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## PHYSICOCHEMICAL QUALITY DETERMINATION OF PASTEURIZED AND UHT MILK MARKETED IN TIARET REGION, ALGERIA

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### ABSTRACT

The purpose of this study was to evaluate the physicochemical properties of processed milk in Tiaret City. From different points of sale, ninety random samples of processed whole milk (60 UHT milk and 30 pasteurized milk) were obtained. The physicochemical parameters analyzed comprise fat, protein, lactose, solids not fat (SNF), minerals, pH, density, freezing point, and conductivity. The results can be summarized as follows: The physicochemical components of pasteurized milk samples were fat ( $27.27 \pm 1.12$  g/l), protein ( $31.43 \pm 0.15$  g/l), lactose ( $84.57 \pm 1.04$  g/l), SNF ( $84.57 \pm 1.04$  g/l), minerals ( $6.7 \pm 0.07$  g/l), pH ( $6.77 \pm 0.01$ ), density ( $1030.16 \pm 0.17$  mg cm<sup>-3</sup>), freezing point ( $-0.54 \pm 0.0$  °C) and conductivity ( $5.06 \pm 0.11$  μS cm<sup>-1</sup>). For UHT milk, the physicochemical components of pasteurized milk samples were fat ( $28.75 \pm 0.26$  g/l), protein ( $30.06 \pm 0.35$  g/l), lactose ( $51.39 \pm 0.03$  g/l), SNF ( $82.65 \pm 0.78$  g/l), minerals ( $6.77 \pm 0.21$  g/l), pH ( $6.73 \pm 0.01$ ), density ( $1028.83 \pm 0.32$  mg cm<sup>-3</sup>), freezing point ( $-0.53 \pm 0.01$  °C), and conductivity ( $4.49 \pm 0.06$  μS cm<sup>-1</sup>). Based on our results, it was revealed that all physical characteristics were in accordance with national and international standards. However, the majority of chemical parameters, minerals, SNF, and fat were lower than Algerian regulatory limits.

**Keywords:** physicochemical properties, Tiaret, UHT milk, pasteurized milk.