

Effect of processing conditions on chemical and sensory properties of ultrafiltrated Feta cheese made from cow's milk and soymilk blend.

Ghods Rohani, M.^{1*}, Mortazavi, S. A.², Mazaheri Tehrani, M.³,
Razavi, M. A.⁴

1. PhD student, Food Science and Technology Group. Hasheminejad Higher Education Center. Mashhad, Iran.
2. Professor, Department of Food Science and Technology. College of Agriculture, Ferdowsi University of Mashhad. Mashhad, Iran
3. Assistant Professor, Department of Food Science and Technology. College of Agriculture, Ferdowsi University of Mashhad.
- 4- Associate Professor, Department of Food Science and Technology. College of Agriculture, Ferdowsi University of Mashhad.

In this research , the effects of three variables, soymilk concentration (0- 25%), CaCl_2 (0.3-1%) and coagulation temperature (30- 40°C) on sensory (taste, texture) and chemical (amount of total solids, protein and fat) properties of UF Feta cheese made from cow's milk and soymilk blend were investigated. The central composite experimental design (CCD) was used and the data were analyzed using response surface methodology (RSM). Coefficients of determination, R^2 , of fitted regression models for taste, texture, total solids, protein content and fat content were 0.965, 0.918, 0.924, 0.999 and 0.841 , respectively. The Result of analysis of variance (ANOVA) table showed that lack of fit was not significant for all response surface models at 95%. Therefore, the models for all response variables were highly adequate. The results showed that the optimum processing conditions for producing cheese with highest overall values for response variables were 15% soymilk, 0.3% CaCl_2 and coagulation temperature of 38°C. The response values for such product are: taste 3.9, texture: 4.72, total solids:35.13%, protein:13.45 %and fat: 14.05%.

Key words: Soymilk, Retentate, CaCl_2 , Optimization, Response surface.

* Corresponding author E-mail address: Qhods@yahoo.com