Determination of Antioxidant Activity and Related Compounds of Various Infusions from *Ligustrum delavayanum* Hariot.

Z. KONTŠEKOVÁ¹, P. MUČAJI¹, M. NAGY¹, E. ŠVAJDLENKA²

¹Department of Pharmacognosy and Botany, Faculty of Pharmacy, Comenius University, Odbojárov 10, 832 32 Bratislava, Slovak Republic

² Department of Natural Drugs, Faculty of Pharmacy, Veterinary and Pharmaceutical University, Palackého 1/3, 612 42 Brno, Czech Republic

E-mail: kontsekova@fpharm.uniba.sk (Z. Kontšeková)

Sci Pharm. 2009; 77: 249

doi:10.3797/scipharm.oephg.21.PO-50

Antioxidant activity [1] plays an important role in some biological effects of genus *Ligustrum* (on the cardiovascular system [2], immunomodulant [3] activity *etc.*). This activity can be caused by a wide range of constituents, mostly phenolic and terpenoid compounds.

In this study, three types of infusions of leaves and twigs of *Ligustrum delavayanum* were made in order to find out the best way how to prepare the most effective infusion: A - drug mixed with hot water and steeped for 15 min at laboratory temperature; B - drug mixed with hot water, steeped for 15 min at laboratory temperature and then 5 min in a boiling water bath; C - drug mixed with hot water, steeped for 5 min in a boiling water bath and 45 min at laboratory temperature.

Different groups of phenolics were determined in these infusions. Leaves contained higher amounts of these compounds than twigs with the majority of phenolic glycosides and hydroxycinnamic derivatives in both drugs. There were small differences in amounts of determined groups of constituents between infusions types. However, HPLC chromatograms showed remarkable differences between qualitative composition of infusion A and other two infusions. These results were compared with the antioxidant activity (FRAP assay), and the scavenging activity (DPPH assay). Leaves were more effective in both assays. Infusions B and C were about equally active and more effective than infusion A for twings and leaves, respectively.

Acknowledgement: This work was supported by grants No. 1/4289/07 and 2/0083/08.

- [1] Nagy M, Spilková J, Vrchovská V, Kontšeková Z, Šeršeň F, Mučaji P, Grančai D. Free radical scavenging activity of different extracts and some constituents from the leaves of Ligustrum vulgare and L. delavayanum. Fitoterapia. 2006; 77: 395–397. doi:10.1016/j.fitote.2006.04.010
- [2] Stankovičová T, Frýdl M, Kubicová M, Baróniková S, Nagy M, Grančai D, Švec P. The effect of Ligustrum delavayanum on isolated perfused rat heart. Exp Clin Cardiol. 2001; 6: 132–136.
- [3] Jantová S, Nagy M, Ružeková Ľ, Grančai D. Cytotoxic effects of plant extracts from the families Fabaceae, Oleaceae, Philadelphaceae, Rosaceae and Staphyleaceae. Phytother Res. 2001; 15: 22– 25. doi:10.1002/1099-1573(200102)15:1<22::AID-PTR774>3.0.CO;2-A