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Czech J. Food Sci.

**Matthaus B., Özcan
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Fatty acids, tocopherol, and sterol contents of some *Nigella* species seed oil

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The lipid compositions of the seed oils of some *Nigella* species were investigated. The total oil content of the seeds ranged from 28.0 to 36.4%. GC-MS fatty acid compositional analysis of the *Nigella* seed oils revealed the content of linoleic acid to be the highest (40.3– 58.9%). Other prominent fatty acids were as follows: oleic (18.7– 28.1%), palmitic (10.1– 12.5%), 22:1 D11 (3.2– 3.8%) and stearic (2.6– 3.1%) acids. All the *Nigella* seed oils analysed exhibited differences in their tocopherol contents and the differences were estimated. The oils extracted from the seeds contained between 1.70– 4.12 mg/100 g α -T, 0.97– 4.51 mg/100 g γ -T, and 4.90– 17.91 mg/100 g β -T3. The total tocopherol content in seeds varied

between 9.15 mg/100 g to 24.65 mg/100 g. The compositions of the sterol fractions were determined by gas liquid chromatography. The total amounts of sterols ranged between 1993.07 mg/kg to 2182.17 mg/kg. The main component was β -sitosterol (48.35– 51.92%), followed by 5-avenasterol, campesterol, and stigmasterol.

Keywords:

black cumin; seed oil; *Nigella* spp.; fatty acids; tocopherol; sterols

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