ABSTRACTS
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32 Proteolysis and lipolysis of goat milk cheese. Young Park*[1], [1]*Fort Valley State University, Fort Valley, GA*.

Numerous varieties of goat milk cheeses are produced worldwide. Maturation or ripening of goat and other species milk cheeses is governed by an interplay of many different factors. Proteolysis and lipolysis are two major biochemical processes in the multifaceted phenomenon of cheese aging, which involves the occurrence of a variety of chemical, physical, and microbiological changes under controlled environmental conditions. Proteolysis of cheeses is influenced by several factors including plasmin, chymosin, protease from starter and non-starter bacteria, pH and moisture levels of the curds, storage temperature and time, salt content, salt-to-moisture ratio, and humidity. Primary factors affecting lipolysis in cheeses are fatty acid composition, lipolytic enzymes, lipolytic microorganisms, moisture, temperature, storage time, oxygen, and surface area, etc. Several analytical techniques have been used for quantitative measurement of proteolysis of goat and/or cow milk cheeses during ripening such as solubility of peptides and amino acids in various solvents or precipitants, liberation of reactive functional groups, various forms of chromatography, and different forms of electrophoresis. Lipolysis of goat milk cheeses and other dairy products has been estimated by acid degree value (ADV), acid value, peroxide value, thiobarbuturic acid value (TBA) and free fatty acid contents using HPLC. Recent reports have shown that goat cheeses had greater rates of protein degradation than cow counterparts, and that aging time and temperature synergistically elevated most of proteolytic and lipolytic indices in goat milk cheeses. This paper will further discuss proteolytic and lipolytic characteristics of goat milk cheeses.

Key Words: Proteolysis, Lipolysis, Goat milk cheese