

ANTIBIOTIC RESIDUES IN RAW MILK IN MEXICO CITY

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Introduction

Mastitis is the most frequent cause of antibacterial use on dairy farms and contributes to a substantial portion of total drug and veterinary costs incurred by the dairy industry. 3 commercially assays are available on the market: Delvotest, Penzyme MilkTest and SNAP beta-lactam.

The objective of this study was to investigate the presence of antibiotic residues in milk produced and commercialized in south of Mexico City.

Material and Methods

We used The Delvo- test SP[®] is based on biological detection of antibiotics in the milk is suited for raw milk processing factories.

Test sensitivity is for β -lactams, Sulphonamides, Tetracyclines, Macrolides, Aminoglycosides, Lincosamides and others. Sensitivity of the Delvo-SP assay is > 90%, (1). Kang, 2001(3) indicate that the Delvotest SP assay may provide a suitable means for the detection of drug residues.

Sample population: 22 farms they produce raw milk for to sell cheeses factory. 264 Milk samples were collected at the farm afternoon after the milking. We take samples one time a week along 3 months.

Results

We founded antibiotic residues in 77% of the samples analyzed, in 17 farms This reflected hazard for public health and the importance that companies of milk manufacturing take a quality system that include HACCP.

Discussion

Problems arise when the test is used on milk samples of a single cow. Buffers, cells, bacteria, cell contents, and disinfection without using antibiotics may give false positive and false negative results.

Hassig, 2003, (2) reports an error up to 44.8% was detected when test is used on single cow milk samples. The use on single cow milk samples to prove absence of antibiotics is not recommended.

Conclusion

The most frequent reasons suggested by farmers for their test failures were not withholding milk for the full withdrawal period (95 per cent) and accidental transfer of milk (5 per cent). In some farms lactating and dry cow intramammary antibiotic preparations were held responsible

References:

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