

Preparing The Area For Inoculation



Inoculation Products

Nitrile Gloves, Mask, Isopropyl Alcohol, Isopropyl Alcohol filled Spray Bottle, Disinfectant Spray, Butane lighter, Alcohol Lamp (optional)

Inoculating the bag is the main step in the process where contamination is possible so it must be done in as clean of an environment as possible. Some people prefer their bathroom or a closet while others prefer a glove box or the oven method. The needle of the syringe can carry bacteria and spores from other molds in the room air into your bag, contaminating and ruining the substrate. The open air of your home is filled with millions of microscopic mold spores and bacteria, so even one of these mold spores falling on the needle of your spore syringe can infect a bag. For this reason, absolute sterility of your needle is extremely important.

Wash your arms, hands and face with antibacterial soap. Take a shower if needed. Wear clean clothes. Anything in the area of the syringe and bags could contaminate your bags if it is not clean. There are two methods of injecting your spores that help eliminate any possible air contaminates.

We highly recommend using one of the two methods listed below. 99% of the time people fail at growing mushrooms is because they thought the space they were using was clean and did not use a sterile spore injection method. Beginners must expect some failure to achieve success in growing mushrooms so you need to follow proper sanitizing and sterilization methods to increase your chance of success until you get past the learning curve. Close windows and turn off all air conditioning or heating and anything else that can move air around your home. The least amount of moving air in your workspace the better. This is the most crucial part of the entire process so be sanitary and sterile every step of the way. Having a spray bottle 70% Isopropyl alcohol comes in very handy to sanitize the work area, your hands, arms, syringe, fruiting chamber, top of the bags. 70% Isopropyl alcohol is highly flammable so never have an open flame near you because even the evaporating vapor is highly flammable and can harm you.

Method 1

The Oven Door

The oven door inoculation method is one way to inject spores into the bags. This is one of the oldest methods using hot rising air to keep contaminates away. Although the science behind has been questioned it is our recommended method for people who don't have a laminar flow hood.

Turn off all fans and HVAC and close all windows. Make sure the air is very still. Spray Lysol Disinfectant spray or another similar brand around your work area and let settle. Next, Pre-heat the oven to 325 degrees. This will pre-sterilize your oven. Once oven has reached 325 degrees, leave it at that temperature for 20 minutes, then lower the temp to 275 degrees. After 10 minutes at this temperature, you can begin the inoculating process. Pull out the lowest rack and place a small piece of cardboard or something solid that you can work on. Next place the bags on the cardboard with the injection port facing up.

Sterilize the syringe with a lighter or alcohol lamp until it starts to glow. Make sure you flame the syringe after every injection for a second or

two. Use alcohol swabs to remove any debris stuck to the needle. Wipe injection port with alcohol swab and Inject each bag by reaching into the oven. Once done place a piece of tape over the injection port to prevent contamination. This method works very well and is much simpler when compared to the glove box method. Do not let the bags get very hot sitting in the oven. When done correctly you can count on a success rate over 99%.

Warning: When working with an open flame and Isopropyl alcohol you need to be very careful you don't start a fire. It's always best to have a fire extinguisher nearby just in case. Use this technique at your own risk. We keep isopropyl alcohol in a spray bottle and lightly spray the entire bag to sanitize it.









Method 2

Bathroom or Closet Method

We find this method will suit most people.

The smaller the space the easier it is to sanitize and prep the room for injection.

- 1. Turn off all household heat and AC and close all windows and turn anything that moves the air in the room you are working.
- 2. Take a shower and put on clean clothes.
- 3. Thoroughly clean the area where you will me doing the injection.
- 4. Then disinfect with Lysol Disinfectant spray or another similar brand like Great Value Brand around your work area and then spray the entire space and leave the room for 10 minutes.
- 5. Wear a mask and gloves. Disinfect gloves with 70% isopropyl alcohol.

Inoculation

Spore Injection

To begin start by fluffing up the wood substrate bag being careful not to damage the bag. Never force air in our out of the bag. Mycelium needs air to grow and the bottom of the bags are known for dead zones so as the substrate colonizes downward lightly fluff up the bottom substrate to introduce air. This will great speed up colonization. You can also gently roll the bag on a countertop to try to get air down to the bottom via the sides of the bag.

You can use 3-4cc for the 2.5 lb bags and 5-6cc for the 5 lb bags, Begin carefully injecting the bags with the syringe. Flame the needle until there is a faint red glow, then carefully squirt a little bit of spore solution (if you can spare it) to cool down the needle before sticking it in the injection port, usually 3-4 seconds. Use alcohol wipes on the needle in between each bag you do and always flame the needle before each injection.

Once you're ready to inoculate, shake up the spore syringe to get as many spores as possible off the sides of the syringe and into the water. After you sterilize your needle slide the needle into the injection port. Push it all the way in. Never try to force a grow bag to breath by squeezing the bag because you will surely damage the filter. The filters need no assistance in performing gas exchange so leave it alone.

Warning: When working with an open flame and Isopropyl alcohol in a cardboard box you need to be very careful you don't start a fire. It's always best to have a fire extinguisher nearby just in case. Use this technique at your own risk. Never try to force a grow bag to breath by squeezing the bag because you surely damage the filter. The filters need no assistance in performing gas exchange so leave it alone.

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Mycelial Growth Phase

Incubation Period

The bag is now ready to be incubated at the temperatures required for the mushroom species you are growing. It normally takes 45-60 days to fully colonize. You will need to find a warm room or some other source of heat to keep them in that temperature range. Please note that every mushroom species has its own incubation and fruiting temperature.

