

Review Form 3

Journal Name:	European Journal of Nutrition & Food Safety
Manuscript Number:	Ms_EJNFS_130428
Title of the Manuscript:	Assessment of the microbiological quality of beef marketed in commune I of Bamako district
Type of the Article	

PART 1: Comments

	Reviewer’s comment	Author’s Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.		OK
Is the title of the article suitable? (If not please suggest an alternative title)		OK
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		OK
Is the manuscript scientifically, correct? Please write here.		OK
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		OK

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Is the language/English quality of the article suitable for scholarly communications?		OK
Optional/General comments	<p>1) In the introduction, the authors mention the risk posed by the presence of pathogenic microorganisms, which are responsible for meat spoilage. However, there are also spoilage microorganisms capable of creating a repugnant appearance in contaminated food, yet they do not produce toxins and/or pose risks documented in scientific literature, thereby compromising product quality. I also suggest updating the references used (Daube, 2007; Barro et al., 2005).</p> <p>Contamination of meat by pathogenic microorganisms is a major issue for public health and the quality of food products. Indeed, these microorganisms can cause serious illnesses in consumers while degrading the organoleptic properties of meat. In addition to pathogens, some spoilage microorganisms, although harmless to health, compromise the quality of products through visible changes, such as a repulsive appearance or unpleasant odors. These spoilage phenomena are well documented in recent literature (Ellies-Oury, 2016; Bellés et al., 2017; Hamaidia, 2019; Toldrá and Reig, 2021).</p> <p>2) At the end of the Introduction, the authors specify the microorganisms to be investigated (mesophilic aerobic flora (TMAF), total and fecal coliforms, Escherichia coli, Salmonella/Shigella, Staphylococcus aureus, as well as yeasts and molds). Why were these microorganisms chosen? Is there any national regulation regarding microbiological limits for the products in question? If no local regulation was followed, was it based on any international standard? Additionally, it is known that some of these microorganisms are significant to public health, as they can produce toxins that cause serious health issues. I suggest elaborating on this, particularly regarding <i>S. aureus</i>, <i>E. coli</i>, and <i>Salmonella</i>.</p> <p>This study aims to assess the microbiological quality of meat by analyzing the presence of different microbial groups, including total mesophilic aerobic flora (TMAF), total and fecal coliforms, Escherichia coli, Salmonella/Shigella, Staphylococcus aureus, as well as yeasts and molds. These microorganisms were chosen for their relevance as indicators of the quality and safety of meat products. The standards chosen for this study are based on international standards, including the Codex Alimentarius and the recommendations of the World Health Organization (WHO), in order to ensure comparison with global data.</p> <p>3) In the Materials and Methods section, I recommend better describing what is meant by "MARKETS," as the characteristics of the locations where these products are stored may influence their microbiological quality.</p> <p>The "MARKETS" mentioned in this study correspond to different types of outlets, including traditional markets, supermarkets and street stalls. Each site has distinct characteristics in terms of storage conditions, hygiene and temperature control. These factors directly influence the microbial load of the products and were taken into account during sample collection.</p> <p>4) In the Materials and Methods section, under the analysis of Total Mesophilic Aerobic Flora, the culture medium used was not specified, unlike in the other analyses. To ensure standardization of the work and enable reproducibility of the study, this should be mentioned.</p> <p>For the analysis of total mesophilic aerobic flora (TMAF), Plate Count Agar culture medium was used, as recommended by ISO 4833-1:2013 standards. This precision is essential to ensure the reproducibility of the results.</p> <p>5) In the Discussion section, could the high concentrations of microorganisms found be related to any specific characteristics observed at the collection sites?</p> <p>The high concentrations of microorganisms observed in some samples can be directly attributed to the</p>	Corrected

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	<p>precarious conditions of the collection sites. For example, street stalls exposed to high ambient temperatures and poor hygiene promote microbial proliferation. These observations corroborate the work of Sofos and Geornaras (2010), who showed the impact of storage conditions on the quality of meat products.</p> <p>6) The presence of high concentrations of <i>S. aureus</i> and <i>E. coli</i> observed in the study is a significant concern, as it represents a serious public health risk due to various virulence factors produced by these microorganisms. I suggest further discussing this issue.</p> <p>The presence of <i>Staphylococcus aureus</i> and <i>Escherichia coli</i> in significantly high concentrations in the samples analyzed represents a major health risk. <i>S. aureus</i> is known to produce enterotoxins responsible for acute food poisoning, while some strains of <i>E. coli</i> produce shiga toxins that can cause serious complications, such as hemolytic uremic syndrome (WHO, 2022). These results highlight the need to improve hygiene practices throughout the production and distribution chain to minimize these risks.</p> <p>I could not identify the source of the 8% of non-compliant samples for <i>Salmonella</i> spp. in the results tables, as there is no mention of <i>Salmonella</i> in the results. Please discuss why these 8% require closer monitoring.</p>	
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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)	I agreed with the reviewers' comment and corrections are highlighted in the corrected document