**RESPONSES TO REWIEWERS**

**Effects of water boiling, microwave, and water bath postpolymerization on the mechanical properties of acrylic denture resins**

Dear reviewers,

Thank you for the indicated errors and correction guidelines that have significantly improved the quality of our manuscript. In accordance with your recommendations, we have made the necessary changes to the text below.

Of course, we will be pleased to note your follow-up instructions, if you consider that you need them.

**Reviewer A**

In the considerably modified text of the introduction and discussion, the authors explained more precisely the possible reasons for the improvement of the mechanical properties of acrylic materials after post-polymerization procedures. Using the data from the literature as well as the results of their earlier researches published in the reviewed journals, they explained in more detail the influence of the microwave post-polymerization and immersion into the water bath to reduce the amount of residual monomer in acrylic samples which probably led to the improvement of the mechanical quality of the examined sample material.

In the extended introduction of the article (according to the suggestion of the reviewer the parts of the discussion have been moved to the introductory section) the authors cite the findings of previous author's research on the effect of post-polymerization on the mechanical properties of acrylates, introduce new references and explain why the research was conducted. Although acrylates meet most of the challenges set before them by the dental profession, they are not ideal materials. They are exposed to strong masticatory and other forces in the mouth, whether it is dentures or orthodontic appliances. For these reasons, it is necessary to work on improving their mechanical properties, and one of the ways is to reduce the amount of unbound residual monomer.

The authors fully acknowledged the minor remarks of the reviewer in the text of the review. Statistically significant differences in the mechanical properties before and after post-polymerization are given in the conclusion.

**Reviewer B**

The authors fully followed the reviewer's suggestions from points 1 to 5.

Given the unacceptability of the term polymer complex, it is replaced by term polymer.

The reviewer states that the residual monomer and small molar mass of the components obtained by the polymerization process reduce Tg and weak mechanical properties of acrylates. Subsequent polymerization results in a decrease in the amount of residual monomer and increase in Tg PMMA. This fact is clear to the authors from the literature data, but Tg values ​​immediately after polymerization and after post-polymerization are not measured.

Earlier researches of this group of authors published in the original articles, cited in the manuscript after the review of the text, show the values ​​of residual monomers and other components of acrylates just before and after post-polymerization procedures by HPLC method. Given the extensiveness of the results obtained, not all the parameters could be published in one manuscript. The authors have therefore taken the right to refer to the previously obtained and published results that said post-polymerization procedures lead to a reduction in the amount of residual monomer in the tested samples as well as their cytotoxicity.

We appreciated the reviewer's suggestion that additional polymerization is not possible at 37°C and that the amount of residual monomer is reduced by diffusion into the aqueous medium. This is where we supplemented the previously obtained results with sampling into artificial saliva at body temperature, the amount of residual monomer in the samples decreased and consecutively increased in artificial saliva, in accordance with the observation period (HPLC method). Our research is in a positive correlation with the findings of other authors.

Impact strength is replaced with flexural strength, regardless of the purpose of the research.

The results and discussion were modified in accordance with the suggestions of the reviewers, for a clearer explanation, references of the newer date have been added, and these are enumerated in the section of the references according to the order of occurrence in the manuscript.

We hope that the modified manuscript will conform to the standards of the journal "Hemijska industrija". We are open for all kinds of suggestions, given that the quality of publication of the results obtained through multidisciplinary work is of primary importance.

With respect,

Authors