

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.

Review of the article

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title of the article: The anti-staphylococcal activity of probiotic-contain gelatin and whey coatings on processed chicken breast

Dear Editor,

thank you for inviting me to review the article titled: The anti-staphylococcal activity of probiotic-contain gelatin and whey coatings on processed chicken breast.

I find the article interesting. Its topic fits well into research on the protective role of food coatings.

The purpose of the research was sufficiently justified in the introduction.

In my opinion, the Materials and methods subsection should be supplemented with additional information, among others those regarding the method of heating chicken meat (heating time, temperature in the center of the meat, etc.).

The obtained results were discussed.

In my opinion, the article needs improvement before publication.

Below are my comments on the article:

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1. *Abstract*: "ofB . bifidum" - Please spell the name of the probiotic bacteria correctly.

2. *subsection 2.2.*: "10 ml" - The unit of volume, which is a liter, is written as 1 L. Therefore, you should write "10 mL".

Please make sure to write this volume unit correctly throughout the entire article!

3. *subsection 2.4.*: "Cooked-processed chicken breast..." - Please explain why the study involved heat-treated chicken

breasts. Shouldn't the coating be applied to raw meat, which spoils more quickly?

4. *subsection 2.4*: “the samples were analyzed in five different conditions, including the following items: 1- cooked, processed chicken breast (uncoated), 2- chicken breast coated with whey protein coat solution containing *L. plantarum* strain, 3- chicken breast coated with whey protein coat solution containing *B. bifidum* strain, 4- chicken breast coated with gelatin coat solution containing *L. plantarum* strain, and 5- chicken breast coated with gelatin coat solution containing *B. bifidum* strain.” - The description of the experimental samples is unclear to me. Were all chicken breast samples heat treated (cooked)?

5. *subsection 2.5*: “ $p < 0.05$ %” - the p-value is not expressed as a percentage

6. *Section 3. Results and discussion*: Table 1 and Figure 1 show the same data! This is repetition of information. Please choose whether to include the data regarding the number of *S. aureus* bacteria in chicken meat samples in a table or graphically in a figure!

7. *Section 3. Results and discussion*: “However, comparing treatments and controls shows that both probiotic-content coatings significantly reduced *S. aureus* growth.” – Please note, that this statement is true, but only for the sample storage time until day 15. In my opinion it needs to be reworded.

8. *Section 4. Conclusions*: “In general, the findings of the present study showed the effective inhibition of *S. aureus* during the storage period in coated chicken meat with edible coatings such as probiotics-containing whey protein concentrate and gelatin compared to uncoated samples.” - Please note, that this statement is true, but only for the samples W1, G1 and G2, which were stored not longer than 15 days! In my opinion it needs to be reworded.

I agree with the authors' statement that the results of this research are promising, but the effectiveness of the tested coatings against *S. aureus* has been demonstrated for cooked chicken meat only in the short term!

Best regards,

Reviewer