

**STANDARD OPERATING PROCEDURE (SOP) FOR OYSTER MUSHROOM  
CULTIVATION USING POLYTHENE BAG METHOD**

**Materials Needed:**

1. Oyster mushroom spawn
2. Substrate (Wheat straw or Paddy straw)
3. Polythene bags (large)
4. Water spray bottle
5. Pressure cooker/Drum/Autoclave
6. Rubber Band
7. Thermometer and hygrometer
8. Hut with ventilation system (optional)
9. Shelves/Rope/ Racks for bag placement
10. Clean working area

**Procedure:**

1. Preparation of Substrate:

- The material wheat/paddy straw must be chopped into shorter pieces
- Soak the substrate overnight

2. Sterilization:

- Sterilize the substrate in a pressure cooker/drum/steam generator at around 121°C (250°F) for 1-2 hours. This kills competing microorganisms.
- Allow the substrate to cool down to room temperature in a clean area.

3. Bagging

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- Inoculate the bags with oyster mushroom spawn by adding a layer of spawn between the layers of substrate.
- Ensure even distribution.

### **4. Incubation:**

- Seal the inoculated bags with rubber band
- Place the bags in a dark, warm (around 24-28°C or 75-82°F) and humid environment for spawn colonization. This typically takes 2-3 weeks.

### **5. Pinhead Formation and Fruiting:**

- After the mycelium has colonized the substrate, move the bags to a well-ventilated area with indirect light (or use a ventilation system).
- Mist the bags with water using a spray bottle to maintain humidity around 90%.
- Gradually decrease humidity to around 80% to encourage pinhead formation (initial mushroom growth).

### **6. Harvesting:**

- Once the pinheads have fully developed into mature mushrooms, carefully harvest them by twisting and pulling gently to avoid damaging the substrate.
- For a second flush of mushrooms, spray the bags with water, then repeat the pinning and fruiting process.

### **8. Cleaning and Reusing:**

- After harvesting, remove any remaining mushroom debris from the substrate and sterilize the bags again for reuse in the next batch.

Remember that these are general steps and specific conditions and might vary based on factors like mushroom variety, climate, and equipment available.