

Appendix A: Project Brief

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !



family name _____
initials _____ given name _____
student number _____
street & no. _____
zipcode & city _____
country _____
phone _____
email _____

Your master programme (only select the options that apply to you):

IDE master(s): ☐ IPD ☐ Dfl ☐ SPD

2nd non-IDE master: _____

individual programme: _____ - - _____ (give date of approval)

honours programme: ☐ _____

specialisation / annotation: ☐ _____

☐ _____

☐ _____

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair _____ dept. / section: _____

** mentor _____ dept. / section: _____

2nd mentor _____

organisation: _____

city: _____ country: _____

comments
(optional)

⋮

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair _____ date ____ - ____ - ____ signature _____

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: _____ EC

Of which, taking the conditional requirements into account, can be part of the exam programme _____ EC

List of electives obtained before the third semester without approval of the BoE

☐ YES all 1st year master courses passed

☐ NO missing 1st year master courses are:

name _____ date ____ - ____ - ____ signature _____

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: ☐ APPROVED ☐ NOT APPROVEDProcedure: ☐ APPROVED ☐ NOT APPROVED

comments

name _____ date ____ - ____ - ____ signature _____

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date - - - - end date

space available for images / figures on next page

introduction (continued): space for images

image / figure 1: _____

image / figure 2: _____

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date - - - - end date

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Appendix B: Interview Summaries

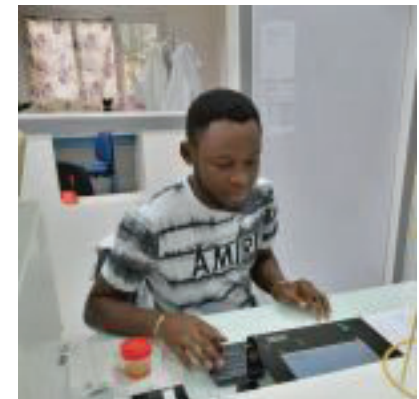
- Did sample preparation, microscopy, was present for sample collection
- Travel to field -> Sample collection -> Travel to lab -> Analyze
- On average 20 - 30 samples are collected and analyzed per day
- Various samples are collected for various tests. It is rarely only one type of sample collection/ testing, so isolating time for just stool sample collection is difficult
- Personnel are allotted depending on study size and availability
- Usually there is a sample prepper and a microscopist. Who does what is very fluid.



PROSPER OYIBO,
PhD Student, TUDelft

On field experience with
Kato Katz

- Extensive experience with Kato Katz – 1.5 years everyday
- Number of participants enrolled to give samples on a particular day makes a difference in work load
- With 2 microscopists, 30 sample analysis a day was good. 40 was too much
- A microscopist needs atleast 5 min to read a slide. 10 if EPG is greater
- Quality is more important than speed
- Usually microscopy is slower than sample prep
- Things to improve: quality and consistency, timing, reduce contact with stool on gloves



