

*In vitro* Study of Erosive Effects of Local Lime and Pineapple Fruit Juices on Human Dental Enamel.

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**Objective:** This is an *in-vitro* study to determine dental erosion in two popular local fruit juices, local lime and pineapple. **Methods:** Forty five extracted sound premolars with intact enamel were collected. Thirty teeth were randomly tested for Vickers hardness number measurement using microhardness tester and another fifteen teeth were for the surface roughness and volume loss measurement (profilometer). For each experiment, all the teeth were then randomly divided into three groups. Measurements of dental erosion effects (surface hardness, surface roughness and volume loss) were taken prior to immersion. Subsequently, the specimens were immersed in one of three solutions for 15 minutes four times a day for fourteen consecutive days; a) local lime juice, (b) pineapple juice, (c) distilled water. All teeth specimens were kept in artificial saliva in between the immersions. Another set of post-immersion readings were taken at the end of the study period. Group C was immersed again in the citric acid solution. **Results:** Hardness data were subjected to ANOVA. Roughness and volume loss data were subjected to Kruskal Wallis test. Findings indicated that there were significant differences between all groups as compared to the control group except for distilled water group in surface hardness. There were also significant differences in between all groups in roughness and volume loss data. **Conclusion:** This *in vitro* study suggests both local lime and pineapple juices have the potential to cause enamel erosion, the consequence of which can have an impact clinically and also affect the patient well being and quality of life.