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Applying health psychology theory and practice in mental and public health settings: workplace health, behaviour change and bone health promotion

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Submitted in fulfilment of the requirements of the Professional Doctorate in Health Psychology
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DECLARATION

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ACRONYMS

MBCT	Mindfulness Based Cognitive Therapy
CBT	Cognitive Behavioural Therapy
IAPT	Improving Access to Psychological Therapies
OARS	Open questions, Affirmation, Reflective Listening and Summary Reflections
HBM	Health Belief Model
MBI	Mindfulness Based Intervention
MAAS	Mindfulness Attention Awareness Scale
GHQ-12	General Health Questionnaire-12
MBSR	Mindfulness Based Stress Reduction
DBT	Dialectical Behaviour Therapy
ACT	Acceptance and Commitment Therapy
MD	Major Depression
RCT	Randomised Controlled Trial
BPS	British Psychological Society
NHS REC	National Health Service Research Ethics Committee
CPD	Continuing Professional Development
JSNA	Joint Strategic Needs Assessment
MECC	Making Every Contact Count
GAD-7	Generalised Anxiety Disorder Scale
PHQ-9	Patient Health Questionnaire
PSS	Perceived Stress Scale
BMD	Bone Mineral Density
NICE	National Institute of Clinical Excellence
BMI	Body Mass Index
DEXA	Dual Energy X-Ray Absorptiometry

SECTION A: PREFACE

This portfolio demonstrates work that was carried out over a period of four and a half years. During my training I worked in three different roles within mental and public health. At the beginning of my training I worked as a Wellbeing and Clinical Manager at Mind, a mental health charity. A number of the professional competencies were carried out during my time at Mind, where I largely worked on the development of workplace interventions as well as managing psychological therapy services.

In year three I worked as a Health Improvement Programme Lead for Older People within Kingston Public Health team, and finally in year four I worked as a Public Health Officer and Making Every Contact Count Programme Lead within Camden and Islington Public Health team. I also worked as an honorary researcher with the Health Psychology team at the Royal National Orthopaedic Hospital during my second year of training. These roles provided me with experience in research, health promotion, behaviour change and self-management, commissioning, service development as well as policy development and strategic influencing around public health matters. The combination of these roles has enabled a broad experience of the application of health psychology in a range of different settings. This portfolio evidences the development of these competencies.

Section B -Research Thesis

This research was conducted during my time as a Wellbeing and Clinical Manager at Mind. At the time of writing, mindfulness practice was beginning to be used within Improving Access to Psychological Therapies (IAPT) services, and organisations were starting to use mindfulness as an employee wellbeing intervention. However, there was little research conducted exploring Mindfulness Based Cognitive Therapy (MBCT) in workplace settings.

The study aimed to explore public sector employee's experiences and reflections of a brief MBCT intervention. Semi structured individual interviews were conducted with twelve participants. The data generated from the interviews was analysed using a thematic analysis approach. Additional quantitative data was collected, such as the

Mindfulness Attention Awareness Scale (MAAS), and the General Health Questionnaire (GHQ-12).

Overall, participants felt that they benefited from the intervention, there was an ability to reappraise life situations, increased acceptance, greater attention and awareness of actions, thoughts, and emotions, living more actively in the present moment, a calmer attitude, as well as improved sleep. Participants that attended the intervention integrated mindfulness practice in a variety of ways, some participants integrated formal structured practice within their daily routines, other participants chose to use mindfulness as and when they felt it was required, such as when they needed to relax, or were required to deal with a difficult situation. Finally, some participants integrated mindfulness into their day to day activities and focused less on formal meditation.

The intervention was not without challenges, participants noted the difficulty in finding the time to practice, maintaining focus while practising, applying mindfulness within the workplace and sometimes in the home environments also, and issues with course logistics.

Section C- Professional Practice

Teaching and Training: one off workshop

My role at Mind provided me with opportunities to develop and deliver a range of different training and health promotion courses. During my time in this role, I delivered a stress management workshop. The workshop was delivered as part of a larger consultancy project with a school in London. The school had identified high levels of stress amongst employees in their organisation; part of the planned consultancy work was to design and deliver a stress management workshop for employees. The aim of the workshop was to raise awareness of stress and equip staff with stress management tools.

Teaching and Training: modular

This competence was met through the development, delivery and evaluation of a programme of behaviour change training for mental health workers, using concepts and evidence from health psychology. This training was also delivered during my time as a Wellbeing and Clinical Manager at Mind, and it was delivered to front line staff

who worked in the organisation. The objectives of the training programme included increasing delegates knowledge of behaviour change models, and behaviour change strategies that they could use in their roles as front-line staff supporting clients with mental health issues to make positive behaviour changes to their wellbeing (physical and mental health).

Within the evaluation feedback it was clear that a majority of delegates felt better equipped in understanding behaviour change, motivational interviewing and how it can be applied, felt more competent in developing strategies for change talk, had a good understanding of OARS and felt that they would be able to apply behaviour change techniques in their role after the training.

Consultancy

For this competency, I carried out a consultancy project with a primary school based in London. In May 2014, the client contacted Mind to discuss the development of staff wellbeing initiatives and requested a consultant to develop initiatives to support employees to manage stress. The consultancy involved the development and delivery of wellbeing initiatives such as stress management workshops, and the design and delivery of a mindfulness intervention for employees. I was able to apply theoretical health psychology knowledge and develop evidence-based practice to the consultancy project within the development of the project.

Behaviour Change Intervention

During my time as a Wellbeing and Clinical Manager, I delivered an eight-week group CBT psychoeducational stress management intervention for employees working in a large financial organisation in London. This was delivered in June and July 2015. The intervention was developed using health psychology, CBT and Motivational Interviewing theories and was based on White's (2000) Stress Control intervention protocol. Stress Control is a psychoeducational low intensity group-based intervention. Past clients have reported high satisfaction rates with the intervention (Houghton & Saxon, 2007; Kellett, Newman, Matthews & Swift, 2004), with some studies showing significant reductions in stress, anxiety and depression (Wood, Kitchiner & Bisson, 2005; Joice & Mercer, 2010). The intervention met the aim of the request, and clients

gained an awareness of stress as well as a number of strategies to use to manage stress after the intervention was finished.

Section D- Systematic Review

The systematic review was conducted during my time as a Health Improvement Lead for Older People within Public Health, where I managed a bone health service for those who were at risk of developing osteoporosis or had a diagnosis of osteoporosis. I noticed during my time in this role that preventative interventions were limited in the area of bone health, and health psychology theory was not applied to interventions, despite a need for behaviour change in order to improve bone health. I conducted a systematic review exploring educational health promotion interventions based on the Health Belief Model (HBM) to understand if these interventions led to changes in health beliefs, knowledge and osteoporosis preventative behaviours for individuals aged 18-50. A number of interventions based on the HBM have been developed and evaluated to assess their effectiveness in changing osteoporosis preventative behaviours. The aim of the systematic review was to critically assess and determine the effectiveness of interventions based on the HBM that are aimed to increase osteoporosis prevention behaviours, osteoporosis health beliefs and knowledge. 52 full-text articles were screened again for eligibility using the inclusion and exclusion criteria. Eleven studies were included in the systematic review.

The review concluded that there is insufficient evidence that interventions based on the HBM address and alter osteoporosis protective beliefs and behaviours among those aged 18-50. In order to thoroughly test the effectiveness of the HBM future research should describe interventions in more detail, use control groups, clearly test all HBM constructs and osteoporosis behaviours within the outcome measures used.

SECTION B: RESEARCH

EMPLOYEES EXPERIENCES OF A BRIEF WORKPLACE MINDFULNESS BASED COGNITIVE THERAPY (MBCT) INTERVENTION IN A LOCAL AUTHORITY SETTING

ABSTRACT BACKGROUND

Mindfulness Based Interventions (MBI's) have been adapted for workplace settings in recent years. Despite the large number of studies conducted exploring the efficacy of MBI's, previous research has yielded varied results, and the specific mechanisms by which MBCT leads to positive change remain unclear. There is very little qualitative research exploring employees' experiences of workplace MBCT interventions, or the impact of such interventions. If MBCT is to be considered as a workplace intervention, research must clarify the process underlying participant's use and experience, as well as the acceptability of such workplace interventions.

AIM

The current study aims to

- explore public sector employee's experiences and reflections of a brief MBCT intervention.
- examine whether participants found the brief intervention useful and how participants used mindfulness.
- explore any difficulties that participants encountered when practicing mindfulness.

METHODOLOGY

Semi structured individual interviews were conducted with twelve participants. The data generated from the interviews was analysed using a thematic analysis approach. Additional quantitative data was collected, such as the Mindfulness Attention Awareness Scale (MAAS), and the General Health Questionnaire (GHQ-12).

RESULTS

The following four themes emerged from the twelve interviews: (1) effects of the mindfulness intervention, (2) implementation of mindfulness (3) sharing group experiences and disseminating mindfulness to others and (4) challenges of practice. Overall, most participants felt that they benefited from the intervention, there was an ability to reappraise life situations, increased acceptance, greater attention and

awareness of actions, thoughts, and emotions, living more actively in the present moment, a calmer attitude, as well as improved sleep. However, quantitative data indicated lower mean scores of GHQ-12, but only small changes in the mindfulness mean scores post intervention. Participants that attended the intervention integrated mindfulness practice in a variety of ways, some participants integrated formal structured practice within their daily routines, other participants chose to use mindfulness as and when they felt it was required, such as when they needed to relax, or were required to deal with a difficult situation. Finally, some participants integrated mindfulness into their day to day activities and focused less on formal meditation. The intervention was not without challenges, participants noted the difficulty in finding the time to practice, maintaining focus while practising, applying mindfulness within the workplace and sometimes in the home environments also, and issues with course logistics. Implications for the role of brief MBCT as a workplace intervention are discussed.

RECOMMENDATIONS

This study contributes to the field of mindfulness in the workplace in three distinct ways: it offers an insight into the applicability and challenges of mindfulness workplace interventions including the flexibility of mindfulness techniques, it offers an exploration of the role relationships and peer support can offer within a brief MBCT intervention, and it also demonstrates an insight into the role of appraisals in participants who have engaged in a brief MBCT workplace intervention, and helped uncover areas to be explored in future studies. If there is an understanding of the mechanisms by which MBCT can be useful in the workplace, and what outcomes it may present then this is useful information for model development for such workplace interventions. Future workplace mindfulness research should explore the fidelity of MBCT interventions, the role that group dynamics, barriers and facilitators to practice can have on intervention outcomes. Future research should also focus on addressing the barriers to practice and establishing the longer-term effects of MBCT interventions.

CHAPTER 1: INTRODUCTION

DEFINITION OF MINDFULNESS

While mindfulness is currently used as a therapeutic intervention to increase psychological wellbeing, historically, mindfulness meditation has roots in the Buddhist tradition of meditation. Mindfulness, however, is more than meditation and refers to a form of awareness or presence of mind. Currently, there is a lack of an agreement on its definition within academia (Good et al., 2015). Although mindfulness is practiced widely in many countries, and interest in the application of techniques has grown considerably year on year, defining the criteria for mindfulness has not been elaborated substantially beyond construct descriptions (Bishop, 2002), and a growing number of definitions and measures exist that aim to clarify mindfulness as a construct.

Mindfulness has been defined as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to things as they are” (Williams, Teasdale, Segal, & Kabat-Zinn, 2007, p. 47), as well as a form of experiential processing (Brown & Cordon, 2009). Other researchers have defined mindfulness as an open, non-judgmental attention to individuals present experience, including behaviours, bodily sensations, thoughts and feelings (Bishop et al., 2004).

Some researchers describe mindfulness as something that can be enhanced through practice, and therefore is taught through interventions (Chiesa, 2013; Kabat-Zinn, 2003), while others have described mindfulness as a dispositional trait (Pepping & Duvenage, 2016; Brown & Ryan, 2003).

Mindfulness scales vary in regard to mindfulness facets that they measure (Baer et al., 2006), such as one-facet scales that measure awareness (Brown & Ryan, 2004), and scales that include multiple facets such as observing, describing, acting with awareness, non-judging, and non-reactivity (Baer et al., 2006).

Mindfulness interventions consist of several core practice components that are taught in order to promote the use of cognitive and behavioural skills. Empirically supported mindfulness-based interventions include Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982), Mindfulness-Based Cognitive Therapy (MBCT; Segal et al., 2002; Segal et al., 2013), Dialectical Behaviour Therapy (DBT; Linehan, 1993), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999),

which are delivered in group and individual formats, teach mindfulness practices and acceptance, and normally contain elements of experiential learning and home practice.

MINDFULNESS BASED COGNITIVE THERAPY

One of the most widely used mindfulness-based interventions is MBCT, developed by Segal, Williams and Teasdale (2002). MBCT combines elements of MBSR training and elements of cognitive therapy (Segal, Teasdale, & Williams, 2002). Originally developed as a manualised group-based relapse prevention approach for individuals with clinical depression to manage their symptoms, MBCT is known as a third wave Cognitive Behavioural Therapy (CBT) intervention. MBCT differs from traditional CBT interventions as it seeks to change an individual's relationship to events, thoughts and feelings through strategies such as mindfulness and acceptance, rather than changing cognitions or thought processes (Teasdale, 2003). MBCT interventions focus on the progressive acquisition of mindful awareness and aim to help individuals become more aware of thoughts and feelings through experiential learning and mindfulness practice (Segal, Williams, & Teasdale, 2002). MBCT also focuses on the identification of thought patterns and combines mindfulness exercises such as meditation with cognitive behavioural exercises and psychoeducation about depression. The approach utilises 'inquiry' techniques to explore individuals perceptions, mental, and behavioural habits and patterns that participants are experiencing. Continued mindfulness practice is recommended during and after MBCT interventions are completed, and homework exercises are a standard item in intervention design.

Although MBCT was originally developed for patients with depression in order to prevent depressive relapses, the application is evolving, it has more recently been used in population groups such as those with bipolar disorder (Ives-Deliperi, Howells, Stein, Meintjes, & Horn, 2013), anxiety disorders (Lovas & Barsky, 2010), cancer patients (Foley, Baillie, Huxter, Price, & Sinclair, 2010), health care providers and students (Collard, Avny, & Boniwell, 2008; Rimes & Wingrove, 2011; Faramarzi, Rajabi, & Valadbaygi, 2014), children (Semple, Lee, Rosa, & Miller, 2010), for dementia caregivers (Oken et al., 2010), parents (Baillie, Kuyken, & Sonnenberg, 2012) for treating a range of different issues such as stress, anxiety, depression, aggression and physical health condition management. The empirical evidence for its

effectiveness, however, differs by population and target problem that the intervention aims to address (Metcalfe & Dimidjian, 2014).

COMPONENTS OF MBCT

Past theoretical accounts of mindfulness interventions have highlighted cognitive, attentional, and behavioural components of mindfulness (Bishop et al., 2004; Kabat-Zinn, 1990). MBCT differs from other mindfulness interventions as it includes mindfulness techniques in addition to cognitive behavioural and psychoeducational strategies.

The original MBCT structure is manualised, and includes eight weekly group sessions, an all-day silent retreat, and individual daily homework in between sessions (Segal, Williams & Teasdale, 2013). The core skill that MBCT aims to teach participants is the ability to recognise and disengage from patterns of ruminative, negative thoughts and to cultivate an acceptance of such thoughts and feelings (Segal, Williams & Teasdale, 2013). The authors propose that this shift of cognitive mode is carried out through the practice of mindfulness, by intentionally using attention and awareness techniques to disengage from these thoughts. The goal of the intervention is to prioritise learning how to pay attention on purpose, to go from 'doing' to 'being' in the moment and individuals are encouraged to practice paying attention in each moment and non-judgementally (Segal, Williams & Teasdale, 2013).

MBCT interventions are structured to engage participants in themes such as: addressing negative thinking patterns, being mindful and letting go, kindness, experiential learning, empowerment, which are embedded in the design of the programme. Other key components of MBCT include increasing participants awareness of body sensations, feelings and thoughts, developing a different way to relating to feelings, and the ability to choose a mindful response to unpleasant thoughts, feelings and situations (Segal, Williams & Teasdale, 2013). These are acquired through the development of individuals skills such as concentration, awareness of thoughts and feelings, being in the moment, decentring, which is to relate to thoughts, feelings, body sensations as events passing in the mind and body, rather than identifying with them, acceptance, letting go and bringing awareness to the body, according to the authors (Segal, Williams & Teasdale, 2013).

The intervention consists of an initial assessment, and group classes. The initial assessment interview is conducted with each participant prior to the intervention and

is normally one hour in length. This assessment is carried out in order to explain the programme to participants and assess participants' suitability for the MBCT intervention. Basic mindfulness skills are then delivered in weeks one to four of the intervention. Mindfulness practices included in MBCT interventions are the raisin mindfulness exercise, which encourages participants to eat mindfully, the body scan exercise which brings awareness to the body, ten-minute sitting meditations, stretch and breathe meditations, mindful movement, three-minute breathing space which brings attention to the breath, and a twenty-minute sitting meditation. The final four sessions of the intervention focus on mood, where participants learn to be aware of their thoughts and feelings and move attention to their breathing as a strategy to manage their thoughts and feelings, before expanding attention to the whole body, as well as becoming more aware of warning signs for depressive moods and develop action plans for when these may occur. Guided audio meditations are provided to participants to enable home practice during and after the intervention. Individuals are also encouraged to practice 45 minutes a day in order to obtain the benefits of participation (Segal, Williams & Teasdale, 2002), however research has identified mixed results in the amount of home practice on treatment outcomes (Crane, Crane, Eames, Fennell, Silverton, et al., 2014).

Facilitation of the intervention is outlined as an important element of the intervention, Segal, Williams and Teasdale (2013) highlighted that MBCT should be delivered by those who have an accreditation in psychotherapy or counselling, or mental health professionals who has experience in mood disorders. Facilitators are required to have experience of practicing mindfulness. Segal, Williams and Teasdale (2013) provide facilitator guidance in the intervention manual on how to structure sessions, as well as guidance for working with participants who are experiencing depression.

MBCT is usually facilitated with groups of eight to twelve participants; to date very few studies have examined whether group format of MBCT is more effective than alternative formats (Schroevers, Tovote, Snippe & Fler, 2016), such as individual mindfulness delivery, and there is some evidence to suggest that people do prefer an individual format (Lau et al., 2012; Wahbeh, Lane, Goodrich, Miller, & Oken, 2014). Because time commitment can be a barrier to participant and organisation engagement in interventions, shorter versions of MBCT (e.g., four or six sessions, 90-minute sessions) have been developed in recent years (Finucane & Mercer, 2006;

Herdt, Bührle, Bader, & Hänni, 2012), where adaptations have been made to shorten mindfulness techniques and structure of intervention content.

MECHANISMS OF CHANGE

To date, a comprehensive theoretical framework for the mechanisms of change within mindfulness practice does not exist, and few studies have explored how and why MBCT may be beneficial for those with depression and other psychological and physical conditions. Understanding the mechanisms of change in mindfulness interventions may help understand and improve outcomes, adapt and revise intervention protocols if required (Kazdin, 2007; Murphy, Cooper, Hollon, & Fairburn, 2009) and provide the ability to distinguish important effects of treatment, along with moderators in MBCT (Gu et al., 2015).

A number of studies have conceptualised and reviewed different mechanisms of action in mindfulness interventions, which have had considerable overlap in terms of their theoretical constructs (Carmody, Baer, Lykins, & Olendzki, 2009; Farb, Anderson, & Segal, 2012; Garland et al., 2010; Grabovac, Lau, & Willet, 2011; Hölzel, Lazar et al., 2011; Shapiro, Carlson, Astin, & Freedman, 2006; Vago & Silbersweig, 2012). van der Velden, et al. (2015) outlined the key core constructs included in mindfulness mechanisms, these include the modification of dysfunctional cognitive biases (e.g. memory, attention and perception); modification of dysfunctional beliefs; improved emotion regulation; increased interoceptive exposure and bodily awareness; decreased habitual reactivity and improved self-regulation, increased awareness of positive emotions and events, and increased awareness of functional and dysfunctional behavioural patterns.

A small number of studies have examined what the proposed mechanisms of change are in MBCT in relation to treatment outcomes and effects of the intervention (Van der Velden, 2015; Gu, Strauss, Bond & Cavanagh, 2015; Cairns and Murray, 2015). Although further research is required, there is some evidence to suggest that mindfulness, cognitive and emotional reactivity, decreased rumination, worry and meta-awareness could be mediators of intervention outcomes, such as increased wellbeing and management of psychological and physical conditions.

Van der Velden's (2015) systematic review explored the mechanisms of change in MBCT studies for the treatment of recurrent major depressive disorder. Twelve of the

twenty-three studies included in the review found that changes in either mindfulness, rumination, worry, self-compassion, decentering or meta-awareness were associated with, predicted or mediated the effect of MBCT on treatment outcomes. They further proposed that attention alterations, memory specificity, self-discrepancy, and emotional reactivity may also play a role in how MBCT interventions exert clinical effects, however the authors propose that the mechanisms of action in MBCT are not clear within studies included in the review. The review highlighted the need for additional research conducted with rigorous designs to assess greater levels of causal specificity for MBCT in the treatment of depression, and also highlighted that it was difficult to establish to what extent outcomes such as an increase in mindfulness were a unique result of the MBCT treatment. Mechanisms of change may also be affected by moderating variables such as the facilitator competence and participant adherence (van der Velden et al., 2015).

Gu, Strauss, Bond and Cavanagh (2015) assessed proposed mechanisms of action in both MBSR and MBCT studies that aimed to improve mental health and wellbeing. The systematic review and meta-analysis identified strong and consistent evidence for cognitive and emotional reactivity as mechanisms for change, in addition to moderate and consistent evidence for mindfulness, rumination, and worry, and preliminary but insufficient evidence for self-compassion and psychological flexibility as change mechanisms underlying MBIs. Gu et al (2015) also highlighted that many studies included in the review had key methodological shortcomings which preclude strong conclusions regarding mediation.

By drawing on the subjective experience of participants, in an attempt to understand the process of change from a participant's perspective Cairns and Murray (2015) conducted a meta-synthesis of qualitative studies which explored how MBCT contributes to positive therapeutic change. The authors found the following five themes: i) Taking control through understanding, awareness and acceptance; ii) The impact of the group; (iii) Taking mindfulness skills into everyday life; (iv) Feelings towards the self; and (v) The role of expectations. These qualitative insights help with an understanding of how components of MBCT might work for an individual, such as acceptance, although the study provides a different picture to the quantitative research outlined above, as the themes that participants describe are different to the conclusions of the systematic reviews exploring mechanisms of change highlighted

above. For example, the impact of the group, or intervention expectations are not outlined as change mechanisms in the systematic review.

To date, research exploring mechanisms of action has focused mostly on patients with depressive episodes. From the literature above, it is evident that it is difficult to develop a theoretical model that takes into consideration the multifaceted nature of some of the proposed mechanism of changes and robust methodological research is required to explore the specific change processes of MBCT.

EFFECTIVENESS

A number of systematic reviews have explored the relationship between MBCT and depression (Piet & Hougaard, 2011; Chiesa & Seratti, 2011; Galante, Iribarren & Pearce, 2013), and identified that MBCT can be an effective intervention for those with depression to prevent relapse, with a 34-40% lower chance of relapse or recurrence of a depressive episode than those receiving treatment as usual or those in the placebo condition, and in some studies MBCT in adjunct to usual care was significantly better than usual care alone for reducing major depression (MD) relapses in patients with three or more prior depressive episodes (Piet & Hougaard, 2011; Galante, Iribarren & Pearce, 2013; Chiesa & Seratti, 2011). The reviews, however, recommend that future RCTs should apply optimal design including active treatment for comparison, accredited instructors, longer follow-up periods and explore whether mindfulness itself is a decisive ingredient by controlling against other active control conditions or true treatments.

There are several other reviews which have looked at synthesising the evidence for mindfulness across other outcomes, however these reviews have combined MCBT with other mindfulness-based interventions, making it difficult to establish the effectiveness of MBCT specifically. Hofmann, Sawyer, Witt, and Oh (2010) synthesised eleven MBCT studies along with twenty-eight MBIs studies that used different designs such as MBSR and found that MBIs were moderately effective for improving anxiety and mood across the severity spectrum for both anxiety and depression. Nine MBCT studies included measures of depression symptom severity in the review, and six MBCT studies in the review measured anxiety; both of the mean effect sizes for the pooled data were statistically significant for both anxiety and depression.

Other reviews have focused on healthy participants only, a meta-analysis of MBSR and MBCT studies (Khoury, Sharma, Rush & Fournier, 2015) showed considerable stress reduction, anxiety and depression, improved quality of life, as well as moderate but consistently lower depression, anxiety and distress scores in favour of MBI, however it is not clear from the study how many MBCT studies were included.

The neuropsychological effects of mindfulness have also been researched, with mixed results. Mindfulness has been also shown to improve focus attention and efficiency of cognitive resources; a systematic review that synthesised three MBCT, two MBSR and ten other types of MBI studies demonstrated significant improvements in selective and executive attention and suggested that mindfulness interventions may improve working memory capacity (Chiesa, Calati & Serretti, 2011), however the authors have outlined that the variable evidence should be considered with caution and further high-quality studies investigating more standardised mindfulness meditation programs are needed. Lao, Kissane and Meadows (2016) found preliminary evidence for working memory, meta-awareness and cognitive flexibility improvements after mindfulness interventions in their systematic review that included seven MBSR and eleven MBCT intervention studies conducted with healthy and patient populations but highlighted that attention and executive functions were not improved through mindfulness interventions.

Mindfulness has also been researched as an intervention for other health behaviours such as obesity, pain management and health condition management, currently with limited studies that include MBCT interventions. A systematic review (Katterman, Kleinman, Hood, Nackers, & Corsica, 2014) included fourteen studies that identified that mindfulness interventions can decrease emotional eating, and binge eating across a wide range of samples, although it does not consistently produce significant weight loss. However, the review did not specify the number of MBCT and MBSR studies included within the review, so the effects for MBCT cannot be delineated and there were often a lack of comparison group and small sample sizes.

Research has indicated that there is some evidence that mindfulness may be an effective intervention in pain management. A meta-ethnography study of published qualitative papers focused on participants experiences of eight-week MBCT and MBSR interventions and found a role for mindfulness in helping participants manage their difficulties associated with their illness better, as well as develop a new

understanding of their illness over time (Malpass et al., 2012). There is also some evidence to suggest that MBCT may be an effective pain management strategy for women treated for breast cancer, with a recent RCT showing that MBCT had statistically significant effects on pain intensity post intervention, more women in the MBCT group achieved reductions in pain intensity than the wait-list control group in the study (Johannsen, O'Connor, O'Toole, Jensen, Højris, & Zachariae, 2016).

The reviews and empirical research above highlight that there are positive findings for MBCT in the treatment of anxiety, depression and stress, and more limited evidence for neuropsychological outcomes, pain management and obesity. However, future research in the field will need to address critical issues such as the development of an agreed conceptualisation of mindfulness, in addition to addressing issues around the use of self-report mindfulness measures to demonstrate the effectiveness of interventions. As highlighted earlier, there are challenges with measuring mindfulness, as the conceptualised of mindfulness as a construct varies widely in the literature, and therefore no common understanding of mindfulness exists currently, in addition to mindfulness concepts being measured in different ways across self-report scales (Baer et al., 2004; Bishop et al., 2004; Brown & Ryan, 2003,2004). There is a discrepancy within the literature as to whether mindfulness consists of one dimension, such as awareness, or multi dimension constructs, and mindfulness scales vary in regard to mindfulness facets that they measure (Baer et al., 2006), such as one facet scales that measure awareness (Brown & Ryan, 2004), and scales that include multiple facets such as observing, describing, acting with awareness, non-judging, and non-reactivity (Carmody & Baer, 2008; Shapiro, Carlson, Astin, & Freedman, 2006;Baer et al., 2006).

This can create difficulty in exploring which mechanisms of mindfulness may exert positive changes in participant's physical and mental wellbeing. Scale items can also be misinterpreted by those who are new to the concept of mindfulness, as well as discrepancies occurring between an individual's perception and self-rating of their own levels of mindfulness and how mindful they really are (Grossman, 2008).

Mindfulness studies are also primarily focused on research with clinical populations, and all reviews suggested that further research is required due to methodological issues. Goldberg et al. (2018) examined to what extent mindfulness research has

increased in methodological rigor over the previous sixteen years and concluded that the issues with mindfulness research are still in existence.

Given the mixed evidence surrounding effectiveness and mechanisms of change for MBCT it would suggest that more research is required to determine how MCBT may work, intervention outcomes and the effects within non-clinical populations.

WORKPLACE MBCT

In recent years MBIs have been delivered in workplace settings, with varied results. As MBIs are normally delivered in group settings, they may prove to be a cost-effective workplace stress management intervention, but this has not yet been determined. Mindfulness could compliment other stress management interventions such as Employee Assistance Programmes, individual CBT, or workplace stress management programmes. Occupational mindfulness studies have been conducted largely in clinical workplace settings with healthcare professionals as well as in university settings to investigate the effectiveness of mindfulness to reduce employee stress and increase wellbeing. Despite the highlighted efficacy of MBCT interventions within clinical populations, and in particular those with depression, the intervention has not yet translated into a widely used approach within the workplace. To date, very few occupational mindfulness studies have been conducted using MBCT interventions (Guillaumie, Boiral, & Champagne, 2017; Burton, Burgess, Dean, Koutsopoulou, & Hugh-Jones, 2016). A large number of occupational mindfulness studies include interventions that are tailored or designed by the research authors (Lomas et al., 2017), highlighting an inconsistent approach to the delivery of mindfulness-based interventions within workplace settings.

A small number of studies using MBCT have been carried out in workplace settings; most have been described as pilot or feasibility studies, conducted with mental health professionals and have had methodological issues such as uncontrolled designs and limited sample sizes. Results have demonstrated positive impacts on wellbeing (de Zoysa, Ruths, Walsh, & Hutton, 2014; Rimes & Wingrove, 2011). The outcome measures collected in occupational studies have varied largely, with studies measuring outcomes such as rumination, self-compassion, anxiety, stress, empathy, and mindfulness awareness, making it difficult to draw comparisons across studies. One MBCT study conducted with twenty trainee clinical psychologists found significant decreases in rumination and increased self-compassion and mindfulness after the

intervention (Rimes & Wingrove, 2011). More frequent home practice was associated with larger decreases in stress, anxiety and rumination, and larger increases in empathic concern, but there were no significant reductions in anxiety and depression. This study, however, was small in size, had no control group and was conducted by inexperienced facilitators. A further small prospective uncontrolled study conducted with twenty-seven mental health professionals to prevent relapse of depression found a statistically significant improvement in mindful awareness and psychological well-being, with a significant reduction in worry, trait anxiety and general psychopathology, specifically in those who continued meditation practice during the follow-up period (Ruths, de Zoysa, Frearson, Hutton, Williams, & Walsh, 2013). Long term follow-up of eighteen participants from this same sample found a significant improvement in levels of mindfulness, trait anxiety, trait worry, psychological wellbeing and ongoing meditation practice at an eighteen month follow up point (de Zoysa, Ruths, Walsh, & Hutton, 2014). The authors highlighted a need for further qualitative research to explore how programme attendance impacts on participants' professional roles and personal well-being.

A recent systematic review found that workplace MBI studies have poor methodology, and the diversity of workplaces settings where the research was conducted was limited (Lomas et al., 2017). Overall, MBIs generally had a positive impact upon most outcome measures such as wellbeing, resilience, performance, mindfulness and mental health outcomes. Only 44% of interventions however, used an RCT design, so further research is required, particularly involving high-quality randomised control trials. This review highlighted that workplaces generally do not deliver well established MBIs, only fourteen studies used well established interventions such as MBCT and MBSR. A number of workplace RCTs have also used a combination of MBCT and MBSR in the intervention. Lomas et al (2017) recommended diversification of outcome measures used in workplace mindfulness studies to include non- clinical outcomes such as work engagement and life satisfaction. Only six of 112 intervention studies included were based on MBCT, making it difficult to delineate the effects for MBCT or implications for research.

Qualitative research exploring participant's experiences of MBCT within a workplace context are limited to studies conducted with trainee psychologists and midwives. Two qualitative studies conducted with trainee psychologists explored the impact of attending a workplace MBCT intervention and found that the intervention was

associated with the ability to de-centre from strong emotions, helped participants feel more grounded, altered stress experience where participants were more aware of their own signals, and expanded knowledge regarding concepts and procedures of mindfulness. Participants described using mindfulness in a more informal way to enhance pleasant experiences or to deal with stressful situations, although mindfulness was seen as a challenging experience where participants described requiring adapting to mindfulness practice (Hopkins, & Proeve, 2013; de Zoysa, Ruths, Walsh, et al., 2014). Finally, a study conducted with midwives found that MBCT can help with improving the work environment, and patient care, with a highlighted role for mindfulness in positive workplace relationships (Hunter, Snow, & Warriner, 2018). MBCT workplace studies are limited, it is clear that studies to date have included small sample sizes, conducted mostly with healthcare professionals and some have been conducted without a control group. More research is required in order to understand participants experience of workplace MBCT, the determinants and acceptability of participation in workplace MBCT, and factors that may contribute to the positive impacts of the intervention, as well as intervention outcomes. In sum, there is limited evidence to suggest that MBCT increases wellbeing, productivity or decreases stress in the workplace, and what intervention format is most effective. As highlighted in the studies above, there is little understanding of the process and acceptability of MBCT as a workplace intervention, and there is a gap in the occupational mindfulness literature.

BRIEF MBCT IN THE WORKPLACE

Due to the high cost associated with longer interventions, time commitments, busy schedules, and number of employees, eight-week interventions can be difficult to integrate in the workplace (Kemper, Bulla, Krueger, Ott, McCool, & Gardiner, 2011; Luberto, Wasson, Kraemer, Sears, Hueber & Cotton, 2017). Recently, virtual or online mindfulness workplace interventions have emerged, as well as the delivery of brief interventions (Glück & Maercker, 2011; Morledge et al., 2013; Aikens et al., 2014). Brief mindfulness interventions vary in length, but generally the overall length of these interventions is shortened, and the number of meetings and the amount of practice time are both reduced.

A small body of primarily feasibility studies have explored brief workplace MBCT, using quantitative and mixed method study designs. Luberto et al. (2017) conducted a mixed

methods study exploring the feasibility and acceptability of a four-week MBCT intervention conducted with hospital staff; statistically significant decreases in stress burnout were found, which were supported by qualitative themes of improved self-regulation and mindfulness skills, stress reduction, emotional well-being, improved work productivity and patient care skills. A further study evaluated the feasibility and effectiveness of a four-week MBCT intervention in reducing stress among medical students (Phang, Chiang, Ng, Keng, & Oei, 2016). This study found that there were significant reductions in perceived stress and increase in mindfulness with medium effect sizes from pre- to post-intervention. Both studies need to be considered with caution, as there was lack of control groups, lack of follow up measures, and no data on amount of home practice carried out by participants. Lan, Subramanian, Rahmat and Kar's (2014) quantitative study delivered a brief five-week, two-hour MBCT intervention for reducing stress and promoting wellbeing with 41 nurses and found a significant improvement in the level of perceived stress, anxiety, depression, mindfulness and happiness with a moderate to large effect size, although there was no control group, no follow up and no measures on productivity.

Brief and flexible interventions may be more feasible for workplaces, however further research is required to demonstrate how these interventions may be effective for wellbeing and stress management. Looking specifically at MBCT, although the evidence is positive for workplace interventions, currently the number of research studies is very small, with limited papers exploring the acceptability and impact of such interventions, leading to the conclusion that more research is required to understand the effectiveness and mechanisms of change in such interventions.

MINDFULNESS AS A WORKPLACE INTERVENTION IN THE PUBLIC SECTOR

As highlighted above, the effectiveness of MBCT for improving job performance and employee wellbeing is still not well established; even less is known about the impact that MBCT may have in public sector organisations, outside of the healthcare field.

Industries that reported the highest rates of total cases of work-related stress (three-year average) within the UK are human health and social work, public administration and defence, and education (HSE, 2017). Research has indicated that public sector employees are more susceptible to mental health problems than those working in other sectors (Hilton et al., 2008; McHugh, 1998). Job strain, high job demands, and,

to some extent, low decision latitude, are associated with an increased risk of coronary heart disease among British civil servants (Kuper & Marmot, 2003), with the effect seen more in younger workers. There is a lack of research exploring why public-sector employees may feel stressed, and why public-sector change and pressures do not affect employee outcomes for all (Kiefer, Hartley, Conway, & Briner, 2015). More broadly, little is currently known about individual characteristics that make employees more or less resilient to workplace stress effects (Glaser & Hecht, 2013).

Public sector organisations within the UK are more likely than the private sector to use a range of methods to promote good health, and address stress (77% versus 55% in the private sector) as well as offer stress management training (CIPD, 2015, 2016).

Despite figures indicating that stress is more prevalent in public service industries, there is a lack of research identifying interventions and models which could be effective in reducing workplace stress or increasing employees' wellbeing. A majority of the occupational mindfulness research from the public sector has focused on health care settings, with little research conducted in civil servant populations or the educational sector. An RCT conducted with public sector employees using a five-week Mindfulness at Work Programme, designed by the study authors explored the acceptability, feasibility, and efficacy of mindfulness. This study found that mindfulness improved for participants in the mindfulness intervention in addition to improvements in perceived stress, psychological distress and health-related quality of life in comparison to the control arm, who were provided with self-help material. The study had small sample size within the intervention group, only twenty compared to 100 in the control group (Bartlett, Lovell, Otahal, & Sanderson, 2017).

To summarise, although a number of workplace MBI studies have now been carried out in occupational settings, very little MBCT interventions have been studied, and the research that has been conducted exploring occupational MBIs have largely taken place in the health and academic settings. Findings from reviews and RCTs have shown varied results, with a lack of follow up, specific workplace outcomes, or intervention clarity, inconsistent quality, and it is therefore difficult to determine how mindfulness interventions could be used as a wellbeing intervention in workplaces. To the authors knowledge, no qualitative data exists exploring brief MBCT interventions within a local government setting. Given the small amount of qualitative and quantitative research conducted with MBCT in the field, a qualitative exploration may

be beneficial as it is primarily inductive and explorative in its procedures in order to understand the acceptability of such programmes, as well as an understanding of the process of how MBCT workplace interventions could be beneficial for individuals.

AIMS AND OBJECTIVES

The current study aims to

- explore public sector employee's experiences and reflections of a brief MBCT intervention.
- examine whether participants found the brief intervention useful and how participants used mindfulness.
- explore any difficulties encountered by participants when practicing mindfulness.

CHAPTER 2: METHODOLOGY

Ethics

Approval for the study was granted through the Psychology Department Research and Ethics Committee at City University of London in May 2014. Information sheets (Appendix B1), consent forms (Appendix B2) and debriefing sheets (Appendix B3) were used to ensure that informed consent was obtained from the participants in the current study. All participants were assured of their anonymity prior to data collection.

STUDY DESIGN

The study takes a predominately qualitative approach, consisting of one to one participant interviews with a small number of quantitative measures collected pre-and post-intervention.

Epistemology

This study employed qualitative and quantitative methodology, from a realist perspective, which assumes that participants' experiences can be accessed through accounts of their experiences.

A realist epistemological perspective is one that assumes that there can be a number of valid accounts of any phenomenon and more than one way of understanding reality (Lakoff, 1987), that statements are true to the extent that they accurately represent the world (Long, 2013), and assumes that the world is the way it is, and that mental processes are real phenomena.

In this research, the researcher aimed to avoid bias and remain objective at all times. The aim was to explore participant's experiences of a brief mindfulness intervention, including whether they considered the intervention beneficial, in addition to consideration of participants experiences of any potential outcomes experienced and any difficulties encountered, along with the collection of quantitative data. There was a consideration by the researcher that the intervention may not work for all participants. The basis of this study was that participants are experts in their experiences, they know what their thoughts and feeling are towards the mindfulness intervention and its usefulness.

INTERVENTION

CONTENT

The structure and format of the intervention closely followed that of the original eight-week MBCT (Segal, Williams & Teasdale, 2002), with group intervention sessions incorporating mindfulness practices and CBT-based exercises. Session four to eight which concentrate on depression and mood were removed in order to suit the workplace setting. The adapted intervention consisted of four 1.5 hours weekly sessions taking place in the workplace (see Table 1 for a breakdown of the intervention).

Table 1: Intervention content

Session number and title	Content
Session 1 Waking up from life on auto pilot	Session included <ul style="list-style-type: none"> • Introduction to mindfulness • The three-minute breathing space practice • Mindfulness eating (raisin technique) practice • Body scan practice • Treating thoughts as mental processes that come and go. • Home practice set for next week.
Session 2 The mind-body connection	Session included: <ul style="list-style-type: none"> • Mindfulness techniques, such as thoughts-emotions-physiology model. • Three step breathing space, body scan and breath, mindfulness of the breath. • Using your body as an early warning system, reflection of home practice, and everyday opportunities for mindful movement. • Home practice set for next week.
Session 3	Session included: <ul style="list-style-type: none"> • Three step breathing space practice

Session number and title	Content
Reviewing your working relationship with yourself	<ul style="list-style-type: none"> • Participant reflection on home practice • The importance of self-kindness • Identifying and applying small acts of kindness, mindfulness of sounds and thoughts • Things that nourish / things that deplete • Home practice set for next week.
Session 4 Living life to the full	<p>Session included:</p> <ul style="list-style-type: none"> • Three step breathing space mindfulness technique • Reflection for participants in pairs on home practice • Enjoying life to the full • Deciding what's worth fighting for • Accepting what you cannot change or isn't worth the effort and focusing on what you can change • Dealing with difficulty, useful tools and techniques • Befriending exercise – self and others • Putting it all into practice – strategies for applying what employees have learned to everyday life and work.

The brief intervention aimed to synthesise and condense most of the main elements of the eight-week MBCT intervention. Participants learnt the basics of mindfulness, paying attention to daily life, to become aware of how quickly the mind shifts, and bringing the mind back when it wanders. The material included other elements, such as the 'befriending exercise', and 'putting it all into practice' in week four, which were additions to the original MBCT eight-week programme. Titles of the sessions were adapted to suit the workplace setting.

The brief MBCT intervention aimed to teach employees to observe their thoughts and feelings non-judgmentally and to relate to them in a more 'de-centered' and less 'self-identified' way. The course contained several cognitive and behavioural elements and its primary mode of teaching was through experiential mindfulness learning and

practice. The intervention taught participants new mindfulness techniques each week, such as the three-minute breathing space, mindful eating, and the body scan. In the three-minute breathing space participants learn how to become fully aware and acknowledge their thoughts or feelings and move their attention to their breathing before expanding attention to the whole body (Segal, Williams & Teasdale, 2002). The mindful eating raisin technique requires participants to focus their mind on the present moment using all of their senses. The body scan exercise (Kabat-Zinn, 1990) is used to encourage participants to become aware of, and experience fully, sensations in the body just as they are. This offered flexibility of learning to allow participants to find and practice techniques that suited and promoted integration of on-going practice into everyday life. The three-minute breathing space is used as a thread throughout all sessions, as in original protocol. The fourth session including information on how participants would integrate mindfulness into their lives, and within the workplace after the intervention was finished. Participants were provided with a CD of guided meditation exercises and the book 'Mindfulness, a practical guide to finding peace in a frantic world' (Williams & Penman, 2011), which included MBCT meditations and instructions for daily home practice. Participants were reminded to practice at home through guided meditation. Homework included different forms of guided or unguided awareness exercises used in Segal, Williams and Teasdale's (2002) intervention protocol such as the body scan, three-minute breathing space and raisin techniques, as well as mindfulness exercises designed to integrate application of awareness skills into participant's days. As the intervention was designed to be brief, participants were taught how to embed the practices into a twenty to forty-minute daily practice. Participants were also asked to read chapter one to four of the book as homework through the four-week course.

Unlike the eight-week MBCT intervention, participants did not receive a pre-class assessment interview but met with the facilitator briefly for 10 minutes prior to the intervention starting so that the facilitator could explain the nature of the programme, in addition to programme expectations to the participants.

FACILITATOR

The intervention was delivered by two mindfulness facilitators, who had experience of delivering eight-week workplace MBCT interventions, to both public and private sector organisations. One of the mindfulness facilitators was a psychotherapist with over ten

years of experience delivering mindfulness training, and both were trained in MBCT Mindfulness Teacher Training 1 and 2. For both, this was their first delivery of a brief MBCT intervention. The lead researcher was not involved in the delivery of the mindfulness intervention but did attend the first and final sessions to explain the research.

SETTING

The intervention took place across three local authorities in London, within booked meeting rooms across the organisation. The intervention was delivered at the same time and day each week; however, it was delivered at two different locations across two boroughs to provide equal access to participants working across boroughs. Cohort one was delivered within core working hours, and cohort two was delivered outside of core hours to ensure flexibility for employees from different sectors within the local authority to attend.

PARTICIPANTS

INCLUSION CRITERIA

Participants were local authority employees, over eighteen years of age, that had the ability to attend at least three of the four weekly mindfulness sessions.

EXCLUSION CRITERIA

Exclusion criteria included those who suffered from severe depression, a recent bereavement or other serious illness which required psychological treatment over the past twelve months. This was assessed in the pre-questionnaire (Appendix B4), and an initial conversation with the course facilitator prior to the start of the intervention.

PROCEDURE

RECRUITMENT

Participants self-selected to attend both the mindfulness intervention, and the qualitative interviews that took place after the mindfulness intervention. Employees were invited across the three public sector organisations. The mindfulness intervention was promoted on the staff intranet through the Learning and Development training website and through internal communications within the organisation. Employees

were invited to a large-scale workplace mindfulness taster session a month before the intervention, where those who were interested in attending the four-week course could find out more and register their interest. Employees were not required to register for the taster session in order to decrease attendance barriers. The taster session was open to all employees and one hundred participants attended. This taster session was delivered in a forty-five-minute lunchtime session. At the taster session, the mindfulness facilitator gave a short presentation introducing mindfulness, demonstrated an experiential mindfulness exercise with participants and answered any questions about the four-week MBCT intervention for interested employees. Employees were invited to sign up for the MBCT intervention if they were interested at this taster session, this was captured through a sign-up sheet on the day of the taster session. Participants were then invited to register for the intervention through the online Learning and Development portal in the organisation after the mindfulness taster session, and this information was passed to the researcher and facilitator before the intervention started.

Participants were advised about the study at the start of the intervention and were advised that participation was voluntary. In the first cohort, participants filled in the consent forms at the first mindfulness session, and in the second cohort participants were emailed (Appendix B7) a link to the pre-questionnaire and information sheet. Participants were emailed by the researcher at the end of the intervention to remind them about the interviews and to organise an interview slot. Participants could decide to attend the interview after the intervention was complete. Participants were able to select a suitable time for their interview, including outside of working hours, or lunchtimes. Those who had dropped out after registration or during the intervention or who did not attend the final session were also contacted to collect data. Participants were not contacted more than twice post intervention.

DATA COLLECTION

The mindfulness facilitators were not involved in the data collection, or the recruitment for the intervention interviews and quantitative data.

Interviews were conducted between one and four weeks post-intervention. Quantitative measures were also collected at the first and after the last MBCT session.

QUALITATIVE DATA

On the day of interview, the participant was asked to read a participant information sheet (Appendix B1) and complete a consent form (Appendix B2). All interviews were recorded and transcribed verbatim.

TOPIC GUIDE

A semi-structured topic guide was employed (Table 2). To allow for flexibility and exploration within the interviews, questions were not designed to elicit structured responses. The topic guide was developed based on the research objectives, which included a warm up discussion on the topic of stress, which was designed to be easy to answer, gain an insight into the participant's perceptions of stress and build rapport at the start of the interview. The second part of the topic guide was designed to elicit responses around participant's experience of the intervention, perceptions of mindful experiences, and the experience of meditating. Finally, the end of the topic guide was developed in order to provide insights into what in particular participants found useful about mindfulness and whether they were planning to use these techniques after the intervention has finished.

A number of the questions were open-ended to explore participant's beliefs and experience of stress, appraisals, and the mindfulness intervention. The questions were developed after consulting the literature, and identification of gaps that were evident in terms of understanding how mindfulness could work as a brief workplace intervention. After two interviews were conducted the interviewer added other prompt questions, based on themes that had emerged from the previous interviews.

Table 2: Topic Guide

- | |
|---|
| <ol style="list-style-type: none">1) What does the word stress mean to you?2) Can you tell me about an instance where you felt you were not able to manage a stressful situation well?3) Do you think people cope with stress in different ways?4) When you think about the past four weeks of the mindfulness programme, what comes into your mind? |
|---|

5) Did you notice any changes over the duration of the intervention?

6) Have you experienced mindfulness?

Probe: What does the term 'mindfulness' mean to you?

7) Have you noticed any differences in how you manage stress after the programme?

Probe: If so, what have the differences been?

8) Did you experience any difficulties during or after the mindfulness intervention?

9) How would you describe the experience of meditating?

10) Did you find mindfulness useful?

Probe: Did you find any particular mindfulness techniques useful?

11) Do you think you will you maintain your mindfulness practice in the upcoming months?

12) Is there anything else you wish to share on this topic?

After the interview was completed, the participant was debriefed by the researcher, using a debriefing sheet (Appendix B3) and asked if they had any questions. The researcher explained community support that was available to participants should they require it and participants were given the researcher's contact details in case of any queries.

QUANTITATIVE DATA

Data was collected pre-and post-intervention. This included demographic information (age, gender and ethnicity and the local authority that the participant worked for), attendance and engagement in mindfulness practice, along with the following measures:

MENTAL HEALTH

The General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988) is a validated and frequently used self-report scale for assessing mental health. The 12-item version

of the GHQ is an abridged form of the 60-item General Health Questionnaire (Goldberg & Williams, 1988). The GHQ was designed to measure overall psychological wellbeing and detect symptoms of depression, anxiety, and social dysfunction among the general population (Goldberg & Williams, 1988). It has been used in a variety of studies to measure stress responses (Frappell-Cooke, Gulina, et al., 2010; Magnavita, Garbarino & Winwood, 2015). Six of the statements are positively phrased and six negatively phrased. The maximum scoring of the GHQ-12 is 36. Each of the twelve questions asks respondents to rate the degree to which they have experienced each symptom over the past few weeks relative to their normal situation, ranging from 0 – less than usual to 3 – much more than usual for statement 2,5,6,9,10 and 11 and ranging from 0- 3 much less than usual for statements 1,3,4,7,8, and 12 on the scale, with higher scores indicating higher levels of psychological distress. It has reliable internal consistency, ranging from 0.79 to 0.87 (Quek, Low, Razack, & Loh, 2001) and good content validity (Goldberg & Huxley, 1980).

MINDFULNESS

The Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003) is a 15-item scale designed to assess awareness, a core characteristic of mindfulness (Brown & Ryan, 2003). The scale lists a collection of statements about everyday experiences. Participants are asked to answer according to what reflects their experience, rather than what they think the experience should be using a 1 to 6 Likert scale, with 1 signifying 'almost always' to 6 signifying 'almost never'. Example items include "I find it difficult to stay focused on what's happening in the present", "I could be experiencing some emotion and not be conscious of it until sometime later". The scale was developed and validated for use with clinical adult populations and community adults (Brown & Ryan, 2003), and is currently among the most commonly used self-report measures of mindfulness (Brown, 2011). Studies have indicated that the MASS is a reliable, valid measure for capturing changes in attention and awareness over time (Brown & Ryan, 2003). Internal consistency levels (Cronbach alpha) generally range from .80 to .90 (Brown & Ryan, 2003; Carlson & Brown, 2005). Higher scores on the MAAS are associated with fewer and less intense current unpleasant and negative emotional states and greater levels of mindfulness.

DATA ANALYSIS

QUALITATIVE DATA ANALYSIS

Inductive thematic analysis was used in the qualitative analysis for the current study. Thematic analysis was considered the most appropriate methodology, as it is a flexible method that allows interpretation of meanings and comprehensive understanding of the phenomenon. Thematic analysis is a recognised and accepted mode of analysis and has been used in a range of health research (Braun & Clarke, 2013). By comparing the individual accounts, the author sought to identify patterns of meaning in how the employees experienced the brief MBCT intervention, along with the process of how they used mindfulness during and after the intervention.

The analysis focused on the selected data as a whole and examined the meanings embedded within it. An inductive, data-driven approach was used to analyse the data, with themes developed from and grounded in the data (Braun & Clarke, 2006).

Data from the audiotapes were transcribed and verified for accuracy by comparison to the audiotapes. In this study, the phases proposed by Braun and Clarke (2006) were followed: (1) familiarisation with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report.

The researcher transcribed the interviews, which enabled familiarisation with the data prior to coding. After repetitive reading of all interview transcripts, coding was performed. Key features of the data were highlighted, and codes were generated across the dataset. Codes were then collated and by going back and forth across the transcripts and codes, initial themes were generated. Thematic maps (Appendix B8) were used to develop and refine themes, and this provided a detailed account of all themes generated from the codes, and patterns within the themes. In the present study, the themes represented patterns of meaning that were prevalent across most of, or the entire data set. Themes were then defined and reviewed before writing up the analysis. Codes and themes were developed through NVivo 10 software.

REFLECTION

Braun and Clarke (2013) emphasise the role of the researcher in the research process, and the importance that their values, interests and standpoints may have on the analysis process. Braun and Clarke (2013) highlight that qualitative analysis is

influenced by the researcher's knowledge and epistemology. As part of her role is developing wellbeing interventions for workplaces, the researcher had a broad knowledge of mindfulness and workplace wellbeing interventions prior to this research. The researcher had a particular interest in workplace stress, due to the nature of her role, but questions were kept broad so as not to assume that individuals were experiencing stress at work. The researcher's personal investment in this topic stems from having worked with many stressed local authority staff, which may mean the researcher was unable to see participant's stories without thinking of these past experiences. The researcher also reflected on how their own professional and personal relationship with mindfulness may have been impacted in this study and its findings, as during the time of the study they were largely involved in providing mindfulness interventions to organisations for workplace employees.

The researcher took a reflexive and transparent stance throughout the research process, ensuring that participant's voices were heard. This enabled a richer in-depth exploration of the participants' experiences during and after the brief MBCT intervention, although the researcher recognises that all prior assumptions of mindfulness interventions and occupational stress cannot be fully dissolved for this study. To address these reflections the researcher used a research journal and used supervision to remain aware and reflect on their role within the research. Initial impressions, behaviours, and nonverbal cues from the interviews were noted and referred to before coding to establish a sense of the participant's experiences.

QUANTITATIVE DATA ANALYSIS

Descriptive statistics were used to summarise the results of the quantitative data. Data for each participant were not matched pre-and post-intervention.

CHAPTER 3: RESULTS

PARTICIPANTS

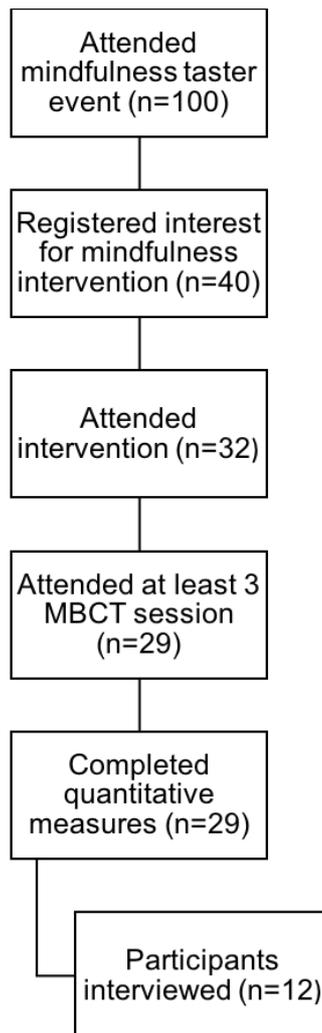


Figure 1: Recruitment outline

There were 40 participants who signed up for the intervention, 32 who attended the intervention and 29 participants who completed the mindfulness intervention. To maximise opportunities for employees to engage in the intervention the programme was delivered twice, at two different times of the year. Cohort one included sixteen participants and was delivered in May 2014, and cohort two included sixteen participants and was delivered in October 2014. The ethnicity of the participants were mixed, a majority were white British (n=7, 21.88%) or white participants (n=5, 15.63%) (Figure 2).

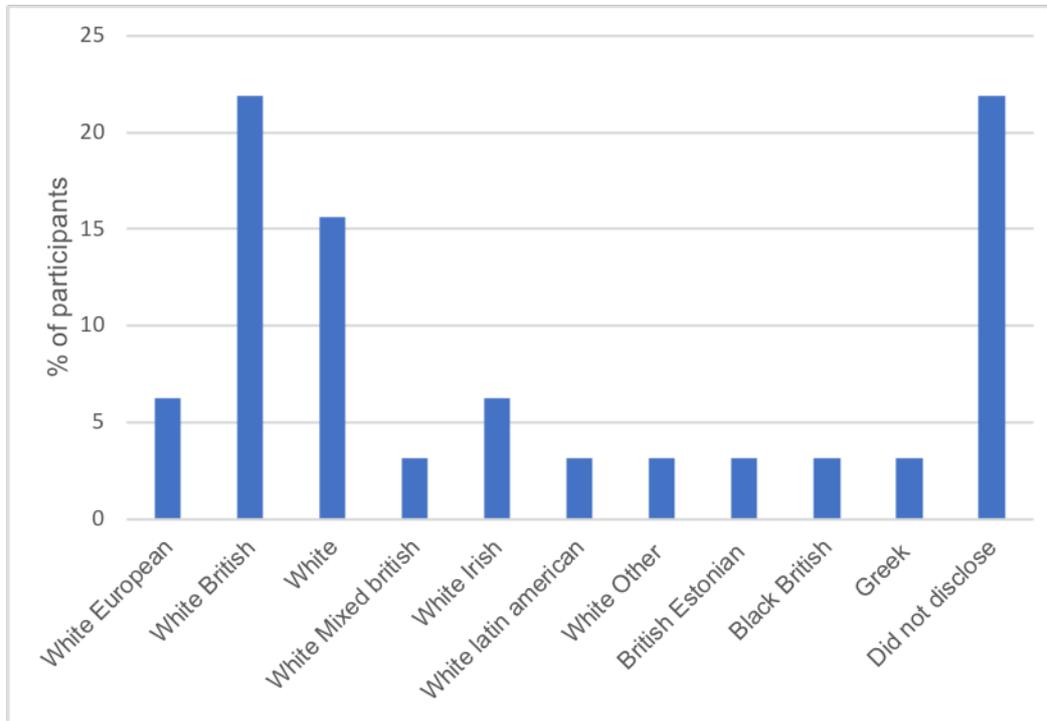


Figure 2: Ethnicity
(intervention participants, n= 22)

Of the 29 participants who completed the course, 25 (86.21%) were women and four (13.79%) men, and age ranged from 18 years to 55 years for those who disclosed their age (M = 41.61, SD = 8.65).

Thirty-two participants were invited to be interviewed and 14 (43.75%) agreed to take part. Two of the 14 participants failed to respond to further invitations, therefore, 12 consented to participate in the interviews phase of the study. Of those who took part in a qualitative interview ten (83.3%) were female and two (16.6%) were male. Participants came from a wide and diverse range of local authority departments including family services, learning difficulty services, children’s services, housing and homelessness, adult social care, travel, planning and development, corporate services and legal. From those who provided details on their age (n=6), ages ranged from 29-50, the mean age was 38.5 (SD = 7.69). Only five interview participants agreed to disclose their ethnicity, these white British/white mixed British (n=3, 25%), white Latin American (n=1, 8.3%) and white other (n=1, 8.3%).

QUANTITATIVE DATA ANALYSIS

ATTENDANCE

Attendance was high for both cohorts: 90.63% (n=29) attended at least three mindfulness sessions. In cohort one, sixteen participants started the four-week intervention, and sixteen (100%) completed three or four intervention sessions. In cohort two, sixteen started the four-week intervention, and thirteen (81.25%) completed three or four intervention sessions.

MENTAL HEALTH

Scores on the GHQ-12 were available for 28 participants, mean pre-intervention scores was 15.82 (SD= 8.10) and 7.41 (SD= 5.26) post-intervention. GHQ-12 scores of over eleven or twelve are used as a threshold to identify psychiatric 'caseness' when using Likert scoring (Goldberg et al., 1997).

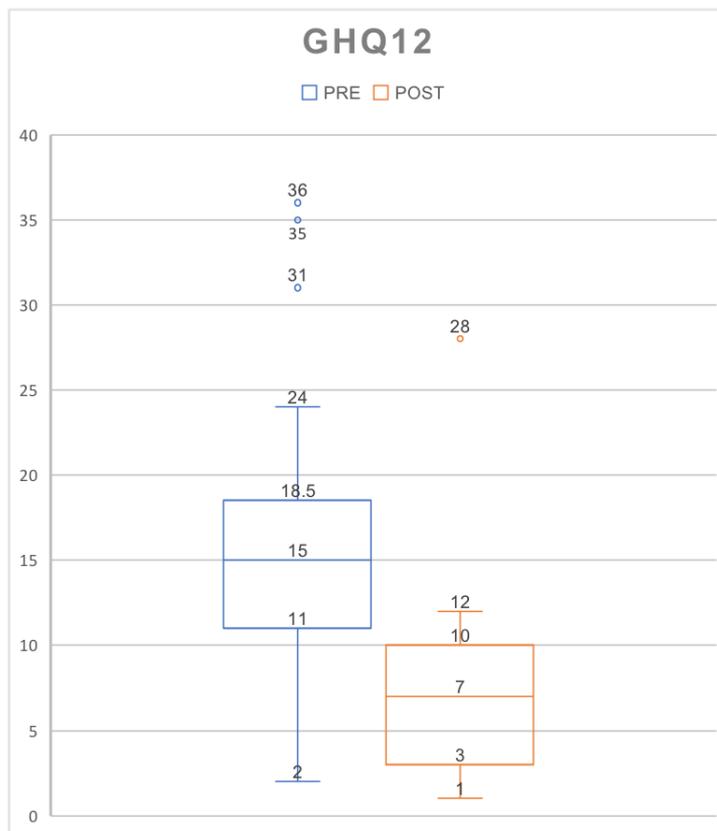


Figure 3: GHQ-12 pre and post intervention data
(intervention participants, n= 28)

MINDFULNESS

Scores on the MAAS scale were available for 28 participants, pre-intervention the mean score was 52.42 (SD= 12.81), after the intervention this had increased to 55.34 (SD=12.46). Higher scores reflect higher levels of dispositional mindfulness (Brown & Ryan, 2003).

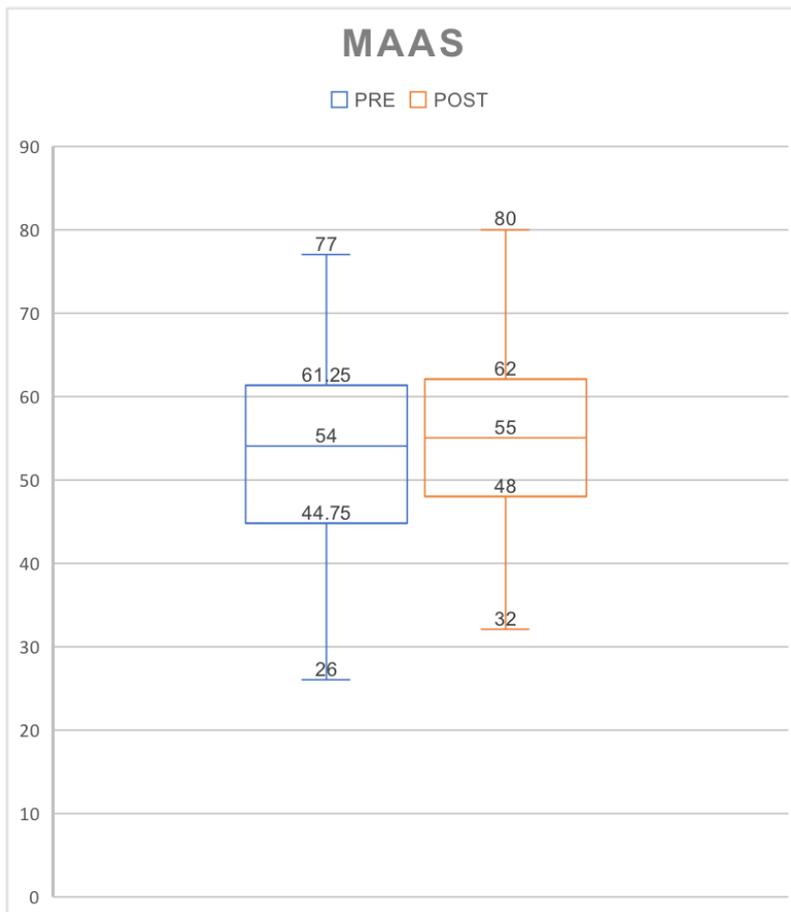


Figure 4: MAAS pre and post intervention data
(intervention participants, n= 28)

ENGAGEMENT WITH MINDFULNESS PRACTICE

Of the 32 participants, 29 completed post intervention data on amount of mindfulness practised, as well as whether participating in the course was a good use of their time. Fifty percent of participants were practicing mindfulness between five to ten minutes a day.

Table 3: Time spent practising mindfulness

Number of minutes a day	N (%)
5	9 (28.12%)
10	7 (21.88%)
15	5 (15.63%)
20	3 (9.3%)
25	2 (6.25%)
More than 25 minutes a day	2 (6.25%)
Missing data	1 (3.12%)

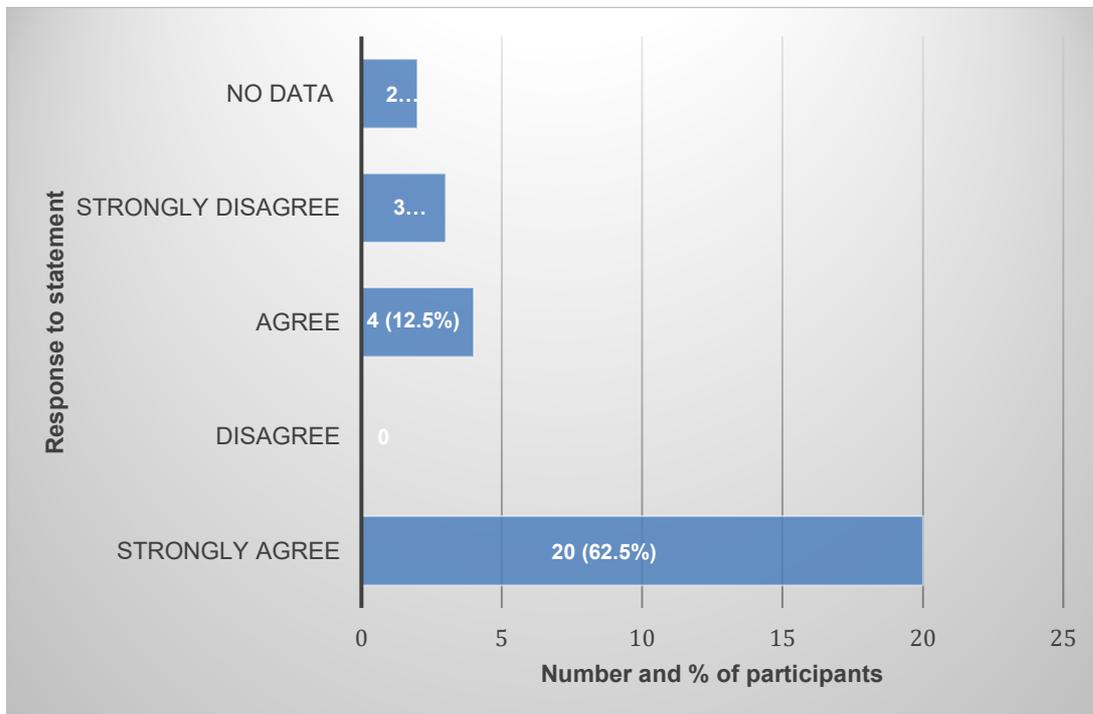


Figure 5: I plan to continue practising mindfulness
(intervention participants, n=29)

75% of the sample (n=24) planned to continue mindfulness after the intervention, with 9.38% (n=3) not planning to continue with mindfulness techniques post intervention.

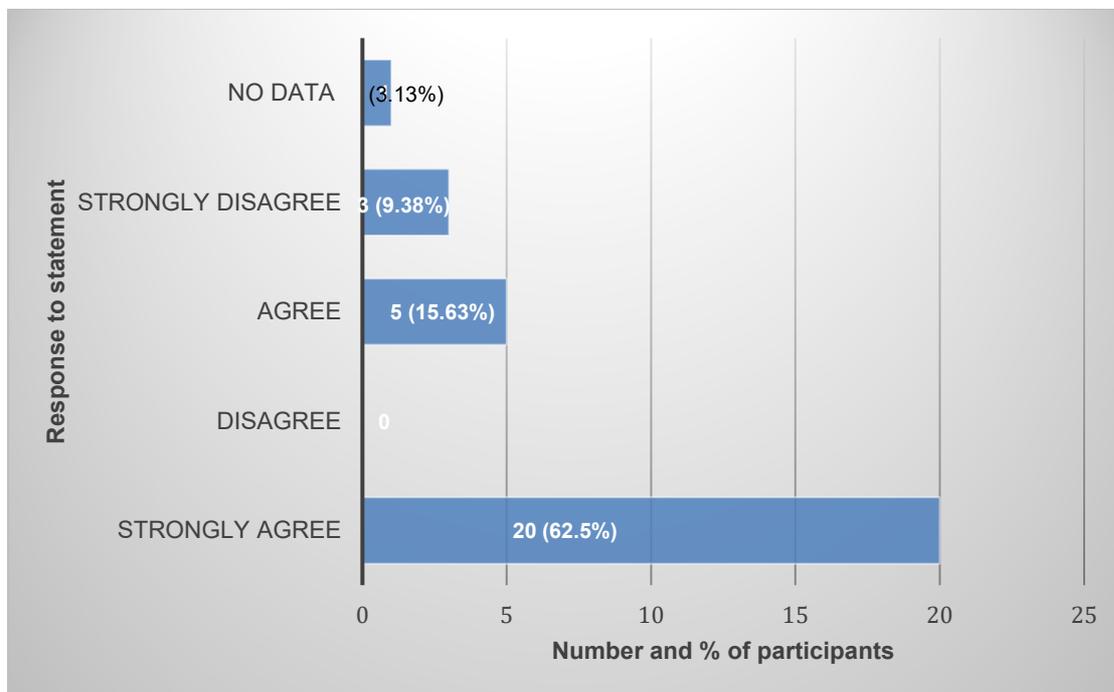


Figure 6: Participating in this course was a good use of my time
(intervention participants, n=29)

A majority of the sample (78.13%;n=25) agreed or strongly agreed that participating in the MBCT course was a good use of their time, however three participants strongly disagreed with this statement.

QUALITATIVE DATA ANALYSIS

Interviews lasted between 30-45 minutes. Upon review of the transcripts, 121 initial codes were developed. These were used as the building blocks to create the themes described below. Four broad themes were identified: effects of the mindfulness intervention, implementation of mindfulness, sharing group experiences and disseminating mindfulness to others, and challenges of practice (Table 4). These themes did overlap and intertwine in many instances.

The four themes explored participants' experiences during the group intervention and reflections on the brief MBCT intervention, in addition to exploring participant's cognitive appraisals and management of stressful situations after the intervention. The thematic analysis is presented through the interpretation of quotations, which are representative of the interview material. Thematic maps were used to make sense of the relationships between the themes and subthemes (Appendix B8).

Table 4: Overview of themes and codes

Themes	Subthemes	Tertiary themes
Effects of the mindfulness intervention	Increased awareness	<ul style="list-style-type: none"> • Awareness of the body • Being present: awareness in the moment • Awareness in the workplace • Awareness of thoughts and emotions
	Clarity and change of thoughts and emotions	<ul style="list-style-type: none"> • Altered thought appraisals • Acceptance • “A sense of calm... in a busy life”
	Sleep improvements	
Implementation of mindfulness	Finding the right techniques Using it when I need to Day to day mindfulness Structured practice Preventative tool Mindfulness aids	
Sharing group experiences, and disseminating mindfulness to others	Group practice Sharing mindfulness experiences and practices outside the group	
Challenges of practice	Beginning of the journey Course logistics Applying mindfulness at work Challenges in maintaining attention during practice	<ul style="list-style-type: none"> • Physical environment

Themes	Subthemes	Tertiary themes
	Time barriers	

THEME 1: EFFECTS OF THE MINDFULNESS INTERVENTION

“It helps me to approach the day with my feet on the ground” [participant 2, female, 44]

This first theme outlines the different ways in which participants benefitted from mindfulness practice, both during and after the four-week intervention. This theme comprised of three subthemes: increased awareness; clarity and change in thoughts and emotions; and sleep improvements.

Participants provided a variety of accounts as to the effects of the intervention. All twelve participants described a range of positive effects experienced through practising mindfulness and explored a range of ways in which mindfulness had helped them manage work and home life stressors, and specifically challenging stressful situations, which were mostly work-related. Only one participant reported that mindfulness did not impact their personal wellbeing and cited the length of the course as a reason for this. Although this participant felt that four-week course was *“too short to have any impact”* [participant 8, male, age NR], they subsequently reported other positive changes that they did not directly associate with their wellbeing, such as increased awareness and attention since completing the course.

INCREASED AWARENESS

One of the most prevalent subthemes that participants reported during the interviews was a heightened sense of awareness. This increase in awareness was described by ten of the twelve participants interviewed. Participants described becoming more self-aware both during and after the intervention. There was recognition by participants of an increased awareness of their body, thoughts, feelings, the behaviours of others, and the surrounding environment. Participants discussed making an effort to *“be mindful”* [participant 3, female, 40], and carry out daily activities such as travelling, household tasks, eating, showering, and driving with more awareness.

AWARENESS OF THE BODY

Participants described increased body awareness by using phrases such as “*mind-body connection*” [participant 4, female, 50] and “*listening more to my body*” [participant 2, female, 44]. This mind-body connection was described as a new experience that had taken place since embarking on the mindfulness course. Participants noted that they had become generally more aware of their body after the intervention, not only while practising the mindfulness techniques. Six participants reported a new ability to observe areas of tension and aches within the body and were more aware of the physiological effects of stress.

“I’m definitely more connected to my body. I’m noticing...em... how I am physically feeling. I do use my body to ground myself.”

Participant 4, female, 50

“I’m becoming more aware of...everything really, more movements, aches, and pains when I didn’t even know they existed...”

Participant 12, female, age NR

“What I like to do to apply is to listen more to my body while I am at work.”

Participant 2, female, 44

Stress was mostly described in relation to situations that took place at work, such as the impact of work colleagues being on sick leave, the workplace environment, the challenges of working with families and residents, and stressful interactions with clients within the workplace. Workplace stress accounts and experiences were described in ten interviews.

“The effects of situations which I find stressful...for example I have been in the office where there is lots of people talking over me...em...relationships...em all of that kind of stuff will create an anxiety for me.”

Participant 4, female, 50

“I mean, you know the role I do...it involves a... em...lot of communications or engagement with various groups of residents. Eh, with counsellors and with

senior management and then obviously with the strategic executive board of directors and you know director level so it's quite stressful in terms of what you are communicating and how we communicate and stuff."

Participant 11, male, 35

"I mean, I always see stress as mainly a work context."

Participant 1, female, 34

When asked about stress, participants described a range of different signs of stress, including visible signs such as facial expressions, body posture, tone of voice, and behavioural symptoms such as loss of sleep, shouting, and panic. However, only four participants explored the physiological signs of stress when asked to describe stress. It is interesting to note that although participants reported a decrease in 'tension' and 'aches', these were not linked to stress within the interviews despite having an increased awareness of the mind and body connection in most of the interviews conducted. Having an awareness of the signs of stress within the body was reported as beneficial for managing these situations by one participant.

"And I think that's really good because I do kind of, you know have those little stress fits and it's just noticing what part of your body feels it and I sort of do that."

Participant 1, female, 34

The increase in bodily awareness enabled participants to take appropriate action, for example practicing body scan and breathing mindfulness techniques, or 'slowing down' their physical actions to stop tension in the body. Seven participants described the body scan technique as the most useful mindfulness technique within the interviews. This particular participant found heightened body awareness a useful way of identifying tension within the body and consequently used mindfulness techniques, such as breathing exercises, to address these tensions:

"I have always been someone that is really tense, I never realised that before. Whereas now, even in my daily... you know, when I do things I can feel where

the tension is and I can sort of bring myself back, I'll do a bit of breathing and let it go. I think that is one of the most amazing things that I have learned."

Participant 7, female, age NR

Participants described an increased awareness of body tension at work, and utilised this awareness to correct posture, and incorporate other coping strategies such as focusing on what they are doing in that moment to alleviate tension.