BRICE MEULAH,
PhD Student, LUMC

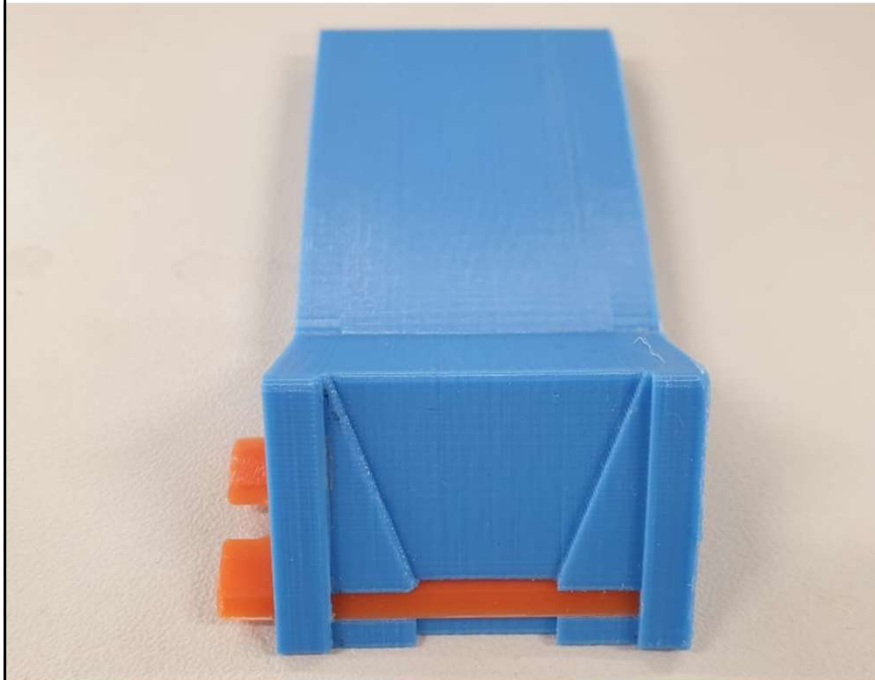
On field experience with
Kato Katz

SUMMARY

- Sample prep time is less important as microscopy usually takes longer
- Quality of the sample slide is much more important
- There are too many uncontrollable variables to improving overall speed - travel time, no. of participants, stool sample consistency
- Things that can be improved - sensitivity of Kato Katz, quality of sample, ease of use, less contact with stool

Appendix C: User Questionnaire

User Experience - The Scraper



1

What do you think of the assembly and disassembly of the scraper?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of holding the cellophane film on the glass slide while scraping?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of scraping the smear over the cellophane film?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

2

What do you think of smearing 100 mg of feces instead of the standard 41.7 mg?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of using a scraper to create a fecal smear instead of pressing?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of the scraper aligning itself with the glass slide?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of obtaining a consistent smear thickness every time?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

Overall, what do you think of using the scraper to create a kato katz smear?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



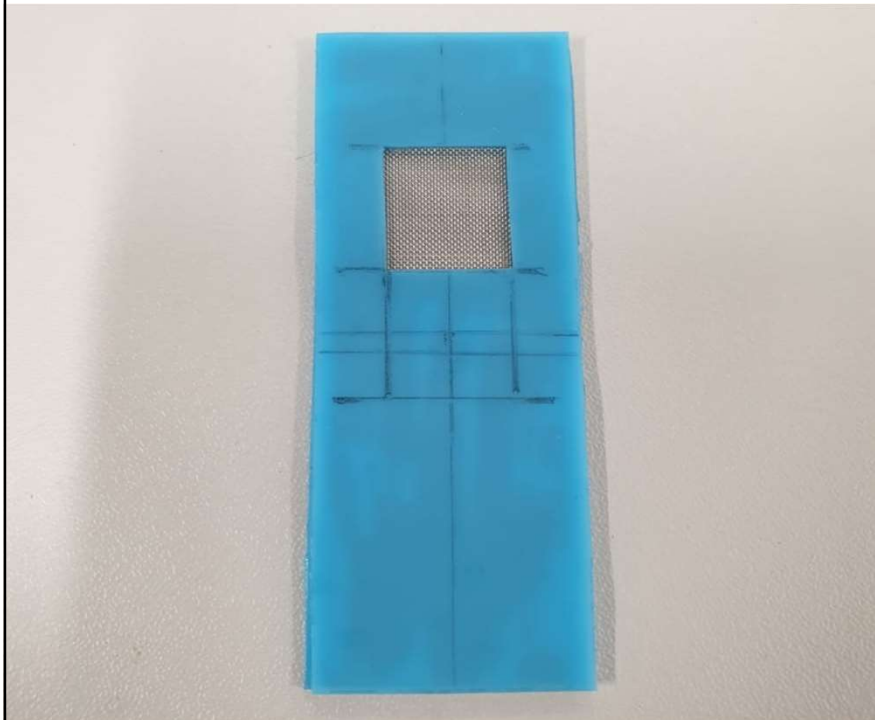
Desire
I love this!!

Reason:

Suggestions for Improvement:

Any other comments/ critiques/ thoughts? Please mention below:

User Experience - The Filter-Template



What do you think of aligning and holding down the filter template to the glass slide?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of filtering feces through the template mesh?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of obtaining a consistent amount of feces after each filtration?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of the dimensions of the filter-template hole in terms of ease of use?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of the shape of the filter-template hole in terms of ease of use?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of the number of times you must scrape the feces on the filter-template mesh to successfully fill the hole with 100 mg of feces?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

What do you think of the ease of cleaning and reusing the filter-template?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

Reason:

Suggestions for Improvement:

Overall, what do you think of using the filter-template to create a kato katz smear?



Disgust
I hate this!



Contempt
I don't like this!!



Boredom
Meh. Nothing New!



Hope
I like this!



Desire
I love this!!

