

The First Step to Standardization of Iranian Buffalo Milk: Physicochemical Characterization

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Abstract : Nowadays, buffalo's milk due to has highly nutritional properties, has a special place among consumers and its application for the production of dairy products due to the high technological properties is increasing day by day. In the present study, the physicochemical characteristics of Iranian buffalo's milk were compared with cow's milk. According to chemical analysis, the amount of fat, protein, and total solid was higher in buffalo milk than cow's milk (respectively, 8.2%, 4.73%, and 15.92% compared with 3.5%, 3.25%, and 12.5%). Also, the percentage of cholesterol buffalo's milk was less than in cow's milk. In contrast, no significant difference between the pH, acidity, and specific gravity was observed. The size of buffalo milk fat globules was larger than cow's milk. In addition, the profile of buffalo free fatty acids milk showed the relatively high distribution of long chain saturated fatty acids. The presence of four major bands related to α s casein, β casein, β -lactoglobulin, and α -lactalbumin with quite higher intensity than cow's milk was also observed. The results obtained will provide a reference investigation to improve the developing of buffalo milk standard.

Keywords : buffalo milk, physicochemical characterization, standardization, dairy products

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