Background. Denture cleansing was proven to be able to prevent plaque formation and attachment to denture base that was made from heat cured acrylic resin (HCAR). 5\% Psidium guajava infuse (5\% PGI) can be used as an alternative denture cleanser for its anti-plaque effect. The effect of 5\% PGI to surface hardness of HCAR is remain unclear.

Purpose. The aim of this study was to acknowledge the decreasing of surface hardness of heat cured acrylic resin after the immersion in 5\% PGI for 4, 8, and 11 days.

Method. After processing following the manufacturer’s instructions, specimens (65 x 2.5 x 10 mm plate) were immersed in aquadest and IDJB 5\% for 4, 8, and 11 days, followed by measuring the Vickers hardness (VHN) with a hardness tester. Data were analyzed by One Way ANOVA test.

Result. Mean value of HCRA surface hardness after the immersion in 5\% PGI was decreased compared to the immersion in aquadest. From One Way ANOVA test, significant value was obtained (p > 0.05). This shows there was no significant differences between sample groups.

Conclusion. There were no significant decreases in surface hardness of HCAR after the immersion in 5\% PGI for 4, 8, 11 days.

Keyword: heat-cured acrylic resin, surface hardness, Psidium guajava