"I noticed how much I tense my body at work. Um...I have been having some ahh, I've been seeing a physiotherapist because of the tension in my right shoulder and my right hand. So, that has been really helpful for me to realise that I am sitting again like a banana, and so I sit straight again, or I take more breaks...just to stretch, shorter breaks or even to stretch sitting...em...so that's been really helpful."

Participant 2, female, 44

"And I used to be the kind of person that used to push myself until the max, until I really can't stand it and then I want to cry because now I am in pain. Now I am more conscious, and I am like 'hey this is coming on and you know what's going to happen, so take precaution before it gets bad."

Participant 7, female, age NR

BEING PRESENT: AWARENESS IN THE MOMENT

*"Because, what I realised is the moment, if you are fully there, is so rich."
[participant 2, female, 44]*

Through engaging in the mindfulness intervention, participants described being more aware of the "here and now" [participant 2, female, 44]. Ten participants articulated that mindfulness had enabled them to "slow down" or notice what was taking place in the present moment. This enabled them to appreciate the moment, instead of rushing, or thinking ahead about the future.

"This mindfulness programme that I have been on has taught me so much things about being in the moment you know".

Participant 7, female, age NR

"Being focused on what's happening in the moment. Having better awareness of what is happening in general. Of what is happening with your thoughts and feelings, and body."

Participant 6, female, 29

When asked to describe the meaning of mindfulness, five participants described mindfulness as "*being present*". Some participants provided examples of not recalling how they arrived at destinations prior to the intervention or eating while on autopilot and described how this had altered since the intervention, as the quote below articulates. This quote also symbolises moments that can be missed when individuals are not being mindful.

"I did find I was listening to music, but it was like I didn't hear the music, I was on some journey, I sort of like...my eyes were opened, I wasn't asleep, and it was like 'How did we get here?'. So obviously, I have gone off somewhere, the music it was still on the same volume, I just didn't hear it, I didn't hear the people on the bus, I didn't even notice we were travelling."

Participant 10, female, age NR

This participant illustrates a positive picture of "*being present*", and how this has added to their quality of life:

"Because what I realised is the moment, if you are fully there is so rich...maybe not in the office but if you are out...you know if you are talking to someone in the park, or you are watching nature, or you are walking, or you are listening to music you are fully there, it's really rich."

Participant 2, female, 44

Eight participants described their efforts to create more awareness whilst participating in everyday activities. Two of these eight participants describe integrating mindfulness into everyday activities, such as cycling and drinking tea, allowing them to become more present in daily life.

“And also, the small things about being mindful, ah in everyday life. So, I was doing...when I have my cup of coffee or tea or umm...when I cycle to work I was sort of being more mindful about the body because my mind goes everywhere when I cycle.”

Participant 2, female, 44

The ability to be more focused in the moment had positive effects, such as increased attention, reduced stress, a feeling of calmness, an increased ability to plan workplace tasks, slow down and enjoy the moment, and a reduction in impulsive actions and rumination.

“And I think a lot of the time my, I am always thinking about what I have got to do next, I have always got some sort of project in my mind, or thinking 'oh what am I going to do this weekend?’ and I think now, when I’m watching a film or when I am out having a walk or when I am doing something, it’s like I’ll stop worrying about what I have got to do when I get in and enjoy what I am doing now...so..”

Participant 1, female, 34

AWARENESS IN THE WORKPLACE

Increased awareness within the workplace was also reported as a beneficial outcome of the intervention. This included heightened awareness of workplace situations; for example, an awareness of when work duties became overwhelming or increased in volume, a heightened awareness of colleagues’ behaviour and emotions, and increased awareness of their own actions in day to day work activities.

Three participants described their lack of awareness at work prior to attending the course, and the difficulty in becoming mindful in the moment, when participants are used to working on ‘autopilot’. This participant described a lack of mindful presence during the working day before the course:

“Em previously when I used to have lunch at my desk. I never took forty-five minutes’ break or one-hour break, it’s just hardly grabbing a sandwich while I am at work at the computer. So, I eat, and I don’t even realise that I am

actually snacking and eating at work. I only realise at the time when there is nothing left to catch, it's like oh shit I have finished it, that's really bad because I don't even know how much I ate, what I ate em..."

Participant 11, male, 35

A second participant described working on autopilot, and as a result they were not aware of physiological signs of tension:

"Where I said most of the time, or...a big chunk of the time I am on autopilot, so I sit a lot in front of the computer and don't take breaks. And I don't realise how tense my body is."

Participant 2, female, 44

Recognising increased workload led two participants to select more problem-focused approaches to stress when their work volume increased:

"So, I'm really aware of it (increased workload) now...so um...yeah...so that I can cope better and maybe ask for help if I need to or say I can't do this can someone else take this on board."

Participant 2, female, 44

Whilst other participants concentrated less on time constraints and workload after the intervention:

"To be honest I don't focus on if I'm behind on something now."

Participant 3, female, 40

Mindfulness enabled participants to consider individual feelings and interactions with others within the workplace, including how feelings and thoughts may influence behaviour. This was achieved by being able to "*slow down*" [participant 12, female, age NR] as the quote below signifies:

“So, I think it (mindfulness) just does makes you slow down, it starts to make you more ...aware of yourself, how you are feeling, how you relate the other people, you start to become aware of how other people’s behaviour is as well.”

Participant 12, female, age NR

This awareness also manifested in a heightened insight into the feelings and behaviour of their work colleagues:

“And then I was watching other people in the team, and their opinions and things like that, and I thought to myself ‘you are holding back’. And it’s almost as if I could identify myself what other people were feeling, and I found it quite interesting because I feel like I have got a bit more insight.”

Participant 7, female, age NR

Having this increased awareness within the workplace led participants to adjust their workplace routines and practices, which consequently led to an increase in efficiency and concentration. As one participant described this meant switching off technology:

“It’s more about, to me I have just made changes to make my job easier. Like for instance em...buy a to do list and write things down, and not really accessing the outlook calendar all the time because then you tend to check emails. Turn the email thing so it comes off.”

Participant 3, female, 40

Enhanced concentration enabled participants to focus on one task at a time, instead of trying to manage several tasks at once. It also helped participants recognise when their levels of concentration. Participants articulated this within the interviews:

“So, it has really helped me to be more focused. And I do more, like one thing at a time. I like the fact that it talked about attention management rather than time management...and it’s... it’s true.”

Participant 2, female, 44

“Oh, I think I kept that in my mind, to focus on the one...one thing I am doing and do it. Or else break it down and you know just think ‘okay, chip away at something and it will...it will happen’.”

Participant 9, female, age NR

And also, is to...to the I work really well in the morning, it when I am more lucid...sort of more clarity...so I will do more difficult tasks in the morning...and do more repetitive stuff, or stuff where I don't need my mind one hundred per cent in the afternoon...Because my concentration falls down dramatically after 3pm...or something.”

Participant 2, female, 44

Interestingly, one participant described a heightened awareness of the language she used within emails, and as a consequence this had helped her address a workplace situation by using words in a less commanding way:

“And it's just said, I don't look at how I am saying it. So, having this and thinking about words and how you say things and... and having that em...what was it from last week...eh...holistic and gently asking and not commanding type of words. So, it does make me think about when I put together an email, the content. So that I am not being like ‘you've got to do this, I want it done now.’ So, I do try, it doesn't always pan out but I do try to think about the language that I use ...so I mean hopefully it will only get better with practice.”

Participant 10, female, age NR

Structured guided mindfulness techniques enabled participants to divert awareness from the workplace environment, and direct this focus into the mindfulness technique, and in turn experience outcomes such as relaxation, as this participant describes:

“But the relaxation meditations are set, they are guided ones. So, the first five or ten minutes will be a guided one. Em...pretty much based on the breathing, the way you breathe and then try to visualise that practice going travelling all over your body. So, you just take your mind off all that nonsense going

around, and just focus on the different parts of the body. And em...yeah that gives me that that... deep internal relaxation after breathing.”

Participant 11, male, 35

Participants described an increased ability to concentrate, through living in the present moment; this increased attention involved detracting attention and thoughts from past and future events, which reduced worry concerning workplace issues. Seven participants described ruminating about work stressors prior to the intervention, which improved after the intervention as it enabled participants to “switch off” [participant 4, female, 50] after work hours.

“Em...I tend to focus a lot now.”

Participant 11, male, 35

“So, it has really helped me to be more focused. And I do more, like one thing at a time. I like the fact that it talked about attention management rather than time management...and its true”.

Participant 2, female, 44

“Yeah just being more reasonable able to make an effort to focus on what I’m doing, lots of positive changes.”

Participant 6, female, 29

AWARENESS OF THOUGHTS AND EMOTIONS

It was clear that participants experienced a wide range of negative emotions prior to the intervention, including worry, anxiety, guilt, anger, frustration and low mood. Most of these emotions were related to workplace situations involving other colleagues, clients or members of the public, along with examples of stressors that were not related to work (for example having concerns about housing situations, or traffic) that left participants feeling angry or worried. These emotions paired with negative thought patterns were evidenced in participant’s descriptions of stressful events prior to the intervention. For example, these participants described the difficulties of managing their anger and frustration due to workplace stressors:

“I just say literally saw red. And the people in the office just said to me [name of participant] your face...just changed from...and I realised that if I didn’t turn around and leave the office I would have physically hit her.”

Participant 10, female, age NR

“I was really angry. Em...I think I was embarrassed as well for the person who had to facilitate the group when they were sort of expecting twelve people and then like three or four....so I was a bit embarrassed on behalf of the business. But I think anger was the sort of overarching theme.”

Participant 5, female, 34

One participant described a lack of connection with her thoughts prior to the intervention:

“And even in terms of my own life as well you tend to think that things are not bothering you, but I suppose they are and you are not really thinking about them.”

Participant 10, female, age NR

Part of the mindfulness intervention aimed to increase participant’s observation and awareness of thoughts. After the intervention, participants described a greater awareness, understanding, and acceptance of their thoughts and emotions, this was facilitated through their ability to identify and recognise thought processes through mindfulness practice. The aim of MBCT is for individuals to become more aware of their thought processes without reacting to these thoughts, instead of ignoring them as evidenced in the quotes below.

“You know if you... some days your mind wanders and you have lots of thoughts then you can be aware of what’s going on, and if you are sad or if you feel great.”

Participant 4, female, 50

“Yeah, there were really interesting things about thoughts as processes. And how they can evoke emotions or body reactions just by thinking about things. I

found that very very interesting. And they presented it in a very tangible way. So, I thought that was very positive as well.”

Participant 2, female, 44

“So, there is a bit more awareness, you know...and I don’t know it’s ...I am more aware of the things that I do, and how I feel emotionally mentally and every way, basically you know. And em...I...I do think it’s... it’s because of this course.”

Participant 7, female, age NR

CLARITY AND CHANGE OF THOUGHTS AND EMOTIONS

“It has made a difference in the way I perceive things.” [participant 7, female, age NR]

ALTERED THOUGHT APPRAISALS

The mindfulness intervention enabled participants to become more aware of their thoughts and emotional experiences as explored above, and consequently alter their thought appraisals and emotions, and in some instances behaviours to address situations in a more positive or neutral way. The process of mindfulness provided participants with techniques to observe and explore their thoughts and feelings. These participants described the ability to notice thoughts, and recognise whether they were positive or negative, which had an impact on stress levels:

“Em...so yeah a bit less stressed, a bit less anxious about things. Noticing far more...when my mind was wandering. Paying more attention to whether the things it was wandering to was positive or negative. Yeah just being more reasonably able to make an effort to focus on what I’m doing, lots of positive changes.”

Participant 6, female, 29

Changes in perceptions about life, in general, were evident throughout the interviews, identified in phrases such as *“the way I see things now is quite different” [participant 7, female, age NR]*.

The quotes below explore changes in participants' appraisals of their life outlook:

"It does put things in perspective, doesn't it? I mean the mere fact I'm here and not in some hospital bed with tubes and stuff coming down, so yeah."

Participant 7, female, age NR

"Life is too short to be carrying so much negativity. And harbouring thoughts that you...you know things that you cannot control so literally making yourself feel worse than necessary."

Participant 4, female, 50

"I think from the course it was that kind of...that idea of looking outside, you know you might think something is awful and you're doing really terrible at something but imagine if you saw somebody else behaving that way. It's... you are not doing as bad as you think."

Participant 1, female, 34

An expanded awareness of thoughts and change in thought processes allowed participants not to be overrun by thoughts and manage situations more effectively. Five participants described a change in their levels of worry, or anxiety after the intervention.

"And I'm definitely training my mind not to keep going...em... into thought patterns. I've definitely reduced my ruminations, I do a lot less of that."

Participant 4, female, 50

"I definitely noticed that I am not worrying about things as much."

Participant 1, female, 34

As well as altering their appraisal of life, participants were able to alter their thought appraisals in specific situations. Below are two clear examples of changes in participant's appraisal and management of thoughts, during periods where they would normally ruminate.

“Because I find for me as soon as I haven’t got things distracting me, as soon as I go to bed I’ve got that quiet time that when I, that’s when I start thinking ‘oh no I shouldn’t done that, I’ve got this to do’ and I definitely...I kind of I’m now saying to myself ‘what am I going to do about it right now at this minute?’ I can deal with it tomorrow.”

Participant 1, female, 34

“Or if I do wake up, once I wake up in the night I just think you know I get paid from when I get there to when I finish...so I shouldn’t really be spending my time thinking about work outside of work, because otherwise it’s like they are getting something for free, that’s the way I see it.”

Participant 3, female, 40

Participants were able to detach from stressful situations and realise that some stressors were outside of their personal control and were able to “let go” [participant 5, female, 34] of these thoughts, as the quotes below describe. This ability to reappraise situations and feelings towards work were described as a positive outcome of the course.

“Actually, it was a very good point that I learned from there is whatever the stress that comes is not directly to me, it’s for the work in that role. So, anyone in the role will get it. So, there is no point in me taking that personally, which is an incredible...em...em...lesson to say the least.”

Participant 11, male, 35

“And trying to...to say to yourself...this is not something I can literally change, so just let it go.”

Participant 4, female, 50

“and my thoughts, and sort of the idea behind thoughts, letting go of thoughts.”

Participant 7, female, age NR

"I...I keep saying that it's like...em...let go, let flow. Which is what I love to say because that's what mindfulness is to me now. It allows you to let go and let all that negativity flow out...of your body instead of you being tense."

Participant 10, female, age NR

Changes in appraisal of work situations enabled participants to take a more problem focused approach to their work:

"Yeah, I think.... I think ... I think like sometimes you can see all this work you have got haven't you and everyone has got hundreds, especially for me has got hundreds of emails and it's like 'oh my god, where do I start?' and actually having to think 'okay no, do not get stressed, it will be fine'. And work through and be more methodical in your approach and more organised."

Participant 9, female, age NR

Reappraising thoughts, along with adopting changes to their work processes, made their work day "better".

"But it is better because I am not arriving with the pre...pre...ideas of ... 'oh my god I'm getting in the office'. That's definitely changed. Before...like I was dreading coming into the office, I'm able to stay detached until I actually get in the office. Arriving there early helps as well, before anyone else arrives."

Participant 4, female, 50

Participants that changed their appraisal of potentially stressful situations felt that this could have an impact on how they reacted and felt, as well as increased their clarity about how to approach the situation.

"Like...like...you know seeing things as problems now, but they won't be problems tomorrow they will be yesterday's problem, you know. And so, if I see it like that I am not overreacting to things and you know, be much calmer."

Participant 9, female, age NR

“I may not have it spot on... but if I take a step back I think I don't need to deal with that like this, I can now deal with that this way.”

Participant 7, female, age NR

“Yes, because I think you catastrophise, you know you think ‘oh my god what's going to happen? What's going to happen, uhhh... it's going to be terrible’. No, it's not, I mean for some people it might be terrible but on the whole, it's not going to be that bad, it's going to be okay. On the whole, you just need to calm down, and people just get stressed and overreact.”

Participant 9, female, age NR

Participants described an increased ability to cope and manage stress after the intervention. Becoming more mindful may not eliminate stress completely, rather it enabled a change in perception of the situation.

“Because before work I'm ...before I get into work or whatever I am not increasing in my stress levels, and therefore arriving in a more stressed out...so I'm arriving to work em...not particularly stressed because I am managing my emotions a lot better.”

Participant 4, female, 50

“And mindfulness helps teach you that if you kind of catch that at the very beginning and you don't start the downward spiral and obviously that sort of catching it at the start that makes you take it back immediately, you don't start getting as em...stressed out, angry, upset, whatever. Em...as you would do if you left a festering thought about the situation and the negativeness, whereas mindfulness lets you take a step away from the situation and maybe come back to it when you have had a bit of time to ...I don't know... take time out, relax. I think it's quite good for managing stress in that way.”

Participant 5, female, 34

“And em...it still happens, I still get stressed and things like that you know, but it has made a difference in the way I perceive things.”

Participant 7, female, age NR

The awareness and change of thoughts in some cases led to a change in the participant's response to the situation.

"Friday, I went to the pictures. I went to the cinema and when I left, I got to Hammersmith and that was in Shepherds Bush and I wanted to buy a little of water, and I realised that I had lost my purse. And whereas before I would have freaked out and panic panic panic panic... and I thought 'oh okay I just need to go back and hope that it's there'."

Participant 7, female, age NR

ACCEPTANCE

"To be honest I have just accepted that I am what I am."

Participant 3, female, 40

As demonstrated in the previous subtheme, participants reported an increased ability to appraise work situations from negative to neutral as a consequence of the course. This transformation involved an acceptance of thoughts, situations, self and others. Those participants who had learnt to become more accepting of situations were able to reduce panic, stress and worry. In this example, the participant was unable to find a pragmatic solution to the situation and considered the benefits of using mindfulness techniques as a tool to meditate and learn to accept situations where there may not be an immediate solution.

"Yeah...em...I...my stress levels is...the way I see things now is quite different. Because the way I was before I would like panic and you know 'oh god' blah blah blah blah... But now it's like 'okay what is the situation and what can be done?', you know? And I am realising that sometimes there isn't an answer. And that's normally when I used to drive myself bonkers, but now it's more like 'let me meditate on that'. Let me just...you know...so that I can accept."

Participant 7, female, age NR

Acceptance of vulnerability is evident in the quotes below, in addition to drawing on past experiences to reach acceptance. Another participant is more accepting of the process of ageing, which has not been identified elsewhere in other interviews.

“Because that is... what it’s about most of the time to just accept that sometimes you are helpless and then just sort of like...instead of worrying about it and making myself feel sick; just acknowledge it is what it is and that somehow things will work out, and for most of the time they do, you know.”

Participant 7, female, age NR

The accounts below described a new sense of self-acceptance within the workplace, and acceptance of workplace situations, which participants identified as a useful strategy to reduce worry and make job roles easier.

“I ...I’ve got to realise that’s its ...this is just ...it...as long as I have done my job properly and as long as I’ve kind of applied the law and done everything that I possibly can I need to stop worrying about it because there is nothing I can do to change the situation.”

Participant 1, female, 34

“So just doing things, giving myself more time to do things and just accepting that you know I am always going to be behind, it’s the job that I do. You know. So yeah, and just trying to make things easier in the role that I do.”

Participant 3, female, 40

“But I think...that I have had to deal with a lot, especially today there was something that happened and a certain person said something and I just...I didn’t pick it up straight away. And the when I read it, I read it quickly last night. When I came back in and I read it I was like ‘hmmm...okay’. So, I said to my boss [name], I said ‘I don’t take kindly to what you said. I am not going to take it further, its...its...its...its... put to the back of my mind but it’s not forgotten, I’m not about to say anything but it’s there, I know it was said and that’s about as far as I am going to take it’. Whereas I think before I would have been like ‘No, no, no you know this is uncalled for, blow up. So, I think in

a way it's probably made me a little bit more accepting to criticism, even if the criticism was not warranted."

Participant 10, female, age NR

Reaching acceptance can be difficult, a participant outlined the challenge of acceptance of the actions of others and managing expectations. In the event described, the participant was unable to manage these expectations, however, reflected after that she needed to let go of the expectations of other individuals, and accept others.

"I... I... just...it's more about just letting it go and I can't really judge, I know I can't really judge other people by my standards and they might have other things going on in their life, whatever, for whatever reason it really wasn't worth me getting as upset as I did about it. So, it's more trying to just...let go...of my expectations of other people in those situations."

Participant 5, female, 34

"A SENSE OF CALM...IN A BUSY LIFE"

Nine participants described the concept of calmness within their interviews. Eight participants described feeling calmer or behaving in a calmer manner as a result of participating in the mindfulness intervention. Three of these participants described the mindfulness practice itself as a calming experience.

"It was nice that you can have that hour of ...of ...hearing a calming voice and allowing yourself ...even if you fell asleep you are so much more relaxed afterwards."

Participant 10, female, age NR

Meditation was used as a tool to switch off from work related thoughts, resulting in lower levels of worry:

"Yeah, definitely. I think um, for me my biggest issue is that I think about work the night before when I am at home and now I have, sort of, I think having to do the sort of mediation in the evening it stops that a lot of the time... I mean

it's not going to get rid of completely, sort of at this stage but I definitely noticed that I am not worrying about things as much."

Participant 1, female, 34 age NR

Others used mindfulness practice as a mechanism to stay calm and regulate emotions in difficult situations, whilst others described a more relaxed disposition overall. Although there is no intentional focus to relax during mindfulness meditation, seven participants found the experience of mindfulness relaxing.

"You definitely feel your calmness and your breathing better. Just the warm glowy feeling that you get really. And being calm you know, of having given yourself.... time out."

Participant 12, female, age NR

"The relaxed state I can get into is so lovely...it's almost addictive"
Participant 4, female, 50

"Yeah, well I would say I am much calmer because I am a bit hyper, I have calmed down a lot."

Participant 9, female, age NR

"Just being able to be more relaxed, and just yeah not worrying about things."

Participant 1, female, 34

Which was also recognised by other members of their family.

"I did say to [name of facilitator] when I first started on the mindfulness course whereas em my son is seventeen, sort of teenage, and he will say to me 'all you do is moan'. When I first started on the mindfulness and getting into it, he was like 'Mum you are so much calmer'. So, I was like wow, because normally I would just be jumping off at him and like rarrrrrr, and he would just be like look at me and you are a mad woman, what happened. So, I think...my... me now knowing this, having this outlet I have curbed how I deal with things."

Participant 10, female, age NR

SLEEP IMPROVEMENTS

Sleep issues were common for participants prior to the course and were related to cognitive arousal at night time, including worry and negative thoughts about stressful events.

“And sometimes I cannot sleep. This is the thing, the thing that bothers me the most is if I... normally I don't have any problem sleeping. I don't suffer from insomnia or anything but when I am in stress I know anything wakes me up and my mind starts working and thinking and I can't fall asleep again. This is how I know I'm stressed out.”

Participant 2, female, 44

“That normally prevents me from actually enjoying anything because my mind is constantly on it and I struggle to sleep and do normal things because it is constantly in the back of my mind.”

Participant 7, female, age NR

“I mean I felt I have always had trouble sleeping and I have never really made an association with being worried about things or whatever...”

Participant 6, female, 29

Five participants reported improved changes in their sleeping patterns after the intervention. Some slept better through the use of mindfulness techniques, whilst others fell asleep immediately after practice.

“But I just, I mean I find sort of mediation it just you know it just takes that focus away so I think I had one issue where I couldn't sleep recently, and I just did the breathing for twenty minutes.”

Participant 1, female, 34

“I do think overall, in general, it has made a positive contribution to being able to sleep.”

Participant 6, female, 29

Three participants reported using mindfulness practice specifically as a sleep aid, instead of other coping strategies, such as alcohol or medication.

“Listening to the deep mediation sounds actually helped me to sleep. Well...em...without taking you know, without added... not need of alcohol or no need for mediation as such. So actually, that mellows my mind and then it gets me get into smooth, easy sleep so that’s one, another significant achievement personally that I have gained.”

Participant 11, male, 35

THEME 2: IMPLEMENTATION OF MINDFULNESS

“If you can get into the habit of doing it.” [participant 12, female, age NR]

This theme helps reach an understanding of whether individuals use mindfulness as a tool to manage stress after the brief four-week intervention, and how mindfulness practice is utilised after a brief intervention.

FINDING THE RIGHT TECHNIQUES

“It does feel like a bit of a treat if you can find the right one” [participant 1, female, 34]

Participants found certain types of mindfulness practice challenging but were able to identify techniques that worked well for them. When asked about the techniques that they preferred, most participants expressed a preference for shorter mindfulness techniques, such as the three-minute breathing space and sound practices. Despite being encouraged and advised about the benefits of longer practice, there were more accounts of experiential shorter practices described within the interviews. When participants found mindfulness techniques challenging, they tried alternative techniques.

“Yeah but the body scan, I did find a couple of times it’s like you know one minute I’d be doing my left leg and already I am on the torso bit, that’s like five minutes gone, and I just found it really hard to motivate myself to sit down and do that one whereas to do the breath or to do the sound, I quite enjoyed that.”

Participant 1, female, 34

“Providing different options even for the breathing was very helpful. And...the body scan is excellent because you really go through your body with your mind and you realise the areas where there is tension.”

Participant 2, female, 44

“I didn’t really have a problem...with all of them... I mean when we were at the session we did the mindful walking, that one...I did think no that’s not for me. I’m not...to mindful walk...no...I just feel that in London everything is just too fast paced...and I have got the space to well...to ...do all this...I didn’t enjoy that because I felt a bit silly. But I preferred...I preferred the one where you can just sit down sort of like that or lie down...that’s what how I would prefer.”

Participant 3, female, 40

“And what I have tried to do, is to again be more...try to find opportunities within the work time to meditate as well. This one I fed back on the course is sitting on your computer em...sort of just staring at a screen [laughs] and kind of endless emails coming through, is trying to be just more aware of what’s going on, so mindful, mindfulness awareness in the situation and listening to the noises and breathing as well for a few minutes.”

Participant 8, male, age NR

Some of the more structured shorter mindfulness practices such as the three-minute breathing space could also be practised out of home, which participants found that they could apply easily:

“What was actually good was the breathing was really good, I know I can do that you know any time or any place.”

Participant 9, female, age NR

“Em, I think they were useful because... they were easy to, to use at, throughout the day. I guess part of what I look for as well is being able to kind of apply something without having to kind of take time out to go to a room to

do it in.”

Participant 8, male, age NR

Travel time was also used to practice mindfulness, as described by four participants:

“But if I am able to do it...I mean I do it on the tube when I travel to work or when I travel home, maybe like five minutes.”

Participant 9, female, age NR

“So, I thought to myself okay what I am going to do, it’s only half an hour. And kind of like nice because the start of my journey- it is half an hour down to Richmond so that’s when I do my body scan, I put my headphones in you know what I mean. And I did that and when we did that ten minutes of...of sound we introduced that. So, when I sit in between waiting for the train, so I try to do like, so of like make it part of my routine.”

Participant 7, female, age NR

“It was really nice to bring back to the actual simple exercise of cycling. So, it was good to have the different these different options.”

Participant 2, female, 44

“Sometimes I do the walking one on the way to work.”

Participant 4, female, 50

Environment could also play a part in deciding when and where to practice, and needed to be considered for formal practice, as one participant notes:

‘Em...I think body scanning, the whole shebang, a good one, is definitely a home thing, where you have to do at home, in a nice environment in a way you want to do it all.’

Participant 12, female, age NR

“I think I am still at the early stage of it having an impact on myself. But I am trying to introduce it...eh... into my life. And so, I think in that way, yes. Useful

and maybe potentially more useful when I get more practice at finding the space to do it.”

Participant 8, male, age NR

USING IT WHEN I NEED TO

Ultimately, there were three ways in which mindfulness was practiced (i) using it as a tool when required, (ii) incorporating mindfulness into day to day practice, and (iii) using mindfulness as a formal technique. Three participants expressed that they used mindfulness ‘*when I need to*’ [participant 6, female, 29], and felt like a commitment to practice mindfulness outside of these situations may not be beneficial.

“Em...but again it’s something I am doing when I want to. When a space opens up, or when I feel like I need to instead of committing to like building it into the routine.”

Participant 7, female, age NR

“Yes. Yes, in the sense. Certainly in the sense of using it when I need to. Use and actually practice when I need to.”

Participant 6, female, 29

“Although I know I haven’t been practising every day, but I have been practising and it’s more when I feel I need to do it, rather than for the sake of doing it.”

Participant 9, female, age NR

Mindfulness techniques may be useful for managing stress in the moment; the participants below provide descriptions of short techniques which were useful to apply in stressful situations. Using breathing techniques to manage stress was a useful experience for many participants, and this technique was described by most participants for managing potentially stressful situations.

“Um...breathing I found the easiest one...because we breathe...ah...to follow your breath it feels...it feels...it’s already there.”

Participant 2, female, 44

“The ones I find quite handy though as an immediate type thing given what environment we work in is the hourglass the three-step breathing technique, is a really good one. Because you know you are in a bad...you know you might be stressed so focus on your breathing and then you feel good about yourself, it’s that idea anyway it’s the simplest. So that’s quite quick- you can do it as you are heading off to make a coffee, if you are in the bathroom for a minute, bringing yourself back into the moment”

Participant 12, female, age NR

“Yeah, so I think the breathing one, um I really liked, um I can’t remember what it’s called it was one where we had to kind of think of a time when we were really stressed about something and then kind of breathing through it. And I think that’s really good because I do kind of, you know have those little stress fits and it’s just noticing what part of your body feels it and I sort of do that. And it did work in the class and also I tried it at home a couple of times so...”

Participant 1, female, 34

Breathing techniques can also aid a more problem-focused approach, as one participant explores:

“Um...so I had to...today is my first day back after like four days being away. And I can feel this...yeah...I was like ‘oh noooo we don’t know when she is coming back’ I can feel this...so...yeah...now for me is the moment to breathe deeply and, yeah...yeah... to take one thing at a time and I can speak to my line manager and discuss how we can cope...or how can I cope...or what is expected of me...”

Participant 2, female, 44

In acutely stressful situations participants also reported that being present and having an increased sense of awareness and using mindfulness breathing techniques enabled them to cope more effectively, as one participant reflects:

“Driving can be em...can find driving sometimes in London traffic stressful. And ah so again just thinking about being aware of the moment, being aware of other people around and letting people cut across if they want to. And thinking about my breathing as well so that’s been, that’s been quite, quite useful, to be aware of...obviously be aware of the road and everything else, safety.”

Participant 8, male, age NR

Some participants used mindfulness techniques in stressful situations to stay calm:

“And I guess...so I think when I think about the four-week course, what I’ve I have taken is some of the techniques that I learned there that I can apply to try and stay calm in situations, in work situations, maybe stressful meetings, challenges and some of the techniques we have learned to focus on those to stay cool in the situation.”

Participant 8, male, age NR

DAY TO DAY MINDFULNESS

Integrating mindfulness into participants daily lives meant taking a general approach to being aware of their experiences, carrying out activities in a mindful way and bringing attention to the activity at hand when the opportunity arose. Four participants integrated mindfulness into their everyday activities, rather than taking a more structured approach to their practice, whilst others took this approach in addition to structured daily practice.

“So now I’m actually trying to be mindful about what I am eating, what I am doing, what I am drinking.”

Participant 11, male, 35

“As I said I did...I was doing stuff with it all the time and I would find myself eating my lunch more away from my desk, and when I did I would sit there in silence or read my book but really on my own. Washing hands, washing dishes, doing tasks around the office, all of them –if I do them mindfully it just makes it a bit better”

Participant 12, female, age NR

“Whereas trying to be more mindful- as I said sitting on a computer, or on a bus em, or walking and so practising the breathing and being mindful listening and mindful kind of visual awareness, I think are the ones I try to use kind of on a regular basis. I do a lot of, when I am out doing visits and going to meetings I walk, rather than getting...driving or public transport. And I think that’s been a really good way to practice mindful awareness. Which helps health and wellbeing as well.”

Participant 8, male, age NR

There was recognition that building mindfulness into daily activities, although not time consuming, required effort and practice.

“But I actually started thinking do you know mindfulness is such a ...it’s the most simplest thing...that...if you can...if you can get in the habit of doing it and not seeing them as something you have to set time aside for, it’s actually stuff you do on a day to day.”

Participant 12, female, age NR

“So, I’m...I’m still trying to get that mindfully eating and mindfully brushing your teeth. I think probably em...when I am in the bath is where I am able to ...really do that mindfully. I think it’s probably because I am a lot more relaxed and I am just sitting there. So, when it’s a case of doing something so where you are thinking about it, I think you tend to go off...but it’s a work in progress.”

Participant 10, female, age NR

One participant described several occasions on which they performed mindfulness techniques within daily life, however they did not perceive this as “*meditating properly*” [participant 9, female, age NR].

“I was at my computer this morning I get emails on my phone, or ill check emails on my phone or ill think well this is my opportunity now. But I can do it (mindfulness practice) more on the bus, travelling, on the tube...em...yeah, I

mean that's when I do it most. Sometimes when I am at home, in bed sometimes...a little bit in the morning, it's not really meditating properly."

Participant 9, female, age NR

STRUCTURED PRACTICE

Six participants dedicated time to practicing mindfulness techniques each day including guided meditation and self-directed meditation, using techniques such as the body scan and breathing exercises. Participants felt that you *"have got to put the effort in"* [participant 3, female, 40] and prioritise mindfulness practice, and therefore developed plans to implement mindfulness at home, or at work.

"I'm prioritising the meditations which I wasn't doing before, I'm prioritising that now, that's become a big thing for me."

Participant 4, female, 50

The participants who described formal mindfulness practice committed to a structure, where they created space to practice mindfulness techniques, usually in the evening after work hours and in their personal space.

"By doing my meditations, which is very regular. I do it when I get in from work. And then I do it before bed, and then I do it at the weekends."

Participant 4, female, 50

PREVENTATIVE TOOL

Mindfulness was used a preventative technique to manage stress in some instances, as described by these participants:

"So, it's actually completely sort of holistic approach to the way you can tackle ...loads of different things... prior to them becoming stressful problems."

Participant 5, female, 34

"Yeah so it works both ways. It works helping you de- stress, or when you are stressed and it helps you look at what might be stressful to you and then tackling that before it's a big problem."

Participant 5, female, 34

“it keeps going back to the tools but it’s...it’s like this set of rules where you literally take yourself out of the moment and put yourself in another moment, in order to calm yourself down.”

Participant 5, female, 34

Seven participants described using mindfulness as a technique to manage stressful situations, in the moment:

“Mindfulness helps teach you that if you kind of catch that (stress) at the very beginning and you don’t start the downward spiral and obviously that sort of catching it at the start that makes you take it back immediately, you don’t start getting as em...stressed out, angry, upset, whatever. Em...as you would do if you left a festering thought about the situation and the negativeness, whereas mindfulness lets you take a step away from the situation and maybe come back to it when you have had a bit of time to ...I don’t know... take time out, relax. I think it’s quite good for managing stress in that way.”

Participant 5, female, 34

“You know, what has come out of the course in that you can manage stress it’s just working out what works for you... so finding what works for you. Because I think you can acknowledge something is stressful, but I think you can ...it’s about learning to move on from that and deal with it, and not bury it but kind of...sort of ...yeah...”

Participant 1, female, 34

“But personally, I feel.... less stressed, or when there is a stressful scenario I tend to like...cool down myself...and take things slowly rather than rushing and doing it, that’s one good thing.”

Participant 11, male, 35

“The last four weeks, I mean...I think it has equipped me with good tools for dealing with stress... and if you have something there usually, you know if you have, if you know you are in a stressful situation, or you can’t cope and you

know it's like an awkward type you have got or whatever, you've got an anchor or you have got something to save you there, do you know it is something you can use."

Participant 9, female, age NR

MINDFULNESS AIDS

Ten participants used aids to practice mindfulness or learn about mindfulness, these included YouTube videos, mindfulness apps, audio files, and the handbook from the MBCT course. One participant specifically mentioned not using guided meditation aids, preferring to practice independently. The participant below described different approaches to mindfulness practice, how she felt about mindfulness, and how accessible mindfulness techniques can be through different channels. This enabled the participant to access mindfulness in a variety of different ways, including CDs and YouTube.

"Taking it seriously and making it a part of my life. Its embedded it for me you see, so when I think about that course...because I had been doing it on my own and hadn't done a group or done a course in it...em...I kind of plucked...I didn't pluck it out of the blue you know, I knew that it was a big thing. I could see that...because this is probably going back about four years when I first heard about it. Em what I hadn't done was look on YouTube and realised there was a lot of audio search, but I have changed from using my...I'm accessing it more easily, I have the cd's em...and I put the cds on and quickly jump into bed and put the guided mediation on. Now I have the app which she suggested so I listen to that a lot. And I also listen to talks on it one on YouTube and getting the absolute, embracing it a bit more. So, when I think about mindfulness I think about it being a lifeline from that course."

Participant 4, female, 50

"but knowing that it's there and I can go refer to it in the book, you know I can get myself to where I need to be, that's always good."

Participant 10, female, age NR

One participant considered external mindfulness courses to maintain their practice:

“I mean there are some groups in London actually like a meet up group and they do a free meditation, so I am thinking at some point to do ...em... to do that as well as just break it up- to do some myself or to go somewhere with a group.”

Participant 3, female, 40

THEME 3: SHARING GROUP EXPERIENCES, AND DISSEMINATING MINDFULNESS TO OTHERS

GROUP DYNAMICS AND PRACTICE

Participants described sharing experiences of mindfulness and workplace situations with others as a positive part of the intervention. Group dynamics were generally considered positive in participant reflections. There were however, two participants who articulated a lack of connection within the group and consequently described a difficulty in forming a rapport with other participants. These two participants suggested improvements to enhance the group dynamic such as more structured introductions of group members and a structured ending to the intervention.

“Yeah, the group dynamic was good, it’s quite mixed, different backgrounds, different experiences. And em...yeah...I mean we never had an ice breaking session where we know each other as such, which is unfortunate. And I don’t know who the other members are, even if I wanted to contact them now I don’t have anything to say who they are...em...other than one or two who sits right next to me directly, are the ones I know.”

Participant 11, male, 35

“I think the other thing about the course is that there wasn’t really a sense of introductions within the group either.”

Participant 8, male, age NR

Ten participants described the group experience as an enjoyable and a comfortable group space to communicate and experience practice.

“Yeah it was fine, I mean it’s like you say we are all adults it’s just we close our eyes and listen to our body it’s not...so yeah it was quite a nice experience.”

Participant 3, female, 40

“And the group were really nice I think. I think that everybody in the group was nice, a supportive group.”

Participant 9, female, age NR

Some participants experienced positive connections with other group members through a shared interest in mindfulness:

“And I feel like I’ve made connections with my colleagues and things like that and we have things to talk about and stuff like... like... I mean I would never have known [name of colleague] before or anything like that. But now we’ve got something to talk about and she has got my email and send me all these links so it’s like really good, you know what I mean?”

Participant 7, female, age NR

“There is a lady in my office who was on the course. She is on another team and we’ve been sending each other... little things to do with it. Like...em...if I have done a mindfulness body scan, or I have sent her a love and kindness compassion meditation the other day, and then she sent me something. We’ve both been sort of doing a bit of that and we talk about it. It just, it’s lucky enough she is sort of behind me.”

Participant 4, female, 50

This participant also described feeling less lonely since the course

‘Oh, and so I’m not feeling as low. I’m not as lonely either.’

Participant 4, female, 50

Practising with others was a motivating factor in the maintenance of mindfulness practice between the weekly sessions. Sharing mindfulness experiences and practice ideas with other group members was a common part of the sessions. Participants also discovered other coping strategies to manage stress by sharing experiences.

“I think for me it’s...especially in the initial stages, if its exercise of anything I need to get somebody to get me to do it (laughs), because I find a million excuses not to do things. But I do find myself when someone else is very positive about stuff it kind of helps.”

Participant 1, female, 34

“Because in that course we actually tend to share a lot of other people’s practices as well, what they do and everyone tends to do that.”

Participant 11, male, 35

One participant compared her situation to peer’s experiences in the group, and a second participant outlined the benefits of sharing experiences with other members of the group:

“Because I have a lot of thoughts going around my head, so I am always thinking about things. So, on the way home I will be thinking ‘oh I need to do this’...you know so a lot of it...uhh... and the fact that other people were the same.”

Participant 3, female, 40

“It was really nice to hear other people’s contributions, I thought this was really valuable as well. Or people talking about what they liked or what they found difficult. And what else did I like, I liked the fact we were able to share in pairs and it was up to the people to share with the rest of the group. I thought that worked really well.”

Participant 2, female, 44

Another participant reflected on the usefulness of having a facilitator to guide the mindfulness practice within the group setting:

“I mean it was really good to have someone there to go through the relaxation with you like the body scans.”

Participant 9, female, age NR

Seven participants referred to the knowledge that they had acquired from the course facilitators about the process of mindfulness practice and learning about thought processes, as evidenced in these quotes:

“Well, [name of facilitator] for a start is the most amazingly wonderful teacher you could ever hope for. Her personality, character just comes through, and also her knowledge. She is one of those perceptively good people where her knowledge is massive, but she actually comes across very casual, like it’s all easy.”

Participant 12, female, age NR

“And actually, work through and be more methodical in your approach and more organised. I mean I know she said...it was [name of facilitator]...yeah...[name of facilitator] yes...and she said something about...about...emm...like multi-tasking and she said they are just doing lots of jobs at the same time and they are not actually achieving more. So, I think I kept that in my mind, to focus on the one...one thing I am doing and do it.”

Participant 9, female, age NR

Part of the intervention was interactive; participants practised and lead mindfulness experiential techniques with peers in the group. Leading practice was described as a challenging aspect of the group work by one participant:

“I know in myself I am, whereas I can’t relax and I tend to get flustered...eh...especially when I had to speak, you know taking the group through and its...its... all a learning curve. And I never thought I would be like that because I am quite open and I speak to everybody and anybody.”

Participant 10, female, age NR

SHARING MINDFULNESS EXPERIENCES AND PRACTICE OUTSIDE THE GROUP

Participants within the mindfulness group experienced a shared sense of identity with their group peers as described above, this contrasted with the difficulties participants experienced when attempting to share their experiences of mindfulness with others outside the group:

“It’s easy to speak to the people who have attended, than the people who haven’t...so when I speak to my girlfriend she thinks I’m an idiot, she thinks of you are just off your brain...but if I speak to someone else who had attended you would be having the equal...em... platform so we could actually...you know...discuss it more, so that’s one thing.”

Participant 11, male, 35

Interestingly however, eight of the twelve participants described sharing practices and experiences with other peers and friends outside the group. There was a strong willingness to share practice with others who had not embarked on the course, and those who were external to the organisation:

“Em...I’m trying to articulate it really is probably the one good thing to do. And someone I was friends on Facebook the other day sort of had gone to school with, back in New Zealand and they were thinking about doing it and did anyone have any experience and I fed back to her you know absolutely do it if you can.”

Participant 5, female, 34

“I thought it would be really good giving it to my team. [name of colleague], who actually wanted to do the mindfulness, he’d seen it being advertised, thought about it, then realised he was going to be away for two of the sessions he decided not to do it. So, I announced to my team that’s where I had disappeared to for the minute and had done in the past on a Wednesday he afterwards sort of said to me ‘oh I was really interested in doing that mindfulness thing’, so he has agreed in his next one to one we are actually going to do a session together.”

Participant 12, female, age NR

“I have been sharing it with my families as well that I work with.”

Participant 4, female, 50

Other participants encouraged colleagues to participate in future mindfulness courses, outlining some of the benefits that can be achieved, and reflected on ways to integrate mindfulness practice with others in the work environment:

“I kept saying to everybody I think you should, you should book yourself on this because it’s nice, even if it’s just an hour, half an hour of coming out of the zone and just...you know relaxing yourself.”

Participant 10, female, age NR

“Em, yeah I actually did think because one of my friends who works in this office, she did it so maybe doing it in one of these rooms for lunchtime because that’s when I can...quite easily say I like having twenty minutes away from my desk anyway.”

Participant 1, female, 34

THEME 4: CHALLENGES OF PRACTICE

Although there were several positive effects from attending the brief mindfulness intervention, there were also several challenges that participants experienced in integrating mindfulness into daily life. Eleven participants shared experiences of difficulties in practising mindfulness within the interviews; these challenges included feeling like more time was required to embed practices, lack of concentration, lack of time for practice, workplace practice difficulties, and barriers in their physical environment.

BEGINNING OF THE JOURNEY

Regular daily practice is an integral part of the brief MBCT intervention, and was encouraged within the group setting, however not all participants practised daily. Seven participants described their experience as *“the start of the journey”* [participant 1, female, 34], or *“still developing the skills”*, [participant 6, female, 29] as new mindfulness habits were not formally embedded after the four-week course. There was

acceptance that embedding mindfulness may require more time than the course duration.

“Emm...so...I...well...(laughs)...I think for me ...em...It’s just the start of the journey really.”

Participant 1, female, 34

“I have struggled with...em...is when they say try to be mindful, so if you are in the shower have a mindful shower and mindful eating. But I think sometimes because I am not used to doing that.”

Participant 3, female, 40

One participant observed that the practice of mindfulness had become easier over time but was not as embedded as they would have liked it to be.

“Yeah, it’s easier than it was in the beginning but it’s still not...I think I would like to get to the point where it’s just kind of, almost thinking on autopilot you are doing the mindfulness thing.”

Participant 5, female, 34

Although participants felt that the techniques were not fully embedded, efforts were made to embed mindfulness, and progress was anticipated, with time:

“Sometimes I do things and it will pop into my head to be mindful, you know. And I think it becomes more and more.”

Participant 7, female, age NR

“And I’m just trying to make sure that at least once a day I’m incorporating it in some way, so it becomes more everyday natural reactions to things, rather than having to kind of think to do it, I’m sure eventually that will take place, but its early days yet.”

Participant 5, female, 34

“There is one called the sound one, sound meditation but I am not really keen on because it’s really hard not to judge the sound, for me maybe because I am...maybe after a few months of...em... practice probably I would get over that...”

Participant 11, male, 35

COURSE LOGISTICS

Many participants noted that they would have liked the course to be longer, however some reflected on the likely difficulty of their employee committing to an eight-week course within work time. Five participants indicated that they would have preferred a longer course, or longer sessions.

“A bit more longer sessions would have been beneficial I would say, eh well obviously... everyone got time restrictions and such. Either could make it six weeks, or make it four to seven I don’t know whatever suits but it helped me, I mean personally I gained from it so...”

Participant 11, male, 35

“I think the only thing I’d say about the course was it felt like four weeks just wasn’t enough.”

Participant 1, female, 34

Participants noted that the length of a workplace intervention is a “*fine balance*” [participant 12, female, age NR] due to work commitments, and in fact longer interventions could induce stress:

“Which is crucial, you don’t want to create something which is supposed to be anti-stress but actually make people stressed about completing it. So, it’s a fine balance. I think four weeks is a good start.”

Participant 12, female, age NR

“I mean it is difficult and you have got to ask people to find two hours for eight weeks.”

Participant 1, female, 34

Two participants had difficulty attending the course during the working day due to travel and location. Arriving at the course stressed was viewed as counterproductive, as one participant describes:

“but it is a bit of a struggle for a lot of people to travel across London, wherever to get to the class. Um...the timing of the class is fine, four to six, you know. But I think realistically you would have to leave your job at three to get there in good time. You don’t want to...with any of these sorts of things, you don’t want to run up sweaty and in a panic because

otherwise sort of...defeats the point of the thing. “

Participant 12, female, age NR

CHALLENGES IN MAINTAINING ATTENTION DURING PRACTICE

Five participants described a general increase in concentration or ‘focus’ as a consequence of using mindfulness techniques however, the data also highlighted that maintaining attention during mindfulness practices could be challenging.

“I am trying to incorporate, and it doesn’t seem to work because as soon as you start to do it, my mind goes elsewhere.”

Participant 10, female, age NR

“So just doing a body scan, or like ...basically doing a meditation or practice when feeling quite stressed...em...I mean obviously the mind does tend to wander.”

Participant 6, female, 29

“Yeah so in the first couple of weeks where they were saying the homework is to go and do this...So I have been trying to do it at night time just before I went to sleep. But I was finding because I was tired I was falling asleep half way through.”

Participant 5, female, 34

“There were a number of times where I tried to sit up on the bed and stuff, but it didn’t feel, and I almost always ended up lying down and falling asleep and using it as relaxation and stuff. So that was a bit of practical difficulty.”

Participant 6, female, 29

Although maintaining attention was notably difficult, this participant attributed this to the fact that she was at the beginning of her practice:

“I think with any meditation to begin with, I think your focus lasts about five seconds and then it goes but that’s the point of it, isn’t it?”

Participant 12, female, age NR

APPLYING MINDFULNESS AT WORK

Although four participants had success in incorporating mindfulness practice within the workplace, and utilised mindfulness as a tool to manage workplace stress, a common thread across most interviews was a reported difficulty in applying mindfulness within the working environment. This is an important and interesting finding. Although eleven participants discussed reductions in stress as a result of the intervention, successful mindfulness implementation within the workplace was a challenge.

PHYSICAL ENVIRONMENT

Seven participants discussed difficulties with implementing mindfulness at work, this included both formal practice and being more mindful in daily activities. This was largely due to the physical environment. These participants were however, able to use mindfulness and experienced the benefits in other environments, such as at home.

“And you do get, you can take yourself away...but I just think...I would rather do it at home where I am not going to get someone knocking saying ‘oh, oh can I come in and sit down?’. Because some people want to use the phone, and they use the lunch room to use the phone or they go somewhere so you don’t really ...always have the space. So, I think its...you know...for me it’s better outside of work.”

Participant 3, female, 40

“You try not to rush into...but it’s inevitable in humans, I mean you know it’s really hard to...say no...you know we work in an environment, my line manager right next to me saying ‘I need this report going on, what’s the stats?’. So, I would leave the sandwich and just keep doing it. It’s not something I think ‘ah let me breathe, let me think through it’, it’s not going to work. Em...it’s hard...but at least it’s there to unwind you at the end of the day, so thinking you are not the only one, it’s across the board and how do you manage that, you know that’s definitely very useful.”

Participant 11, male, 35

“Bringing the mindfulness into what is already quite an adrenalin environment is harder than having the tranquillity and detachment when I walk out, so that bit I haven’t been able to quite manage yet.”

Participant 4, female, 50

Although the participant below indicates that mindfulness home practice was more common than practice within workplace settings, they recognised how one can apply mindfulness within the workplace to manage stressful situations through mindfulness apps or finding a quiet space.

“I mainly do it at home, but I mean...have been told that you can download the stuff onto your phone, so you can just disappear and listen, which I think I need to do. So, when it gets too much for me, I can go to the loo with the phone and have a nice little listen, get into the moment and come back, refreshed.”

Participant 10, female, age NR

“And I do wish I could get a guided breathing mediation through my phone. I wish I could do that. I mean you are supposed to be able to plug into their bloody Wi-Fi, but it never seems to work on phones. That’s the only dilemma with that one.”

Participant 4, female, 50

“I think in work maybe it’s a bit more difficult because it depends because we don’t always have a place where no one is going to come in. Em...and like

disturb you, but you know you can take yourself away for quiet time so yeah I think it doable in work and outside of work.”

Participant 3, female, 40

TIME BARRIERS

Participants found it difficult to find time to practice formal mindfulness techniques and juggle multiple responsibilities within their work and home lives. Without setting adequate time set aside for the practice, participants reflected on their failed attempts to practice when time was limited:

“Em...you know, the awareness thing, you know you do find yourself drifting off. I try to, I was running late this morning for example, so I tried to do it while I was getting ready. Focus on my body parts and that just absolutely does not work because you are rushing around...it just doesn't work.”

Participant 4, female, 50

Course expectations could be difficult to implement, and time barriers were evident for one participant:

“But I think the real...I think what the expectations were from session to session was quite a lot more than that. And especially if you read the book, especially if you are you know supposed to do a body scan every day plus another mediation and things like that, then I do think that the time constraint was a little bit unrealistic.”

Participant 6, female, 29

Participants described ‘*allowing myself the time*’ [Participant 12, female, age NR], which suggests the need to prioritise mindfulness above other competing tasks or activities, by giving themselves permission to do this.

“I think it was just allowing myself the time, seeing rather than having the telly on, turning it off and do it. It's always the issue of setting time aside with ...various other things that need to get done too.”

Participant 12, female, age NR

“Yeah, I mean for me I don’t feel like I can incorporate mediation enough yet, I’m still struggling that kind of, I get home and it’s like when am I going to find this twenty minutes, half an hour to do it when I could find an hour to watch a crap film or something, so it’s for me it just feels...I need to just keep myself doing it and I need to really sort of set aside the same time every day to do mediation.”

Participant 1, female, 34

Despite being aware of the benefits that mindfulness can bring, it can be difficult to make a commitment to practice, as one participant described. Committing to mindfulness practice requires planning, and a personal commitment to make the time to do something you will benefit from.

“So, I know the benefits but sometimes I practice for a period of time, and sometimes I’m off two months do you see what I mean? Even knowing how beneficial it is the challenge is to respect the time, and I always try to get up earlier in the morning to do it, to begin the day...yeah.”

Participant 2, female, 44

CHAPTER 4: DISCUSSION

The aim of the present study was to explore participant's experiences of a brief MBCT intervention in the workplace. Few studies have examined participant's experiences of brief workplace MBCT interventions using qualitative methodology and those that have been conducted outside of the UK context (Dobie, Tucker, Ferrari, & Rogers, 2016).

The qualitative analysis identified four major themes: (i) effects of mindfulness, (ii) implementation of mindfulness, (iii) group experience and sharing mindfulness with others and (iv) challenges of practice.

The quantitative data showed that there was little change in the mean MAAS mindfulness scores; pre-intervention MAAS mean scores were 52.42 (SD= 12.81), and post intervention scores were 55.34 (SD=12.46). There was a decrease in the mean GHQ-12 scores post intervention from 15.82(SD=8.10) to 7.41 (SD=5.26), and 75% of participants stated that they planned to continue mindfulness after the course, which is an indication that participants who were interviewed found the intervention helpful.

Participants mostly reported practicing regularly in their own time and completed three of the four MBCT sessions, suggesting the acceptability of the programme along with the qualitative feedback that participants felt that more sessions would have been beneficial, which is similar to qualitative feedback of the acceptability of a four-week intervention in another past MBCT study conducted in healthcare settings (Luberto et al., 2017). Although the qualitative interviews of the twelve participants who took part in the study indicated that the intervention was acceptable and helpful, these results do not reflect on the quantitative data that did not show any differences in terms of mindfulness disposition. The discrepancy might be a result of the self-selected nature of people who took part in the interviews. In other words, people who felt that they benefitted from the intervention might be more likely to agree to be interviewed. It might also mean that although participants found the mindfulness intervention helpful and were willing to carry on practicing, they would need more time to develop their mindfulness skills through practice to show any differences in the self-report measure. Another explanation might be that participants found helpful aspects of mindfulness that were not necessarily measured. For example, in the interviews, participants talked about reappraising stressful situations, sleep improvements and the positive group dynamic that they found helpful, and these constructs were not measured

quantitatively. Participants may have developed other mindfulness related traits such as self-compassion and acceptance, which is not measured by the MAAS, which assesses mindfulness traits.

A number of participants who agreed to be interviewed felt that they benefited from the intervention, there was an ability to reappraise life situations, increased acceptance, greater attention and awareness of actions, thoughts, and emotions, living more actively in the present moment, a calmer attitude, as well as improved sleep, however some faced difficulty and challenges with the intervention that are explored below. Participants acquired more internal resources to deal with situations through the practice of mindfulness. These benefits were identified in those who practiced mindfulness formally, or informally. Participants that attended the intervention integrated mindfulness practice in a variety of ways, some participants integrated formal structured practice within their daily routines, other participants chose to use mindfulness as and when they felt it was required, such as when they needed to relax, or were required to deal with a difficult situation.

The intervention was not without challenges, participants noted the difficulty in finding the time to practice, maintaining focus while practising, applying mindfulness within the workplace and sometimes in the home environment, and issues with course logistics. Findings also suggested that participants felt that they were at the beginning of the mindfulness journey, and additional effort was required to embed mindfulness within their lives.

The group experience was a very important part of the intervention for participants, and is an important theme for workplace interventions, the group dynamic was central for peer support and the sharing of experiences. The findings suggest that more time could have been utilised developing the group dynamic, and that several participants shared experiences and practices of mindfulness with others inside, and outside of the workplace.

EFFECTS OF MINDFULNESS

As there are minimal studies conducted in the workplace using MBCT parallels are drawn with other studies conducted in clinical, academic and other occupational settings.

Firstly, a number of participants identified a range of positive outcomes from the intervention including a heightened awareness of body, thoughts, emotions and

behaviours, clarity and change in thoughts and emotions, and better sleep. Similar themes have been identified in other qualitative research exploring the effects of eight-week interventions in clinical, community, and academic settings (van Ravesteijn et al., 2014; Griffiths, Camic, & Hutton, 2009; Haydicky, Wiener, & Shecter, 2017; Morone, Lynch, Greco, Tindle, & Weiner, 2008).

Mindfulness was defined by many participants in the interviews as 'being present' and described as a heightened awareness in the moment. Participants described an increased ability to 'be present' and an enjoyment of life in the present moment, with many reporting a reduction in worry and rumination. This ability to stay in the moment helped as a stress reduction technique for participants, allowing freedom from worry about past or future events. A further reported effect of the brief intervention was a heightened awareness in both mind and body after the intervention, as well as increased awareness of the environment, and of other colleagues, although this was not reflected in the quantitative MAAS outcome data which measured levels of awareness and mindfulness and identified little change pre and post intervention. However, increased awareness was reported by all participants as a positive effect of the mindfulness course and developing an awareness of the present moment was reported in the interviews as positively impact upon mood and negative thinking, and there was a change in mean GHQ-12 scores post intervention. Awareness can allow employees to be aware of their thoughts and feelings, without reacting upon them (Brown & Ryan 2003), and thus may influence the impact of potentially stressful situations, such as those in the workplace. Past quantitative research has identified enhanced body awareness as an outcome of eight-week MBCT training in a population of patients experiencing pain and depression (de Jong et al., 2016).

In this research, a number of participants reported a heightened mind-body connection and observed body cues such as tension and aches; increased awareness of physical sensations and a conscious awareness of body tension, and posture. This awareness enabled some participants to put appropriate strategies in place to manage these, as well as identify somatic symptoms of stress earlier. This has also been seen in past qualitative accounts of experiences of MBCT for patients with respiratory problems, where a heightened awareness of body was beneficial in noticing early cues for their health (Malpass, Kessler, Sharp, & Shaw, 2015). Participants in this study also provided evidence of being able to perform tasks more effectively and had more focus after the intervention. In the current study, being aware of the mind-body connection

also served as a useful tool for preventing potentially stressful situations from becoming stressful, as it enabled a better understanding of emotions and thoughts, as well as bodily sensations. Interoceptive awareness has been defined as the sense of the physiological condition of the body (Craig, 2003). Past research has suggested that interoceptive awareness can play an important role in managing emotions; those with high levels of interoceptive awareness are more emotionally reactive and aware (Barrett, Quigley, Bliss-Moreau, & Aronson, 2004; Wiens, Mezzacappa, Elizabeth, & Katkin, 2000). An increased self-awareness of body and mind was evidenced in a meta-synthesis of healthcare sector staff's experiences of longer mindfulness training (Morgan, Simpson, & Smith, 2015). In the current study, some participants described having more focus and improved attention through their heightened awareness, which allowed them to handle workplace situations more effectively. Similarly, Chiesa, Calati and Serretti's (2011) systematic review explored whether mindfulness training improved cognitive abilities in those participating in eight-week mindfulness programmes including MBCT, MBSR, ACT and other MBIs suggested that MBIs could enhance several domains of attention, memory, and executive functions. Although some similarities exist between review findings and the current research, the theme of improved memory functions was not present in the current study.

A strong sub theme in the current research was a shift in thought reappraisals, suggesting that the practice of mindfulness may strengthen an individual's capacity to reappraise situations. The idea that mindfulness training could promote cognitive reappraisal was first explored by Garland (2007), who suggested that mindfulness may alleviate stress by facilitating positive appraisals. Findings identified in past research echo this, where participants experienced changes in appraisal after interventions or surveys conducted with mindfulness practitioners (Garland, Gaylord & Fredrickson, 2011; Troy, Shallcross, Davis, & Mauss, 2013; Hanley, Garland, & Black, 2014). Similar findings can also be seen in Chiesa, Calati and Serretti's (2011) review of eight-week mindfulness programmes including MBCT, MBSR, ACT and other MBIs where an increased awareness of thoughts and emotions enabled participants to alter their appraisal of situations, which meant that participants felt better able to decide what actions to take. This outlines the role that mindfulness practice can have on cognitive reappraisals, and that mindfulness can enable a shift in cognitions and facilitate the attribution of new meaning to previously stressful events, which can be seen for both longer and shorter interventions. It is interesting to

note that unlike past research most participant's reappraisals in the current study were neutral, rather than positive reappraisals.

As well as a heightened awareness of thoughts, a heightened awareness of emotions was also evident in a number of participants' accounts. Emotional regulation can be described as the ability to see things as they are and shift perceptions (Shapiro et al., 2006). There is some evidence that mindfulness can be beneficial for emotional regulation (van der Velden, 2015), but less is known about participants' experience after workplace MBCT interventions, and the mechanisms of emotional regulation within workplaces. Researchers have suggested that the effects of mindfulness in the workplace may be particularly strong when emotional regulation is required (Glomb, Duffy, Bono, & Yang, 2011). The regulation of emotions may be required for managing workplace relationships, and feelings in regard to work constraints, particularly within the local authority setting where interactions with clients, and members of the public, were reported as stressful by participants in this study and participants had difficulties switching off from workplace events. Most participants described past experiences where they were unable to manage their emotions prior to the intervention. A number of participants reported an increased ability to identify and manage emotions post intervention and were more aware of their tendency to react automatically to internal and external triggers, such as distressing interpersonal situations. This meant that participants were better able to mindfully respond to clients, and colleagues. Participants described using mindfulness to regulate difficult emotions such as anger and found that mindfulness was a useful tool to use to manage negative feelings and to remain more objective in situations. These strategies could be valuable for public sector staff who have frequent interactions with clients and members of the public, as well as dealing with workplace colleagues. Emotional regulation has also been identified as an intervention outcome within past mindfulness studies in mindful meditation (Ortner, Kilner, & Zelazo, 2007), and it has been identified as a theme in past qualitative research exploring the experience of parents who had received an MBCT intervention (Bailie, Kuyken, & Sonnenberg, 2012).

Awareness of rumination and negative thoughts were explored and highlighted within the interviews; several participants reported being more aware of their anxiety and worry during and after the intervention. 'Taking a step back' or using mindfulness to 'take yourself out of a moment' was also a strategy which was used and associated with moderating emotions. However, there were times when a smaller number of

participants reported difficulty in managing emotions despite attending the mindfulness intervention.

A further reported impact of the MBCT intervention was an increased sense of acceptance by a majority of participants interviewed. Acceptance was utilised in three different ways by participants; acceptance of self, acceptance of others, and acceptance of situations that occur in both home and work life. This in turn had positive behavioural and physiological responses, with participants feeling less worried, and able to approach situations with an awareness of their emotions and thoughts. These findings echo past RCTs and uncontrolled studies using MBCT interventions, where a decrease in rumination was identified after MBCT interventions (Van Aalderen et al., 2012; Ruths et al., 2013). Negative thoughts about individual roles, and workplace perceptions were reappraised and accepted, and participants reported a change in attitude to their roles and workplace. This has also been highlighted in past trials of workplace MBIs which included interventions that contained MBCT components, where mindfulness was found to facilitate an adaptive responding to stressful events by allowing individuals to attend to the event in an accepting, non-judgmental manner (Michel, Bosch, & Rexroth, 2014). After the intervention, many of the participants described an increase in self-acceptance at times when they were struggling in daily life. Acceptance has also been highlighted in a recent meta-synthesis of qualitative MBCT studies, which aimed to gain a deeper understanding of how the features of MBCT contributed to positive therapeutic change (Cairns & Murray, 2015). Findings suggesting a heightened sense of acceptance and understanding of problems, acceptance of difficulties, and the benefits of a new sense of acceptance as themes within the included research papers (Cairns & Murray, 2015).

Finally, the current study found MBCT practice lead to increased relaxation, better sleep in five participants interviews, and a sense of calmness in nine participant interviews. Participants' experiences were largely different in terms of how they used mindfulness to relax. There were a range of ways that participants described how mindfulness was used as a tool to aid sleep, such as using mindfulness practice as a mechanism to fall asleep, using mindfulness to stop behavioural habits such as checking work phones and electronic devices outside of working hours, which in turn helped sleep quality, while other participants described sleeping better since practising their mindfulness techniques. Participants suggested that mindfulness assisted them to reach an inner state of calmness. Cognitive processes characterised by stress and

worry caused or contributed to sleep complaints in this study. Mindfulness techniques, and the ability to feel more mindful appeared to disable work related thought processes and rumination after work hours. This is a notable change for participants who described an inability to switch off at night, which impacted on their sleep routines prior to the course. It is possible that participants used mindfulness as a tool to enable a relaxed and calm state, as opposed to becoming more mindful. Feeling relaxed, and an increased sense of calmness has also been identified as themes in qualitative workplace research conducted in eight-week mindfulness courses (Cohen-Katz et al., 2005; Moody et al., 2003); where participants reported increased patience, calmness, a reduction of stress, and a greater ability to relax as benefits of the programme.

There are a number of studies which identify a link between psychological wellbeing and problematic sleep (Hamilton, Gallagher, Preacher et al., 2007; Steptoe, O'Donnell, Marmot, & Wardle, 2008; Choueiry, Salamoun, Jabbour, El Osta, Hajj, & Rabbaa Khabbaz, 2016). Sleep quality has not been extensively reported within mindfulness workplace studies. There is some evidence outside workplace settings to suggest that mindfulness practice can increase sleep quality and duration using subjectively reported sleep quality measures with participants who experience depression after an eight-week MBCT course (Britton, Shapiro, Penn, & Bootzin, 2003), in workplace interventions (Klatt, Norre, & White, 2012), and with cancer patients (Smith, Richardson, Hoffman, & Pilkington, 2005). A systematic review conducted with other MBIs such as MBSR suggested there is no clear effect of mindfulness interventions on sleep quality or duration (Winbush, Gross, & Kreitzer, 2007). Lomas et al's (2017) systematic review examined the impact of mindfulness on wellbeing and performance in the workplace and identified sleep as an outcome in only one of the studies included in the review. Increasing sleep quality through workplace mindfulness interventions could have important implications for managing workplace stress and wellbeing.

IMPLEMENTATION OF MINDFULNESS

The skills and techniques learned on the intervention were highly valued by participants. There were a number of ways in which participants shaped their practice in order for it to be beneficial for them and fit into their daily lives. Participants practiced mindfulness in different formats; in contrast to the original aims of the MBCT programme, a number of participants did not follow a regular formal meditation practice. Participants reported that they engaged in and enjoyed mindfulness

techniques that were shorter, more accessible, did not require planning or formal practice and required no tools, or space. It could be suggested that a limitation to practising using formal methods is that people may be unwilling or unable to invest this level of time, and informal mindfulness practice may be beneficial in situations that arise as part of everyday life.

Other participants practised formally, by devising a routine, and incorporating mindfulness into their daily regimes, mostly within home settings. This demonstrates the range of approaches to mindfulness practice, and the flexibility to use mindfulness in a proactive way (for example to manage mood) or a reactive way (for example to deal with stressful situations). There is a discrepancy in the literature about the impacts of informal versus formal practice, in the present study, both those who practiced informally and formally reported positive benefits from the intervention. Informal practice is often described as an important method for generalising mindfulness skills learned in formal practices into daily life (Kabat-Zinn, 1990). Segal, Williams and Teasdale (2002) proposed that regular formal practice is necessary to effect meaningful change within mindfulness practice and wellbeing. MBCT interventions often assign 45 minutes of formal practice per day, six to seven days a week (Segal, Williams, & Teasdale, 2002). The effect of informal versus formal practice within mindfulness studies is limited. In contrast to the present study, Morgan, Simpson, and Smith's (2015) systematic review of healthcare workers highlighted that participants perceived formal practice as essential to continued or further benefits, only a minority preferred informal practice within the past study. However, other qualitative workplace MBCT studies conducted with mental health professionals found that participants used mindfulness in a more informal manner throughout and after the intervention (de Zoysa, Ruths, Walsh, & Hutton, 2014).

Looking at adapted workplace mindfulness interventions, past quantitative research where participants integrated informal mindfulness practice identified no significant changes in participant's levels of mindfulness but showed a reduction in anxiety and depression measures, and qualitative feedback indicated that participants had acquired more personal coping strategies to manage stressful situations (Dobie, Tucker, Ferrari, & Rogers, 2016). In a systematic review and meta-analysis (Parsons, Crane, Parsons, Fjorback, & Kuyken, 2017) that analysed participants' mindfulness home practice and its association with outcomes within forty-three studies there was a small, but significant association between the extent of formal practice and positive

intervention outcomes for MBCT and MBSR. Participants in the review practiced for an average of thirty minutes per day, six days per week, which was 64% of the assigned amount of practice. In the current study, participants spent less time practising mindfulness, with only 6.25% of participants practising more than twenty-five minutes a day. Most practised between five and fifteen minutes a day (65.63%). Levels of mindfulness home practice was associated with clinical outcomes in past MBCT studies (Rimes & Wingrove, 2011; Crane et al., 2014), however, other MBCT studies have indicated that frequency of practice is not associated with clinical outcomes (Bondolfi et al., 2010).

In the current study, participants tried to integrate mindfulness practice across different settings, including work and home, and within day to day activities, such as driving, showering, cycling, washing or walking. In a recent meta-synthesis of seven qualitative MBCT studies exploring how mindfulness contributes to therapeutic change (Cairns & Murray, 2015), it was identified that participants who learnt to apply mindfulness skills in their everyday life experienced lasting impact. Similar themes are echoed in the current study, where participants integrated mindfulness techniques into daily life both in a proactive and reactive manner, and utilised mindfulness techniques to manage emotions and situations. Studies included in Cairns and Murray (2015) were conducted with clinical populations and not in the workplace, but it is interesting to note that such practice habits can be integrated after a four-week intervention.

Participants recognised that not all mindfulness techniques were beneficial, or easily integrated; some disliked certain techniques with a preference for others, particularly the body scan and the three-minute breathing space. Having a range of mindfulness techniques to use, as well as several different guided meditation options, and flexibility to use these techniques both formally and informally seemed beneficial for embedding mindfulness into everyday life. Previous research conducted with participants experiencing Obsessive Compulsive Disorder found that the three-minute-breathing space and body scan exercises were perceived as feasible mindfulness techniques, as opposed to longer mindfulness exercises (Hertenstein et al., 2012). Waiting periods were also acknowledged as convenient for practicing mindfulness in Hertenstein's study, which was also evident in the current study where some participants explored using mindfulness within their commutes and journeys.

The use of guided meditation aids and applications were frequently reported within the participant interviews in order to facilitate mindfulness practice. Participants' accounts suggested the applicability and flexibility of mindfulness practice aids, and there were several references to books, iPads, phone applications, computers, CDs and YouTube as tools to guide mindfulness. Our present findings suggested that individuals may be able to successfully maintain mindfulness and acceptance skills through interventions that require little or no therapist resource, although further research is required to establish the generalisability, cost-effectiveness and optimisation of self-help mindfulness aids. There is not a wealth of evidence to suggest that the use of mindfulness aids lead to positive outcomes, and a majority of online mindfulness applications have not been tested empirically (Plaza et al., 2013). There is however, a small body of literature (Kemper, 2017; Grégoire & Lachance, 2014; Bazarko, Cate, Azocar, & Kreitzer, 2013) supporting the effectiveness of online, telephone and application-based mindfulness interventions in occupational settings, although methodological issues exist within the studies, such as small number of participants, non-randomised groups, and lack of control groups. Kemper (2017) analysed data from health professionals and trainees who completed online training on self-reflection mindfulness exercises and found that completing online modules was associated with small but significant improvements in mindfulness. In Grégoire and Lachance's (2014) study participants listened to two short guided meditation sessions using a headset at their workstation each day for five weeks. Results indicated that the intervention increased mindfulness and reduced psychological distress. A combined eight-week classroom and telephonic delivery of MBSR (Bazarko, Cate, Azocar, & Kreitzer, 2013) found a positive effect on nurse's perceived stress and self-compassion, however the intervention did not include a control group, and so comparisons cannot be drawn. Self-help interventions that include mindfulness and/or acceptance components resulted in a significantly higher level of mindfulness or acceptance skills and significantly lower levels of anxiety and depressive symptoms than control conditions, with small to medium effect sizes, according to a systematic review of fifteen mindfulness and acceptance-based self-help intervention studies that included internet-based interventions, books and audio recordings (Cavanagh, Strauss, Forder, & Jones, 2014). This review only found four studies that had evaluated the effects of mindfulness-based self-help interventions, which limits the conclusions that can be drawn about this approach.

Stress was a prominent theme in participant's interviews. Participants described work situations that caused high levels of stress. Akin to previous qualitative research outside of the workplace context (Langdon, Jones, Hutton, & Holttum, 2011), and in the workplace (Lomas et al., 2017), MBCT helped participants to manage these stresses. Most participants described the stressful nature of their workplaces, which included work duties, absent colleagues, dealing with residents and managers, managing interactions with families, and paperwork issues. This highlights the impact that the workplace can have on individuals within the local authority settings. Additionally, participants described not being able to leave such concerns at work and disclosed that they thought about work situations at home which impacted sleep routines. Participants reported that mindfulness enabled them to manage their roles more effectively in a range of different ways including mindfulness as a stress management strategy, to reduce overall stress and in specific situations. Using mindfulness as a coping strategy to manage stress has also been identified in a previous MBCT study conducted in the workplace (Luberto et al., 2017), where participants found that they reacted better to stressful situations, felt more relaxed and peaceful after the intervention, and mindfulness techniques helped participants have better control over stress. Similar to Hopkin and Proeve's (2013) study conducted with trainee psychologists there were evident work pressures outlined in the interviews, and stressors were not eliminated after the intervention; rather more participants had an increased ability to manage stress more effectively. In Hopkin and Proeve's (2013) study, participants described an altered response to stressful situations post intervention, through a heightened awareness of stress signals and a willingness to observe negative thoughts and feelings, with increased enjoyment living in the present moment, as well as allowing things to be, which echo the findings in the current study. The way in which mindfulness was utilised as a stress management or life management tool was divided in the participant accounts in the current study. Awareness and ability to be present was utilised in two ways to reduce stress: participants could take time when dealing with stressful situations to focus on the 'here and now', and in some instances, bring awareness to the body as a distractor from current stressors. Secondly, a 'pulling back' approach utilising mindfulness as a tool to bring the participant back to the present moment and reappraise the situation that participants were facing was also used. It is interesting that these techniques were

useful for stress management in two different ways, and this should be explored in future workplace MBCT interventions.

Overall, the current study suggests that participants found mindfulness techniques useful for stress management and feeling calm, which could have wider implications for the workplace and individual health, but further research is needed to establish these effects.

SHARING GROUP EXPERIENCES, AND DISSMINATING MINDFULNESS TO OTHERS

The third theme in this study focused on sharing group experiences and disseminating mindfulness to others. Participants expressed the importance of a collective group dynamic and experiences, the impact of group cohesion and sharing mindfulness experiences within the workplace. Group mindfulness facilitated a common identity and a shared bond to develop practice. Participants reported that support from other participants in the mindfulness group was valuable and enhanced their practice; participants also reported acquiring useful practical stress management tools through group interactions. Benefit was obtained from sharing experiences, and in this way helped participants to recognise that their peers were often in similar situations, which helped normalise their own experiences. Peer support within brief mindfulness workplace interventions may itself be a beneficial outcome of a mindfulness intervention (Cormack, Jones, & Maltby, 2018) when participants from the group can practice with each other and form a network after such interventions have ended, however, will require further research to fully understand this within the workplace and particularly within brief interventions where there is limited time to develop relationships with other group members.

The value of the mindfulness group experience has been reported in past research, although there is not a vast amount of research conducted in the workplace, there is a body of research that outlines the value of group identity, and the dynamics of a supportive group intervention environment as elements that aid mindfulness skills. In a qualitative review of mindfulness studies by Morgan, Simpson and Smith (2015), eight-week group interventions conducted with healthcare workers were thought to be supportive environments, enabling normalisation of the mindfulness process and techniques through group discussion. Similarly, qualitative reviews of MBCT and MBSR interventions (Cairns & Murray, 2015; Malpass et al., 2012) and a systematic

review of mindfulness and wellbeing in the workplace (Lomas et al., 2017) found group identity and dynamics as elements that may provide an aid to learning mindfulness and group relationships to be positively impacted. There was, however, a disparity of feelings about the group cohesion in the current study, a majority of participants developed relationships within the group, whilst a small number of participants did not feel that the group dynamic equipped them to make these group connections. Although the group dynamics and support were apparent in the current research interviews, and participants described the ability to manage emotions better, positive changes in relationships outside of the mindfulness group were not described.

