Reviewer's report

Title: Effect of Surface Finishing on Colour Stability and Translucency of Dental Ceramics

Version: 1 Date: 01 Jan 2018

Reviewer: Hermann Agis

Reviewer's report:
In their study entitled "Effect of Surface Finishing on Colour Stability and Translucency of Dental Ceramics" the authors studied the impact of staining solutions and surface finishing on the colour stability and translucency of hybrid ceramic and resin nanoceramic materials. The authors found that incubation in coffee increased deltaE* values of hybrid ceramic stronger than incubation in tea or cola. Resin nano ceramic incubated in coffee and tea had higher ΔE* values than when stored in the cola. In addition a decrease in TP values of hybrid ceramic and resin nano ceramic incubated in the coffee was found. While these findings are interesting for a subset of a specific audience it remains unclear what benefit the findings will bring. The rational and hypothesis of the study are not supported by literature and the study is purely descriptive. The overall quality of the presented work requires immense efforts to reach the high level of excellence required for BMC Oral Health. I suggest submitting the manuscript to a journal which focuses on material science as short communication.

Major issues:
1) As mentioned the study is mainly descriptive. The presented hypothesis and rational was not based on literature. It remains unclear what the underlying mechanism is.
2) The introduction is very superficial and needs to be rewritten. The authors should present an overview of the current literature on the topic and present a rational for the study which is linked to the clinical applications and requirements. Also the studied materials need to be introduced.
3) The authors should seek the help of a professional statistician and present the rational for the application of the chosen statistical tests as well as sample size.
4) Again the discussion is very superficial and lacks essential elements including the limitations of the study and future directions. Finally, it remains to argue what benefit the study brings to the field of dentistry and what the take home message for a clinician or a basic scientist would be.

5) The groups must be labeled consistently throughout the manuscript including tables and figures.

6) The presentation of the data in tables and figures seems repetitive. The legends need to clearly explain what is seen on the figures. Also the information regarding statistics including the performed tests and n should be presented. The authors should also seek the help of a scientifically trained illustrator as the quality of the figures is poor.

7) The authors should follow the suggestions of BMC and make the raw data available via an accessible database.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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