

Responses to Reviewers

Reviewer 03477204

In this study, the authors aimed to compare the commercial bowel cleansing solutions according to their taste, odor and mouthfeel assessment. This study well considered and the purpose of this study is understandable. However, I have some questions and suggestions to the authors:

1. I don't understand why they separate study as panelist and participants. This discrimination is confusing.

Response: The word "participant" was replaced by the word "panelist" (page 7), as a panelist is defined as a subject or participant taking part in any sensory evaluation test.

2. In the table S1, what do the 'sample' and the 'replicate' words mean? And the significant differences between these groups must be determined in the legend (e.g. $p < 0.05$ vs. sample?) Thus, this table must be explained more clearly.

Response: A detailed legend was added to table 2 (formerly table S1) in order to clarify the meaning of sample. Sample represents the different bowel cleansing solutions used in the study.

Replication allows panelists to repeat their judgment for the same sample several times, thus it is necessary in descriptive analysis to allow the sensory scientist to check the consistency of the individual panelists.

P values in the legend of table 2 (formerly table S1) are specific for each of the main effects (panelist, sample and replicate) along with their two way interactions.

3. Whose results were described in table 2? Panelists or participants? In this table, the results' owner might be described in the article or the table. This issue must be determined and explained more clearly by the authors.

Response: Table 3 (formerly table 2) summarizes the results of the descriptive analysis which was conducted by 14 trained panelists. This information is stated clearly in the text.

4. Finally, the main result of this study, the message of this study, may be defined more clearly in the discussion part. There isn't any suggestion by the authors about which preparation is palatable and more tolerable by the participants. There may be a suggestion as a conclusion in the discussion part of the article.

Response: The following sentence was added to the last paragraph of the discussion section (page 13). "Sensory evaluation results revealed that SPS (orange flavored) bowel cleansing solution was the most palatable and tolerable by the subjects."

Reviewer 00035678

This is an interesting article that presents novel data on the palatability of various bowel preparations.

1. Within its limits, it is a worthwhile paper, but I think there is a risk of over-extrapolation, given that the study was based on healthy volunteers tasting small samples (understandably!), thereby missing out volume effects, which are a key determinant of tolerability and acceptability. The authors have acknowledged this limitation in the discussion but it is not apparent in the abstract. As many readers unfortunately never get beyond the abstract, I would like to see a few words inserted to make this clear.

Response: the following sentence was added to the abstract at the end of the results section. "While using small sample volumes were necessary to avoid unwanted purgative effects, acceptability ratings do not reflect the true effect of large volumes intake thus limiting the generalization of the results."

2. My second comment relates to a couple of over-sweeping statements in the introduction: 1. "Bowel laxative preparations are generally poorly tolerated, disliked and as a result often serve as an impediment to CRC screening and surveillance" This overstates the case. While nobody would take a bowel prep for enjoyment, most patient surveys in screening programs show that patients would be willing to repeat the exercise, when required. 2. "Despite the above, inadequate bowel preparation occurs surprisingly often and in as many as 25% to 40% of patients [4]" The reference for this statement is a review article that cites two references. The first is also a review, stating that "up to 25%" of colonoscopies have inadequate cleansing. The second is a study that showed that 10% of colonoscopies had cleansing of sufficiently poor quality to impair adenoma detection rate - ie. consistent with the "up to 25%" figure 3. "Clearly, the most important factor remains the adherence with the prescribed laxative regimen (including diet)". I'm not sure there is much evidence to

support this - there are many factors involved in cleansing success. Adherence with the regimen is one of these, although it does not appear to be as important as one might think. Additionally, there is virtually no published research relating to diet - it is not even clear whether dietary restriction is important. There is a clear reason for doing this research but I believe hyperbolic statements like these will tend to irritate the reader and distract from the important point that they are making. I think that the introduction therefore needs to be revisited, toned down and appropriately referenced.

Response: The introduction was revised as suggested.