There were several positive references to the guidance received and skills of the course facilitators. This is similar to what has been found in other research, where participants felt that facilitators were a prominent part of the process (Cairns & Murray, 2015). Participants reflected on conversations that have taken place with the facilitators, revisiting advice around the mindfulness process, and an acceptance that practice will take time, and did not have to be perfect.

Complicated and stressful social relationships within the local authority structure were identified in interviews, where participants managed interactions with members of the public, councillors, senior managers and work colleagues. Some studies have indicated that MBCT may have a positive effect on relationships and aid the regulation of feelings about relationships in studies conducted outside the workplace (Bihari & Mullan, 2014; Allen, Bromley, Kuyken, & Sonnenberg, 2009). In the current study we found that mindfulness helped participants manage stressful interactions with colleagues and develop relationships within the group. Mindfulness may enable individuals to pay more attention to relationship dynamics within the workplace, which could help with managing workplace relationships.

Interestingly, there was a strong wish to disseminate mindfulness amongst colleagues and clients who had not attended the intervention. Participants reflected how the intervention could benefit others in their organisation, including the employer, colleagues, and even clients and residents. Participants championed the mindfulness approach to others within peer groups both inside and outside the local authority. This can also be seen in a recent review of mindfulness interventions for healthcare workers, where participants recognised the potential use of mindfulness when supporting patients (Morgan, Simpson & Smith, 2015). This method of dissemination

could be utilised to integrate mindfulness within organisations, and to champion the mindfulness stress management approach across organisations.

CHALLENGES OF PRACTICE

The fourth and final theme included participant's perspective of the challenges experienced in the practice of mindfulness during and after the mindfulness intervention. All participants engaged in mindfulness during and after the intervention, however several factors appeared to influence participants' engagement. Some of these challenges may prevent effective participation during the programme and hinder the integration of mindfulness after the intervention finished, and therefore are useful insights for future workplace model development. Although there were barriers to practice identified by participants on the mindfulness course, these challenges were not perceived or described as large obstacles to practice, participants made a concerted effort to find mindfulness techniques that suited them and were positive about the experience of mindfulness. None of the participants interviewed reported a perception that these challenges could not be overcome and were not explored in a highly negative fashion.

The mindfulness course was reported as a valuable tool by a majority of participants, although one participant felt it wasn't long enough to have any impact. Participants recognised that it required commitment to practice, and often the practice of mindfulness was described as challenging. Participants felt like they were at the beginning of a longer process where techniques were not fully embedded post intervention. The subtheme 'just the beginning' suggested more effort and time was required to embed the practices into daily life, and again this may be a further reason for a discord between noted changes reported in the interviews, and results of MASS quantitative data. This is important to consider in terms of the delivery of future brief interventions, and sustainability of practice after a four weeks intervention.

A number of other barriers to practice were described, including a lack of attention span, the physical environment (including the workplace), course logistics and time barriers. Within the current study participants seemed to accept and address barriers and challenges of practice and found a way to continue mindfulness in a way that was meaningful for them. The inability to stop the mind wandering during mindfulness practice was considered a normal challenge for participants as they thought themselves to be at the start of the mindfulness process, and this was accepted by

participants. Morgan, Simpson and Smith's (2015) qualitative review identified similar practical challenges including finding time to practice at home or work and psychological barriers associated with mindfulness practice such as restlessness and sleepiness. The quantitative engagement with mindfulness data also shows that participants practiced mindfulness each day, with the majority of participants reporting practising between five to twenty minutes a day. All participants reported intending to maintain practice after the course ended.

Despite time being a barrier to practice several participants would have preferred a longer intervention, supporting past research which has identified that participants felt that longer courses would be beneficial and follow up essential (Finucane & Mercer, 2006; Hertenstein et al., 2012). Traditionally, MBCT is delivered over eight-weekly, group or individual sessions (Segal, Williams, & Teasdale, 2002). Conducting longer interventions within workplace settings is not always feasible for employers or employees (Shapiro, Carlson, Astin, & Freedman, 2006). The four-week mindfulness intervention involved a practical and experiential approach to build mindfulness skills and confidence in developing mindful states, which encouraged participants to engage in non-judgmental self-observation, aiming to lead to greater understanding and awareness about thoughts, actions, and emotions. Four-week intervention studies have been perceived as providing useful introduction to mindfulness that could act as a platform for developing mindfulness skills further in past studies (Moore, 2008), however may not allow sufficient time to embed new routines and habits. In order to embed mindfulness practice within daily routines consideration must be given to continue training options to sustain the behaviour and practice. Future studies should consider how to support employees in maintaining a regular practice of mindfulness on their own, to maintain benefits over time. It can be challenging to find an intervention length that is suitable for all participants and reach a consensus in regard to intervention timescales. A review that explored eight-week MBCT for patients with respiratory conditions found no consensus on course length and logistics (Malpass et al., 2015). Some studies in the review reported benefits after attending four sessions, whilst others did not perceive any benefits after attending seven sessions. Of course, these differential effects could also be due to other variables.

Course length was a theme in a past qualitative mindfulness study conducted with patients who had long term illnesses (Howarth, Perkins-Porras, Copland & Ussher, 2016). The intervention differed from the one conducted in the present paper, a ten-

minute mindfulness audio was used over a period of one week with the participant group, however this past study also reflects similar findings where participants preferred shorter practices (in the current study there was a preference for body scan and breathing exercises). Although the possibility for a longer intervention was suggested by many participants, a majority of these interviewed described as a preference for shorter mindfulness techniques.

Most participants also spoke about practical barriers which prevented them from maintaining regular mindfulness practice, including finding time to practice, and the physical environment. Participants described their stressful work environment, the negative thoughts and feelings it gives rise to and the potential consequences it may have on their wellbeing as a potential barrier to practicing mindfulness. Despite acquiring skills that could be applied within a range of environments, practicing within the workplace was identified as a challenge throughout several interviews. Care should be taken to adequately address challenges to formal practice at work and provide an intervention with adequate physical practice space (such as a quiet mindfulness room) to give participants the opportunity to develop mindfulness skills and apply them within the workplace. A lack of support or structures to practice mindfulness at work was also a theme found in a qualitative systematic review (Morgan, Simpson, & Smith, 2015) of health care workers experiences of mindfulness training. Some of the studies in this review identified that the practice of mindfulness was unsupported at work, or contrary to work culture.

The degree to which participants could navigate the barriers to implementing mindfulness at work varied; some were able to apply the techniques and use mindfulness aids such as audios and reminders within the workplace setting, whereas others had tried unsuccessfully, and as a consequence they would bring themselves out of the workplace environment and into a quieter space to apply the techniques. Quality of practice, as well as quantity of practice time is important (Shapiro, Brown, & Biegel, 2007). Future research could include the establishment of a mindful space (such as a quiet room) within the workplace to assist development of practising during the working day, as well as demonstrating within the intervention examples of how participants can integrate mindfulness practices into routines at work.

Unsurprisingly, time was a prevalent and important barrier to implementation both in and out of work. The difficulty in maintaining practice due to time constraints alongside feeling agitated or experiencing discomfort during meditation, as well as having

difficulty maintain mindfulness practice independently was also a common theme identified in Morgan, Simpson and Smith's (2015) qualitative review, and this aligns with the current research. Participants described having difficulty in finding time for practice, as well as personally allowing themselves time to practice. Committing time to practice, prioritising practice, or planning when to integrate techniques have been identified as challenges to the feasibility of mindfulness in everyday life in previous mindfulness research (Sears, Kraus, Carlough, & Treat, 2011; Howarth, Perkins-Porras, Copland & Ussher, 2016). A previous workplace eight-week intervention study highlighted busy schedules and finding time alone as barriers to practice (Irving, Park-Saltzman, Fitzpatrick, Dobkin, Chen, & Hutchinson, 2012). Making time for oneself can be a challenge, and this is something that has been identified in a qualitative review of mindfulness interventions for healthcare workers (Morgan, Simpson, & Smith, 2015). Although this was not overtly stated by participants in the current research, it may be a reason why participants were unable to find time to practice. Addressing this within the mindfulness intervention could also help participants think about how they can integrate mindfulness techniques into their lives, during and after the intervention. In sum, there were a number of challenges as well as benefits to the MBCT, some of which have been identified in other research outside the work environment, and others conducted using mindfulness interventions inside the workplace. These challenges are useful to consider in regard to the development of future workplace interventions.

CLINICAL AND RESEARCH IMPLICATIONS

There are several clinical implications to consider regarding the development of future brief mindfulness interventions within workplace settings. The findings of this study suggest that the daily practice of informal and formal mindfulness carries benefits for public sector employees who practice, but it is important to highlight that although positive benefits were expressed by most participants in the interviews, these were not identified in the quantitative MAAS mindfulness data.

Practising mindfulness was also not without its challenges. Analysis of participant's comments was particularly helpful in identifying potential future enhancements to the intervention for public sector employees, such as increasing the length of sessions and the intervention itself, as well as the possibility of adapting mindfulness techniques to become shorter, and easier to use, or utilising different meditations or ways in which people can access meditations to promote variety.

The most significant implication is that despite the disparity of practice methods and routines regarding the practice of mindfulness, and the fact that this was four rather than eight-weeks, most participants still reported positive effects on wellbeing, and strategies to manage stressful situations, and the quantitative data signified that most participants were practising mindfulness daily and found the course useful. The brief intervention cultivated many positive impacts such as higher levels of acceptance, improved attention, higher awareness of thoughts and reappraisals of situations as well as improvements in sleep and relaxation. Mindfulness was used in two ways, as a daily formal practice or as a coping strategy when required (such as in a stressful situation). This can also be considered in future intervention development and suggests there may be benefits from using mindfulness informally to manage stressful situations. While the brief intervention did not necessarily promote a sustained habitual use of formal practice, it did accentuate the use of specific mindfulness skills as a reactive strategy, to use 'when I need it' and participants still found it allowed them to manage their stress better. The study findings suggest that brief mindfulness could supplement one's ability to foster positive or neutral reappraisals when presented with a stressor; however, more research is required to identify if the maintenance of positive or neutral reappraisals is sustained at follow up points after brief interventions.

Strong themes of peer and group support were evident in this research, and there were many references made to the sharing of practice within and outside the group setting. Having opportunities for social and peer support at work, for example through the delivery of group interventions may help employees manage such interactions as well as job demands, and in turn decrease burnout and stress, and increase morale. Mindfulness could be used as a tool to manage workplace relationships effectively, but also can build positive relationships through shared interest within the group setting. Mindfulness practice adherence may also be facilitated through peer support networks post intervention, additionally this is a chance for the important group dynamic to continue post intervention. Employees could motivate their peers to integrate new mindfulness routines, which may have a positive impact on sustaining practice post intervention.

Mindfulness interventions should emphasise and enable the creation of a positive group dynamic at the start of the intervention and ensure that the group is a safe space for participants to explore issues such as work-related stress and appraisals. Future interventions could be designed to ensure that social or peer support is integrated into

the intervention model and the therapeutic qualities of facilitating a group dynamic are not lost. Intervention facilitators may require a therapeutic background to understand these group processes, and safely end the group at the time of intervention closure. Sustainability of practice could be explored, as suggested by a participant, through peer support networks via email, groups and booster sessions.

It would be beneficial to explore teaching acceptance as a coping strategy to manage workplace stress within workplace mindfulness interventions, particularly when problem solving is not an option. This may be an important element for future workplace interventions within public sector organisations, where many of the work processes and stressful experiences cannot be altered (such as interactions with the public, and political decisions). In the current study, mindfulness enabled participants to become more aware of their emotions and feelings, and to be able to separate their emotions from workplace situations and progress to a more objective solution focused approach. Brief workplace interventions could be designed using cognitive reappraisals (including neutral appraisals such as acceptance), however further research is required to consider other potential mediators such as peer support, facilitators, and other lifestyle changes and stress management techniques that are learned and adapted throughout the intervention.

Participants experienced a range of challenges implementing mindfulness within the workplace setting, these should be a considered in the design of future workplace mindfulness interventions. Addressing the challenges presented by participants may aid implementation and fidelity, for example adapting the workplace environment to facilitate mindfulness practice, ensuring that employees are able to use mindfulness applications at work, providing and encouraging free or protected time during the work day for employees to practice mindfulness, implementing lunchtime mindfulness drop in sessions, and encouraging the setting of action plans in order to integrate mindfulness into their day. Guided mindfulness aids could also be utilised, as they were described by several participants as beneficial to enabling their practice, however further research is required in order to demonstrate the effectiveness of such mindfulness applications prior to implementation (Plaza et al., 2013).

Encouraging employees to make personal space outside of work for mindfulness should also be explored, to combat the challenges of practicing within a busy workplace. Practising mindfulness requires discipline and the formation of new routines, although brief mindfulness interventions may be more applicable within the

workplace than standard eight-week interventions, consideration should be given to ongoing support after the intervention to ensure that reported outcomes are sustained, and ongoing regular practice is supported.

Another possible area for future research may be to explore possible discord in quantitative outcome measures and qualitative themes in those who practice mindfulness in shorter interventions, and exploration of the different ways in which participants practice mindfulness (formally, informally, or using mindfulness techniques to manage stress).

LIMITATIONS AND IMPLICATIONS FOR RESEARCH

The present study has certain limitations that should be taken into consideration. The qualitative methodology permitted an exploration of participants' experiences of brief mindfulness in a workplace setting; however, it does not answer any questions about the causal effects of the intervention. It is difficult to ascertain whether the positive outcomes reported in this study are specific to mindfulness practice, peer support within the group or other variables due to the lack of a control group, or whether mindfulness traits or beliefs may have impacted on the effects of the intervention. In order to ascertain causal effects and establish which elements of the intervention were most effective a fully powered RCT and process evaluation would need to be conducted. However, as the literature surrounding brief interventions in the workplace is limited, a qualitative approach enabled a better understanding of participants' experiences of such interventions, as well as informing future intervention design considerations. We are also limited to understanding the experiences of the intervention in the longer term, qualitative research conducted after a longer follow up period would have been advantageous to explore if participants still found mindfulness useful after a period of time post intervention.

A larger sample size may have captured richer data, with greater levels of saturation however, the researcher contacted and invited all potential participants from the intervention cohorts to participate in the interviews, with twelve participants accepting the invitation.

A third limitation in the current study was related to the nature of participants who chose to participate in the mindfulness programme and further self-selected to participate in an interview. These participants may have chosen to attend the

mindfulness course and interview due to their perceptions of mindfulness as an effective intervention, and thus may present a limited range of views on their experiences of mindfulness. It is evident in the extracts that participants had positive beliefs or experiences of mindfulness practice, and this can be seen even when participants identified challenges with practice. Participants self-selected for the intervention by responding to the advertisements for the intervention and may therefore not be representative of the diverse public-sector workforce. We cannot, from the findings in this study, assume that brief MBCT is equally accessible, acceptable or effective for all public-sector staff. There were also a small number of males in the current study, the two male participants referenced issues within the group setting and felt like group structure was not fully established. Addressing this gender imbalance in future research will give more insight into the application of mindfulness in workplace settings across all participants.

It would be beneficial to develop future research with public sector employees who did not have previous knowledge of mindfulness and identified as being stressed to determine if similar themes emerge, and whether there are similarities in quantitative outcome measures and qualitative themes. Those who have had previous experience or knowledge of mindfulness may have an advantage from those who have not previously experienced mindfulness, as well as be more likely to sign up for the course based on this knowledge.

A further limitation in the current research includes the fact that the quantitative data was unpaired, and therefore changes overtime could not be explored.

There are also limitations related to the content of the interview topic guide, which focused on stress in general, and did not specifically discuss the implications of mindfulness on workplace stress. Although participants primarily discussed workplace stress and it was evident that the workplace was a large stressor, more of a focus on mindfulness and occupational stress within the interview could have been beneficial.

CONCLUSION

The current study sought to gain an understanding of employee's experiences of a brief MBCT intervention within a workplace setting. Given the small amount of qualitative and quantitative studies conducted within workplace settings using MBCT, this study adds some insight into the acceptability, and experiences of participants.

Short day to day mindfulness strategies were found to be effective in managing stressful situations by a number of participants interviewed, both in and out of workplace, which led participants to feel better able to cope with stressful situations, calmer and able to reappraise stressful situations for a number of participants. Brief MBCT was acceptable for most participants who attended the intervention, and participation appeared to have contributed to felt and observed improvements in emotional regulation, attention, sleep and feeling calm and relaxed for a number of participants. There was a discord between quantitative outcome data and participants interview accounts, outcome data suggested that mean mindfulness scores did not change largely, although there was a reduction in the mean GHQ-12 outcome scores. This study offers an insight into the applicability and challenges of MCBT interventions in the workplace, including the flexibility of the use of mindfulness techniques, it offers an exploration of the role relationships and peer support that MBCT can offer, and it also demonstrates an insight into the challenges presented by participants of MBCT workplace interventions. The limitation of participant sampling in this study should be considered, as participants self-selected to attend the intervention, and qualitative interviews. Future research should focus on addressing the barriers to practice and establishing the longer-term effects of brief MBCT interventions, in addition to widening participant sampling.

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APPENDICES

APPENDIX B1: PARTICIPANT INFORMATION FORM



Title of study: A mixed method study exploring the efficacy of a brief MBCT stress management intervention in the workplace

We would like to invite you to take part in a research study. Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

I am a Doctorate in Health Psychology student at City University and a project manager at Hammersmith and Fulham Mind. I would like to invite you to participate in research that I am carrying out. The purpose of this study is to explore your views and experiences of a brief mindfulness workplace intervention. We would like to investigate employees' experiences of the programme at the end by inviting you to provide feedback in an interview. The interviews will last between 45- 60 minutes at a suitable time and location for you.

Why have I been invited?

You have been chosen because you work for [name of workplace 1] or [name of workplace 2] and you have expressed an interest in participating in the 4-week mindfulness workplace programme, and you are aged 18+ years.

Do I have to take part?

Taking part is entirely voluntary. If you decide to take part, you will then be requested to sign a consent form. You are still free to withdraw at any time and without giving a reason.

What will happen if I take part?

You will be invited to attend an interview at the end of your 4-week mindfulness course, within 1 month of the course ending. If you decide to take part, the interview between you and the researcher will be audio taped. There are a set of questions we would like to ask you. Interviews should last between 45 and 60 minutes. The interview will be semi-structured in nature, which means that you will be asked open-ended questions and the discussion will be designed to explore your view of the programme, including your thoughts and experiences.

What do I have to do?

You will be asked to reflect on your experiences of the mindfulness intervention and the researcher will ask you a series of 12 questions during the interview.

What are the possible disadvantages and risks of taking part?

There are minimal risks in taking part in the research study, and your participation is voluntary.

What are the possible benefits of taking part?

Apart from any benefits of the mindfulness intervention that you will have taken part in, this is an opportunity for the researchers to explore the experiences of participating in a mindfulness workplace intervention. It may lead to further research into mindfulness in the workplace and could benefit other employees.

What will happen when the research study stops?

You will only be asked to attend one interview for this research project. The interview will take place after the mindfulness course has finished. The findings from these interviews will form an analysis of the experiences of participants in the study and will be reported back to the organisation in an evaluation report, however no names or identifiable features will be used in this report in order to maintain confidentiality. Direct quotes will be used to evidence the findings, which will be anonymised. It is possible that the research may be published in an academic journal, as it is part of a doctoral research project.

Will my taking part in the study be kept confidential?

Only the lead researcher will have access to the interview data, and this will be destroyed after transcription. All the information which is collected about you and from you will be kept strictly confidential and will not be passed on to your employer, or other third-party organisations. The researchers are only permitted to breach the code of confidentiality, if any safeguarding issues are disclosed during the interview.

Your name will always remain separate from the answers that you give, and you will be recognised by a participant number, which you will be assigned. Your personal details and the audio recordings will be destroyed once transcription has taken place. Data will be stored at Hammersmith and Fulham Mind, and not in [name of workplace] buildings, nor will it be shared with your employer.

The interviews can take place in a confidential setting in the workplace or at local Mind offices near your home at a time convenient for you, so it does not interrupt your work routine.

What will happen if I don't want to carry on with the study?

You are free to withdraw from the study at any stage.

What if there is a problem?

If you would like to complain about any aspect of the study, City University London has established a complaints procedure via the Secretary to the University's Senate Research Ethics Committee. To complain about the study, you need to phone [REDACTED]

You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is: A mixed method study exploring the efficacy of a brief MBCT stress management intervention.

You could also write to the Secretary at:

[REDACTED]
Secretary to Senate Research Ethics Committee
Research Office, E214
City University London
Northampton Square
London
EC1V 0HB

Email: [REDACTED]

Who has reviewed the study?

This study has been approved by City University London Research Ethics Committee

Further information and contact details

If you require any further information, please contact

Donna Kelly

Trainee Health Psychologist

[REDACTED]

[REDACTED]

[REDACTED]

Lecturer in Health Psychology

[REDACTED]

[REDACTED]

Thank you for taking the time to read this information sheet.

APPENDIX B2: CONSENT FORM



Title of study: A mixed method study exploring the efficacy of a brief MBCT stress management intervention in the workplace

Please initial box

1.	<p>I agree to take part in the above City University London research project. I have had the project explained to me, and I have read the participant information sheet, which I may keep for my records.</p> <p>I understand this will involve:</p> <ul style="list-style-type: none"> • being interviewed by the researcher • allowing the interview to be videotaped/audiotaped • completing questionnaires asking me about stress and mindfulness 	
2.	<p>This information will be held and processed for the following purpose(s): <i>[list purposes]</i></p> <p>I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party. No identifiable personal data will be published. The identifiable data will not be shared with any other organisation.</p>	
3.	<p>I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalized or disadvantaged in any way.</p>	
4.	<p>I agree to City University London recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my</p>	

	consent is conditional on the University complying with its duties and obligations under the Data Protection Act 1998.	
5.	I agree to take part in the above study.	

Name of Participant Signature Date

Name of Participant Signature Date

When completed, 1 copy for participant; 1 copy for researcher file.

APPENDIX B3: DEBRIEF FORM



CITY UNIVERSITY
LONDON

Thank you for taking the time to participate in the current research study. Your contribution is very much appreciated. The aim of the study was to explore employee' experiences of the brief mindfulness intervention in the workplace along with perceptions of stress and coping, in order to aid future research in the field. As well as understanding if the intervention was useful for you, we aimed to investigate whether the brief timescale of the project worked and explore the effects of the different components of the intervention, and therefore we were interested in your subjective experience of the programme.

Mindfulness has been researched to be very effective with lots of physical and mental health conditions such as anxiety and depression management, and used for treatment of chronic pain, fibromyalgia, cancer, and the stresses of contexts as diverse as prison life and medical school.

We aimed to see if participants experienced effective stress management in relation to their mindfulness techniques that they learned over the course of the four-week programme as mindfulness has been suggested to be an effective intervention for stress management.

In order to develop research in the area of mindfulness and the workplace it is important to investigate the lived experience of participants and the value they place on such interventions. This is why it is crucial to obtain information for those who have already participated in mindfulness workplace interventions.

If you by any way have been affected by taking part in this research, then you can consult the researcher, as they work for Mind, or alternatively please contact your GP.

If you have further questions about this study or if you wish to lodge a complaint or concern, then please contact:

Donna Kelly Trainee Health Psychologist – Lead researcher contact number: [REDACTED]



[name of manager]

Business Development Manager, Hammersmith and Fulham Mind

Contact number: [REDACTED]

If you would like further information on stress, then please contact any of the services below:

NHS Choices: <http://www.nhs.uk/Conditions/stress-anxiety-depression/Pages/understanding-stress.aspx>

MIND: <http://www.mind.org.uk/information-support/tips-for-everyday-living/stress-guide/>

Advice Line: 0300 123 3393

If you feel that you are under too much stress at any stage, please do speak to your GP for advice.

Thank you for your participation.

APPENDIX B4: DEMOGRAPHIC FORM



Participant Information Sheet- please note this will be kept strictly confidential and contact details will only be used to contact you after the intervention to complete your interview.

Name:

Telephone number:

Email address:

Age:

Gender:

Do you work for [name of workplace 1] or [name of workplace 2]?

Workplace 1	
Workplace 2	

Have you had treatment for any psychological issue in the past 12 months?

Yes

No

APPENDIX B5: MINDFULNESS ATTENTION AWARENESS SCALE

Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience.

Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never

I could be experiencing some emotion and not be conscious of it until sometime later.

1 2 3 4 5 6

I break or spill things because of carelessness, not paying attention, or thinking of something else.

1 2 3 4 5 6

I find it difficult to stay focused on what's happening in the present.

1 2 3 4 5 6

I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.

1 2 3 4 5 6

I tend not to notice feelings of physical tension or discomfort until they really grab my attention.

1 2 3 4 5 6

I forget a person's name almost as soon as I've been told it for the first time.

1 2 3 4 5 6

It seems I am “running on automatic,” without much awareness of what I’m doing.

1 2 3 4 5 6

I rush through activities without being really attentive to them.

1 2 3 4 5 6

I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there.

1 2 3 4 5 6

I do jobs or tasks automatically, without being aware of what I'm doing

1 2 3 4 5 6

I find myself listening to someone with one ear, doing something else at the same time

1 2 3 4 5 6

I drive places on ‘automatic pilot’ and then wonder why I went there

1 2 3 4 5 6

I find myself preoccupied with the future or the past.

1 2 3 4 5 6

I find myself doing things without paying attention.

1 2 3 4 5 6

I snack without being aware that I’m eating.

1 2 3 4 5 6

APPENDIX B6: GENERAL HEALTH QUESTIONNAIRE 12

PsycTESTS Citation:

Goldberg, D. P. (N.D.). General Health Questionnaire-12 [Database record].

Retrieved from PsycTESTS. doi:10.1037/t00297-000

Test Format:

Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual); it gives a total score of 36 or 12 based on the selected scoring methods.

Permissions:

Test content may be reproduced and used for non-commercial research and educational purposes without seeking written permission. Distribution must be controlled, meaning only to the participants engaged in the research or enrolled in the educational activity. Any other type of reproduction or distribution of test content is not authorized without written permission from the author and publisher.

General Health Questionnaire-12

Items

Able to concentrate

Capable of making decisions

Face up to problems

Lost sleep over worry

Constantly under strain

Could not overcome difficulties

Unhappy and depressed

Loss of confidence in self

Thinking of self as worthless

Play useful part in things

Enjoy day-to-day activities

Reasonably happy

APPENDIX B7: PARTICIPANT EMAIL INVITATION

This is an email from Hammersmith and Fulham Mind, we are delivering your Headstrong Mindfulness at Work Course, which starts today. We are looking forward to meeting you all this afternoon.

In order to embark on this course, we would like to ensure that:

- You are able to commit to most of the dates that the course is running
- You are able to commit approximately 15-20 minutes outside of the course each day practicing mindfulness
- You have an understanding of what mindfulness is about, from embarking on the introduction sessions at the council, or from your own experience.

If the answer is yes to all of the above, you need to fill out the pre-training questionnaire below by copying the link into your browser, this will take a couple of minutes to complete in order to complete your registration. If the link does not seem to work, please right click on the link and press 'Open hyperlink' for both links below.

<http://www.smartsurvey.co.uk/s/128317AJFVF>

Hammersmith and Fulham Mind will deliver the 4-week intervention at the council and would also like to evaluate the effectiveness of the course looking at levels of mindfulness and general health. If you are interested, please do click on the link below to become involved in the research that Mind are conducting with City University. This is a simple pre-training questionnaire that will take approximately 5 minutes to complete and we would really appreciate your participation with the evaluation of this exciting project.

https://qtrial2014.az1.qualtrics.com/SE/?SID=SV_6fdoD1NZTEYNa6N

If you have any questions, please do not hesitate to email- I hope you enjoy your course.

We will be checking in with you after the 4 weeks course also.

Kind Regards

Donna Kelly

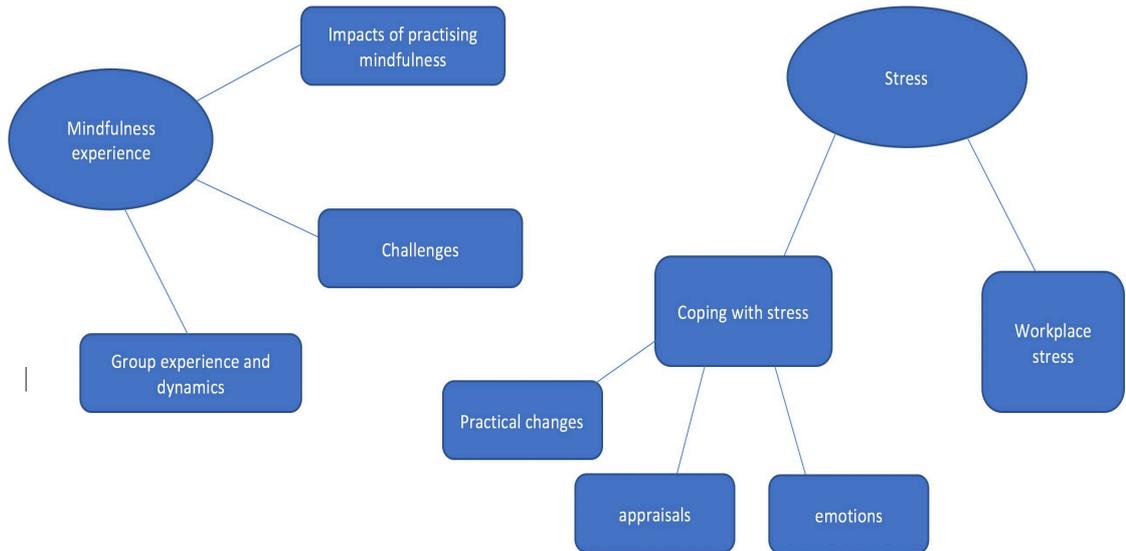
Wellbeing and Clinical Manager

Hammersmith and Fulham Mind

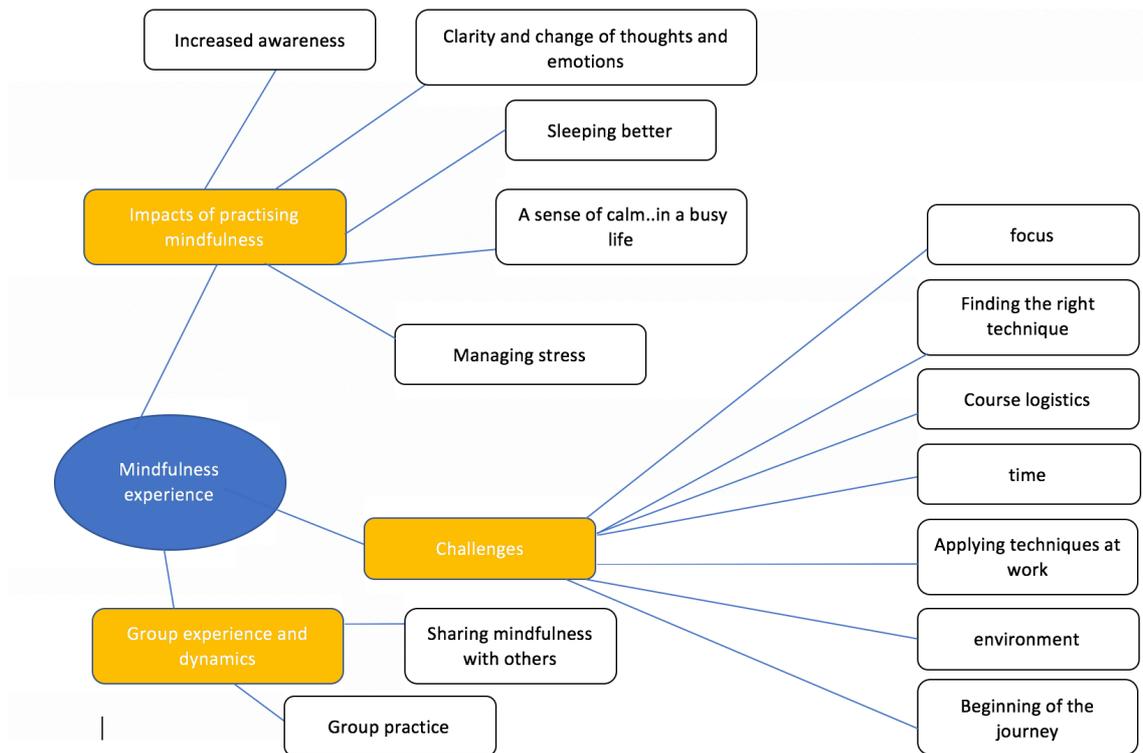
APPENDIX B8: THEMATIC MAPS

Thematic Map 1

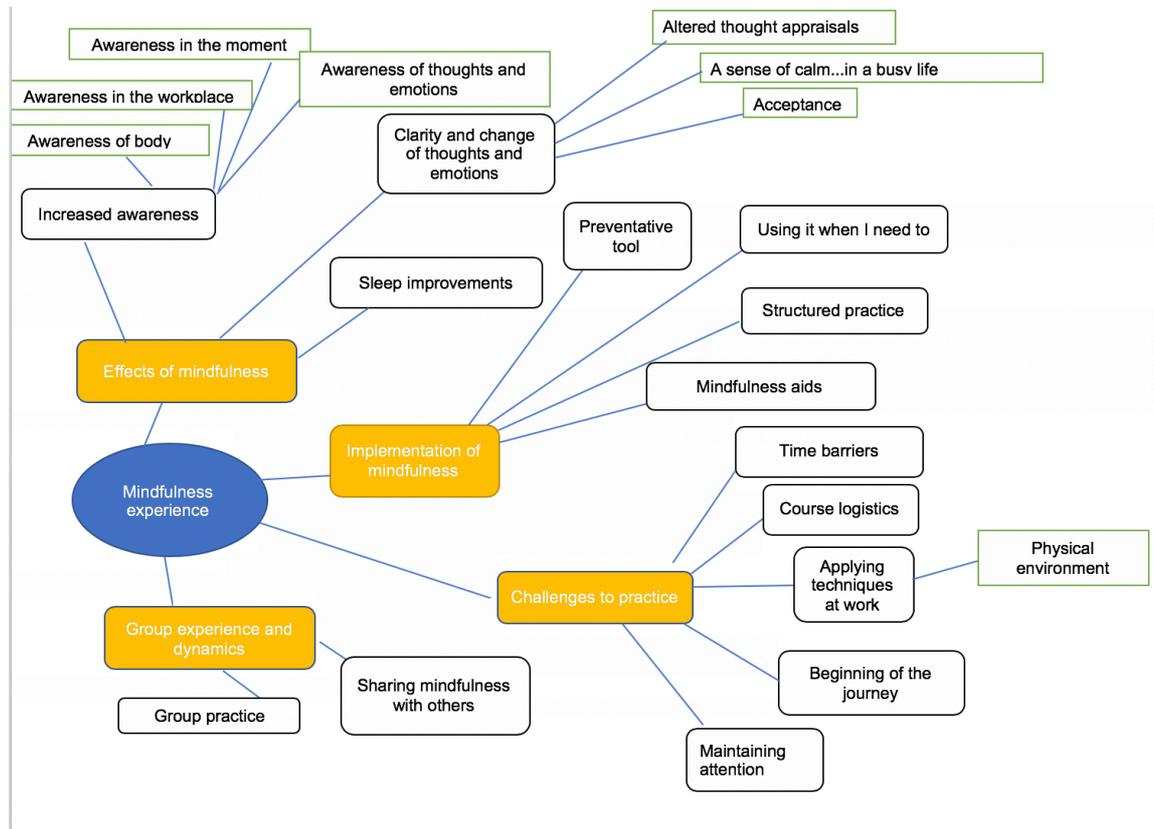
Thematic map



Thematic Map 2



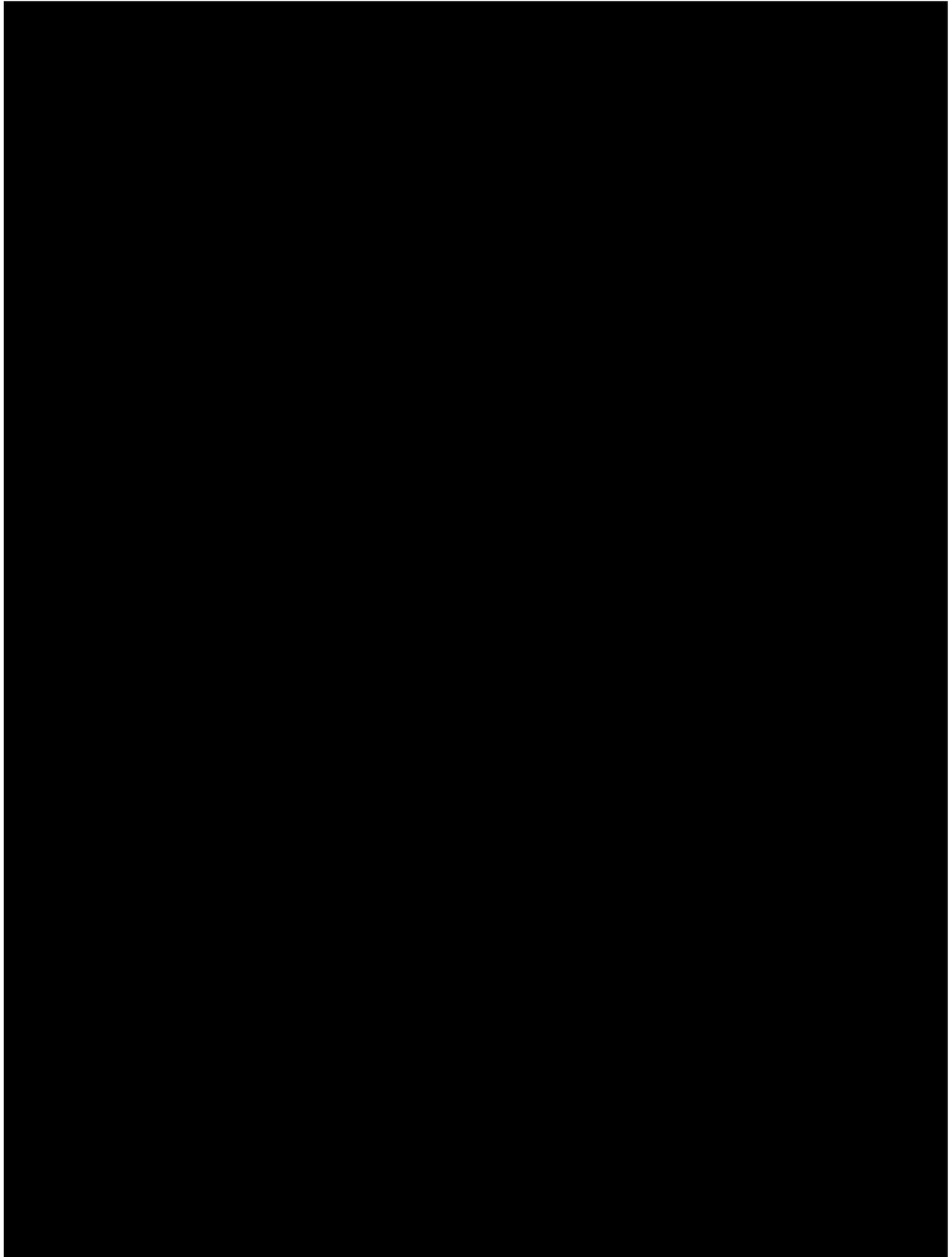
Thematic Map 3

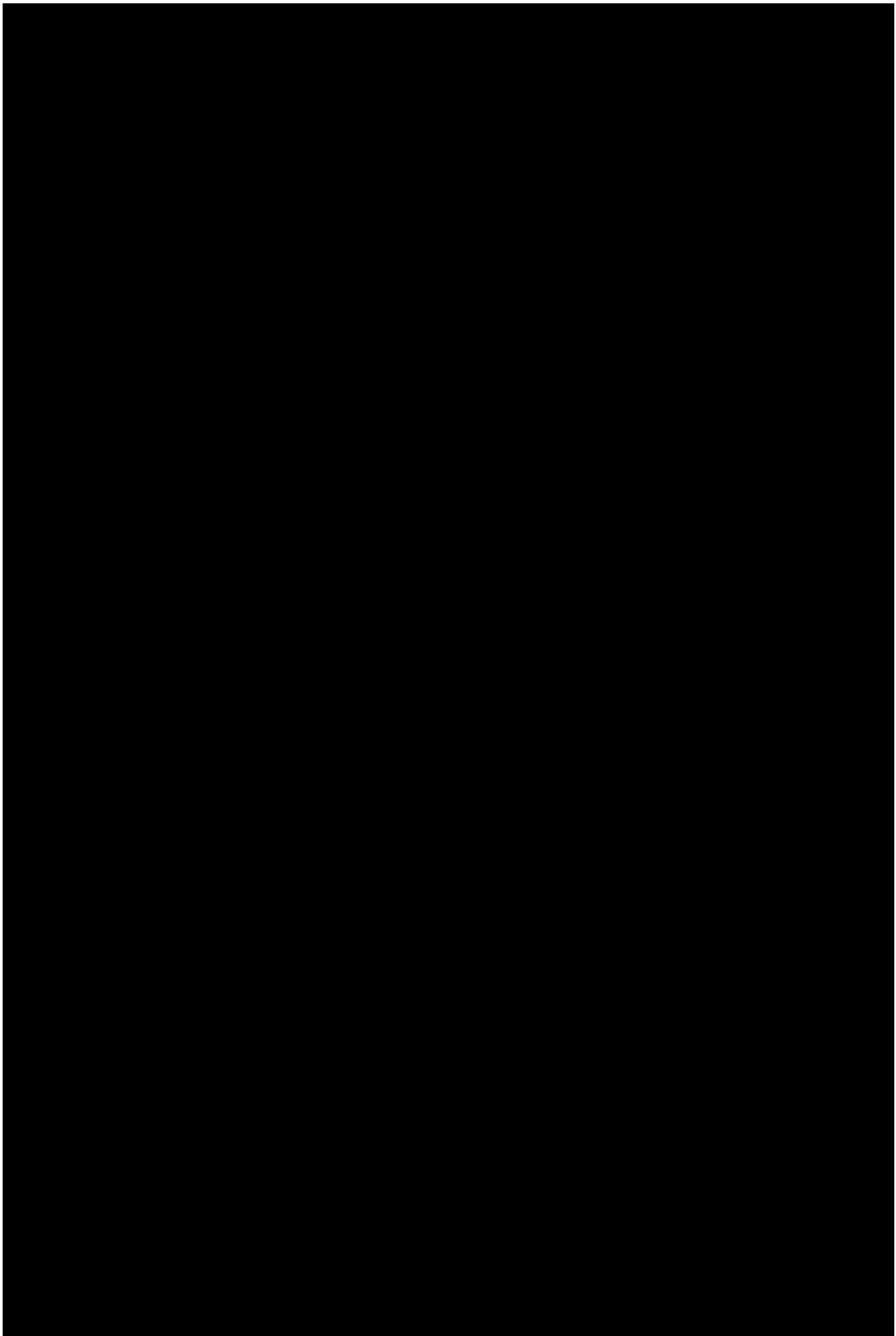


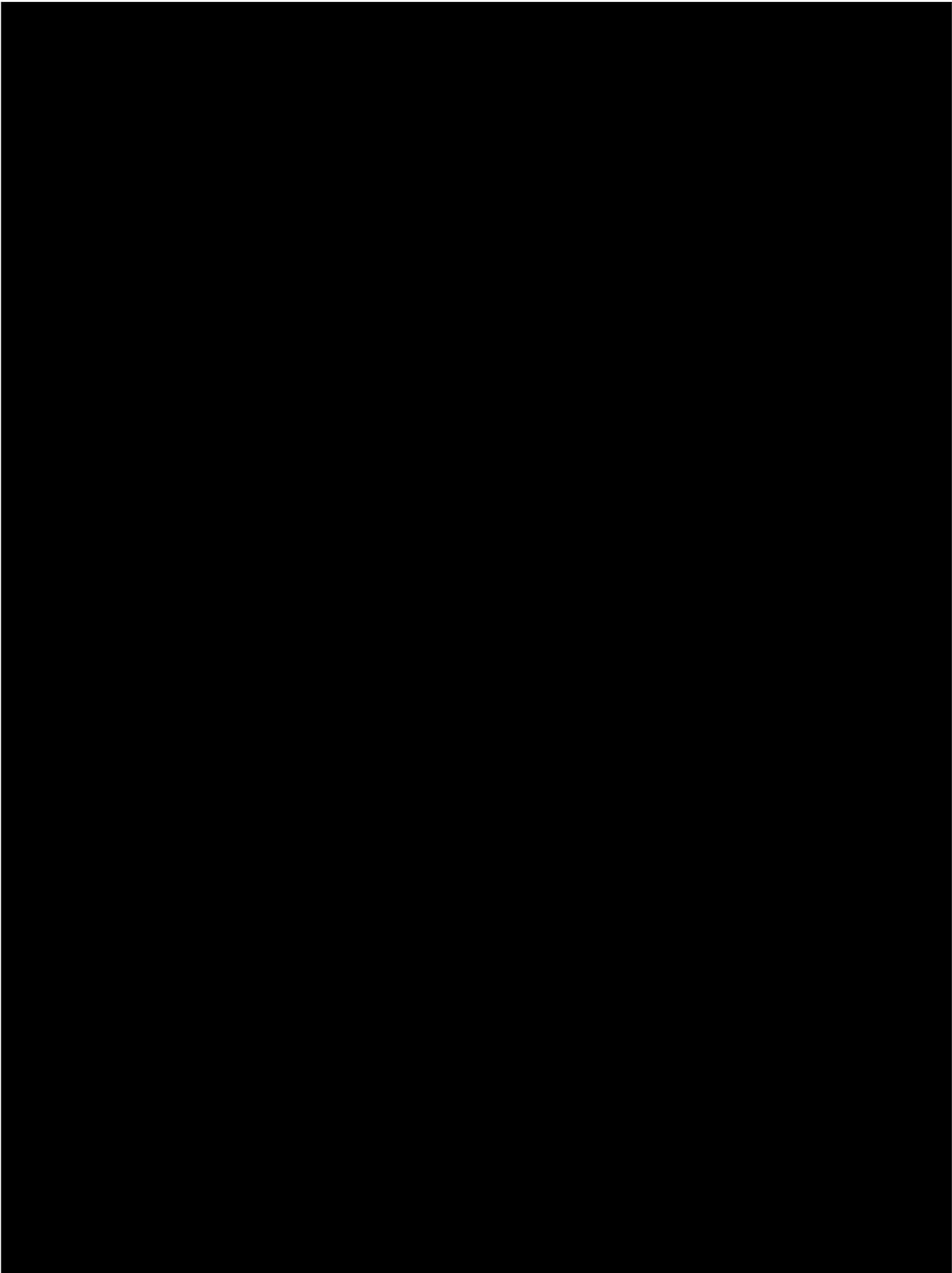
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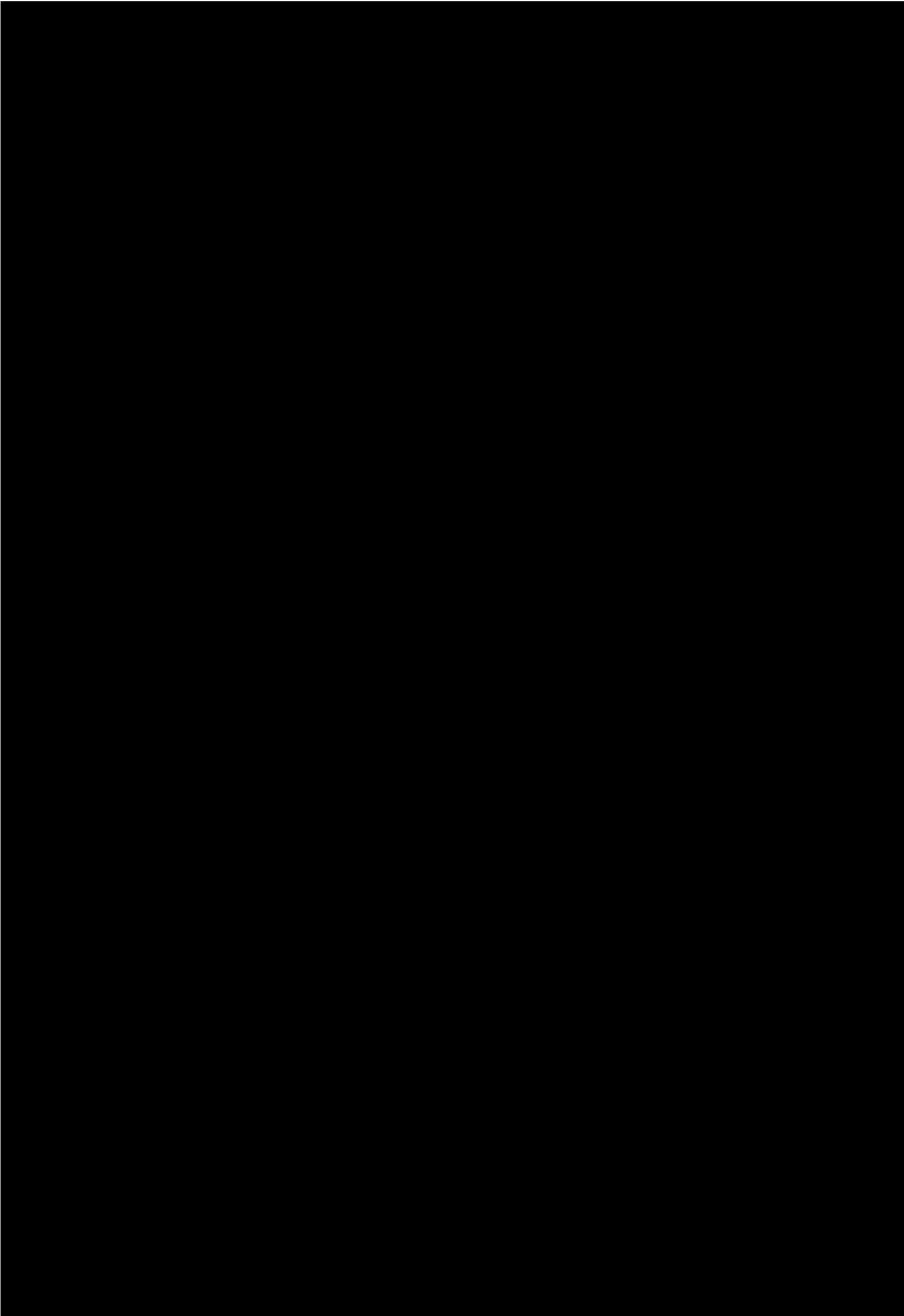
SECTION C: PROFESSIONAL PRACTICE

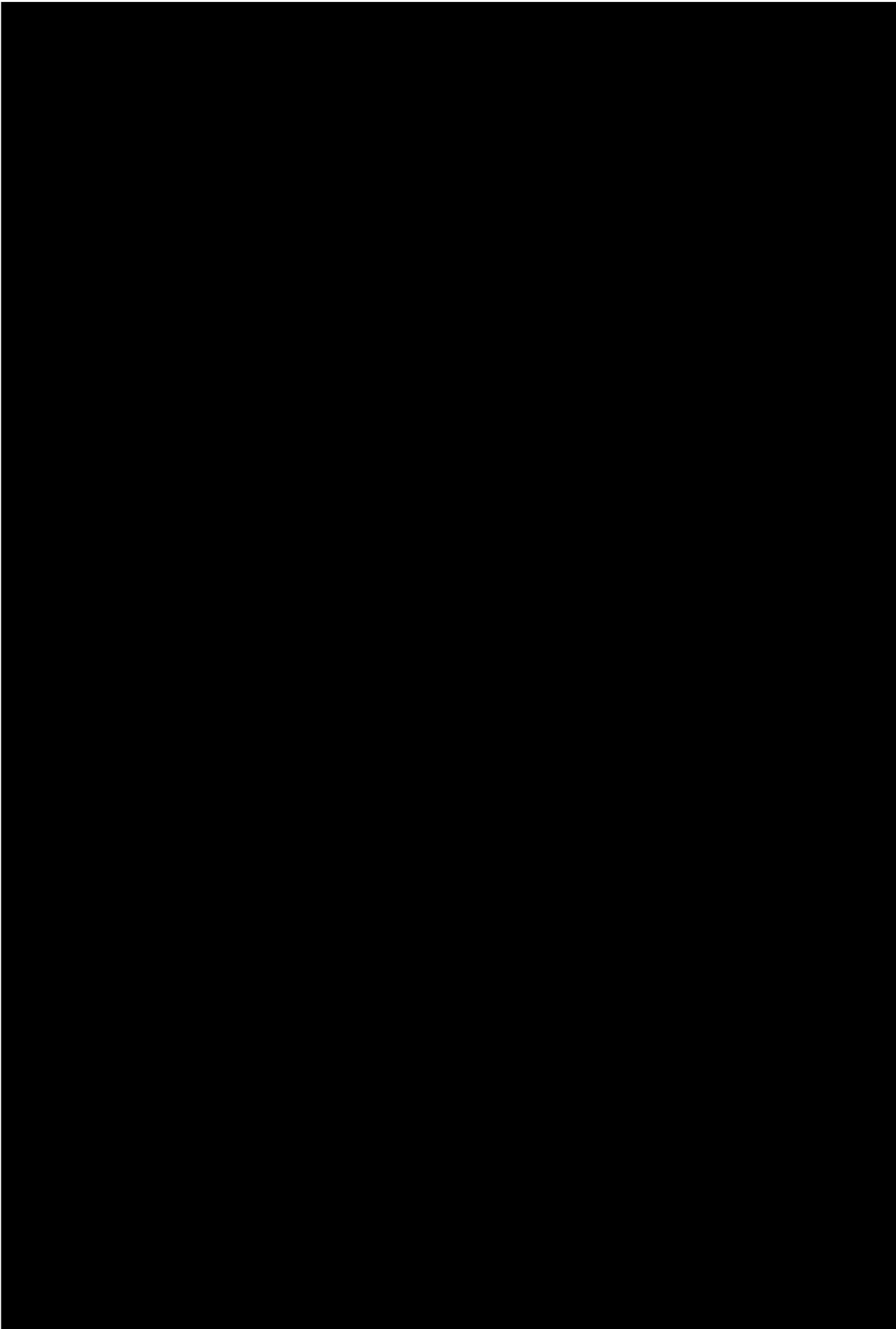
GENERIC PROFESSIONAL COMPETENCE: A CASE STUDY

