

Reviewer's report

Title: The total antioxidant content of more than 3100 foods, beverages, spices, herbs and supplements used worldwide.

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Reviewer: Francisco FJ Romero

Reviewer's report:

This manuscript from Carlsen et al. describes the total antioxidant content of 3100 food products, allowing the authors to develop a database that could be used for a wide range of nutritional research.

The study is well planned and organized, and the manuscript is well written, however there is much data in the literature about this subject, and in fact, one third of the results have been previously published by the authors (as they mentioned in the material and methods section). Therefore this erodes the impact of the results. Despite of this, the interest of this manuscript falls on the database developed, since it is a helpful tool for researchers in the field of nutrition.

Minor essential revisions:

- In the methods section, regarding to Sample collection and sample preparation, authors mentioned that: "On arrival at the laboratory, samples were either analyzed at arrival or stored at 4°C for a few days or frozen at -20°C before analysis". They should provide more details about the time stored at 4°C or the days that the samples were frozen, since it is known that these processes affect the antioxidant content. They should also describe in which cases samples were stored at 4°C or frozen.
- In the results section, if authors decide to explain berries and berry products in a different paragraph to fruits and vegetables, they should at least mention them one following the other since berries belong to fruits and vegetable categories.
- Finally, regarding to the measurement of the antioxidant content, in addition to the fact that it is not necessarily a direct relationship between the antioxidant content of a product and the subsequent antioxidant activity in the target cell, authors should take into account that methods based on the total antioxidant capacity do not allow to identify the antioxidant compounds as well as the mechanisms by which they act. Therefore any discussion regarding to the biological effects should be avoided.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests