



## LIQUID CULTURE KIT SPORE GERMINATING SYSTEM

2019 Version 2.1

### ***\*\*Please read before you begin\*\****

- ⇒ You must purchase your spore syringe or spore print separately. See our Q/A section on our Website for details.
- ⇒ Our Liquid Culture kit can be used by first time growers but is intended for growers who are already comfortable with the spore inoculation process. The same sterile inoculation steps are required, but there are more chances for contamination to occur during the process due to the multiple use nature of the product.
- ⇒ Please use a spore syringe that you know is good or from a reputable source! If there is an issue with a spore syringe or print then this will only cause the problem to multiply, possibly ruining your substrate.
- ⇒ After unpacking, look for the white magnetic stir rod. During shipping it is common for it to become stuck to the metal lid out of sight. Hit the top of the jar with a blunt object to dislodge it. We recommend a heavy book or rubber mallet. Sometimes a good amount of force is needed to dislodge it.
- ⇒ Unpack, remove and discard plastic upon receiving.

### **Overview**

Liquid Culture solutions have been used for generations. This is how large-scale mushroom growing farms produce commercial products. It allows the grower to isolate a specific high-yield strain and clone that strain to produce thousands of pounds of mushrooms. Starting from a culture is different from starting from spores because the germination period has already taken place and you are injecting live mushroom tissue into your substrate which colonizes quicker.

### **Unpacking- Storage**

We try our best to ship your liquid culture jar right side up, but during shipping the jar may be shipped on its side or upside down. The first thing you should do upon unpacking is remove the clear film on top and allow the jar to rest right side up for a few hours. This will allow any liquid that has soaked into the white filter disks to return to the jar. You should store your liquid culture in the fridge or any cool area under 50 degrees when not using within a day or two. When you are ready to use the jar, remove from the fridge and allow the liquid to warm to room temperature. Thoroughly wipe the filter disks with the alcohol swabs provided.



**\*\*We recommend injecting spores and starting the process as soon as possible. Best results are achieved when used within 2-3 weeks after receiving. Once colonized the culture can be stored in the fridge for 3 months!**

## **Step 1: Injecting your spores**

Decide on what sterile method you would like to use. The oven-door method or Glove-box method are fine. We recommend the oven-door method along with UV-C light to provide a near 99.9% contamination free barrier.

***See our Mushroom Guide or Mushroom Grow Videos on how to properly inject spores.***

PDF Guide can be found here: <http://www.midwestgrowkits.com/guides.html>

Use another alcohol swab to prep the self-healing port. Inject around 5-7 cc's of spores into the jar. Once you remove the syringe have a tiny piece of tape ready to place over the spot you injected just for added protection during incubation. Place the included magnet on the bottom of the glass to slowly spin the stir-bar mixing up the spores.

## **Step 2: Incubation Period**

- ⇒ Prepare an incubation area. This can be any setup that provides a temperature between 80-85 degrees. Heating mats, tub-in-tub aquarium heater setups work great but even using a small space heater in a closet or room do the trick.
- ⇒ Most spores usually germinate within 5-7 days. Stir up the liquid once after 36-48 hours. Start by slowly stirring the solution using the magnet and mixing bar. Create a vortex by circling the magnet around the bottom.
- ⇒ After 5-7 days you will start to notice a “cloud” of white mycelium starting to form. Once this appears make sure to stir everything up well so the mycelium does not form large chunks. Never shake the jar as this will cause the liquid to get into the filter.
- ⇒ The first signs of growth begin in the bottom of the jar and may just look like an increase in the white malt extract. Some spore varieties will grow on the bottom and not form a vertical cloud, this is normal.

Once your liquid starts to thicken and clouds have formed you should continue to stir it up to prevent the mycelium from growing too large. Usually its safe to keep incubating for 2 weeks or so before needing to refrigerate.

## **Step 3: Using your culture**

- ⇒ When you are ready to use, decide on how much substrate you are going to inoculate. You want to use double the amount of liquid culture than if you were using just spores. 7-10cc per spawn bag/ 1cc per hole for BRF Jars.
- ⇒ **Always test first!** No matter how careful you are, there is always a chance that something could have contaminated your culture and if you are injecting many bags or jars you don't want to ruin them all.
- ⇒ When ready to inject, first stir the culture up very well. Unpack the 60cc Syringe, insert into the injection port, tilt the jar so the liquid does not get into the filters and suck up the needed amount. If syringe gets clogged, just push some back in and try again. Always keep stirring in between sessions.
- ⇒ Store your colonized liquid culture in the fridge for use anytime up to 90 days! The liquid will stay dormant and ready to use!