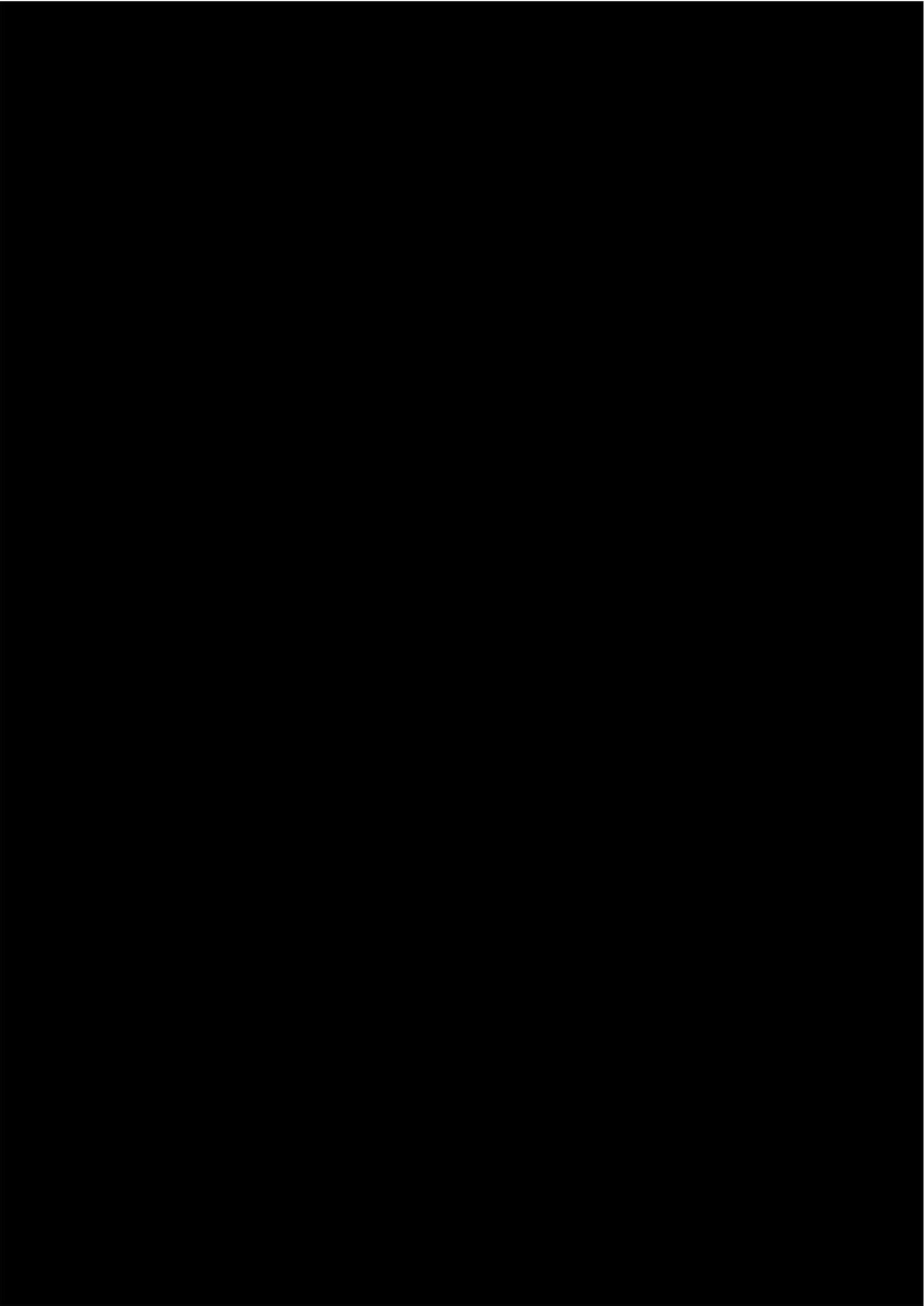


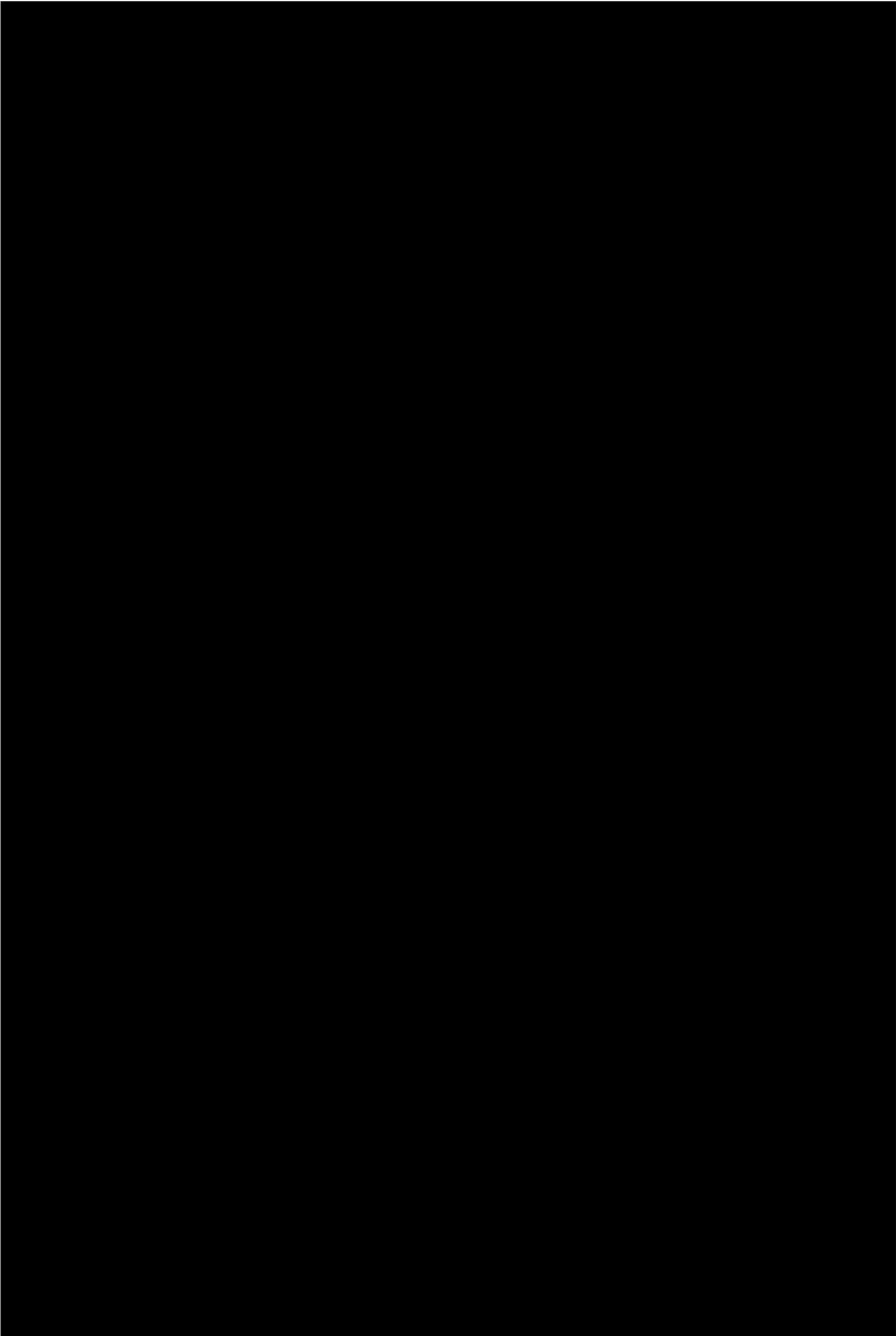


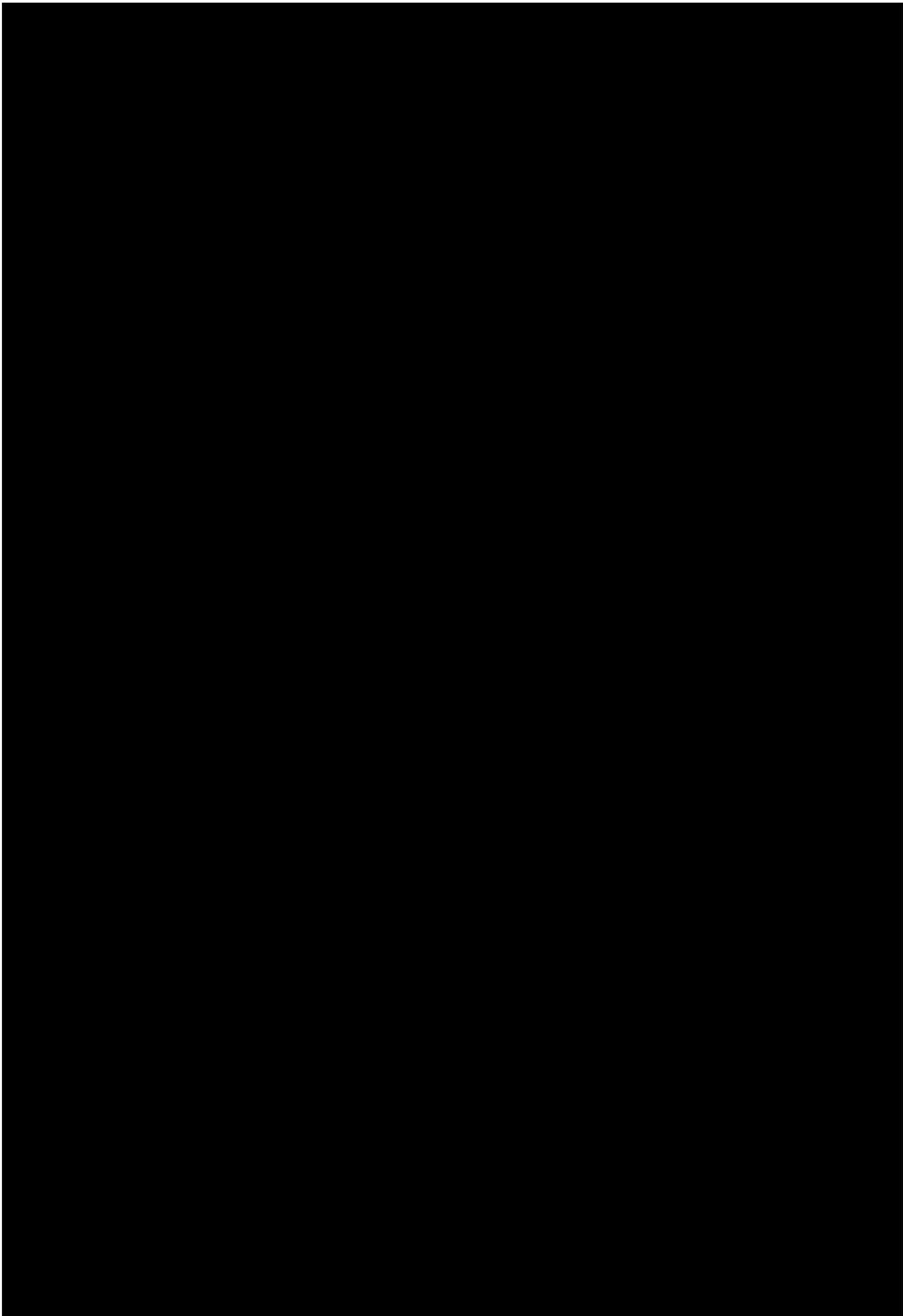


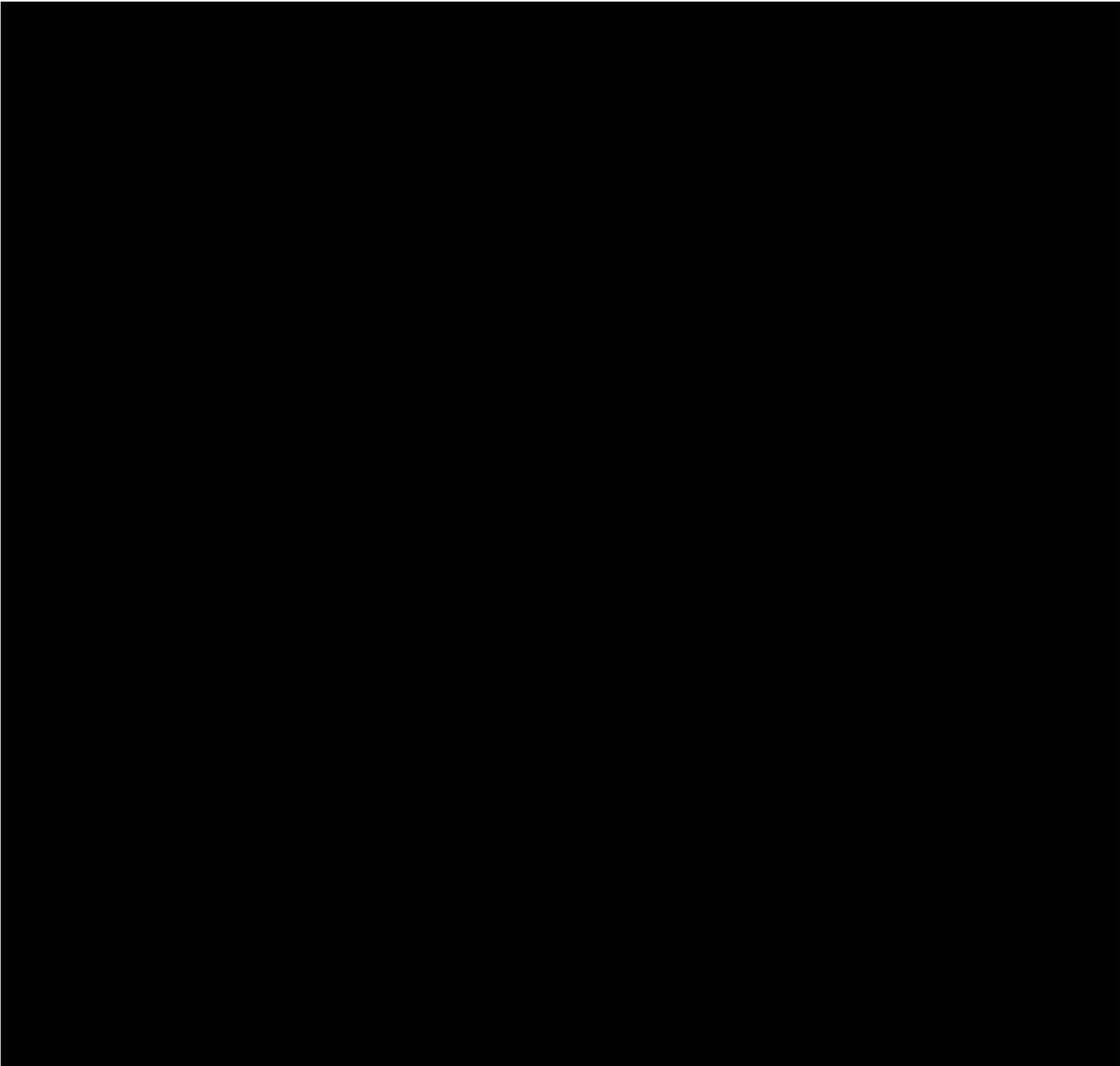


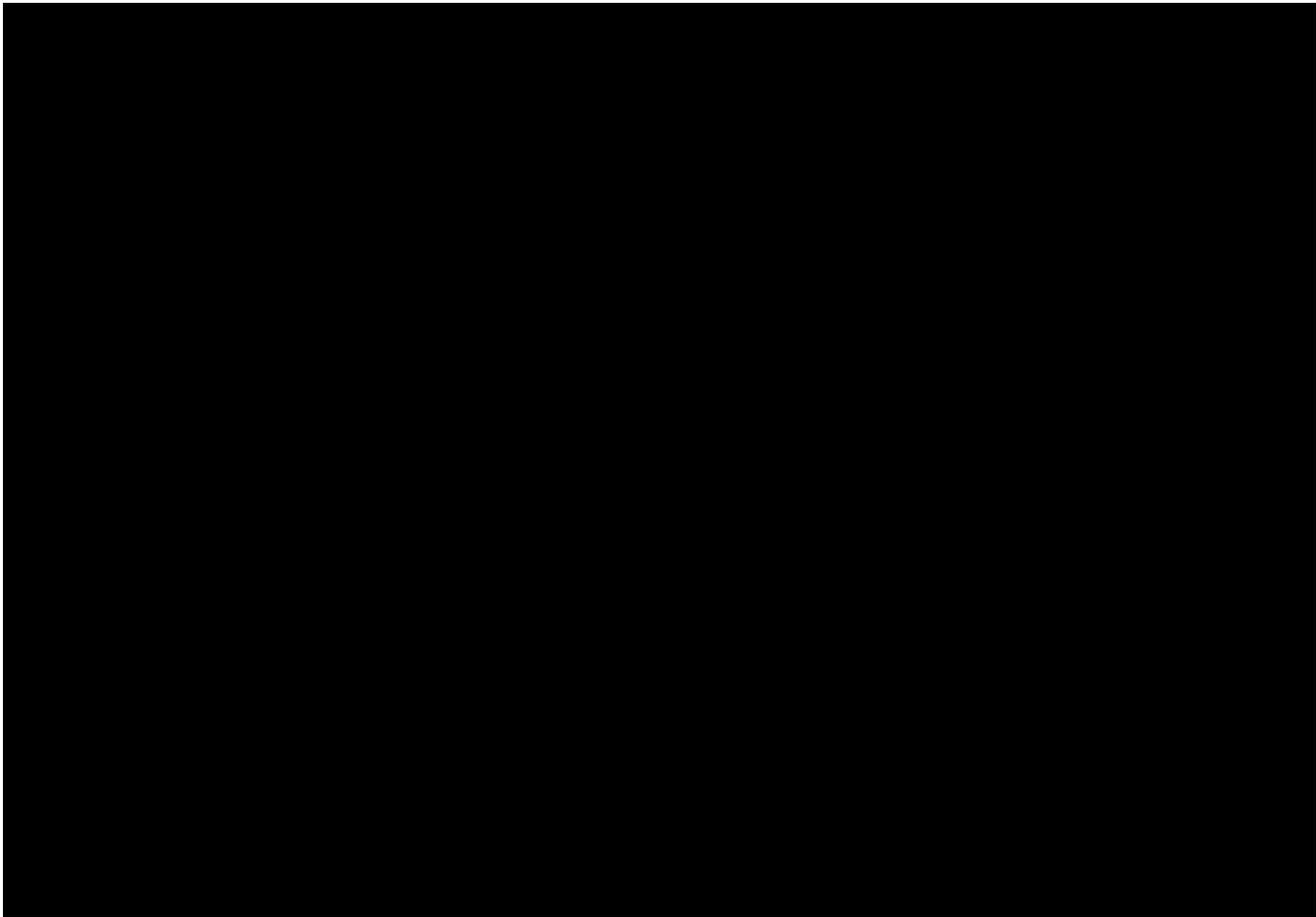


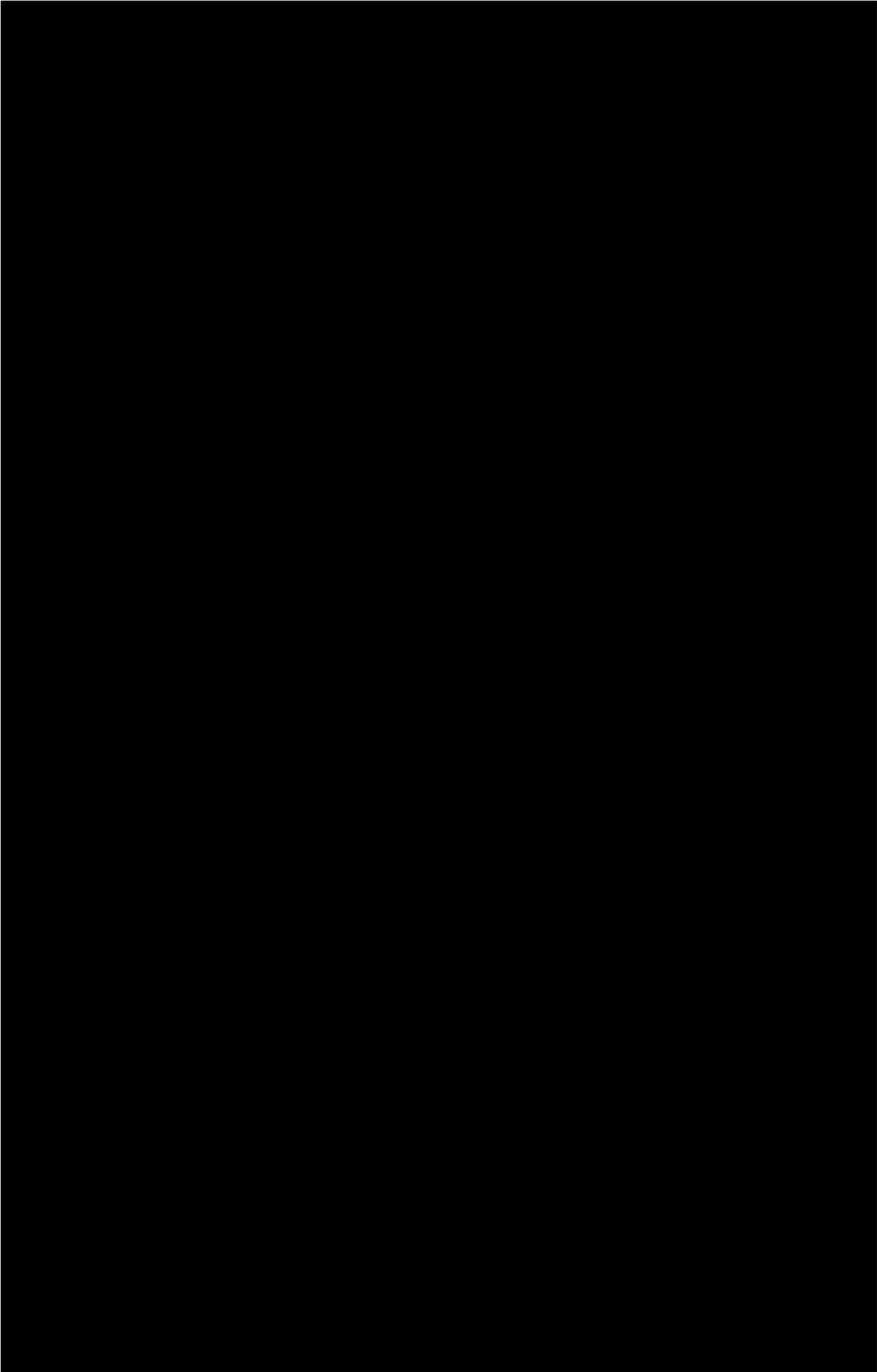


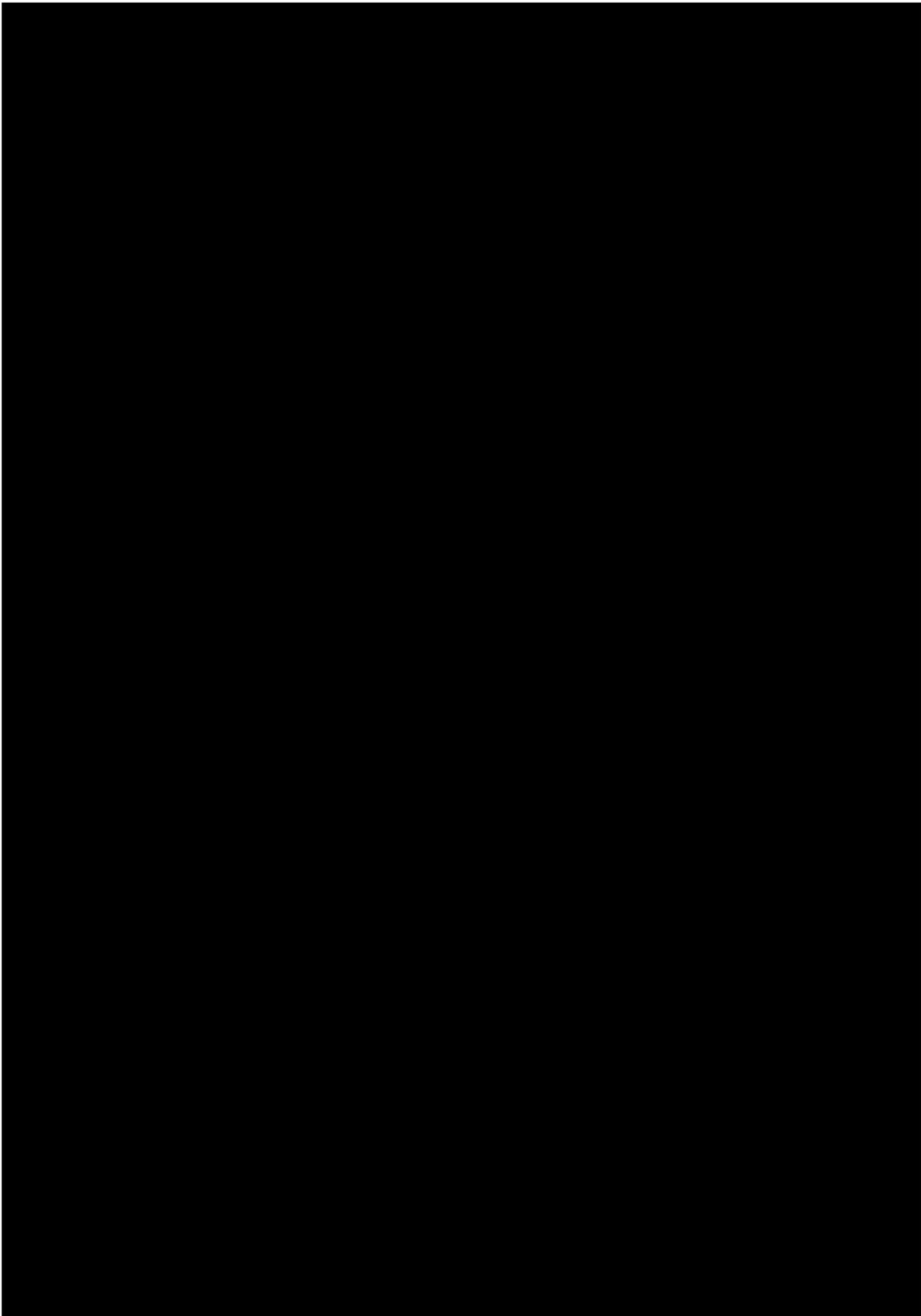


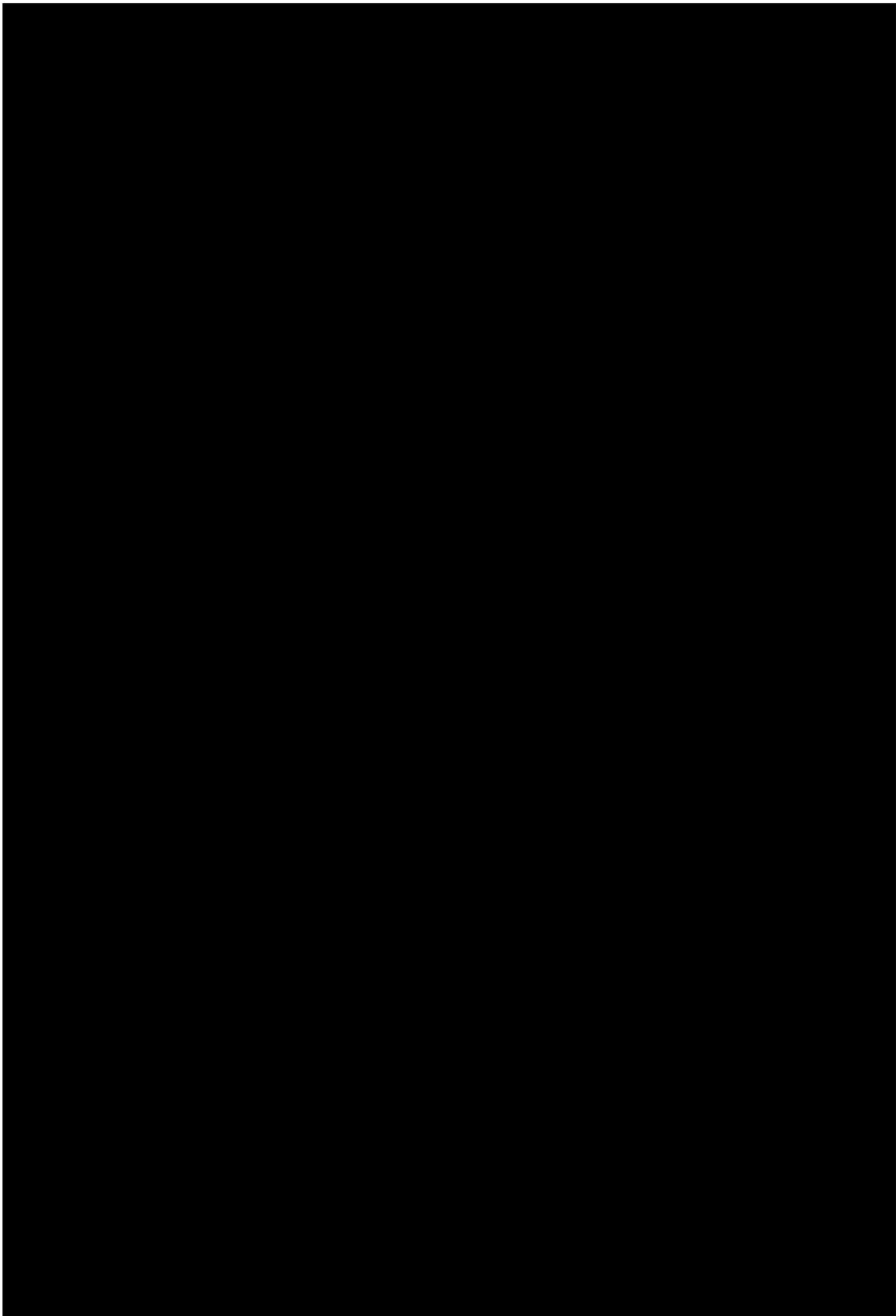


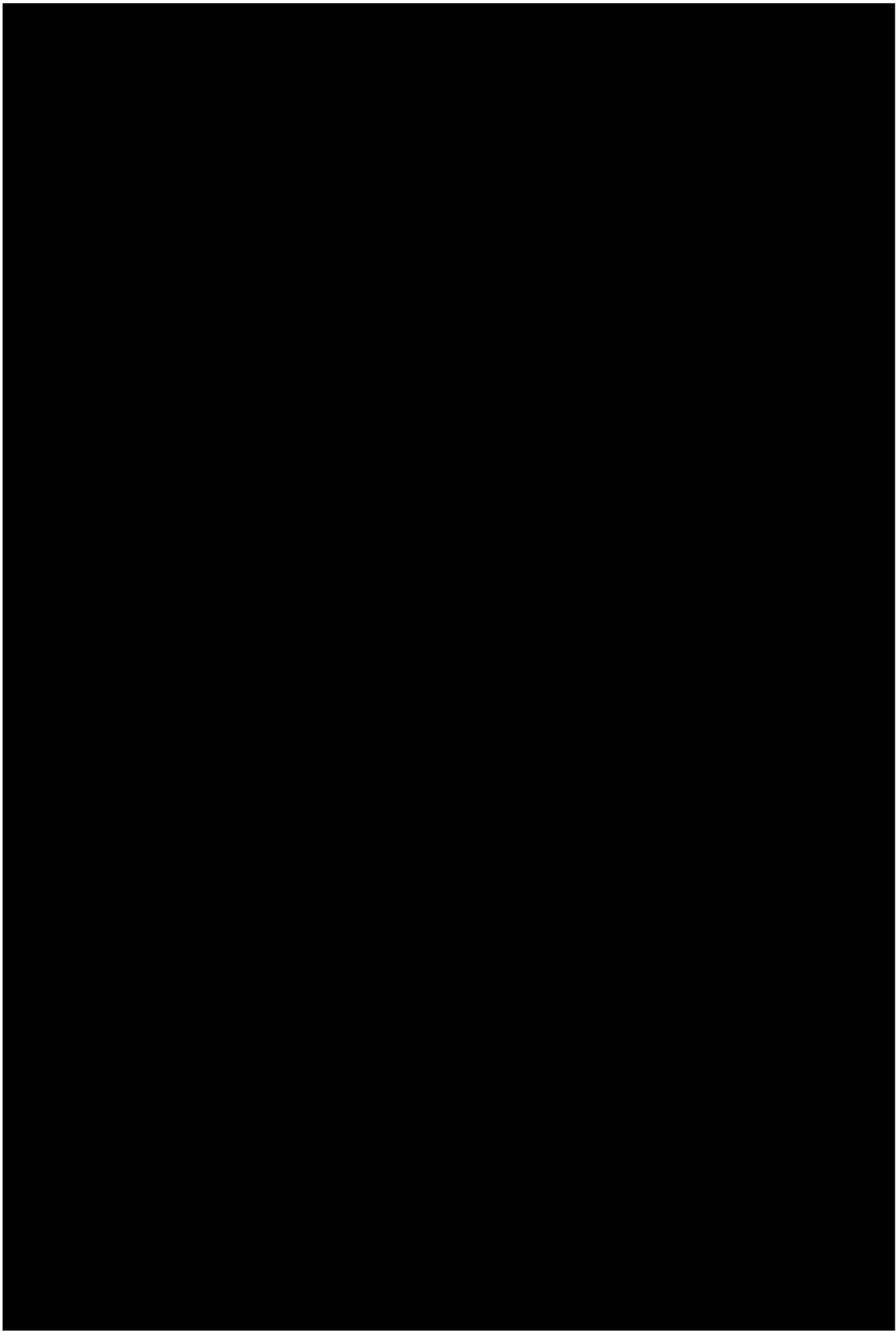


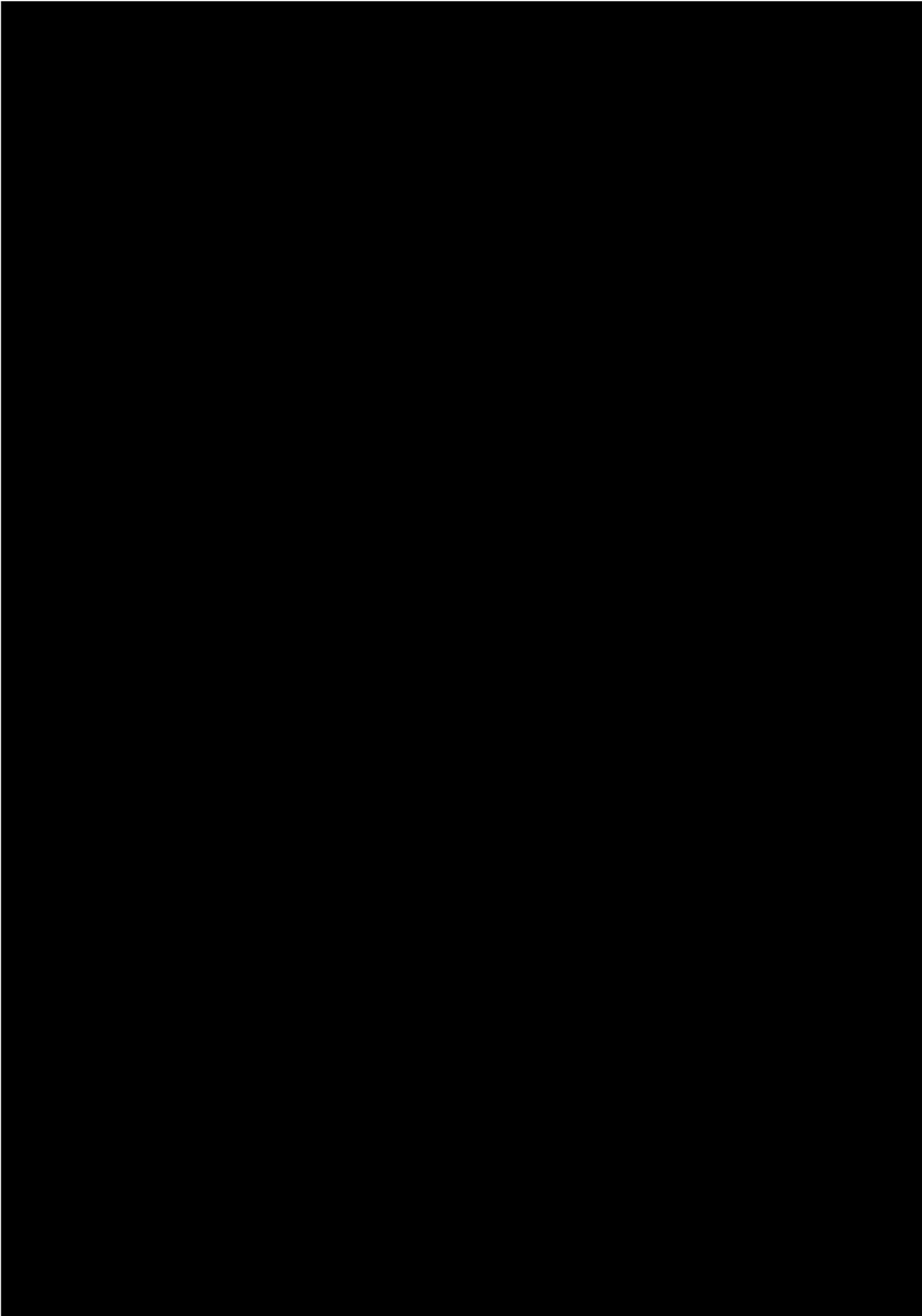


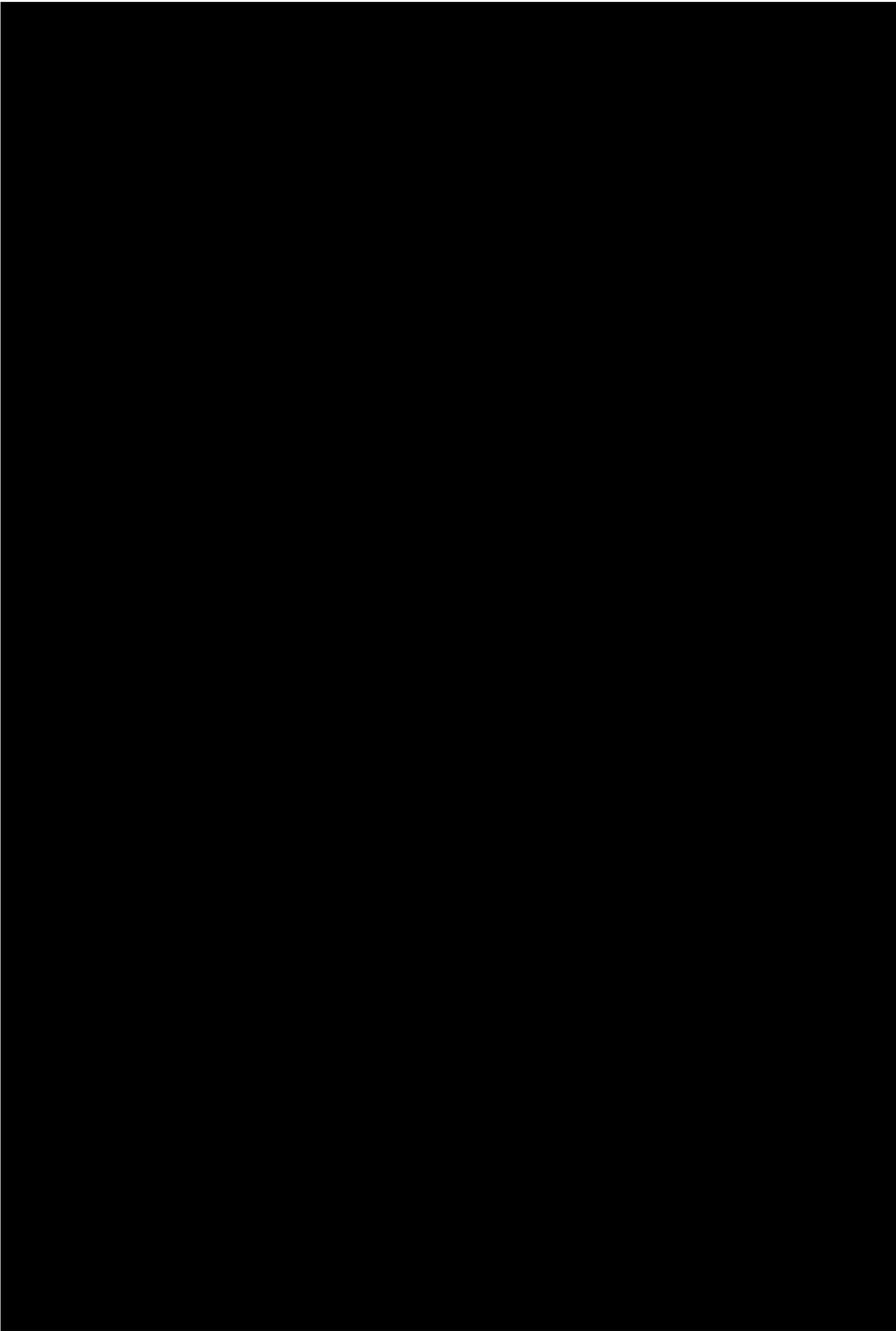


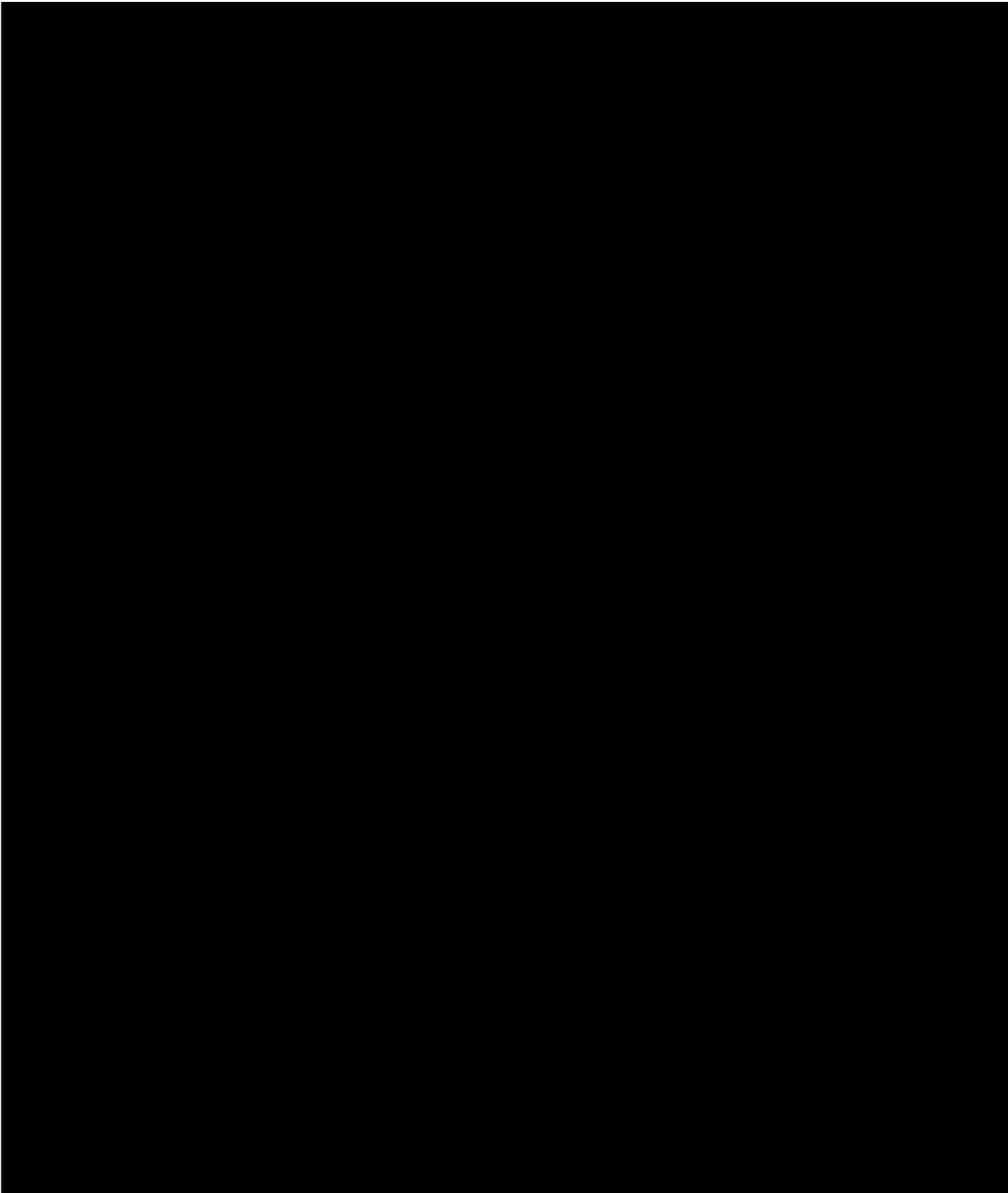


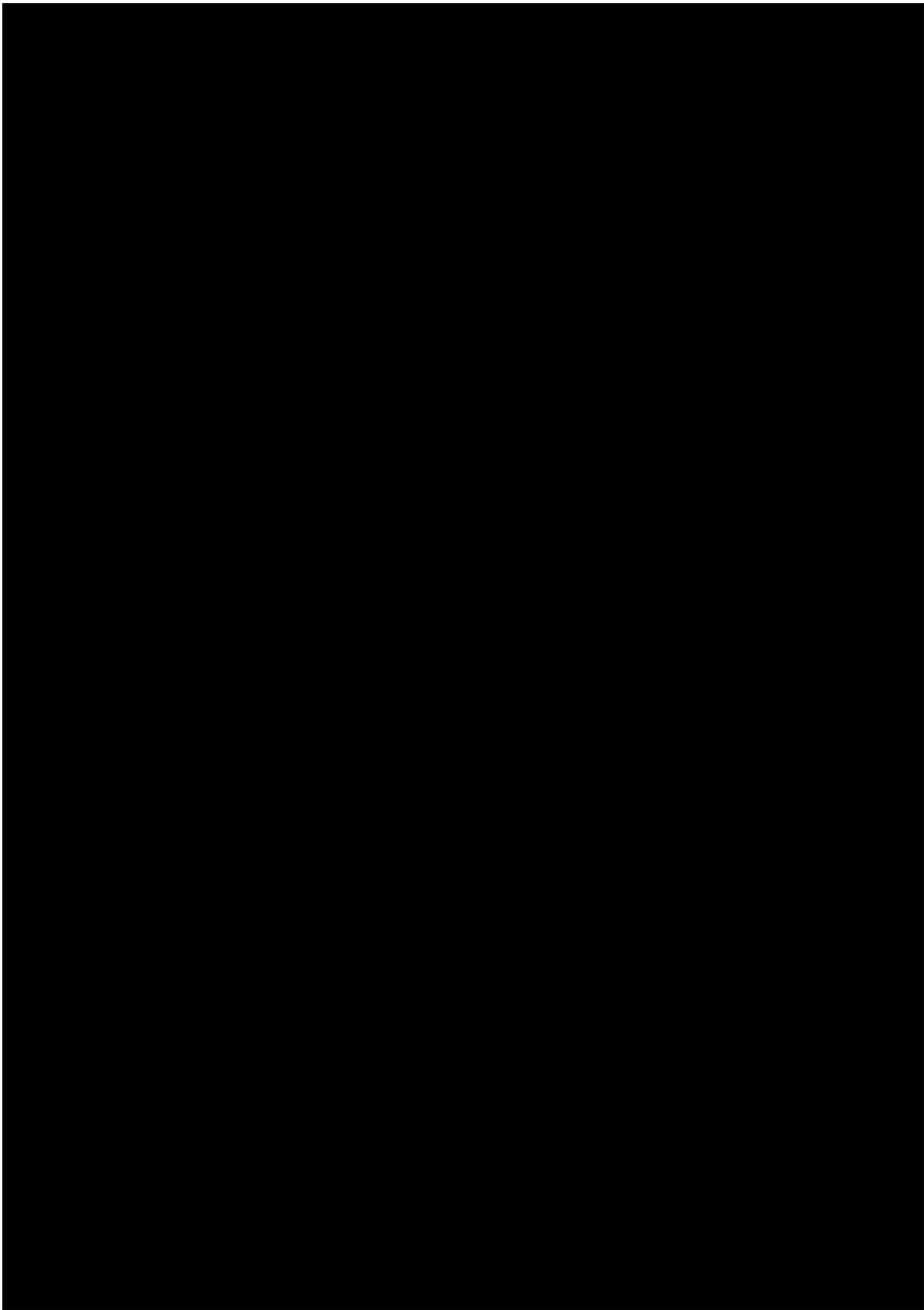


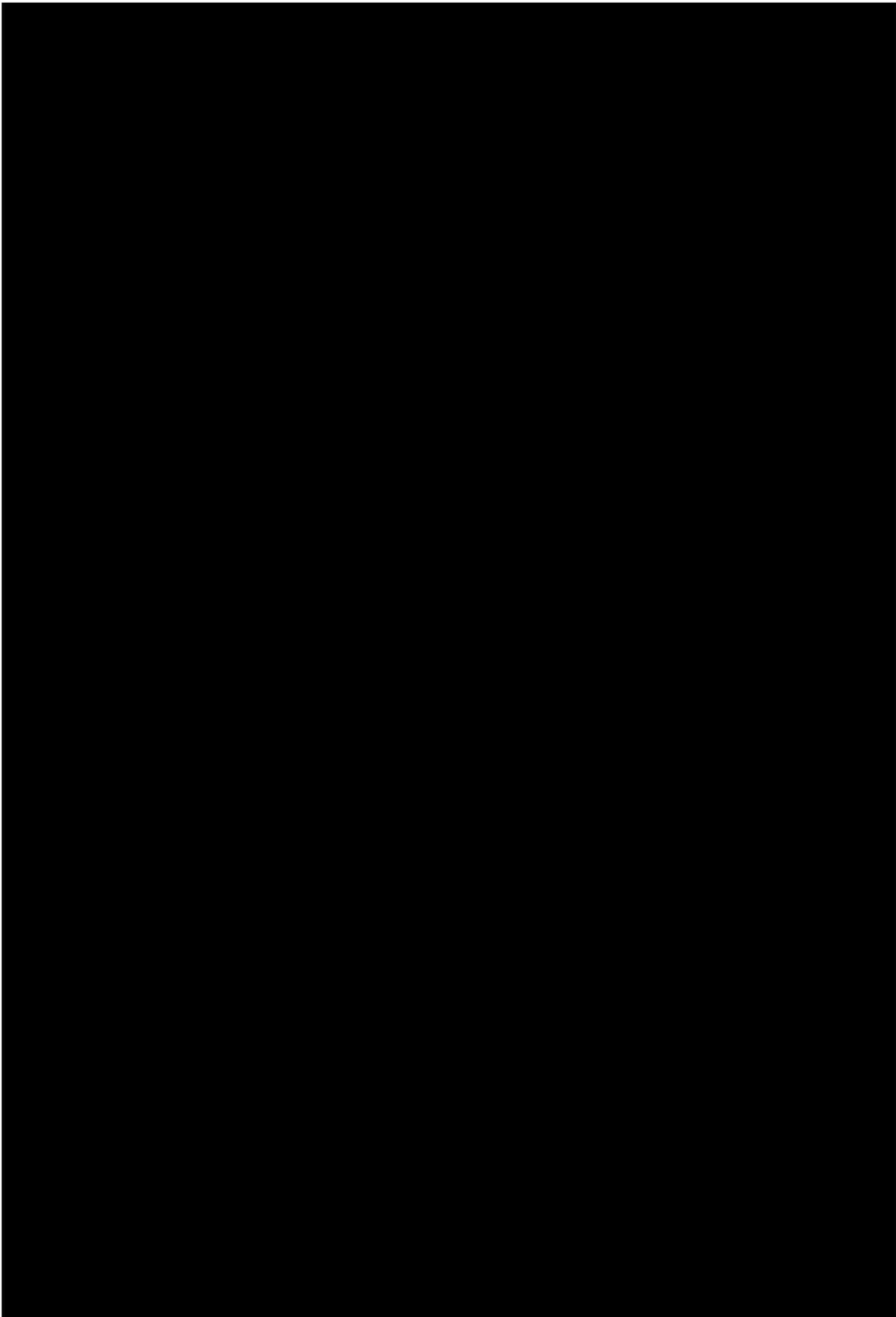


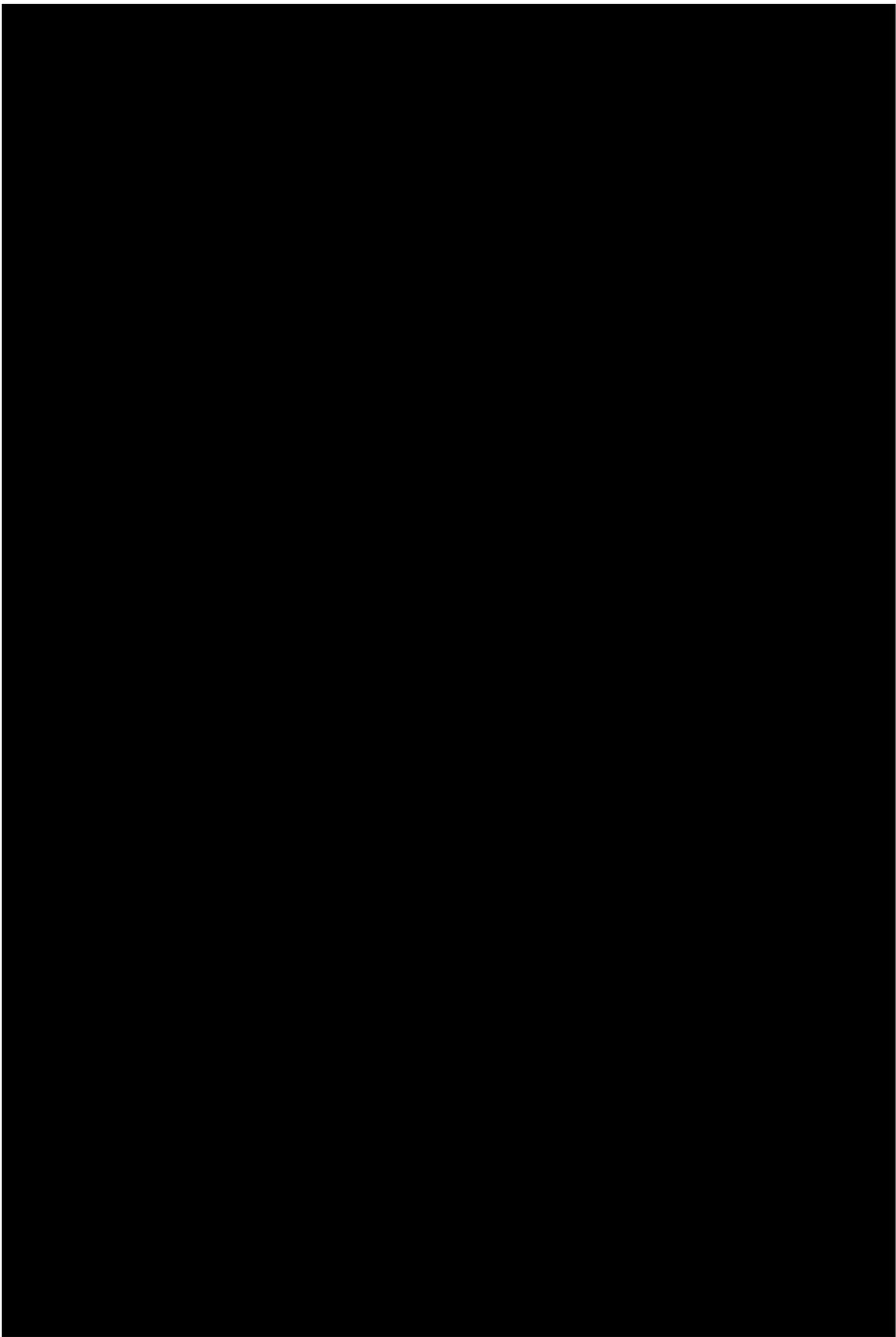






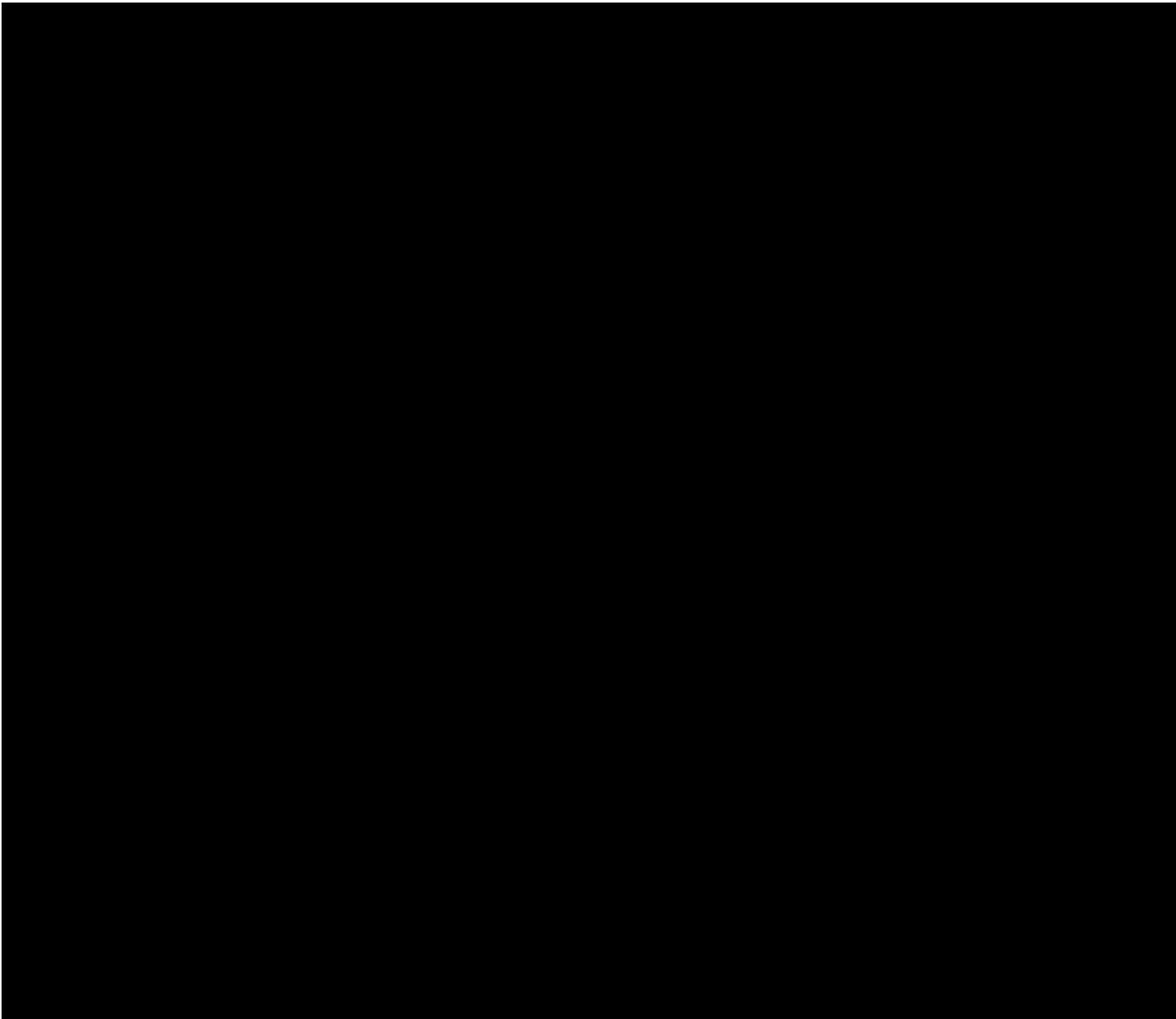


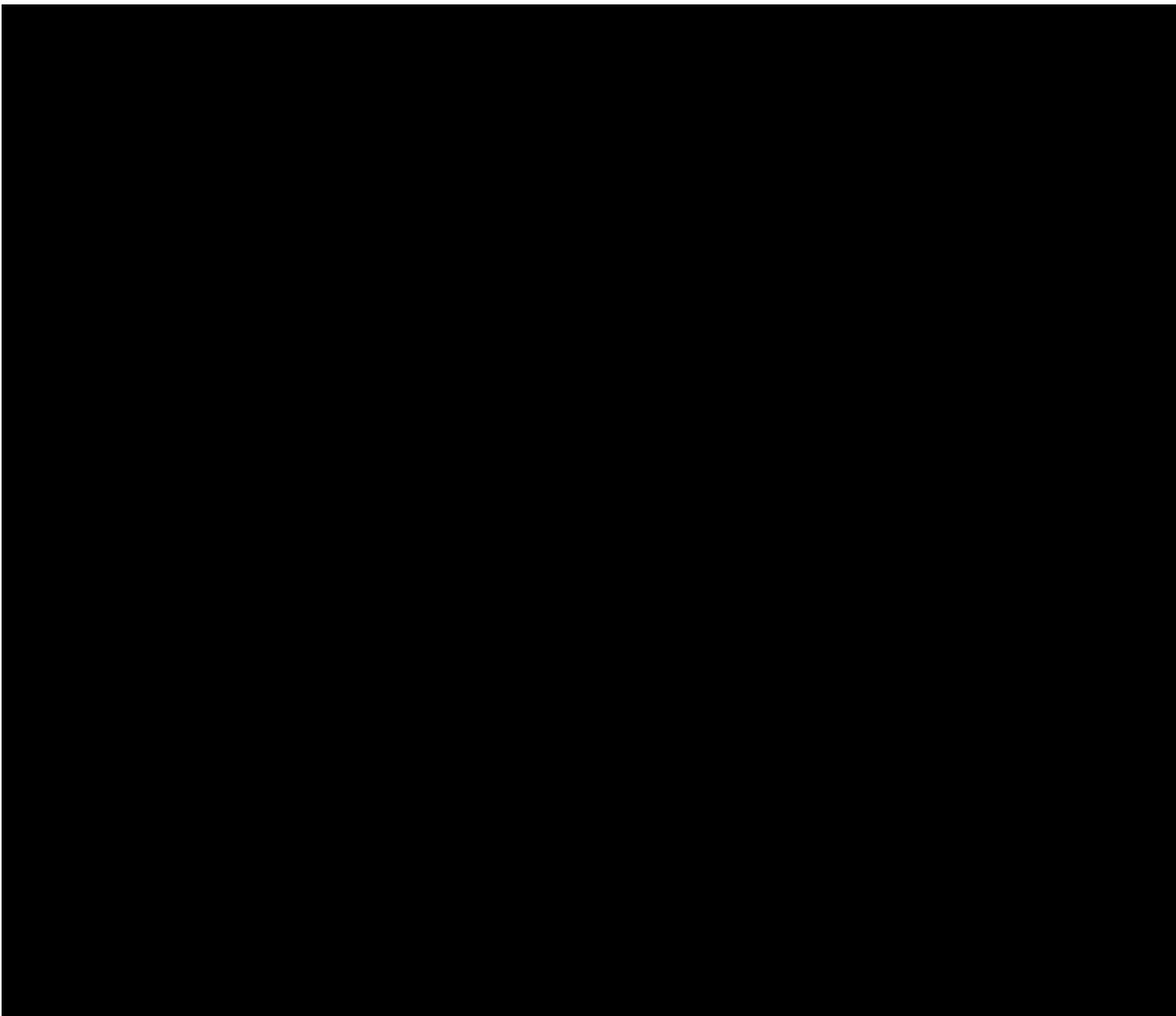


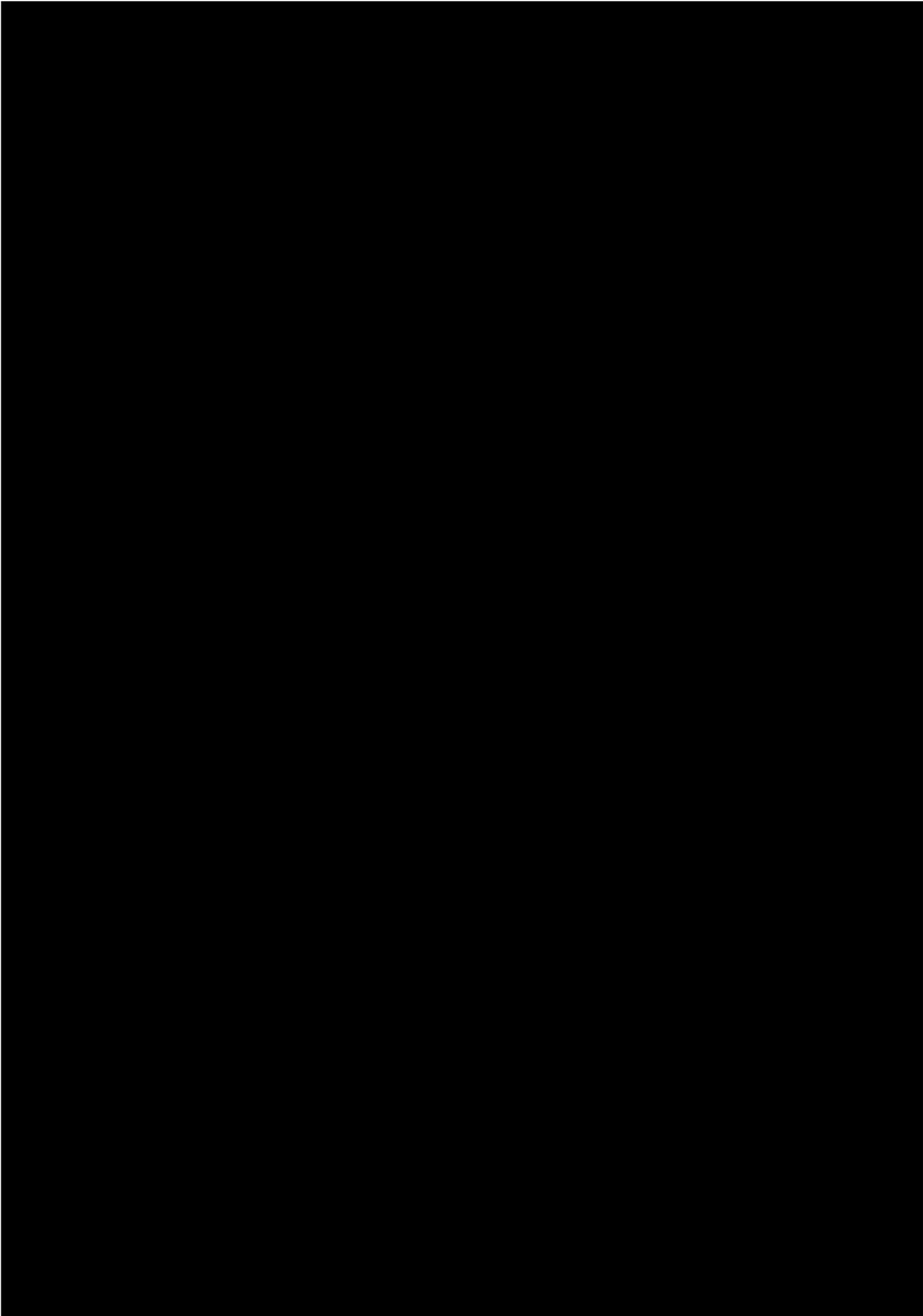


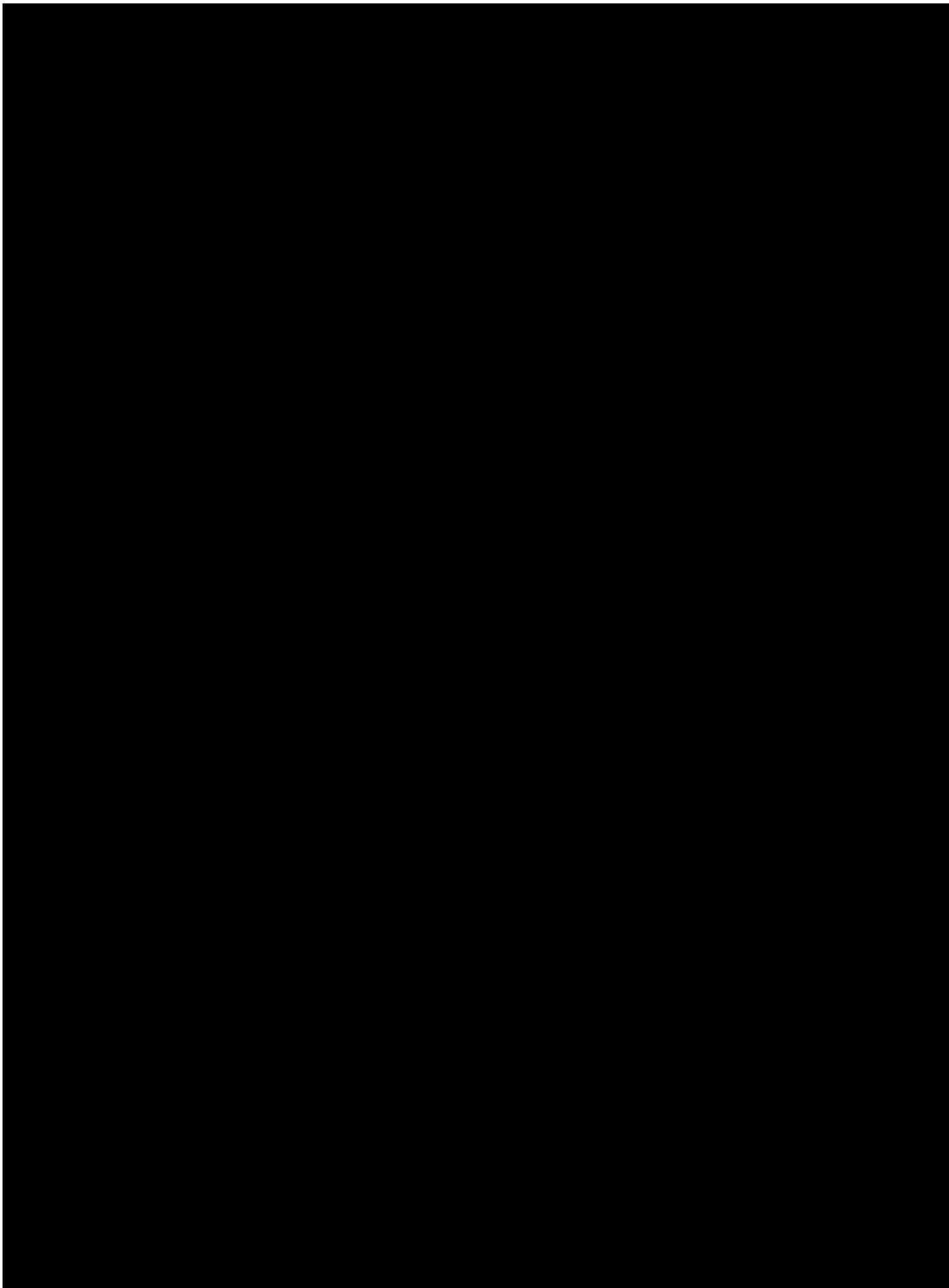


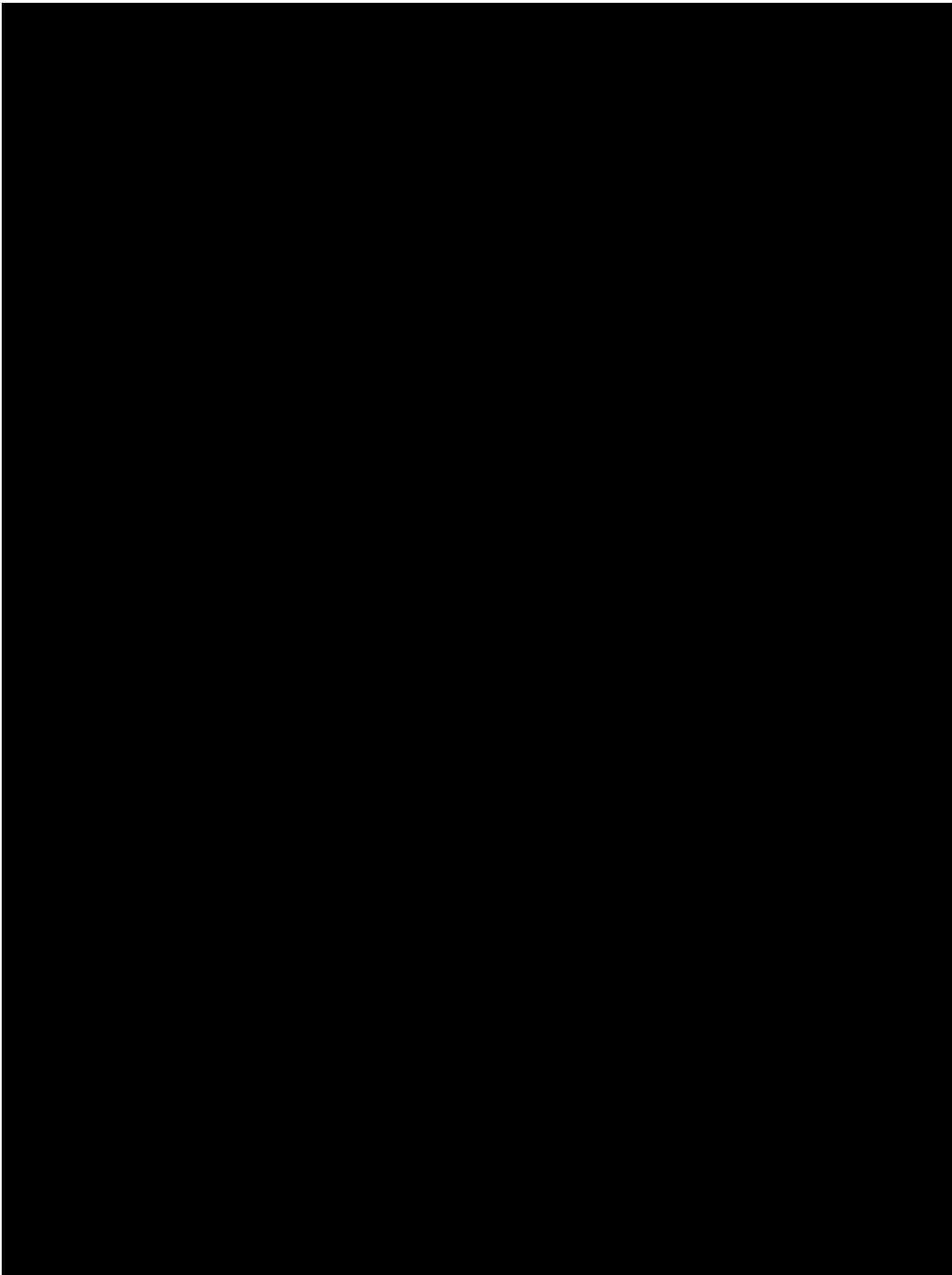


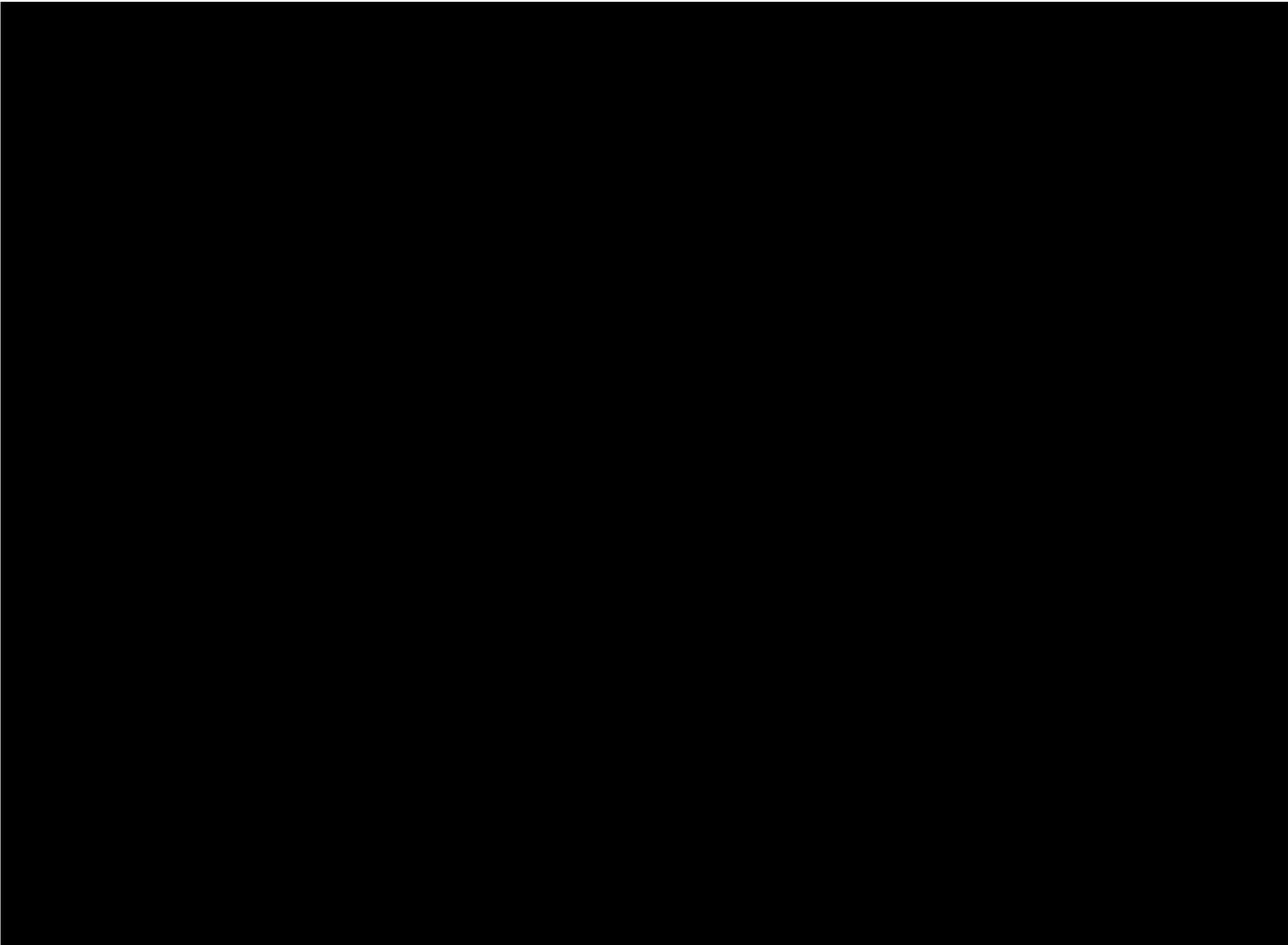


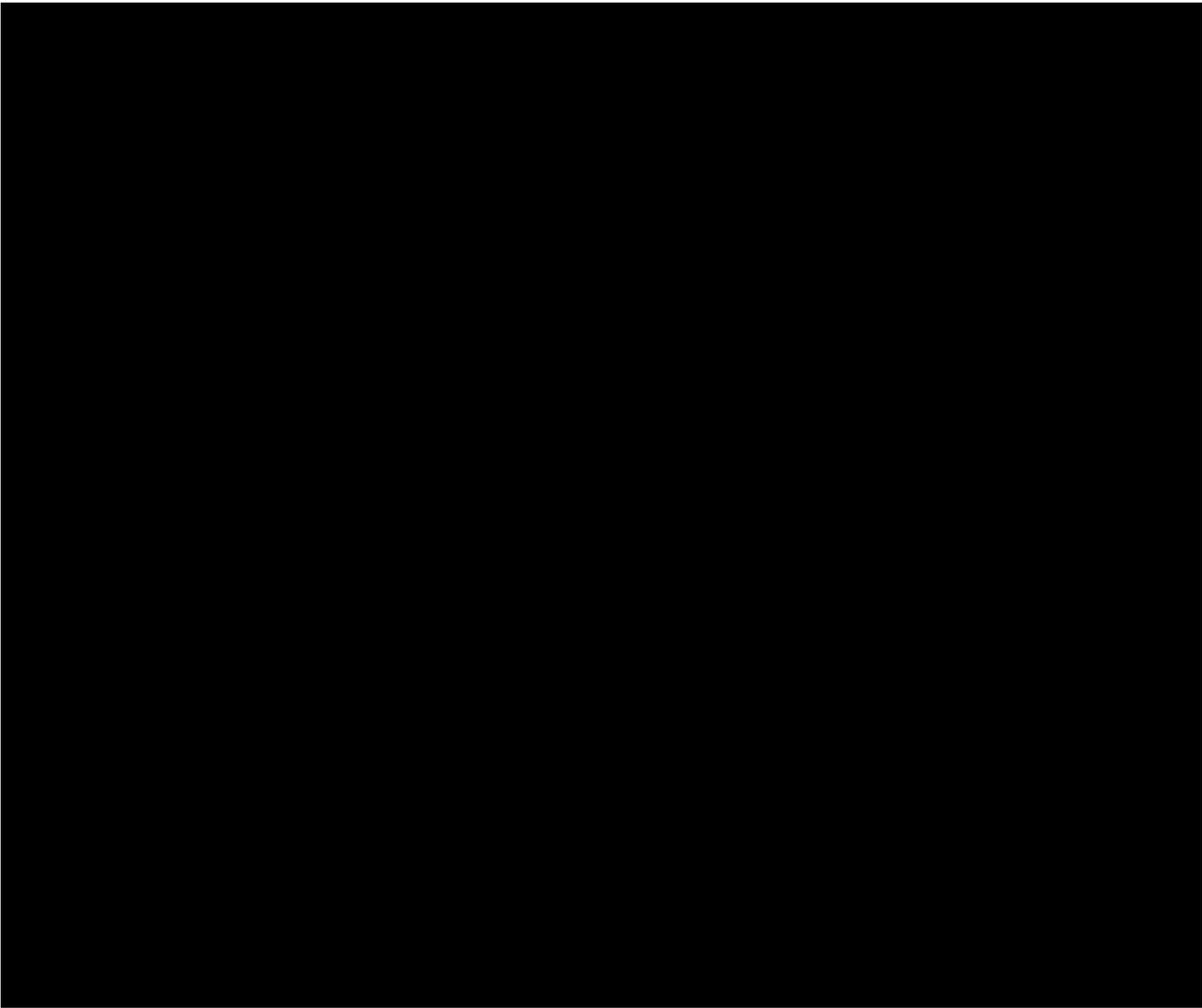


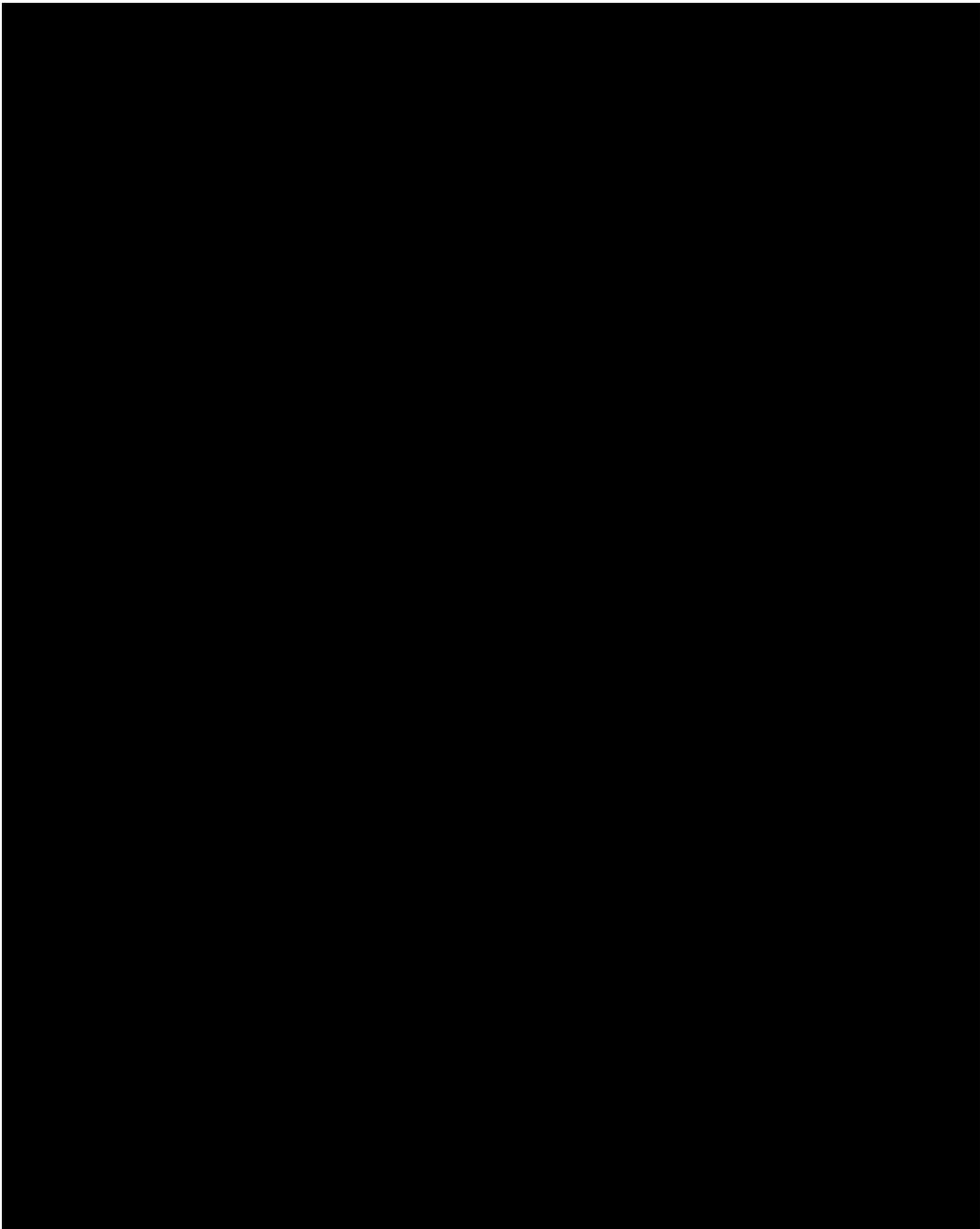


