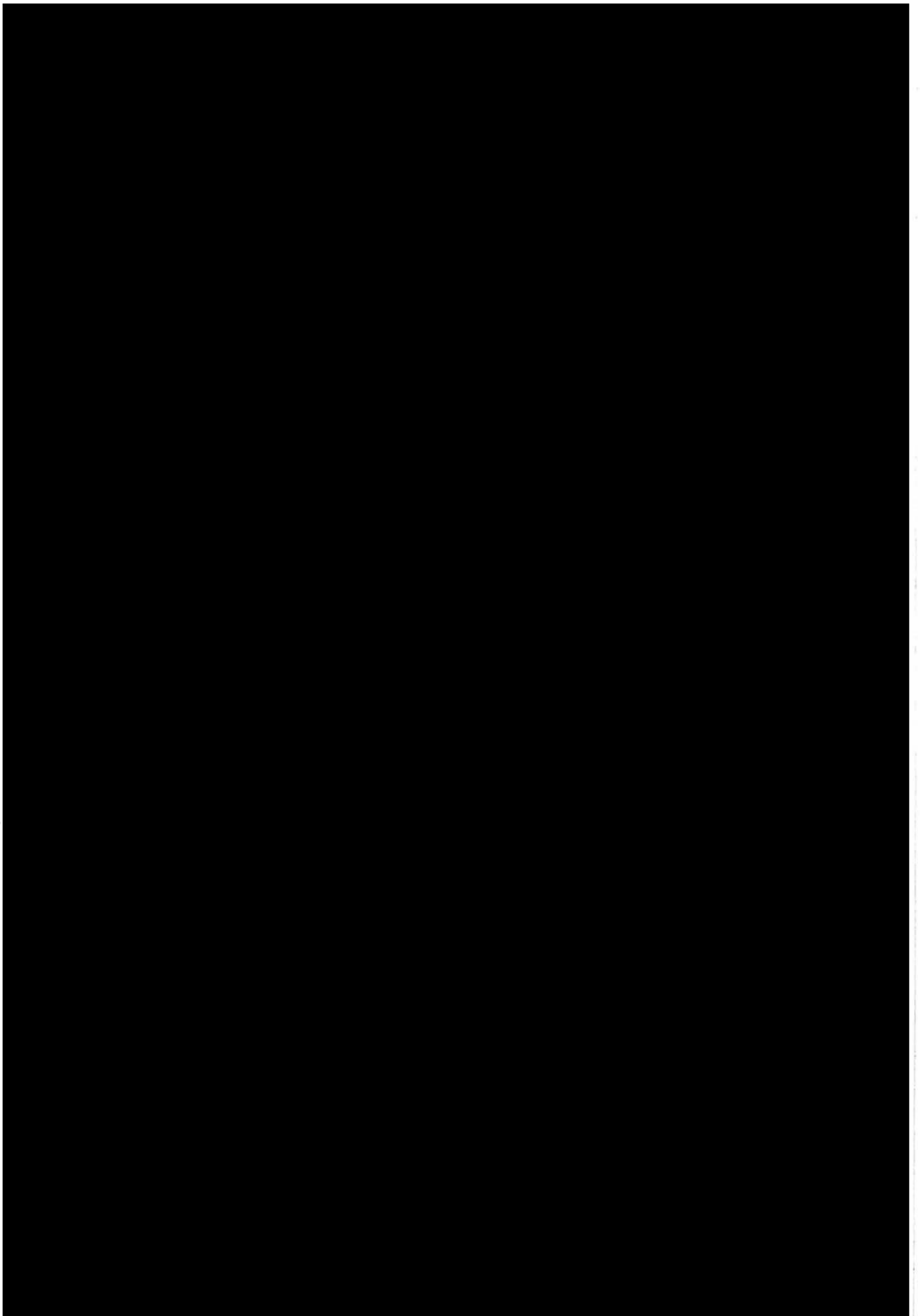


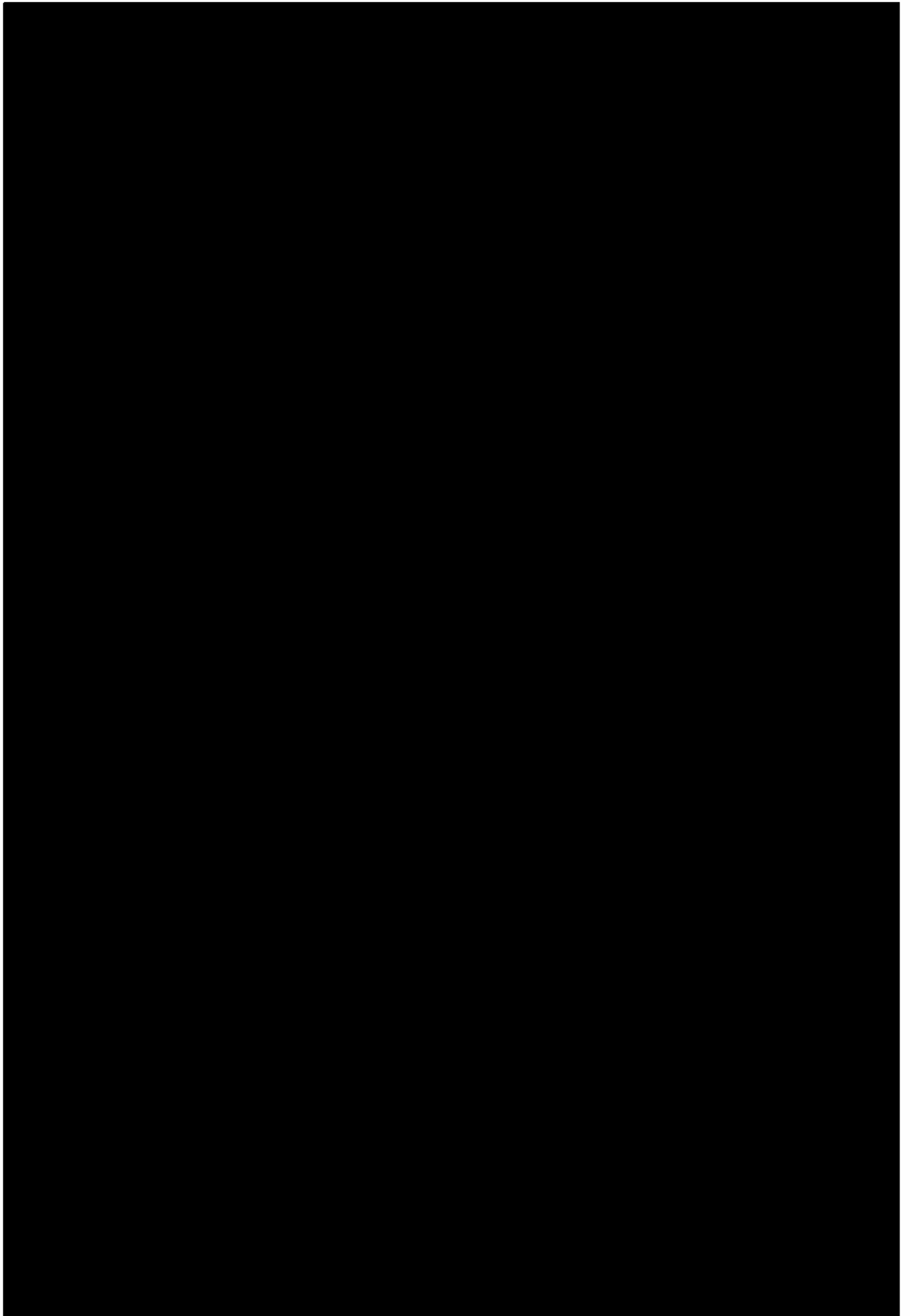


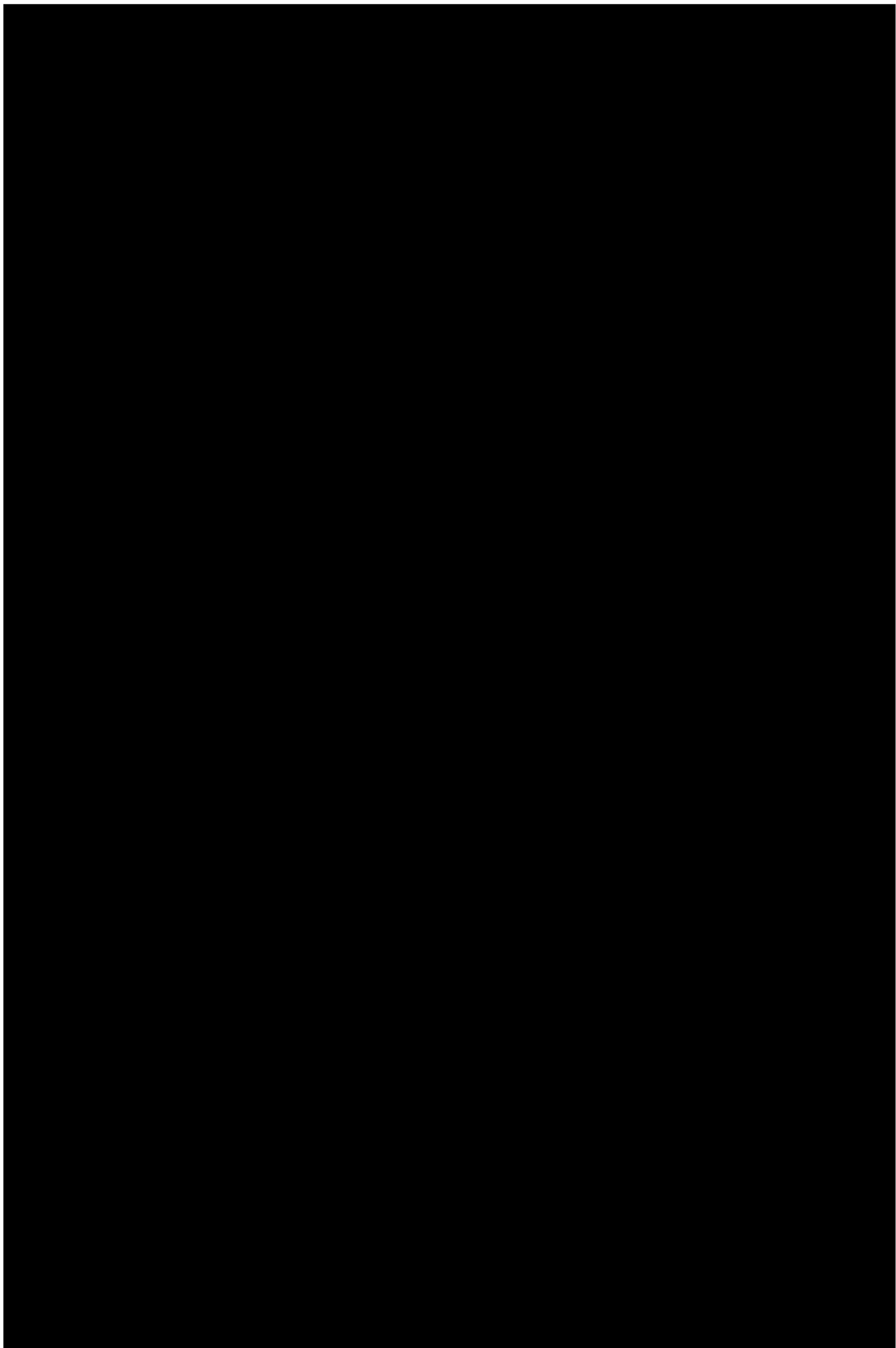


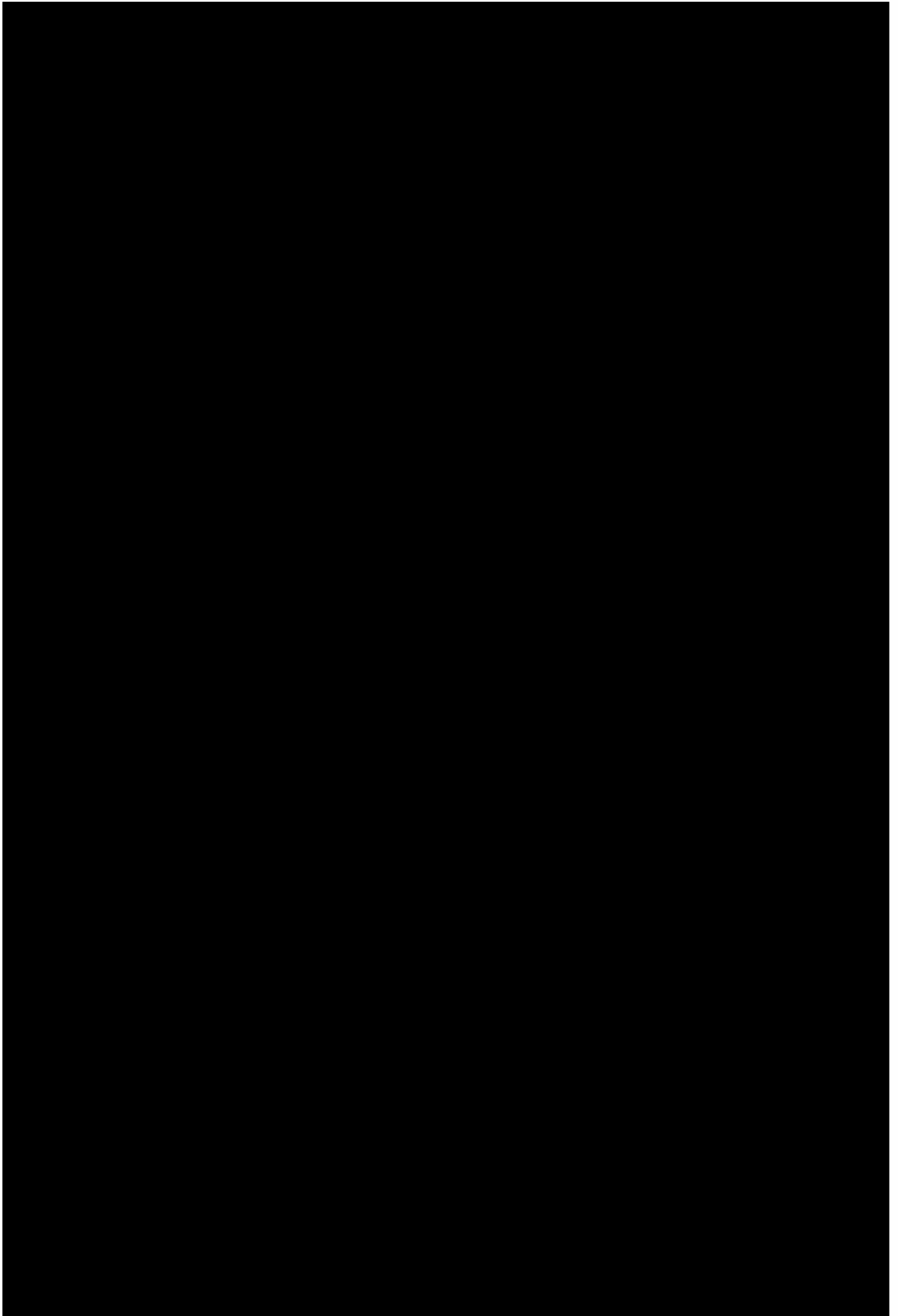


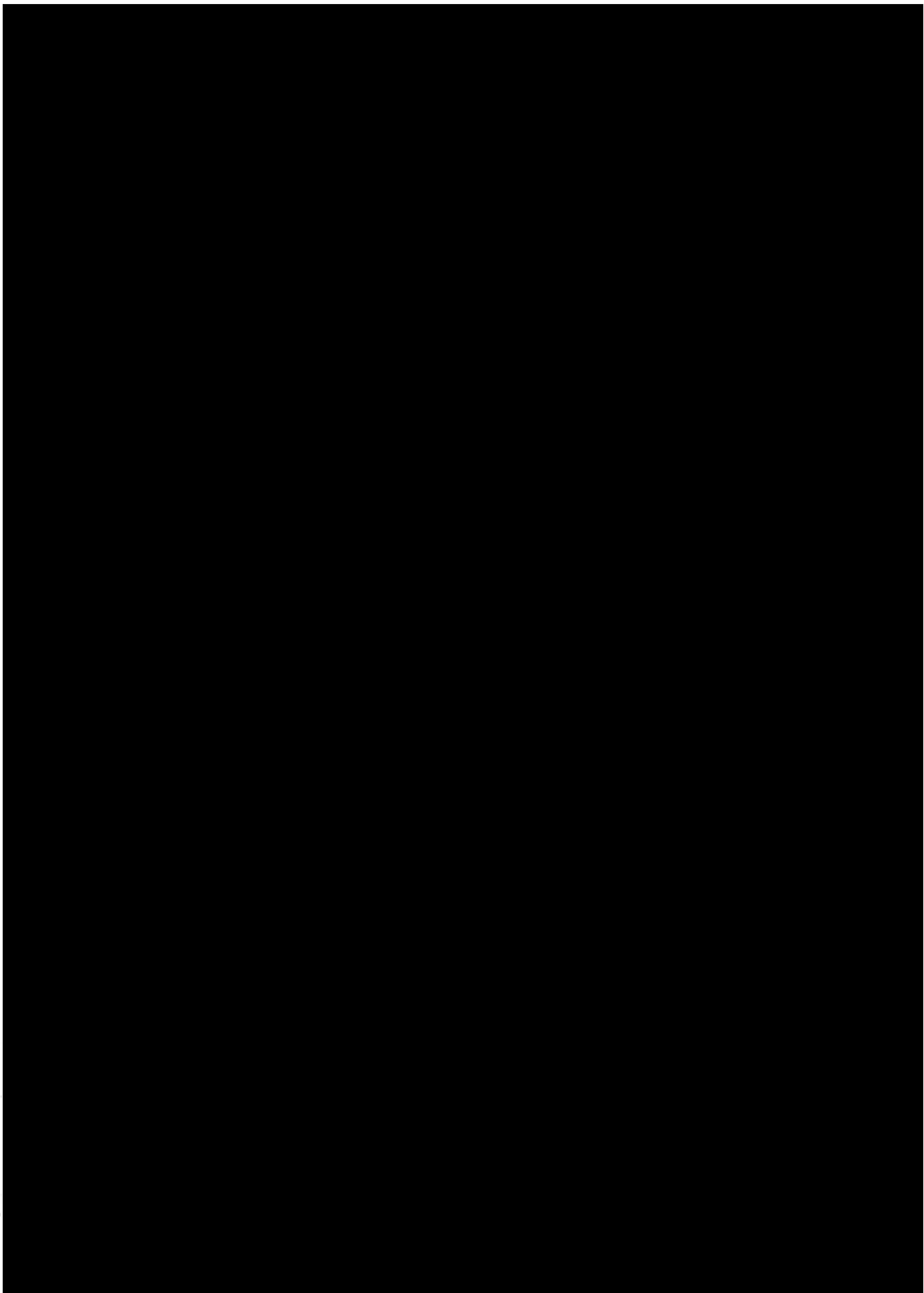




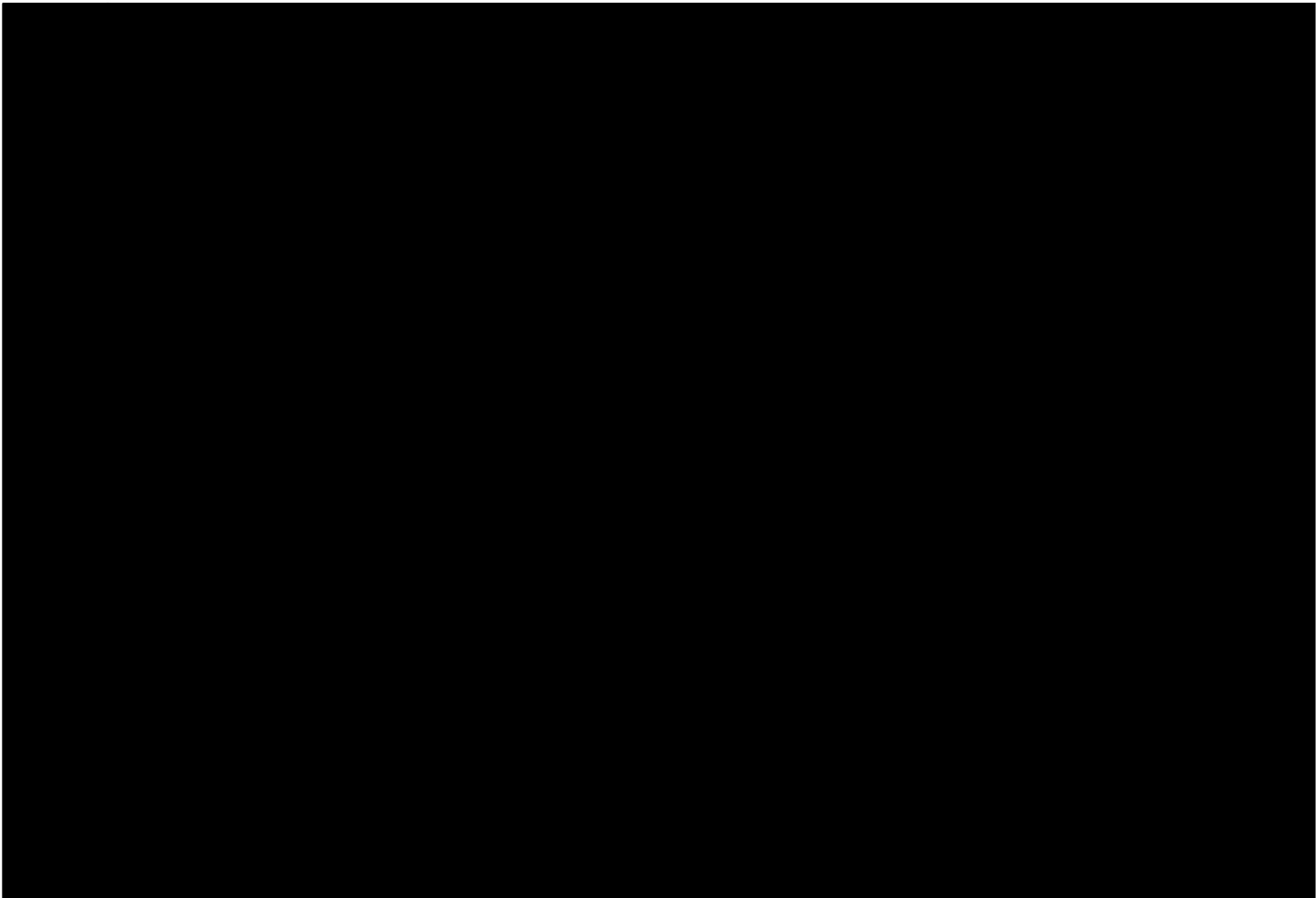


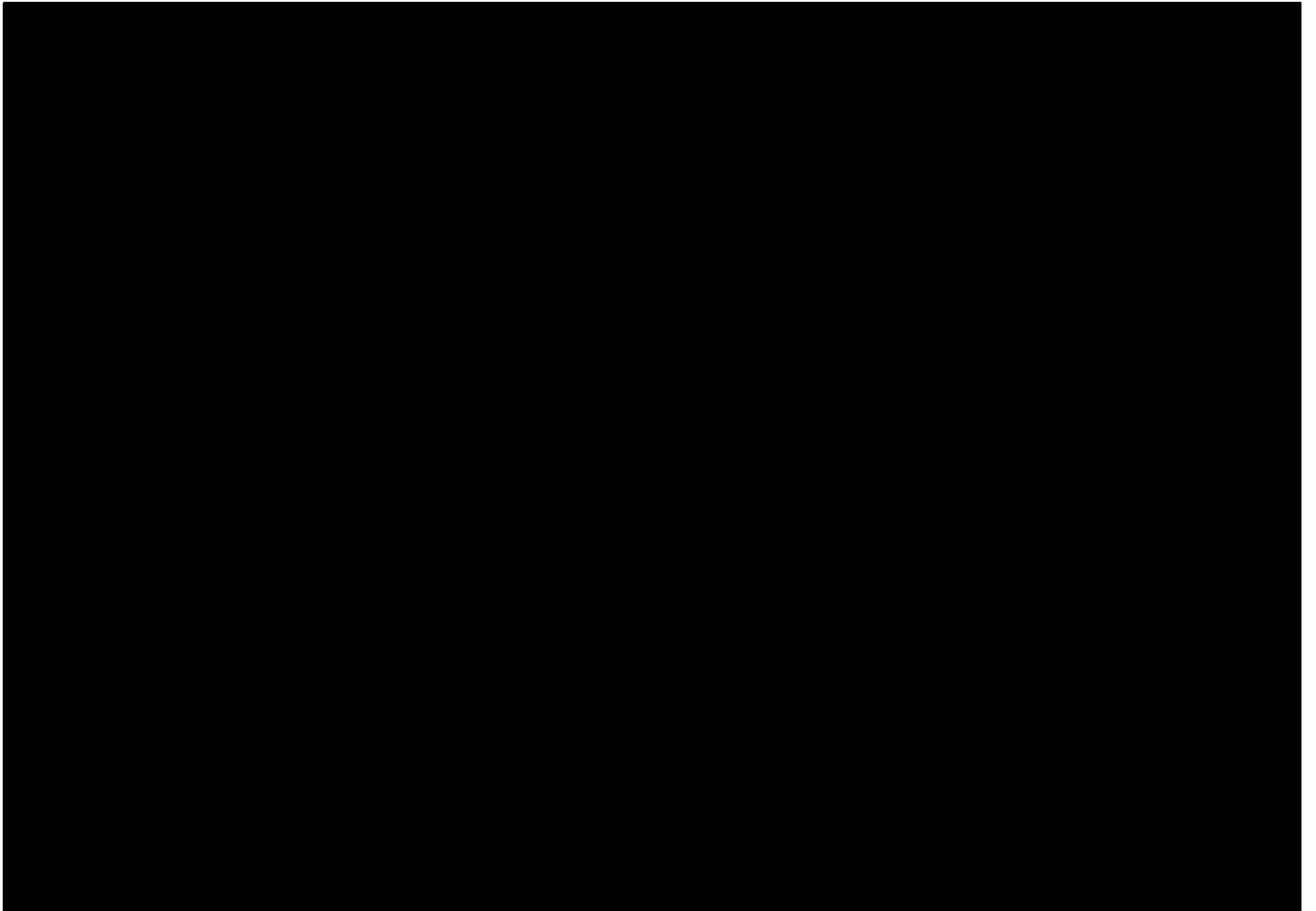


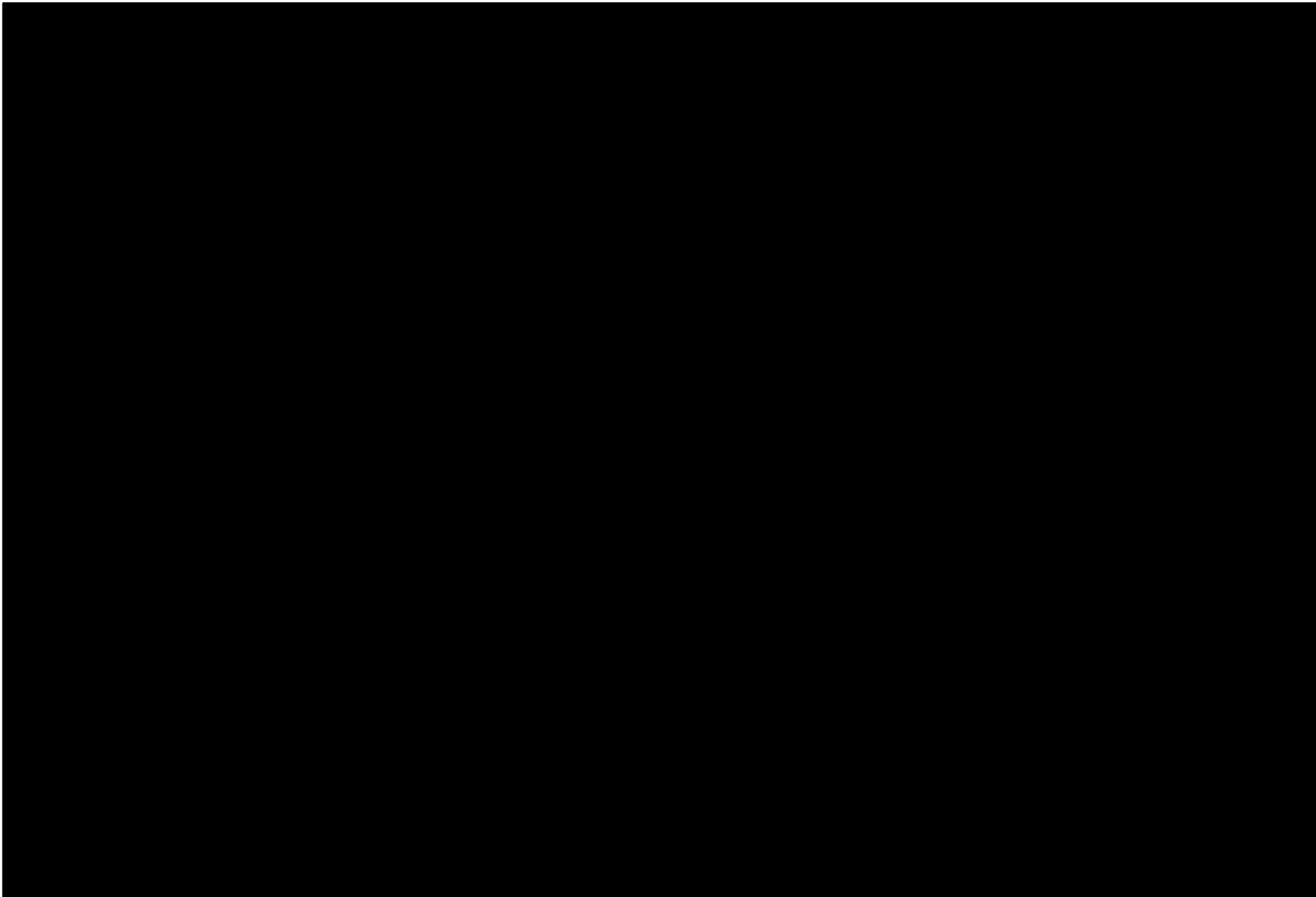


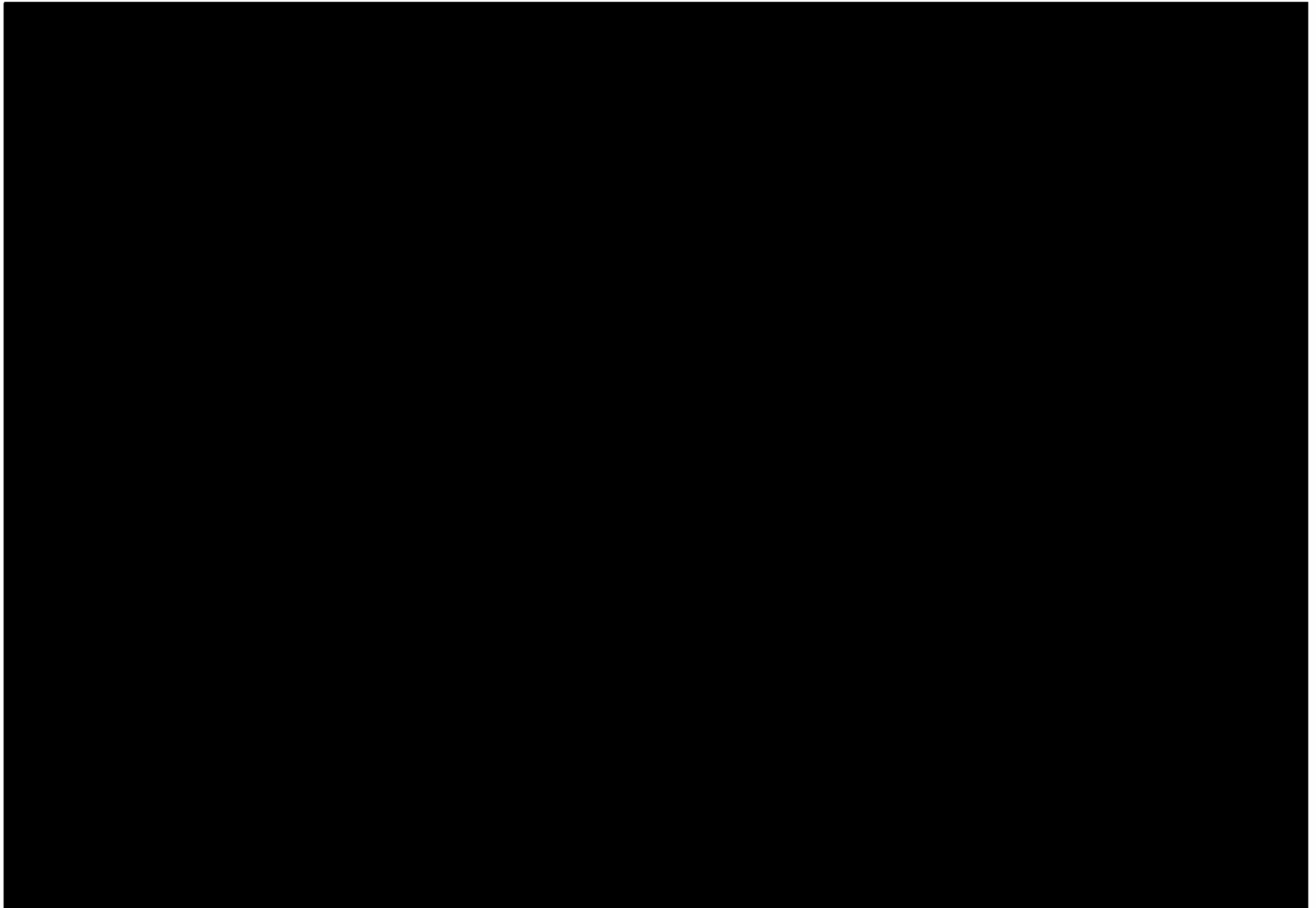


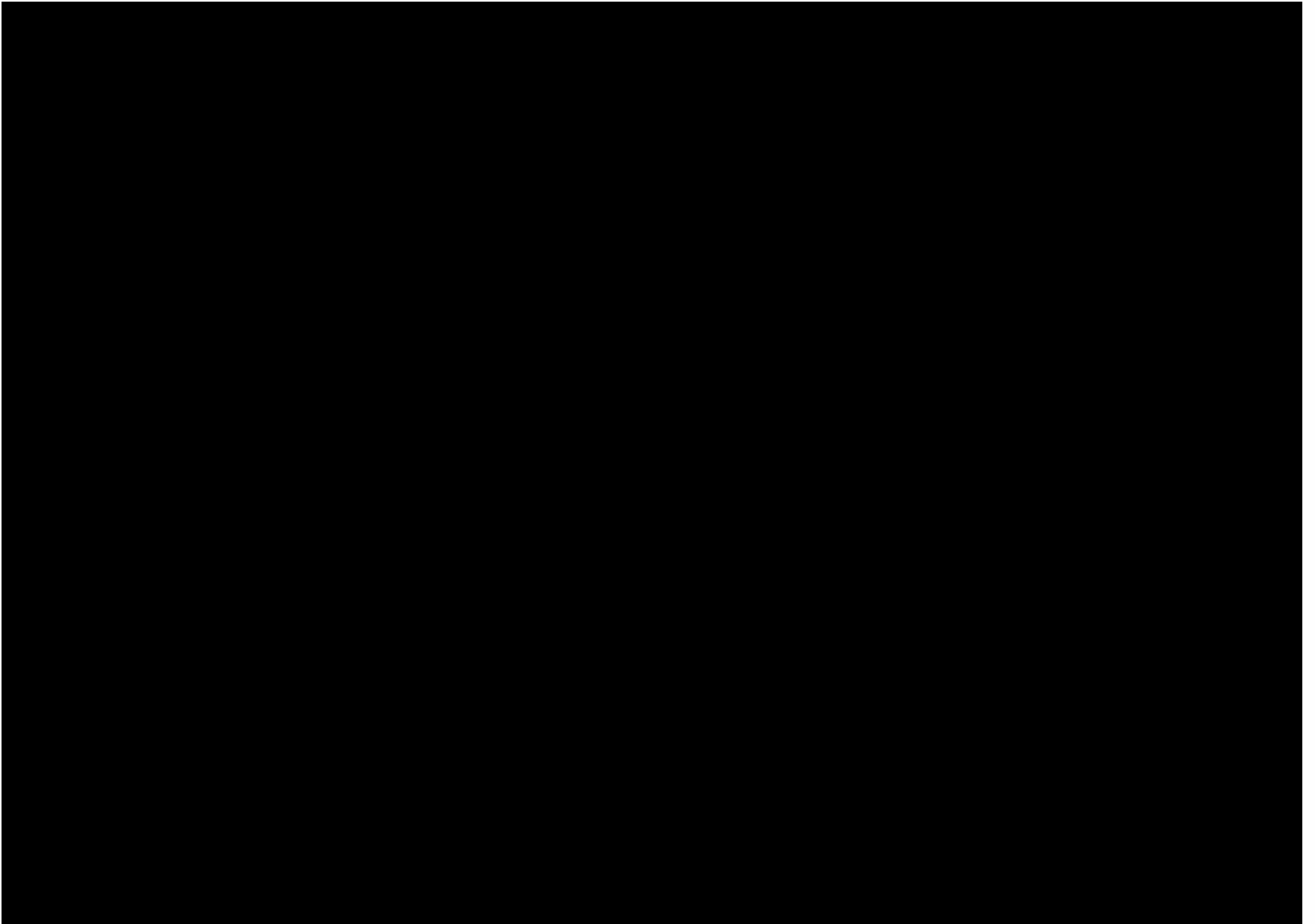


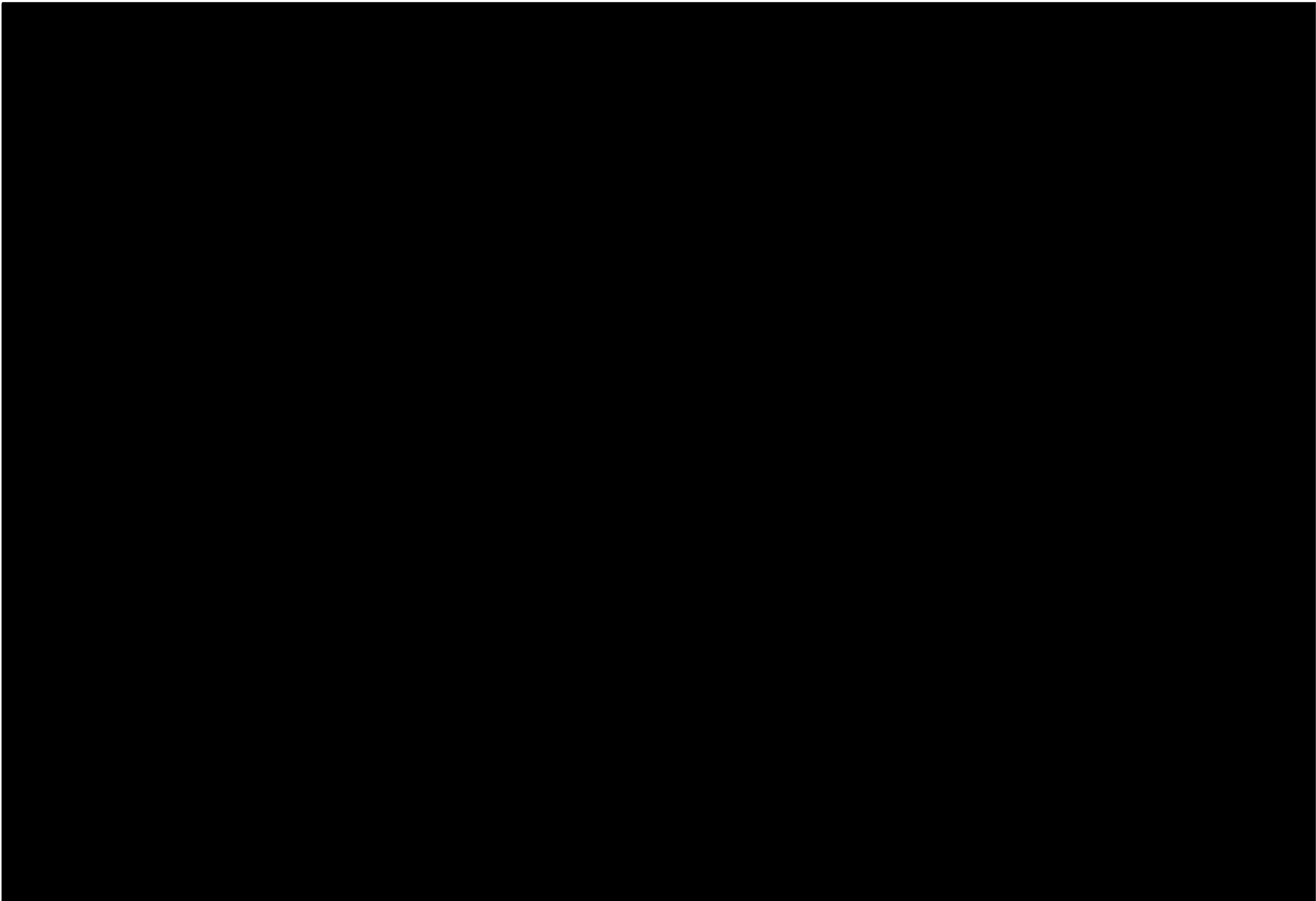


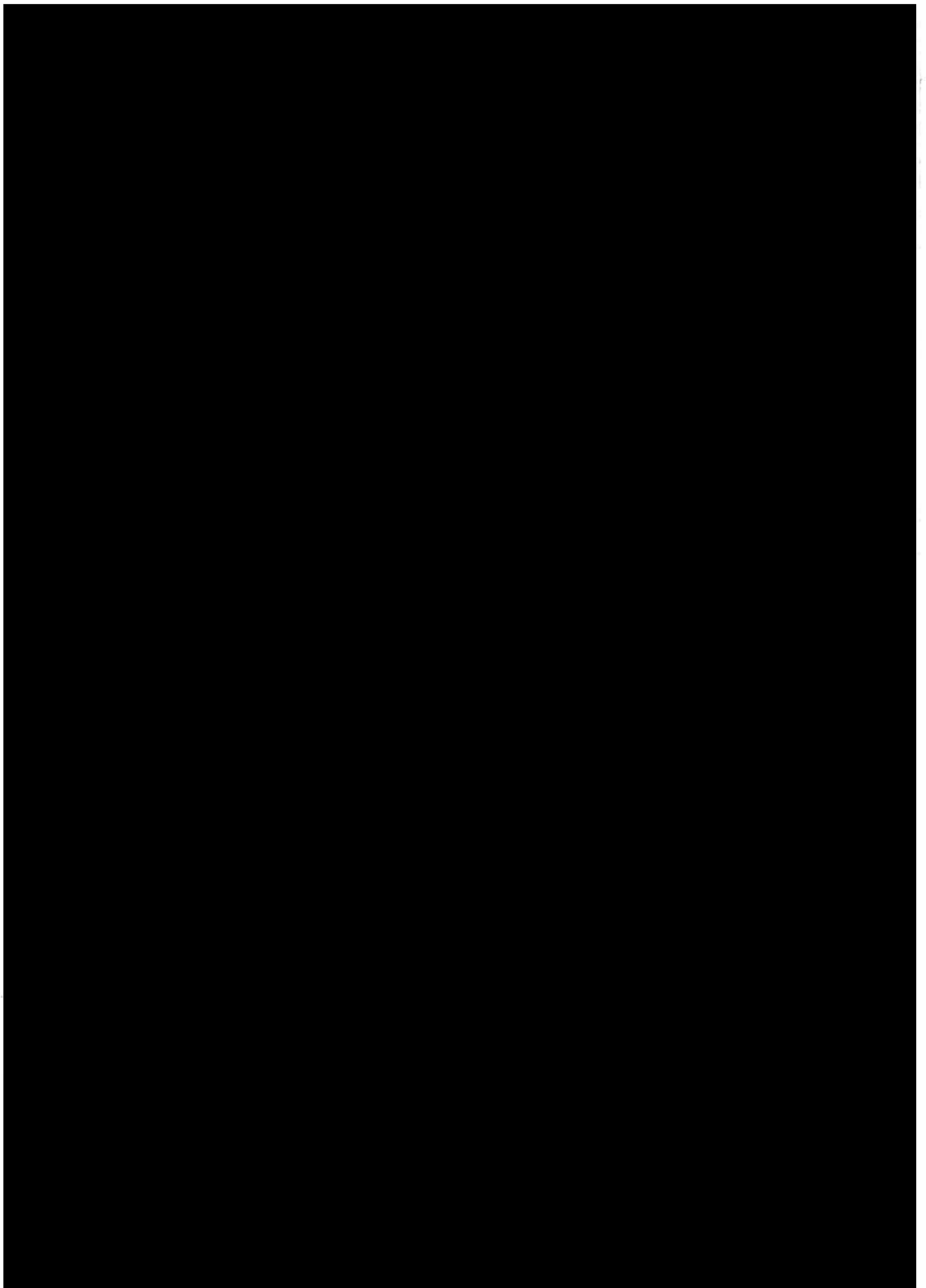


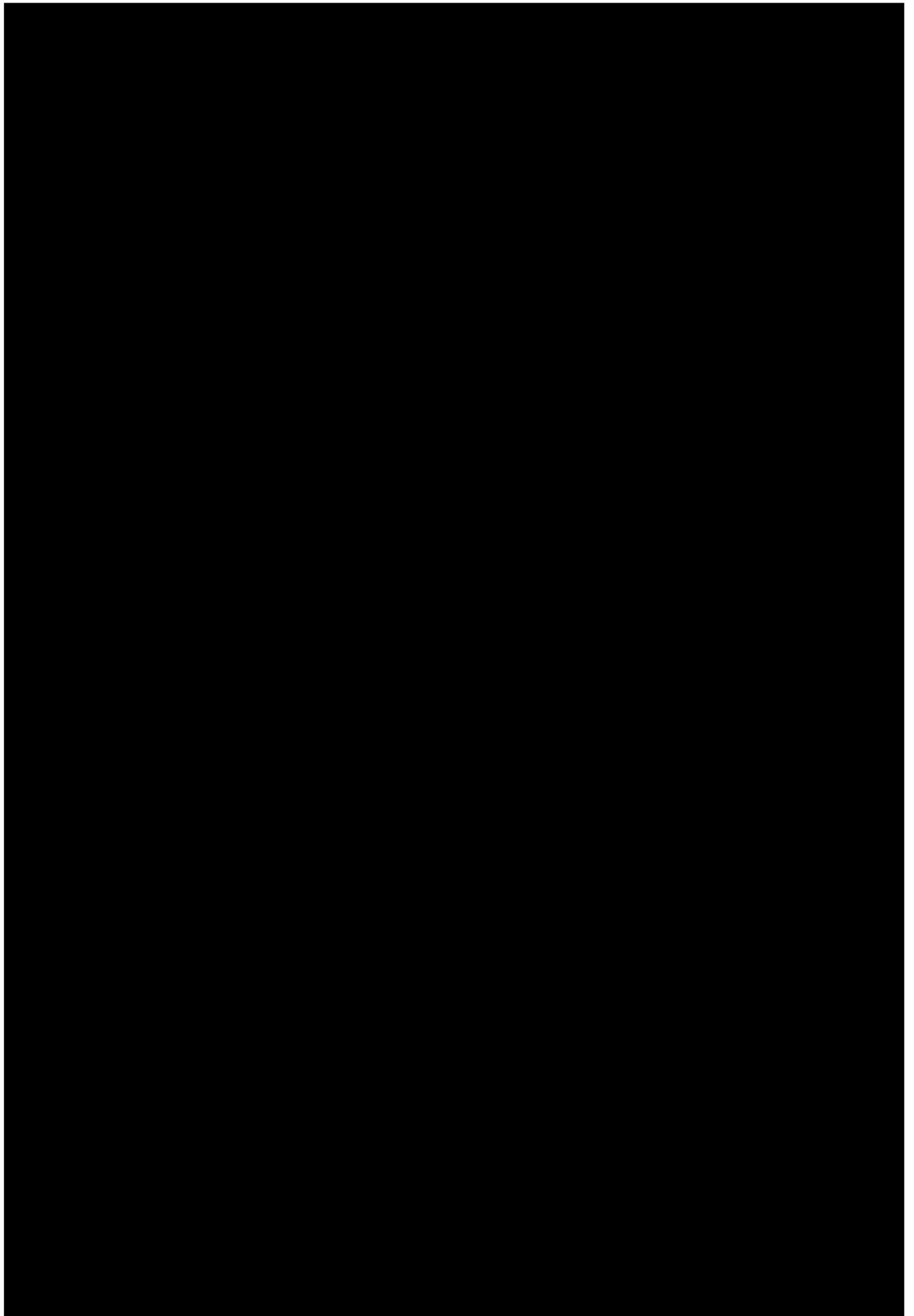


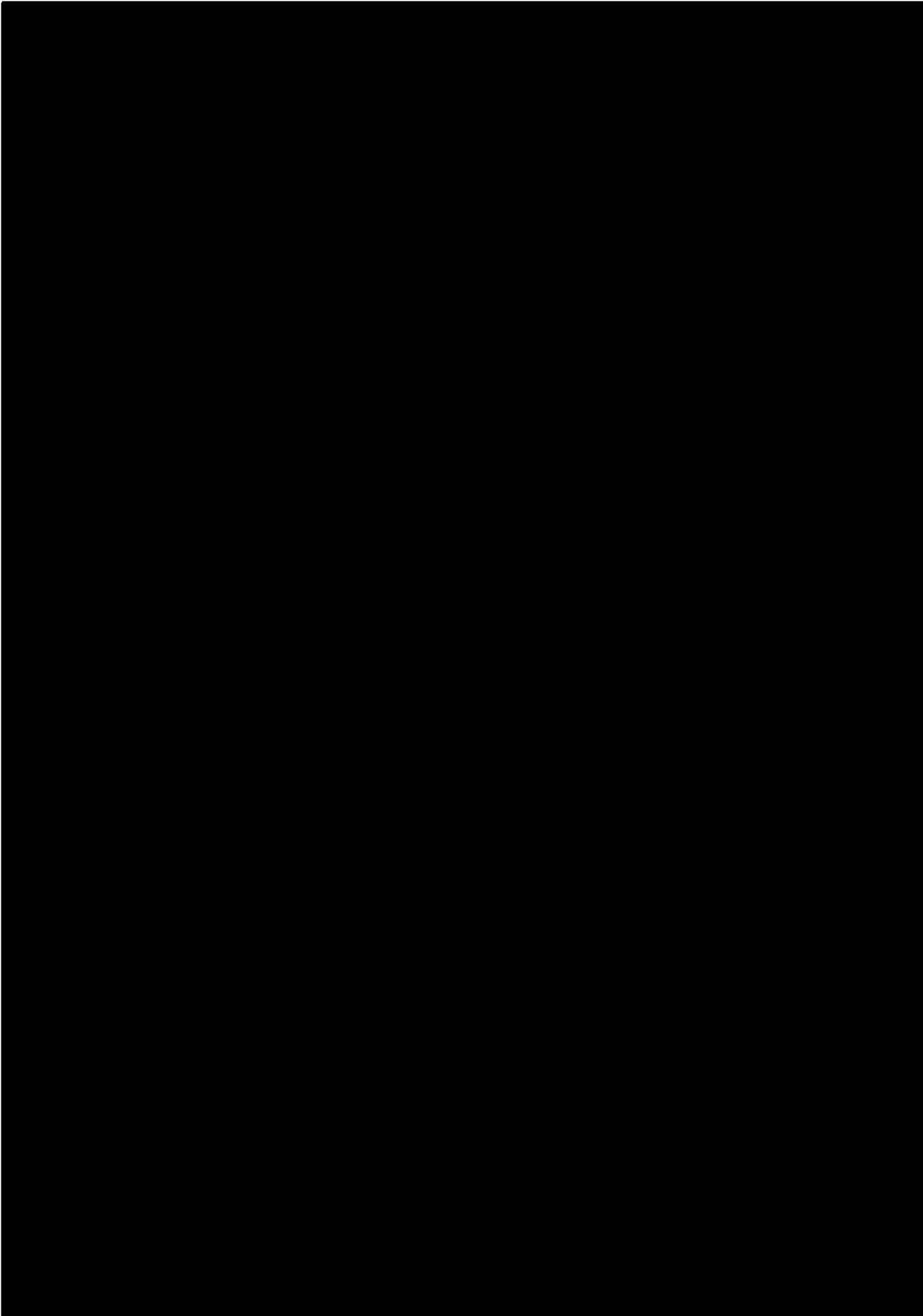


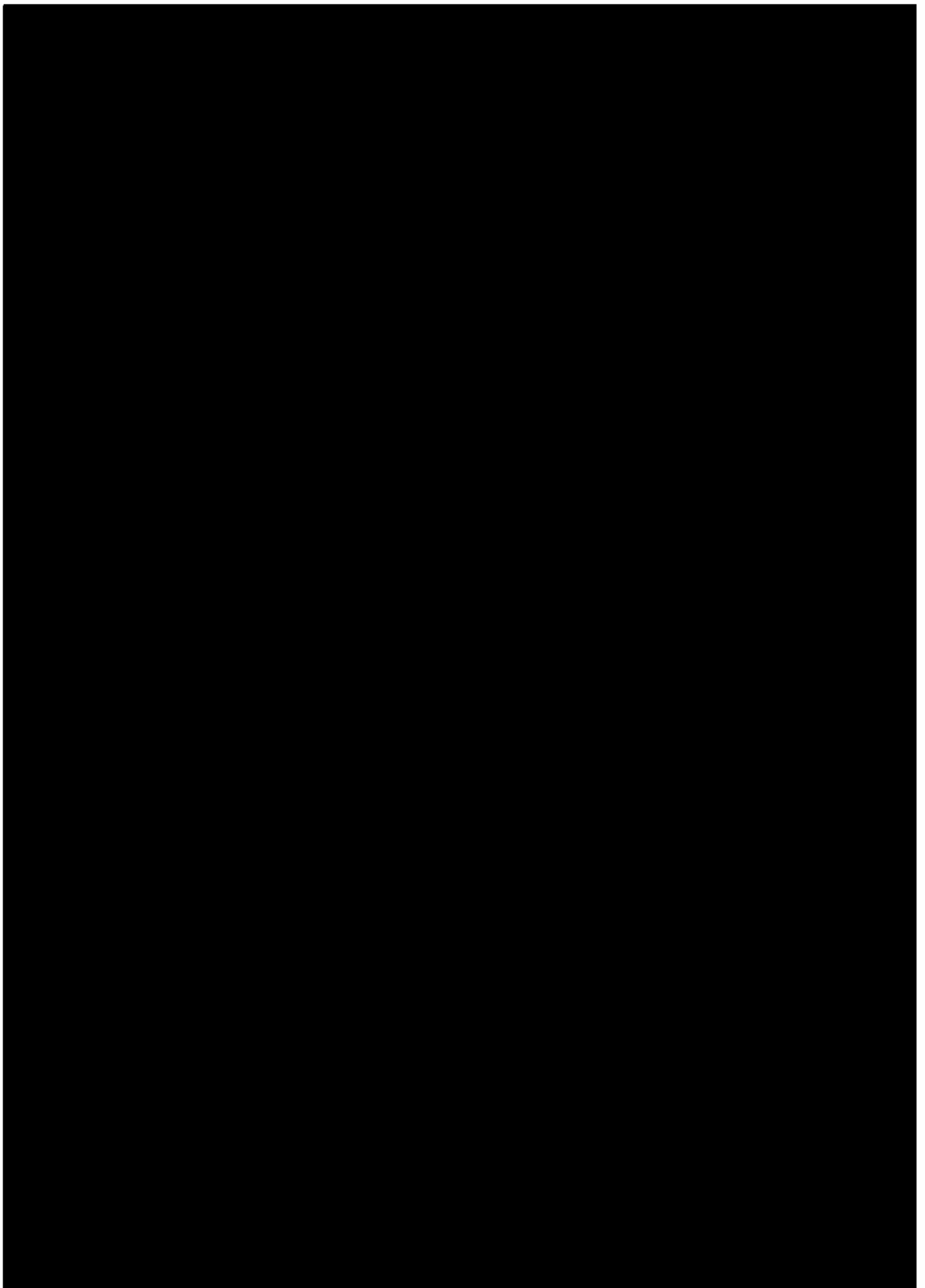


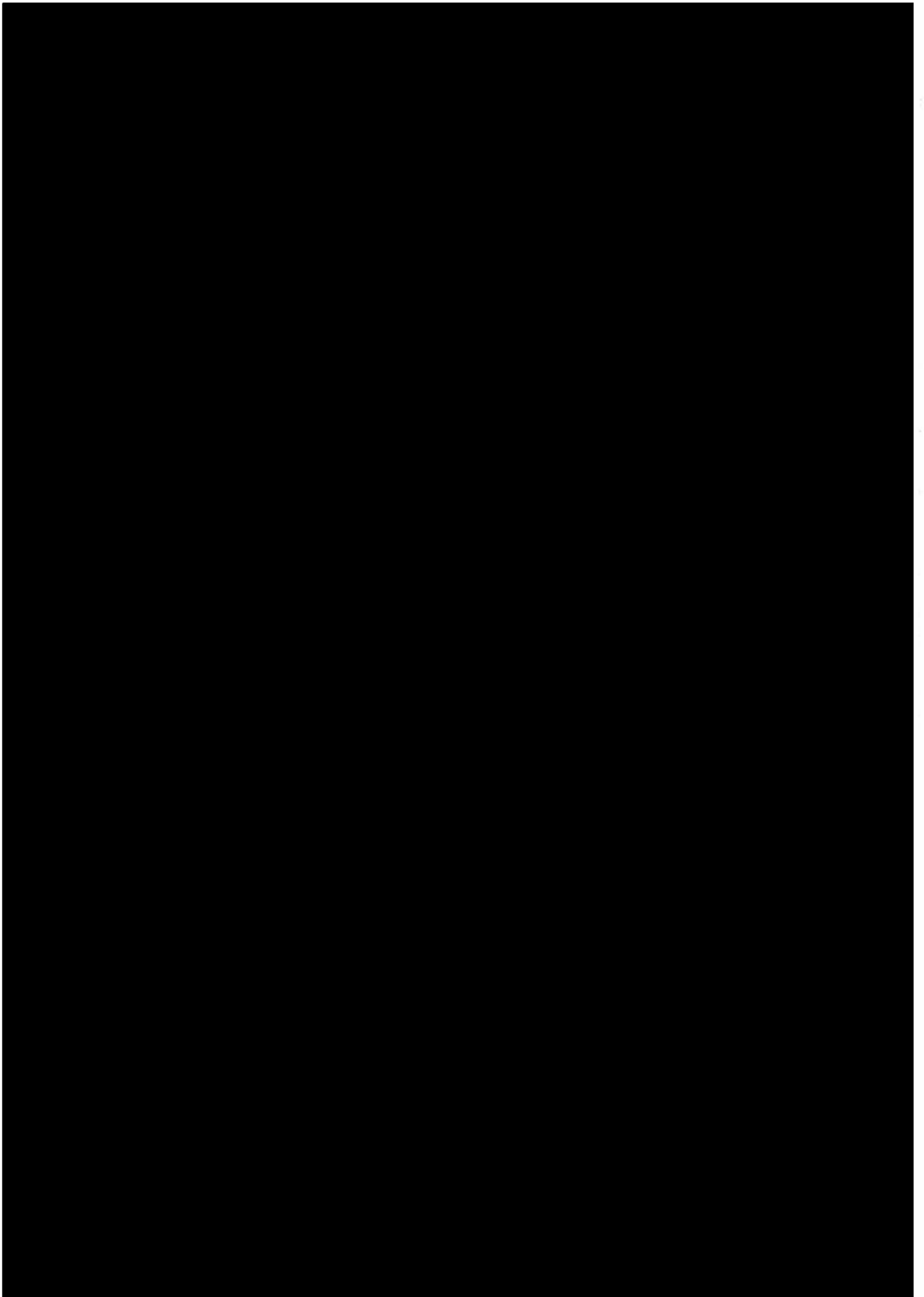


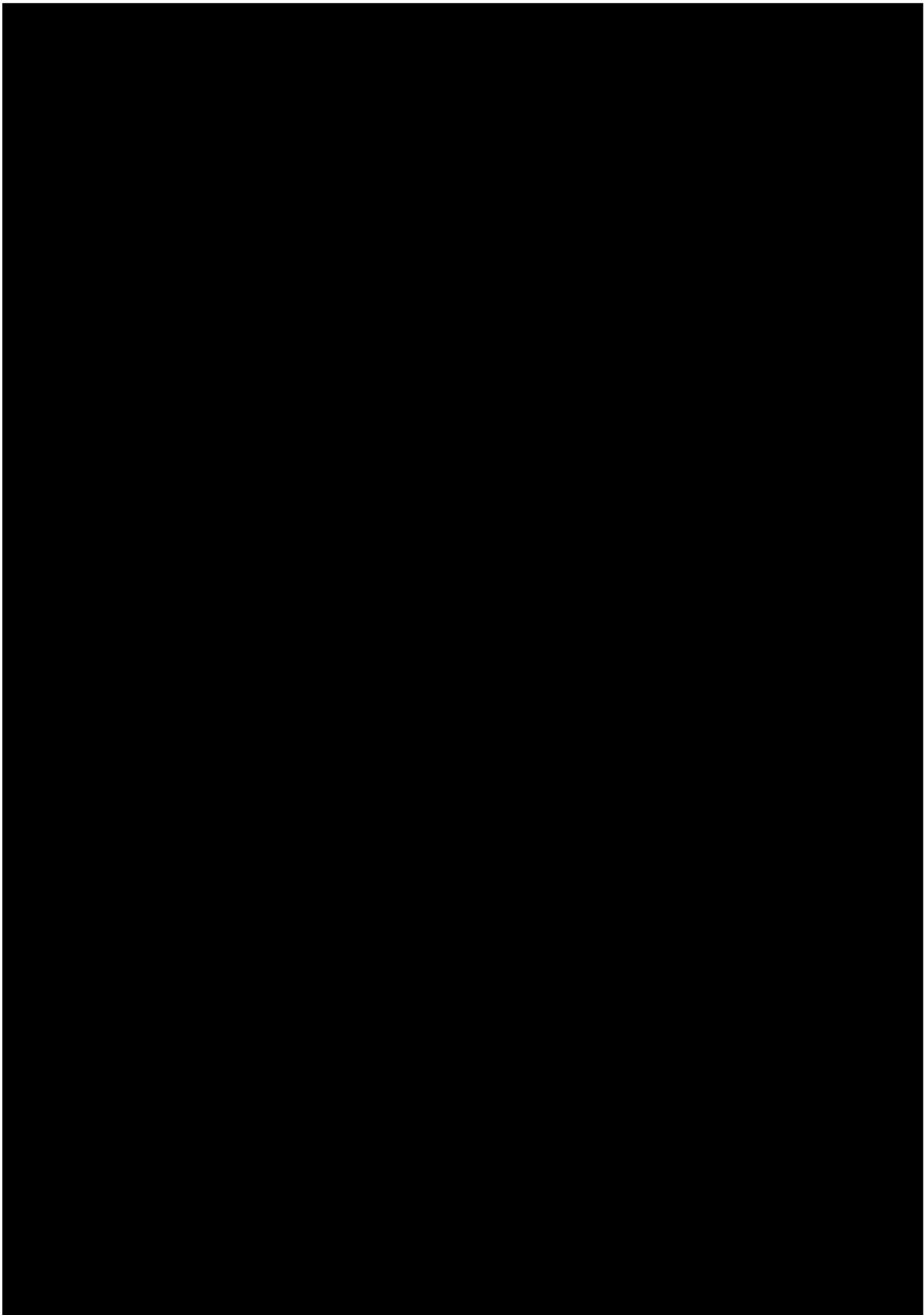


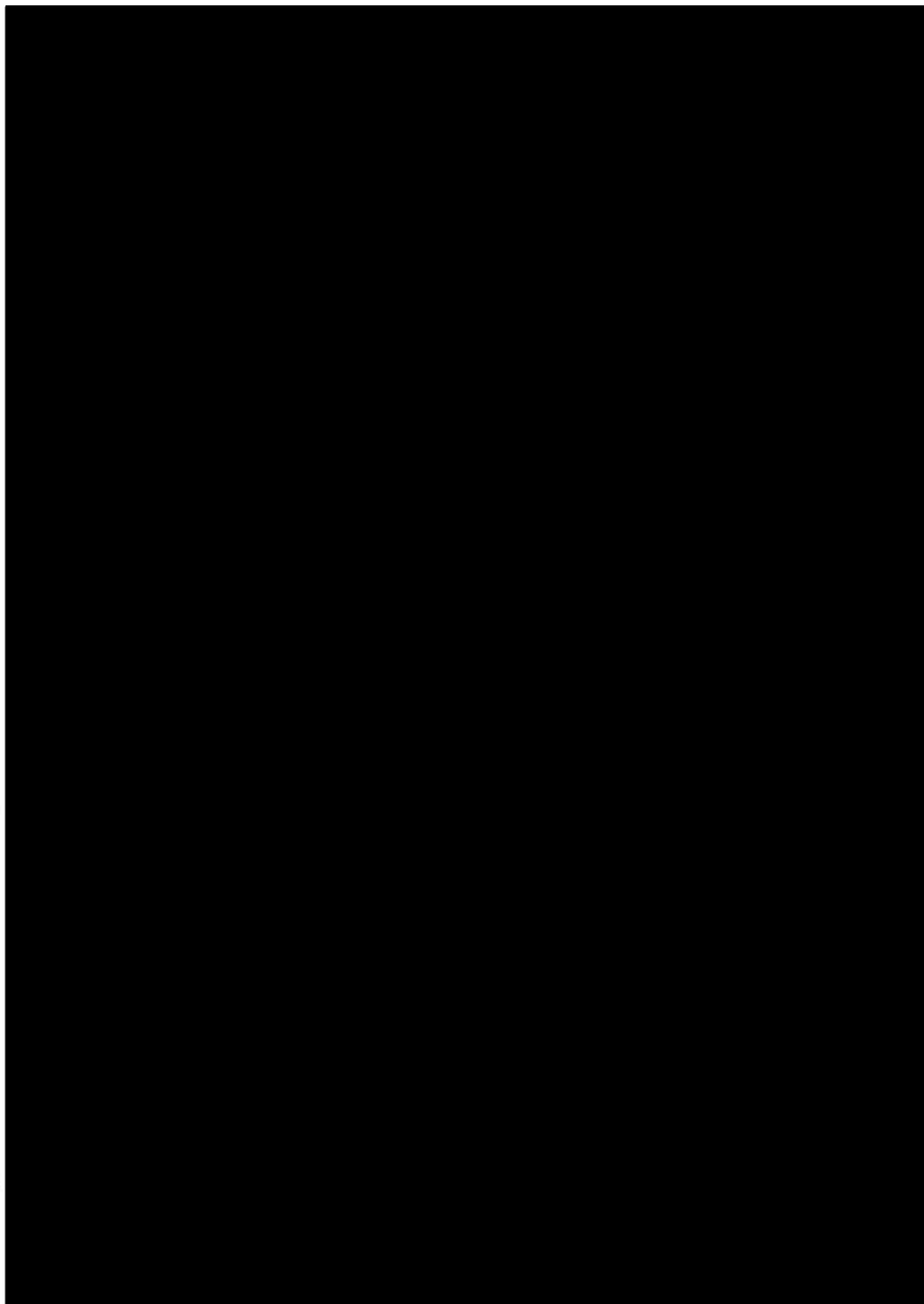


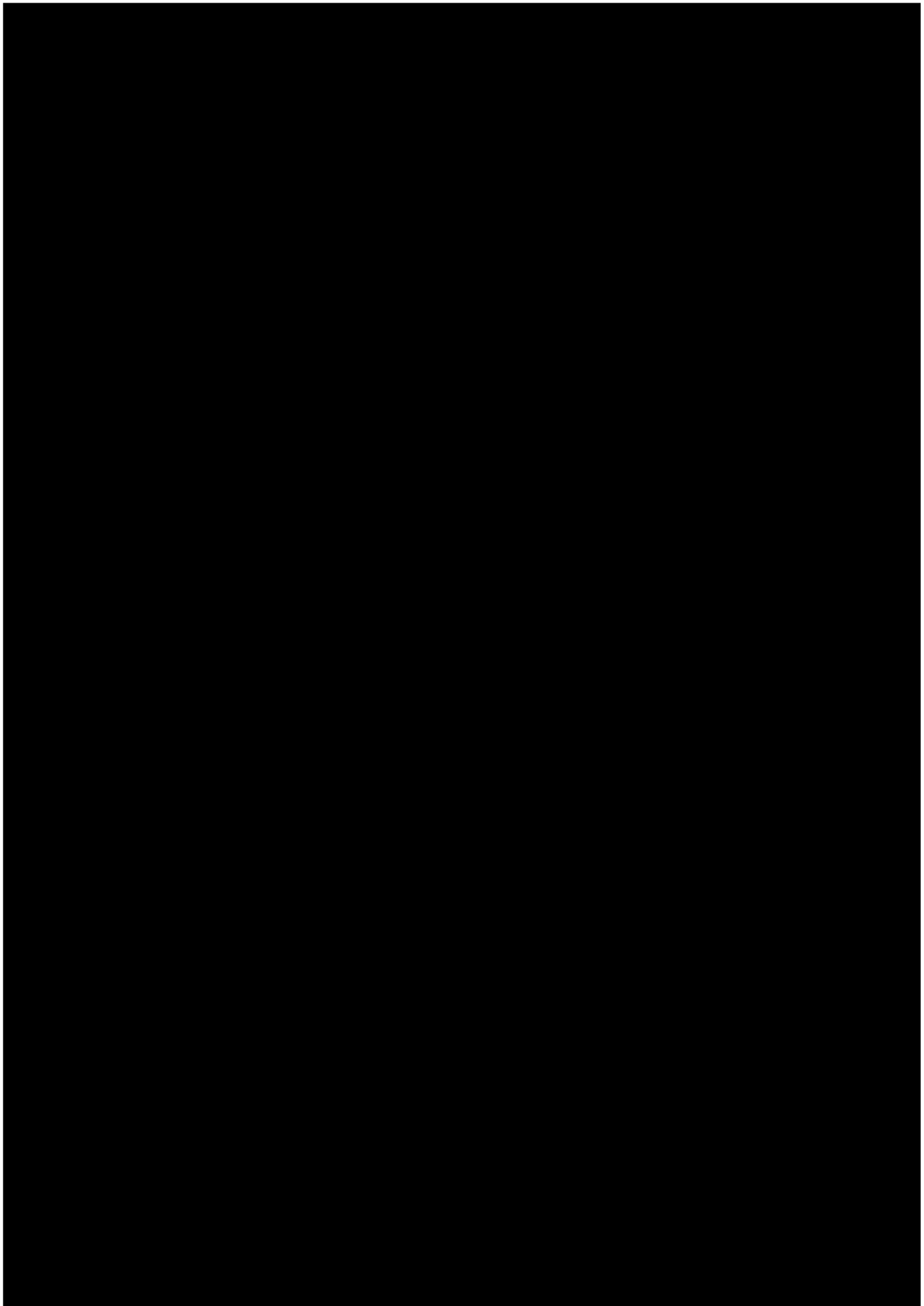


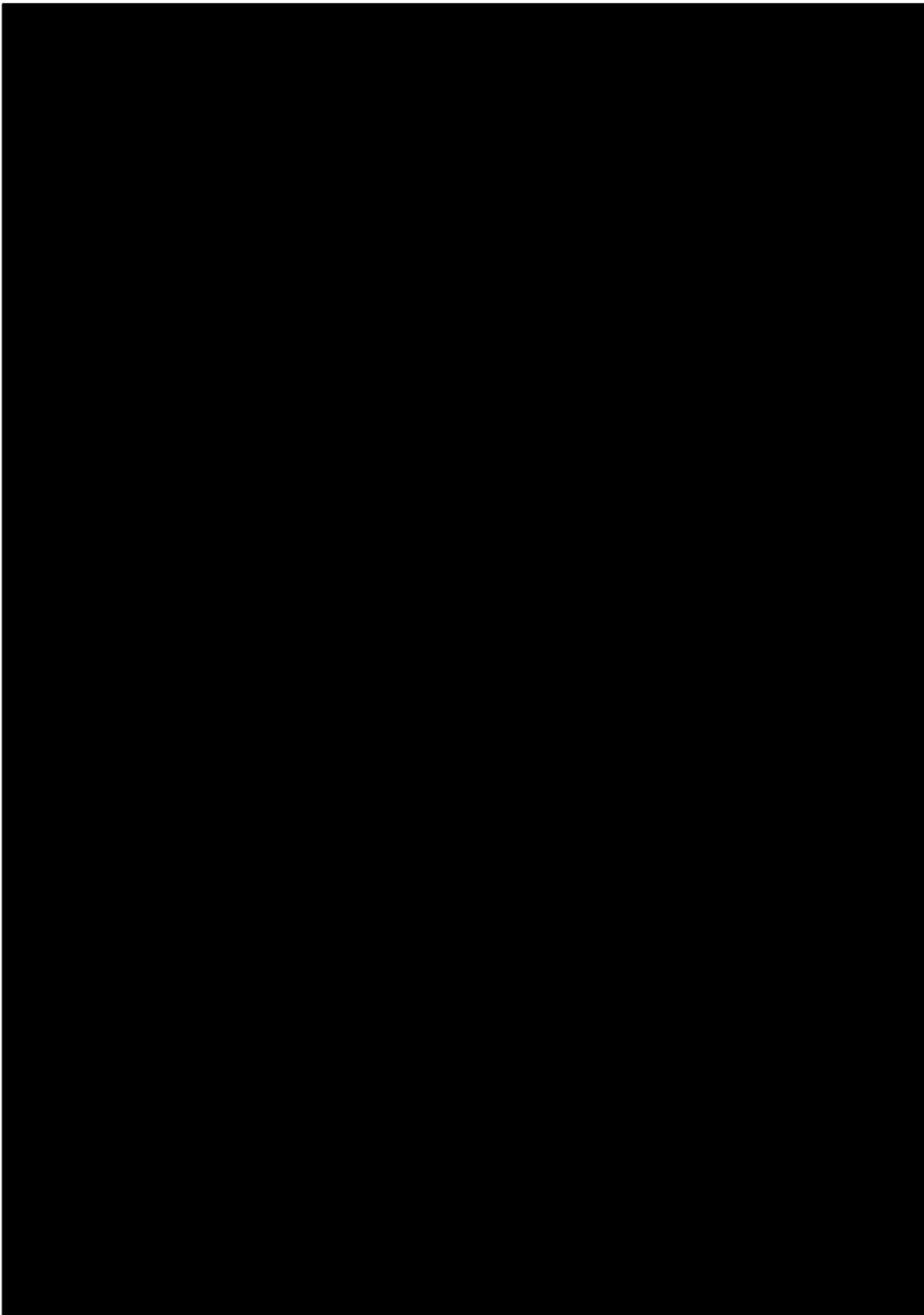


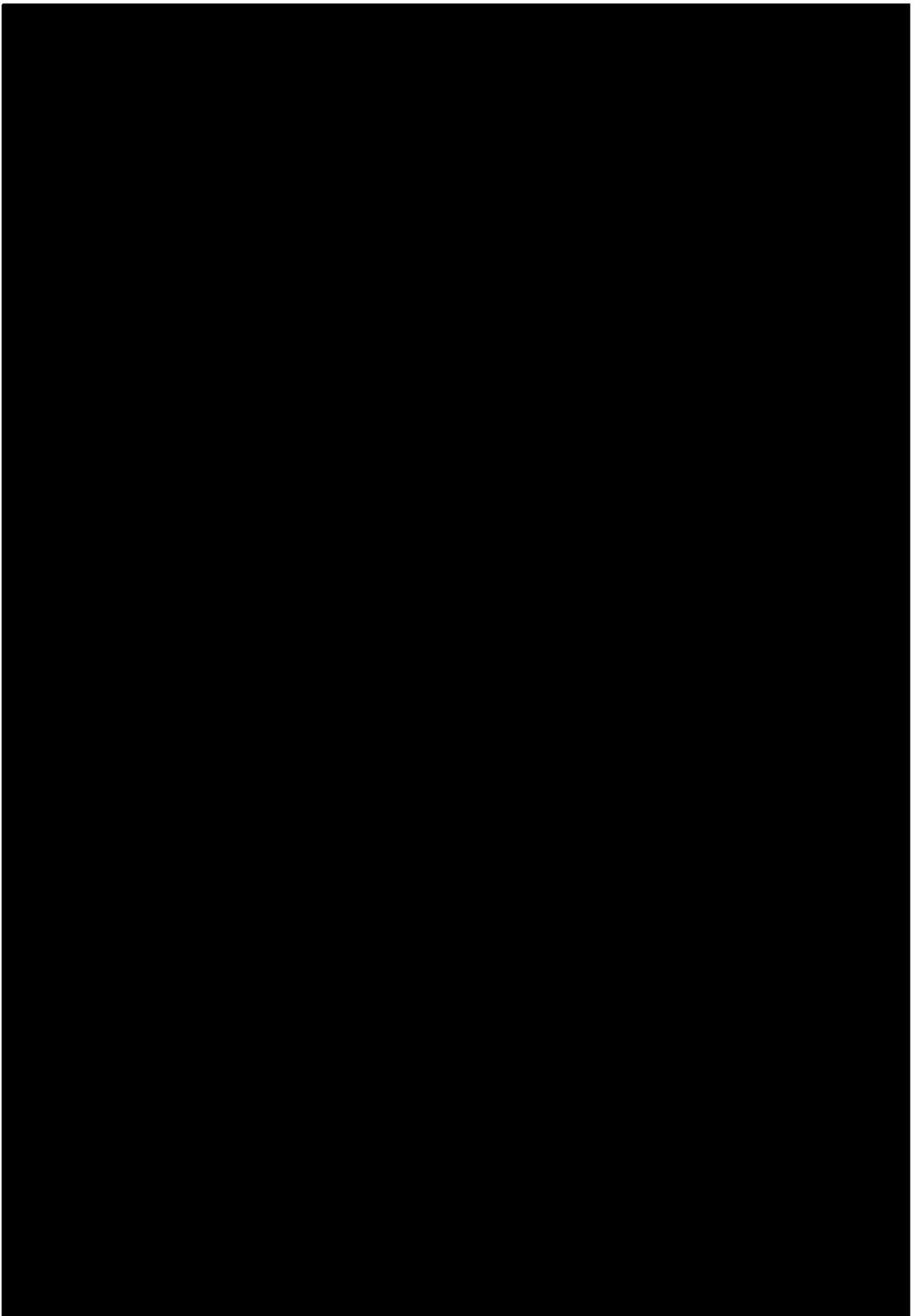


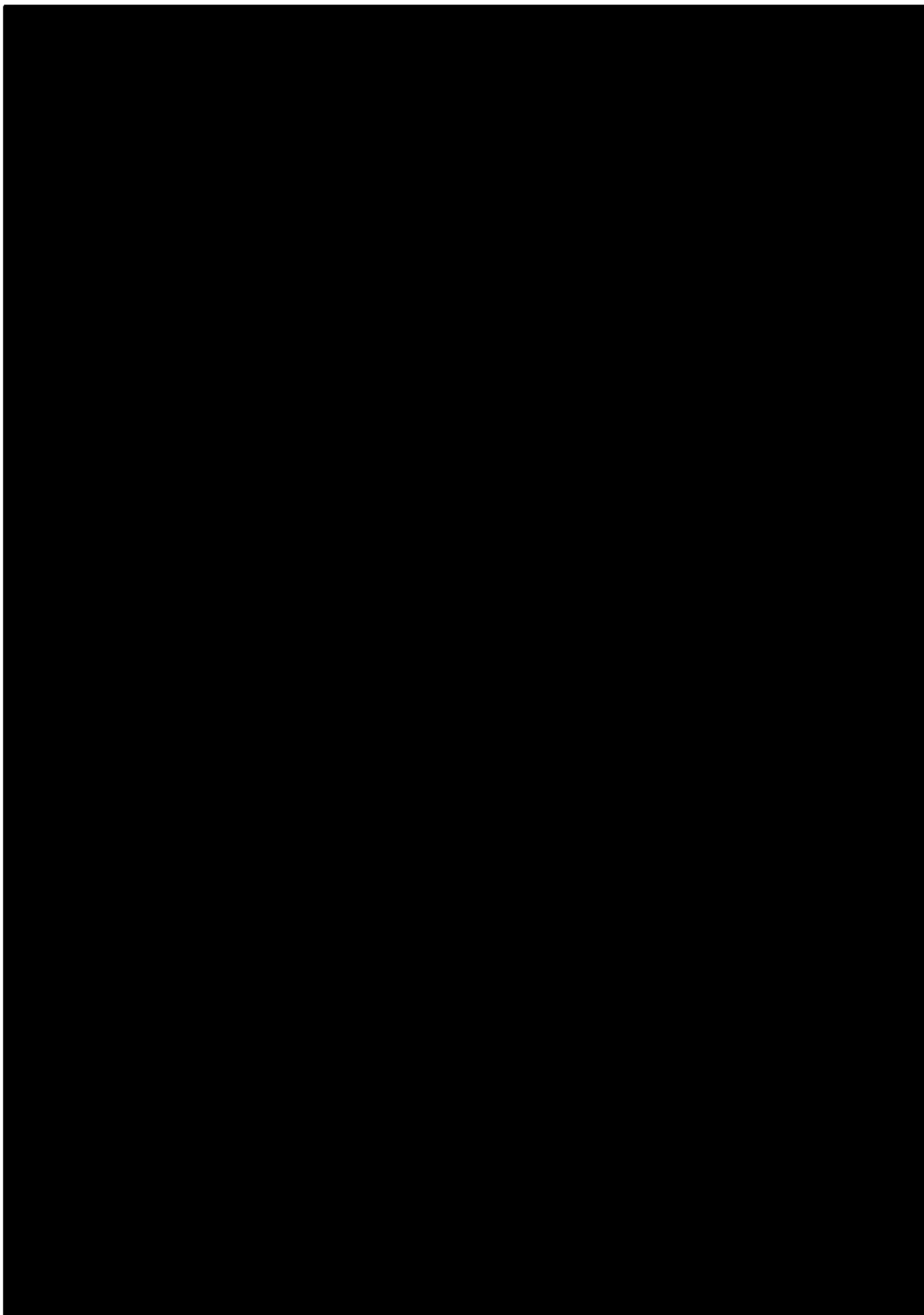


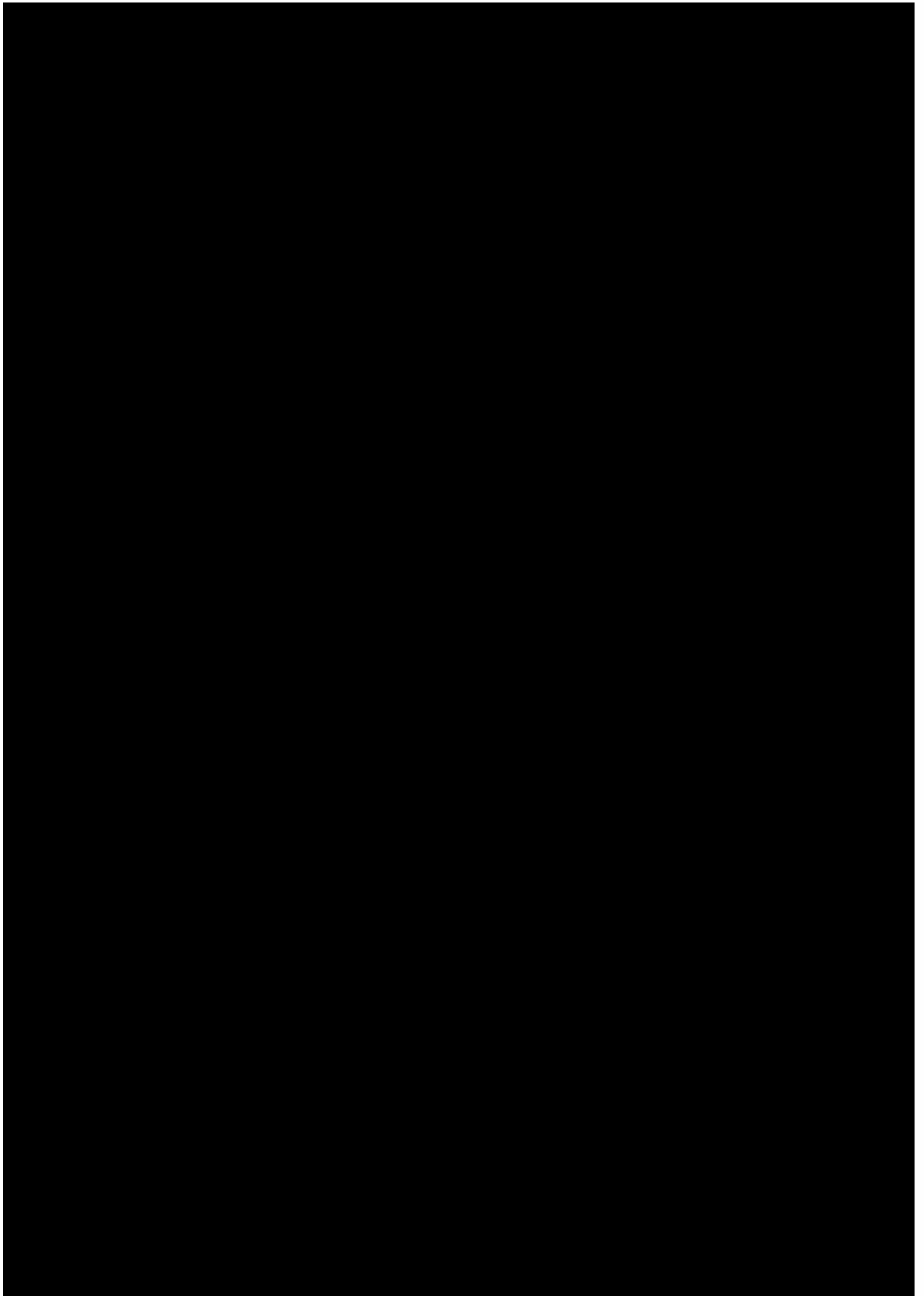


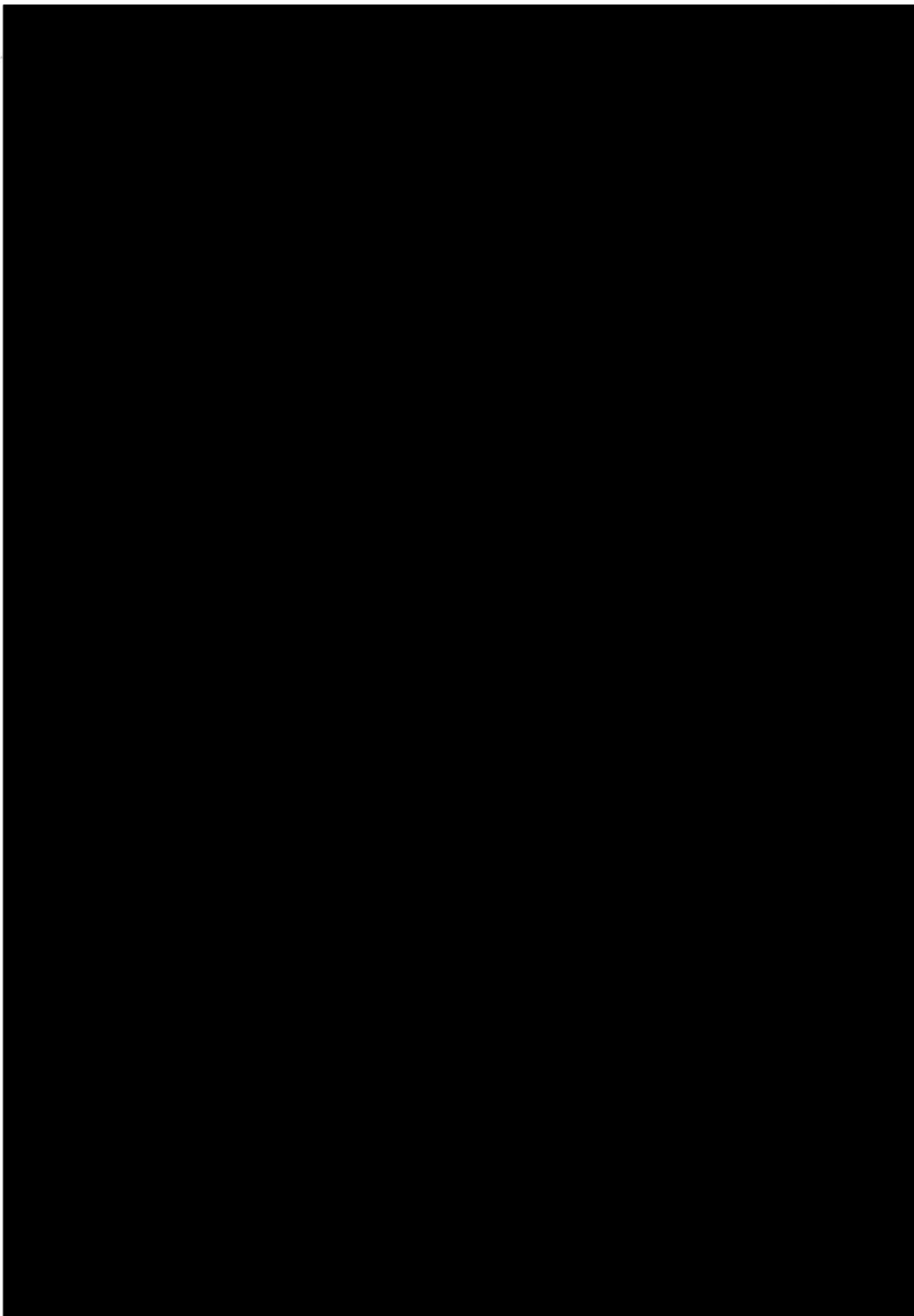


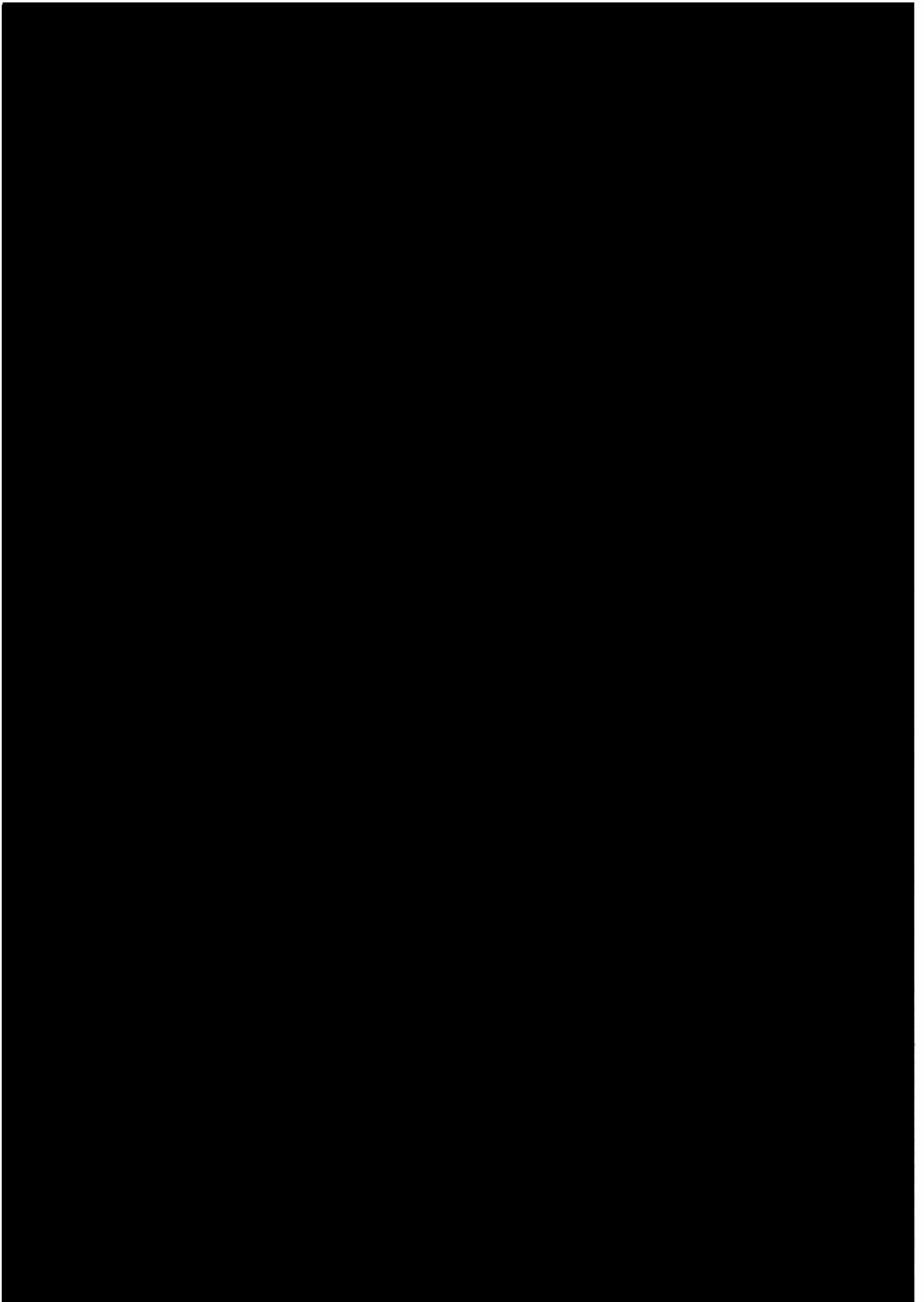


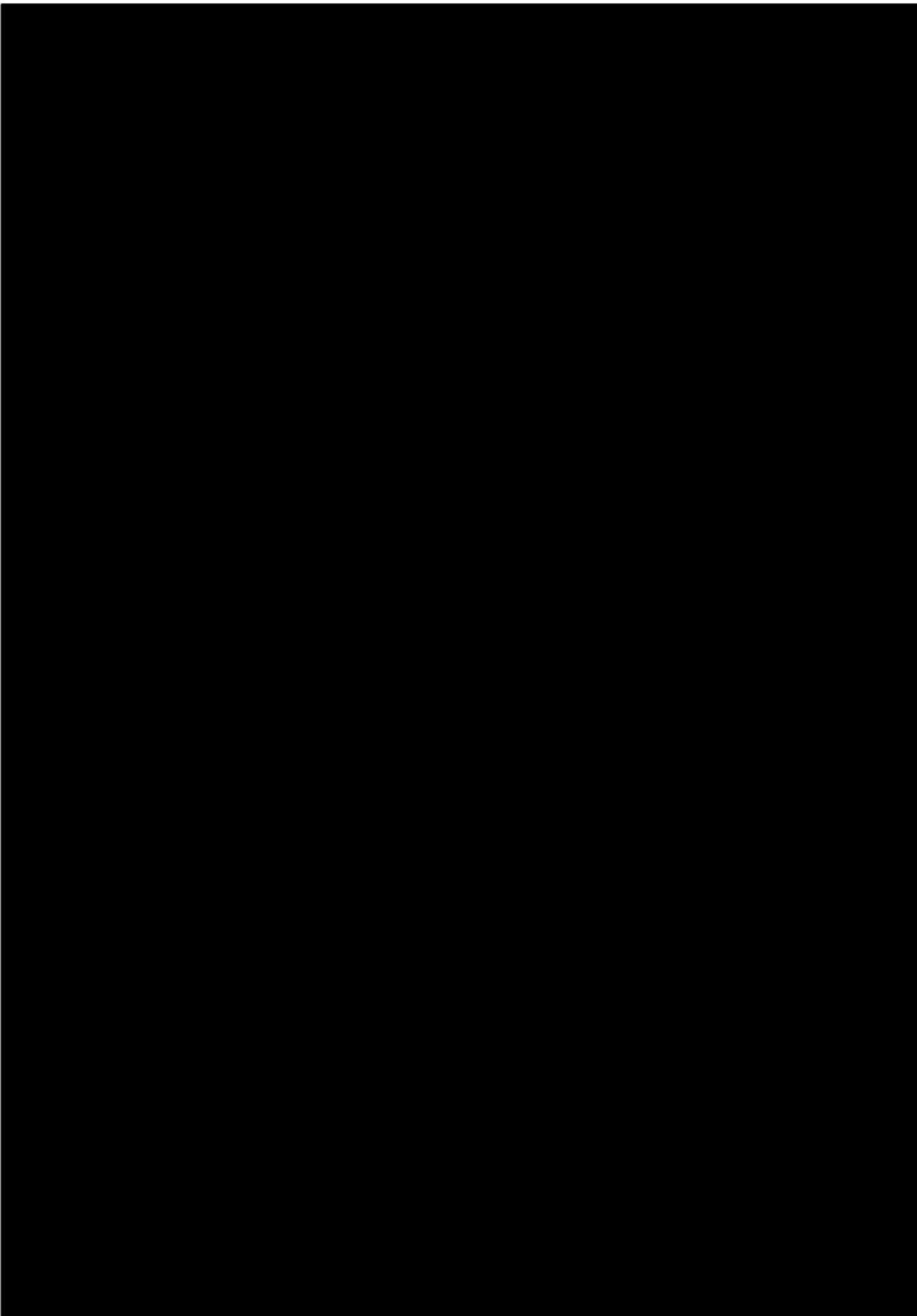


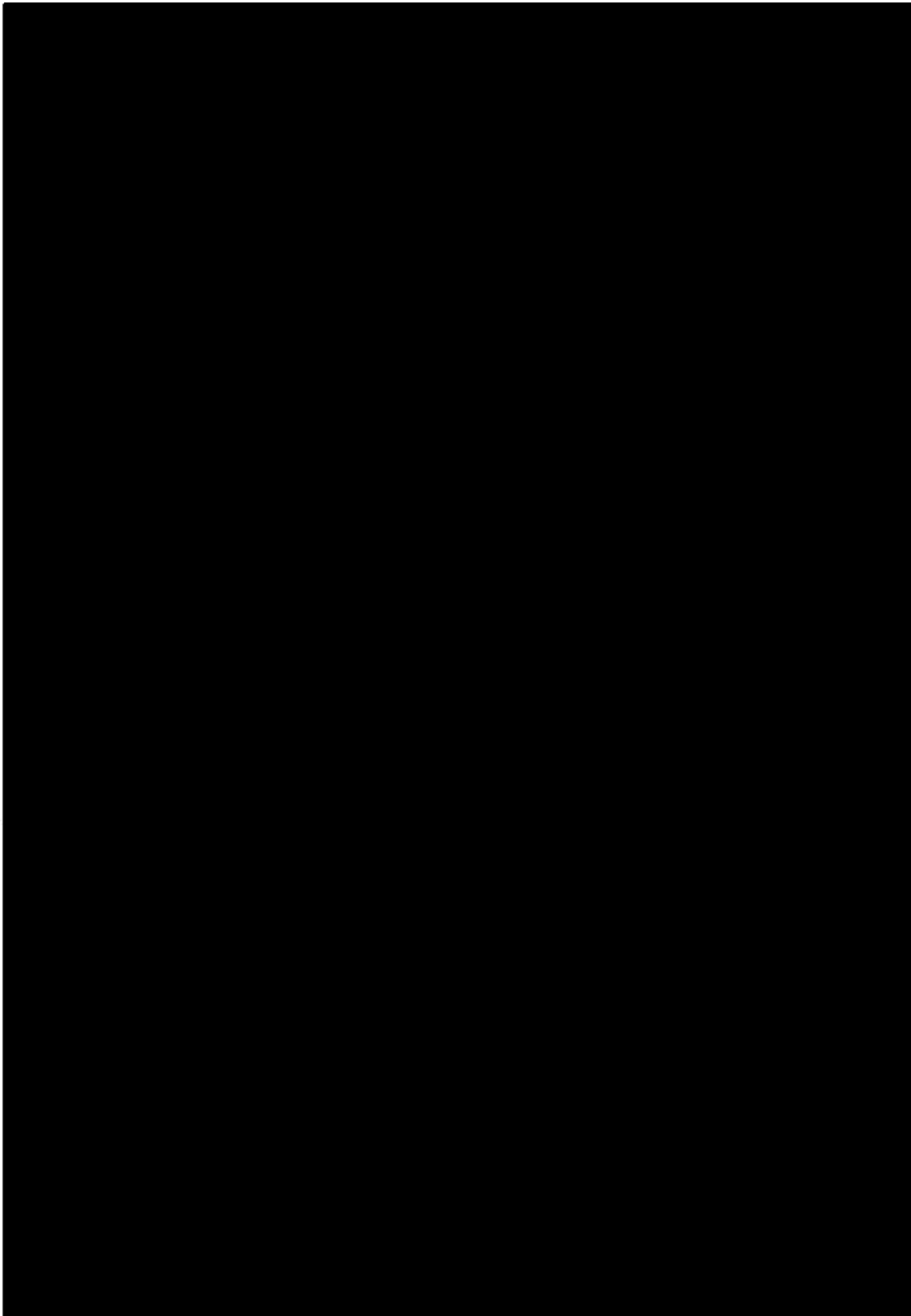


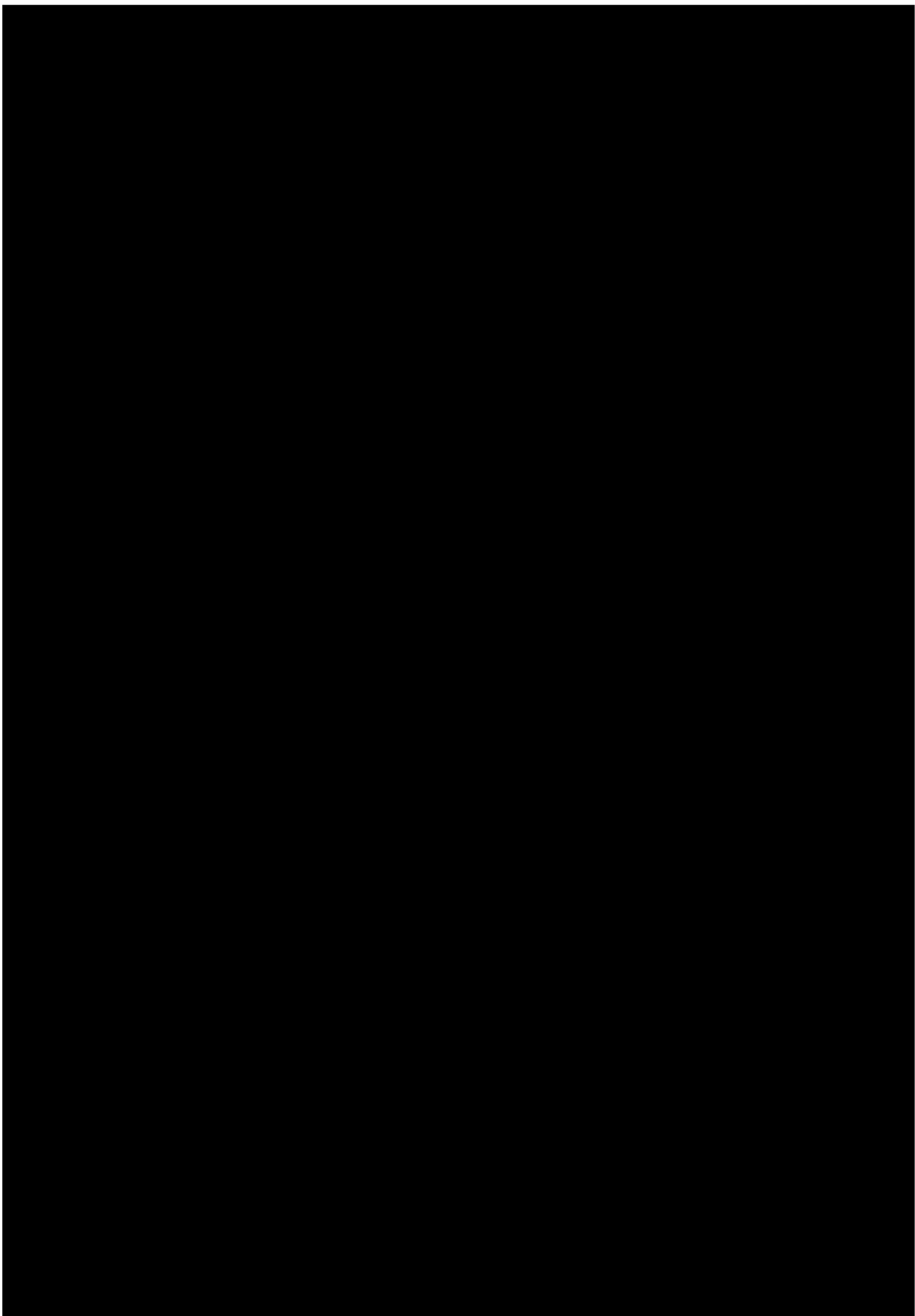


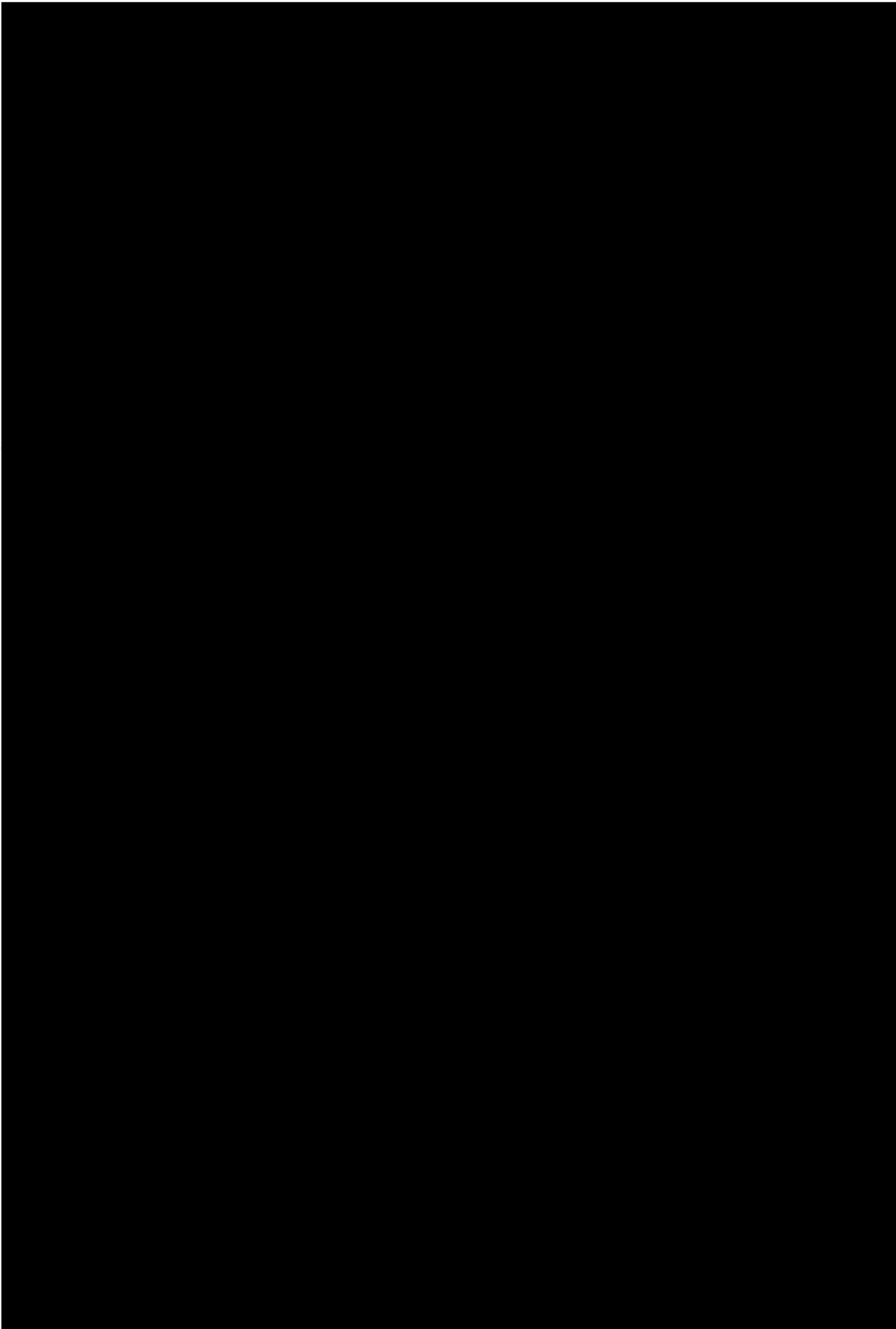


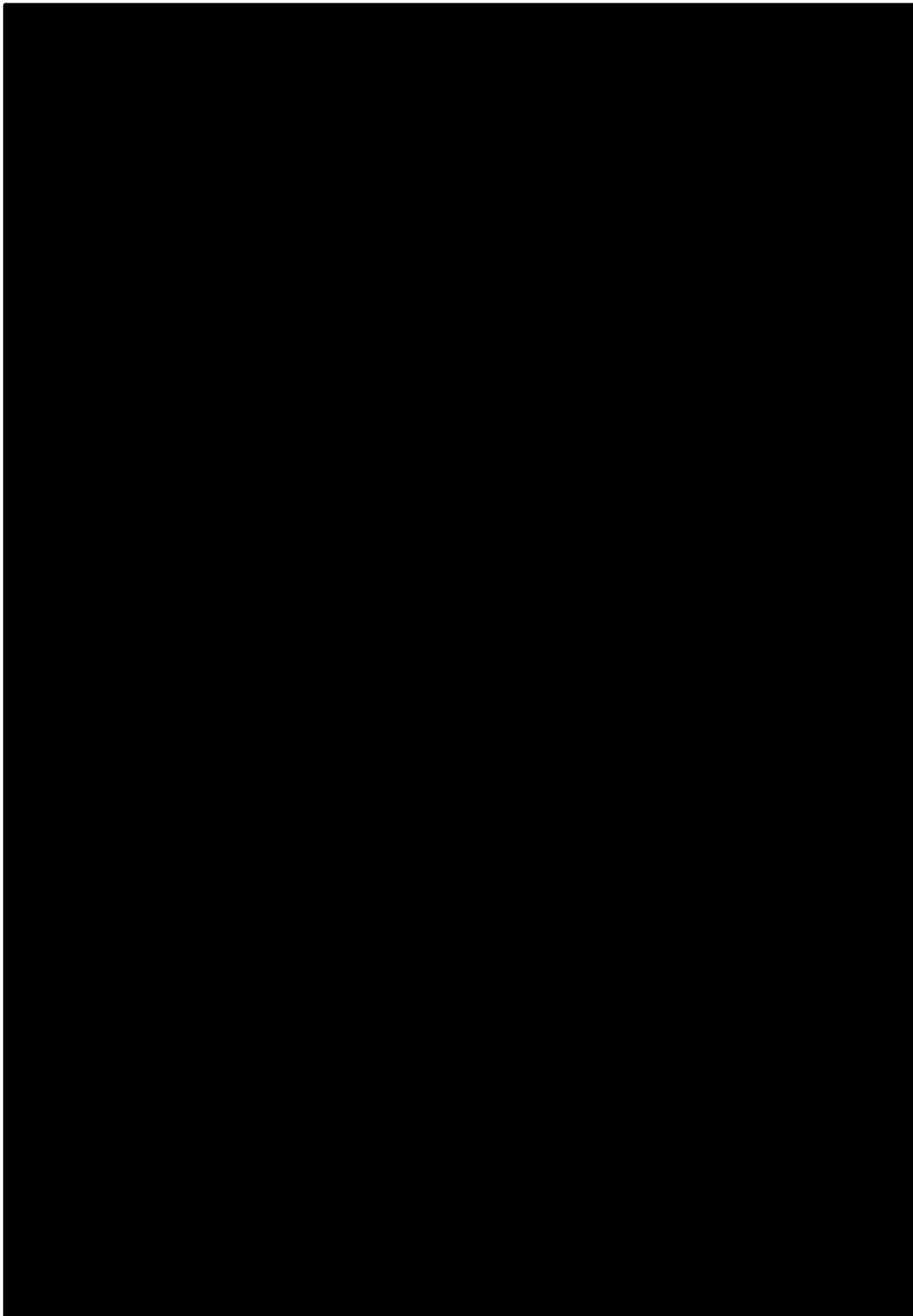


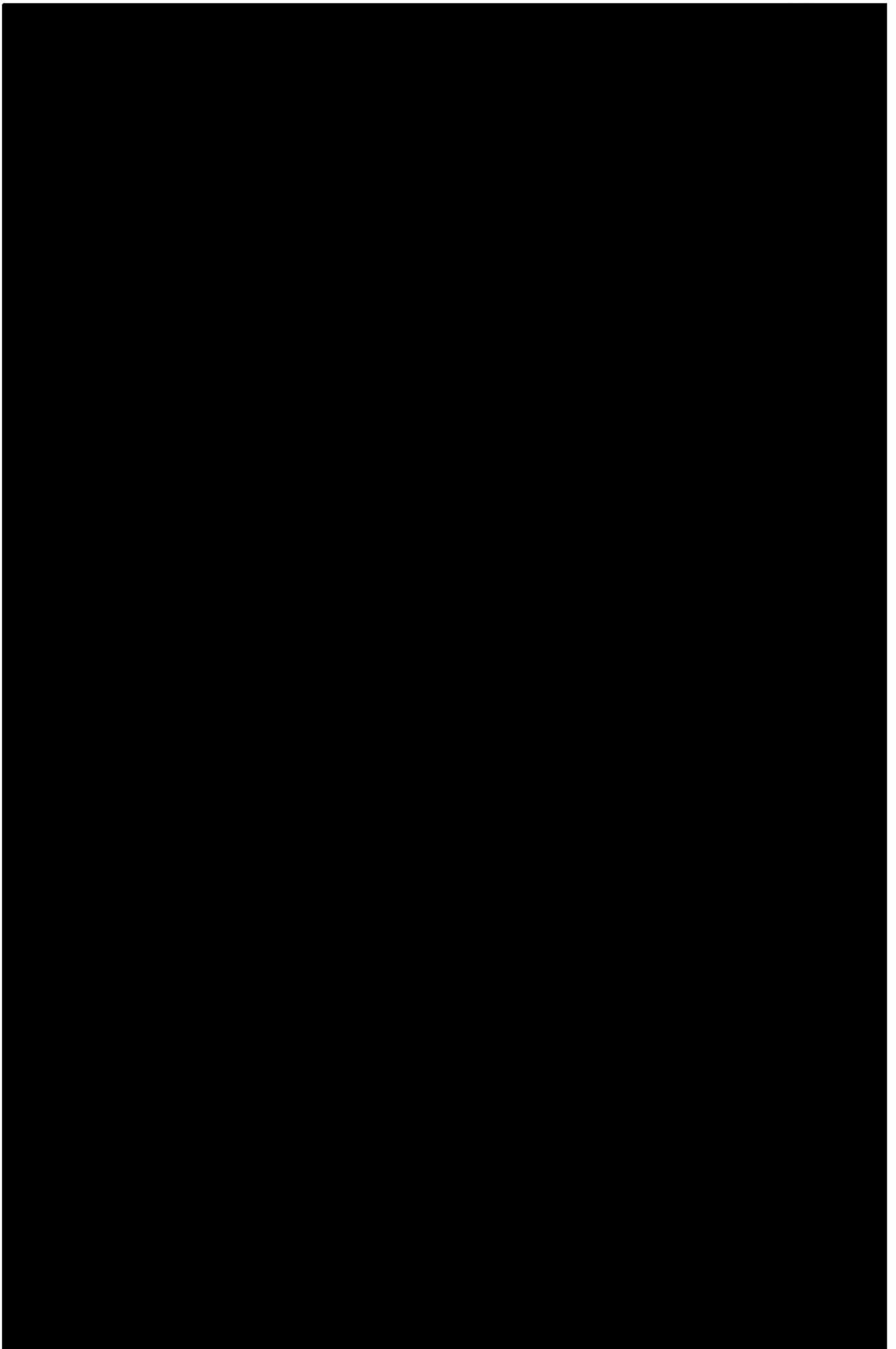


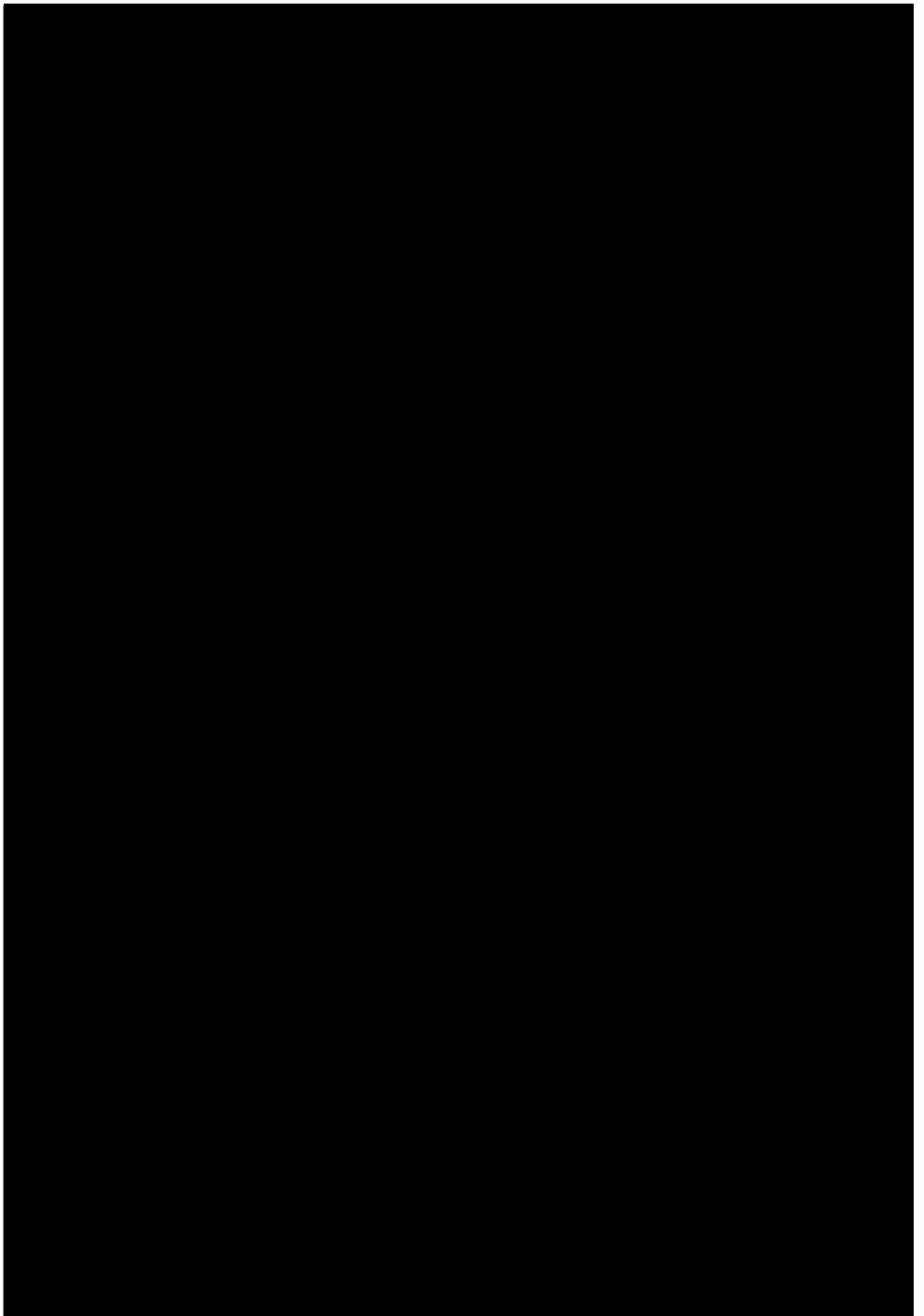


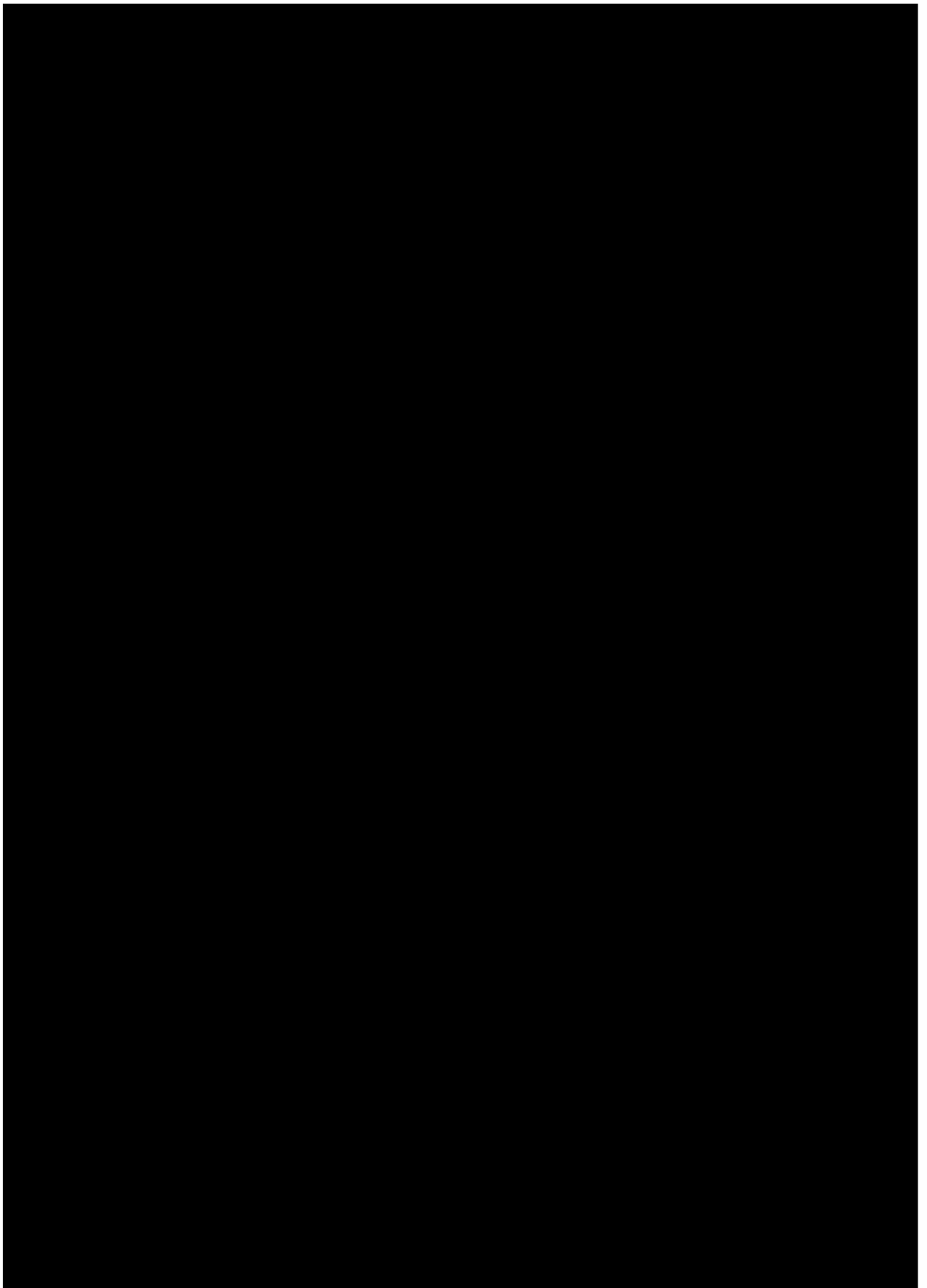


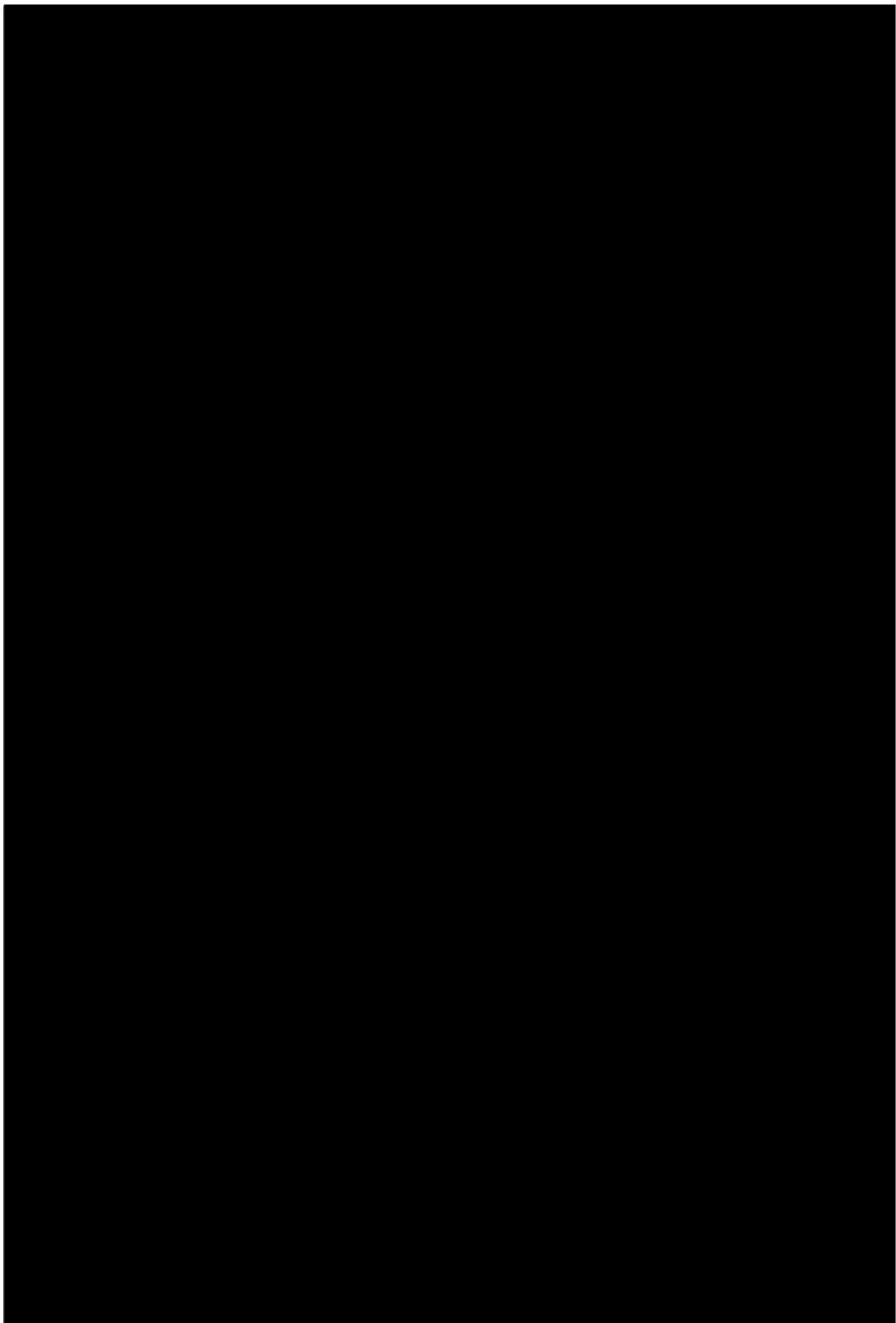


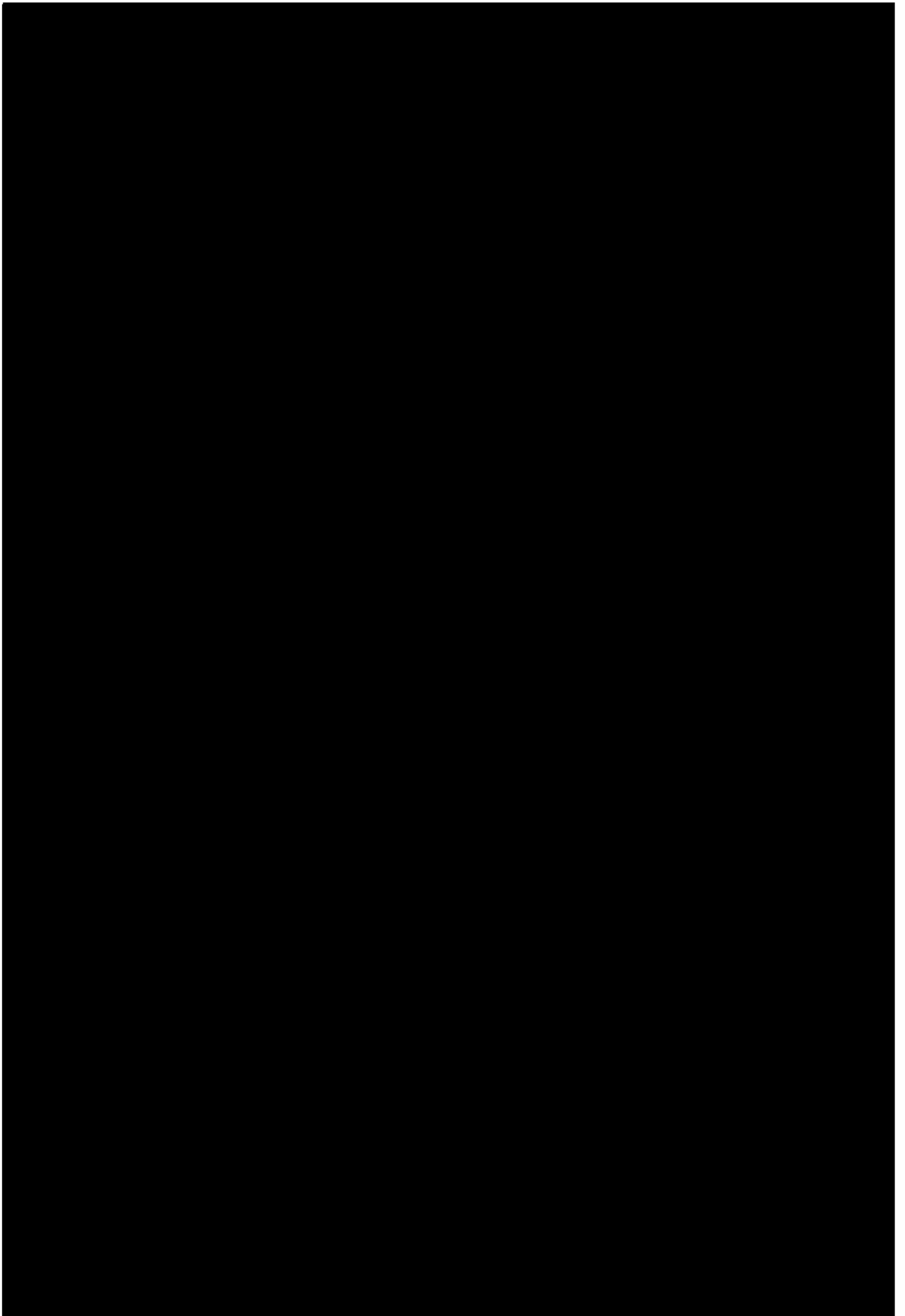


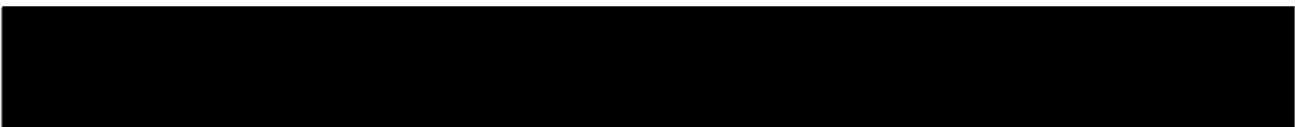


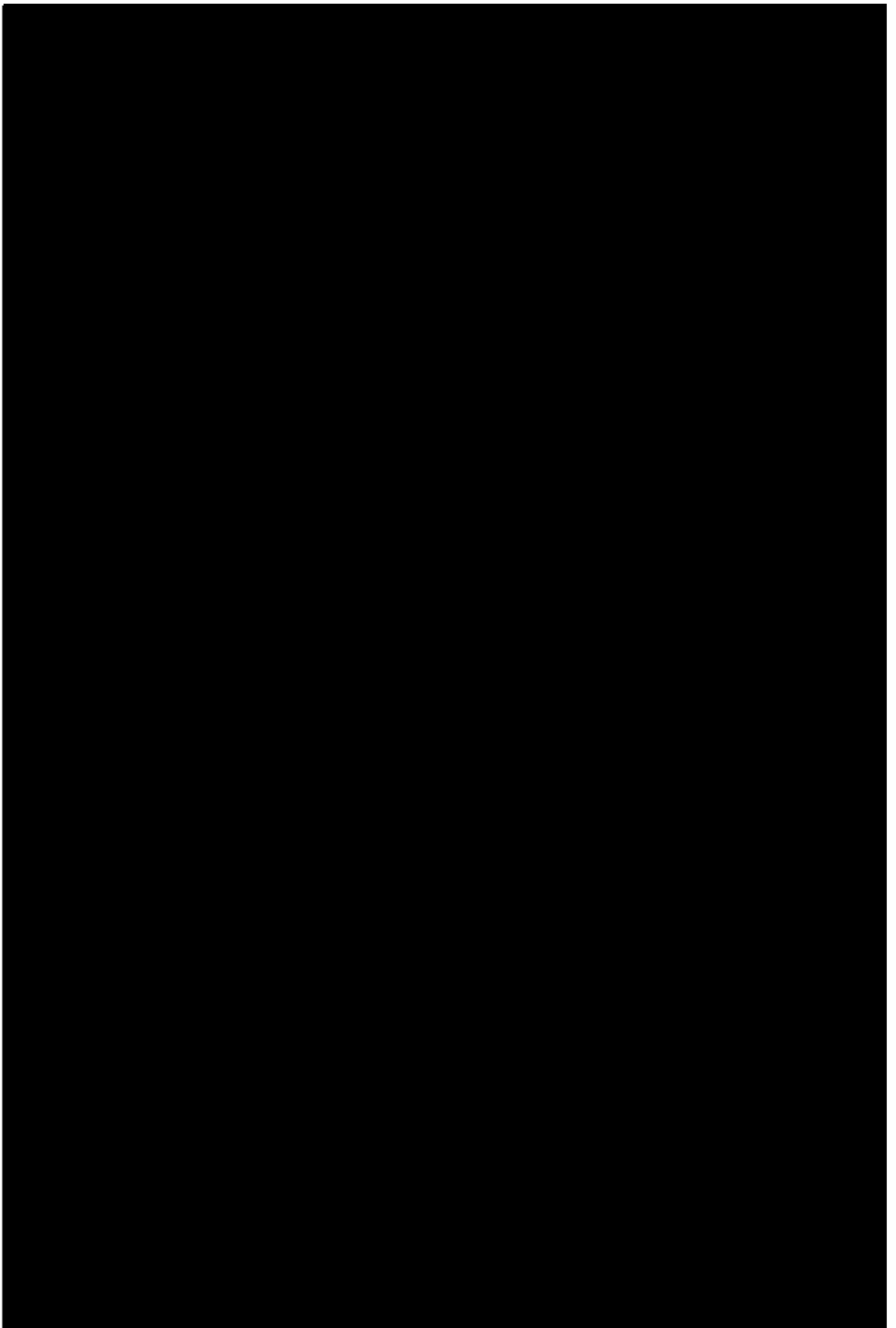










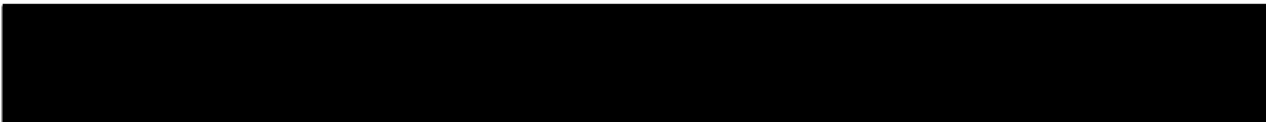
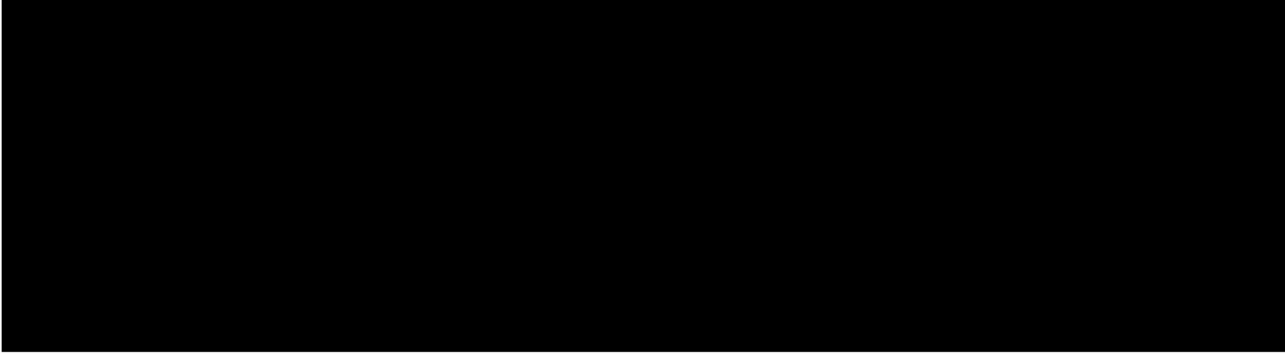


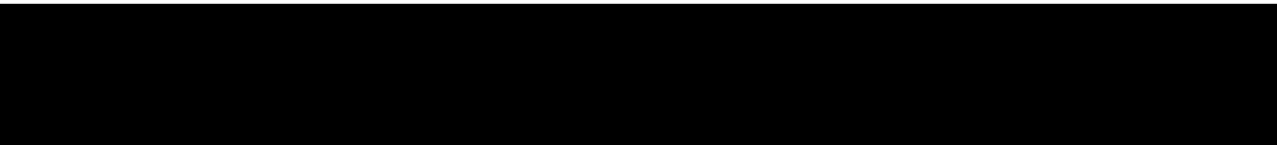
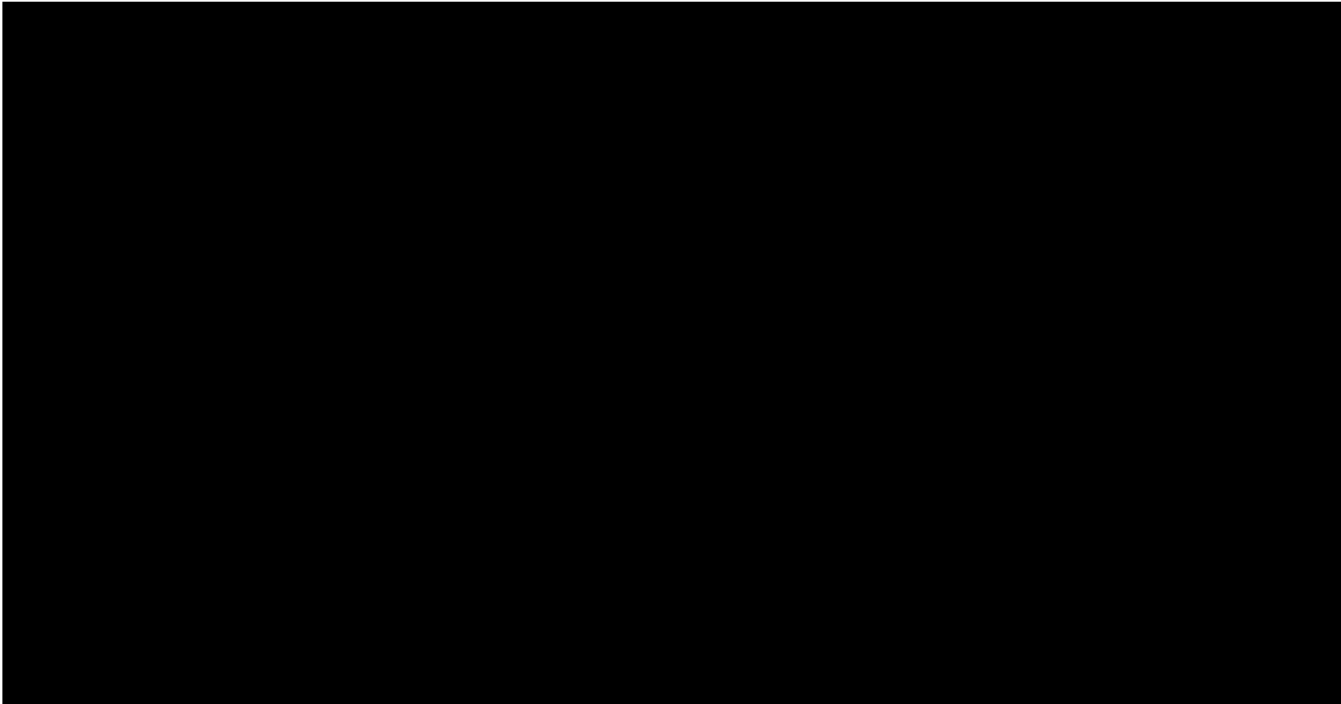


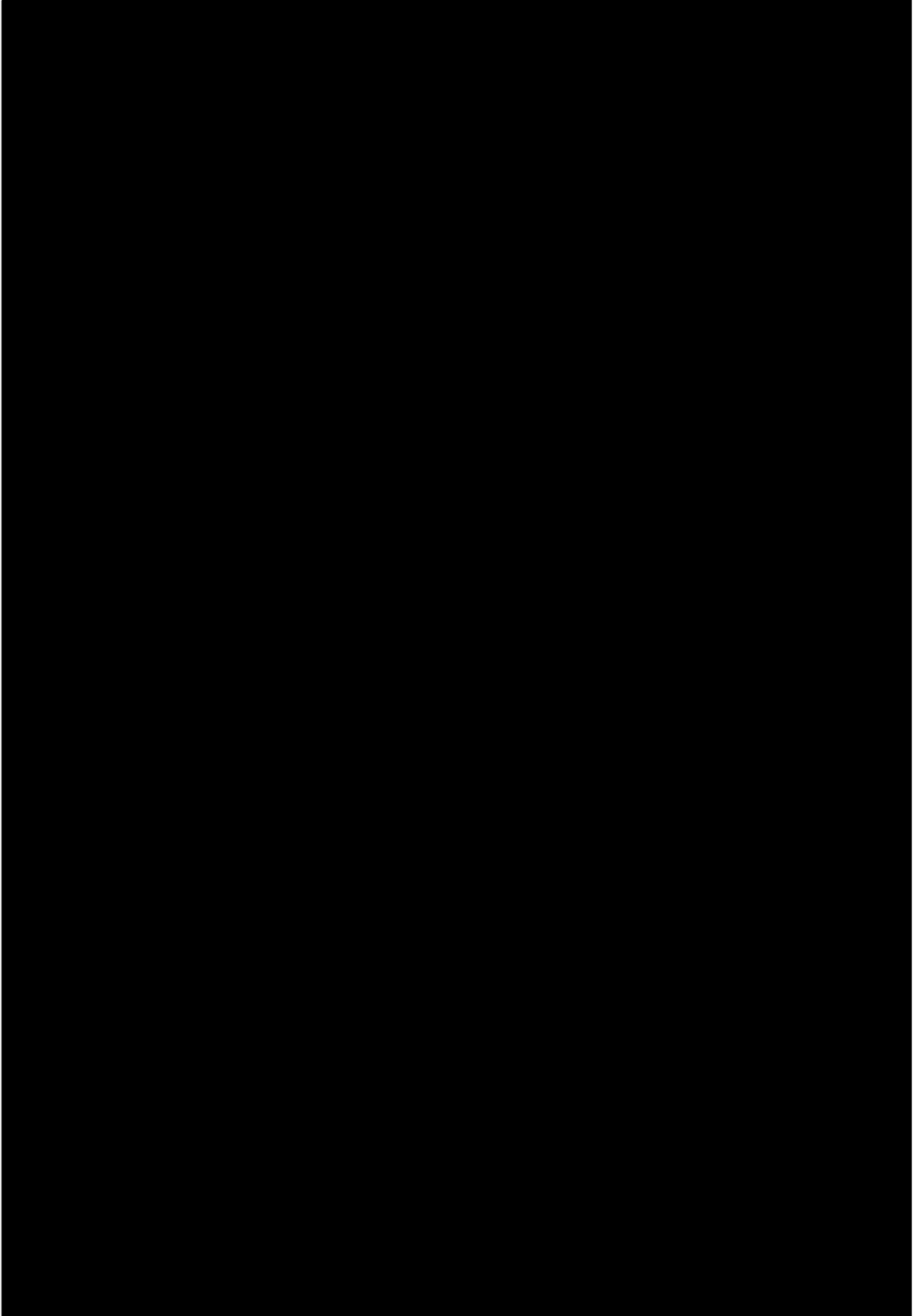
**Transport
for NSW**

Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F4 – Initial Asset Management Plan

