



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.

E. Abd El-Moneim Mahmoud, J.

**Dostařalová, J. P. Okorný,
D. Lukešová, M.
Doležal:
Oxidation of Olive Oils
during Microwave and
Conventional Heating
for Fast Food
Preparation**

Czech J. Food Sci., 27 (2009): S173-
S177

The oxidation stability of extra virgin and refined olive oils produced in different countries were studied under different conditions of microwave heating (microwave oven Electrolux, 2450 MHz, 500 W) and conventional heating (200° C). Oils were heated in a microwave oven and in a conventional oven for 0, 3, 6, 9, 12, 15, 20, 25, and 30 minutes. The evaluated parameters were peroxide value, content of conjugated dienes, conjugated trienes (determined by absorbance at 233 nm and 274 nm, respectively), and fatty acid composition

by CO₂. During microwave and conventional heating peroxide values and contents of dienoic compounds differed significantly between control and the heated samples. The microwave treatment did not produce significantly greater amount of oxidation products than traditional heating.

Keywords:

conjugated dienes; conjugated trienes; conventional heating; fatty acids composition; lipid oxidation; microwave heating; olive oil; peroxide value

[[fulltext](#)]

© 2011 [Czech Academy of Agricultural Sciences](#)