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## Antibiotic residues in milk: Impact during manufacturing of probiotics dairy products and health hazard

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The greatest challenge for any country is to provide safe food for ever increasing population. As such, the production of safe and wholesome milk for human consumption remains the primary goal of dairy producers. Antibiotics are extensively used in dairy cattle management for preventing and curing diseases like mastitis, brucellosis etc. which are prevalent in tropical countries like India. But indiscriminate use, lack of medication records, use of unapproved drugs, failure to observe withdrawal period in lactating animals cause substantial excretion of these residues into milk. As a result, the contamination of milk with harmful and higher levels of antibiotic residues makes it unsafe for human consumption as well as economical loss. Antibiotics are not completely destroyed during various heating and or cooling processes of dairy industry. Their presence even in minute quantities creates various problems. Antibiotic residues inhibit the growth of probiotics micro-organism during manufacturing of fermented products like yoghurt, cheese, kefir, kumis and acidophilus milk. The usual antibiotics like penicillin, streptomycin etc. selectively inhibit Gram positive streptococci but not Gram negative micro flora resulting in decreased keeping quality of the products. Thus the inferior products formed may have to be discarded causing not only direct economic loss but also costly equipment clean up and environmental pollution coupled with the plant scheduled disruption. Moreover, the possible potential health hazards associated with antibiotic residues in milk are allergic reactions with penicillins and cephalosporins, carcinogenic effect with sulfamethazine and nitrofurazone and aminoglycosides also cause nephrotoxicity and ototoxicity.

### Biography

Nilkanth Pawar has completed his M.Tech. (Dairy Chemistry) from National Dairy Research Institute, Karnal (India). Presently serving as an Assistant Professor, department of dairy chemistry at College of Dairy Technology, Udgir (Latur), Maharashtra (India). He has published 3 research papers and 3 abstracts in reputed journals.

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