



## Post Harvesting Technology Involved in Mushrooms

Hajera Ashraf\*

Department of Chemistry, Shaheed Benazir Bhutto Women University, Peshawar, Pakistan

### DESCRIPTION

Fungi, the conspicuous umbrella-shaped fruiting bodies (sporophytes) of certain fungi, typically of the phylum Basidiomycota, order Agaricales, but also belonging to several other groups. In general, the term fungus is used to identify edible sporophytes. The term fly agaric is often reserved for inedible or poisonous sporophytes. Mushrooms in the narrow sense are edible mushrooms (*Agaricus campestris*) widely distributed in fields and meadows. A closely related species, *A. bisporus* is a fungus that is commercially grown and found on the market. Humans have always collected mushrooms in the wild and consumed them for food, medicine and even intoxication. Mushroom picking is still a game and hobby for many people. However, the occurrence of fungi in the wild is uncertain and depends on many factors such as habitat and climate. It began with the domestication of the rice straw mushroom (*Volvariella volvacea*) and the black ear mushroom (*Auricularia polytrica*) in China, but it was undoubtedly the introduction of the white button mushroom (*Agaricus bisporus*), common in Chinese caves. and cultivation. France in the late 18th century did just that, and it's the biggest milestone in the history of mushroom production. Since then, more than 20 species of edible and medicinal mushrooms have been domesticated and the technology brought to commercial level.

Mushrooms are best eaten raw. However, in practice this may not be possible. Discoloration will occur if stored at high temperatures. Mushrooms have a high respiration rate and should be stored with great care. Some of the commonly used methods are described below.

### Refrigerated/immediate packing

Freshly picked mushrooms packed in 25-gauge non-perforated plastic bags. Store in a refrigerator at 5°C immediately after packaging. This process extends the shelf life by 3-5 days. This process slows your breathing rate and helps to reduce water loss.

In addition, it reduces the browning of mushrooms and the development of off-flavors.

### Lyophilization

Slice mushrooms and soak in 0.05% sodium metabisulfite and 2% saline for 30 minutes. Then he blanched them in boiling water for two minutes and cooled. Then freeze at -12°C for 1 minute and store at -20°C. This process extends the shelf life by 3-4 months.

### Dehydration

- This process consists of three steps: pretreatment, drying and storage.

#### A) Pretreatment

- Clean mushrooms, boil in boiling water for 2 minutes and soak in cold water for 2 minutes.
- Soak mushrooms in water containing 0.2% potassium metabisulfite and 1% citric acid and dry.

#### B) Drying

- Sun drying:
- The pretreated mushrooms are dried in the sun until they are 1/10 of their raw weight. After drying, it can be stored for 3 months, but the color may change or the finish may not look good.
- Drying in continuous dryers:
- Dry the pretreated mushrooms with hot air at 60°C for 6-8 hours. This process results in a final moisture content of 3-5%.
- Vacuum drying:
- Dry the pretreated mushrooms immediately at 40°C under vacuum conditions. This process produces very high quality mushrooms, but the processing costs are high.

**Correspondence to:** Hajera Ashraf, Department of Chemistry, Shaheed Benazir Bhutto Women University, Peshawar, Pakistan, E-mail: Harejaashraf@gmail.com

**Received:** 04-Nov-2022, Manuscript No. JMBT-22-19478; **Editor assigned:** 07-Nov-2022, Pre QC No. JMBT-22-19478 (PQ); **Reviewed:** 21-Nov-2022, QC No. JMBT-22-19478; **Revised:** 29-Nov-2022, Manuscript No. JMBT-22-19478 (R); **Published:** 07-Dec-2022, DOI: 10.35248/1948-5948.22.14.533.

**Citation:** Ashraf H (2022) Post Harvesting Technology Involved in Mushrooms. J Microb Biochem Technol.14:533

**Copyright:** © 2022 Ashraf H. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

### 3) Canned food

Preserves are used on a very large scale, especially for the preservation of mushrooms. For canning purposes, mushrooms should be harvested early. Select mushrooms of uniform size and cut the stems before processing.

#### Procedure

- Wash mushrooms with clean water to remove dirt and other foreign matter.
- Soak mushrooms in boiling water for 2 minutes, remove and soak in cold water for 2 minutes.
- Pack mushrooms into special cans to 3/4 capacity. (1 pound can fills about 220g of mushrooms)
- Add 2% table salt, 2% sugar and 0.3% saline solution.
- Percent citric acid fills only to the brim. (Brine must be boiled and filtered through a muslin cloth before adding) (1 pound can require approximately 125ml of solution).
- Cap the can and place the can in boiling water or steam until the temperature in the center of the can reaches 80-85°C.
- Seal the can with a sealer to create a hermetic seal.
- Sterilize cans at 10 lb in an autoclave. Pressurize for 20-25 minutes.
- Chill the cans in clean cold water immediately after sterilization.
- Wipe the can with a dry cloth and store it in a cool, dry place. This process extends the retention periods by up to 12 months.