



# Using Liquid Mycelium Syringes

Syringes are the most convenient recipients for transporting and preserving mushroom mycelium as well as for inoculating nutritious substrates. Aside from the liquid mycelium itself, the syringes contain sugar (usually malt extract), soy peptone and yeast extract. Our syringes are produced in our laboratory and tested for purity on petri dishes and on grain.

To prolong the life and quality of most of our species, the syringes must be stored in the refrigerator at 4°C. Certain tropical species must be kept between 10 and 30°C. In general, their quality is best until 2 years after the date indicated on the syringe and on the bag (species code yy/mm/dd). The exception to this rule is Morel liquid mycelium, which keeps for only 6 months after the production date.

Liquid mycelium is used for inoculating a malt extract agar medium or sterilized grain. Our cultivated strains have proven vitality in the laboratory and yields in mushroom farming. From one wild strain to another, however, diversity is greater and yields are more variable.

## Instructions for use on petri dishes

1. Dissolve 50g of malt extract agar powder in 1L of water. Sterilize for at least 20 minutes at 15 psi or 121°C.
2. In front of a flow hood or in a glove box : pour the liquid agar and extracts into the petri dishes, leaving the dishes slightly open in order to let the steam escape. Once they have cooled and solidified, close the petri dishes and store in a ziplock bag in the refrigerator.
3. To inoculate, open the petri dishes in a sterile environment and place a drop of liquid mycelium on the growing medium. Seal the petri dishes with Parafilm. Place the inoculated dishes in an incubator at 20-25°C. Wait 4-10 days for the mycelium to grow. Use when the mycelium has colonized more than half of the radius of the dish. Un-contaminated mycelium can be used to make new liquid mycelium or to inoculate sterilized grain.

## Instructions for use on grain

1. For each small autoclavable culture bag (4A), use 550g rye grain, 450g water and 3g gypsum. Mix well and fold the top of the bag twice over on itself, covering the filter. Tape closed with masking tape. Let sit for 12 hours. If using 14A bags, triple the quantities. Adjust quantities proportionately if using containers of different volumes, such as small wide-mouthed mason jars.
2. Sterilize for 90 minutes at 15 psi or 121°C.
3. Cool to room temperature in front of the flow hood, in the glove box or in a clean space.
4. Open as briefly as possible and inject 1mL of liquid mycelium per liter of sterilized grain. Close and seal the bags with an impulse sealer or with an elastic. For Mason jars, it is possible to pierce holes in the lid to add a filter and an injection port. In this case, inoculation is done through the port.
5. Incubate in a clean, warm environment (20-25°C). Once the grain has been fully colonized by the mycelium, it can be used to inoculate other sterilized grain or a fruiting substrate. The colonized grain can be kept in the fridge for several weeks before being used.