

Thesis Title Decreases of Coliform Bacteria in Drinking
Water Stored in Large Cement Jars.

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ABSTRACT

The study of the decreasing of coliform bacteria in drinking water stored in large cement jars covered with plastic nets and lids placed in two different locations, at the open air and nearby the household was operated on September, 19 to November, 18, 1989. Public pond water in Amphur Mueng, Khon Kaen province was used as water sample. Multiple Tube Fermentation Technique and membrane Filter Technique were employed to examine the number of total coliform bacteria and fecal coliform bacteria respectively. Air temperature, water temperature, pH and turbidity of water samples also recorded.

The results were revealed that the number of total coliform and fecal coliform bacteria reverse related to the retention time of water stored in the jars in linear relation (both at the open air and nearby the household). The trend of the decreasing of total coliform and fecal coliform bacteria in water was almost the same at both loca-

tions of jars and met the standard of drinking water in 14 days.

It was found that the decreasing of total coliform and fecal coliform bacteria in water stored in the jars placed at two different locations had no significant difference. It was also found that the average of maximum water temperature was 30.93°C and minimum was 26.75°C . The pH of water was between 7.6 - 8.2 and turbidity decreased until met the standard of drinking water in 12 days.

The results indicated that the drinking water stored in large cement jars with well cover can prevent the recontamination and the number of total coliform and fecal coliform bacteria decreased to meet the standard of drinking water in 14 days. The heat from the Sunlight could not increase the temperature of storage water up and high enough to kill the bacteria.