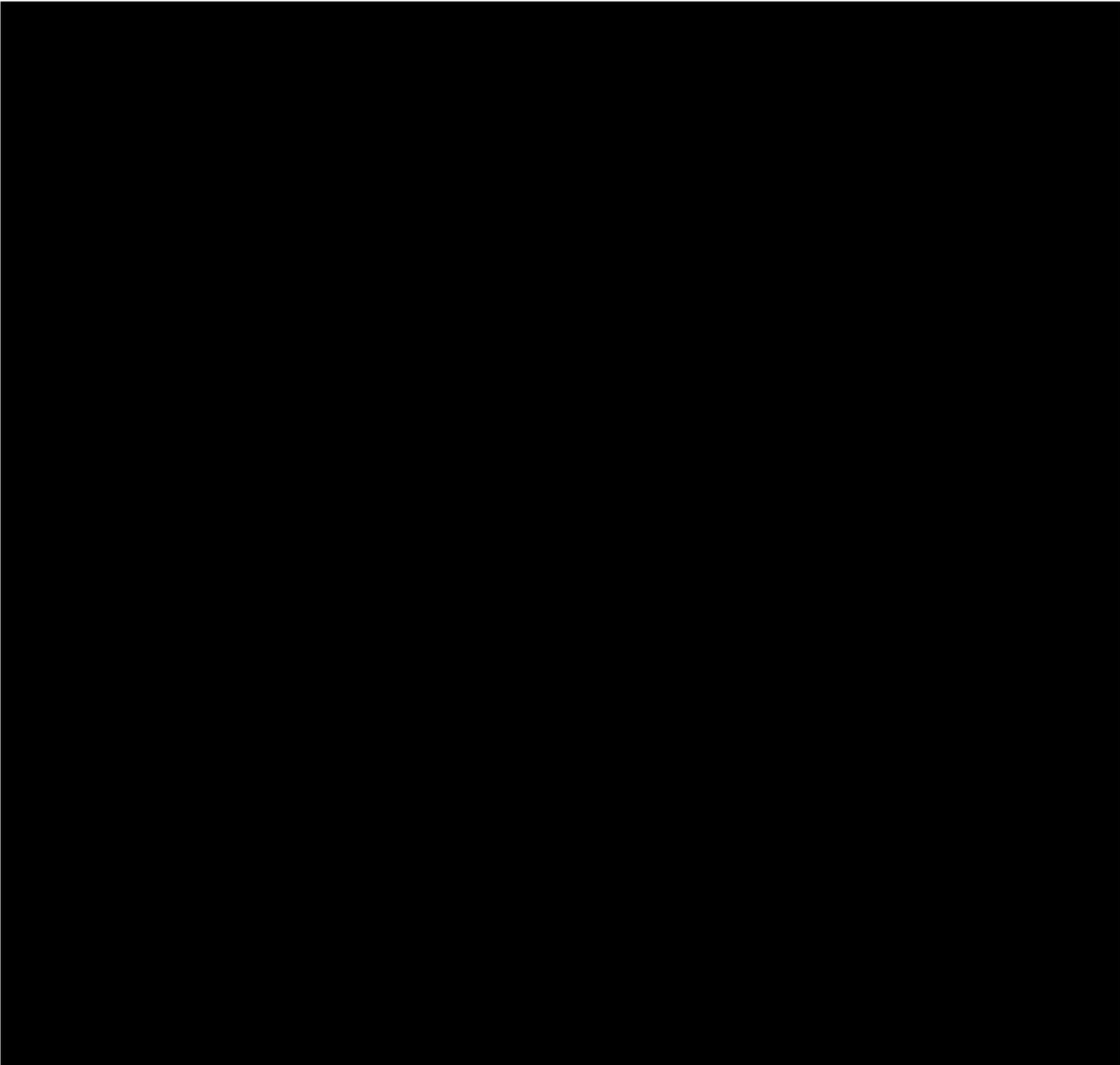


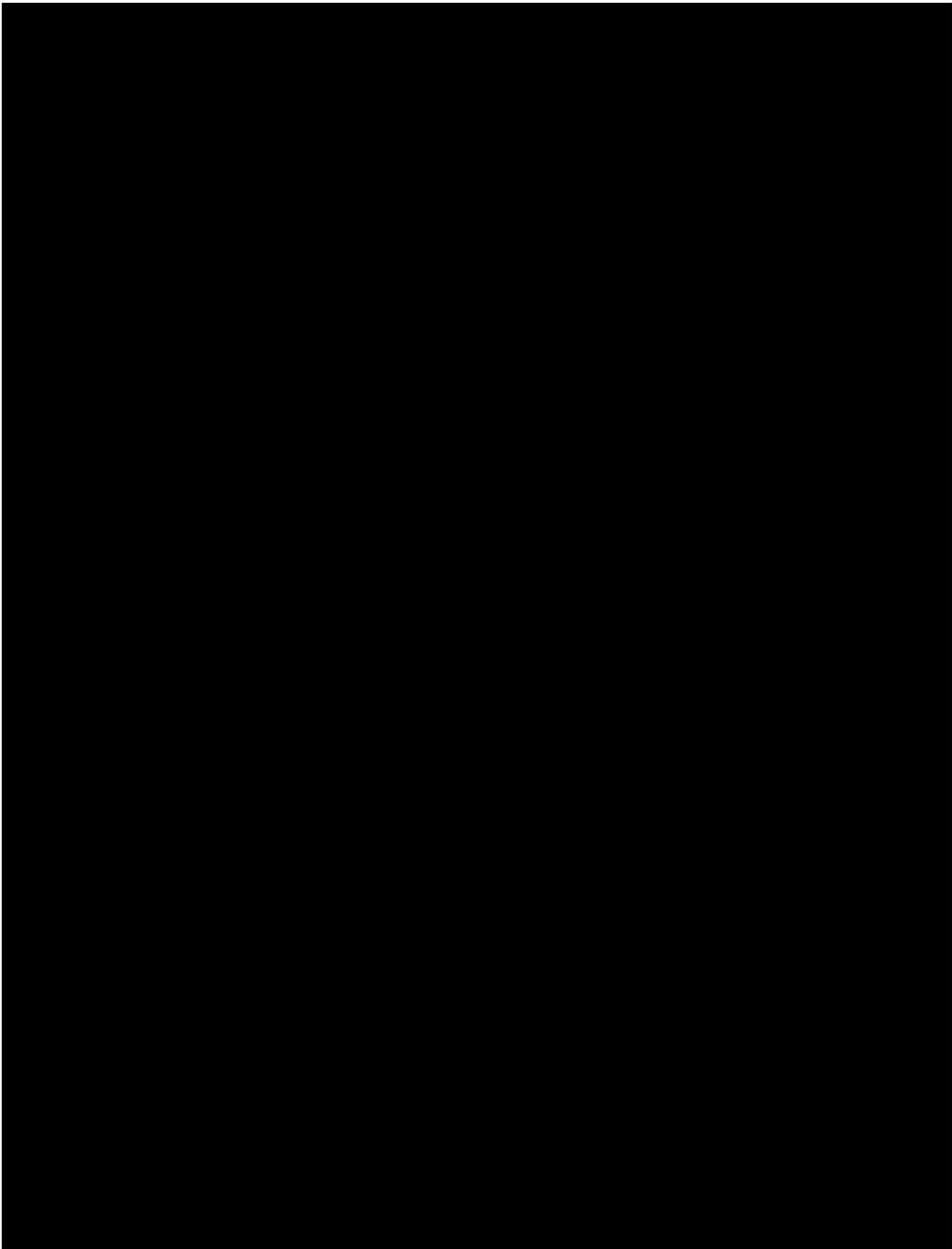


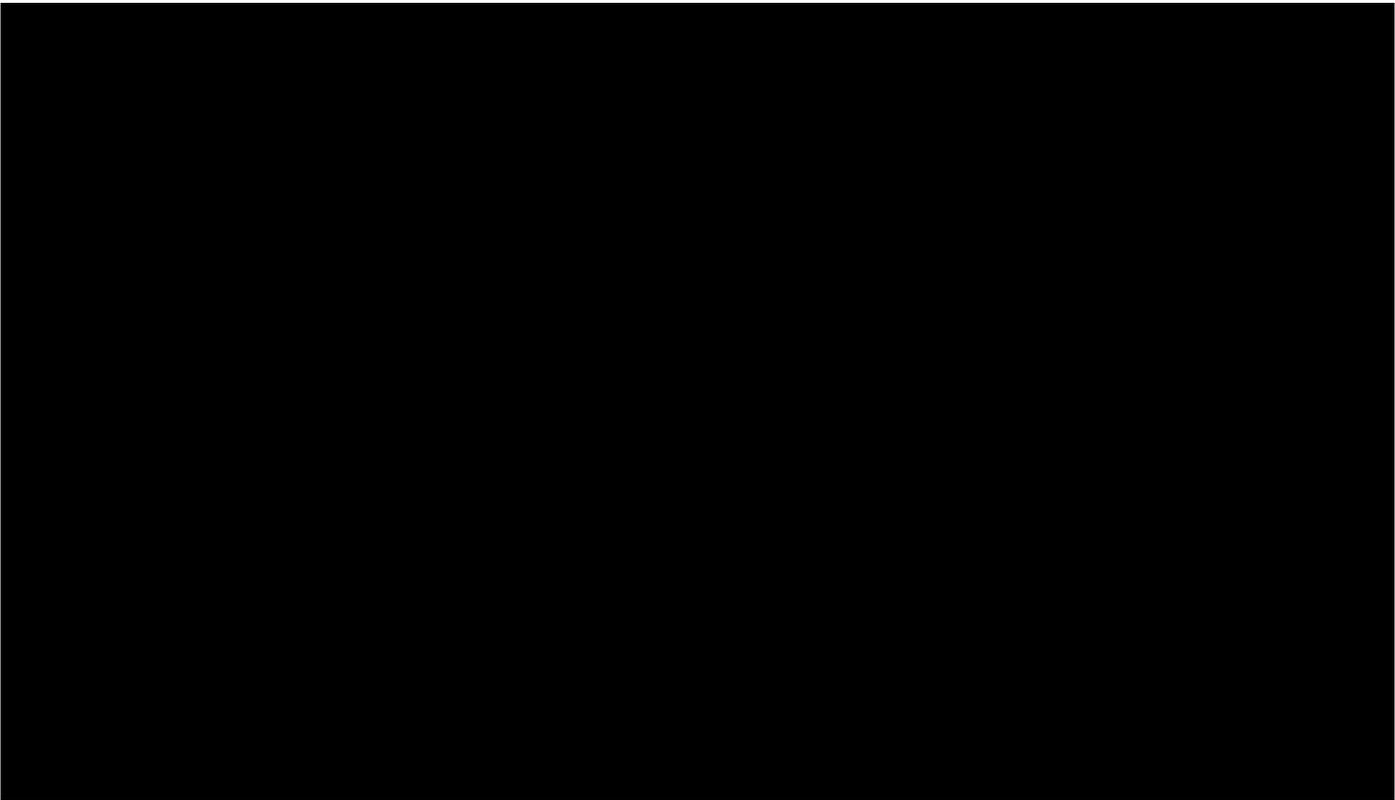


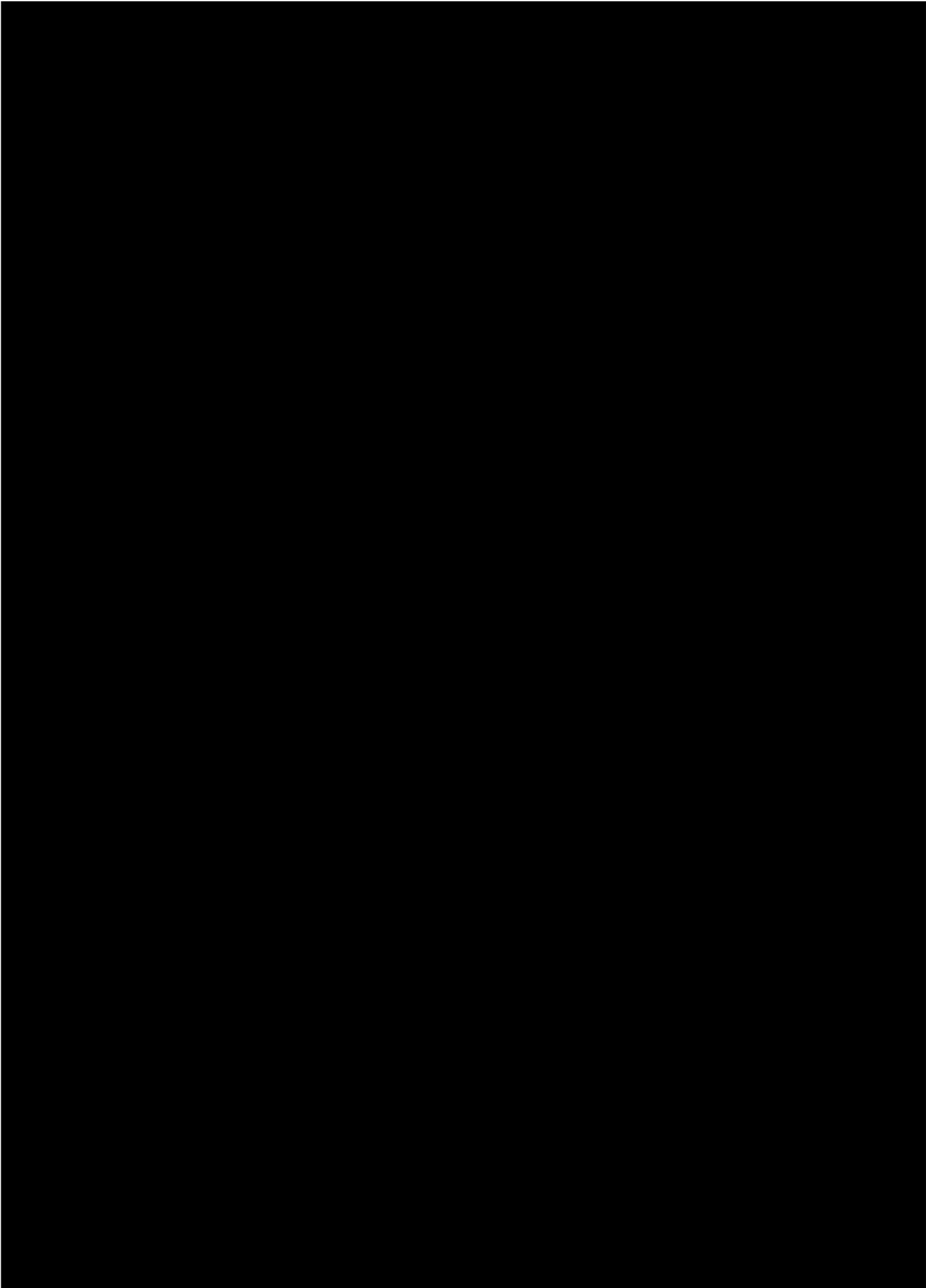


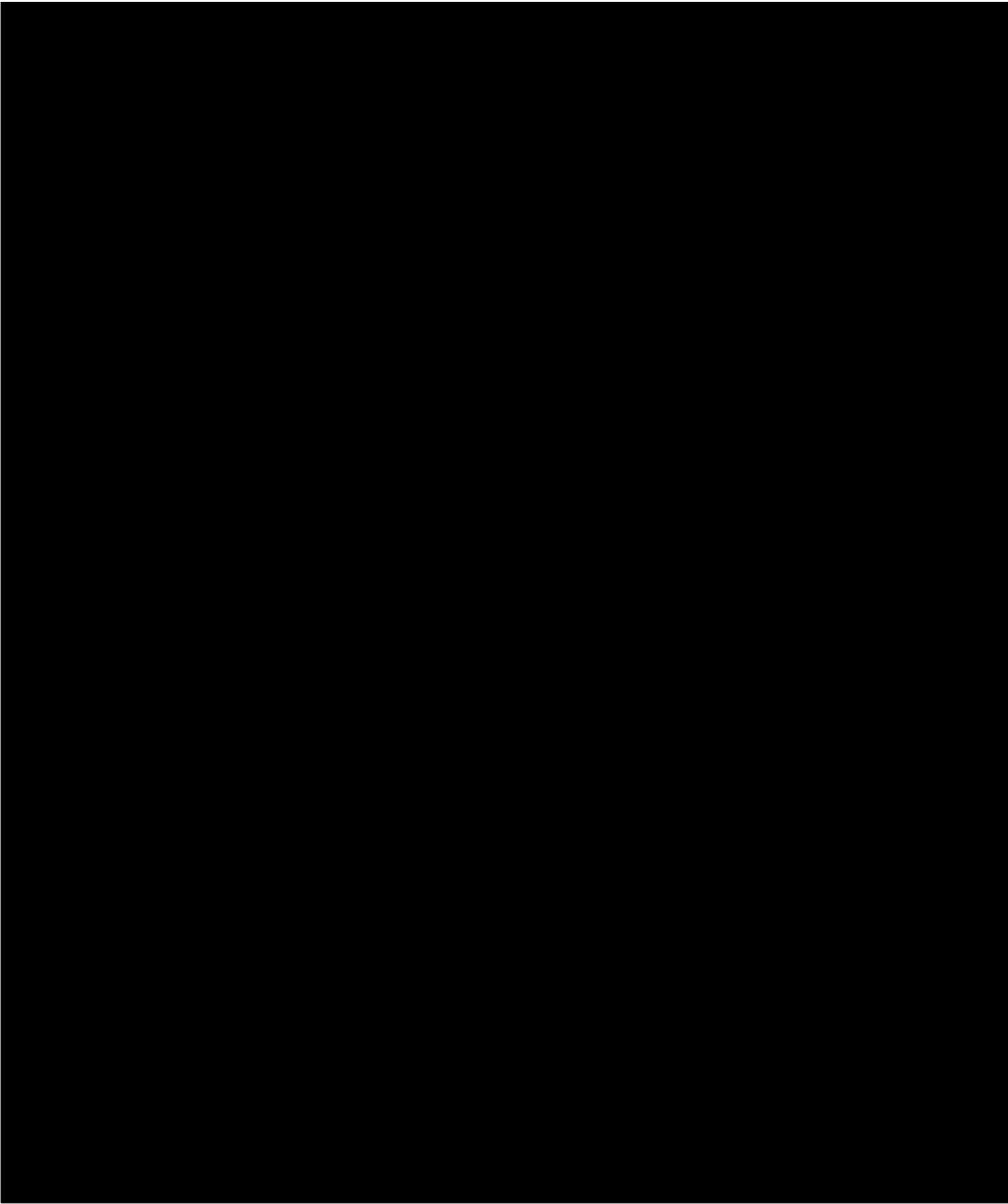


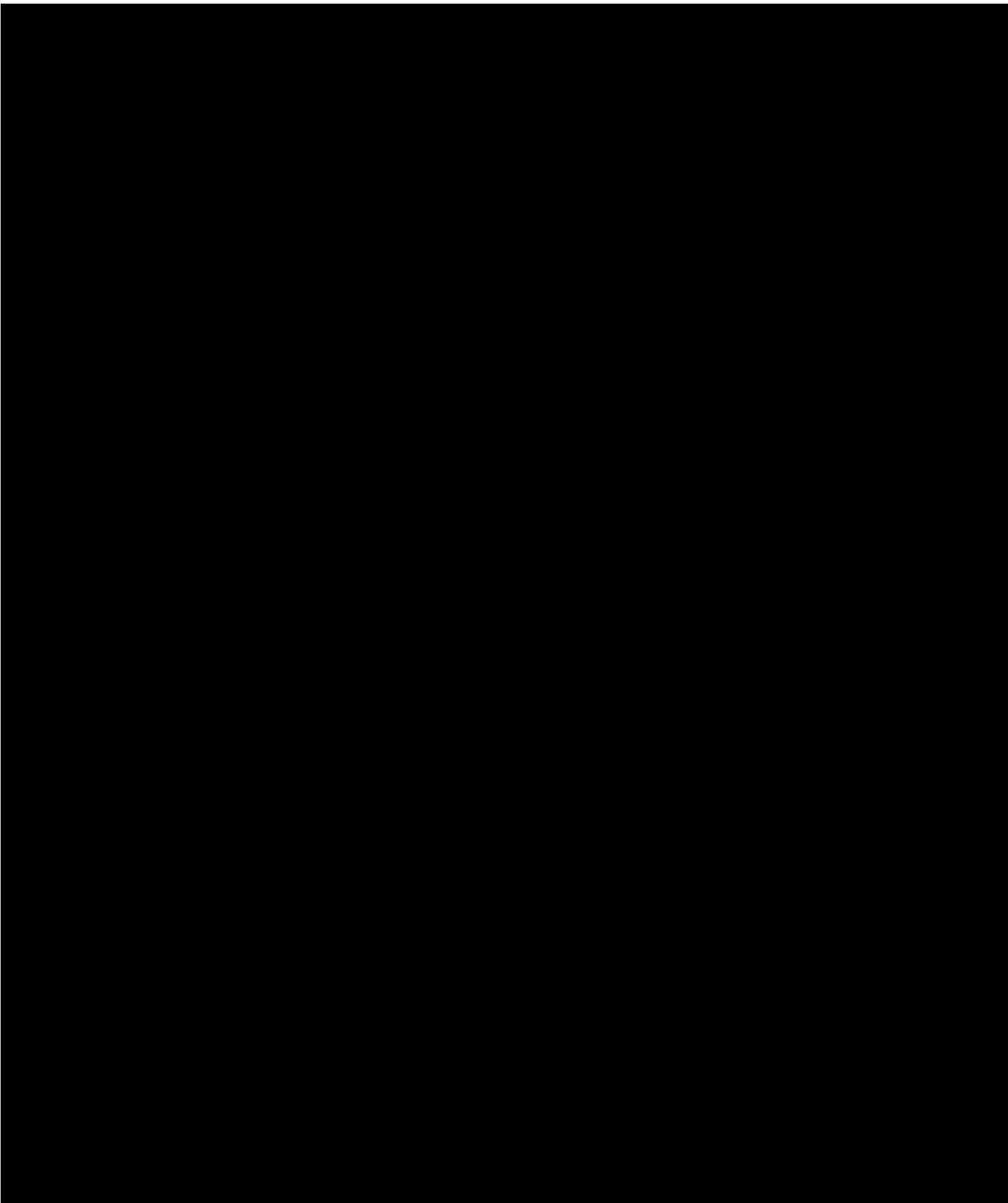


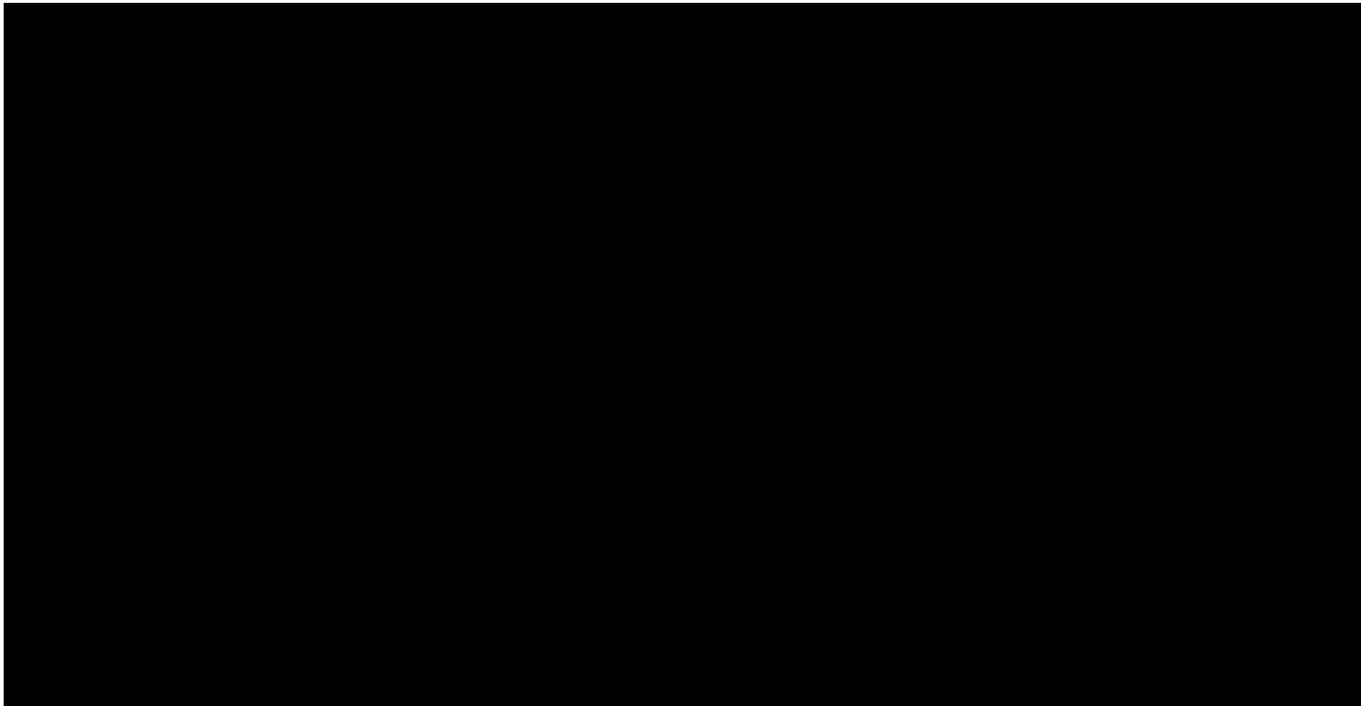


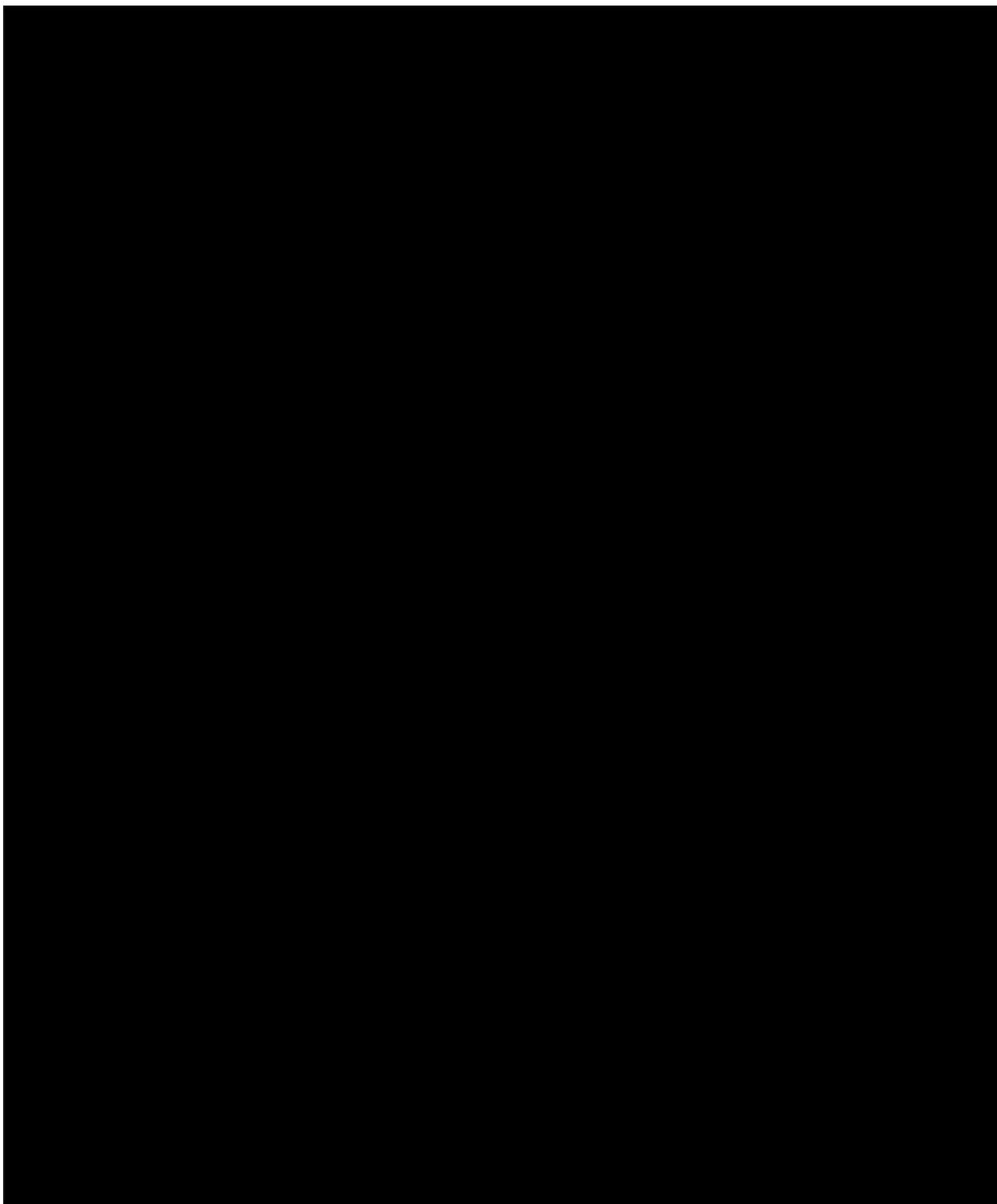


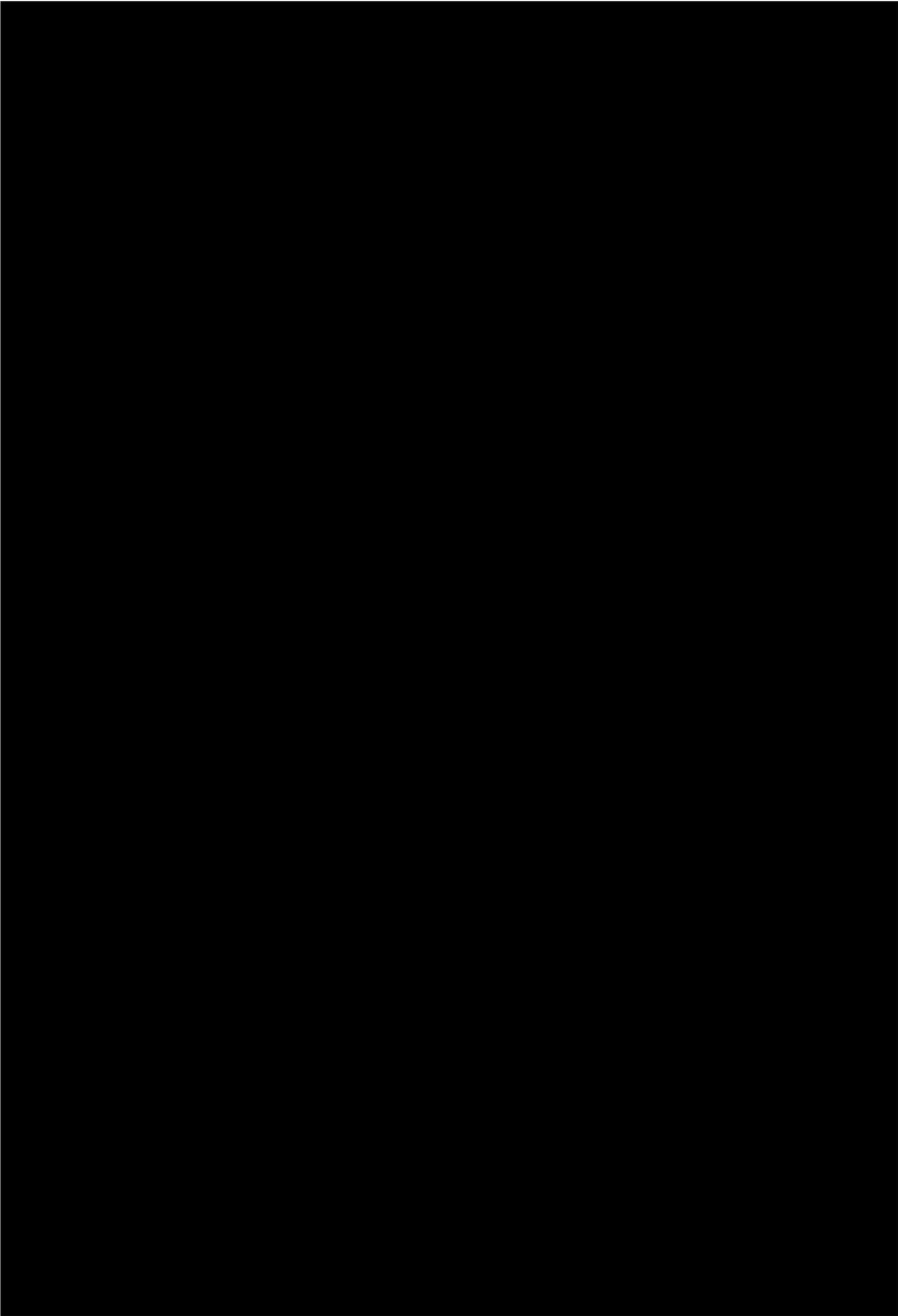


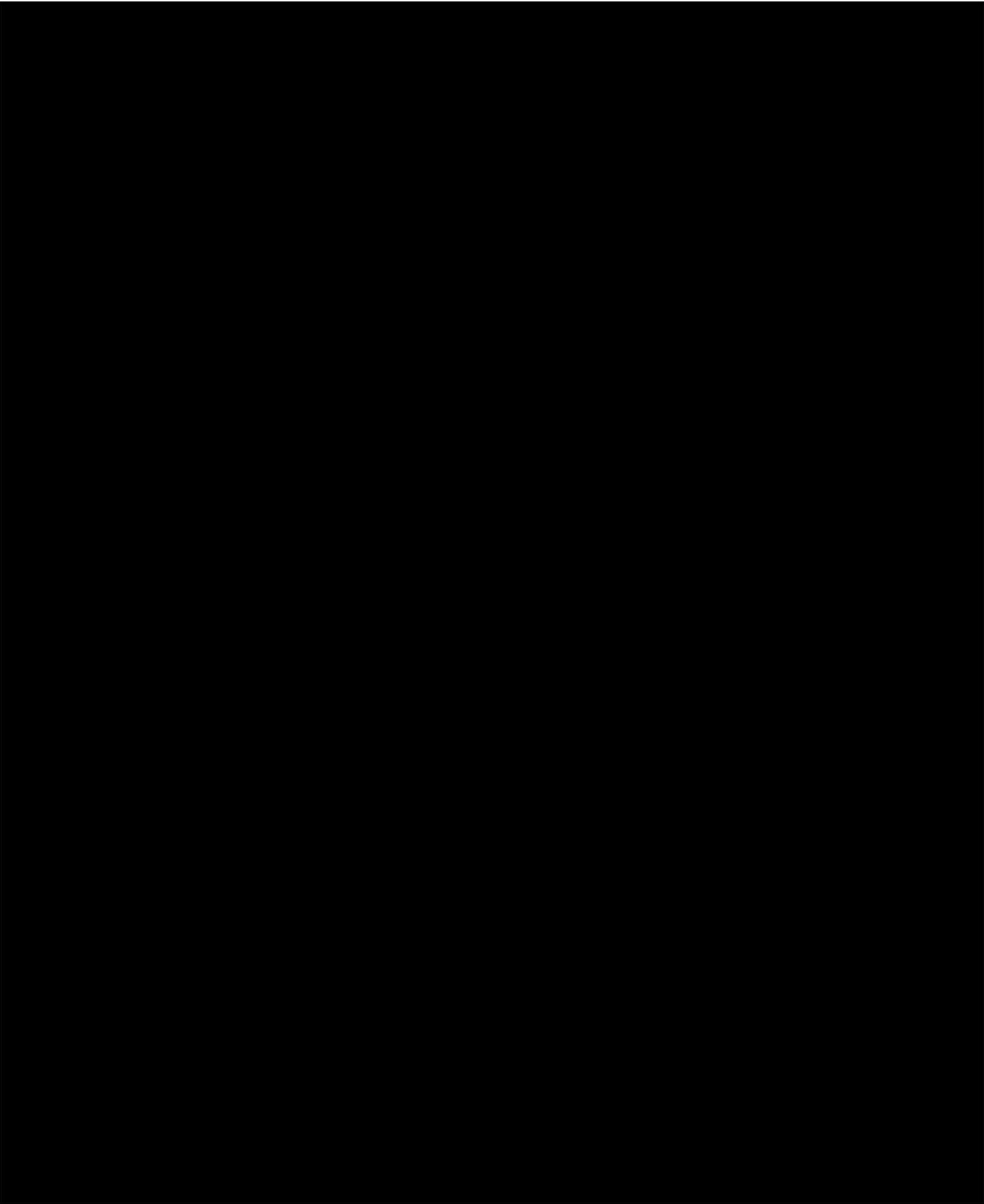


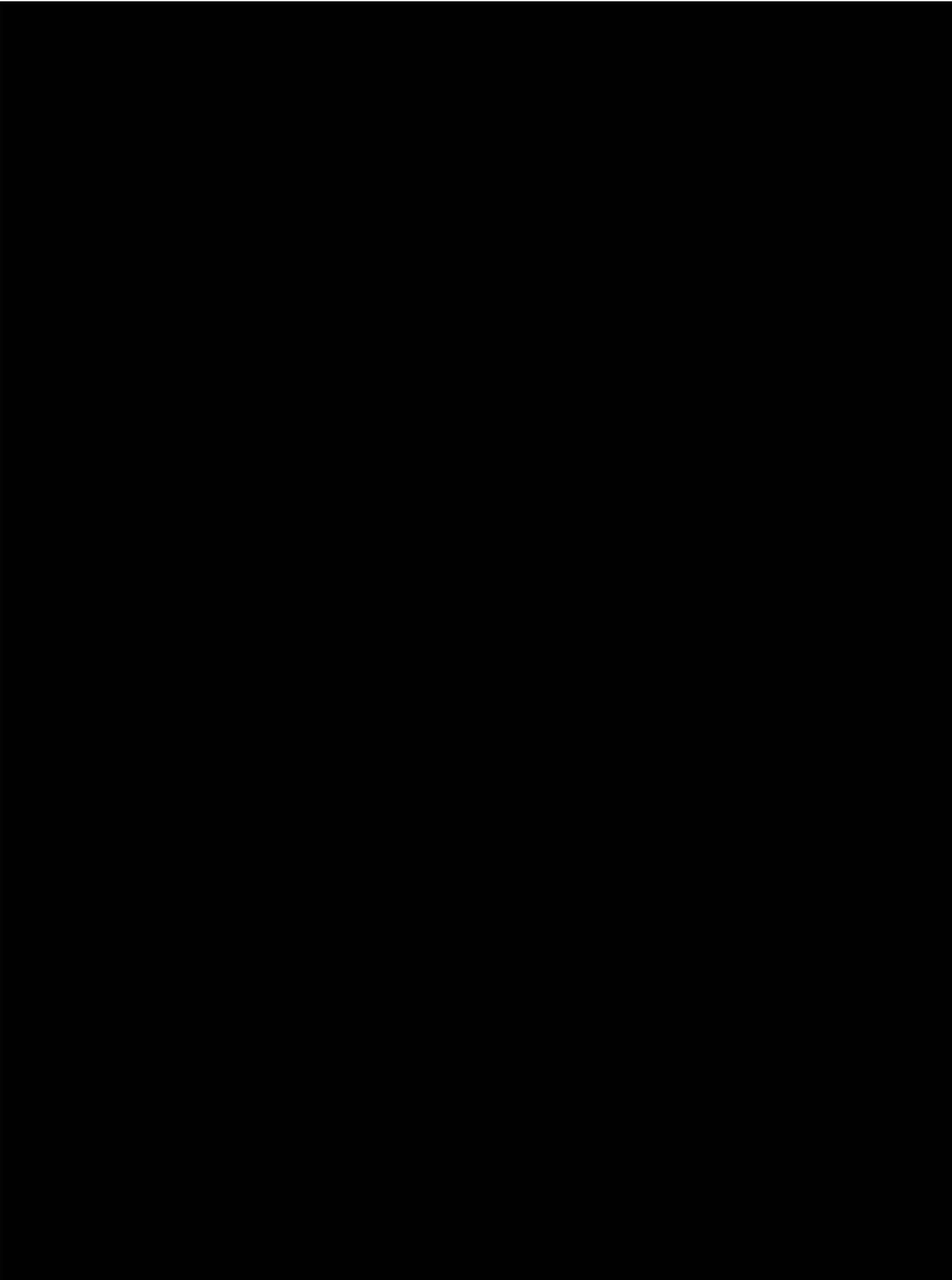


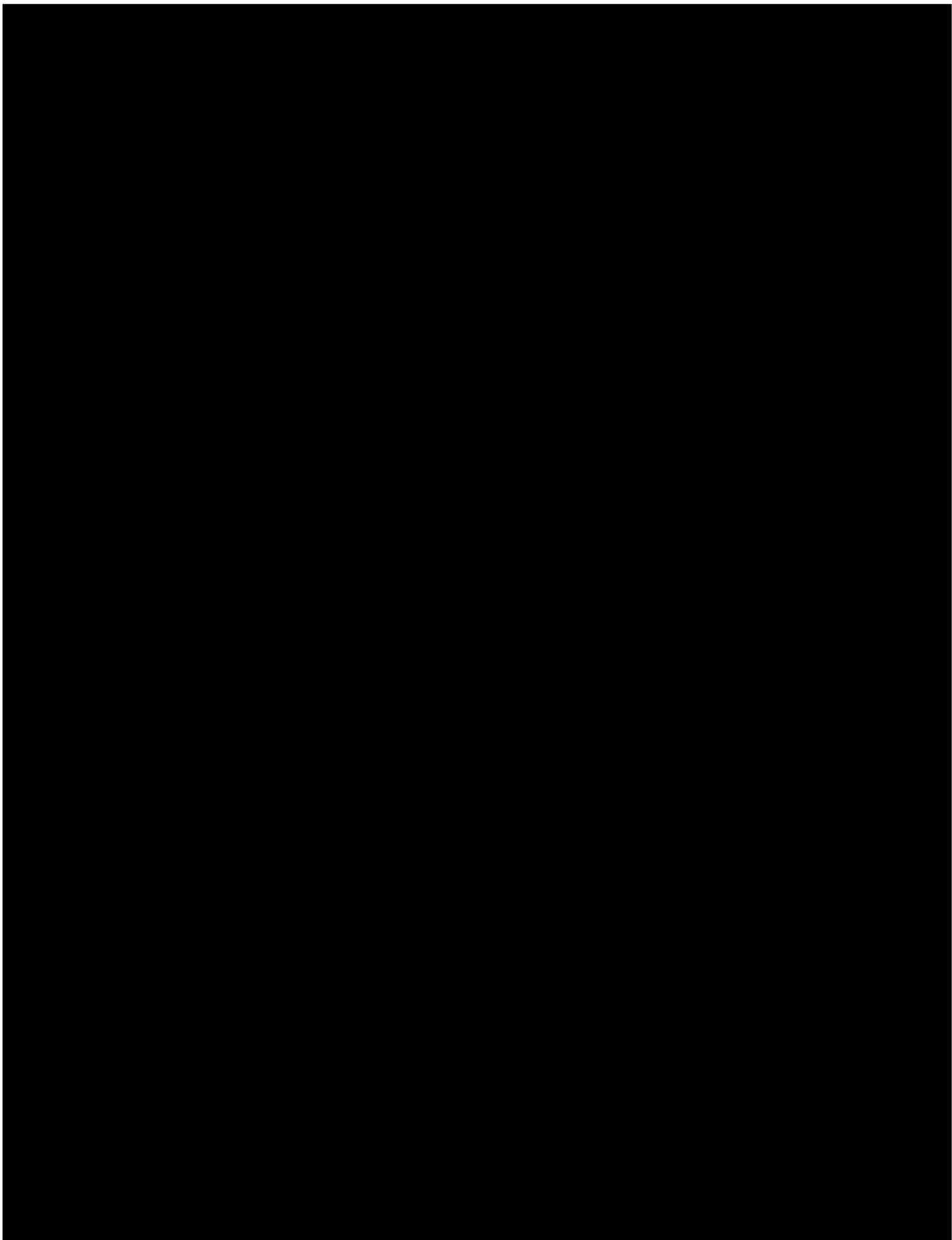


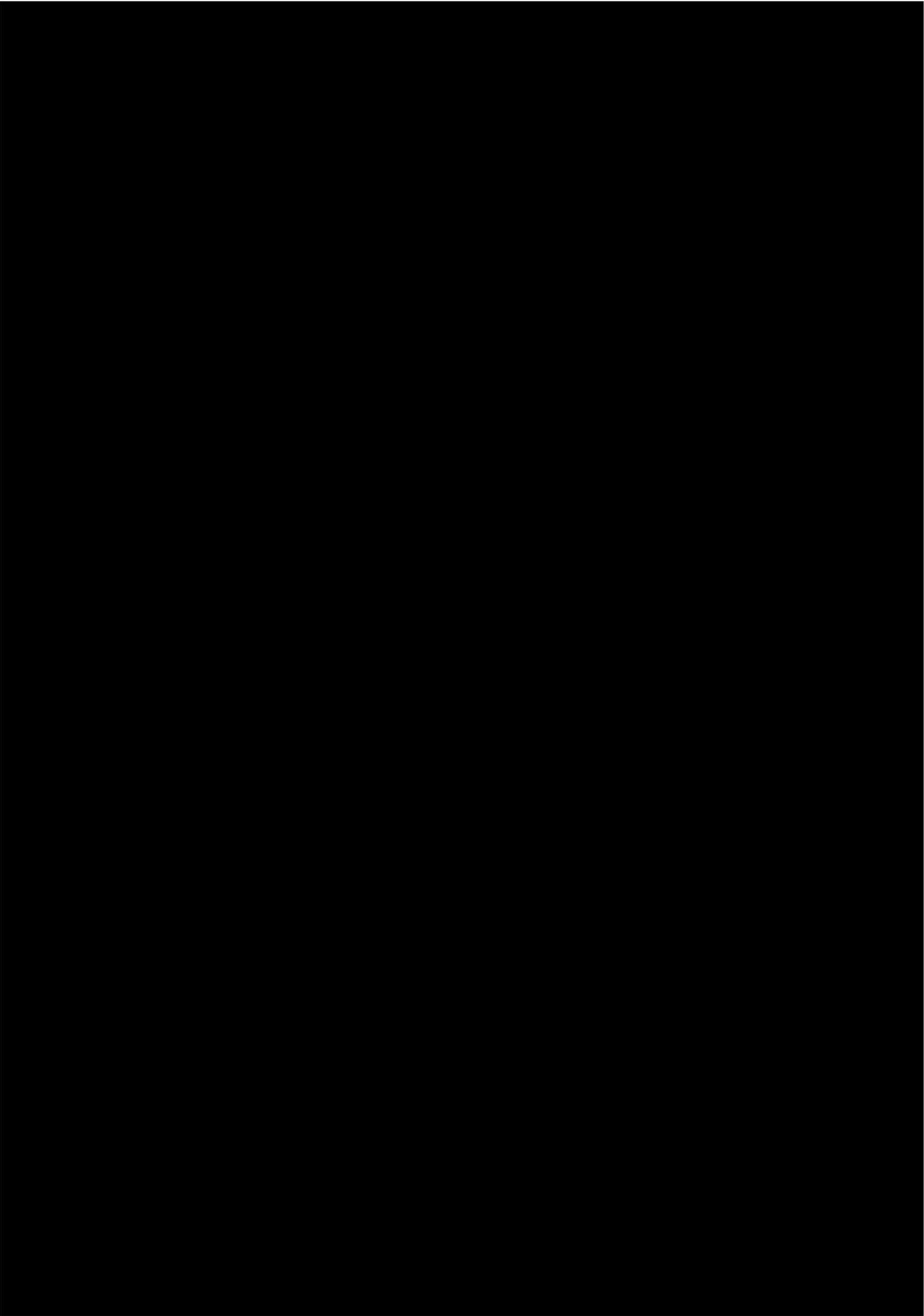


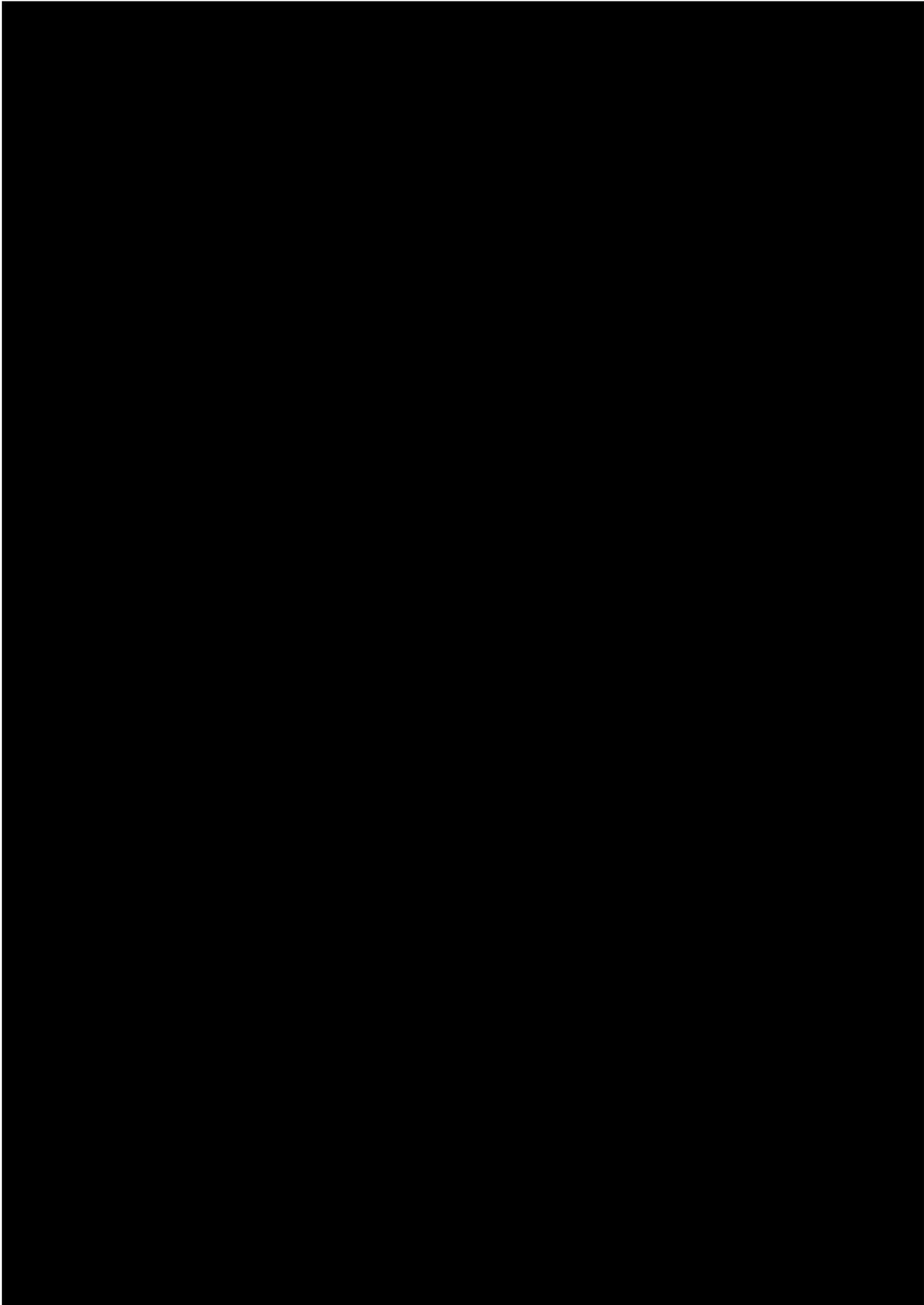


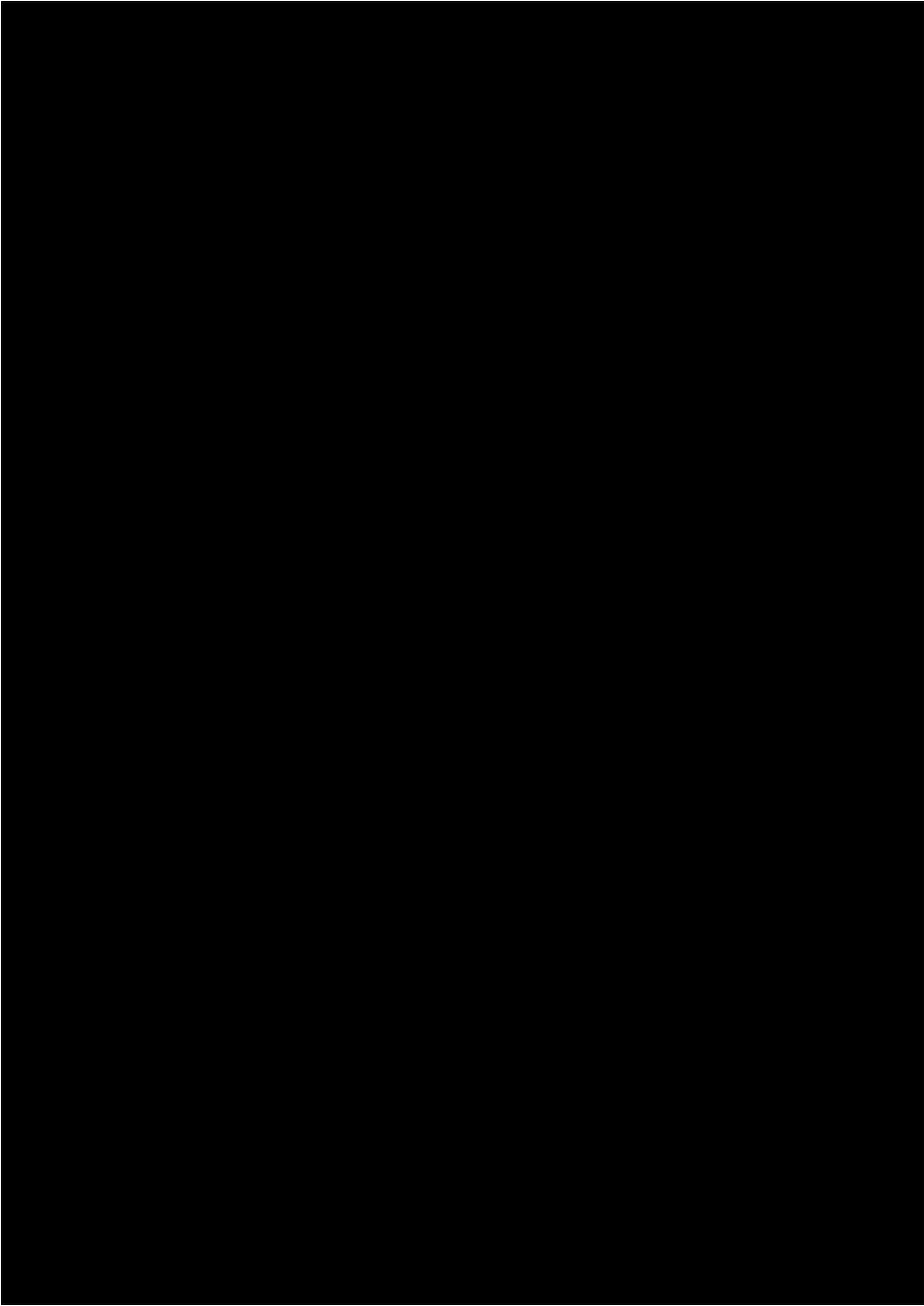


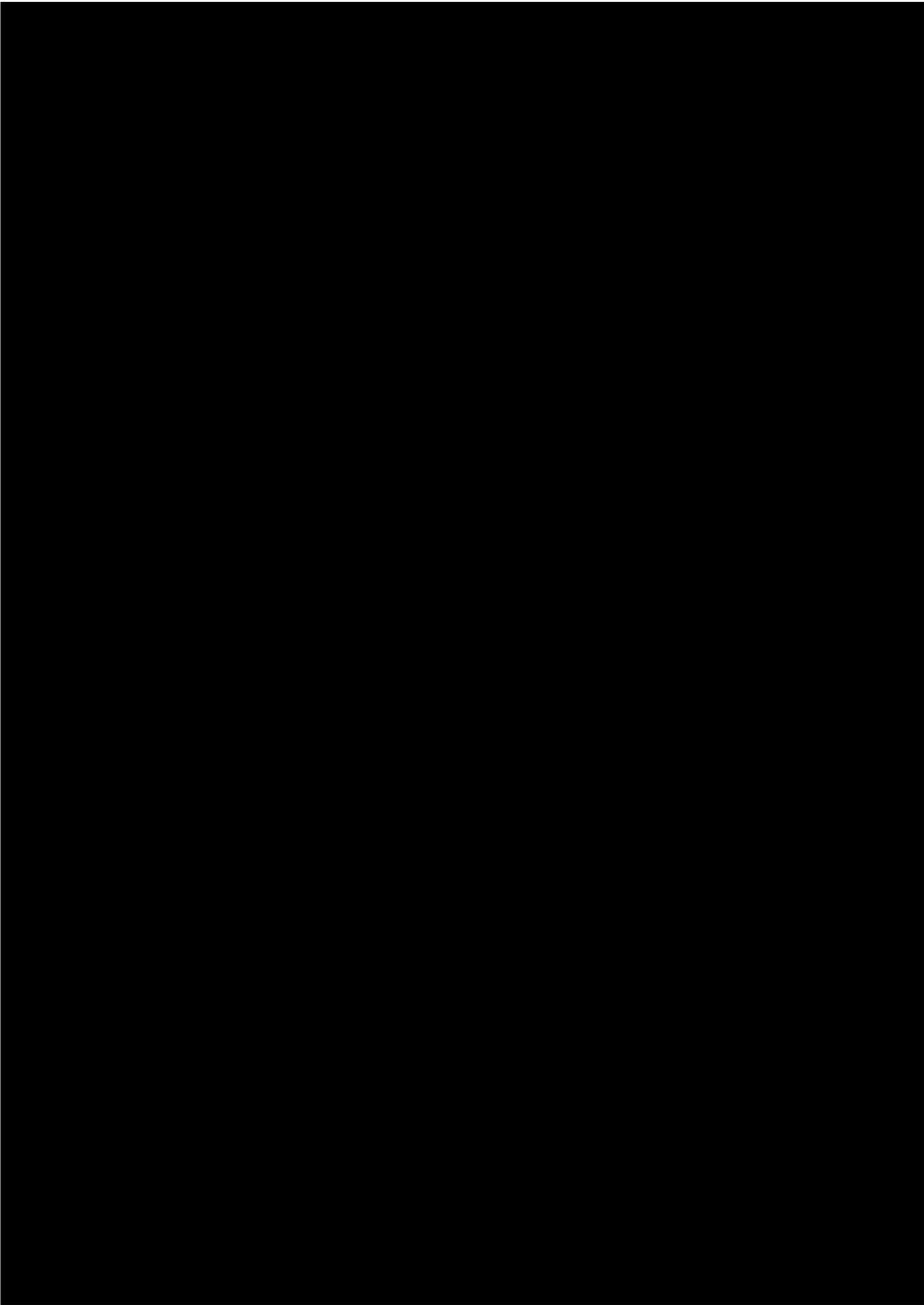


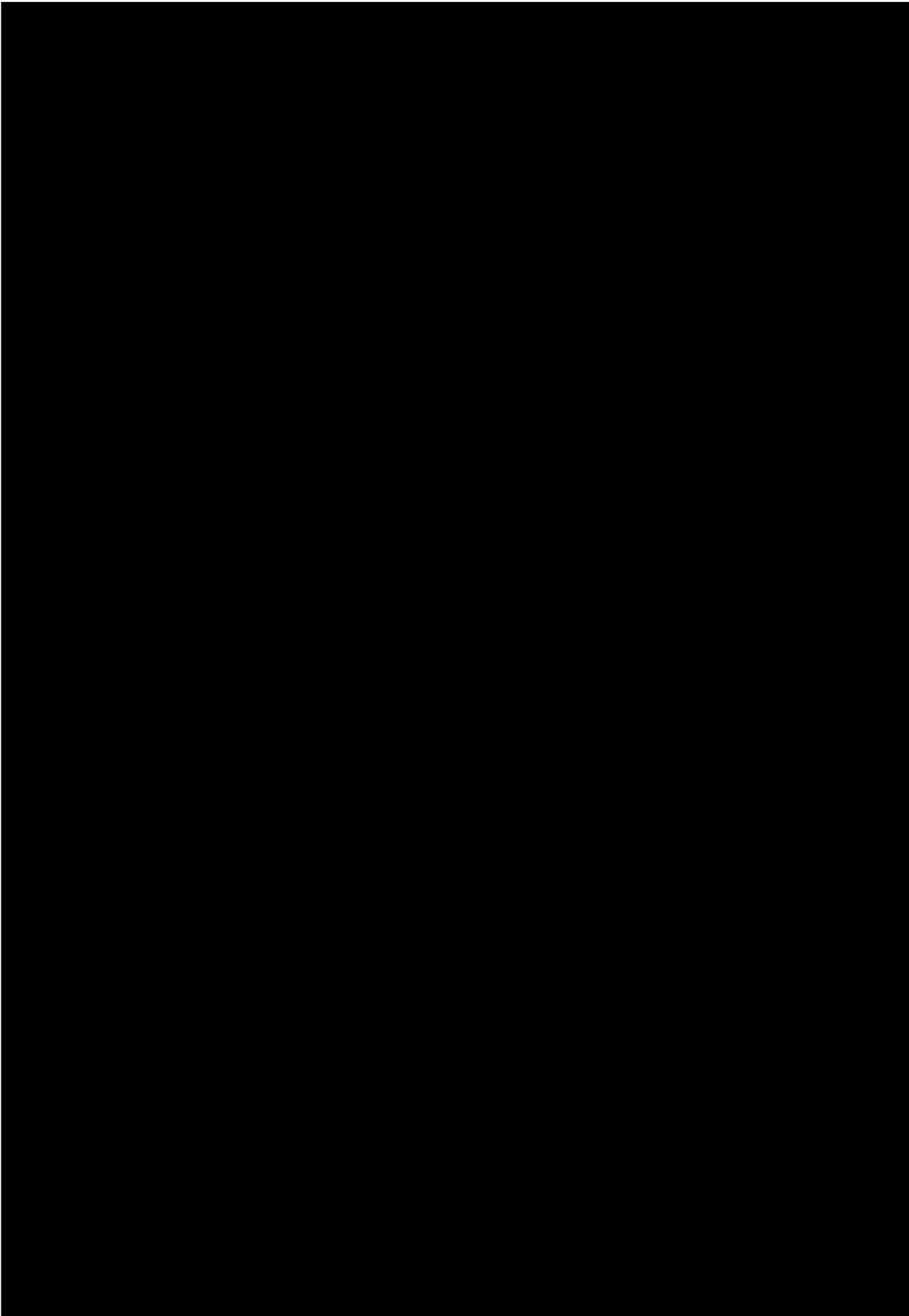


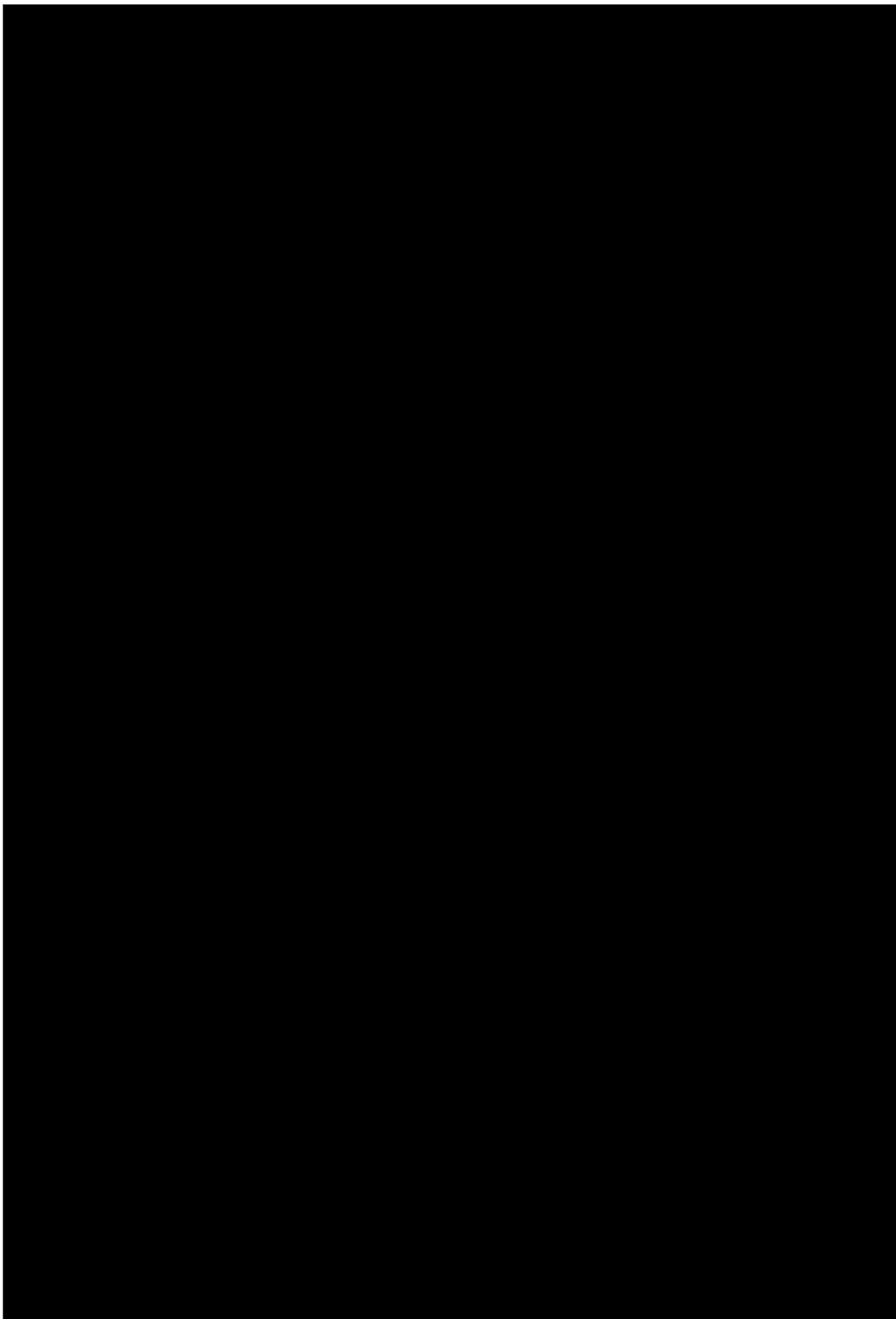


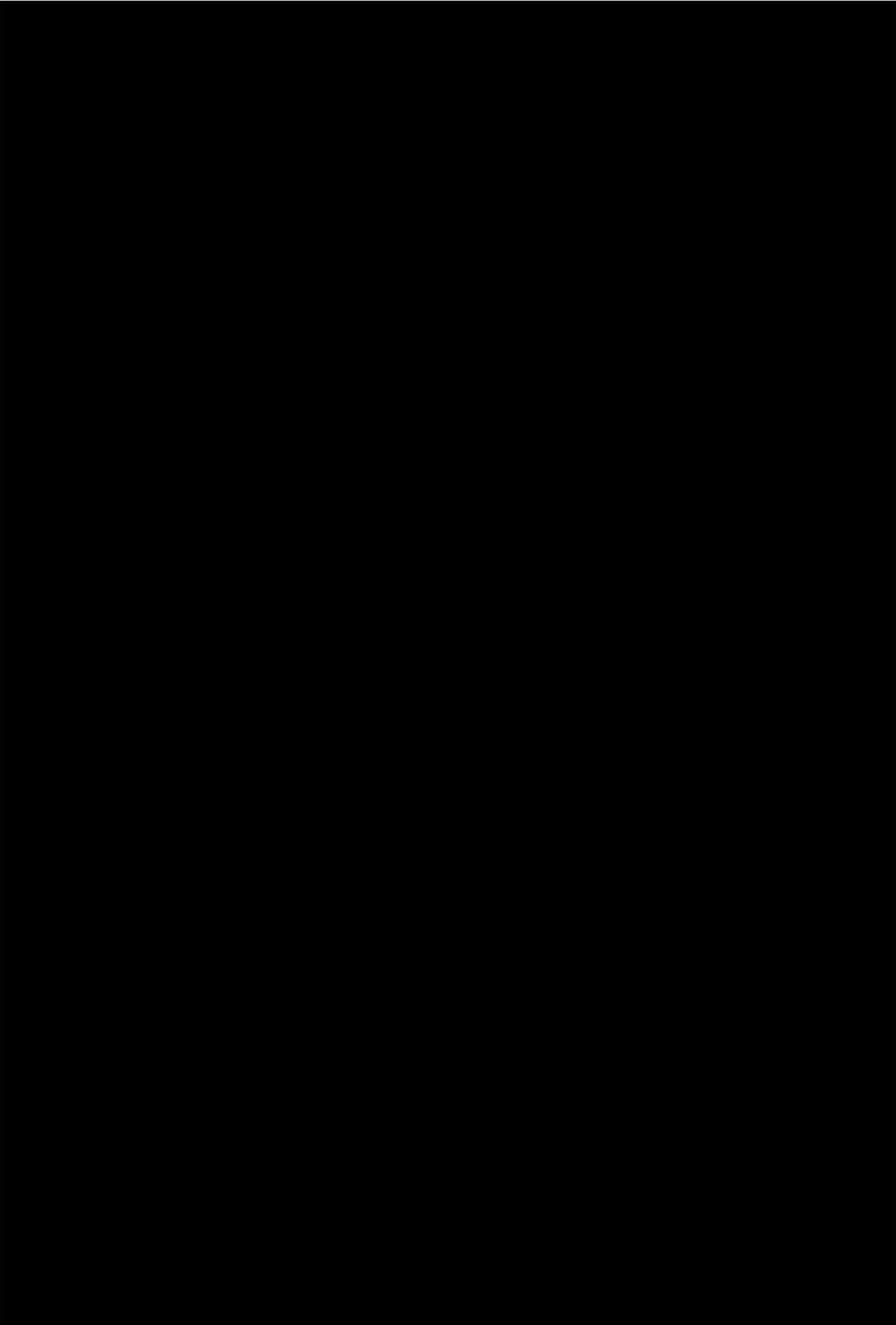


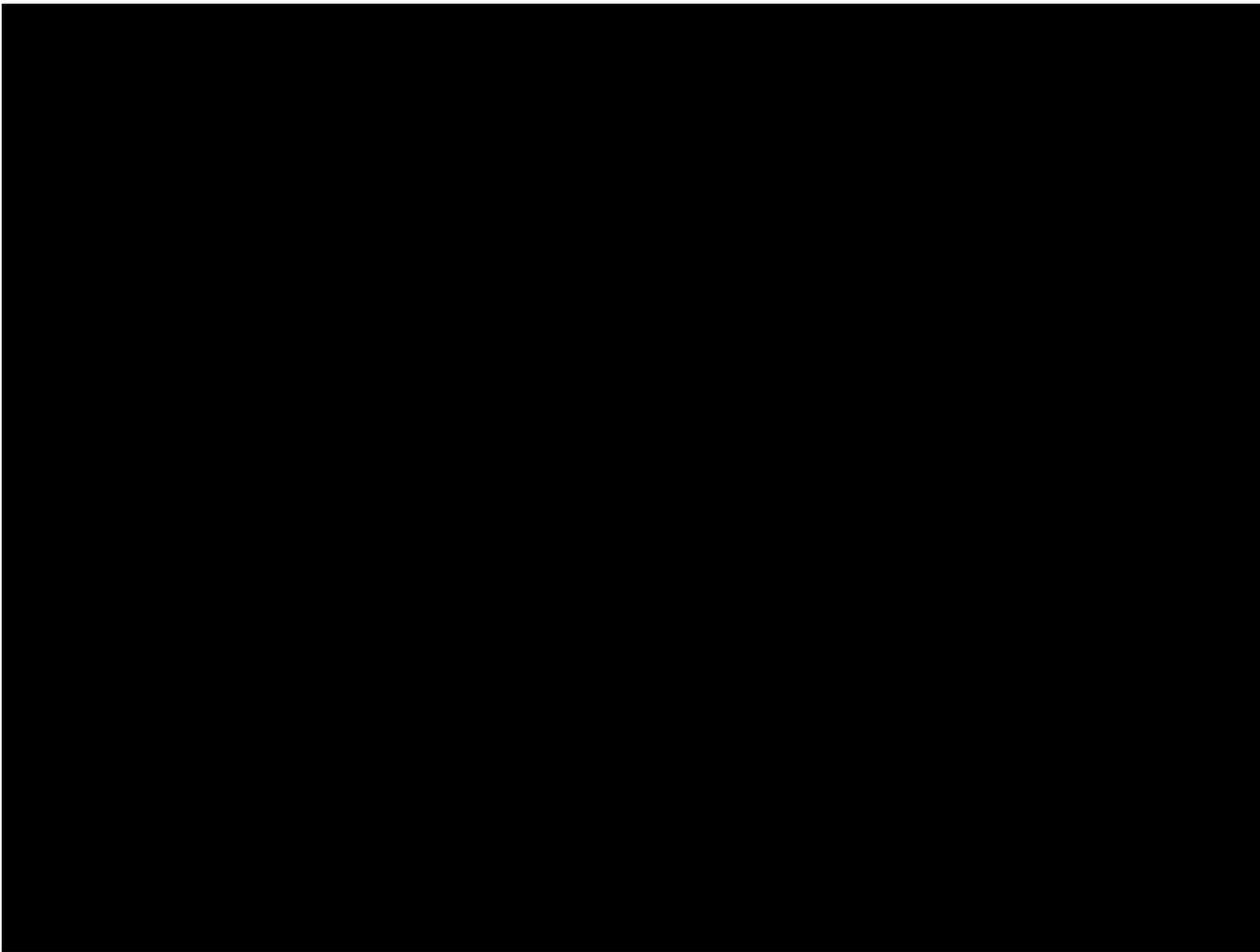


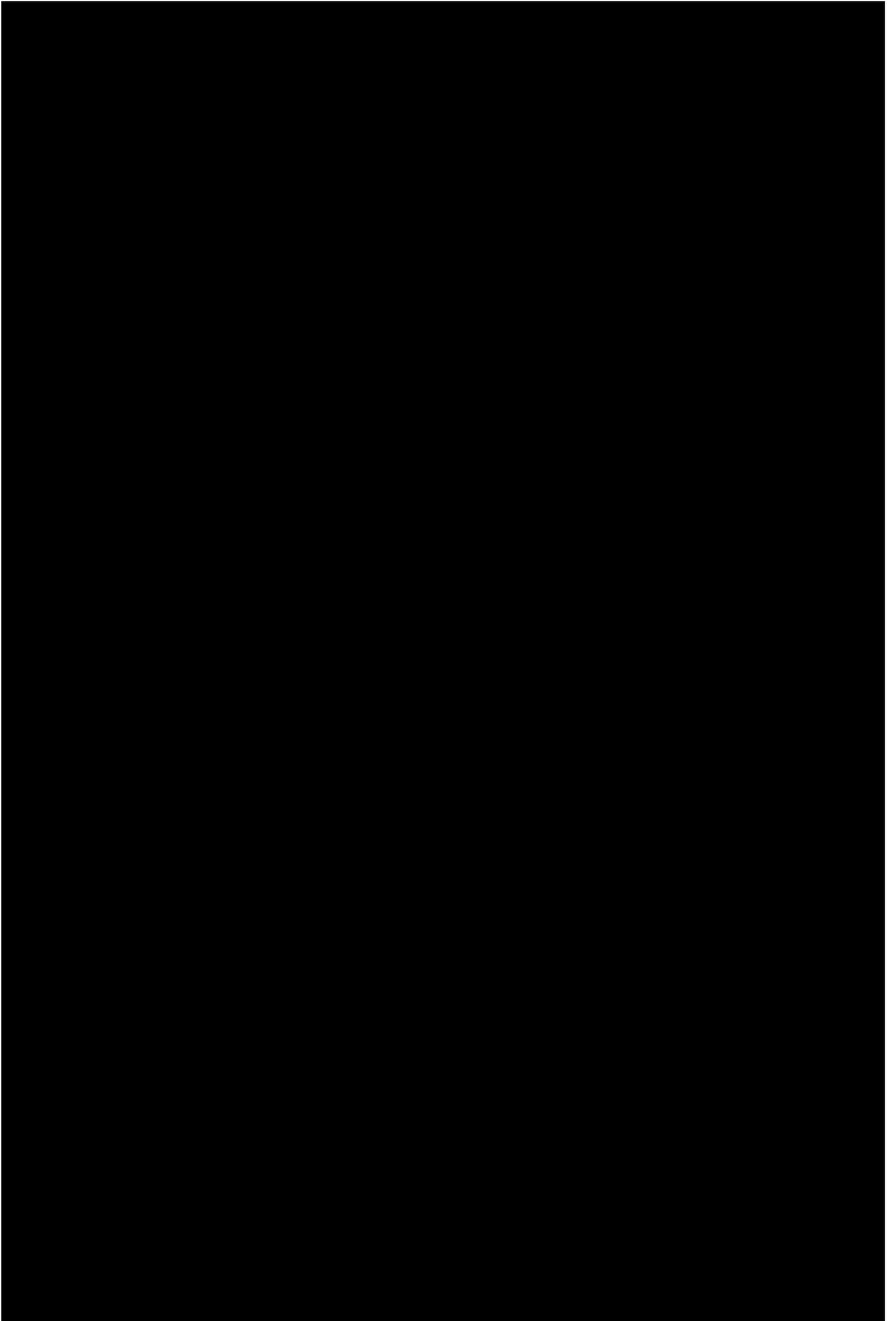


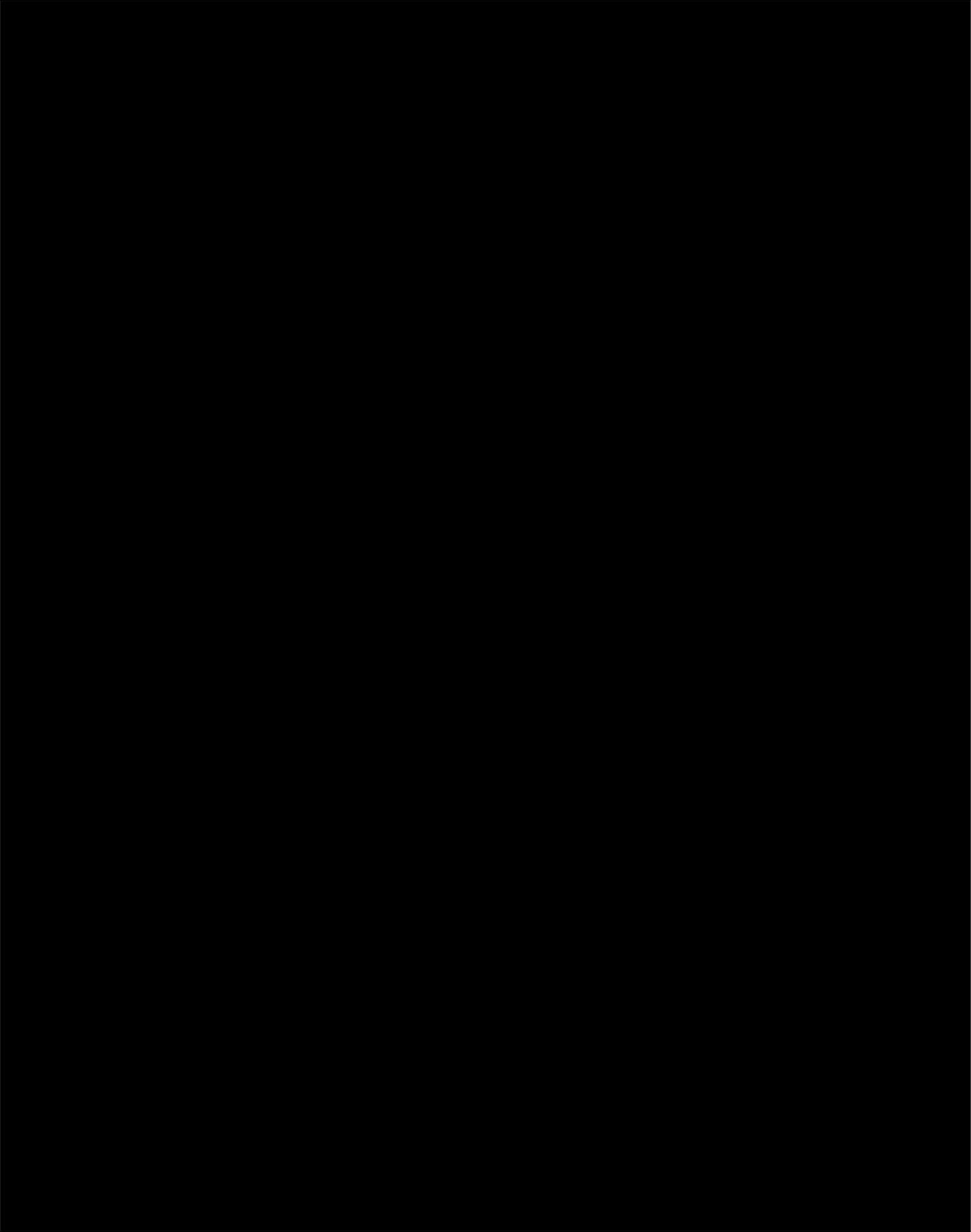


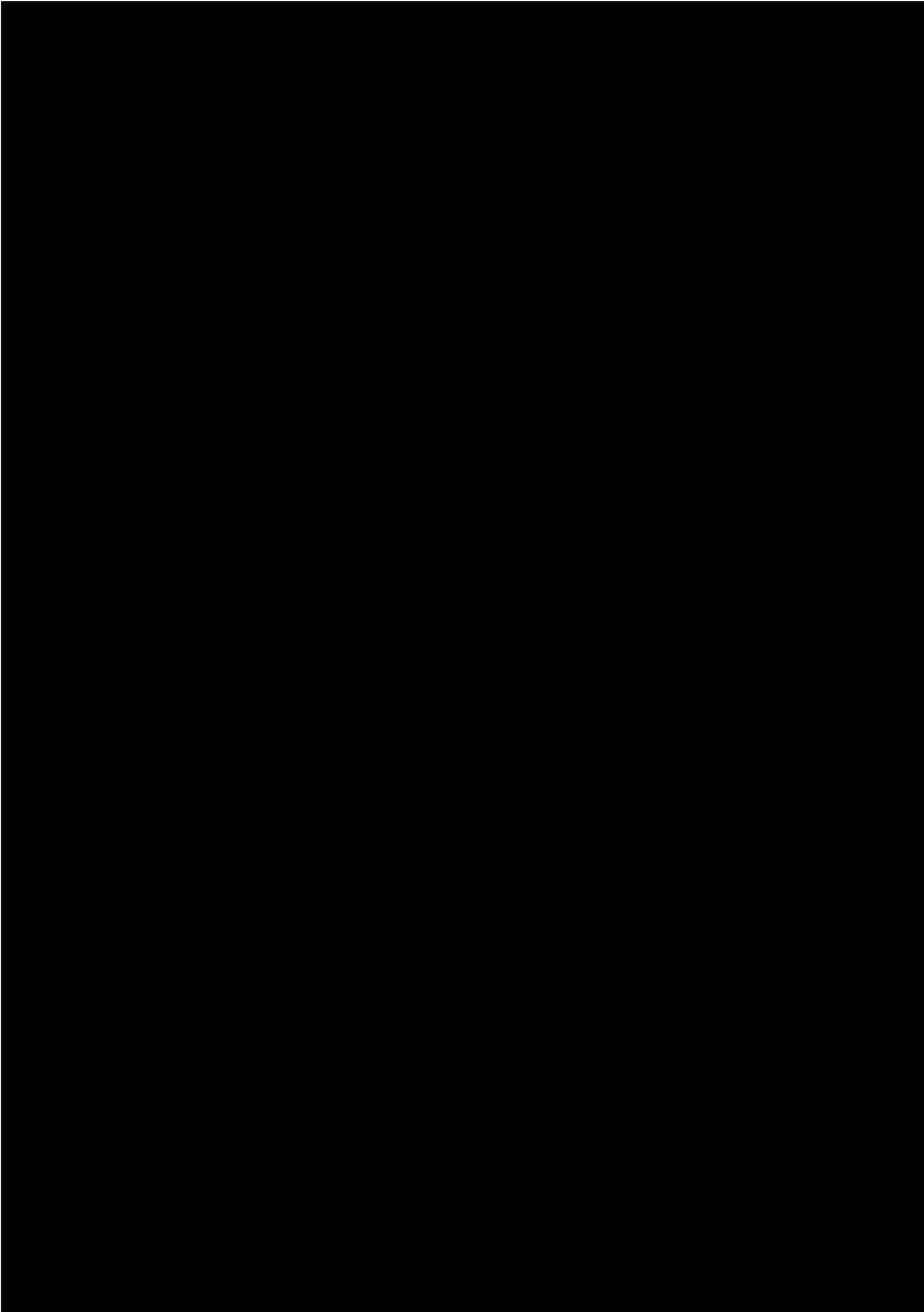