Document Number: 3129230_13
Execution Version

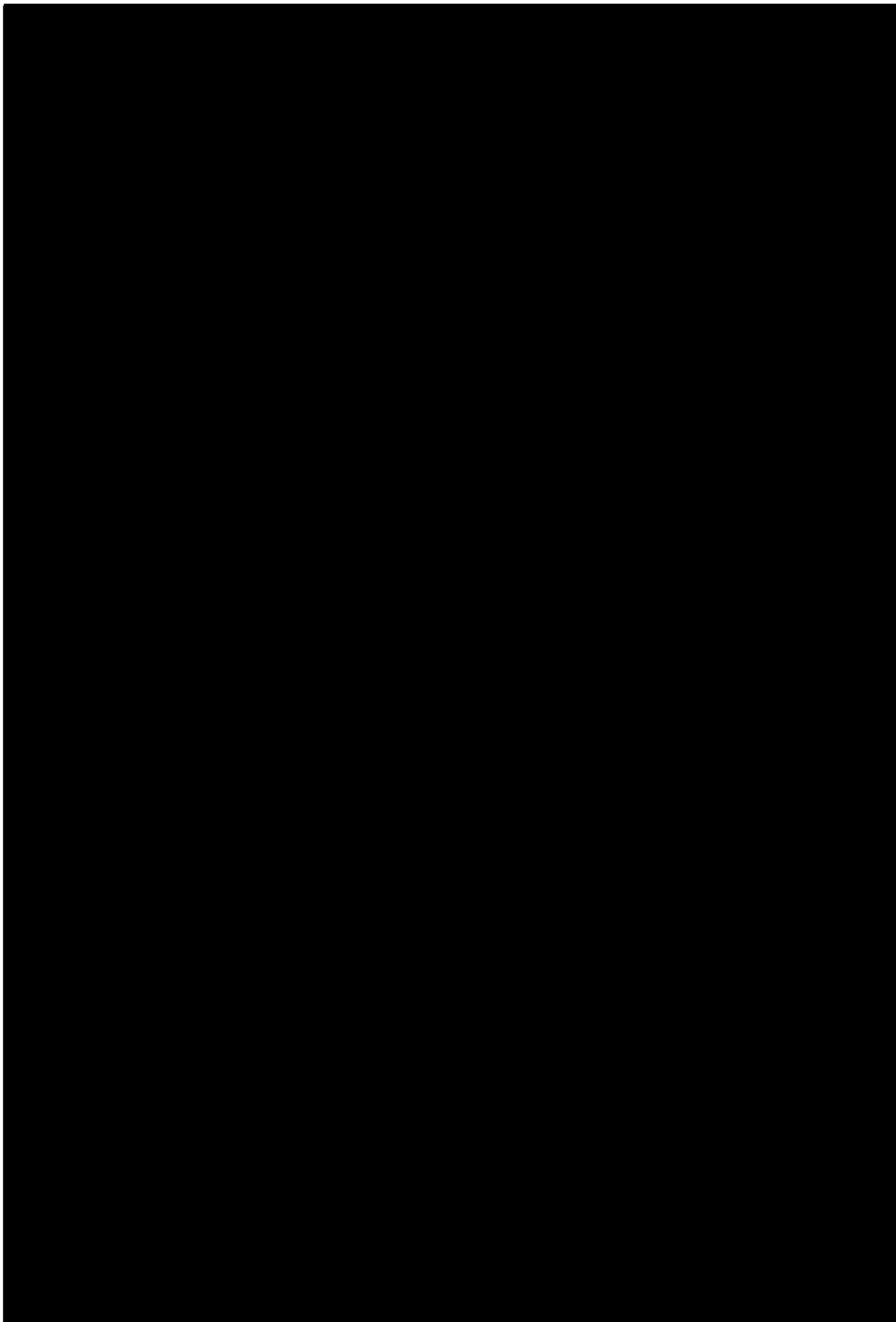


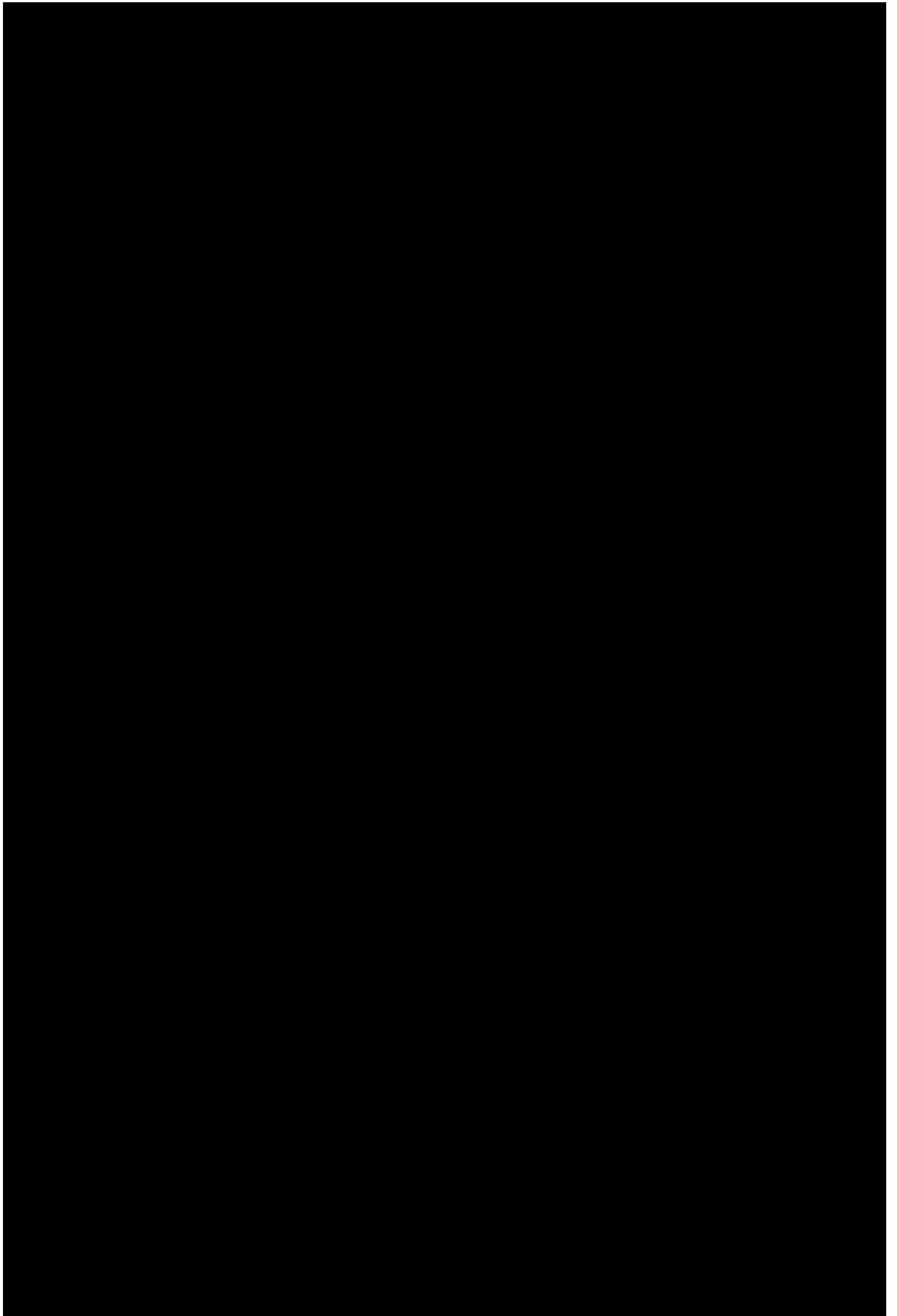


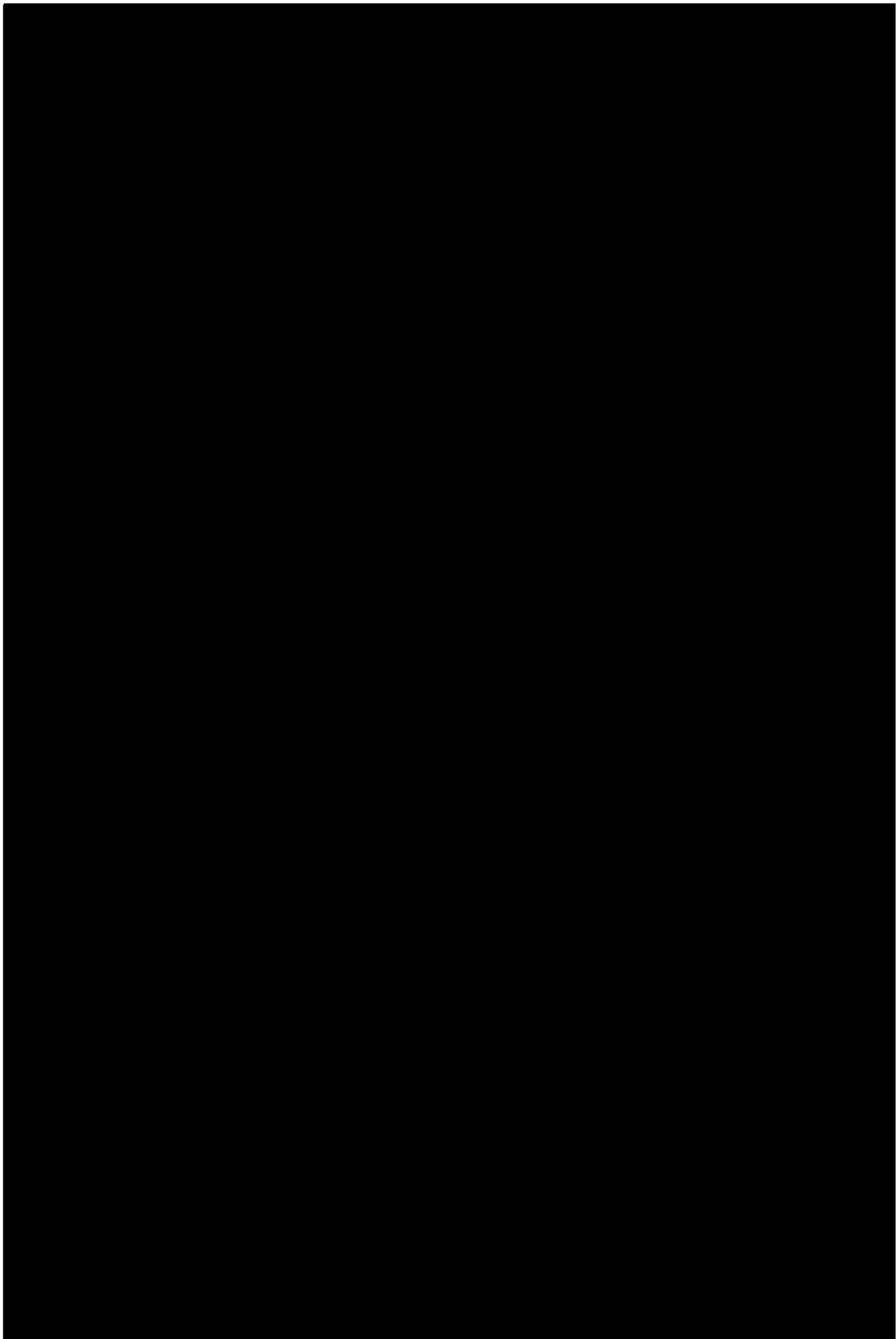


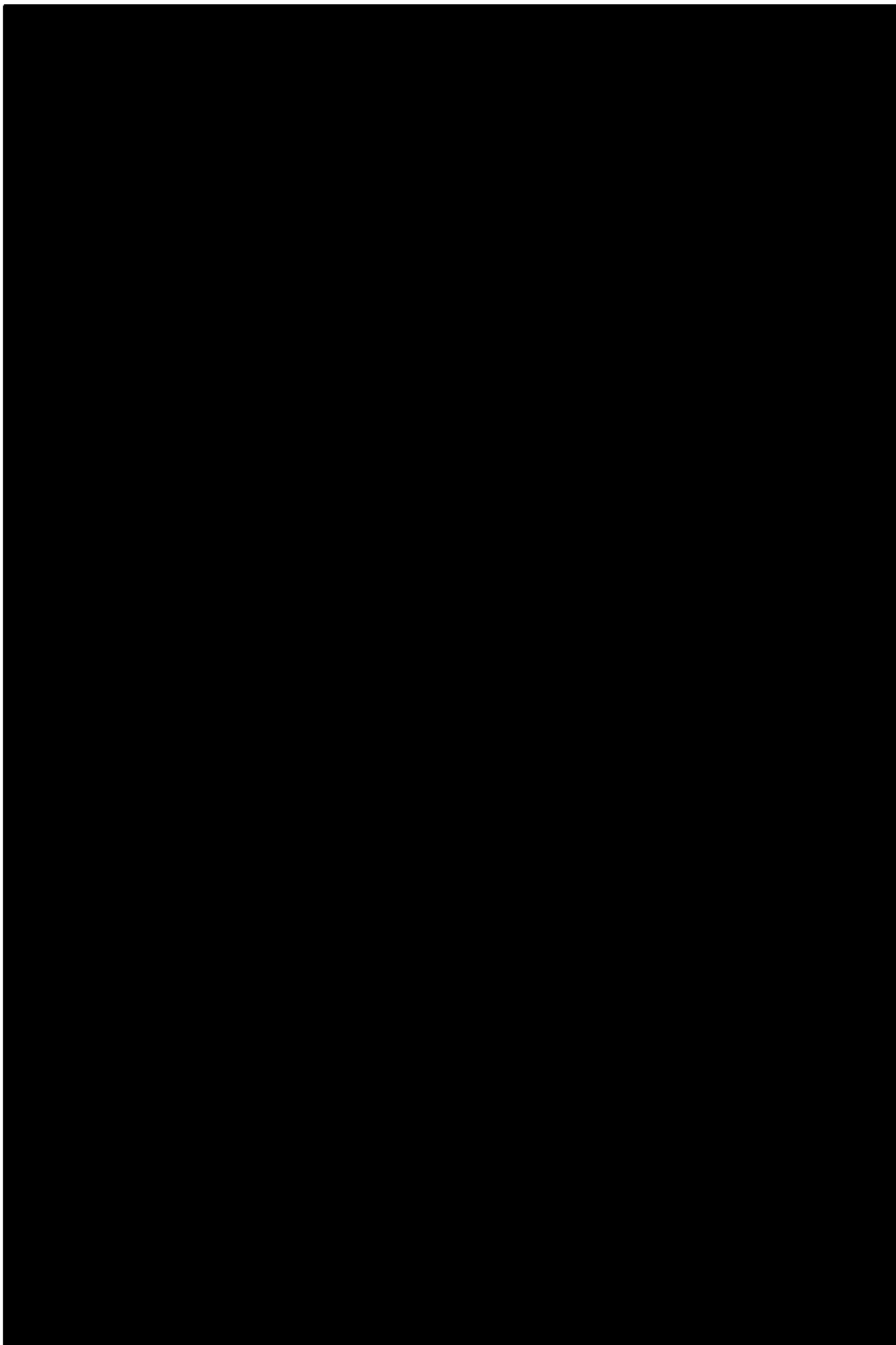


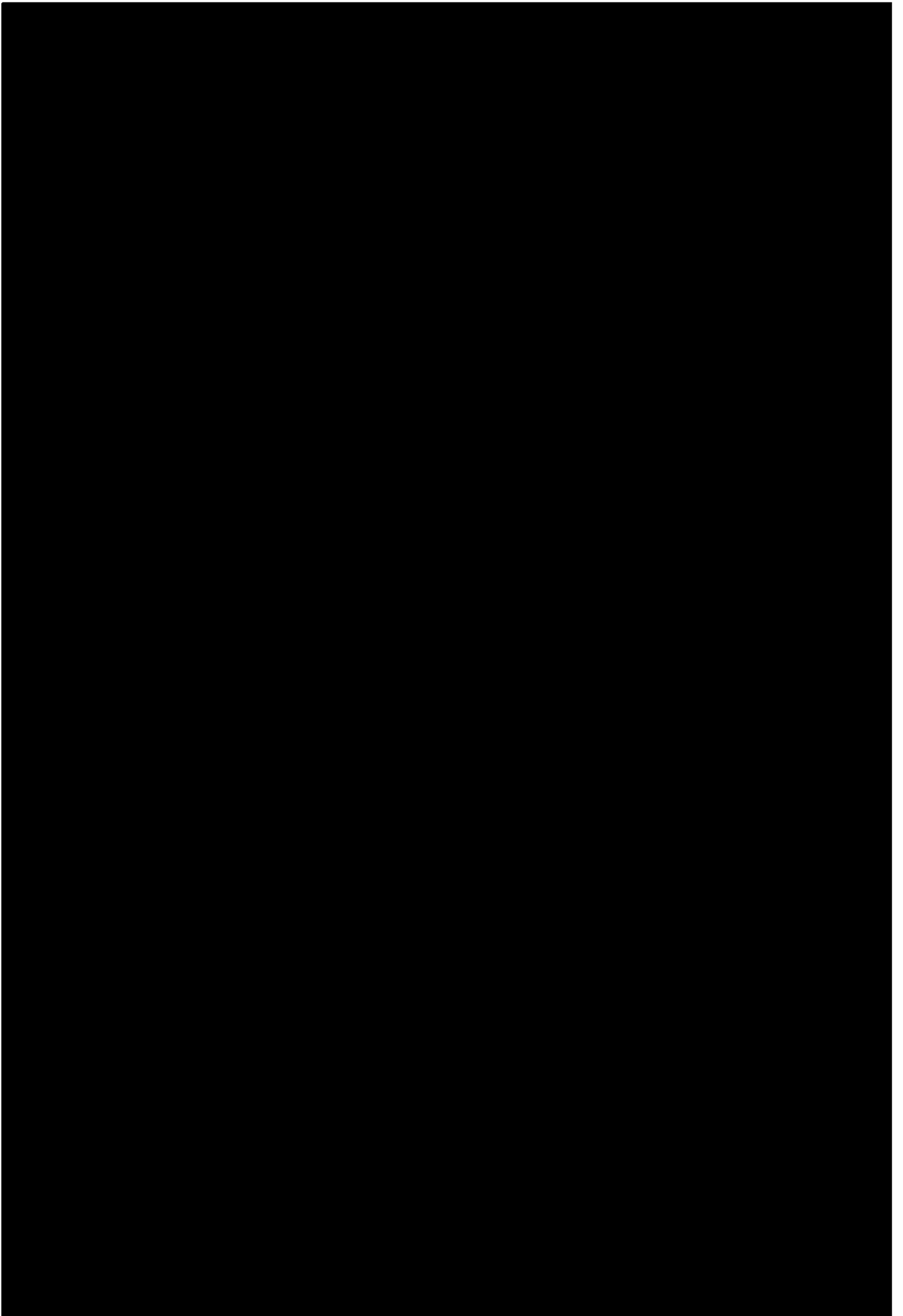


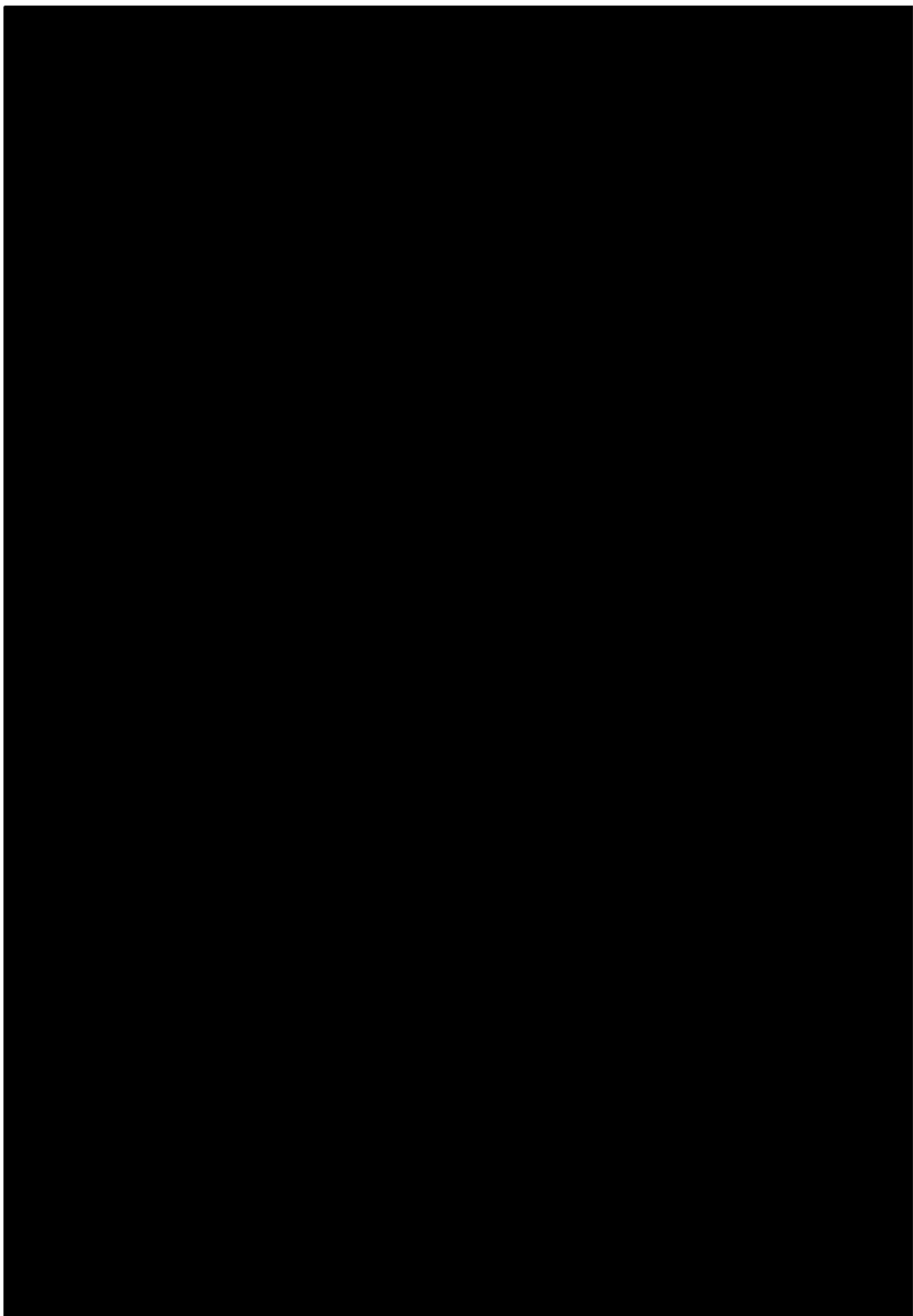


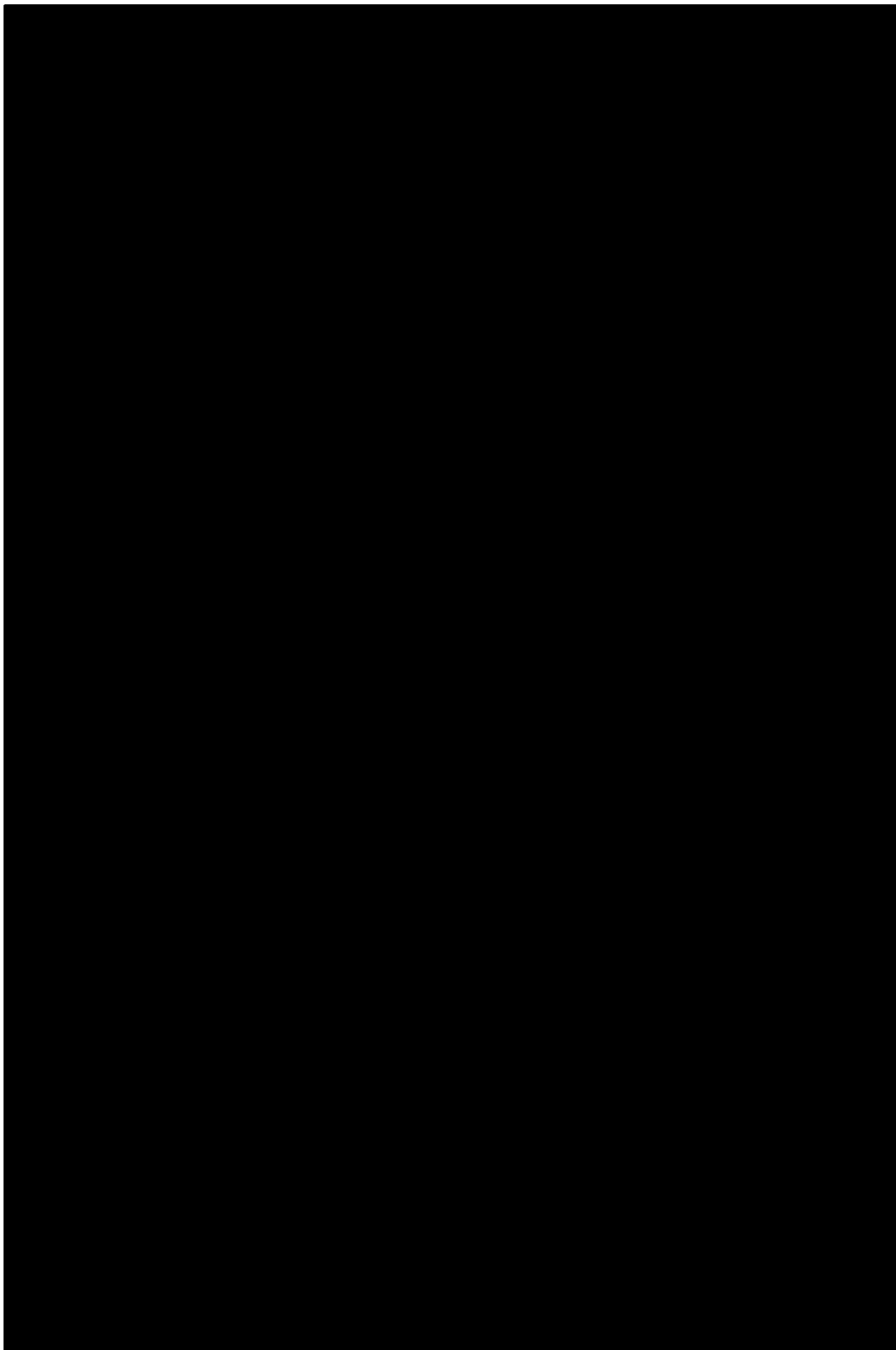


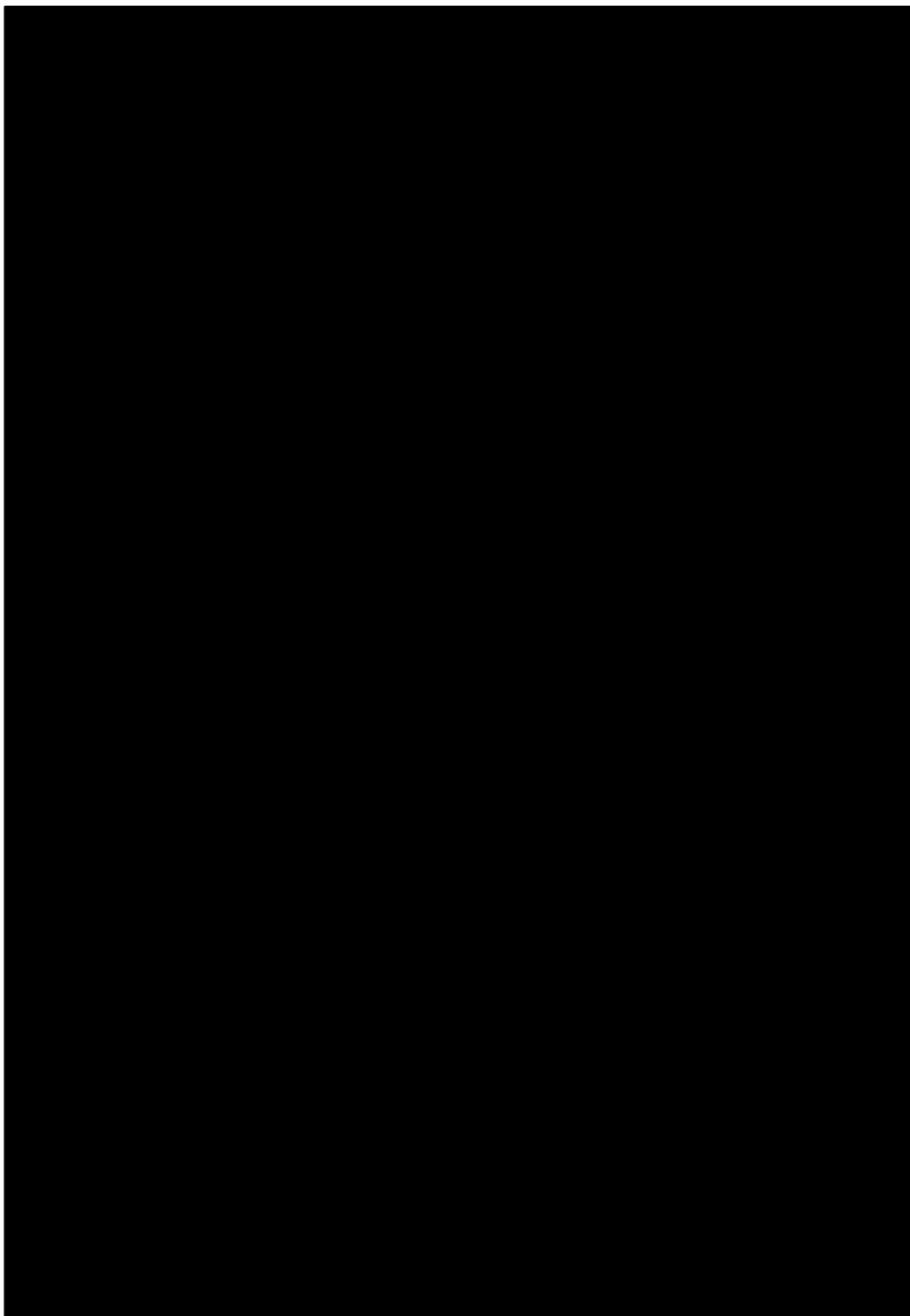


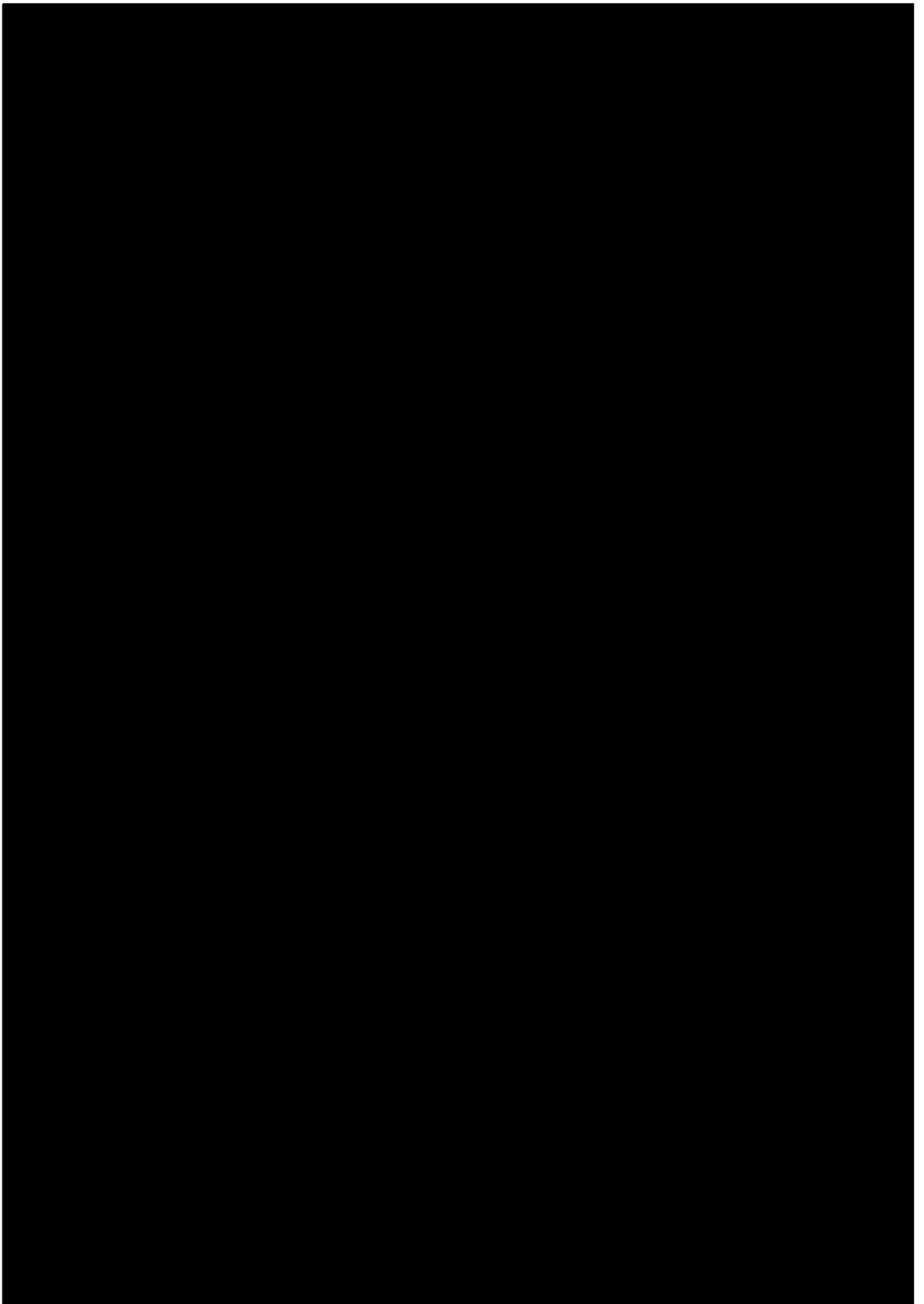


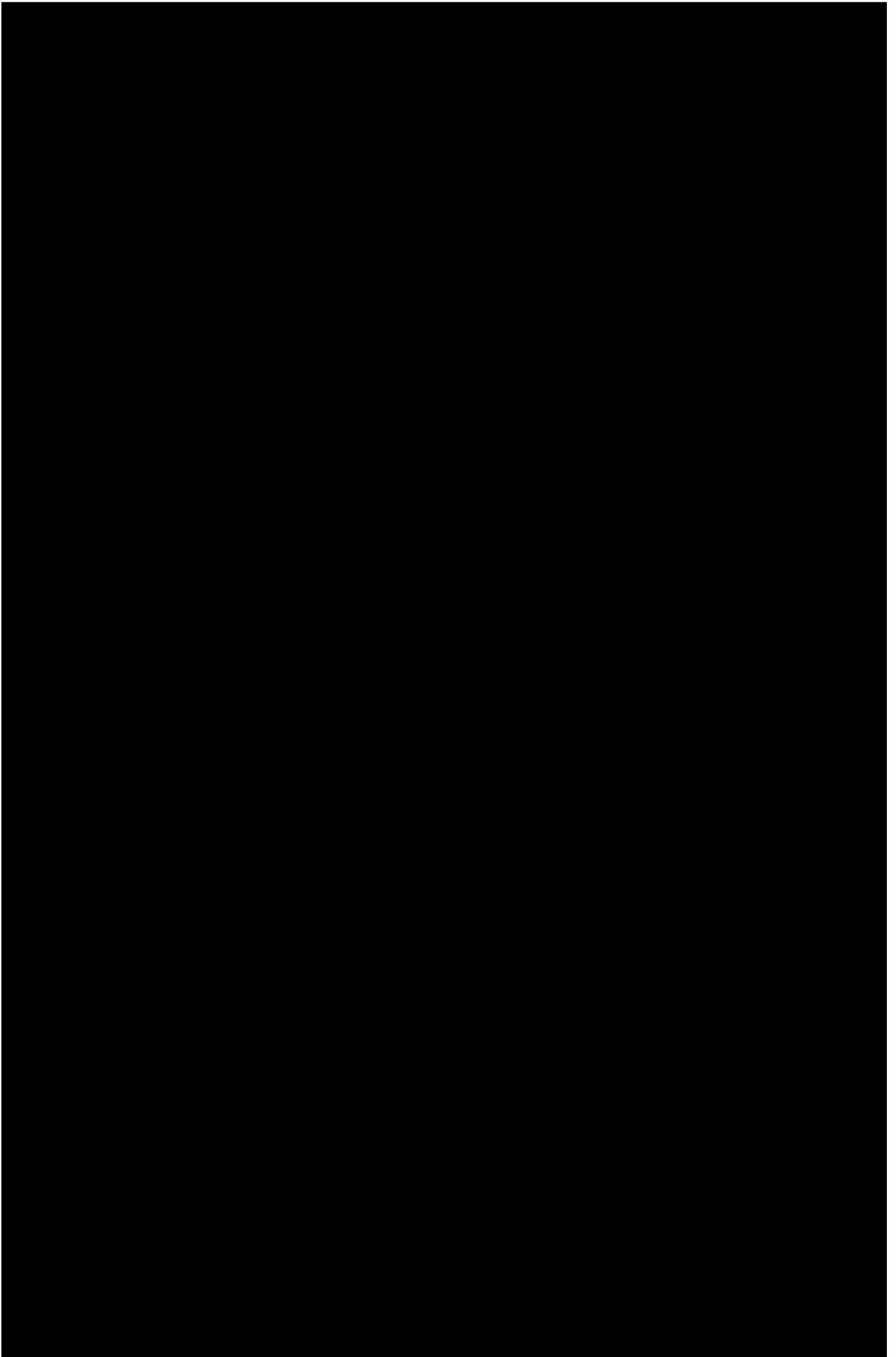


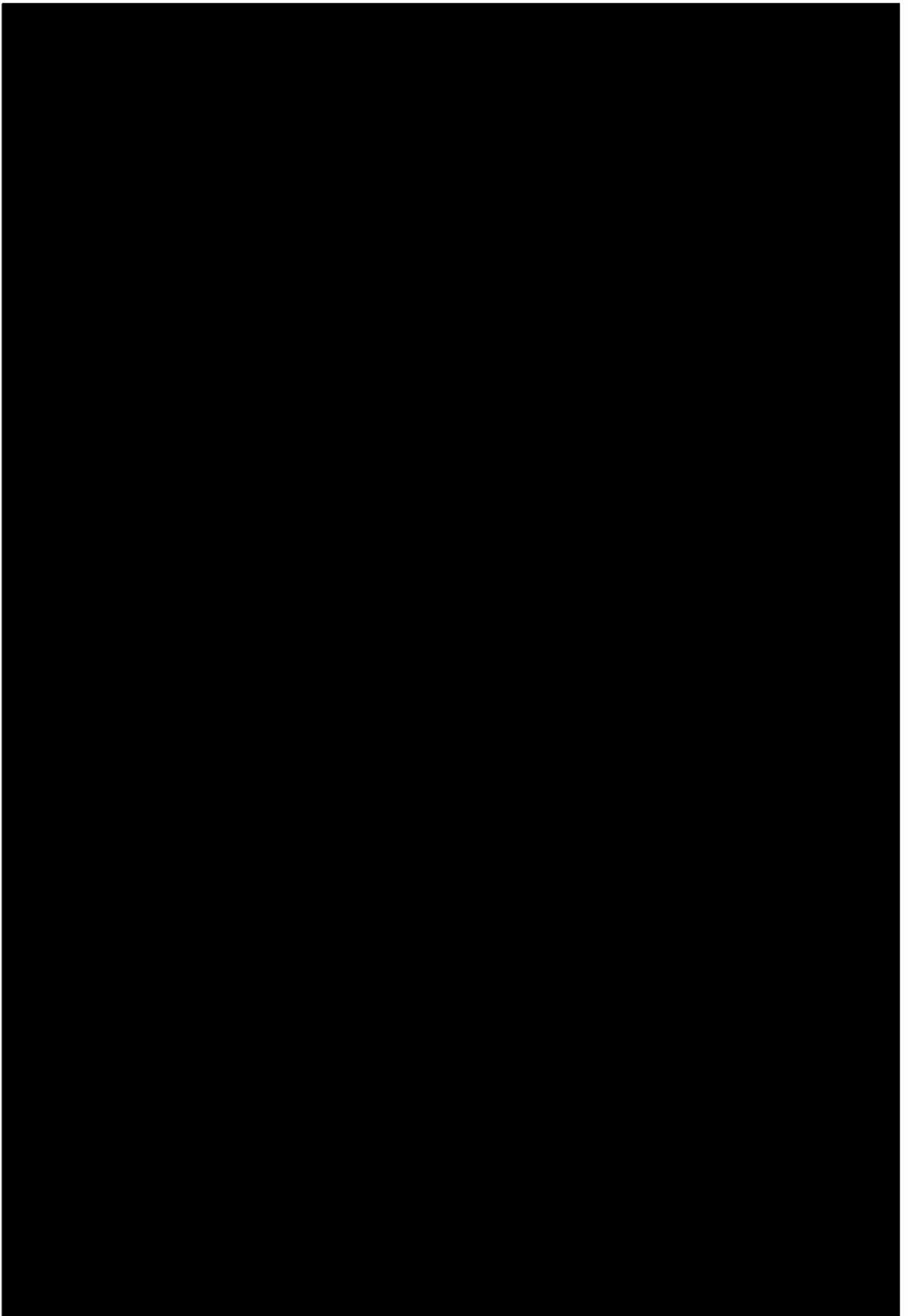


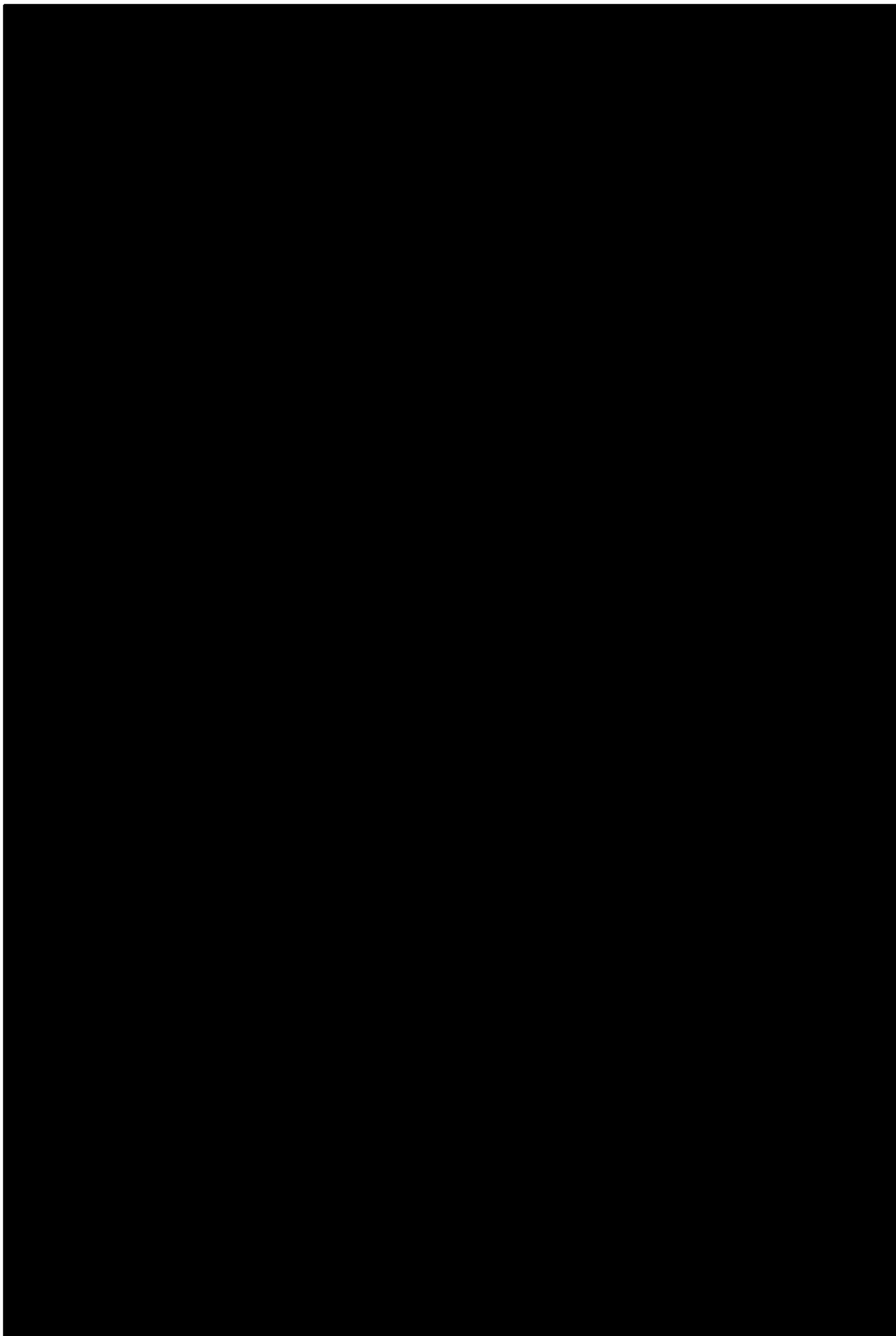


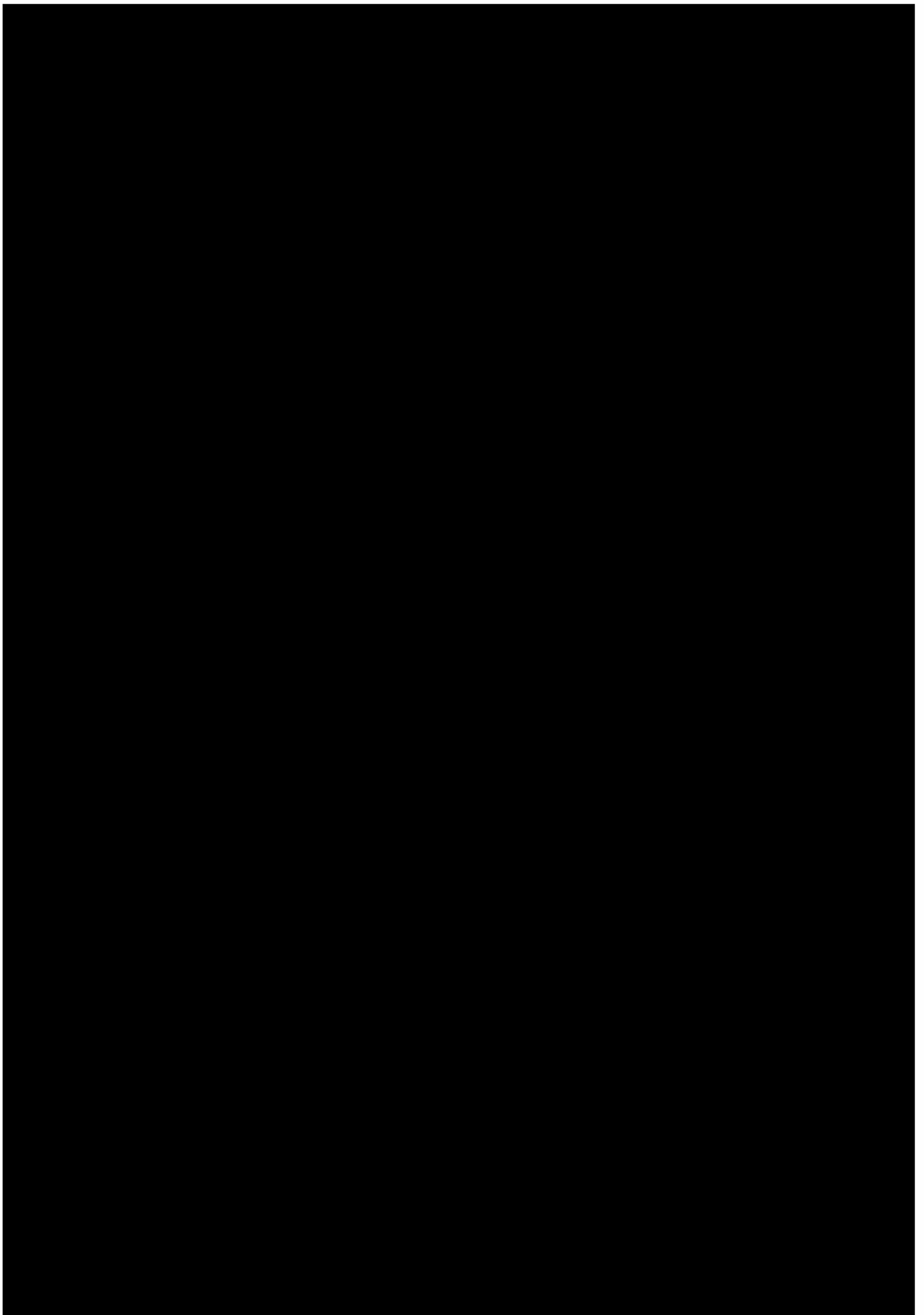


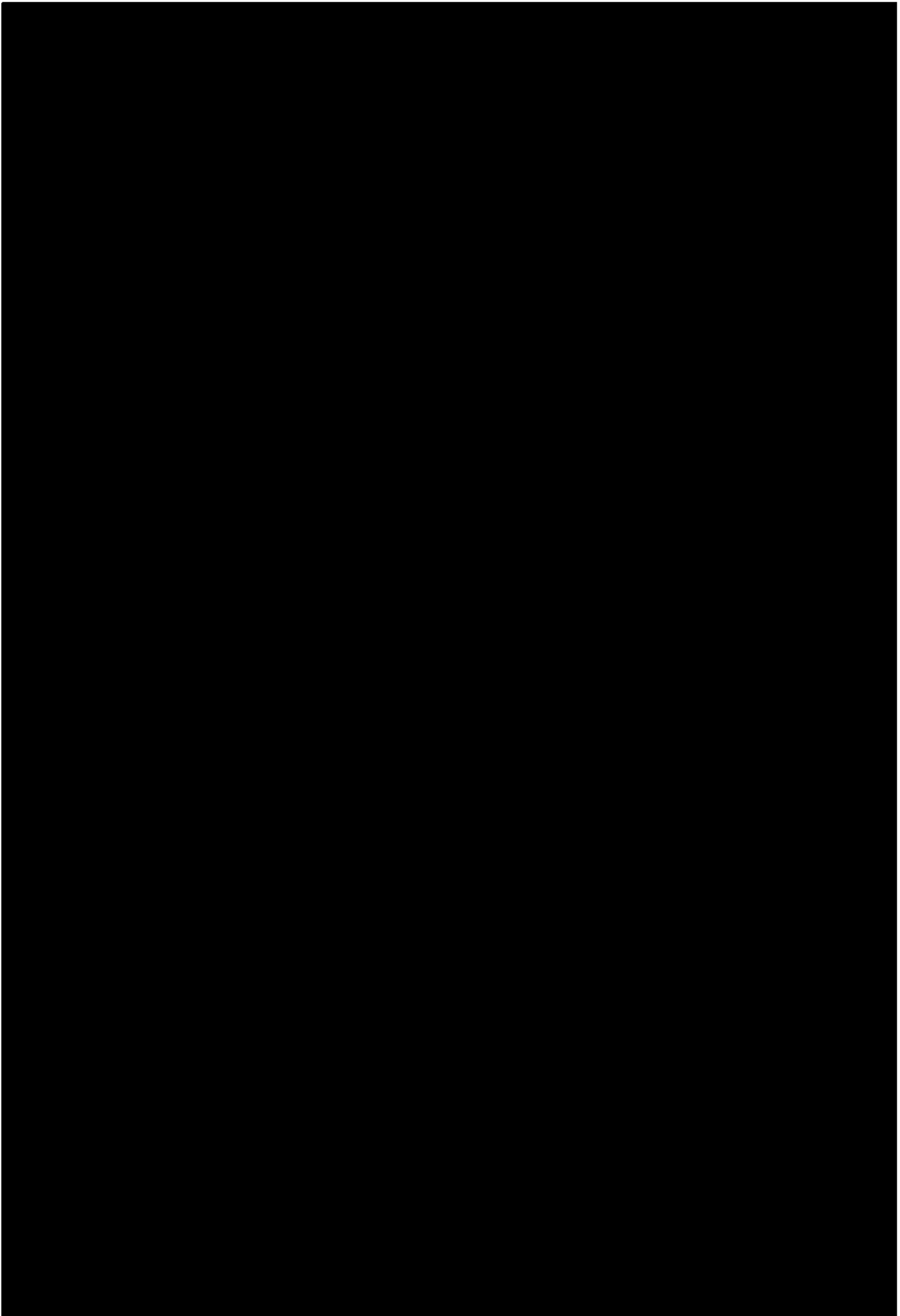


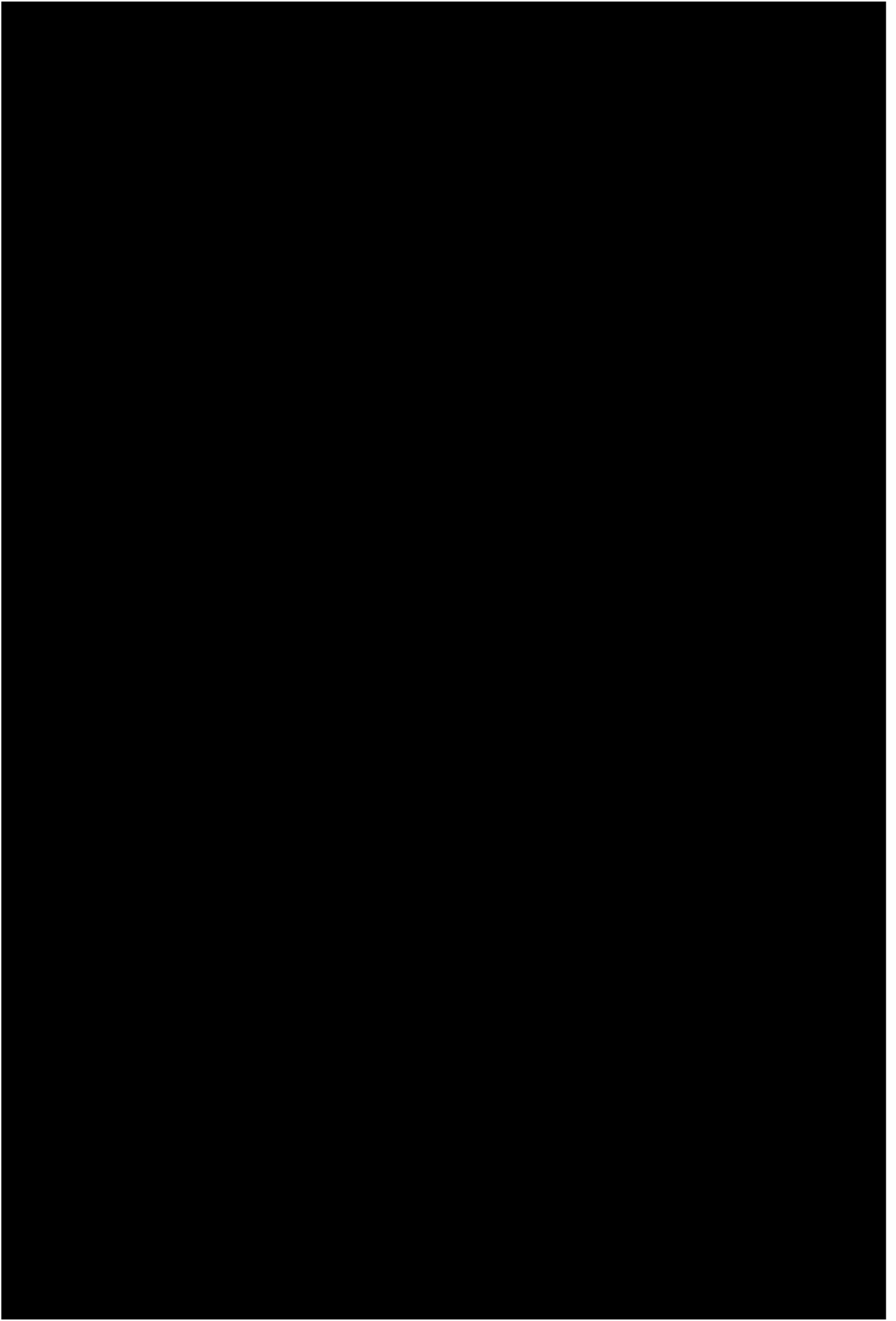


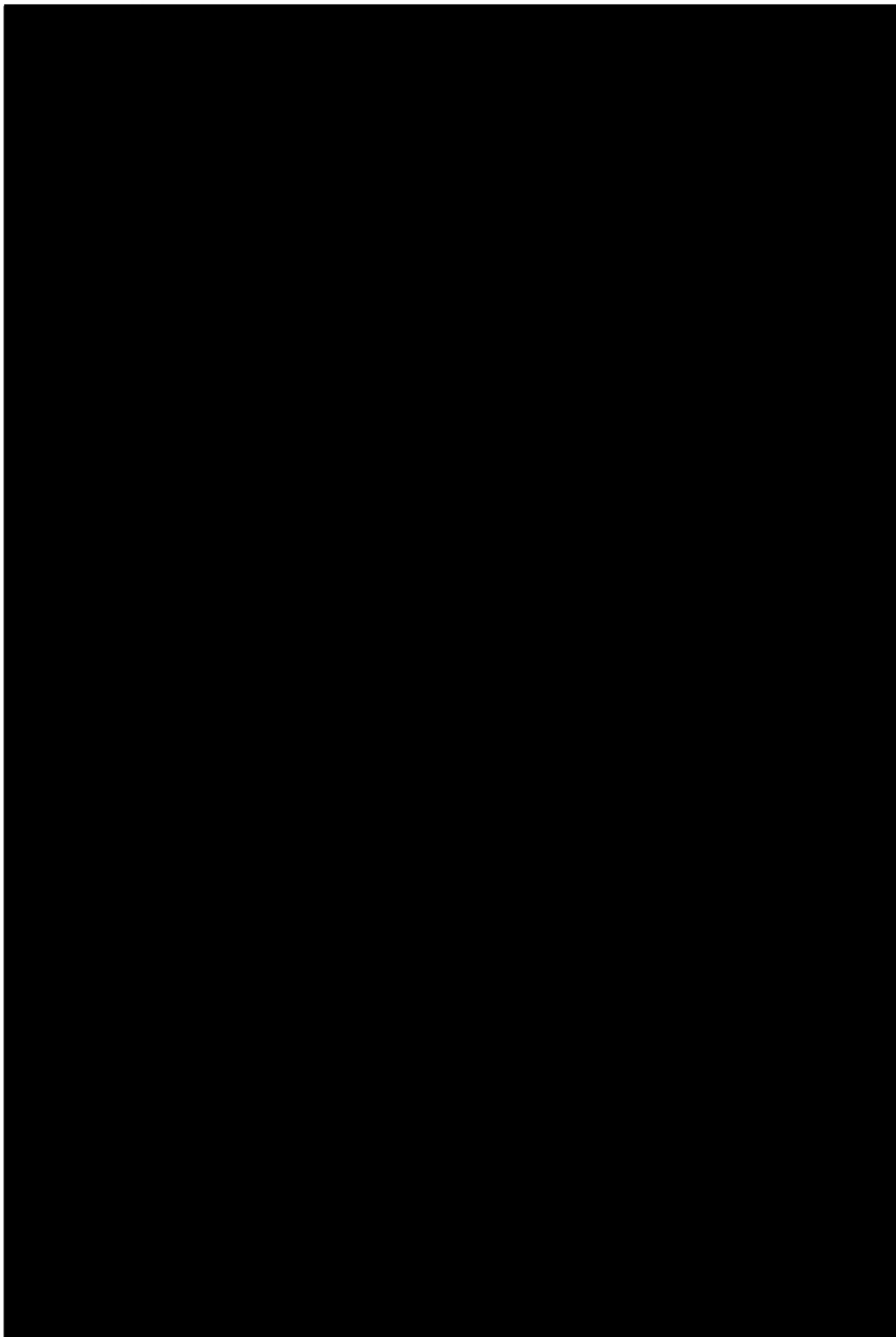


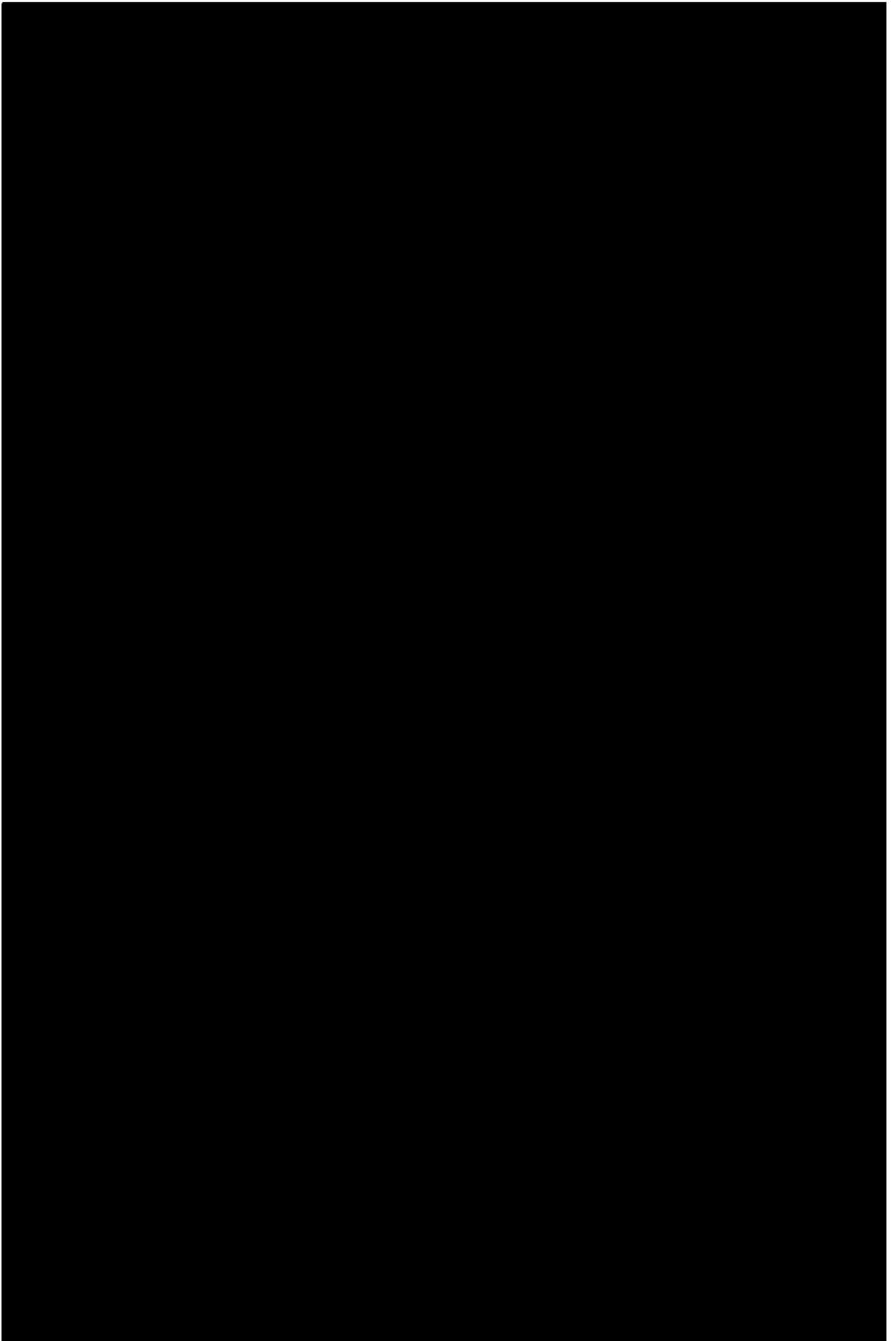


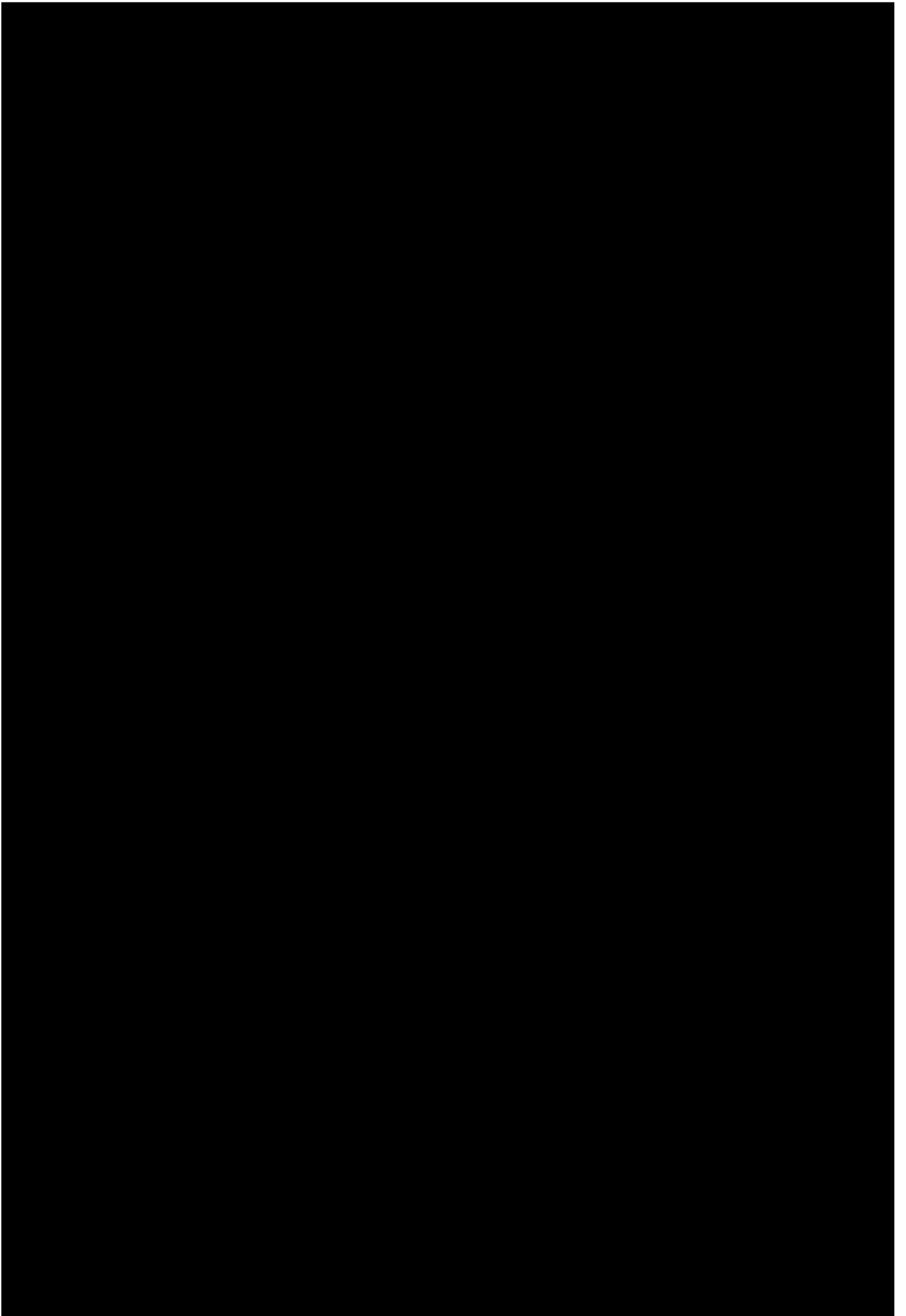


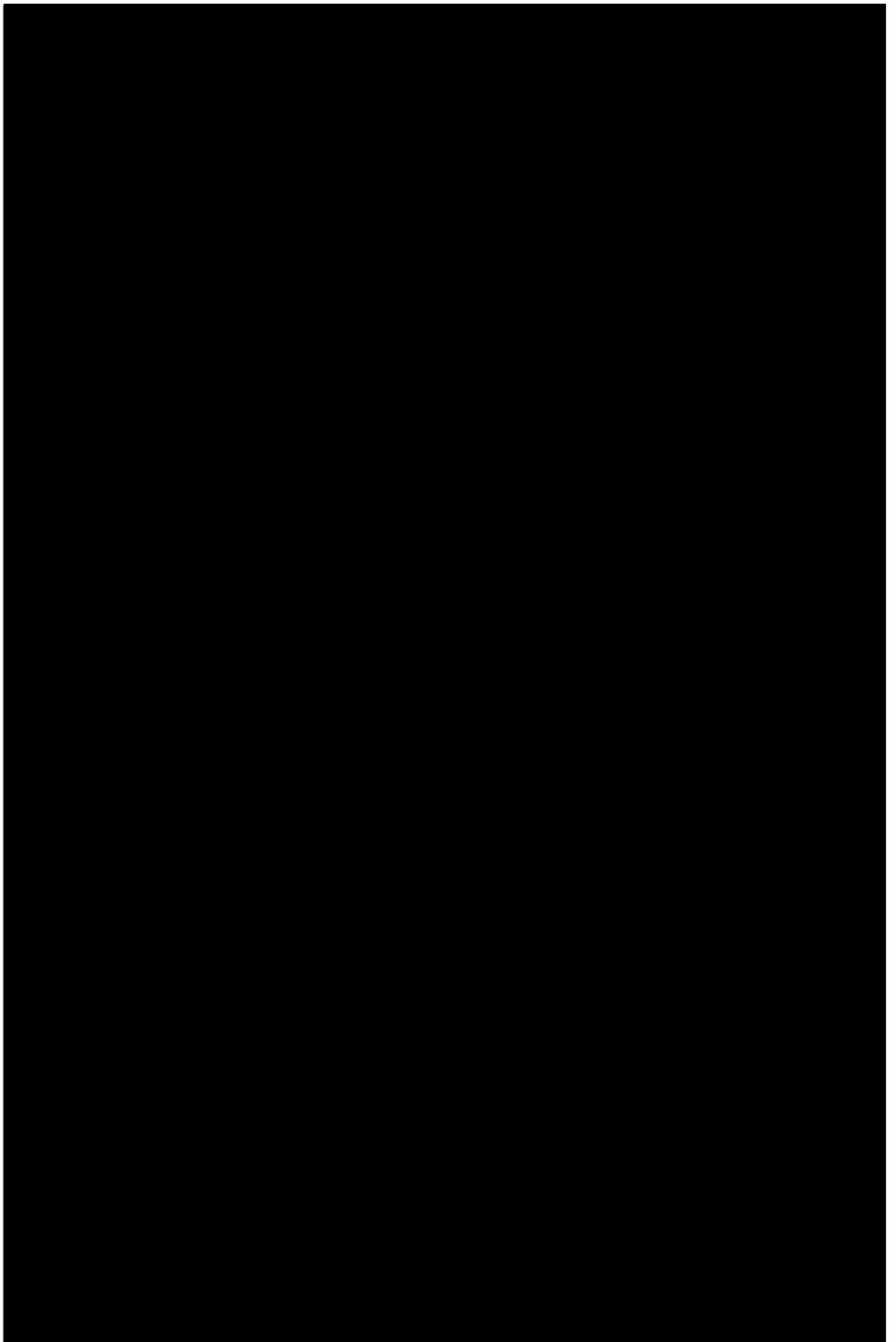


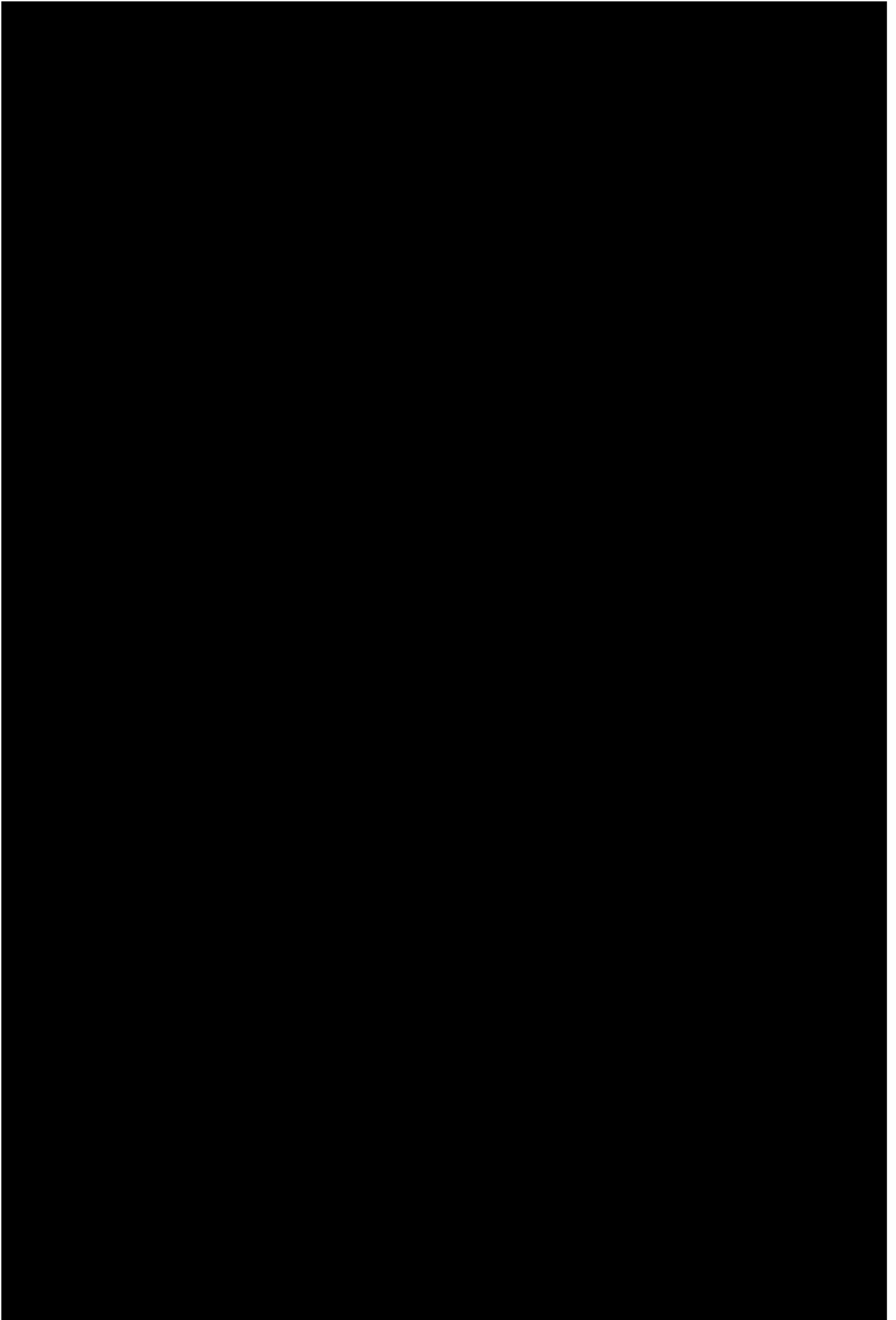


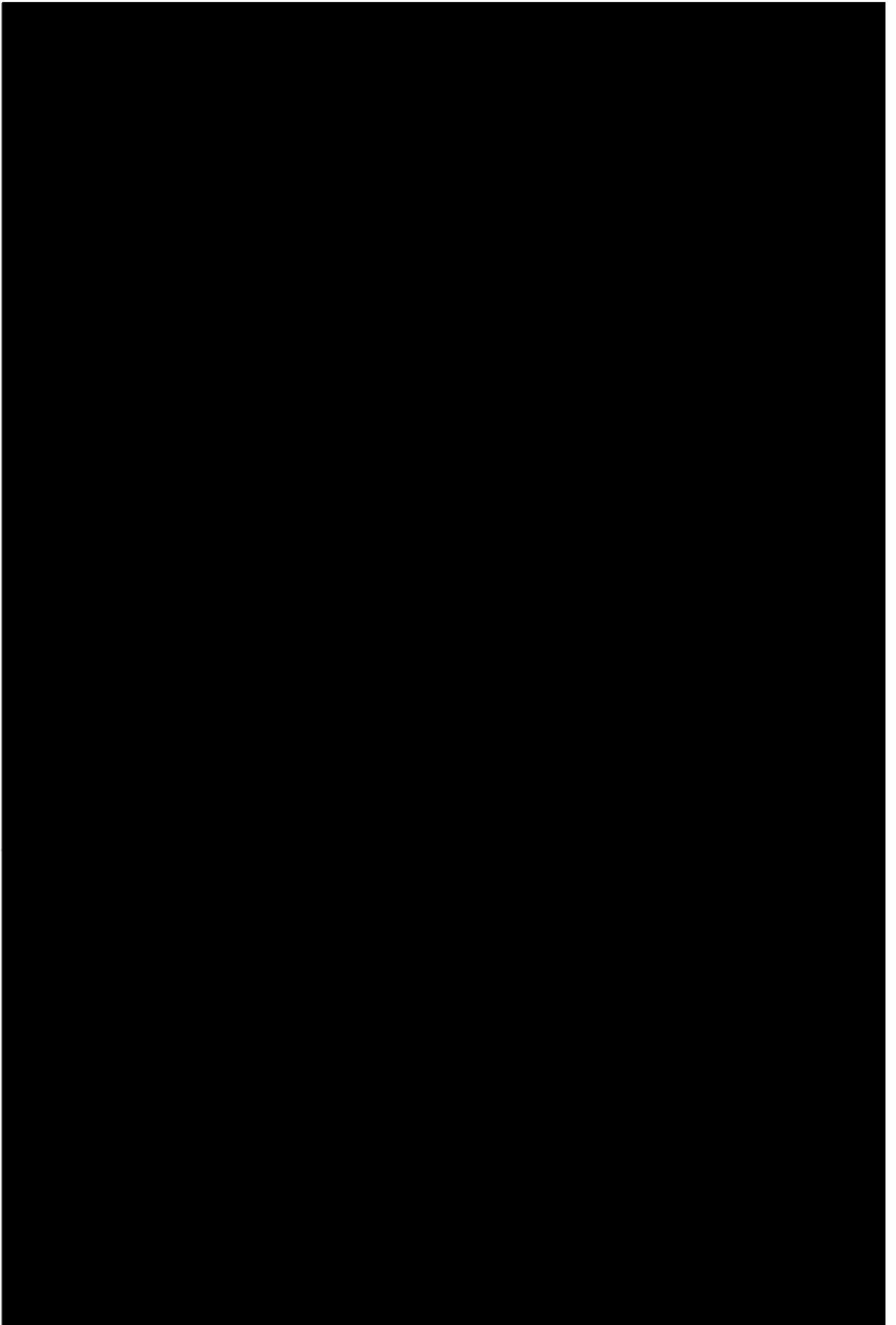


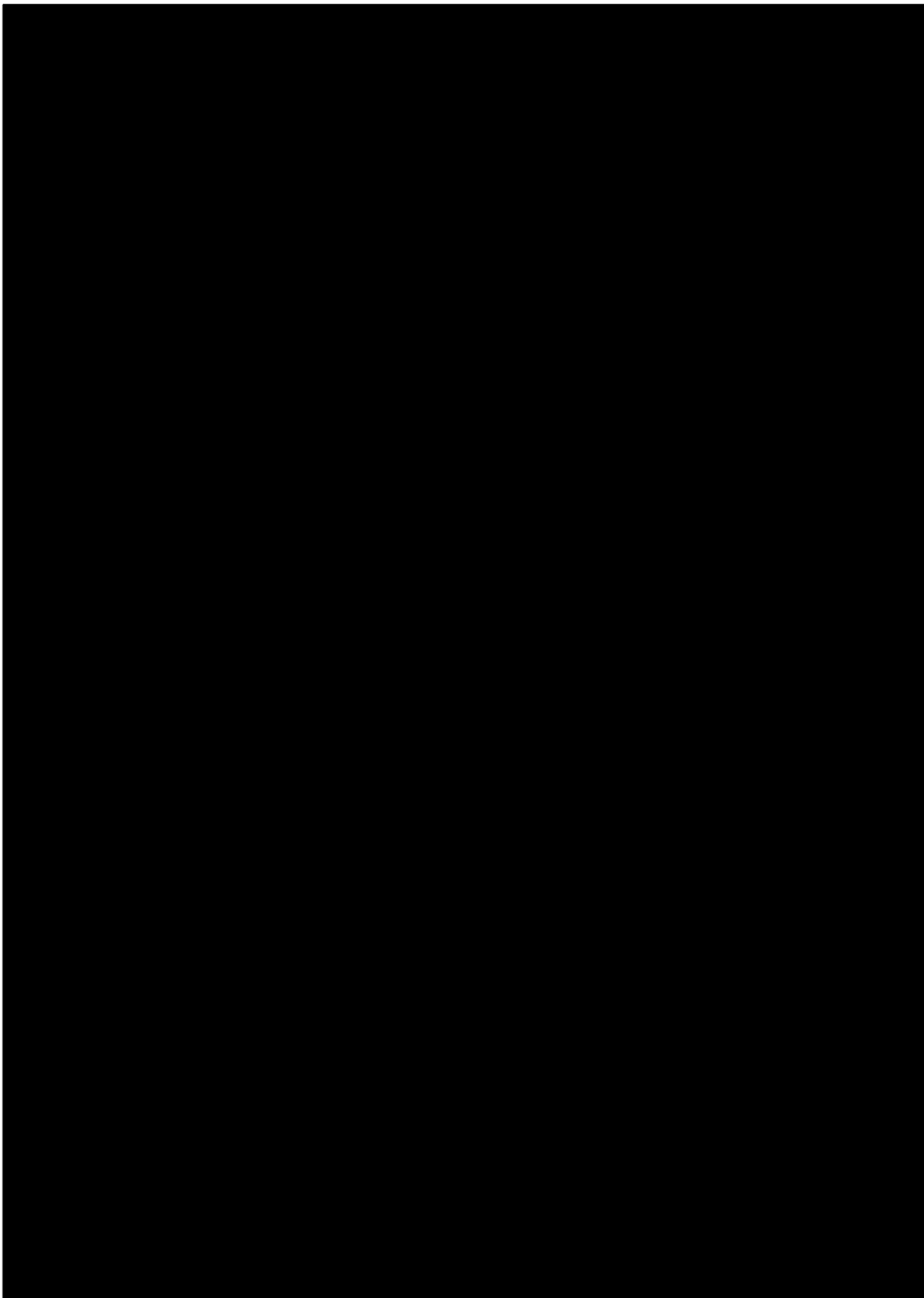


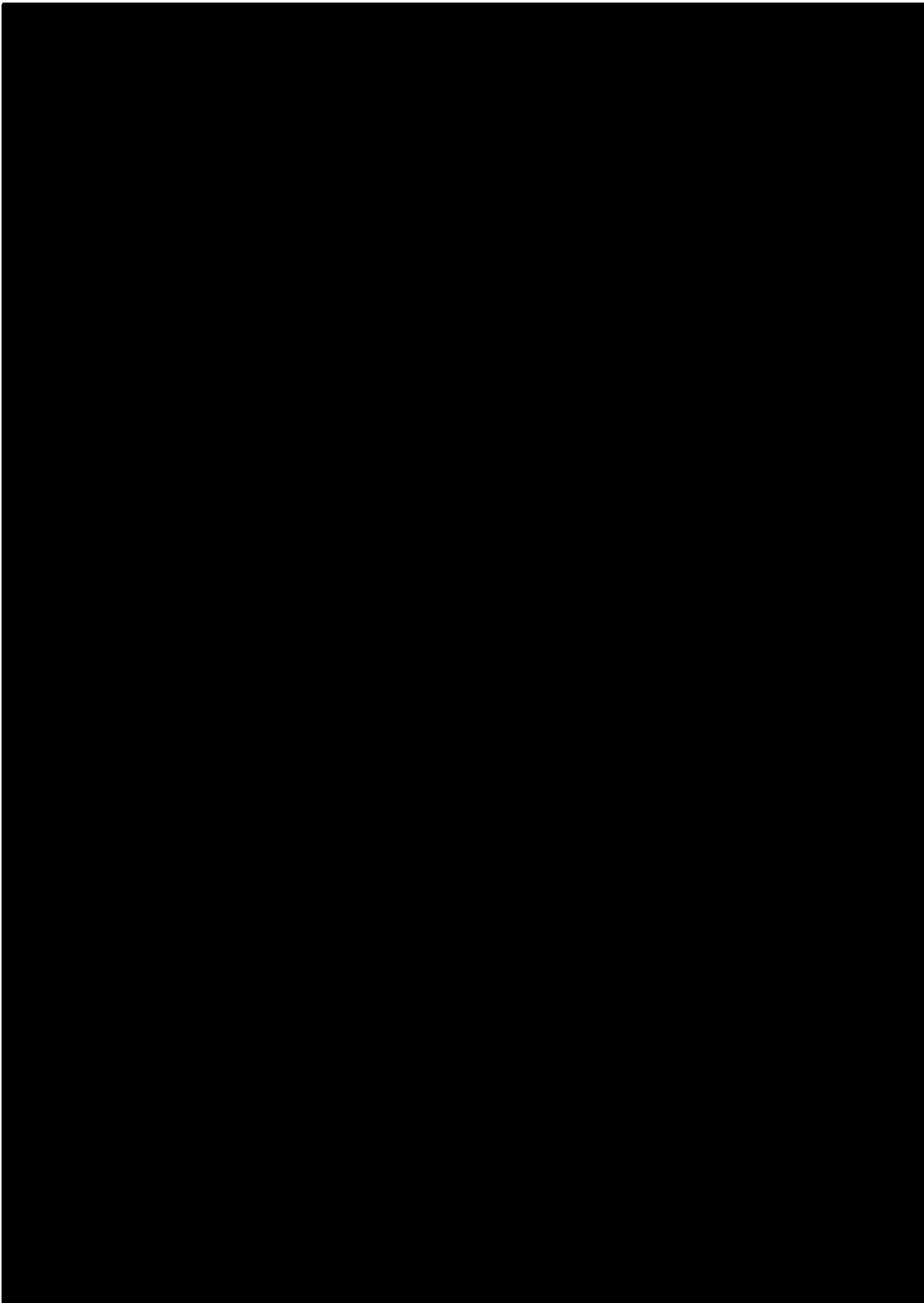


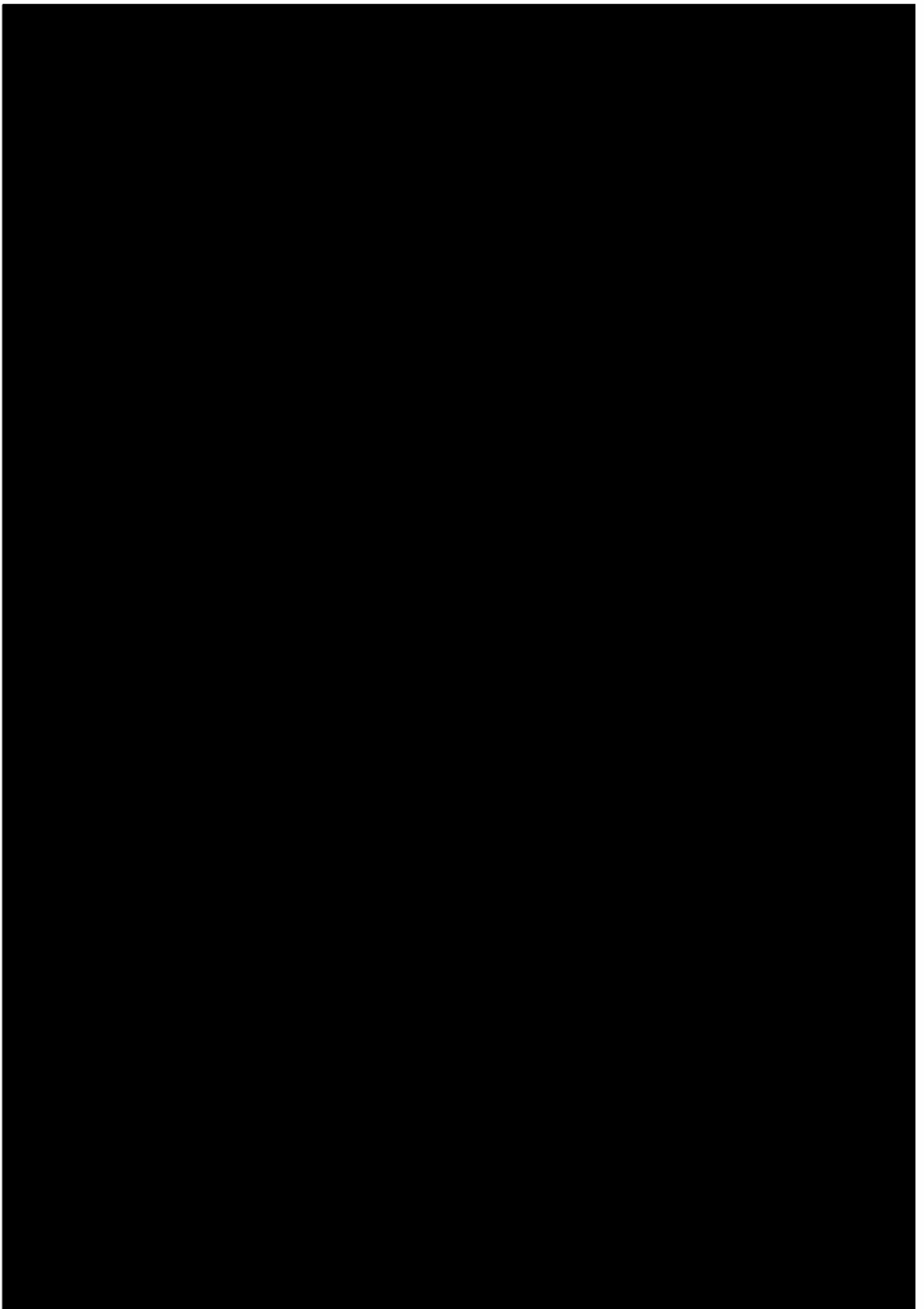


