Blue Oyster Mushroom Liquid Culture Syringe, 10ml or 20ml

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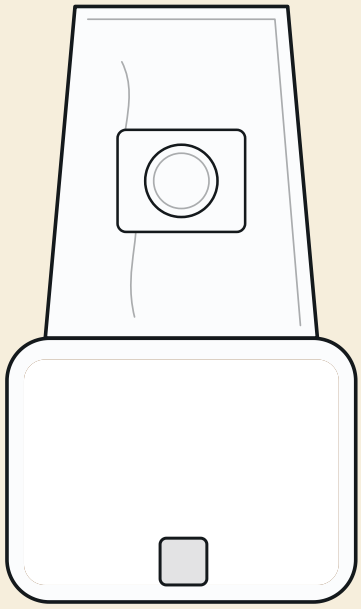
HOW TO COLONISE A GRAIN BAG WITH THIS CULTURE





Day 20

1 Wipe the port with the alcohol swab

2 Needle through the port once; inject it all in one place

3 Tilt the bag so the liquid runs across the base; no mixing

4 Days 1 to 10: growth shows at the bottom; leave it alone

5 Day 10: break it up and mix well, through the plastic

6 Day 15: mix well again; five days between mixes

7 Day 20: every grain covered; ready for bulk substrate or a casing layer

About Blue Oyster Mushroom Liquid Culture Syringe, 10ml or 20ml

A liquid culture of blue oyster mycelium in a 10 ml or 20 ml syringe, for starting grain spawn, agar plates or a further liquid culture. Blue oyster is forgiving and fast growing, which makes it a good first species for a beginner, and it suits outdoor growing because of its high fresh air demand.

About the mushroom

Blue oyster is very forgiving and easy to grow, so it is an ideal first mushroom. The fruits grow rapidly, sometimes doubling in size every day, in large clusters with the shelf-like shape typical of Pleurotus species; size and shape vary widely with growing conditions. Clusters start out a deep, striking blue and turn grey as they mature, and the fruit is usually thick and meaty and versatile in the kitchen. Blue oyster needs an extremely high level of fresh air exchange, more than any other commonly cultivated mushroom, which makes it an ideal candidate for outdoor growing. Grown in a high CO2 environment it produces long, thick stems with small caps. It also has a very heavy spore load, which can quickly fill a grow room with spores.

On agar and in spawn

Blue oyster grows vigorously on agar and seems to prefer malt yeast agar. Growth can be rhizomorphic and eventually becomes thick and fluffy. The mycelium tends to emit a brown or orange metabolite that is often mistaken for contamination, though it may be a sign of the mycelium fighting off contamination. Rye grain works best for spawn, but sawdust spawn can also be used, and some growers report higher yields on straw when sawdust spawn is used in place of grain spawn. Oyster spawn has a distinctive mushroomy scent and breaks up easily in spawn bags for spawning to bulk substrates. Blue oyster spawn tends to sweat, producing pockets of water in spawn bags or grain jars, so position the spawn so that the grain is not sitting in water while it colonises.

Substrates and fruiting containers

Pasteurised straw logs are extremely effective for blue oyster. Use a higher spawn rate for better yields; a straw log will produce multiple flushes if contamination is kept at bay. Supplemented sawdust blocks also work well, but straw is likely to give similar results more economically. Blue oyster will devour almost anything and can be grown on coffee grounds, waste paper, sugar cane, grass and many other waste products.

- Straw logs: poly tubing, 16 inch lay-flat diameter; too thick a log turns anaerobic in the centre and eventually contaminates
- Grow bags: cut slits in the side for mushrooms to grow through, or cut the top off the bag and let fruits form on top of the block
- Buckets and other containers: 5 gallon buckets with holes drilled, or almost any container you can think of

Harvest and storage

Harvest by picking or cutting off entire clusters. Mushrooms keep longer if handled gently and stored as a cluster rather than picked apart, and blue oysters keep longer in the fridge than pink or yellow oysters. They tend to carry on growing in the fridge, with mycelium starting to grow from the stems, which is usually unwanted. For long-term storage, dry them in a dehydrator.

Species	Blue oyster (Pleurotus ostreatus var. columbinus)
Volume	10 ml or 20 ml syringe
Use	Grain spawn, agar plates and further liquid culture
Preferred agar	Malt yeast agar
Spawn	Rye grain works best; sawdust spawn can also be used
Substrates	Pasteurised straw, supplemented sawdust, coffee grounds and other waste
Storage	In the fridge at 2 to 8 °C, where it keeps for 3 to 6 months; shake before drawing from it

Injection rules

Almost every contaminated bag we have ever replaced went wrong in the thirty seconds between opening the syringe and finishing the injection. The syringe, the needle and the bag all arrive sterile; the job is to keep them that way for those thirty seconds. These are the rules our sterile guarantee asks you to follow, and they apply to gourmet liquid cultures and spawn bags alike.

Rule 1: never heat, flame or wipe the needle

Every needle arrives gamma-irradiated sterile in its own wrapper, and the syringe casing and end cap keep the contents sterile. Flaming a needle leaves soot and a hot tip that kills what it touches; wiping it with alcohol drags whatever was on the wipe onto the one part that goes inside the bag. Use the needle straight from the wrapper. There is a sticker on every bag saying the same thing.