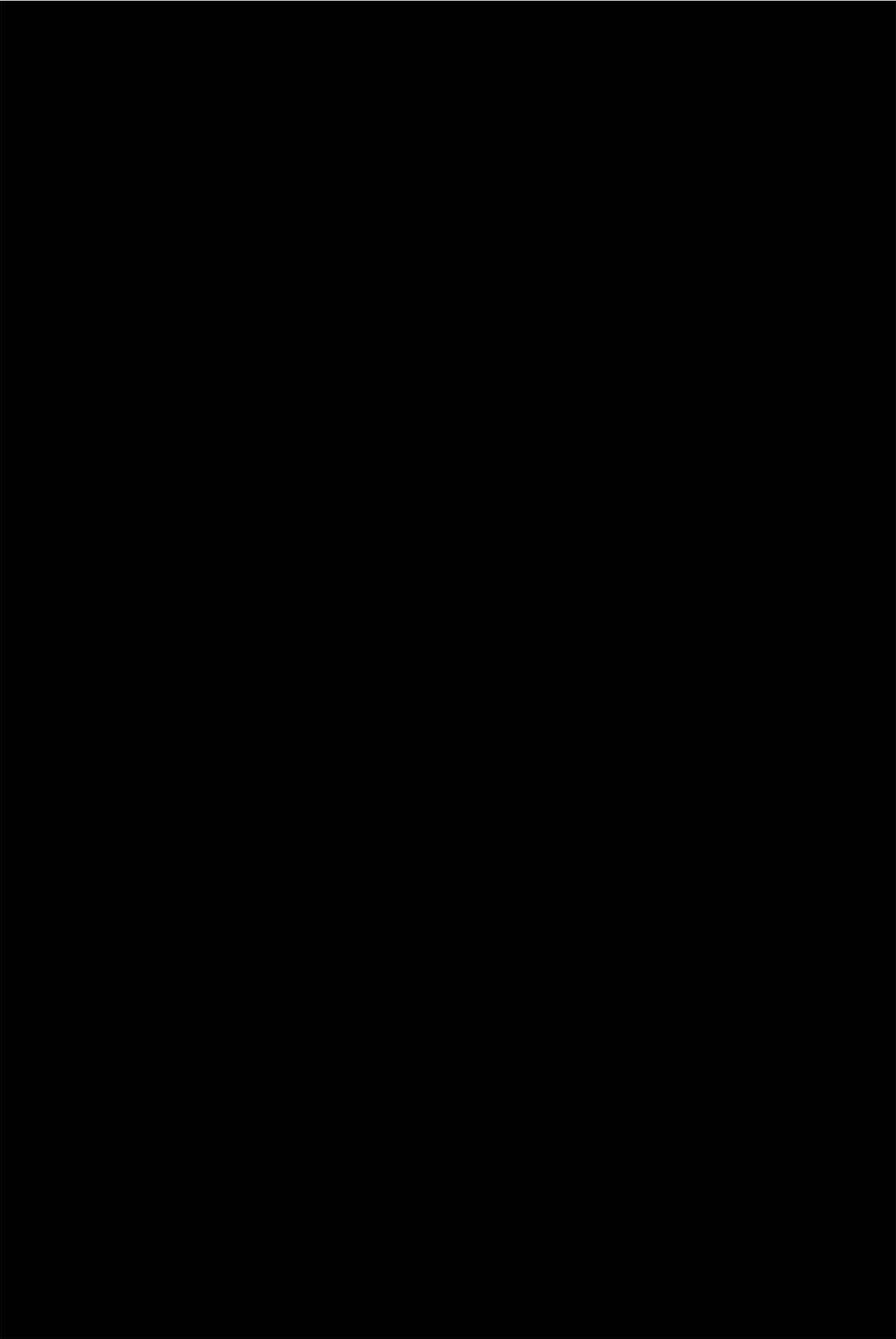


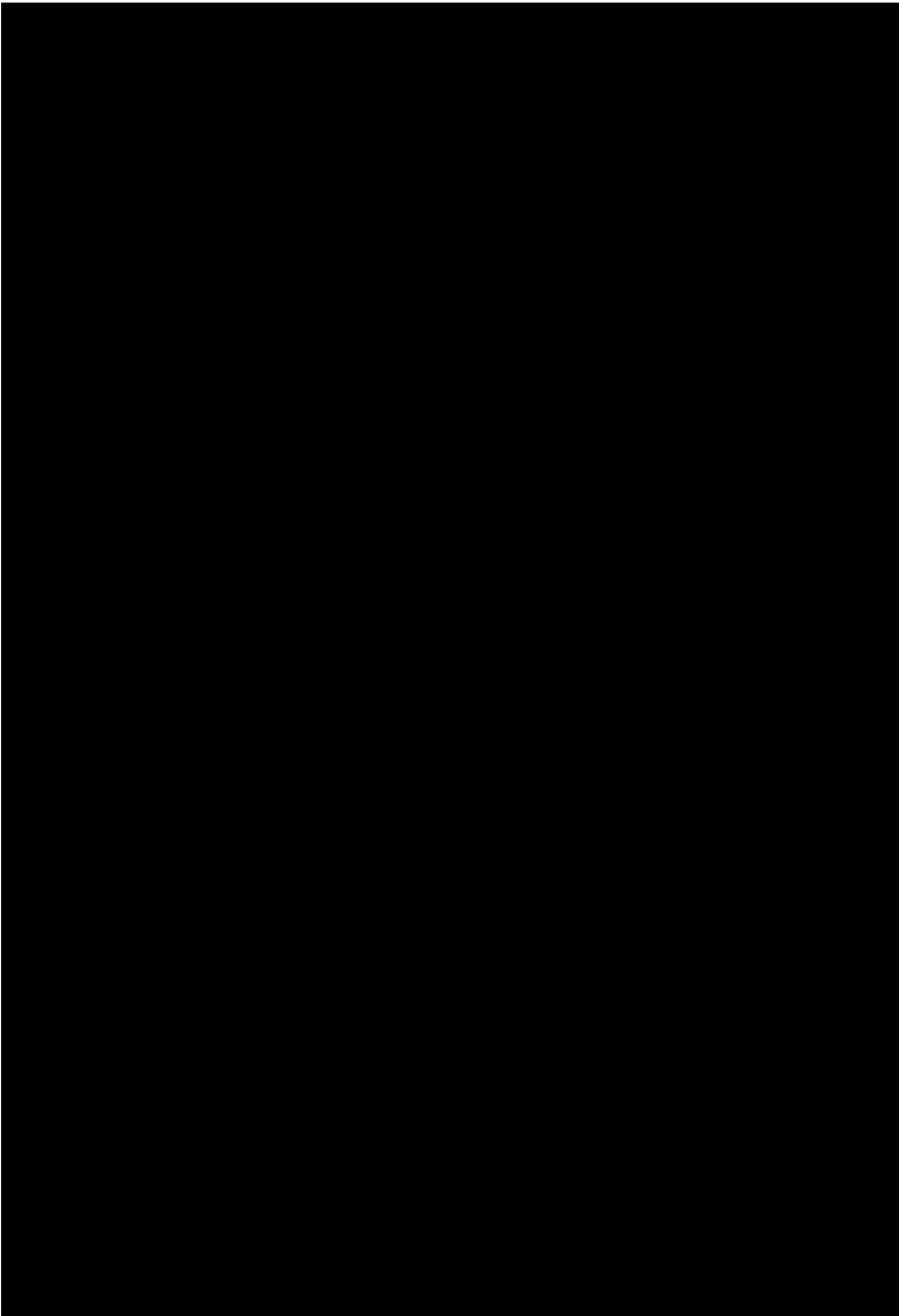


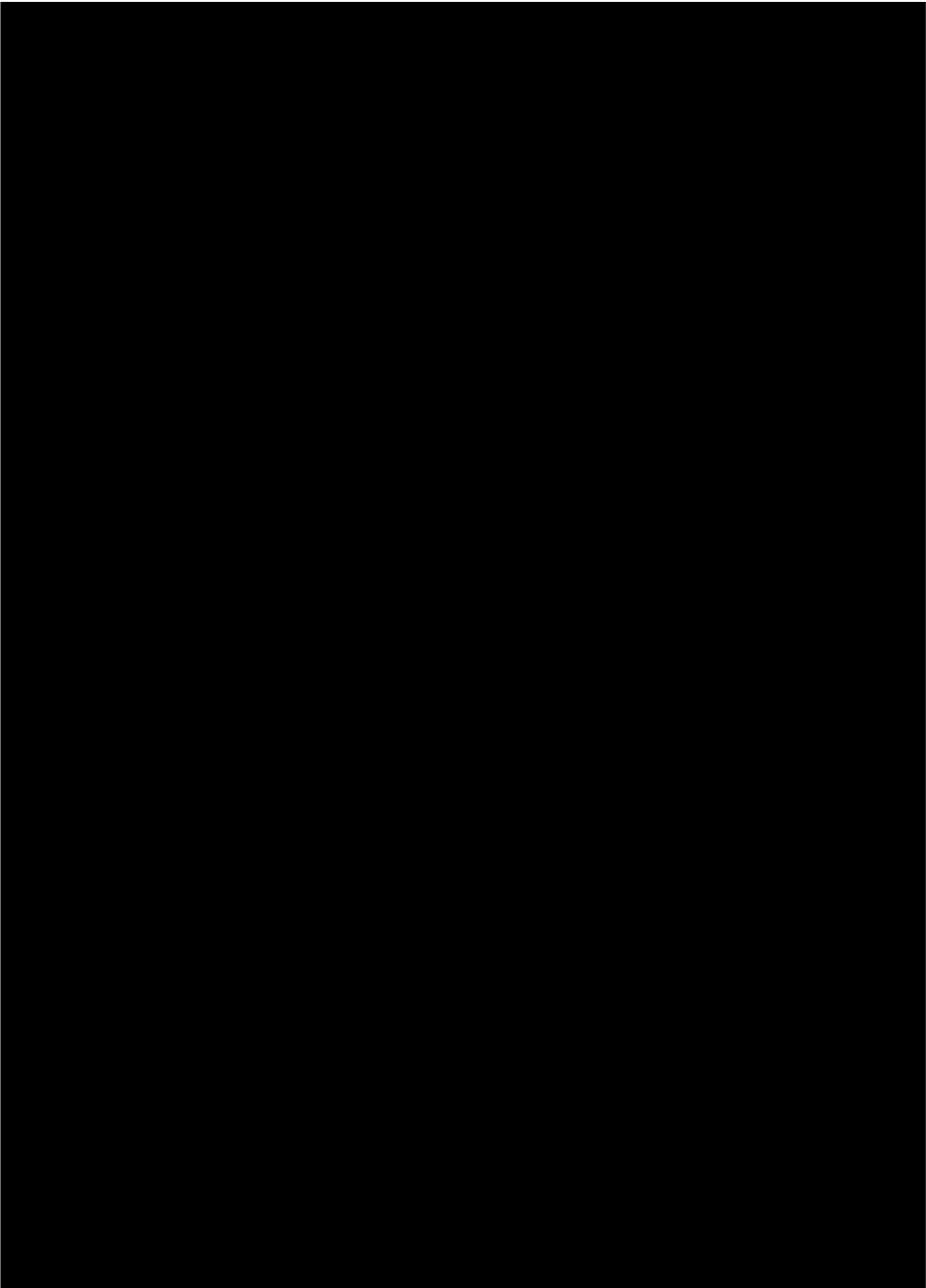


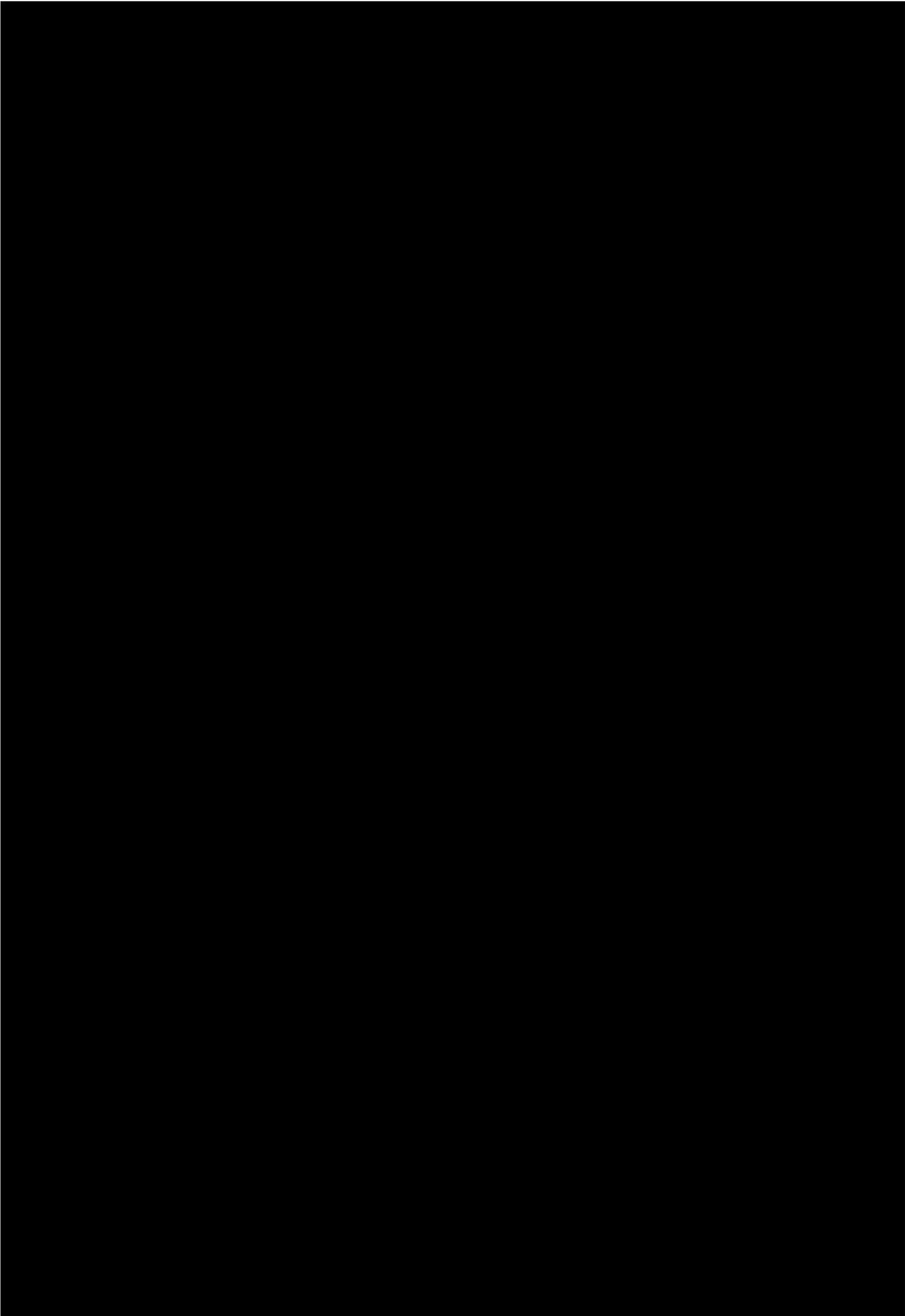


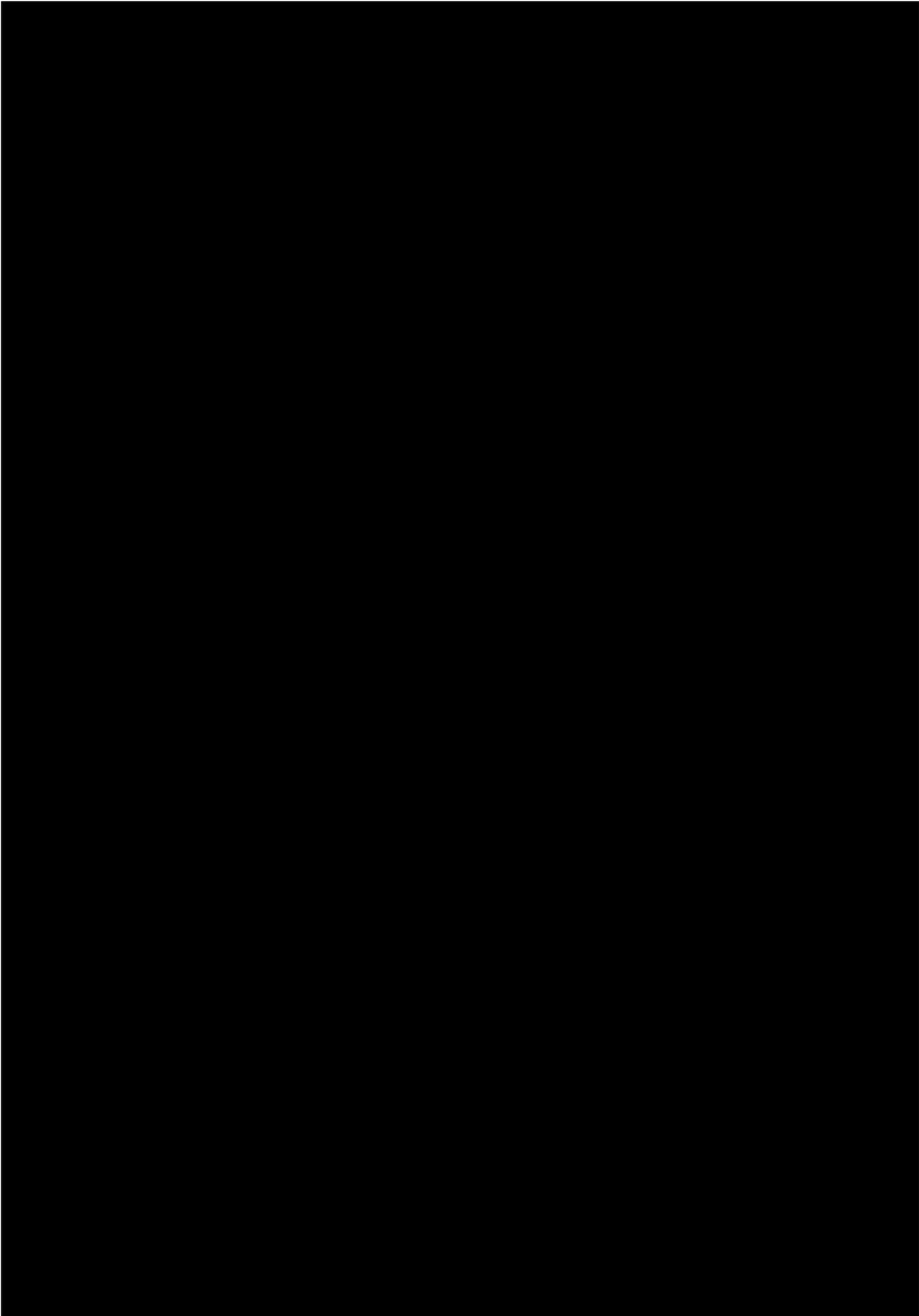


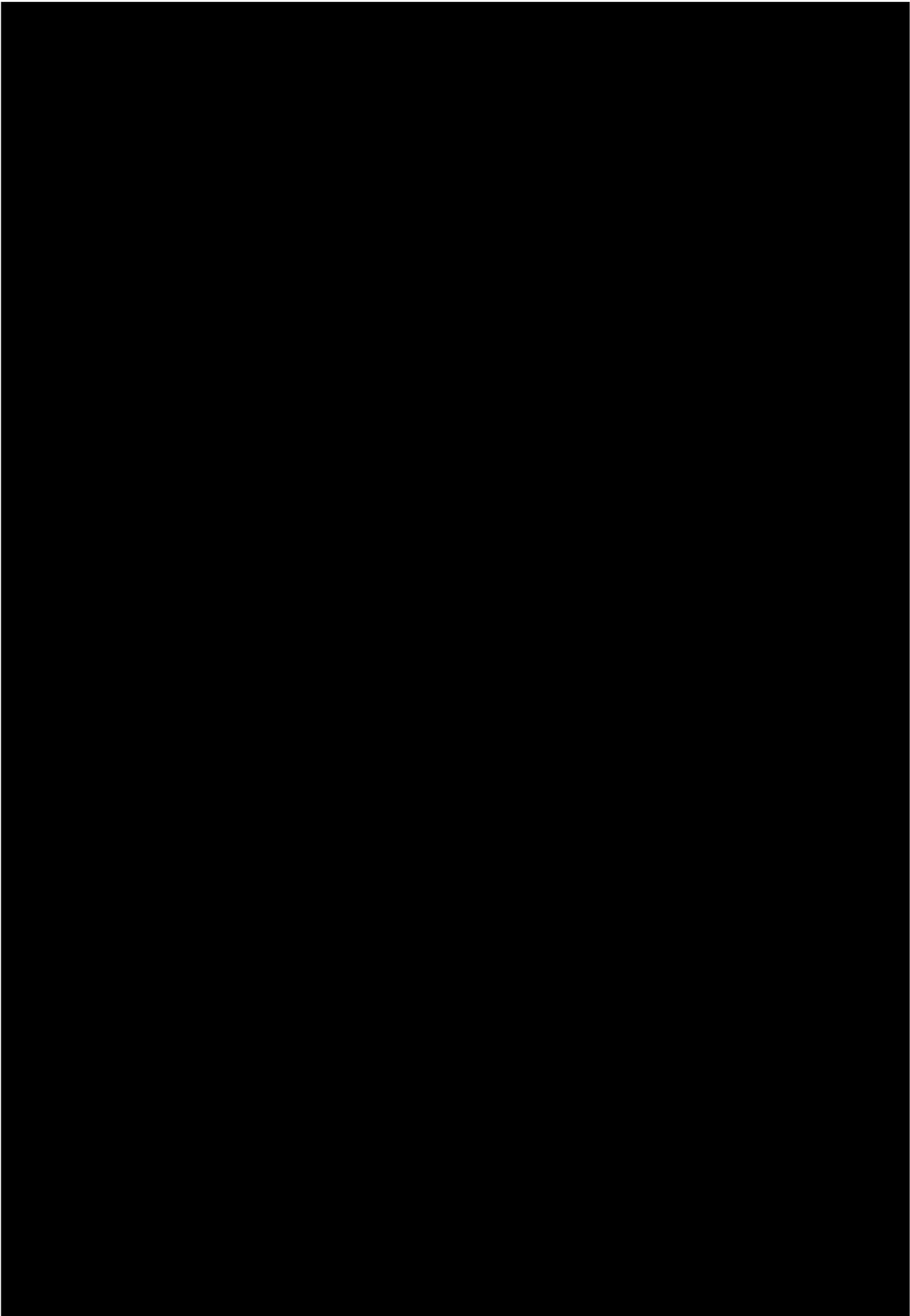


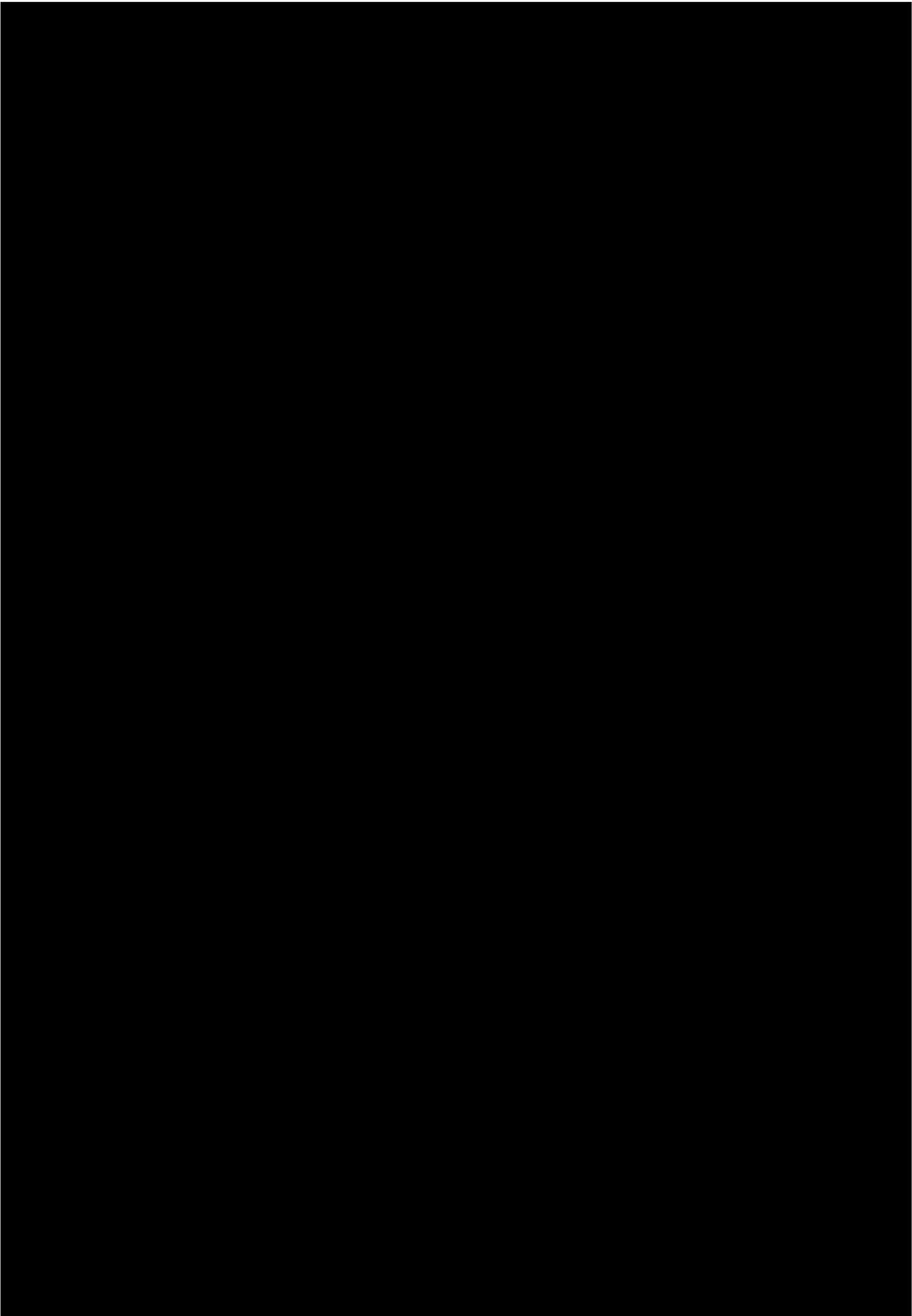


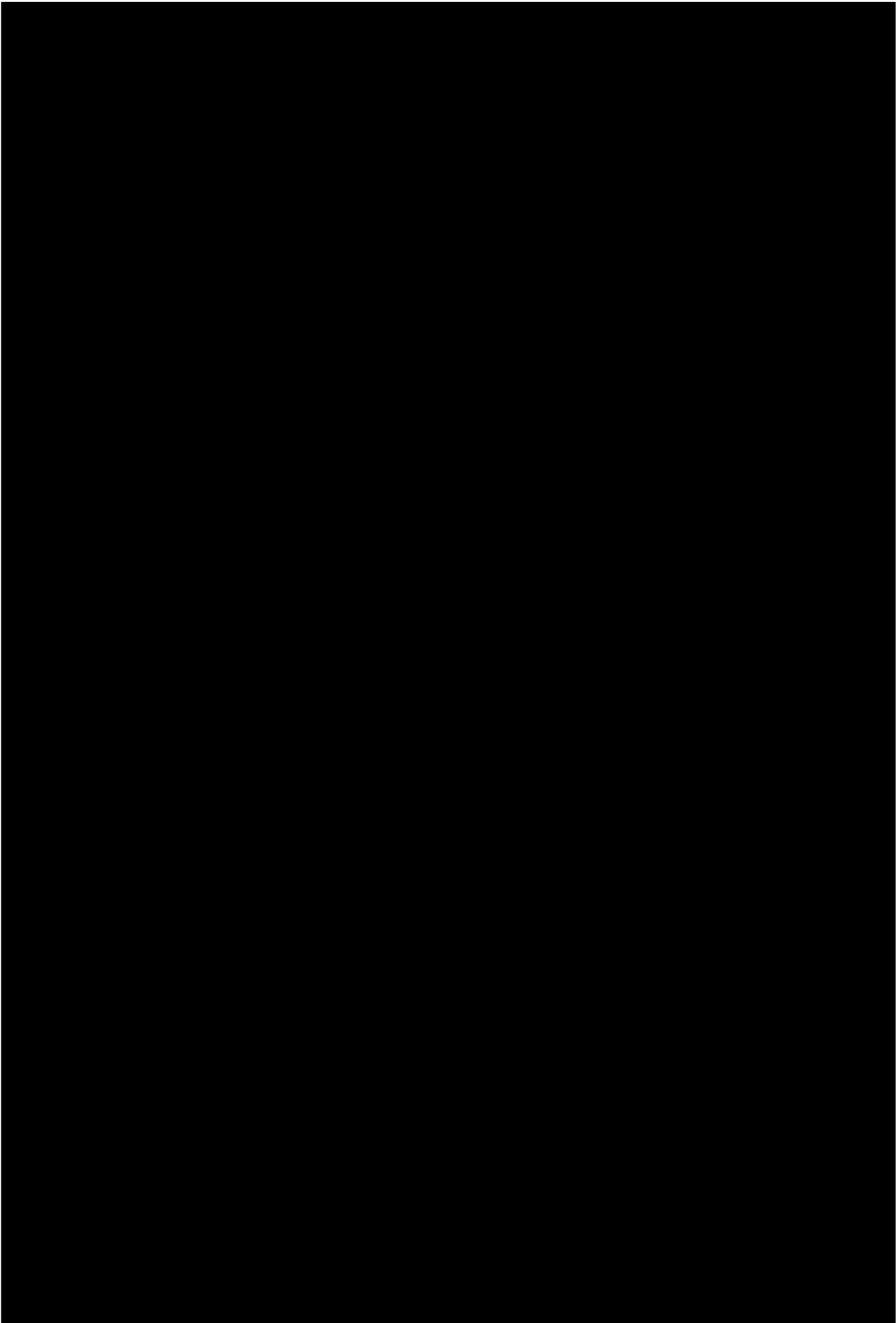


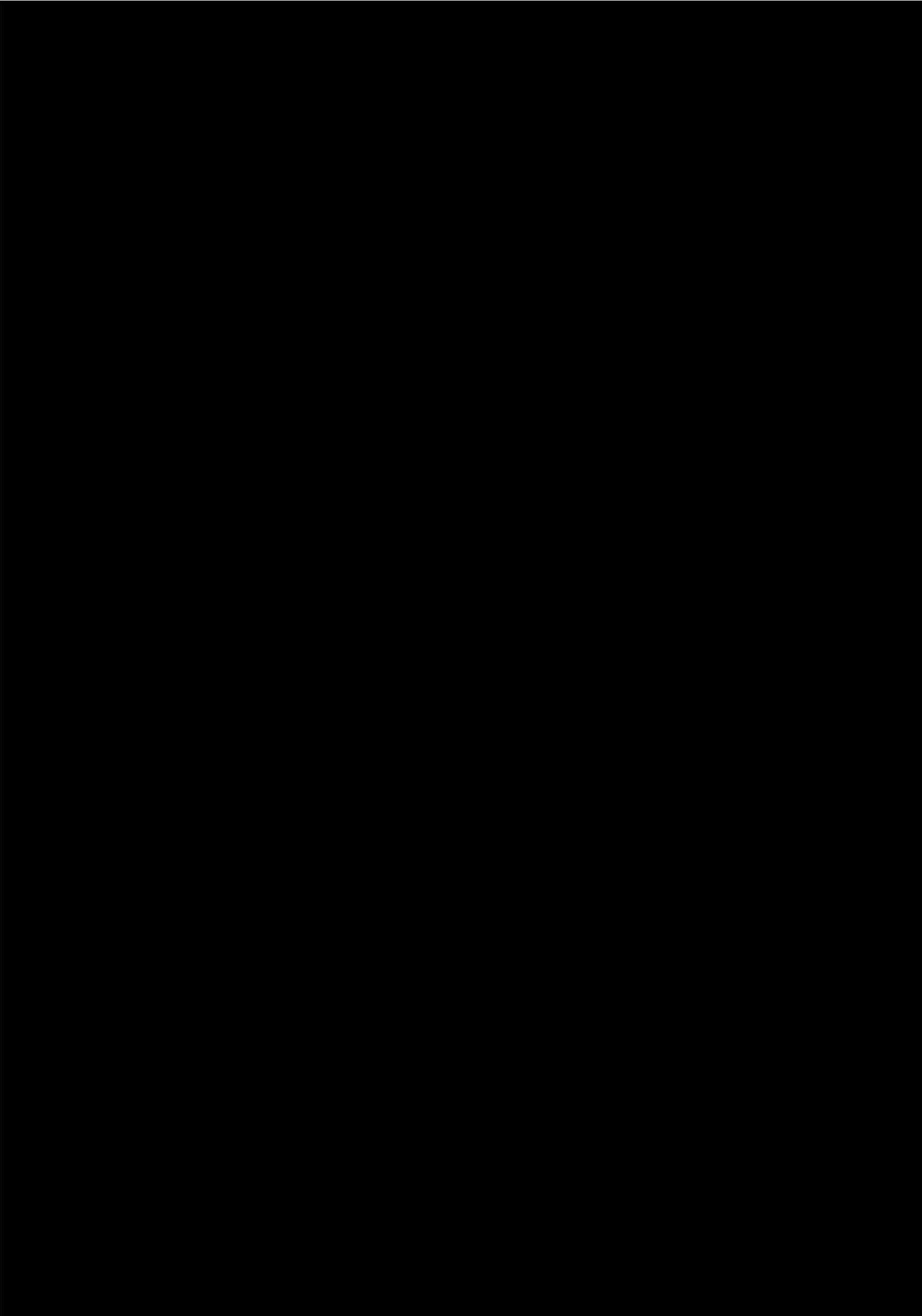




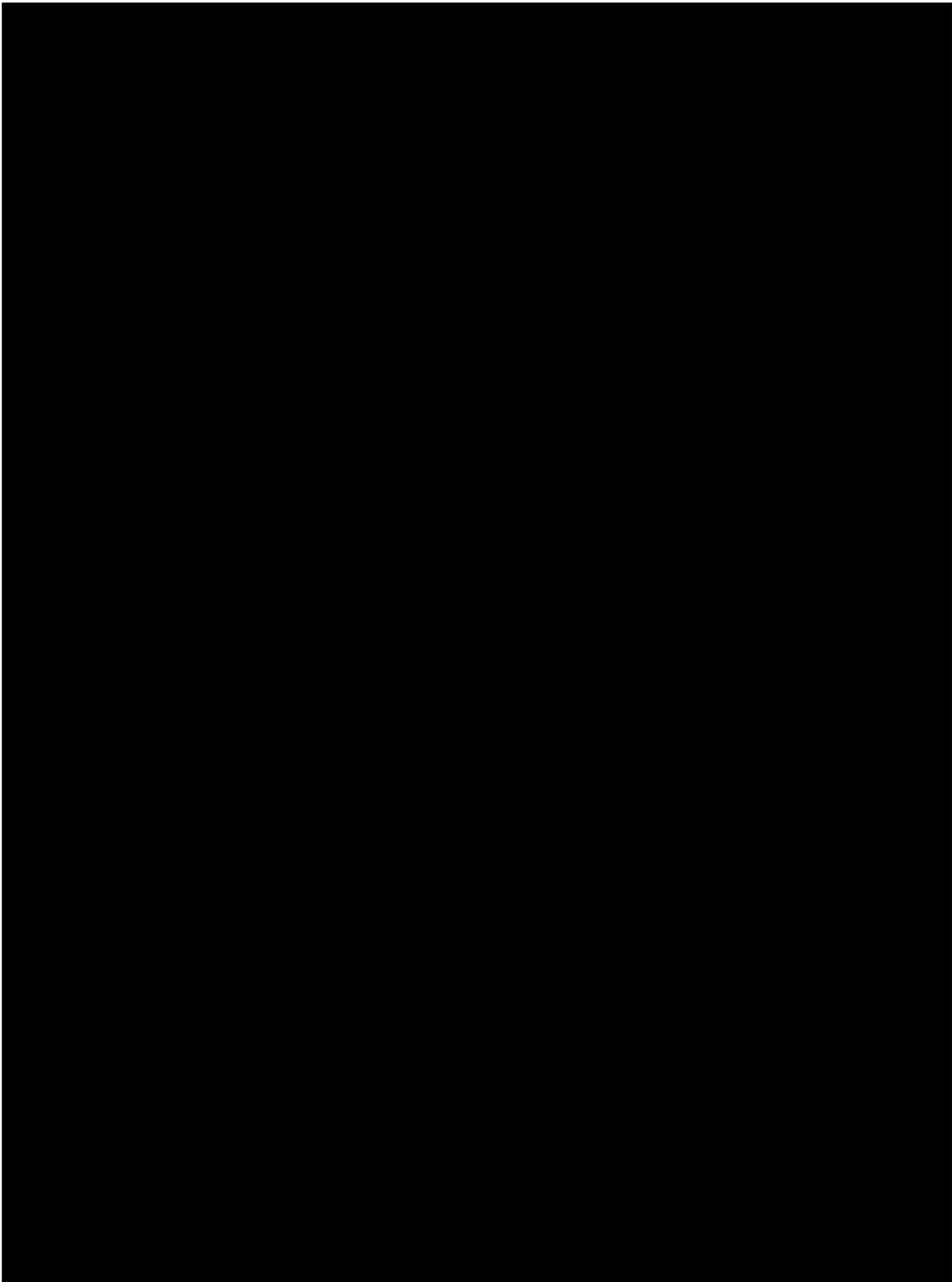


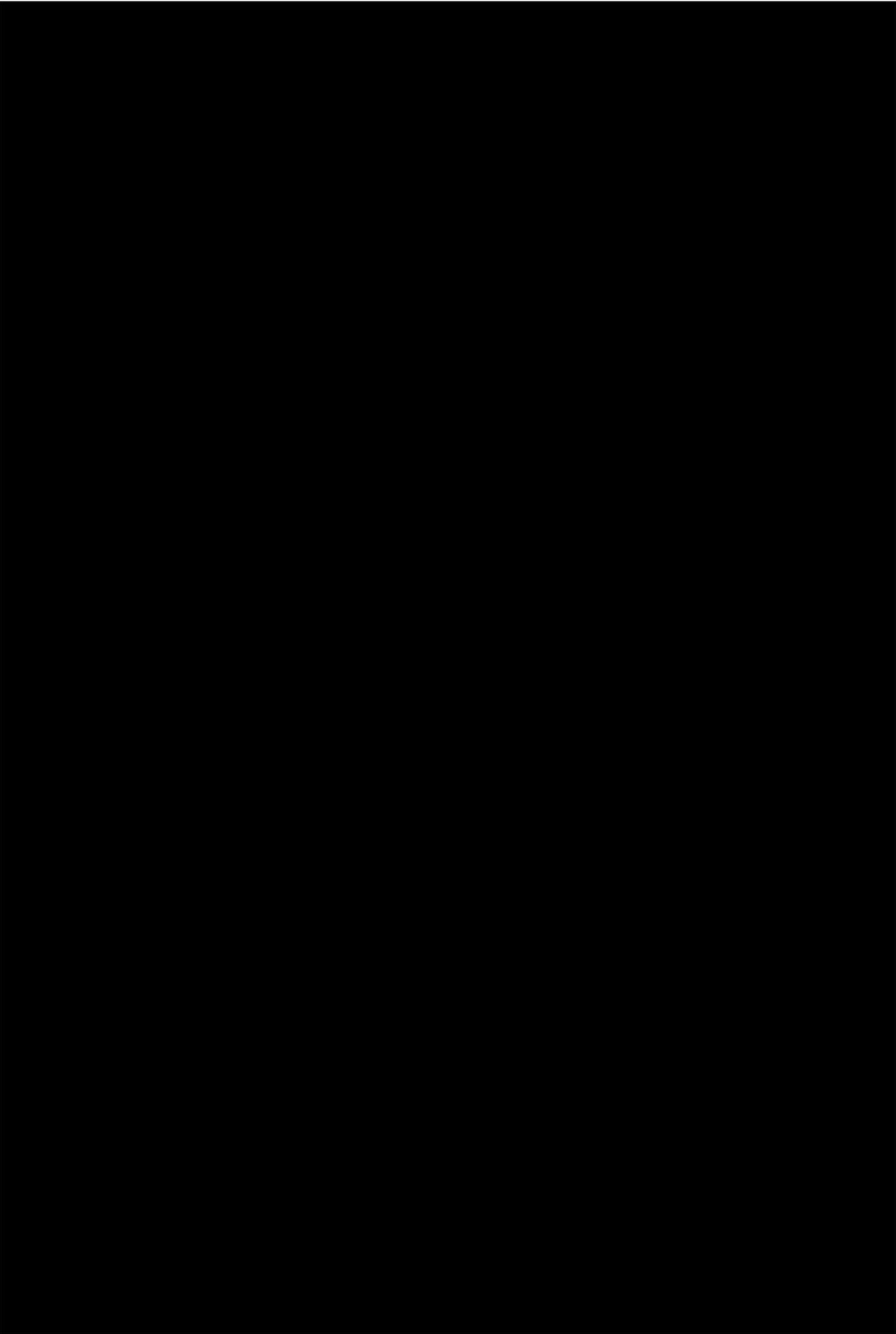


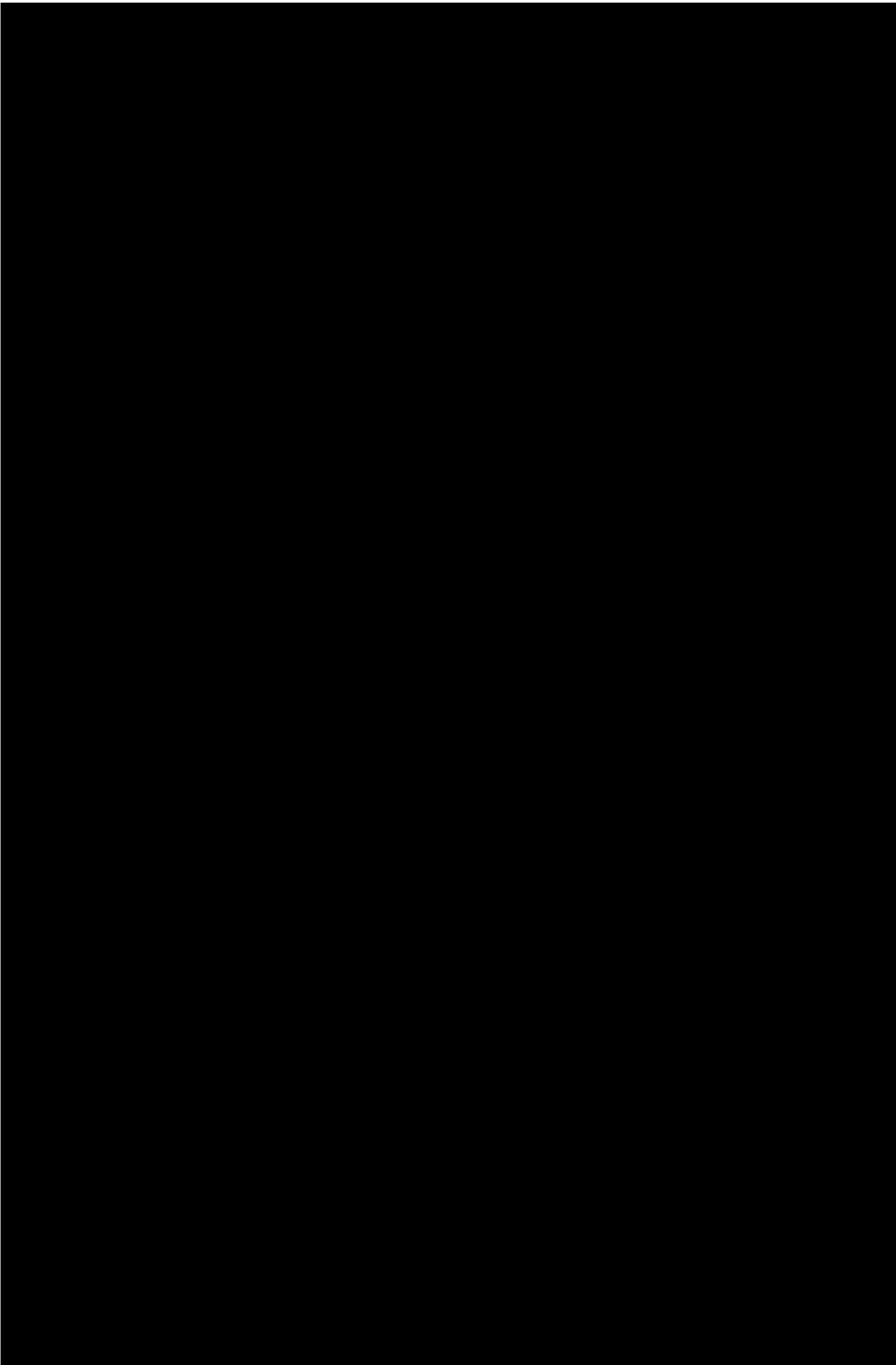


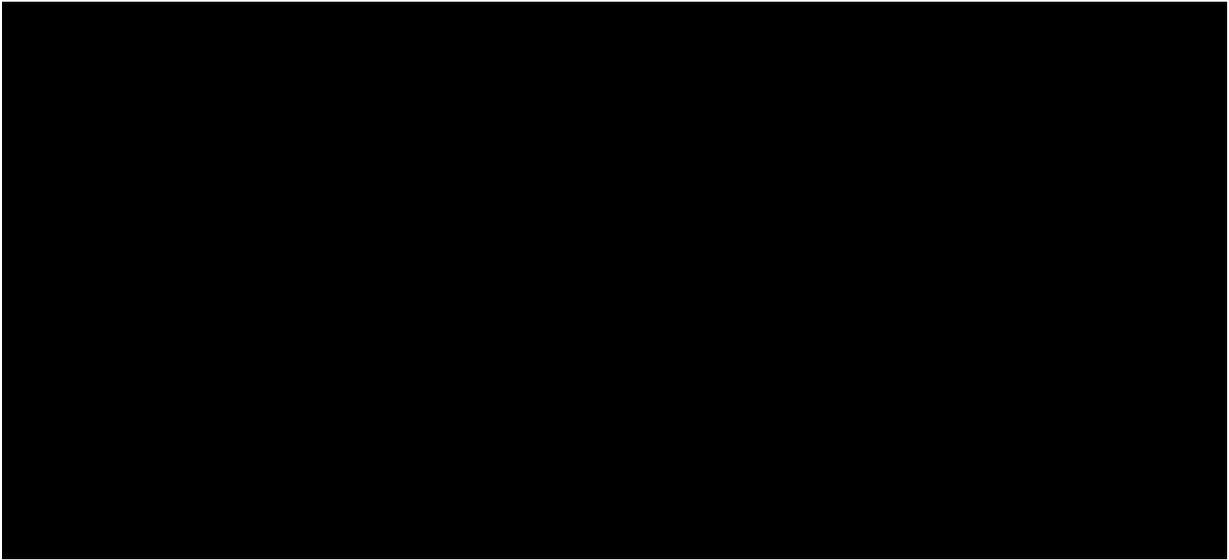


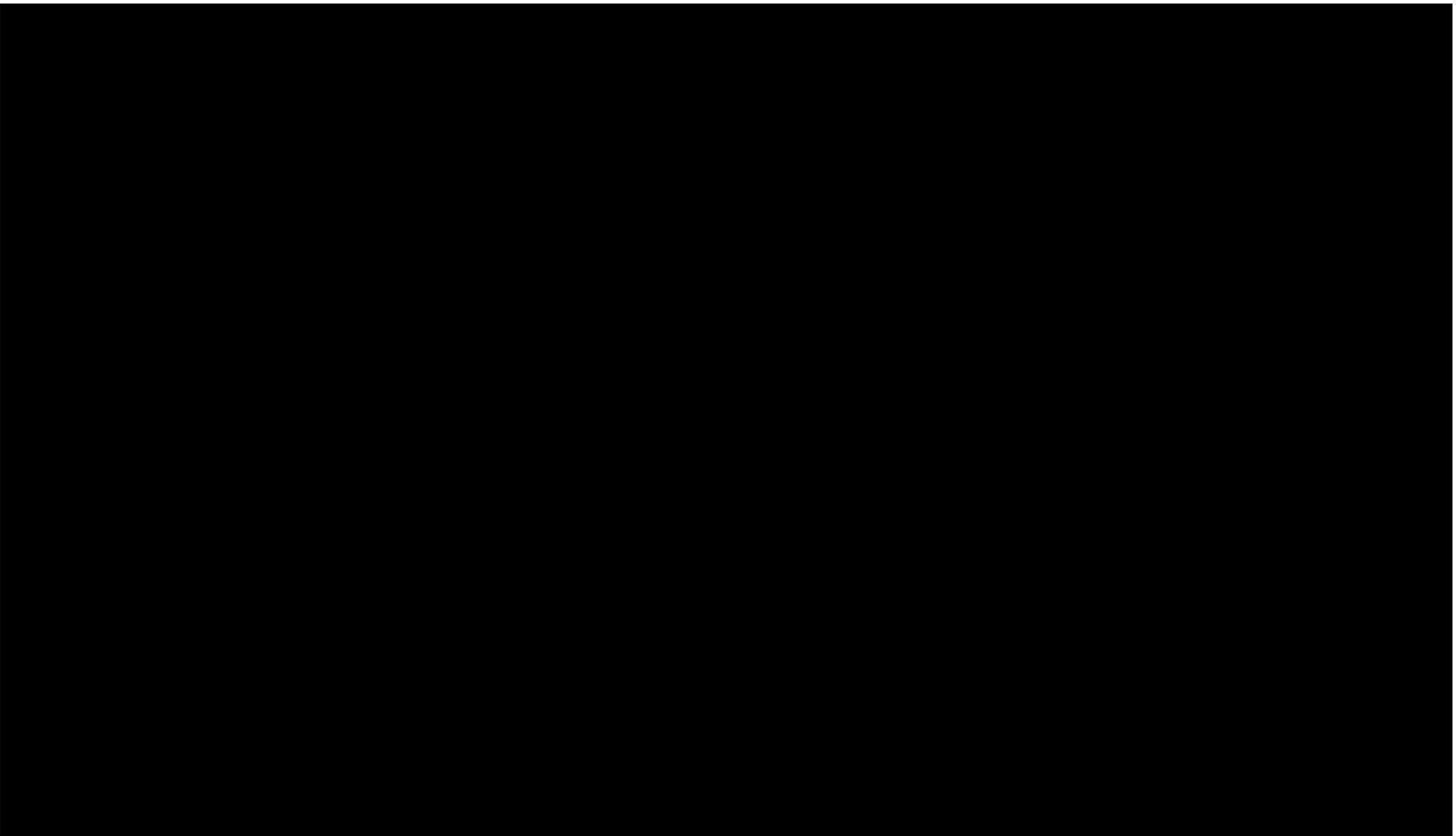


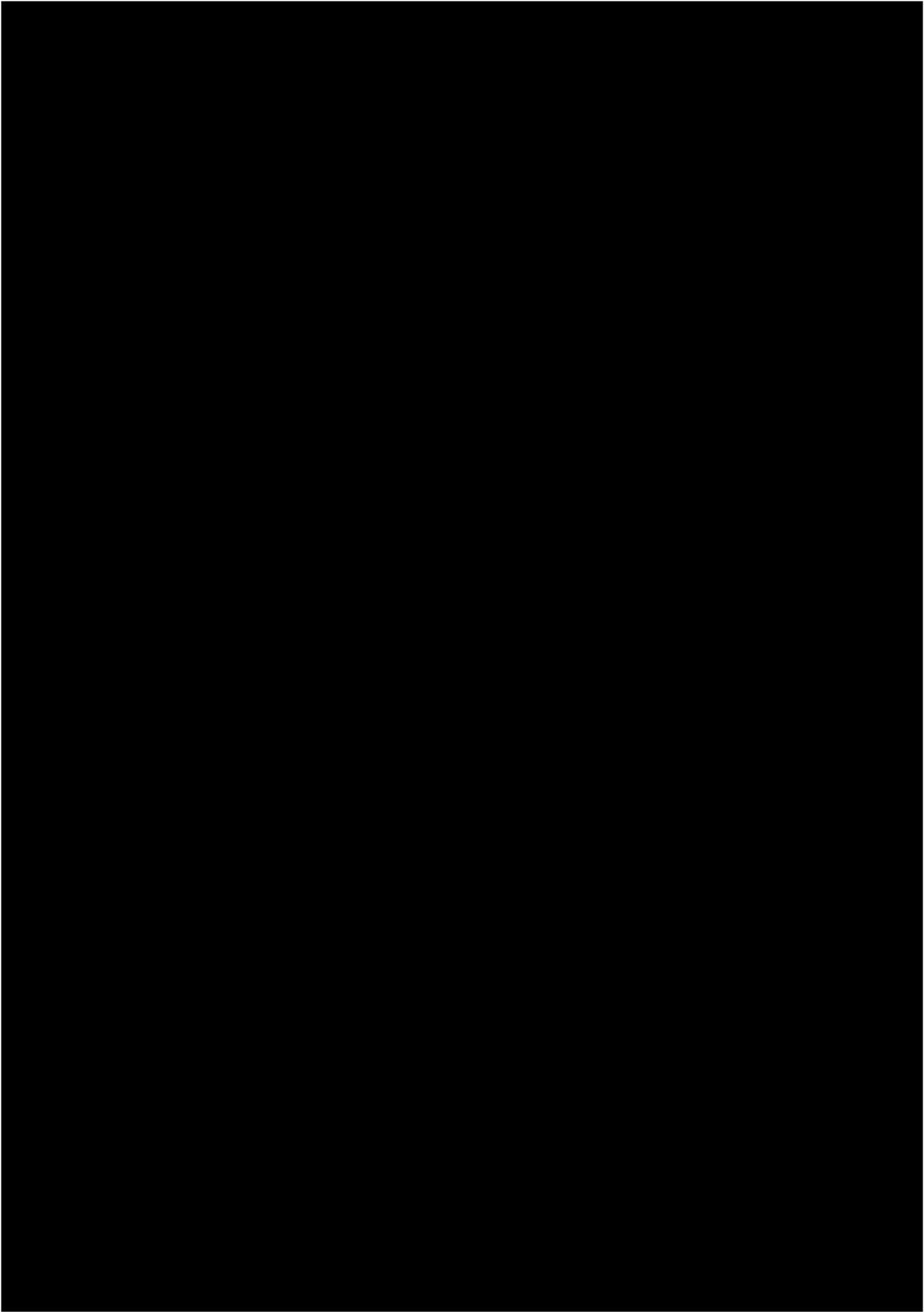


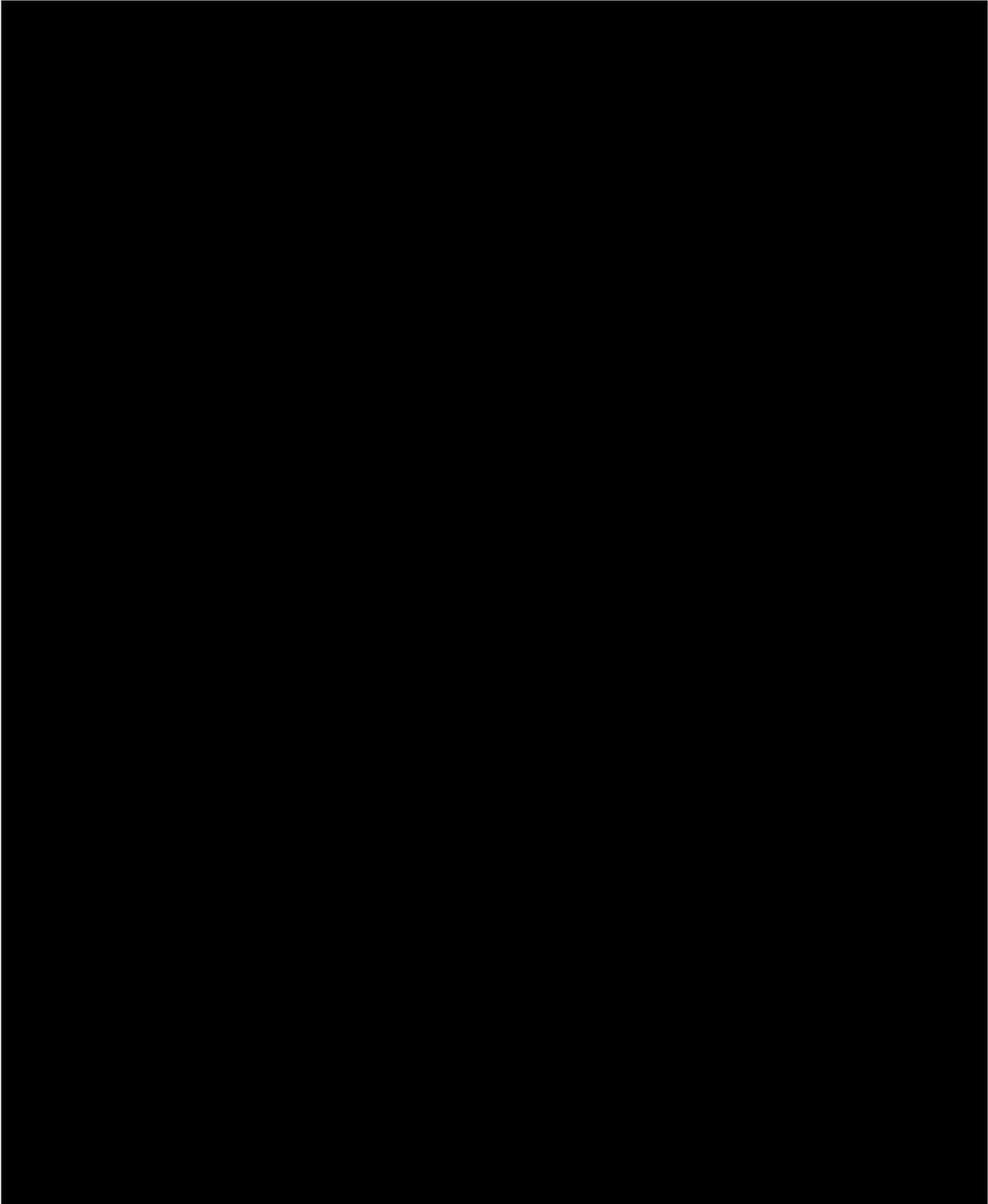


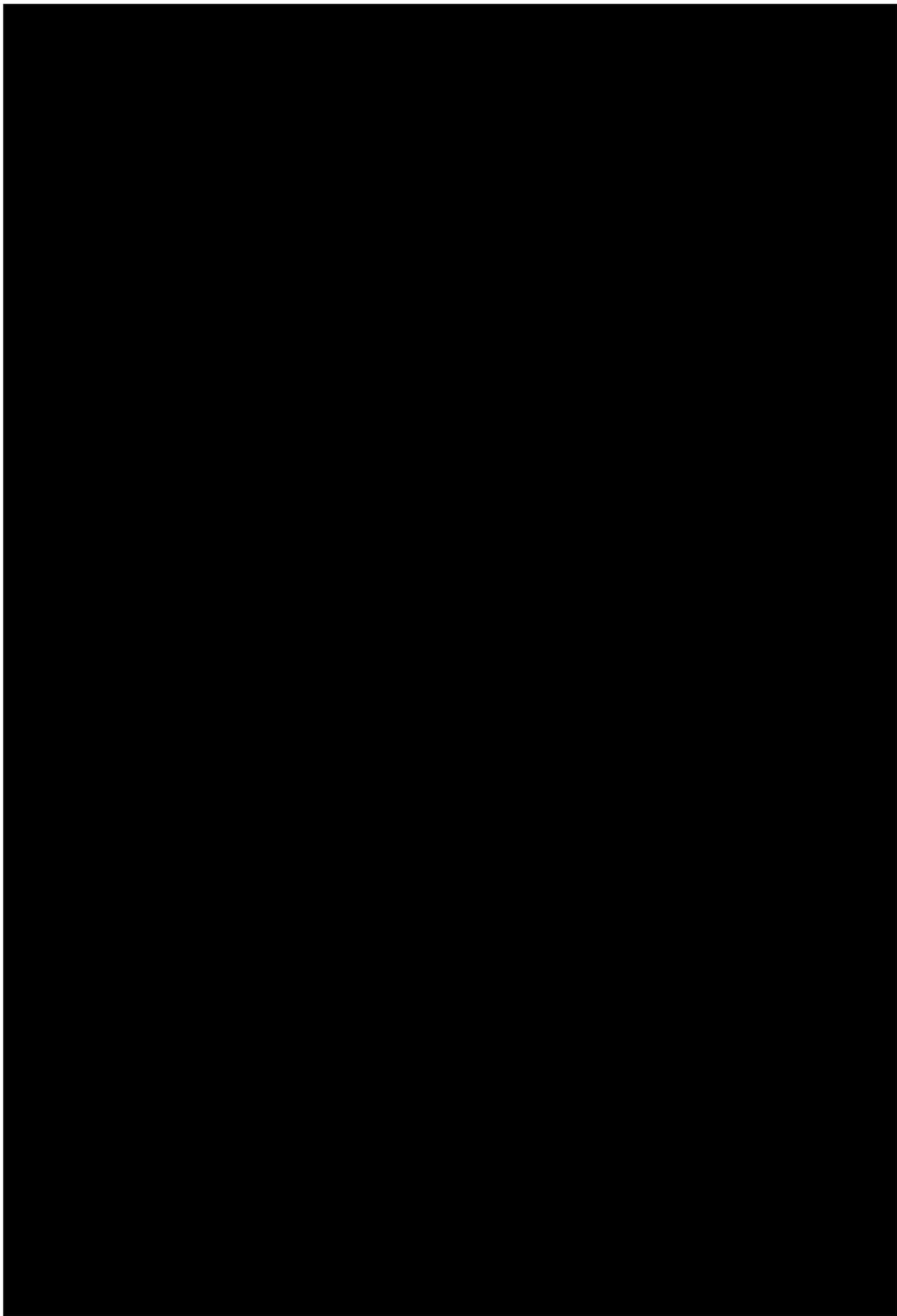


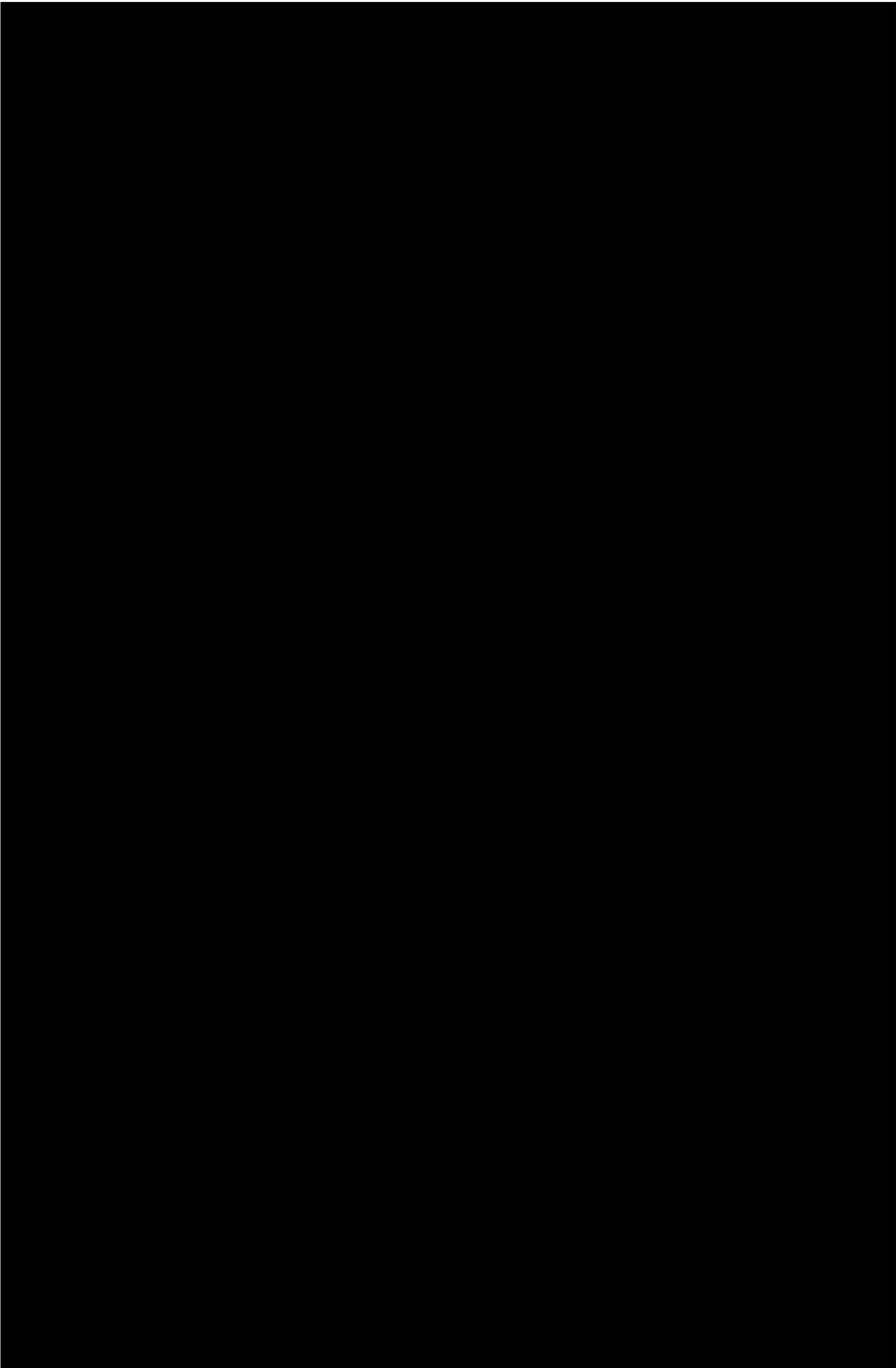


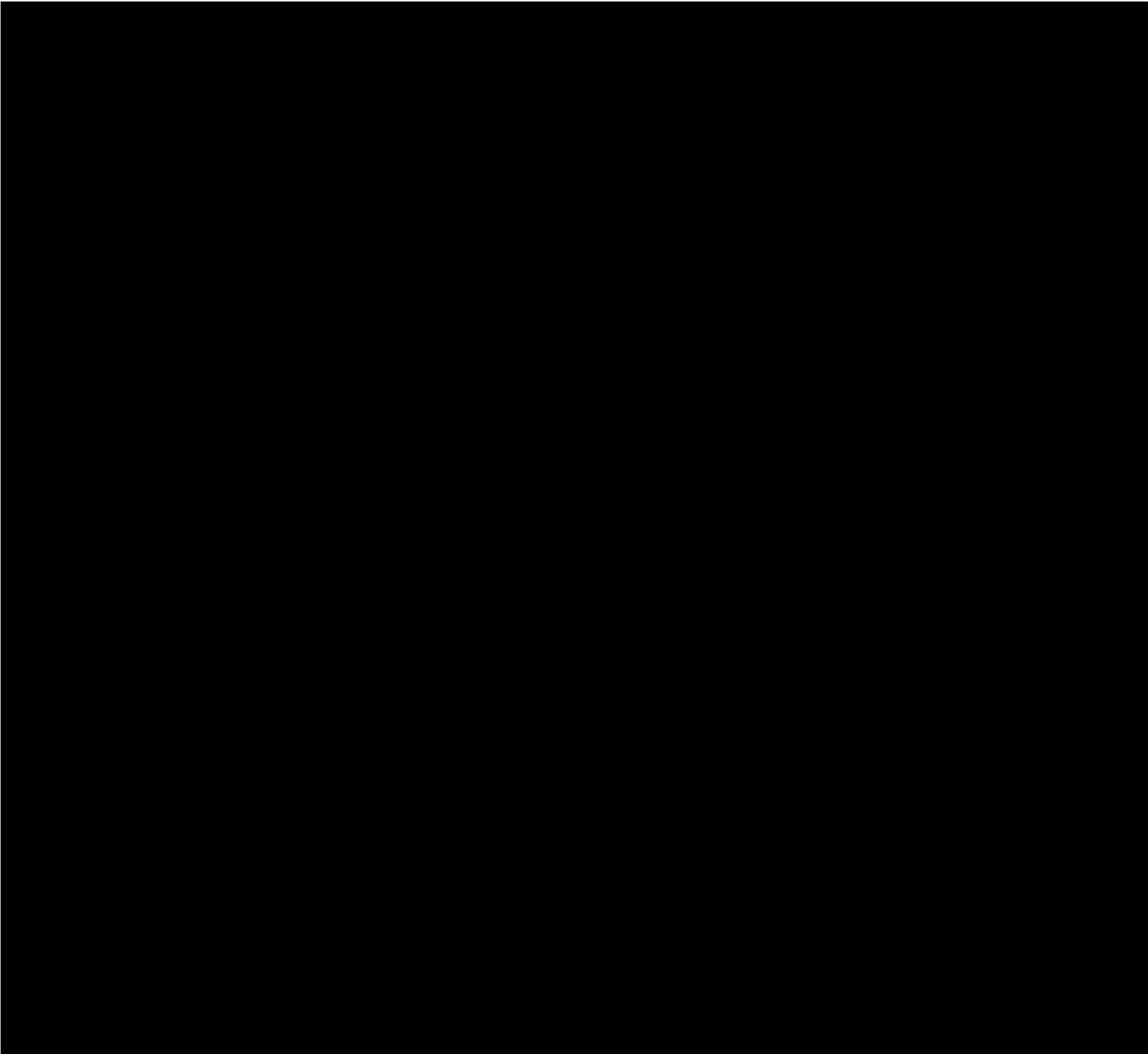


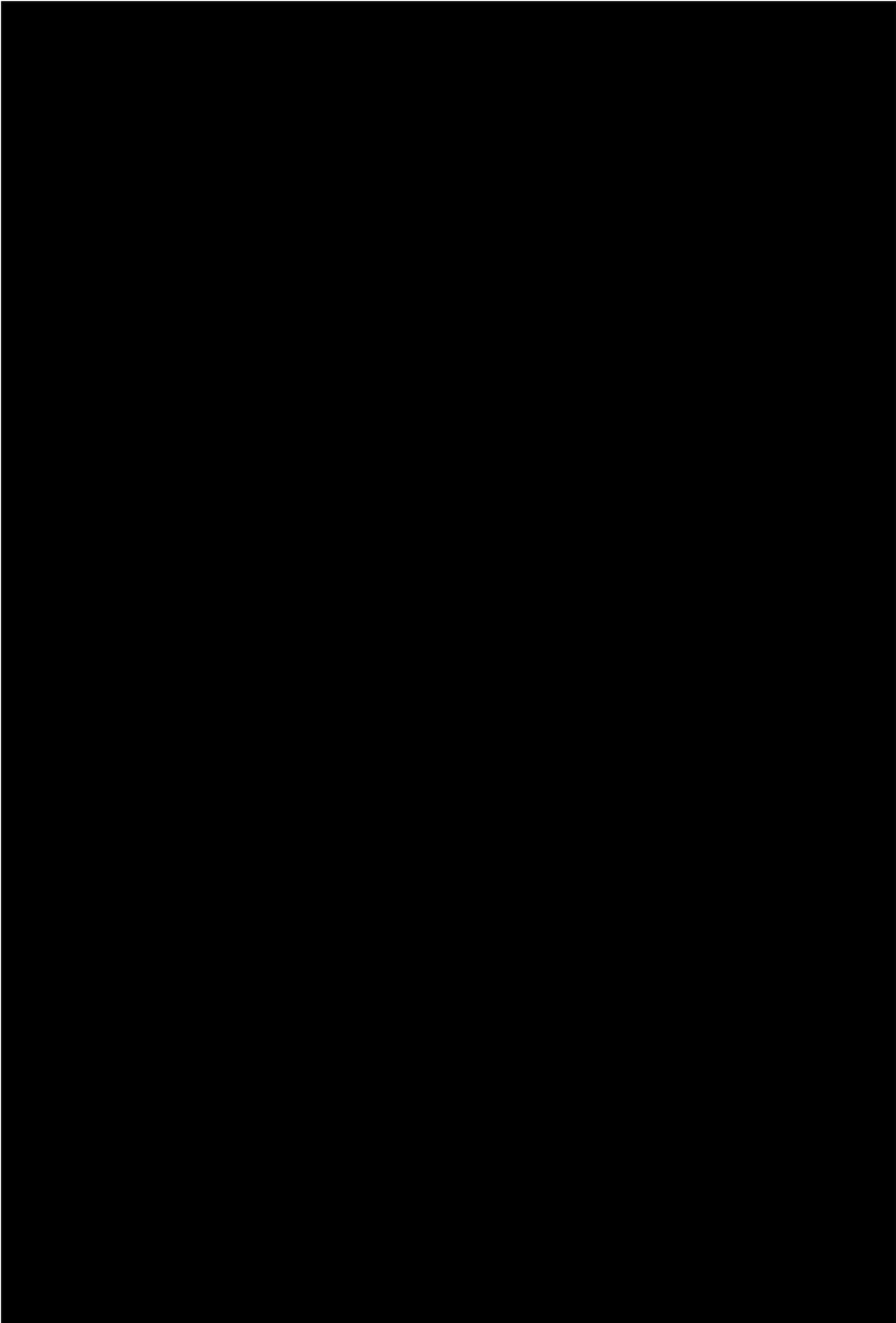


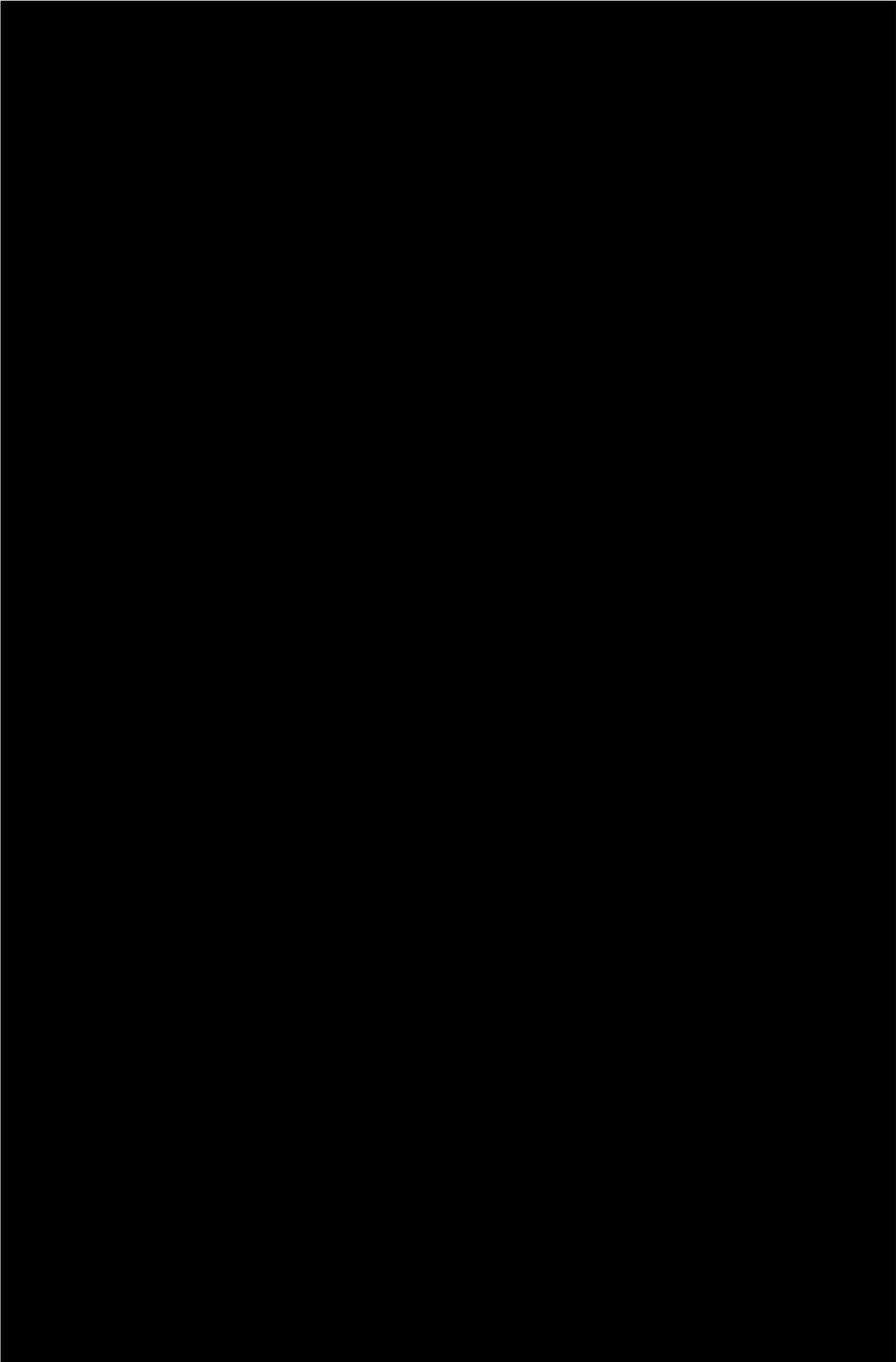


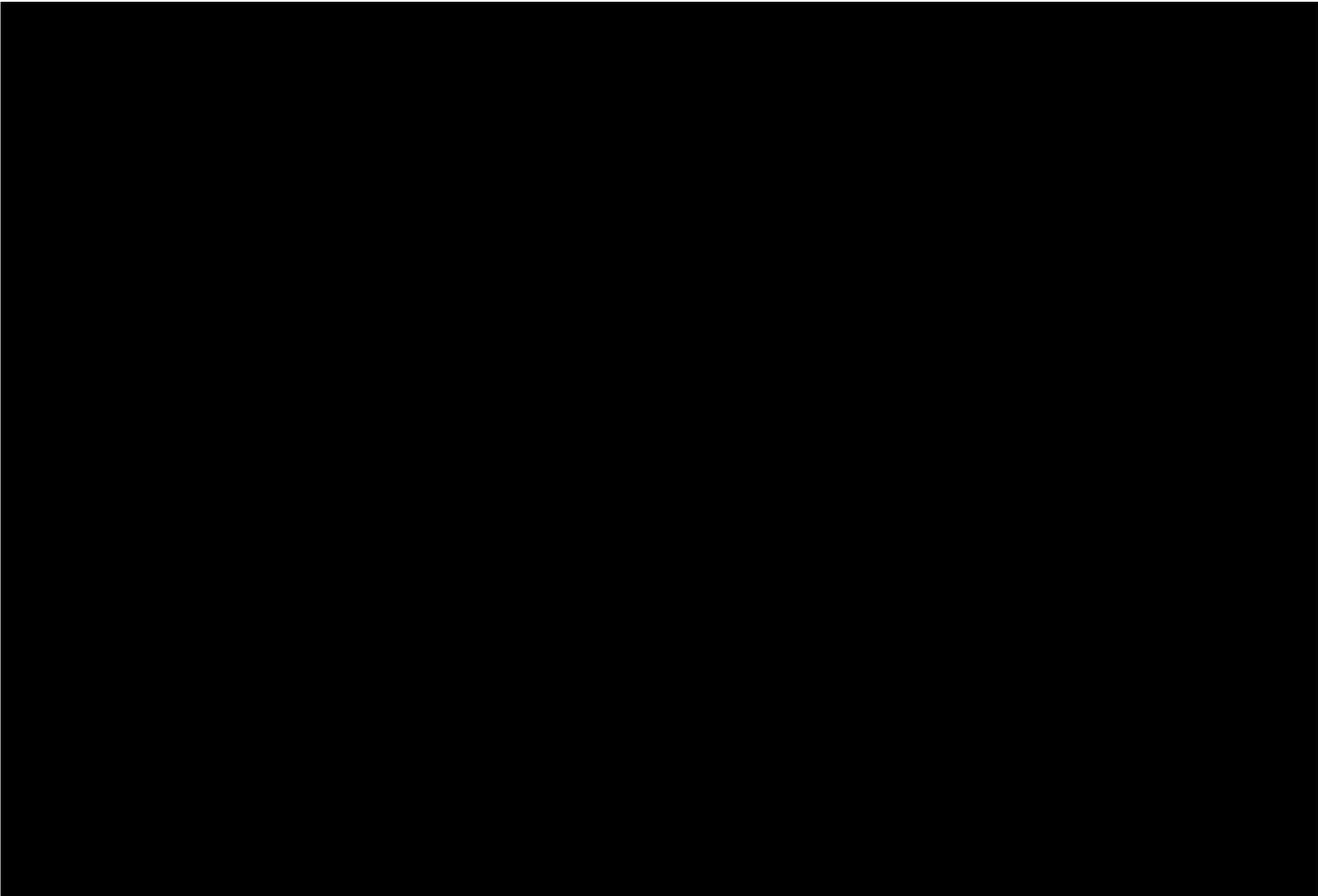


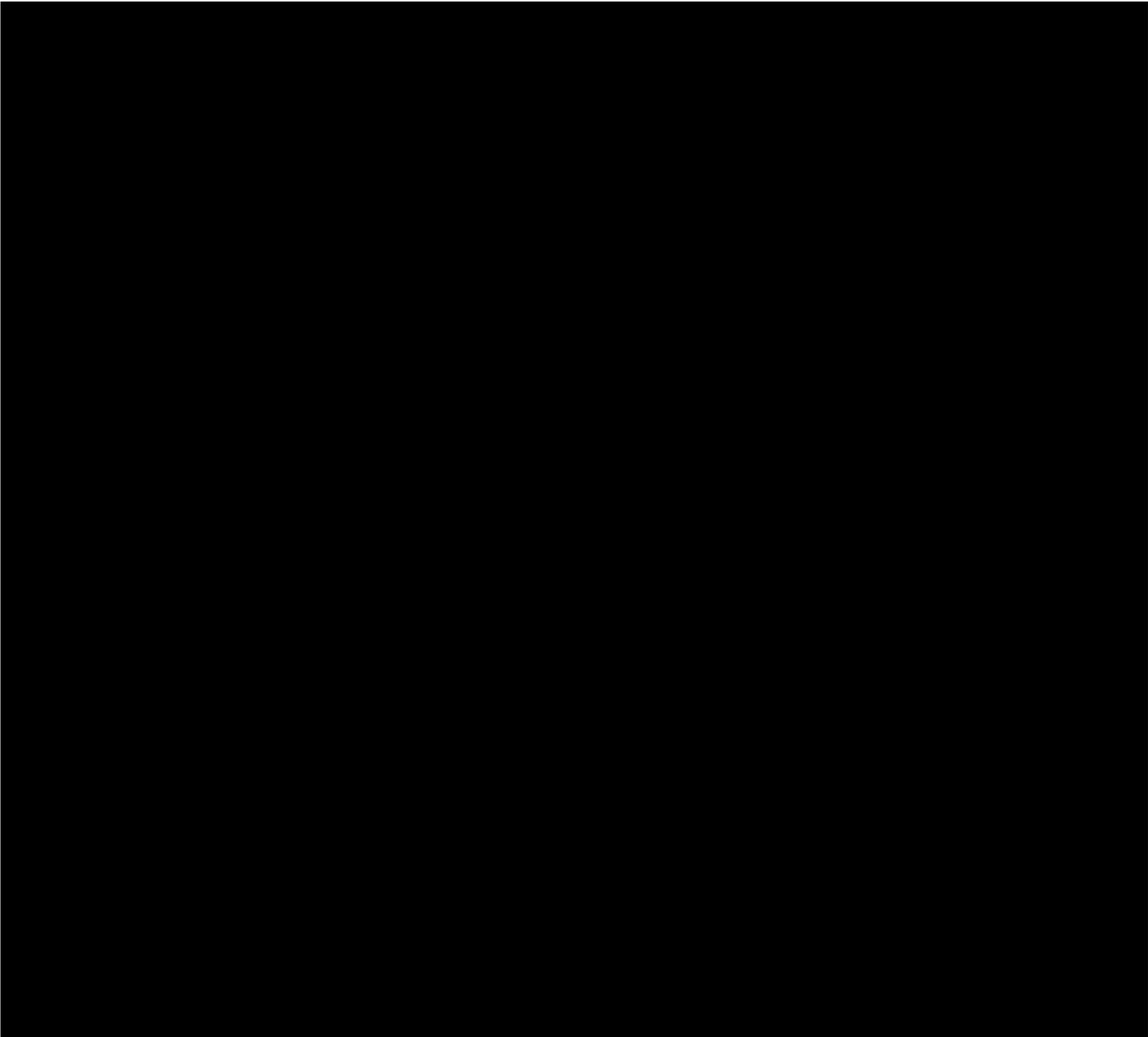


