Raw Camel Milk Production in the Algerian south eastern arid areas: Constraints Related to Collection, Storage and transport: Impact on product quality

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Résumé

Camel is the most dairy species adapted to arid's areas. Raw camel milk, having nutritional, therapeutic properties, rich in salts, enzymes, inhibiting lactic flora growth, where it's weak coagulation and transformation capacities. Research related on thermophilic lactic flora isolated from camel milk, reported some particular characters as: resistance to high salts concentrations and some bacteriocinogénic properties. This was attribute to the camel preferred halophyte vegetation, rich in salt tolerant plants.
In Algeria, camel population is spread across 17 provinces, with 75% of camel herd in 08 desert provinces (Ouargla, Ghardaia, El-Oued, Tamanrasset, Illizi, Adrar, Tindouf and Bechar) and 25% in 09 steppe provinces (Biskra, Tebessa, Khenchela, Batna, Djelfa, El-Bayad, Naama, Laghouat and M'sila). The study aimed to explore the physicochemical parameters (pH, titratable acidity, lactic acid, density and viscosity) during milking collection, transport and storage, to assess their impact on the indigenous thermophilic lactic flora evolution. Results show that pH ranged between: 04,79 and 05,04. Titratable acidity between: 65.7 °D and 78.3 °D. Density was between 01,014 and 0,992, viscosity between: 01,67 and 02,06. Indigenous lactic flora enumeration in colony forming unit/milliliter on M17 medium at 30°C ($3.14x10^5$ Wr1- $07.2x10^5$Wr1). At 37°C ($1,47x10^6$Wr1- $3,11x10^6$Ms1). At 44°C ($5,6x10^4$ Bs1-$9,01x10^4$Wr1). Lactobacilli flora enumeration on MRS medium ranged from: ($1,65x\ 10^6$Bs1-$5,11x10^6$Ms1) At 30°C. ($0,57x\ 10^6$ Ms1- $1,45\ x10^6$ Bs2) At 37°C. (00Wr1- $6,11x10^4$ Ms2) At 44°C. For all samples, Streptococques thermophiles species, were dominant. Freezing, remains the ideal method for the preservation of raw camel milk, which is accessible only in arid area of it's production.

Mots- clés: Camel, Raw Milk, Indigenous flora, Physicochemical, Storage, Quality