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Czech J. Food Sci.

**Brindzová L., Čertík
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Antioxidant activity, β -glucan and lipid contents of oat varieties

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The antioxidant activity, total phenolic and β -glucans contents, and the fatty acid profile of total lipids in covered (black and yellow) and naked oats were studied.

Oats with black hulls showed a significantly higher antioxidant activity in 2,2'-azino-di-[3-ethylbenzthiazoline sulphonate] (ABTS) and 2,2-diphenyl-1-picrylhydrazyl (DPPH) based tests in comparison to the grains with yellow hulls and those of the naked varieties. Radical scavenging activity of oats determined by electron paramagnetic resonance (EPR)/spin-trapping test did not depend on the colour of the grain hulls, but the naked grains showed a lower ability in scavenging reactive radicals. A positive correlation between the content of β -glucans in covered oat grains and the

amount of reactive radicals scavenged was observed. Total phenolic content in the black oats was significantly higher than in the yellow and naked oat varieties. However, no significant differences in the fatty acid profile between the naked and covered oats were found, and the common fatty acids being linoleic, oleic, and palmitic acids.

Keywords:

oat; antioxidants; phenolic compounds; β -glucans; fatty acids; EPR

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