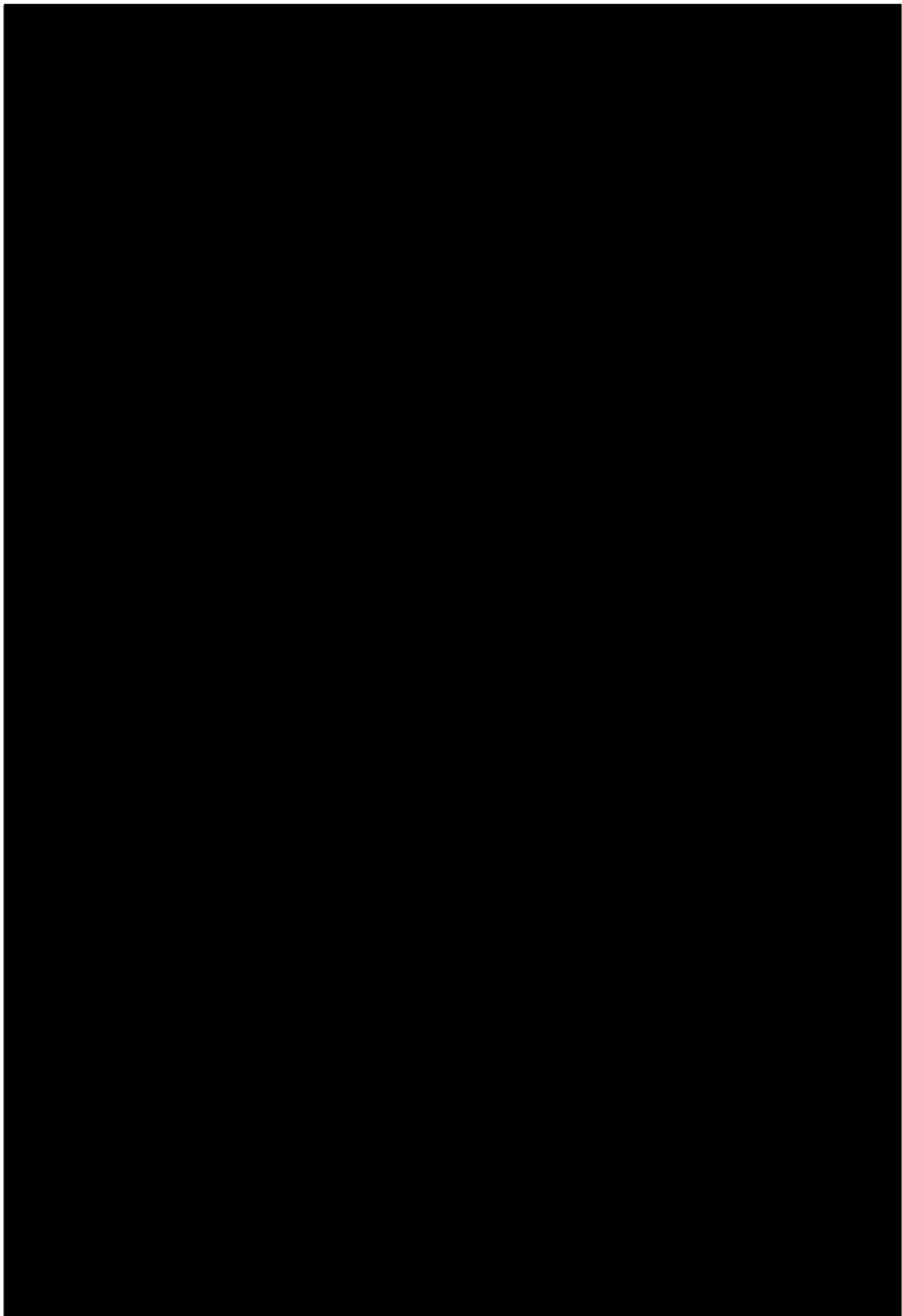


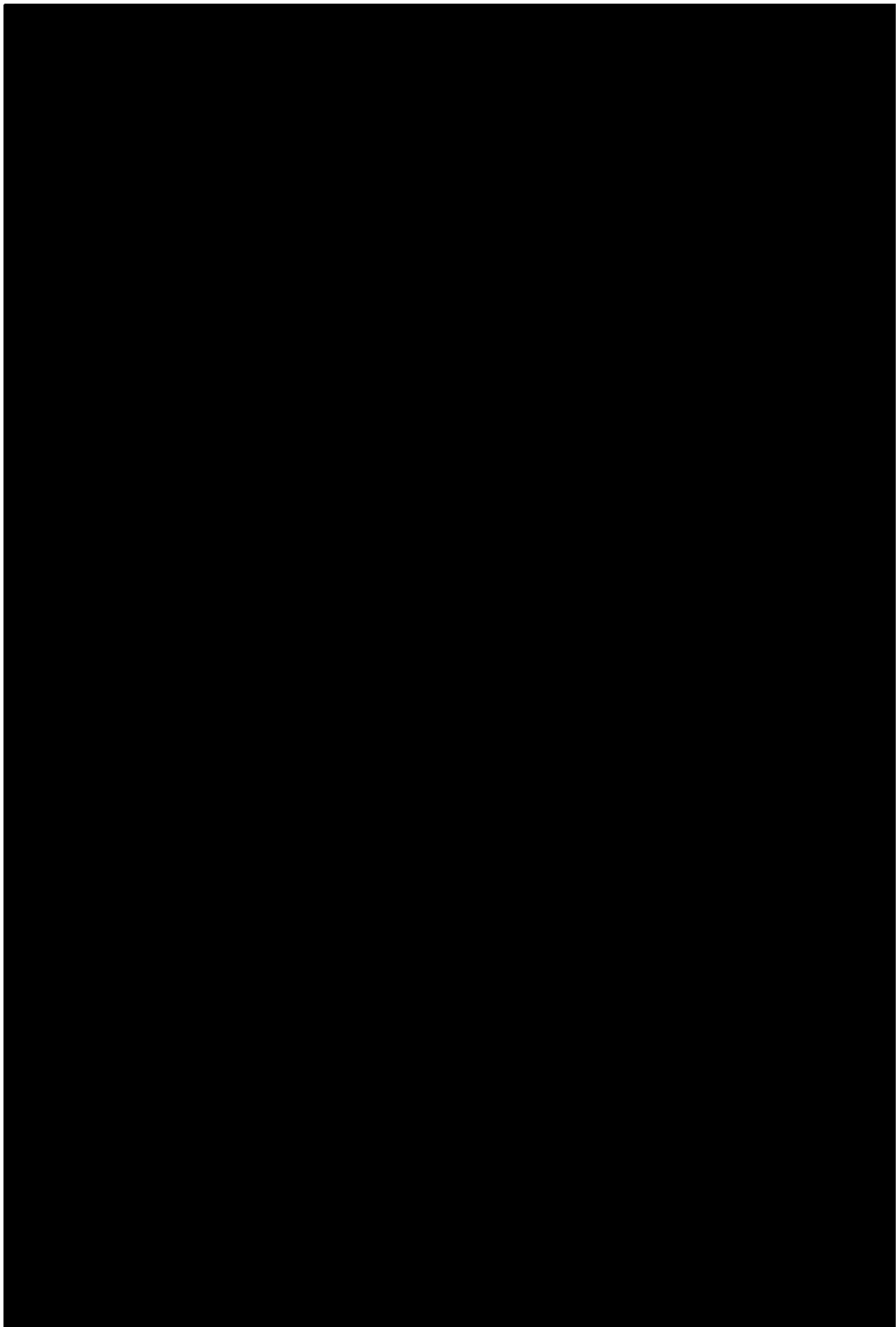


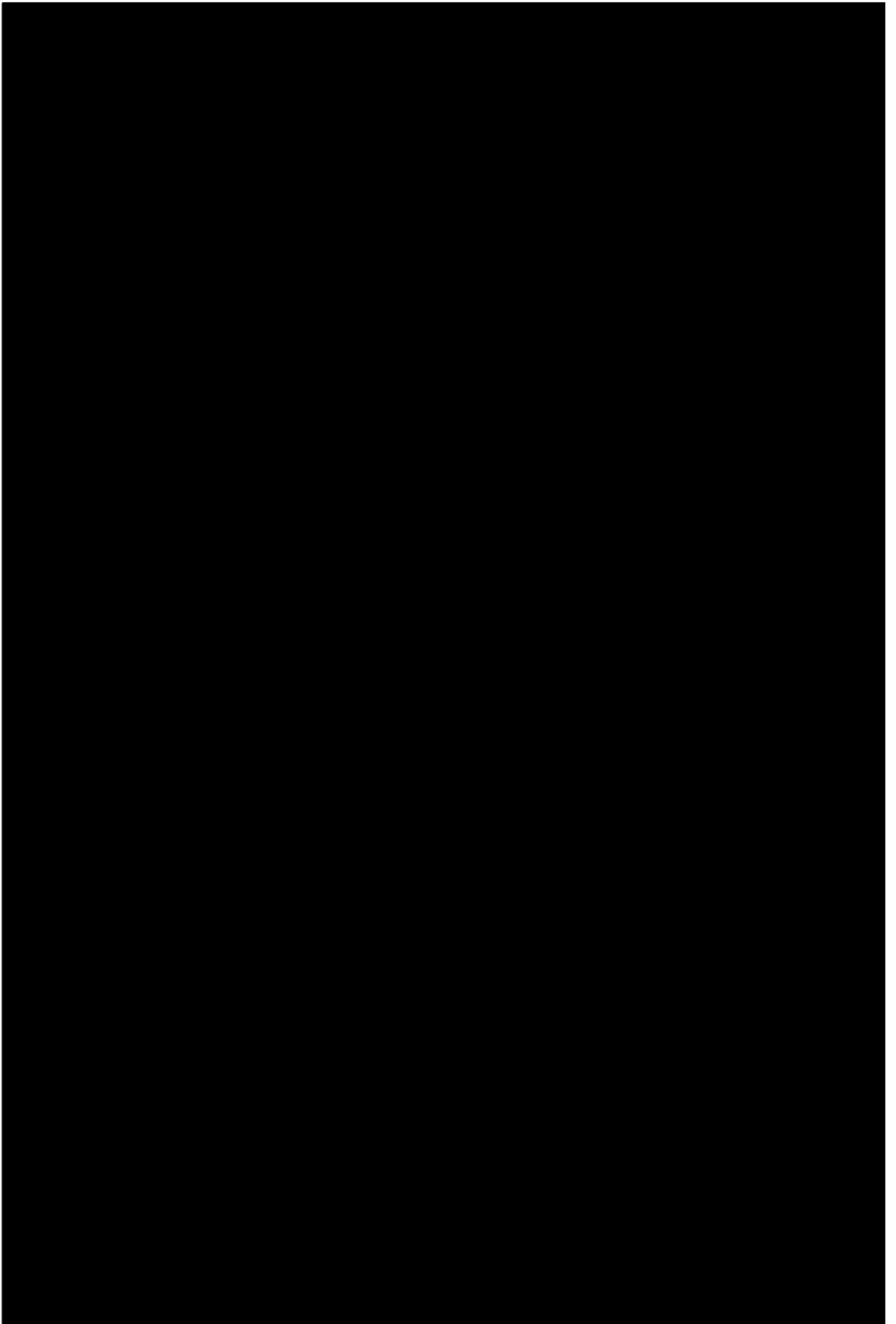


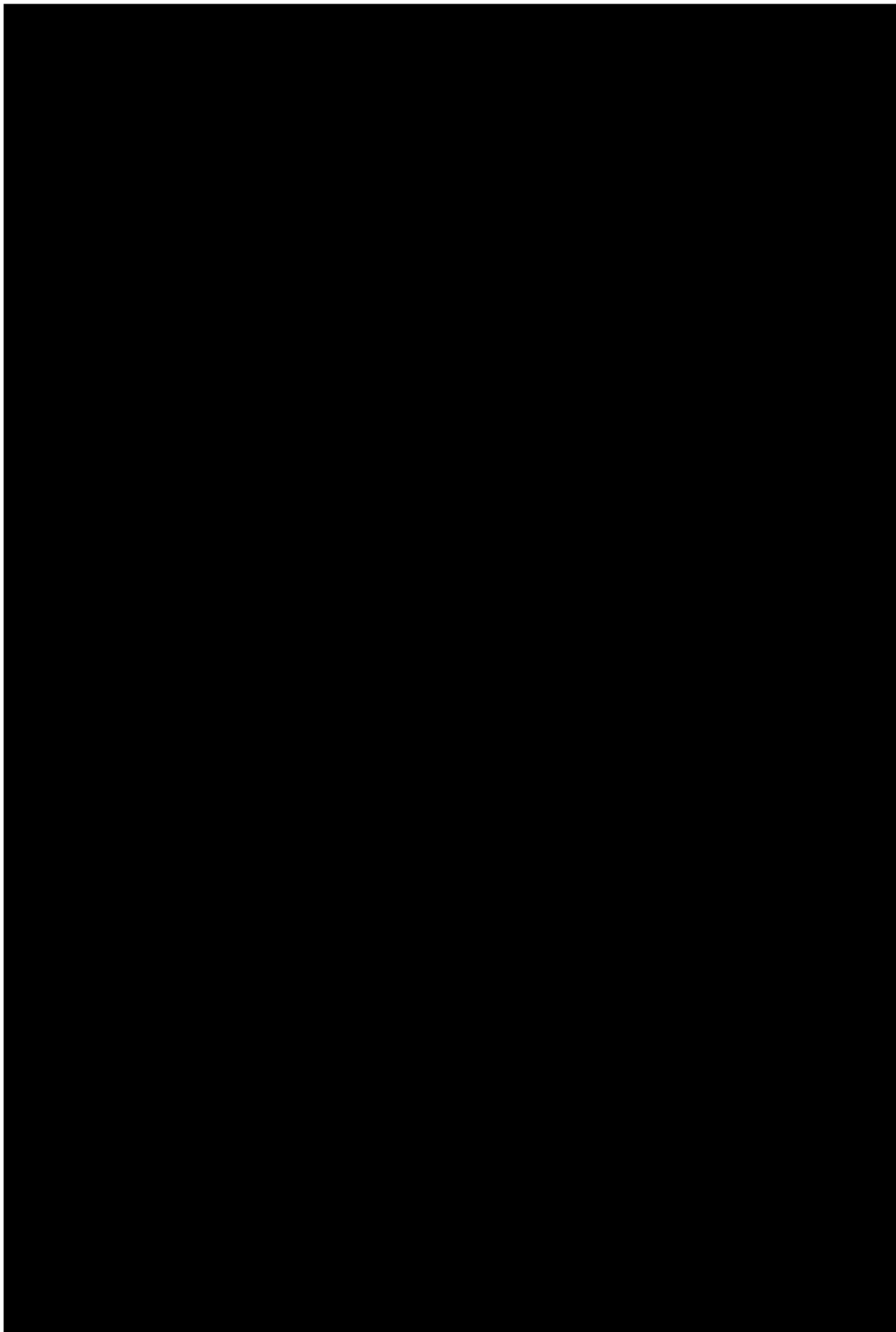


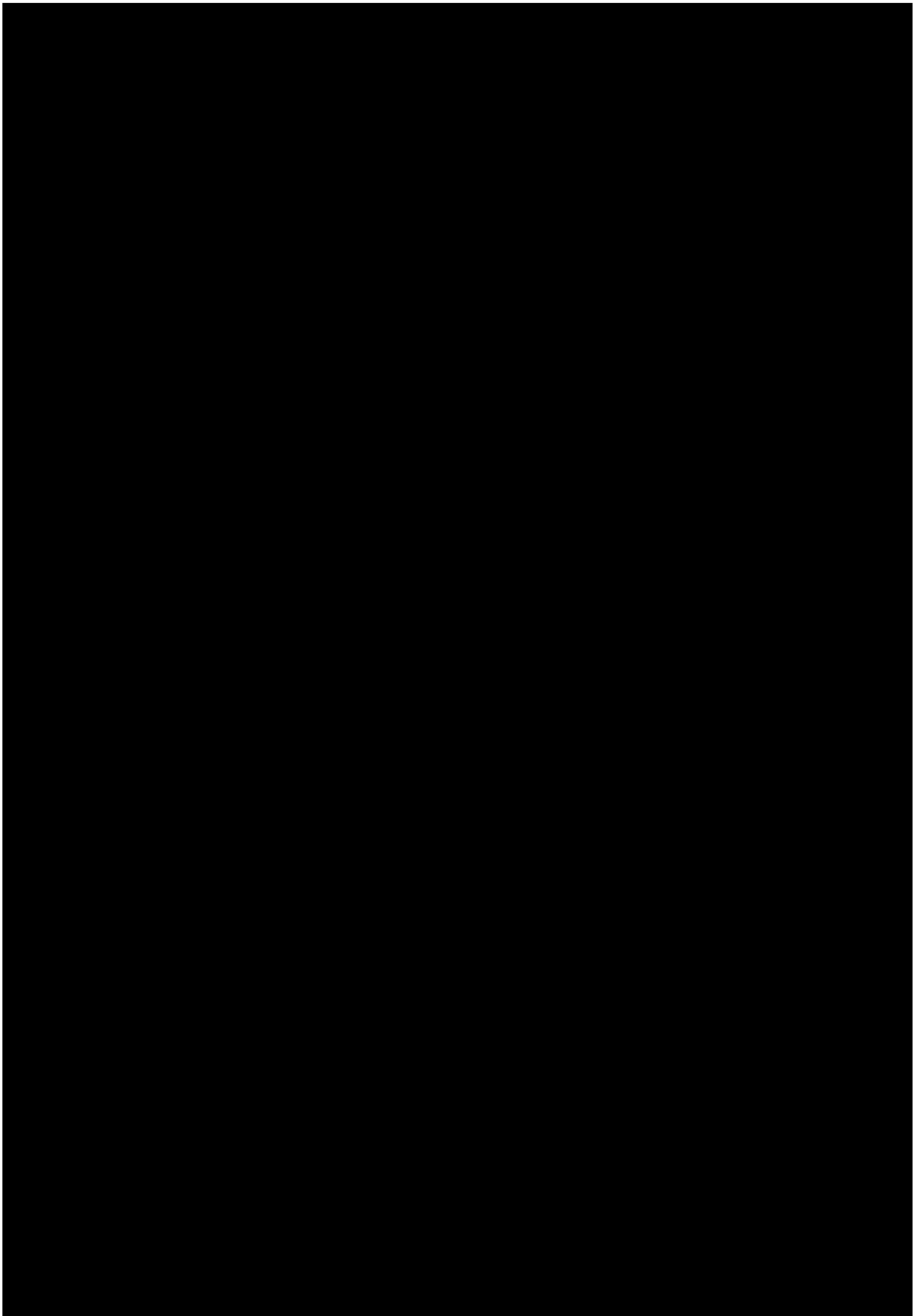


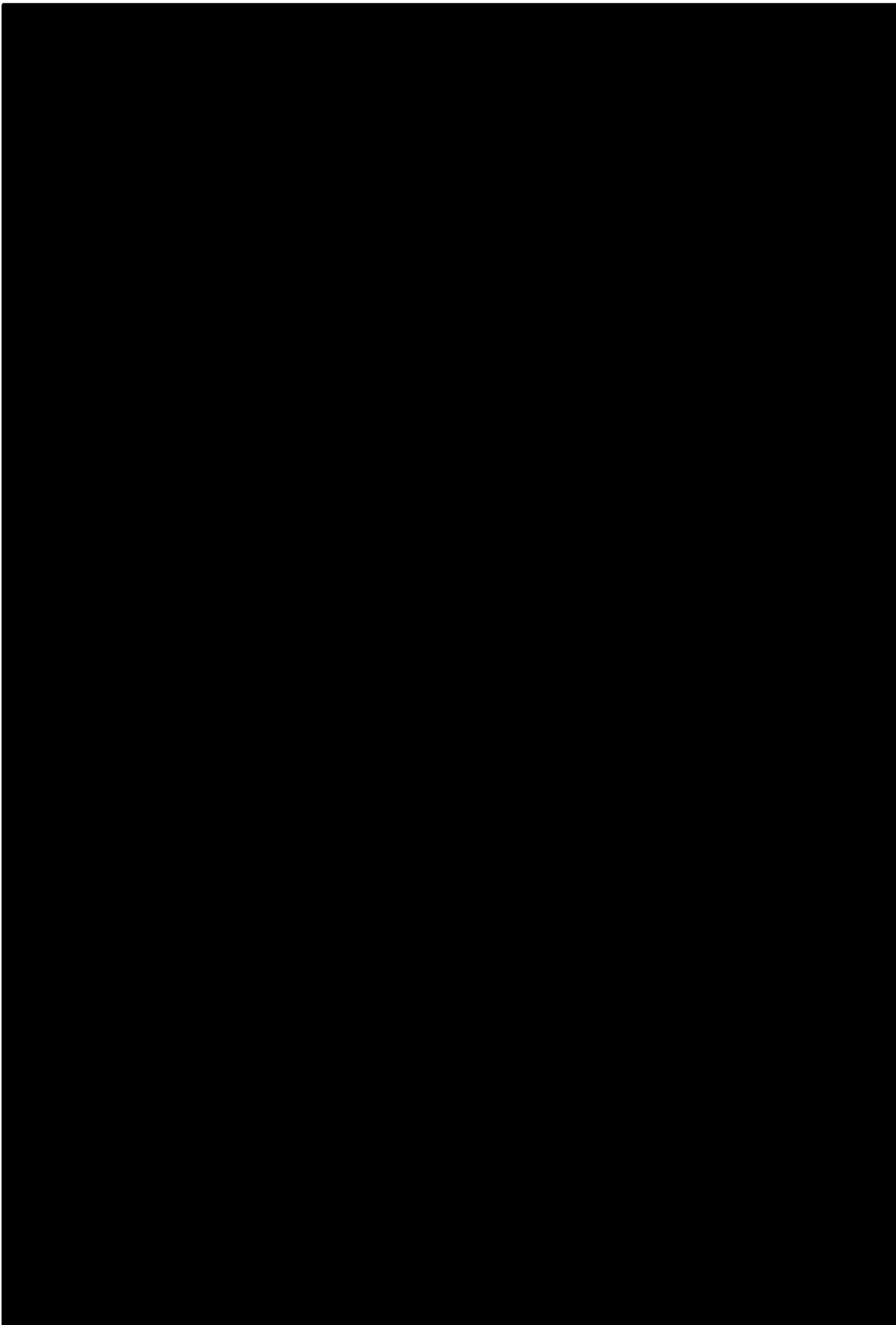


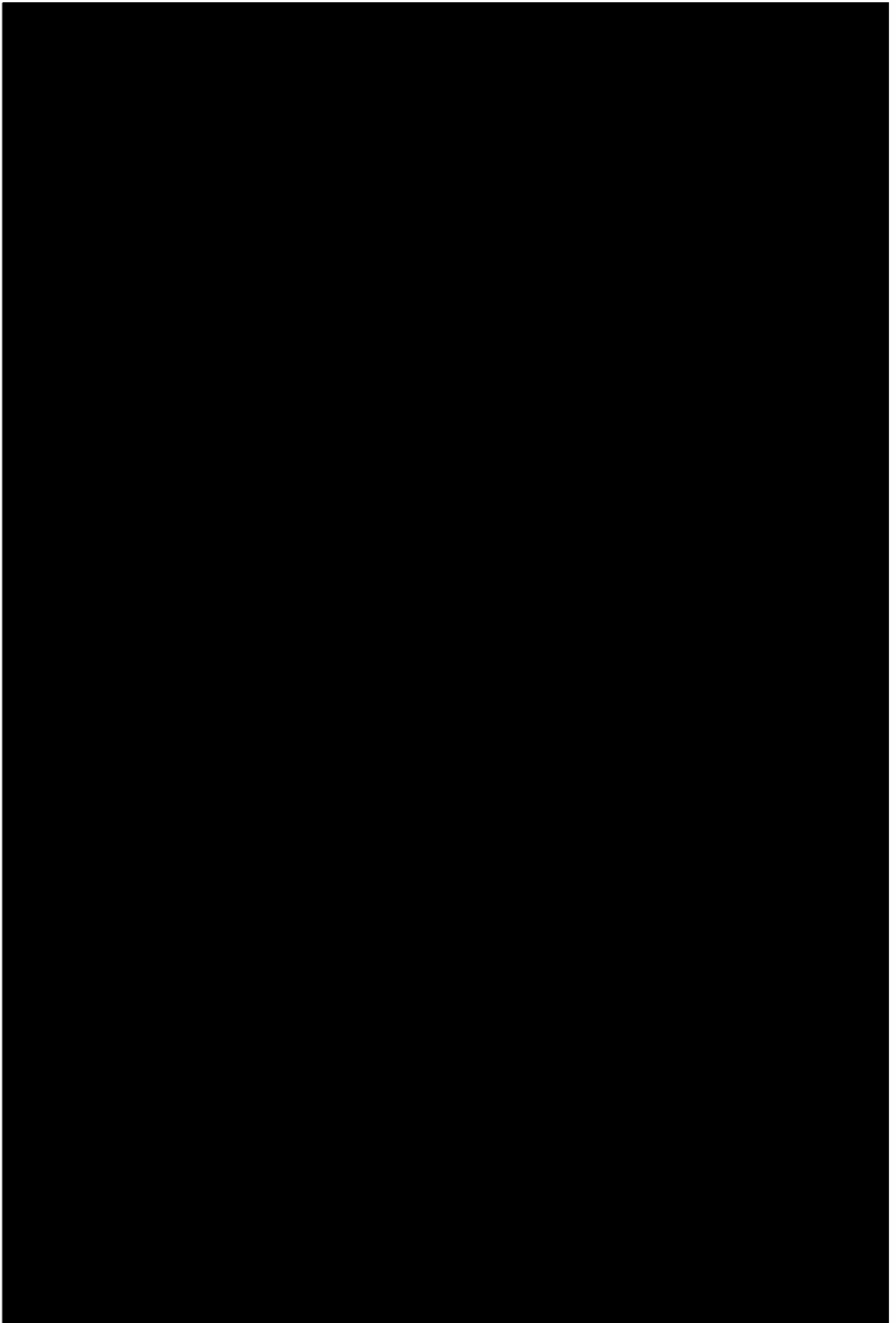


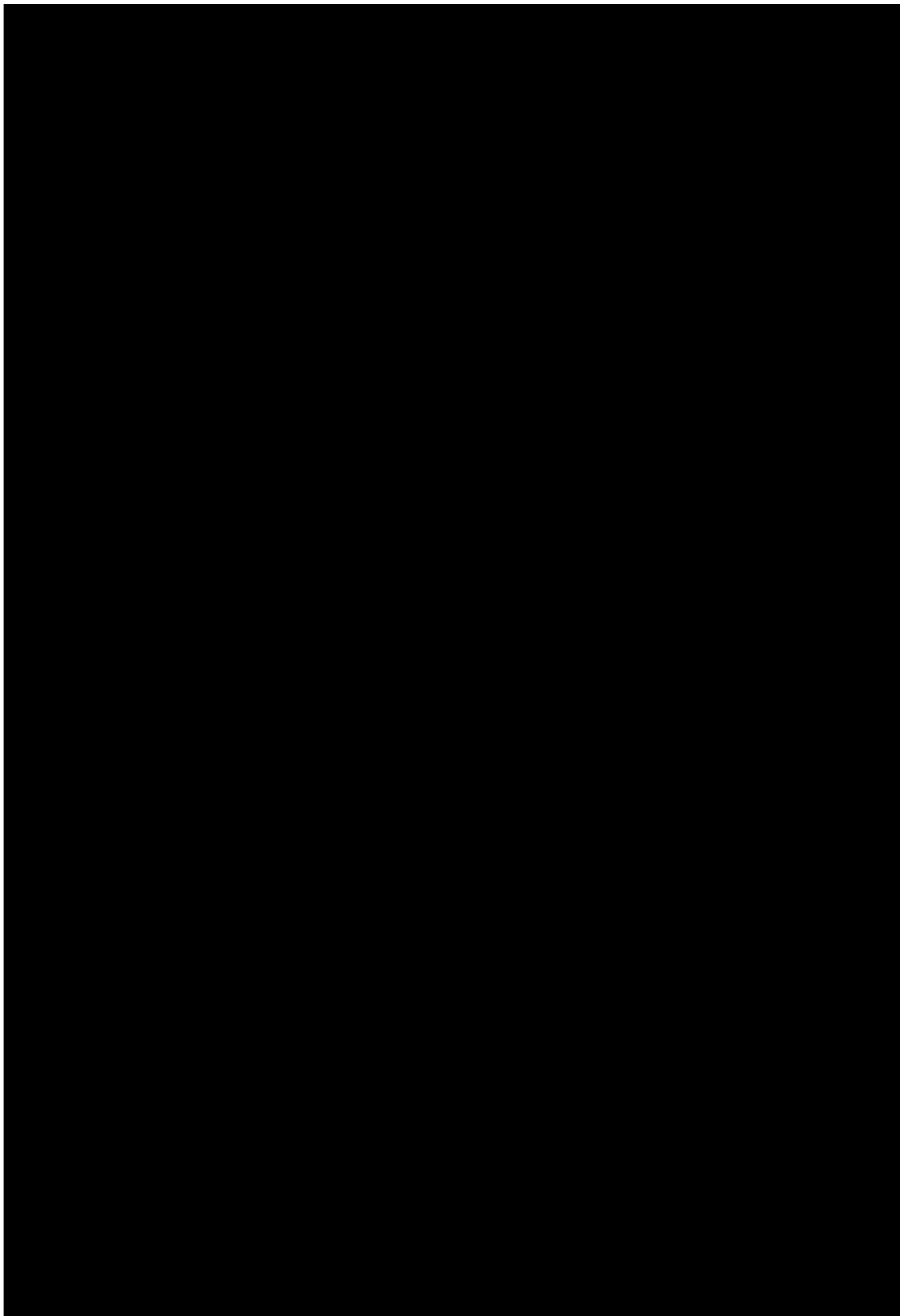


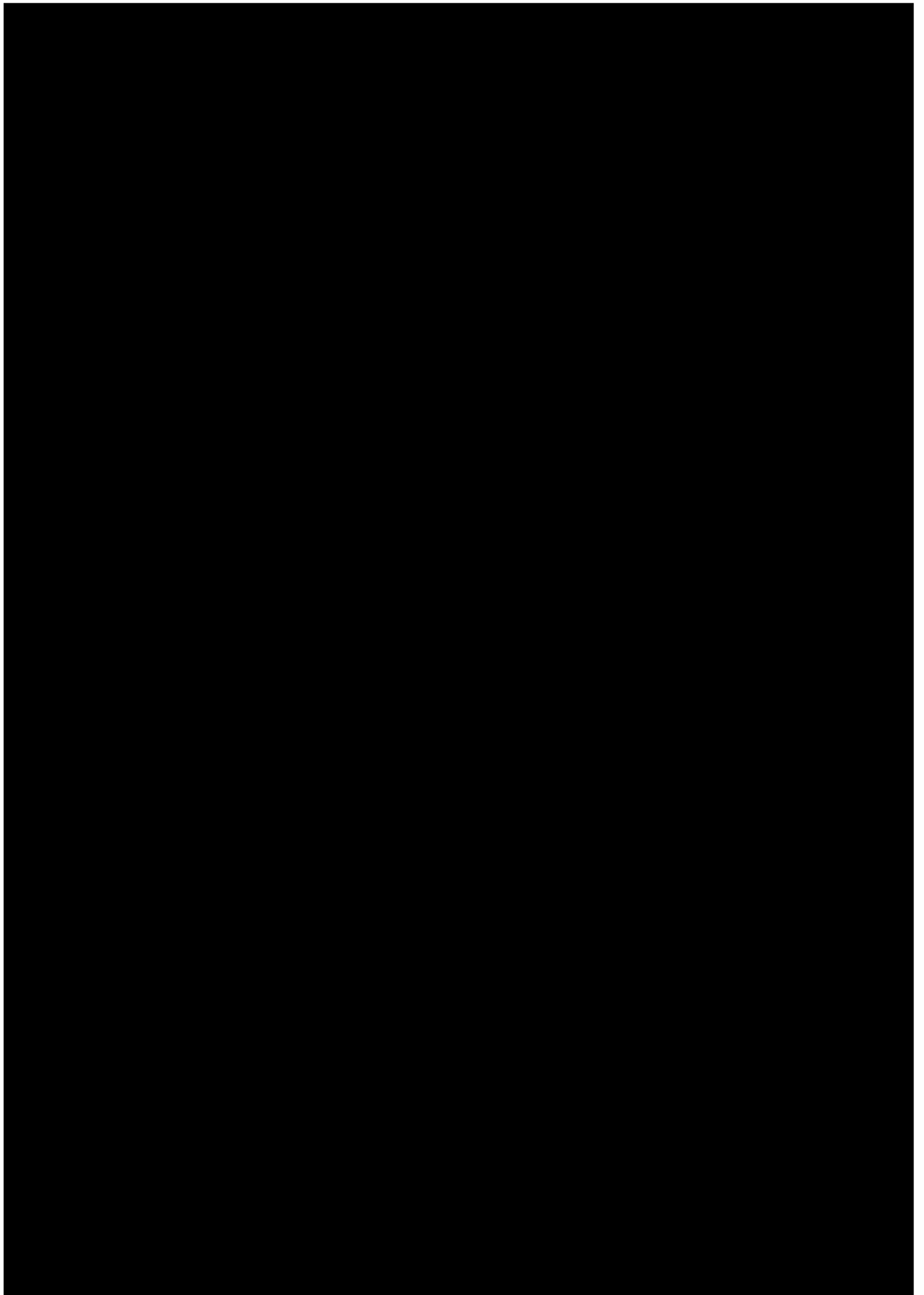


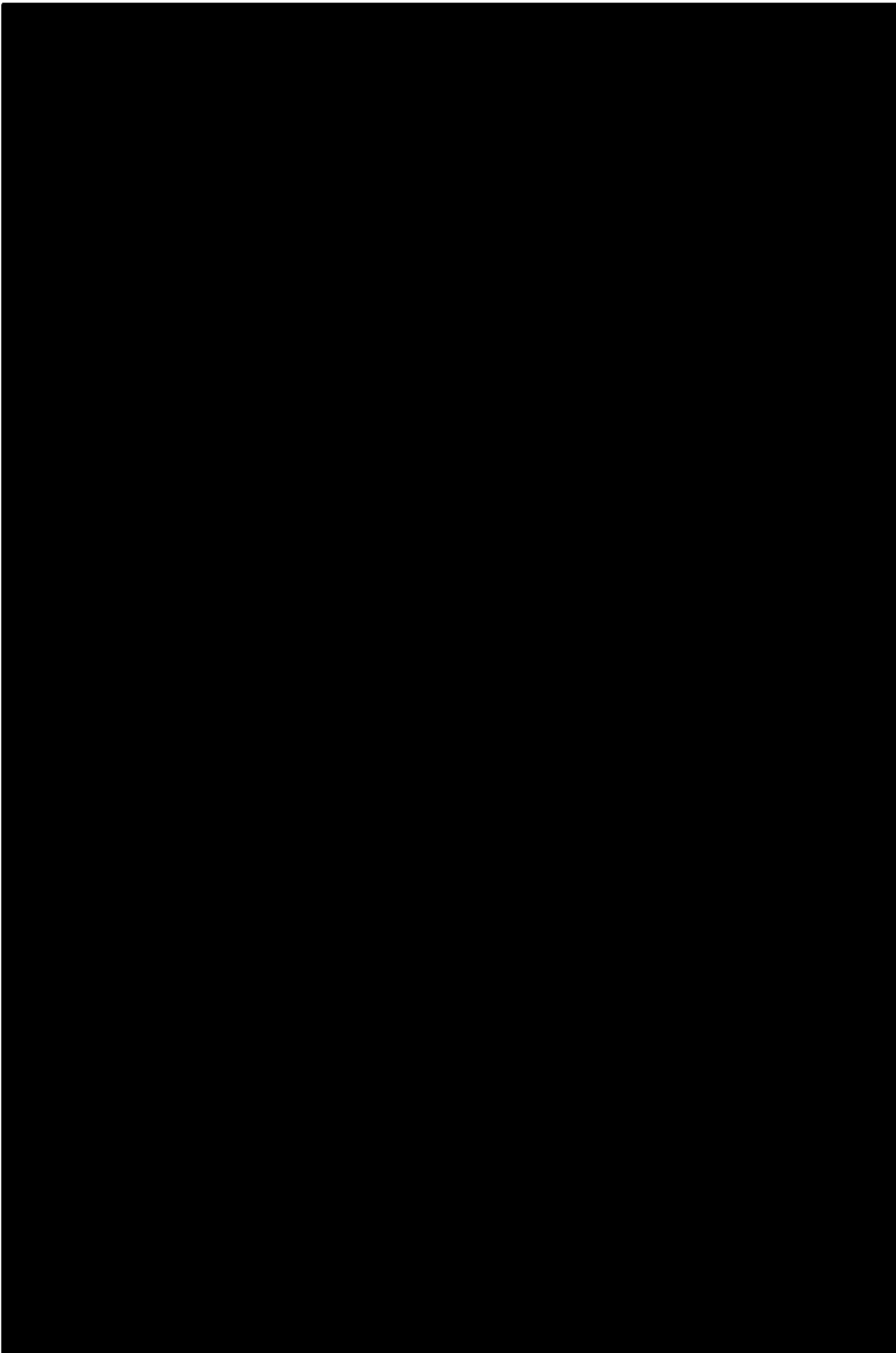


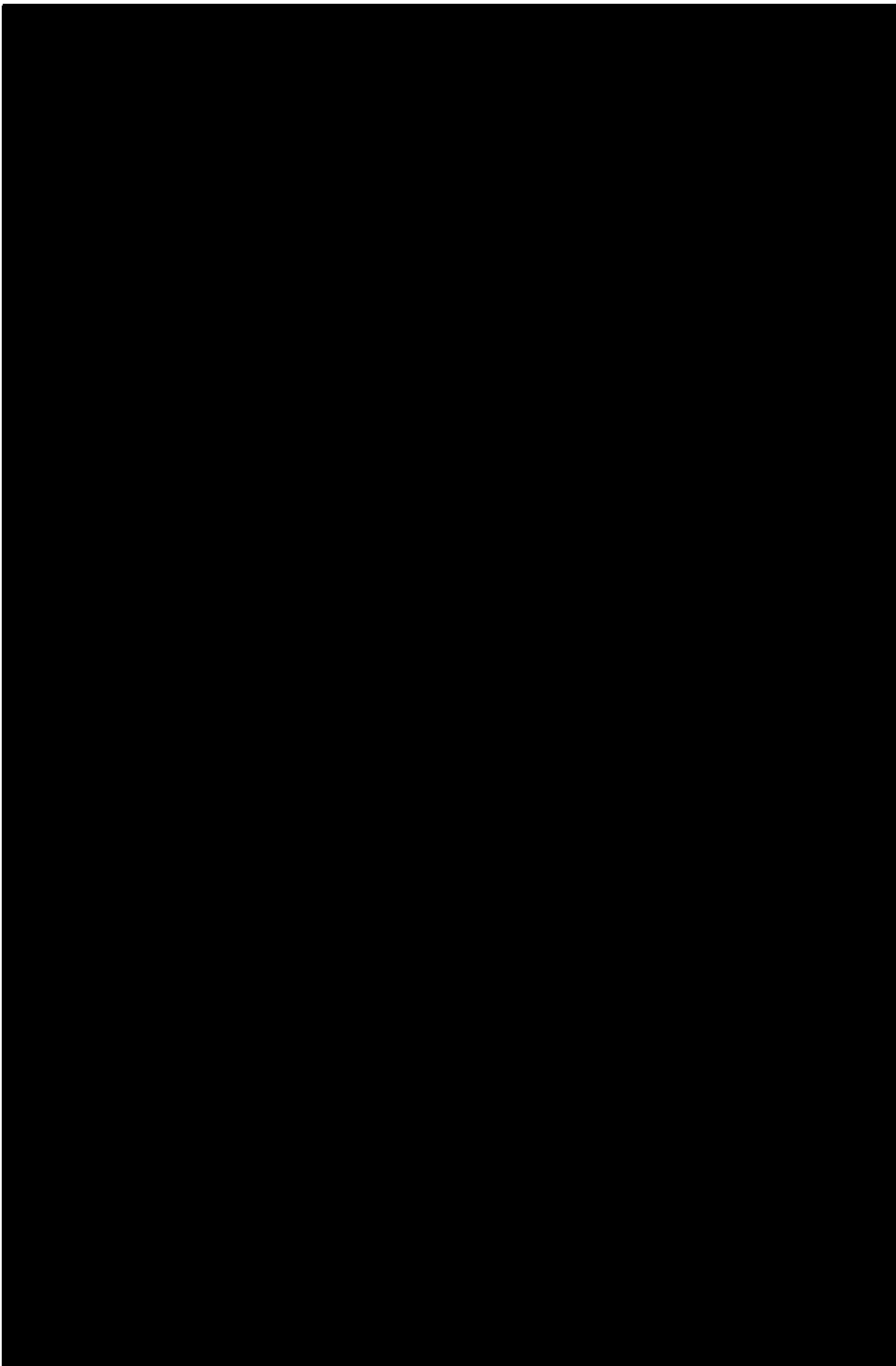


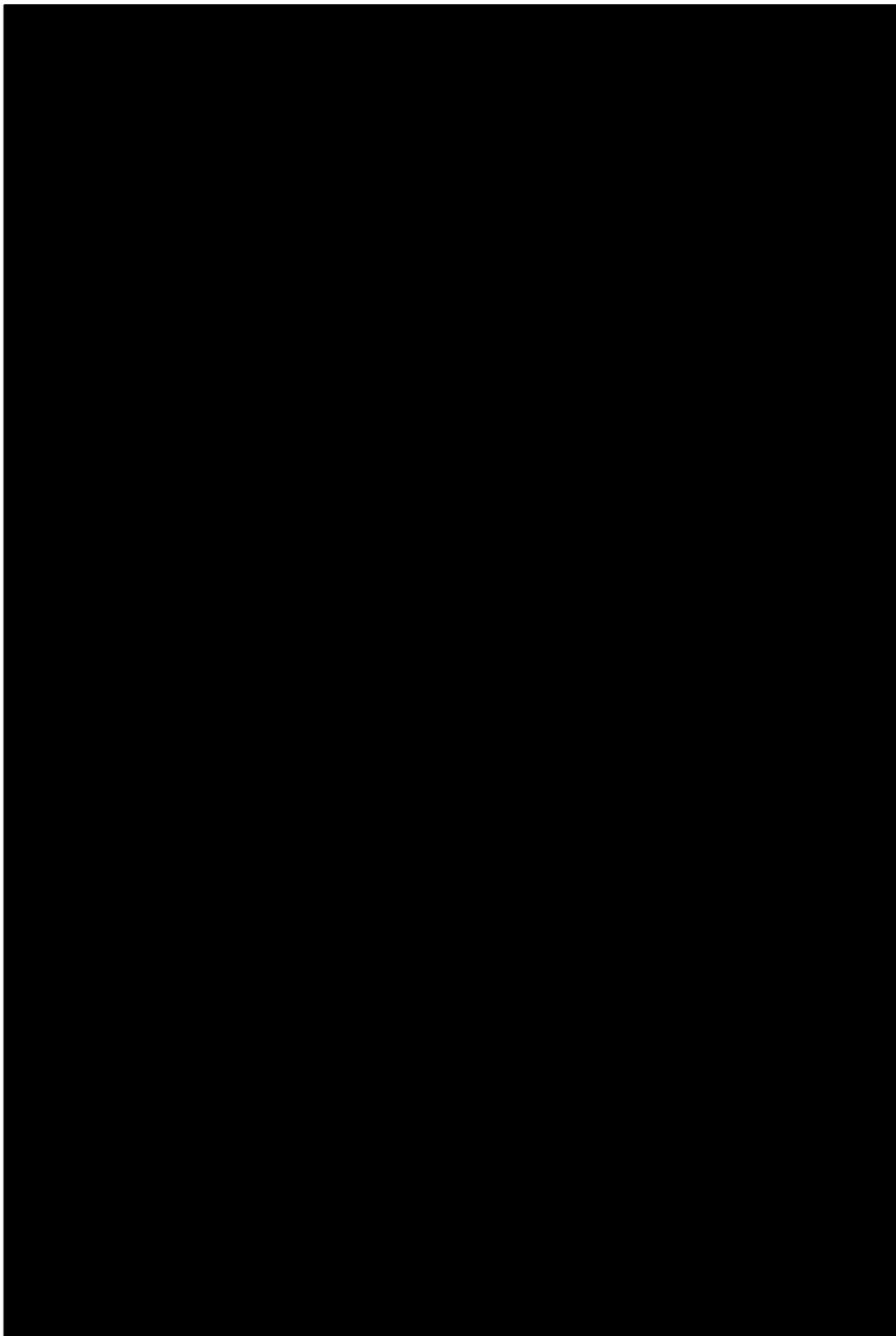


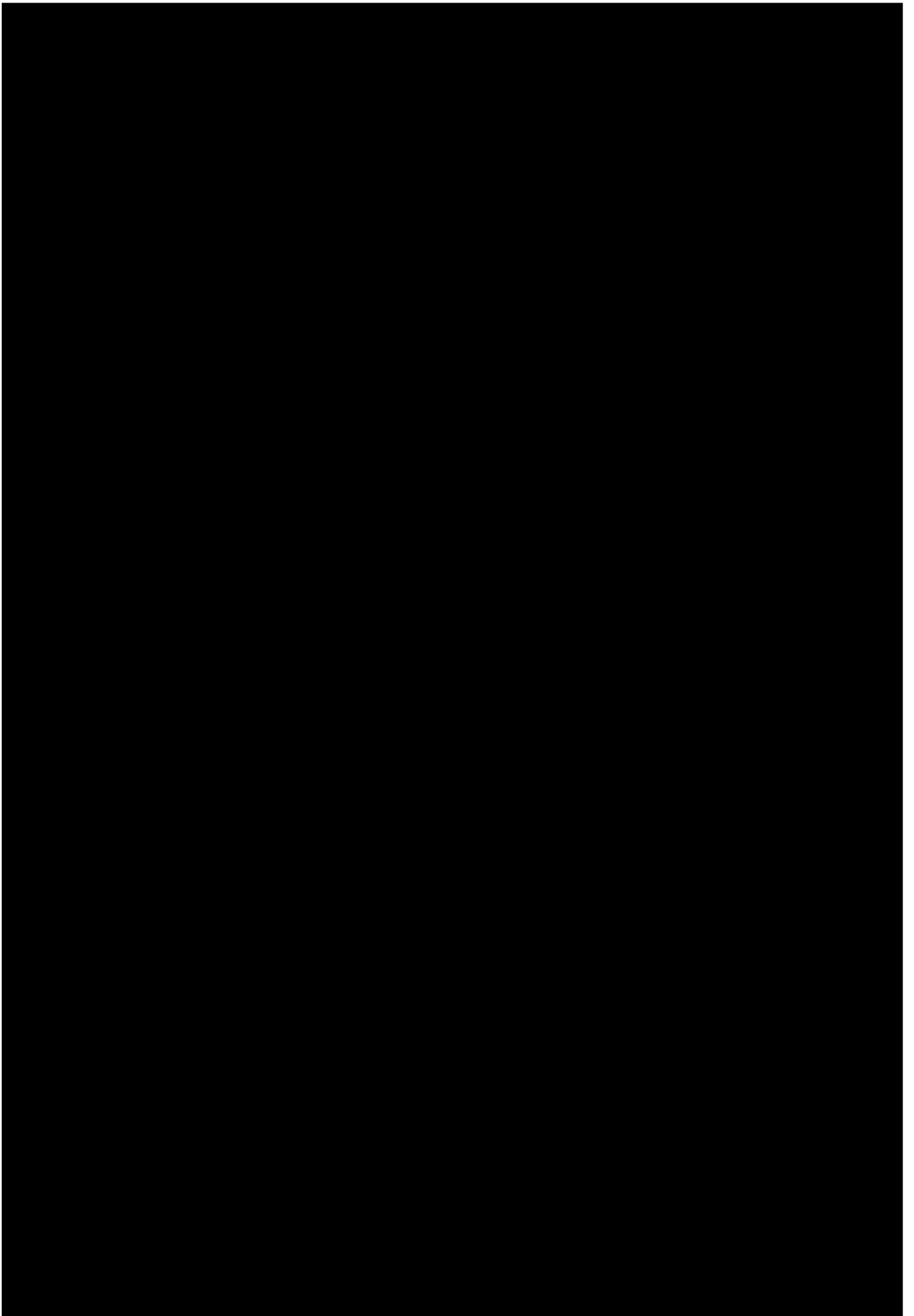


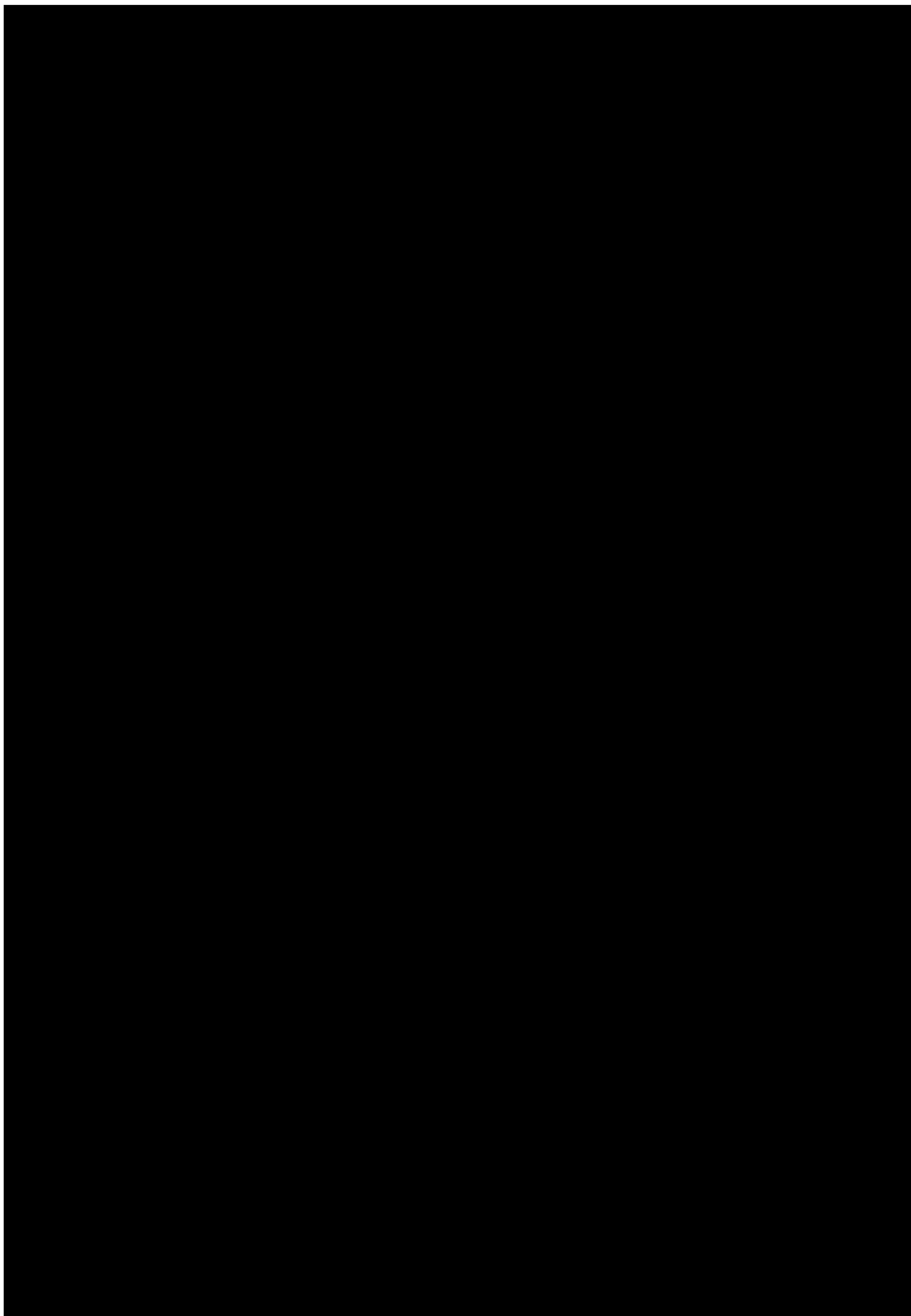


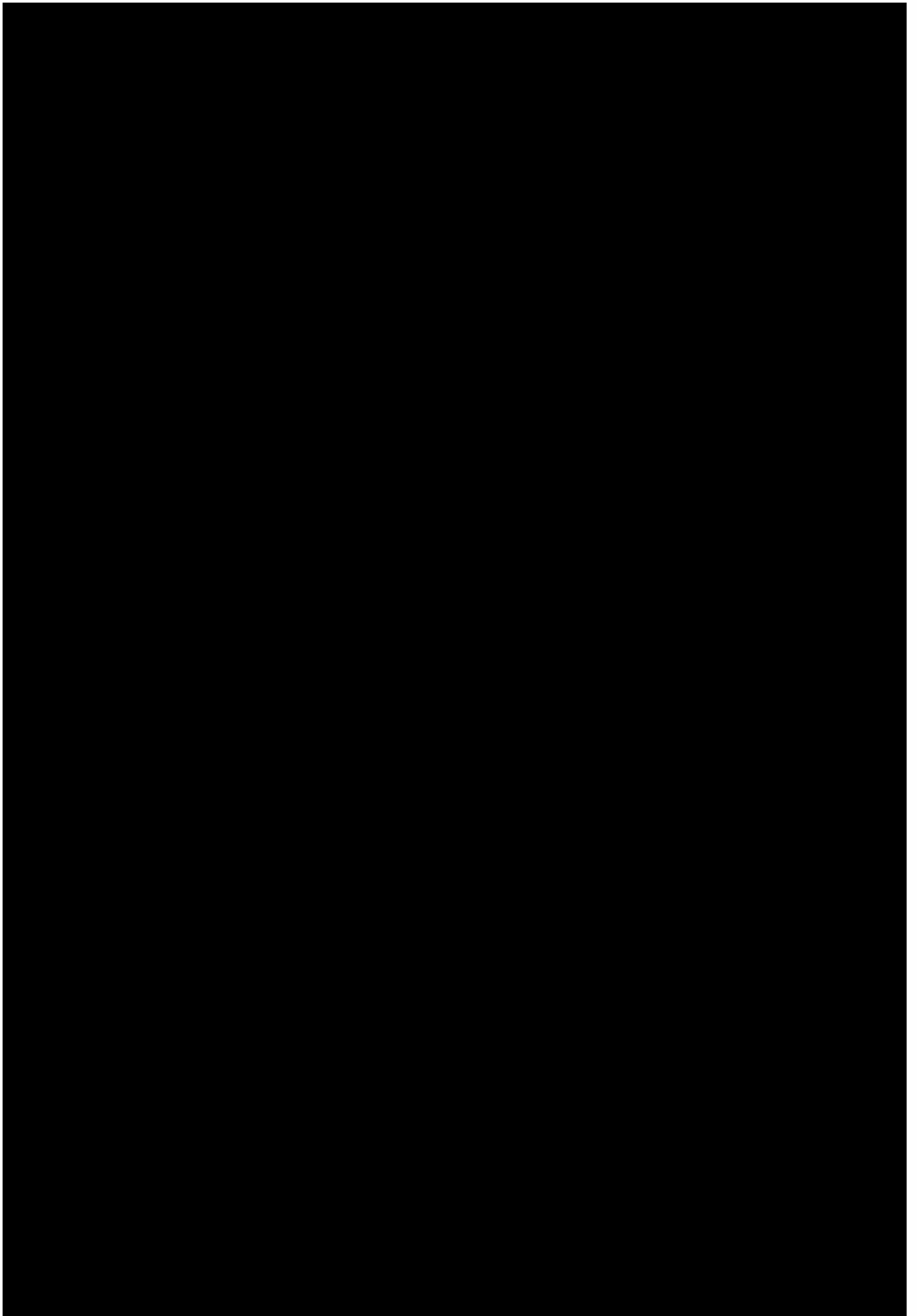


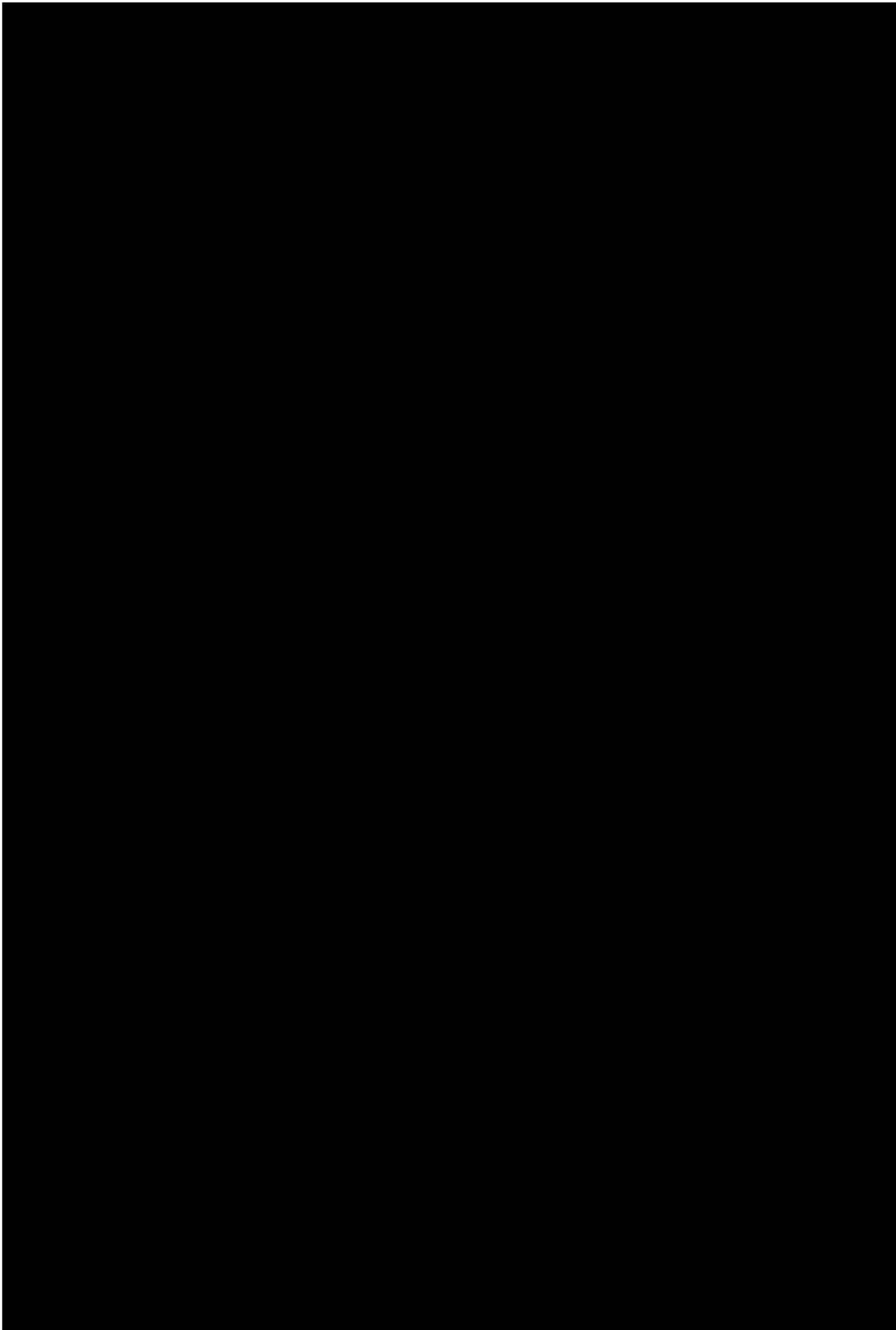


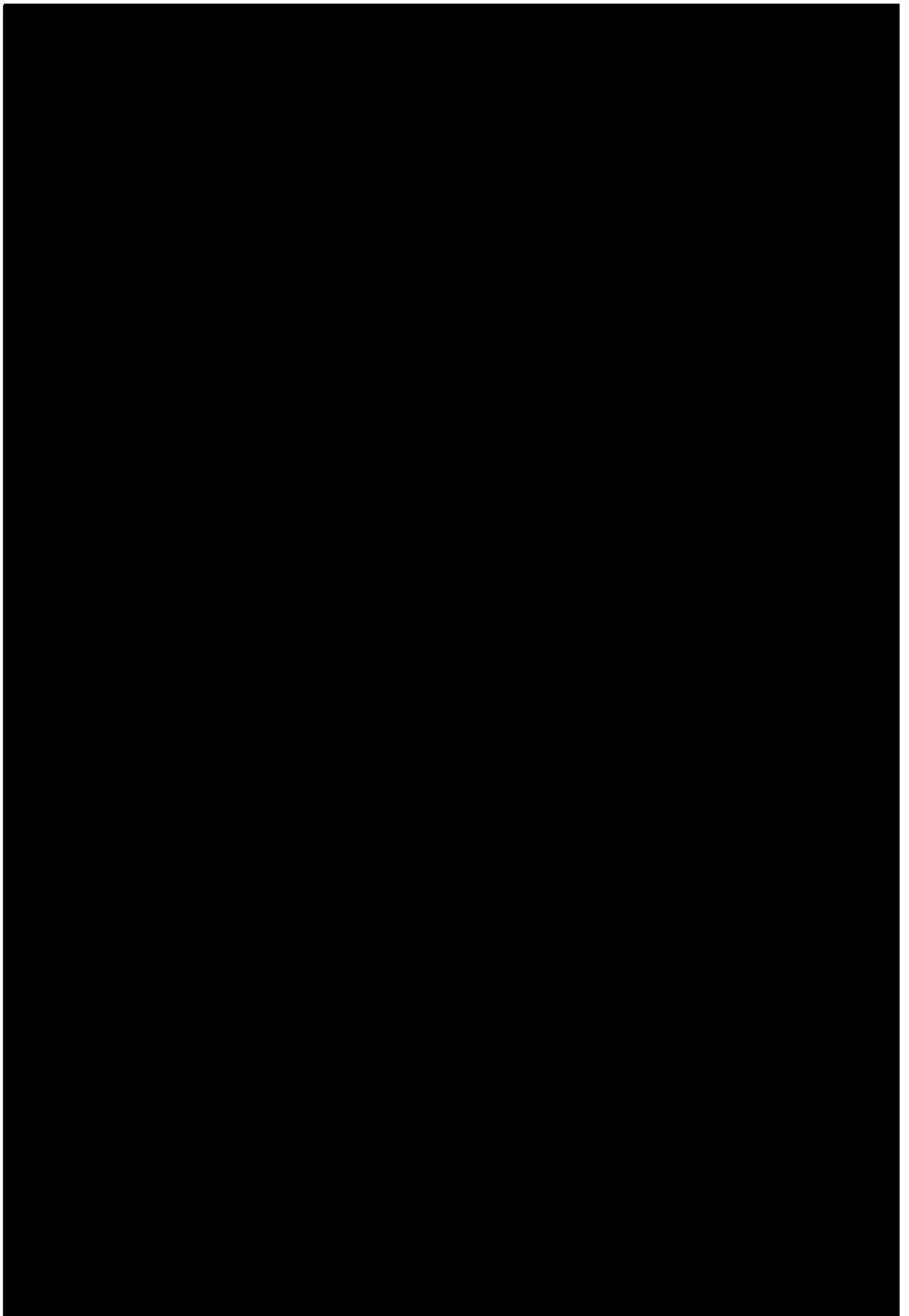


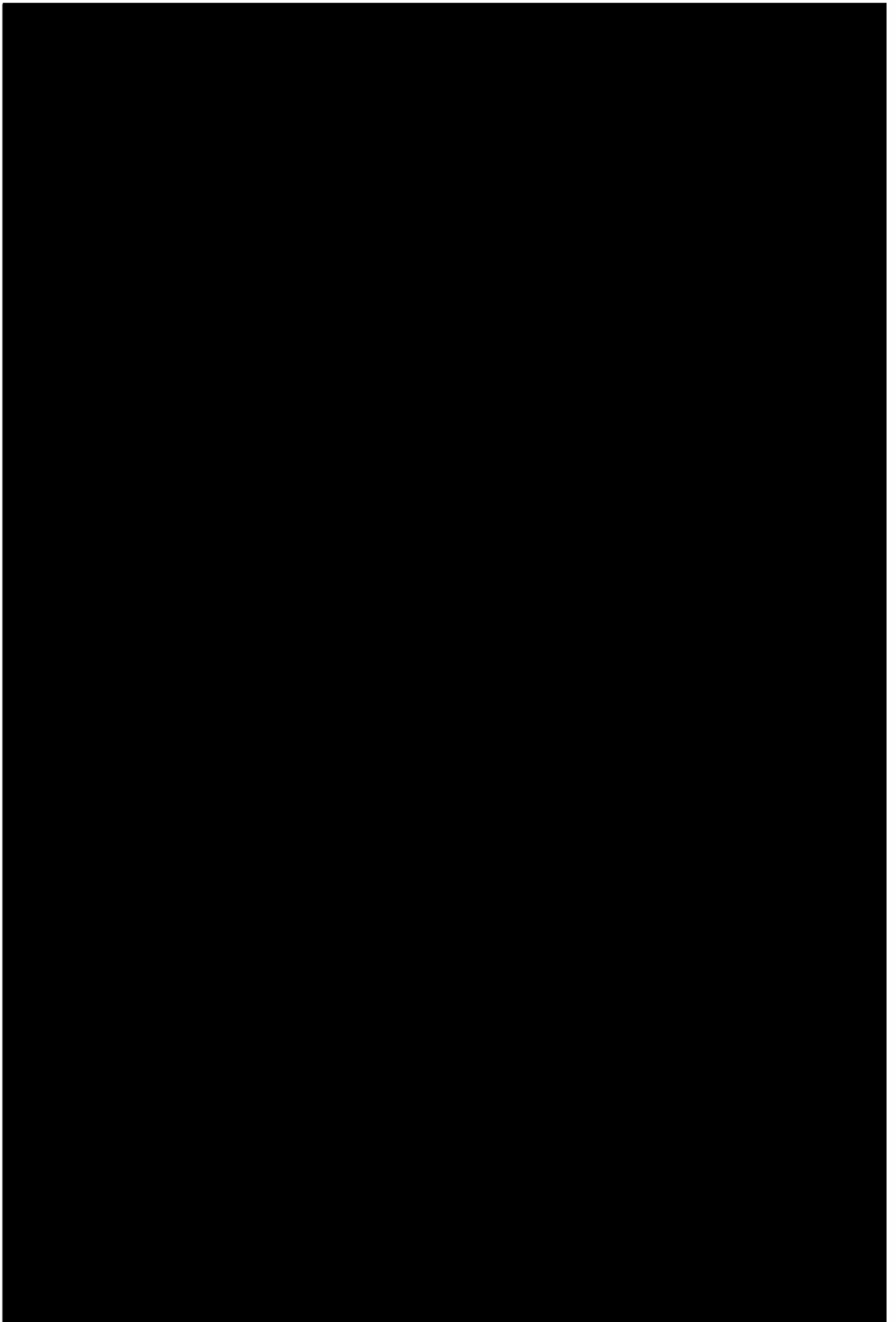


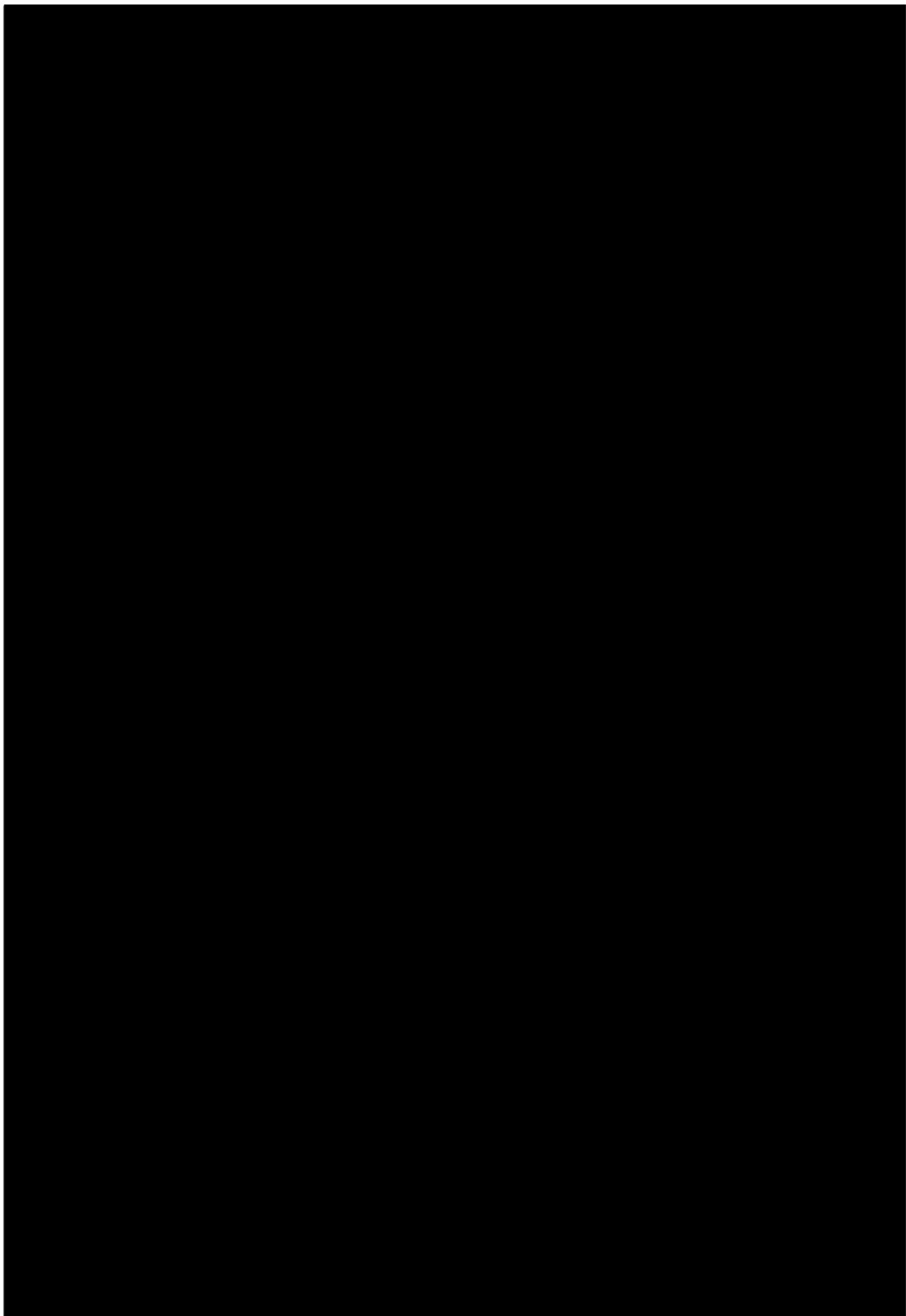


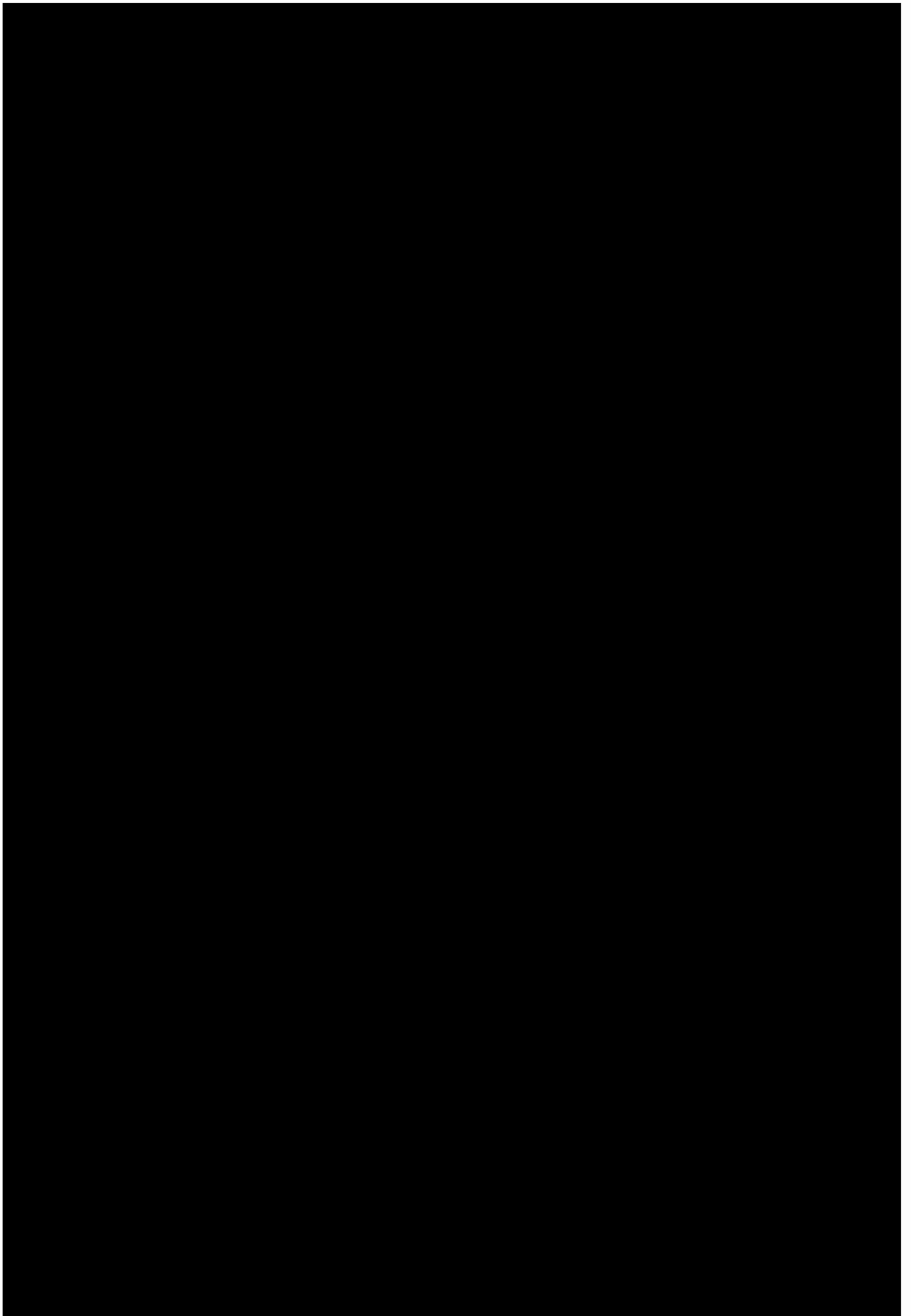


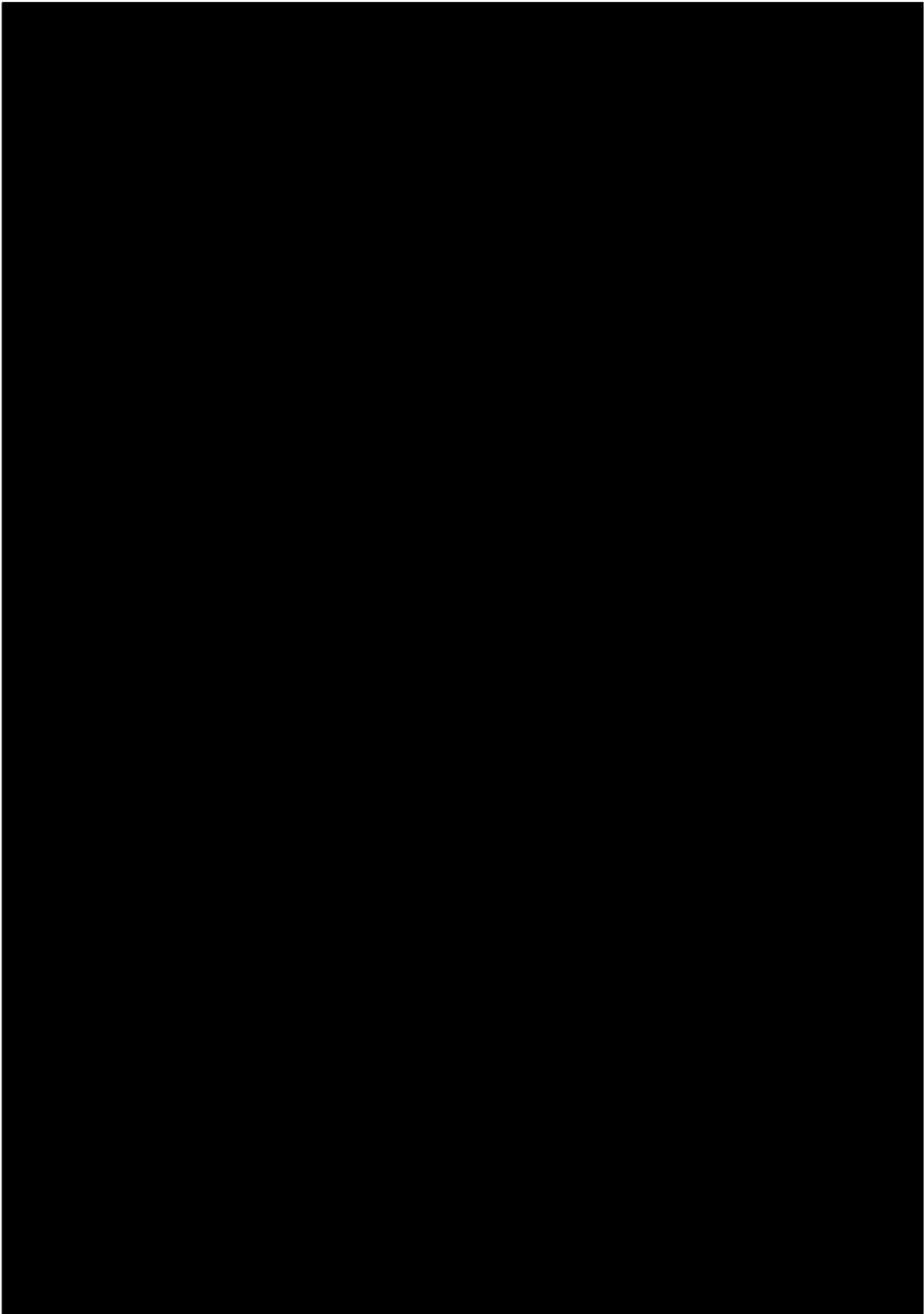


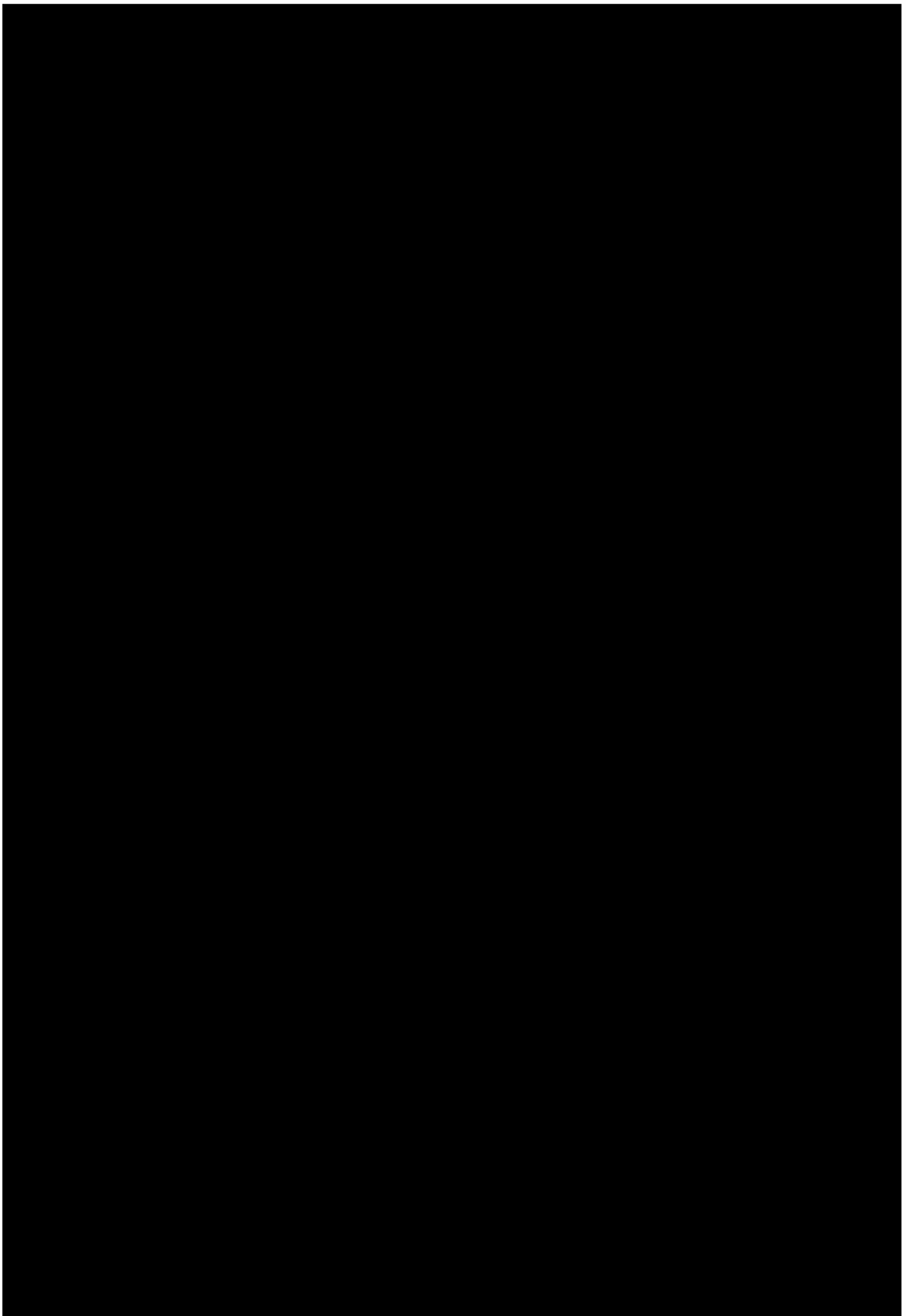


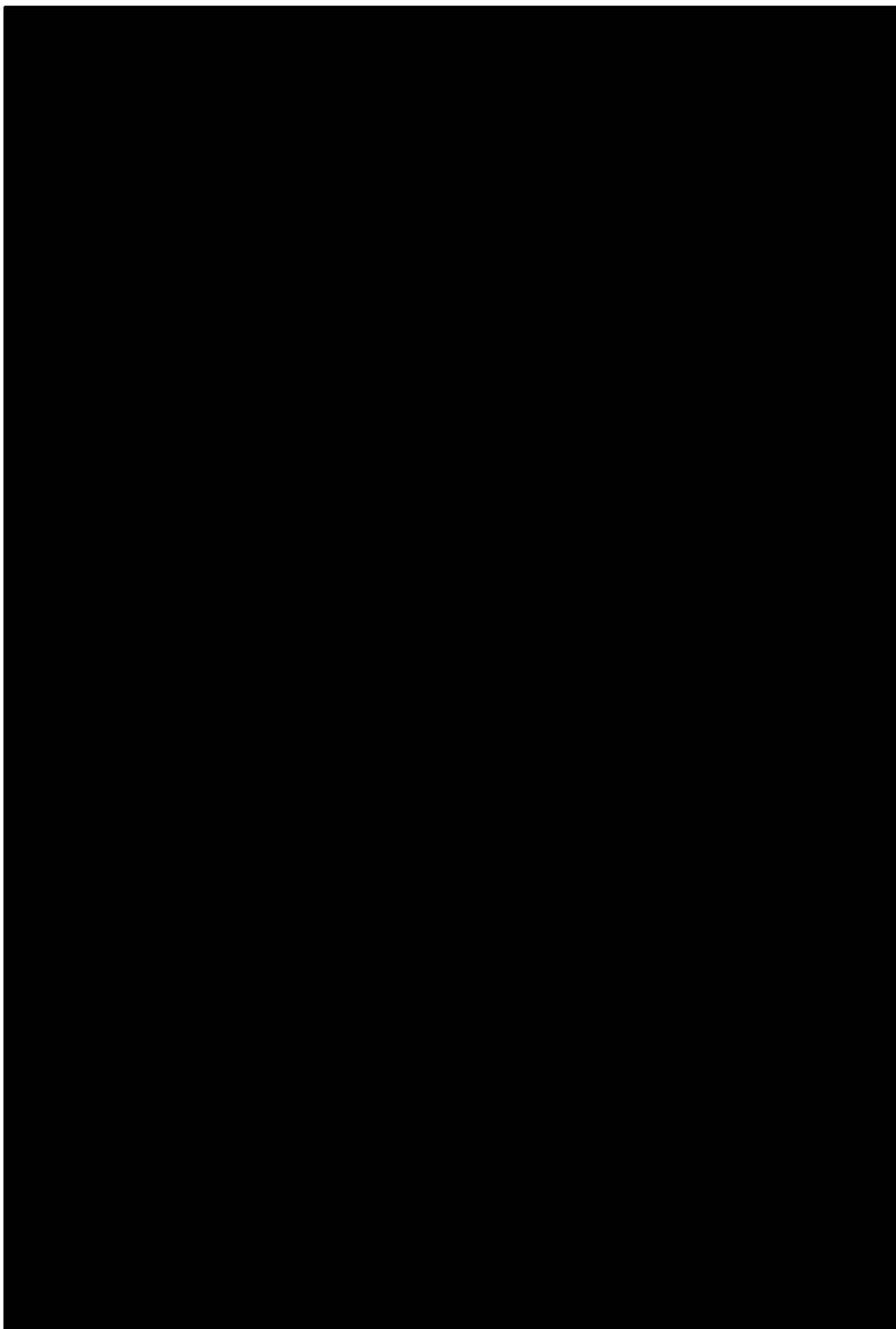


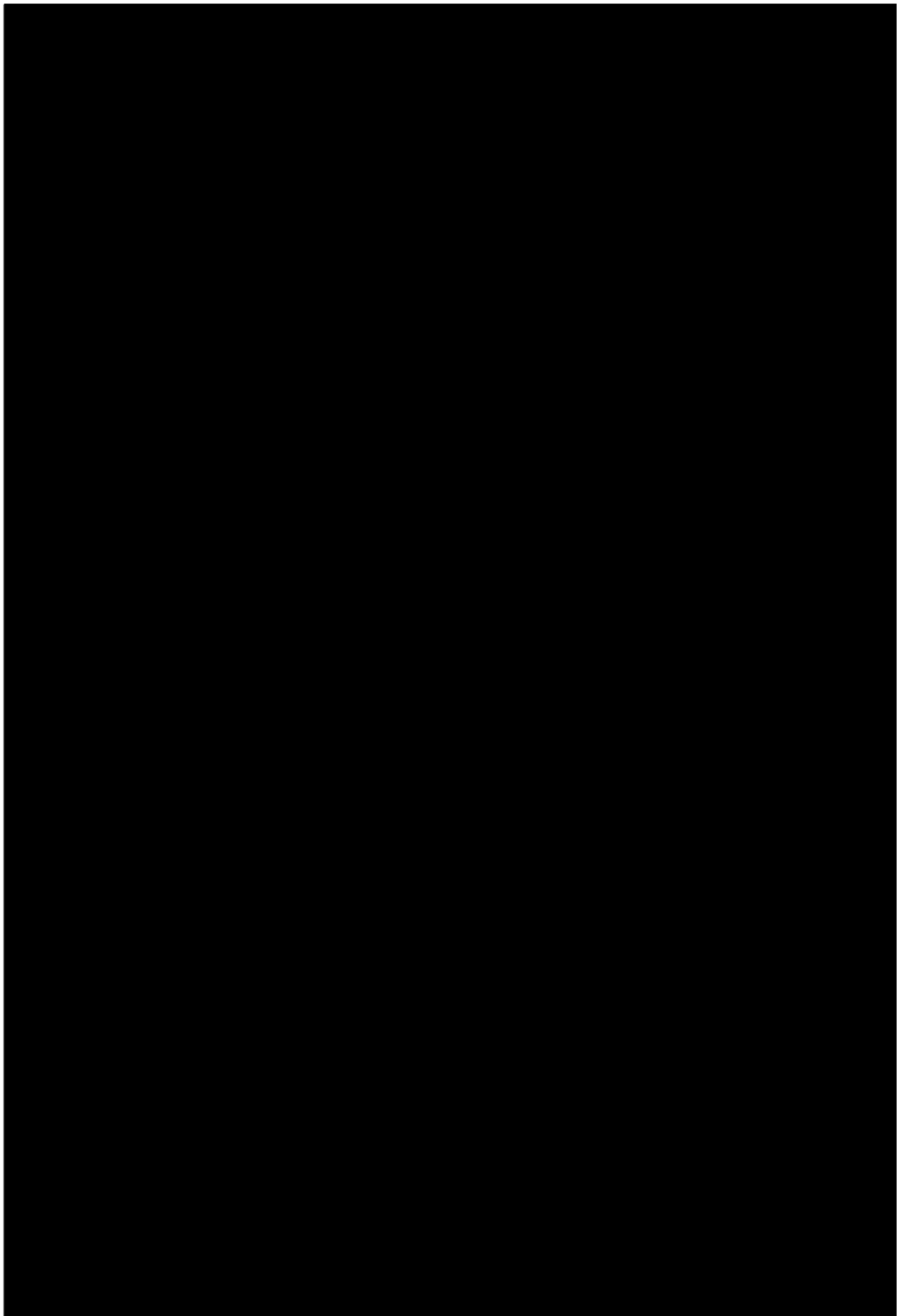


