

Analysis of bacterial load in pre and post filtered drinking water at the educational institutions of Rabwah, District Chiniot, Pakistan

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Water-borne diseases due to bacterial contamination are one of the major causes of mortality in the children of developing countries. The main objective of the study was to evaluate the bacterial load in drinking water of educational institutions at Rabwah, District Chiniot, Pakistan and to recommend best practices to provide clean drinking water. Samples were collected on a monthly basis for continuous 10 months (March 2016 – December 2016) from 15 educational institutions before and after the filtration to check the effectiveness. Each sample was processed for the analysis of total bacterial load and also the detection of Gram –ve bacteria as well as E.coli, by plate detection method. Confirmatory biochemical tests were performed for the detection of *E.coli*. Results showed that percentage of pre-filtered samples of all the institutions were highly contaminated with bacteria as compared to the post filtered. 2 out of 15 institutions had contamination of *E.coli* in pre filtered sample and only one institution in post filtered sample. This was observed only once in the beginning of the study and never after that. Because of improved filtration methods through proper cleaning of overhead water tanks, reservoirs and increasing the frequency of changing filters on time, the reduction in bacterial load was observed. The study showed that improved filtration methods could decrease the bacterial load of drinking water and mainly concerned with the improvement of health of the students.

Biography

Saad Sattar has completed his M.phil in Microbiology from GC University Lahore, Pakistan. He has worked as a lab scientist in clinical pathology labs of Shaukat Khanum Memorial Cancer Hospital And Doctors Hospital Lahore for more than 2 years. Now working as a Senior Research officer in Abdus Salam Research Forum at Nusrat Jahan College, Rabwah, Pakistan.

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