

عنوان مقاله:

Microbial and Chemical Adulterants Assessment of Raw Cow Milk Collected from Dairy Farms of Hlabisa Villages, KwaZulu-Natal Province, South Africa

محل انتشار:

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خلاصه مقاله:

Background: Milk is one of the most nutritious foods providing a variety of proteins, fats, minerals, and vitamins needed to maintain, grow, and develop the body. The aim of this study was to assess microbial and chemical adulterants of raw cow milk collected from dairy farms of Hlabisa villages, KwaZulu-Natal Province, South Africa. Methods: A total of 68 raw cow milk samples were obtained from teats sampling points, milking buckets, and communal pooling buckets. The bacteriological analysis was conducted for the detection of various bacteria in milk samples. Biochemical tests were also done to detect some chemical adulterants in milk samples. Results: Total bacterial count of teats, milking buckets, and communal milk pooling buckets were 6.91, 6.06, and 6.06 log Colony Forming Unit (CFU)/ml, respectively. The most found chemical adulterant was urea detected in 23 out of 68 (33.8%) samples, followed by hydrogen peroxide showed in 22 out of 68 (32.3%) samples. However, none of the samples were contaminated with formalin, starch, and neutralizer. Conclusion: The present study revealed high microbial contamination of raw cow milk produced by rural small-scale dairy farmers of Hlabisa villages, KwaZulu-Natal Province, South Africa, indicating the lack of standard operating sanitation. It was also stated that raw milk samples contained various types of chemical adulterants that may lead to severe health problems. Good hygiene practices must be adopted by small-scale dairy farmers at every stage of their milk handling and processing.

کلمات کلیدی:

„Milk, Bacterial Load, Food Contamination, South Africa

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