

Abstract

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Fagopyrum sp. (*Polygonaceae*), especially *Fagopyrum esculentum* Moench (common buckwheat) and *Fagopyrum tataricum* Gaertn (tartary buckwheat), which are most frequently used, contain some substances affecting living organism. They have an anticarcinogenic and hypotensive effect. They reduce fragility of blood vessels and also affect the progress of atherosclerosis. For their nutritional value they are used as food. Most of these properties are result of an antioxidant activity of a group of substances, flavonoids.

Antioxidant activity of *Fagopyri herba* was evaluated by two methods using the free radical 2,2,-diphenyl-1-picrylhydrazyl (DPPH) and superoxide.

By the DPPH assay, the methanol extract and the lyophilized water extract were evaluated. Their IC₅₀ were compared with standards and the antioxidant activity decreased in the order: hyperosid (IC₅₀ = 0,004 mg/ml) ≥ rutin (IC₅₀ = 0,005 mg/ml) › methanol extract (IC₅₀ = 0,105 mg/ml) › lyophilized water extract (IC₅₀ = 0,2945 mg/ml).

By the superoxide assay the lyophilized water extract was evaluated. When compared with standards, antioxidant activity decreased in this order: rutin (IC₅₀ = 0,0242 mg/ml) › ascorbic acid (IC₅₀ = 0,0692 mg/ml) › trolox (IC₅₀ = 0,1192 mg/ml) › lyophilized water extract (IC₅₀ = 0,3169 mg/ml).