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## Effect of Sargassum Sp Effervescent on Surface Roughness of Acrylic Resin

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### ABSTRACT

**Background:** Denture cleaning materials on the market are available in several forms, one of which is effervescent tablets. Brown algae effervescent granules (*Sargassum sp*) have been demonstrated in several studies as denture cleansers but it has not been proven whether these materials affect the surface roughness of acrylic resins. **Purpose:** Analyzing the effect of effervescent *Sargassum sp* and alkaline peroxide as a soaking agent on the surface roughness of acrylic resin plates. **Methods:** This research is a laboratory experimental study with 27 samples of acrylic resin plates divided into three groups. Group A was immersed in effervescent granules. Group B was immersed in alkaline peroxide (sodium perborate) and group C was immersed in distilled water. Immersion was carried out for 15 minutes per day and lasted for 4 consecutive days and every day each solution was replaced with a new one. Measurement of surface roughness of samples after immersion using a surface roughness tester & hardness measurement using CLSM (Confocal Laser Scan Microscopy). **Result:** Wilcoxon's test on the Alkaline Peroxide group showed a p value of 0.008 ( $p < 0.05$ ) indicating a significant difference in surface roughness values before and after immersion. Paired t-test in the Algae and Aquadest groups showed  $p > 0.05$  (0.285 and 0.447) which means that there is no significant difference in surface roughness values before and after immersion. **Conclusion:** *Sargassum sp* effervescent granule solution does not affect the surface roughness of the acrylic plate.

**Keywords:** surface rougness, *sargassum sp*