A simple way to store your bags as they incubate is to put them into a cardboard box to keep them safe and to keep the light out. The bags must be kept in darkness until fully colonized and ready to fruit. You may find that on some bags the mycelium growth just stalls out and will not fully colonize. That is because there is no air in is getting to that spot. Massage the area in question to introduce air. Check on the substrate to see if you need to reposition the bag or gently roll it on the countertop to get air to the part of the substrate bag that is not colonizing.

The first signs of mycelial growth should appear within 14 days. Most types of mushroom mycelium will appear as white spots at first. A good way to tell if the mycelium is consuming the substrate is to look at the bag to see if there is condensation on the bag. Condensation can mean two things. 1. Mycelium is starting to grow. 2. Mold is starting to grow.

Never open a contaminated bag indoors because you will contaminate the entire house and might even get sick.

Activating and Fruiting

Place bag in refrigerator for 6-12 hours to activate the substrate. Refrigerating the bag tricks the mycelium into thinking it is winter so when you remove from refrigerator and the bag starts to warm it tricks the mycelium into thinking it is spring and should start producing fruting bodies.

Cut a 1/2" crisscross X cut about a third of the way up the bag. Do no remove plastic flaps were you cut. Now lift each place flap up and use a fork to lightly score the surface of the substrate.

Place the bag near a window so it gets indirect light for 12 hours a day or use a low wattage lamp will trigger fruiting. Each day lift each flap up and spray 2 pumps or the mister bottle under each flap to keep the substrate hydrated. The flaps will prevent the substrate from drying out. Once you see pins forming mist them with one pump of mister and stop misting altogether. You may find under some flaps they are not pinning. To remedy this lightly mist the area until it does start to pin. lightly mist mushrooms as they grow three times a day.

To increase yield build a fruiting chamber out of a clear tote container with a lid. It needs to be at least 50 quarts in size. Sterilite 54 quart gasket tote works best.

Rinse and drain well, enough perlite to fill the tote up 3-4". Perlite will keep the humidity high. For best results put the perlite in a 5 gallon paint strainer mesh bag which will make it easy to rinse and drain and keep the mess to a minimum. You can place the bag anywhere in the fruiting chamber since it is portable.

Drill some holes on the side of the container for air flow. Placing micropore tape over the holes is optional. Once a substrate is fully colonized it is pretty resilient.

Second option is to not drill holes and to just remove the top of the tote and fan the substrate a couple of times a day. Mycelium produces CO2 which is heavier than air so you need to purge it.

Third option is drilling A 1/4" hole on both sides of the container and stick an air hose that is connected to an aquarium air pump in one hole and let it will exhaust out of second hole.

Preservation

Preservation Methods

Refrigeration

If you will be consuming your mushrooms fairly soon after picking them, you can keep them in your refrigerator, in a paper bag. Don't use a plastic bag to store fresh mushrooms, this will cause them to mold. Fresh mushrooms are reportedly stronger than dried ones, but can be more difficult to measure or dose. Also, a fresh mushroom can have a varied taste depending on which strain was used and under what conditions it was grown.

Drying

The best way to preserve mushrooms is to dry them as soon as possible after picking. It is very important when drying that the mushrooms never be exposed to heat, or heat-sensitive chemicals that will break down if exposed to heat. The best method of drying is to put the mushrooms in an enclosed container, like a covered bowl, that also contains some desiccant.

(Slow drying method)

The best overall method for drying mushrooms is to first dry them using moving air, then, if necessary, put them into the drying kit to remove the last little bit of moisture that remains in the mushrooms. You want your mushrooms to be bone dry and brittle. If they feel flexible, they are probably not totally dry. Store the dried mushrooms in a sealed container with small desiccant packs, away from heat and light.

Tips & Tricks

- Inoculation: When injecting the spore solution into the bags, make sure the area you are working in is very clean. Spray Lysol, Great Value brand or another brand disinfectant spray all over your work area first. Make sure there is as little air movement as possible in the room. Close all windows, turn off all fans and A/C units. UV-C light is another great way to inoculate your bags with to provide another layer of protection.
- Sterilize the syringe needle with a lighter for a few seconds before injecting the spores. Do this for every jar. Shake the spore syringe every jar to mix up the microscopic spores. Use the alcohol wipes if you end up with vermiculite on your needle. Try and break up the clumps of spores by shaking hard!
- Incubation period: Keep bags at temperature recommended for the mushrooms you are growing. Daylight or room light is best! Indirect light is all that is needed to trigger fruiting and for the mushrooms to grow. Use a low wattage light if growing in a dark closet or an area that will not get room light or daylight.
- After the first flush of mushrooms soak the bag again in water and start the entire process all over again to produce a second flush of mushrooms. You may even be able to get 3 flushes per bag.
- Once the grow bags are spent they can be recycled into your garden. Spent bags are loaded with nitrogen and can be used
 as fertilizer.
- Contaminated bags can be planted in the ground near a tree and mother nature may create a nice little mushroom patch.
- You must use 70% isopropyl alcohol and not 90% isopropyl alcohol because it will evaporate before it can fully sanitize. We spray all of our work surfaces with isopropyl alcohol to sanitize them when working with our substrates.

Support

If you have a problem with your product we hope that you'll contact us first instead of leaving a bad review. We value our customers and want all to be happy with our products, not sad and remorseful. Don't worry, be Happy!

Website Chat Support

Visit https://shroomability.com and select chat in the lower corner of the website.

Typically we'll reply in under 5 minutes.

Toll Free Phone Support in USA.

Call +1 (800) 948-4818 and stay on the line while your call is forwarded. If you reach our VM leave us a message and we will call you back as soon as we can.

Email Support

support@shroomability.com