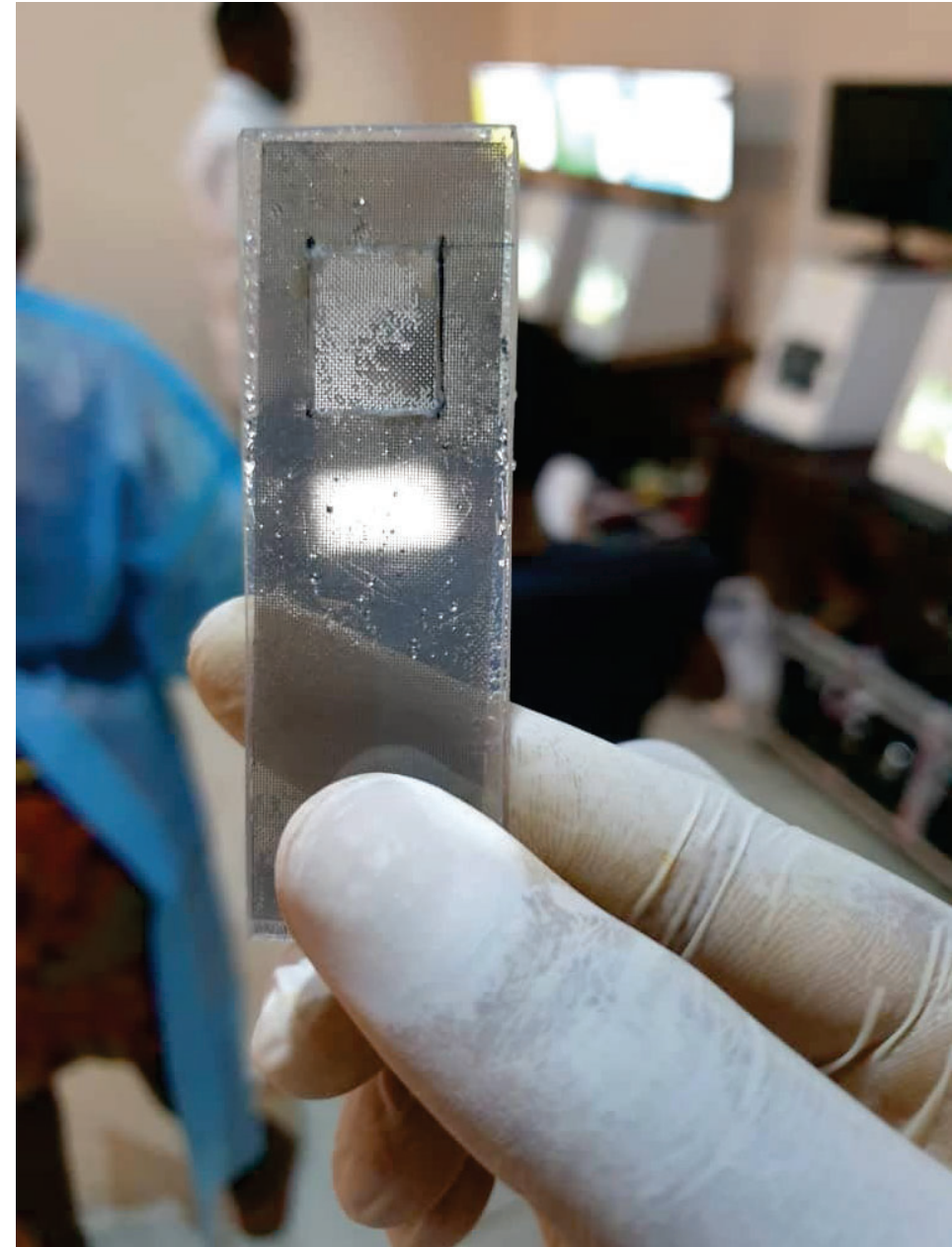
Reason:

Suggestions for Improvement:

Any other comments/ critiques/ thoughts? Please mention below:

