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[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.

**Arfan M., Amin H.,
Karamać M., Kosińska**

**A., WICZKOWSKI W.,
Amarowicz R.:
Antioxidant activity of
phenolic fractions of
*Mallotus
philippinensis* bark
extract**

Czech J. Food Sci., 27 (2009): 109-117

Phenolic compounds were extracted from *Mallotus philippinensi* bark using methanol. Six fractions (I– VI) were separated from the extract on a Sephadex LH-20 column using ethanol and acetone-water as the mobile phases and were evaluated for their total antioxidant activity, antiradical activity against DPPH• (2,2-diphenyl-1-picrylhydrazyl radical), and reducing power. The total phenolics and tannin contents in the fractions were determined. The content of total phenolics in the fractions ranged from 54 mg/g (fraction I) to 927 mg/g (fraction VI). Condensed tannins were detected in fractions II– VI. Total antioxidant activity (TAA) of phenolic fractions of *Mallotus*

philippinensis bark extract ranged from 0.58 mmol Trolox/g (fraction I) to 6.82 mmol Trolox/g (fraction IV). Fraction IV also showed the strongest antiradical activity against DPPH• and reducing power. Several phenolic constituents in the fractions were detected by RP-HPLC using a gradient solvent system with UV-DAD detection.

Keywords:

Mallotus philippinensis; bark; extract; natural antioxidants; phenolic compounds; tannins; antioxidant activity; antiradical activity

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