

PF has created a revolutionary cultivation technique that enables easy growing of fabulous magic mushrooms using common kitchen utensils and easy to get supplies (small jars, powdered rice, vermiculite and an aquarium).

**PF TEK** — New high quality booklet edition — complete illustrated instructions — \$10 postage paid

**PSILOCYBE CUBENSIS SPORE SYRINGE** — \$10 postage paid — From the finest available blueing strain. Spore syringes are guaranteed clean and viable (replaced or your money refunded) Non-USA orders add \$10 for postage. There are no customer or mailing lists kept and all mailers are discretely return addressed to PF, not "Psylocybe Fanaticus".

PF web site — <http://www.fanaticus.com> or web search with **FANATICUS**

*Notice:* Psilocybe Cubensis mushrooms contain the contraband compound psilocybin. There are no federal laws prohibiting these spores. PF distributes these spores and this document for scientific and entheogenic research only.

**PSYLOCYBE FANATICUS P.O. BOX 22009 SEATTLE, WA 98122 USA**



**PF High Times advertisement  
February 1997**



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## PF TEK By Psylocybe Fanaticus

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## INTRODUCTION - from the PF web site at <http://www.fanaticus.com>

In September 1991, Psylocybe Fanaticus introduced the PF magic mushroom growing and culture kit in High Times Magazine. It was in the classified section under the heading "Magic Mushrooms". It ran for several years. At first it was in kit form with prepared jars with PF substrate, syringes and instructions. The formula of the PF substrate was not revealed. But in 1992, the kits were made obsolete when the complete PF TEK was published. PF now maintains a 1/6 page ad in High Times monthly, usually towards the back of the magazine.

The PF TEK is basically a brown rice method with an improved formula by using vermiculite as a base and adding pulverized brown rice. The secret is in the vermiculite. When mycelium is cultured in just grain, the mycelium turns into a mass with little air space. But when grown with vermiculite, the mycelial threads stretch across space. The important thing about the PF TEK, is that it copies nature. Instead of the usual cloning of mushroom tissue and growing mushrooms from that, a mass spore inoculation is employed directly to the fruiting substrate. That way, the genotype remains complete. Senescence (mutating and ceased fruiting) is no longer a problem. The spores insure a never ending succession of fungus, with all the power of the spores reproductive ability intact.

The PF TEK has been copied worldwide.

1. HEMP BC (Vancouver Canada)
2. HEMP NATION (Canada)
3. POWER PRODUCTS (a rip off that appeared in the "High Times" classified section and in "Psychedelic Illuminations" - 1993).
4. The Florida Mycology Research Center
5. Psilo-grow (Amsterdam, Holland)
6. Smart Botanics (Gouda, Holland).
7. LYCAEUM Magic Mushroom site
8. Perfect Fungi - Europe (Wageningen, Holland)
9. Experiences with the PF TEK at the Internet mushroom growers survey (parts 1 - 4 in text - 100KB)
10. EROWID Magic Mushroom site

## MORE PHOTOS AND TECHNIQUES

1. Photo (67KB JPG file) of a fruiting PF cake by Risto Paasivirta from Finland.
2. Fantastic crop circle (36KB JPG file) from Windmill Hill, South Wiltshire, Stonehenge England.
3. PF TEK in French (44KB)
4. PF interview from Soft Secrets magazine - Amsterdam, Holland
5. PERLITE humidification technique - proving once again, that less is more.
6. New PF article on fungi potency
7. New PF article on fungi extraction
8. Jochen Gartz - TRYPTAMINE technique
9. Modified PF TEK in ITALIAN - This method uses sand, perlite, whole grain brown rice and rye grains as a substitute for vermiculite and brown rice powder (standard pf jar). These mixtures are not recommended, but this version is intended for those in Italy that can't get vermiculite - a ubiquitous horticultural product in the states (and Holland). Vermiculite is the "magic" ingredient of the pf tek.

Within the last few years, mycophiles have copied the PF TEK and put it out on the Internet world wide web in the form of a web document called the "Magic Mushroom Growers Guide" Ver. 3.2. It can be seen at the Lycaeum and such web sites as the Hyperreal Magic Mushroom Site. It is all PF TEK plus various alternate things that can be done. So that is the reason PF is putting the PF TEK on the Internet. Since it is there in many different forms, why not put it up in its original form so all the mycophiles can see where it all came from.

## CATALOG

### PF TEK - NEW 2nd EDITION BOOKLET

\$10 post paid (US post - first class) - The new PF TEK booklet is a quality production with detailed photos and drawings. The entire process is explained from growing, to harvesting, and preserving the mushrooms. There is nothing left out.

PSILOCYBE CUBENSIS SPORE SYRINGE - \$10 each - post paid. The spores come from the finest fruiting genotype. The spore syringes are guaranteed clean (uncontaminated) and viable (germinate). If you are not satisfied with the syringes, they will be replaced or money refunded. **MONEY BACK GUARANTEE.**

Send a money order or cash for immediate shipment. No customer or mailing lists whatsoever are kept. All the syringe boxes and PF TEK envelope mailers are addressed by hand. As soon as the address is written on the mailer, the order letter is trashed - no records. For discreteness, "Psylocybe Fanaticus" is not used as a return address, instead, just plain **PF** is used.

PSYLOCYBE FANATICUS, PO Box 22009, Seattle, Washington 98122 USA



## LEGAL ISSUES

It should be known, that this mushroom, *Psilocybe Cubensis* contains active hallucinogens (Psilocybin and Psilocin). It is not that the mushrooms are illegal, but it is those compounds that are. Therefore, possession of this mushroom is against the laws of the United States, so act with wisdom. There are no federal laws concerning these spores.

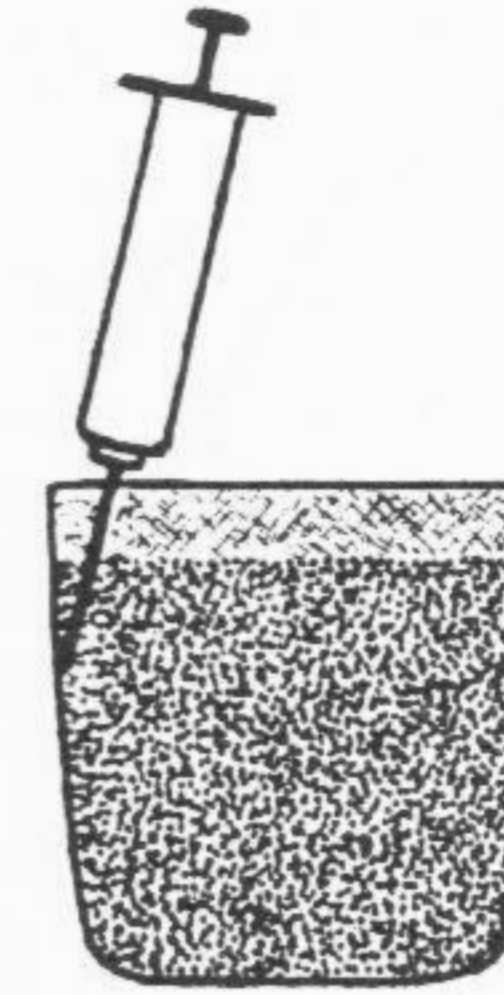
PF distributes these spores and this document for scientific, and entheogenic research only.

Only mature humans need experiment with these entheogens. Protect the children and don't involve those that aren't wise enough with this sacrament. But exercise your rights as an adult, to explore the other place and bring back knowledge.

*Psilocybe Fanaticus* - Seattle

## OVERVIEW OF PF TECHNIQUES

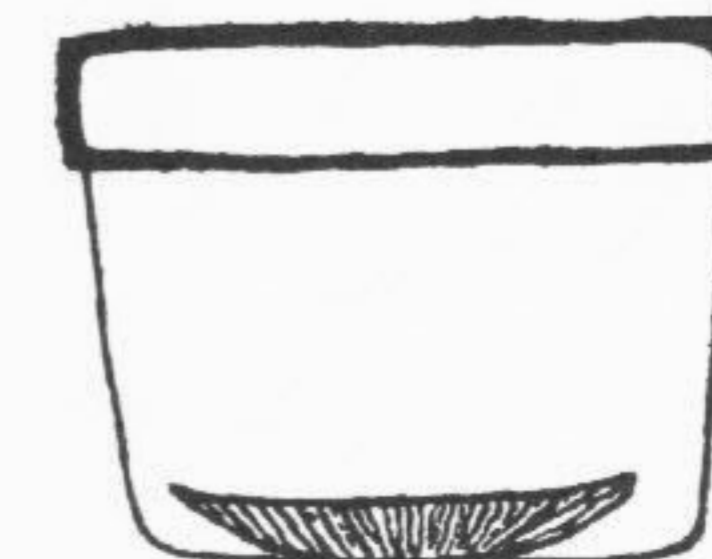
1. Brown rice powder, vermiculite and distilled water are mixed and loaded into a 1/2 pint jar, which is steam sterilized. The jar is then inoculated by the spore syringe.



2. After the substrate cake in the jar colonizes and begins to show signs of fruiting, the cake is released from the jar and placed into the dual chambered terrarium to fruit.

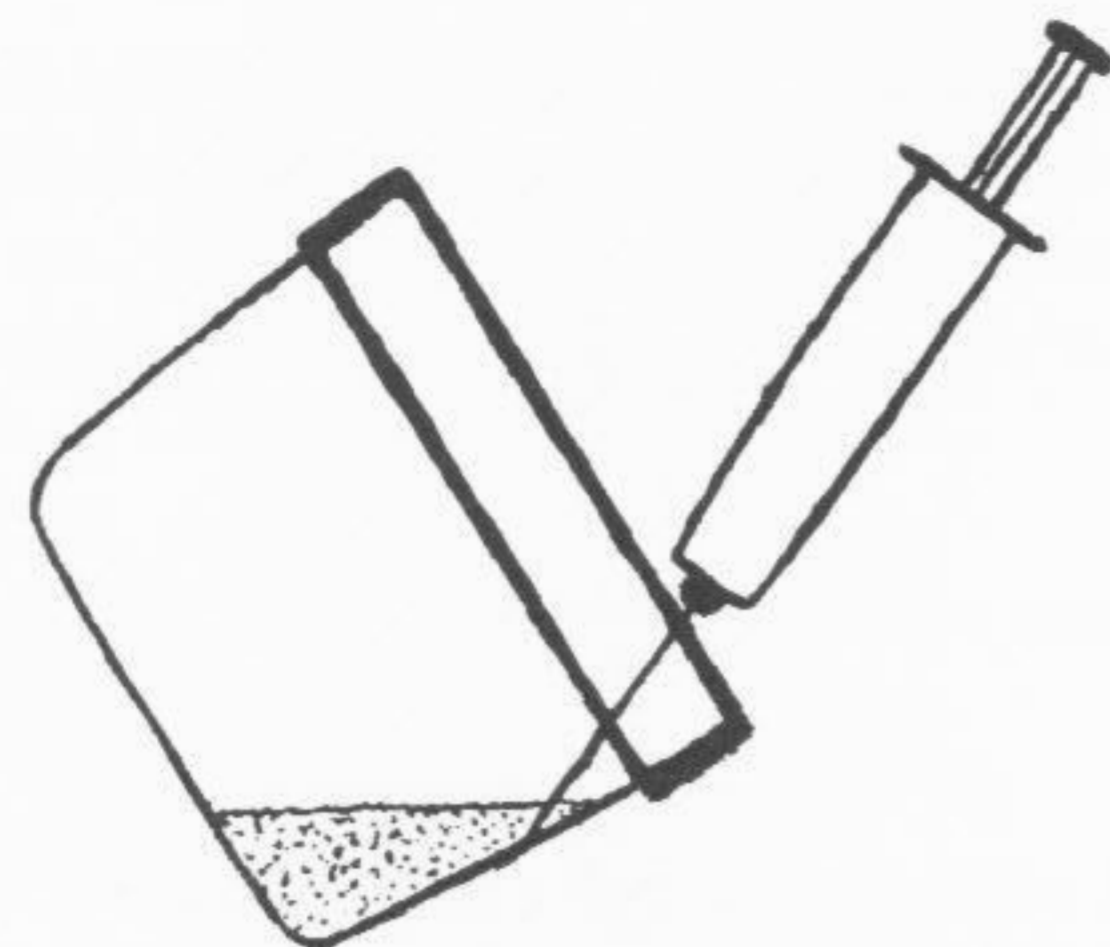


3. A mature mushroom is decapitated and spore printed in a jar.





4. Spore syringes are prepared with the spore print jar to begin another life cycle.



### PF SUBSTRATE FORMULA (for half pint jar)

Jars and glasses to be used with this technique are 1/2 pint capacity (8 ounces) - (250 milliliters). They must have tapered sides and no shoulders, otherwise the fungus cakes won't easily come out of the jars.

Appropriate jars; (source - super markets and hardware stores)

1. KERR wide mouth half pint canning jar.
2. BALL regular mouth half pint canning jar.
3. BALL half pint jelly jar.
4. 1/2 pint (250 ml) capacity drinking glasses (tapered sides)

NOTE: Even though the regular mouth BALL half pint and the regular mouth KERR half pint look similar, the KERR is not tapered.

1/8 cup of brown rice powder (Health food stores and co-ops)  
1/2 - 2/3 cup of horticultural vermiculite (medium grade) (garden centers and hardware)  
40-45 cc's (milliliters) of water or (a little less than 1/4 cup) (1&1/2 ounces)  
(3 tablespoons + 1 teaspoon)

#### Maximum fruiting formula:

1/4 cup of brown rice powder  
1/2 cup of vermiculite  
60 cc's water

Not all vermiculite is the same. The coarseness varies quite considerably among different brands. The coarser type will hold less water than the finer

type which will alter the water holding capacity. If the formulation (water content) results in a really wet or sloppy substrate, use less water. Keep notes on formulas for replicating the substrate formula that fruits the best.

