Reviewer's report

Title: Evaluating the nutritional content of an insect-fortified food for the child complementary diet in Ghana

Version: 0 Date: 05 Mar 2019

Reviewer: Lenka Kourimská

Reviewer's report:

General comments:

The manuscript brings information about the composition and nutritional value of the palm weevil larva traditionally consumed in Ghana. Introduction part summarises theoretical background, Materials and methods are clear, but it is a pity, that majority of analysis was carried out only in duplicate and not in triplicate. In case of proximate macronutrient analysis the information about the number of determinations of each sample is missing. I also do not understand why the analysis of triacylglycerols was carried out when finally fatty acid profiles are given as results. Why the authors did not use the analysis of fatty acids by GC? In case of amino acid profile and fatty acid profile I miss the information about the identification of analytes (Which standards were used?). The moisture was determined within the proximate analysis but the results of the dry matter were not included in Table 1. Some results are expressed as 0.0 which is analytically incorrect. There should be stated "< detection limit of the method". Some results in Table 1 are missing and there is no explanation why. All figures are expressed without uncertainty (± SD) which is a big weakness. There is no statistical evaluation of the data (correlation between analysed levels of nutrients, statistically significant differences between raw, fried and roasted samples etc.).

Only Val, Leu, Ile, Thr, Phe, Trp, Met, Lys are essential amino acids. His and Arg are semi-essential (essential for children). Cysteine and Tyrosine are not essential and it should be explained why their values are given together with essential amino acids (analytical reasons).

I have no general comments to the Discussion and Conclusion.

Detailed comments:

Line 54: Add the Latin name to the palm weevil.

Line 181 and below: Why the analysis were done only in duplicate?

Line 211: Add the used concentration of HCl.
Line 228: Why wasn't the GC analysis of fatty acid profile used?

Line 244: Add the citation of the used AAS method.

Lines 280-293: Why did you use the methods based on the growth of microorganisms and not some instrumental techniques?

Line 335: Are the results per fresh weight or per dry matter? Add the uncertainty of results (mean ± SD). Explain why some results are missing in table. Replace 0.0 by less than detection limit (in all tables).

Line 389: The results of TAG profile are not in fact presented, because the authors gave the results of fatty acid composition in Table 4.

Line 450: Add citation to this statement. Variability depends also on other factors.

Line 486: It is not generally expected in the future that the wild edible insects will be harvested. How could it affect ecological balance? It is assumed that for sustainable production the insects will be produced in the farms.

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**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.

Yes

**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
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Please indicate the quality of language in the manuscript:
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