

**Quantity of Fluoride Ion in Drinking Water from School in
PathumThani District**

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Abstract

Known as the one most importance Public Health in the 20th century, fluoride's ability to inhibit or even reverse the initiation and progression of dental caries is well documented. The WHO's drinking water quality Guideline Value of fluoride is 1.5mg/liter (WHO, 1993). However, WHO emphasizes that in setting national standard for fluoride it is particularly important to consider climatic condition volumes of water intake, and intake of fluoride from other sources. Thailand Department of Health has set the standard limit for the amount of fluoride in tap water states that the safe amount of fluoride should not be higher than 0.7 ppm, the Food and Drug Administration legislates the amount of fluoride in commercially bottled water should not be higher than 1.5 ppm. This study aimed to analyze the fluoride concentration in tap water and bottled water supply in 25 primary schools within PathumThani province. The samples consist of 25 tap water samples and 5 bottled water samples. The samples are then analyzed by ion chromatography. Each sample was collected 1 month apart and measured twice, in order to calculate the average value from the two measurements. The result showed that the average fluoride level from the collected samples (Mean \pm SD) is 0.09 \pm 0.16 ppm F. Therefore, both tap water and bottled water in the primary school within PathumThani province are not exceeded the optimal value. However, when one decided to prescribe the fluoride supplement, the amount of fluoride in drinking water should be considered.

Keywords: Fluoride, Tap water, Bottled water