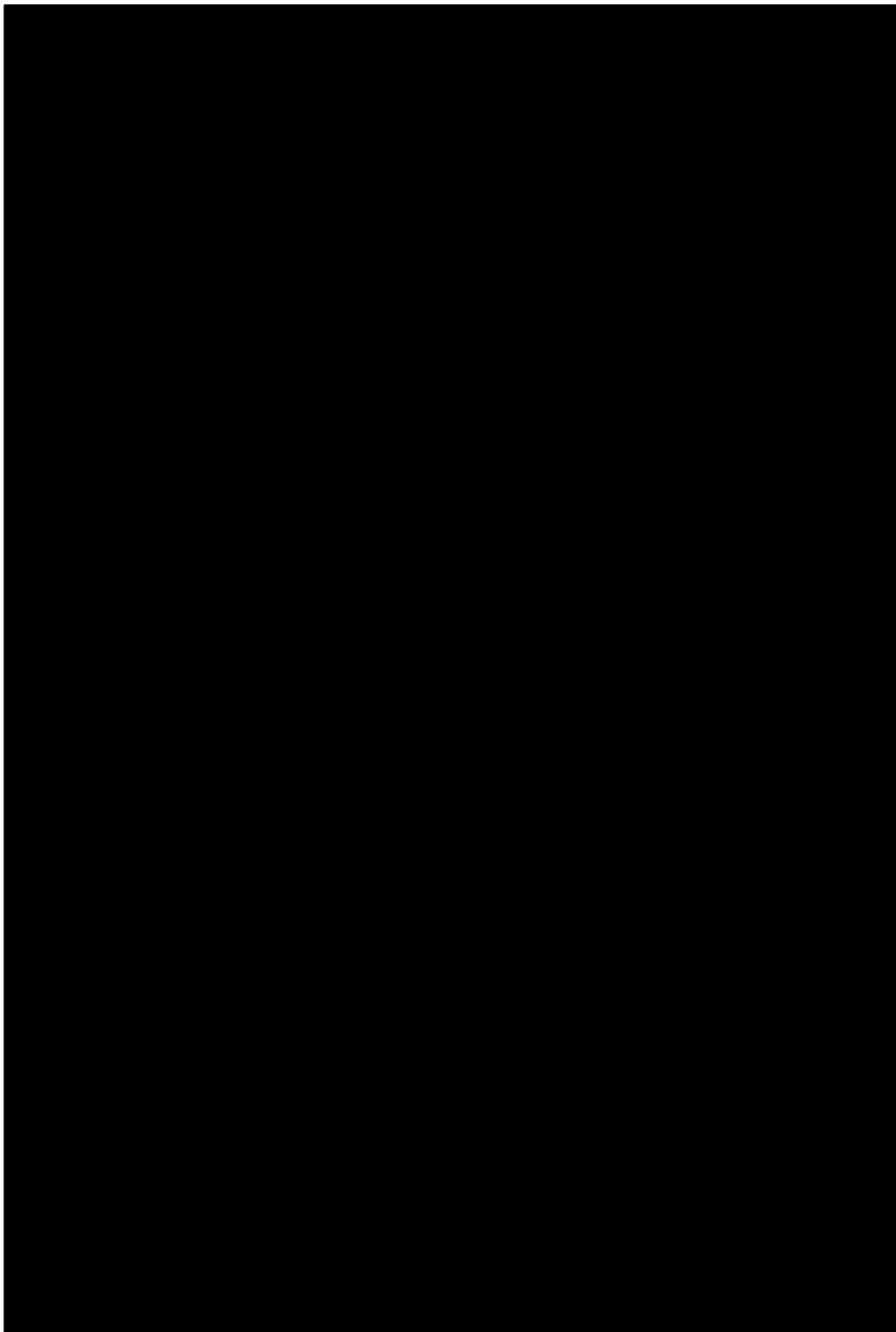


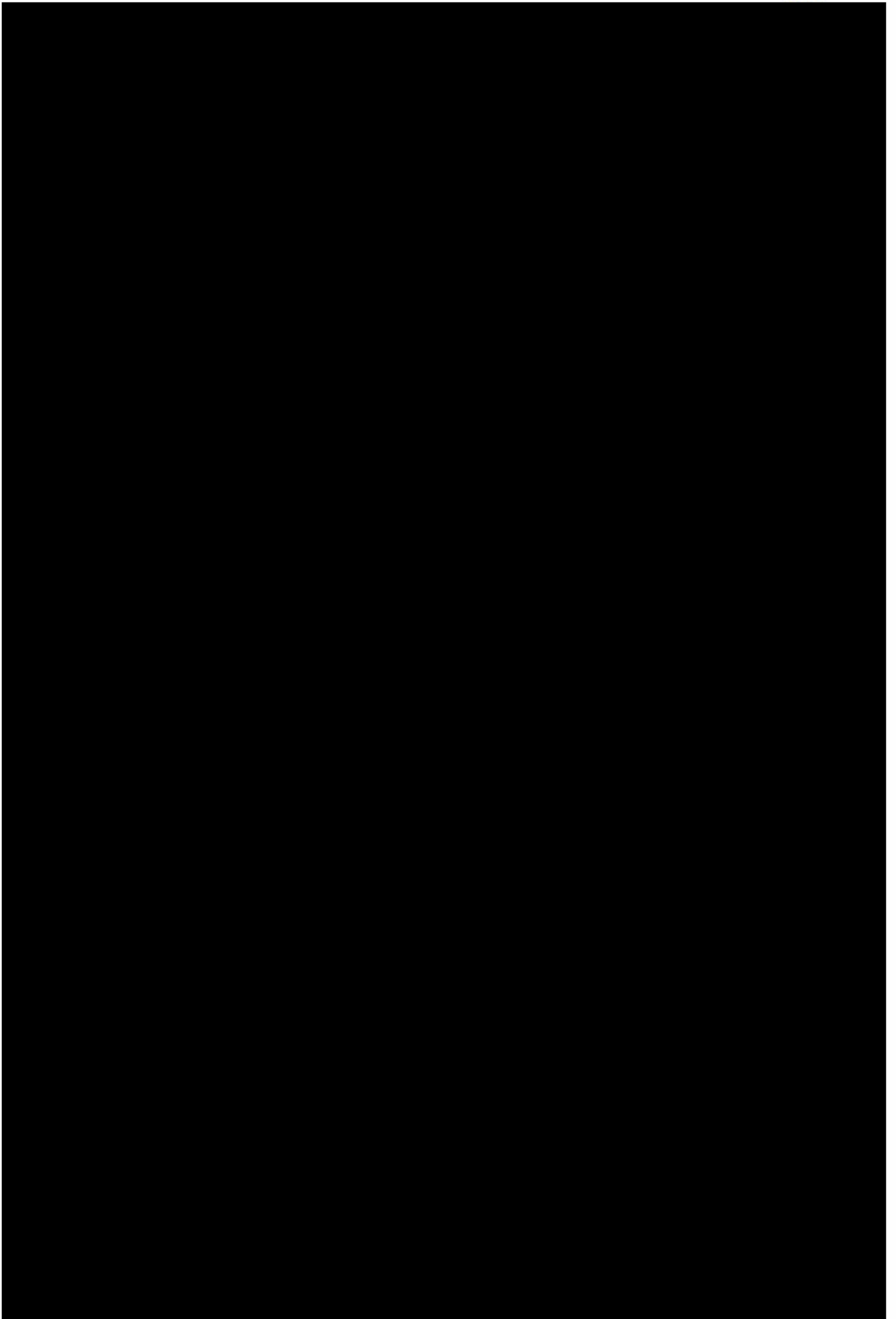


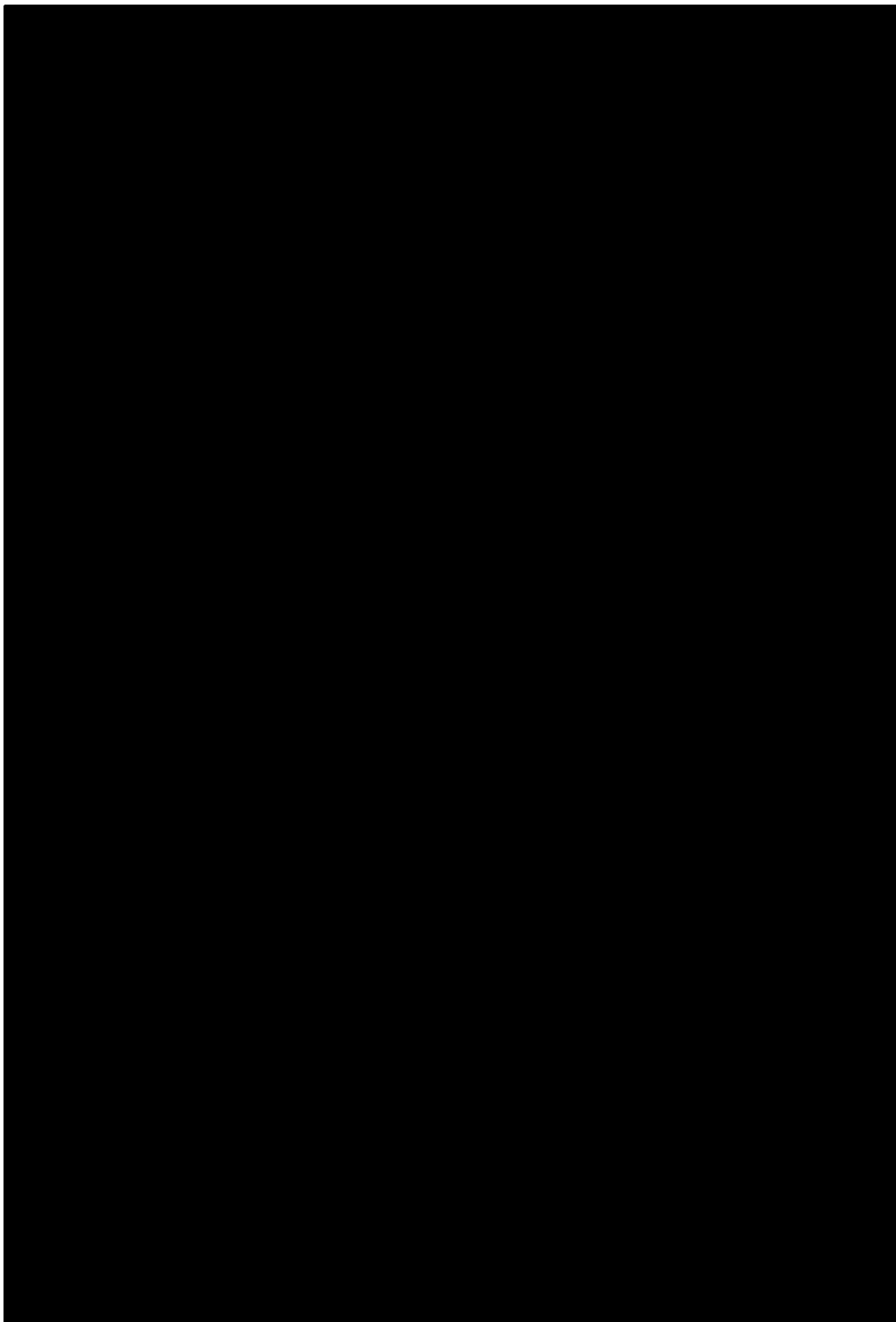


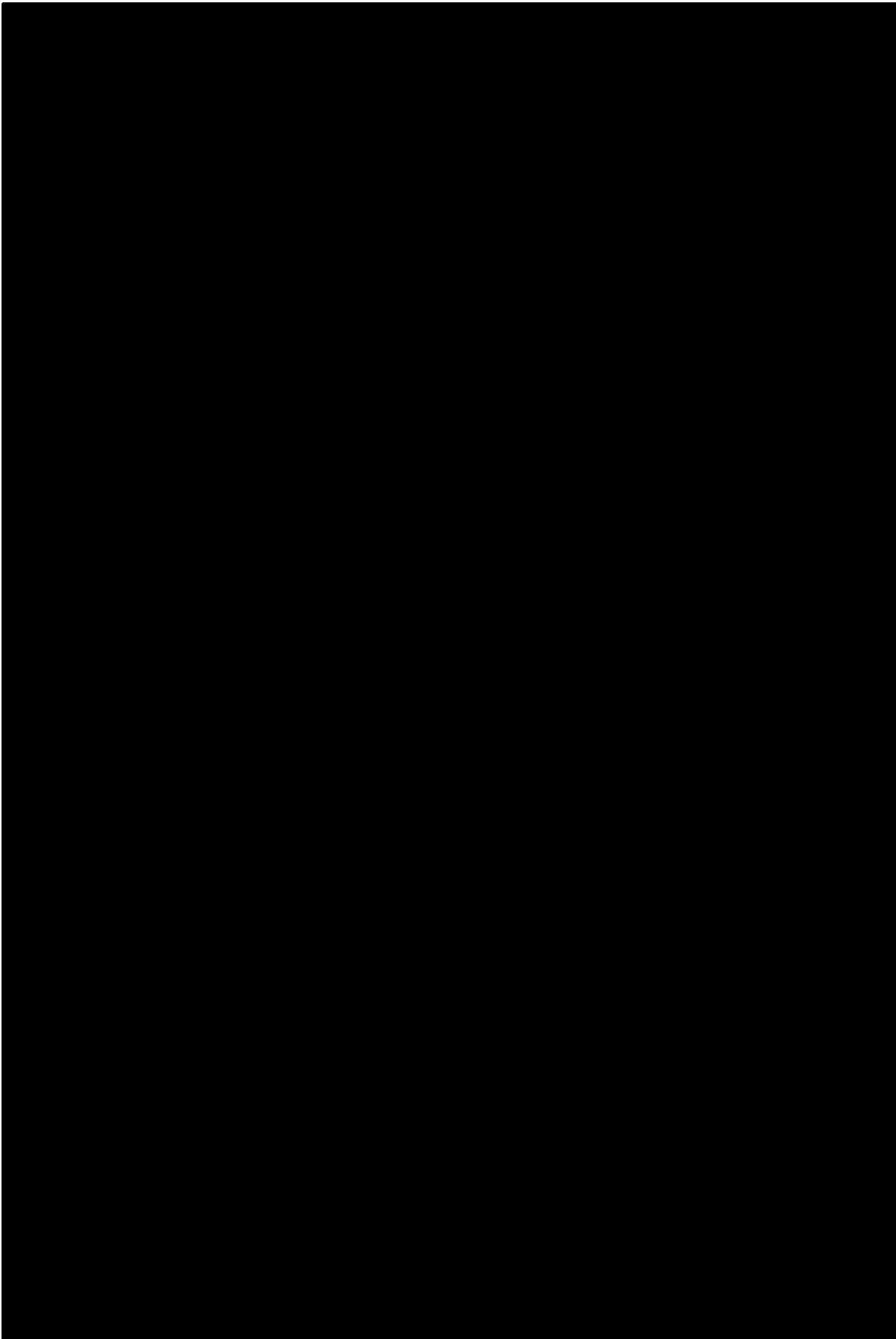


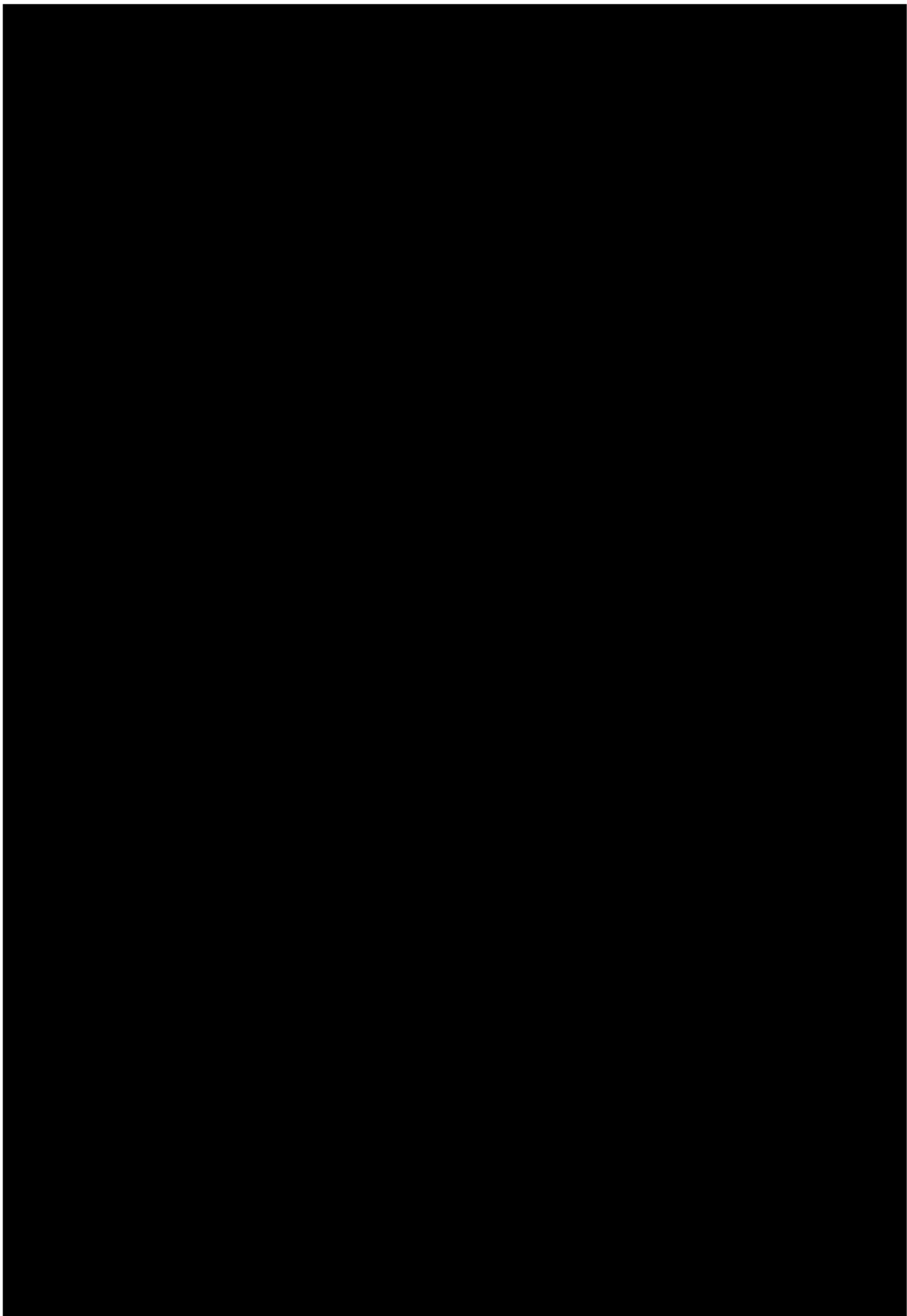


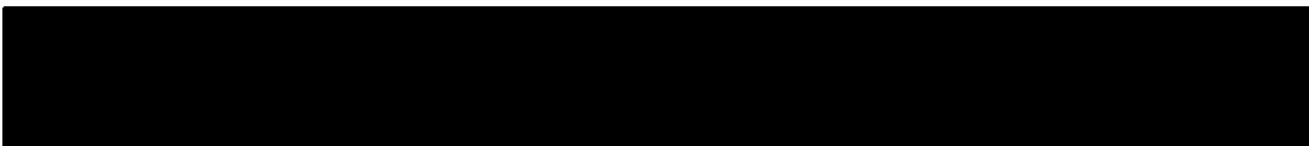




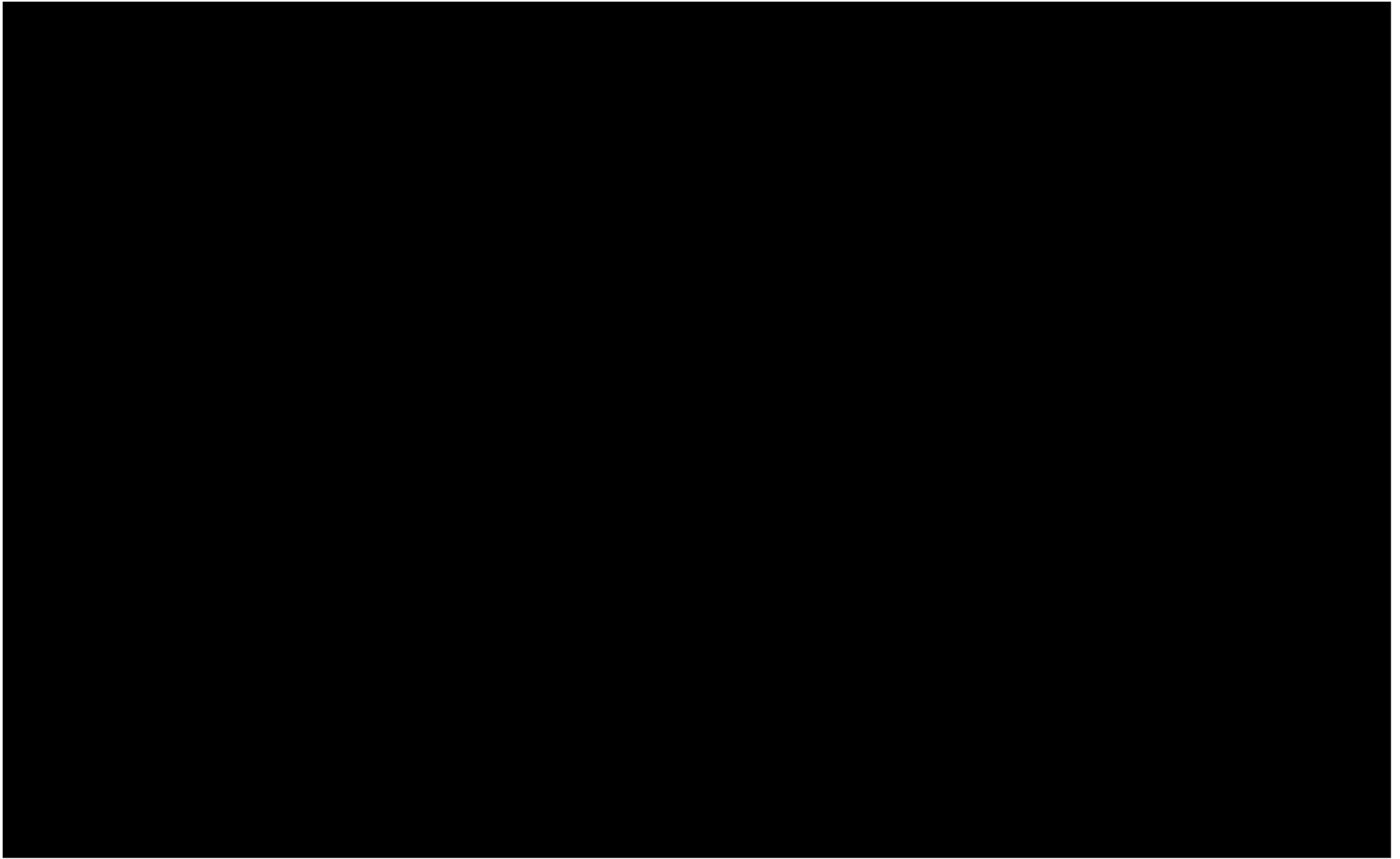


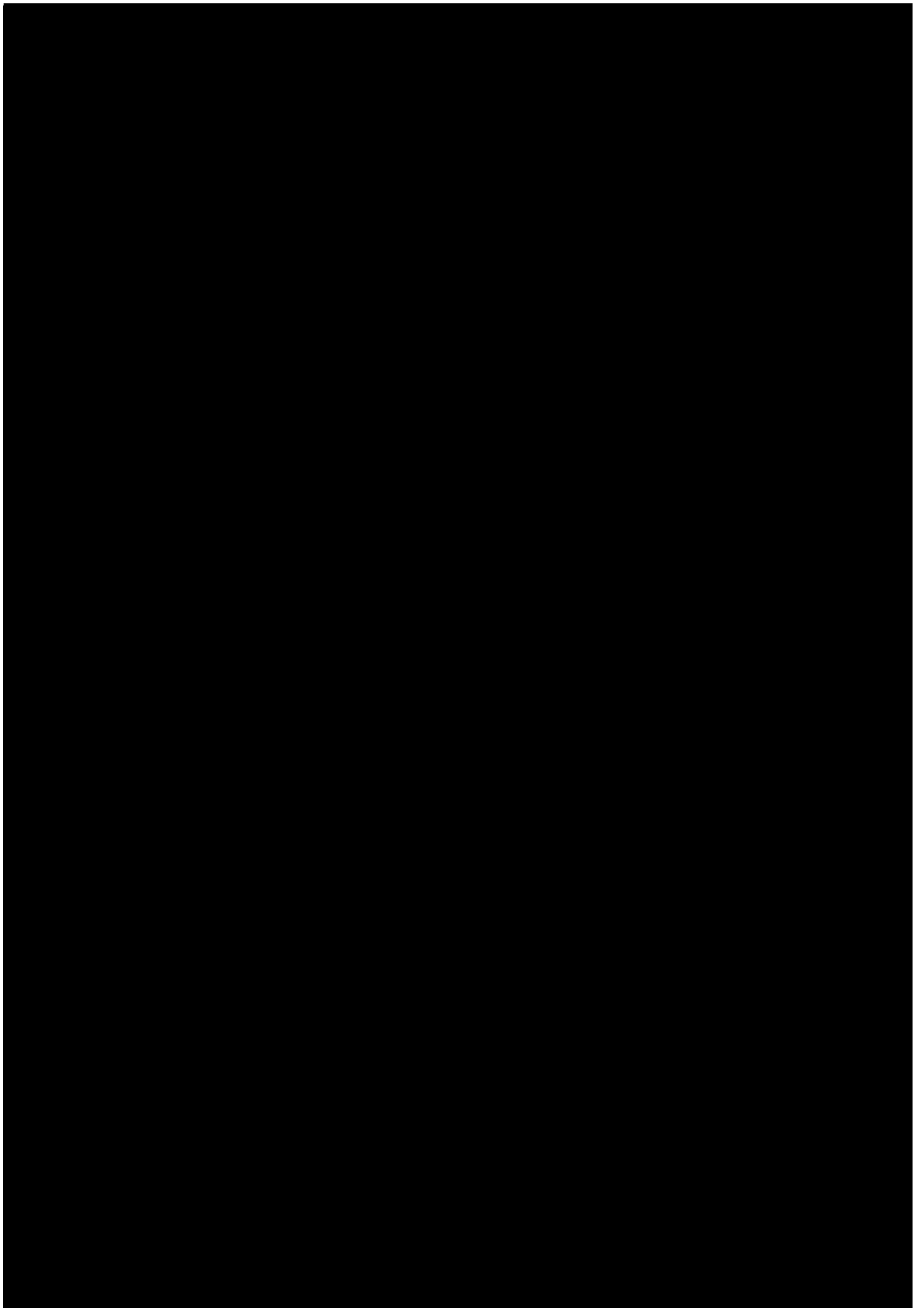


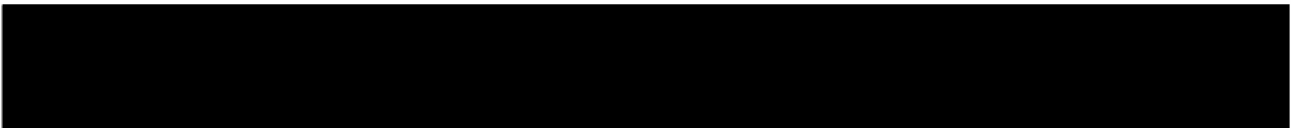


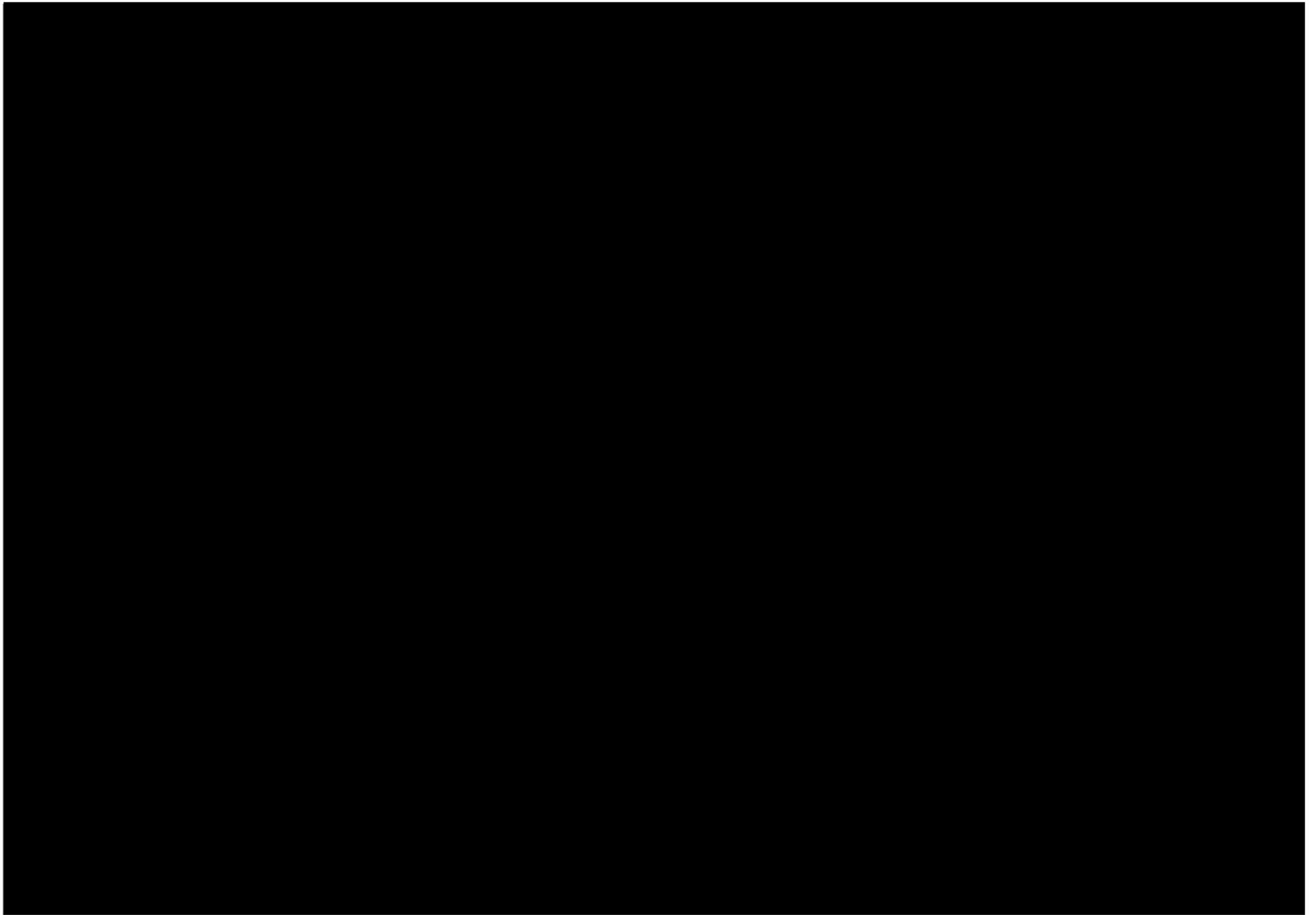


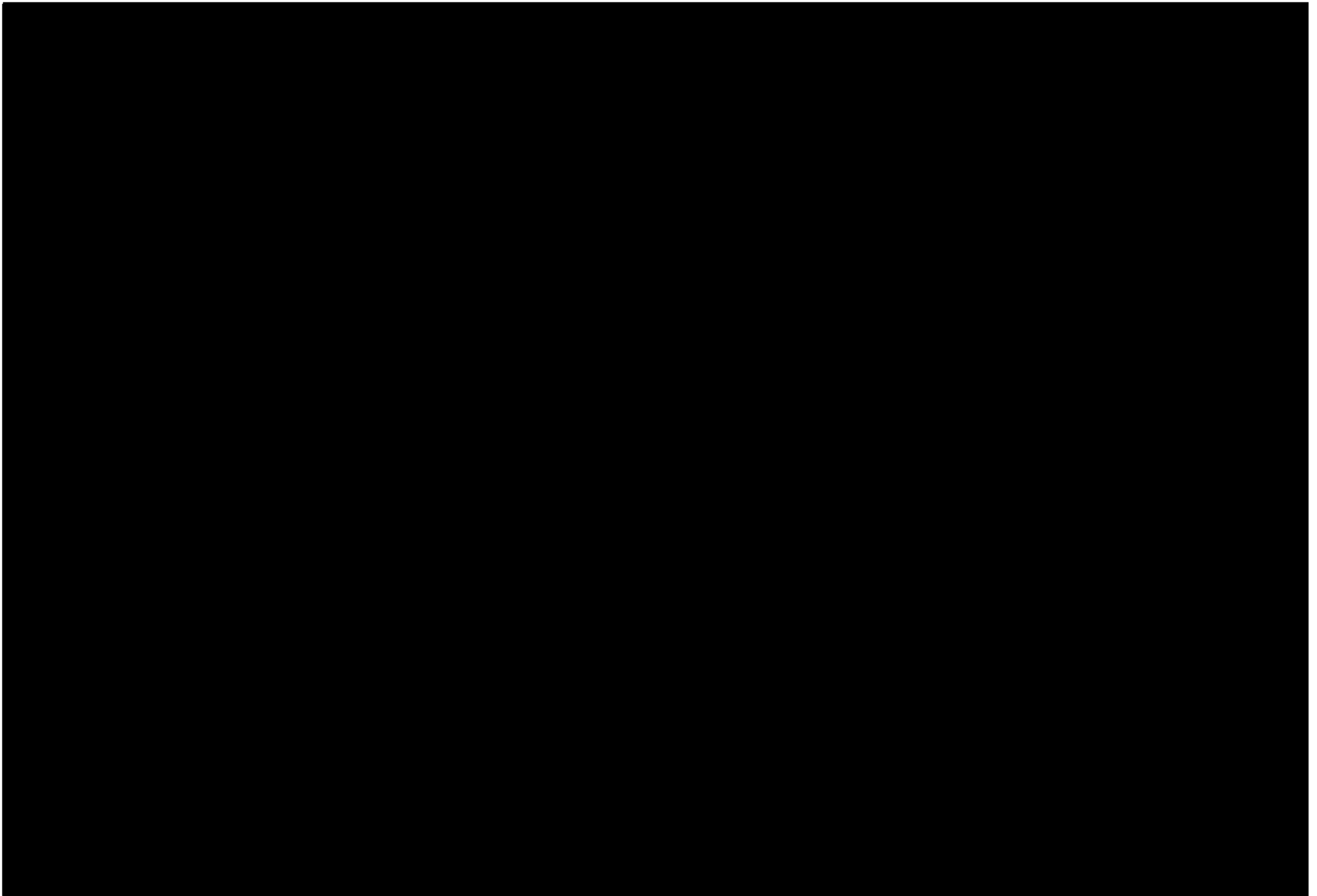




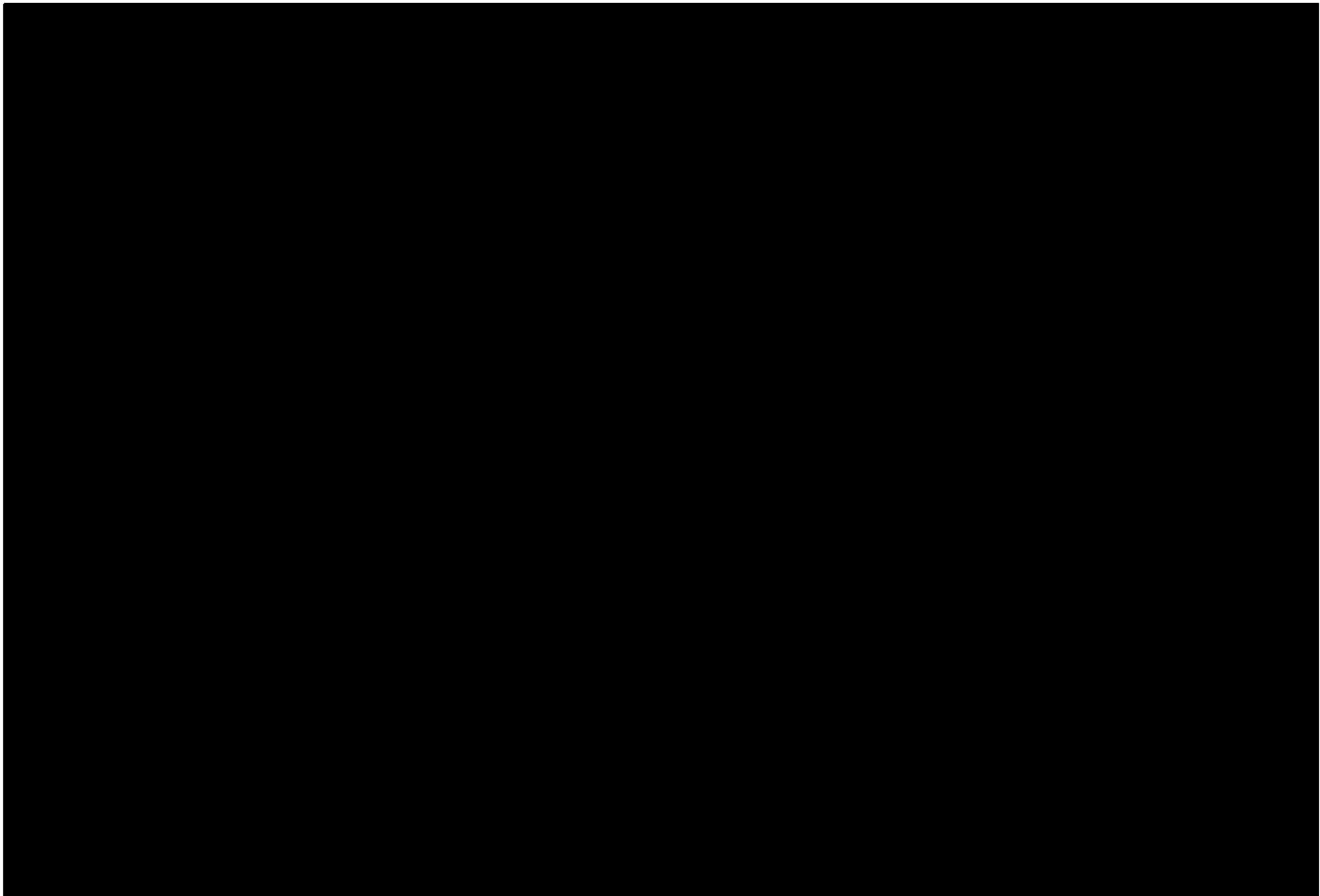


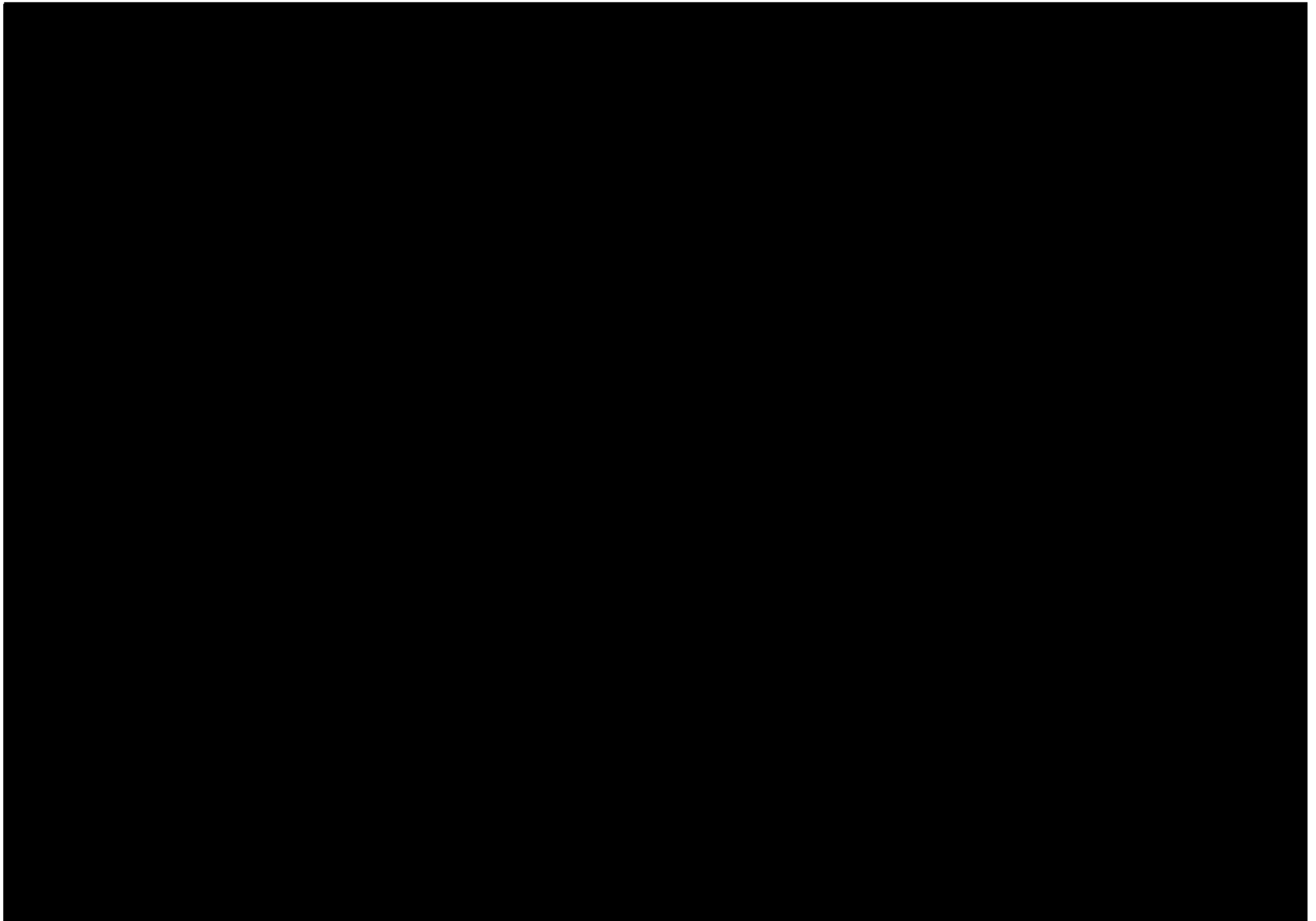


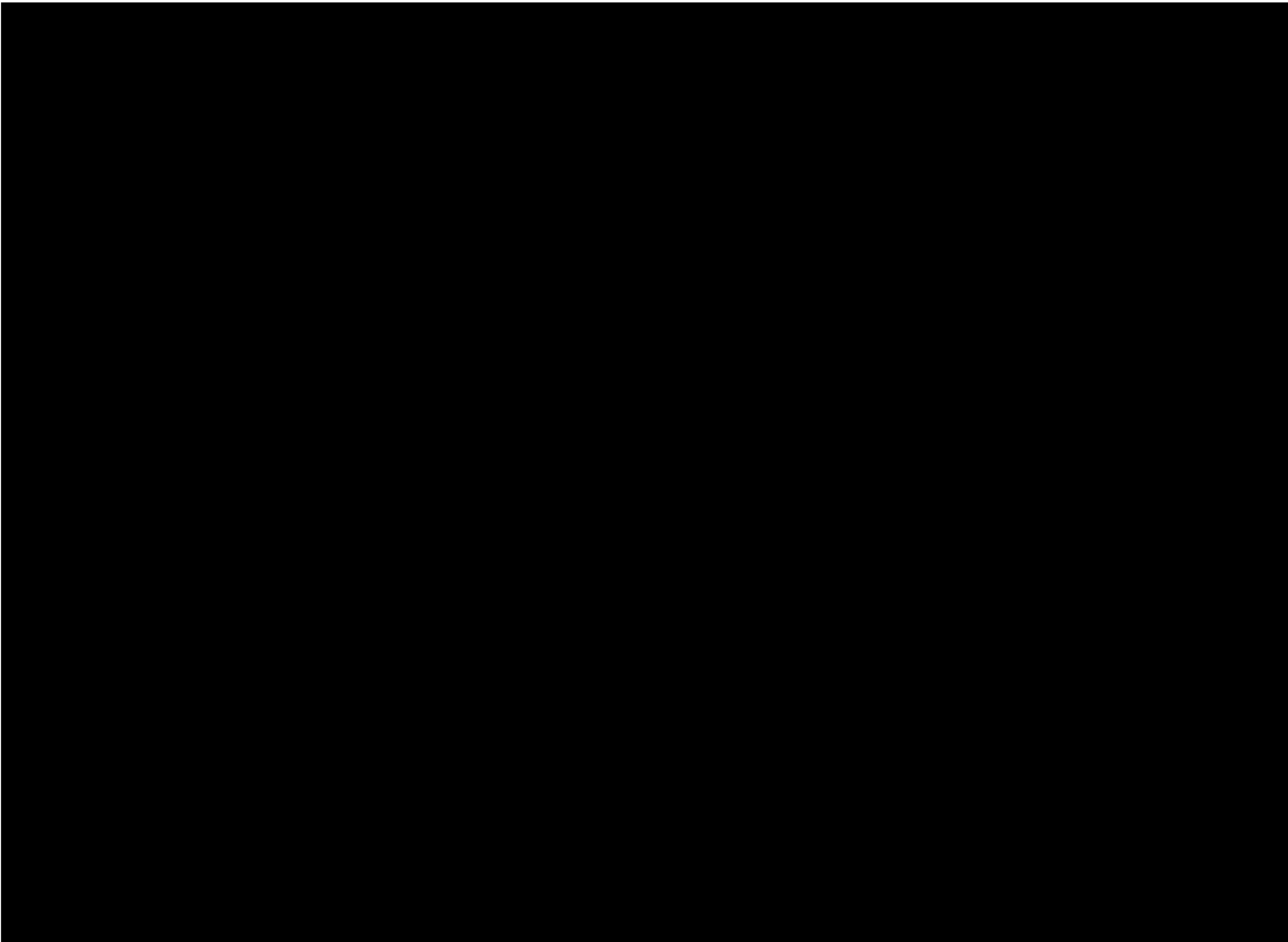


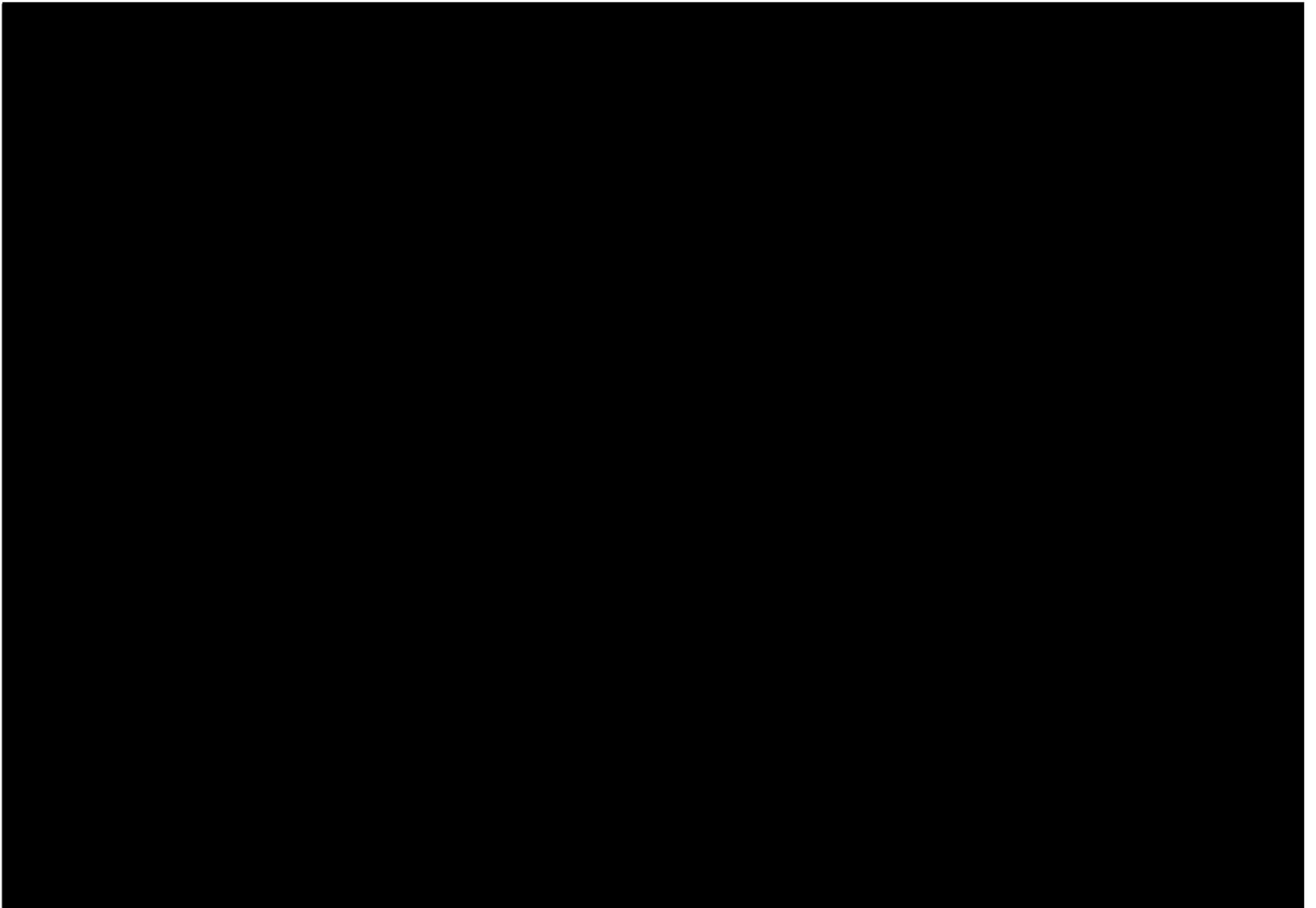


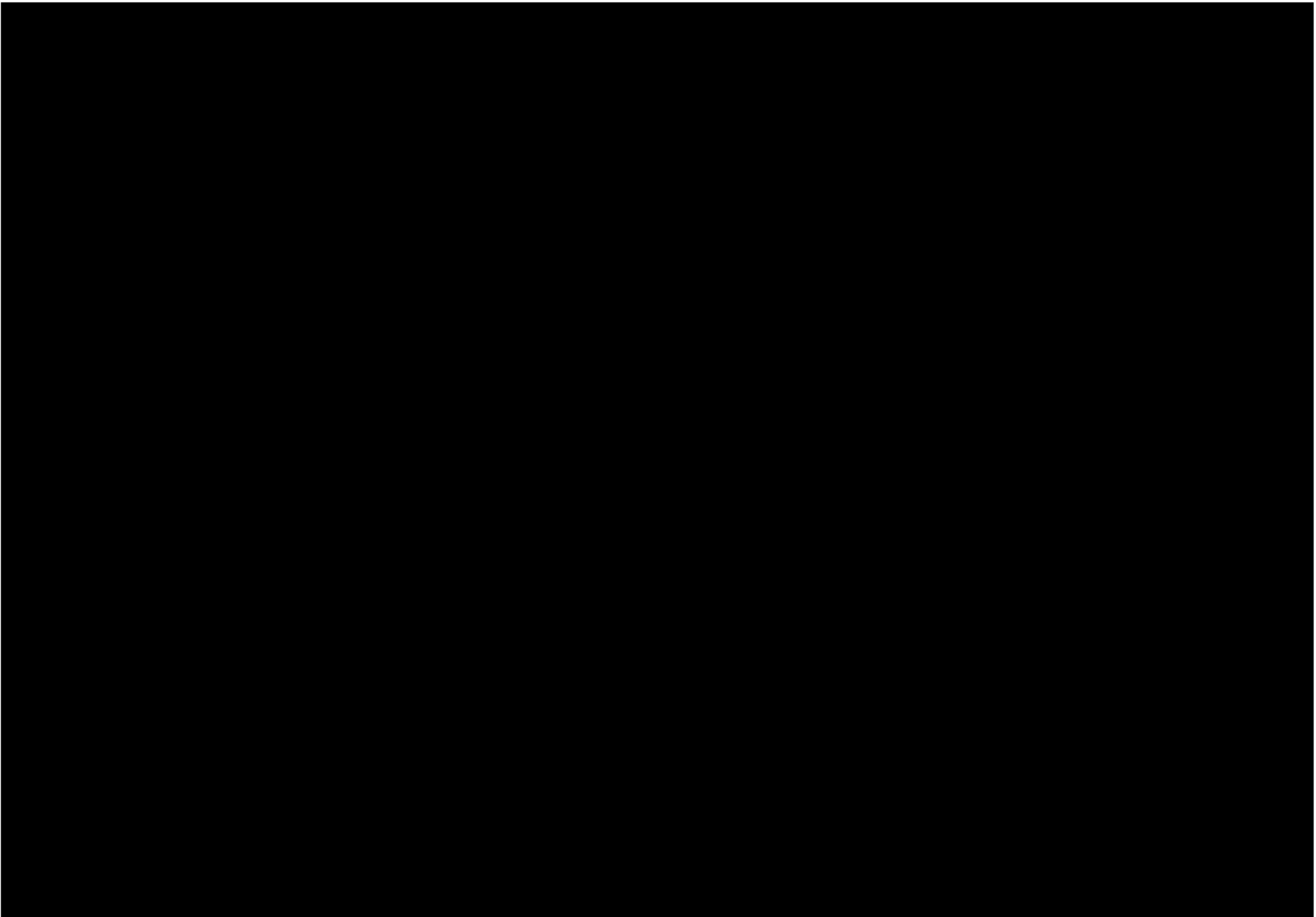


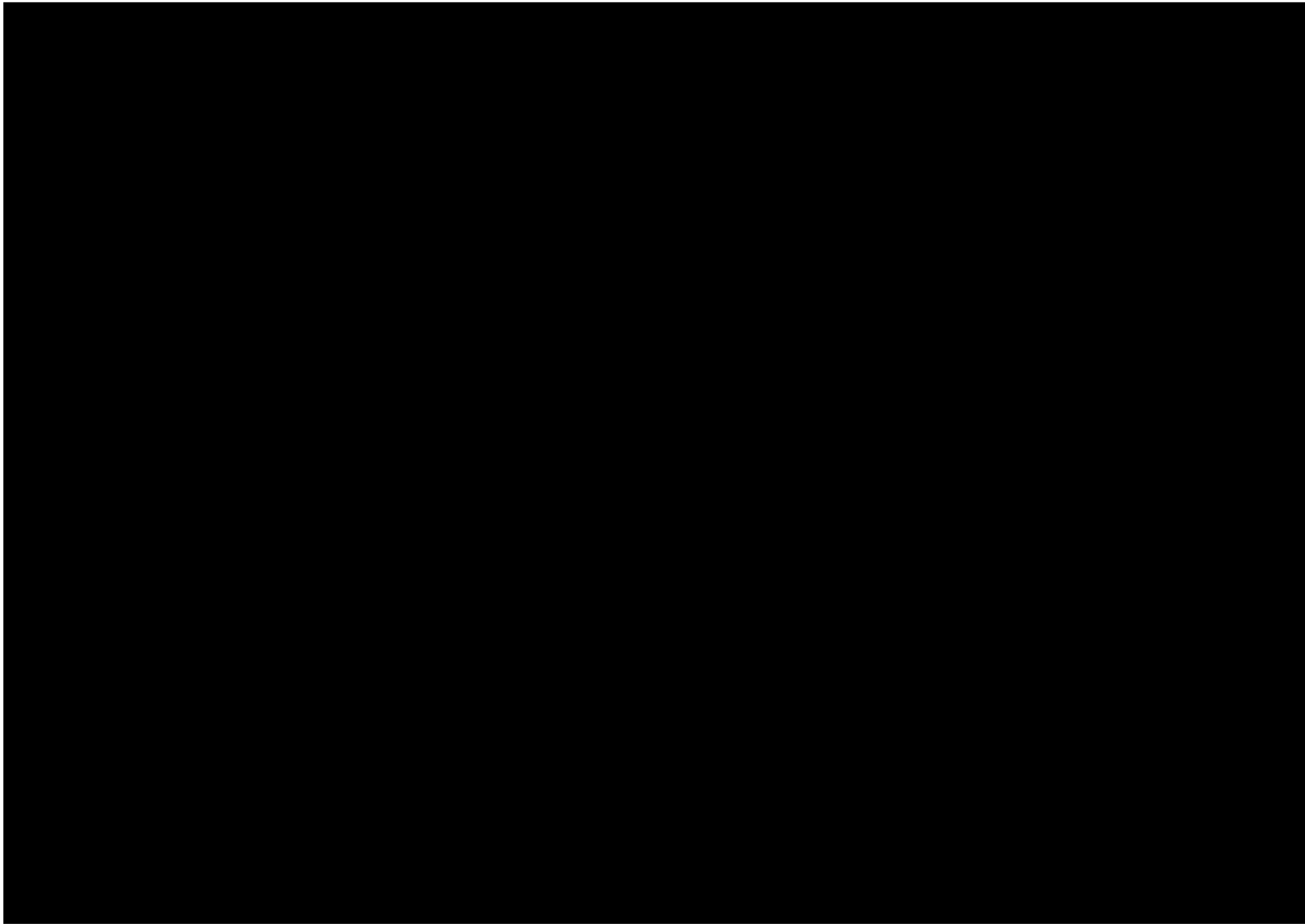


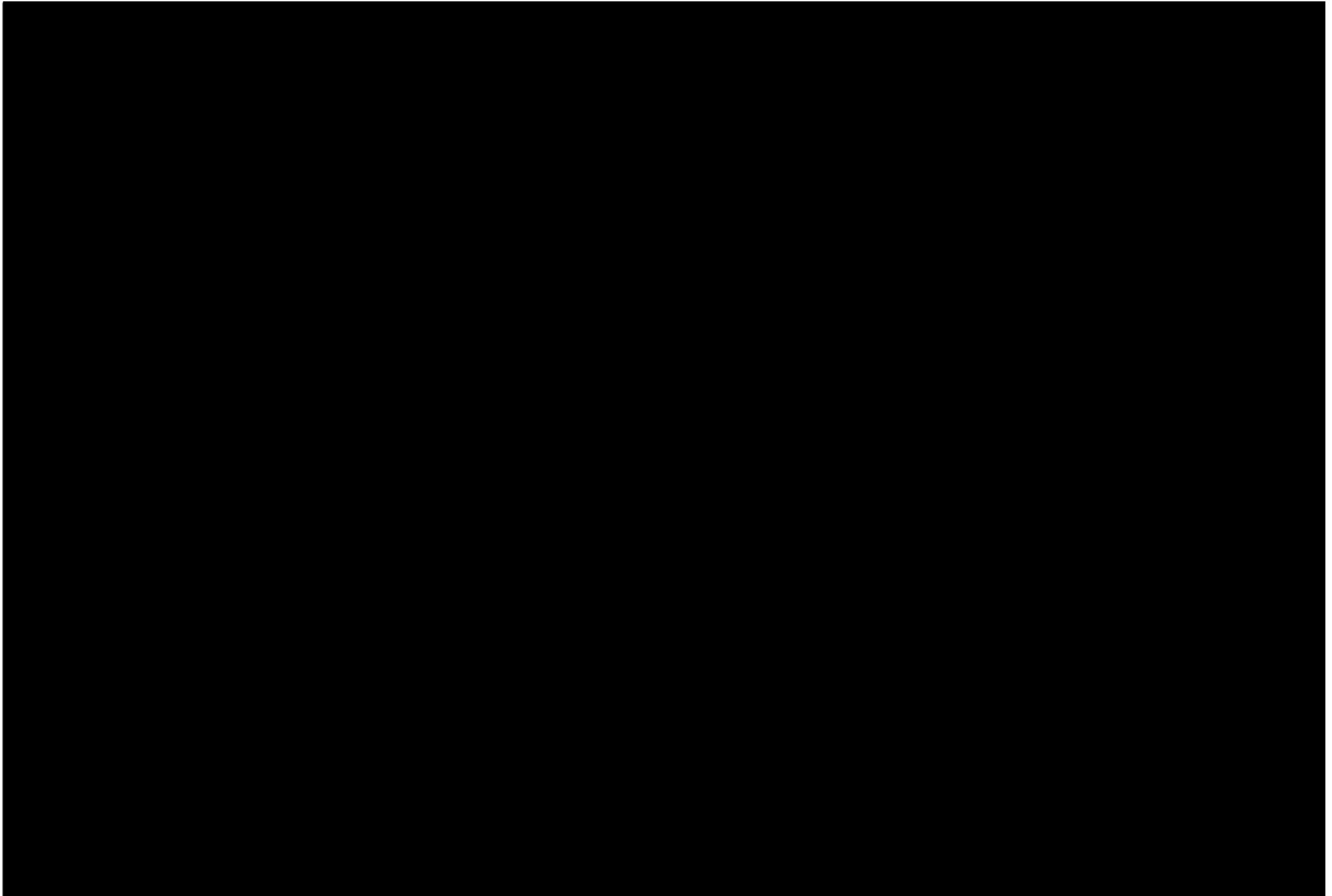


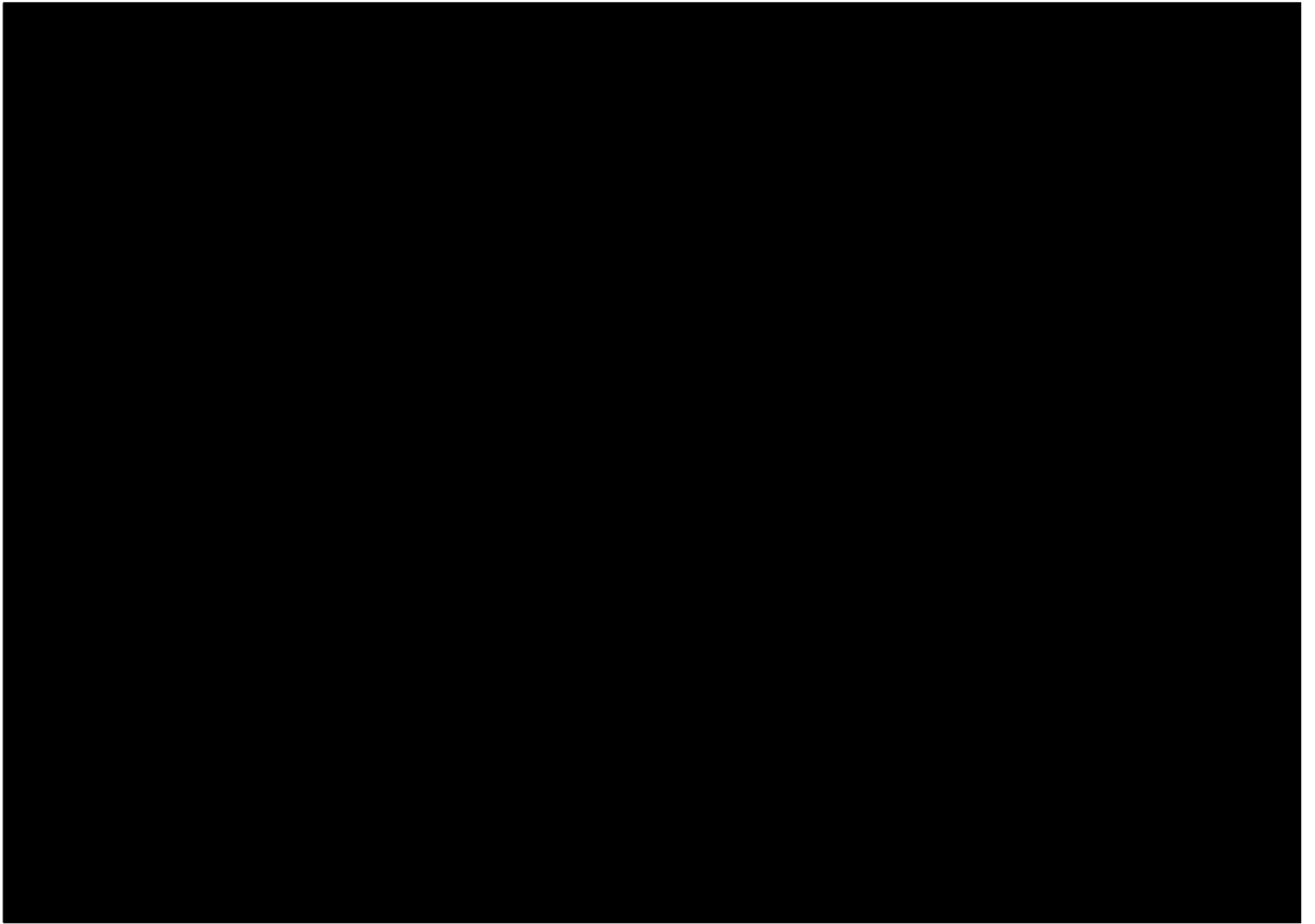


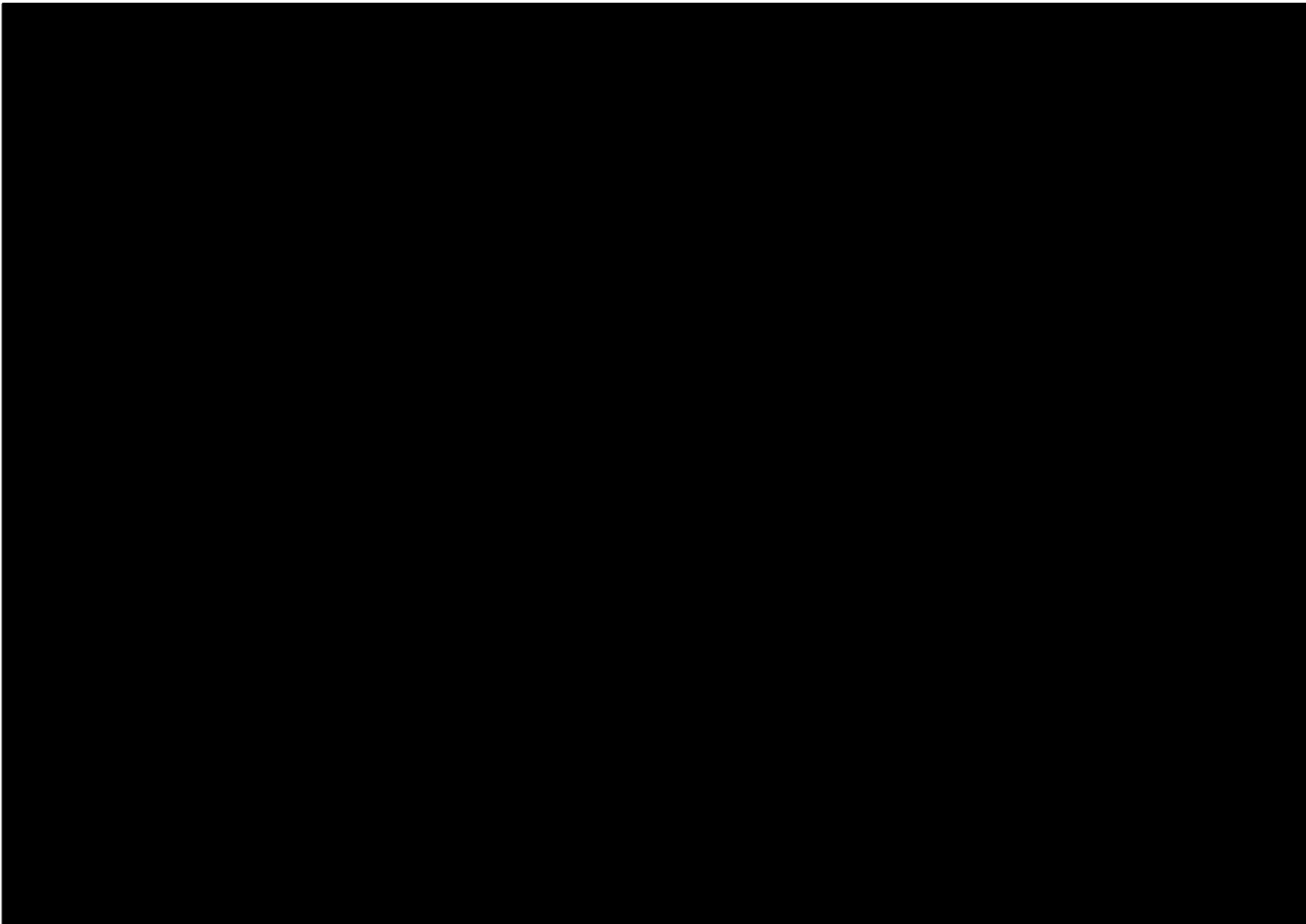


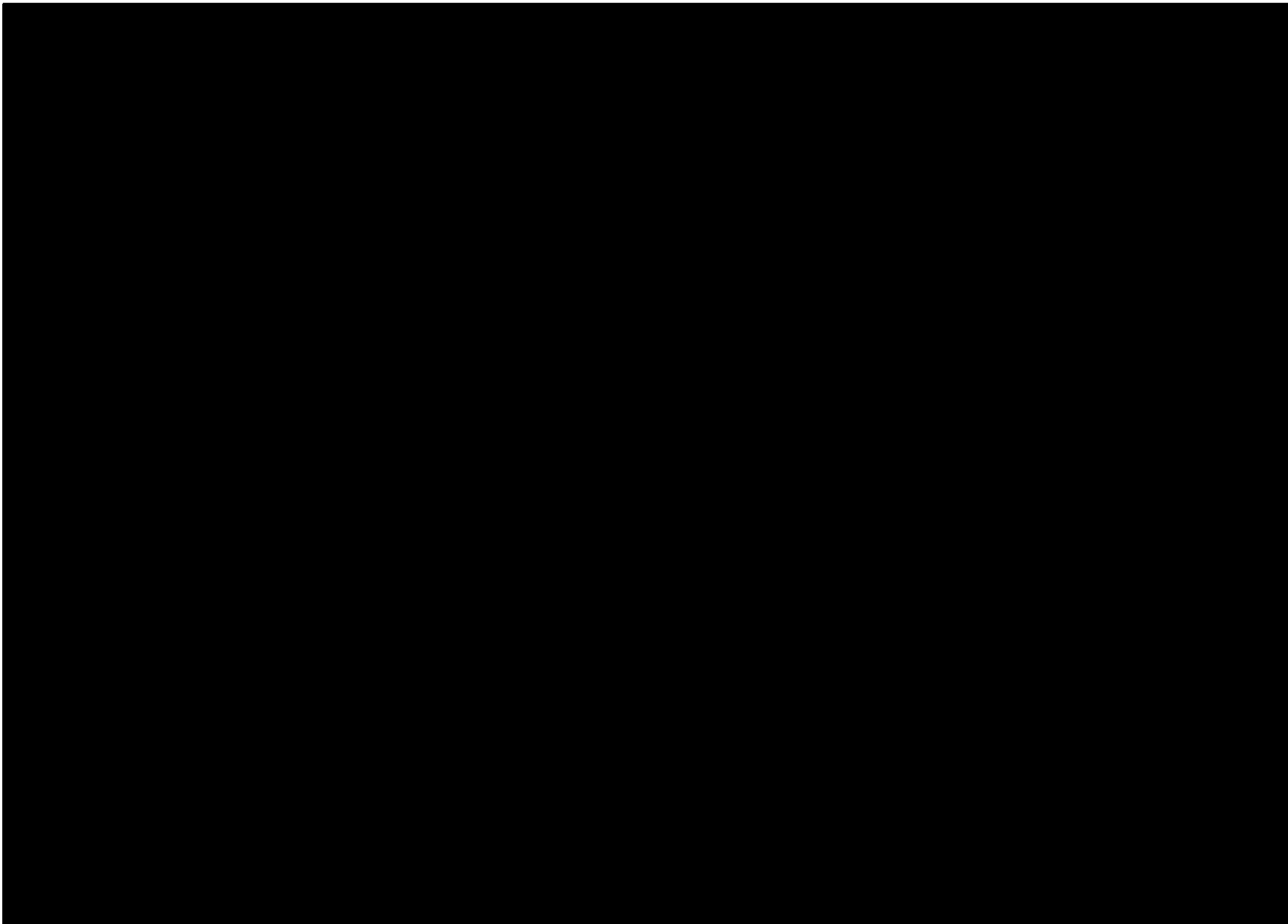


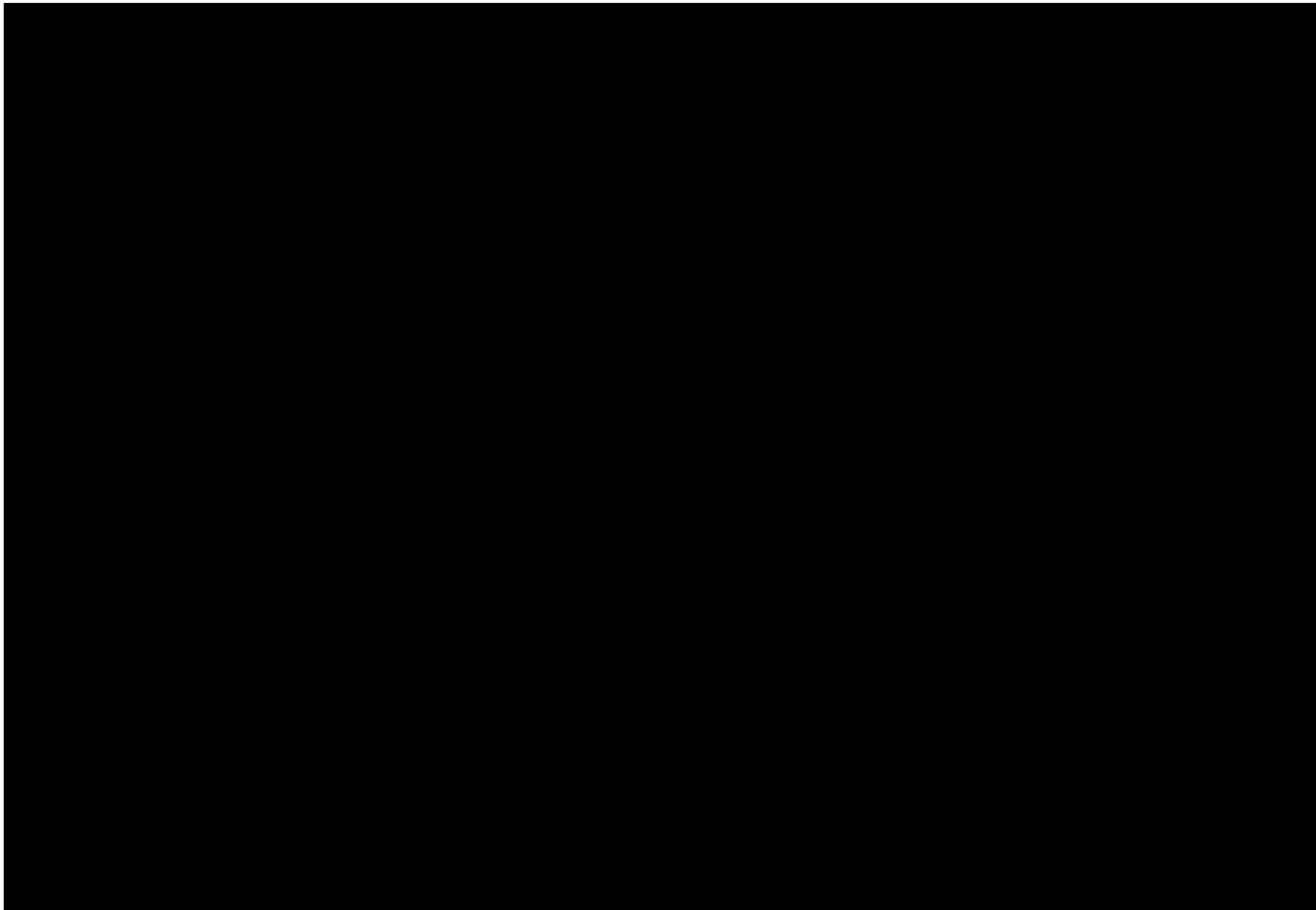


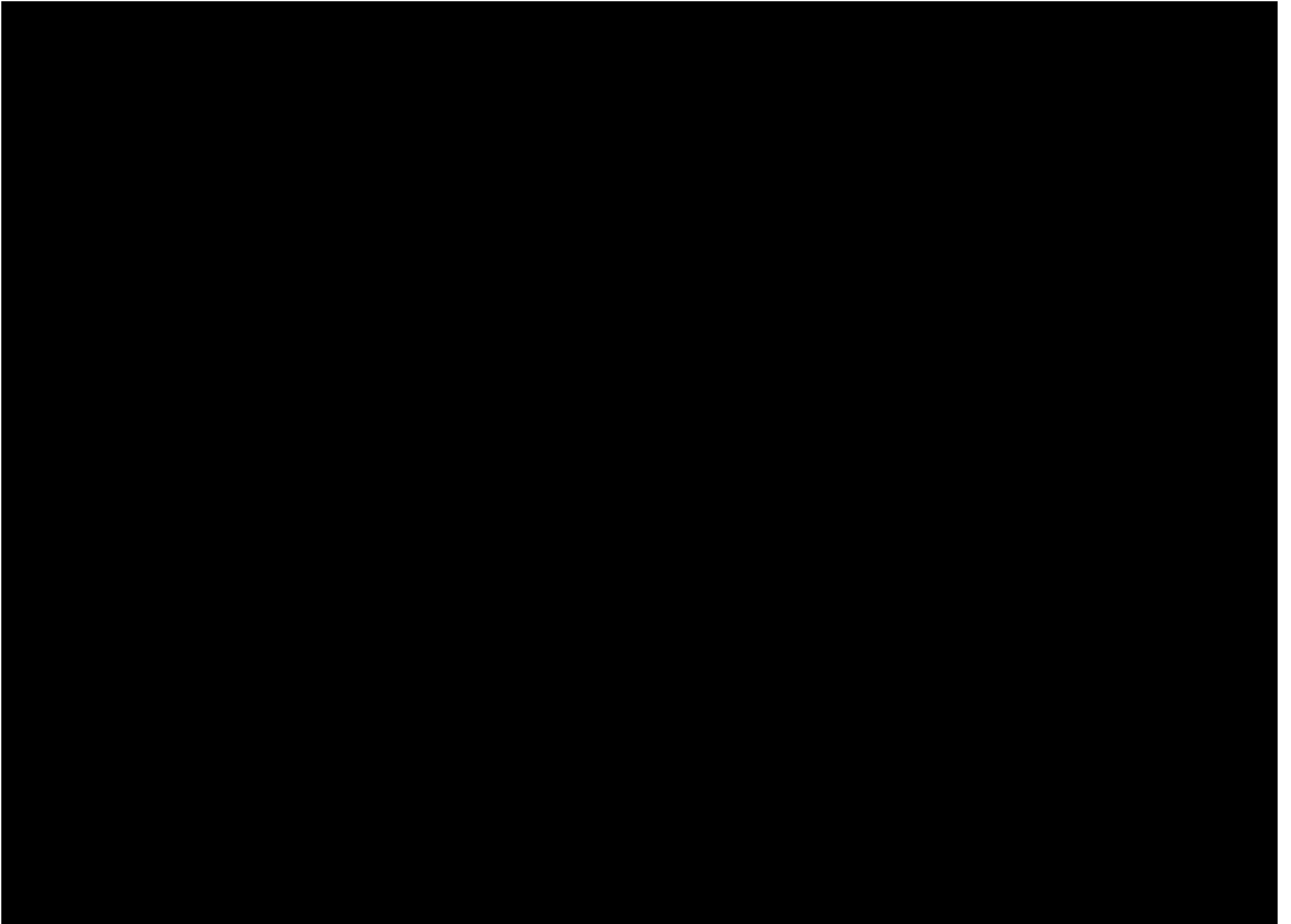




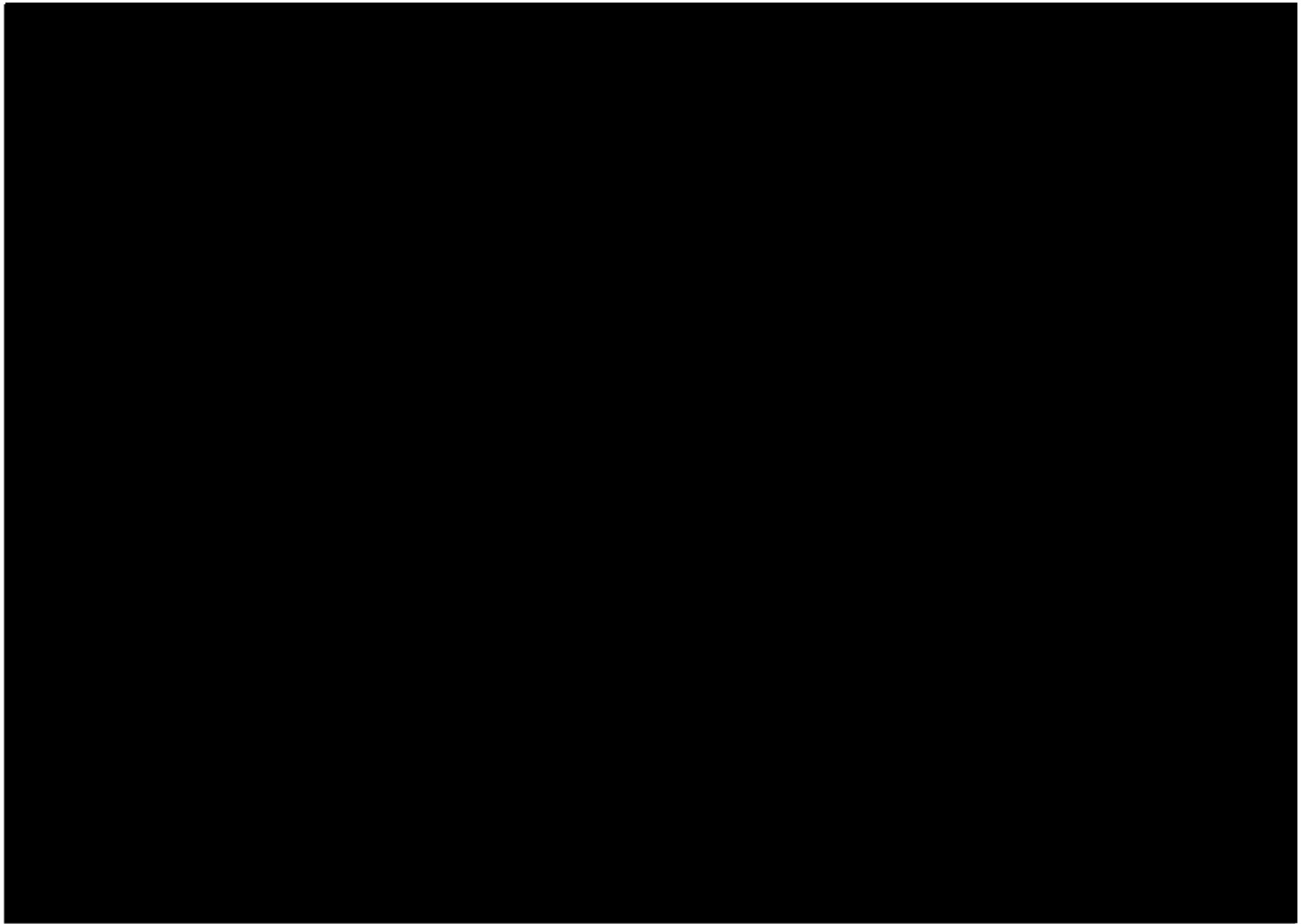


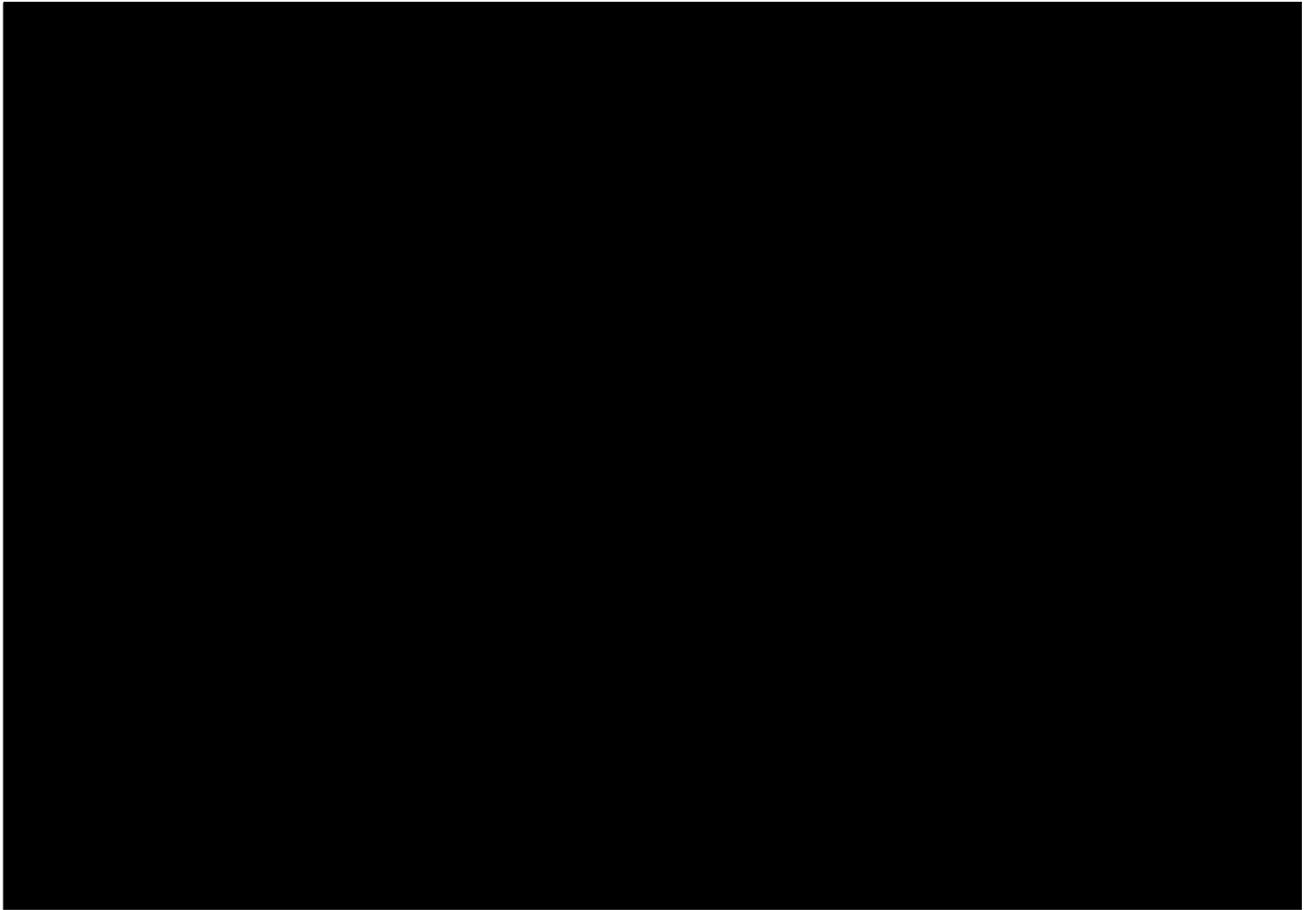


