Background. Hybrid composite resin has a high mechanical strength and it has a less shrinkage during polymerisation. Composite resin may able to absorb liquid, chemical substance, and acid solution surround it. Purpose. To observe the difference of hybrid composite resin surface hardness after being immersed in acid energy drink pH 3.2; 3.7; 3.9 for 2 hours. Method. 28 specimens were made using a 5 mm in diameter and 2 mm in thickness mold. The hybrid composite resin were polymerized for 40 seconds with Light Emitting Diode and divided into 3 experimental groups and 1 control group. The experimental groups were immersed in different energy drink (pH 3.2; 3.7; 3.9) for each group and the control group was immersed in aquadest for 2 hours. The surface hardness was measured from three sites of specimens’ surface with micro Vickers hardness tester. Data were analyzed using One Way ANOVA test. Results. This showed there was significant differences in surface hardness between sample groups ($\alpha < 0.05$). Conclusion. The surface hardness of hybrid composite resin were decreased after being immersed in acid energy drinks (pH 3.2; 3.7; 3.9) for 2 hours.

Key words: surface hardness, hybrid composite resin, acid energy drinks