

VOLATILE COMPOUNDS IDENTIFIED IN TRADITIONAL CROATIAN COW'S AND GOAT'S CHEESES MATURED IN LAMBSKIN SACK DETERMINED BY GC-MS ANALYSIS

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Abstract. Cheeses ripened in animal skin sacks belong to traditional cheeses that are strongly connected to the culture and history of the country from which they originate. Their main specificity is anaerobic ripening in an animal skin sack. The aim of this study was to determine the volatile compounds of Croatian cheeses in a sack of lamb skin produced from either raw cow's or goat's milk and relate them to the aroma of these traditional cheeses. Cheese extracts were obtained by headspace solid-phase microextraction (HS-SPME) and ultrasonic solvent extraction (USE) and analysed by gas chromatography-mass spectrometry (GC-MS). A total of 32 volatiles were identified in the cheese samples, including 12 carboxylic acids, 8 esters, 6 alcohols, 3 ketones, 2 hydrocarbons and 1 aldehyde. In the samples obtained by HS-SPME, the fatty acids and alcohols were the most abundant, while in the samples obtained by USE, the fatty acids were the most abundant.

Keywords: headspace solid-phase microextraction, ultrasonic solvent extraction, cheese in a lamb sack, goat milk, cow milk.