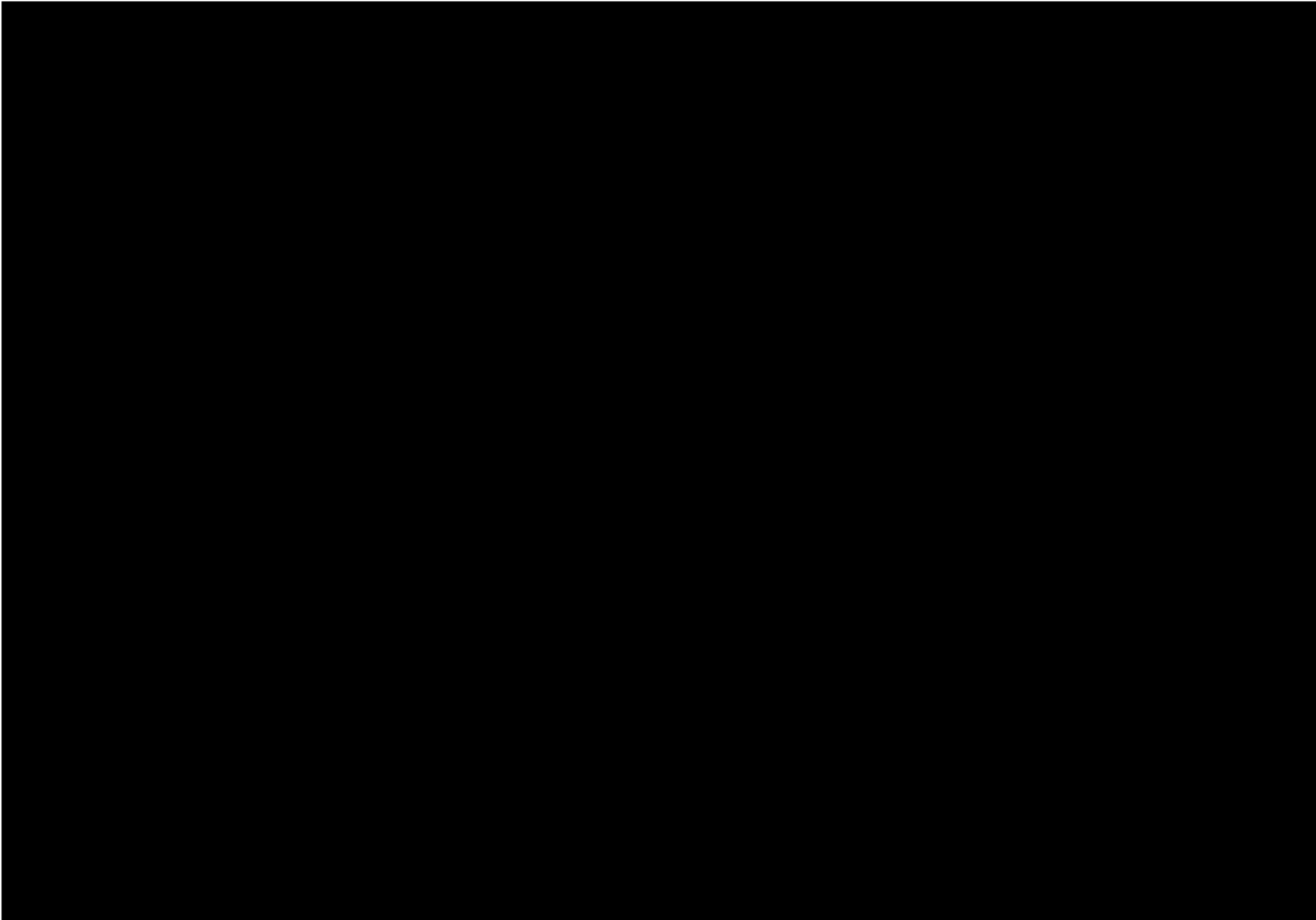


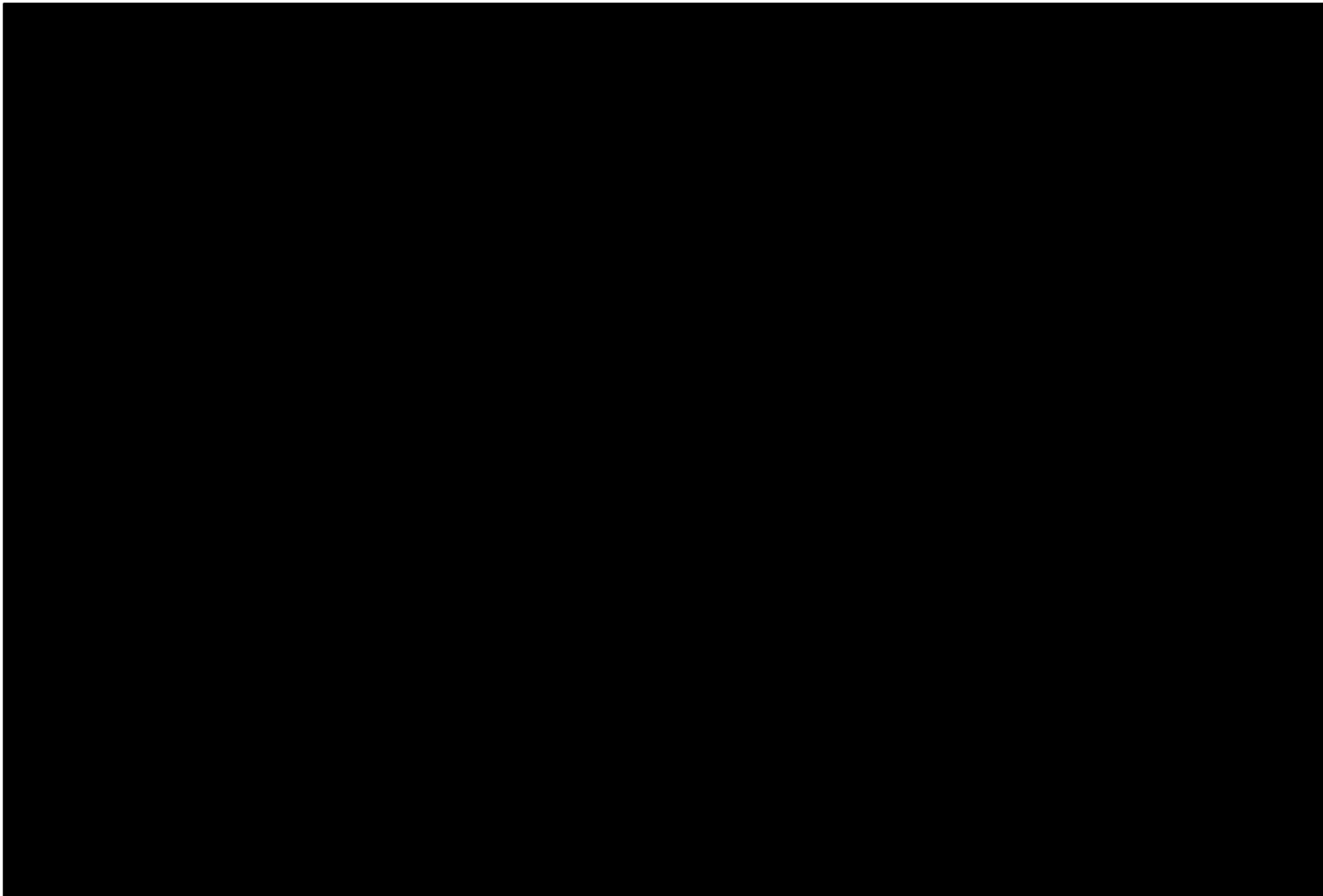


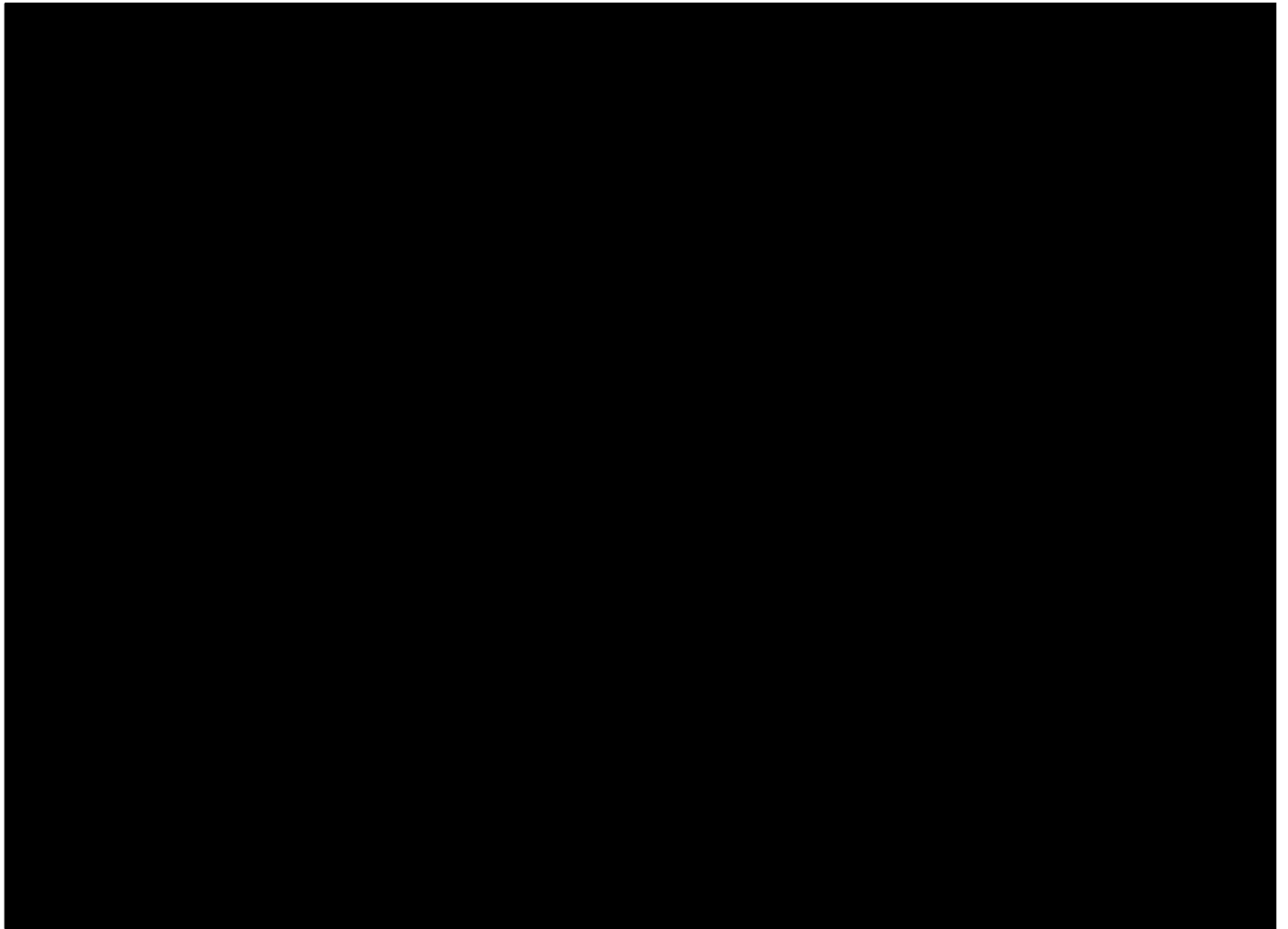


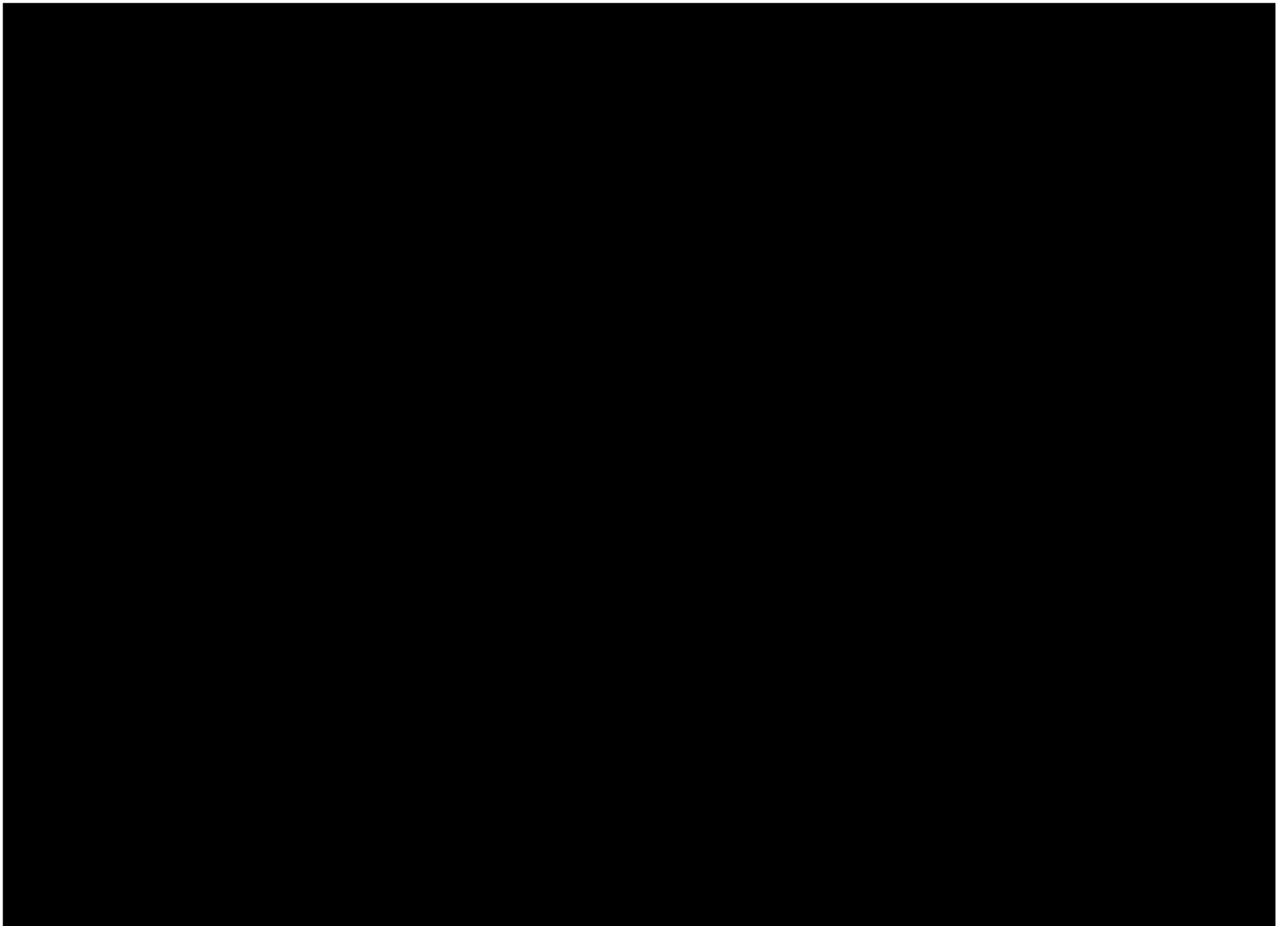


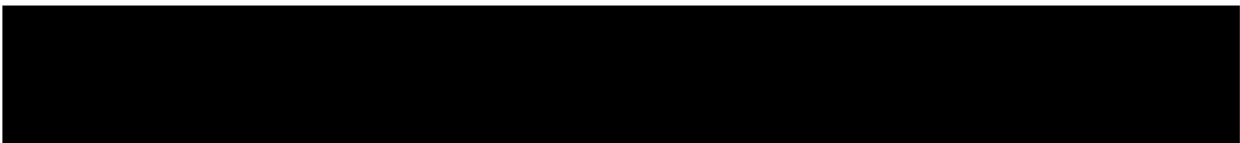


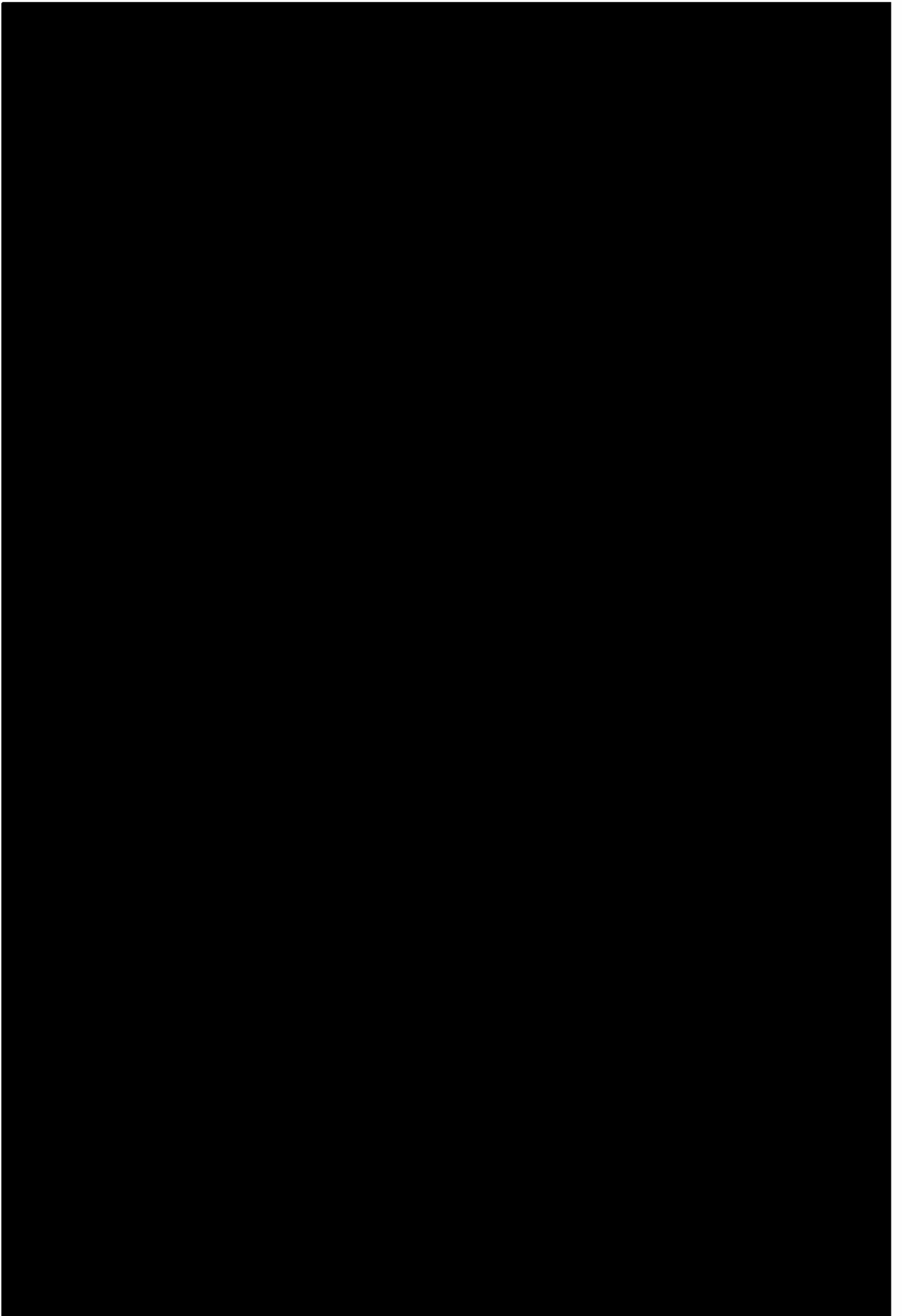


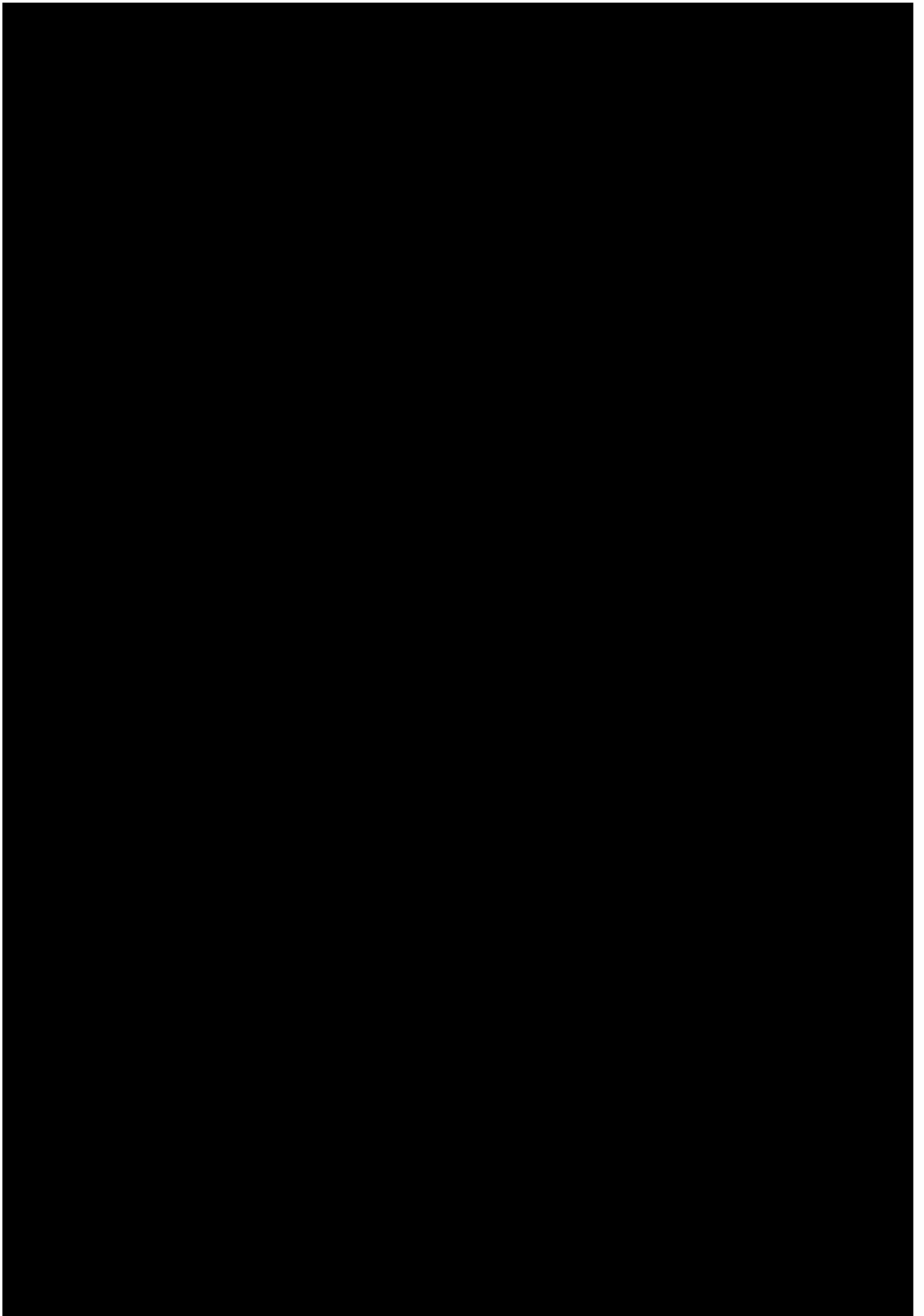


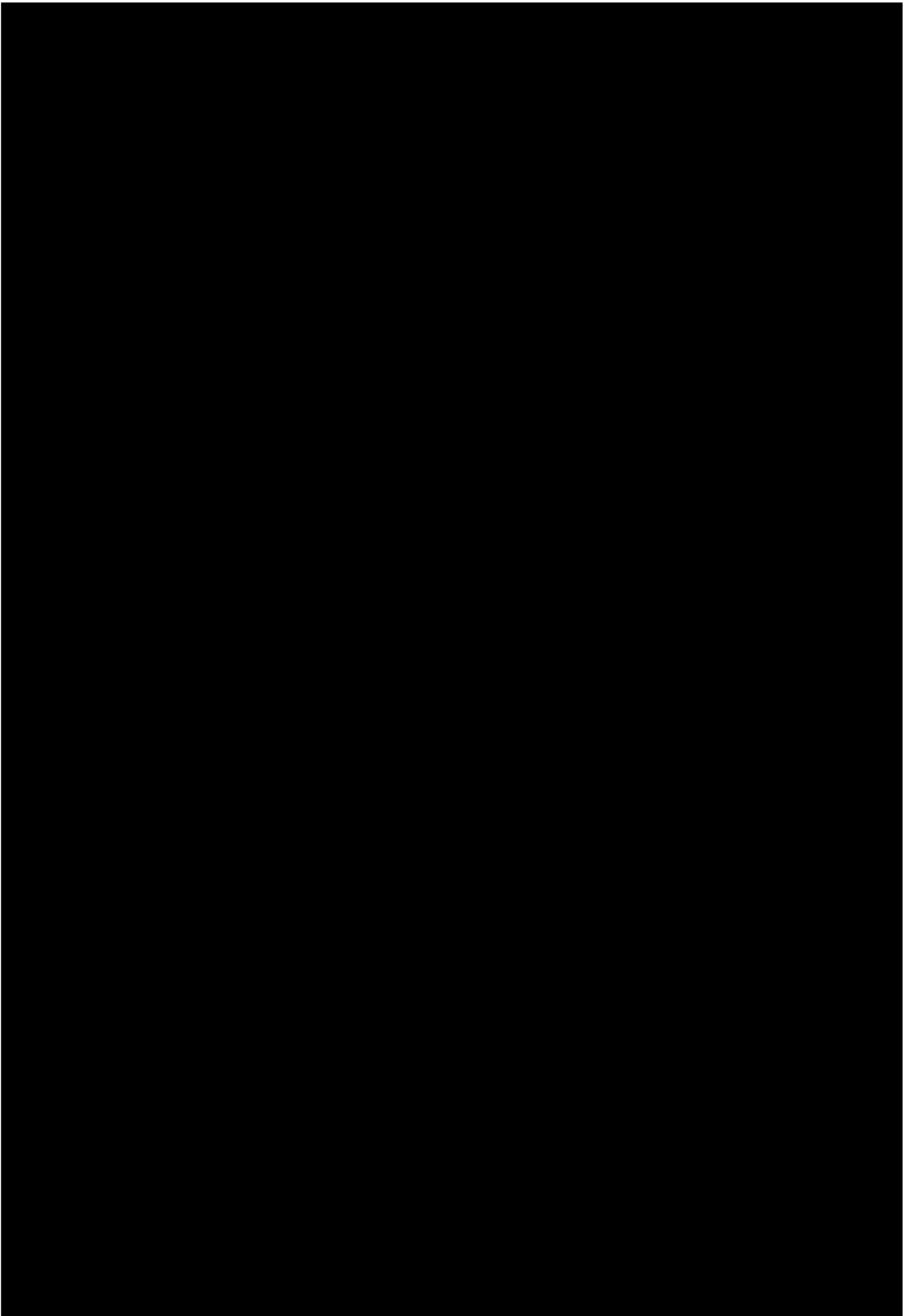


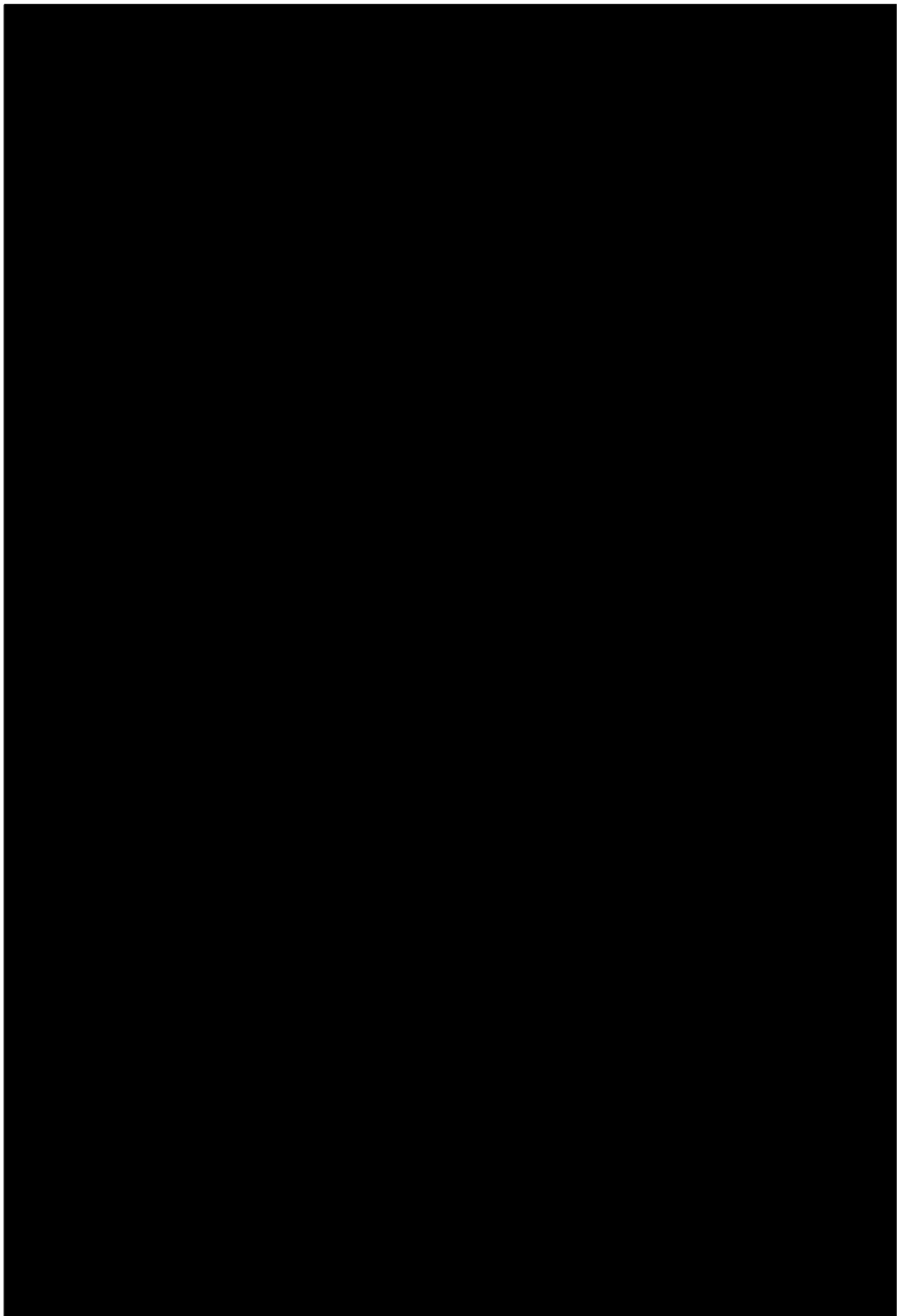


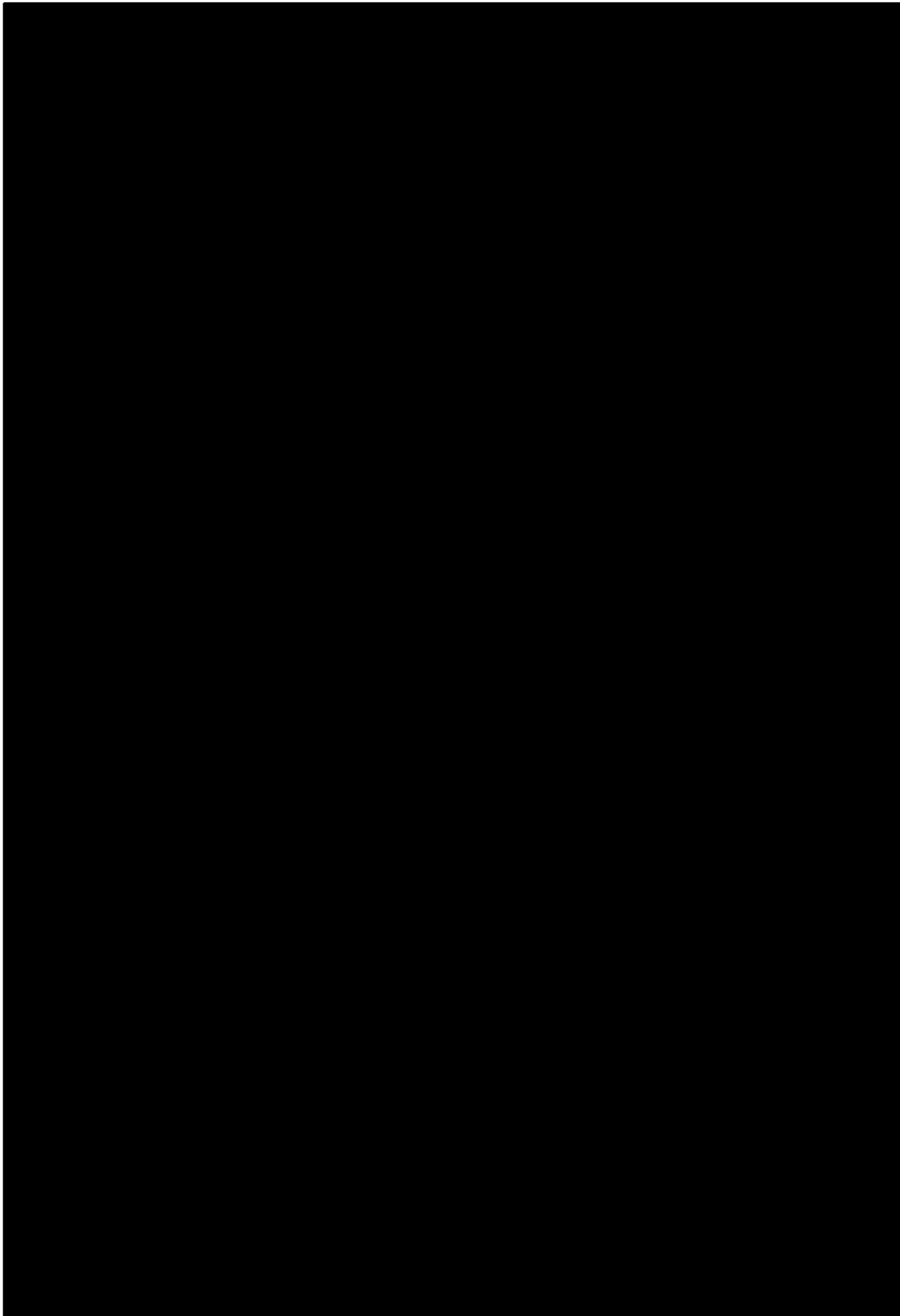


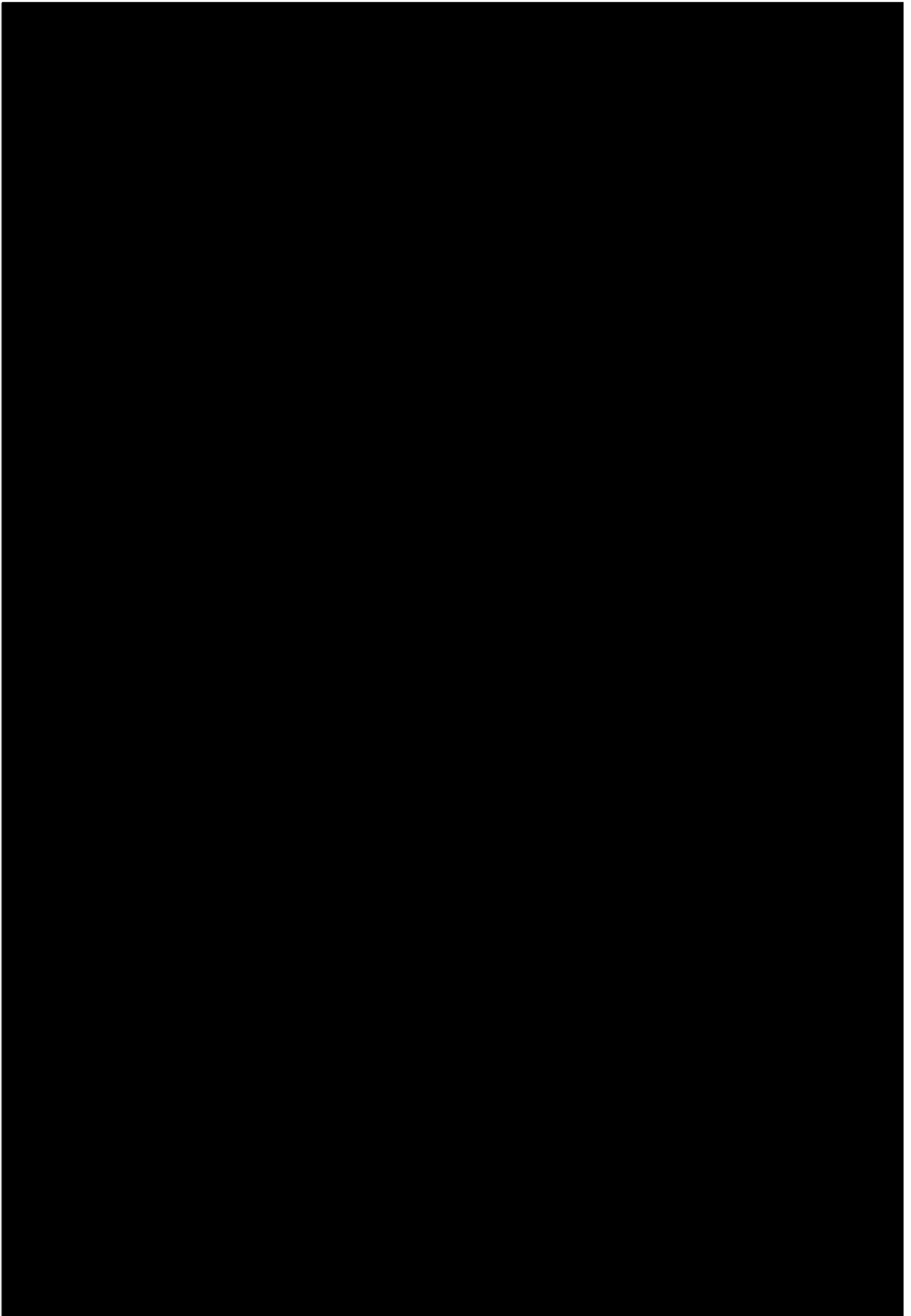


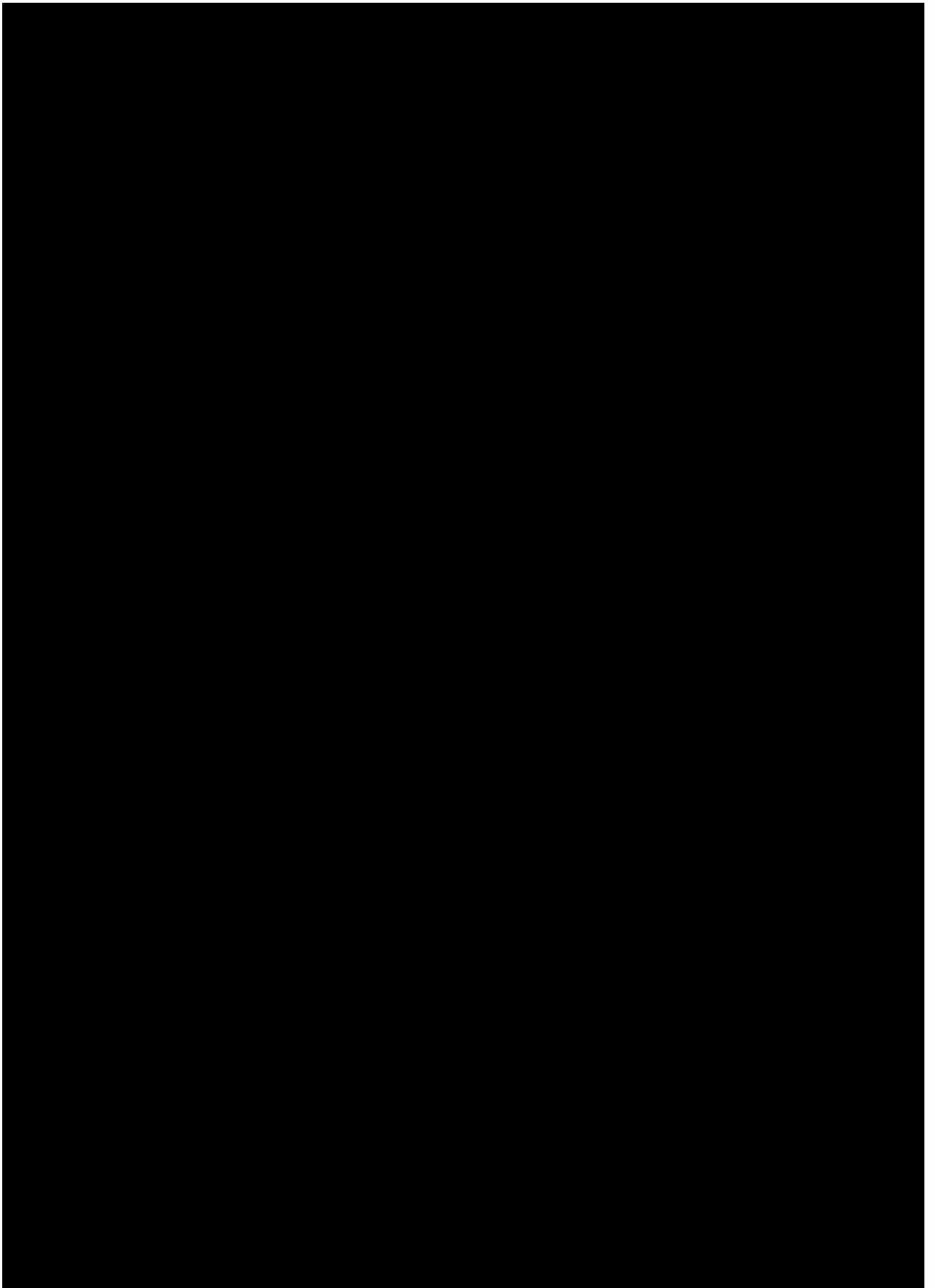


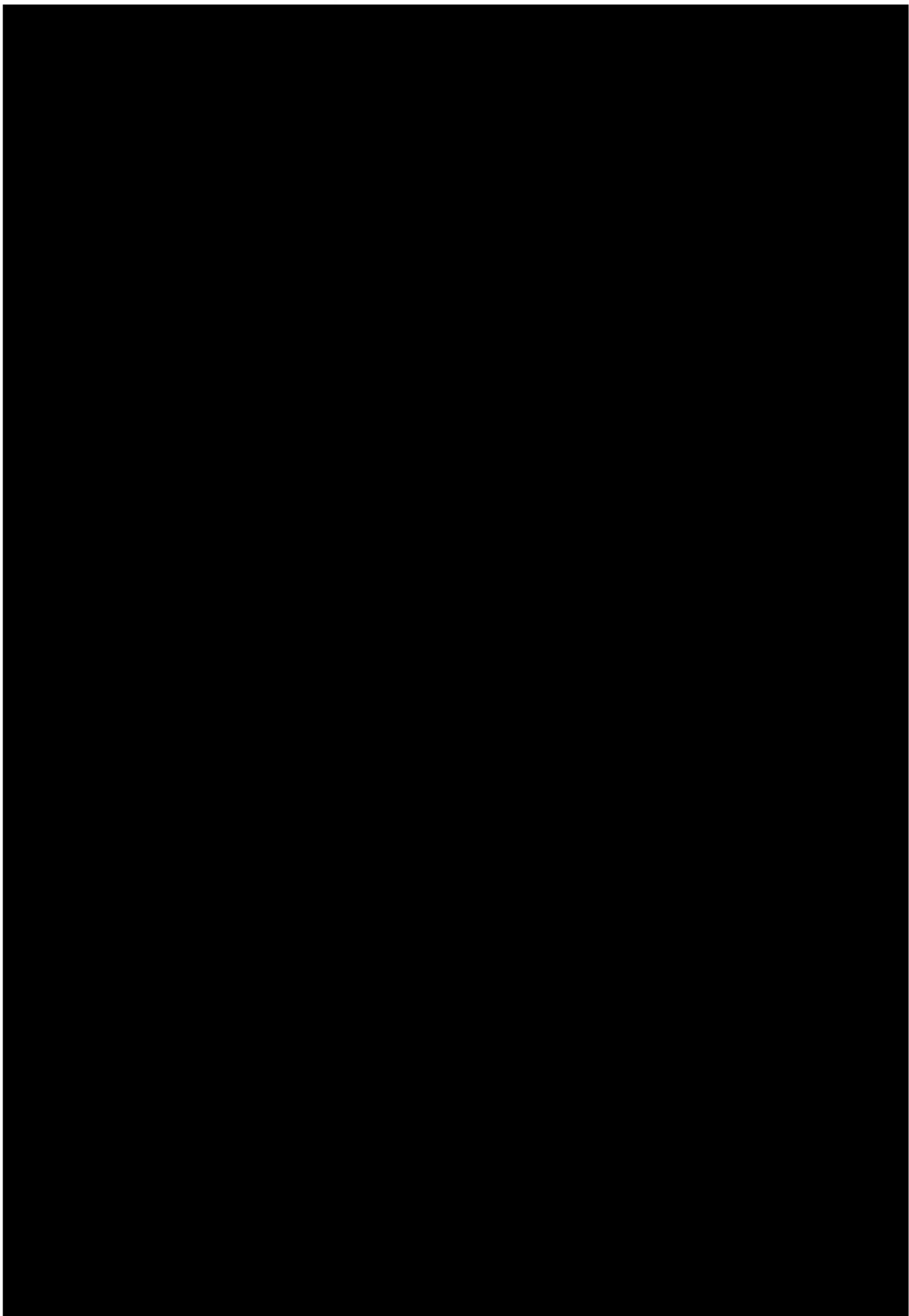


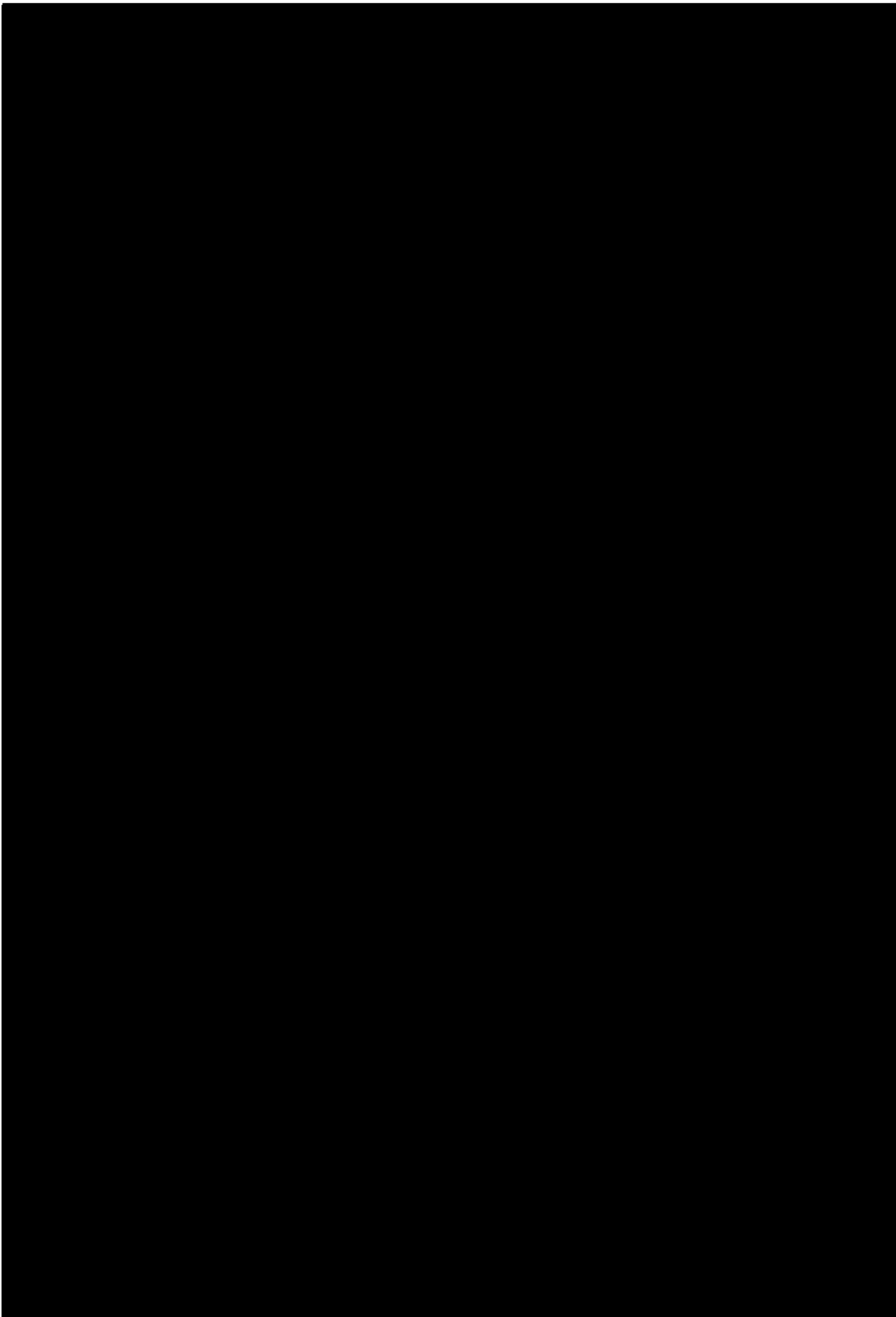


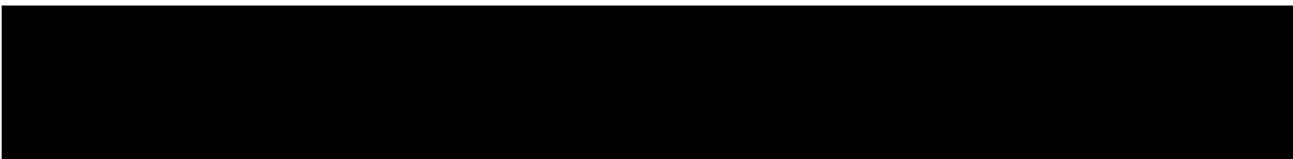


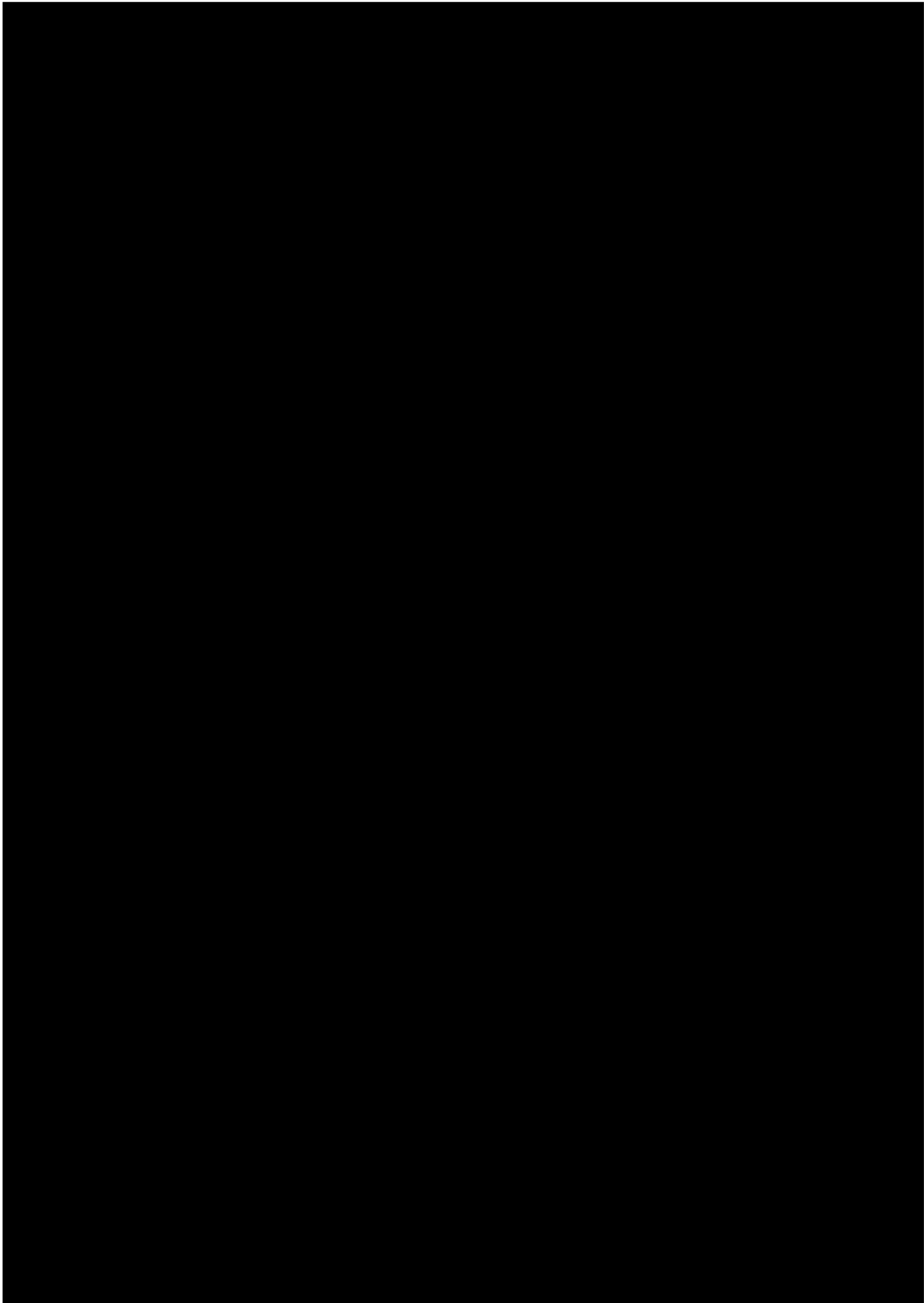


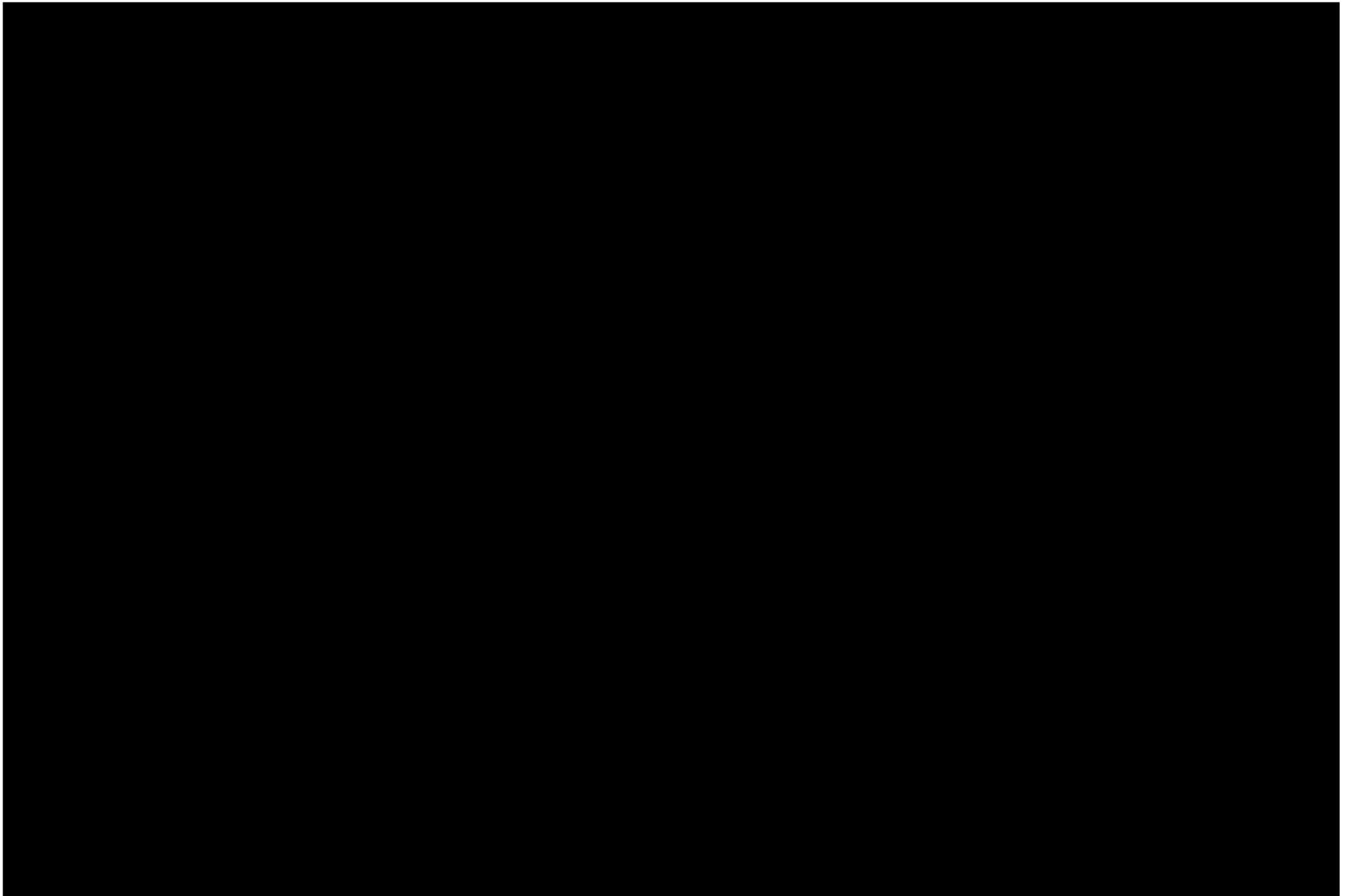






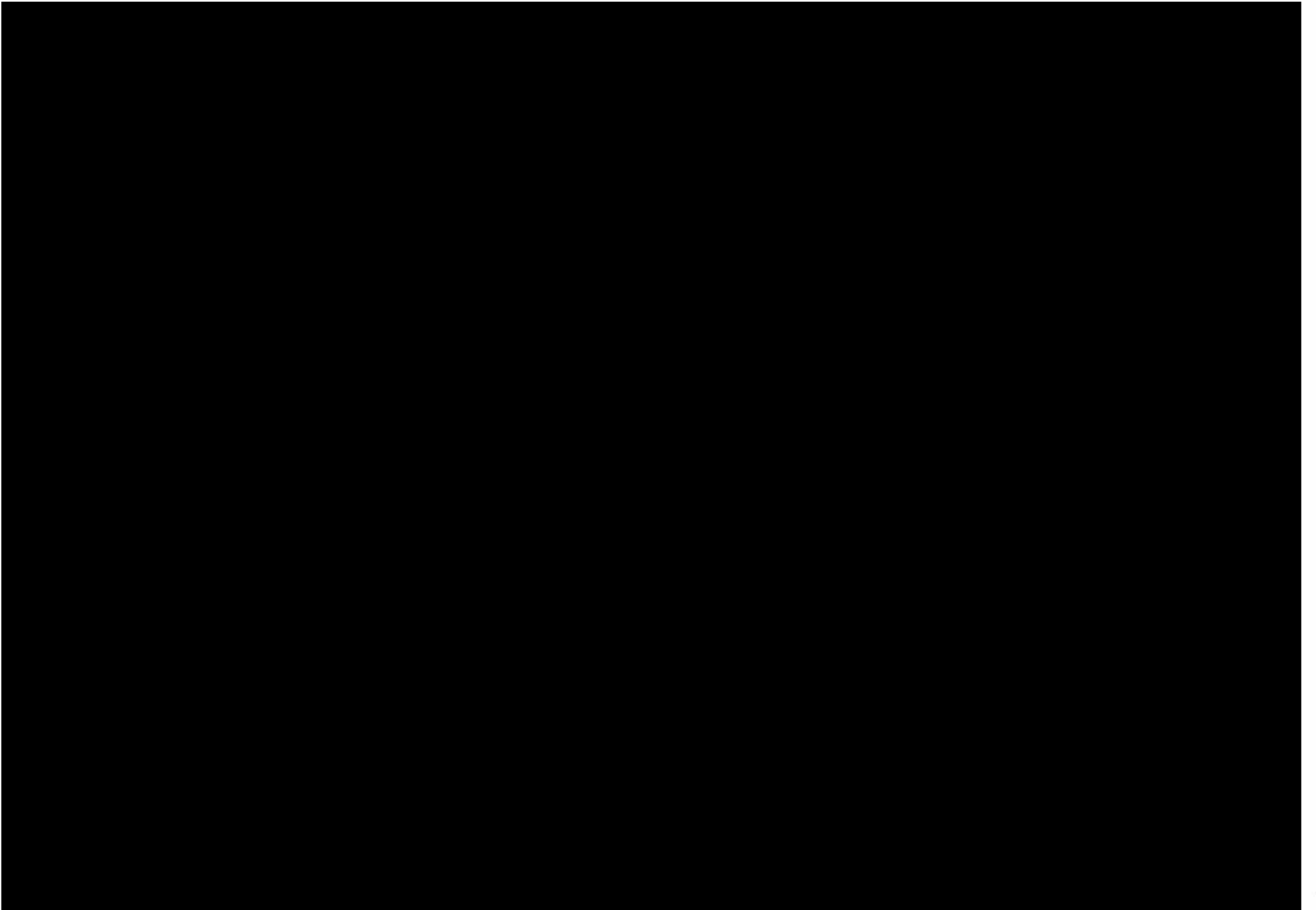


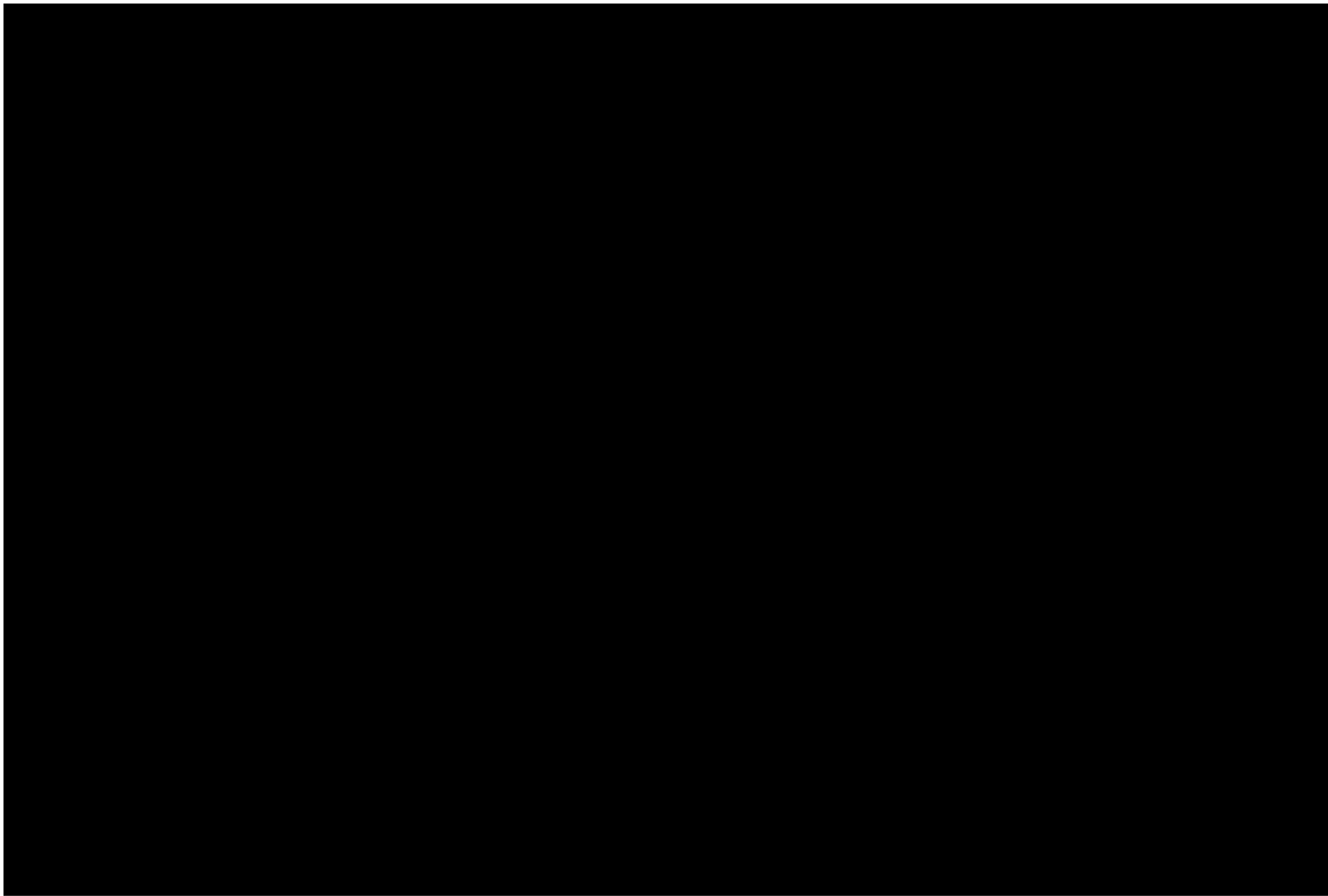


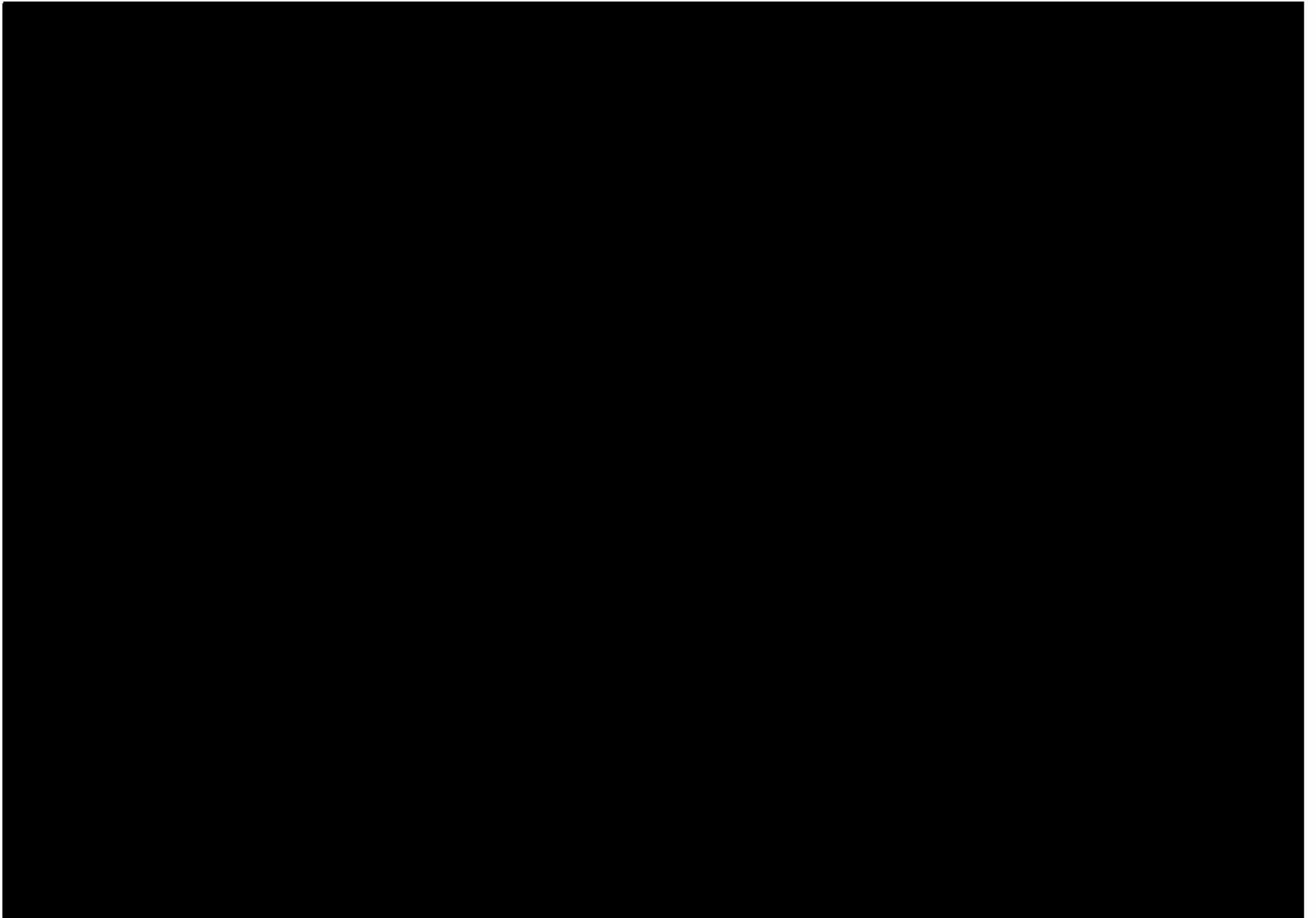


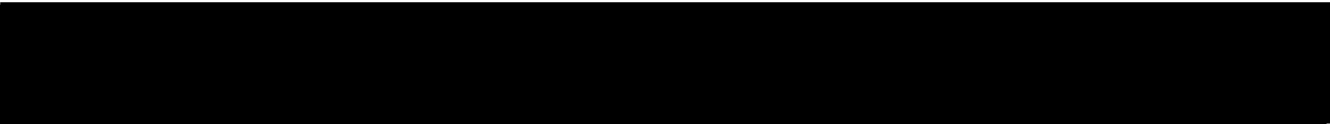


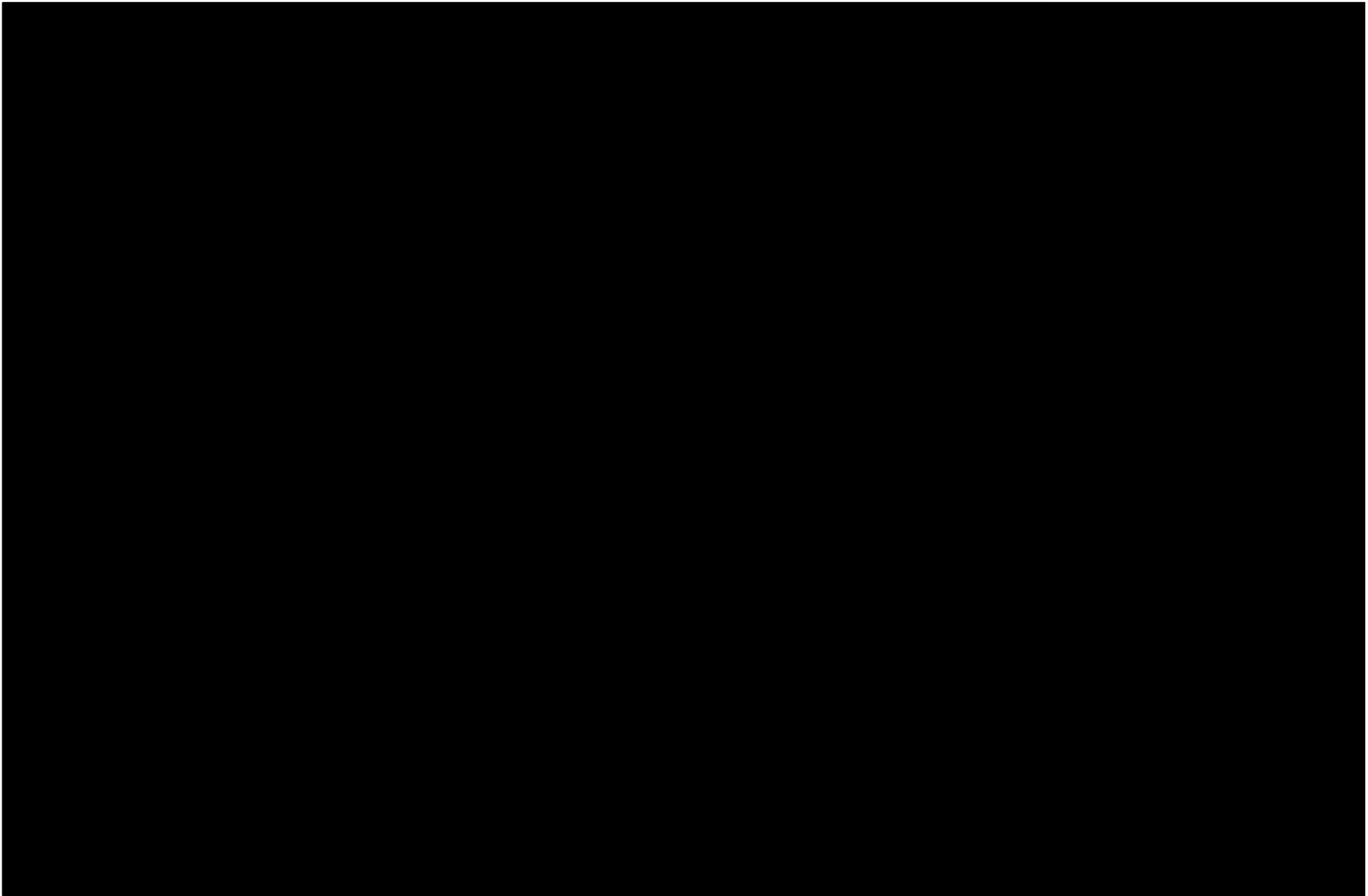










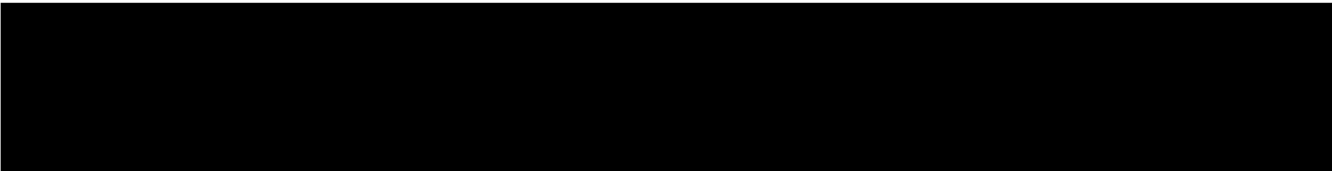
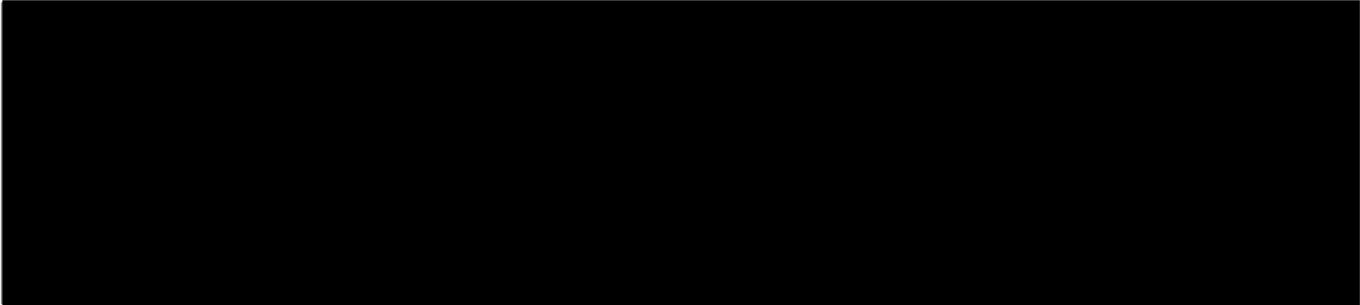