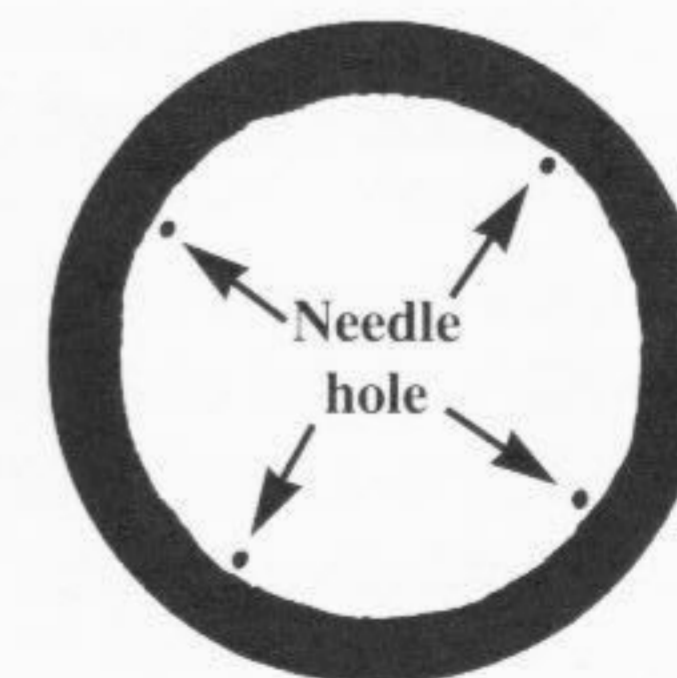
The above formulas utilize the finer type of vermiculite. If the above maximum fruiting formula is used with the finer type of vermiculite, the jar lid should be loose during incubation (see - "The canning jar lid - loose or tight").

The finer type of vermiculite is recommended over the coarser type because it holds more water. To ascertain the size of the vermiculite particles, observe them under a photo magnifier next to a millimeter ruler. The finer type of vermiculite has particles averaging around 1 millimeter across (some larger and some smaller). The coarser type has particles averaging around 4 or 5 millimeters across and up to 8 millimeters. Stores usually carry one type. Plus, there will be regional differences in the different brands of vermiculite. Shop around and try to get both types to compare.

To make homemade brown rice powder, place some regular brown rice in a small canister type coffee bean grinder and grind it to fine powder. Freshly ground brown rice is recommended over prepackaged type. The freshness sometimes makes a big difference.

If the measuring cup specs aren't true, the formulas will be off, setting up certain failure or diminished growth. Check the cup measurers this way: 1 cup is 237 milliliters which is 1/2 pint or 8 liquid ounces (English measurement). There are 2 cups in a pint, 2 pints in a quart and 4 cups in a quart.

Prepare the canning lid by placing it with the rubber sealing edge upwards on a supporting surface and with a sharpened 3 penny nail (held with vise grip pliers), punch 4 holes inside the periphery of the rubber sealing edge.



Canning lid with needle holes



## PF SUBSTRATE JAR PREPARATION

Steam sterilizing PF substrate jars with regular cookware is possible because there is no grain to cook up and the substrate is airy. Other regular jars (other than canning type) or small drinking glasses (with tin foil covering) can be substituted for these canning jars. To insure similar results, make sure the jars or glasses are tapered sided with no shoulder of any kind, and that they have a 1/2 pint (8 ounce - 250 ml) capacity. It is important to note, that jars somewhat larger than 1/2 pint are unreliable for the PF TEK and fail easily. The low form KERR 1/2 pint canning jar is the most versatile (fits into tight spaces et).

A 3 piece vegetable steamer (pot, basket insert & lid) is used for the steam sterilizing stage. Also, the stainless steel vegetable steamers that fold out and stand on the bottom of the pot are good. Anything is good as long as it keeps the jar bottoms off the pot bottom where the high temperature will crack the glass.

Step 1. Place 1/2 cup of vermiculite into a mixing bowl. Place the brown rice powder on top of the vermiculite. Slowly add the water directly onto the brown rice powder, wetting it first. Thoroughly mix the ingredients. The mixture should feel damp and cohesive. More water (or less) can be used if experimenting to improve the fruiting. Mix Each jars substrate individually for loading to insure accurate formula rendering.

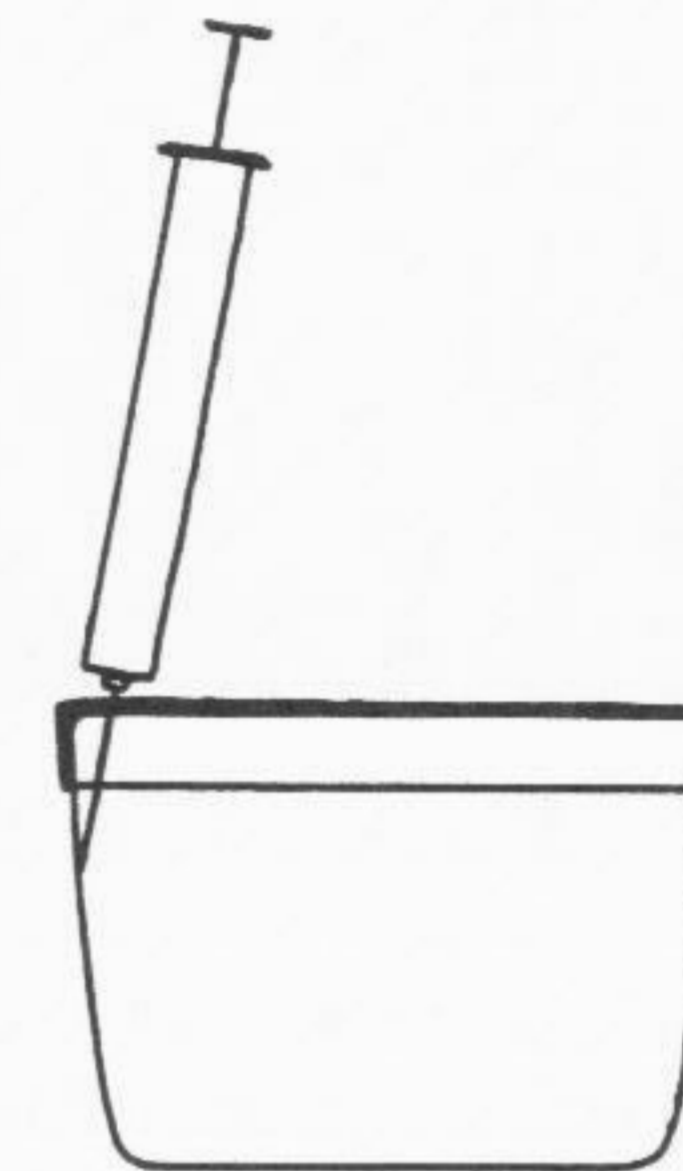
Step 2. **Fill the jar very loosely.** Leave a 1/2 to 3/4 inch space at the top. Level the substrate. With a tissue or a fingertip, wipe the insides of the jar down to the substrate. Fill the top of the jar with plain dry vermiculite and level it off at the top. This upper layer will protect the wet substrate from air borne contaminants. It acts as a contaminant barrier. This is a Psylocybe Fanaticus original discovery. What this dry vermiculite layer does is protect the wet substrate from airborne contaminants and also absorbs and regulates moisture transpiration and condensation. (See page 30.)

Step 3. Place the lid on the jar with the rubberized edge up (jagged edges of the needle holes down). Screw the lid band on. Place pieces of "professional" grade masking tape (holds on during steaming) over the needle holes. This is to protect the needle holes from contaminant entry.

Step 4. Heat the pot of water to a boil. **Put the jars into the pot with the lid bands loose** so that the steam can penetrate the jars quickly. The jars can sit in water but make sure boiling water can't slosh into the jars. Turn the heat down and GENTLY steam the jars at the lowest possible boil for an hour in a

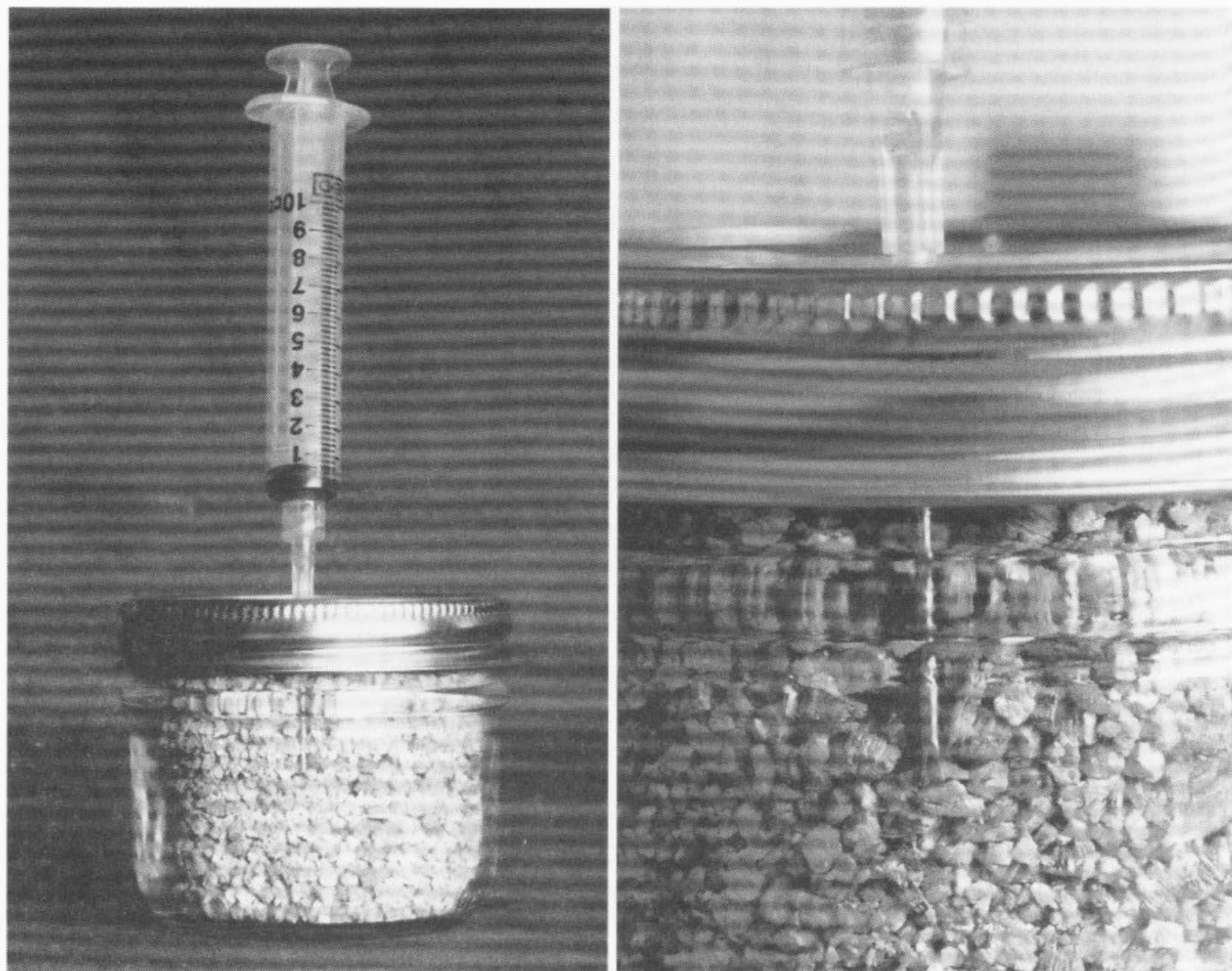
**TIGHTLY** covered pot (gas stoves are the easiest to control). A good tight fitting pot lid is essential for successful steaming. Be careful to not overheat the jars, this dries the substrate. Drying is evidenced by o.k. spore germination and halted growth. The fungus will spread but stop at a certain point depending on how dry the substrate has become. Generally, any halted growth (with no contamination) is a sign of dried substrate. This is an important concept that will enable diagnosis and correction of problems experienced with drying. The remedy is to increase the water content of the substrate formula in use. After the jars have cooled, tighten the lids and store them in a cool draft free place until ready to inoculate them.

## INOCULATION OF THE PF SUBSTRATE JARS



Any jar to be inoculated must be cool to the touch before proceeding. Make sure the lid is tight. Shake the syringe well and remove the tape from the syringe needle guard. This shaking of the syringe is important as to redistribute the spores in the water. Take off the tape covering the needle holes. Remove the needle guard and insert the needle through the lid hole. Tilt the syringe body back towards the center of the lid with the needle tip touching the glass. This distributes the spore water down the side of the jar, giving a good inoculation down the side of the substrate cake. Inoculate a few drops down each needle hole. As the syringe plunger is pressed, observe the needle tip against the inside of the glass. As soon as water appears around the needle tip, release the syringe plunger pressure. In between each hole inoculation, shake the syringe a little to keep the spores distributed. Use 1 cc per jar. This will allow the syringe to inoculate 10 jars. More spore solution per jar can be used (speeds colonization), but fewer jars can be inoculated. If the syringe needle plugs up as it is inserted into the substrate, draw the needle back a little and it will unplug.





