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THE EFFECT OF USING TRANSGLUTAMINASE ON VOLATILE PROFILE IN THE MANUFACTURE OF YOGHURT SUBSTITUTED BY SOYBEAN MILK PROTEINS

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ABSTRACT

Head space analysis employing gas chromatography / mass spectrometry have been used for examining the volatile components associated with yoghurt affected by TGase added to the milk used. A total of 27 volatile components were detected. Ten major types, 4 aliphatic alkane (7-11 carbon atoms), 6 aliphatic ketenes (4-11 carbon atoms), 5 aliphatic organic acid (2-10 carbon atoms), one aromatic acid (7 carbon), 2 aliphatic aldehyde (2-6 carbon atoms), 2 aliphatic ester (4-8 carbon atoms), one aliphatic alcohol (ethanol), one cyclic alkane(C_9), one aromatic alkane (8 carbon), and 3 aromatic compounds (7-10 carbon atoms). The percentages of volatile compounds and their concentrations in the bovine and soybean milk mixture were affected by the original concentrations of these compounds in soybean milk, which directly affected the increased concentration of these compounds in the mixture used and increased the dose of the enzyme used from 1 to 1.5 units.

Key words: Soybean milk and volatile compounds, Transglutaminase, Yoghurt.