

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)Author:  [ADVANCED](#) | Volume  Page   
Keyword:   |   [TOP](#) > [Available Issues](#) > [Table of Contents](#) > Abstract

ONLINE ISSN : 1881-3976

PRINT ISSN : 1341-7592

**Food Science and Technology International, Tokyo**

Vol. 2 (1996) , No. 4 pp.239-241

[\[PDF \(235K\)\]](#) [\[References\]](#)

## Maillard Reaction Products from 3-Deoxyglucosone and Butylamine under Physiological Conditions

[Fumitaka HAYASE](#)<sup>1)</sup> and [Mahoko TAKAHASHI](#)<sup>1)</sup>*1) Department of Agricultural Chemistry, Meiji University*

(Received: May 9, 1996)

Acetic acid, *N*-butylacetamide, *N*-butyl-2-formyl-5-(hydroxymethyl)pyrrole, and *N*-butylformamide were formed as major compounds in a butylamine and 3-deoxyglucosone (3DG) reaction system under physiological conditions of 50°C at pH 7.4. *N*-Butylformamide is postulated to be formed by the cleavage of the C-C bond in  $\alpha$ -dicarbonyl groups with the addition of amino compounds. Carbon at the 6 position in 3DG is speculated to be principally converted into methyl carbons of *N*-butylacetamide and acetic acid during the Maillard reaction.

**Keywords:** [Maillard reaction](#), [3-deoxyglucosone](#), [pyrraline](#), [amide](#), [acetic acid](#)[\[PDF \(235K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Fumitaka HAYASE and Mahoko TAKAHASHI, **Maillard Reaction Products from 3-Deoxyglucosone and Butylamine under Physiological Conditions** *FSTI*. Vol. 2, 239-241. (1996).



---

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