### ALCOHOL FLAMING TECHNIQUE

If the syringe needle is touched, flame the needle to sterilize it. An alcohol flame is a clean flame whereas a butain cigarette lighter leaves behind an undesirable soot residue. To produce a short burning alcohol flame, place a tequila shotglass upside down. Using an eyedropper, put a few drops of denatured alcohol fuel (hardware store) on the hollow bottom of the glass and touch it with a match or lighter. The blue flame will cleanly and safely sterilize small stainless steel tools. Heat the needle in the flame for a few seconds to re-sterilize it. There might be a few "pops" of boiling water spurt out of the needle, but the spores within the syringe are safe. If there is some left over spore solution, replace the needle guard and store the syringe for later use. Re-sterilize the needle immediately before re-use. Store the syringe in a dark, cool place.

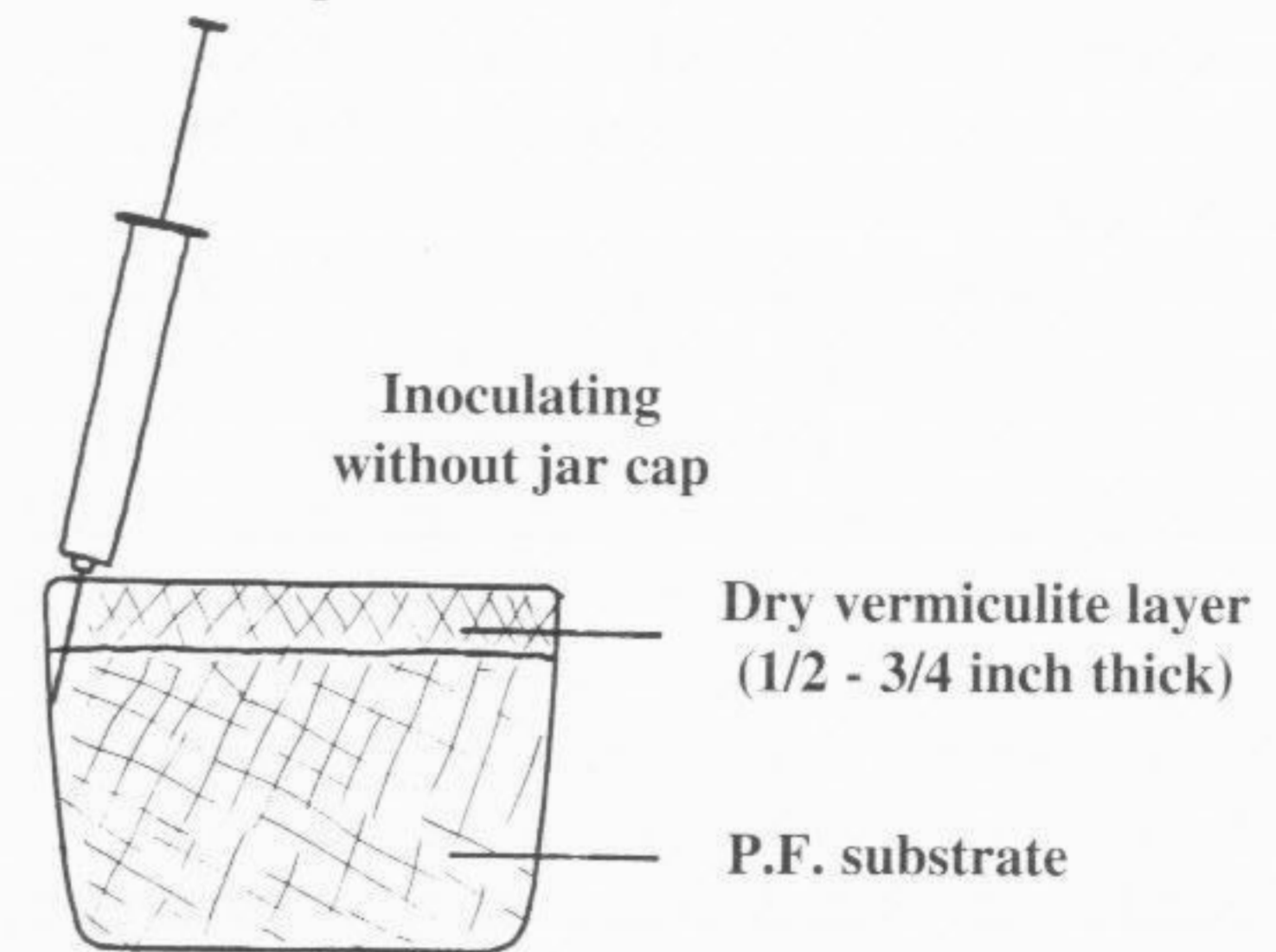
### INOCULATION OF PF JARS WITHOUT THE LIDS

(technique for using regular 8 ounce (250 ml) tapered sided drinking glasses)

Jars can be inoculated without using a lid with holes punched. Before trying this technique, inoculate with the punched lid first. That will show how it works without any problems (almost fail proof).

The only precaution to observe is to disturb the dry top vermiculite layer as little

as possible, especially when removing the needle after the inoculation. The underlying substrate must not be exposed to the air. Carefully move any disturbed vermiculite back into place. If using a drinking glass or alternate container, cover the mouth with tin foil. Replace the tin foil cover after inoculation.



### INCUBATION OF INOCULATED JARS

After inoculation of the jars, tighten the lid bands and retape the needle holes. Place the jars in a safe place out of direct sunlight. Indirect light is all that is required. If the temperature is kept around 70 degrees, germination will begin within 3 to 5 days. Germinating spores appear as small white fuzzy spots, quickly growing and spreading with cottony white growth and strandy "rhizomorphs". Any room temperature is O.K. If it gets cold indoors, over head light shinning down on the tops of the jars is a perfect heating technique for this culturing stage. A clamping type light with a reflector works well for this. If this is done, keep the temperature around 70 degrees (don't overheat the jars - monitor the temperature with a thermometer). A warm overall house temperature is fine. But in the over-all view, cool temperatures are never a problem. The rule is to not overheat.





## THE CANNING JAR LID (loose or tight)

There are two choices with the lids during incubation - tight or loose. With a very high moisture content (good for fruiting), a tight lid can cause water to collect in the bottom of the jar. This is to be avoided. If it happens, the lid should be kept on loose during incubation. If the substrate is on the dry side, a tight lid will preserve the moisture content. It is all a matter of the balance between the water needs of the mycelium, the size of the jar, the available air space in the jar, and the type of vermiculite used. Only by direct experimenting and comparison can the right balance be found for a given set of conditions. Take notes and go with what fruits the best.

After the substrate turns white with the mycelium (2 or 3 weeks after inoculation), the jars are left to sit in indirect light. The mycelium will continue to infiltrate the substrate until it gets enough food to trigger the fruiting cycle. In less than a week to a few weeks after surface colonization of the cake, tiny white "pin" like structures begin to appear. This is called pinning. This is the beginning of the fruiting cycle. Soon after that, within the week, small round fungus growths appear that soon begin to turn yellow.

Lastly, "primordia" start to grow. These are tiny worm like structures with tiny reddish heads. These are the first mushrooms.

### REMOVING THE FUNGUS CAKE FROM THE JAR

The best time to remove the fungus cake from the jar is when the primordia (tiny worm like structures with reddish heads) appear on the cake while still in the jar. Be careful not to damage them in handling. The rule is to handle with care.



PRIMORDIA IN JAR

Remove the lid. With a clean fork, scrape away the majority of the dry top vermiculite layer. There will probably be seen some wispy mycelium here and there in the top layer. Place an old jar lid over the jar mouth and turn the jar upside down. Lightly slam the jar down on a table cushioned with a magazine. The fungus cake will slide out onto the old jar cap (BIRTHDAY). The jar cap functions as a base for the cake. When handling the fungus cake, be careful as not to squeeze and bruise it. Bruising results in a bluish mark. This fungus is resilient and can tolerate a certain amount of handling, but handle it as least as possible. The aroma is distinctly mushroomy, very pleasant.

As soon as the fungus cake comes out of the jar, daub the cake with a piece of loose tissue paper to soak up any water droplets that may have deposited on the cake as it comes out of the jar. Immediately after the birthday, place the cakes into the dual chambered terrarium for the fruiting cycle.

Some of the first mushrooms to form are "aborts" (convoluted caps, gnarly stems and stunted growth), and ironically they are primo in magic alkaloids. They are even more powerful in magic than the stately beauties that will soon dominate the cake. The tiny "baby mushroom" aborts are likewise good. After witnessing the growth of the fungus, recognition of these aborts is easy. As long as the aborts are healthy and pure, they are primo. Also, another form of mutants will manifest, blobs of fungus with little or no cap, also good for harvesting. And along with these mutants, appear the perfect specimens, the sporocarps.

It has been reported that *Psilocybe Cubensis* is a "weak" mushroom. PF and others have seen this to be not necessarily so. It all depends on how it is grown, on what medium and how it is harvested and preserved.

The secret to potent mushrooms is in their age when picked. It has been scientifically proven that the small immature specimens are significantly more potent than the larger mature specimens. Over half of the small primordia that first form will abort (cease growing, convolute and deform). Pick these before their heads turn black. A pointed knife blade works well for removing these high potency primordia. These are among the most potent. The abortive mushrooms are also high potency. Harvest them when they are young and before their heads turn black. When the fruitbodies are normal, harvest them before the veil under the cap breaks. The mushrooms will be smaller and their heads will be roundish. It is important to note that the mushroom cakes pictured in this book are all mostly well matured. While these mature specimens are beautiful and perfect, they are not as potent as the diminutive specimens. The mature specimens are good for spore collecting and showcasing but are weak in psychedelic potency.

**Grow them on brown rice, harvest them when they are young and cool dry them with desiccant. When this is done, they are an entheogen of the highest order.**



## TIME SCALE OF THE MUSHROOMS

1. Spore inoculation to spore germination - within a week, at 70 degrees Fahrenheit.
2. Spore germination to complete colonization of the cake - about 2 to 3 weeks.
3. Colonization to fruiting cycle start - within 2 weeks.
4. The fruiting cycle lasts about 2 weeks. After the initial flush, the mycelium cake begins to turn blue and no more mushrooms form. If the cake is thoroughly cleaned after the initial fruiting, sometimes secondary fruit bodies form, but they are usually sparse and small, if at all.

All in all the process takes from 4 - 6 weeks from spore inoculation to fruiting.

## CONTAMINANT SOURCE IDENTIFICATION

Contaminant invaders appear in various colors from pastels to black. If they appear, the culture is doomed. Bacteria contamination is detectable through the top dry vermiculite layer as a sour foul odor within two days after inoculation (and no spore germination). If the jar is bacteria contaminated, be careful in cleaning it. Keep a safe distance from the contaminated substrate. Don't inhale the bacteria and wash after touching it. Bacteria can be dangerous.

### Control jar technique:

After the jars are steam sterilized, let them cool, tighten the lids and let them sit uninoculated for several days. Watch for any colored growths or changes in the appearance of the substrate. The tell tale rancid odor of bacteria can be easily detected by loosening the jar lid and checking for the odor. If there is contamination at this stage, the sterilization technique needs to be checked. Most likely it will be a too short sterilization time. If there is a problem at this stage, lengthen the sterilization time. If the jars remain clean and unchanged, they are ready for spore syringe inoculation. If contamination occurs after inoculation, the syringe was contaminated or the dry vermiculite layer was breached during inoculation.

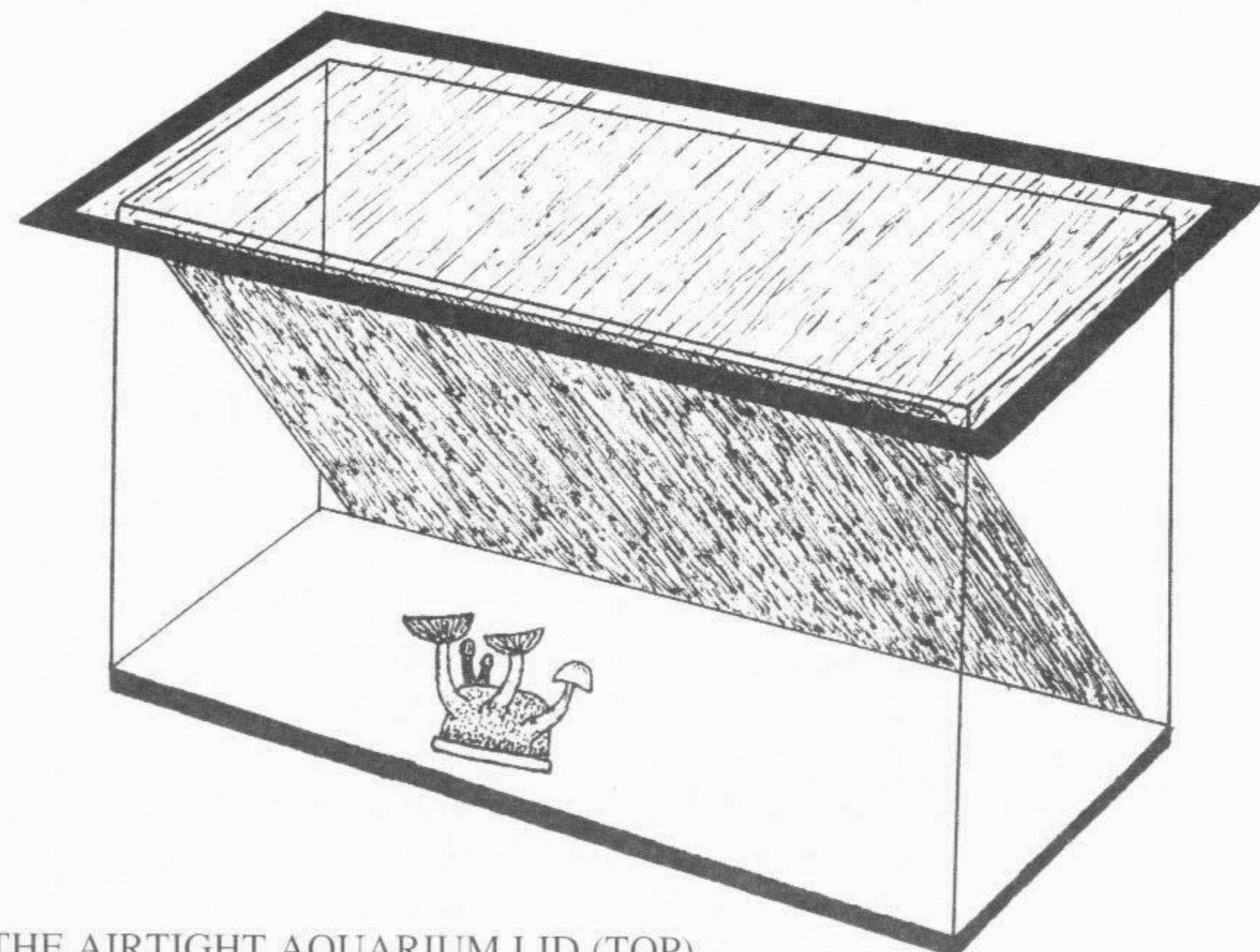
## NON-GERMINATION OF SPORES

1. The spore solution was not inoculated deep enough down into the jar. Instead of running down the side of the jar and inoculating the substrate cake, the solution was absorbed by the non-nutritive top vermiculite layer. To avoid this from happening, make sure that the spore solution flows down along the sides of the substrate cake by inserting the syringe needle so that the tip is below the non-nutritive upper vermiculite layer.
2. The substrate jars were not allowed to cool down after sterilization, killing the spores. Inoculate only when the jar feels cool to the touch.

