Review of: "The anti-staphylococcal activity of probiotic-contain gelatin and whey coatings on processed chicken breast"

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Potential competing interests: No potential competing interests to declare.

I was very pleased to be invited to review this work.

In general:

As provided in the references cited by the authors and the literature, many works aimed to use coatings incorporated with *Bifidobacterium* and Lactobacilli species as an innovative approach in food preservation.

In the present study, this approach is used to limit the contamination of cooked-processed chicken meat by*S. aureus*. Did *S. aureus* present a risk in cooked chicken, or are these the toxins of this foodborne pathogen? Authors can describe this point in the introduction part.

Currently, the genus Lactobacillus does not comprise the species L. plantarum. This species was reclassified into a novel genus as *Lactiplantibacillus plantarum* (Zheng et al., 2020) https://doi.org/10.1099/ijsem.0.004107

Revision of bacterial species nomenclature in several parts of the manuscript is necessary.

Did the two strains used, *Bifidobacterium bifidum* 1644 (DSM20456) and *Lactiplantibacillus plantarum* 1058 (ATCC8014), get classified as probiotics? Cite a reference, please.

In Title:

I suggest adding the adjective “cooked” for an exact description of the studied processed chicken. In addition, I propose to introduce the two species *Bifidobacterium bifidum* and *Lactiplantibacillus plantarum* to replace the term probiotic.

In Materials and Methods:

I propose that the authors assess the survival and kinetics of growth of*B. bifidum* and *L. plantarum* strains in whey and gelatine. I suggest examining the production of metabolites by the strains in whey and gelatine, such as aromatic acids and others.

The production of thermoresistant toxin by *S. aureus* in food constitutes a real concern. I propose that the authors demonstrate the effect of the coating on the toxinogenesis of *S. aureus* strains.

Given that *S. aureus* is a mesophilic bacterium, can the low storage temperature (4°C) affect its multiplication? I propose that the authors explore the effect of this external factor.

The enumeration protocol of *S. aureus* is not clear. I suggest that the authors describe the steps of cell enumeration.

In Results and Discussion:

Figure 1 and table 1 present the same results, so I suggest choosing one representation of the results.

How can authors explain the efficiency of the whey coating compared to the gelatine one?

Did the authors evaluate the effect of the four combinations used on the rheological traits of the cooked-processed chicken?

Finally, this investigation can be improved when results of the proposed parts will be added.