Review Form 1.7

Journal Name:	**Asian Food Science Journal**
Manuscript Number:	**Ms_AFSJ_104526**
Title of the Manuscript:	**Changes in the Quality of Culled Layer Chicken Meat at Different Ultrasonic Time Levels**
Type of the Article	**Original Research Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. This paper examines the effect of ultrasonic exposure time on the meat quality of culled laying hens. The manuscript accurately and reliably discloses the key concepts of this study. The material for the study, meat from culled laying hens, is chosen correctly and authorises the research in the field of meat quality determination. Given the increasing demand for high quality meat, the topic of this study is important. 2. Approach to the change of meat quality indicators of culled laying hens at different levels of ultrasound exposure time. 3. Yes 4. Yes 5. Enough, but there are more pressing: Caraveo-Suarez, R. O., Garcia-Galicia, I. A., Santellano-Estrada, E., Carrillo-Lopez, L. M., Huerta-Jimenez, M., Alarcon-Rojo, A. D., et al. (2022). Integrated multivariate analysis as a tool to evaluate effects of ultrasound on beef quality. *J. Food* Process *Eng*. e14112. doi: 10.1111/jfpe.14112 Dong, Z. Y., Li, M. Y., Tian, G., Zhang, T. H., Ren, H., Quek, S. Y., et al. (2019). Effects of ultrasonic pretreatment on the structure and functionality of chicken bone protein prepared by enzymatic method. *Food Chem.* 299	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	complies with the requirements	
Optional/General comments	This paper examines the effect of ultrasonic exposure time on the meat quality of culled laying hens. The manuscript accurately and reliably discloses the key concepts of this study. The material for the study, meat from culled laying hens, is chosen correctly and authorises the research in the field of meat quality determination. Given the increasing demand for high quality meat, the topic of this study is important. However, there are a number of problems with the correct justification of the research findings and the relevance of the selected literature. More specific comments on the sections are given below: Title This study did not reasonably identify "change in meat quality of culled laying hens", but presents an approach to change in meat quality parameters of culled laying hens at different levels of ultrasonic exposure time. Abstract The conclusion that ultrasonic treatment can have a significant effect on meat quality is reasonable given the data presented in the article. The authors substantiated this fact by physical destruction at the cellular level. Introduction More information on the quality characteristics of meat that consumers emphasise in their choice would be useful here. A little more detail on those indicators that have undergone changes during the study would have suggested the significance of this work. This can be returned to in the discussion, as a direct effect of acoustic cavitation on 'cooking loss' and 'tenderness' has been established. The "tenderness" index is one of the most important indexes affecting the edibility of	

	meat products. Therefore, the significant effect of ultrasonic treatment on meat quality is reasonable. Methods Data analysis: As described, the results were analysed by ANOVA analysis of variance. But it is not specifically stated how the mean values and standard deviations were determined from the data. What tests were used to assess the normal distribution of data for normality to examine the effect of independent variables on dependent factors. Please describe. Results The authors point out that cooking losses are presumably related to the duration and power of the ultrasound. However, it is worth mentioning the "sponge effect", which is responsible for the enhancement of internal mass transfer by ultrasound. Due to the activity of water, microchannels are formed which improve mass transfer. This explains why the enhancement of the hydration process is higher after a certain processing time than in the early stage. The authors consider meat tenderness, in terms of ultrasonic treatment, as an effective way to modify quality parameters. However, it is worth adding that during ultrasonic processing, the meat is forced to vibrate. This indicator is perhaps the most important one here. The interaction forces between meat proteins are modified by the vibrational waves, thus increasing the tenderness of the meat. Ultrasound has a mechanical effect, a thermal effect and a cavitation effect. The cavitation effect plays a primary role in the softening process of meat products. It is worth elaborating on this. Conclusions The authors do not give specifics on the results of their study. It is worth saying that ultrasonic treatment can effectively improve meat quality by mechanically disrupting the myofibrillar protein structure, resulting in faster proteolysis. Hence, ultrasonic treatment shows the potential of an effective approach to modify meat quality parameters.	

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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