Cultivated Heritage

An exploration into growing plants in vitro

A project by Candyce Dryburgh

platform to explore futures

plants

organisms

growing things

mycelium

food

wealth

indipendence

cultured ingredients

fermentation

waste

materials

Bio Art/ Design

ME &

Bio tech

yeast

health

Synthetic Biology

engineering nature

microbiome

DIY

teach

explore

activism

in the home

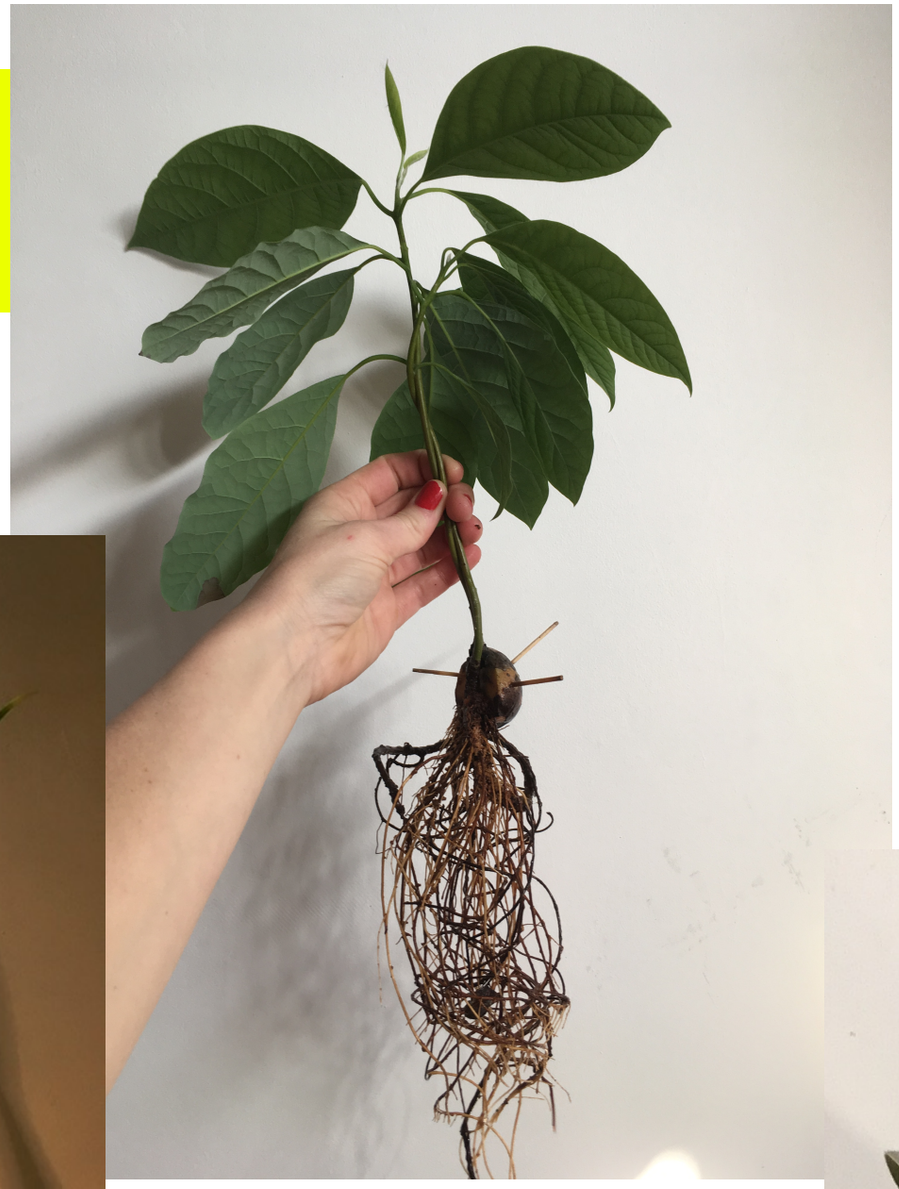
part of the home

health & wellbeing

whats the point?

