

Salivary Fluoride Retention Across Toothpaste Formulations and Rinsing Protocols

Background

Fluoride supplements, particularly through fluoridated toothpaste, have significantly reduced caries incidence over recent decades. Strategies to enhance fluoride retention including the “spit don’t rinse” approach, minimal water rinsing, and post-brushing rinsing with fluoride mouthwash have been recommended. However, direct comparisons of these strategies remain limited.

Keywords : Fluorides, Toothpastes, Mouthwashes, Saliva, Adult

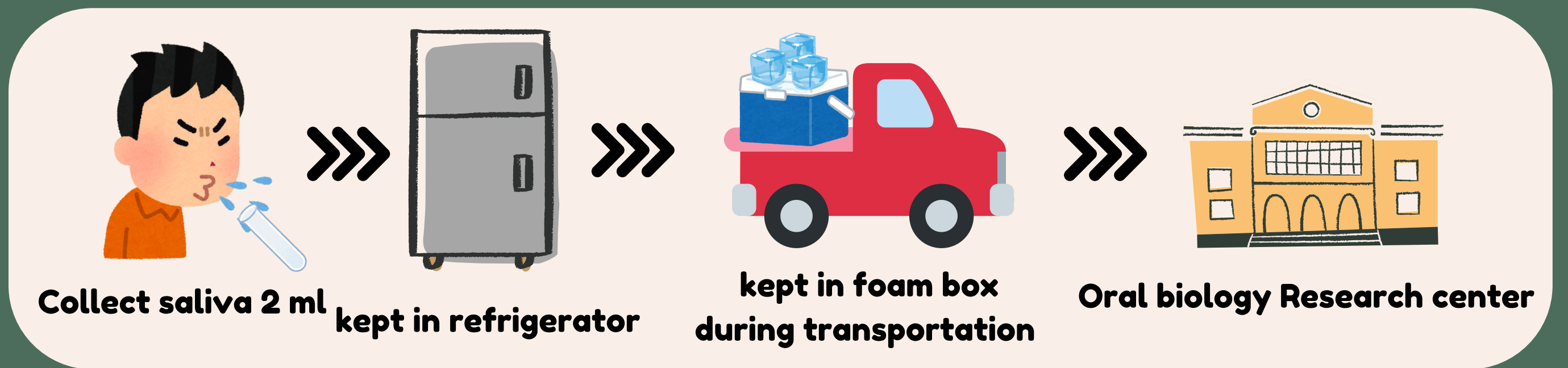
Clinical significance : For alternative protocol to increase fluoride retention

Objective

To evaluate salivary fluoride concentrations using different toothpastes and rinsing strategies.



Methods



Data analysis

A repeated measures ANOVA (non-parametric), with pairwise comparisons using the Durbin-Conover post hoc test, was conducted using R software (version 4.3.1) and the stats package (version 4.3.1) to examine dependencies in the data.

Result

High salivary fluoride retention



Moderate salivary fluoride retention



Low salivary fluoride retention



Conclusion

The high-concentration fluoride mouthwash demonstrated superior salivary fluoride retention. The “spit don’t rinse” approach retained significantly more fluoride than minimal water rinsing or 225-ppm mouthwash. These findings highlight the importance of rinsing strategies in optimizing fluoride retention and provide alternative options for individuals to enhance caries prevention based on their oral hygiene preferences.



DR. RATCHA RAKSAKMANUT



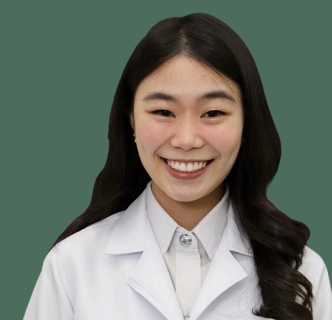
DR. AMPAPORN NITIPRATHEEP



SARIT BOONSIN
6200134



SUPASIRI
RATTANASAMAI
6200147



WARINTHORN
SAMANYAPORN
6200149



WARINTHORN
WOODTIKARN
6202118