Dear Professor Ražić,

we would like to thank you and the Reviewer for consideration of our manuscript.

We have made all Reviewer’s corrections which are incorporated and highlighted in our revised manuscript. We are grateful to the Reviewer for useful suggestions and comments which, we believe, improved our manuscript. Particularly, we thank the Reviewer for many, very useful language corrections.

Our responses to the specific points are given in the appendix to this letter.

We hope that our responses and changes we’ve made to the paper are satisfactory and that you will be able to accept our manuscript for publication in Journal of the Serbian Chemical Society.

Best wishes,

Ljiljana Damjanović-Vasilić

**Appendix: Detailed responses to Reviewer’s comments**

**Reviewer A:**

Does the manuscript contain enough significant original material?:
    yes

Is the manuscript clearly and concisely written?:
    yes

Are the conclusions adequately supported by the data?:
    yes

Does the manuscript give appropriate credit to related recent publications?:

    yes

Are the references appropriate and free of important omissions?:
    yes

Is the length of the manuscript appropriate?:
    yes

Does the manuscript need condensation or extension?:
    yes

Is the quality of the figures (including legends and axes labelling)
satisfactory?:
    yes

Are the nomenclature and units in accordance with SI?:
    yes

Are the English grammar and syntax satisfactory?:
    yes

ADDITIONAL COMMENTS
Please indicate the page numbers for suggested corrections.
Please, be as specific as possible if major correction by the author(s) is
recommended! :
    Language issues for the main text of the article – and several
observations

•    Line 19 – ‘…copper and iron ions were responsible for the coloring of the green and yellow glazes’;

Corrected as requested.
•    Lines 26-27– ‘…became a widespread and important…’;

Corrected as requested.
•    Line 27 – ‘Between the 11th and 12th centuries, Byzantine…;

Corrected as requested.
•    Line 28 7-39 – ‘Considering the raw materials and procedures employed in their manufacturing, the investigations confirmed the local pottery production and originality’;

Suggested sentence added to the text.
•    Line 40 – ‘Belgrade was the capital of the Serbian state…’ – unless they were many capital cities active at that very moment, which clearly not the case…in that unlike case, , ‘Belgrade was one of the
capitals of the Serbian state…’;

The Reviewer comment is correct – only Belgrade was the capital of the Serbian state at the beginning of the 15th century. Changes were made in accordance with this and the next comment.
•    Lines 40-41 – ‘Belgrade was the capital of Serbian medieval state at the beginning of 15th century. The focus of this study is the glazed pottery originating from that period excavated in the area of Belgrade Fortress’.

Corrected as requested.
•    Line 45 – ‘to identify the materials used…’;

Corrected as requested.
•    Lines 49-50 – ‘The Belgrade Fortress is regularly maintained exhibition space and partial archaeological  excavation performed so far did not provide enough archeological (and ceramic) material…’ – what do you mean by this?!
Possible reformulation – but I am not sure that I got your point:
‘Belgrade Fortress is regularly used as an exhibition space (museum?!) and
the partial archaeological excavation performed so far did not provide…;

Corrected as suggested.
•    Lines 53-54 – ‘to determine the potential sources of raw materials for the pottery investigated in this work. However, the majority of medieval…;

Corrected as requested.
•    Line 61 – ‘contribute to the understanding of pottery production’;

Corrected as requested.
•    Line 62 – ‘…will be an addition to the existing archaeometric
data…’;

Corrected as requested.
•    Line 67 – ‘1) the partial exploration…’;

Corrected as requested.
•    Lines 79-80 – why you did not provide here the characterization of the cross-section using optical microscopy?! Or al least mention that you made this is the supplementary material!
•    Line 94 – ‘…the values of oxides that were under the detection limits were replaced with 0.1 wt%...’;

Corrected as requested.
•    Lines 100-101 – use the symbol × , not the letter x for 18\*8, etc.;

Corrected as requested.
•    Line 118 – ‘…the identification of the pigments and minerals by comparison with the recorded spectra’;

Corrected as requested.
•    Line 120 – ‘In order to understand the glazing production technology it is also important to characterize the ceramic body of the investigated samples. Acquiring this information will lead to a better understanding of the knowledge transfer in that particular historical period’;

Corrected as requested.
•    Line 125 – it would be an idea to state the value of CaO that separates the calcareous from the non-calcareous samples;

We agree. Following underlined text is inserted in the manuscript: “….. based on low amount of lime (less than about 5 wt%), belong to the group of non-calcareous clay.”