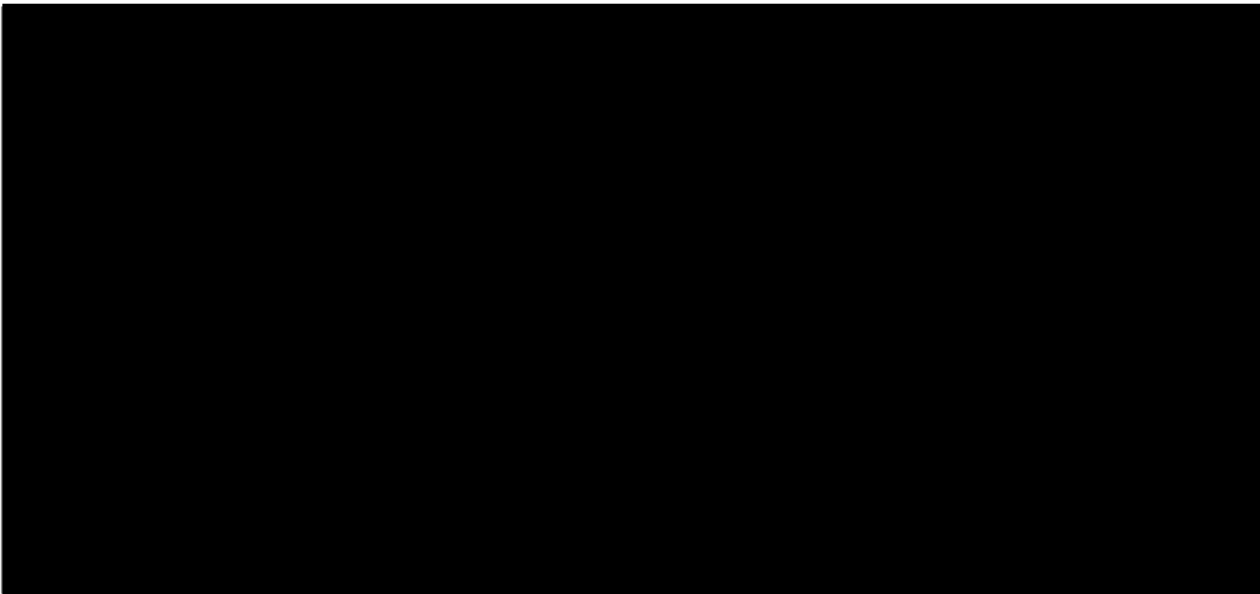


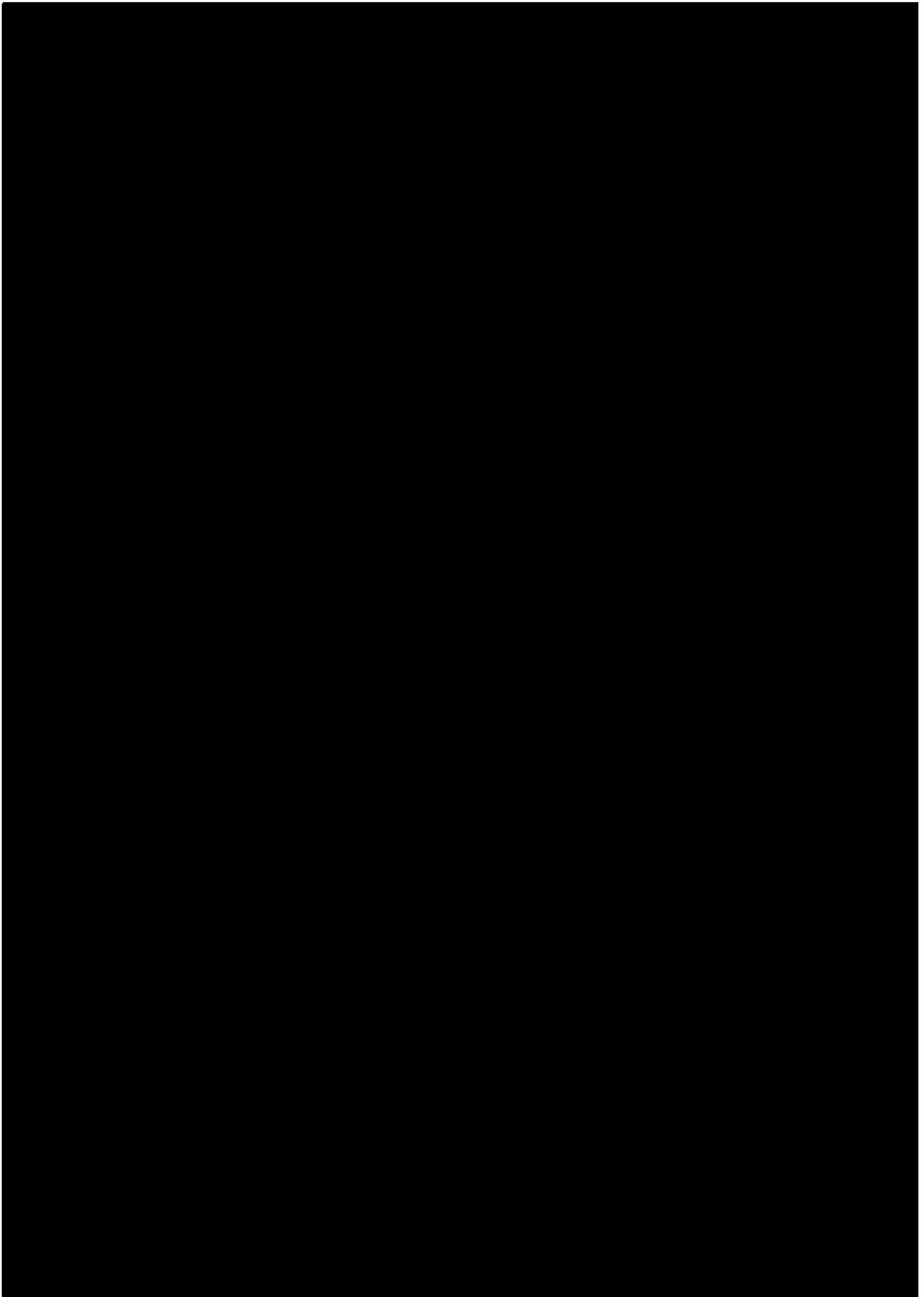
**Transport
for NSW**

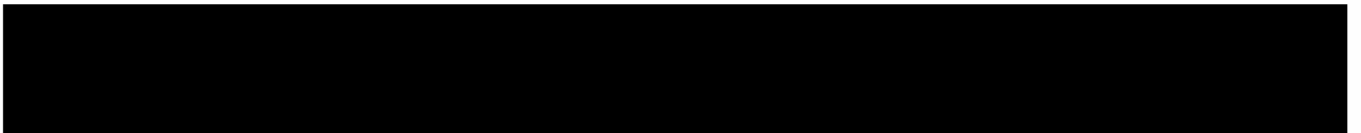
Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F5 – Initial Safety and Systems
Assurance Plan

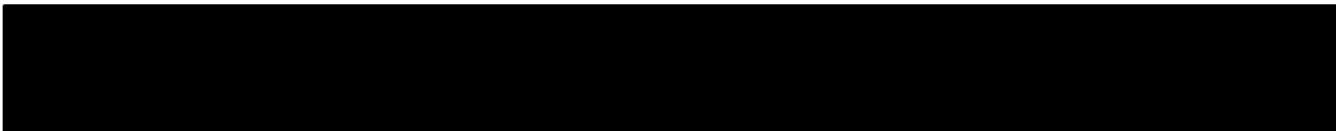
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Execution Version

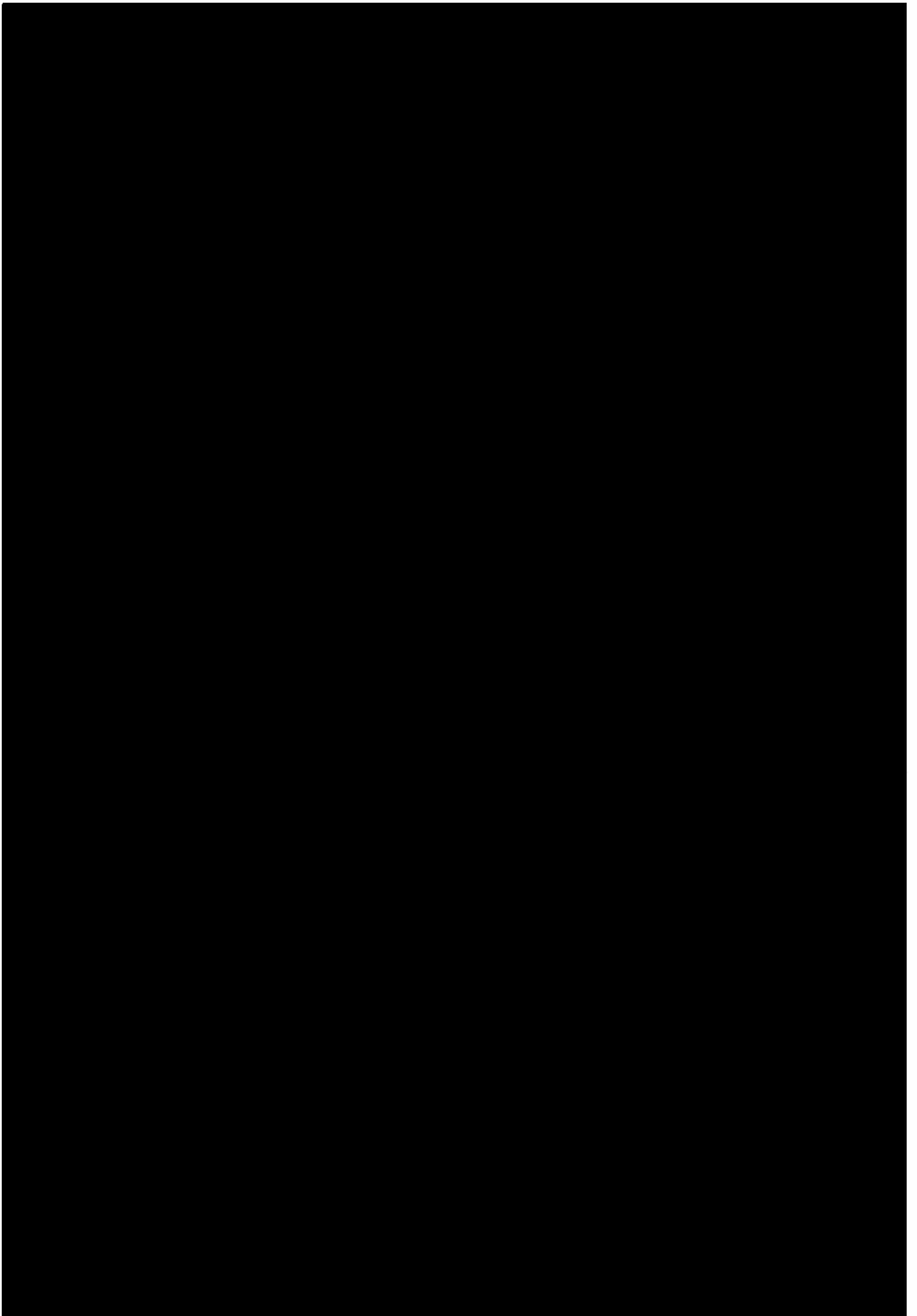


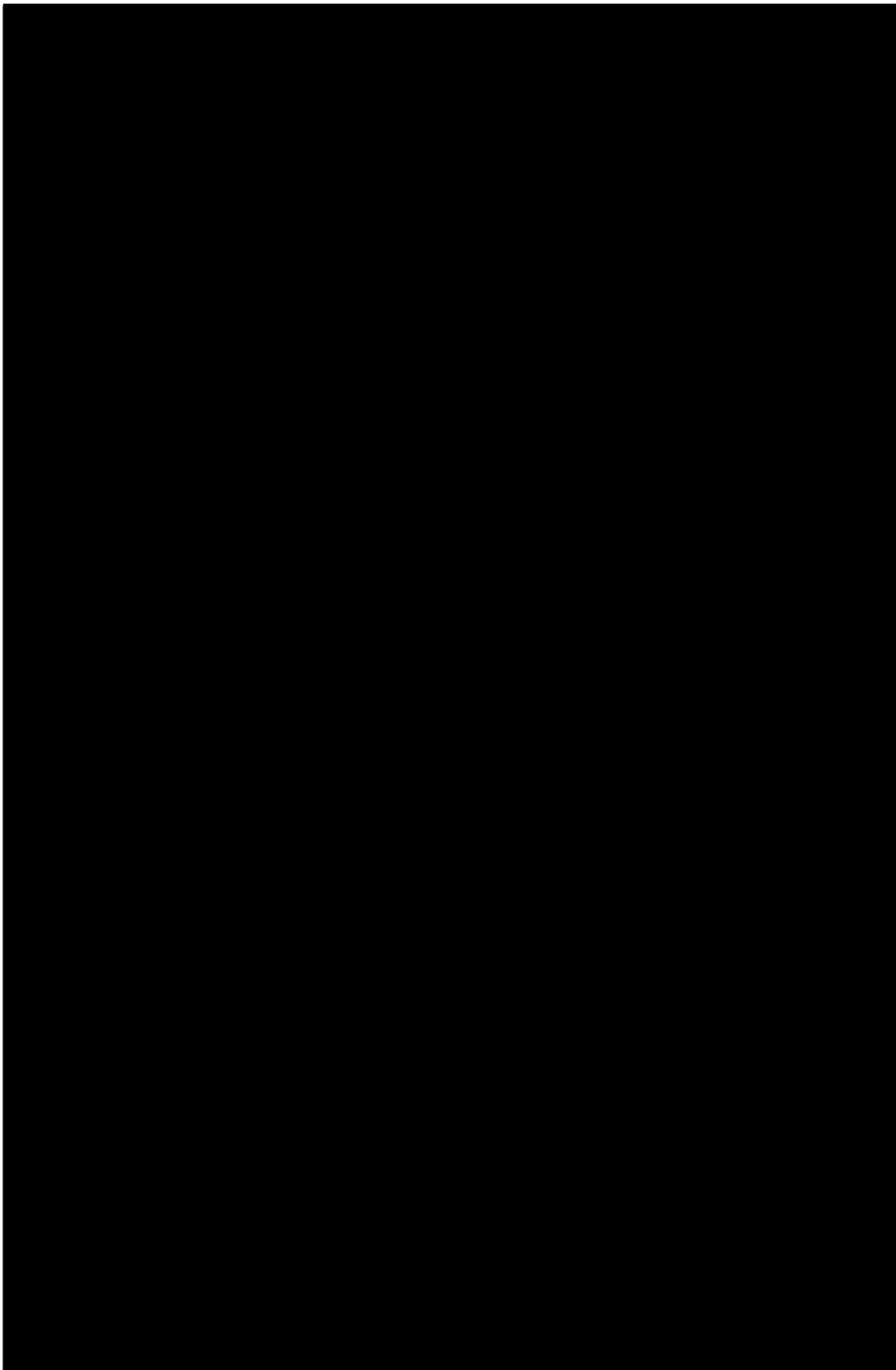


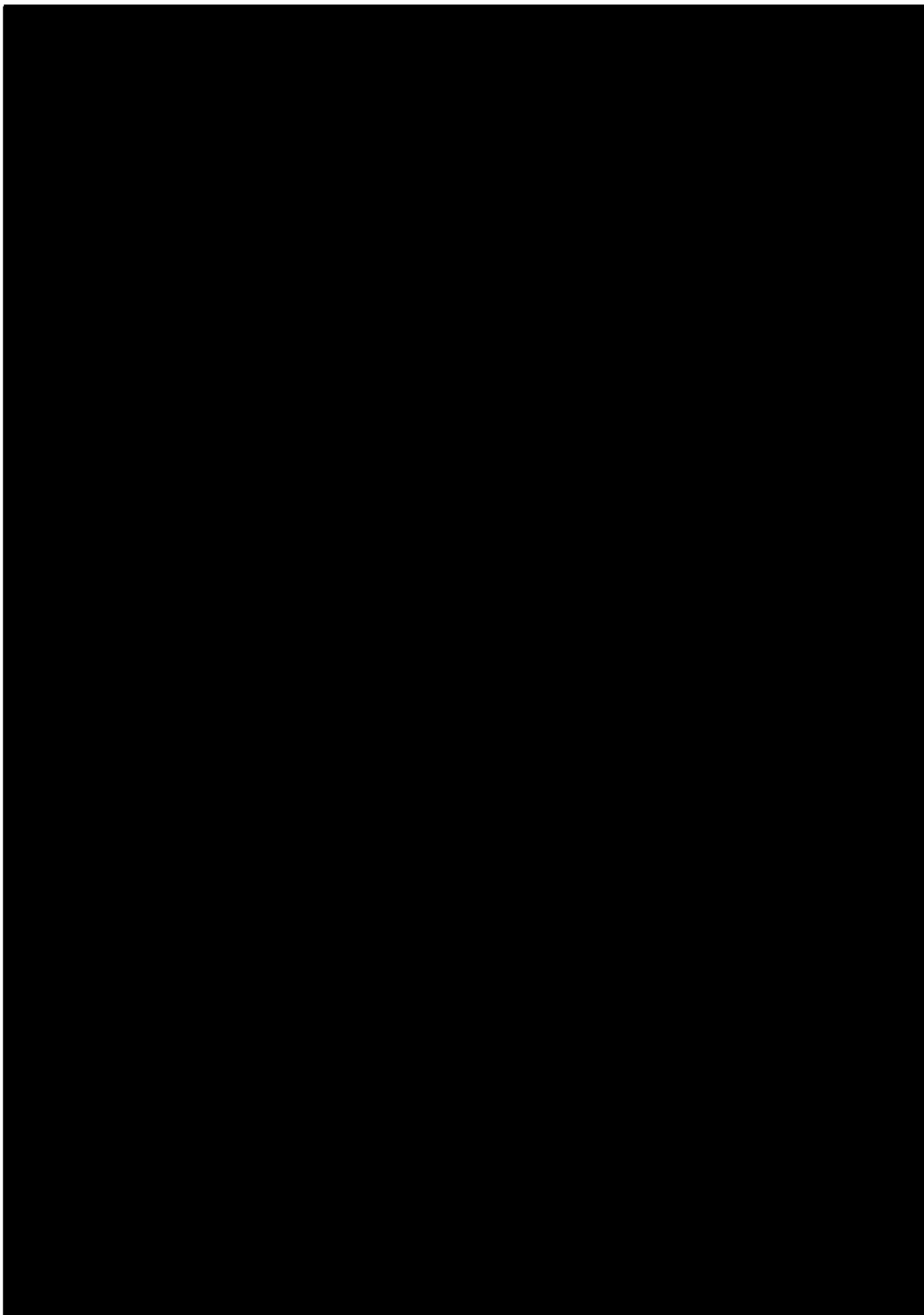


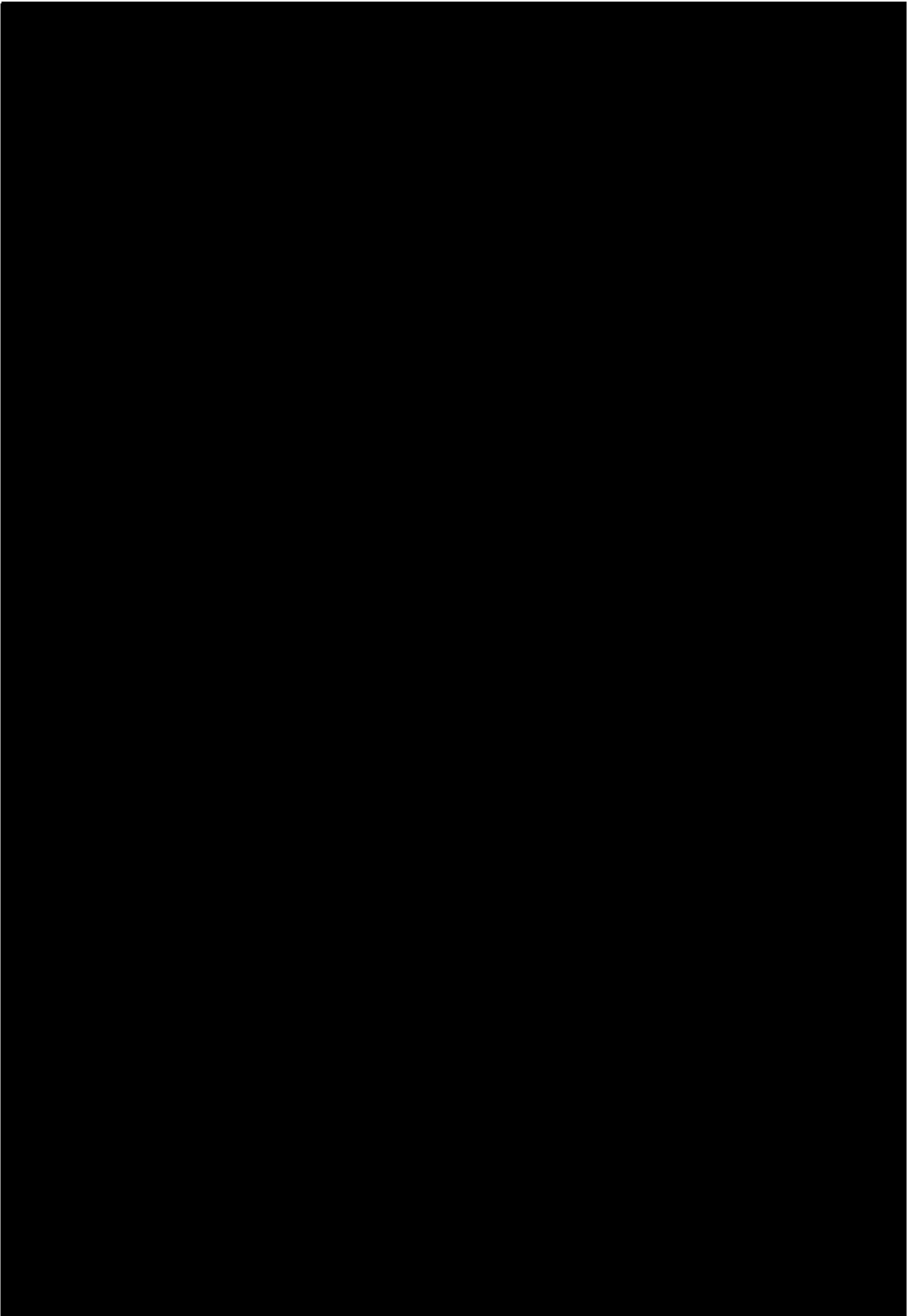




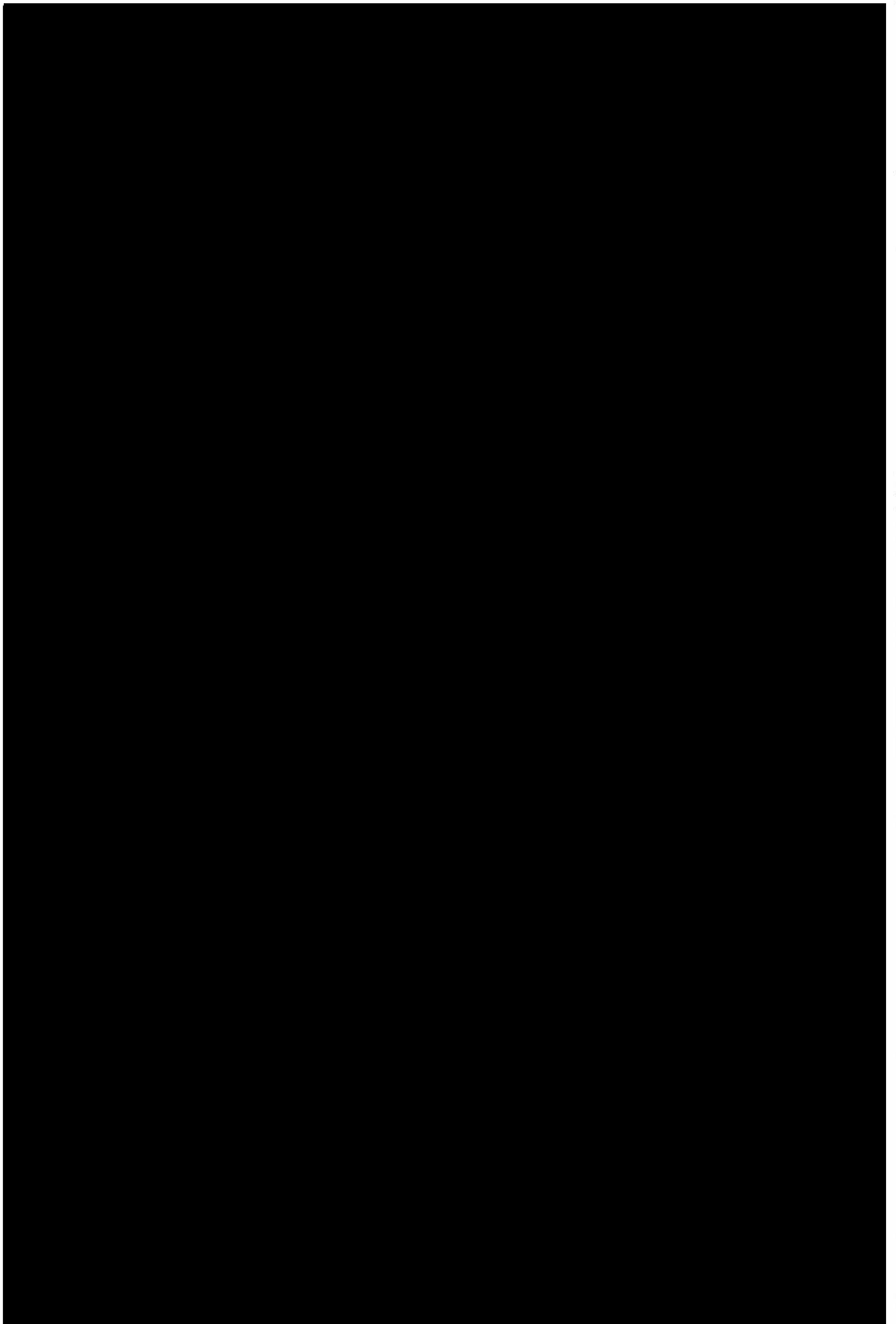


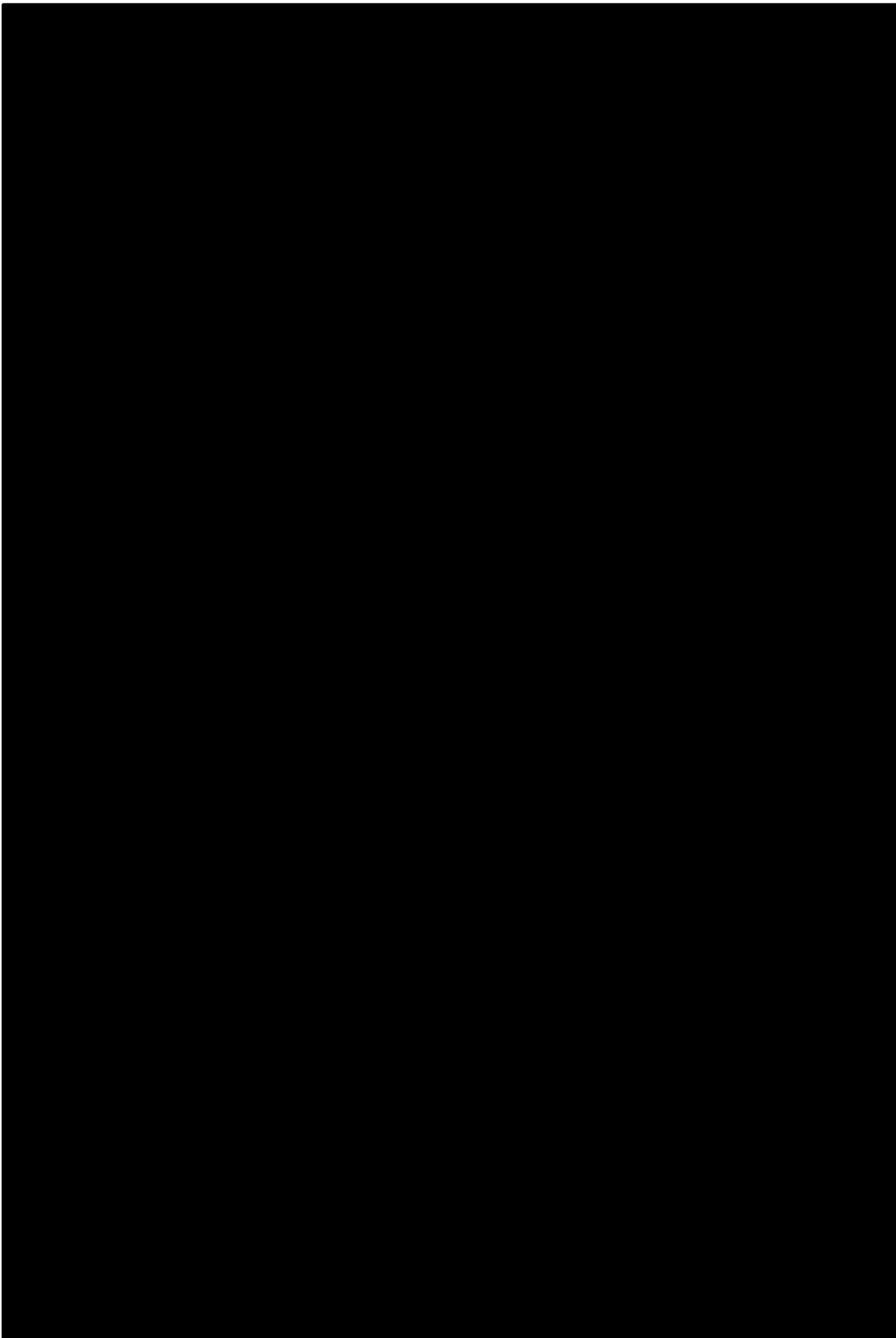


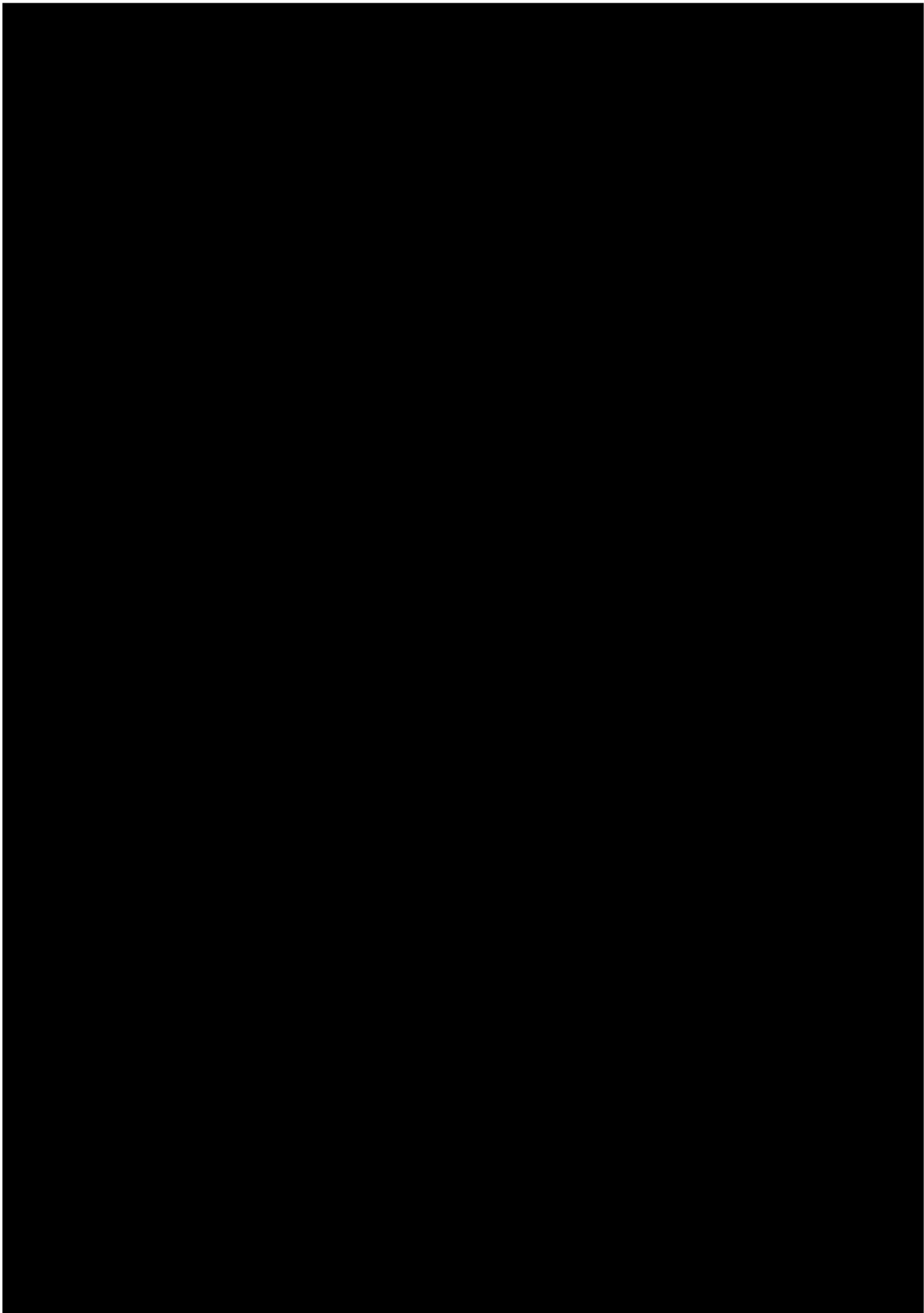


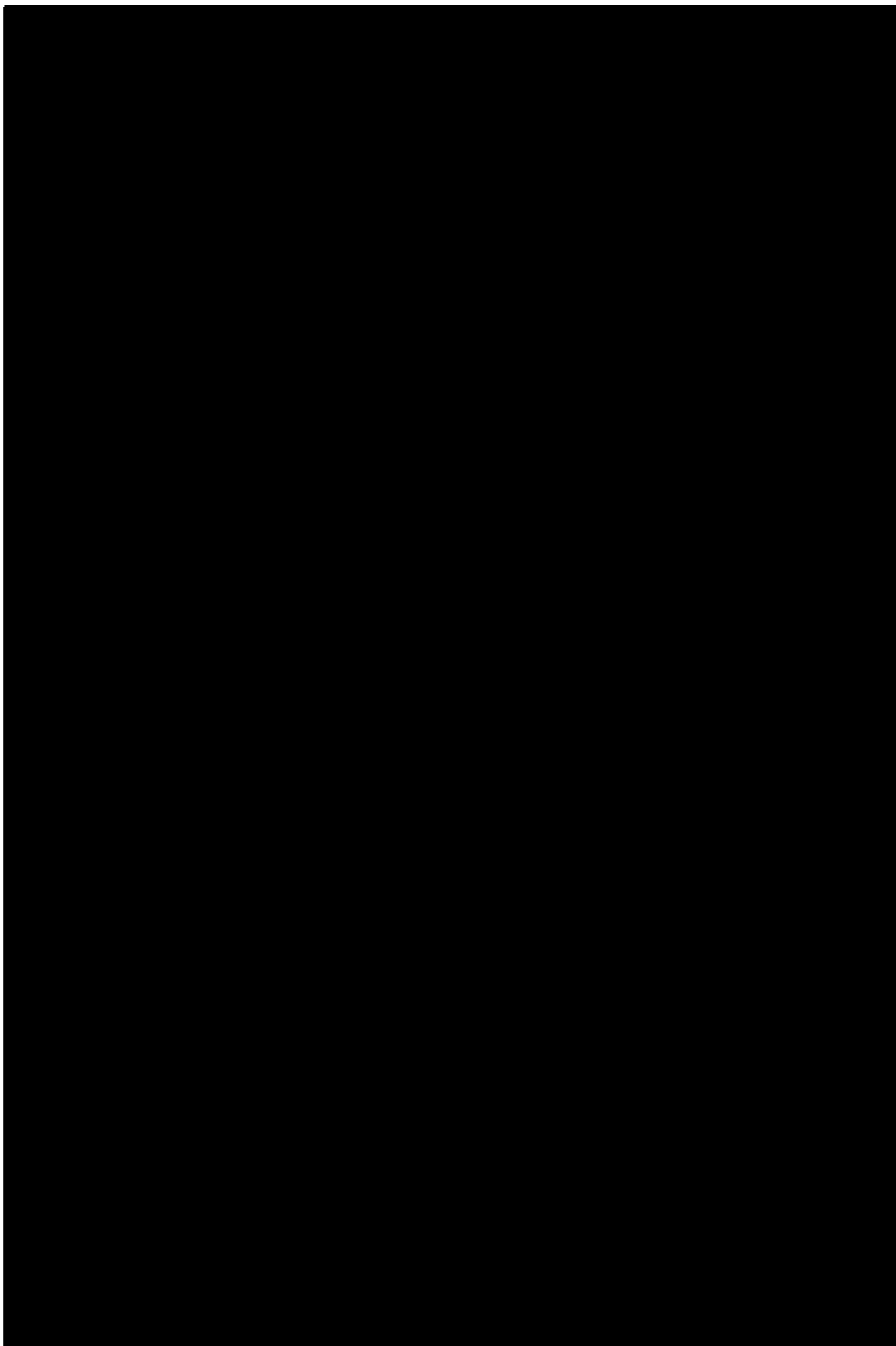


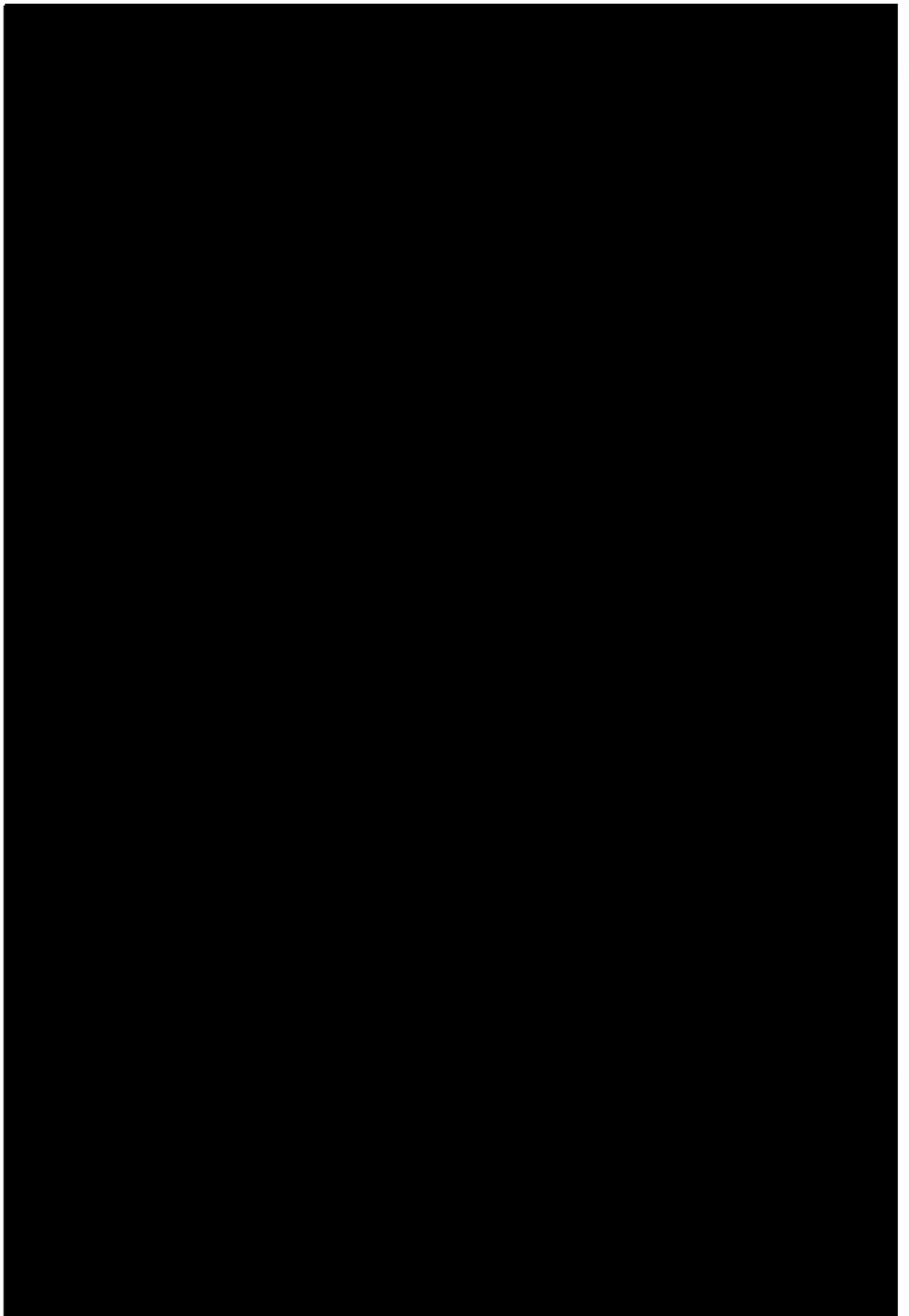


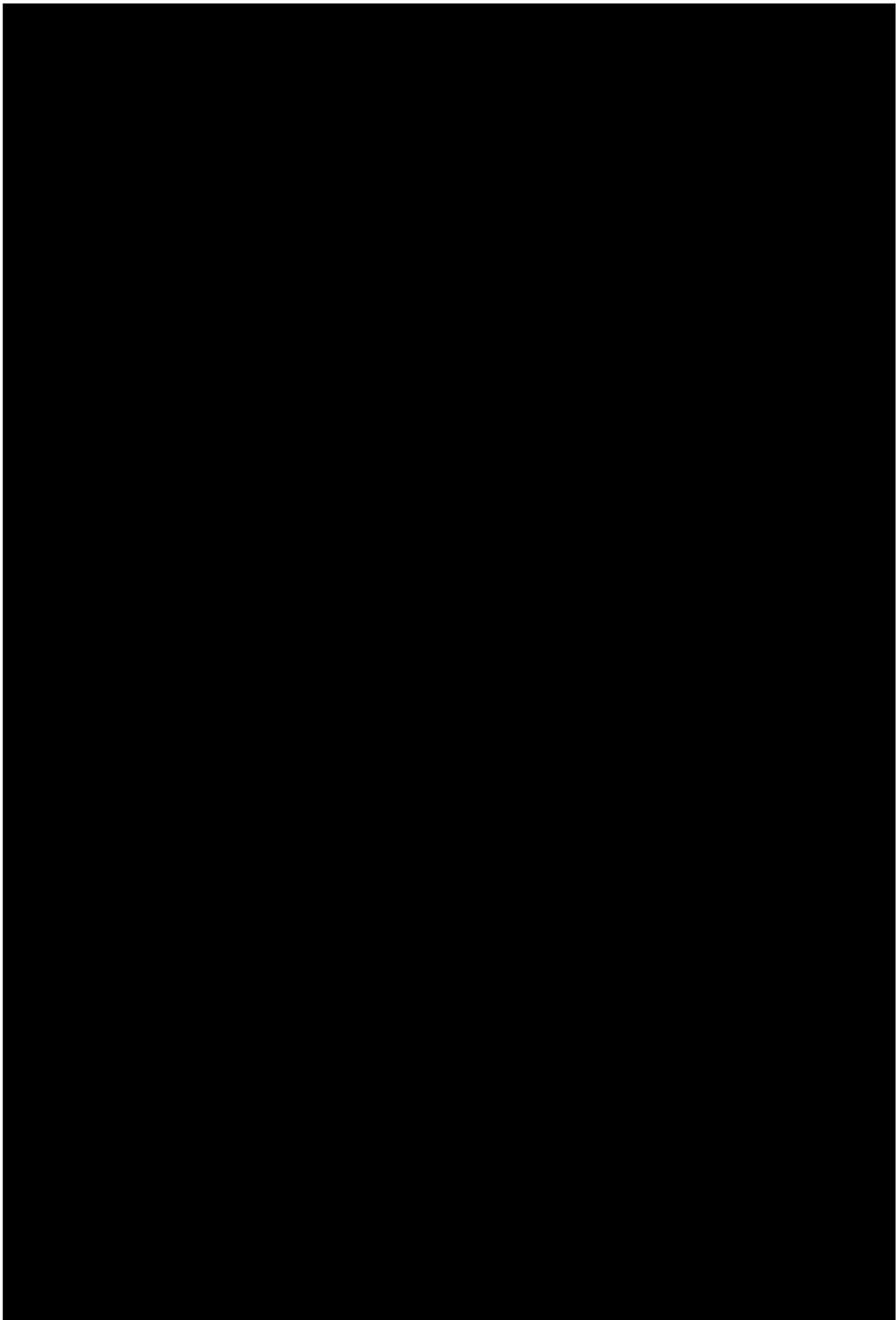


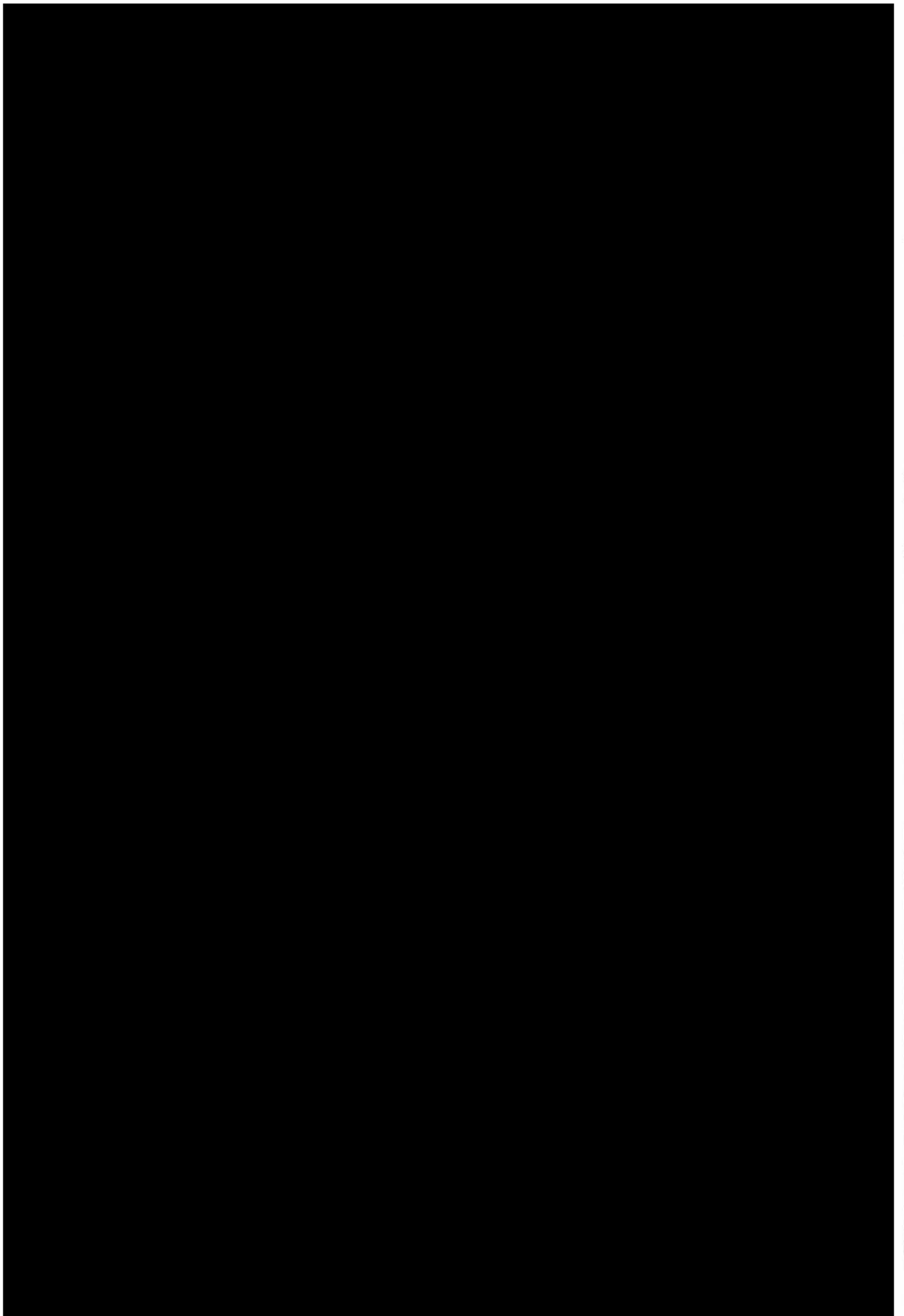


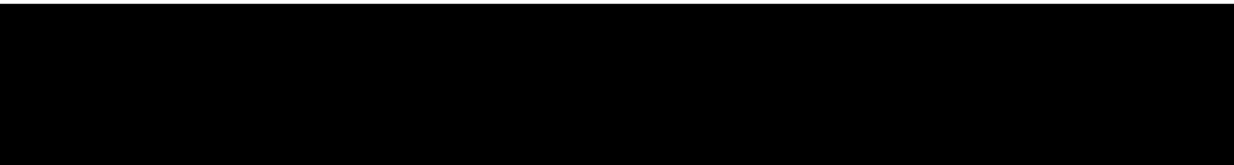


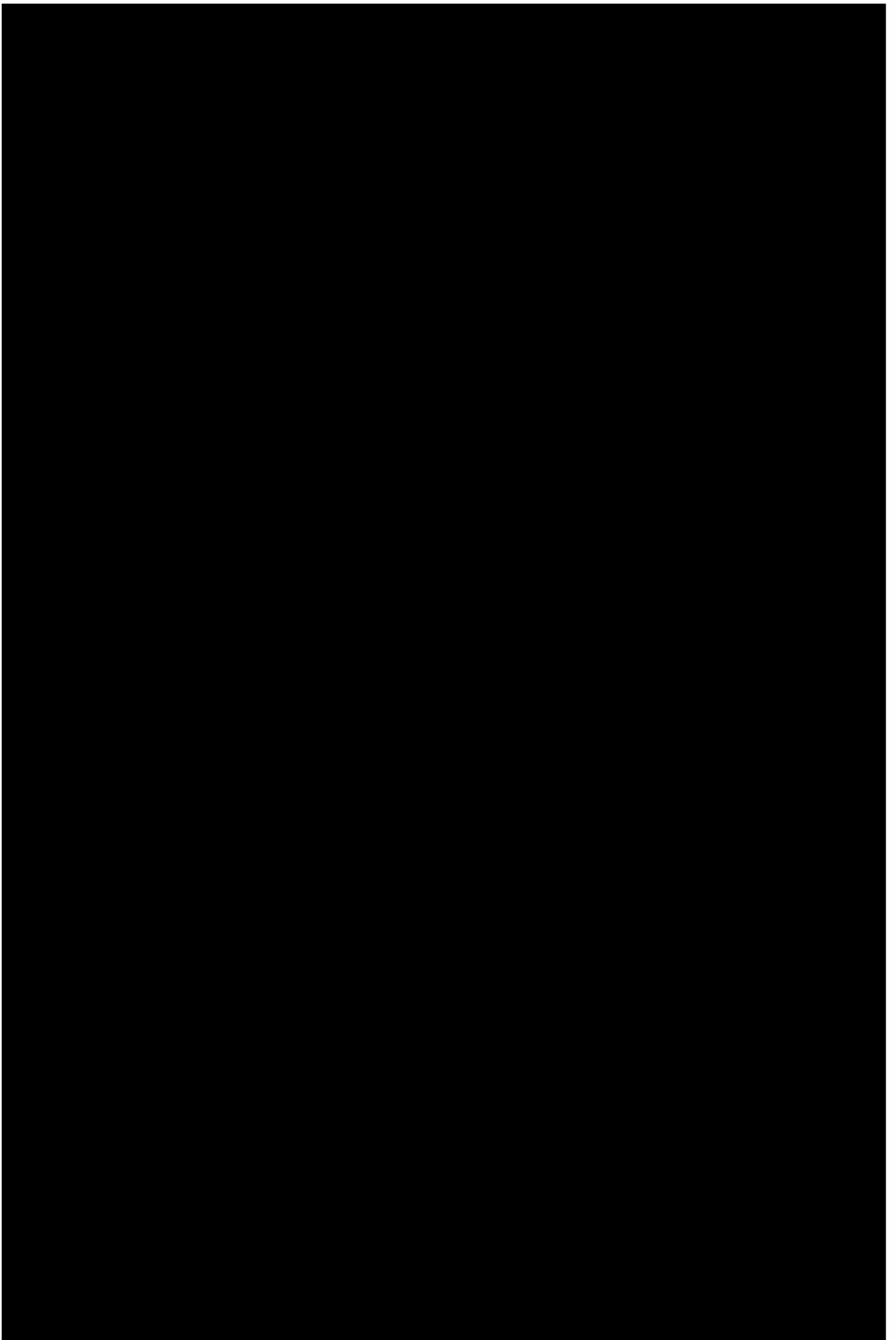










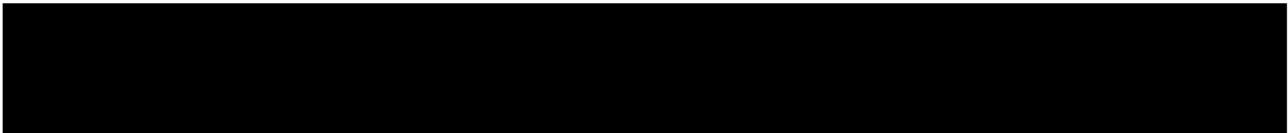


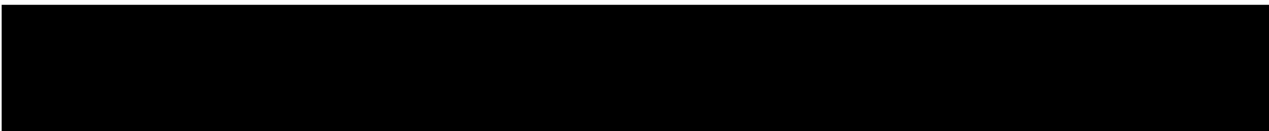


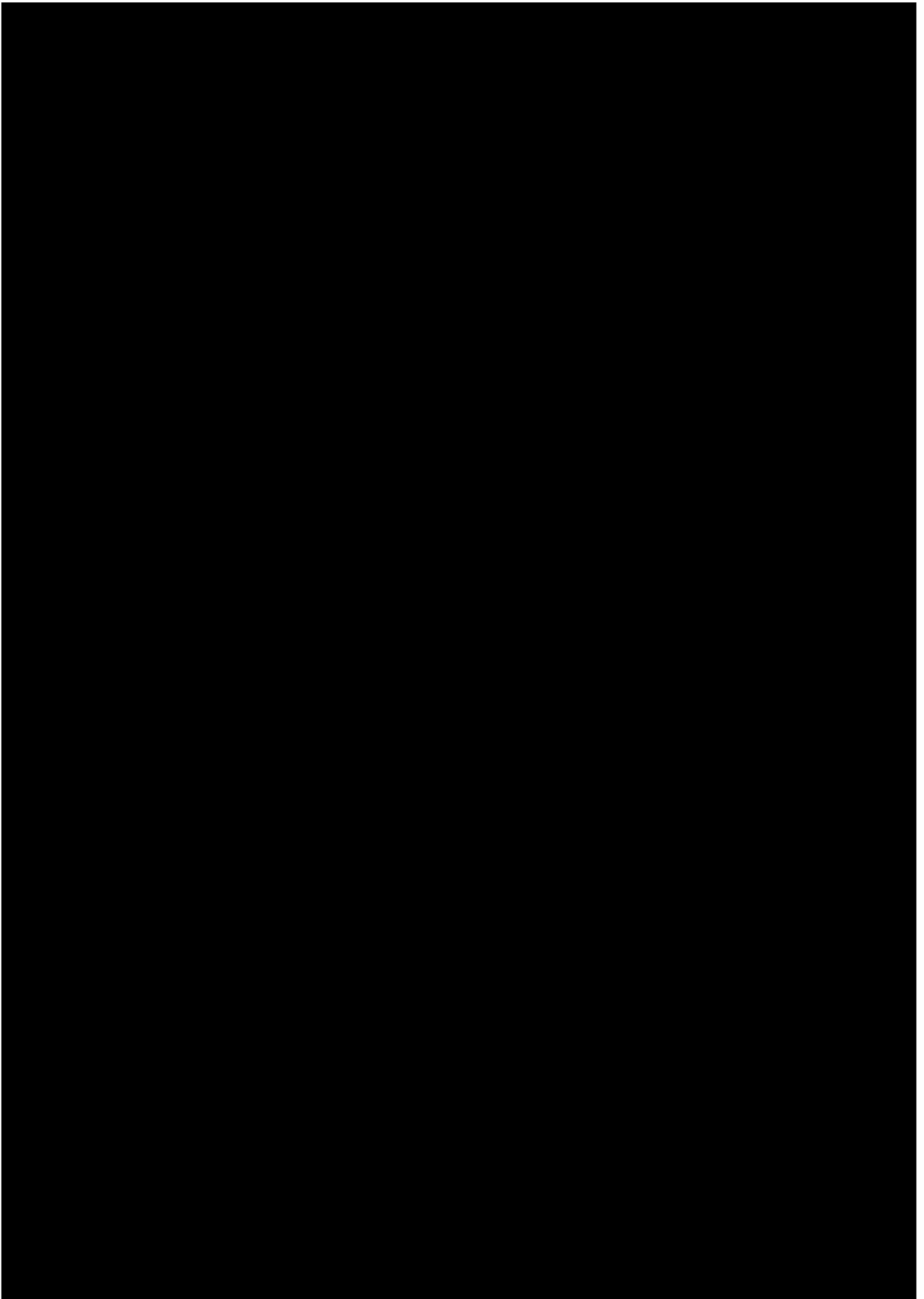
**Transport
for NSW**

Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F6 – Initial Workplace Relations
Management Plan

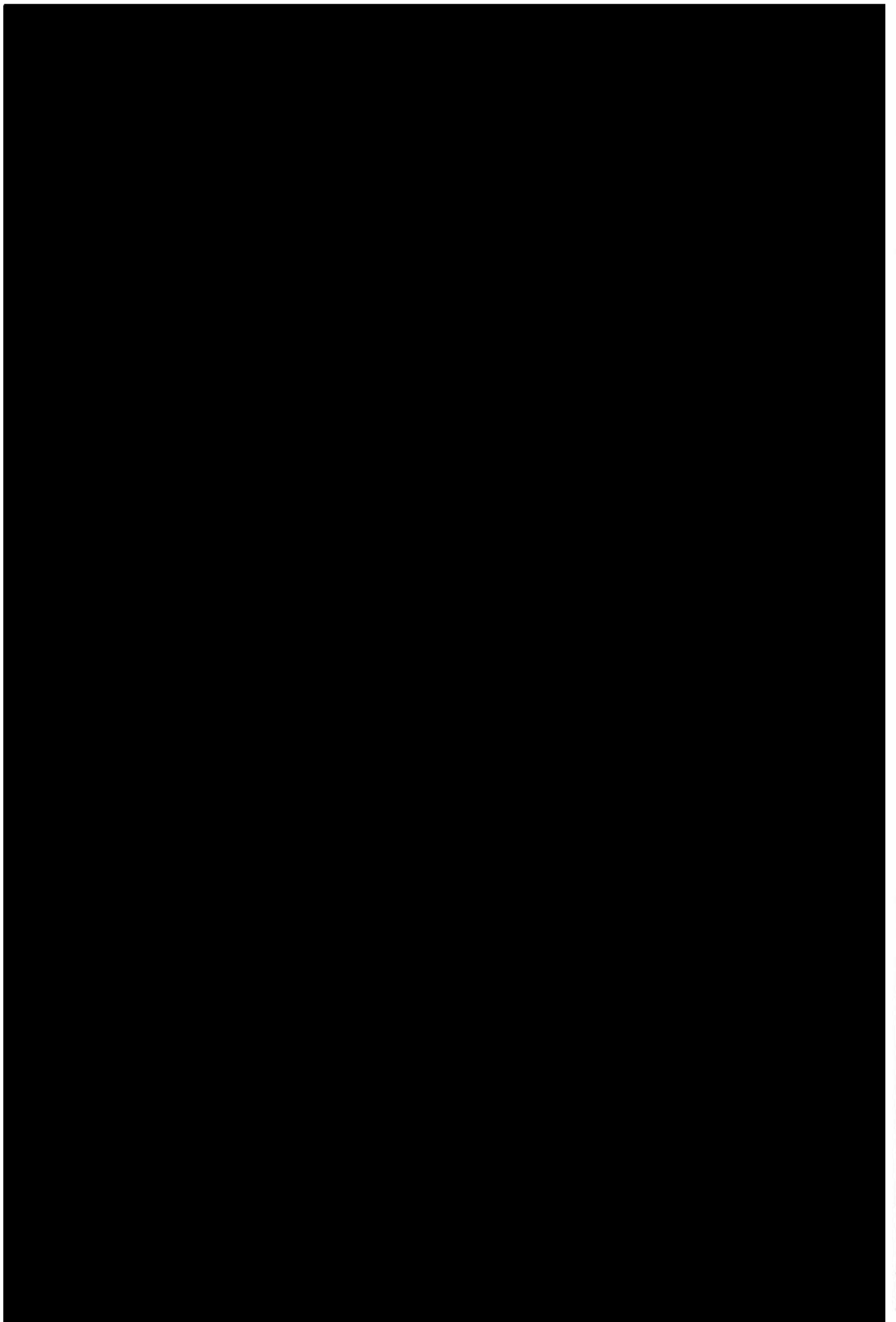
Document Number: 3129234_10
Execution Version

