

Nematicidal Activity of 5-Hydroxymethyl-2-furoic Acid against Plant-Parasitic Nematodes

Yasuo Kimura^a, Satoko Tani^a, Asami Hayashi^a, Kouhei Ohtani^a, Shozo Fujioka^b, Tsuyoshi Kawano^a, and Atsumi Shimada^{c,*}

^a Department of Biological and Environmental Chemistry, Faculty of Agriculture, Tottori University, Koyama, Tottori, Tottori 680-8553, Japan

^b *RIKEN* (The Institute of Physical and Chemical Research), 2-1 Hirosawa, Wako-shi, Saitama 351-0198, Japan

^c Department of Food and Nutrition, Faculty of Food and Nutrition Science, Beppu University, 82 Kita-ishigaki, Beppu, Oita 874-8501, Japan.
E-mail: shimada@nm.beppu-u.ac.jp

* Author for correspondence and reprint requests

Z. Naturforsch. **62c**, 234–238 (2007); received September 15/October 20, 2006

A nematicide, 5-hydroxymethyl-2-furoic acid (**1**), was isolated from cultures of the fungus *Aspergillus* sp. and its structure was identified by spectroscopic analysis. Compound **1** showed effective nematicidal activities against the pine wood nematode *Bursaphelenchus xylophilus* and the free-living nematode *Caenorhabditis elegans* without inhibitory activity against plant growth, but **1** did not show any effective nematicidal activity against *Pratylenchus penetrans*.

Key words: 5-Hydroxymethyl-2-furoic Acid, Nematicide, *Aspergillus* sp.