



Agricultural Journals

Czech Journal of

FOOD SCIENCES

[home](#) [page](#) [about us](#) [contact](#)

us

Table of Contents

IN PRESS

CJFS 2014

CJFS 2013

CJFS 2012

CJFS 2011

CJFS 2010

CJFS 2009

CJFS 2008

CJFS 2007

CJFS 2006

CJFS 2005

CJFS 2004

CJFS 2003

CJFS 2002

CJFS 2001

CJFS Home

Editorial Board

For Authors

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

For Reviewers

- **Guide for Reviewers**
- **Reviewers Login**

Subscription

Czech J. Food Sci.

**K. Cejpek, I.
Maloušková, M.**

Kolář, J. Velišek: Antioxidant Activity in Variously Prepared Elderberry Foods and Supplements

Czech J. Food Sci., 27 (2009): S45-S48

Antioxidant capacity of foods and food supplements based on berries and flowers of medicinal plant elderberry (*Sambucus nigra* L.) was assessed. Reducing properties of the samples and extracts were evaluated using amperometric detection at working electrode potential – 0.8 V after HPLC separation. Moreover, antiradical activity of selected samples was determined by the means of spectrophotometric DPPH radical scavenging method. Electrochemical activity (EA) of fresh juice pressed from elder fruits amounted to 0.71 g AAE/l with anthocyanins as minor contributors (10.2%). Catechins and phenolic acids were the major active groups. During production of elder berry spread, even more than 90% of the EA compounds found in raw elder berry

material can be destroyed. Comparable activity may be found also in the products from elder flowers. Although elder blossom syrups possessed similar EA regardless of the technology used (0.033– 0.054 g AAE/kg), their chromatographic patterns were often very different. For example, no flavonols were present in the syrups, if traditional preparation comprising 24-h maceration with citric acid was applied. Analyzing the chromatographic patterns, one can distinguish different base materials and technology, which can be used for the authenticity confirmation. Herbal infusions from elder flowers, which contain more flavonols than are in syrups, were 16– 27 times richer in EA than drinks prepared from the syrups after recommended dilution. Only the syrup designed for preventing and treating upper-respiratory viral infections showed the EA (0.09 g AAE/kg) comparable to that of herbal infusion (0.13 g AAE/l).

Keywords:

elderberry; elder flowers; antioxidants; reducing power; processing

[[fulltext](#)]

© 2011 Czech Academy of Agricultural
Sciences

XHTML11 VALID

CSS VALID