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Microbiological Quality and Palatability Assessment of Insect-Based Food Rewards for Pet Carnivores

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Abstract: In recent years, the pet food industry has increasingly turned to insect-based ingredients as sustainable and nutritionally valuable alternatives to traditional protein sources. Currently, a wide range of insect-based foods and treats for pets is available on the market. However, several questions remain regarding their health implications, safety profile, and acceptance by companion animals.

• Introduction

Although some studies have examined the nutritional properties of these ingredients mainly in dogs limited research has focused on their microbiological safety and palatability in other carnivorous pets. This study aimed to characterize the microbiological quality of insect-based food rewards marketed for pet carnivores and to evaluate their palatability in domestic cats.

• Results and discussions

The identified pathogenic microorganisms included *Salmonella spp.*, *Escherichia coli*, and *Clostridium perfringens*, as well as mycotoxin-producing fungi. The palatability test conducted in cats demonstrated a high level of acceptance for the insect-based food rewards, suggesting that such products are well tolerated and potentially suitable for inclusion in feline diets. The findings highlight the need for rigorous microbiological monitoring and standardized production protocols to ensure both the safety and sensory acceptability of insect-based pet foods.

• Material and method

Samples were analyzed to detect potential contamination associated with inadequate hygiene during insect farming, processing, and storage.

• Conclusions

These results support the growing potential of insects as sustainable, safe, and palatable ingredients for the pet food industry.

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