

**Title** Effects of different modified atmosphere (MA) applications on the postharvest physiology of 'Oyster Mushroom' (*Pleurotus ostreatus*)

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**Keyword** MA; postharvest physiology; Oyster Mushroom

### **Abstract**

Commercial cultivation of Oyster Mushroom is highly gaining importance in the mushroom production in Turkey which is increasing at a dramatic rate. Mushrooms do not keep well in storage. Therefore, they are generally harvested, shipped and marketed with as little delay as possible. This creates problems to the mushroom growers.

While cold storage prevents postharvest losses to some degree, combined with modified atmosphere (MA) storage, the postharvest life of mushrooms is believed to be extended modified atmosphere (MA) by reducing high rate of respiration. The objective of this study is to extend the postharvest life and quality of Oyster Mushroom by application of MA conditions.

Mushrooms were kept in cold rooms at 0°C and 90-95 % relative humidity and exposed to NA whereas the others were packaged with 14 and 16 PVC wraps. Several laboratory analyses were employed to define the changes in quality criteria. The experiment was set up according to Randomized Block Design with 3 replications, taking samples by weekly intervals. Color change, weight loss, quality, ethylene production, respiration rate and quality criteria were critically studied. Shelf-life was determined by transferring the samples to 20°C room at 60-65 % humidity and leaving there for 3 days.