PLANTS

I like to grow things



Asimina triloba / *Pawpaw*

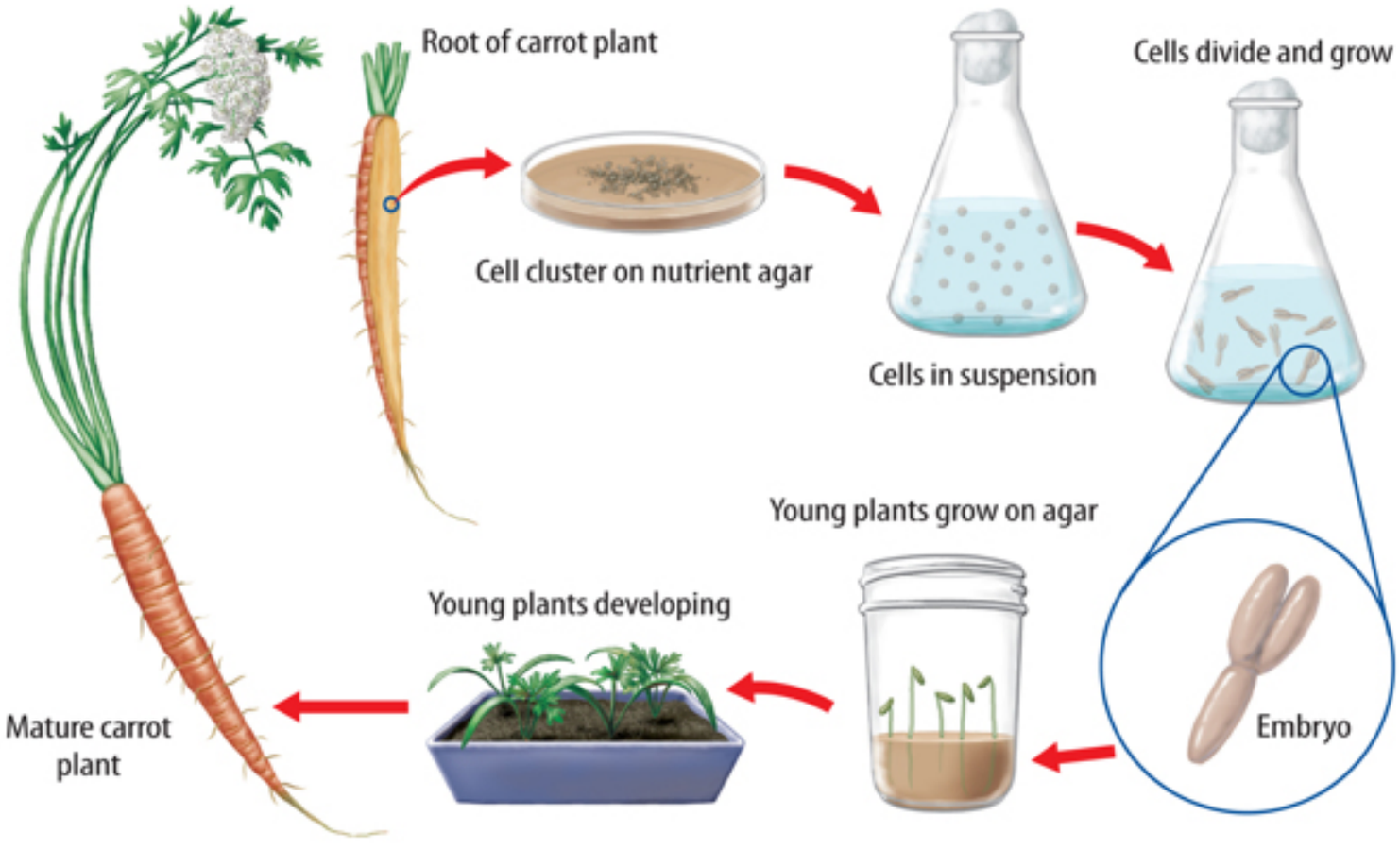
Brunfelsia pauciflora / *Yesterday; Today; Tomorrow*

