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# ABSTRACTS APSTRAKTI

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## Chemical composition and prebiotic effect of the fruit of *Prunus spinosa* L., Rosaceae

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The blackthorn is widespread across temperate Europe and also occurs in the Near East and Africa. The fruit is traditionally used in the treatment of digestive, respiratory and kidney disorders. The aim of the study was to investigate composition and the antibacterial activity of methanol extract of blackthorn fruit, and potential prebiotic effect on selected probiotic microorganisms. The blackthorn fruit is a rich source of vitamin C (5.3 mg/100 g, determined by titration) as well as Ca, Mg and P (106.7; 42.0 and 43.2 mg/100 g, respectively, determined by ICP-OES). The total phenolic content was 1,235 mg gallic acid/100 g (FC method). Hydroxycinnamic acid derivatives (caffeoylquinic and feruloylquinic acids), flavonoids (glycosides of quercetin, methylquercetin and kaempferol) and anthocyanins (glycosides of cyanidin and peonidin) were tentatively identified by LC-DAD-ESI-MS. The antimicrobial activity on eight laboratory control strains of bacteria was not pronounced (MIC 1.25->5 mg/ml). On the other hand the extract (0.3-5.0 mg/ml) exhibited significant prebiotic effect on investigated probiotic strains of *Lactobacillus* spp., *Saccharomyces boulardii* and their mixtures. The stimulation of growth was in the range 4.0-52.8% in concentration dependent manner. In conclusion, significant prebiotic activity of blackthorn fruit confers new insight in blackthorn health benefits.

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