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Assessment of microbiological quality of drinking water from water projects in Sri Lanka

D Wickramasinghe
Department of Microbiology, National Institute of Health, Kalutara

A safe water supply system is a “double – edged sword”. If this system functions well, it can maintain the health of a population. But if not, large public health problems occur. Some people in Sri Lanka fulfill their freshwater needs from small water schemes.

The objective of this study was to assess the microbiological quality of drinking water in small water schemes in selected areas in Sri Lanka. The tanks surveyed were selected randomly. Government officers visited the selected small water schemes (n = 40) to collect water samples. Water samples were collected for analysis and total coliform and Escherichia coli were determined by enumeration of total coliform count and different coliform count method. *E. coli* is a bacterial indicator of faecal contamination.

Results showed that a total of 40 water samples of community water projects, approximately 52.5% of the samples analyzed were contaminated with total coliforms in concentrations exceeding 10 CFU/100 ml, and approximately 47.5% of samples showed contamination with E. coli. Highest detected coliform count was 800CFU/100 ml from Kithulgoda Community water project, Kevitiyagala and highest *E. coli* count (800CFU/100) was found in Samurdhi water Project Matugama. More than 90% of coliform contaminated samples were polluted by *E. coli*. Unfortunately, the water quality found in this study was poor.

Poorly managed public water supplies have the potential to make the large number of people ill. Because most of the people ordinarily drank water without treating it. Therefore we have to continue to put efforts in supplying of safe drinking water and to educate the people who use it. As a primary prevention, an immediate improvement of the water purifying environment by using cost effective method like chlorination, as well as the education of the population is needed.

*dwickw@yahoo.co.uk Tel: 060-2780291