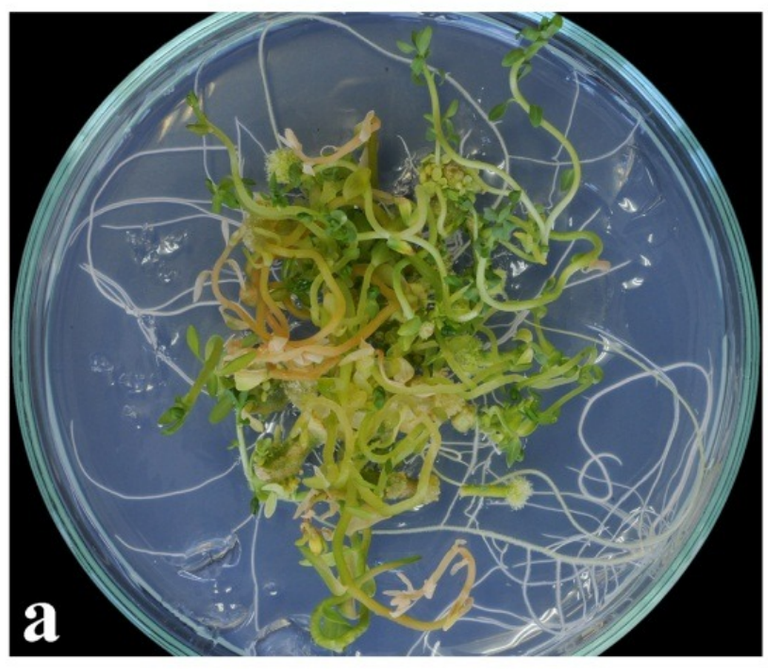
Cultivated Heritage

Specimen from my past / present / future

PLANT TISSUE CULTURE

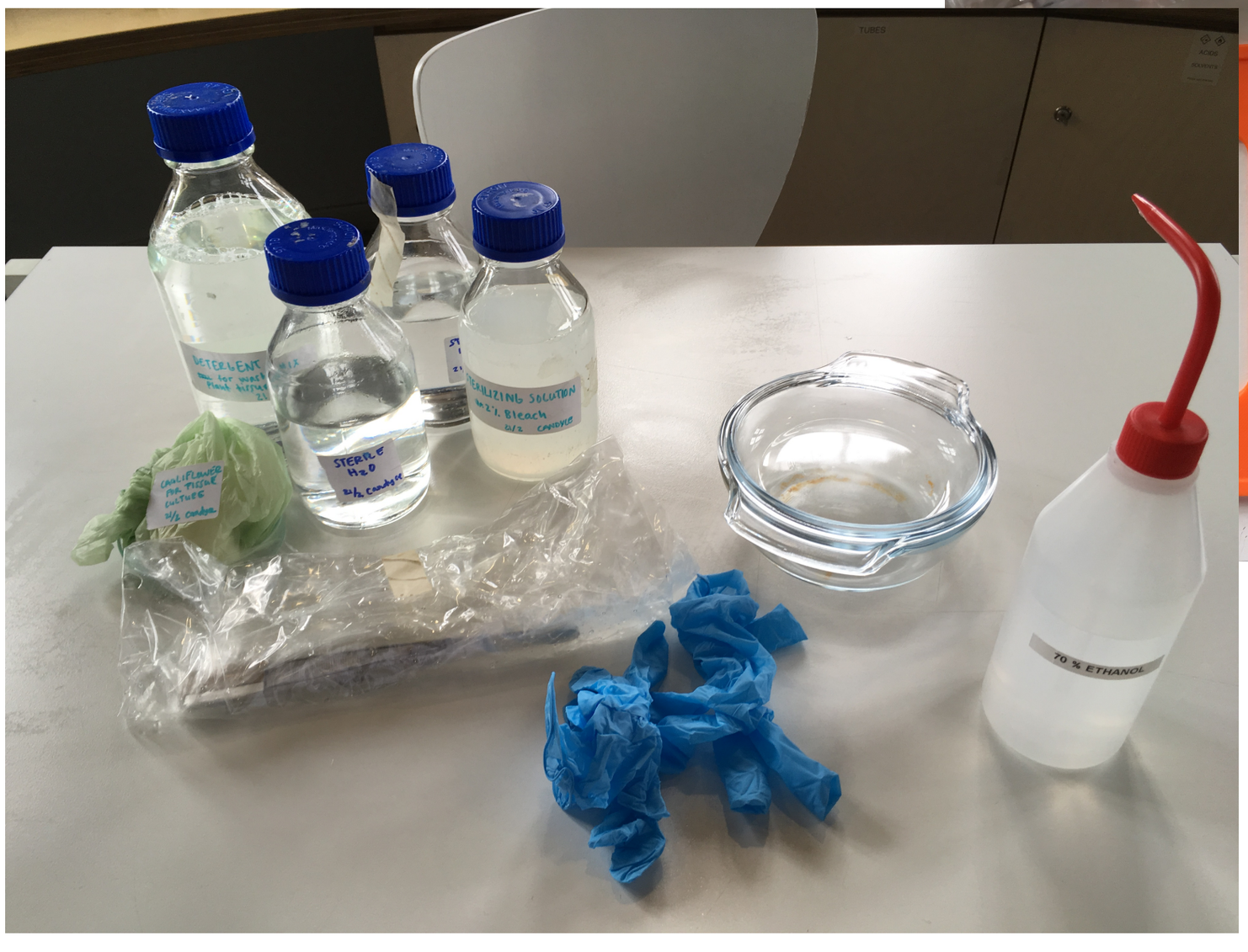
a method to propagate plants

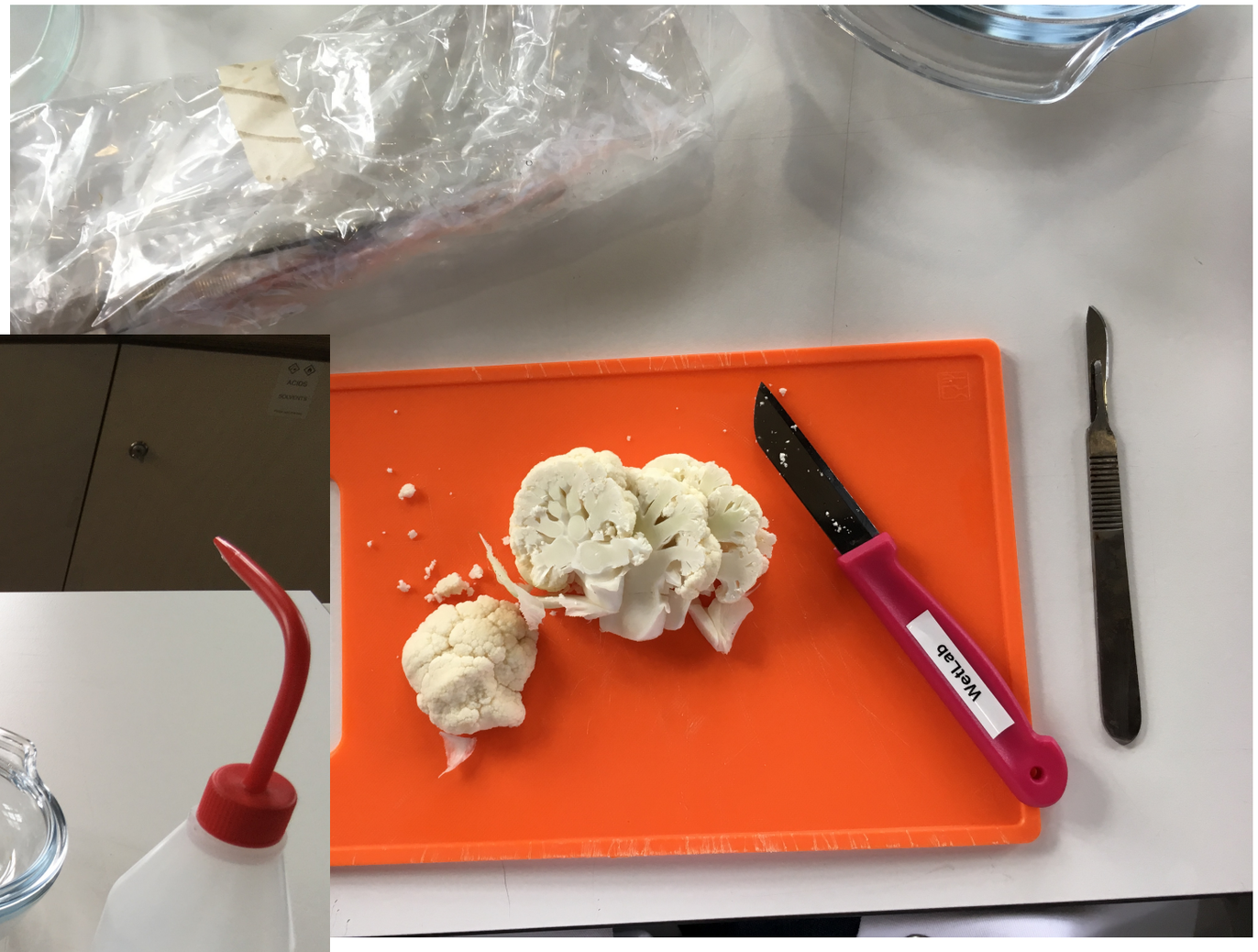


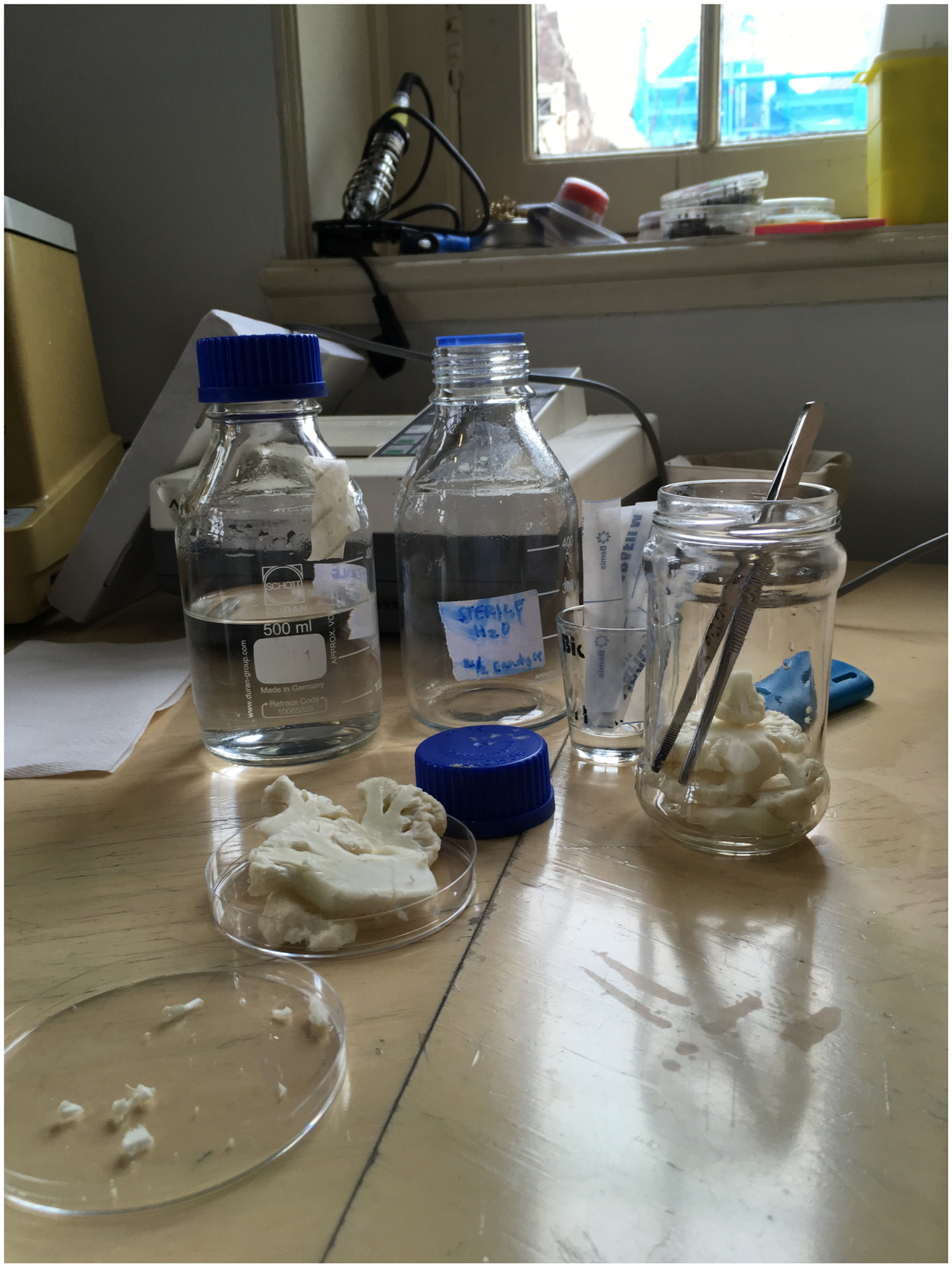


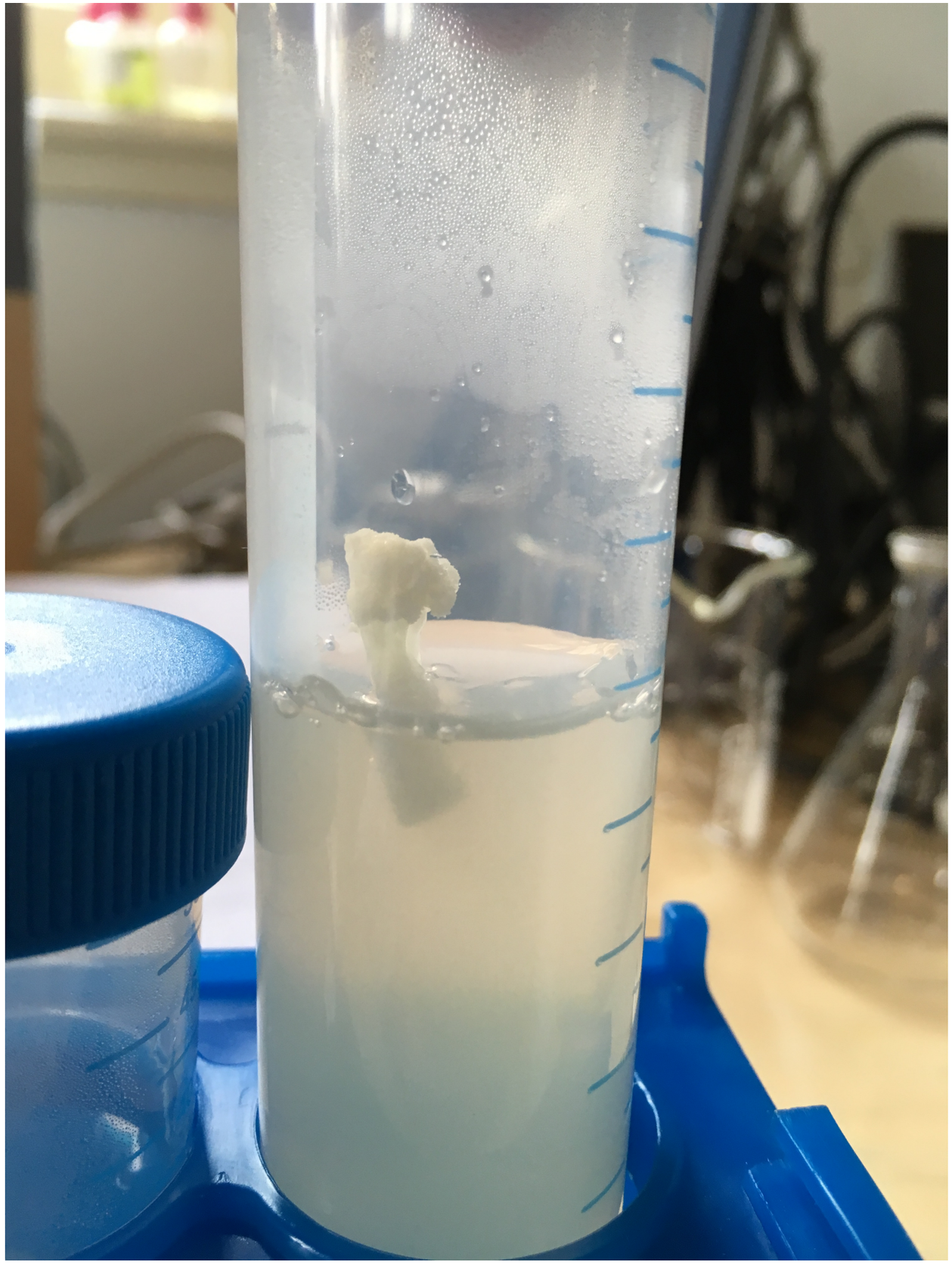
CREATING MY CULTURES

plant tissue at WAAG





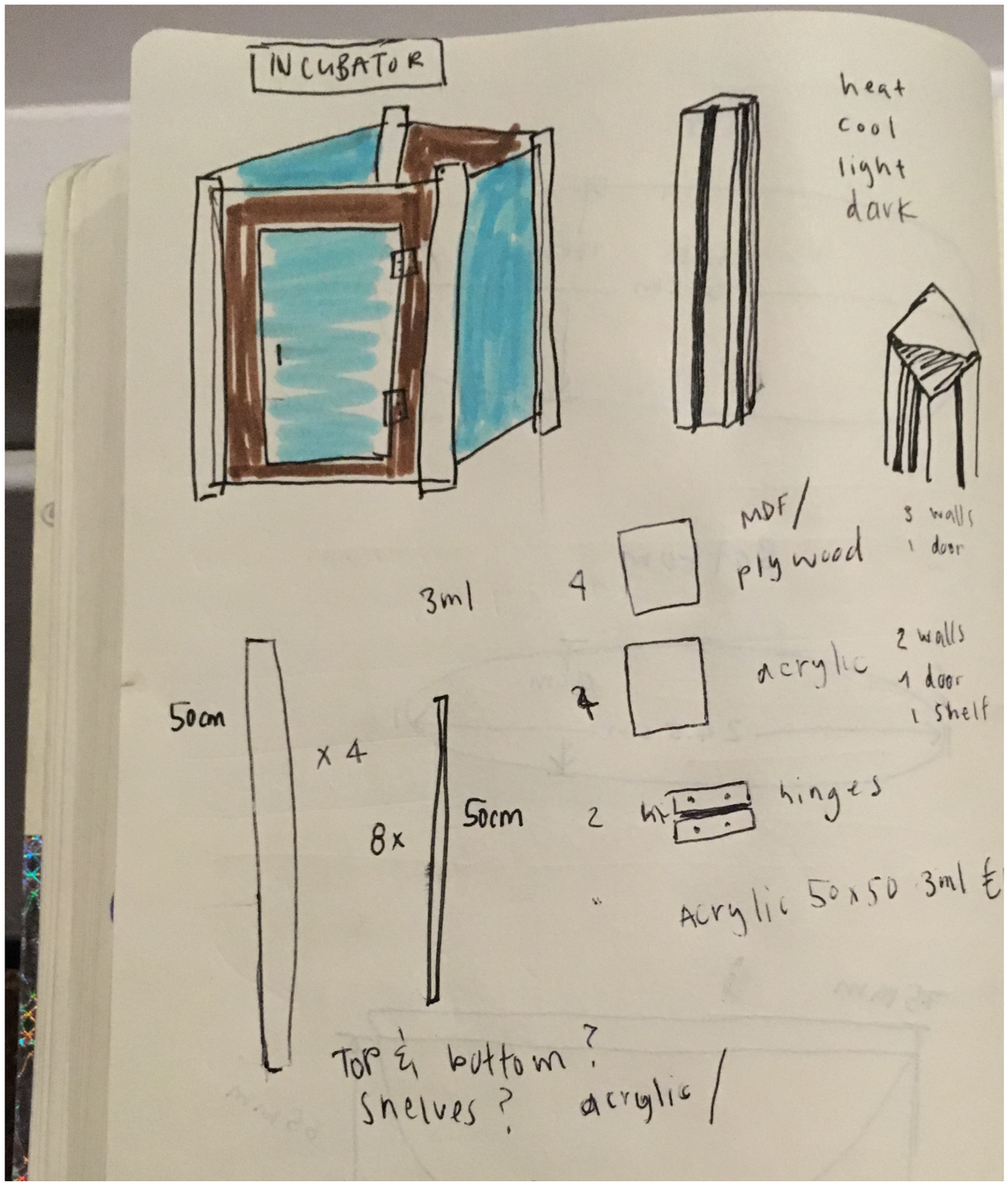

