ABSTRACT

**Background.** Alginate impression material is the most useful material. Nowadays, that is still be imported that causes the price relatively expensive. There were some efforts to modify alginate impression material by mixture Cyclea barbata L. miers leaf polysacharide powder 40-50% and researching the score of recovery from deformation. **Purpose.** The aim of this study was to know rasio of mixed Cyclea barbata L. miers leaf polysacharide powder with alginate impression material that still meet the criteria alginate recovery from deformation printed material according to the ADA. **Method.** Forty-two samples is divided to seven groups of mixture of Cyclea barbata L. miers leaf polysacharide powder in alginate impression material. Group A1 until A6 with the mixture of Cyclea barbata L. miers leaf polysacharide powder in alginate impression material 0% (control), 40%, 42.5%, 45%, 47.5% and 50%. Recovery from deformation of alginate impression material can be measured with recovery from deformation test tool with its 0.01 mm accuracy. **Result.** Kruskal Wallis test result p<0.05 shows that interpreted percentage enhancement in combining Cyclea barbata L. miers leaf polysacharide powder in alginate impression material will cause the meaningful percentage changes of recovery from deformation. **Conclusion.** Mixture Cyclea barbata L. miers leaf polysacharide about 40% in alginate impression material produce recovery from deformation score that can fulfill the ADA criteria.

**Key words:** Cyclea barbata L. miers leaf polysacharide powder, alginate impression material, recovery from deformation