process cheese from Queso Fresco (QF) to help manufacturers salvage excess trimmings, out of spec cheese, etc. QF is a soft, unripened and non melting Hispanic cheese (containing 46.8% moisture, 27.2% fat, 18.5% protein, 2.8% salt and pH 6.5). Pasteurized process Queso Fresco (PPQF) was manufactured on 3 occasions from separate lots of QF (aged 5 d, 1 mo or 2 mo) using 3% sodium citrate or disodium phosphate as emulsifying salt and food grade citric acid for pH adjustment. Mean composition of PPQF was 46.8% moisture, 26.4% fat, 17.8% protein, 2.8% salt, and pH 5.6-7.0. Meltability (mm) and textural parameters (hardness, cohesiveness, springiness, gumminess and chewiness) of PPQF were determined by modified Olson and Price method and TA-XT2 Texture Analyzer, respectively. Meltability of PPQF was significantly ($P < 0.001$) influenced by the type of emulsifying salt and citric acid × emulsifying salt. There was positive correlation but insignificant effect of PPQF moisture, protein and fat on meltability. All texture parameters except springiness were significantly ($P < 0.05$) decreased with cheese age. All texture parameters except cohesiveness were significantly ($P < 0.05$) affected by emulsifying salt × citric acid ($P < 0.001$), moisture × pH ($P < 0.05$) and fat × pH ($P < 0.05$). PPQF hardness was significantly influenced by emulsifying salt ($P < 0.01$) and cheese moisture × protein ($P < 0.05$). In addition, PPQF hardness, springiness, gumminess and chewiness were significantly ($P < 0.05$) increased with decreased cheese pH. Results show that QF age influenced PPQF texture but not meltability. However, meltability and texture parameters of PPQF were influenced by type of emulsifying salt and pH adjustment of QF before processing.

Key Words: Pasteurized process Queso Fresco, Meltability, Texture

Dairy Foods: Political, Economic, and Scientific Considerations of Milk Component Utilization

175 Withdrawn by author.


Milk has been an ingredient in food preparations for many hundreds, if not thousands, of years. This is because both the nutritional and taste contribution of milk as well as its functionality in the physical structure of a broad range of preparations has been appreciated by consumers. In the development of the industrial production of food products, also a lot of work has been done on milk based ingredients. Separation of milk in various fractions allowed a further optimisation of the contribution of milk based ingredients to food products quality. For more then 50 years, European dairy industries have worked on the development of a range of products such as casein, whey proteins, lactose and milksalts. A survey will be given of the present separation and modification techniques and of the market environment that stimulated the development of customer designed products.

Key Words: Milk ingredients, Market orientation, Market policies


This paper draws from a Congressionally-mandated study by the U.S. International Trade Commission on conditions of competition for milk protein products in the U.S. market. This paper identifies recent trends in production and international trade in milk protein products. It describes how economic and non-economic factors (such as food regulations and standards) have impacted product development and international trade in milk components. The paper also discusses the major uses and applications for such products in processed food and pharmaceutical products.

Key Words: Milk protein, International trade, U.S. International Trade Commission