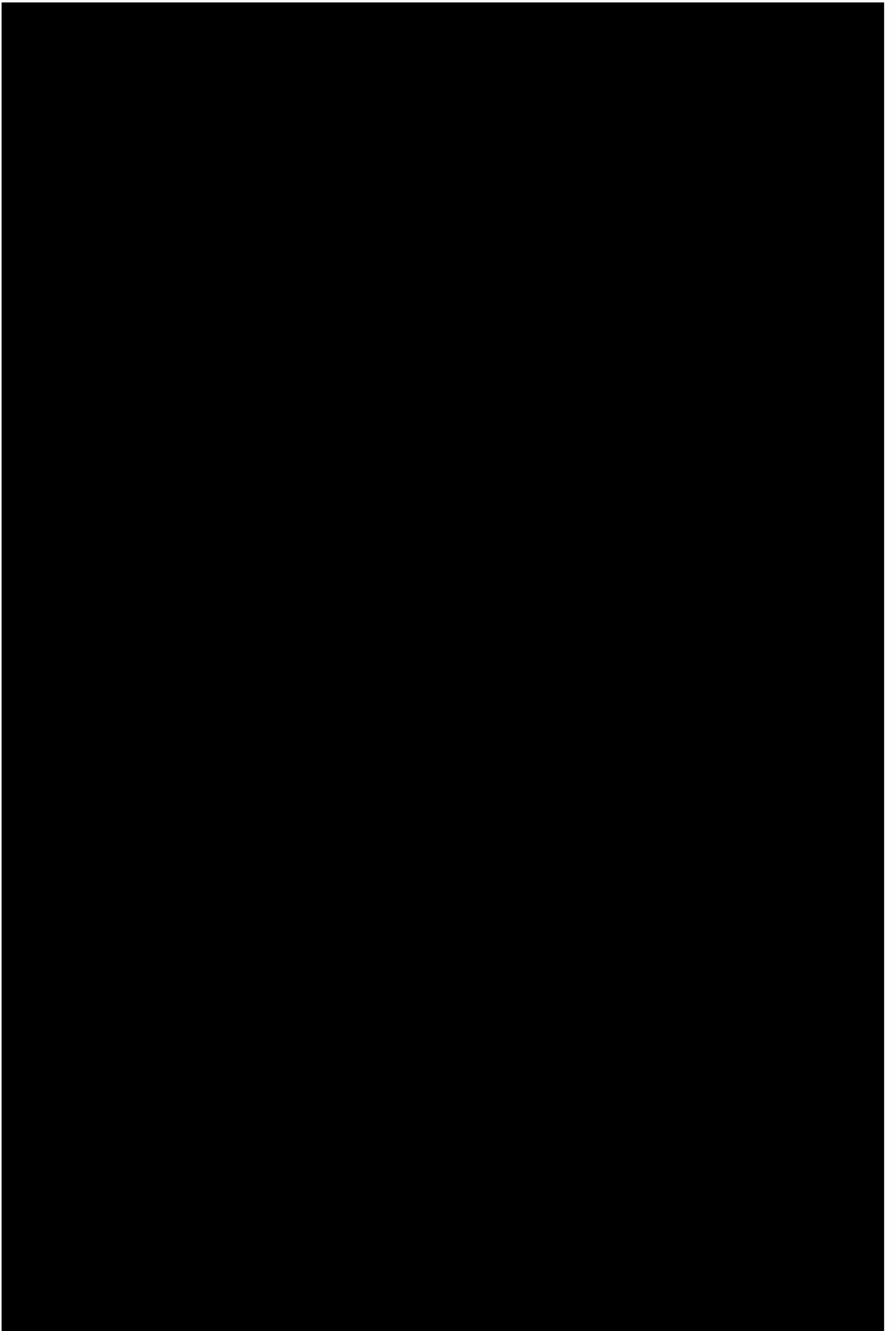


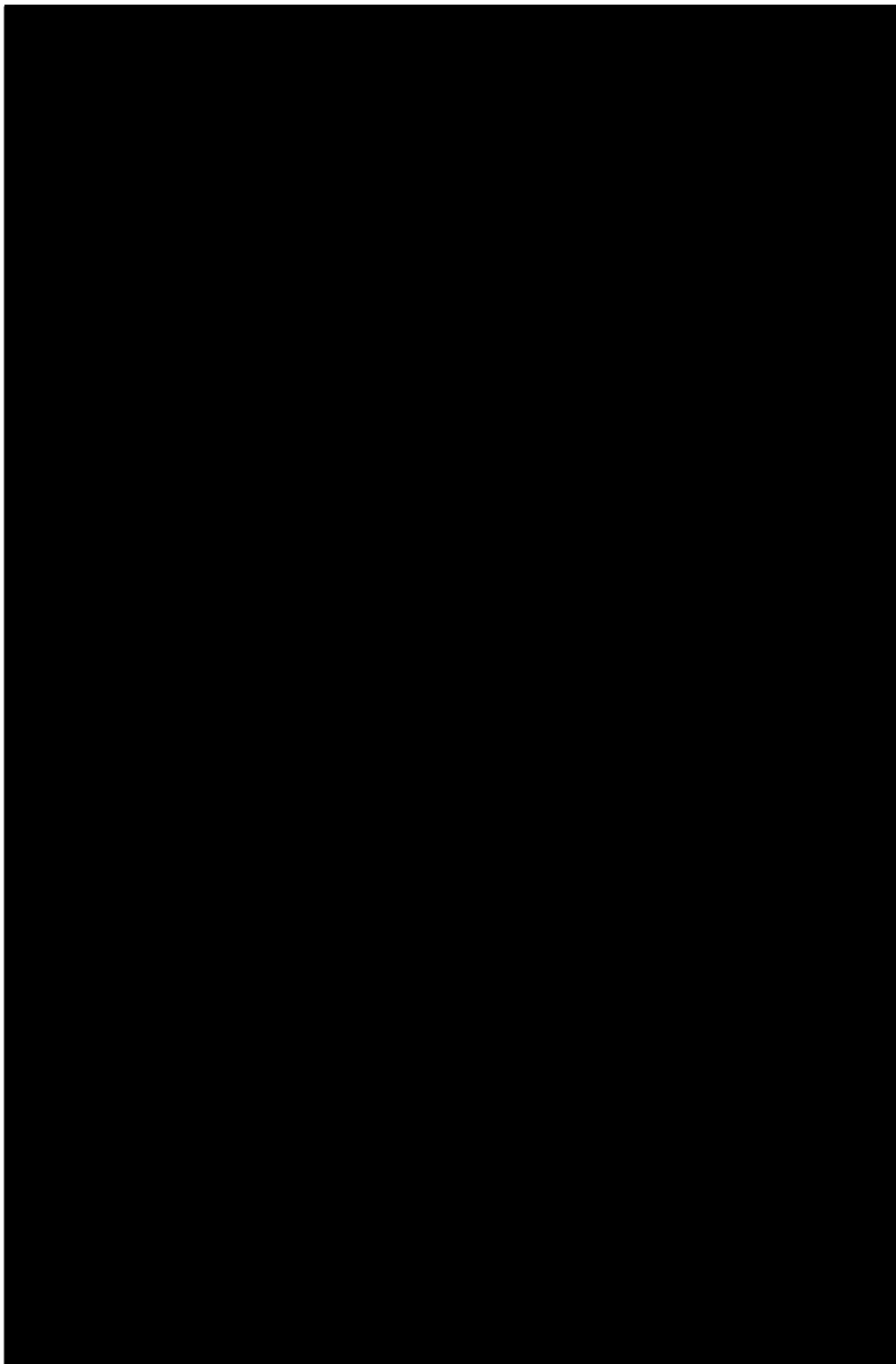


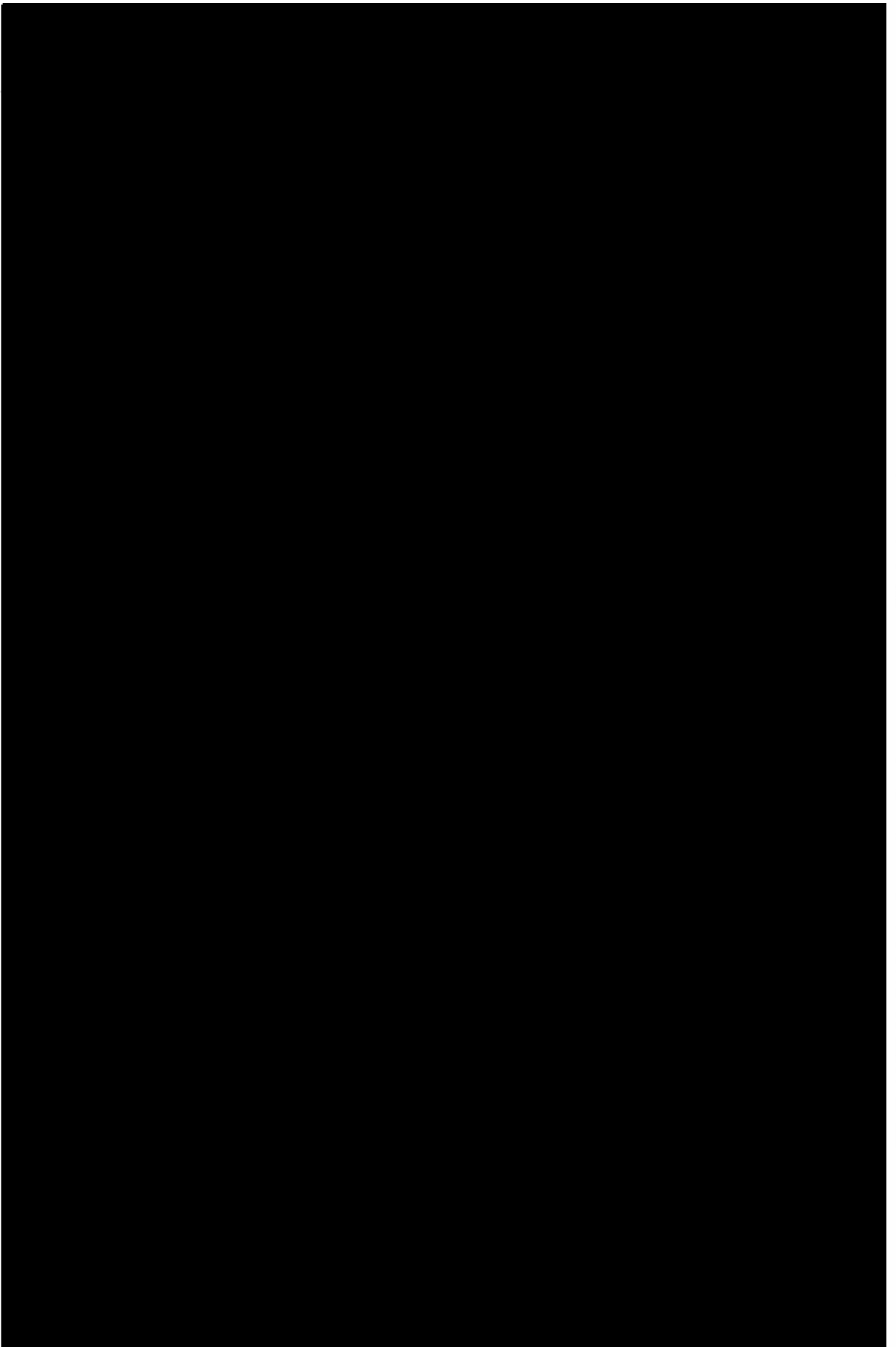


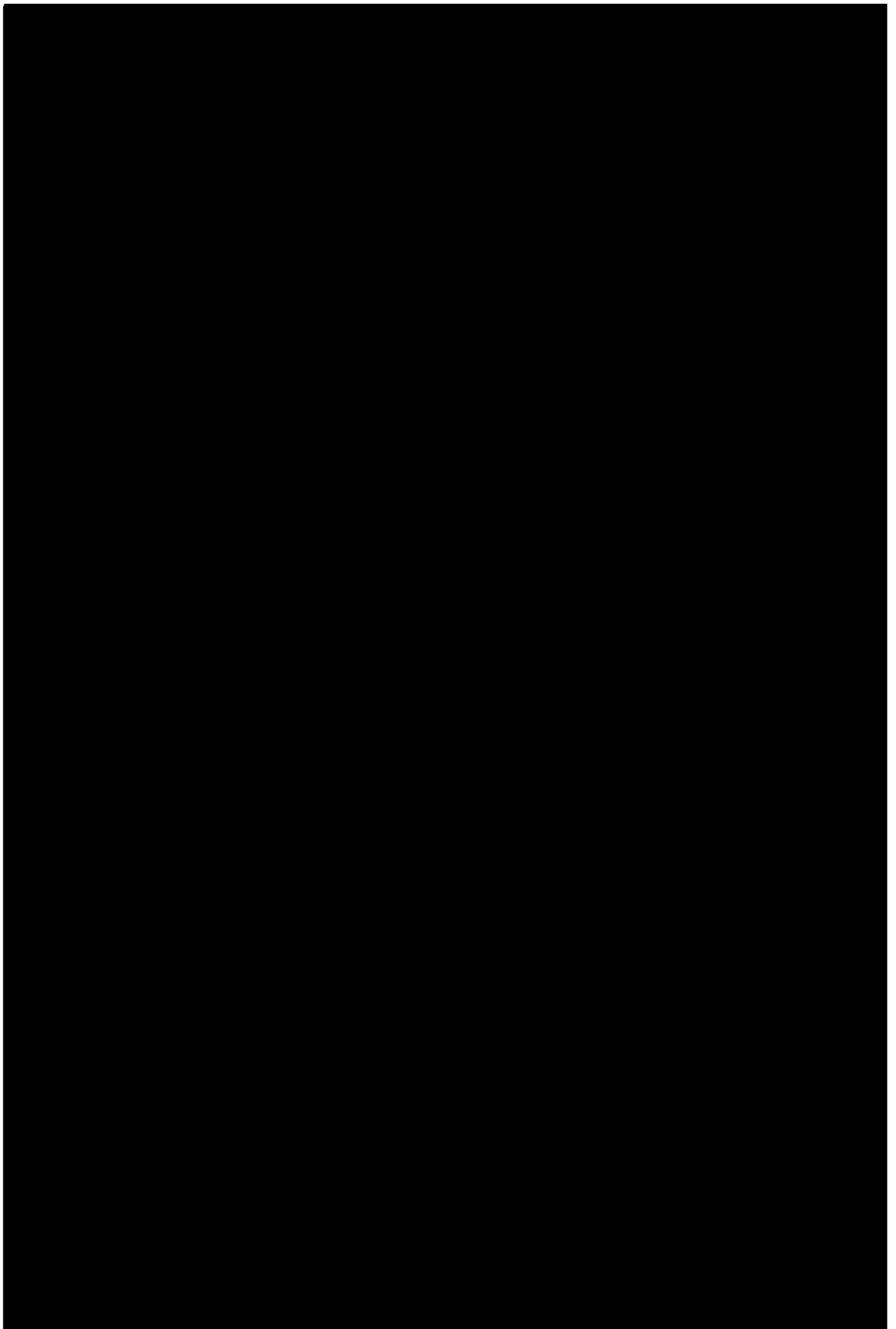


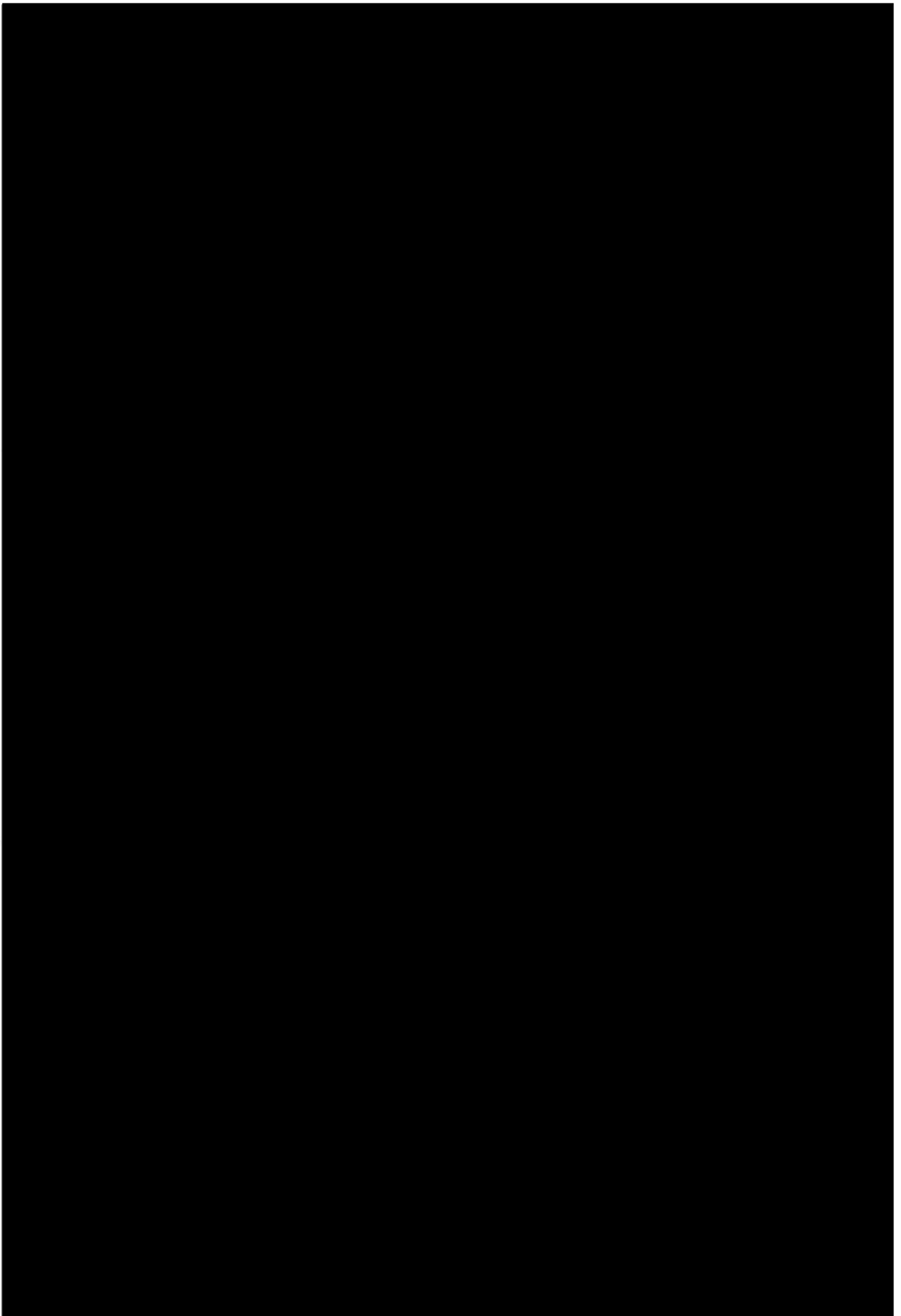


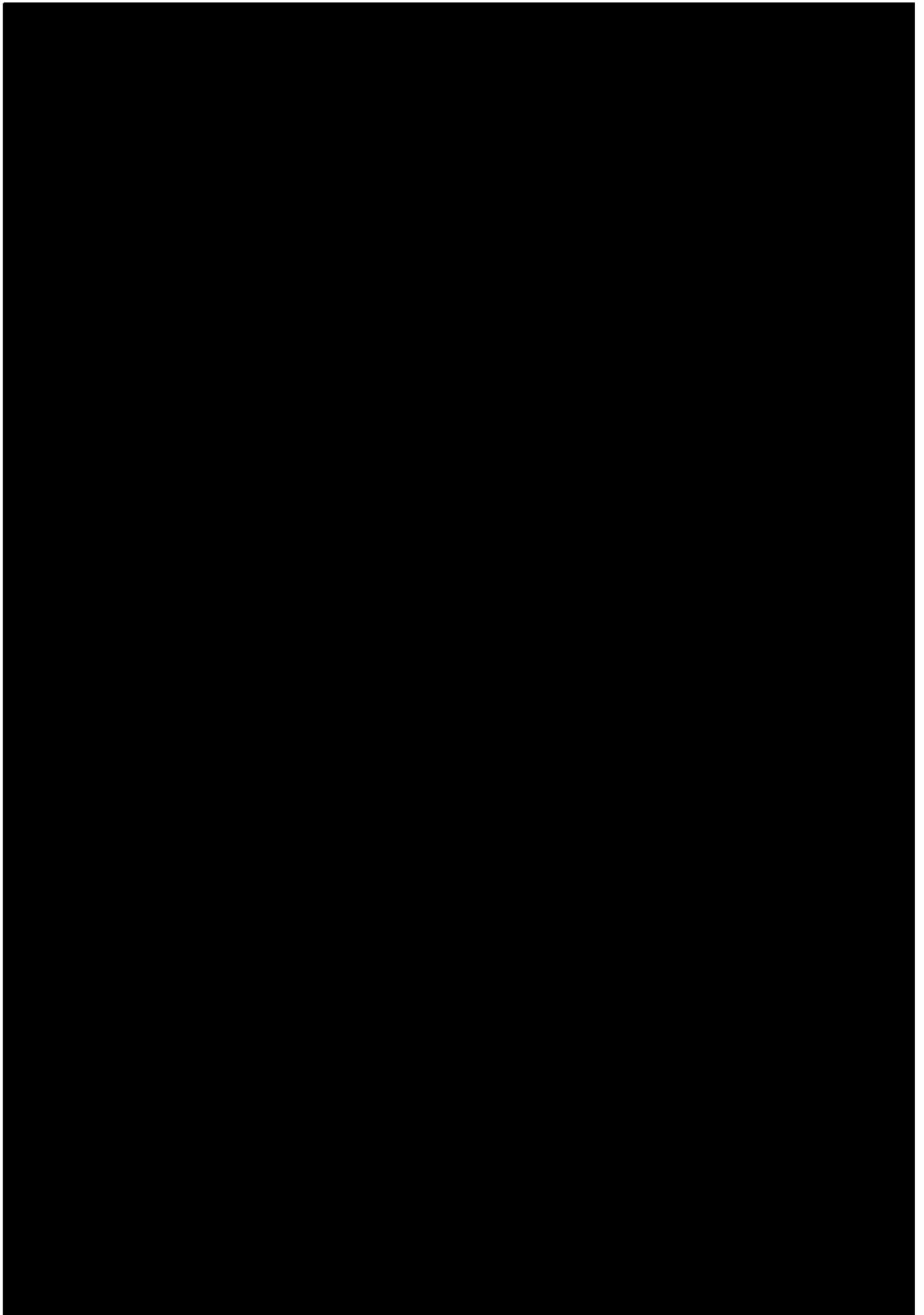


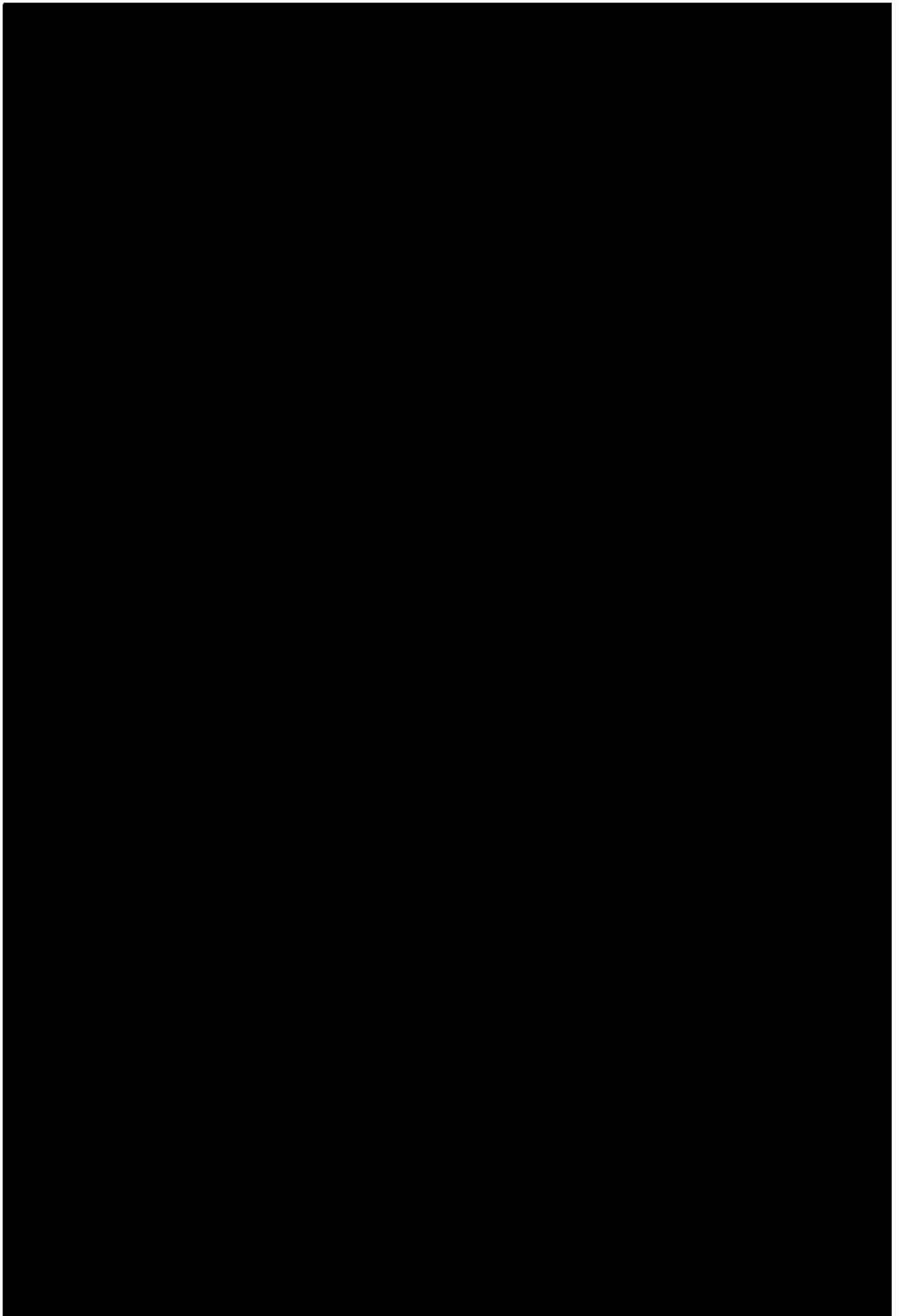


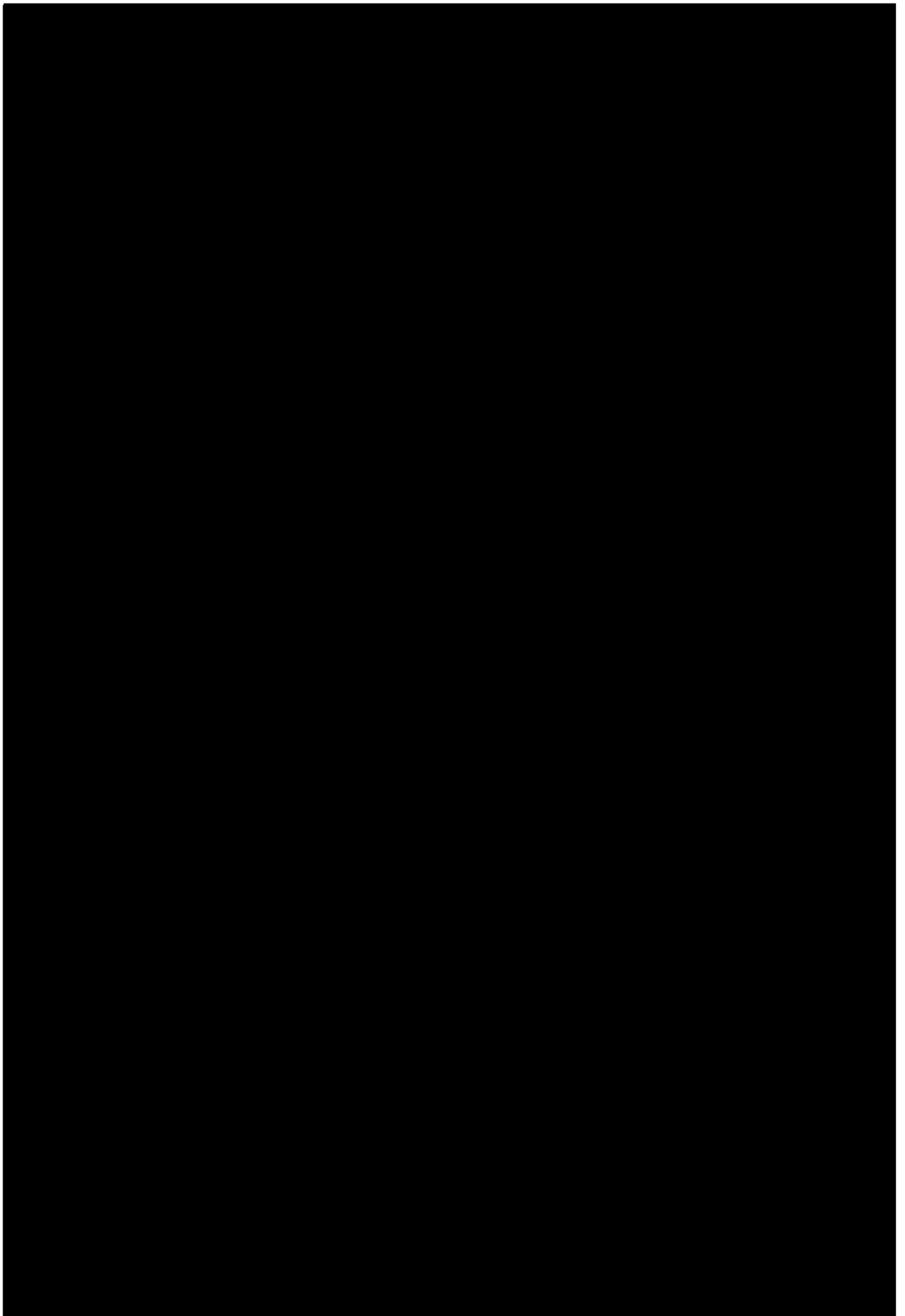


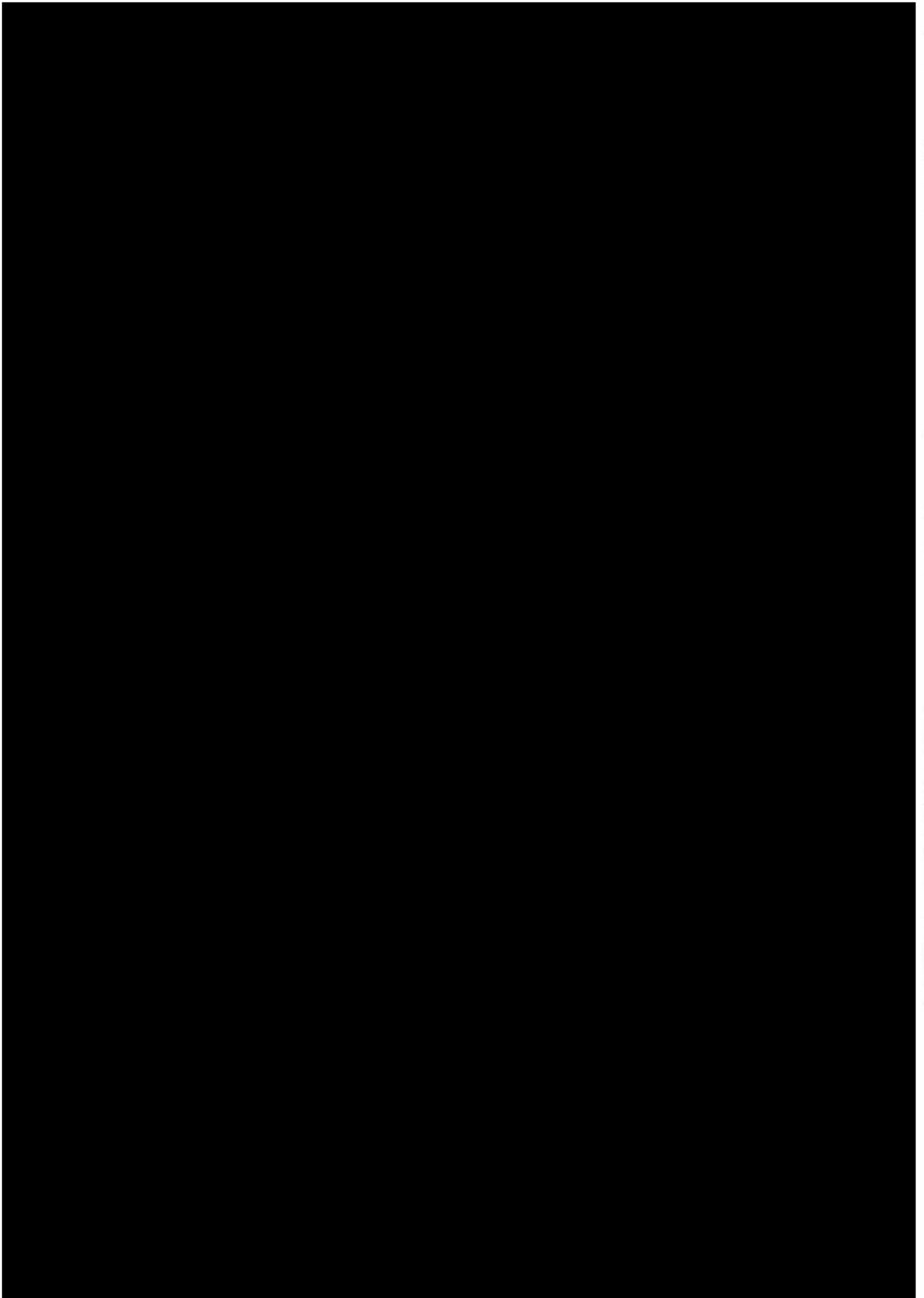


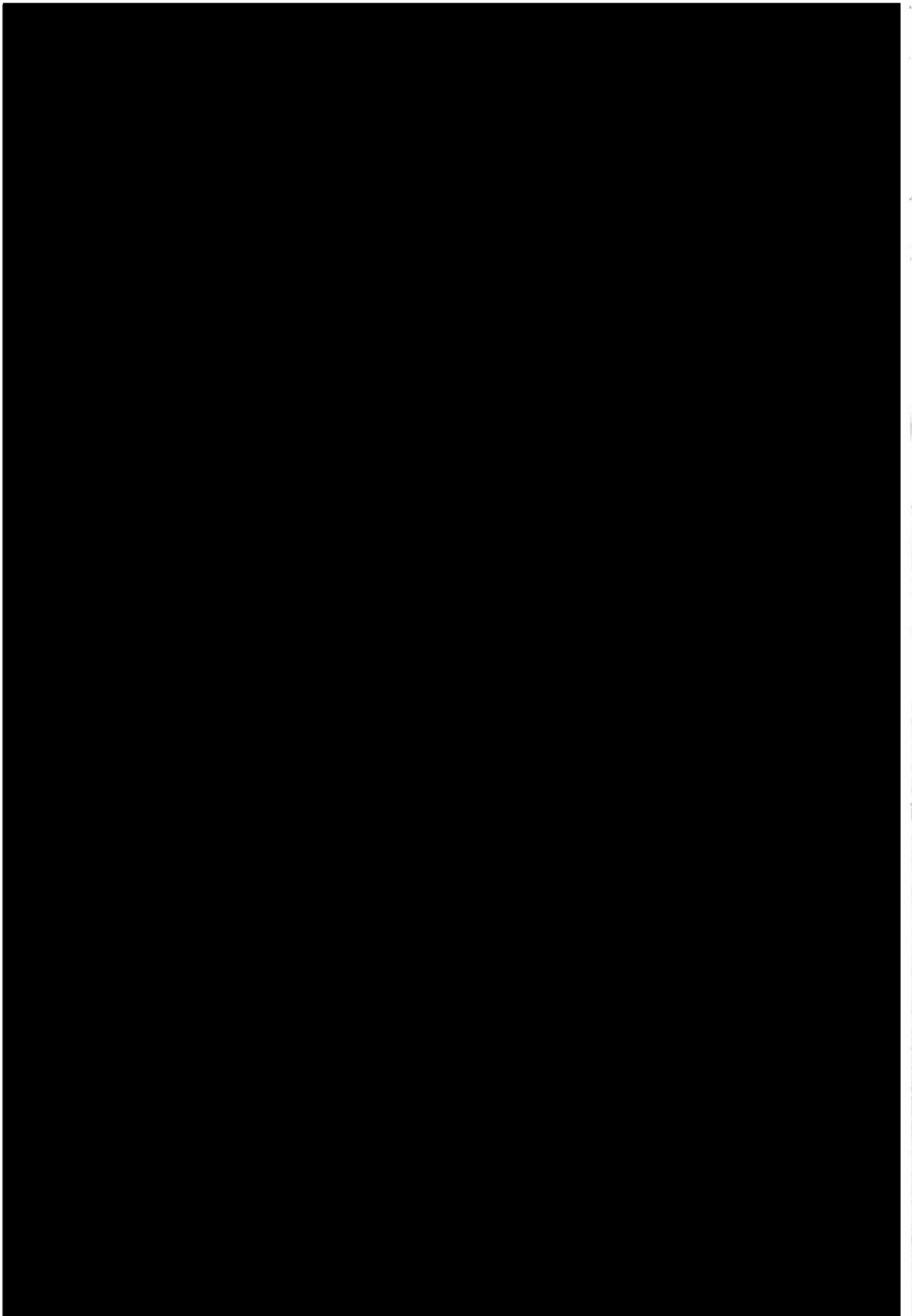


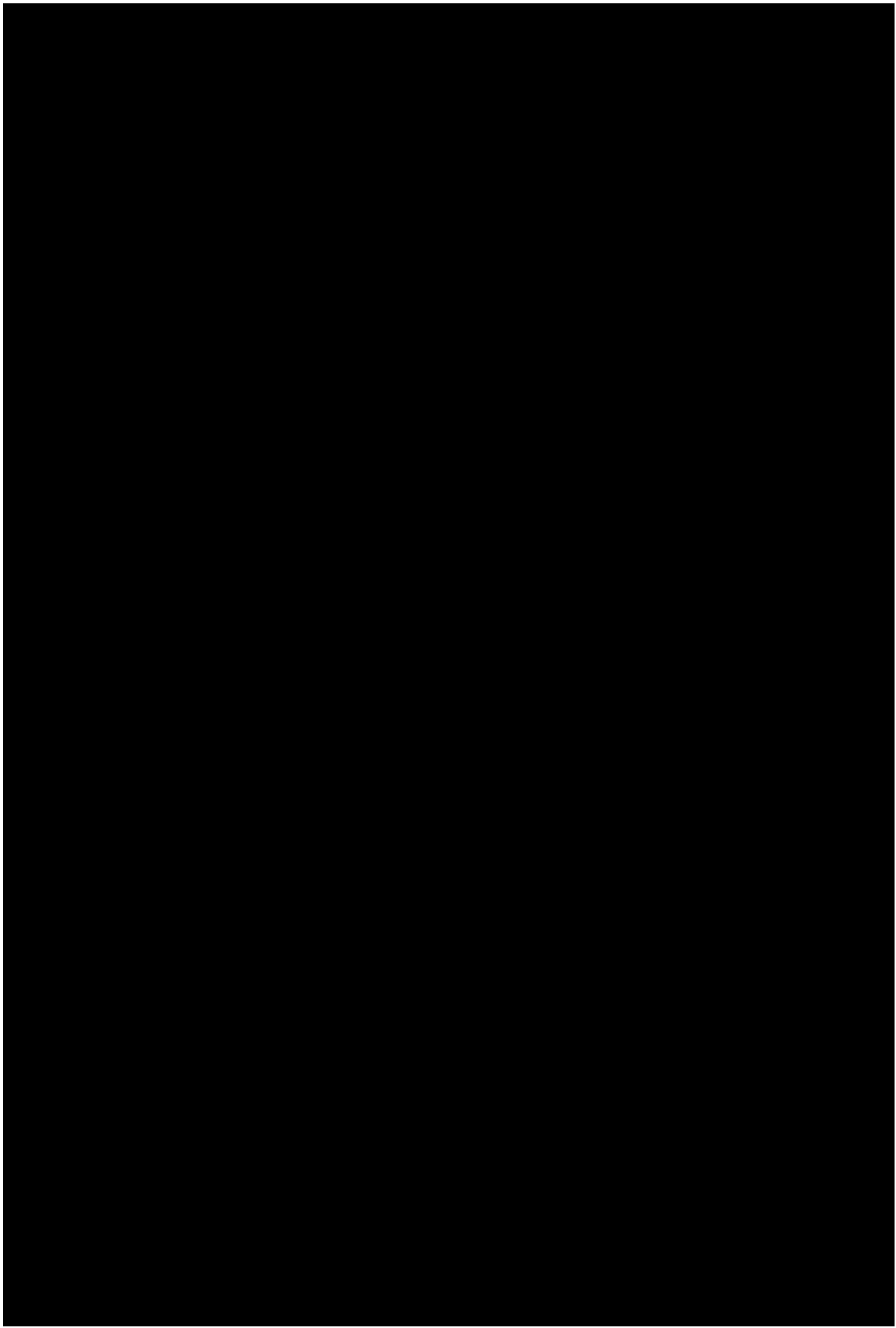


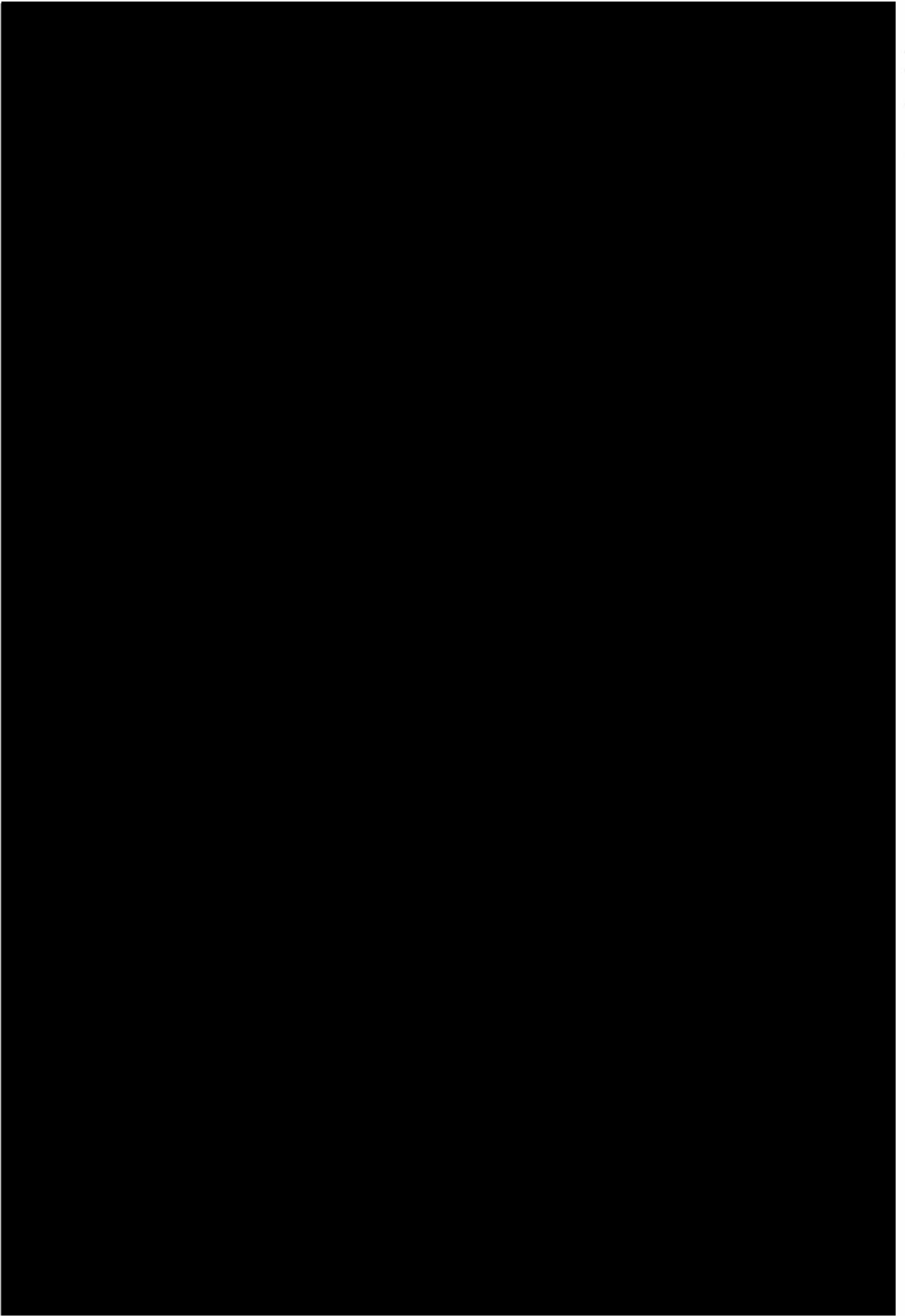


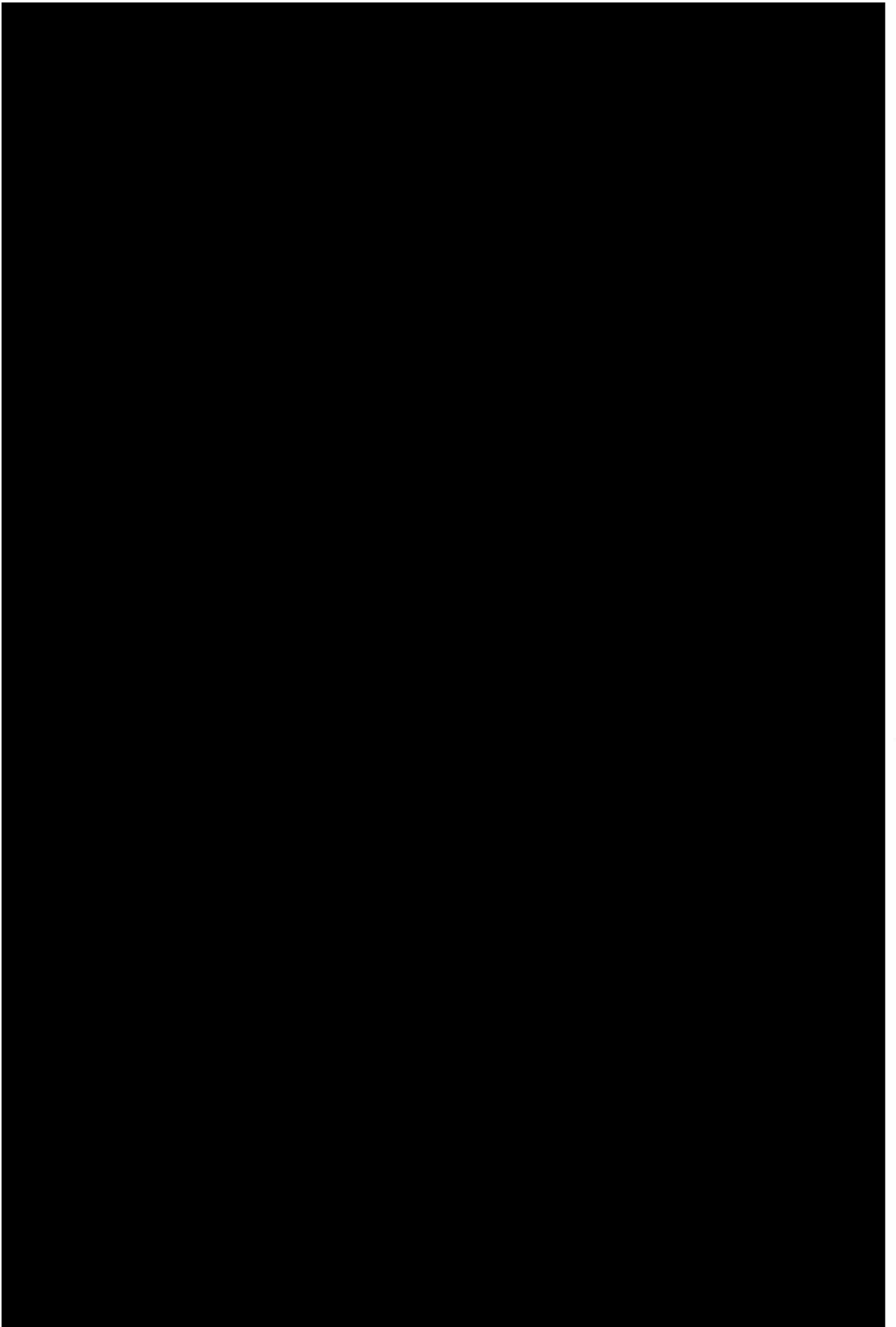


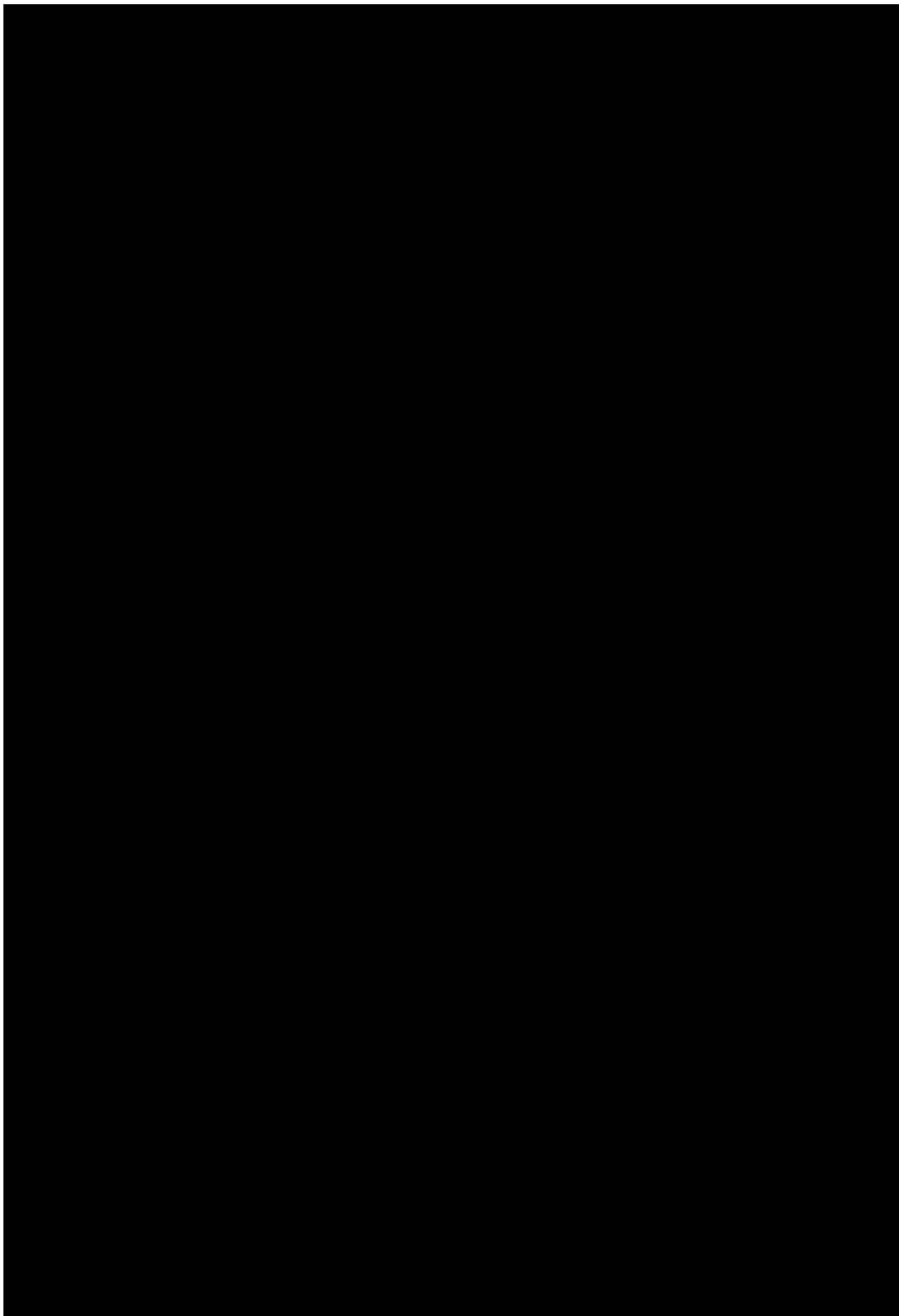


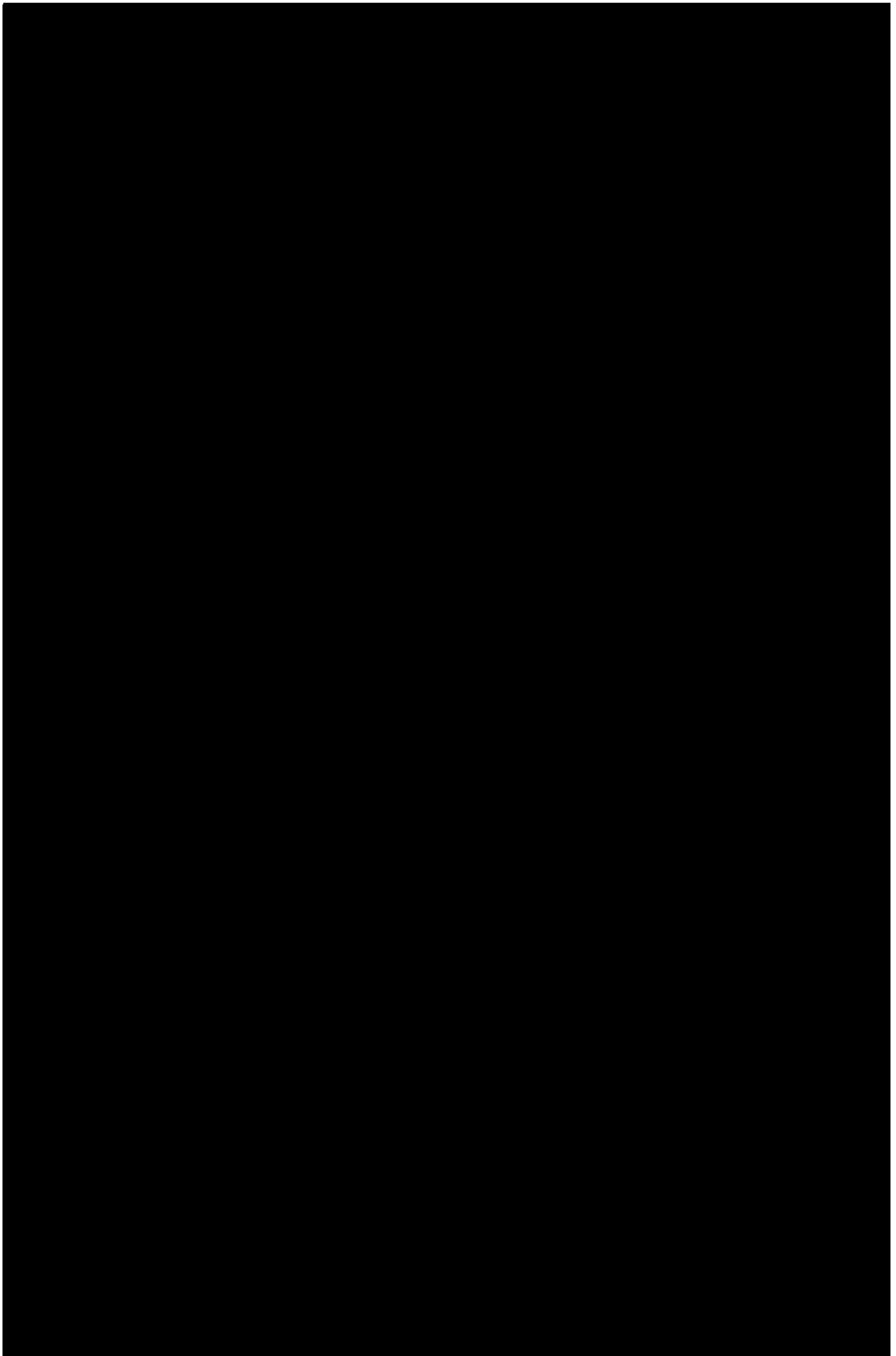


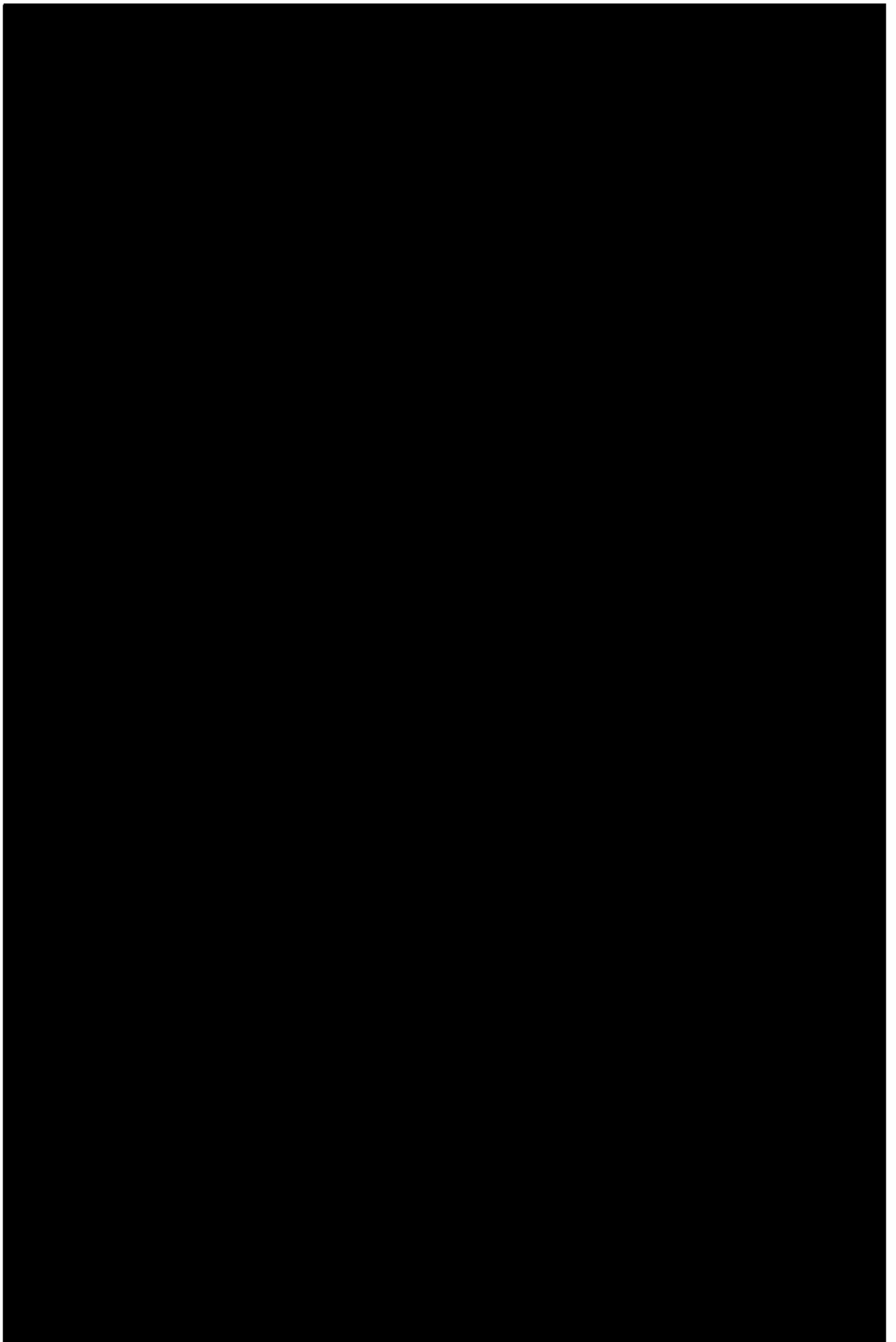


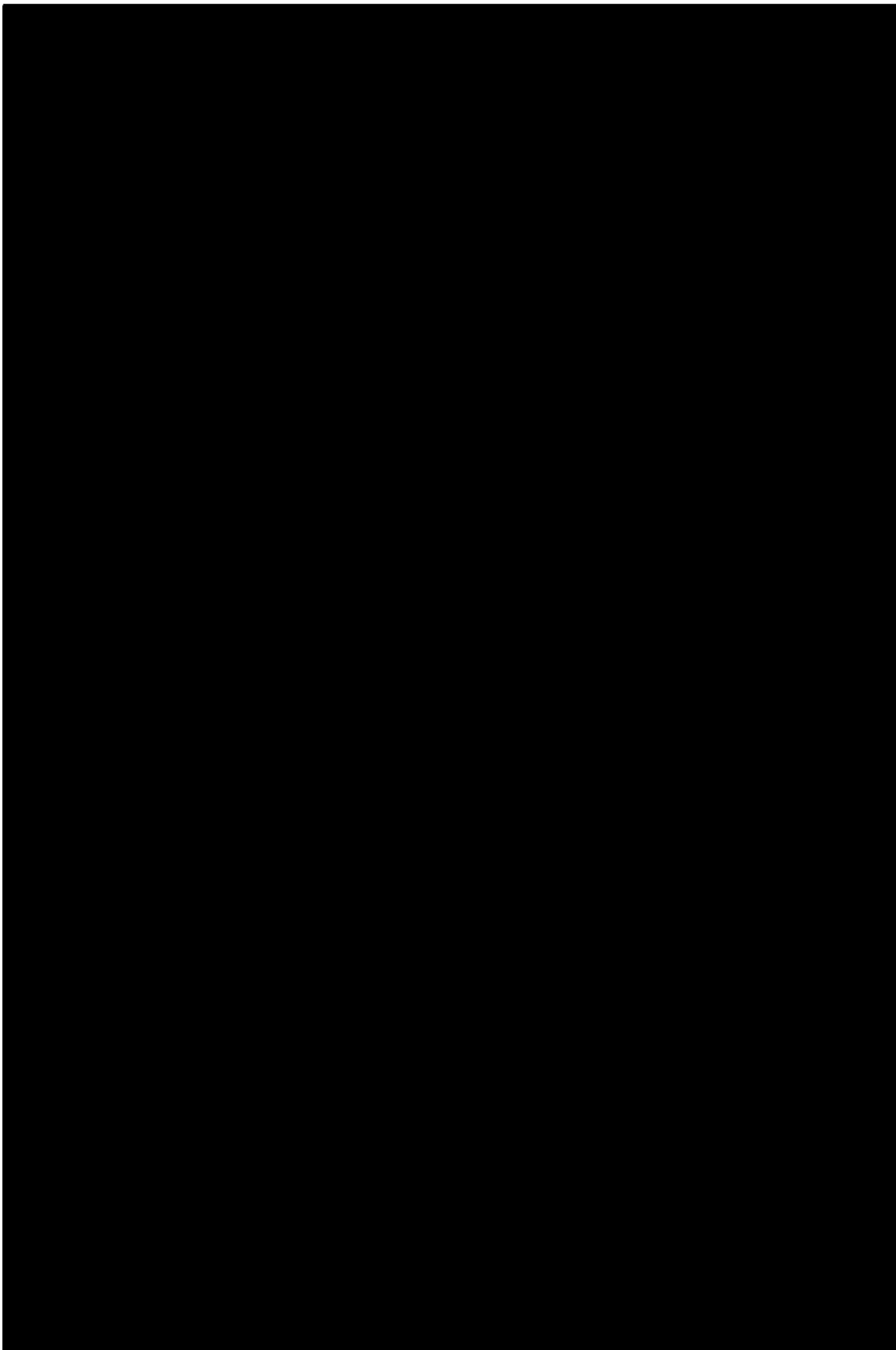


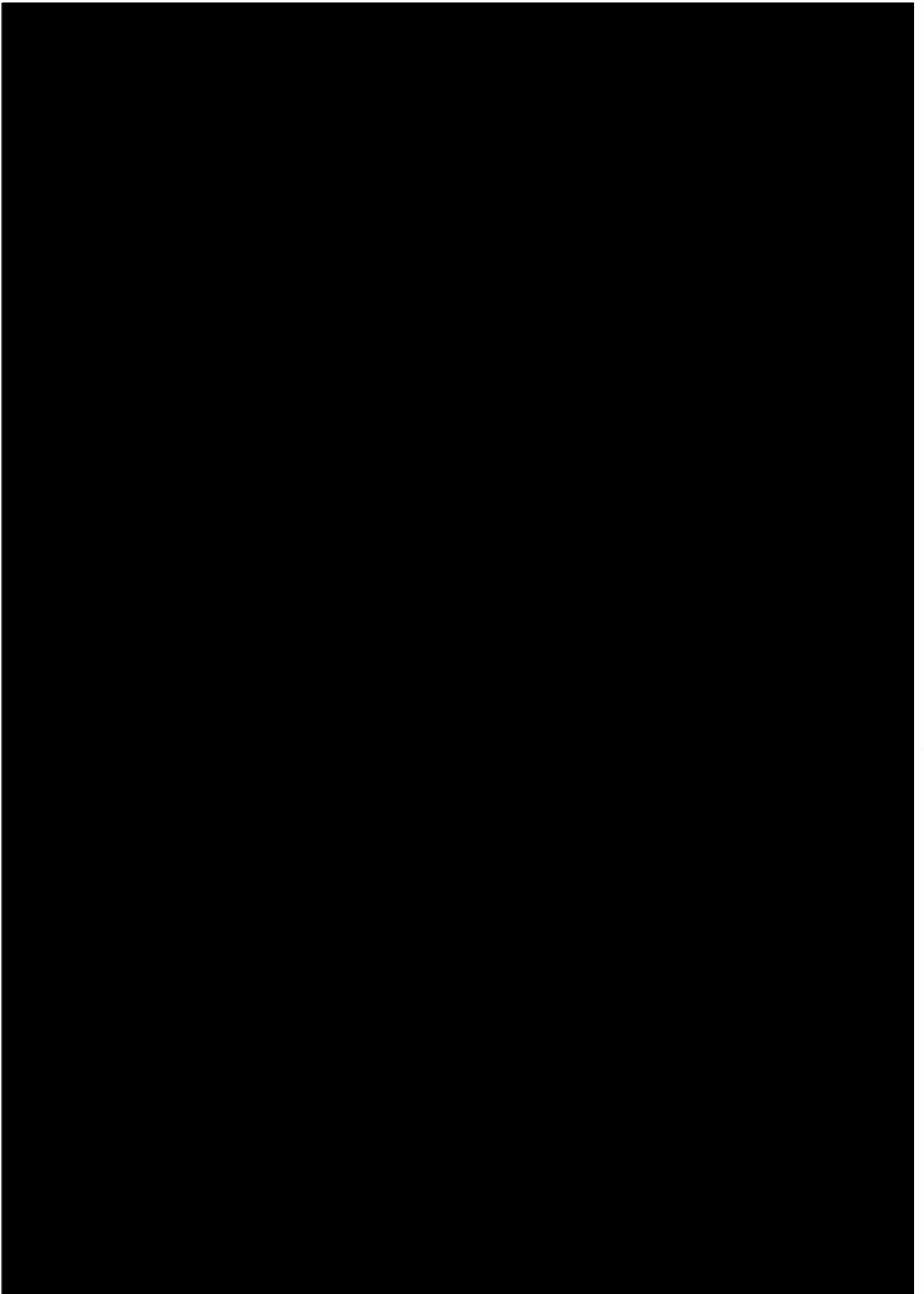


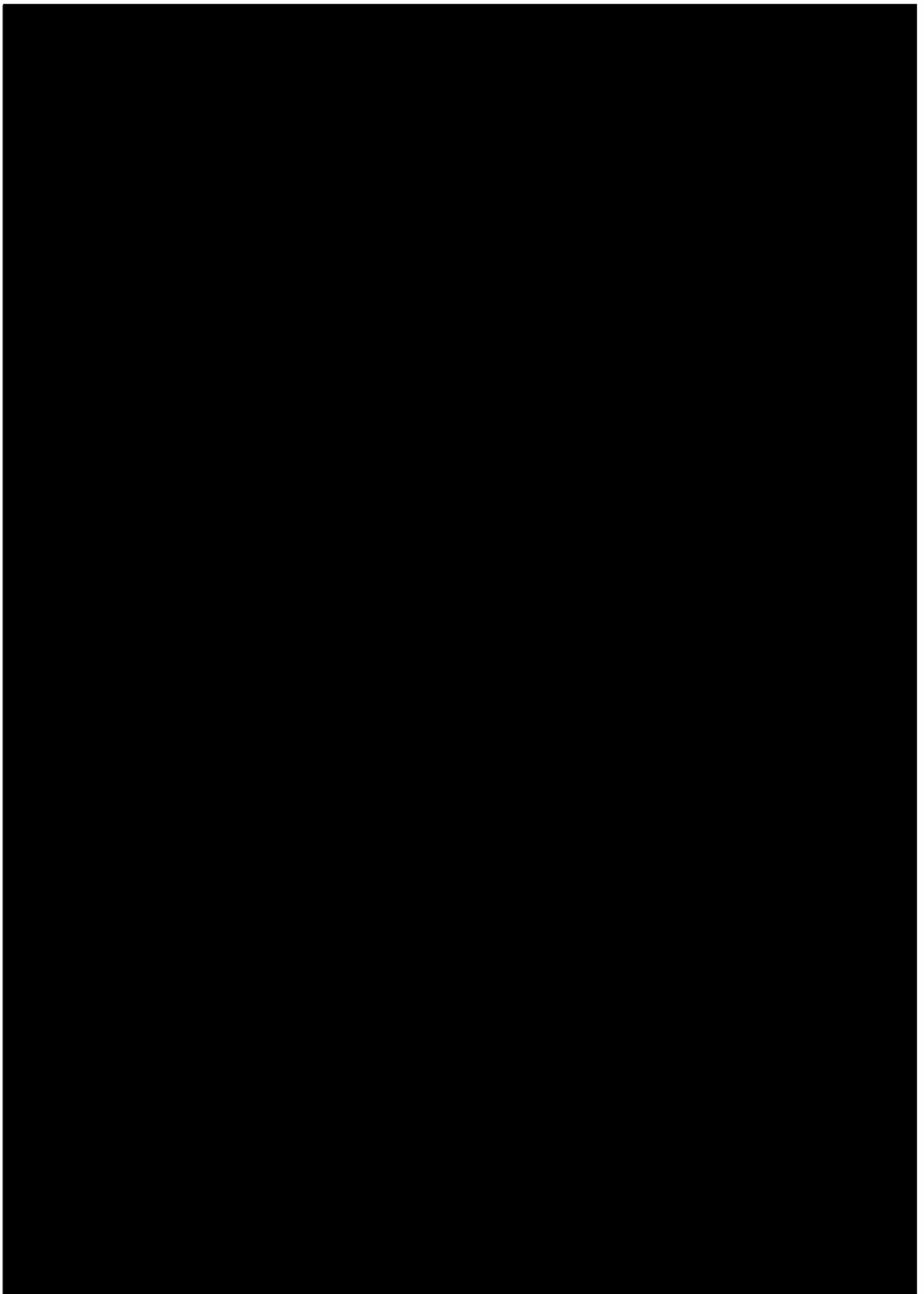


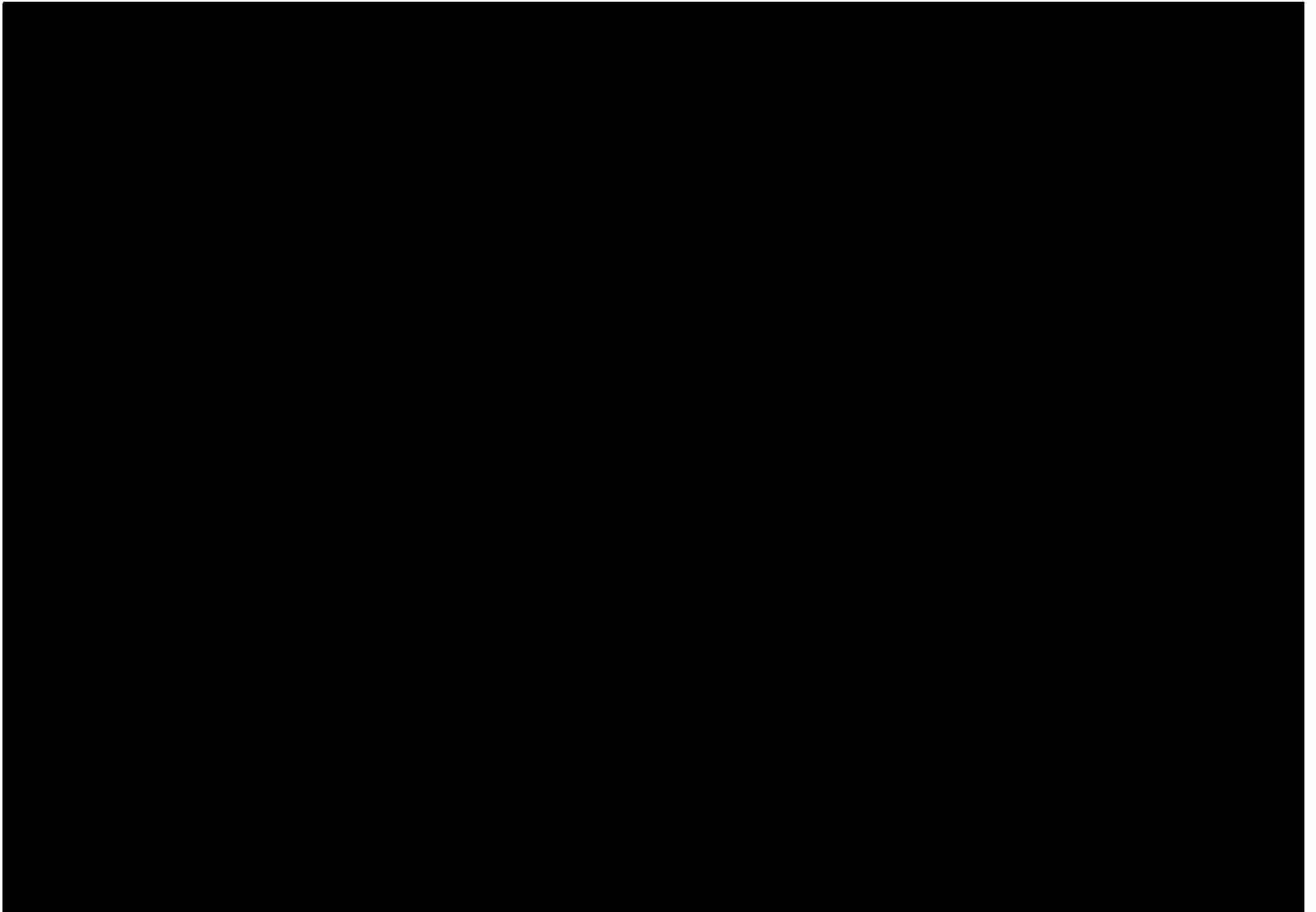


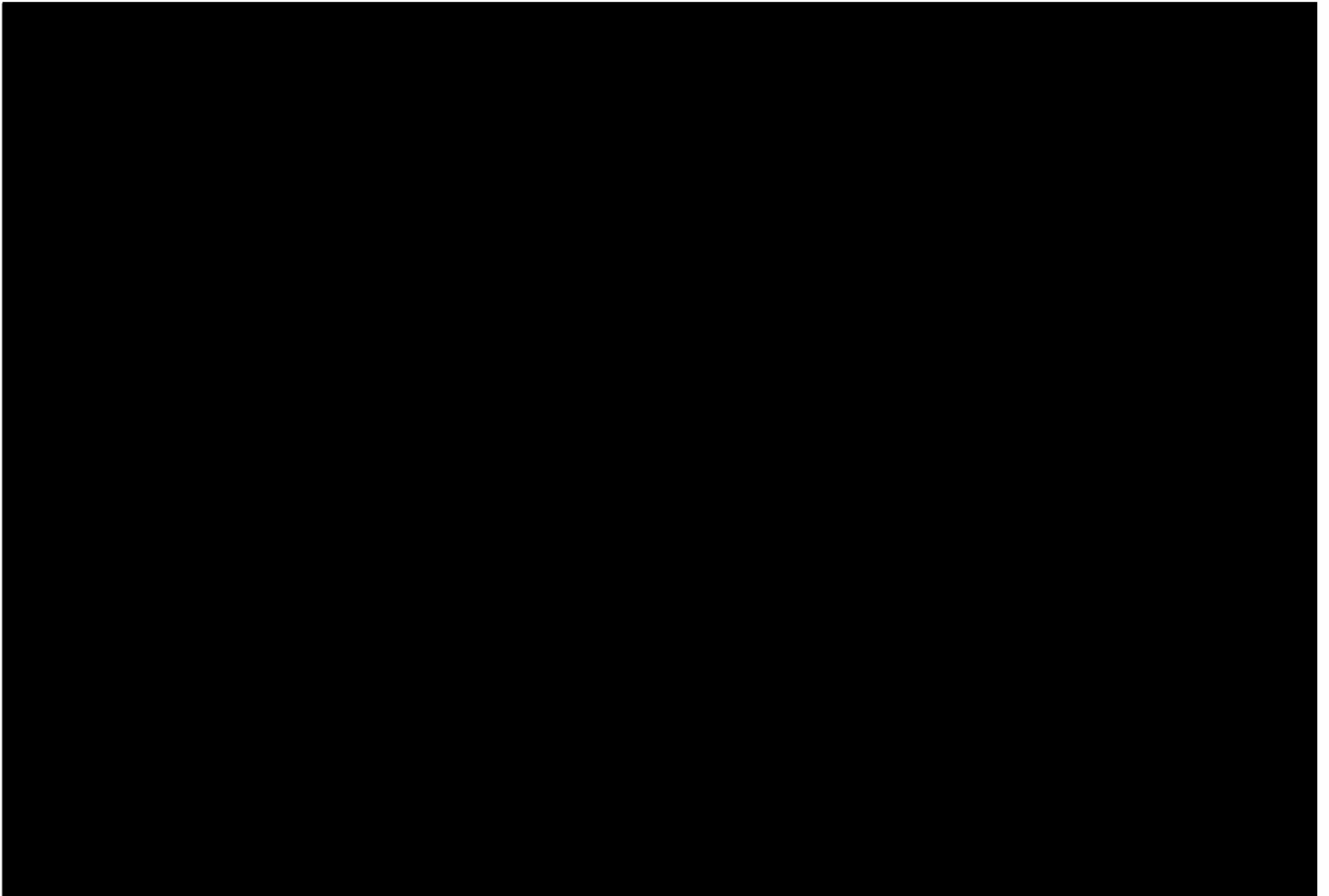


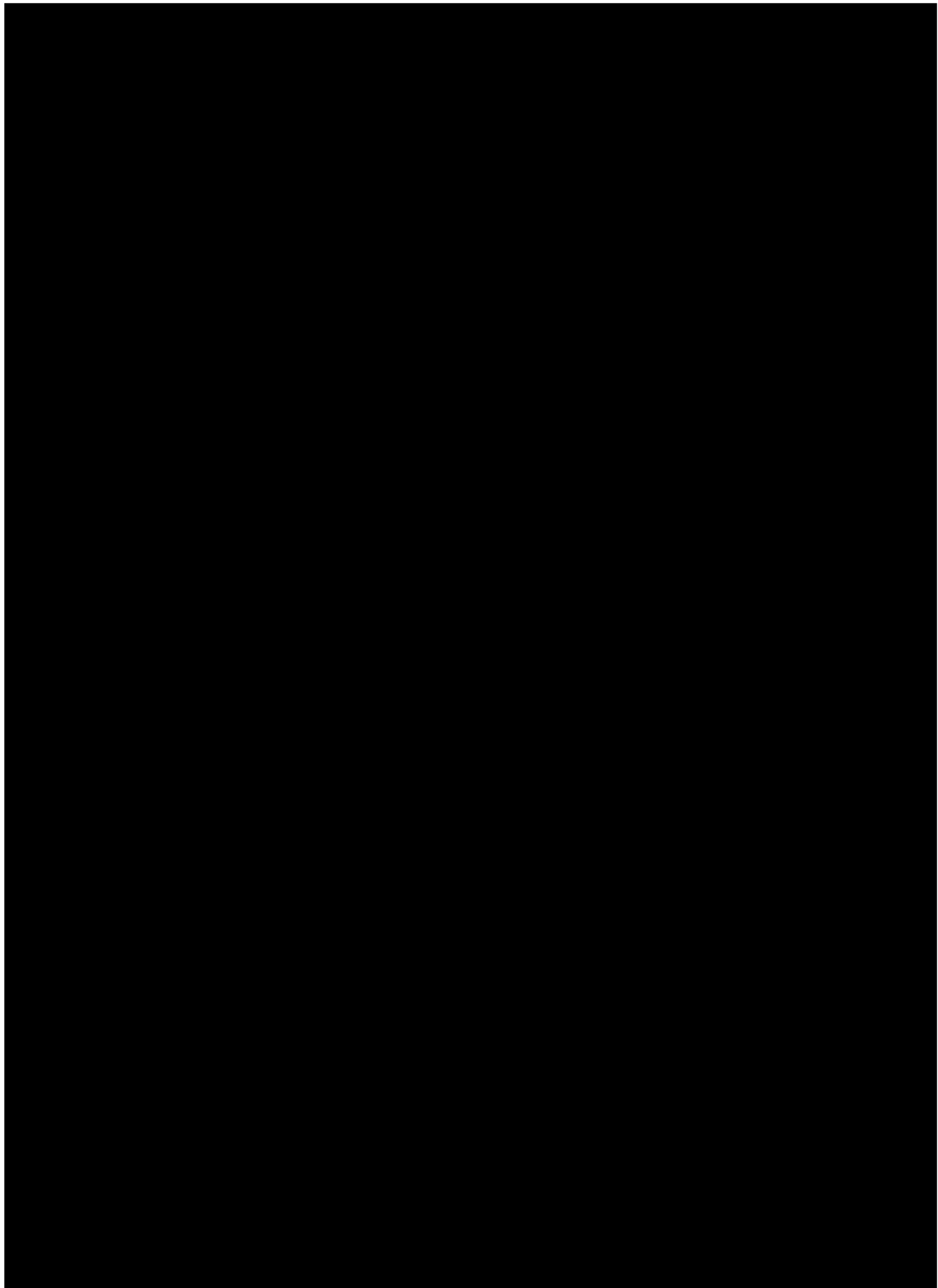


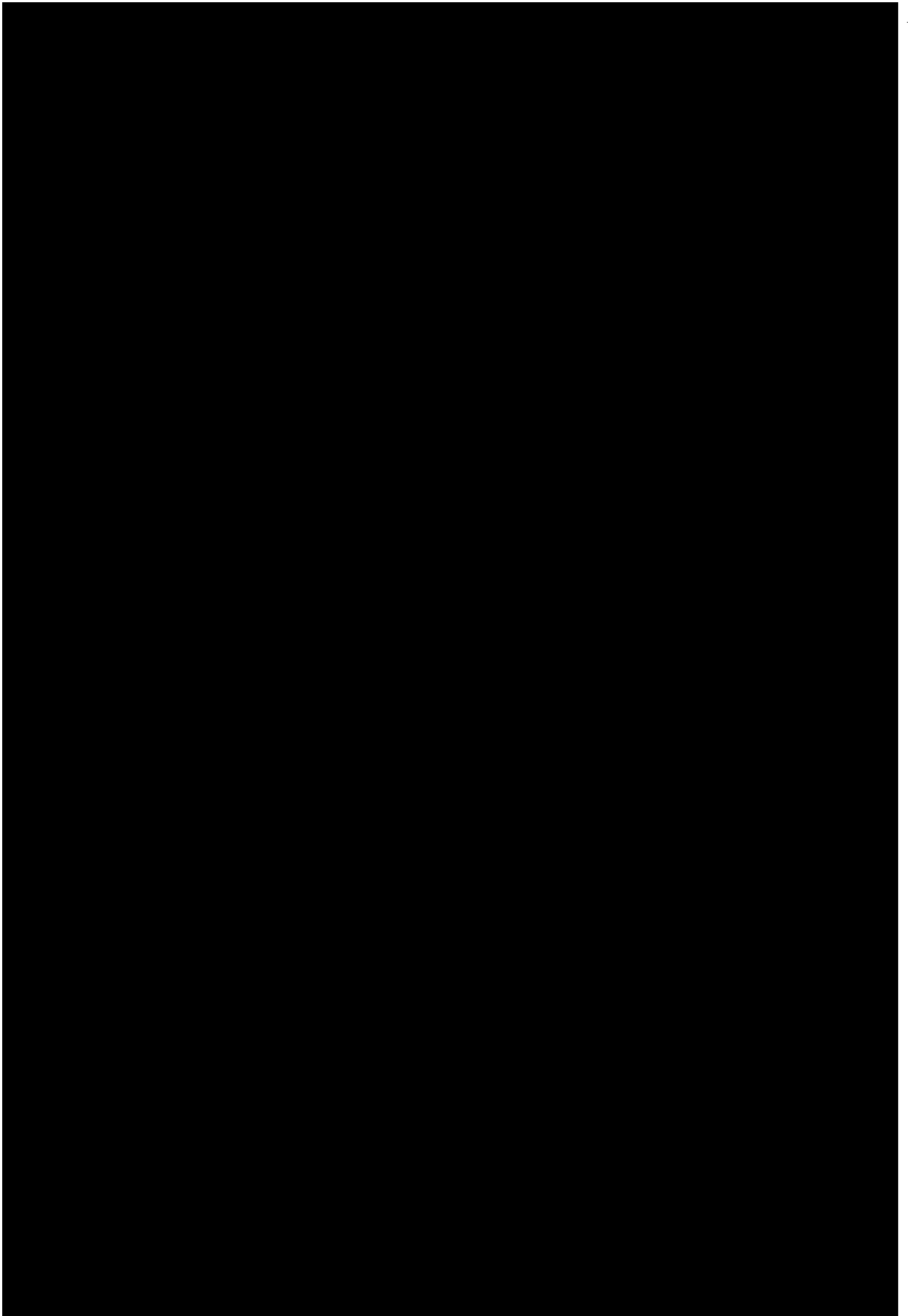


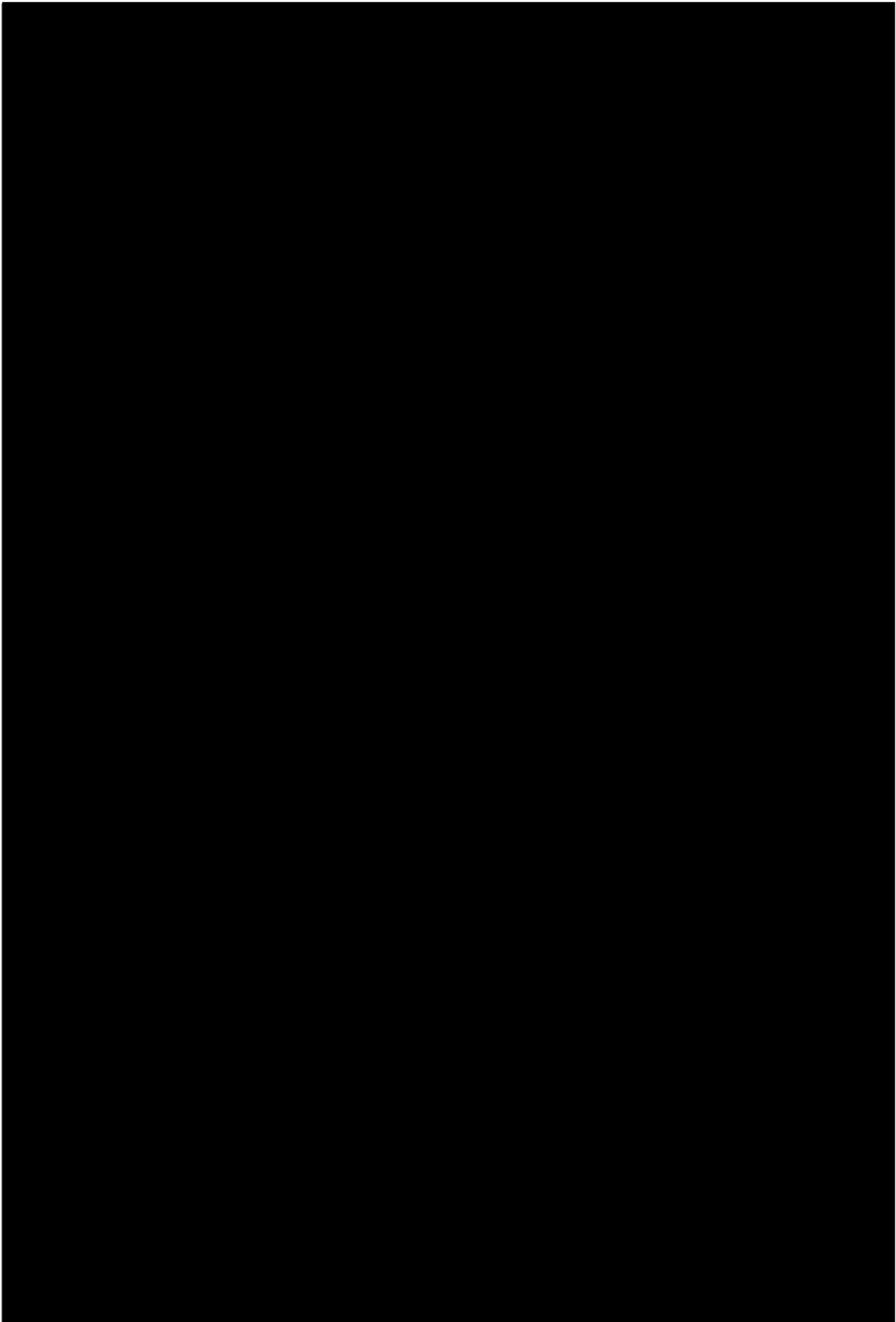


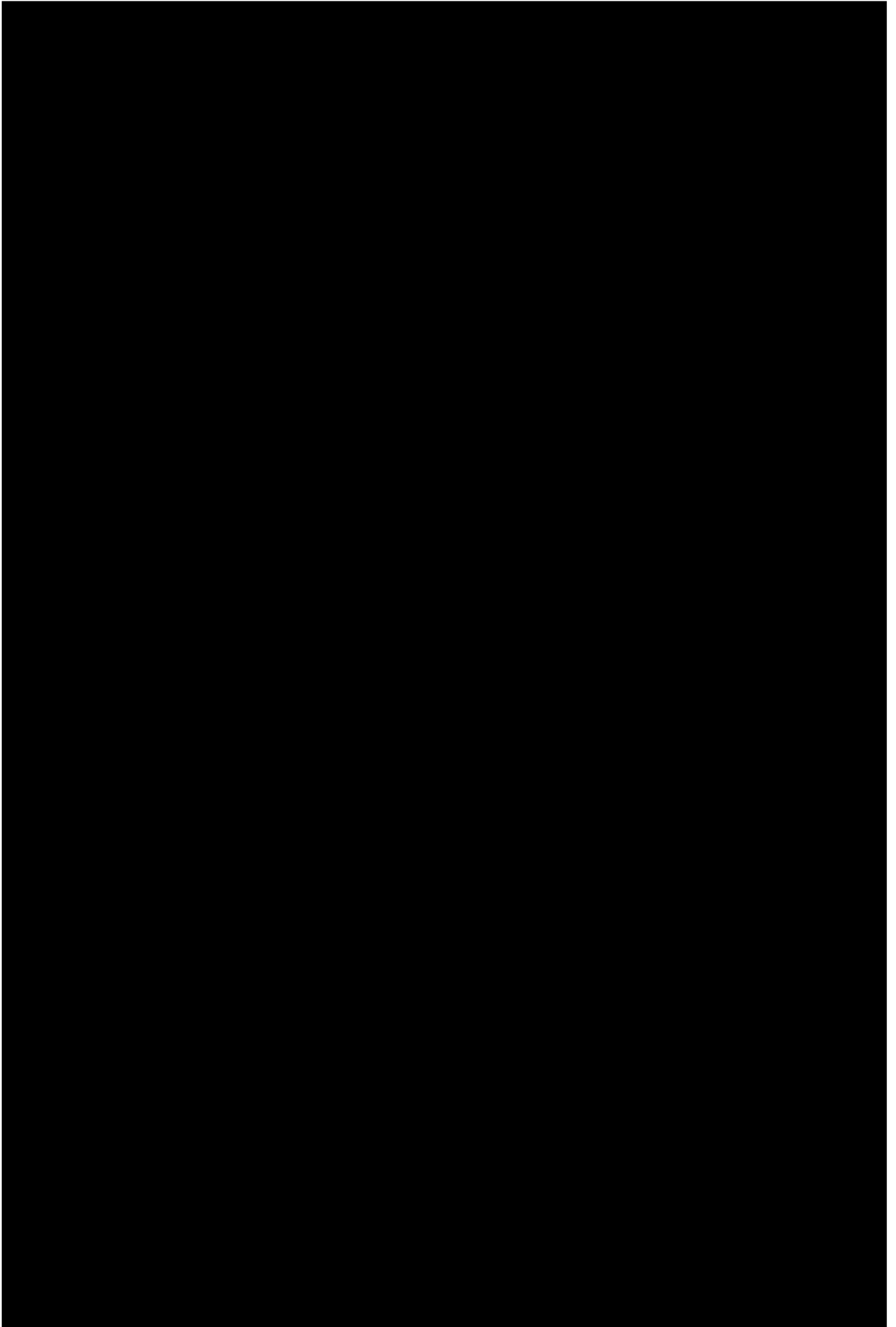


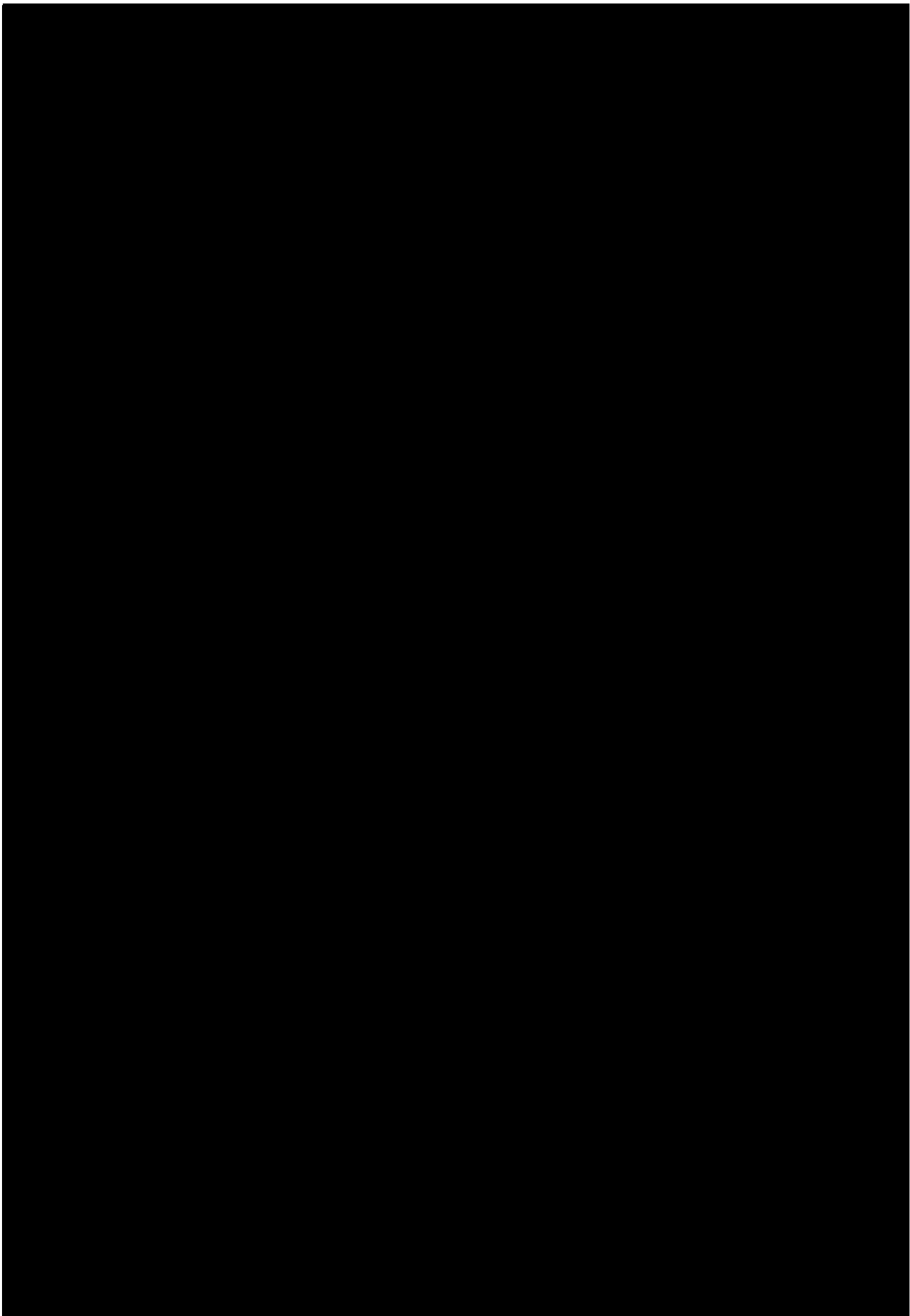










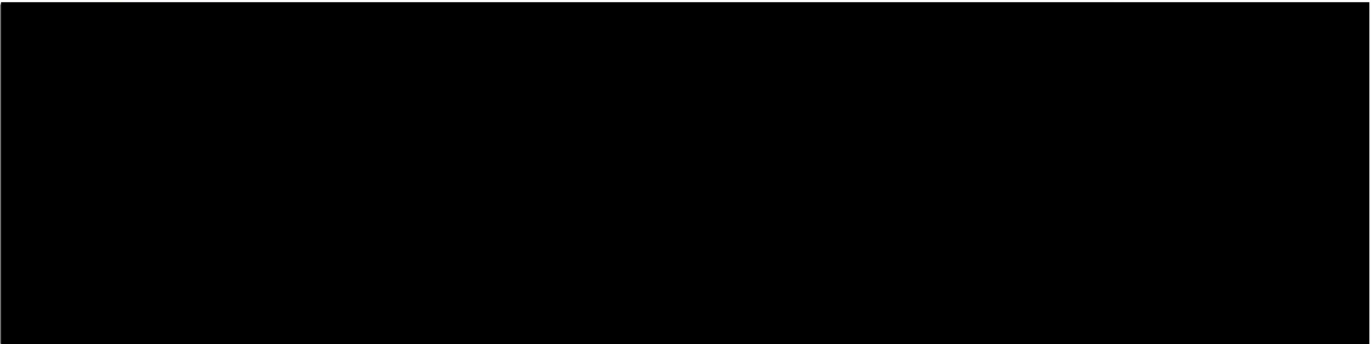


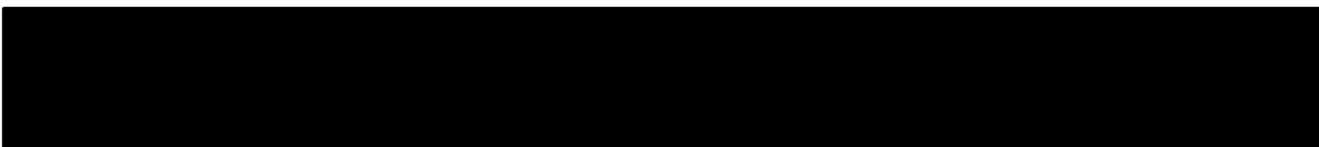
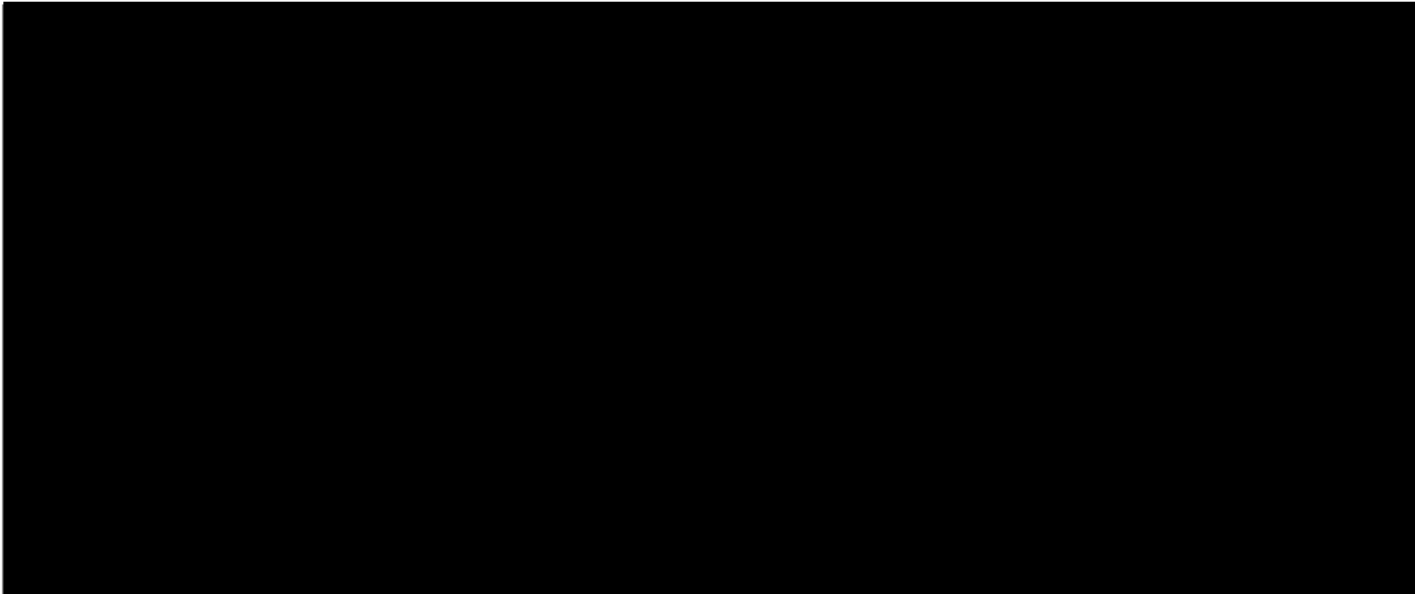


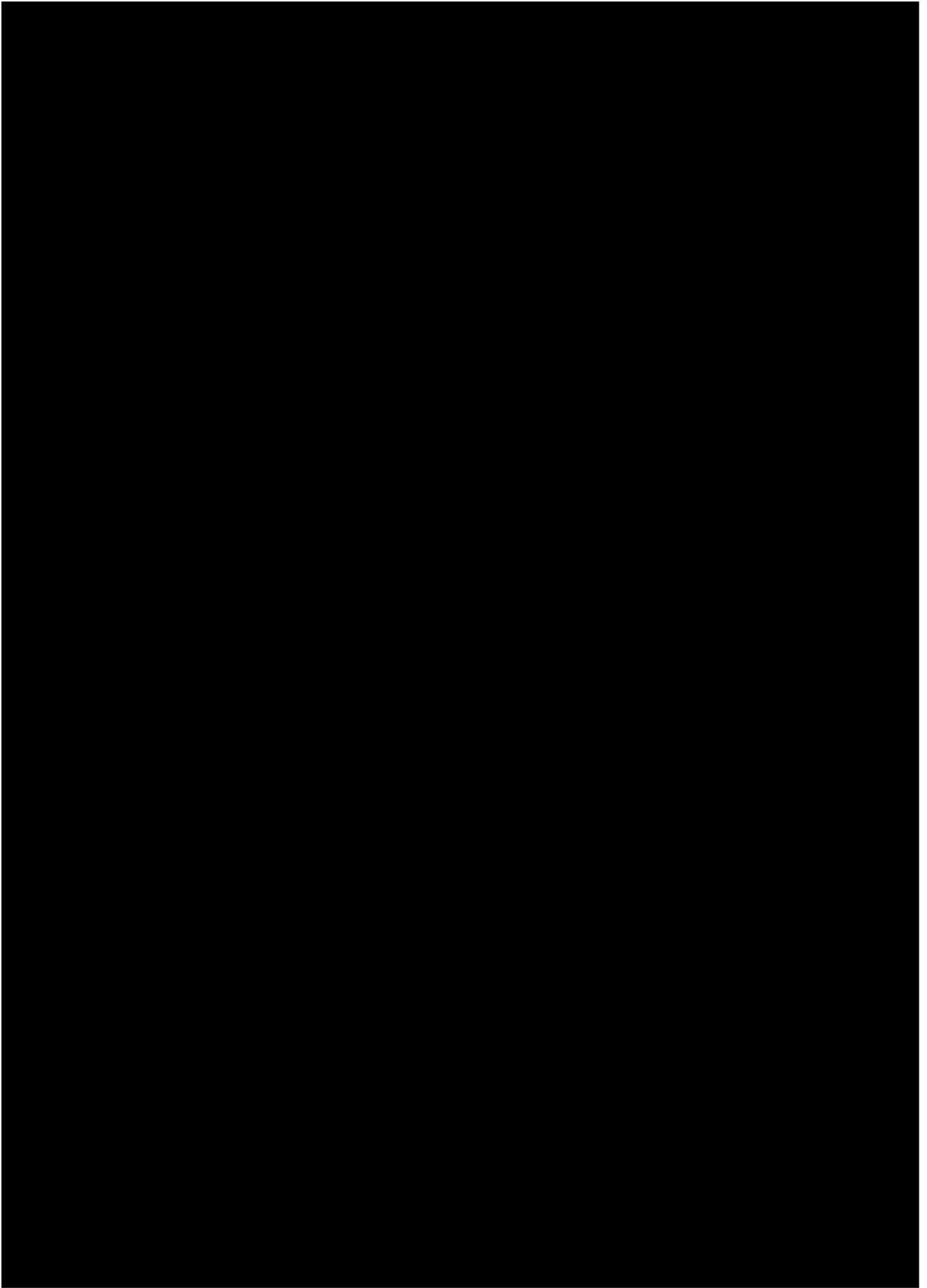
**Transport
for NSW**

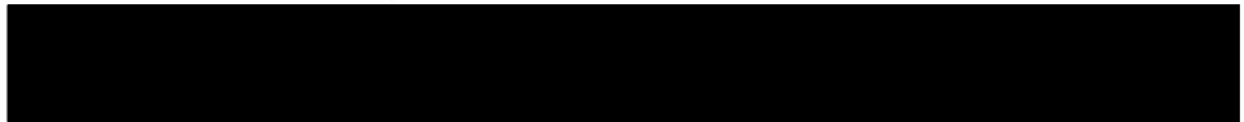
Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
**Schedule F7 – Initial Traffic and Transport
Management Plan**

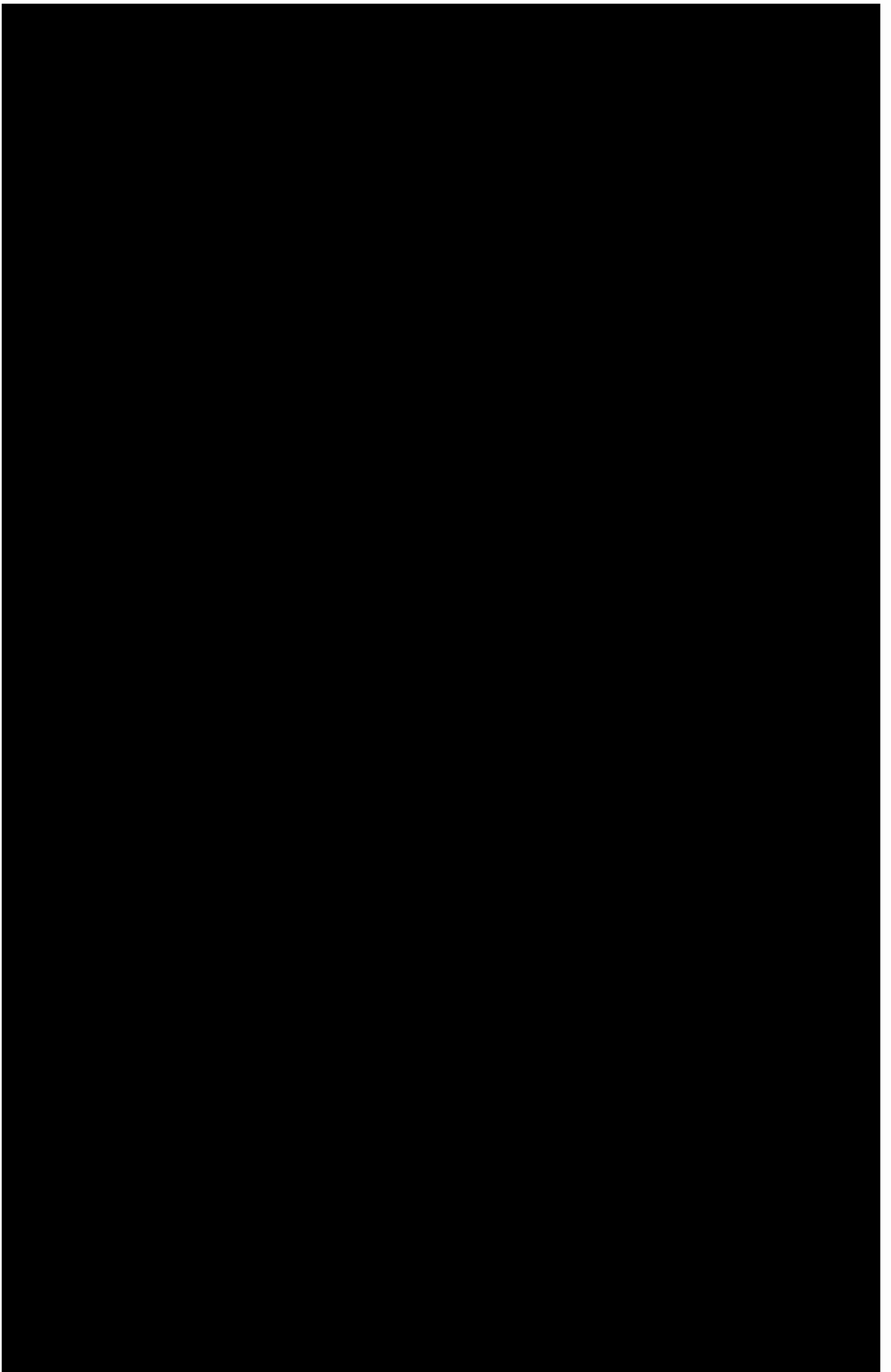
Document Number: 3129240_9
Execution Version

