REVIEWER 1

The grammatic is correct, but an expert in the field of the research must be consulted for more usual terms.

There is excessive distance between the sections of the text. **Corrected**

**Abstract:**

In methodology section, authors wrote: “To analyze roughness and contact angle..” . the more appropriate word would be “To evaluate…”. **Corrected**

What does authors mean by “luting”? would they say resin cement or adhesive?

**Luting means cementation, as it can see in several articles, as:**

Politano G, Van Meerbeek B, Peumans M. [Nonretentive bonded Ceramic Partial Crowns: Concept and Simplified Protocol for Long-lasting Dental Restorations.](https://www.ncbi.nlm.nih.gov/pubmed/30564796) J Adhes Dent. 2018;20(6):495-510.

Perroni AP, Kaizer MR, Della Bona A, Moraes RR, Boscato N. [Influence of light-cured luting agents and associated factors on the color of ceramic laminate veneers: A systematic review of in vitro studies.](https://www.ncbi.nlm.nih.gov/pubmed/30213524) Dent Mater. 2018 Nov;34(11):1610-1624

Fraga S, de Jager N, Campos F, Valandro LF, Kleverlaan CJ. [Does Luting Strategy Affect the Fatigue Behavior of Bonded Y-TZP Ceramic?](https://www.ncbi.nlm.nih.gov/pubmed/30206573)

J Adhes Dent. 2018;20(4):307-315.

In the sentence “A scanning electron microscope (SEM) analyzed the surface of the samples” What kind of analysis was performed? Did the microscope did the analysis? Or it was used for a specific type of analysis?

**SEM was performed to illustrate the surface characteristics after treatments, so the word “analyzed” was changed for “showed”.**

Authors mentioned that “it was obtained statistically significant difference for contact angle (p-valor=0.00)” but concluded that “the different post-etching surface treatments did not increase the flexural strength, surface roughness and ceramic wetting”. Sentences are conflicting.

**The conclusion of the paper was changed.**

**Introduction**

This section is too long. Authors must summarize it to one and a half, or two pages. I suggest authors to focus in lithium disilicate, instead of the wide topic of “dental ceramics”.

First paragraph is “empty”. Not necessary. The second paragraph begins in a wrong way. It would be more adequate if authors address the hole of glass and crystal in dental ceramics.

**These paragraphs were corrected for better understanding.**

In third paragraph, authors say that “Ceramic materials can be manufactured by pressable method or by CAD/CAM system” but this is true only for lithium disilicate, since dental ceramics may be also vennered. The following sentences are repeating the information, and may be summarized. **Corrected**

In 4th paragraph, authors say that “Higher etching time increases bond strength between resin/ceramic, because it promotes a higher average surface roughness.” But for lithium disilicate, longer etching times decrease the strength of the ceramic and are strongly not recommended.

**HF acid attacks the glassy phase of acid-sensitive ceramic (silica based - SiO2), as it can be seen in the following articles:**

Addison O, Marquis PM, Fleming GJ. Resin strengthening of dental ceramics- the impact of surface texture and silane. J Dent. 2007 May;35(5):416-24.

Saavedra, G.; Ariki, E. K.; Federico, C. D.; Galhano, G.; Zamboni, S.; Baldissara, P.; Bottino, M. A.; Valandro, L. F. Effect of acid neutralization and mechanical cycling on the microtensile bond strength of glass-ceramic inlays. Operative Dentistry, 2009, 34-2, 211-216.

The 7th and 8th paragraphs may be joined – until the sentence “…….composite [16].” But the following sentences of 8th paragraph deal with a completely different issue and should compose another topic/paragraph. **Corrected**

The information of the beginning of the 9th paragraph was already mentioned in the text before. **Corrected, we took it out.**

Correct “…the aim of this study is evaluate the …” as “… the aim of this study was to evaluate the …” **Corrected**

The correct term is “surface roughness” instead of “superficial roughness”

Information about how a resin cement heals the imperfections caused by the acid etching on ceramic surface, and how cementation enhances the strength of ceramic are missing.  **Corrected**

**Material and methods**

The most appropriate term is “sectioned” instead of “cutted”. “serial slices” is not an adequate term also. It is not necessary to describe the exact sectioning of the blocks, just that they were sectioned and the final dimensions of the samples obtained. **Corrected**

Surface treatments are better explained if written in descriptive format.

The test must be descried with technical terms. The units used for load (P – this is the maximum applied load, in Newtons, not the strength), and bar dimensions must be cited. **Corrected**

The SEM images may not indicate “if different treatments can influence in the flexural strength result after the mechanical test.” But if surface treatments may influence the failure mode and failure origin. **Ok**

Surface roughness and contact angle analysis should be described before the strength test, for a more logical sequence. **Corrected**

When did the procedures described in the least 3 paragraphs were performed? Way they are described here? After that all surface treatments were described for each test?? **Corrected (the position was changed)**

**Results**

Tables do not have vertical lines, only horizontal lines. **Corrected**

Image 1s(should be called “Figure 1”) –

caption: which group is “group B”? **Corrected, we decided to take this of because it was only to illustrate, and it was wrong.**

In the sentence “…origin, on the traction surface,…”, the correct term is tensile. **Corrected (we took of the article)**

The fracture origin, indicated by the blue arrow, seems to be wrong in both images of Image 1. In both cases, the fracture origin seems to be located at the inferior corner of the bars, on the tensile side. By this point of view, these images are not good examples of fracture, since it is recommended that the failure should start at the middles of the tensile surface. The corners may contain defects that underestimate the strength of the material. Besides that, the bars should present an edge chamfer, to avoid that these defects caused during bars’ fabrication originate fracture.

Tables: “average” is better represented by “Mean value”. **Corrected**

And the property measured must be cited into the table, instead of only in table title. p-value must be cited in table 3. **Corrected**

Figure 2 – indicate the precipitates in the image **Corrected**

**Discussion**

Begin this section by describing the main results of your study. **Corrected**

Authors affirm in the fist paragraph that “e precipitates remain inside the surface pores, preventing the penetration of the resin cement, decreasing the adhesion between substrates.” This sentence lacks of reference, since adhesion was not evaluated in the present study. **Corrected**

Why would the acid precipitates decrease strength?

**The poorly adherent precipitates may weaken resin–porcelain bonds, and lead to clinical failure, as it can be seen in the following articles:**

Belli R, Guimaraes JC, Filho AM, Vieira LC. Post-etching cleaning and resin/ceramic bonding: microtensile bond strength and EDX analysis. J Adhes Dent. 2010 Aug;12(4):295-303.

Canay S, Hersek N, Ertan A. Effect of different acid treatments on a porcelain surface. J Oral Rehabil. 2001 Jan;28(1):95-101.

Martins ME, Leite FP, Queiroz JR, Vanderlei AD, Reskalla HN, Ozcan M. Does the ultrasonic cleaning medium affect the adhesion of resin cement to feldspathic ceramic? J Adhes Dent. 2012 Dec;14(6):507-9.

Adhesion was not evaluated in this study, so, must have less attention in discussion. **Corrected**

REVIEWER 2

The study seems to have been well developed, however the manuscript writing and the English language are very poor. There is a lot of missing information on materials and methods section. Attached you have the Word file with corrections, sugestions and questions.