MICRODOSE BROS.

Presents:

Cultivating Magic Mushrooms (Psilocybe cubensis) from Liquid Culture Syringes

Part 1

Growing Psilocybe cubensis mushrooms from a liquid culture ampoule is one of the most rewarding ways to cultivate your own mushrooms at home. This guide takes you through the complete process, from inoculating sterile grain with liquid culture to harvesting multiple healthy flushes, while helping you understand each stage of the cultivation journey.

If you prefer a simpler approach, we'll also point out optional shortcuts, such as using pre-sterilised grain bags or ready-to-use bulk substrate, allowing you to skip some of the more advanced preparation steps.

Whether you're growing mushrooms for the first time or already have experience with mushroom cultivation, this guide will give you the practical knowledge and confidence needed to successfully grow healthy Psilocybe cubensis mushrooms from a liquid culture ampoule.

Supplies needed*:

Sterile Workspace
- 70% Isopropyl Alcohol
- Disposable Gloves
- Face Mask (Recommended)
- Clean Work Surface
- Still Air Box or Laminar Flow Hood (Recommended)

Liquid Culture Inoculation Equipment
- Psilocybe cubensis Liquid Culture Ampoule
- Sterile Syringe
- Sterile Syringe Needle
- Alcohol Wipes
- Lighter or Alcohol Lamp

Grain Spawn Equipment
(Skip if using a pre-sterilised grain bag)
- Rye Grain, Millet or Sorghum
- Large Cooking Pot
- Colander or Strainer
- Mason Jars or Filter Patch Grain Bags
- Pressure Cooker or Autoclave

Fruiting Substrate Equipment
(Skip if using a pre-pasteurised CVG substrate bag)
- 1 Compressed Brick of Coco Coir (Approximately 650 g)
- 1.9 L Coarse Vermiculite
- 100 g Agricultural Gypsum (Optional)
- 5-Gallon Bucket or Insulated Cooler
- Large Mixing Spoon or Trowel
- 4-4.5 Litres of Boiling Water

Fruiting Equipment
- Monotub or Filter Patch Grow Bag
- Fine Mist Spray Bottle
- Thermometer
- Hygrometer (Recommended)
- Indirect Light Source or 6500K LED Grow Light

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Part 2

Before You Begin

This guide teaches you how to grow Psilocybe cubensis mushrooms from scratch by preparing your own CVG (Coco Coir, Vermiculite and Gypsum) fruiting substrate.

If you'd prefer a simpler approach, you can purchase pre-pasteurised or ready-to-use CVG substrate bags. These allow you to skip substrate preparation and reduce the amount of equipment you'll need.

If using a pre-prepared substrate bag, always inspect the packaging carefully before use.
Ensure it is properly sealed, free from visible contamination, and undamaged.

Important Tips for Success

Work Clean: The majority of cultivation problems are caused by contamination. Always disinfect your workspace, wear clean gloves and minimise unnecessary exposure of sterile materials to open air.

Be Patient: Healthy mycelium develops steadily. Avoid disturbing your grow unnecessarily and allow nature to work at its own pace.

Maintain Stable Conditions: Consistent temperature, humidity and fresh air exchange play a major role in producing healthy mushrooms.

Step 1: Prepare a Sterile Workspace

Action: Clean and disinfect your work area using 70% isopropyl alcohol. Wash your hands thoroughly, put on clean gloves and organise all of your equipment before opening any sterile materials.

Explanation: Creating a clean workspace greatly reduces the chance of contamination and gives your mycelium the best opportunity to establish itself.

Step 2: Prepare Your Grain Spawn

Action: Choose a grain such as rye, millet or sorghum. Rinse it thoroughly before soaking and simmering according to your preferred preparation method. Once properly hydrated, drain the grain well before filling mason jars or filter patch bags. Sterilise the grain at 121°C (250°F) using a pressure cooker or autoclave, then allow it to cool completely.

Explanation: Grain provides the nutrients your mycelium needs to grow. Proper hydration and sterilisation create the ideal environment for healthy colonisation.