3. There is evidence now that syringe boxes can be exposed to killing heat during transit (a very rare occurrence). The possibilities are such as over heated airplane cargo holds during intense heat waves or a superheated mail truck parked all day in the sun. Another possibility is that on arriving at the mail box, the syringe package was allowed to sit inside a broiling sun heated mail box, killing the spores.

4. Spore syringes can survive freezing, but extreme low temperatures are probably destructive to the spores.

## THE DUAL CHAMBERED TERRARIUM



THE AIRTIGHT AQUARIUM LID (TOP)  
(For a standard 10 gallon aquarium)

24" X 14 1/2" outside dimensions

21 1/4" x 12" inside dimensions (dimensions variable).

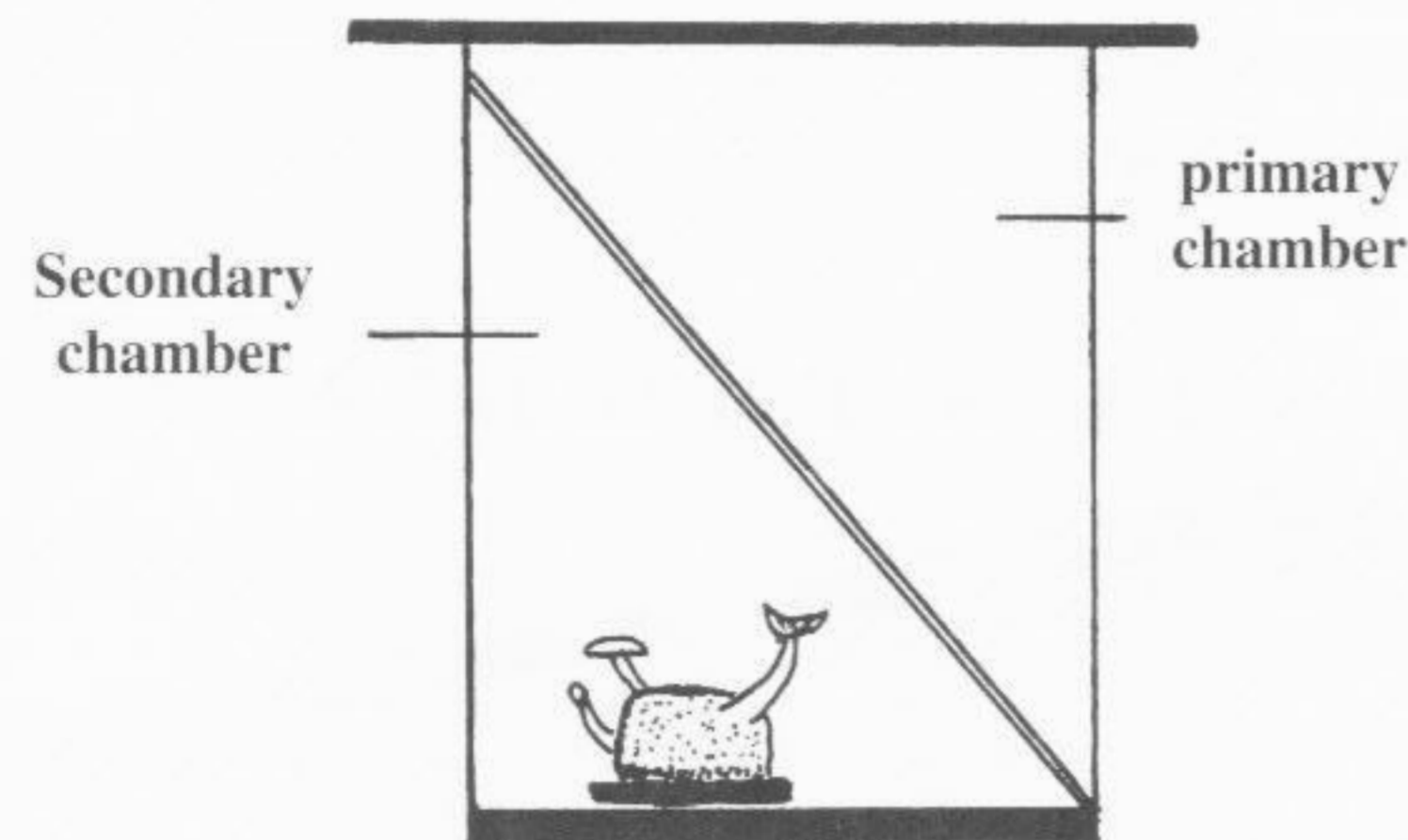
The frame can be made of flat (unwarped) 1/4" thick board or 4 wood strips connected by screws.

The wooden lid frames' inner rectangular cutout must be LARGER than the top of the aquarium. Clear polyethylene plastic film is tacked to the underside (or upper side) of the frame so that the frame holds it tightly onto the aquarium top. The frame essentially hangs by the plastic film. A simpler alternative is to cover the aquarium top with saran wrap or something similar. The most important point to be stressed is that the aquarium must be sealable with no air leaks, for humidity retention.



THE SPRAY SHIELD/CHAMBER PARTITION (shaded area)  
(for a standard 10 gallon aquarium)

Use 1/8" thick clear acrylic (Plexiglas) window insulation available at most hardware stores. Have it cut around 15" x 18" (dimensions may vary - check the aquarium first). A tight fit is good.



Side view of aquarium with the spray shield and lid in place.

### DUAL CHAMBERED TERRARIUM TECHNIQUES

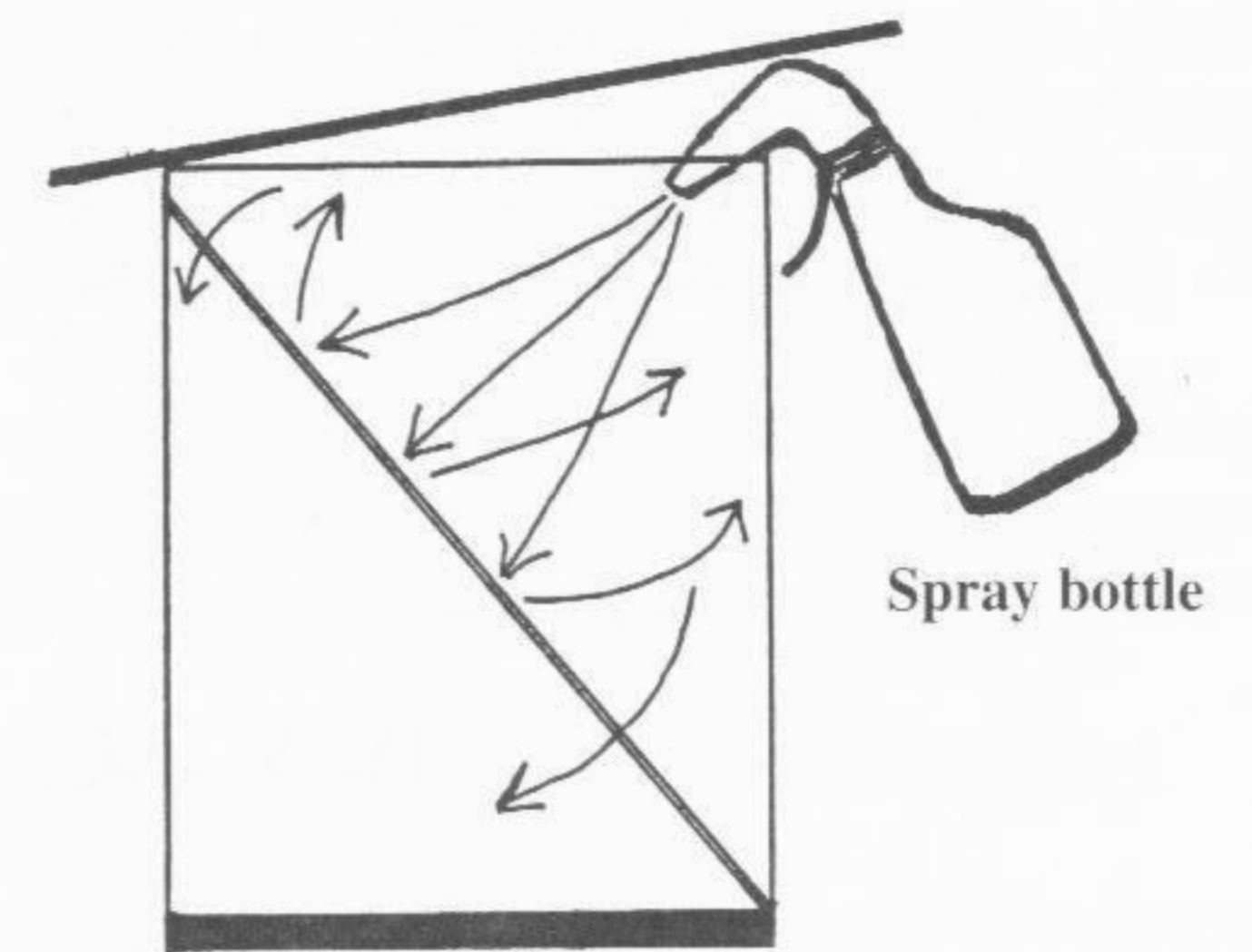
The mushrooms get water from 2 sources; the substrate they grow on and the air that surrounds them. The surrounding air must be highly humidified. The fungus needs to bathe in a shroud of floating water molecules. 100% humidity is where there is the maximum number of water molecules floating amongst the air atoms. The dual chambered terrarium easily achieves these conditions.

It all starts with the spray from the hand sprayer. The first rule is to never directly spray the fungus. This initial spray is comprised of water droplets that are giant ponds of water in relation to the fine mycelial networks of the fungal threads. In culture, the droplet of water will drown the micro world of the fungal structures and thereby inhibit or contaminate growth. But the airborne molecularized water floats into the fine structures and gives the fungus humidity as needed. Molecularized water is another way of describing water that has evaporated into the air.

The spray that comes out of the spray bottle must be molecularized for the fungus. The spray shield and the primary chamber accomplish this. The primary chamber receives the initial spraying. As the spray strikes the shield, it is broken down into a finer mist which flows around the sides of the spray shield into the secondary chamber where the fungus is bathed in the fine humidity safely away from water droplets. In a matter of time, this humidity will condense out onto surfaces inside the terrarium and drip down. The spray shield is slanted and therefore acts as a drip shield and roof, so the more condensation the better.