•    Line 133 – ‘…dated to different periods between the 11th and 15th centuries…’;

Corrected as requested.
•    Line 134 – ‘…a detailed description of the studied samples…’;

Corrected as requested.
•    Lines 138-139 – please, rephrase this: ‘The HCA results tend to be influenced by variables that have low absolute presence, variation and meaning like in this case variable TiO2 wt%’;  - this is not necessarily true – sometimes trace-elements can be useful in statistical analysis; In any case, in order to perform statistical analysis, a selection of variables has to be made, eliminating those measured with poor precision, containing many missing values (i.e. values below the limits of detection) or the ones with more or less similar values.

Corrected as requested.
New sentence is: “The HCA of ceramic body chemical composition data showed that the results have been influenced by variable TiO**2** wt% which has low absolute presence (see Table I- values for some samples are missing and some have poor precision), variation and meaning.”
•    Lines 146;159 – this is not Ward cluster dendrogram – it is a dendrogram in which the clusters were created using Ward’s method and Euclidean distances; Usually in HCA Ward’s method is used in conjunction with squared Euclidean distances…but well, I cannot comment too much on this, as this up to everybody – i.e. how to choose the way of generating the dendrogram;

We completely agree with the Reviewer. It was an error. Following changes have been made:

* Experimental section: sentence “Hierarchical Cluster Analysis (HCA) was made using Ward’s method and Euclidean distance on ceramic body compositional data.” replaced with “Hierarchical Cluster Analysis (HCA) was made using Ward’s method and squared Euclidean distance on ceramic body compositional data.”
* Chemical composition paragraph: The sentence “Two clusters can be seen in Ward's cluster dendrogram (when cut at distance 1).” has been replaced with “Two clusters can be seen in dendrogram obtained by Ward's method (when cut at distance 1).”
* Title of Figure 2 changed to: Hierarchical clustering dendrogram of the chemical composition of ceramic body of the samples from the Belgrade Fortress and the Studenica Monastery.

•    Lines 173-174 – ‘The mineralogical composition provides information about the firing process, such as the estimation of the firing temperature or the atmosphere in the kiln used for the production of ceramics’;

Corrected as requested.
•    Lines 175-176 – ‘disappear at temperatures between 900° C and 950° C12, whereas gehlenite forms between 800° C and 850° C as a reaction between calcite and clay mineral illite21…;

Corrected as requested.
•    Line 185 – ‘The average thickness of the investigated glazes was in the range 60-300 μm. The thickness of…’;

Corrected as requested.
•    Line 193 – ‘…glazes, with lead oxide as flux agent.’;

Corrected as requested.
•    Line 198 – ‘(considered as colorants purposely added)’;

Corrected as requested.
•    Lines 198-200 – ‘For the majority of the investigated samples, the concentrations obtained after the subtraction and renormalization did not match the composition of the body.’;

Corrected as requested.
Lines 195-204 – a figure (or more) supporting these statements would have helped! Moreover, the fact that you still found some samples glazed through the application of the lead glaze only should be stated in the abstract (lines 17-18) – in your case, both glazing methods were apparently in use, with a clear preference for the use of mixture of quartz and lead oxide!

We agree with the Reviewer. A figure showing adjusted glaze composition versus body composition for SiO2 is given in Supplementary material, Fig. S-2.

Also, following sentence has been added to the abstract:

“Majority of the glazes were produced by application of mixture of lead oxide and quartz to the clay body, whereas only two samples were glazed by application of lead oxide by itself.”
Table II – why did you not report SEM-EDS measurements on all colors for each shard?!– there any many shards that have more than one color (e.g. BG-2 – green, black, yellow);…it would have been interesting to see if there were differences in the chemical composition of various colors on the same shard;

Yes, we agree with the Reviewer that this investigation would be interesting. But, as we stated in the text, small number pottery shards have been excavated at the Belgrade Fortress. Because of that, the archaeologists allowed us to cut only one sample from each pottery shard for analysis in order to preserve the shards. That is why we investigated only one colour per shard by SEM-EDS as given in Table II. But we have performed very thorough micro-Raman spectroscopic analysis at many different points (over 300 Raman spectra were analyzed) and identified pigments are given in the text.

