

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.

This study faces several limitations that impact the reliability and applicability of its findings. Notably, there is a lack of control over critical variables, including storage conditions, such as temperature and humidity. These uncontrolled factors could potentially introduce bias and influence the observed antimicrobial activity of the coatings, particularly concerning the growth rate of *Staphylococcus aureus*. The study overlooks essential safety considerations associated with using probiotics in edible coatings. While proposing probiotics as a hopeful approach, the absence of information on potential risks, allergenicity, and regulatory considerations raises concerns about the practicality and safety of implementing such coatings in food products.

Consider restructuring the abstract to follow a more logical sequence, starting with the purpose and methods, then results (concrete) and then conclusions. Please state the strains (ATCC....) precisely.

Check the formatting, especially the punctuation and grammar, to ensure the paper reads smoothly.

Please provide details regarding the rationale for choosing *L. plantarum* and *B. bifidum* to enhance the reader's understanding.

Consider emphasizing more explicitly how the findings could contribute to addressing the challenges of microbial and chemical spoilage in chicken meat.

"After covering the entire surface of the chicken breast, excess liquid was washed (30 s) from the sample surface." What was used for washing the excess liquid? Did the coating remain? How did you checked?

Please include data regarding the coating solution pH and the product's surface.

The authors state "Probiotic strains under study (equal to 10^9 CFU/ml) were separately added to the coat solutions" and then "The coated chicken breast samples were deliberately contaminated with *S. aureus* (10^5 CFU/g) and then, packaged in vacuum conditions" Please add data regarding the technique that allowed you to assess that the probiotics were equal to 10^9 CFU/ml and *S. aureus* - 10^5 CFU/g.

In the section 2.4. the samples are numbered 1, 2, 3, 4, 5 and in Table 1 is different. Please keep consistency through the text.

Usually, the CFU data is converted in log. Why did the authors choose not to do so?

Where possible, consider incorporating quantitative statements or statistics to support claims, such as the effectiveness of natural antimicrobials in increasing shelf-life.

The conclusion could benefit from a brief discussion of the broader context of the study and its limitations. Addressing the potential challenges or constraints of using probiotics in edible coatings would add nuance to the findings. Anticipate possible criticisms or limitations of the study and briefly address them in the conclusion. This demonstrates a thoughtful consideration of the study's scope and potential areas for improvement.

The paper can not be accepted for publication in this format.