

# Sadržaj antioksidansa i ukupnih fenola u plodovima pasjeg trna (*Hippophae rhamnoides* L.) genotipova Sjeveroistočne Anatolije

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## Sažetak

U sjeveroistočnom dijelu Turske samoniklo voće dosta je zastupljeno, te ga lokalno stanovništvo sakuplja i konzumira. U ovoj regiji površine za proizvodnju voća su ograničene zbog nepovoljnih geografskih i ekoloških uvjeta. Dud, pasji trn, kupine, maline, bazga i drijen nalaze se samonikli u prirodi u sjeveroistočnom dijelu Turske.

U ovom radu prikupljeni su plodovi sedam genotipova pasjeg trna, te su analizirani na sadržaj totalnih fenola, vitamin C, totalne antocijanini i antioksidativni kapacitet.

Pozitivan učinak plodova pasjeg trna na zdravlje ljudi opsežno je istraživano i obrazloženo u brojnim radovima, a gdje se sugerira velik potencijal plodova pasjeg trna u održavanju i poboljšanju ljudskog zdravlja.

Sadržaj totalnih fenola mjereno je metodom Folin-Ciocalteu varirao je ovisno o genotipu od 213 do 262 mg GAE/100 g svježe tvari. Sadržaj vitamina C i antocijanina bio je 28-85 mg/100 g, odnosno 3-21 mg/l. Analizom antioksidativnog kapaciteta (metodama DPPH i  $\beta$ -carotene) utvrđeno je da su svi uzorci imali veći sadržaj vitamina C (prosječno 94.23% u  $\beta$ -carotene i 31.23 u DPPH) nego BHA za obje metode. Antioksidativna aktivnost u velikoj je korelaciji sa sadržajem totalnih fenola u uzorcima.

Ključne riječi: samoniklo voće, antioksidativni kapacitet, sadržaj ukupnih fenola, vitamin C

sa2011\_a0906

# Antioxidant and total phenolic content of sea buckthorn (*Hippophae rhamnoides* L.) genotypes from Northeast Anatolia

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## Abstract

In Northeast part in Turkey, wild grown fruits are abundant and widely collected and consumed by rural peoples. In this region, the area for fruit cultivation is very limited because of the hard geographical and ecological conditions of the region. Mulberry, sea buckthorn, blackberry, raspberry, elderberry and cornelian cherry are grown as wild in Northeast part of Turkey. In this study the fruits from seven sea buckthorn genotypes were sampled and analyzed for their total phenolic content, vitamin C, total anthocyanins and antioxidant capacity. Beneficial effects of the sea buckthorn fruits on human health have been extensively investigated and substantiated by studies, suggesting a great potential of the berries for maintaining and promoting human health. Total phenolic content measured by the Folin-Ciocalteu method varied from 213 to 262 mg GAE/100g FW) among genotypes. Vitamin C and total anthocyanin content were found between 28-85 mg/100 g and 3-21 mg/L. Antioxidant capacity analyses (in DPPH and  $\beta$ -carotene method) showed that all samples had higher AA (average 94.23% in  $\beta$ -Carotene and 31.23% in DPPH) than BHA in both methods. Antioxidant activity highly correlated with total phenolic content in samples.

Key words: wild grown fruits, antioxidant capacity, total phenolic content, vitamin C

sa2011\_a0906