



RESEARCH PAPER

Osmo-convective dehydration of oyster mushroom

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Abstract : Mushroom has been appreciated for their delicious taste and high nutritional value through out the world. Fresh mushroom contain high amount of moisture and their storage life is very less. That's why an attempt was taken to develop dehydrated mushrooms through osmo-convective drying. The osmotic drying was found to be highly influenced by salt concentration and time. To make the process simple the sample to solution ratio was kept as 1:20 for all the experiments. Also the experiments were carried out at a temperature of 30°C. An optimum combination of 15 per cent (w/v) salt solution and 2 hours duration time gave 40 per cent water loss and 3.91 per cent solid gain. The optimized osmotically treated samples were further dried to its equilibrium moisture content in a tray dryer at 50 and 60°C temperature. Finally the dried sample reached the equilibrium moisture content of 8 per cent within 2 hrs of convective drying at 60°C. The rehydration ratio of final dried sample was 1.307 after 30 min of rehydration.

Key Words : Mushroom, Osmotic dehydration, Convective drying, Rehydration ratio, Moisture content

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