

## SL-15

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### **Main phenolic constituents of *Mentha longifolia* (L.) L. samples from Northern Hungary – extractability, variability and contribution to some *in vitro* antioxidant properties of the plant**

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*Mentha longifolia* (L.) is a less studied wild-growing species. The aim of experiments is to define effective extraction of its polyphenolic antioxidants, and to observe the variability of them. The present work is the first phytochemical screening of the plant in Europe. Thirty-six accessions were sampled in flowering state. Soxhlet and ultrasonic (US) extraction, both with methanol (MeOH) and ethanol-water 7:3 (WA) were applied. HPLC-DAD measurements were performed on extracts. Dominant phenolics were rosmarinic acid (7043-38667 mg/kg drug, lower than determined in Israeli populations of the plant [1], similar to peppermint [2]) and hesperidin (from 1985 mg/kg to 20000< mg/kg), accompanied by diosmin (398.3-7987 mg/kg, similar to peppermint[2]), and cynaroside (318-2553 mg/kg). For cynaroside and rosmarinic acid, WA methods were more efficient than MeOH extractions. In case of the other two flavonoids, MeOH extraction were the more efficient compared with the WA and there was no significant difference between US and MeOH Soxhlet. Rosmarinic acid was in significant, medium correlation with the DPPH and FRAP values of extracts (R=0.49-0.55 depending on extract type; p<0.01 in all cases). Cynaroside did not show significant correlation with these activities contrary of its strong antioxidant capacity. Other major constituents were observed in all of the chromatograms at ca. t<sub>R</sub>=13.7' and t<sub>R</sub>=19.7'. Their identification needs further examinations.

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#### **References**

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