Mushrooms have been identified as an underutilized crop in Africa, with many nutritive and health benefits. It does not require much land and investment. However, it is highly perishable and there is need to process it to lengthen its shelf life by drying. However, there is need to ensure that the nutrients are not lost in the process. It is for this reason that this project investigated the effect of drying on nutrient levels in mushroom. Vitamin C levels were monitored in the course of drying at 80°C, 60°C, 50°C, 40°C and in direct sunlight. It was concluded that the temperature that gave the best drying rate with minimal nutrient loss was 60°C. In general, more than half the Vitamin C is lost during the range of drying temperatures investigated.

**KEYWORDS:** Oyster Mushroom, drying temperature, vitamin C.