Disclaimer: Alternatively, you can purchase pre-sterilised grain bags. Before inoculating, always inspect the bag to ensure it is properly sealed, clean and free from contamination.

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Step 3: Inoculate the Grain

Action: Shake the liquid culture syringe thoroughly. Sterilise the needle, disinfect the injection port and inject a small amount of liquid culture into each grain bag or jar before sealing it immediately.

Explanation: The liquid culture contains living cubensis mycelium, allowing the grain to begin colonising from multiple points throughout the container.





Step 4: Incubate the Grain Spawn

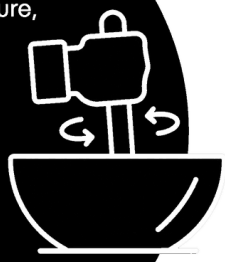
Action: Store the inoculated grain between 21-27°C (70-80°F) in a clean area away from direct sunlight until the grain becomes completely covered in healthy white mycelium.

Explanation: As the mycelium consumes the nutrients within the grain, it develops into healthy grain spawn ready to inoculate the fruiting substrate.

Disclaimer: Under ideal conditions this stage usually takes 2 to 4 weeks, although different temperatures, genetics and growing conditions may affect the colonisation speed.

Step 5: Prepare the Fruiting Substrate

Action: Prepare a CVG (Coco Coir, Vermiculite and Gypsum) substrate by mixing 1 compressed brick of coco coir (approximately 650 g), 1.9 L of coarse vermiculite, and 100 g of agricultural gypsum (optional) in a clean 5-gallon bucket or insulated cooler. Pour 4 to 4.5 litres of boiling water over the mixture, stir thoroughly to break apart the coir, then seal the container and allow the substrate to pasteurise and cool completely for 8 to 12 hours before use.



Explanation: Psilocybe cubensis thrives on a properly hydrated bulk substrate. Coco coir provides the main growing medium, vermiculite helps retain moisture, and gypsum can improve the substrate's structure while supplying calcium and sulphur. Pasteurisation helps reduce competing microorganisms while preserving beneficial microbes that support healthy mycelial growth.

Disclaimer: Alternatively, you can purchase pre-pasteurised CVG substrate or ready-to-use bulk substrate bags if you prefer to skip substrate preparation.



Step 6: Check Field Capacity

Action: Before mixing in your grain spawn, test the substrate's moisture content by squeezing a handful firmly. The substrate should release only a few drops of water. If water streams out, it is too wet. If no water is released and the substrate feels dry or crumbly, lightly add more water and mix until the correct moisture level is reached.

Explanation: Proper field capacity provides the ideal balance of moisture and air within the substrate. This allows the mycelium to colonise quickly while reducing the risk of bacterial contamination and poor mushroom development.

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Step 7: Spawn to Bulk

Action: Break apart the fully colonised grain spawn and thoroughly mix it with the cooled substrate at a ratio of approximately 1 part grain spawn to 2 parts substrate. Transfer the mixture into a monotub or filter patch grow bag, gently compressing the surface to create an even substrate depth of approximately 7 to 10 cm (3 to 4 inches).



Explanation: Evenly distributing the grain spawn throughout the substrate allows the mycelium to colonise efficiently. A 1:2 spawn-to-substrate ratio encourages faster colonisation, while an even substrate depth helps retain moisture and supports multiple healthy flushes.



Step 8: Colonise the Substrate

Action: Place the inoculated monotub or grow bag in a clean location at 21-27°C (70-80°F) and allow the substrate to colonise undisturbed until it is completely covered with healthy white mycelium.

Explanation: During this stage, the mycelium spreads throughout the substrate, creating a dense network that stores water and nutrients needed for fruiting. Full colonisation is essential before introducing fruiting conditions.

Disclaimer: Complete colonisation typically takes 10 to 21 days, although this can vary depending on the strain, spawn ratio, temperature, and growing conditions. Avoid opening the container unnecessarily during this stage to minimise the risk of contamination.

