

## Prepare agar medium flat jars

This recipe guides through the preparation of a simple nutritional medium which can culture almost many sorts of mushrooms (of those which is possible to culture).

**Materials:** Flat jar, wadding, agar-agar, malt extract powder, marker, distilled water, pressure cooker, precision scale (0,1 g), aluminum foil.

### Part 1: Calculate Ingredient Ratios

Below are the quantities for creating medium for 4 of our jars; multiply the numbers and keep this ratio to fit your vessel.

Component	Quantity	Custom Quantity	
Malt Extract (Nutrient source)	2 g	multiplier	g
Agar-agar (Footing for the growth - 3D support)	2 g	x	g
Distilled water (To homogenise the nutrients) - Not tap water, because the mixture coming out from every tap has a slightly different content of minerals or antimicrobial substances)	100 ml		ml

### Part 2: Weigh Ingredients And Mix Into Flask

- Using a scale, weigh the ingredients you need. (Build a vessel with clean aluminum foil or paper)
- Put the ingredients in a flask/jar and mix vigorously!
- Make a hole in the lid, and push wadding cotton through the hole (enables pressure cooking, and air exchange for the mushroom)
- Pour in every vessel enough of the mixture to cover the bottom. (Thick agar layer consumes more materials, but prevents drying if you plan long term fridge conservation)
- Close the jars and cover the lid with aluminum foil (it will prevent microbes to reach the air filter later on)



#### *Tips for Weighing*

- Don't put ingredients back into the jar where they came from, even if there is extra (you don't want to contaminate the whole jar)
- Have a different scoop/spoon for every ingredient to weight (to avoid cross contamination of ingredients)
- Make a small aluminum foil or paper vessel for holding the ingredients
- If you are having trouble getting it well mixed, heating the water before adding the ingredients helps

### Part 3: Sterilize In Pressure Cooker

- Add a couple centimeters of water into the pressure cooker, put the vessels in, sitting in the water but not floating, close the cooker and reach temperature and pressure point (121°C, 15 PSI). **(No air tight containers in the pressure cooker, they could burst)**
  - Always read the pressure cooker manual and use it accordingly.
- Reduce the heat and keep it at the minimum temperature so that the water still boils
- Wait 40 minutes (From the point where pressure and heat are reached)
- Shut the heating source, and let the cooker cool down by itself  
HINT: Don't release the pressure; A sudden drop makes the medium overboil
- When the cooker is just warm, release the rest of the pressure (there should be no pressure), open the lid, carefully take out the medium.
- Let the jars cool down naturally
- You can store them in the fridge