### SPRAYING PROCEDURE

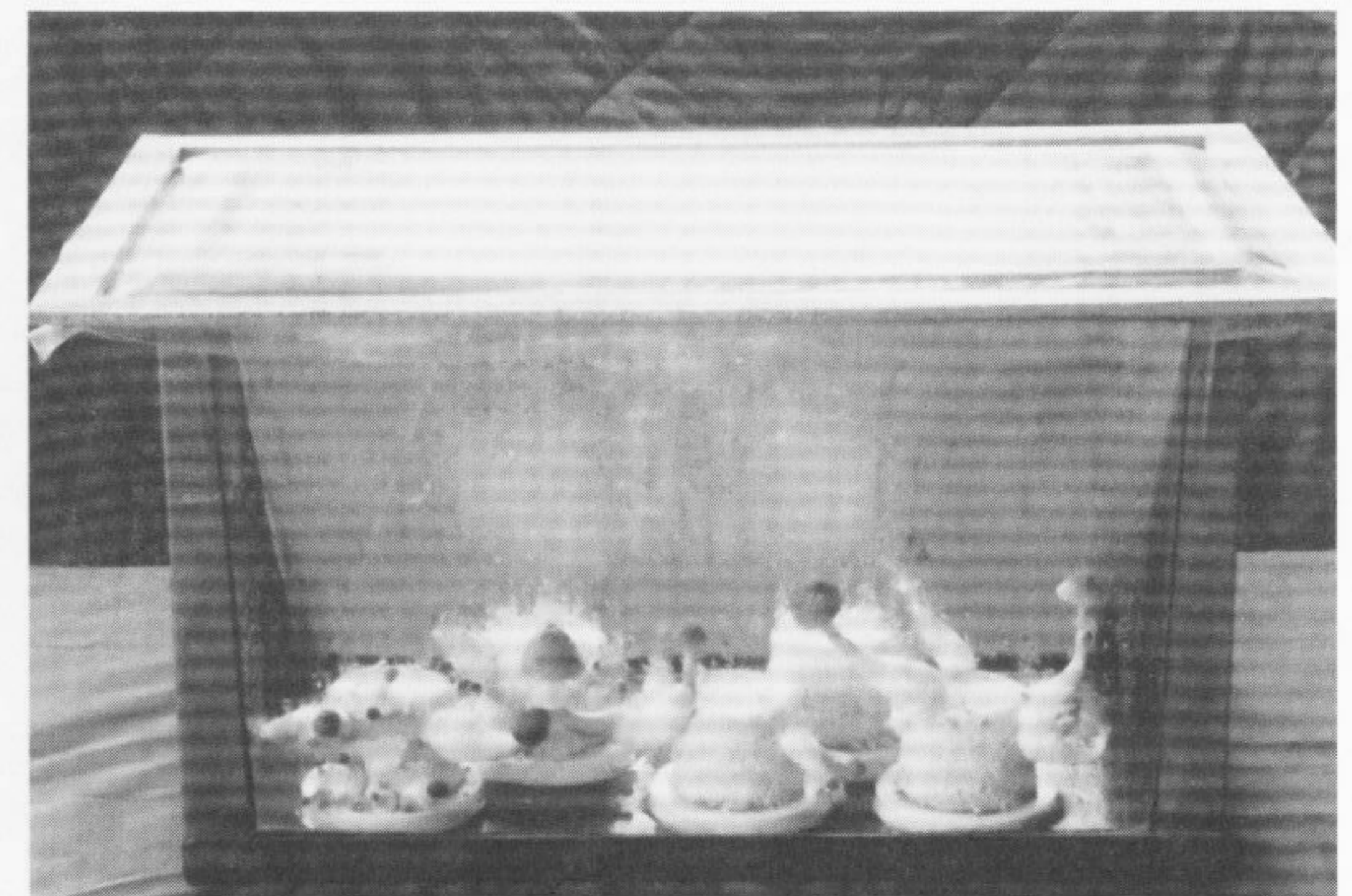
First, before placing the cakes into the terrarium, spray all the inside surfaces of the terrarium, including the spray shield and lid. Insert the fungus cakes and put the spray shield and lid in place. Then, slightly lift up the lid and insert the nozzle of the water spray bottle in between the lid and the top of the aquarium and vigorously spray downwards into the middle of the shield. After about 5 seconds



Spraying the Primary chamber

of spraying, immediately withdraw the sprayer nozzle and let down the lid to seal the swirling mist inside the terrarium. Come back after a few minutes and give it another spraying if desired and a third if the terrarium is to be left untended until the evening. To maintain a high humidity try to spray at least 2 times a day, and the more the better. Compensate for a lack of spraying during the day by spraying several times in the evening. Make sure that all the inside surfaces of the terrarium are foggy or dripping with water. This in itself helps generate humidity.

**It has been seen that mushrooms will grow in a properly set up dual chambered terrarium, with only one good spraying a day - and even less than that!**



DUAL CHAMBERED TERRARIUM — 10 gallon aquarium

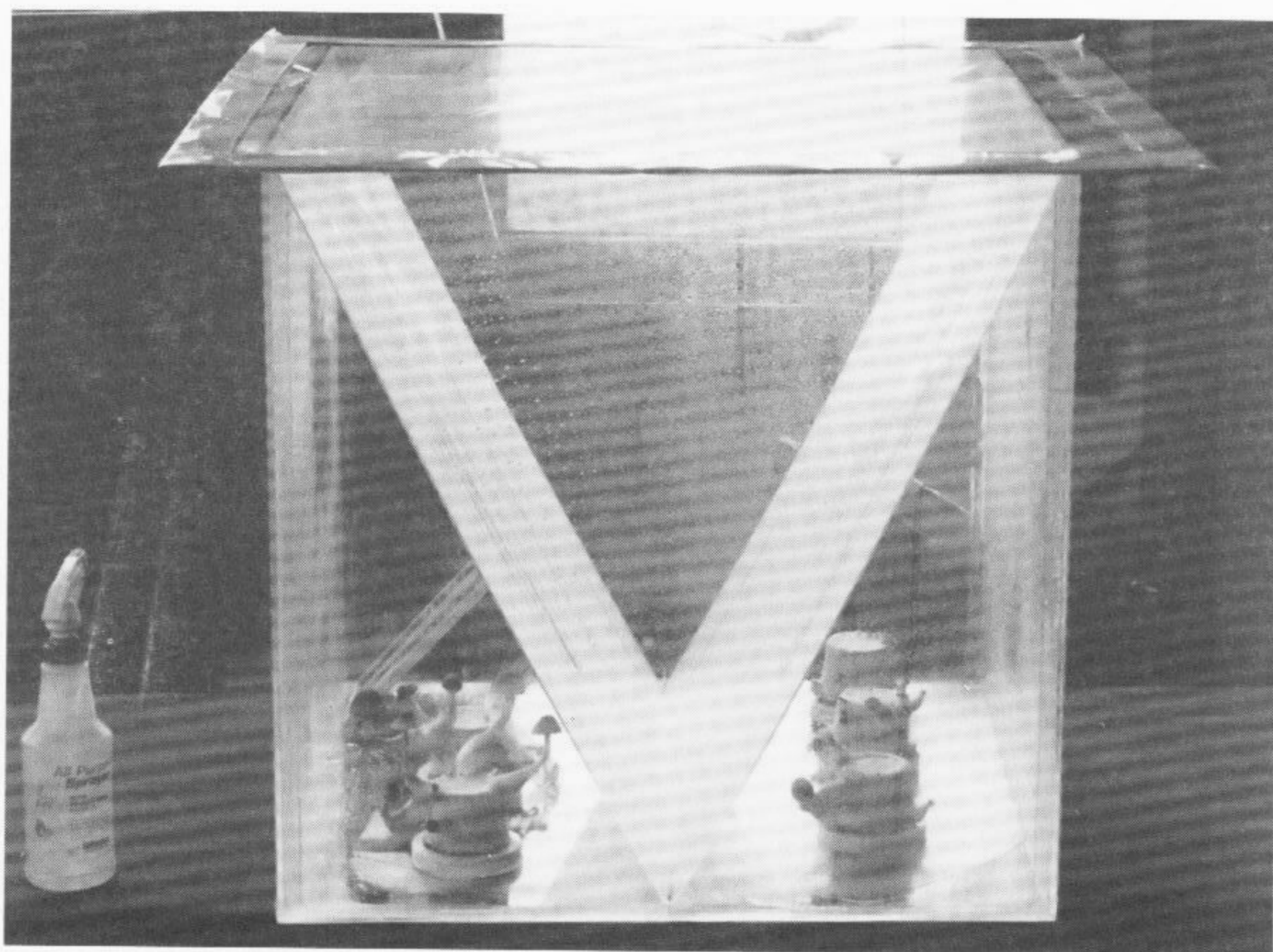


Each time the terrarium is sprayed, the fungus should be ventilated. To ventilate, take off the lid, and while holding the spray shield vertically, fan the chamber with a piece of cardboard, and then spray as above. Also, the water that collects in the bottom of the terrarium must be siphoned out (prevents bacteria buildup). This can be easily done using a rubber bulb battery filler (auto parts store) or a rubber bulb type enema bottle.

Expose the terrarium to normal room light (indirect sunlight). A small low wattage fluorescent plant light will make the phototropic mushrooms grow upwards. Leave it on all the time if desired.

### HEATING

The main rule is to not heat the dual chambered terrarium. Any direct heating works against the humidification and adds a drying influence. Do not use heating cables, heat pads or blankets. Don't shine light directly down into the terrarium. Keep any plant grow light (low wattage only) a safe distance from the terrarium. These fungi grow well at 60 degrees Fahrenheit. PF has even seen them growing perfectly at temperatures cooler than 60 degrees. They grow slowly when they are cool. When warm or at heated room temperature, they grow very fast. Strive for a growing temperature between 65 and the upper 80's. A too hot terrarium will result in lots of spreading mycelium, but no fruiting.



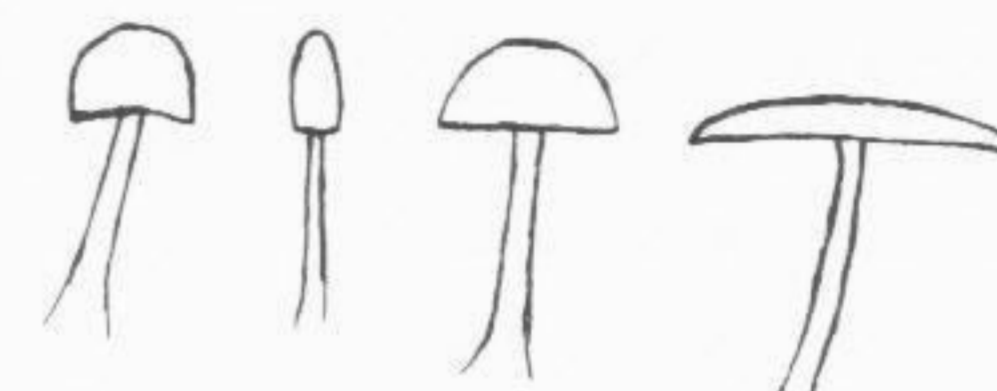
PLEXIGLAS DUAL CHAMBERED TERRARIUM

### SYMPTOMS OF LOW HUMIDITY

When the humidity is a bit low, but not low enough to stop fruiting, the mushrooms can have fuzzy white mycelium growing on the tops of the caps. When this occurs, the cap looks like it has a crown of white hair. This is not contamination. This white fuzzy mycelium is perfectly good and does not detract from the mushrooms quality.

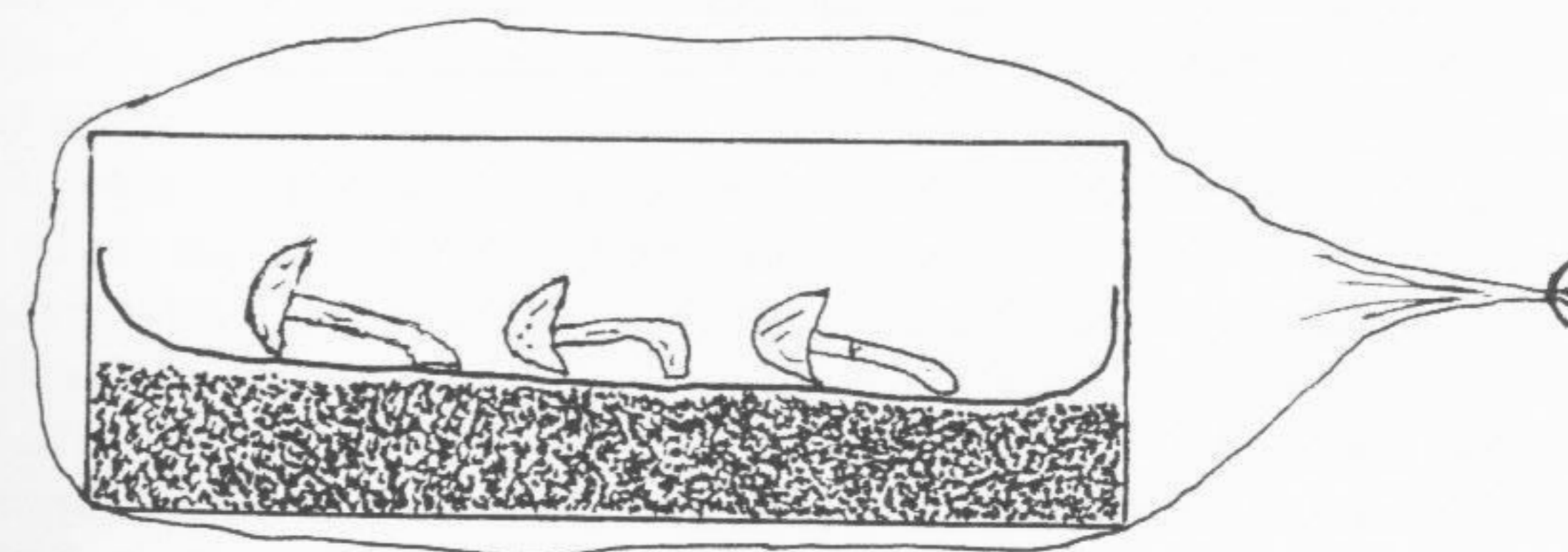
Deformed, convoluted, and withering mushrooms and primordia are signs of low humidity. For the best growth, the humidity has to be very high.

### COOL DESICCATION (drying) OF MUSHROOMS



The immature specimens are the best in quality, digestibility and potency. They are characterized as being very light in color with white stems and light colored caps. The cap will spread out after the veil breaks. Just before or right after the veil breaks is a good time to harvest. The gills on the underside of the cap will be light in color. The mushrooms will be conical shaped and sporulation hasn't really begun yet. These are the mushrooms that are the best for harvesting.

1. The easiest way to dry the fungi is to place them on a wire screen with air available to all sides. Never dry them in an oven or use hot air dryers. The heat leaches the chemical constituents and reduces their quality.
2. Using a frost free (dehumidifying) refrigerator works but it is time consuming and then everyone doesn't have a frost free fridge.
3. Using desiccant to cool dry mushrooms is overall, the best drying technique.





