

Evolution of Lipolysis during the Ripening of Traditional Lebanese Darfiyeh Cheese

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Darfiyeh cheese is an artisanal cheese manufactured from raw goat's milk in northern Lebanese mountains; it is highly appreciated for its strong character primarily due to its ripening process, using the goat skin. It is of significant economic importance to the Lebanese farmers; it contributes to the development of their social situation. With the intent of providing product identity for legal, economic and manufacturing purposes, few studies have been conducted. However, this research effort focused on following the extent and pattern of lipolysis in Darfiyeh cheese by quantifying the concentrations of free fatty acids (FFAs) released during ripening. Experimental cheeses were processed at cheese small scale farming. FFAs were extracted from 2 batches of Darfiyeh samples from the time of manufacture up to 60 days of ripening, in an attempt to characterize their fatty acid profile.

The characteristics of the chromatographic profiles of the FFAs from C_{6:0} to C_{18:3} were performed by gas chromatography. Levels of individual FFAs from caproic (C_{6:0}) to linolenic (C_{18:3}) acids increased significantly during ripening of Darfiyeh cheese. Palmitic (C_{16:0}) and oleic (C_{18:1}) acids were the most abundant FFAs throughout ripening in all samples. The FFAs that showed the highest increase by 60 days of ripening were C_{4:0}, C_{8:0}, C_{10:0}, C_{16:0} and C_{18:1}.

Only limited information is available about these profiles and therefore these results will be useful to understand better the ripening process of this typical Lebanese semi-hard cheese.

Keywords: Darfiyeh cheese, Free fatty acids, Lipolysis, Ripening, Gas chromatography