REVIEWER 5

The scientific level is adequate, and the results obtained in this study will be useful for the extraction of volatile compounds from this and similar plants. However, there is a list of issues that requires revision prior publication. In this sense, I recommend the publication of the manuscript after minor revision. Please, see the following specific comments:

*Please, revise the punctuation marks of the entire manuscript: there are a lot of commas that should be dots.

English misspells were corrected and a new english grammar review was done.

*Lines 19 and 21: Please, change “were obtained” to “were identified”.

Changed and besides english misspells were corrected and a new english grammar review was done

*Line 44: Please, change “have been” to “has been”.

Changed and besides english misspells were corrected and a new english grammar review was done

*The SFE abbreviation was introduced at the beginning of the manuscript but then it is not used. Please, change all “supercritical fluid extraction” by “SFE”.

Correction done.

*Lines 50-51: Please, explain the benefits of SFE compared to enfleurage.

Benefits are now mentioned in lines 36-39 in the modified manuscript.

Please, compare SFE with other green extraction methods such as ultrasound-assisted extraction or ionic liquid-based extraction.

Discussion of these technics were done in the modified manuscript

*Please, explain in the results section why the rest of parameters that influence the extraction (i.e. the amount of plant or the extraction time, drying conditions of the plant, particle size...) were not optimized.

Explanation was added in the modified manuscript as:

Higher yields obtained in this work could be due to different factors as higher pressure process which affects the capability of solvation of non-polar compounds, carefully postharvest handling of tuberose flowers, drying conditions and particle size used for extraction, because these factors were reported as important factors for jasmine and lavender extraction [19, 22]. These factors were not evaluated in this work because the aim of the research was to study, how the main parameters that affects carbon dioxide solvation capability in supercritical fluid process impacts the chemical composition profile of Polianthes tuberosa extracts. It is known that factors as time, particle size, carbon dioxide flow, etc. are factors that affects recovery efficiency or yield extraction but not solvation of carbon dioxide.
Section 2.3: Please, include the following conditions during the GC-MS analysis: transfer line temperature, type of mass analyzer, source temperature, and quadrupole temperature (if this mass analyzer was employed).

The chromatographic system used for analysis of extracts was coupled to a MSD 5972A detector, this model does not allow to program independently the temperatures of quadrupole, ionization source and transfer line as mass detectors in current models.

Section 3.1: Please, include the yield reported in reference [2], even if it is not comparable with the reported value in the manuscript. I also suggest comparing the yield of the first extraction of ref [2] with the obtained yield, if the value was reported.

Yields are already reported in section 3.1

Lines 110-112: If the drying conditions and particle size are important factors that influence the yield, I do not understand why they were not optimized...

Authors are agree with the comments about that only the effect of pressure and temperature were the only studied factors. But the aim of this research was to understand how chemical composition of extracts was affected by the extraction process, pressure and temperature in supercritical extraction are the factors that affects carbon dioxide solvation. Meanwhile, factor as particle size will affects recovery efficiency or yield extraction. In the other hand, dehydration process should be interesting to evaluate because it might be a loss of volatile compounds during process.

Section 3.1: Is there interaction between the two studied SFE factors?

Yes, there is an interaction between the two studied SFE factors, however this interaction is not statistically significate that’s why it is not mentioned.

Lines 145-148: How many analytes were identified in ref. [4,6,11]? Please, include the information in the text.

Discussion of these compounds were done in manuscript.