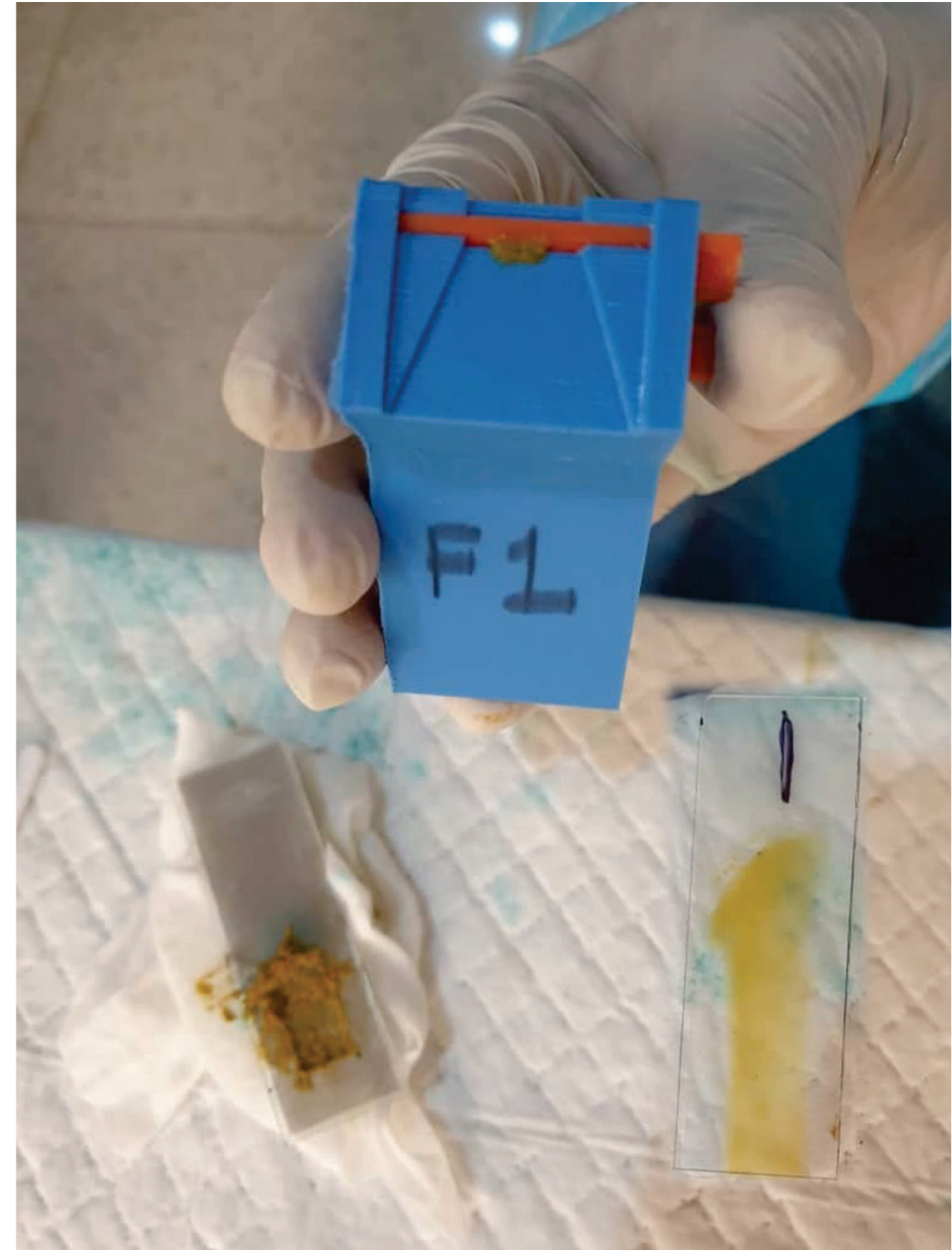
THE FILTER-TEMPLATE

- Filtering feces through the template was **difficult** as the area is too small, and it takes about 30 seconds of scraping the feces through the mesh. It was a **bad experience**.
 - Possible solution - remove top layer of plastic.
- Cleaning the template is difficult as particles of feces remain in the corners of the rectangular profile
 - Possible solution - circular hole



