Accepted Manuscript

Use of encapsulated natural compounds as antimicrobial additives in food packaging: A brief review

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PII: S0924-2244(17)30329-1

DOI: 10.1016/j.tifs.2018.09.003

Reference: TIFS 2309

To appear in: *Trends in Food Science & Technology*

Received Date: 29 May 2017

Revised Date: 28 August 2018

Accepted Date: 2 September 2018

Please cite this article as: Zanetti, M., Carniel, T.K., DalcaCnton, F., dos Anjos, R.S., Gracher Riella, H., de Araújo, P.H.H., de Oliveira, D., Antônio Fiori, M., Use of encapsulated natural compounds as antimicrobial additives in food packaging: A brief review, *Trends in Food Science & Technology* (2018), doi: 10.1016/j.tifs.2018.09.003.

Abstract

Background

Synthetic chemical preservatives in food can be harmful to human health. These problems have increasingly attracted concern and interest from researchers, which has led to the study and application of non-toxic **essential oils** with preservative ability in food products and **food packaging**. A great challenge in this sense is their facile degradation during processing of the food and manufacturing processes during food packing.

Scope and Approach

Encapsulation is an interesting technique to improve the physical-chemical and microbiological stability of these essential oils, as well as to achieve controlled release. This review provides a detailed overview of encapsulation in the food industry, focusing on the application of procedures to encapsulate **antimicrobial** essential oils.

Key Findings and Conclusions

This review focuses on recent studies related to nanotechnology and the nano and microencapsulation of essential oils. This study provides valuable insight that may be useful for identifying trends in the commercialization of nanotechnological products or for identifying new research areas. The results published to date confirm that the encapsulation promotes the protection of active compounds, enabling industrial applications of **active packaging**.