

SEARCH OF ATB RESIDUES IN MILK POWDER IMPORTED BY MICROBIOLOGICAL METHOD

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Abstract. Of 175 samples of milk powder imported by Algeria, 95% are contaminated. The penicillin residues and / or tetracyclines were detected in 64.6% of cases, and those of macrolides and/or aminoglycosides, sulfonamides and / or chloramphenicol were detected in 44.3 and 38.3%.

Keywords: milk powder, residues of ATB, Control, Microbiological method, Algeria.

INTRODUCTION

Milk is a complete food adapted to the nutritional needs of all ages. In Algeria milk production below requirements, forcing the import of powdered milk (\$ / year 700 million). The controls of drug residues in milk are rare. We tested 04 types of imported powdered milk (whole, skim, semi-skimmed and instantaneous) microbiological method through the official EC Regulation N ° 1664/2006) [2].

MATERIAL AND METHODS

175 samples of milk powder compounds 75 in stationary powder (26% fat); Skim 50 (0.26% fat), 40 snapshots (26% fat) and 10 semi-skimmed (14.5% fat), from France, New Zealand, Northern Ireland and Argentina, have been tested . All positive milk samples or questionable test acidification (*Bacillus inhibition stearothermophilus* variety *calidolactis* ATCC 10149), are subject to confirmatory test which consists of three diffusion tests on agar seeded with *Bacillus* spores *stearothermophilus* ATCC 10149, *Bacillus subtilis* ATCC 6633 and *Bacillus megaterium* ATCC 6618. paper discs sterile filter, impregnated with the milk to be tested are applied to the agar medium. The presence of residues ATB inhibits bacterial growth around the disk (translucent area > 2mm diameter).

RESULTS & DISCUSSION

The positivity rate was 100% for the whole milk powder and skim half and 90% for skimmed milk powder. 8 negative samples have involved milk instant powder (80%). The positivity rate for penicillins residues and / or tetracyclines for the whole milk powder, skimmed and snapshot is respectively 60%, 68% and 78%. Heat treatments and the milk drying does eliminate a small portion residues. The presence of TBA residues in the milk powder is not due only to treatment of animals and the non-respect of the waiting time but also to fraudulent treatment by addition of ATB in the milk in order to better preservation. [1] Finally, the presence of residues of ATB, besides the risk of antibiotic resistance [3] is a scourge for the dairy industry (total or partial inhibition of bacterial fermentation).

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