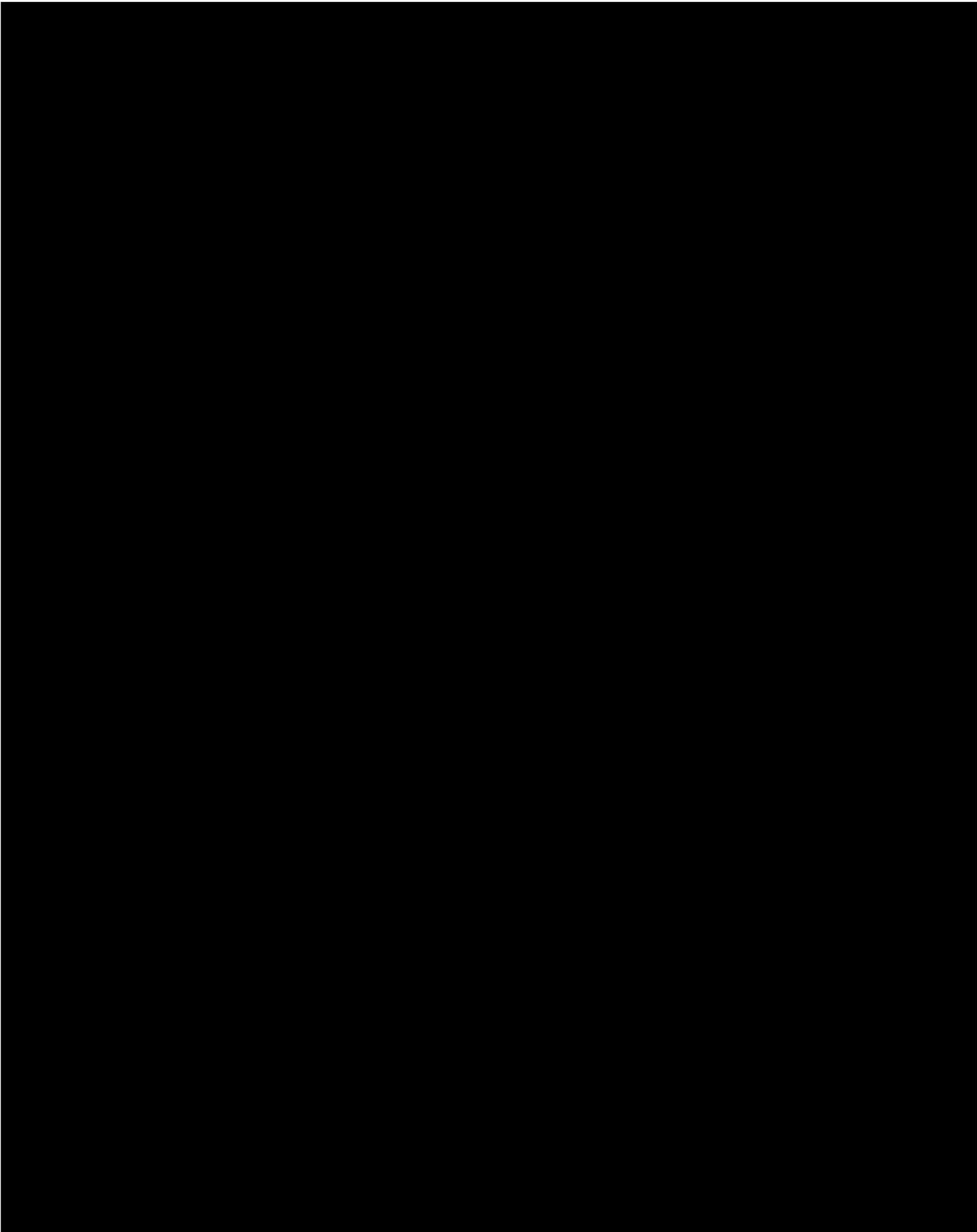


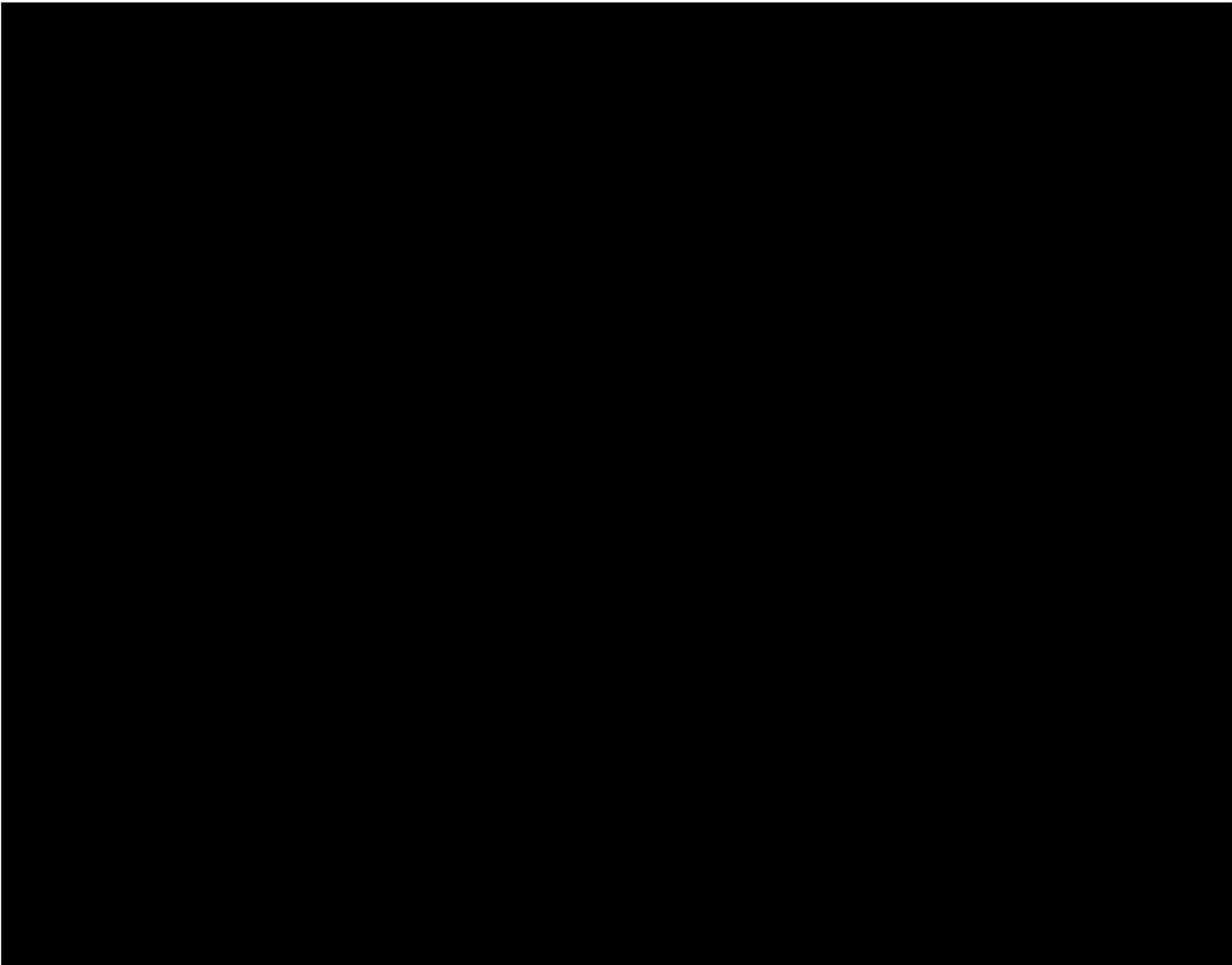


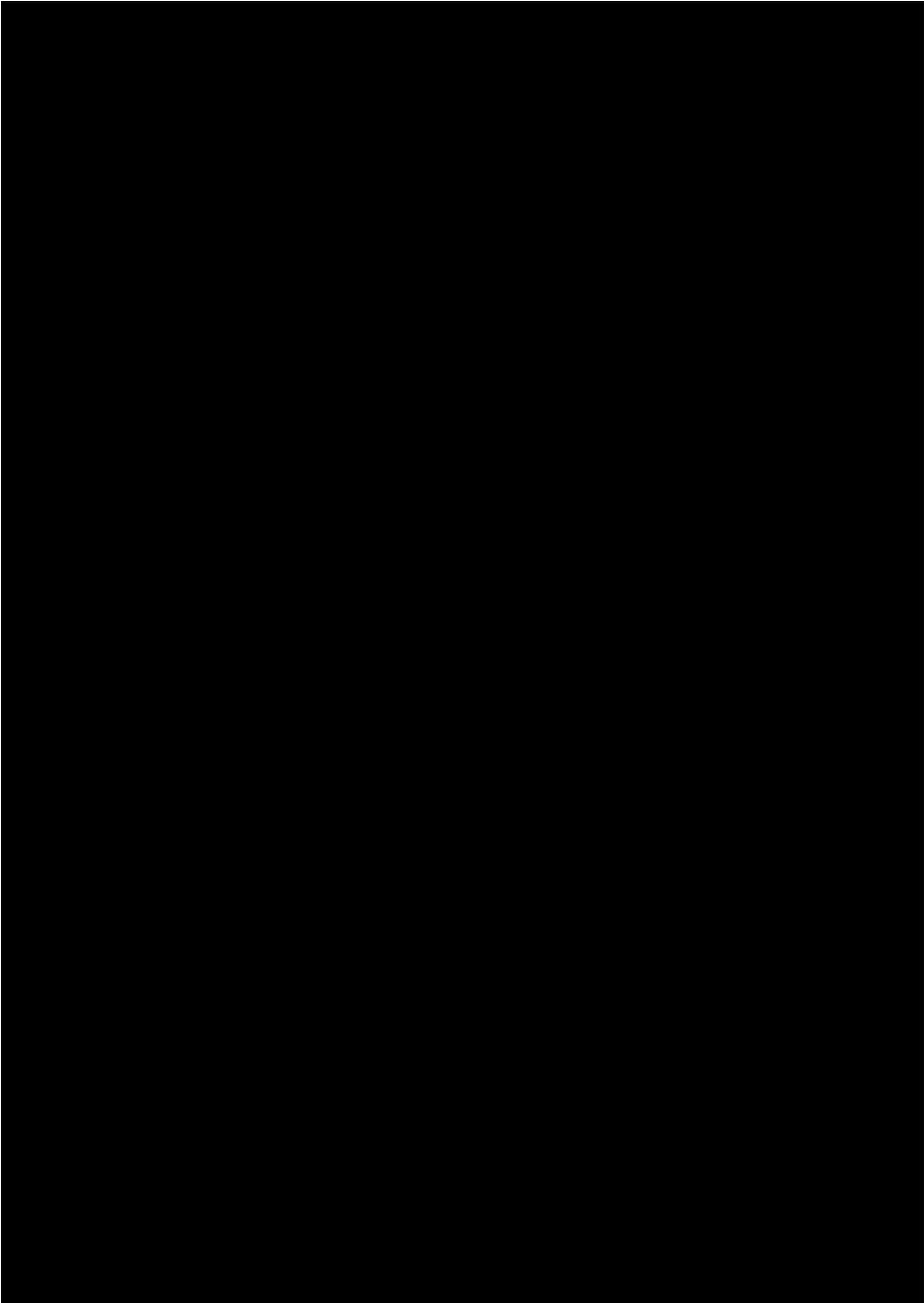


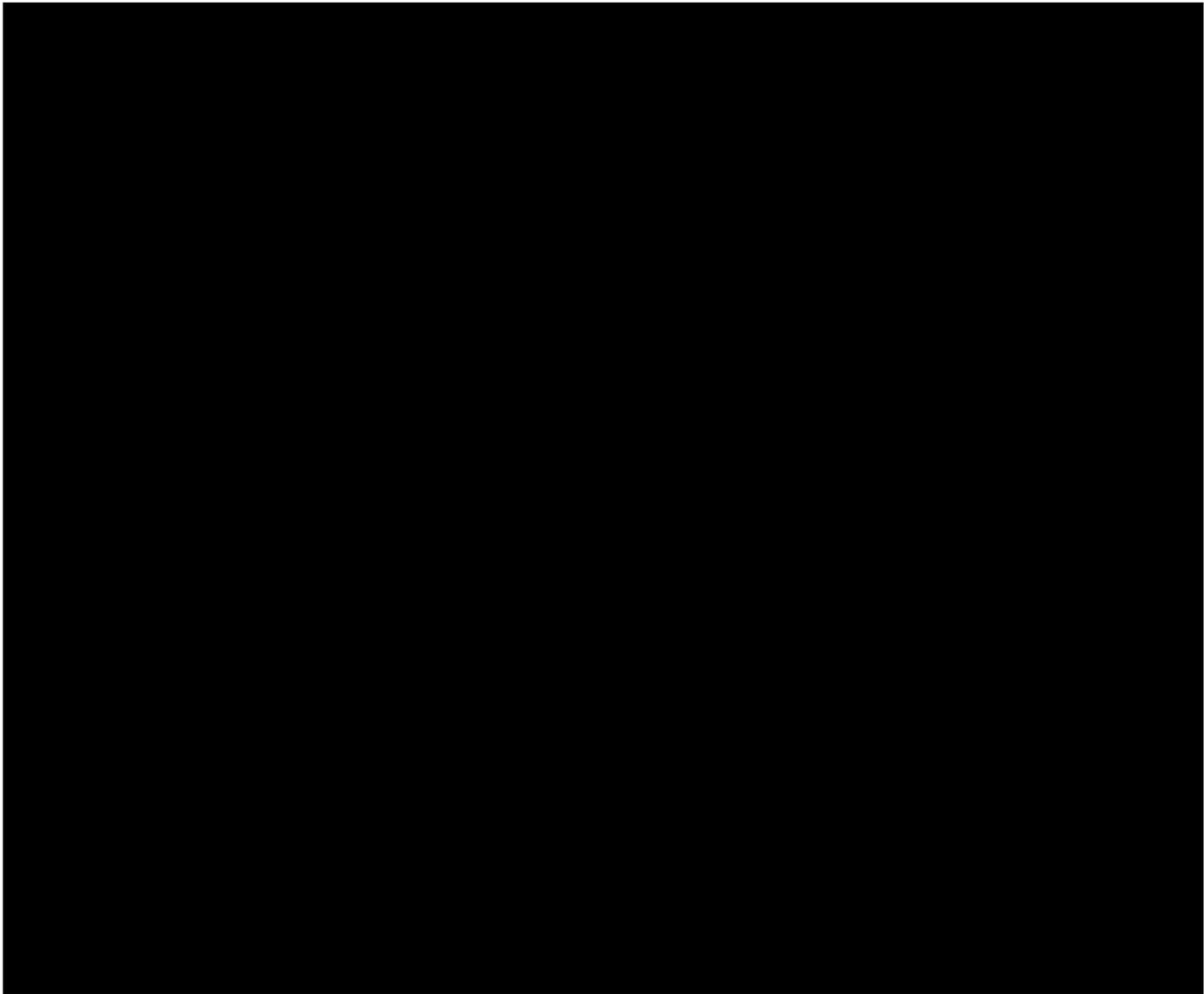


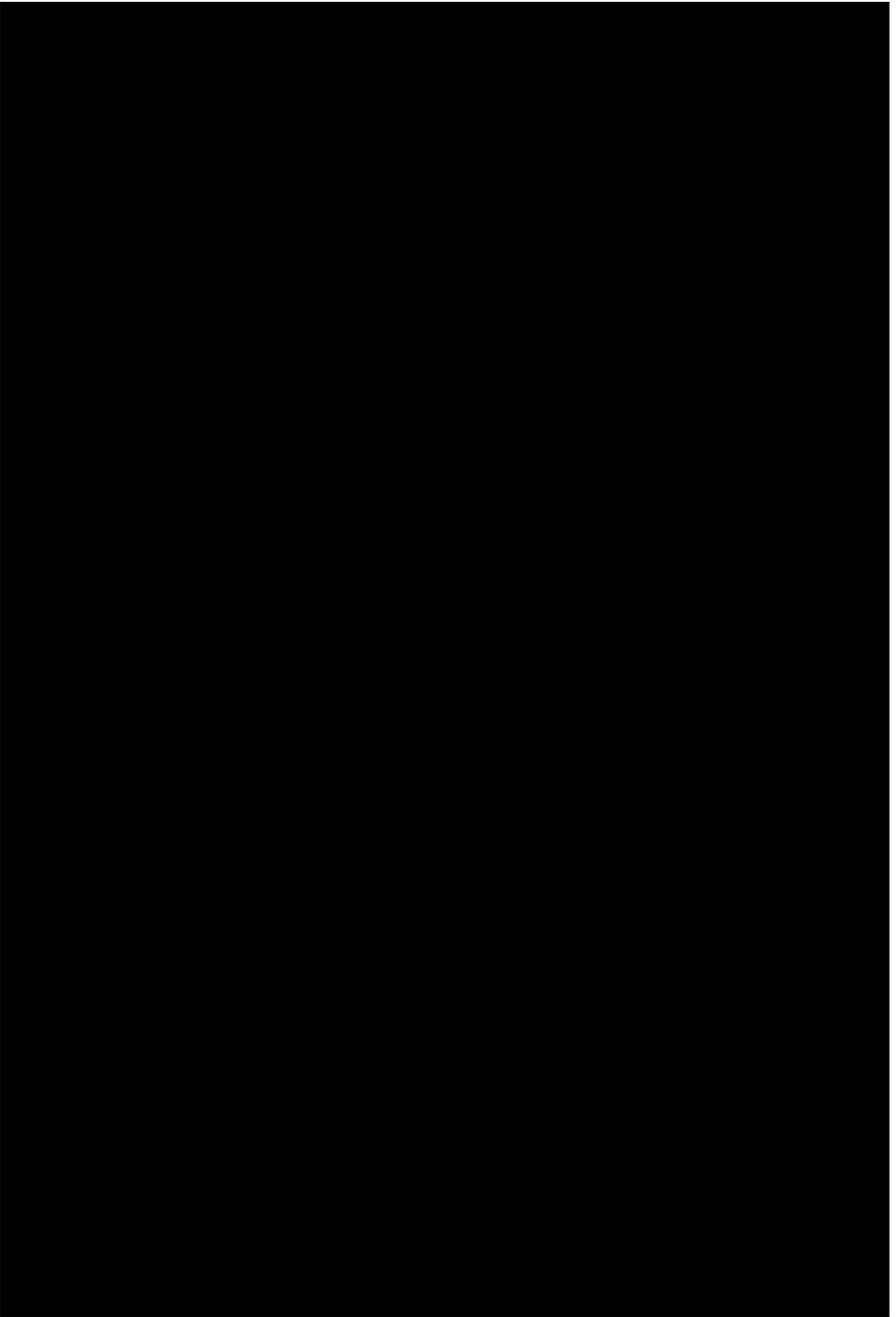


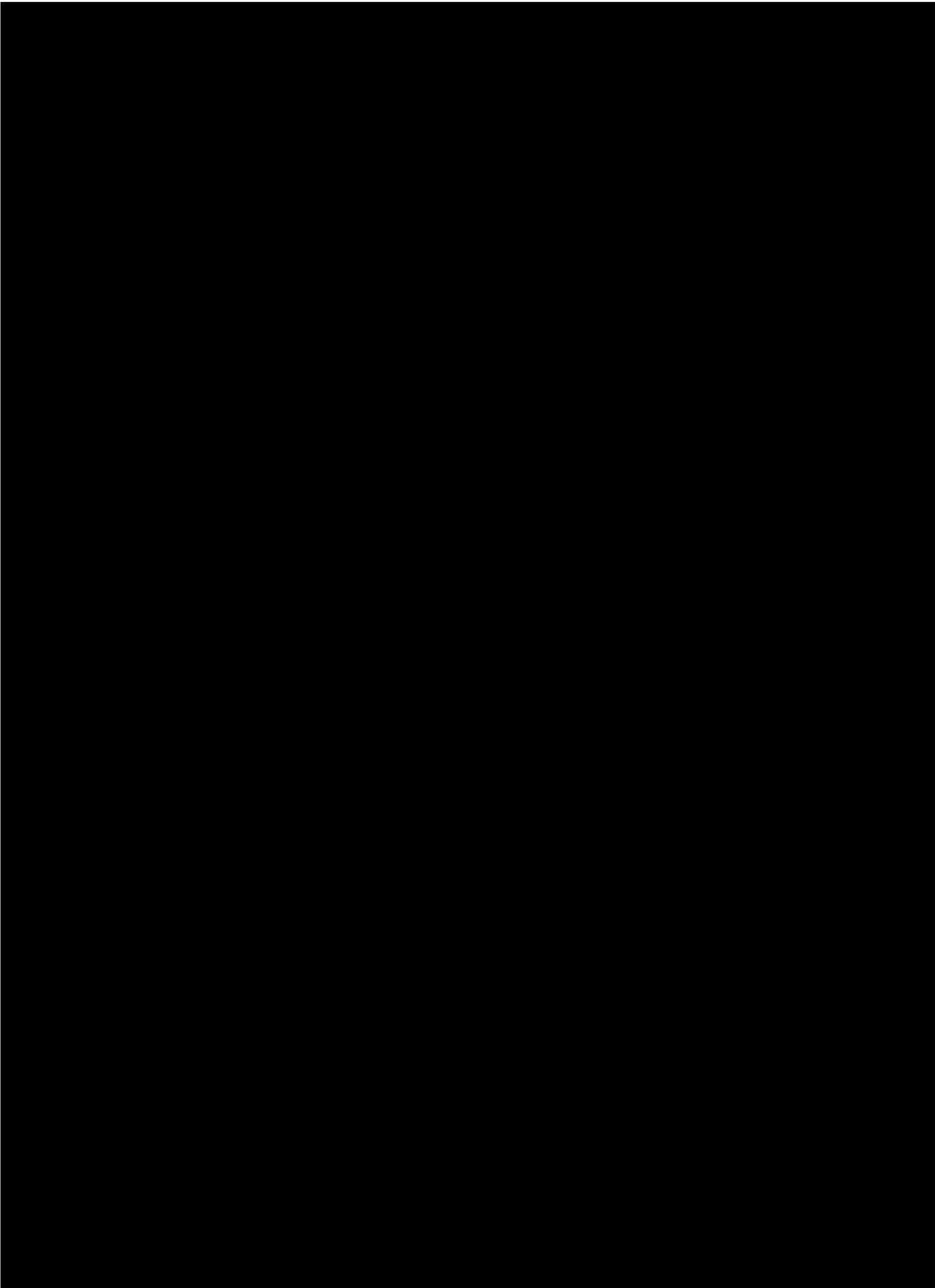


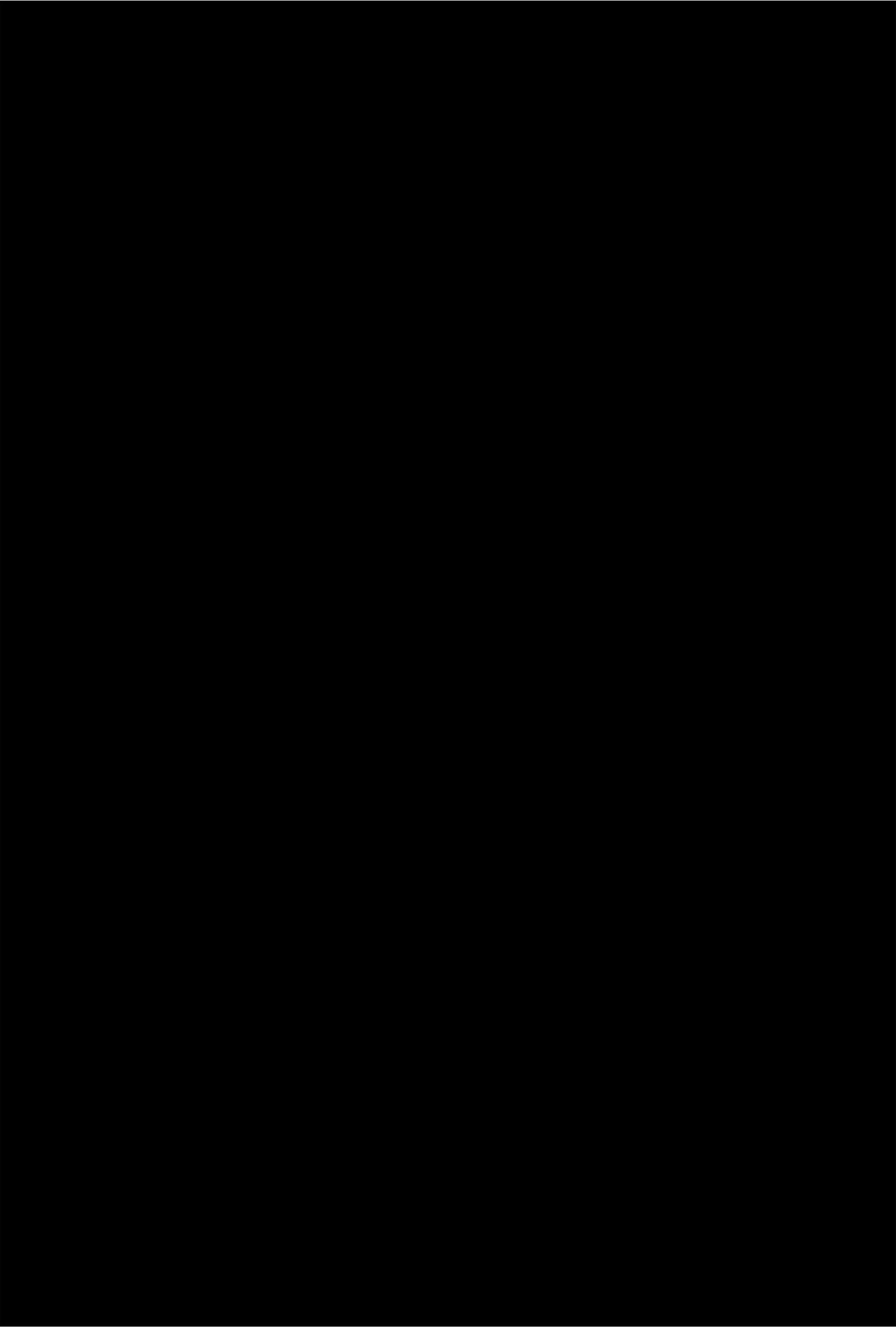




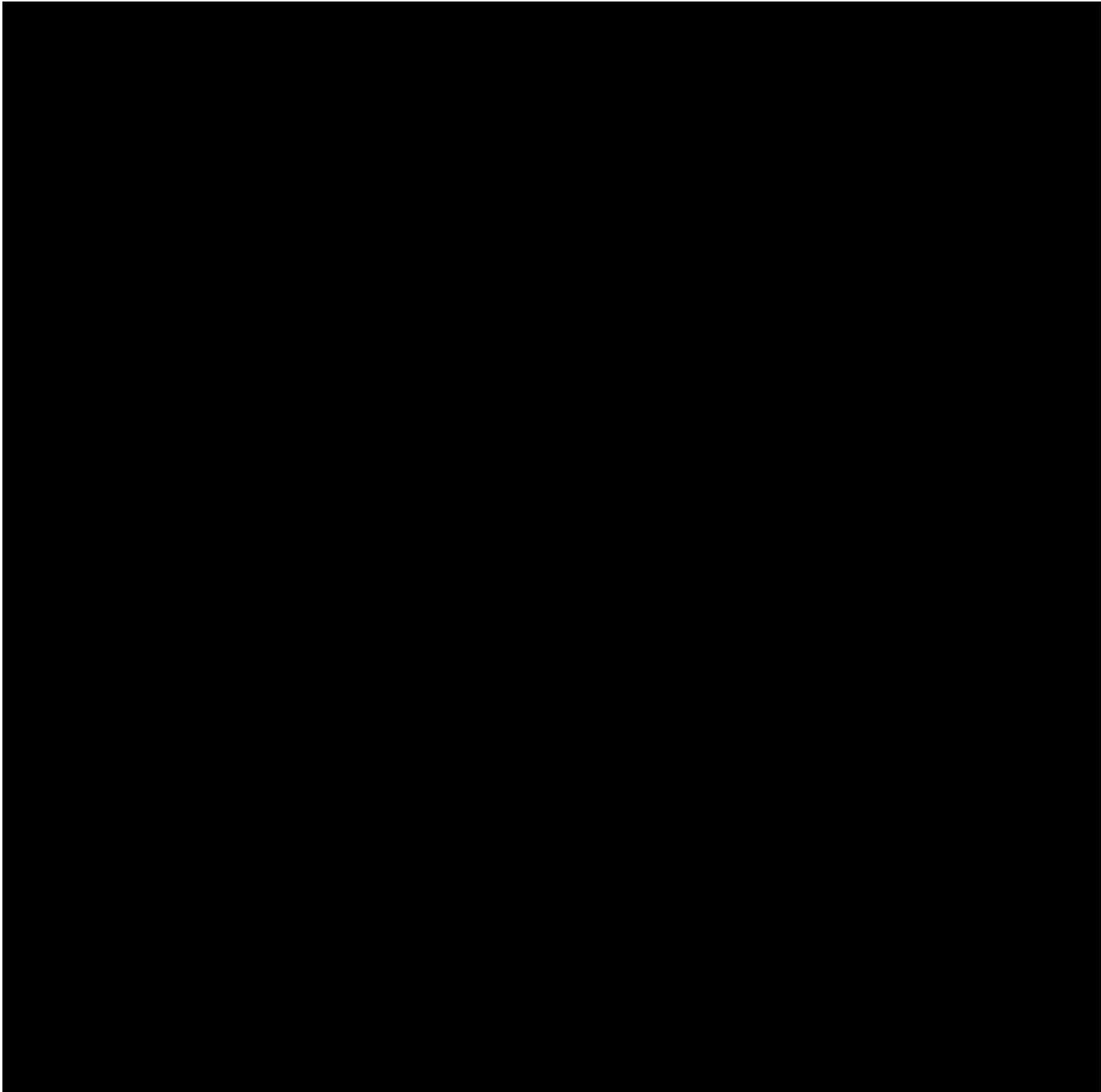




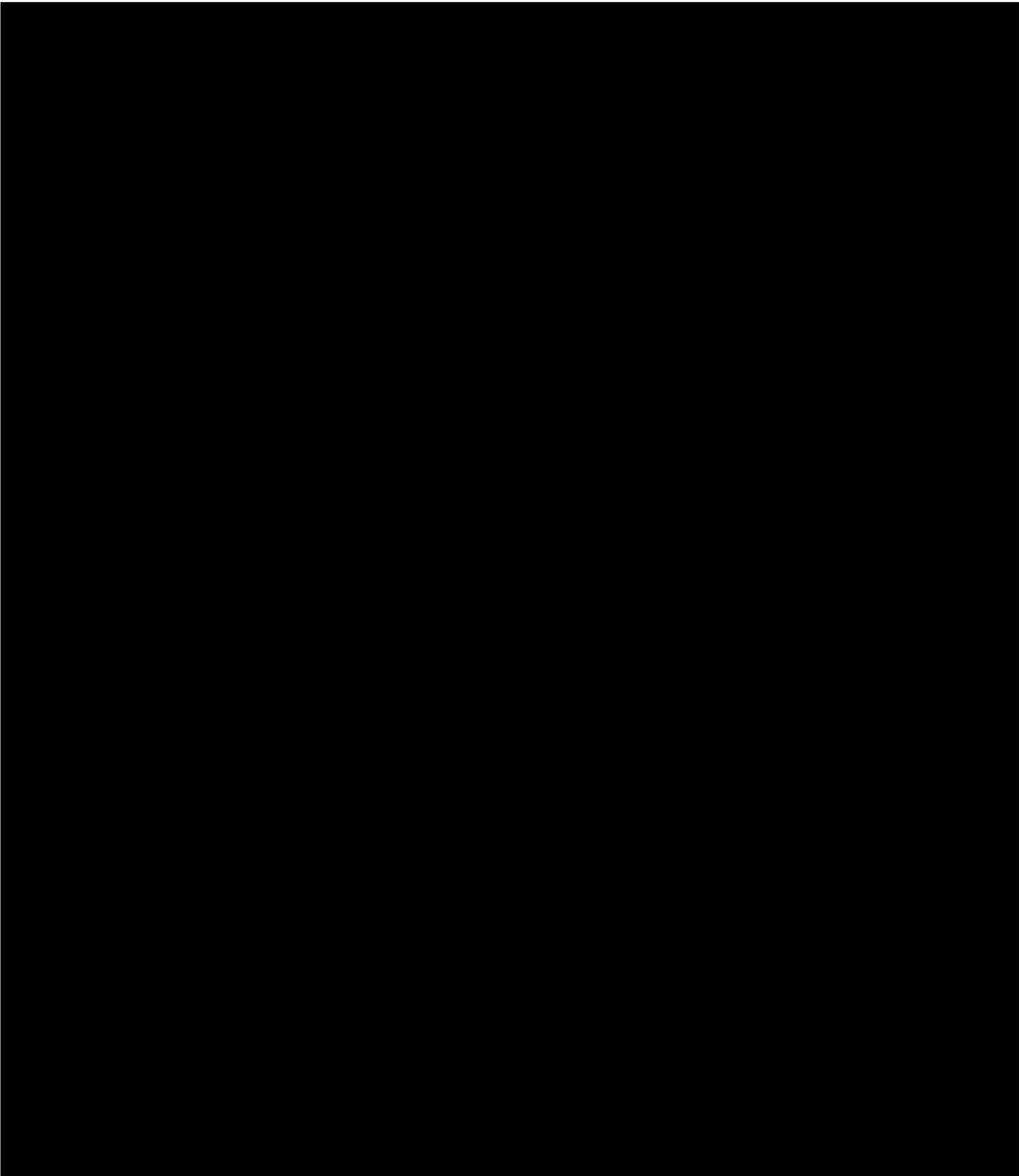


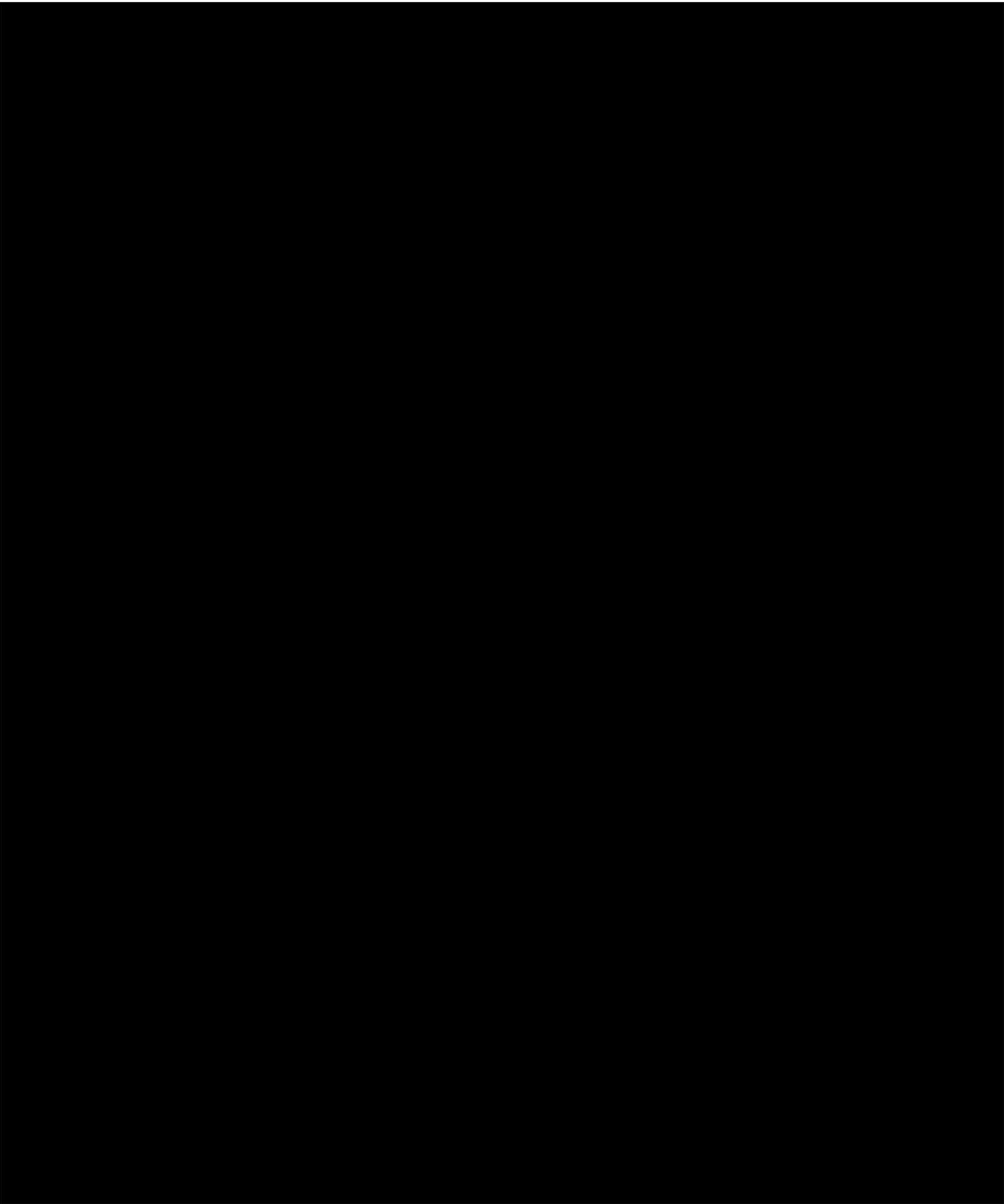


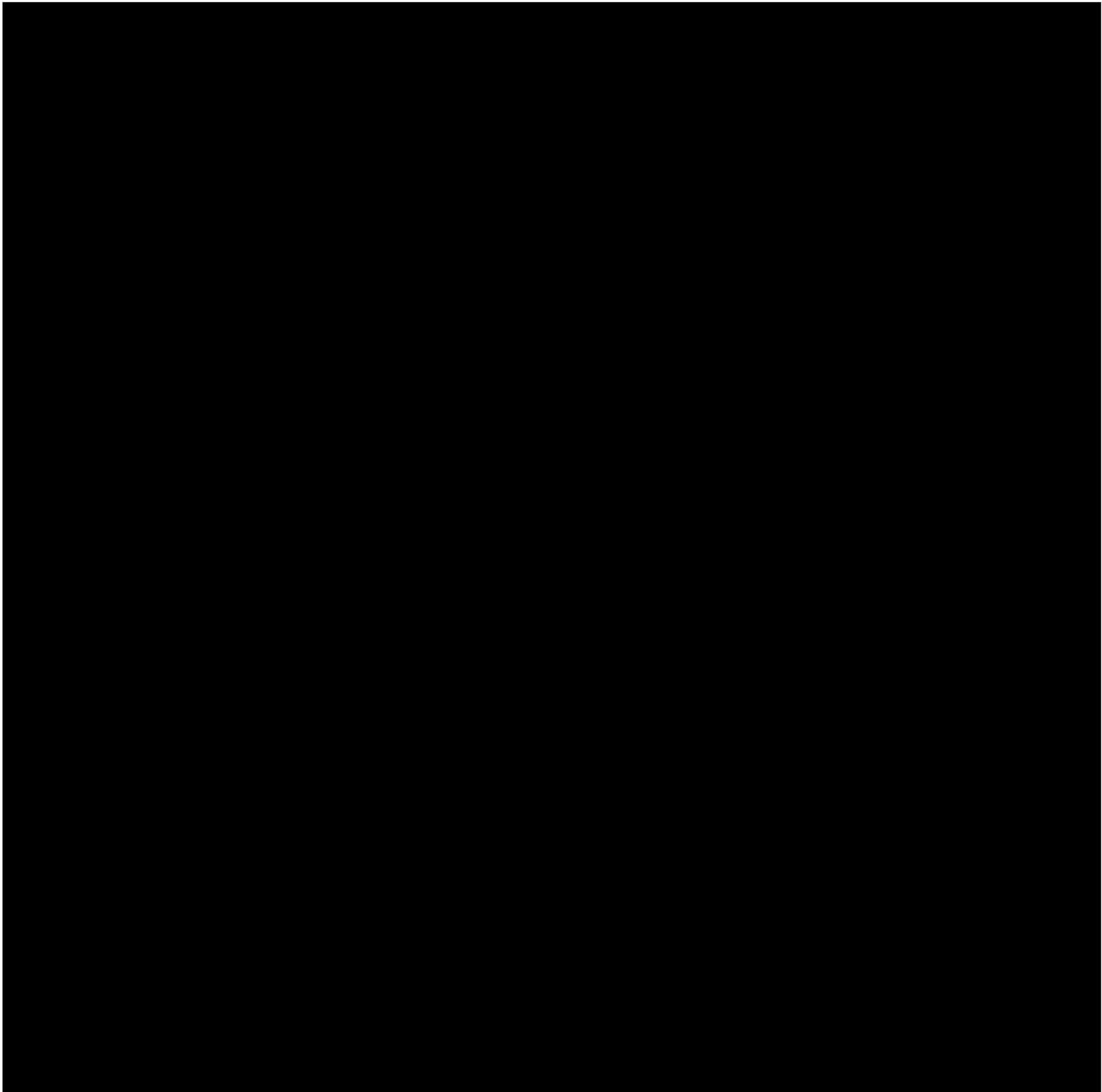


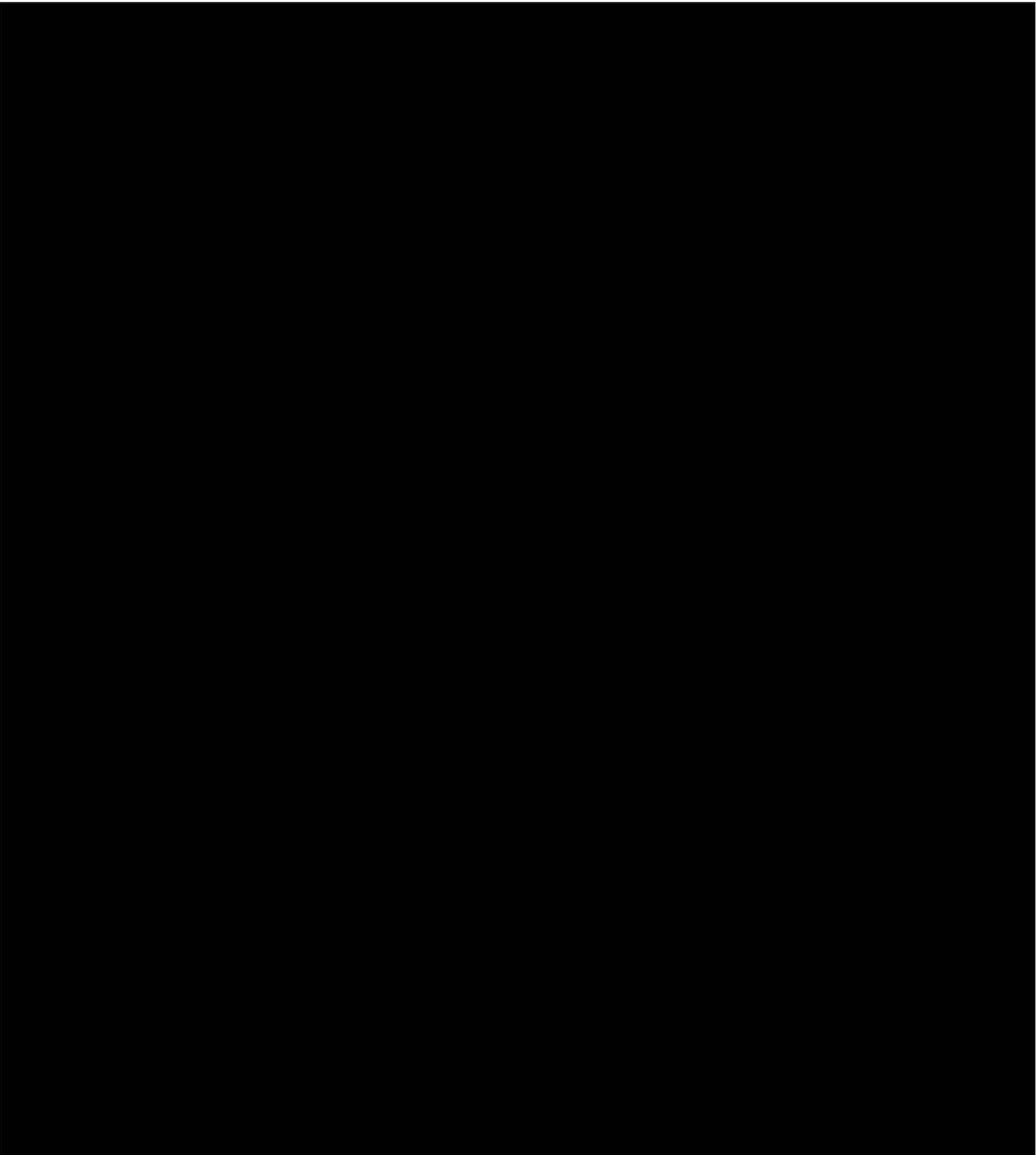


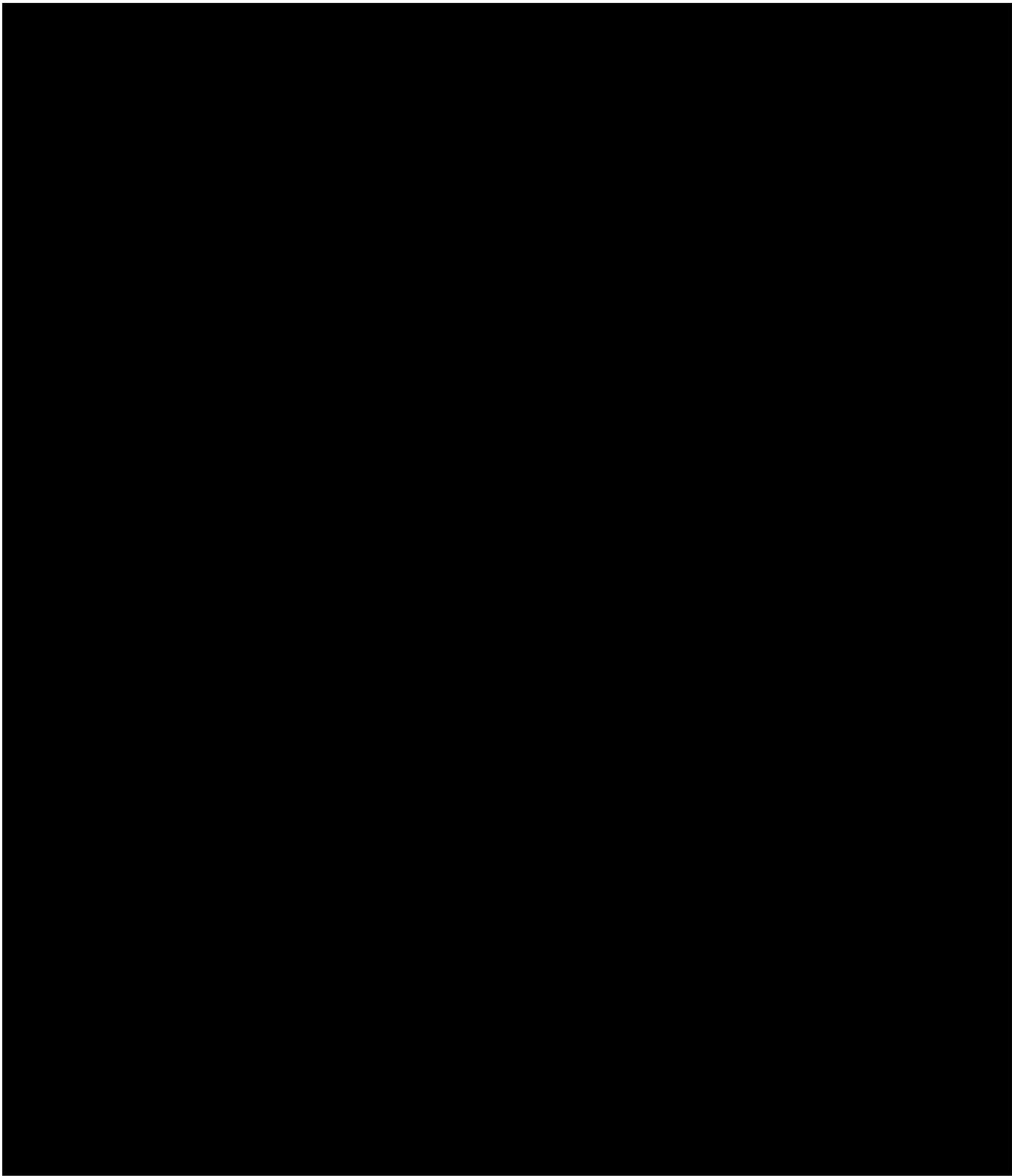


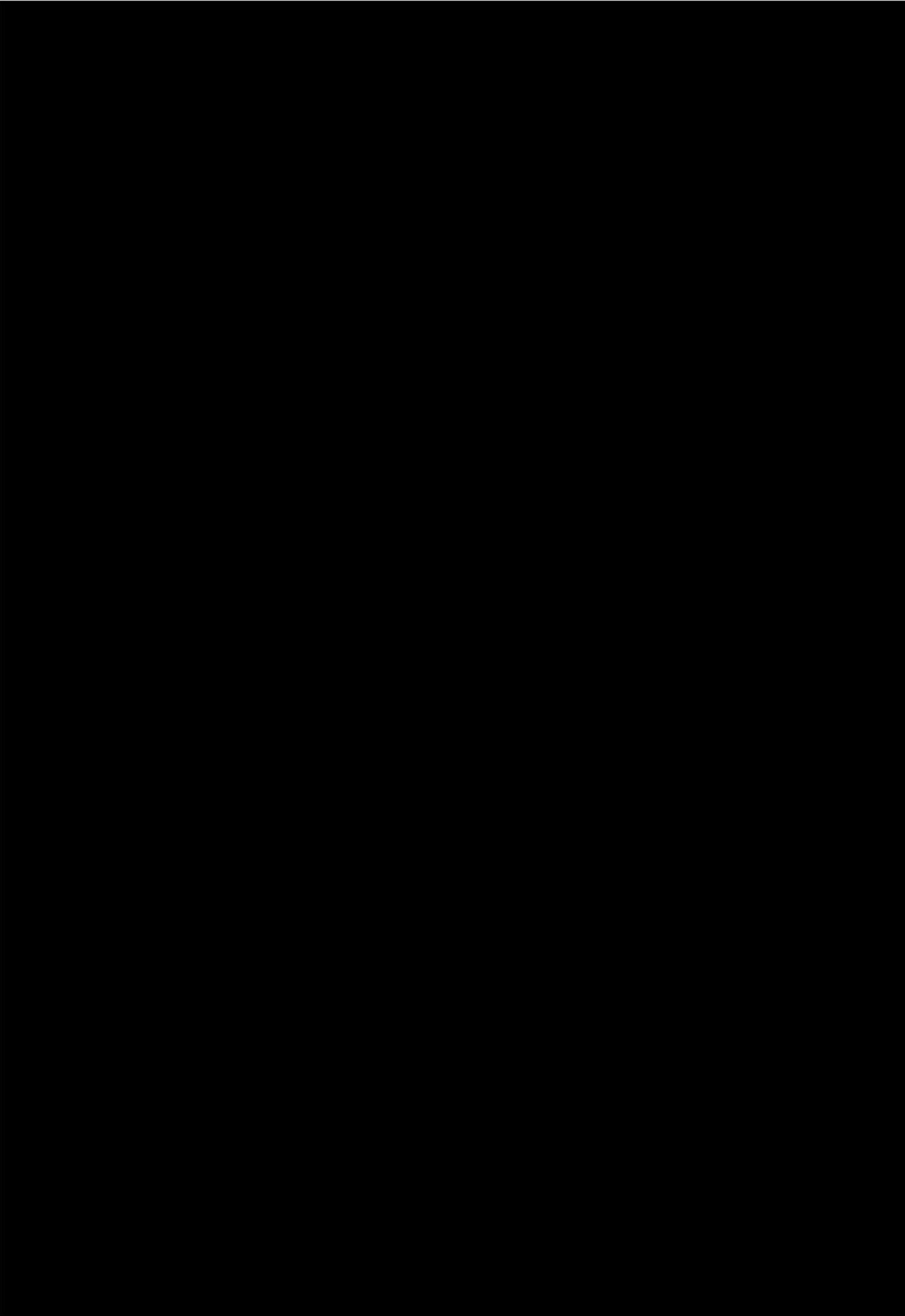


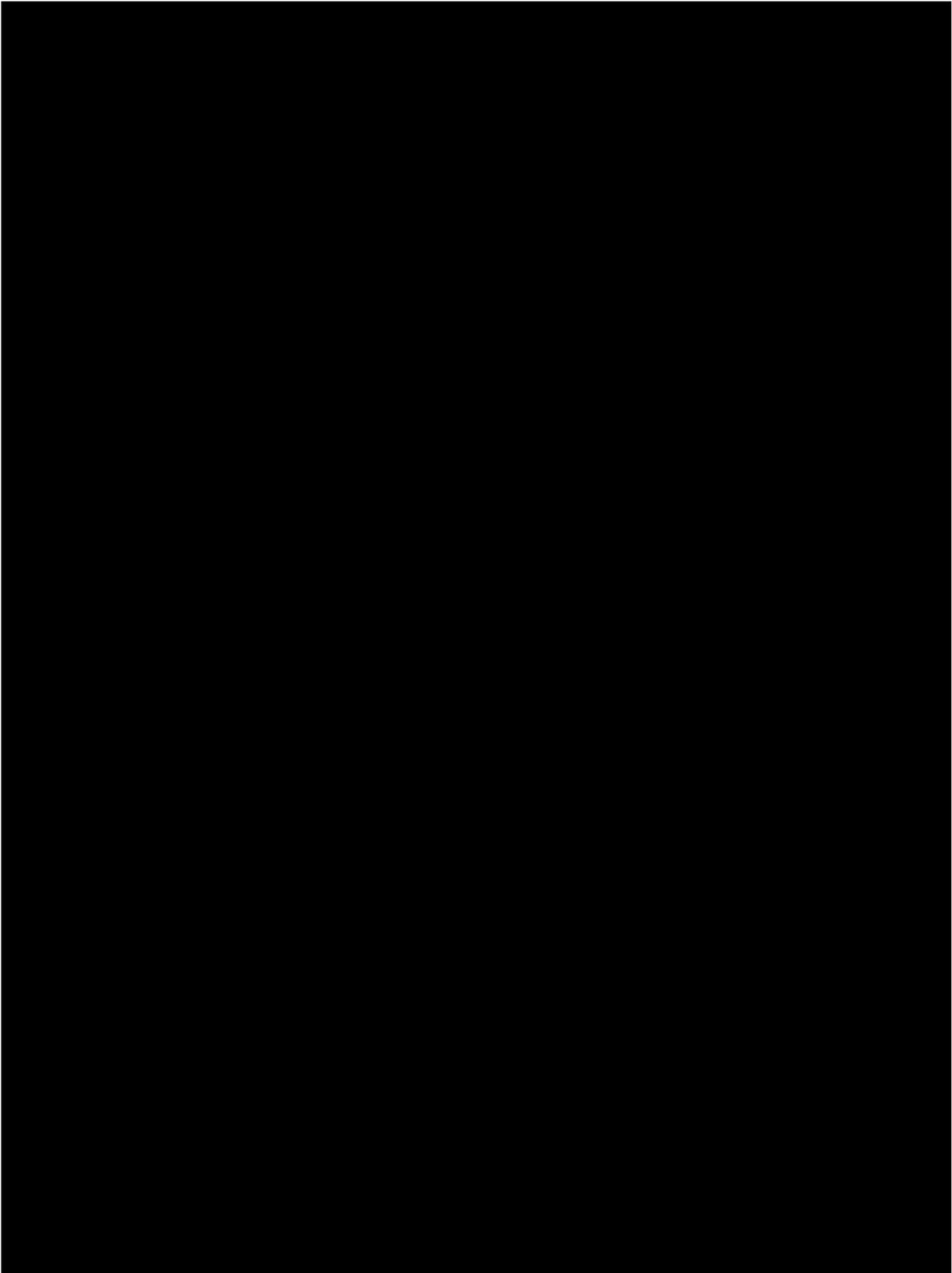


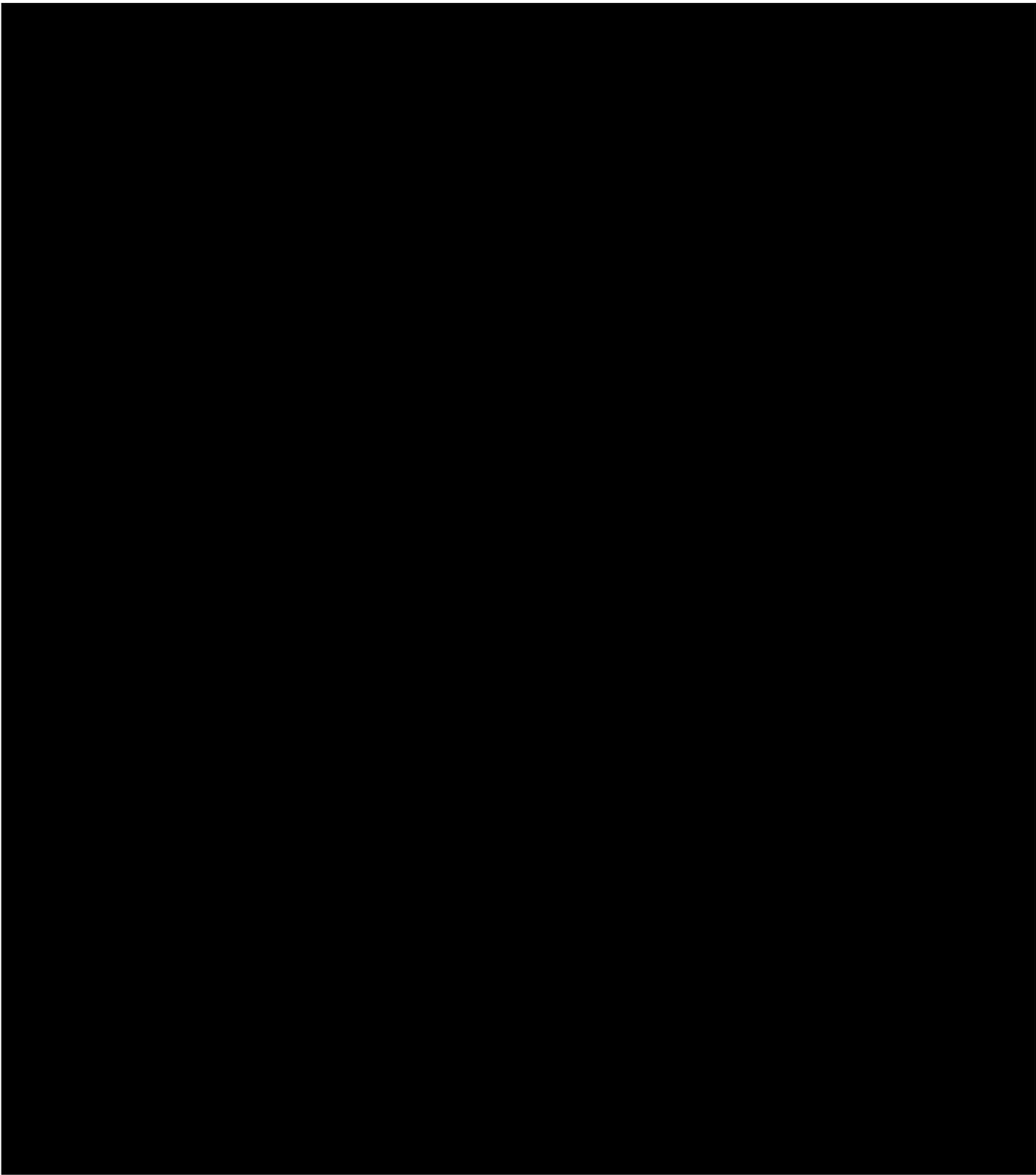


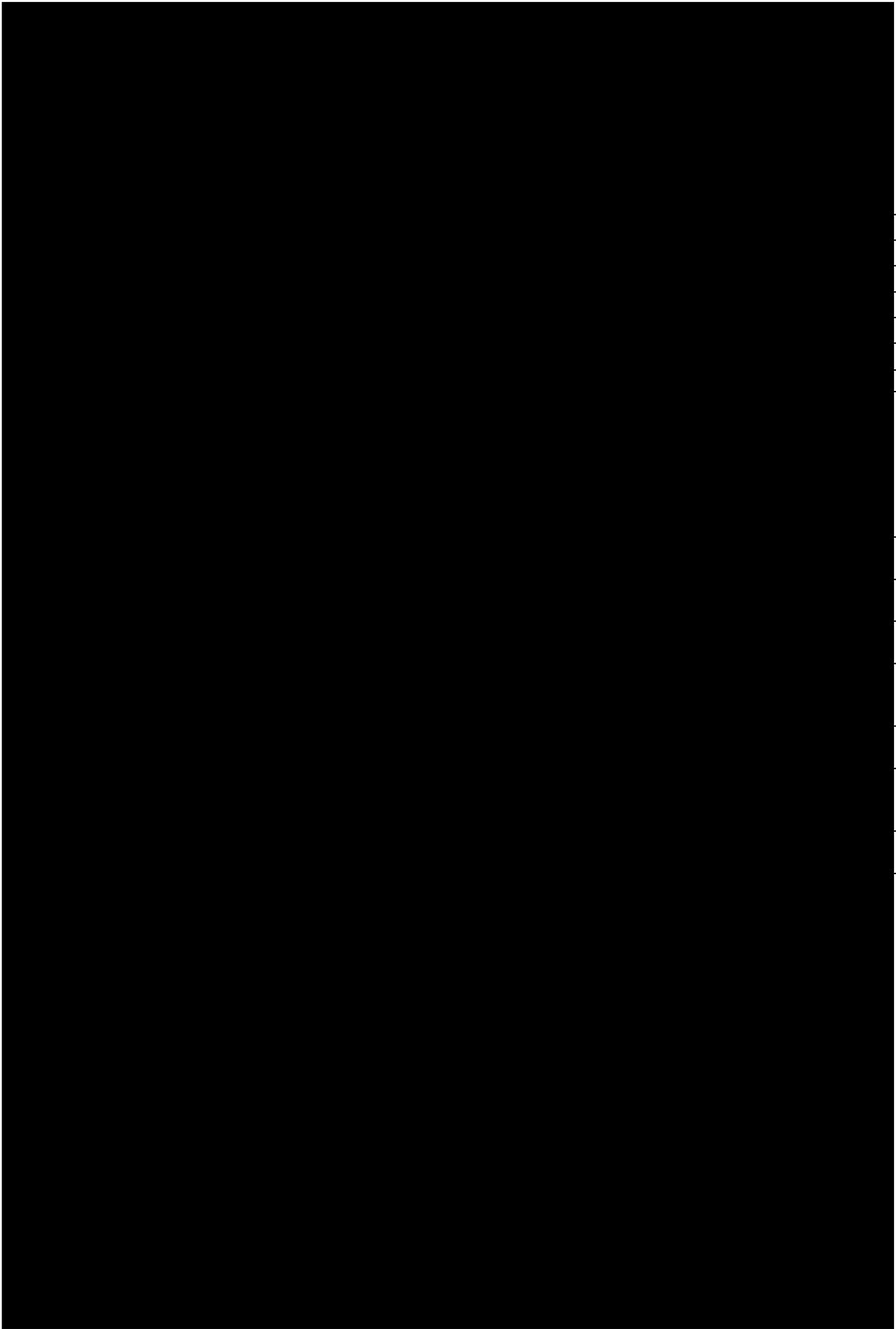


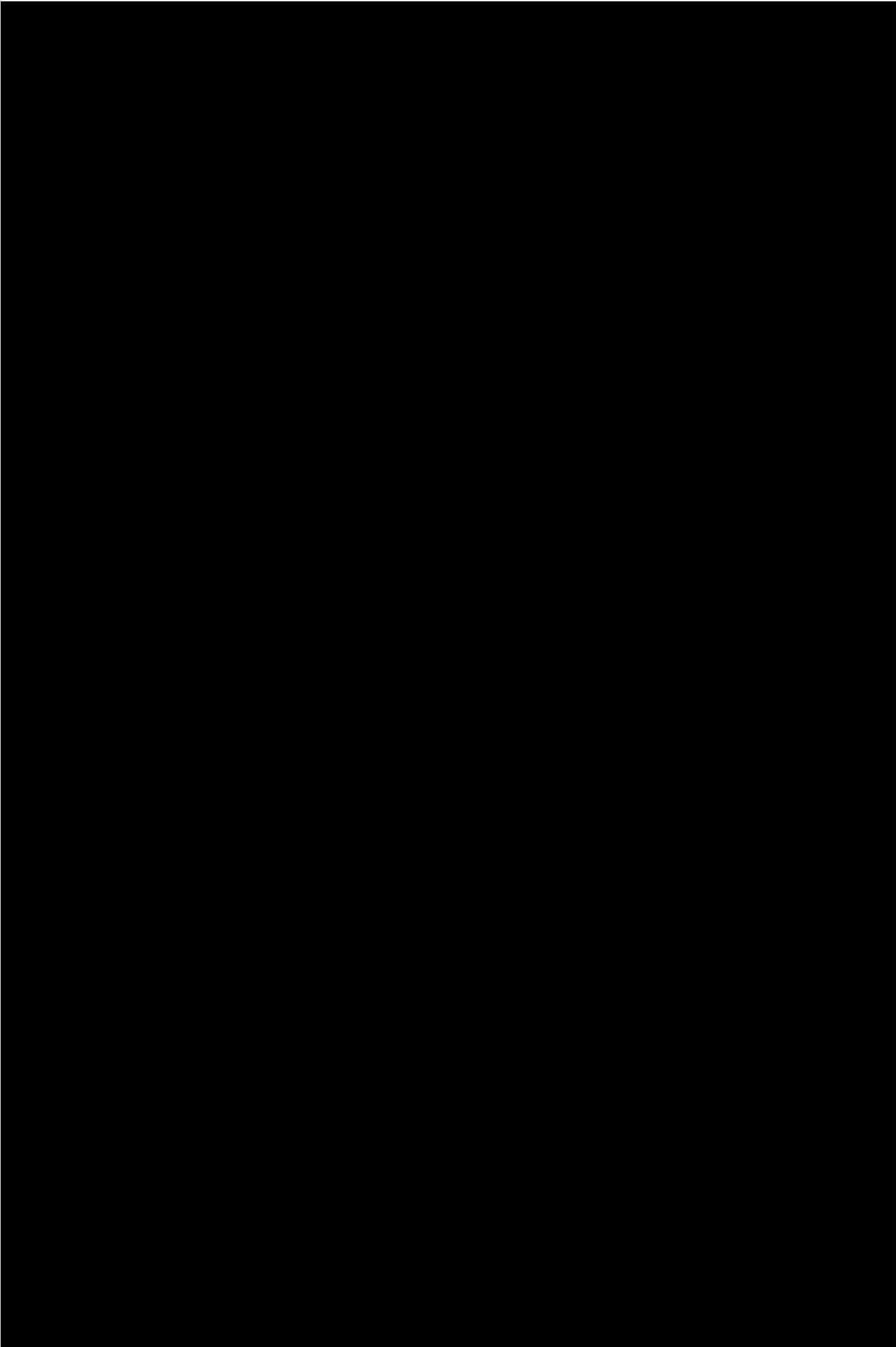


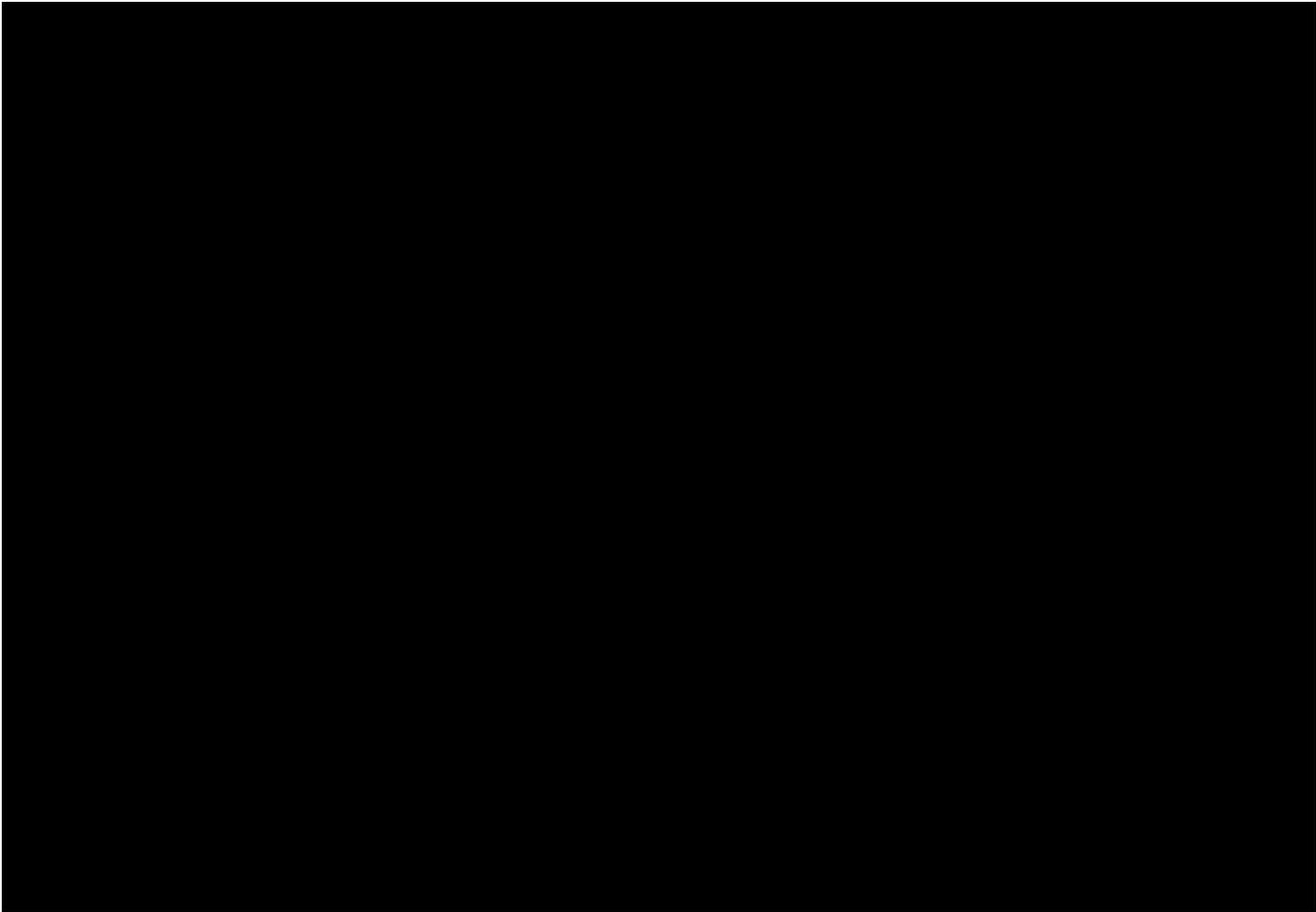


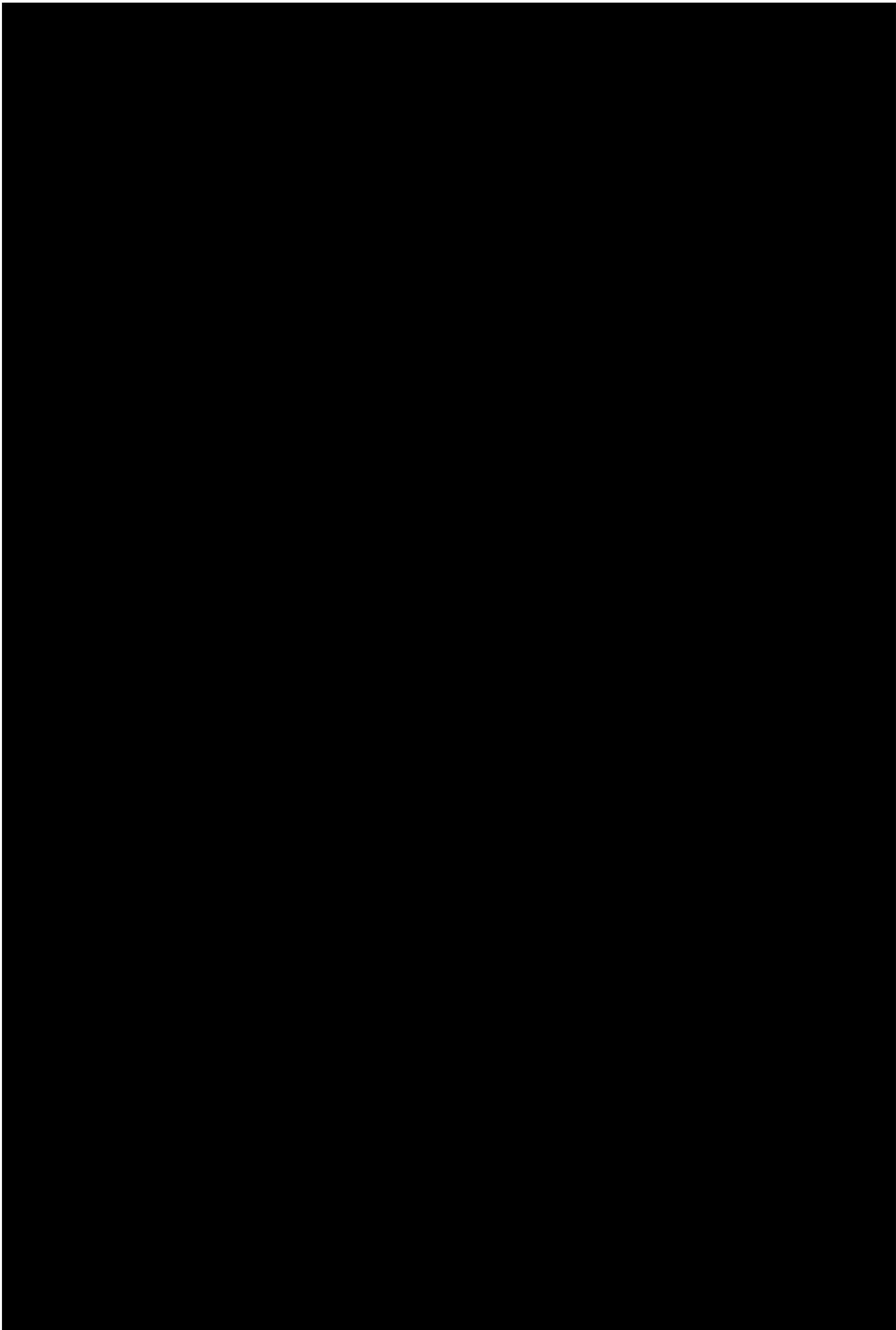


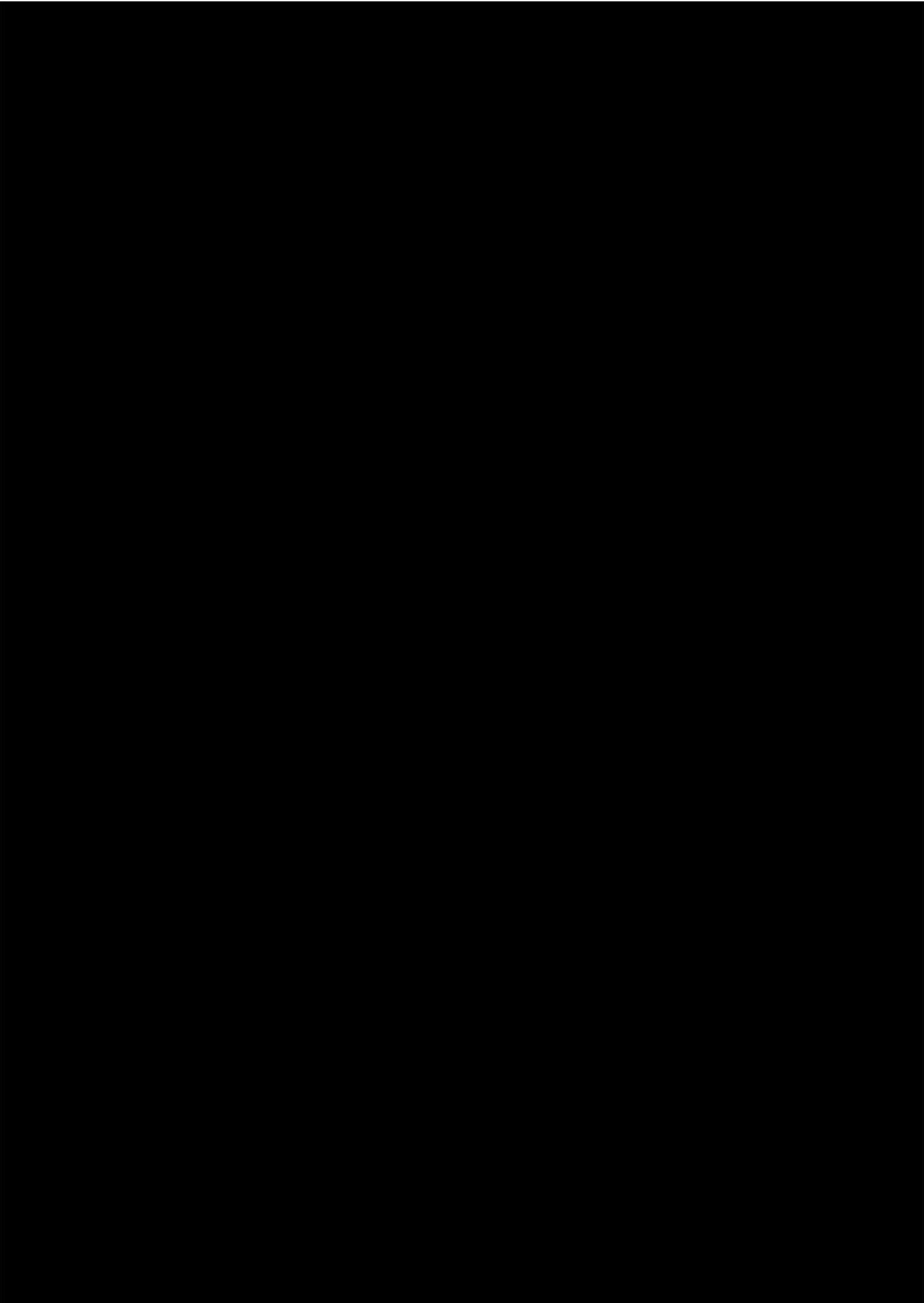


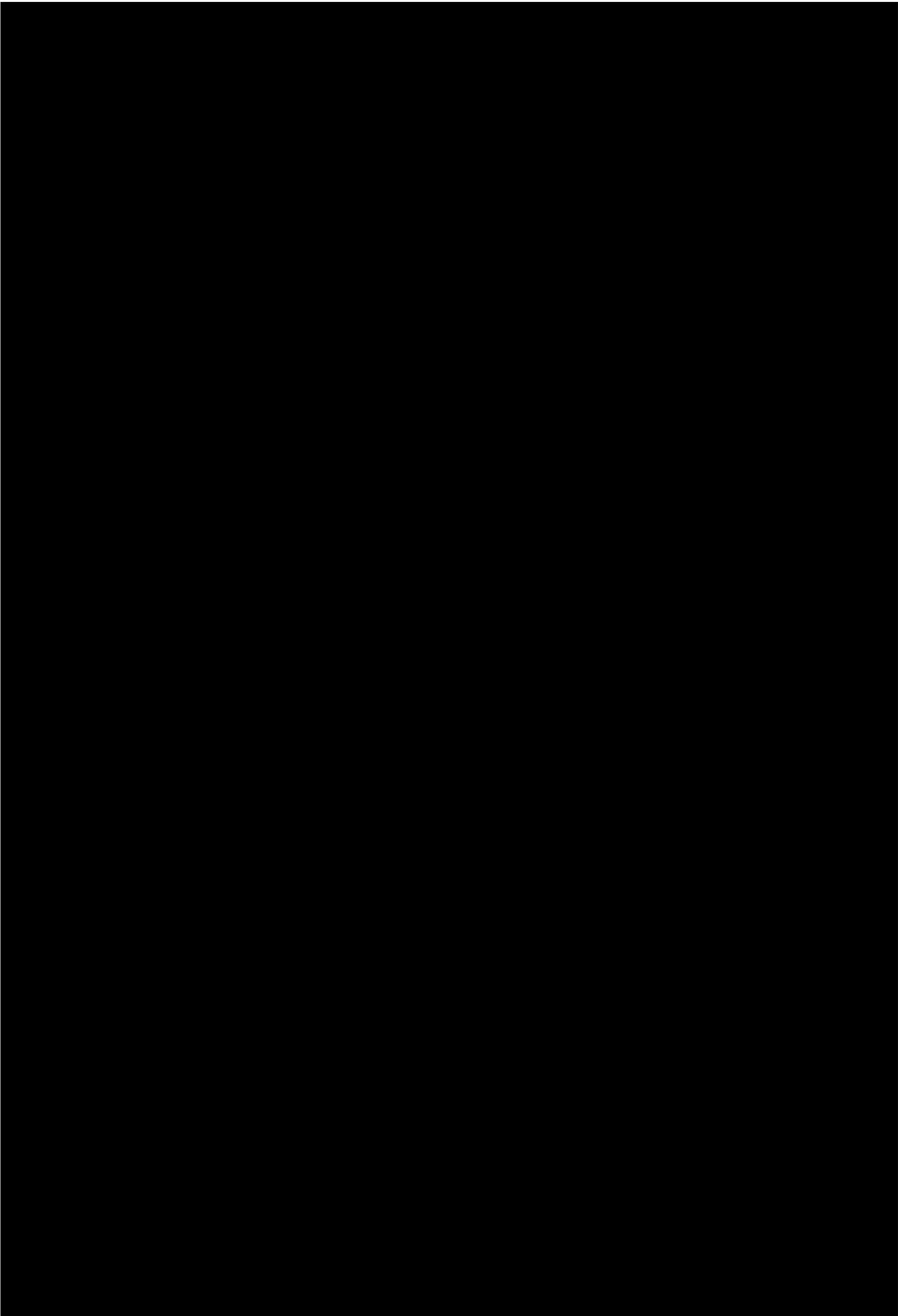


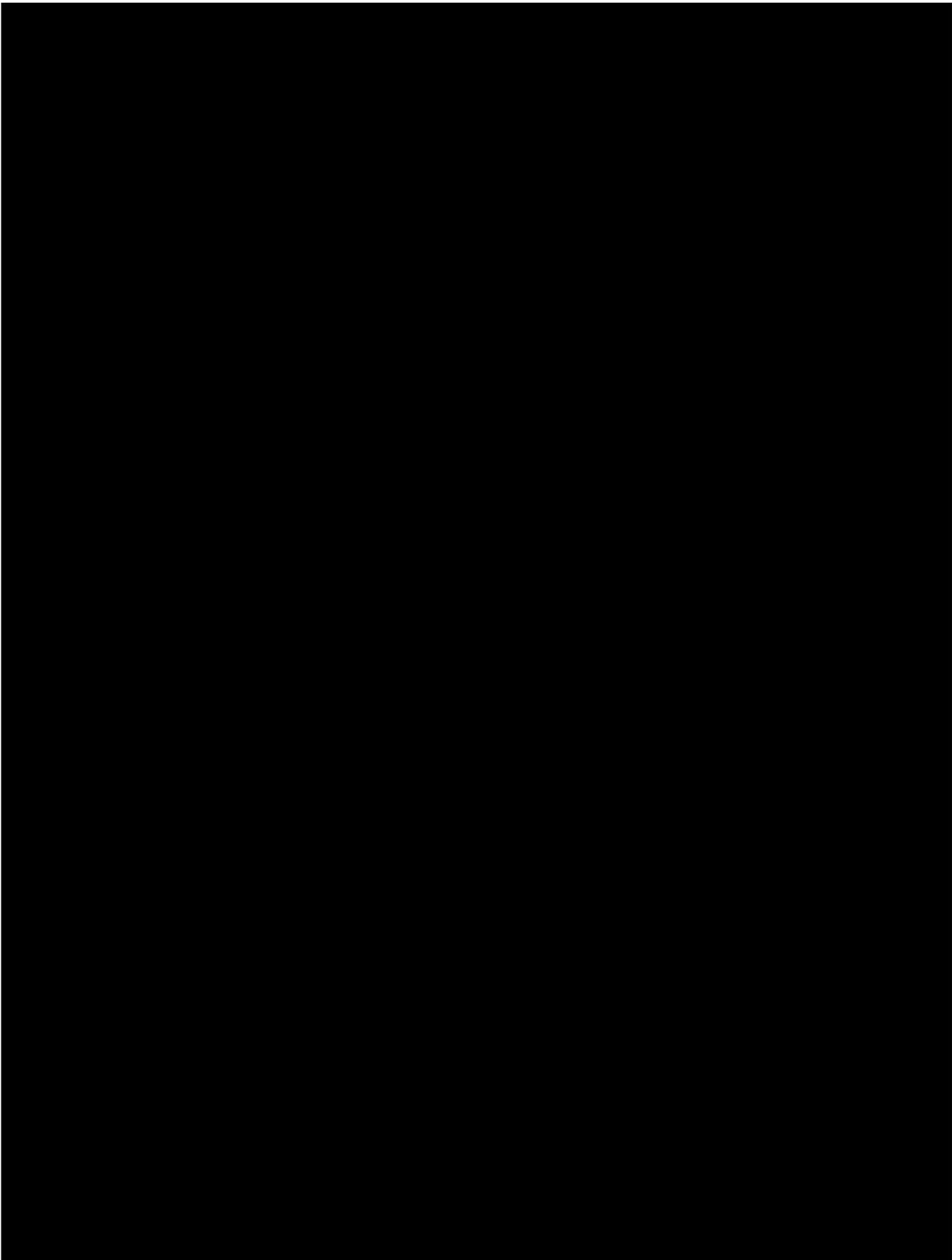