We did not insert any changes in the text regarding this comment.

•    Line 226 – ‘…are more intense than the bending modes’;

Corrected as requested.
•    Lines 279-280 – ‘…dated to the beginning of the 15th
century…’;

Corrected as requested.
•    Line 284 – ‘…by applying a mixture of lead…’;

Corrected as requested.
•    Lines 285-286 – ‘…copper and iron ions were responsible for the coloring of the green and yellow glazes’;

Corrected as requested.
•    Line 287 – I suppose that is ‘decorated jugs’;

Yes. Corrected.
•    Lines 291-292 – ‘…to compare the characteristics of the glazes and to gather complementary information about the glazing technology. Using SEM-EDS and micro-Raman spectrometry, it was shown that the chemical composition and glazing technology of the samples…’;

Corrected as requested.
•    Line 296 – ‘In addition, the results...’;

Corrected as requested.
•    Line 297 – ‘…are very similar to the results…’;

Corrected as requested.
•    Lines 297-300 – ‘The great similarity between the samples investigated in this work and the comparison with typical material from other Byzantine areas dated to an earlier period (12th-13th centuries), as well as from the same period (early 15th century), e.g.27,29,31, indicates that the glazing technology was in Byzantine tradition.’;

Corrected as requested.
•    Lines 300-302 – ‘A better understanding of the medieval pottery production in the Balkans could (or can) contribute to the (or a) comprehensive analysis of glazed ceramic of the Byzantine world.’

Corrected as requested.
I do no see the rationale of the most of the text included in the supplementary file – i.e. why is that much material there.
My opinion is that the text from supplementary material should be distilled and embedded somehow in the main text of the article (I mean the historical part and the optical microscopy characterization), and leave in the annex just the figure with the map and the table containing the photos of the samples and the cross-sections. This is only if you do not have special space requirements from the editorial office…but otherwise I do not see the point of splitting the material like this.

As the Reviewer suggested, we have moved paragraph Microstructure from Supplementary material to the main text and inserted one new Figure showing optical micrographs of selected samples (Fig. 1.). Remaining of the text is historical and archaeological part and we believe it should stay in Supplementary material in accordance with the scope of the Journal.

Language issues for the supplementary material

•    Line 10 – erase ‘diverse’ or rephrase…’is a group of diverse
products…’;

Corrected. Word ‘diverse’ has been erased.
•    Lines 10-11 – ‘dated from the first half of the 13th century to the
middle of the 15th century’;

Corrected as requested.
•    Line 14 – ‘during the 14th century and at the beginning of the 15th
century…’;

Corrected as requested.
•    Line 33 – ‘The Belgrade Fortress is a multilayered archaeological site…’;

Corrected as requested.
•    Line 35 – ‘Because of the very important…’;

Corrected as requested.
•    Line 39 – ‘It was a fortified town…’;

Corrected as requested.
•    Line 40 – ‘in the thoroughly rebuilt Byzantine castle.’;

Corrected as requested.
•    Line 41 – century;

Corrected as requested.
•    Line 43 – ‘at the beginning of the 15th century’,

Corrected as requested.
•    Line 44 – ‘became the military, political,…’;

Corrected as requested.
•    Line 44 – ‘The most important part of the town was the palace with court complex - …’;

Corrected as requested.
•    Line 47 – ‘…as well as the buildings located inside, were destroyed in the gun powder explosion’;

Corrected as requested.
•    Line 51 – ‘…information about the condition,…’;

Corrected as requested.
•    Line 52 – ‘…archaeological units can be obtained from the available field documentation…’;

Corrected as requested.
•    Line 53 – ‘…were separated in all the investigated areas’.

Corrected as requested.

REPORT:
    The paper is generally well-written. There are many minor language issues, I took the time to correct some of them - see the above additional comments. I have also suggested some minor modifications (the addition of some figures, changes of text, some explanations or reporting some additional measurements, if possible). Overall, a good work that requires only minor modifications in order to be published.

In my opinion, this manuscript should:
    be published after minor revision without additional review

If manuscript is suitable for publishing, referees recommendation :
    Original scientific paper

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