# Article information:

The microbiology of beef from carcass chilling through primal storage to retail steaks - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S2665927121000150?via%3Dihub=>

# Article summary:

1. Alternative time-temperature carcass chilling combinations did not result in lower microbial counts due to cross-contamination during boning and cutting.

2. Longer maturation periods did not enhance beef sensory properties.

3. Physicochemical factors such as temperature, pH, and water activity can alter bacterial growth levels and affect product shelf-life and quality.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "The microbiology of beef from carcass chilling through primal storage to retail steaks" provides an overview of the microbial growth and physicochemical changes that occur in beef throughout the production and distribution process. The study investigates the impact of different time-temperature carcass chilling combinations on microbial counts, as well as the effect of primal maturation periods on sensory properties.

One potential bias in this article is that it only focuses on the impact of alternative time-temperature carcass chilling combinations on microbial counts, without considering other factors that may affect meat spoilage, such as hygiene practices during processing and transportation. Additionally, the study only investigates two different maturation periods (2 versus 5 weeks), which may not be representative of all possible maturation periods used in the industry.

Another potential bias is that the study only considers certain types of bacteria responsible for meat spoilage, such as Enterobacteriaceae, lactic acid bacteria, Pseudomonas spp., and Brochothrix thermosphacta. Other types of bacteria or fungi that may also contribute to meat spoilage are not mentioned.

The article does not provide evidence for some claims made, such as the statement that longer maturation does not enhance beef sensory properties. The study only investigates two different maturation periods and does not compare them to a control group with no maturation period.

There are also missing points of consideration in this article. For example, it does not discuss the potential risks associated with consuming spoiled meat or how to prevent meat spoilage during storage and transportation. Additionally, there is no discussion about how different packaging methods may affect microbial growth and shelf life.

Overall, while this article provides some useful insights into the microbiology of beef throughout its production and distribution process, it has some limitations in terms of its scope and potential biases. Further research is needed to fully understand all factors affecting meat spoilage and shelf life.

# Topics for further research:

* Risks of consuming spoiled meat and prevention methods
* Other types of bacteria and fungi responsible for meat spoilage
* Hygiene practices during meat processing and transportation
* Effects of different packaging methods on microbial growth and shelf life
* Comparison of different maturation periods on beef sensory properties
* Factors affecting meat spoilage and shelf life beyond time-temperature carcass chilling combinations.

# Report location:

<https://www.fullpicture.app/item/ee45f969c5e35c6cb0a27665ea33f664>