Incidence and antibiotic resistance of psychrotolerant Bacillus cereus group in ice cream samples, with special reference to Bacillus thuringiensis

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Abstract:

Bacillus cereus causes food-poisoning by means of enterotoxins with either emetic or diarrheal effects. Hence, psychrotolerant Bacillus cereus group occurrence in 150 ice cream samples was investigated. Mannitol-egg yolk-polymyxin B (MYP) agar medium was used as selective medium for isolation of this group. All isolates were identified by several biochemical tests. Accordingly, psychrotolerant B. cereus group was found in 32% of the total ice cream samples. Also, psychrotolerant B. cereus group count in each sample was estimated. B. thuringiensis was isolated from the examined three kinds of ice cream samples. Antibiotic sensitivity test was done by disc diffusion method using 8 different antibiotics. High resistance rate was found to ampicillin, amoxicillin, streptomycin and neomycin. Whereas, sensitive to erythromycin, chloramphenical, cephalaxin and kanamycin. Therefore, the presence of B. cereus especially antibiotic resistant strains indicate poor sanitary conditions during processing which create a health risk for the consumers.

Published In:

Assiut Veterinary Medical Journal, (131)57, 157-168