Thesis Title Microbiological Quality of Street-vended Fruit Juice in Bangkok

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Abstract

This study was conducted to investigate the microbiological quality of street-vended fruit juice in Bangkok during February - March 1996 by using Membrane Filter Technique to examine the contamination of indicated and pathogenic bacteria.

The results showed that most of the quality of the street-vended fruit juice were understandard. It was found that 90.4%, 86.4%, 57.6%, and 51.2% of the samples were contaminated with HPC (Heterotrophic plate count), Total coliforms, Fecal coliforms, and Fecal streptococcus, respectively. Seventy six percent of the samples were contaminated with pathogenic bacteria, *Staphylococcus aureus*.

The statistical analysis revealed that there were no statistically significant differences among the contaminations of HPC, Total coliforms, Fecal coliforms, and Fecal streptococcus between the street-vended heated and non-heated fruit juice. The contamination of *Staphylococcus aureus* was found to be statistically significantly different between the street-vended heated and non-heated fruit juice at $P<0.05$. The pH level of fruit juice also affected the bacterial contamination. The fruit juice with highest acidic level was found to be less contaminated with HPC and *Staphylococcus aureus* than the fruit juice with lower acidic level at $P<0.05$ and $P<0.05$, respectively. Resources of samples were also found to be related

to the contamination of Fecal coliforms. The mean number of Fecal coliforms in samples collected from market and school were found to be statistically significantly different at $P<0.05$. The contaminations of HPC, Total coliforms, Fecal coliforms and Fecal streptococcus in the street-vended fruit juice were associated with the contamintion of *Staphylococcus aureus*.