

Microbial and Coliform Contamination in the Drinking Water Samples of University of Jaffna During Dry and Wet Seasons

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Exposure to waterborne pathogens in drinking water is a serious public health concern. The purposes of the present studies were to evaluate the microbial contamination of drinking water and the examination of the coliform occurrence in university of Jaffna during dry and wet seasons. For this study faculties of the university of Jaffna and hostels for the students were selected. The main campus obtains the water supply from one dug well. Water from this well collected at different sites contaminated statistically significant ($p < 0.05$) number of cells during the dry season and contained statistically non significant ($p > 0.05$) level of contamination during wet season than the base line level established by the Sri Lankan Standard (100 colonies/mL). In Agriculture faculty water is drawn from a dug well. In this well water samples collected from different places showed significant by higher number ($p < 0.05$) of cells than the standard level during both seasons. In Medical faculty, water is supplied from a dug well. During dry season water from this well collected at different sites contaminated with statistically significant number ($p < 0.05$) of cells while one of the sample which obtained water from the same well showed non significant ($p > 0.05$) number of cells composed to the Sri Lankan base line level. But during the rainy season the water samples contained statistically non significant ($p > 0.05$) number of cells than the standard level. Ramanathan College obtains water from a dug well. During dry season water from this well collected at different sites contaminated statistically significant number ($p < 0.05$) of cells while during the rainy season canteen sample which obtained water from the well showed statistically significant ($p < 0.05$) number of cells and others contained statistically non significant number ($p > 0.05$) of cells than the standard level prescribed by Sri Lankan Standard. In sidha medicine, water is drawn from two dug wells. During dry season canteen sample which obtained water from the well 1 showed statistically non significant ($p > 0.05$) number of cells while the other sample of well 1 contaminated statistically significant ($p < 0.05$) number of cells and samples obtained from the well 2 showed statistically non significant number ($p > 0.05$) of cells than the baseline level. During rainy season canteen sample and one of the sample from well 2 showed statistically non significant ($p > 0.05$) number of counts and the others contaminated statistically significant ($p < 0.05$) number of

counts than the Sri Lankan Standard level. In university hostels water is obtained from the tube wells and main campus supply. During both seasons the samples obtained from the hostels contaminated statistically significant ($p < 0.05$) number of cells than the baseline level. The pH of the samples falls in the neutral range during dry season and during wet season the acidity slightly increased. Water samples did not show optical density at 550 and 600nm.