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MATRICARIA RECUTITA L. (CHAMOMILE) AS NATURAL PRESERVER INCORPORATED IN COTTAGE CHEESE

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Introduction

Novel functional foods with health promoting natural ingredients instead of synthetic additives have been intensively developed and commercialized by food industry [1].

Objectives, Material and Methods

In the present work, it was demonstrated the antioxidant (free radicals scavenging activity, reducing power and lipid peroxidation inhibition) and antimicrobial (against bacteria such as *Staphylococcus aureus*, *Bacillus cereus* and *Salmonella typhimurium*, and fungi such as *Penicillium funiculosum*, *Aspergillus versicolor* and *Trichoderma viride*) potential of *Matricaria recutita* L. (chamomile) extracts obtained by decoction.

Results

Di-caffeoyl-2,7-anhydro-3-deoxy-2-octulopyranosonic acid and luteolin-O-glucuronide were identified as the main phenolic compounds present in the extract.

The extract was incorporated (at EC25 value=0.165 mg/mL, previously determined by DPPH assay) to a cottage cheese (prepared by Queijos Casa Matias Lda.) with the aim of increasing its shelf life.

Conclusions

The results showed that the use of this natural extract did not alter significantly the nutritional characteristics of the cottage cheese, but improved its antioxidant potential. After 14 days of storage, only the control samples prepared without extract addition showed signs of degradation, which demonstrates the preservation potential of chamomile.

References:

[1] Carocho M. et al. *Comp. Rev. Food Sci. Food Safety* 2014. 13, 377-399.

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