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Effects of polymerized whey proteins isolates on the quality of stirred yoghurt made from camel milk

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Namel milk has unique characteristics as compare to the other mammal's milks. It has anti-carcinogenic, anti-hepatic, vanti-diabetic and anti-hypertension bioactive components. Polymerized whey protein is important for its functional and nutritional properties in various dairy food products. 10% w/v polymerized whey protein isolates (PWPI) were prepared by heating whey proteins at 850C for 30 minutes at pH 7. Stirred yoghurt from camel milk was prepared by using PWPI as thickening agent in various concentrations of 2, 4, 6 and 8% and compared with the control (without PWPI). All the samples were studied for a period of 21 days with an interval of 7 days for physico-chemical (pH and acidity), compositional (fat, protein, ash and total solids), rheological (viscosity, water holding capacity and syneresis), microbial (total plate count) and sensory parameters by using standard methods. Increased concentrations of PWPI have least effects on pH and acidity whereas pH decreased and acidity increased with the increase of storage days. Protein, ash and total solids increased with the increase of PWPI concentration whereas fat contents were very close to each other in all samples. There was no significant effect of storage days on all these constituents of all yoghurt samples. The viscosity of the camel milk stirred yoghurt increased with the increase of concentration of PWPI showing maximum at maximum concentration i.e. 8% and the lowest in the control. Reciprocally water holding capacity also increased and syneresis decrease with the increasing concentration of PWPI. Water holding capacity decreased as increase in storage days. PWPI had no effect on TPC of all samples. Results showed that PWPI can be a good source to have desired characteristics in camel milk stirred yoghurt like gelling, viscosity, less syneresis, improved water holding capacity and better hydro-colloidal properties.

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