Rule 2: seat the needle properly

A loose needle is the other big cause of contamination. Push the needle hub onto the Luer lock and give it a quarter turn until it stops. It should not wobble. If it does, take it off and seat it again before you go anywhere near the bag.

Rule 3: work still, not clean

You do not need to sterilise the room. You need still air. Close the windows and doors, turn off fans and heating, and wait a minute for the air to settle. Wash and dry your hands, then keep them away from the needle. A still air box helps but is not required for a bag with a self-healing port.

Rule 4: go through the port, once

Every bag has a self-healing injection port. Push the needle through the centre of the port at a slight angle, inject, and withdraw in one movement. Do not inject through the plastic beside the port, do not make a second hole, and do not open the bag to "check" the grain.

Rule 5: how much, and where

Use the amount the product page for your bag gives, and inject all of it in one place. Do not move the needle tip about inside the bag and do not wind the needle round in the port: that can damage the port. The liquid is spread afterwards, not with the needle. An Inject-and-Forget bag is mixed straight after injection. A grain-based bag is tilted so the solution runs across the whole base of the bag.

Rule 6: wipe the port, and nothing else

Every bag comes with a small alcohol swab. Just before you inject, wipe the injection port with it, once, and give it a few seconds to dry. That is the only thing on the outside of the bag that gets wiped: not the needle, not the rest of the bag, and nothing afterwards. The port reseals itself; do not tape over it and do not wash the bag.

Rule 7: one syringe, one job

A syringe is a single-use item. Draw from a fresh syringe for each strain or culture, cap it if you have to pause, and do not put a used needle back into a sterile bottle.Spare needles can be added at the basket.

What happens next

The bag goes somewhere warm and dark and stays sealed until it is fully colonised. That part is covered by the incubation rules. Follow both sets of rules, buy the syringe and the bag together from us, and if the bag still contaminates before it is opened for the first time, the sterile guarantee replaces it.

Psilocybe cubensis spores sold on this site are supplied for microscopy and taxonomy only; germinating them is illegal in the UK and they are not for use with any growing product. These rules are written for gourmet liquid cultures.

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Incubation rules

Once the bag is injected, the work is done and the waiting starts. Our spawn bags and all-in-one grow bags are made to stay sealed from injection to first harvest, so the incubation rules are mostly about resisting the urge to help. These are the rules our sterile guarantee asks you to follow after the injection rules.

Rule 1: keep it sealed

Do not open the bag, cut the bag, or add anything through the port after the injection. The filter patch lets the bag breathe; nothing else needs to. A bag opened "to have a look" is no longer a sealed bag, and it is no longer covered by the guarantee.

Rule 2: warm, dark, still

Put the bag out of direct light, where it will not be moved or knocked, at the temperature for its type: 22 to 23 °C for a grain-based bag (the 50/50 all-in-one bag, the LightBag, the SprinkleBags and every rye grain spawn bag), and 26 to 27 °C for the brown rice flour Inject-and-Forget bags. Grain-based systems are kept cooler so the grain layer at the base does not dry out. An airing cupboard, the top of a wardrobe or a heated incubator all work; the LightBag is made to colonise in dim light, the others prefer dark. Do not put a bag on a radiator, on a heat mat with no thermostat, or in a window: mycelium that goes past 28 °C stalls, and hot bags sweat, which is what contaminants like.

Rule 3: mix on the schedule, not before

An Inject-and-Forget bag is mixed well, through the plastic, on the day it is injected. That same-day mix is the reason Inject-and-Forget bags work so fast. A grain-based bag is the opposite: leave the grain where it landed, and only break it up and shake it after day 10, once the spores have germinated. After any mix, leave at least five days before the next one so the mycelium comes back healthy. Shaking a grain bag before day 10, or mixing more often than every five days, breaks the early growth and spreads whatever else is in there. When you do mix, mix well: knead the bag through the plastic, not a little shake.

Rule 4: wait for full colonisation

White mycelium spreads from the germination points and joins up. In a grain-based bag you see it first on the bottom of the bag, where the solution ran. An Inject-and-Forget bag that was mixed straight after injection shows hundreds of germination points all through the substrate. A bag is ready when the grain is white all the way through with no yellow, brown or grey patches. That takes two to four weeks for most gourmet species at the right temperature, longer if the room is cool. Slow is not the same as failed.

Rule 5: know what contamination looks like

Green, blue-green, black or pink patches, a wet grey slime, or a sour smell through the filter patch are contamination. White fluffy growth, small drops of yellow-brown liquid on the mycelium and a mushroom smell are not. If you are unsure, photograph the bag against a plain background in daylight and send it to us before you do anything else; the contamination guide has pictures.

Rule 6: when the bag is fully white, move on

A grain bag is fully colonised when every grain is covered in mycelium. For a spawn bag, that is the moment to mix it into bulk substrate for a monotub or bag-tek, with the substrate calculator giving the quantities; a grain bag is not fruited without a bulk substrate or a casing layer. A fruit-from-the-bag system is usually ready to fruit by day 20 on our mixing schedule: mix first on day 10, again on day 15 and again on day 20, then place it into fruiting conditions, still sealed until the product page says to open it. Opening the bag for the first time is where the guarantee ends and the growing begins.

If something goes wrong

Contamination before the first opening, on a bag and syringe bought together from us and handled by these rules, is covered by the sterile guarantee. Send the claim form with photographs of the whole bag, the injection port and the filter patch, and your order reference, and we will replace it.

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