

عنوان مقاله:

Evaluation of Fatty Acids and Volatile Compounds in Iranian Ghee by Head Space-Solid Phase Microextraction Coupled with Gas Chromatography/Mass Spectroscopy

محل انتشار:

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خلاصه مقاله:

Ghee, a nutritional dairy product in Iranian culture, can be easily produced on a small scale. This study was undertaken to analyze fatty acids and volatile compounds of collected ghee samples from different ghee production sites of Iran (Ilam, Kermanshah and Hamedan) using Headspace Solid Phase MicroExtraction (HS-SPME) technique. According to the results, palmitic and oleic acids were the dominant fatty acids in all the samples investigated. Further, it might be concluded that compounds such as dodecane, acetone, butyric acid, hexanoic acid, ۲-pentanone, ۲-heptanone, and ۲-undecanone, which are present and might have accumulated as the results of oxidative, hydrolytic, or microbial activities, contribute to the flavor of ghee. Lactones, which are produced at high temperatures, were not collected in any sample except the Hamedan sample (< ۱%). Low thermal processing in the ghee production prevented the formation of off-flavor volatile compounds. The qualitative and quantitative parameters determined in this study might be useful in assessing the quality of the ghee and may help the industry to improve its commercial production.

کلمات کلیدی:

Butterfat, Dairy product, Flavor of ghee, HS-SPME-GC/MS

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