SCHOTT
DURAN
500 ml
Made in Germany
Retrace Code
10065029
STERILE
H2O




TOMADO

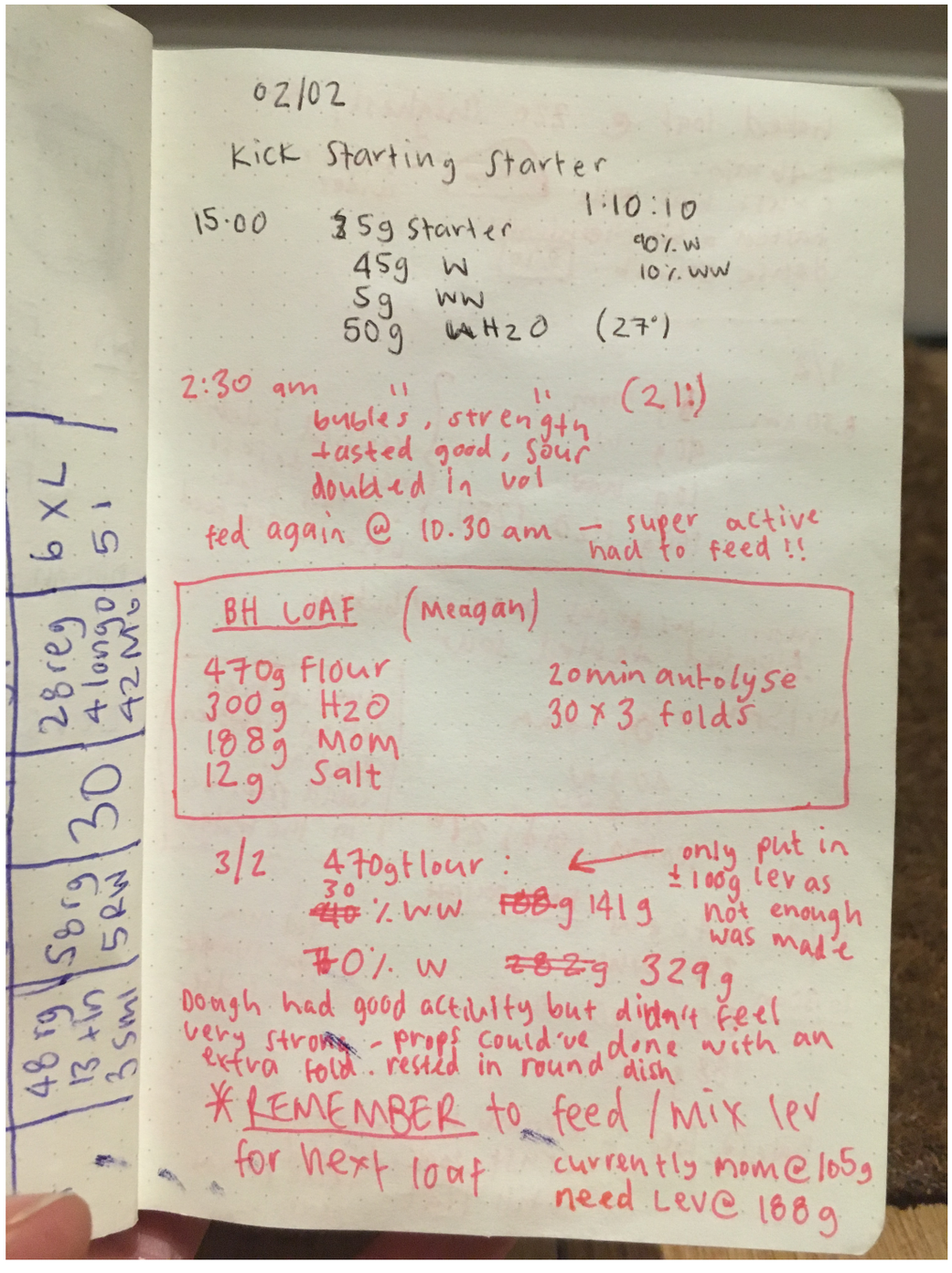
PERSONALISED INCUBATOR

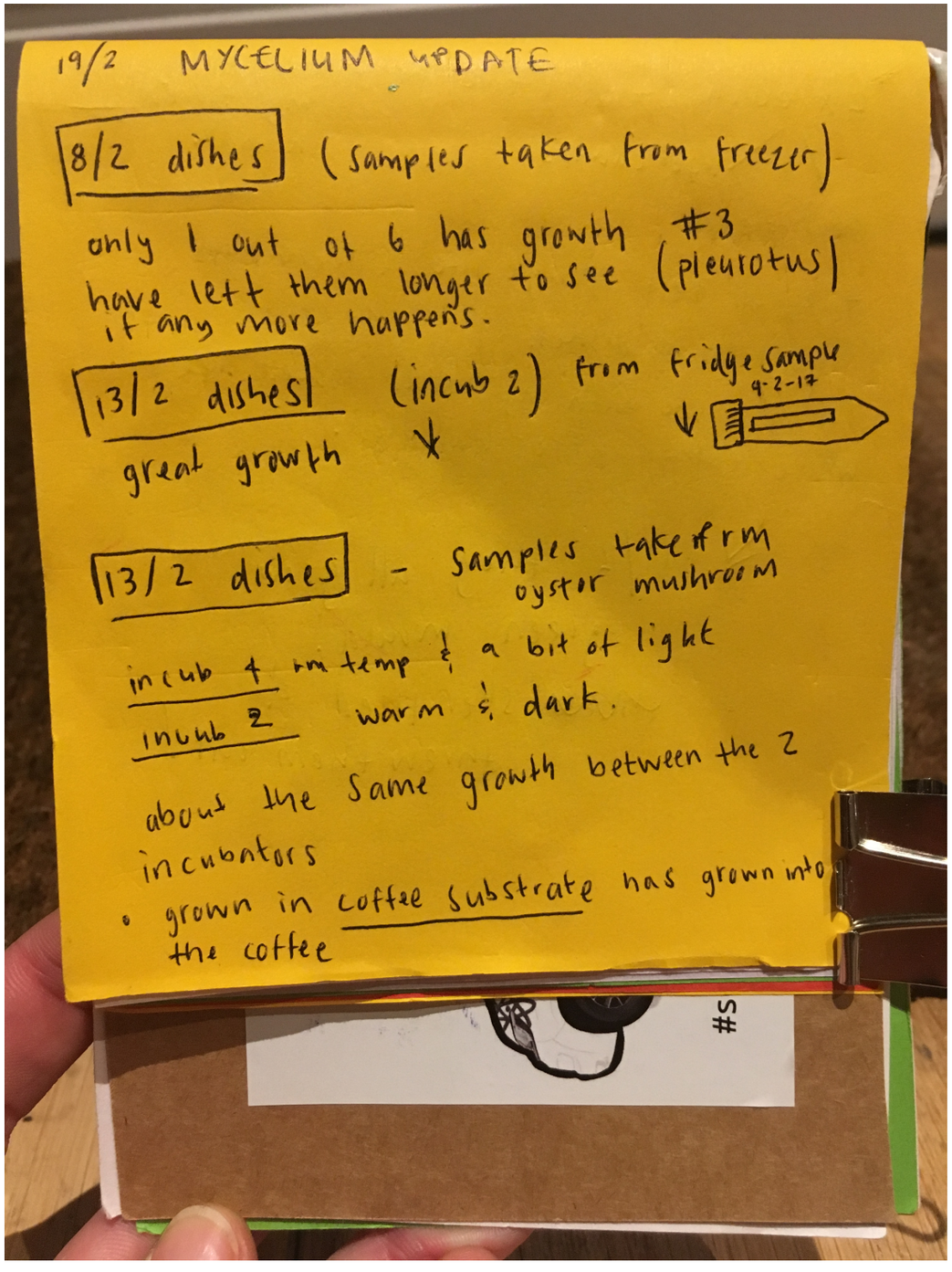
a safe place to grow



DOCUMENTATION

bread book / lab book





Project — ~/Documents/Github/dcandyce.github.io

Project

- _layouts
- _posts
  - 2019-01-28-Hello-World.md
  - 2019-01-29-Biosafety.md
  - 2019-02-03-The sterile hood.md
  - 2019-02-04-First day in the Lab.md
  - 2019-02-05-Ardunio.md
  - 2019-02-11-Isolating-yogurt-bacteria.m
  - 2019-02-12-Isolating-bacteria.md
  - 2019-02-18-isolation-experiment.md
  - 2019-02-19-Microscopy.md
  - 2019-02-20-Plant-Tissue-culture.md
  - 2019-02-21-Webcam.md
  - 2019-02-25-Plant-Tissue-Culture-weel

2019-02-25-Plant-Tissue-Culture-week2...

```
---
layout: post
title: Plant tissue culture Week 2
---

#### Weekend Growth

![day1_day3]({{site.baseurl}}/images/project work/day1_day3.jpg)

On friday I prepared my tissue culture in the most sterile environment I could manage, I autoclaved my tweezers, forceps and blades and wiped down everything with 70% ethanol before putting it in the sterile hood. I did find the sterile hood a bit small and dark for my work.
I have been thinking about tweaking the current design for when i manage to make my own one : making the top and bottom from acrylic so it's easier to see through and keep clean. I would also like to make a bigger one.

MS) media and the procedure

down with 70% ethanol and set
tissue culture 12 hours of
that would come through to the

images/project work/
```

