

Analysis of Microbiological Quality and Detection of Antibiotic Residue in Bovine Raw Milk Produced in Blida State, Algeria

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Abstract : Bovine raw milk represents a favorable environment for the growth of several food-spoilage strains and some pathogens. It must meet stringent standards to ensure the highest microbiological and toxicological qualities. In order to assess the microbiological risks associated with the consumption of this food, we conducted this study to determine the microbiological quality of bovine raw milk (54 samples) commercialized at the state of Blida (Algeria). The samples analyzed were unsatisfactory in terms of total flora where 61.11% of samples were considered as non acceptable in terms of quality standards, fecal coliforms (40.74%), fecal streptococci (55.55%) and staphylococci (74.07%). Salmonella and Clostridium strains were not detected in all the samples. Furthermore, antibiotic residues were found in 26% of analysed samples. These results reflect non-compliance with the rules of good hygiene practices at milking, storage, transportation, and sale of milk. Bovine raw milk consumed presents a serious health risk to the population of the study areas. The livestock coaching actors and dissemination of good hygiene practices throughout the production chain are needed to improve the quality of local milk.

Keywords : bovine raw milk, microbiological quality, fecal coliforms, antibiotic residue, Blida state

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