**MATERIALS NEEDED** - Desiccant - Wire screen - Plastic tub or container - Plastic bag with tie off.

### DESICCANT SOURCES

1. **"DRIERITE"** desiccant. (chemical and science supply retailers). It is the universal lab desiccant.
2. **Silica Gel** granules - desiccant. (Chemical and science supply)
3. **"DAMP GONE"** - (looks like kitty litter - for drying closets and damp places in the home) - available at well stocked hardware stores. This is inexpensive desiccant but works as well as any.

Note: These products might have toxicity warnings - (don't breathe the dust and try not to touch it directly - it dries skin.). Follow those rules, but know that desiccant in an airtight box and under a screen will do nothing to the fungi except dry them. It is completely safe for this use.

What desiccant does, is absorb moisture out of the air. As the fungus transpires moisture, the moisture is immediately absorbed back into the desiccant, drying the fungi. Desiccant can be reused and lasts indefinitely. After use, the desiccant is heated, dried and stored for future use. Store it in an air tight container so that it stays dry and ready for use. Heat the desiccant in an oven as instructed by the manufacturer. This preheating should be done before the desiccant is used because when it is purchased - it is usually somewhat damp which will thwart its function for drying air.

In drying a medium sized mushroom such as *Psilocybe Cubensis*, use a 1 inch layer of desiccant on the bottom of the container, under the mushrooms. Place the mushrooms on a wire screen and lay them on the desiccant that is in the container. Put the container with the shrooms and desiccant into a plastic bag. A garbage bag type wire tie is sufficient to close the bag. If a clear plastic bag can be found, use that to observe the drying process. After 24 hours, a little shriveling of the shrooms can be seen. About 4 or 5 days later, the shrooms will be dried rock hard. To check the drying - the stem should snap cleanly when bent.

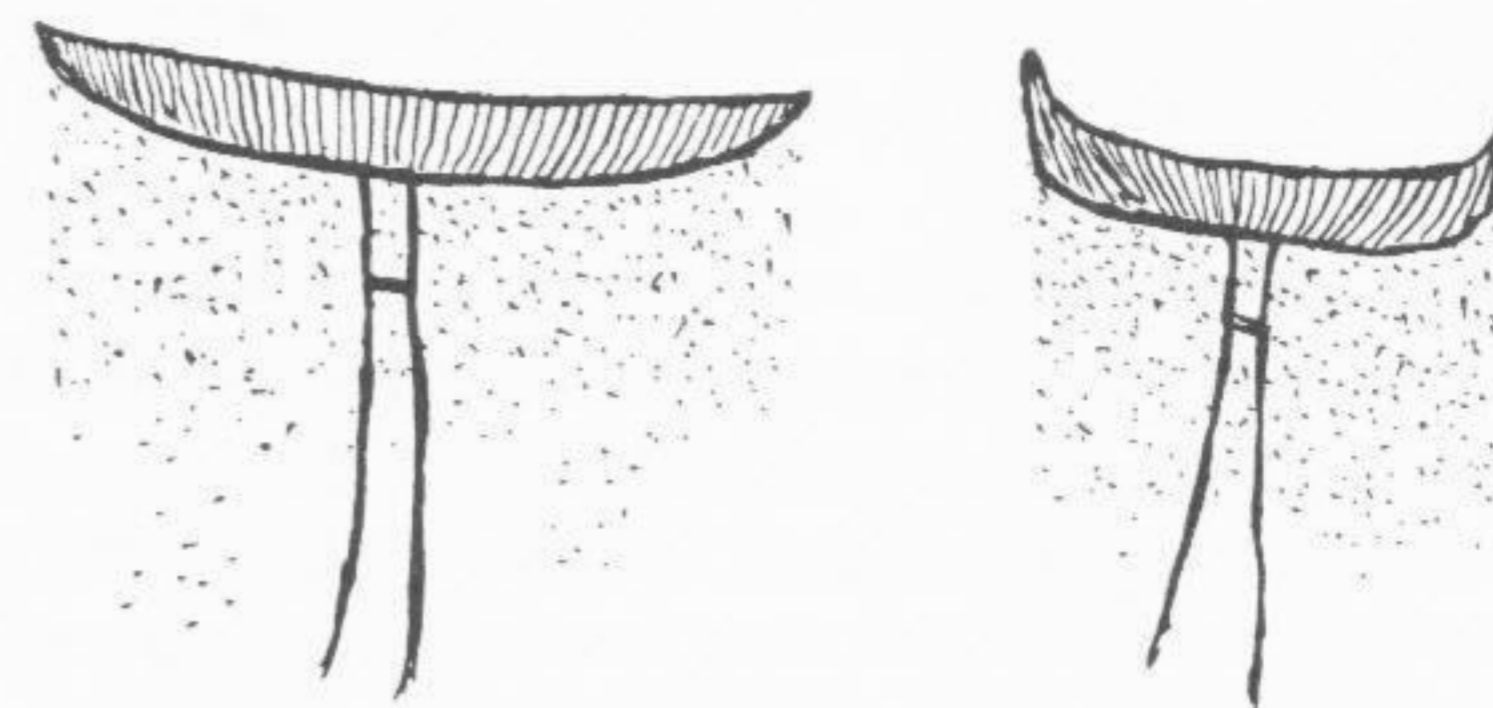
For the best alkaloid preservation technique, the desiccant box can be put into the refrigerator and the mushrooms dried at near freezing temperatures.

Pre drying the mushrooms in the air on a wire screen works very well if the room humidity is not high. After a couple of days, the shriveling fungus can be quickly and completely dried in the desiccant box.

Mushrooms dried in this way lose hardly any chemical constituents and their truly desiccated state preserves them in their prime for months. Store them by sealing them in plastic bags or keep them in canning jars with the rubber edged

canning lid on tight. The freezer is a good place for preservation, but make sure the fungi are tightly sealed in their containers to protect them against the moisture in the freezer.

### SPORE PRINTING AND SPORE SYRINGE PREPARATION



The mature specimens are good for spore production, but are not as good for consumption (weaker potency). They are characterized as becoming darker, with dark bluish colors appearing on the caps and stems. The cap upturns and reveals gills darkening a deep brown color. The mushroom will look like an umbrella that has turned up edges. On the stem can be seen the purple deposits of the dropping spores. Mature adult mushrooms release spores by the millions. In the area around the mushrooms can be seen a deepening color of purple. As the spores fall and collect they will color deep purple. This is the signal that the mushroom has matured and is now in its sporulation cycle. This is the time to take their spores.

### SPORE PRINTING EQUIPMENT

**KERR 1/2 PINT WIDE MOUTH (LOW FORM) CANNING JAR. (ANY SUITABLE JAR IS OK)**

**FINGER NAIL CUTICLE SCISSORS - (cosmetics - drug stores)**

**ALCOHOL, TEQUILA SHOT GLASS AND EYE DROPPER.**

1. Presterilize the jar and regular metal lid (rubber edge up) in a small toaster oven at around 300 degrees Fahrenheit for around a half hour. Keep the lid loose during the sterilization cycle. When the jar has cooled down, tighten the lid until it is time to use the jar for a spore print. The rubberized edge will be a bit melted, but that won't be any problem in this technique.

Note: What follows is a sterile technique. The first rule that must be always followed is to wash hands prior to sterile work. Hands are a prime source for bacteria and microspore contaminants. Sterilize all the work surfaces with rubbing alcohol. Minimize drafts. Try for a still air environment. Don't breathe on the work. Run a small home appliance style HEPA air cleaner (99.97% rated

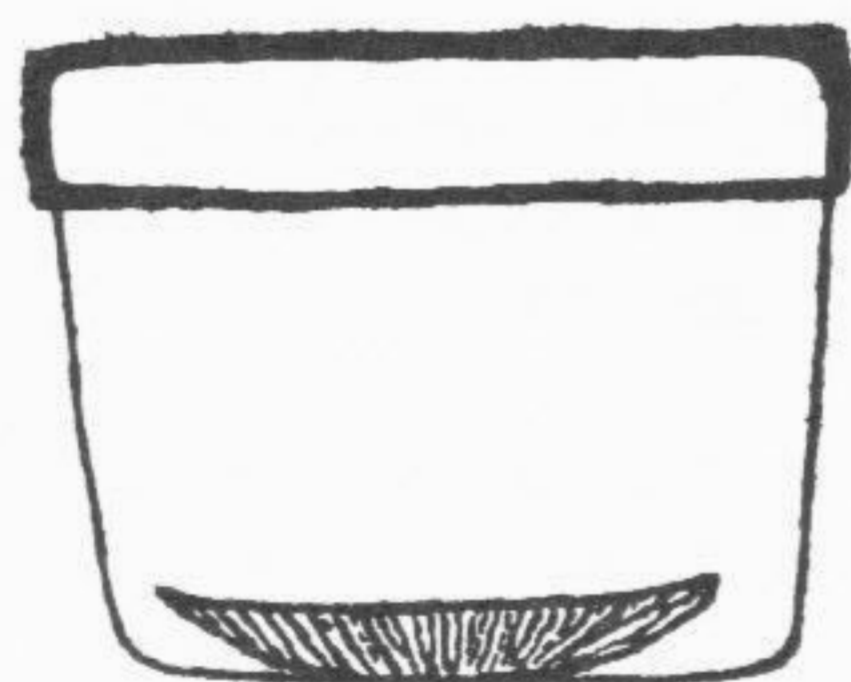


efficiency - available at drug and department stores) for a few hours in a closed room to clean the air before doing sterile work.

2. Flame sterilize the scissors with an alcohol flame and snip off the mushroom cap. Cut the top of the stem as far up into the cap as possible so that the gills of the mushroom will sit flat on the surface of the jar bottom. With quick and sure movements, place the cap into the jar and place the lid on loosely. Pierce the top of the cap with a straight pin to pick it up and handle it.

3. Leave the jar with a loose cap for a couple of days in a draft free area away from direct sunlight. After the print is taken, quickly and with as little air disturbance as possible, remove the jar cap and extract the mushroom cap from the jar. With a loose jar cap, let the jar sit in a draft free place to dehumidify for a few days before sealing it up (with tape) because there will be some residual moisture left behind on the spores and glass. Store the spore print jar at room temperatures in a dark place away from sunlight. Don't store it in a refrigerator.

*Psilocybe Cubensis* spores begin to degrade a few months after they are taken. After approximately 1 1/2 years, spore germination will be greatly reduced or won't occur at all. Germination is massive and quick when the spores are fresh.



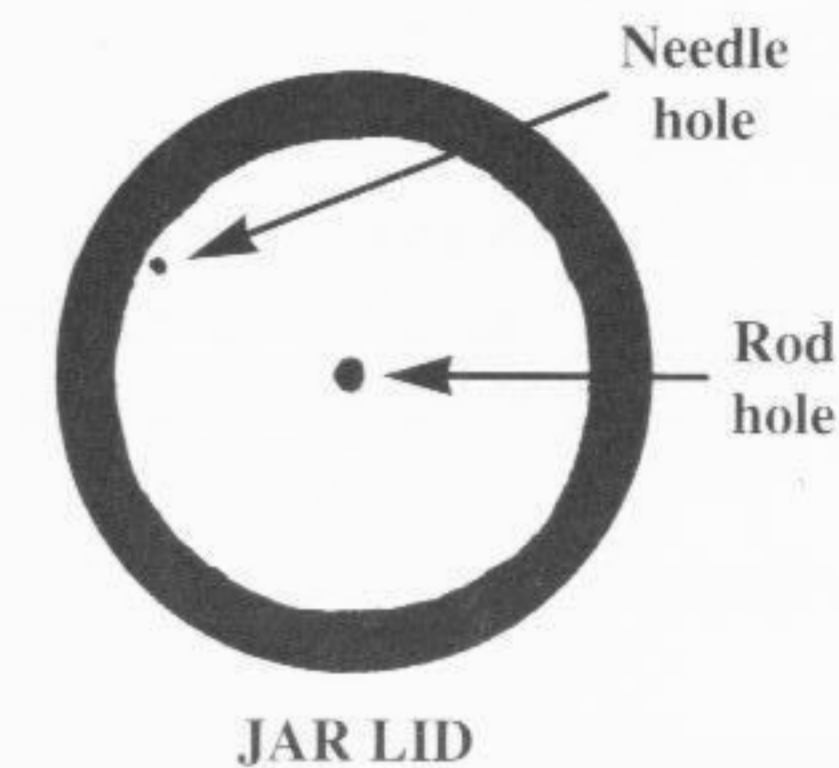
## MAKING A SPORE SYRINGE

Materials list:

