

Abstract

Volatile compounds are important factors that affect the flavor quality of *Flammulina velutipes*, but the changes occurring during hot air drying is still unclear. To clarify the dynamic changes of flavor components during hot air drying, comprehensive flavor characterization and volatile compounds of *F. velutipes* were evaluated using electronic nose technology and headspace solid phase micro-extraction combined with gas chromatography–mass spectrometry (HS-SPME–GC–MS), respectively. Results showed that volatile components in *F. velutipes* significantly changed during hot air drying according to the principal component analysis and radar fingerprint chart of electronic nose. Volatile compounds of fresh *F. velutipes* consisted mainly of ketones, aldehydes and alcohols, and 3-octanone was the dominant compound. Drying process could significantly decrease the relative content of ketones and promoted the generation of alcohols, acids, and esters, which became the main volatile compounds of dried *F. velutipes*. These may provide a theoretical basis for the formation mechanism of flavor substances in dried *F. velutipes*.