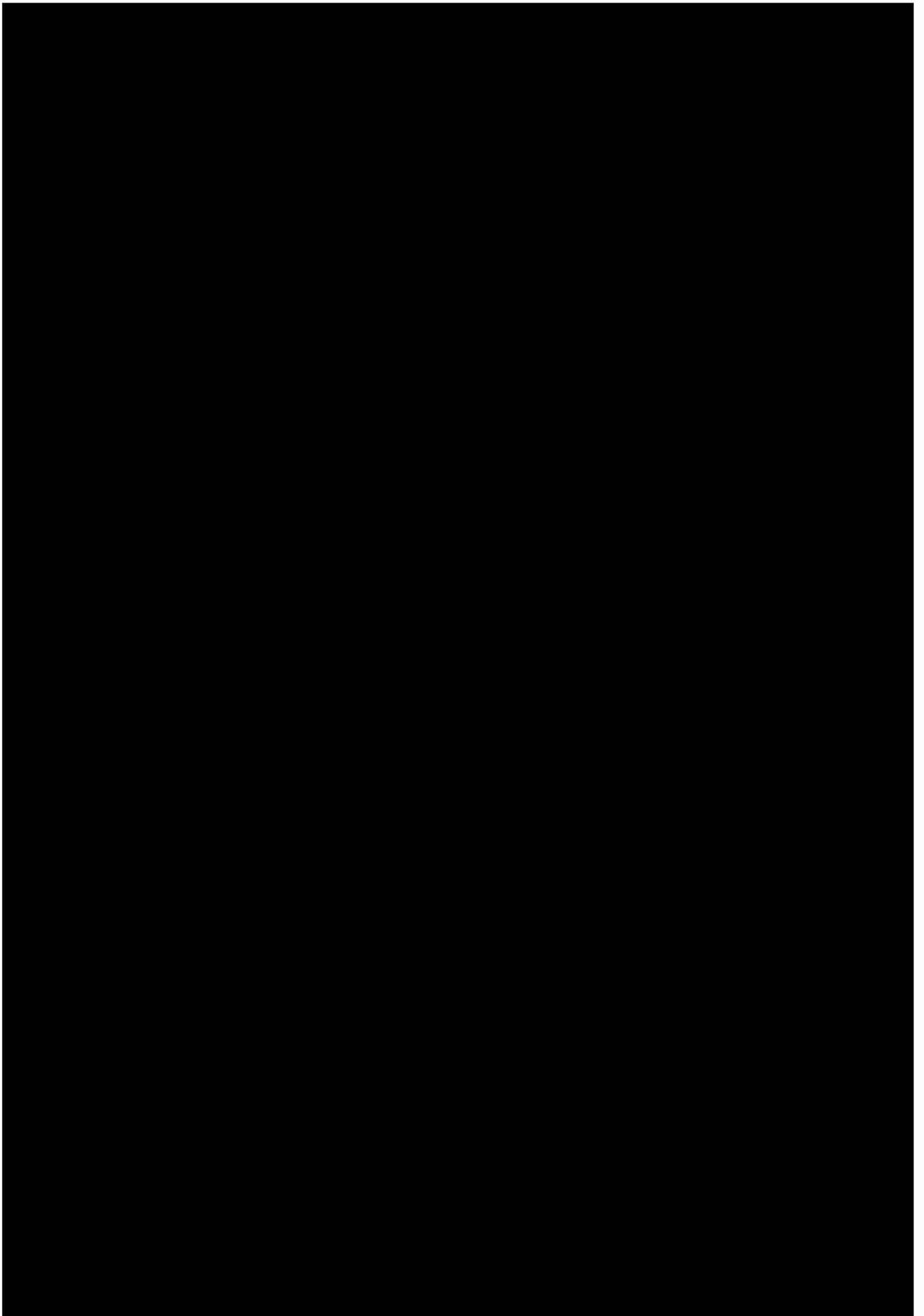


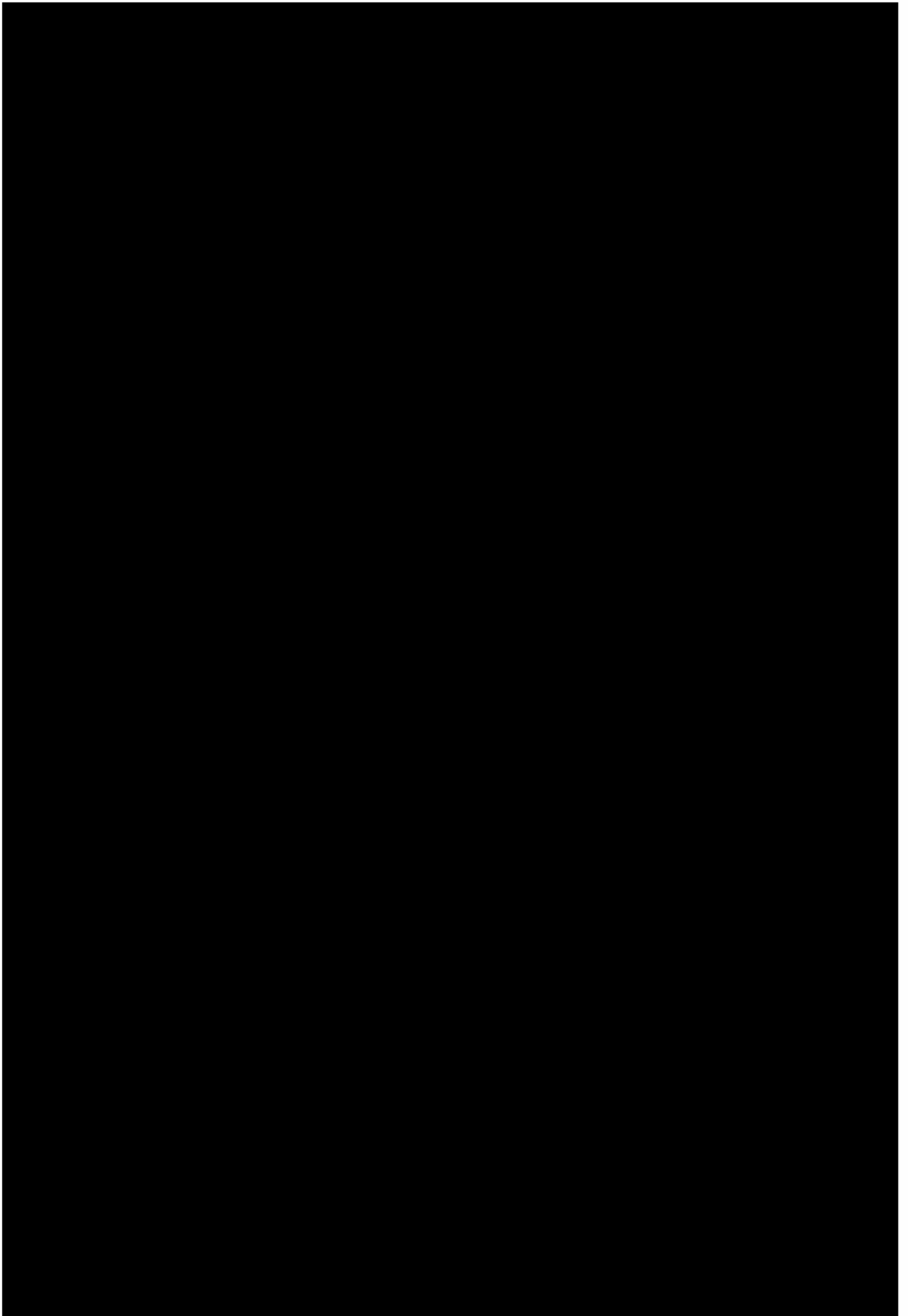


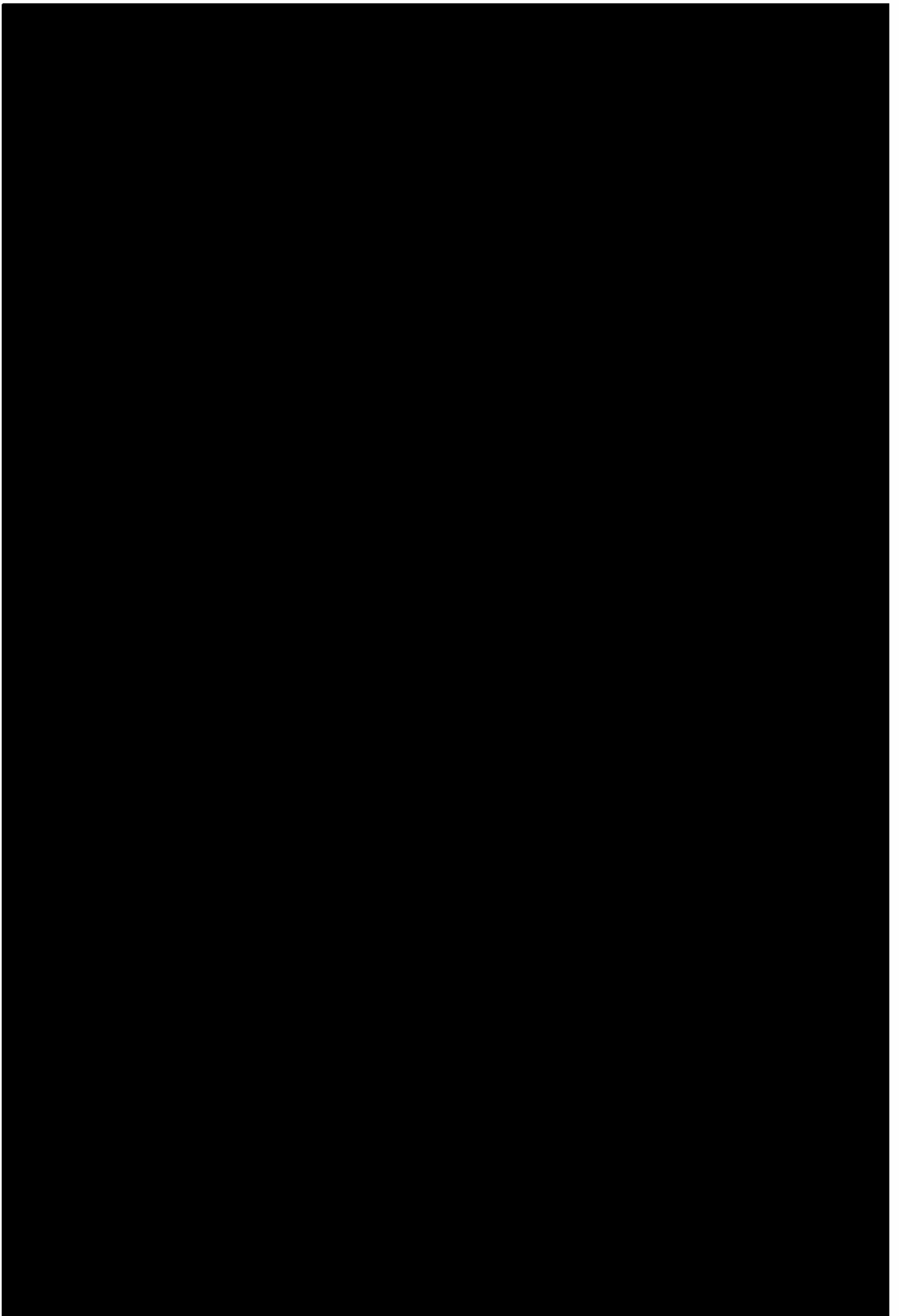


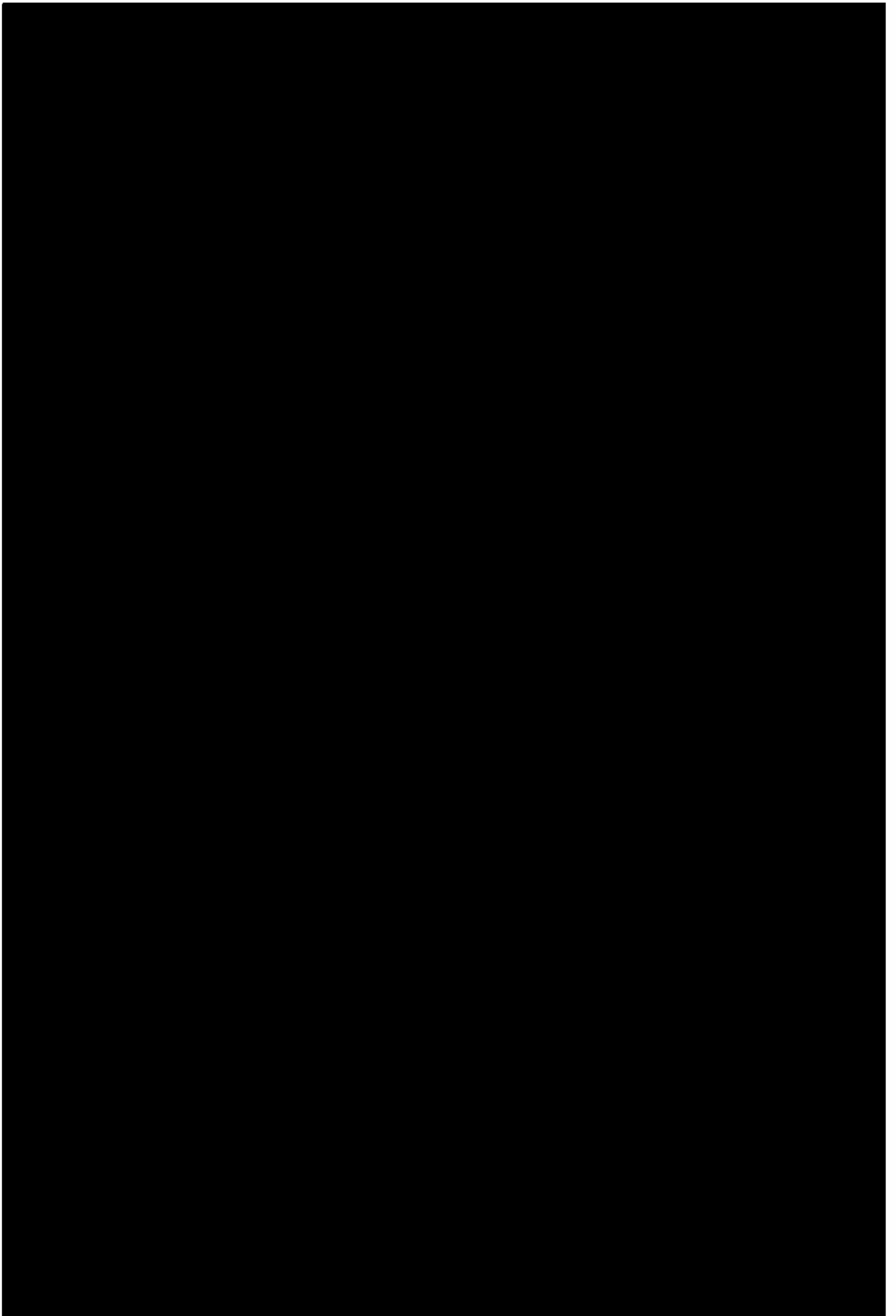


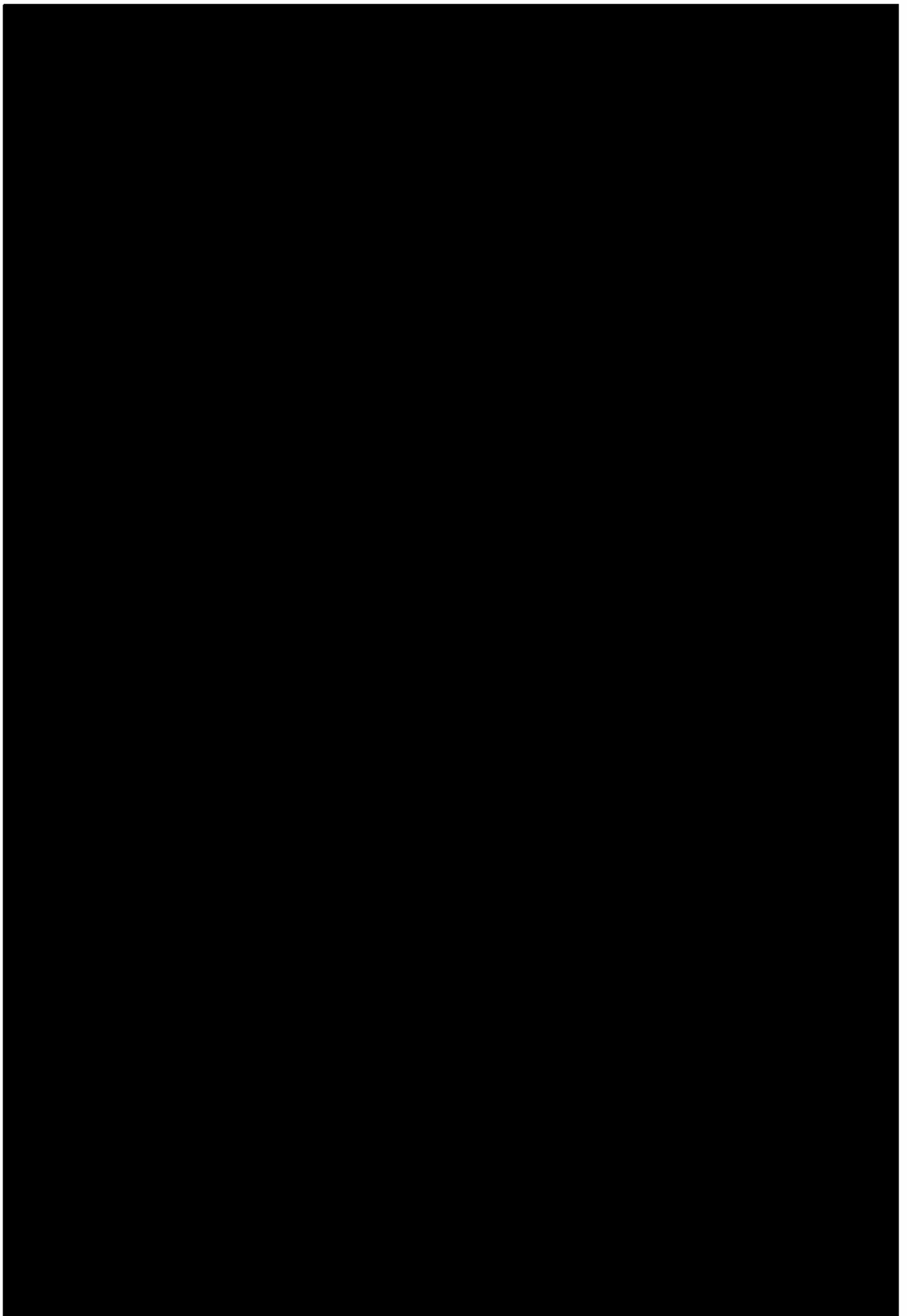


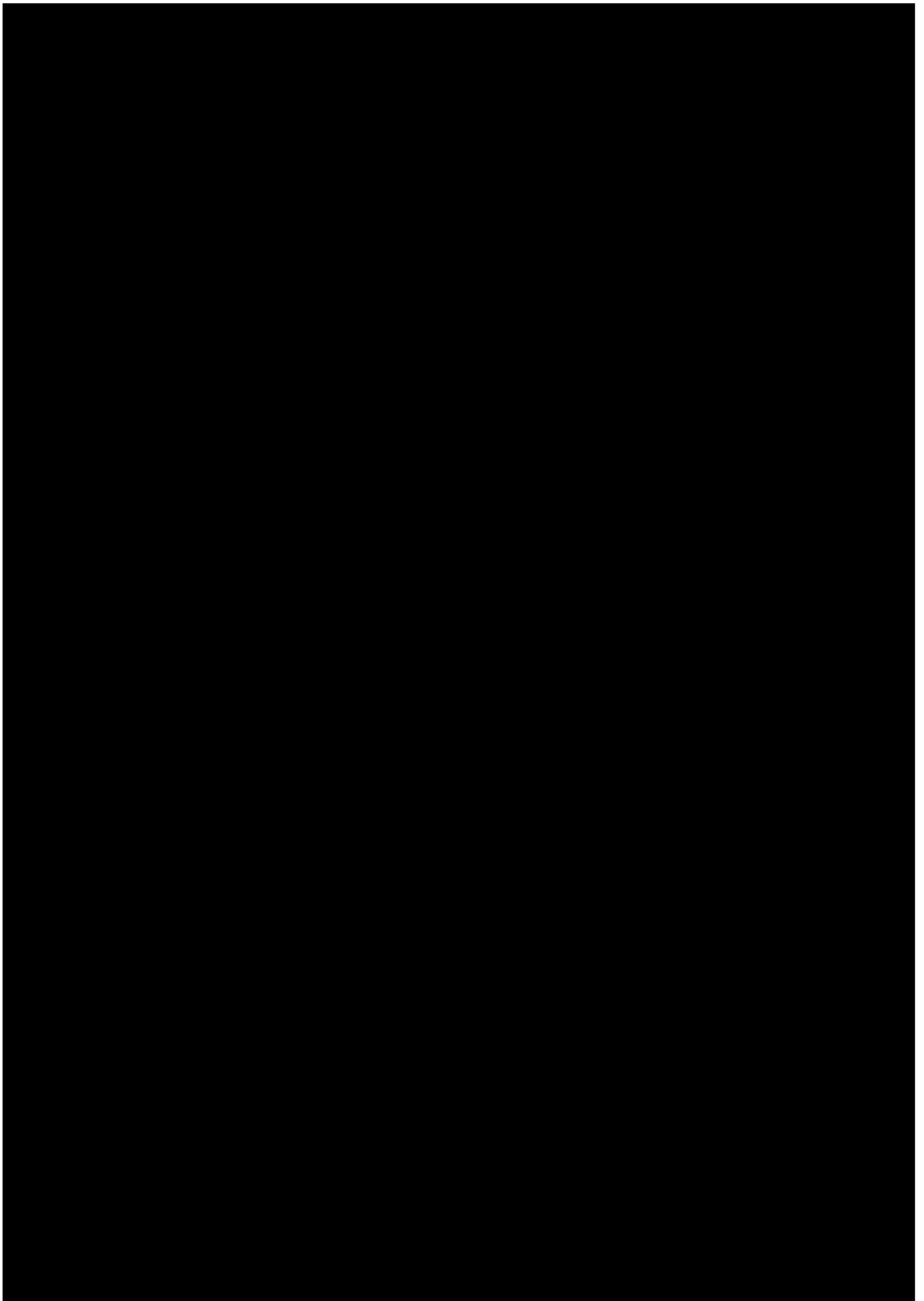


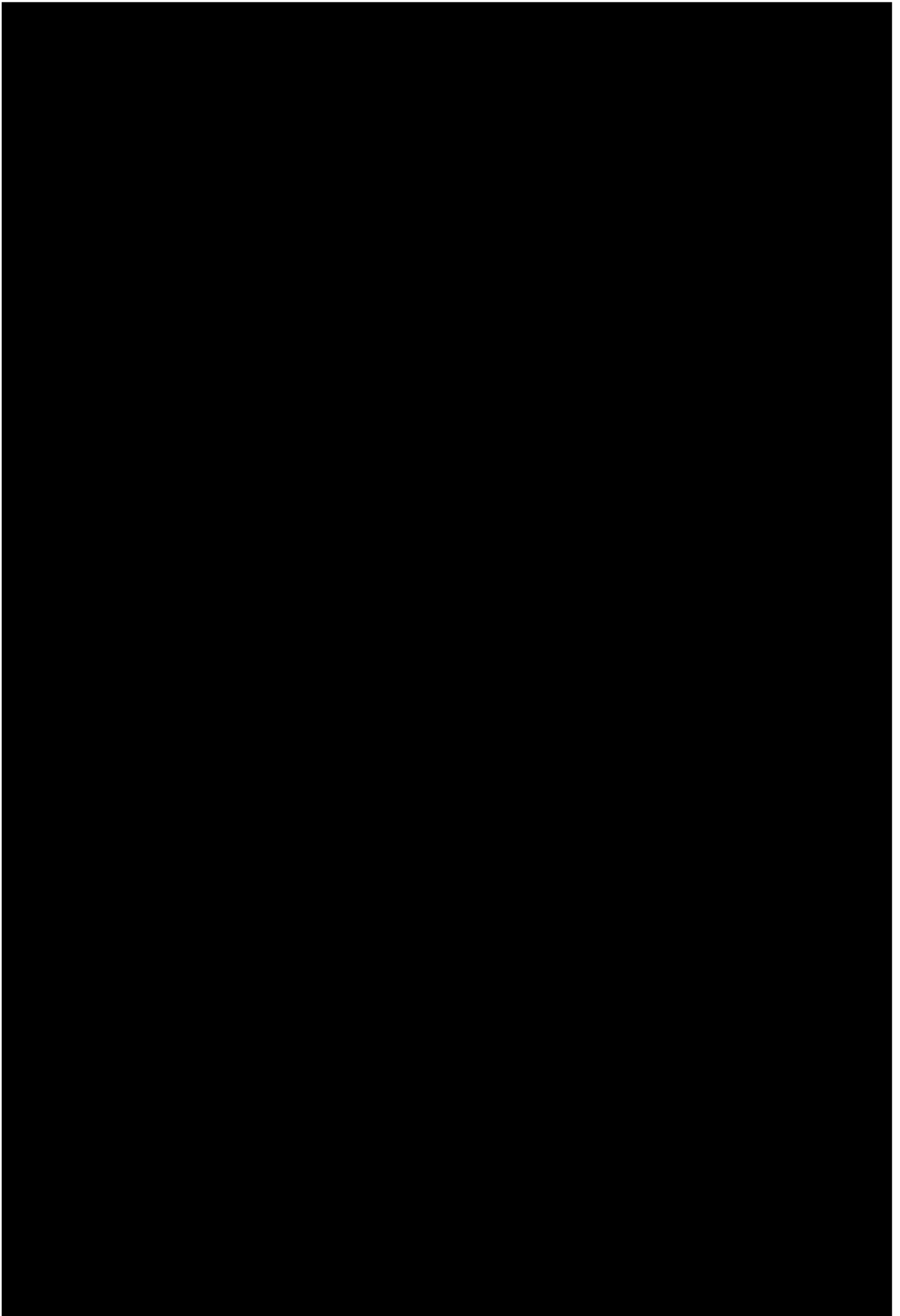


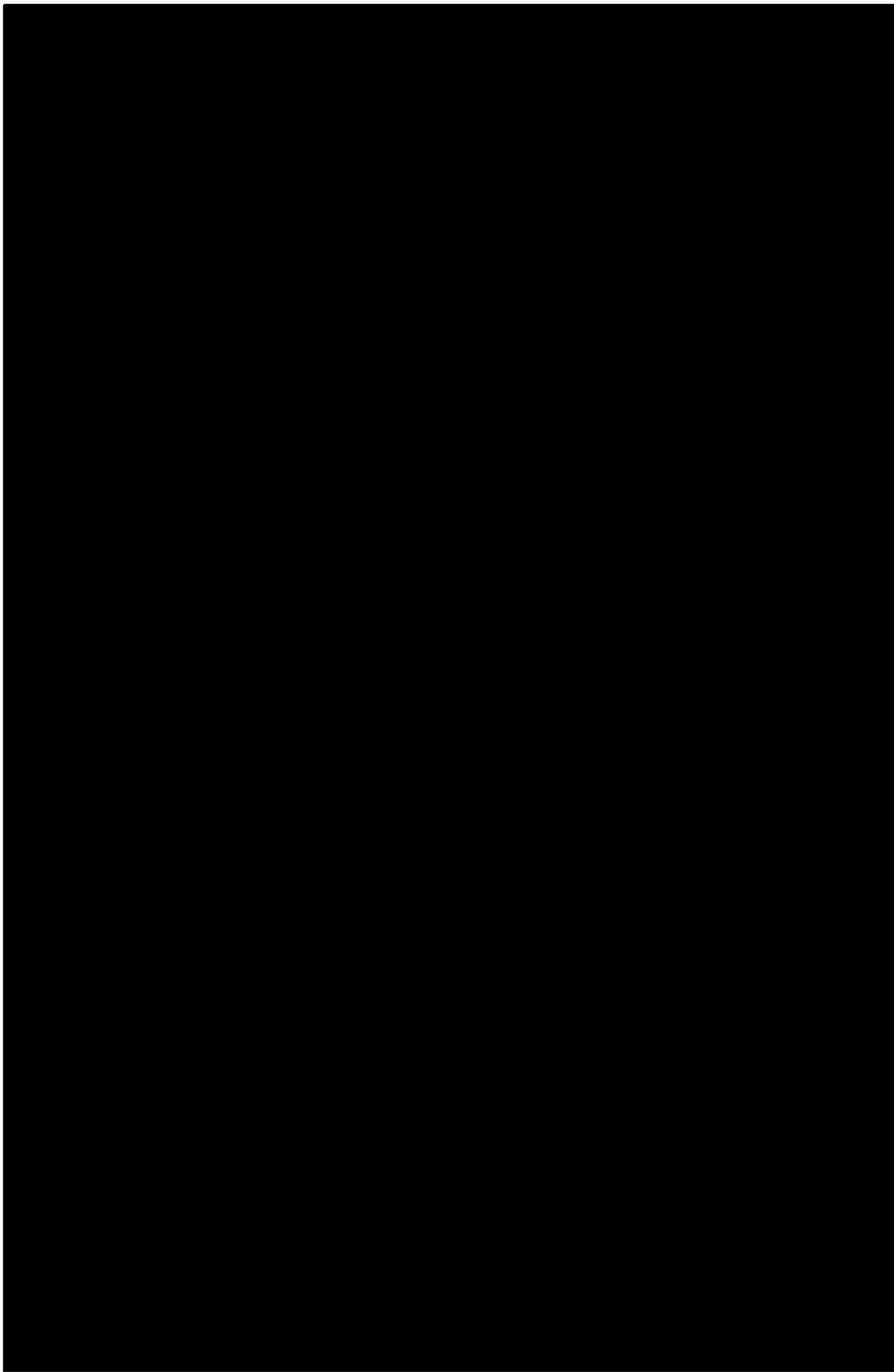


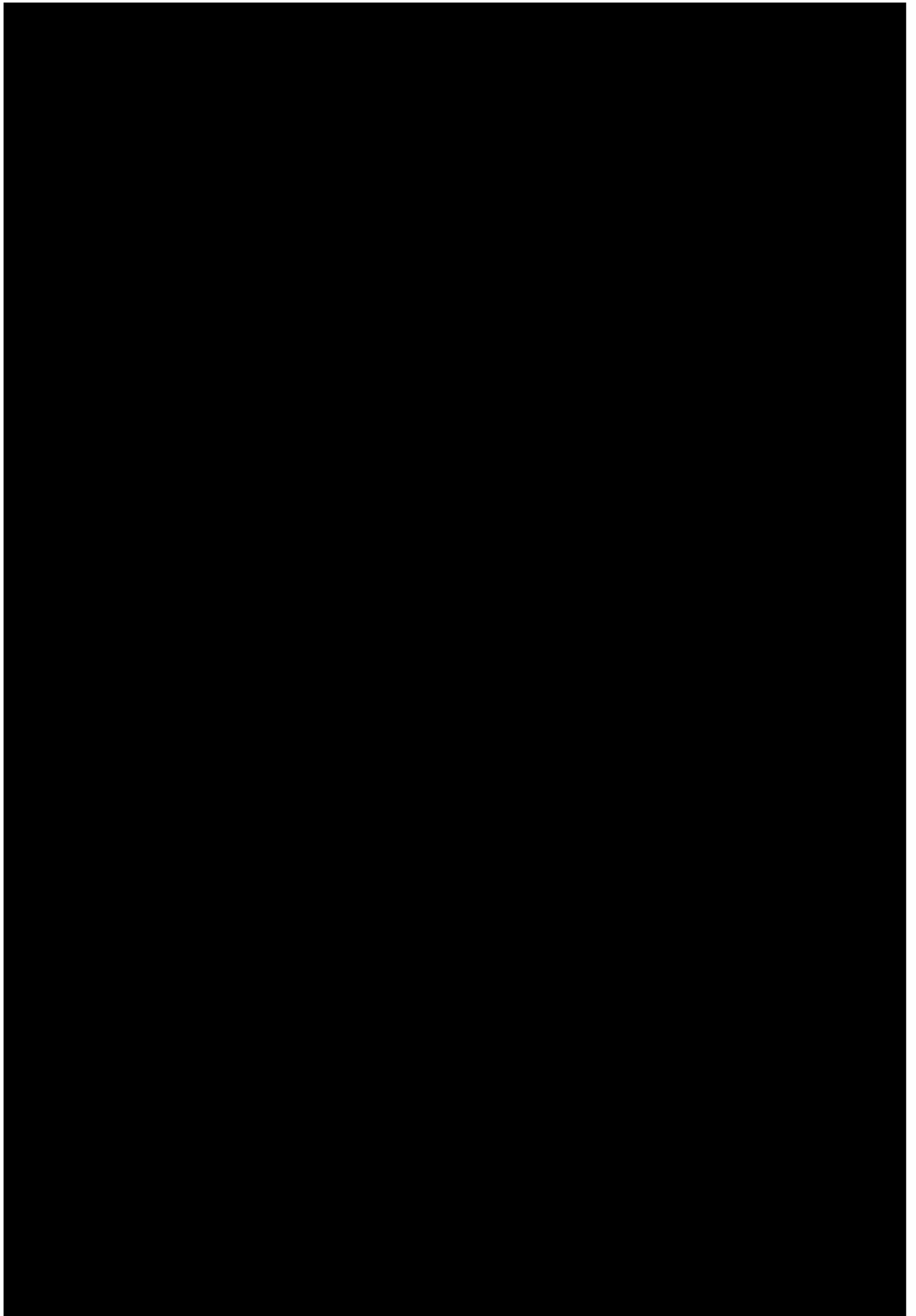


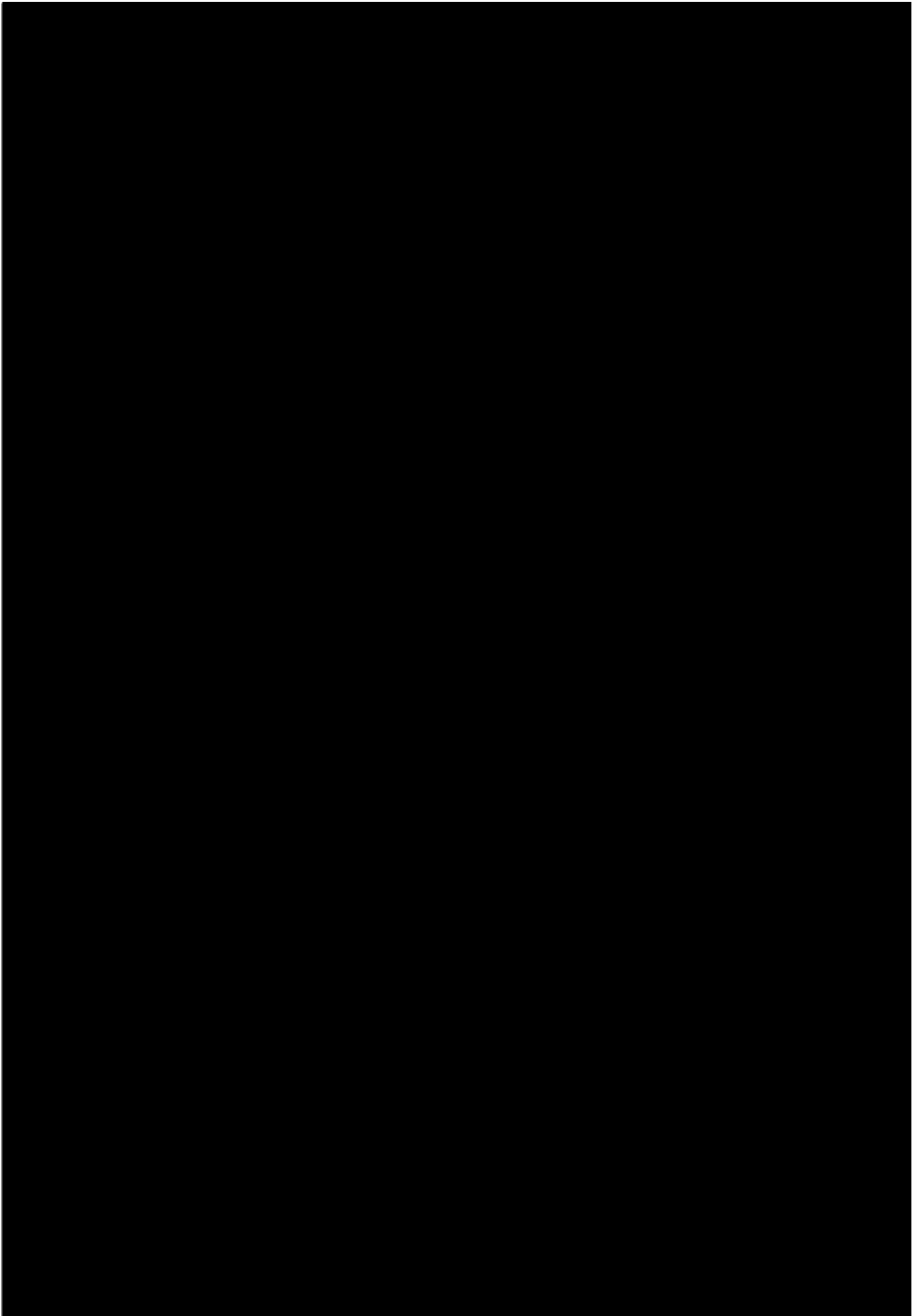


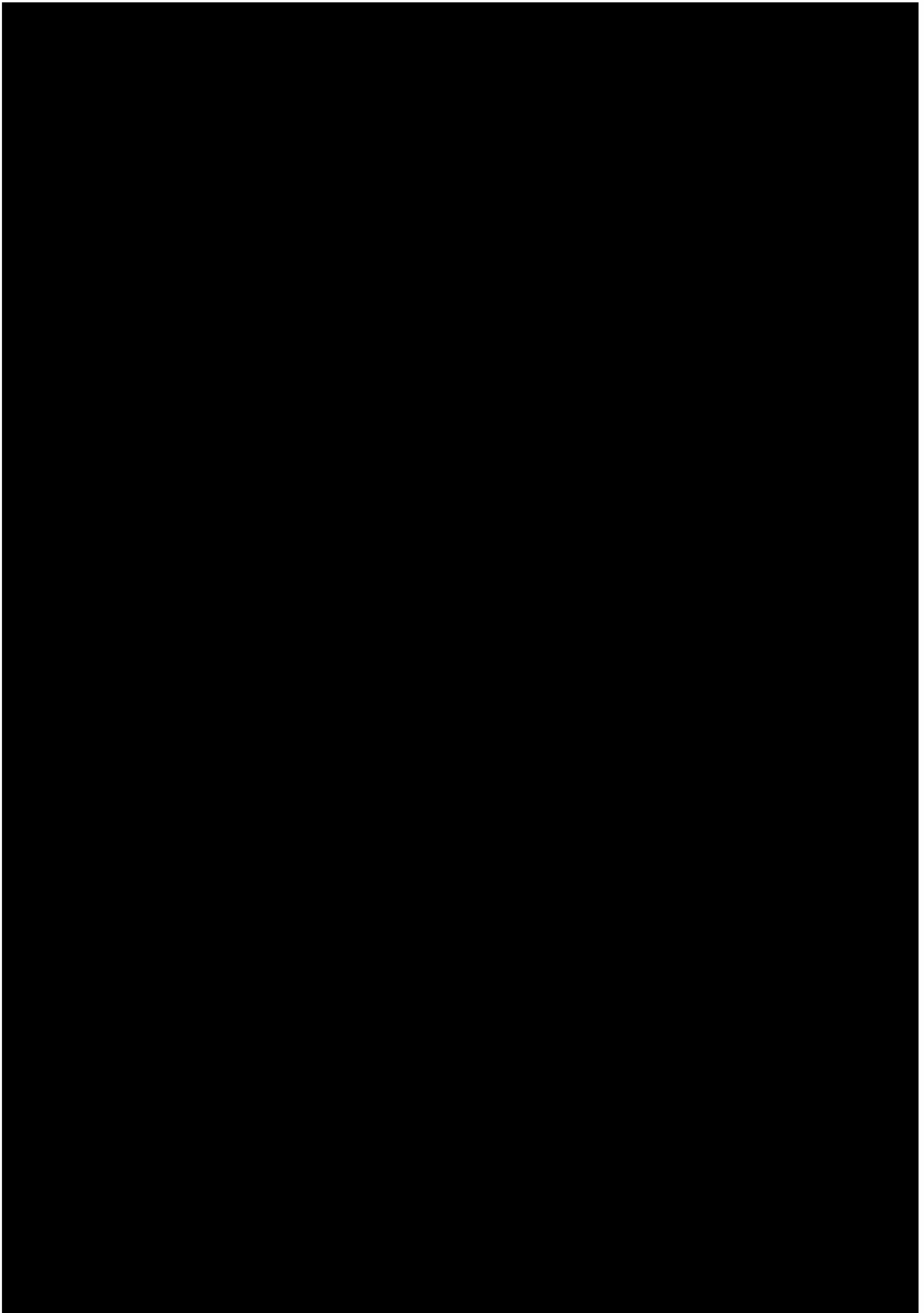


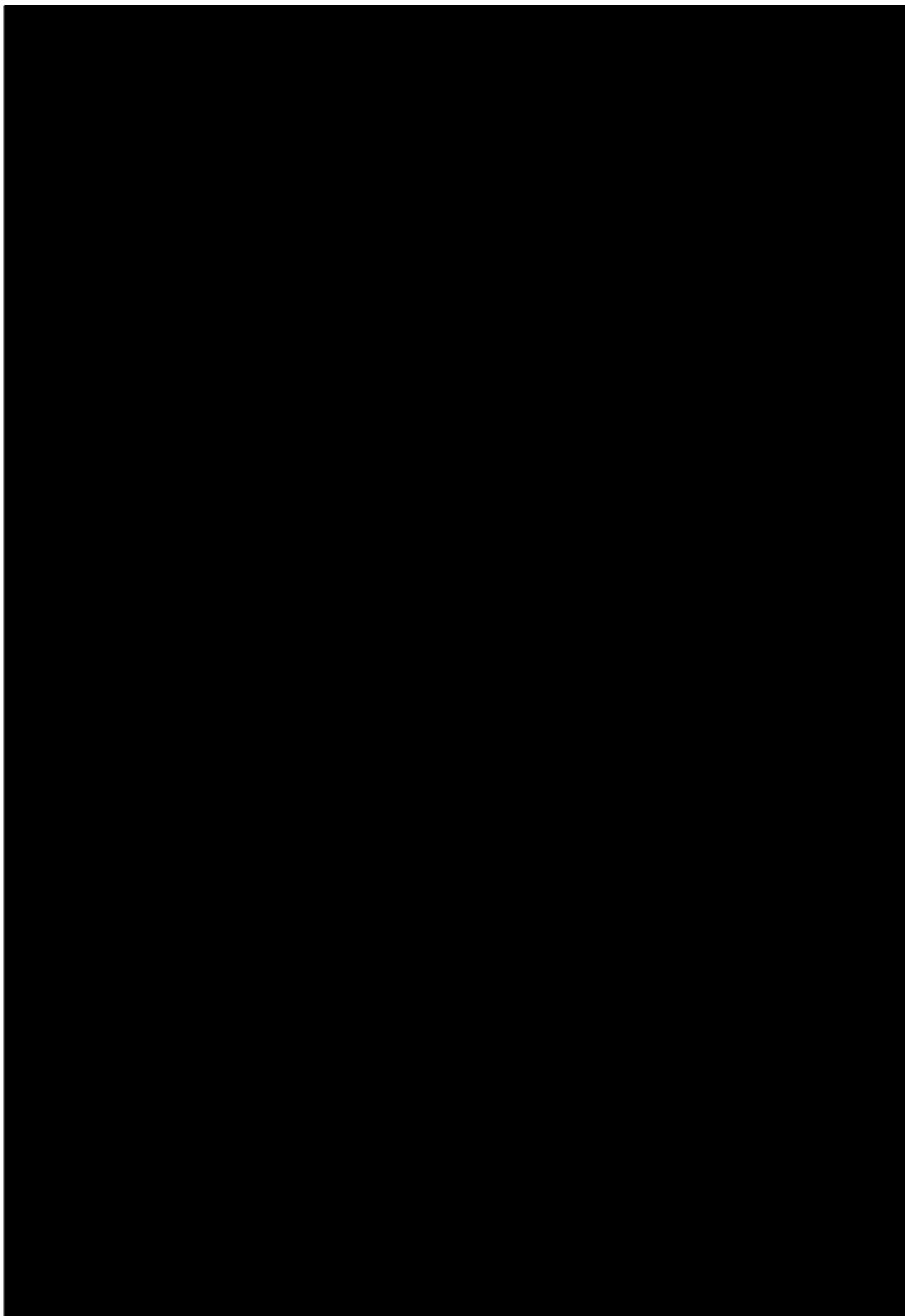


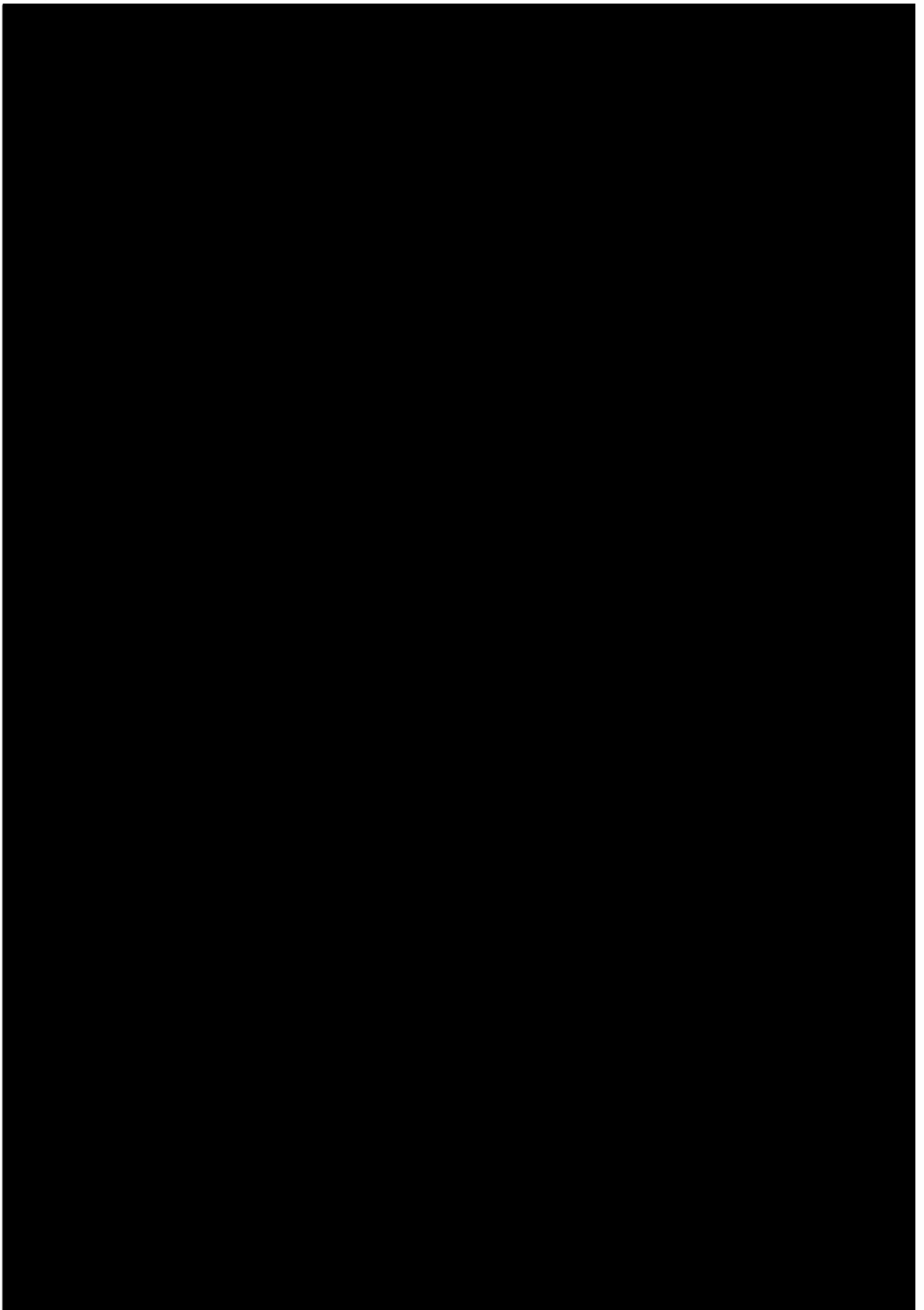


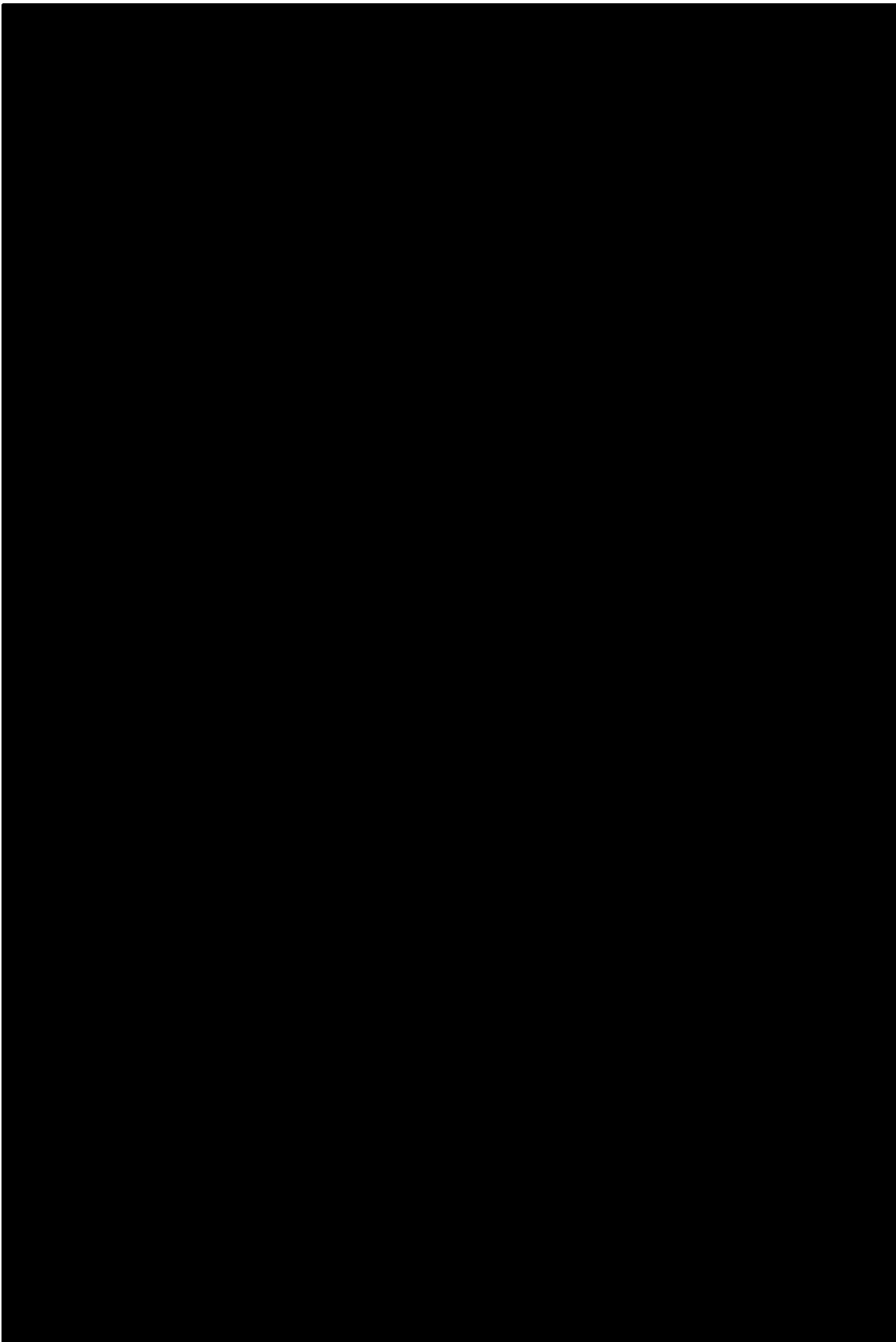


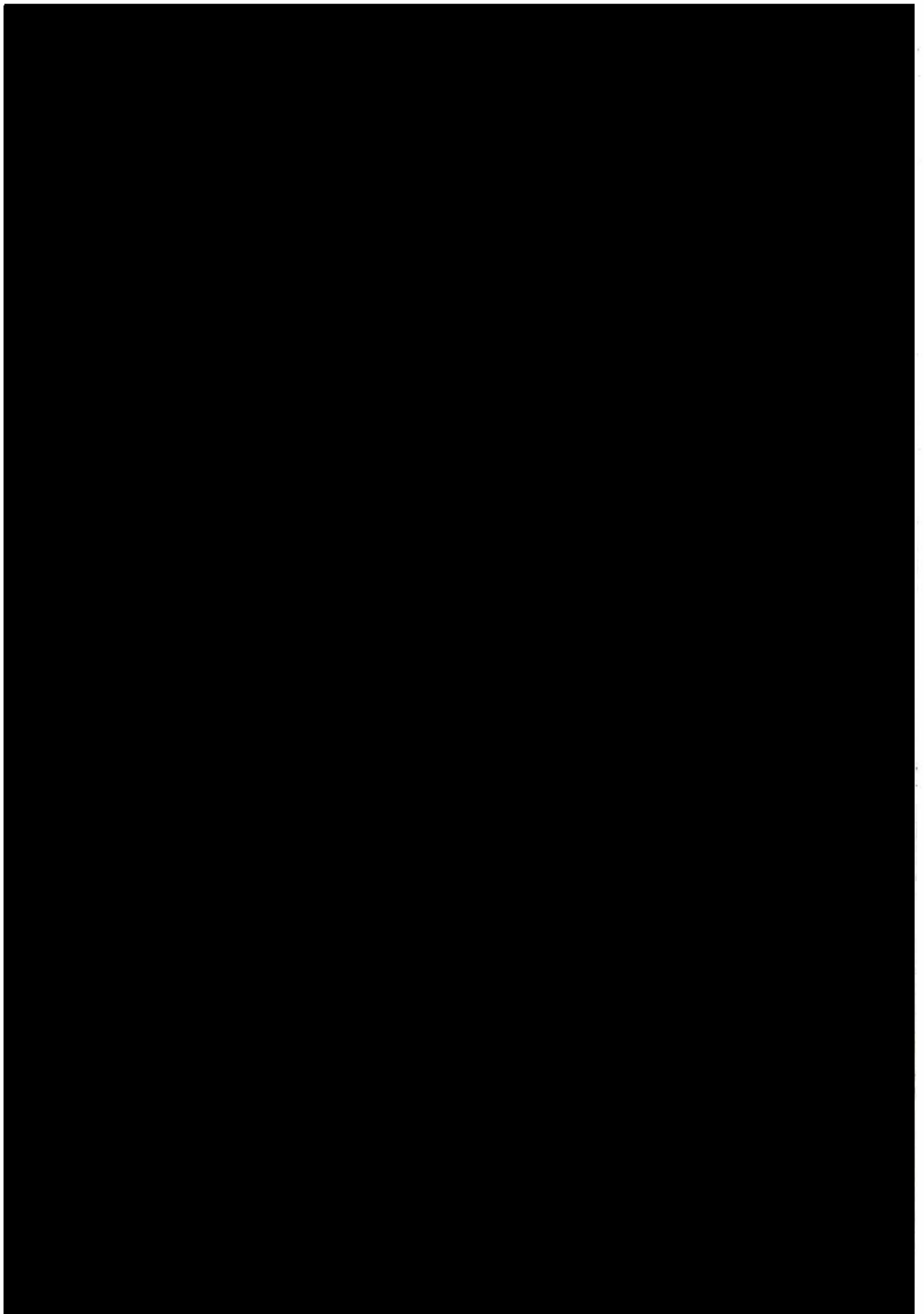


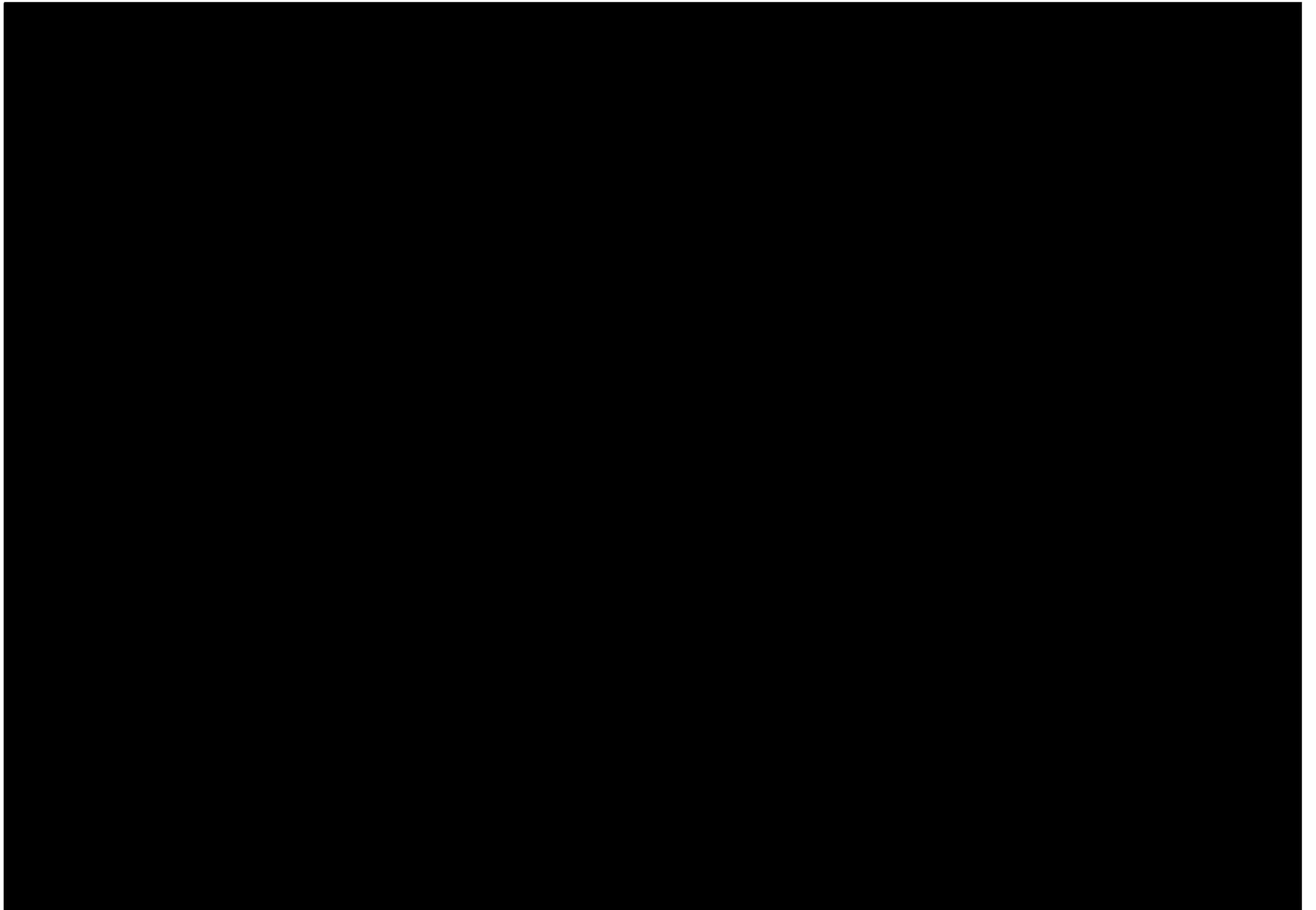


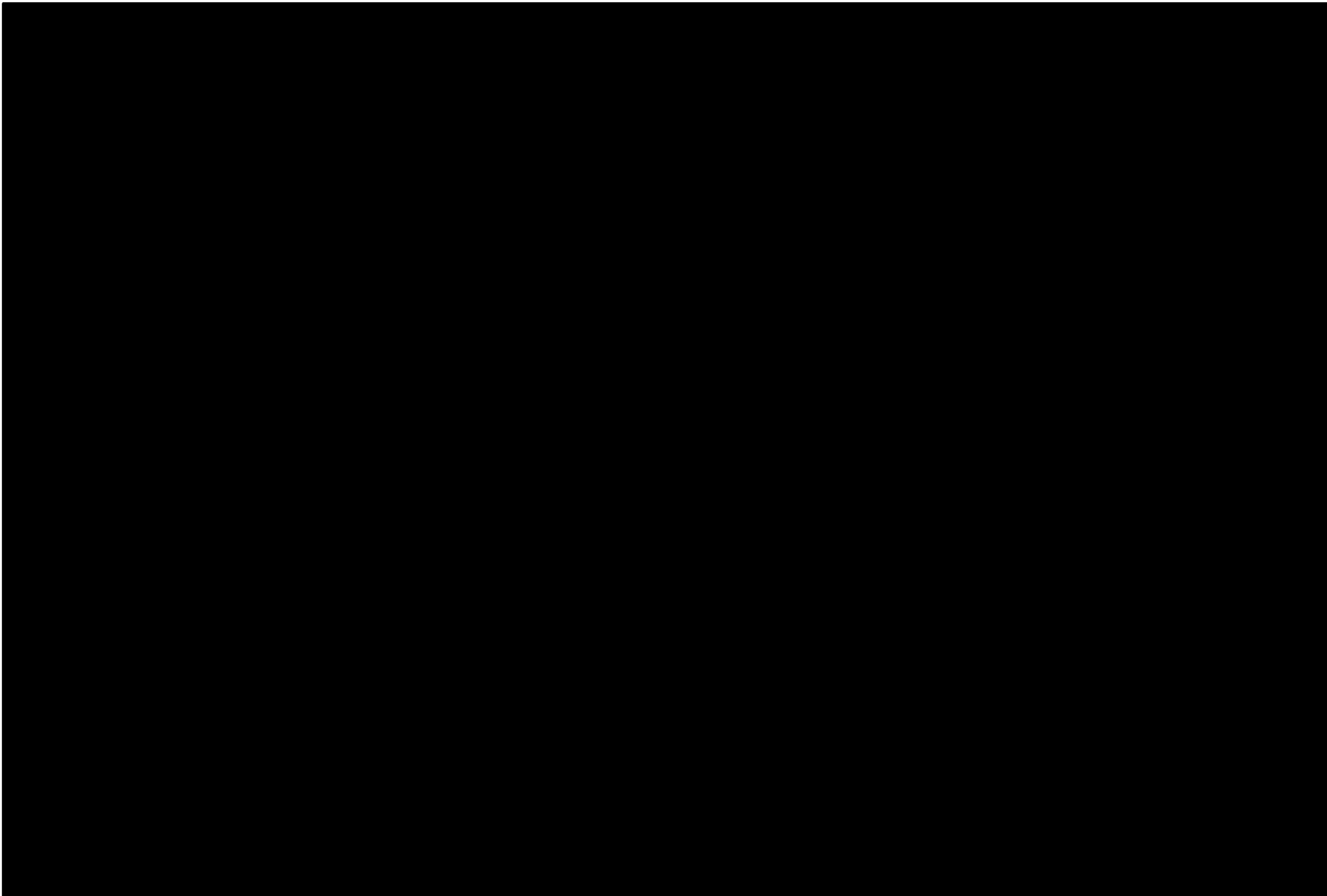


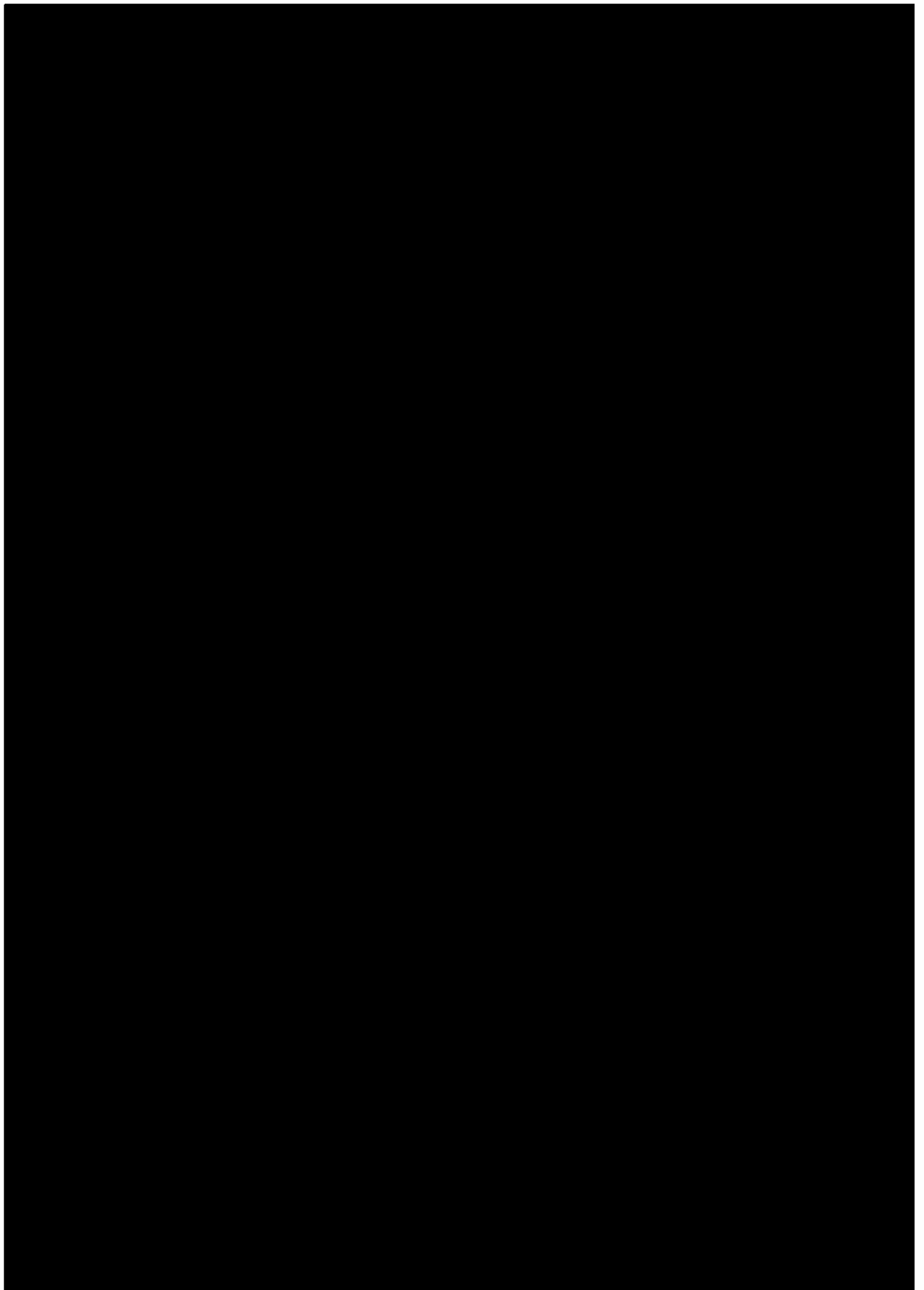


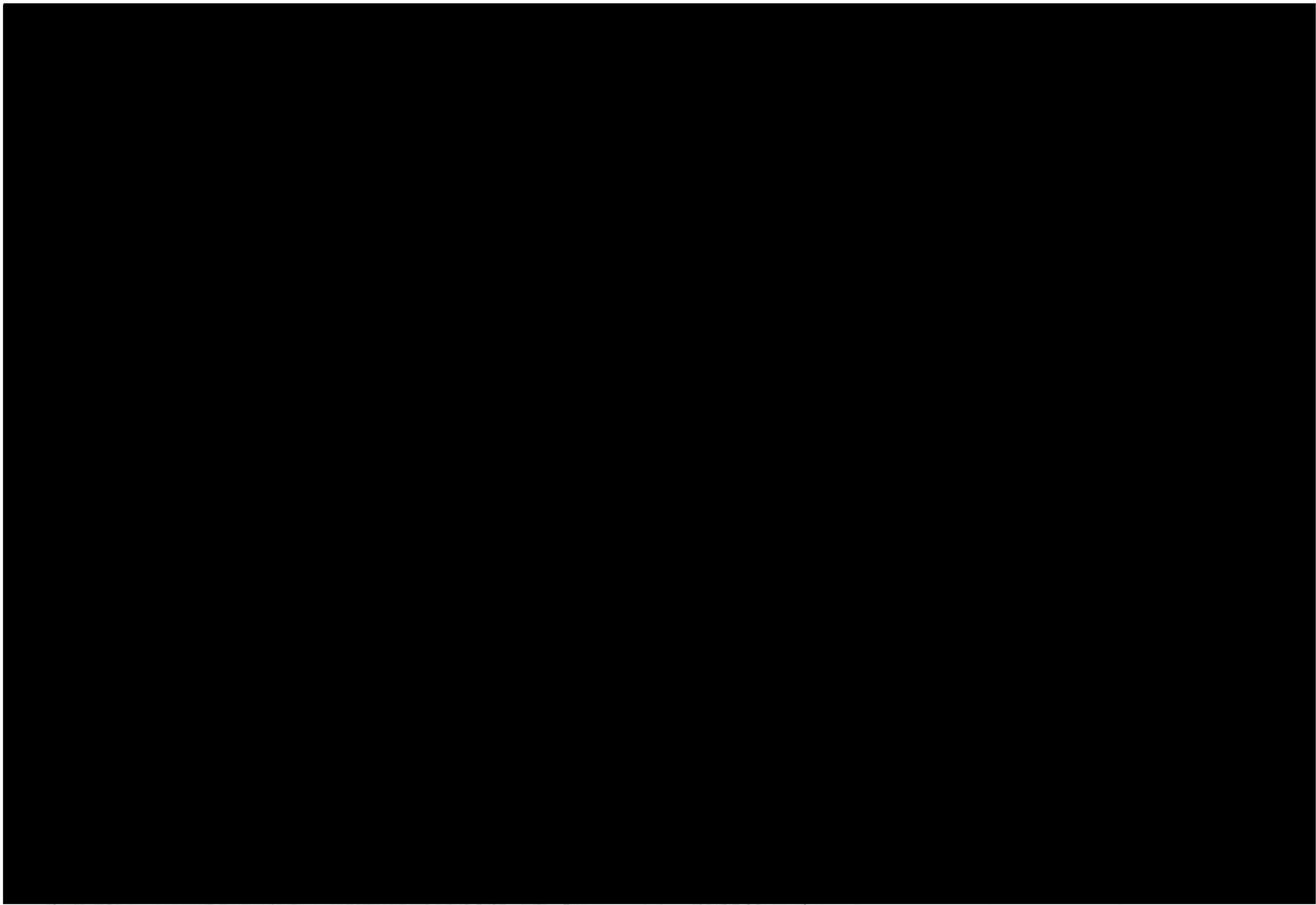


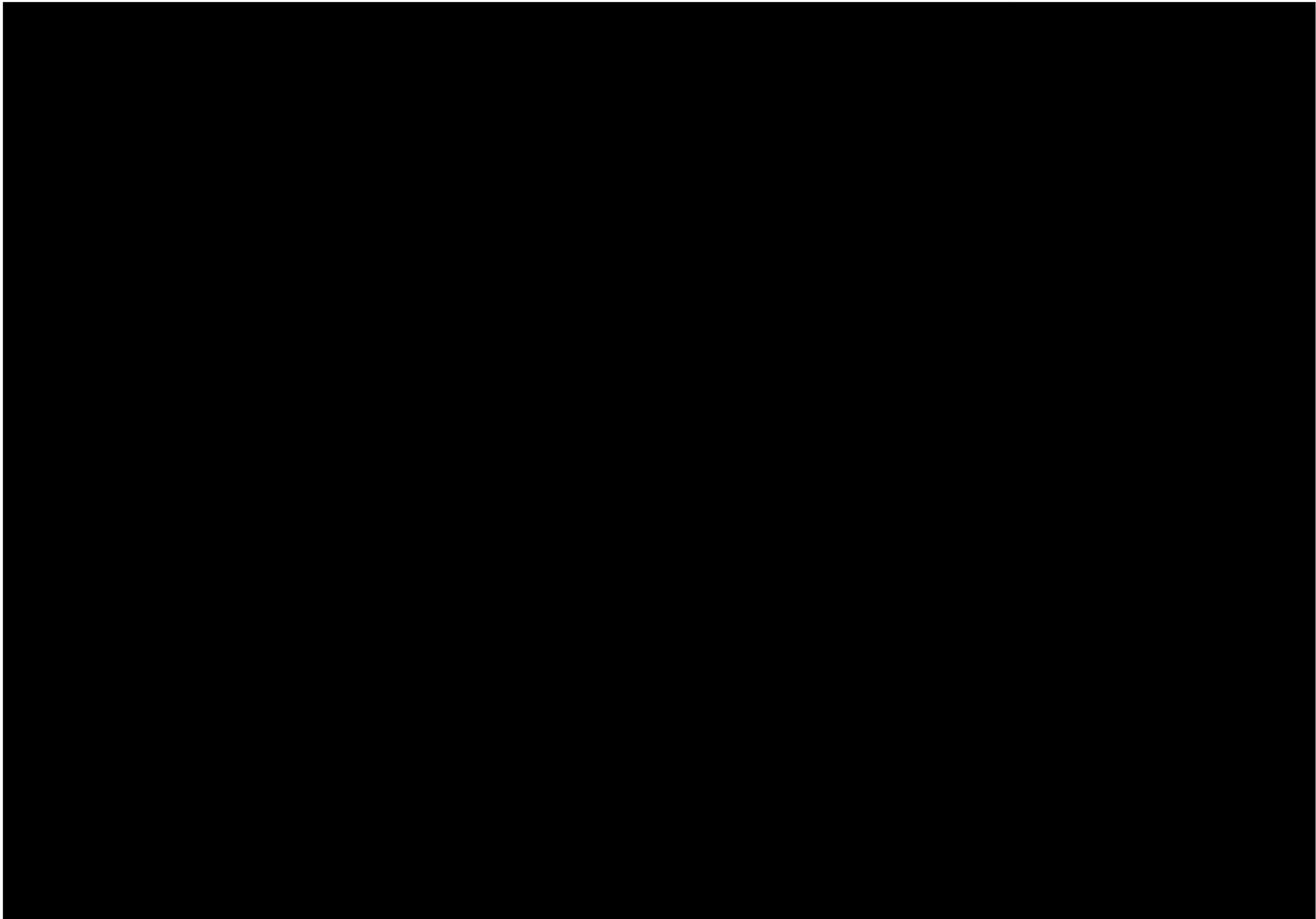


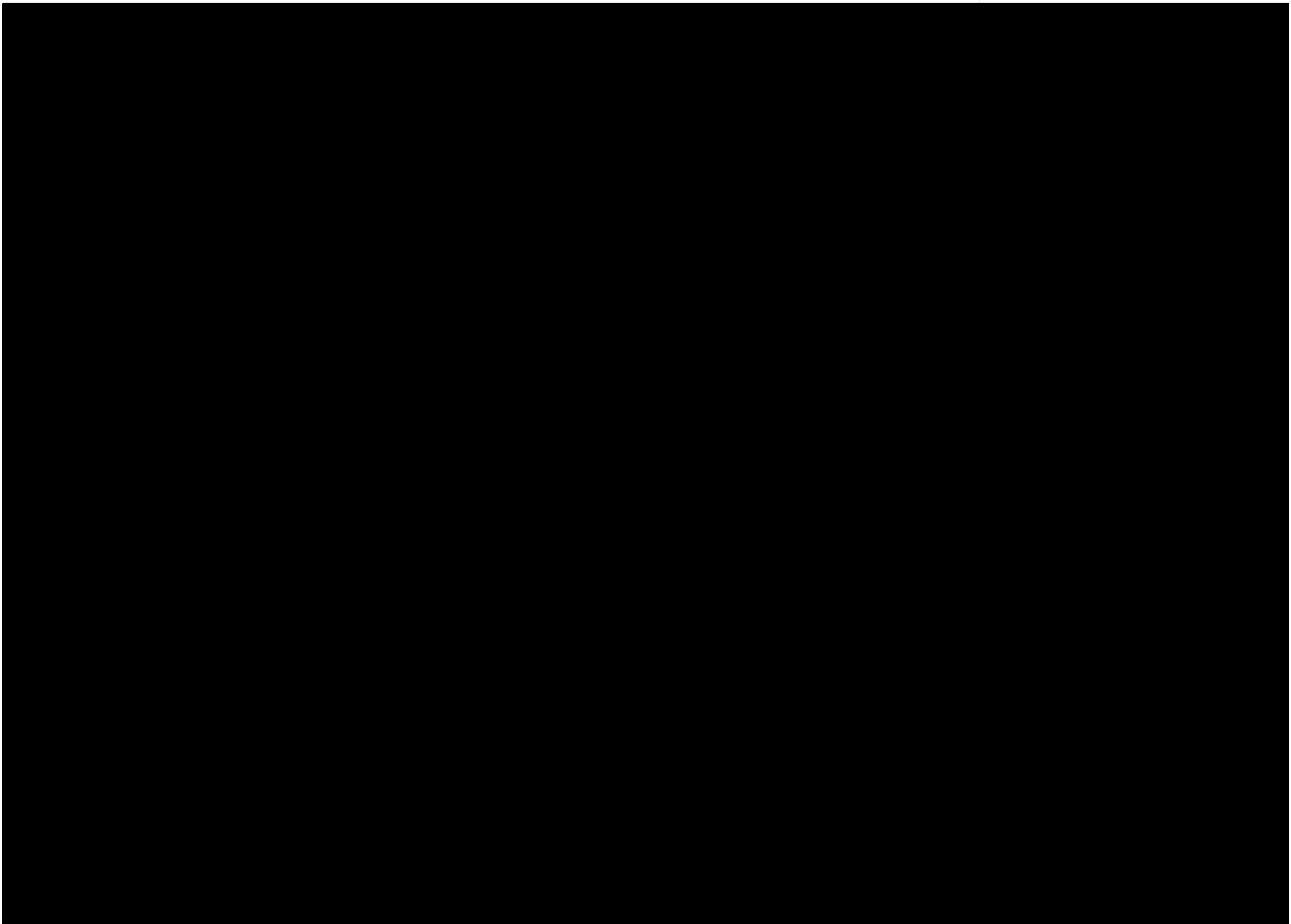


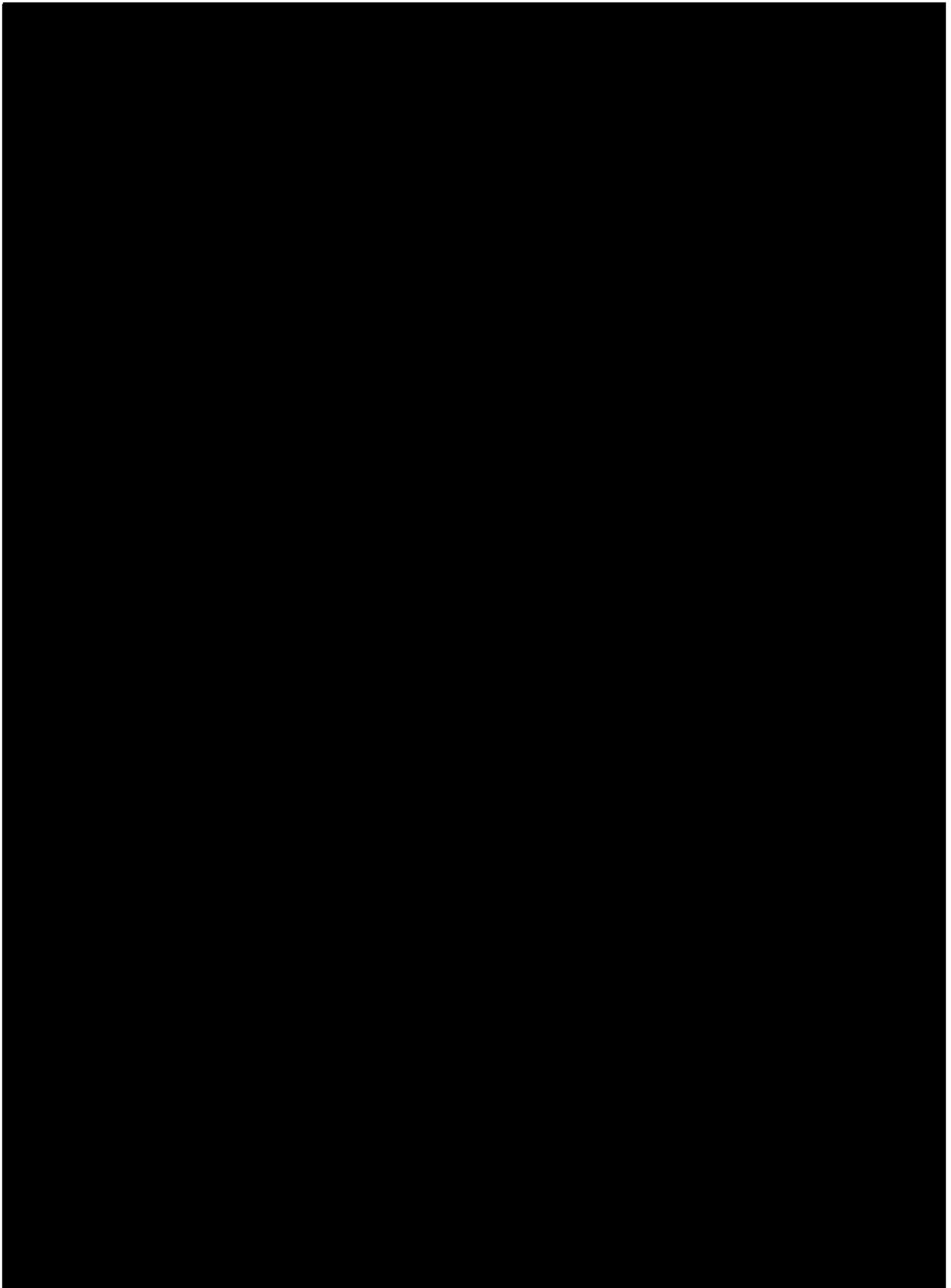


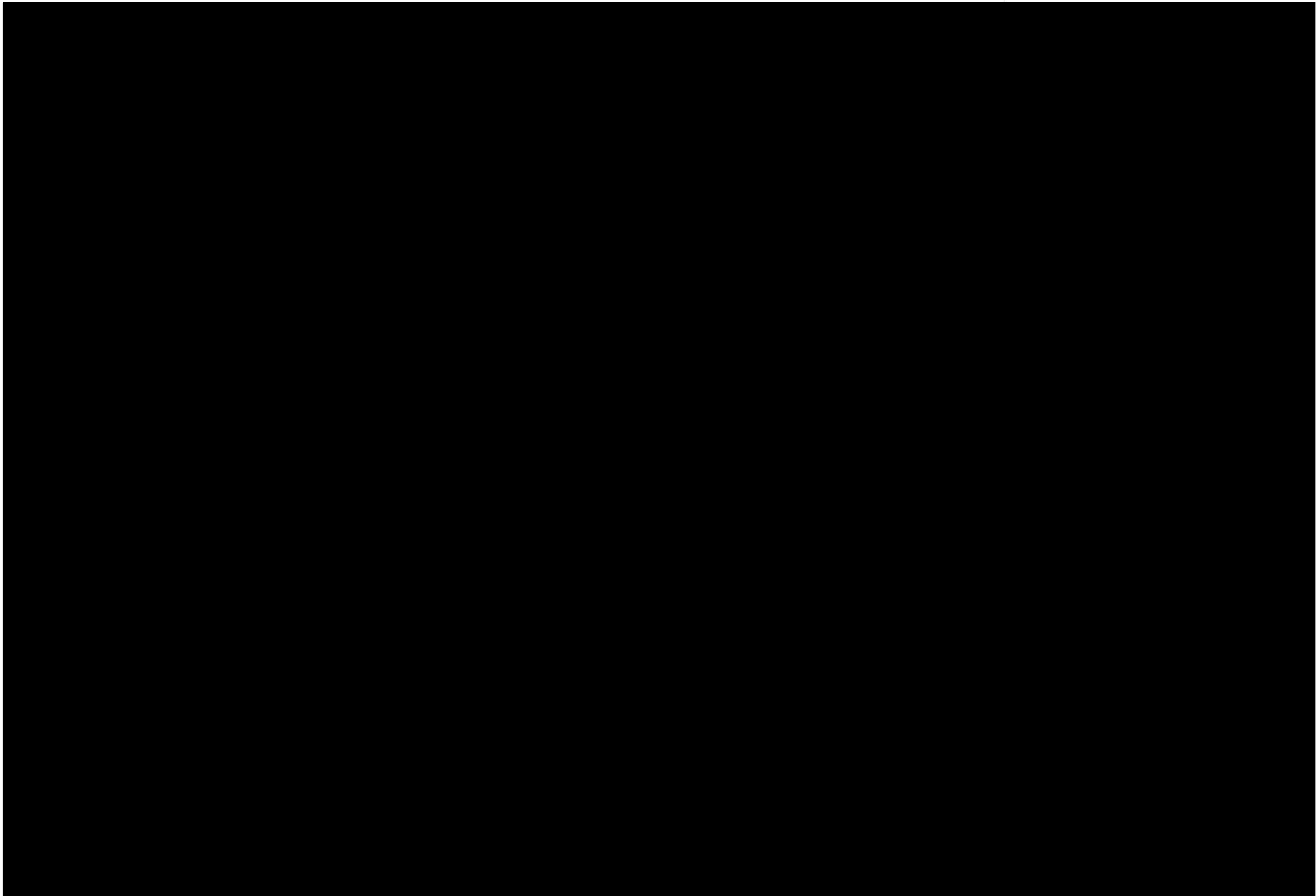


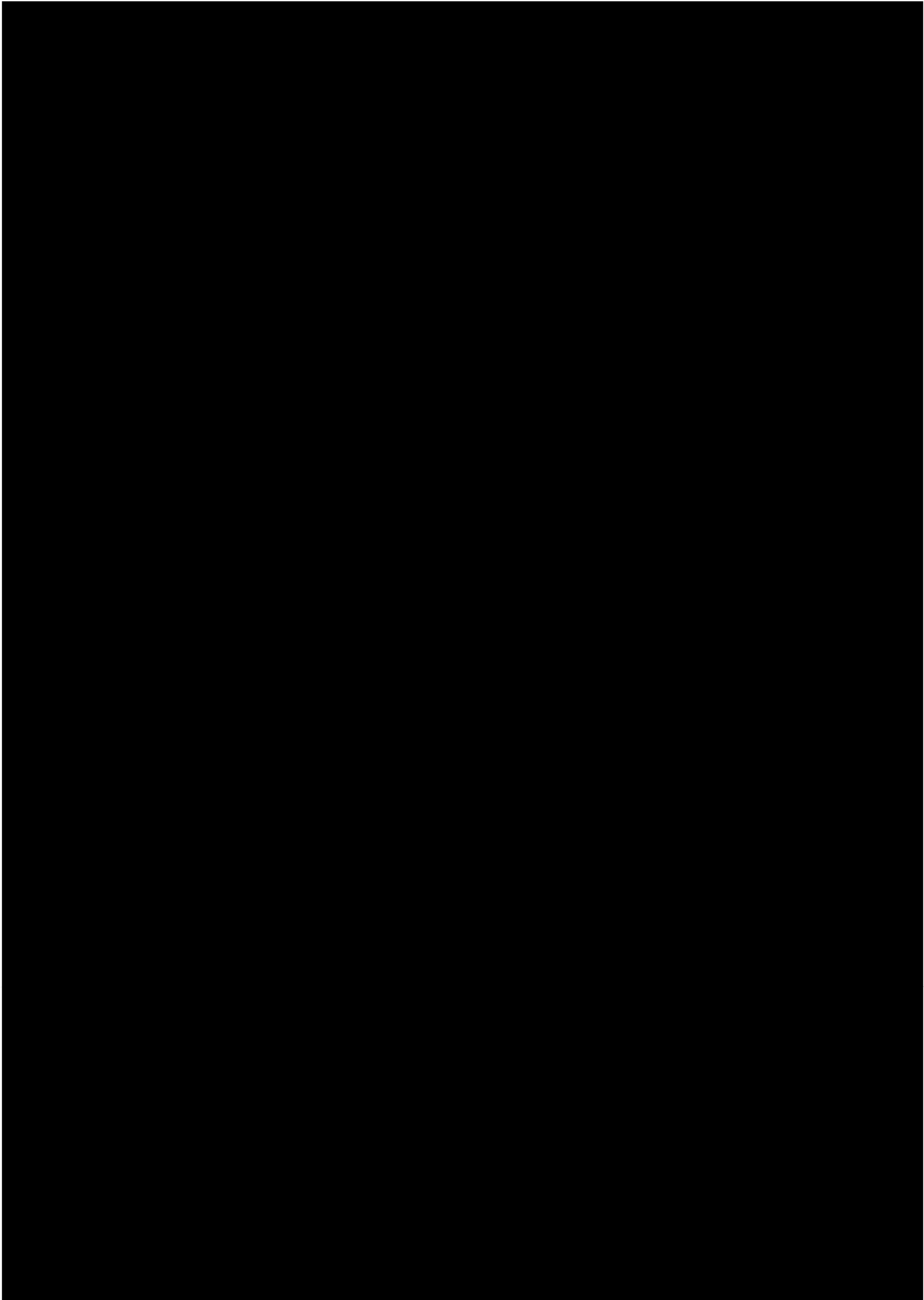


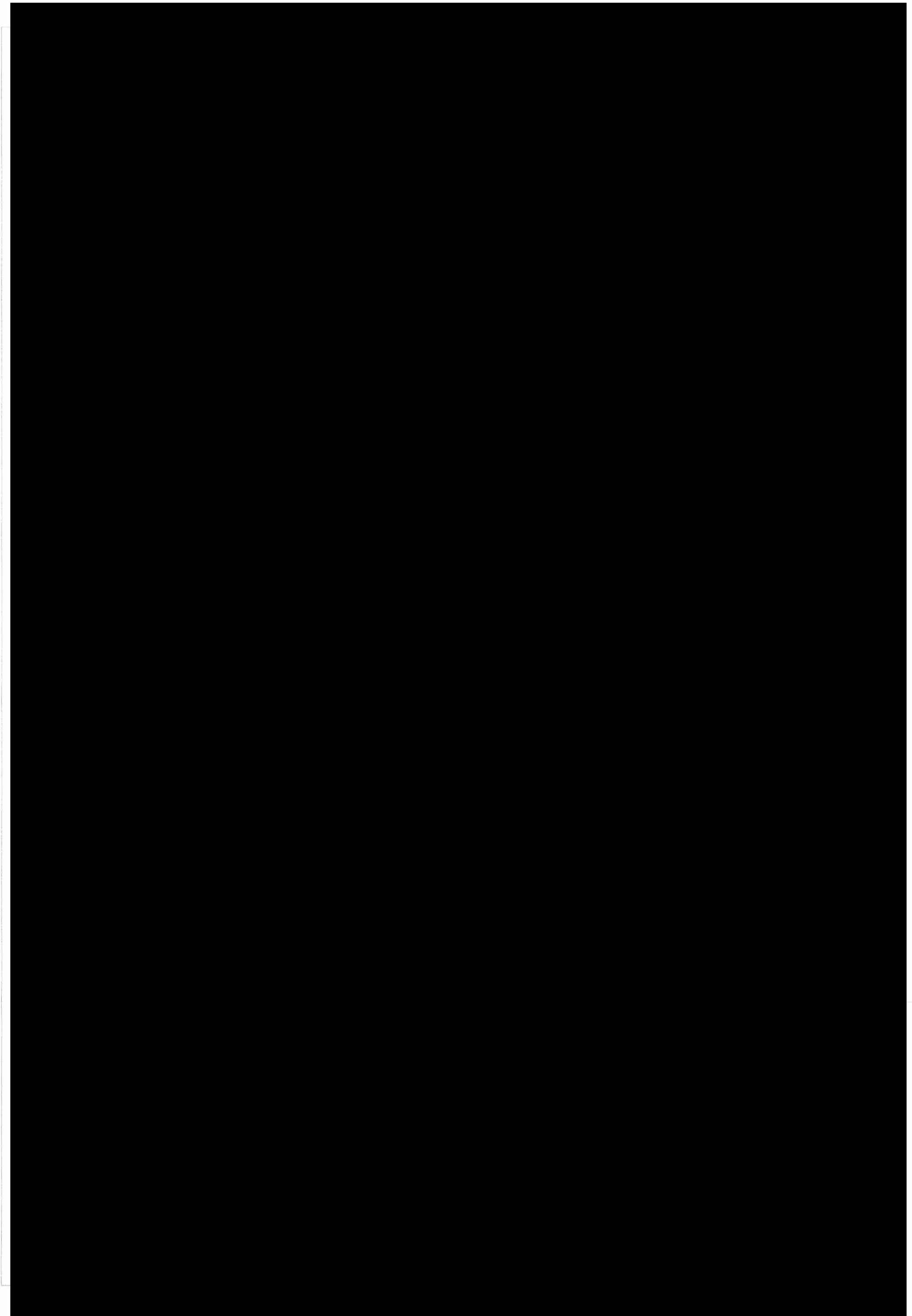


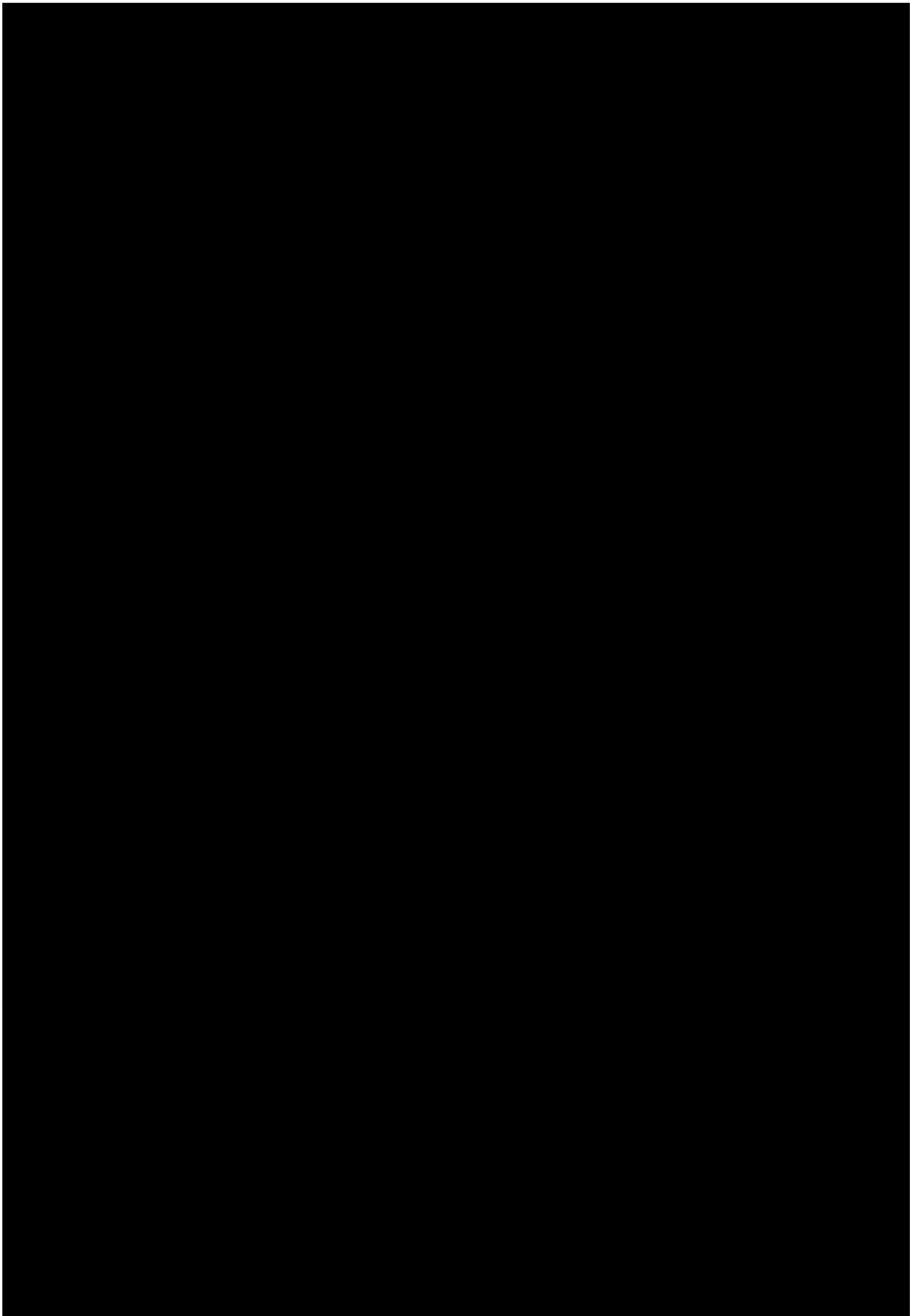


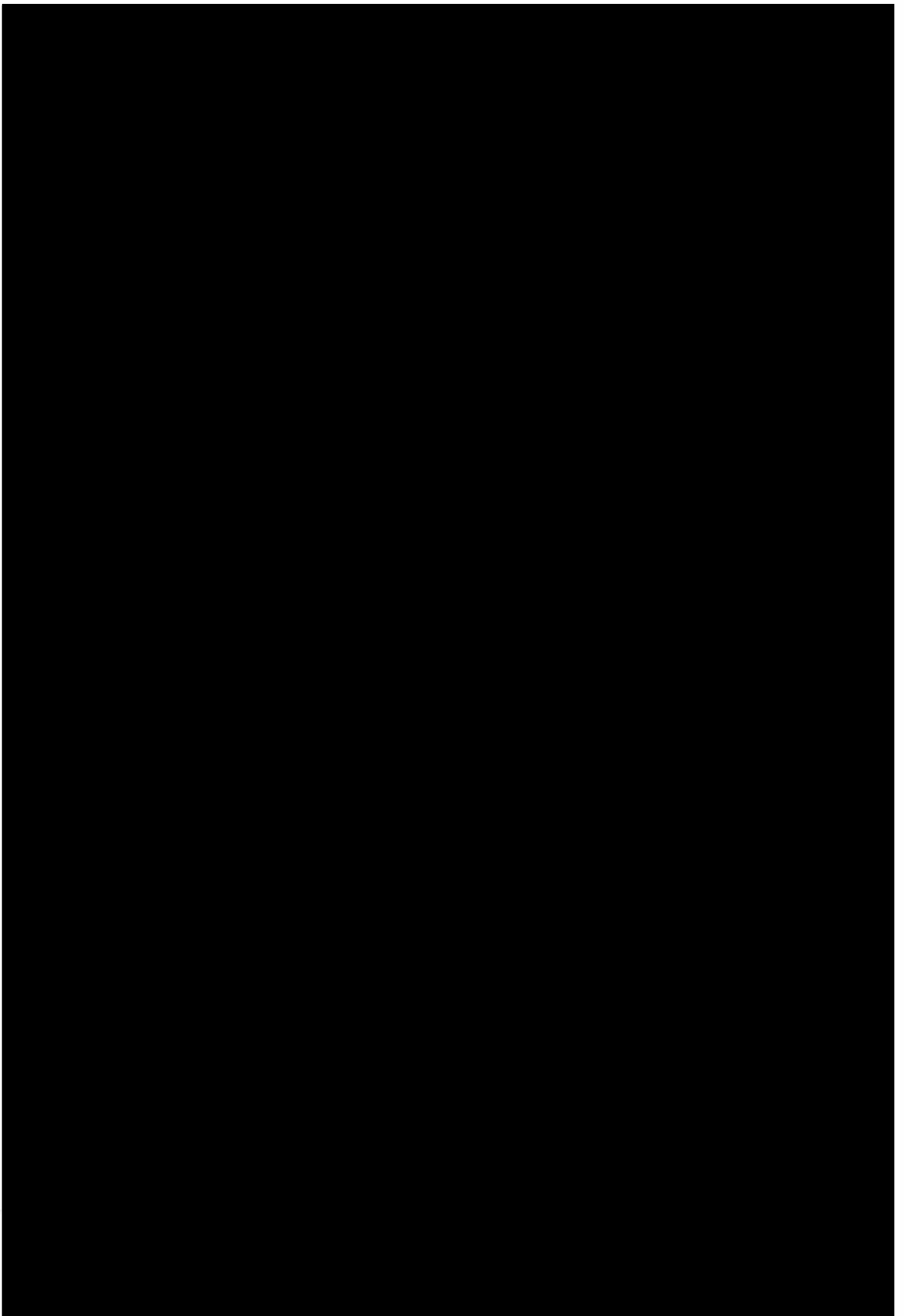


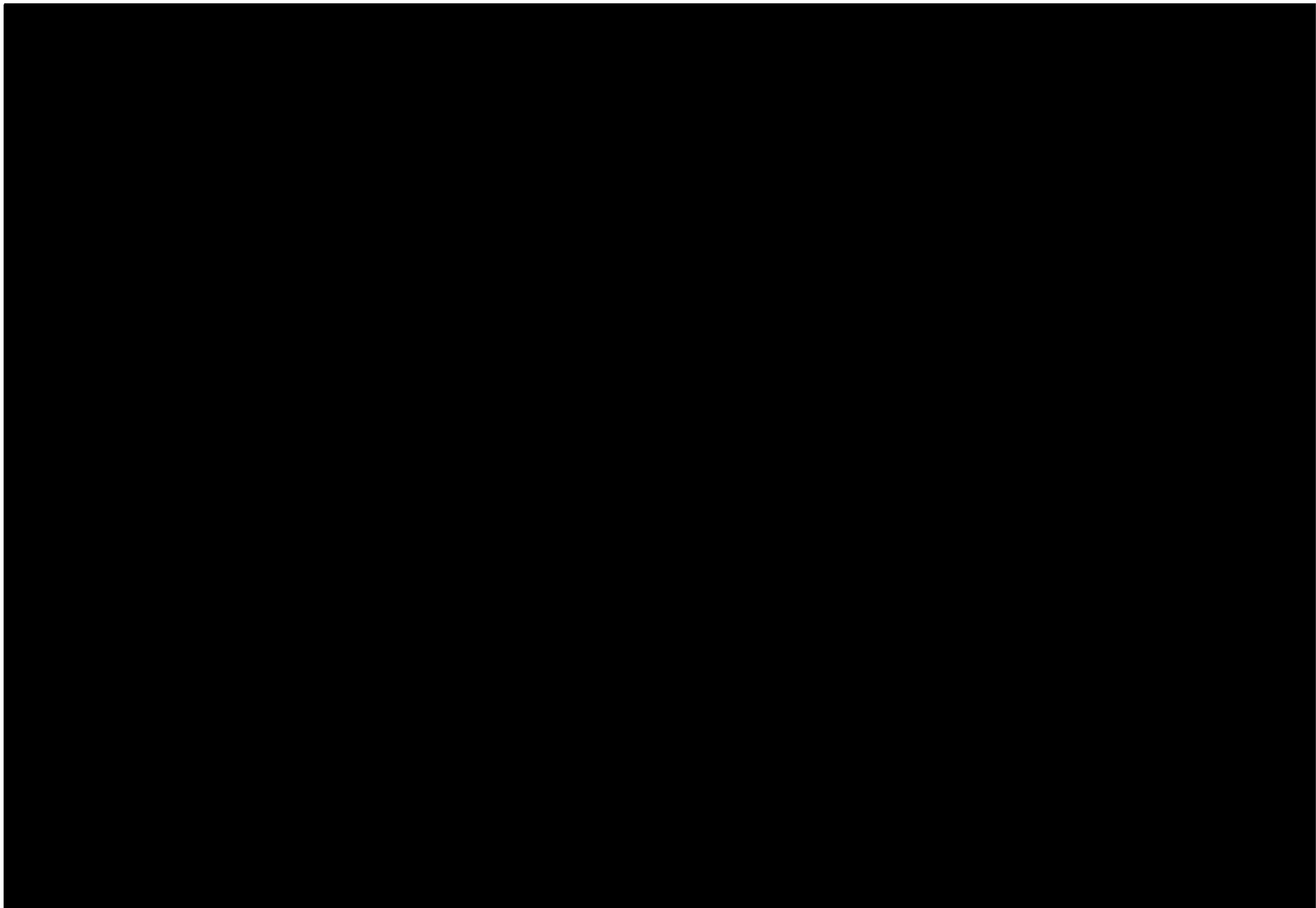














**Transport
for NSW**

Sydney Light Rail
Public Private Partnership
Project Deed
Schedule F Initial Project Plans
Schedule F8 – Initial Utility Service Treatment Plan

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Execution Version