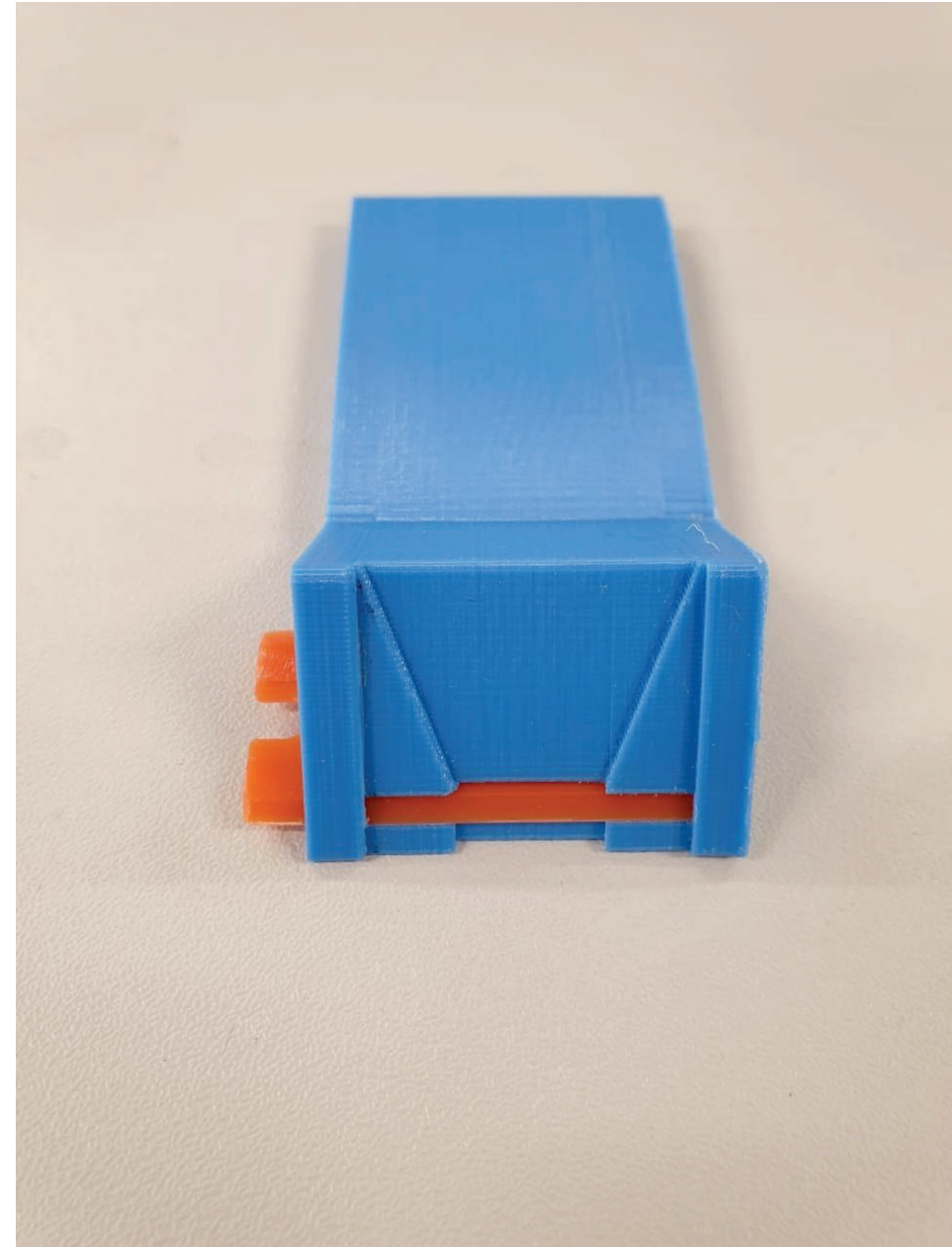
THE SCRAPER

- **Not intuitive.** Technician could not figure out how it worked
- **100 mg is too much** for one slide. Spills over the slide and sticks to scraper
- Scraping might break the eggs (opinion only)
- **Self aligning** to slide is **good**
- Does **not** create a **transparent enough** film, and is also **not** of **consistent thickness**
- One technician said **pressing maybe better** as it spreads the sample evenly



POSSIBLE SOLUTIONS FOR SCRAPER

- Increase to 3 duplicate slides of KK instead of 2. This will decrease feces sample to 66.66 mg per slide
- Decrease distance between razor and slide
- Test to see if scraping breaks the eggs. If yes, go to pressing methods
- Create reliable sliding mechanism to maintain constant gap between razor and slide



Appendix D: User Feedback Notes

- | | |
|--|--|
| 1
The scraper should be refer to as spreader and it is not good enough because it spread beyond the line.
It is not given a thin and even spread | 6. D Hope
7. It is not consistent light can hardly pass through thick feces smear
8. Contempt
Kato-katz is better. |
| 2 Contempt | |
| 3 Contempt | |
| 4. Contempt
The quantity of stool is too much. Some portion of the stool will go outside the slide | |
| 5. Pressing will be better because it spread the stool evenly | |

- | | |
|--|---|
| 1 Hope
Innovative idea | Hope
It can be better |
| 2 Desire
It makes the slide comes out well | Boredom
Same as the one used before |
| 3- Disgust | Disgust
It can break the egg
Some part of the stool comes out |
| 4. Contempt
Quantity of the smear is too much | Contempt |
| 5. Disgust
It can also break the egg. It | Disgust
It won't spread very well |

- | | |
|--|---|
| 6. Hope | Desire
The specimen spread across the slide glass slide |
| 7 Hope | Hope |
| 8 Hope
It's a bit faster
The scraper needs more in | Hope |