

OP 14: Study of fecal contamination in ice creams sold in moh areas of Jaffna & Nallur

Y Abhiramie1, R Shampika, I N Sivarajah3, K Muruganathan3

1 Faculty of Medicine, University of Jaffna

2 WHO, Jaffna, Sri Lanka

3 Department of Pathology, Faculty of Medicine, University of Jaffna

Introduction: Ice cream is a popular food consumed by all most all the people. Depending on production methods, storage facilities and safety handling, ice cream is more prone to get contaminated. Ice cream can be microbiologically analyzed by using the methods that are applicable to drinking water.

Objectives: This study aimed to determine and assess the level of the fecal contamination in ice cream vendors sold in MOH areas of Jaffna and Nallur and to compare the association of contamination related to place of production, site of production, method of storage in selling points, type of storage device and type of selling point.

Methods: This was a laboratory based experimental study of faecal contamination in Ice-creams. Fifty four samples were collected from selling points in MOH areas of Nallur and Jaffna and analyzed for Total Bacterial count (TBC), Probable Coliform count and Escherichia Coli count by using the method used for identification of faecal contamination in water.

Results: TBC showed a range from 7.5×10^3 to 3.758×10^6 cfu/g, with the mean of 5.18×10^4 cfu/g and median of 3.64×10^4 cfu/g. 22.2% of all samples exceeded the Sri Lankan Standards for ice creams (5.0×10^4 cfu/g). Coliform count was between 0 to 32 in the unit of Most Probable Number per gram (MPN/g), with the mean of 2.8 MPN/g and median of 1.2 MPN/g. All the samples conformed to Sri Lankan Standards (100 MPN/g). Majority 29 (53.7%) of samples showed contamination for E.coli, thus exceeded the limits of Sri Lankan Standards (0 cfu/g). Among the factors studied for association for contamination, place of production (Jaffna), Method of Storage (Bulk and popsicles) and Type of storage (Deep Freezer) were significant at p value 0.05 level.

Conclusion: This study reveals the status of contamination with E.coli in ice creams. This possible contamination may be a possible route to transmit the enteric pathogens to the community. Hence, public health authorities have to pay more attention in the food safety methods.