

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)
 Author: [ADVANCED](#) | Volume Page
 Keyword: |

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > Abstract

ONLINE ISSN : 1881-3984

PRINT ISSN : 1344-6606

Food Science and Technology Research

Vol. 15 (2009) , No. 1 pp.45-50


[\[PDF \(891K\)\]](#) [\[References\]](#)

A Novel Yellow Compound and Furpilate Derivatives Formed from Furfural or 5-Hydroxymethylfurfural in the Presence of Lysine

[Hana TOTSUKA](#)¹⁾, [Konomi TOKUZEN](#)¹⁾, [Hiroshi ONO](#)²⁾ and [Masatsune MURATA](#)¹⁾
1) *Department of Nutrition and Food Science, Ochanomizu University*2) *National Food Research Institute*

(Received: July 25, 2008)

(Accepted: September 24, 2008)

Furfural and 5-hydroxymethylfurfural (HMF) are important intermediate compounds in the Maillard reaction of pentose and hexose, respectively, under acidic conditions. Recently we found a novel yellow compound named furpilate from a heated solution containing furfural and lysine. Here we describe the formation of furpilate derivatives in a heated solution containing furfural or HMF in the presence of lysine. Three derivatives, decarboxylated-furpilate, 5-hydroxymethylfurpilate, and decarboxylated 5-hydroxymethylfurpilate, were isolated and identified. 5-Hydroxymethylfurpilate, (Z)-3-[2-(5-hydroxymethyl-furylmethylidene)-3H, 4H, 5H, 6H-pyridine-2-carboxylic acid, is a novel compound and the major yellow pigment of the heated solution containing HMF and lysine.

Keywords: [Maillard reaction](#), [furpilate](#), [furfural](#), [lysine](#), [hydroxymethylfurfural](#), [browning](#)

[\[PDF \(891K\)\]](#) [\[References\]](#)
Download Meta of Article [\[Help\]](#)[RIS](#)

To cite this article:

A Novel Yellow Compound and Furpitate Derivatives Formed from Furfural or 5-Hydroxymethylfurfural in the Presence of Lysine Hana TOTSUKA, Konomi TOKUZEN, Hiroshi ONO and Masatsune MURATA, *FSTR*. Vol. **15**, 45-50. (2009) .

doi:10.3136/fstr.15.45

JOI JST.JSTAGE/fstr/15.45

Copyright (c) 2009 by Japanese Society for Food Science and Technology



[Japan Science and Technology Information Aggregator, Electronic](#)

