Prevalence of Escherichia albertii and Other Escherichia species in Raw Milk and Some Dairy Products in Assiut City, Egypt

Nagah M. Saad, Mohammed S. Sabreen, Wallaa F. Amin and Mira K. Gendi

Abstract:

Aim: To determine the incidence of Escherichia albertii and other Escherichia species in raw milk and some dairy products in Assiut city, Egypt. Materials and Methods: A total of 120 random samples of raw milk, Damietta cheese, kareish cheese and cooking butter, (30 samples each) were collected from different localities in Assiut city, Egypt. Two media Hugh and Leifson agar (H&L) and Eosin Methylen Blue Agar (E.M.B.) were used for isolation of Escherichia spp. The strains were biochemically characterized. Latex agglutination test was performed on Escherichia coli (E. coli) isolates. Polymerase Chain Reaction (PCR) was performed on Escherichia albertii (E. albertii) strains that were biochemically identified. Results: The incidence of Escherichia spp. was 70% on H&L medium and 59.17% on E.M.B. medium. The strains were divided into 6 species; E. coli, Escherichia (E. fergusonii), Escherichia vulneris (E. vulneris), Escherichia hermanni( E. hermanni), Escherichia blattae ( E. blattae) & Escherichia albertii( E. albertii E.albertii was isolated in an incidence of 0.83% on each medium. Three strains of E.coli were positive for E. coli O157:H7 by Latex agglutination test. One of the tested E. albertii strains was confirmed by PCR. Conclusion: Considering the fact that Escherichia species contribute to the burden of food borne illness, and since its presence in milk & milk products could be attributed to their contamination during milking, handling or processing, more hygienic measures should be applied to improve the quality of the produced milk & milk products to ensure maximum safety to consumers.

Keywords:

Raw milk, dairy products, Escherichia albertii, Latex agglutination, PCR

Published In:

Journal of American Science, 8(11), 333-341