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.

A. Wellner, Ch. Hüttl, T. Henle:

Influence of Heat Treatment on the Formation of Amadori Compounds in Carrots

Czech J. Food Sci., 27 (2009): S143-S145

The formation of Amadori products (APs) during heat treatment of carrot juice and dehydration of carrots was studied. APs were measured as the corresponding *N*-furoylmethyl amino acids (FMAAs) after acid hydrolysis using RP-HPLC. Commercial samples of juices contained up to 108 mg furosine/100 g protein, 18 mg FM-Ala/100g protein, 13 mg FM-Val/100 g protein and 32 mg FM-GABA/100 g protein. The concentrations in dehydrated carrots were extensively higher with up to 1553 mg furosine/100 g protein, 1144 mg FM-Ala/100 g protein, 88 mg FM-Val/100 g protein and 908 mg FM-GABA/100 g protein. Heat treatment of fresh carrot juice caused only a marginal increase of Amadori compounds. Samples contained at most 16 mg furosine/100 g protein and 19 mg FM-GABA, respectively, while FM-Ala and

FM-Val were not detectabele at all. In contrast, drying of carrots led to a significant increase of FMAAs. The dehydrated samples contained up to 989 mg furosine/100 g protein, 1201 mg FM-Ala/100 g protein and 969 mg FM-GABA/100 g protein, while FM-Val was not detectable.

Keywords:
carrot; heat treatment; furosine; N-furoylmethyl amino acids

[fulltext]