

## The Comparison of Chromium Ions Release for Stainless Steel between Artificial Saliva and Breadfruit Leaf Extracts

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**Abstract :** The use of stainless steel wires in the field of dentistry is widely used, especially for orthodontic and prosthodontic treatment using stainless steel wire. The oral cavity is the ideal environment for corrosion, which can be caused by saliva. Prevention of corrosion on stainless steel wires can be done by using an organic or non-organic corrosion inhibitor. One of the organic inhibitors that can be used to prevent corrosion is the leaves of breadfruit. The method used for this research using Atomic Absorption Spectrophotometric test. The results showed that the difference of chromium ion releases on soaking in saliva and breadfruit leaf extracts on days 1, 3, 7 and 14. Statistically calculation with independent T-test with  $p < 0,05$  showed the significant difference. The conclusion of this study shows that breadfruit leaf extract can inhibit the corrosion rate of stainless steel wires.

**Keywords :** chromium ion, stainless steel, artificial saliva, breadfruit leaf

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