

Effects of Certain Natural Food Additives (Pectin, Gelatin and Whey Proteins) on the Qualities of Fermented Milk

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Abstract : The experimental study focuses on the extraction of pectin, whey protein and gelatin, and the study of their functional properties. Microbiological, physicochemical and sensory approach integrated has been implanted to study the effect of the incorporation of these natural food additives in the matrix of a fermented milk type set yogurt, to study the stability of the product during the periods of fermentation and post-acidification over a period of 21 days at 4°C. Pectin was extracted in hot HCl solution. Thermo-precipitation was carried out to obtain the whey proteins while the gelatin was extracted by hydrolysis of the collagen from bovine ossein. The fermented milk was prepared by varying the concentration of the incorporated additives. The measures and controls carried performed periodically on fermented milk experimental tests were carried out: pH, acidity, viscosity, the enumeration of *Streptococcus thermophilus*, cohesiveness, adhesiveness, taste, aftertaste, whey exudation, and odor. It appears that the acidity, viscosity, and number of *Streptococcus thermophilus* increased with increasing concentration of additive added in the experimental tests. Indeed, it seems clear that the quality of fermented milk and storability is more improved than the incorporation rate is high. The products showed a better test and a firmer texture limiting the whey exudation.

Keywords : fermented milk, pectin, gelatin, whey proteins, functional properties, quality, conservation, valorization

Conference Title : ICFAPE 2019 : International Conference on Food and Agricultural Process Engineering

Conference Location : Barcelona, Spain

Conference Dates : October 24-25, 2019