



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.

**Marinova E., Georgiev
L., Totseva I., Seizova**

Antioxidant activity and mechanism of action of some synthesised phenolic acid amides of aromatic amines

Czech J. Food Sci., 31 (2013): 5-13

The antioxidative activities and mechanism of action were studied of eight synthesised cinnamoyl- and hydroxycinnamoyl amides of biogenic amines (caffeoyldopamine, cinnamoyldopamine, *p*-coumaroyldopamine, feruloyldopamine, sinapoyldopamine, caffeoylphenylethylamine, caffeoyltyramine, and caffeoyltryptamine) in a wide concentration range ($2.5\text{--}20 \times 10^{-4}\text{M}$) during autoxidation of triacylglycerols of sunflower oil. It was established that all amides exhibited excellent antioxidant activity, higher than or comparable with that of caffeic acid.

The best activity was shown by caffeoyldopamine followed by cinnamoyldopamine and caffeoyltyramine. The analysis of the kinetic data obtained showed that the presence of hydroxyl groups in the amino part (derivatives of dopamine and tyramine) led to direct oxidation of the molecules during the process and stabilisation of the resulting radicals. In contrast, the amides without hydroxyl groups in the amino part participated in the side reaction with peroxides and the resulting radicals took part in one side reaction of the chain propagation as did caffeic acid.

Keywords:

cinnamic acid derivatives;
phenylpropenoyl amides of aromatic
amines; triacylglycerols of sunflower oil

[[fulltext](#)]

