

Response to Reviewer 3 Comments

Point 1: It is not clear how the parameters assessed in this study might be useful to replace microplastics as exfoliants. If I understand properly, only the safety and the cytoprotection against oxidative stress of grape pomace is assessed. In this case this should be clearly explained; in particular, it should be indicated why the parameters assessed in this study are helpful for the use of grape pomace as a substitute for microplastics.

Response 1: Microplastics use as exfoliant ingredient in cosmetic products has been banned in countries such as Canada and the United States because of its environment impact. They can overcome the filtering system of industrial plants being dumped in the river bed and ingested by marine animals. The cosmetic industry trend is to employ biodegradable raw materials like fruit seeds as natural exfoliants. In this context, grape pomace is an example of natural exfoliant with additional antioxidant activity for skin anti-aging treatments. As an active ingredient in cosmetic products, grape pomace needs to be submitted to safety and efficacy studies.

We have added additional information to improve clarity and completeness.

Point 2: Introduction, line 72 : add references regarding the exfoliant properties of grape pomace.

Response 2: Added.

Point 3: Methods : add references for the following assays : phenolic content, DPPH, MTT, cytoprotection (IC_{50} of 600 μ M for hydrogen peroxide).

Response 3: Added.

Point 4: Methods : DPPH assay : (1) explain how you determined the EC_{50} for DPPH assay;

Response 4: We thank the reviewer for this important suggestion. This explanation has been added to the text.

(2) did you analyse a kinetic parameter, since the antioxidant capacity is mostly determined by the reactivity toward oxidants ?

Response 4: We did not performed a kinetic analysis. We found that the EC_{50} determination was a suitable parameter.

Point 5: Statistics: please indicate how you calculated the statistics mentioned in the text.

Response 5: Done.

Point 6: Phenolic compounds : (1) : Do you have data for the determination of phenolic compounds (absorbance values, table or graph) ?

Response 6: Yes, we have absorbance values, but we found that these data were not so relevant to be demonstrated in the manuscript.

(2) The unit indicated for phenolic compounds leaching-out rate is not a rate (mg GAE/g) : to have a rate, you must add the time-dependence (mg GAE/g/min).

Response 6: Agree, this sentence has been modified into the text.

Point 7: Figure 4 : (1) How did you define the cell viability using the MTT assay?

Response 7: We thank the reviewer for this relevant suggestion. This explanation has been added to the text.

(2) Did you apply a statistical test to compare the values of the samples?

Response 7: No, we did not. We calculated standard deviation that for cell culture assays is more usual.

The authors are grateful to the reviewers for their careful reading of this manuscript and the insightful comments.