

STUDY OF THE VOLATILE COMPONENTS OF CHEESE FROM SERBIAN MARKET

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Aroma and flavor are important sensory properties of fermented food products, including cheese, and they are major attributes that influence the selection and consumption of food. Flavor development of cheese is conditional upon various biochemical changes of the product including lipolysis, proteolysis, lactose fermentation and formation of volatile compounds. So, aroma compounds of different cheese varieties occur and cheese has special characteristics during maturation according to milk type, rennet properties, manufacturing process and ripening conditions. An experimental study was carried out with the aim of evaluating the aromatic profile of cheese from Serbian market. The volatile components of cheese were isolated by simultaneous distillation extraction using diethyl ether as solvent. Separation and identification of the cheese components were carried by gas chromatography-mass spectrometry. A total of 32 volatile compounds were detected in the cheese including fatty acids, fatty acid esters, ketones, alcohols, aldehydes and sulphur compounds. The fatty acids were dominant aromatic compounds in analyzed samples with a total content ranged from 45.35% to 98.09%. The capric acid was the most common fatty acid with the mean content of 23.5%. Contents of the fatty acid esters and ketones were within the ranges of 1.88%-27.90% and 2.73-24.61%, respectively. Alcohols, aldehydes and sulphur compounds were detected in the individual samples. Aldehydes and sulphur compounds were present in the lowest amount with percentage of approximately 0.3% relative to the other compounds.

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