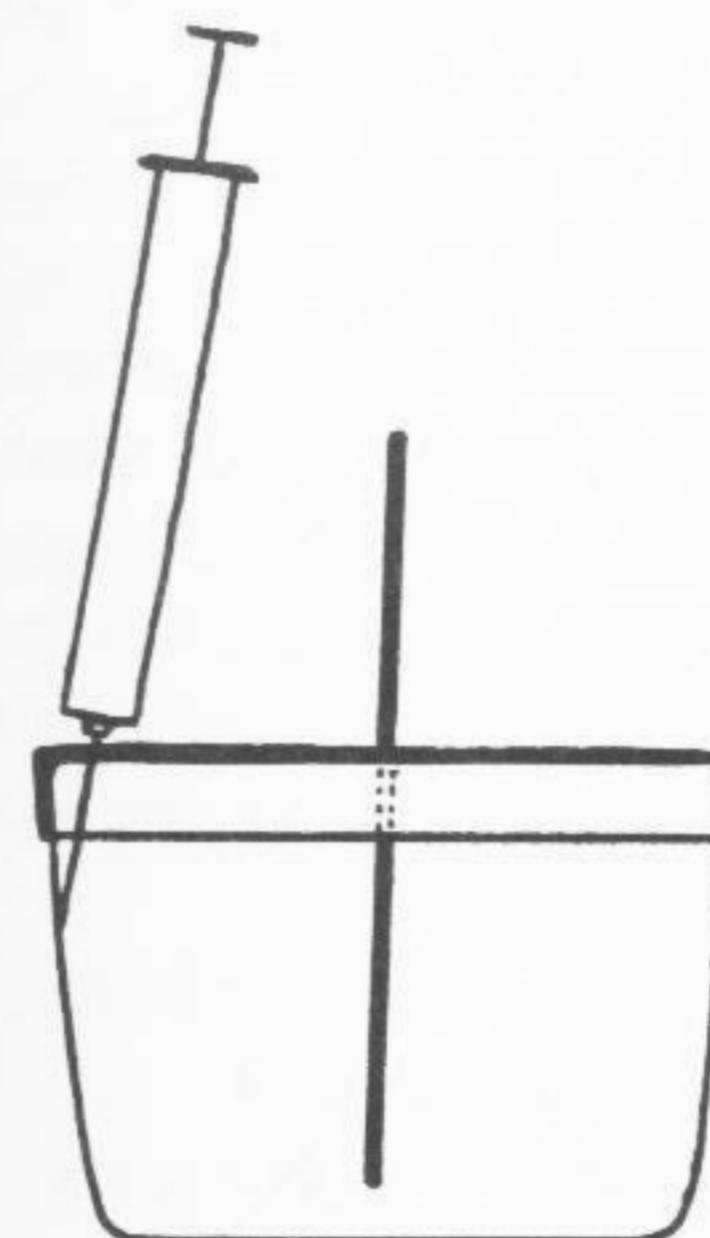
1. Spore print in jar.
2. Sterile syringe with water for injecting water into the spore print jar.
3. Sterile syringe for loading spore solution out of the jar.
4. A small Pyrex glass stirring rod (science - lab supply).
5. Alcohol, tequila shot glass and eye dropper.
6. Lid with two holes. Prepare this lid by drilling a hole in the center of the lid to fit the Pyrex glass stirring rod. Punch the second hole near the edge of the lid (rubberized edge up) to fit a syringe needle.

Syringe preparation:

Boil a pot of water. Draw boiling water into a syringe and squirt it out several times. Refill the syringe with boiling water, replace the needle guard and wrap the syringe in tin foil. Prepare several syringes like this. Drop the syringes into the boiling water and boil them for one hour. Let them cool before using.

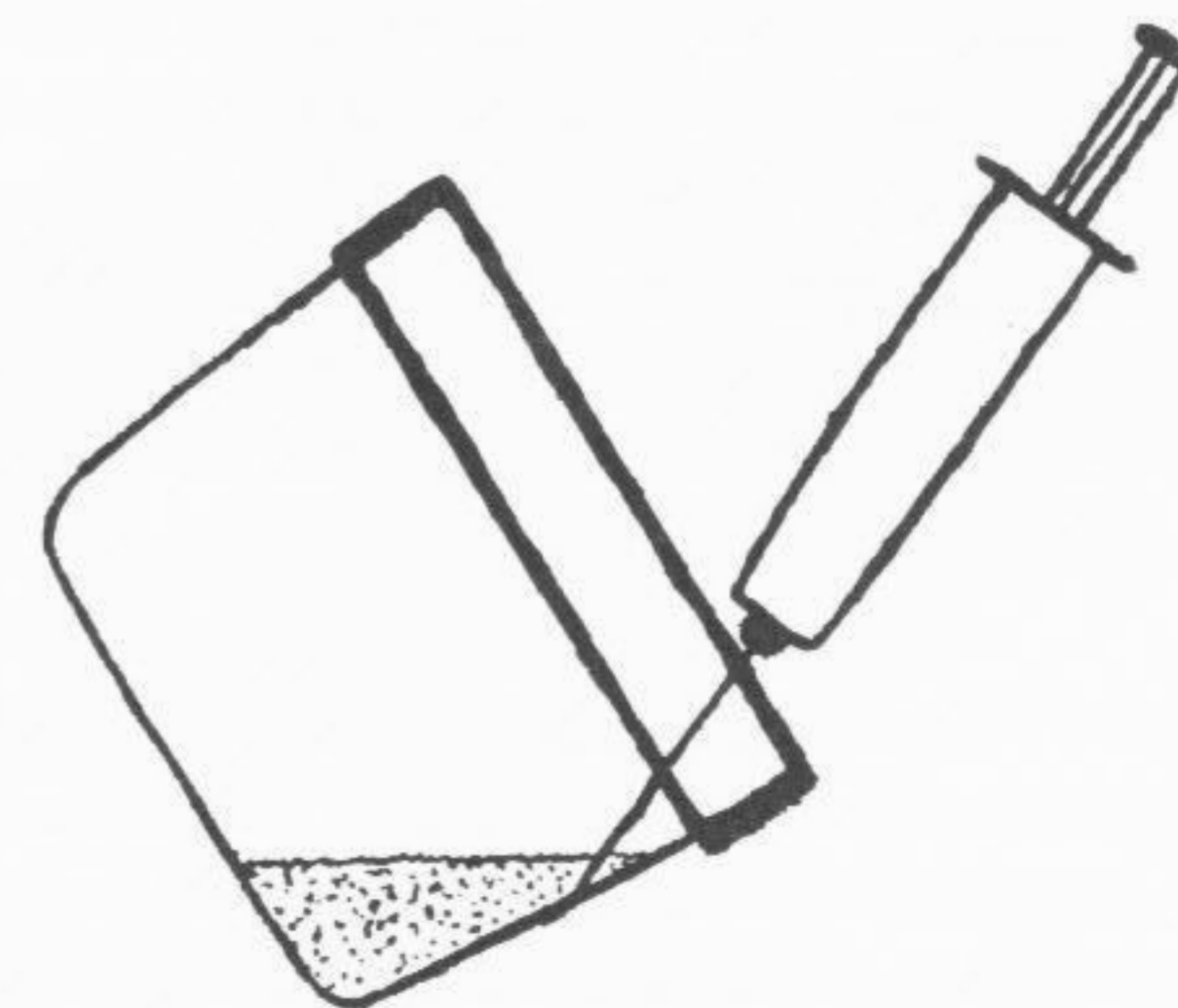


The main point of this technique would be to expose the interior of the jar to as little room air as possible. Always protect the holes in the lid by placing tin foil or sterile surgical tape over the holes before and after this procedure.



1. Inject sterile water into the spore print jar through the needle hole.
2. Flame sterilize the glass stirring rod and let it cool a minute. Insert it through the center lid hole and with the rod end, scrape spores into the water.

3. Insert the sterile syringe needle through the small hole at the edge of the lid. Tilt the jar until the water comes up to the needle tip and draw the spore water into the sterile syringe.



Store the syringe at cool temperatures in the dark. A properly prepared spore syringe will be good for several months and even up to a year or more.



## PRESSURE CANNER USE

PF jars and water bottles can be quickly sterilized with a pressure canner. For proper and safe use of the pressure canner, always refer to the manual that comes with it. If the canner is used and has no manual, try to get one from the manufacturer before using it. Pressure canners can be dangerous if used incorrectly.

Sterilization times:

1. 1/2 pint PF substrate jars - 12 p.s.i. for 20 minutes
2. Water bottles - 12 p.s.i. for 55 minutes
3. Syringes and needles - 12 p.s.i. for 10 minutes

## MUSHROOM POTENCY

Excerpts from "PSILOCYBIN MUSHROOMS OF THE WORLD" by Paul Stamets.

edited by Psylocybe Fanaticus

chapter 5 — GOOD TIPS FOR GREAT TRIPS

Dosage: how many mushrooms to ingest?

page 35 - paragraph 2

Readers should be forewarned about individual sensitivities. The doses I describe should hold true for most of us. However, I know of two mycologists who have had abnormal reactions. The first needs only 1-2 grams (dried). He reacts as though he has had 3-4 times the dose, however. During a recent session, a hike for him was simply getting off the floor. At the other extreme is the woman who did not feel any effects whatsoever at dosage levels exceeding 5 grams (dried). Well-read on the history of psilocybin mushroom use, she had looked forward with great anticipation to the experience and felt cheated that no effects were felt.

page 37 - Paragraph 4

For species such as *Psilocybe semilanceata* (liberty cap), which can average about 1% psilocybin/psilocin content, 1-2 grams of dried mushrooms is recommended for first timers. This is equivalent to only 10-20 mg of psilocybin, and will be, for most people, a dose with moderate effects. The symptoms will last, in most cases, no more than 4-5 hours.

page 38 - paragraph 3

Once you have become a veteran and feel comfortable with a given dose, the amount of mushrooms can be increased in single dried - gram increments, again using *P. semilanceata* as the standard. Over time, each individual will come to understand his or her personal psilometric scale of sensitivity.

page 41 - paragraph 4

Again using *P. semilanceata* as a baseline species, 2 grams (dried) will bring on the first colorful geometric patterns, and lead to noticeable changes in auditory perception. At 3 grams (dried) and above, some people will experience visual waves. The wave phenomenon is especially interesting - it is as if the air were actually in a liquid state and tidal movements flow in from the distance, distorting the scenery as they project towards or away from you.

At 4 grams (dried) and above, the experience becomes more intense, lasting 4-5 hours. At 5 grams (dried), the experience can be nearly overwhelming and span 6 hours, but rarely longer. Even for the most experienced, I do not recommend doses above 7 dried grams. At these higher levels, the set and setting must be especially supportive and safe. At higher doses, some people report a loss of muscular control and strength that can persist into the following day. I have heard this from individuals ingesting *Psilocybe azurescens*, *psilocybe cyanescens*, and *panaeolus subbalteatus*. No plausible explanation has been put forth.

End of Paul Stamets excerpts and quotes.

## COMMENTS BY PSYLOCYBE FANATICUS

*Psilocybe Cubensis* can produce very weak specimens. This happens with mature specimens that have begun sporulation. They have turned darker colors and the cap margins turn up beyond plain (like an inverted umbrella). These specimens are indeed weakly potent and not worth taking. The mushroom is past its prime for a psychedelic source if the cap has opened, the veil has torn away, the gills are dark brown and purple spore deposits are seen gathering on the stem. This is probably true for all other magic mushroom species - including wild specimens.

From the research of Jochen Gartz, it has been shown that *P. Cubensis* can achieve a base line psilocybin content of 1% (similar to *Psilocybe Semilanceata*). But this entirely depends on what the mushroom is grown on (brown rice), its age or maturity (young), its sporulation cycle (pre-sporulation), and the way it is harvested and preserved (cool dried - if dried). So when harvesting, pick all of the tiny primordia that stop growing (abort) and the small mutant growths (round blobs - no heads ect). Do this as soon as it can be determined that they



are not developing into normal specimens. They seem tiny, but several cakes will produce quite a pile of these little ones (several dried grams!). These are the source of the potent magic. The same goes for the young specimens. Pick them (small and large) while their caps are still round and before they begin to open (veil under the cap breaks away and the cap spreads out). The reason for harvesting them when they are young is because as the mushroom cap expands like an umbrella, the mushrooms size will increase, but by weight the potency will decrease.

By harvesting only the young and abortive specimens, the yield will be significantly lower, but the quality will be excellent and the potency can be similar to *P. Semilanceata*.

Eating the fungi is best done as a ritual. Be deliberate, controlled and methodical. Eat the fungi at one sitting. Don't piece meal the dose. The lag time in response can defeat the peak performance of the psychedelic power.

## MUSHROOM EXTRACTION

This technique describes how to extract psilocybin from magic mushrooms with pure 200 proof ethyl alcohol and make a magic mushroom liqueur of concentrated psilocybin to effect a powerful psychedelic dose as potent as desired. The entire process involves only the shrooms and alcohol. The alcohol is untainted with chemicals and poisons because it can be easily acquired from a liquor store (United States) either over the counter (in some states) or with a special permit (most states - see end of article section - "procuring 200 proof ethyl alcohol from a liquor store").

### ALCOHOL EXTRACTION

1. Acquire quality psilocybe cubensis shrooms (harvested before or just as the caps open and cool dried with desiccant). The more shrooms used in the beginning, the more potent the concentration can be when finished. Use at least several grams of dried shroom material to make the process worthwhile and effective. The shrooms need to be thoroughly dry (rock hard) to allow pulverization. To pulverize the shrooms, put them into a small strong zip lock plastic bag (freezer bag), cover the bag with a magazine (for protection of the bag) and pound it with the rubber heel of a large shoe. After pulverization, pour the shroom material into a bottle that has a tight fitting leak proof cap. Add enough alcohol to cover the shroom material to make a loose slurry. Shake the bottle well and let it sit for 24 hours. Shake it now and then to activate the extraction.

2. After 24 hours of soaking, filter off the alcohol. Inexpensive dust-pollen masks make excellent filters for the slurry. These are available at hardware, drug and paint stores. They are usually white or tan colored, fit over the nose and

mouth and are held on to the face by a rubber band attached to the filter. Fashion the filter over the mouth of a drinking glass. Shake up the bottle of slurry, and pour some slurry into the filter. Squeeze the filter and slurry to extract the alcohol. There are many details to deal with, but doing it once reveals them all. Experience is the best teacher. Store the extracted alcohol in a fresh bottle.

3. Retrieve the shroom material from the filters and resoak the extracted shroom material with fresh alcohol and repeat steps 1 and 2 (secondary filtration and reclamation).

