Abstract

Surface hardness of acrylic resin as denture base associated with the habit of consuming foods and beverages such as water, acid, coffee, and tea. Ulee Kareng Aceh coffee was a kind of Robusta coffee which contains of acidic properties. The purpose of this study was to analyze the effect of acrylic resin’s immersion duration in Ulee Kareng Aceh coffee for 1, 3, and 5 days to surface hardness. Eighteen specimens (acrylic resin merck QC-20, 5 mm diameter and 2 mm thickness) were randomly divided in three experimental groups (immersion for 1, 3, and 5 days). Hardness was measured before and after immersion using Knoop Microhardness Tester by Shimadzu. Data was analyzed statistically by Wilcoxon and Kruskal Wallis test. The results of the study showed that there was significant decreasing of acrylic resin’s immersion duration to surface hardness between before and after immersion for 1, 3, and 5 days (p < 0.05). Kruskal Wallis test showed the surface hardness of acrylic resin was significantly different (p < 0.05) between after immersion for 1, 3, and 5 days. In conclusion, the value of surface hardness was decreased by increasing of acrylic resin’s immersion duration in Ulee Kareng Aceh coffee.

Key words: acrylic resin, Ulee Kareng Aceh coffee, knoop hardness number