Step 9: Introduce Fruiting Conditions

Action: Once the substrate has fully colonised, introduce fruiting conditions by increasing fresh air exchange, maintaining a relative humidity of 90-95%, and exposing the substrate to 12 hours of indirect daylight or a 6500K LED grow light, followed by 12 hours of darkness each day.
If using a monotub, adjust the air vents or loosen the lid according to your setup.
If using a grow bag, cut small openings above the substrate to allow passive fresh air exchange.
Maintain an ambient temperature of 21-27°C (70-80°F) and mist only when the fine moisture droplets on the substrate surface begin to disappear.



Explanation: Changing the growing environment signals the mycelium that it has reached the surface and is ready to produce mushrooms. Increased oxygen, lower carbon dioxide levels, high humidity, gentle surface evaporation, and a regular light-dark cycle work together to trigger the formation of mushroom pins and encourage healthy, upright growth.

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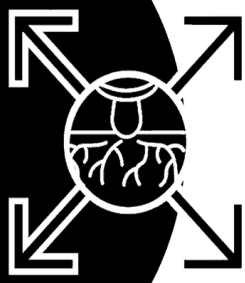
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Step 10: Monitor Growth

Action: Continue maintaining an ambient temperature of 21-27°C (70-80°F), a relative humidity of 90-95%, and consistent fresh air exchange throughout the fruiting stage. Check your grow daily, ensuring the substrate surface remains lightly covered with tiny moisture droplets without becoming waterlogged. Adjust misting and fresh air exchange only when needed, and avoid disturbing the developing mycelium and mushrooms.



Explanation: The first mushroom pins typically appear within 7 to 21 days after fruiting conditions are introduced, although some grows may take longer depending on genetics and environmental conditions. Healthy mycelium should remain bright white and may appear fluffy or rope-like as it continues to develop. Watch for signs of contamination, such as green, black, grey or pink patches, foul odours, or slimy areas. It is normal for the substrate to shrink slightly away from the sides of the container as moisture is used during fruiting.

Disclaimer: Growing times are estimates only. Genetics, temperature, humidity, fresh air exchange, substrate moisture, and cultivation technique can all influence how quickly your mushrooms develop.



Step 11: Harvest the First Flush

Action: Use a clean, sharp knife or sterile blade to cut the mushroom stems at the base, removing all parts of the stem from the substrate.

Explanation: Mushrooms are ready to harvest when the veil under the caps starts to become see-through and starts tearing. The cut area may bruise blue after harvesting. This is a normal reaction commonly seen in Psilocybe mushrooms and should not automatically be confused with contamination. It's important not to leave any pieces of the stem behind in the substrate, as they can rot and potentially cause contamination.

Disclaimer: Alternatively, you can gently wiggle and twist the mushrooms to remove them from the substrate. However, be aware that this method may disturb the mycelium and potentially reduce future flushes by damaging the substrate.

Step 12: Prepare for Additional Flushes

Action: Inspect the substrate after harvesting and gently remove any remaining mushroom tissue or debris. Return the block to fruiting conditions and continue maintaining proper humidity and fresh air exchange. If the substrate appears dry, lightly rehydrate it before continuing.



Explanation: Healthy cubensis blocks are capable of producing multiple flushes. Keeping the substrate clean and maintaining stable growing conditions encourages the mycelium to recover and continue producing mushrooms.

Disclaimer: Most growers harvest 2 to 4 flushes, although the total number depends on genetics, substrate quality and growing conditions.

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Part 6

Step 13: Enjoy

Congratulations on successfully growing your own mushrooms!



Every cultivation cycle is an opportunity to improve your skills and better understand the fascinating world of mushroom cultivation. As your experience grows, you'll become more confident in recognising healthy mycelium, optimising growing conditions and producing consistent harvests.

We hope this guide has helped you begin your growing journey.

For more detailed tutorials, troubleshooting guides and advanced cultivation techniques, visit www.microdosebros.com.

LEAVE A REVIEW!

HOW TO DRY?

We'd love to hear about your experience, please consider leaving a review to help us improve and reach more people.

If you're looking to dry your mushrooms, check out our drying guide!



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