### EVAPORATION AND CONCENTRATION

Combine the alcohol extracts into a glass. Place a small electric fan (small desk clip on fans are perfect) near the glass and point the air flow directly down into the glass until the surface of the alcohol ripples. This will speed the evaporation and concentration. The process will take several hours. The more alcohol extract - the longer the evaporation time. As the alcohol evaporates and the level recedes down into the glass, wash the residue that adheres to the inside of the glass back into the solution. Any fumes that are generated will be harmless because the alcohol is a non poisonous drinkable spirit. Keep flames away from the solution - pure alcohol is very flammable.

Evaporate the extract down to the concentration desired. 1 to 3 or more grams of dried shroom material to 1cc of final extract alcohol concentration is a potent brew. The more concentrated it becomes, the less alcohol needs to be consumed. When taking a dose, the alcohol can be evaporated and the shroom extract taken. Dispense the psilo-liqueur with a syringe for accuracy. Accuracy is important, because a slight over calculation could put a slightly reluctant psychonaut on pluto when only the moon was targeted.

The concentrated shroom liqueur will have a pungent mushroomy aroma (like fungi perfume). Store it in small screw cap bottles or vials in the freezer. Alcohol doesn't freeze solid and will remain liquid.

### PROCURING 200 PROOF ETHYL ALCOHOL FROM A LIQUOR STORE

First, call a well stocked liquor store and ask if they have 200 proof anhydrous ethyl alcohol. Full service liquor stores supply hospitals and laboratories with 200 proof anhydrous ethyl (100% pure ethyl alcohol - no water) in the United States. 200 proof is preferred because it has no water. 190 proof (95% ethyl - 5% water) is ok but 5% residual water is a negative, especially when evaporated down. If the store doesn't have 200 proof, the salespeople will know where to get it.

If a permit is needed, call the state liquor board (usually in the State Capital) and



ask for an application to get an ethyl alcohol permit. The fee is 5 or 10 dollars. On the application will be a question asking what the use of the alcohol will be. Write what they more or less want to hear. State that the use of the alcohol will be for "non-toxic surface sterilizing plus herb extraction - preservation - tincture - and perfume making" (or something to that effect). The poison warnings on the alcohol bottles and this idiotic red tape are just bureaucratic nonsense that results in the state making a big fat bundle off of the sale.

### SUPPLY LIST

1. shrooms
2. 200 proof ethyl alcohol
3. drinking glass (spoon - knife ect.)
4. funnel
5. bottles with tight caps (whiskey bottles - pop bottles - ect.)
6. dust-pollen masks
7. small desk fan
8. 10cc syringe (measurement and dispensing)

*The following is an anonymous internet newsgroup posting. Judging by the responses on the net, this technique is gaining wide popularity. It becomes even more effective if used in conjunction with the standard PF dual chambered terrarium. Perlite (bright white color) can be procured from any plant shop. It is used as an ingredient in potting soil for aeration.*

### PERLITE HUMIDIFICATION TECHNIQUE

A while back there was an interesting post about using a "floor" of wetted perlite as the means to create humidity in your growth chamber. It made sense to me because I happened to already be familiar with perlite's excellent water uptake/transpiration qualities (the 'Rice Krispies' effect).

Anyway, a friend who is growing mushrooms (imagine the audacity!) tried it, and reported excellent results. I went and looked for myself, and folks, it was amazing. Basically, you can forget about electric humidifiers and all that if you like—this is the low-tech way to go and it works like a charm. He had a small PF aquarium bubbler going also, but I could tell that the wet perlite was the thing that was REALLY working. The cakes were flushing **beautifully**, MUCH better than I have ever seen with the bubbler alone. I could tell that even without the bubbler, it would have still worked great.

I assume that what is happening is that the perlite sucks up the water which gravity keeps at the bottom of the layer, and through its porous structure evaporates it into the air above the layer, doing it very gradually (highly desirable). I guess what makes it work is the fact that perlite (unlike its sister vermiculite) doesn't actually absorb and hold water. Apparently though, it takes a very long time

(weeks is my guess) for the perlite to evaporate the water, so it appears to be sufficient humidification for multi-flushing. He had his cakes sitting right on the perlite, and where the contact was I imagine there was also wick-like action transferring moisture directly to the cakes, which helps.

### BASIC MATERIALS LIST FOR CULTIVATION

#### PF jar preparation and culturing (Stage one)

(Domestic products - supermarket - department - drugstore - hardware store)

1. Measuring cups and spoons
2. Large pot for steaming
3. Shoulderless half-pint jars with lids (**Kerr** or **Ball**)
4. Organic brown rice flour (organic food stores)
5. Horticultural vermiculite (medium or fine grade - not powdery)
6. Distilled or filtered drinking water
7. Heavy duty tin foil
8. Heavy duty (professional grade) masking tape
9. Ice pick (for punching needle holes in the culture jar lid)

#### Mushroom growing (Stage two)

Pet shop - Hardware store

1. 10 gallon aquarium
2. Cut piece of transparent plastic (Plexiglas) - (terrarium chamber partition)
3. Strips of wood with connectors and screws (terrarium lid)
4. Plastic film and thumb tacks (terrarium lid)
5. Small wall type thermometer
6. "All purpose" water spray bottle with an adjustable nozzle (hardware and grocery stores). Procure one that gives a good strong spray for instant humidification. Avoid recycled kitchen product sprayers. This is a critical piece of equipment. Only a good quality sprayer (a couple of dollars at a hardware store) can immediately supercharge the dual chambered terrarium with high humidity.
7. Wire screen - plastic containers - plastic bags - (drying mushrooms)
8. DESICCANT (drying mushrooms) (scientific - chemical - lab supply)

#### Spore printing and spore syringe making (Stage three)

1. Micro curved cuticle (finger nail) scissors (cosmetics - drug store)
2. Denatured alcohol (fuel - hardware stores)
3. Tequila shot glass and eye dropper (sterilizing and flaming)



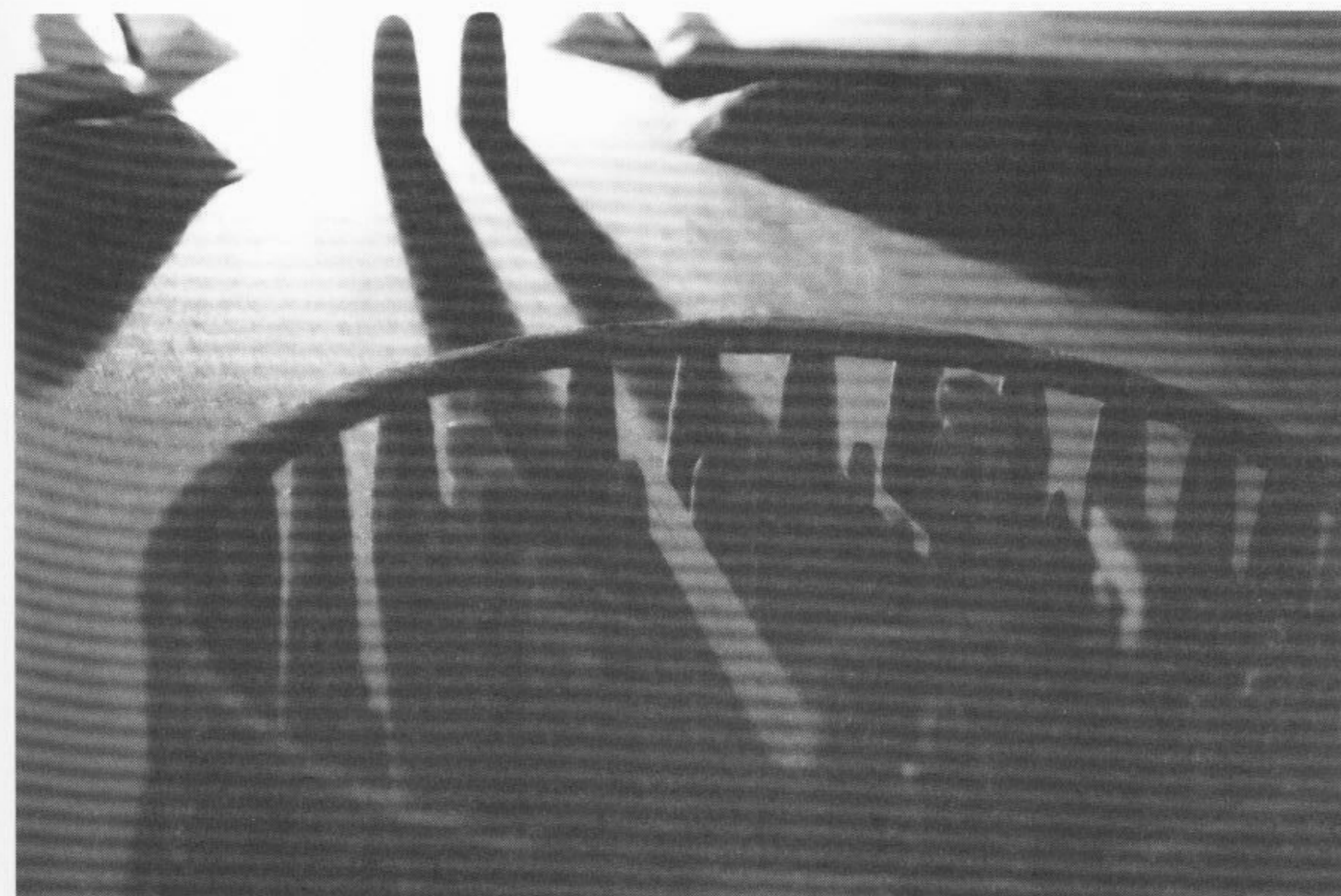
4. Glass stirring rod (Scientific supply)
5. Plastic syringes (10cc or bigger) and 18 gauge 1 1/2 inch needles.  
Large sized syringes are good (20cc - 65cc) as well as extra long needles if available.  
(Retail medical - health supply - pharmacies - drug stores - scientific and lab supply)

#### Appendix to page 8

Unlike the regular PF formula, the maximum formula needs a slight tamping down.

1. Loosely load the 1/2 pint jar and level the top of the mixture.
2. With one hand, cover the mouth of the jar and grasp the jar.
3. Lightly slam the bottom of the jar on the other palm a couple of times to lower the mixture level to 1/2" from the jar top.
4. Clean the inside of the jar down to the substrate level and fill the jar to the top with dry vermiculite.

Incubate the maximum formula jars at room temperature. Don't heat over 70°F. Loosen the lid (or untape the lid holes). Watch for loose water in the jar. Experiment and compare.



# STONEHENGE 2000 BC

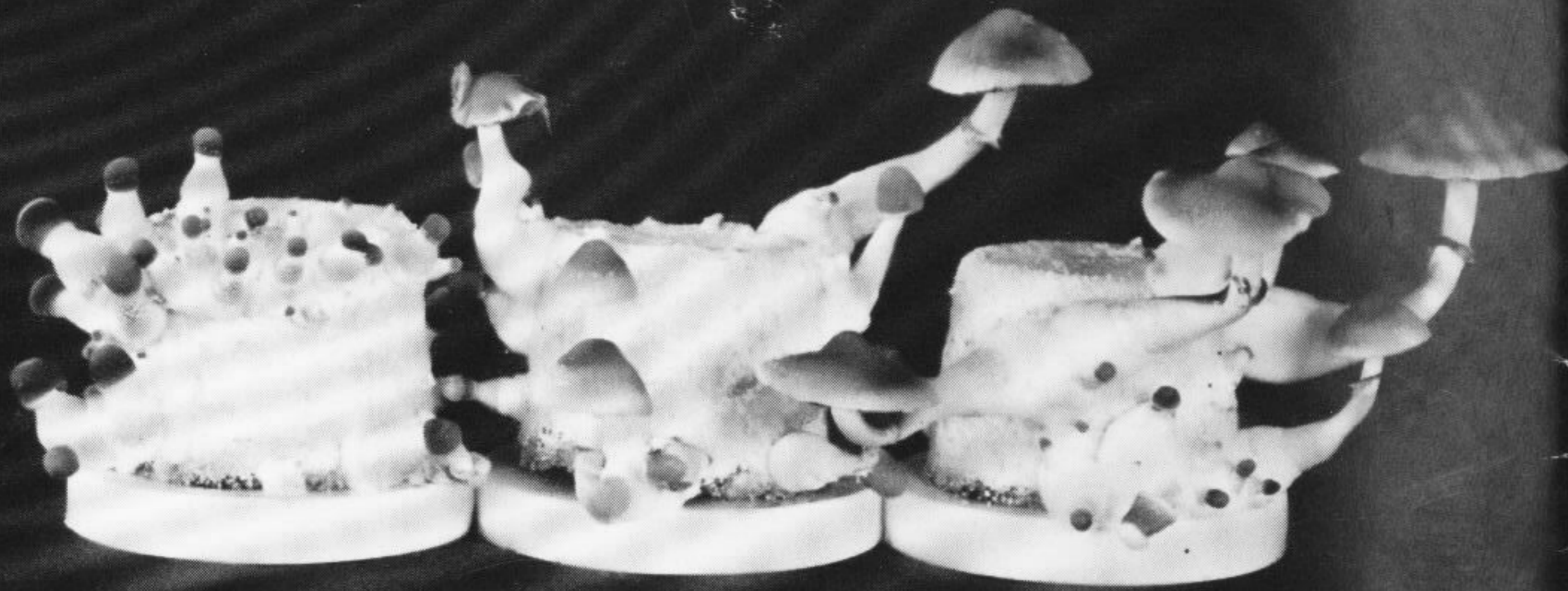
## SUMMER SOLSTICE SUNRISE

### GATEWAY OF LIGHT



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