CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

journalhomepage:**http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

ANTIOXIDANT AND ANTIMICROBIAL EFFECT OF SUMAC (*RHUS CORIARIA L.*) POWDER ON *E.COLI* AND *PENICILIIM NOTATUM* IN PREBIOTICS LOW FAT YOGHURT

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https://doi.org/10.34302/crpjfst/2020.12.1.4

Article history:
Received:
10 April 2019
Accepted:
2 January 2020

Keywords:
Antimicrobial activity;
Antioxidant activity;
Rhus coriaria L.;
Prebiotic;
Low fat yoghurt.

ABSTRACT

Yoghurt is one of the popular food diets with refreshing tasteand health benefits. The purpose of this study identify sumac powder with antioxidant and antimicrobial efficacy for controlling some food borne pathogens such as *Escherichia coli* and *Penicillium notatum.*The antioxidant and antimicrobial effects of sumac *(Rhus coriaria L.)* powder (0%, 1%, 1.5%and 5%) in prebiotic (Resistant starch type 2) low fat yoghurt, were performed respectively to the DPPH and surface cultivation during storage at 4C°.The data were expressed as mean ± SD and were tested by one-way ANOVA at α=0.05. Titratable acidity of yoghurt containing sumac powder increased whereas the pH decreased with increasing amounts of added sumac powder. Also, the antioxidant activity of yoghurt samples were significantly increased with the increasing of sumac powder from 0 to 5% ($p<0.05$). Different concentration of sumac powder reduced the number of *Escherichia coli* and *Penicillium notatum* in prebiotic low fat yoghurt during 28 days of cold storage. Addition of 5% sumac resulted the best attributes in prebiotic low fat yoghurt.