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Evaluation of Microbial Contaminants in Commercial Pet Food from the Romanian Market

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Abstract: This study aimed to evaluate the presence of microbial contaminants in commercial pet food marketed in Romania.

• Introduction

Examination of the microbiological characteristics of wet pet food is imperative to protect the health and welfare of pets, their owners, and the environment.

To date, no study has investigated the microbiological quality of pet food in Romania. This study assessed the microbiological quality of dry pet food sold in hypermarkets (n = 50).

• Material and method

Samples representing various brands of treats available on the Romanian market were subjected to bacteriological isolation and identification using standard culture.



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• Results and discussions

The parameters evaluated included the total number of mesophilic aerobic bacteria (MAB), the total number of yeasts and molds, *Enterobacteriaceae*, *Salmonella*, *Listeria monocytogenes*, and species from the *Clostridium* genus.

Of the 50 samples, 11 exceeded the acceptable limit of MAB, showing significant variations depending on the producers and ingredients.

The microbiological evaluation of wet pet food samples has revealed contamination by specific bacterial species, notably *Micrococcus luteus*, *Pseudomonas fluorescens*, *Pseudomonas veronii*, *Pseudomonas rhodesiae*, and *Pseudomonas synxantha*.

The presence of these microorganisms is indicative of potential lapses in manufacturing practices, post-processing handling, or storage conditions

• Conclusions

Presence of opportunistic bacterial species indicates deficiencies in hygiene practices during production and in storage conditions.

Improved regulation of microbiological control for pet food products is necessary.

The results support the need for better consumer education on proper handling and storage of pet food

This study opens new directions for research in the field of veterinary food safety in Romania.

These findings emphasize the importance of regular microbiological monitoring, good manufacturing practices (GMP), and strict quality control in the pet food industry to ensure the safety of companion animals and to protect public health.