

Abstract

A total of 104 water samples were randomly taken and analyzed to determine bacteriological and physico-chemical qualities of stand-pipe drinking water stored in Huruma food kiosks of Nairobi, Kenya. Out of these, 92 were from storage containers and 12 from stand-pipes supplying the food kiosks. The mean sample temperature ranged from 19.19°C to 23.0°C, while the mean pH ranged from 6.75 to 7.0. All samples analyzed in this study had a residual chlorine level of 0.5 mg/l. The mean total bacterial count (TBC) for stand-pipe samples was 46 per ml, while that from stored water was 615 per ml. The mean coliform count was 7 and 64 per 100 ml for stand-pipes and stored water respectively. Faecal streptococci had mean counts of 13 and 55 per ml in stand-pipes and stored water respectively. Faecal coliforms were isolated from 2 (17%) stand-pipes and 43 (47%) stored water. Faecal streptococci was isolated from 2 (17%) and 57 (62%) stand-pipes and stored water samples respectively. A significant difference in TBC between stand-pipe and stored water ($t = -4.379$, $df = 102$, $p = 0.001$) was noted. Questionnaire and observation investigations revealed that 82(90%) of Kiosk workers treated their drinking water on request. Some water scooping vessels were found lying on dirty floor outside and near open drainage systems. In conclusions results from this study indicates a high risk of infections with pathogens to the consumers. It is therefore recommended that drinking water be treated before consumption.