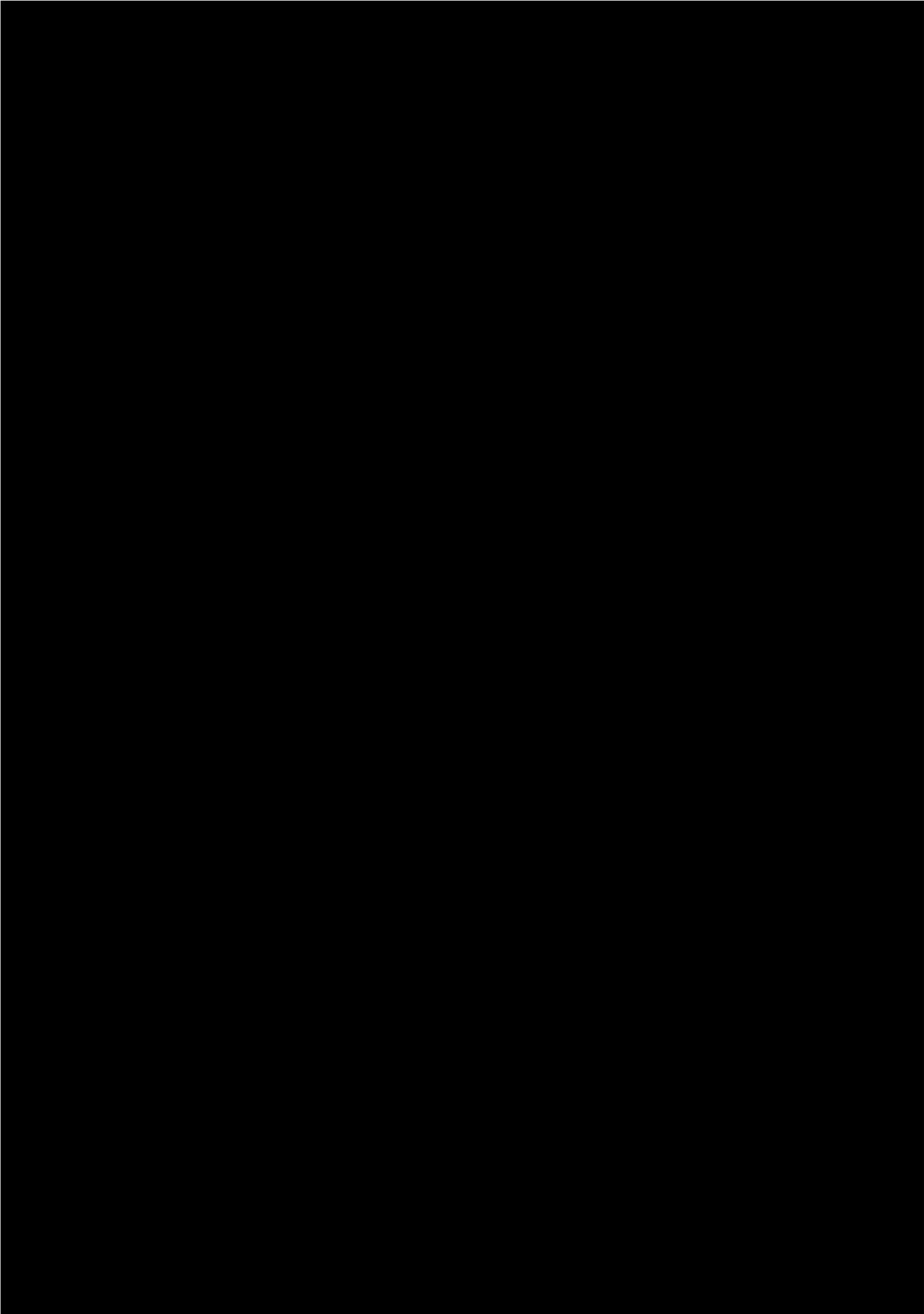


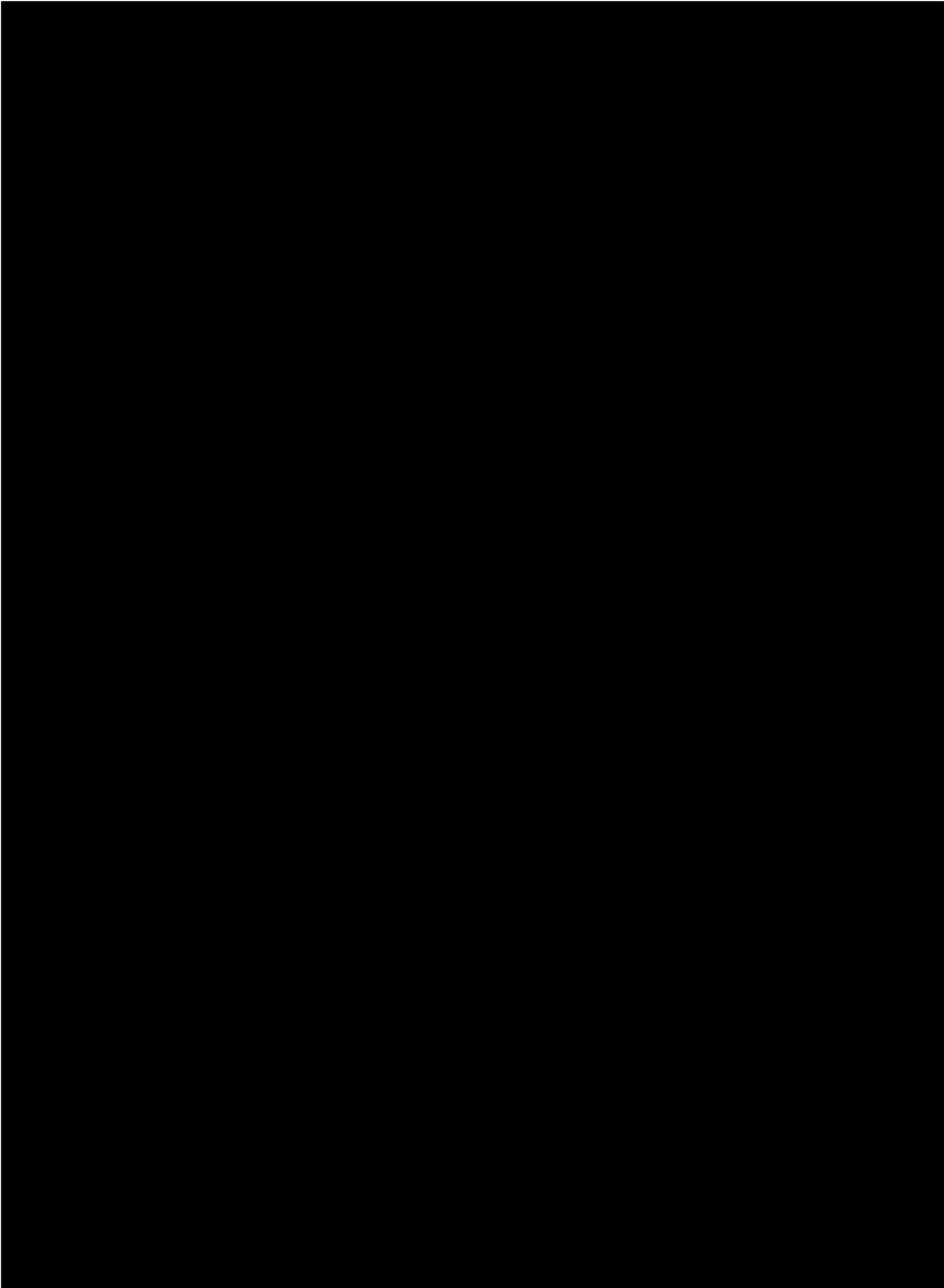


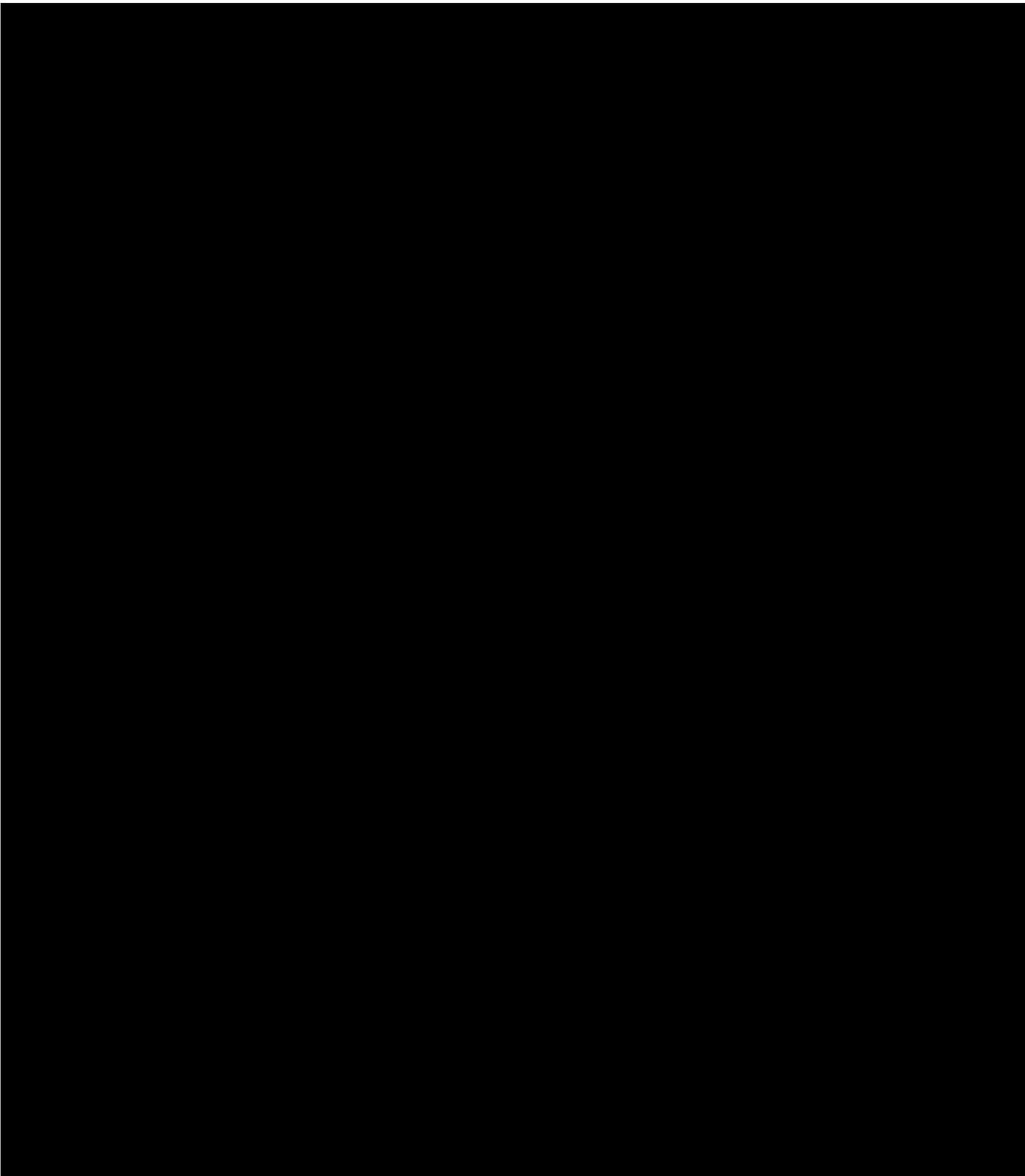


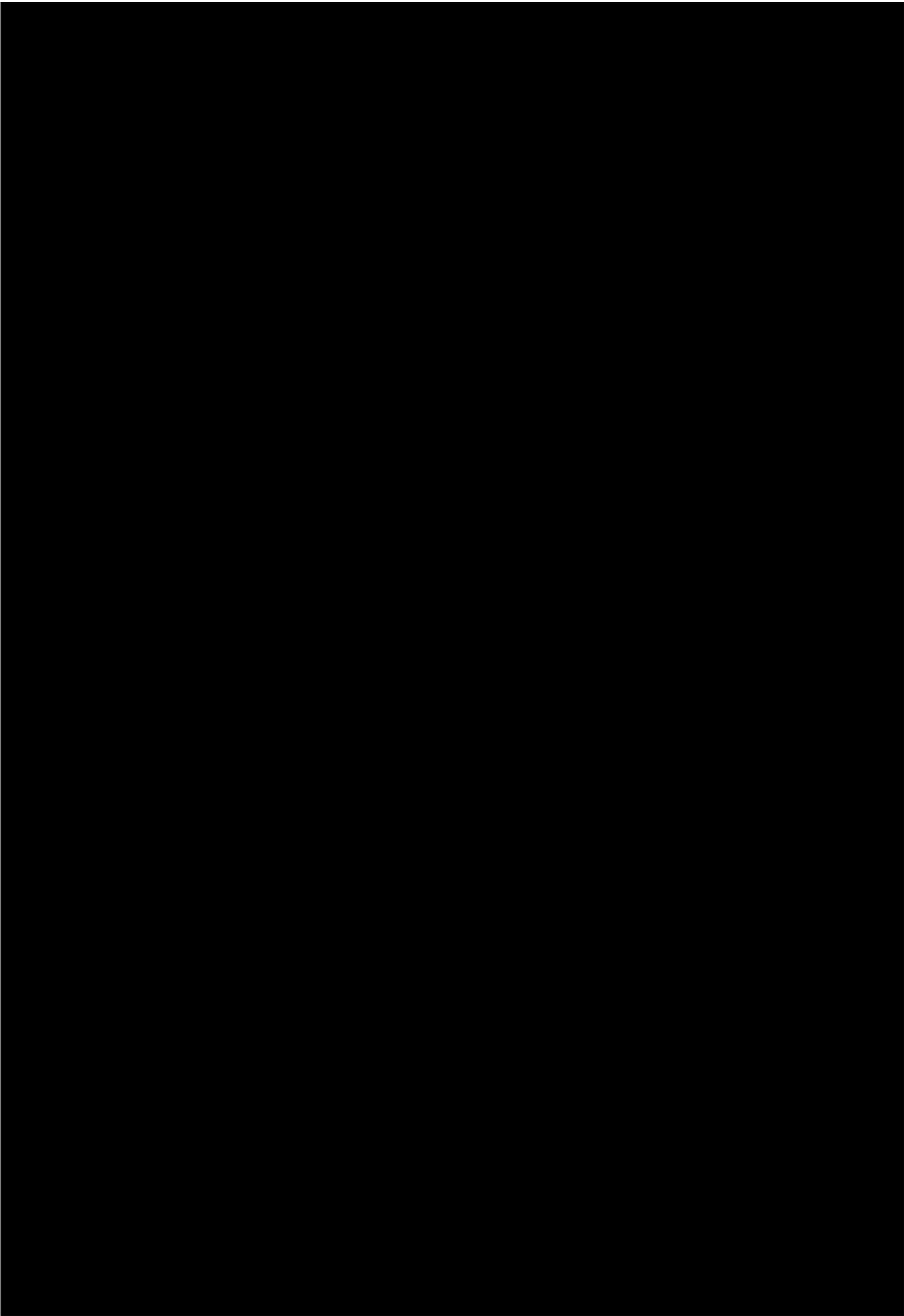




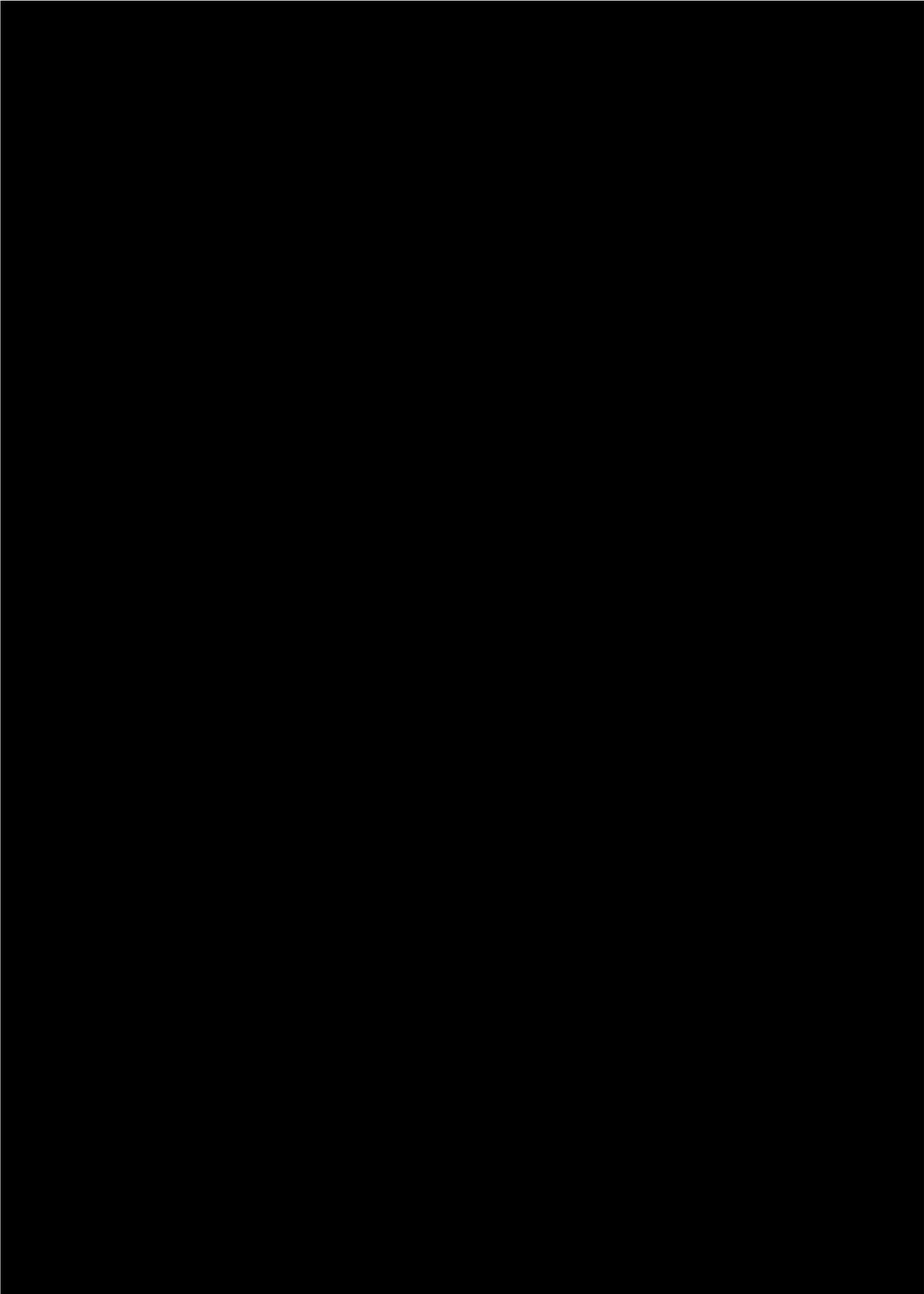


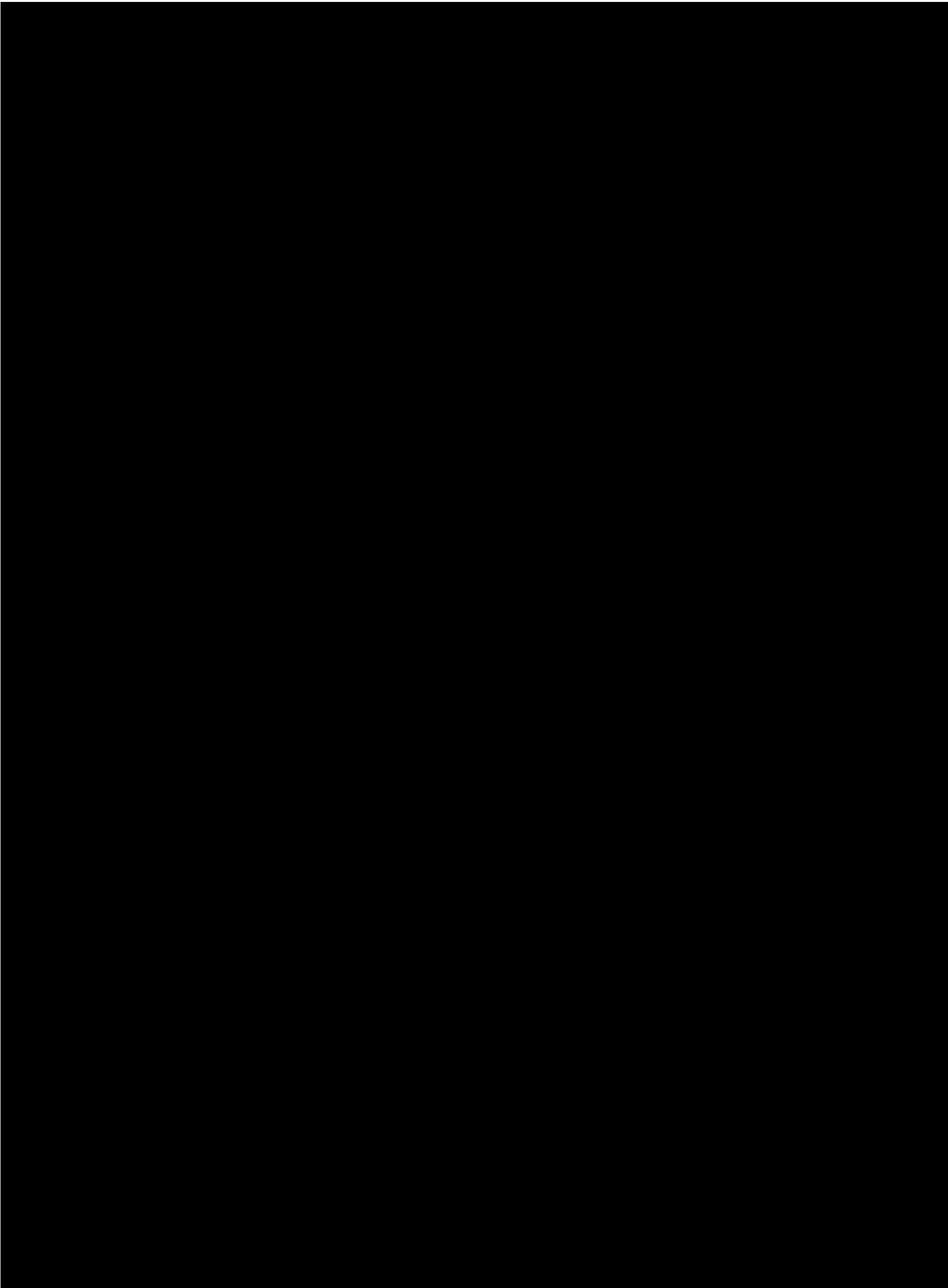


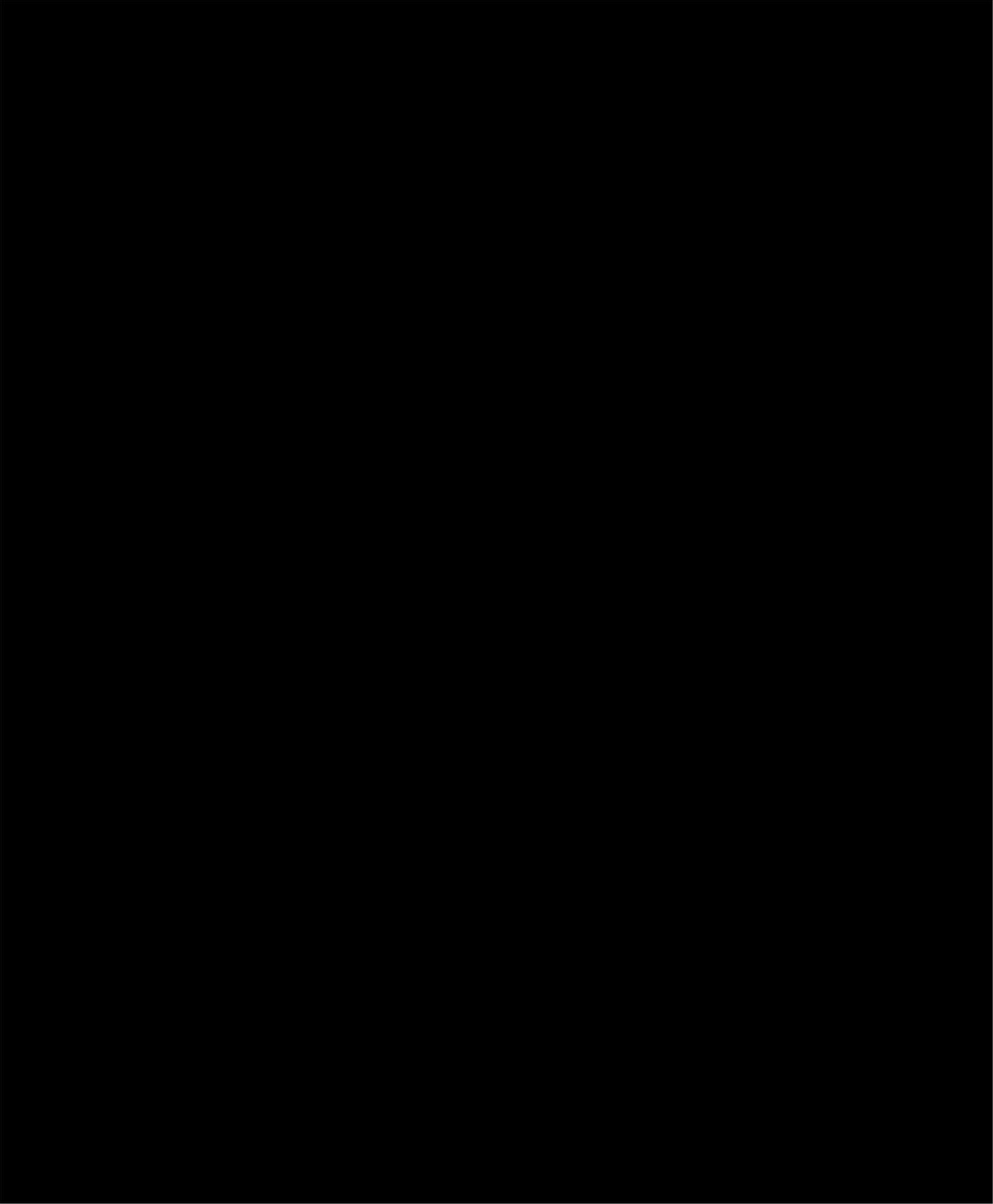


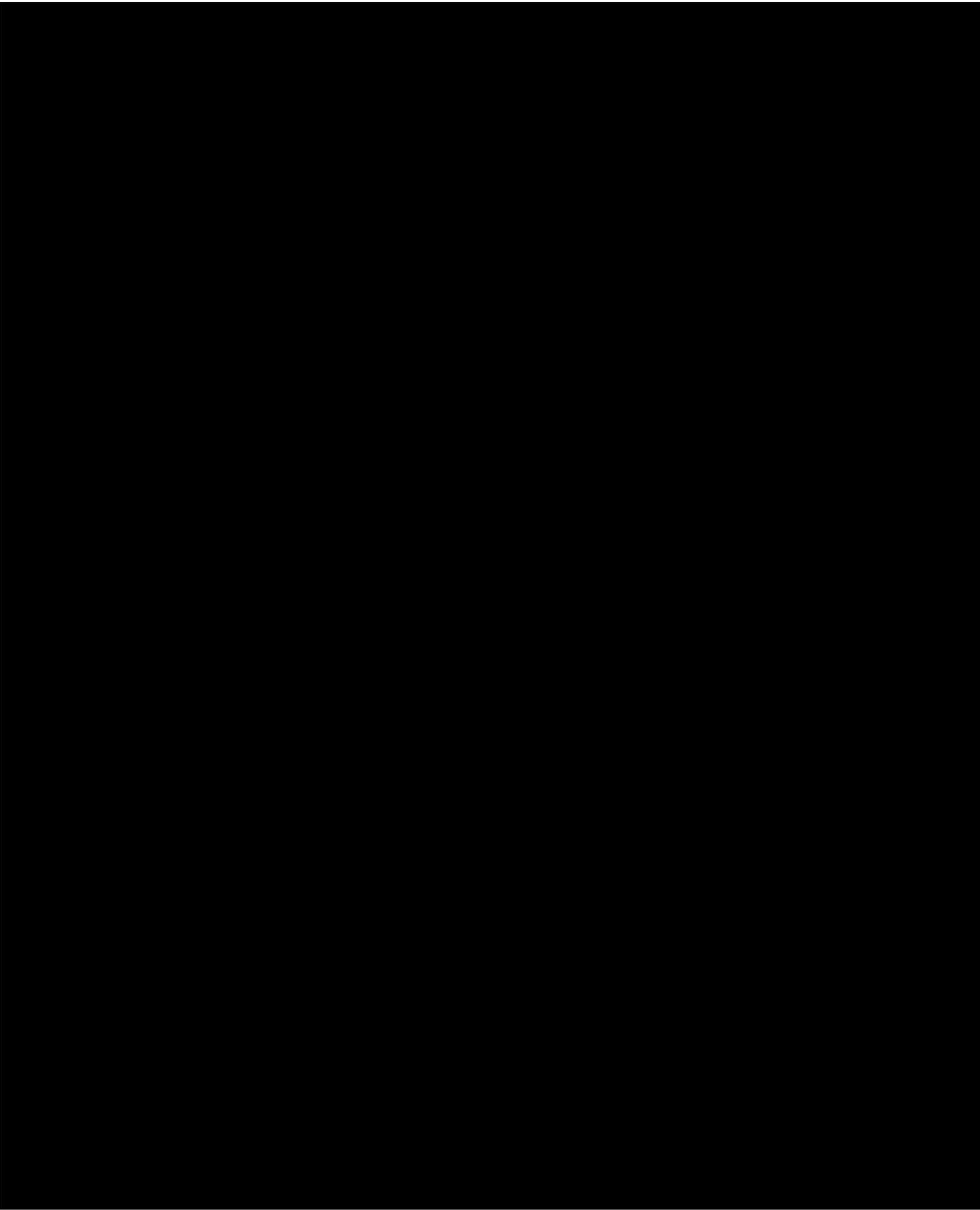


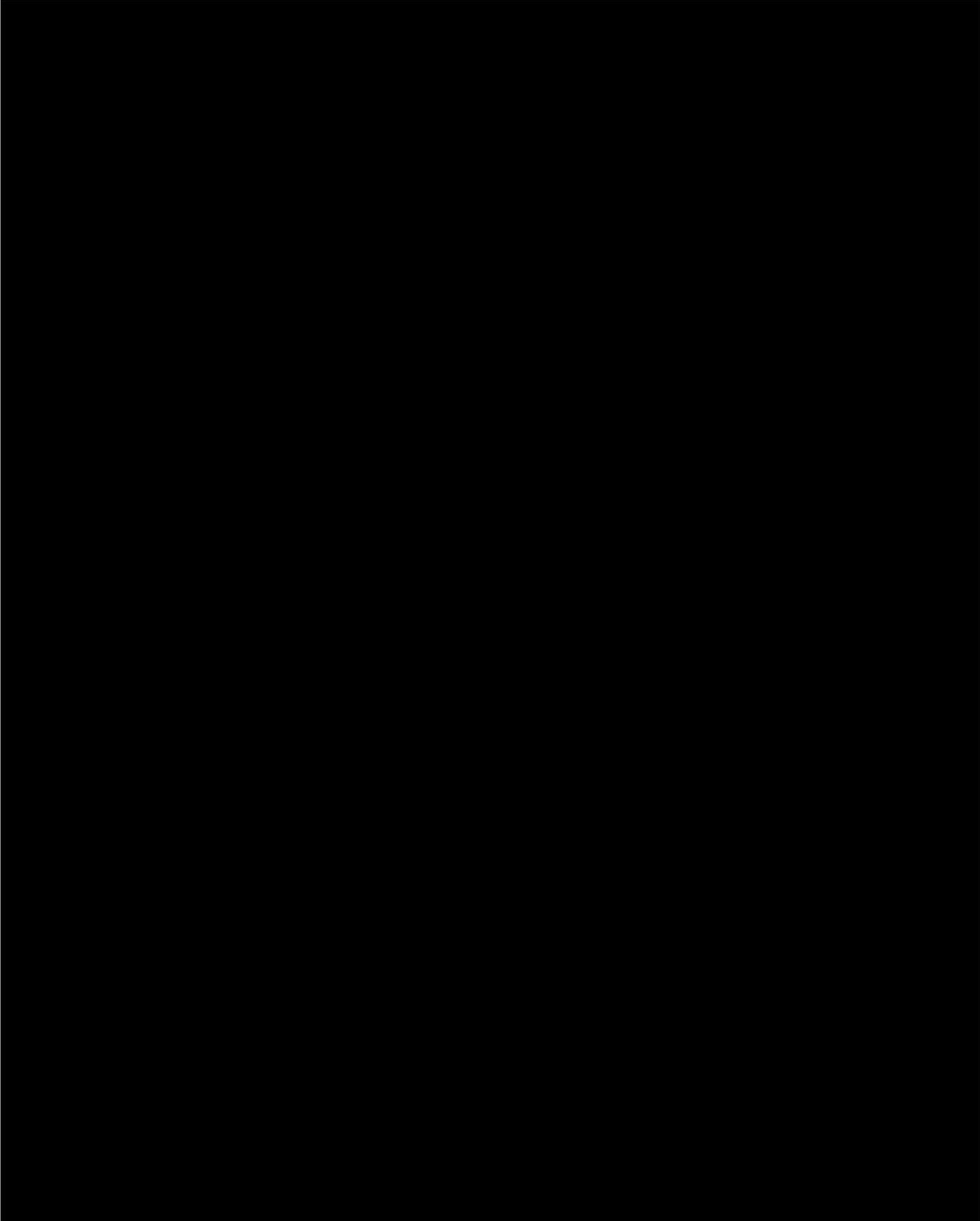


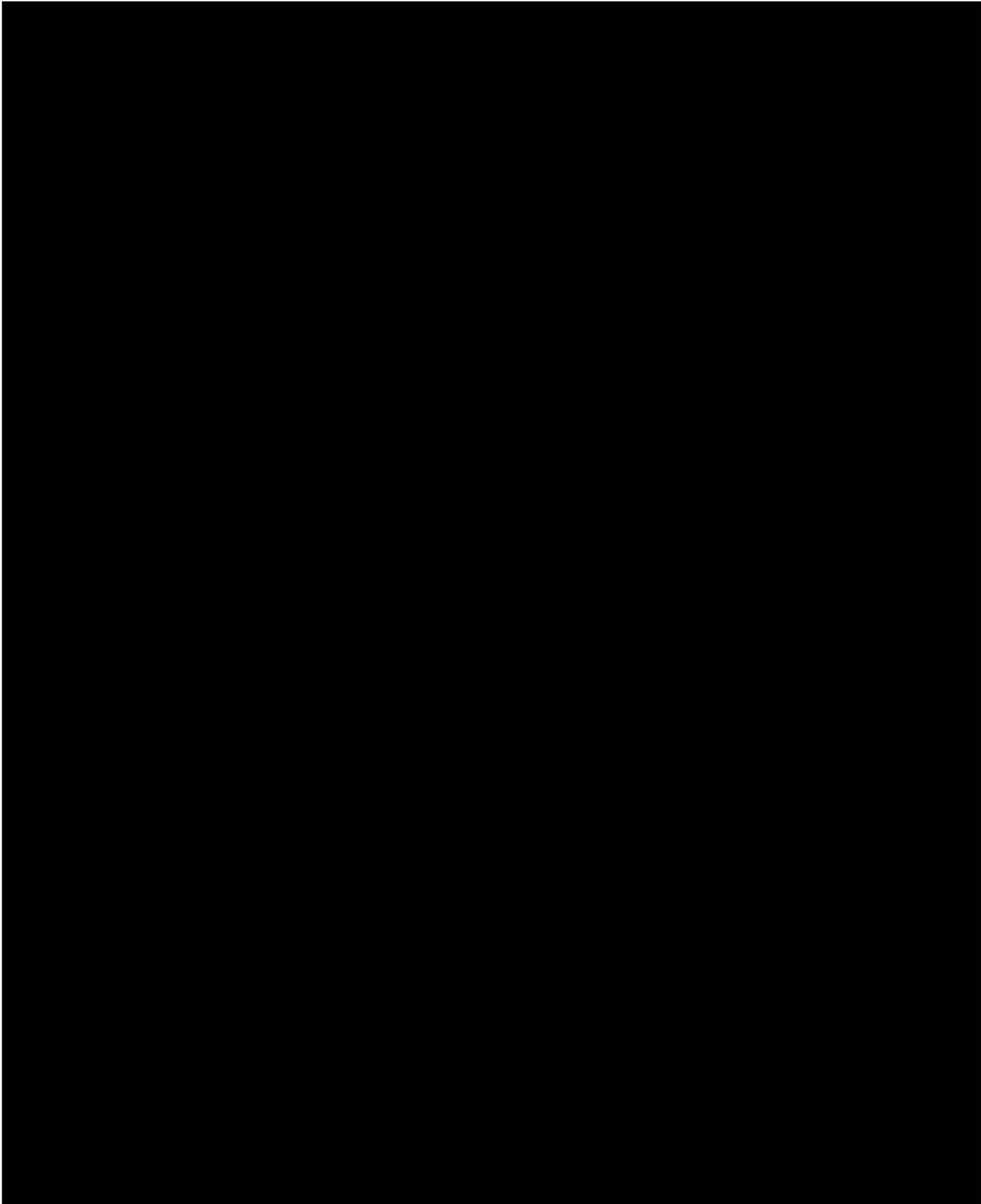


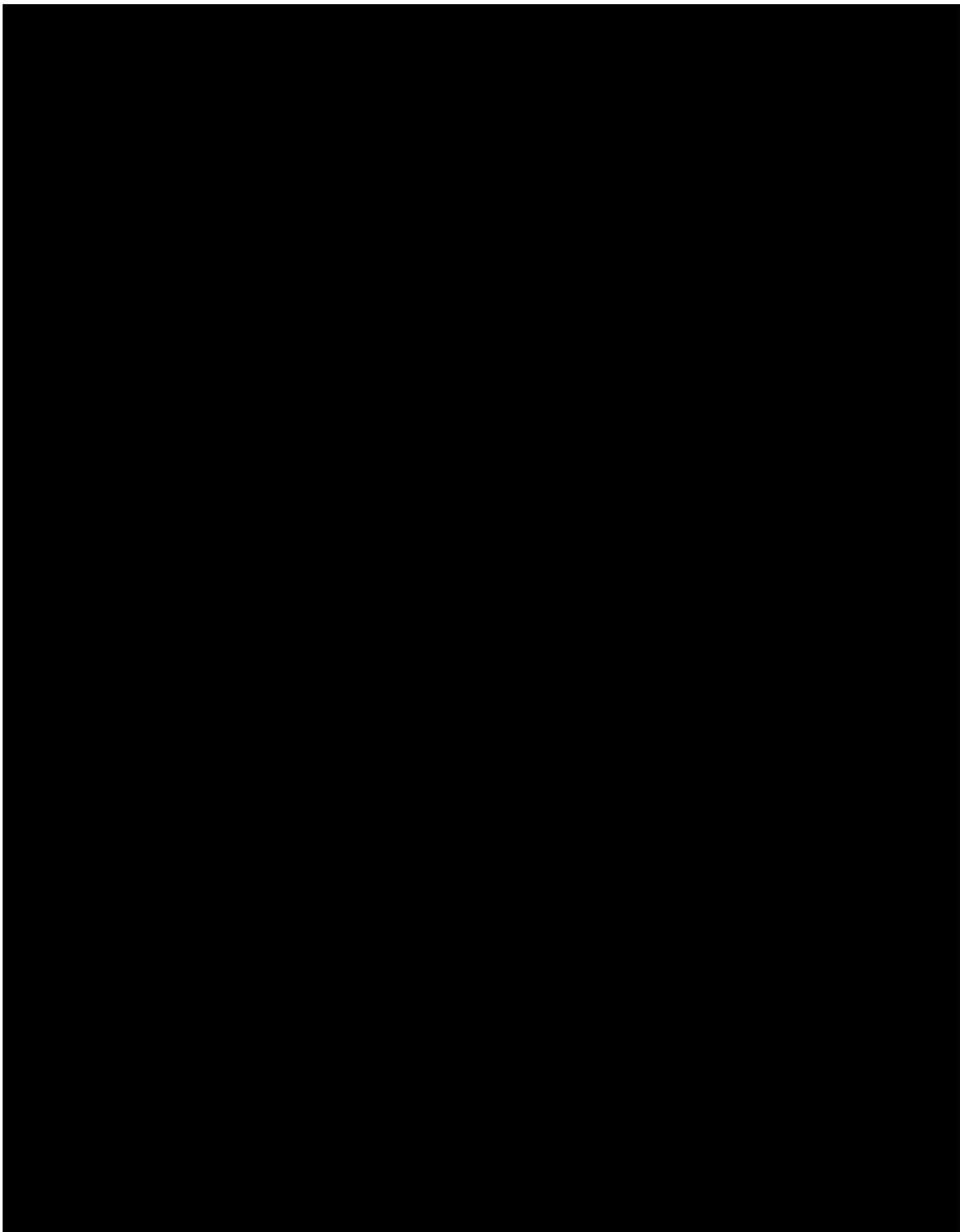


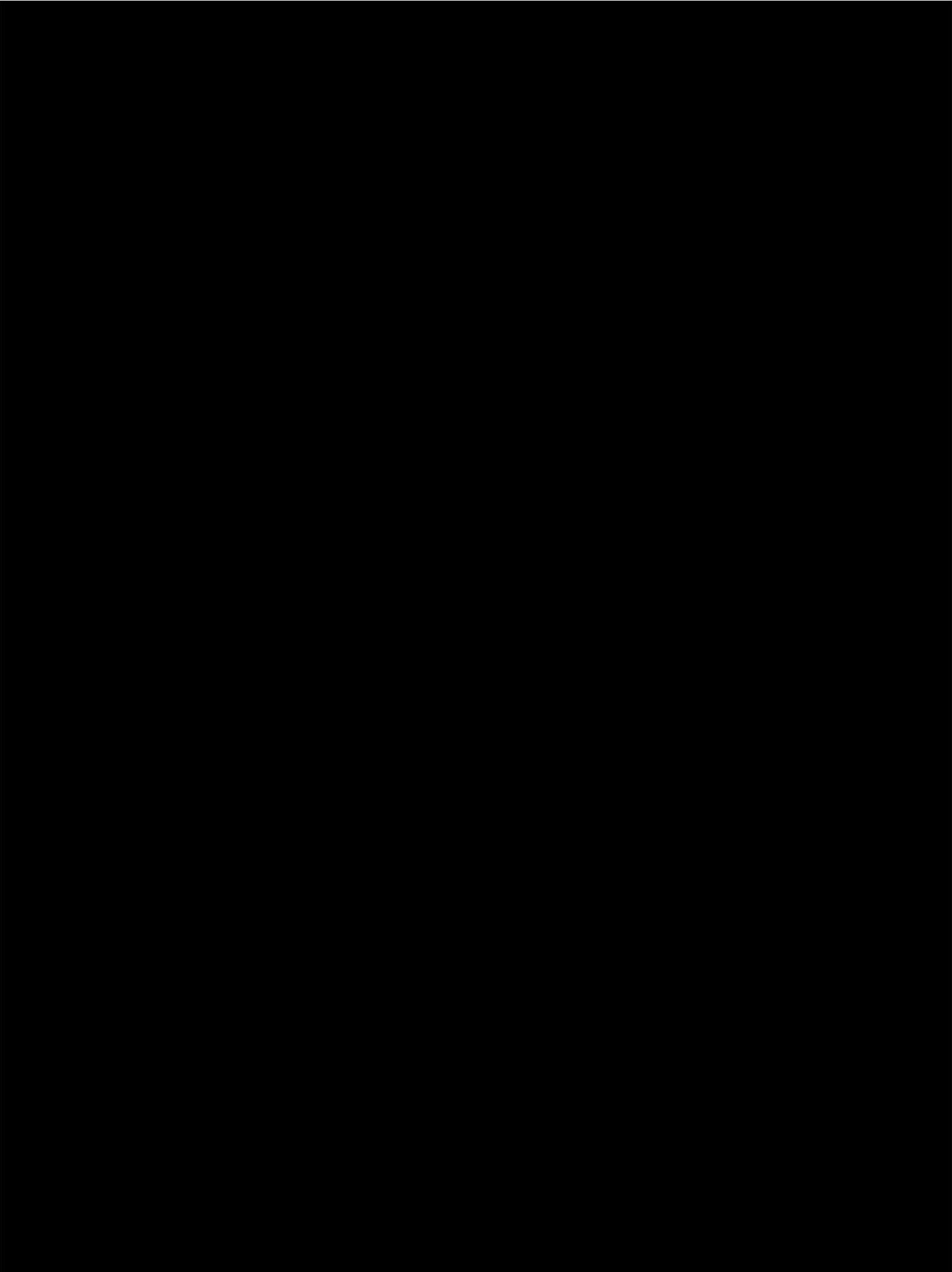


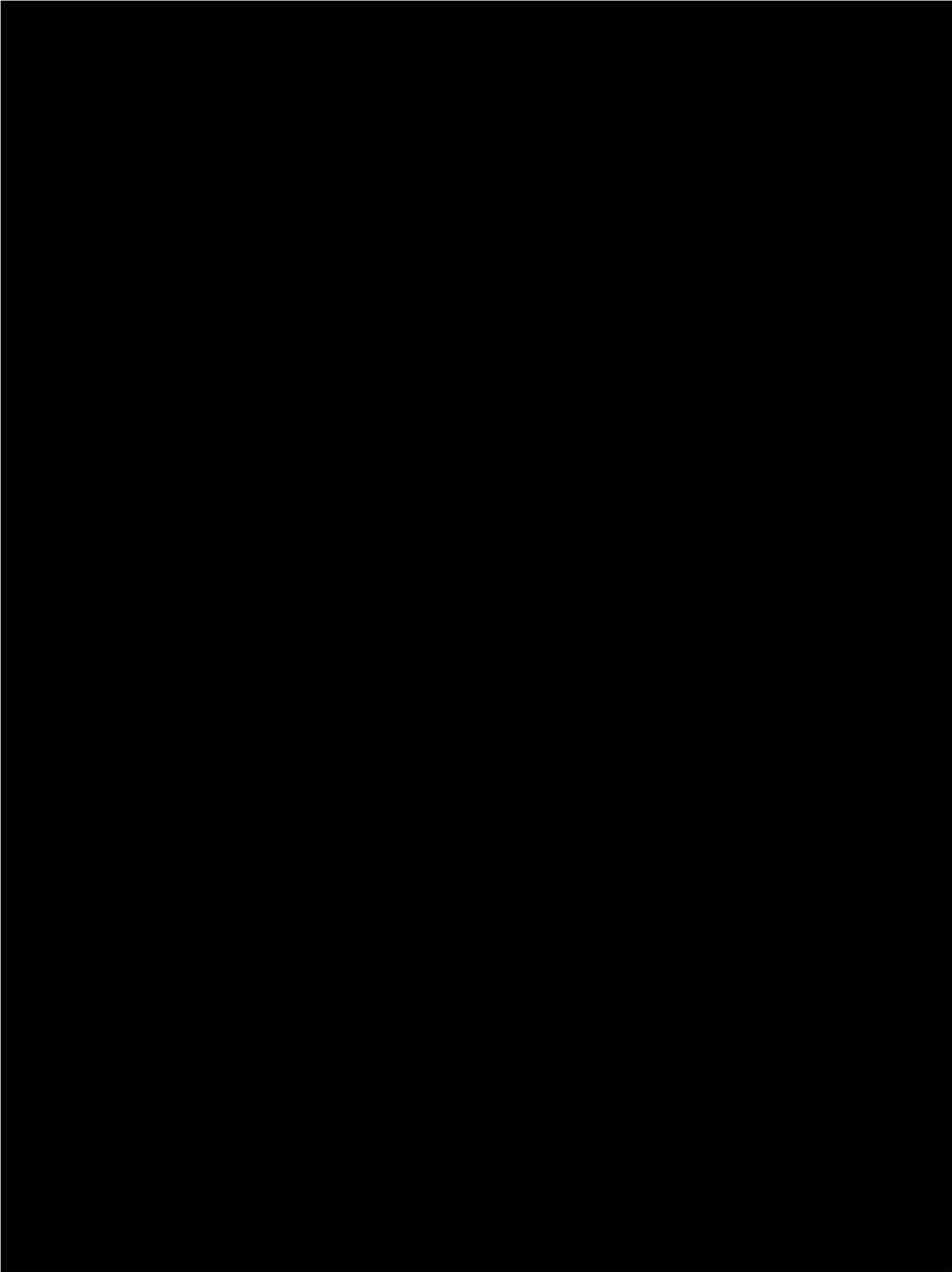


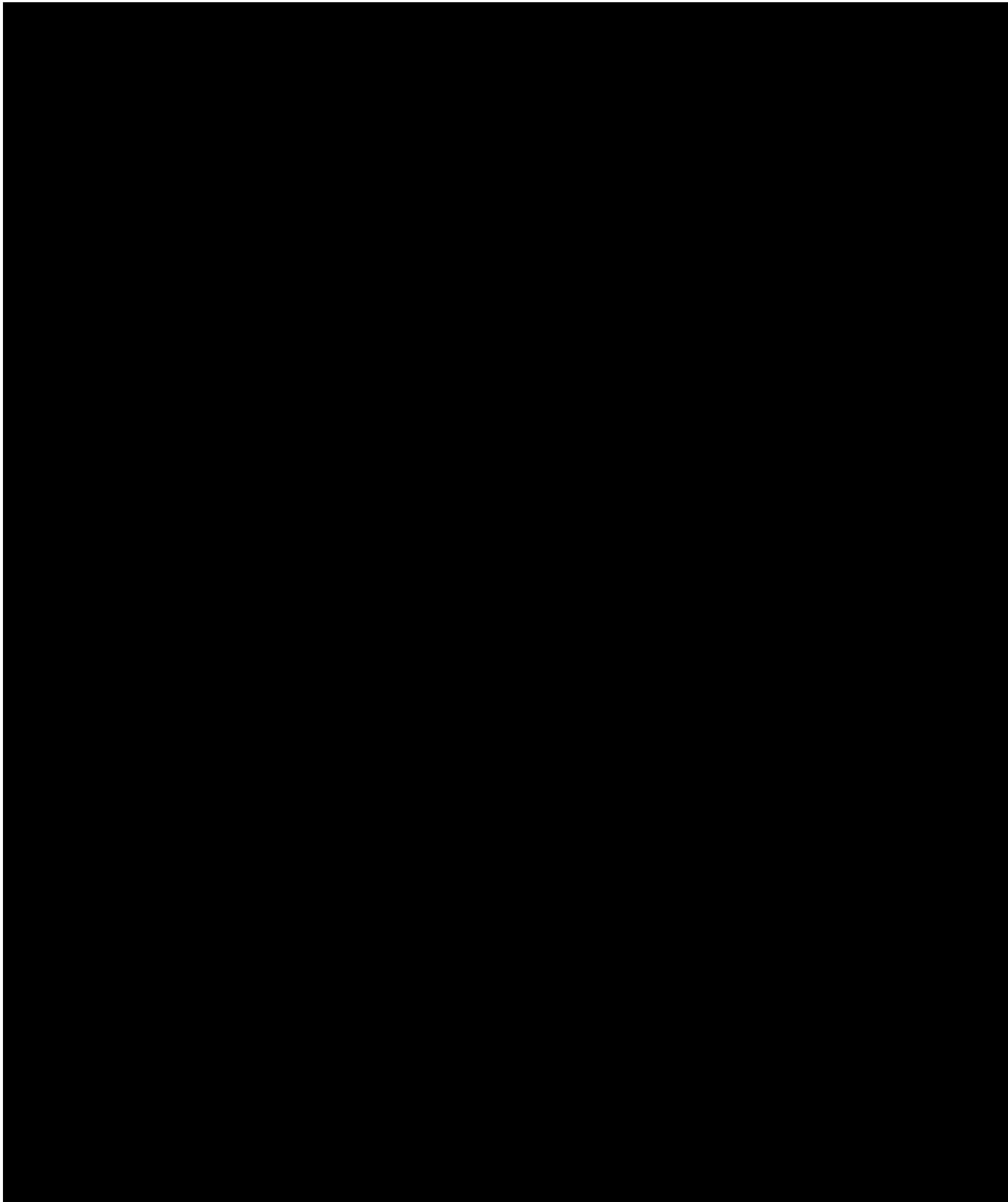


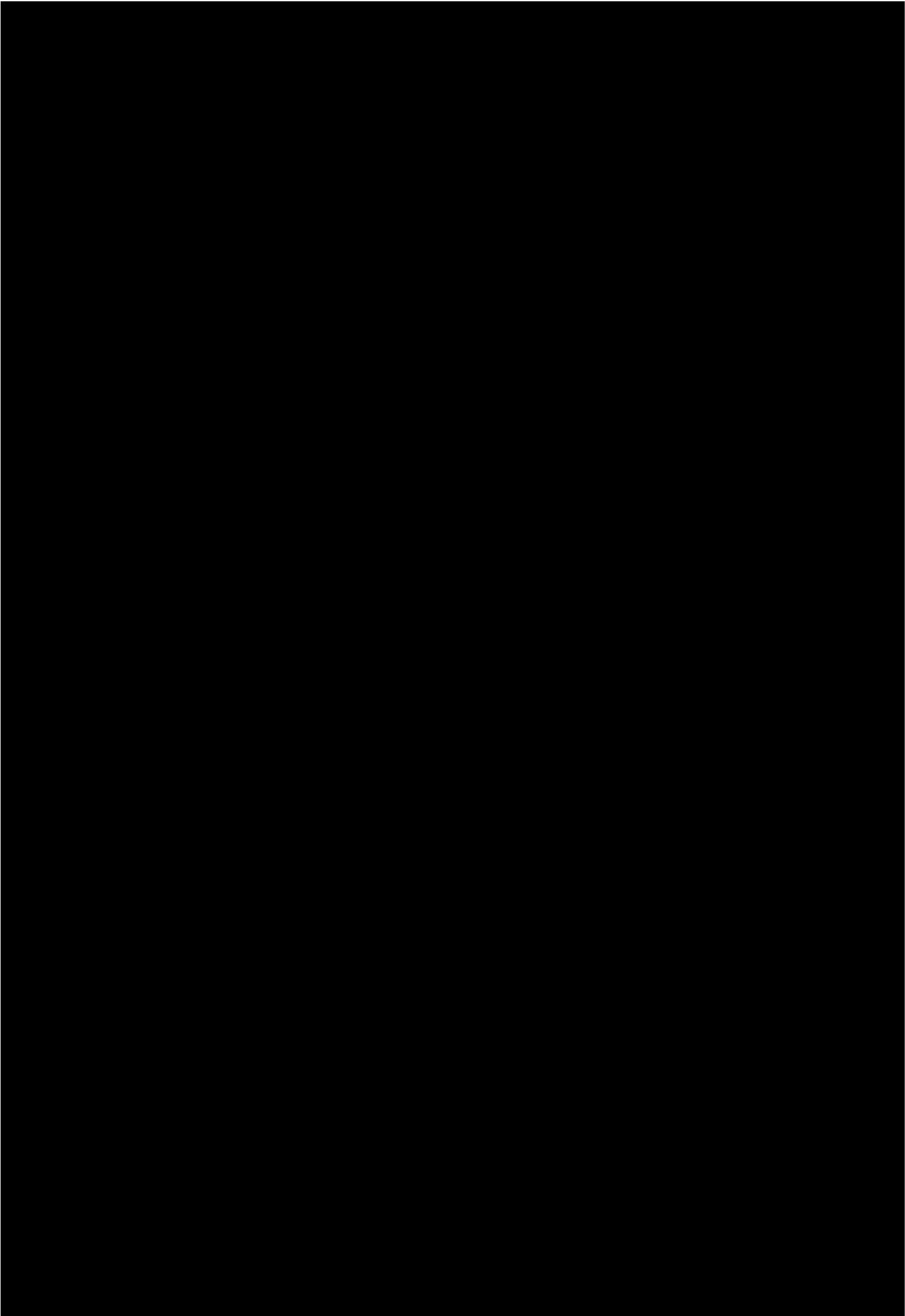


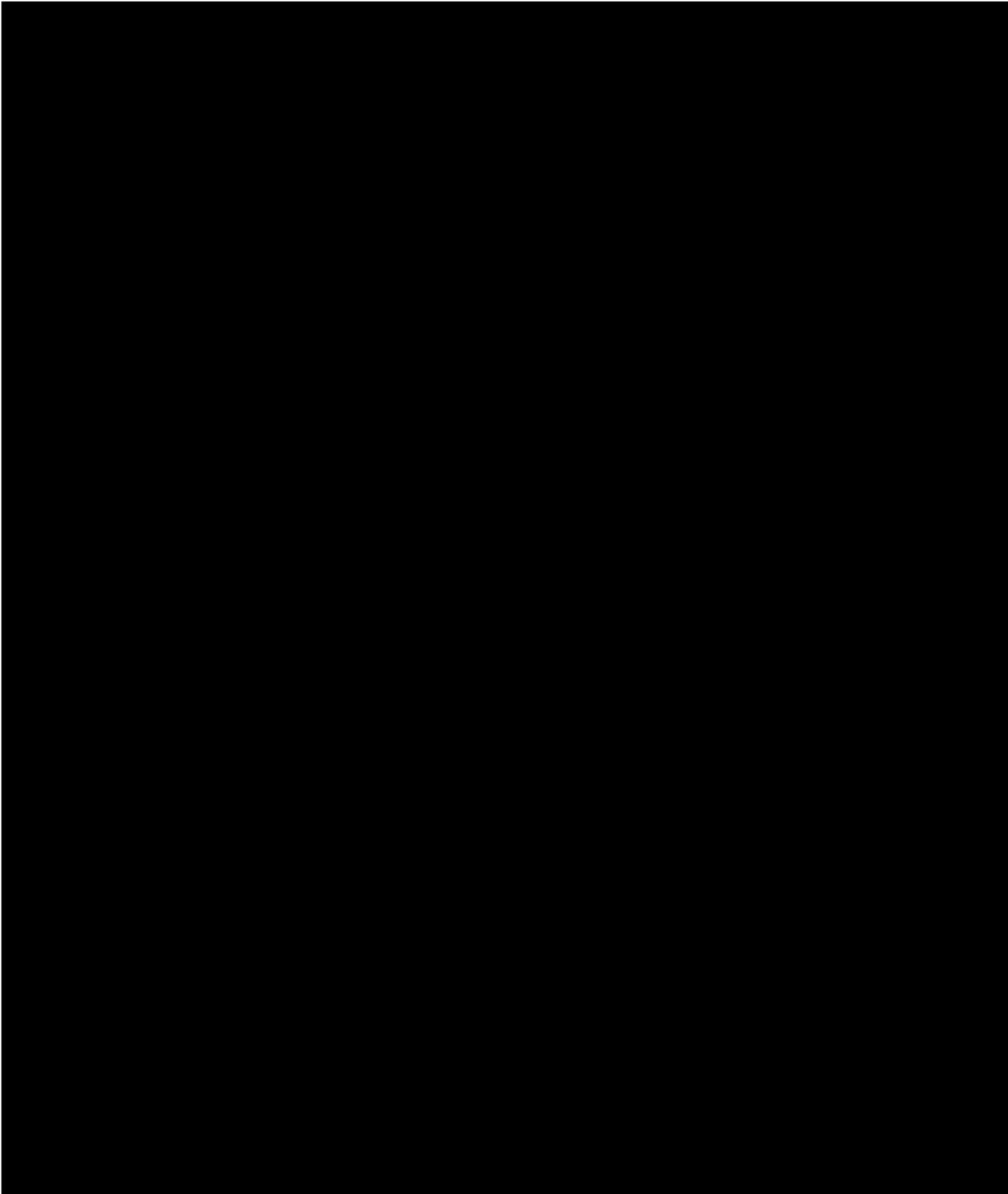




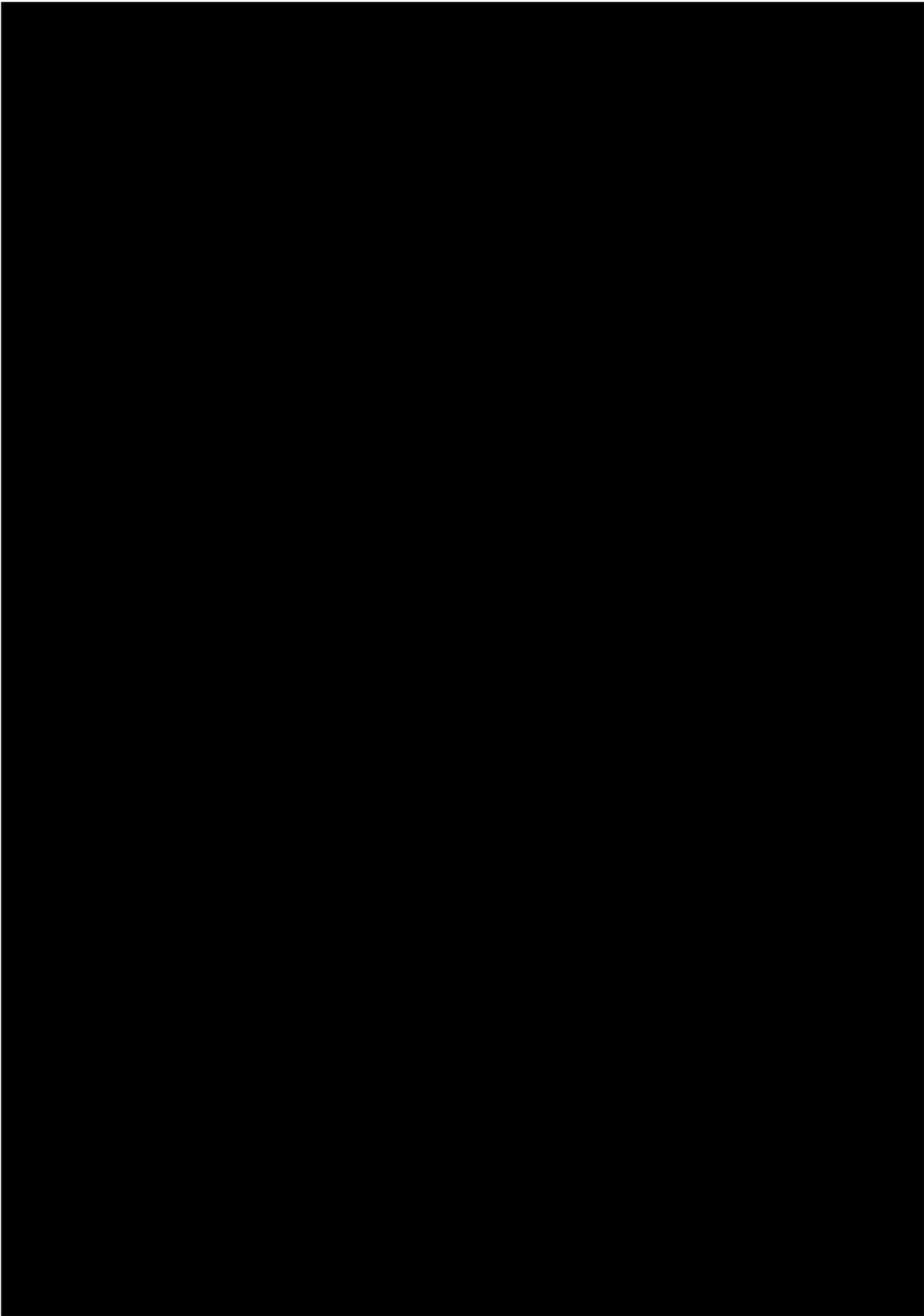












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SECTION D: SYSTEMATIC REVIEW

**THE EFFECTIVENESS OF EDUCATION
INTERVENTIONS BASED ON THE HEALTH
BELIEF MODEL TO IMPROVE HEALTH
BELIEFS, KNOWLEDGE AND
OSTEOPOROSIS PREVENTATIVE
BEHAVIOURS IN THOSE AGED 18-50**

