

## **Comparison of fluoride concentration between the morning urine sample and the 24 hour sample**

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At present, 24-hour urinary fluoride concentration can be used to estimate daily fluoride intake. However, the method of 24-hour urine collection is inconvenient. The purpose of this study was to compare urinary fluoride concentration in the morning sample with the 24-hour sample. Urine was collected in the morning and over 24 hours from 20 subjects aged 19-22 years under the condition of no fluoride tablet intake and fluoride tablet intake once a week for each dose of 0.25, 0.50, 0.75, and 1.00 mg. Urine volume was measured and urinary fluoride concentration was determined by using a fluoride ion selective electrode (EXPANDABLE ION ANALYZER EA 920). The data were analysed by Wilcoxon Signed Ranks Test. There was no significant difference ( $p>0.01$ ) between the urinary fluoride concentration in the morning sample and the 24-hour sample for all conditions observed. This finding allows to conclude that urinary fluoride concentration data obtained in the morning sample could become a good estimator of 24-hour urinary fluoride concentration value.

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