

## Abstract

Button mushroom slices were dehydrated using freeze drying (FD) or FD combined with microwave vacuum drying (FMVD), and the non-volatile component profiles were studied. The results showed that the level of non-volatile components in button mushroom firstly increased during sublimation of FD/FMVD process and then fell during desorption in FD process and MVD in FMVD process. Compared to FD products, the contents of soluble sugars and polyols in FMVD products were relatively low, whereas the contents of total free amino acids were significantly higher, close to the level of fresh mushroom. However, there was no significant difference in the contents of 5'-nucleotides and organic acids between FD and FMVD products. The equivalent umami concentration (*EUC*) values for FD and FMVD products did not differ from fresh, indicating that both drying methods could effectively preserve MSG (monosodium glutamate)-like components in button mushroom.