GitHub | Git

Unstaged C... | Stage All

Untitled

incubator cut sheet

Staged Chang... | Unstage All

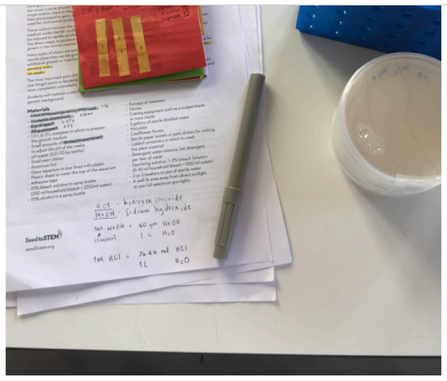
No changes

See All Staged Changes

Commit message

GoToMeeting | Netherlands Code of | BioHack Academy 6 | BioHackAcademy/BH | Fablab Amsterdam / | Candyce – BioHack A

https://dcandyce.github.io

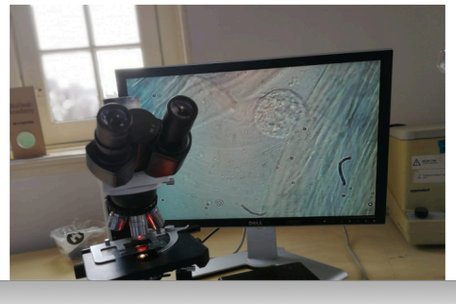


Today i started the bio part of my project - I'm going to grow plants in dishes. Starting with cauliflower, as it grows...

READ MORE

Looking through the microscope

Microscopy Workshop

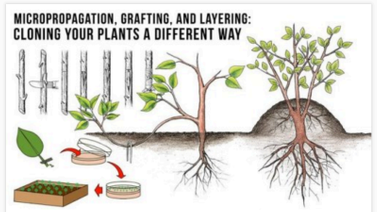


PLANT TIS | Basic Plan | Tumblr | We are all | Do It Toge | Starbeast | myo-inosi | naa chem | MES (buff

https://ditsci.tumblr.com

Do It Together Science

research blog for BHA6



(Source: growace.com)

Feb 27, 2019

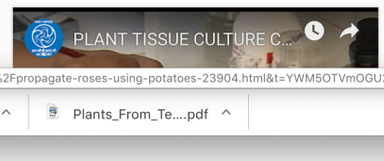
The Slime Mould Collective →

SLIMOCO brings together artists, scientists and others interested in slime moulds

How to Propagate Roses Using Potatoes →

Potatoes provide just the right amount of nutrients and moisture to rose cuttings, allowing them to develop healthy roots.

Mar 04, 2019



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LABORATORY EXERCISE
Preparation of MS Medium from Stock Solutions

Introduction

Murashige and Skoog medium (MS) is the most suitable and most commonly used basic tissue culture medium for plant regeneration from tissues and callus. It was developed by Toshio Murashige and Folke K. Skoog in 1962; based primarily on the mineral analysis of tobacco tissue. This is a "high salt" medium due to its content of K and N salts. Kiss *et al.* (1995) indicated shoot proliferation of pineapple *Ananas comosus* was achieved on MS medium with low levels of some inorganics and vitamin supplements. The shoots after transfers to MS medium containing NAA or IBA gave good rooting. They also reported the *in vitro* axillary bud formation on the etiolated shoots and their rooting on hormone-free MS medium. Litchi, one of the important subtropical fruit crop of Southeast Asia, has been successfully regenerated *in vitro* using cotyledon, hypocotyls, and root segments on MS medium supplemented with 0.05 mg/l. NAA, 0.05 mg/l. 2-ip, 0.2 mg/l. ABA, and 45 g/l sucrose (Chandra and Padaria, 1999).

Objectives

1. To improve how to prepare Murashige and Skoog (MS) culture medium.
2. To improve how to calculate quantity required from the stock solutions for a given concentration and volume of MS medium.

Materials and Methods

Beakers (1000, 500, and 100 ml); graduated cylinders (1000, 500, and 100 ml); conical flasks (100 ml); reagent bottles/Schott bottles (1000, 500, and 100 ml); micropipettes (1000 µl); distilled water; magnetic stirrer; spatulas; chemical balance; weighing boat; tissue; pH meter; aluminium foil; autoclave machine; and chemicals needed: stock solutions of macronutrient; micronutrient; iron source; vitamins; plant growth regulators such as BAP and NAA; sucrose; myo-inositol; agar; and NaOH and HCl to adjust pH.

Methodology

1. Five hundred millilitres of MS medium was made. The required volume of each stock solution were calculated and obtained into 500 ml beaker on a magnetic stirrer.
2. 15 g sucrose and 0.05 g myo-inositol were added, and then stirred until fully dissolved.
3. The volume was adjusted to about 500 millilitres with distilled water.
4. 2 ml (2000 µl) of NAA was added (to get 4 mg/l. NAA) then pH was adjusted to 5.75 ± 0.05 with NaOH and HCl.
5. 3.1 g of agar was added and stirred for complete mixing.
6. The medium was heated up in microwave oven to dissolve the agar.
7. Medium was transferred into 500 ml Schott bottle. Bottle was labelled before autoclaving.
8. The culture medium was autoclaved for 15-20 min at 121°C.
9. After autoclaved, medium was distributed approximately 20 ml to each sterile disposable petri dishes in the laminar air flow and medium are allowed to solidify followed by exposing to UV light for 20 minutes and stored for use.

Preparation of MS Medium From Stock Solution →

https://t.umblr.com/redirect?z=https%3A%2F%2Fhomeguides.sfgate.com%2Fpropagate-roses-using-potatoes-23904.html&t=YWM5OTVmOGU2YTFmZWFiMDk5ZmM0ZGQyOGM4NTJhOWI4OWM0...

98 - Gray Lens....zip | 31 - The Stars ....zip | Plants_From_Te....pdf | Show All

Domesticated biotechnology, once it gets into the hands of housewives and children, will give us an explosion of diversity of new living creatures, rather than the monoculture crops that the big corporations prefer. New lineages will proliferate to replace those that monoculture farming and deforestation have destroyed. Designing genomes will be a personal thing, a new art form as creative as painting or sculpture.

Freeman Dyson ; *Our Biotech Future* ;2007