



УНИВЕРЗИТЕТ У НОВОМ САДУ
UNIVERSITY OF NOVI SAD

TOP ACHIEVEMENTS 2021

“MIHAJLO PUPIN” TECHNICAL FACULTY

"Rosemary essential oils as a promising source of bioactive compounds: chemical composition, thermal properties, biological activity, and gastronomical perspectives"

Micić D., Đurović S., Riabov P., Tomić A., Šovljanski O.a, Filip S., Tosti T., Dojčinović B., Božović R., Jovanović D., Blagojević S.: Rosemary essential oils as a promising source of bioactive compounds: chemical composition, thermal properties, biological activity, and gastronomical perspectives. *Foods*, 10 (11), 2734, 2021

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Rosemary (*Rosmarinus officinalis* L.) is a plant worldwide cultivated mainly for essential oils, extracts, and as a spice. Up-to-date results showed diversity in composition of the essential oils, which may influence their quality, biological activity, and thermal properties. Therefore, the aim of this study was to investigate the chemical composition, antimicrobial activity, and thermal properties of the rosemary essential oils originating from Serbia and Russia. Additionally, oils were added to the sunflower oils in order to investigate possible antioxidant activity during the frying. Investigation of the chemical profile marked α -pinene, eucalyptol, and camphor as the most abundant compounds in both oils. However, overall composition influenced in such manner that Russian oil showed significantly higher antimicrobial activity, while Serbian oil proved to be better antioxidant agent in case of frying of sunflower oil. This would significantly influence possible application of the oils, which could be used as an antioxidant agent for extension of the food shelf life, or antimicrobial agent for protection against different microbial strains.

