

Mokuzai Gakkaishi  JWRS
The Japan Wood Research Society

[Available Issues](#) | [Japanese](#) >> [Publisher Site](#)

Author: Keyword: [ADVANCED](#)



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

ONLINE ISSN : 1880-7577

PRINT ISSN : 0021-4795

Mokuzai Gakkaishi

Vol. 54 (2008) , No. 6 p.319-326

[\[PDF \(3080K\)\]](#) [\[References\]](#)

Characterization of the Pulp-Like Fibers Separated from Sugi with L-Lactic Acid

Takeshi Kajimoto¹⁾²⁾, Yuya Tachibana¹⁾, Yasukatsu Maeda¹⁾, Shizuo Kubota¹⁾³⁾,
Toshimitsu Hata²⁾ and Yuji Imamura²⁾

1) Industrial Technology Center of Wakayama Pref.

2) Research Institute for Sustainable Humansphere, Kyoto University

3) Present address: Japan Institute of Innovation and Invention Wakayama branch

(Received May 30, 2008)

(Accepted August 6, 2008)

Abstract: The characterization of the process of separating cellulose fibers from wood by using L-lactic acid was investigated. Sugi (*Cryptomeria Japonica*) were cooked with L-lactic acid at 200°C for 1hr to be separated as pulp-like fibers and liquefied wood components. The pulp-like fibers were analyzed with molecular weight, SEM, X-Ray diffractions, IR, and ¹³C NMR. Molecular weight was about 1.1×10⁶-1.5×10⁶. The crystals of the pulp-like fibers were type I and the crystallinity was 23-25%. The pulp-like fibers were esterified with L-lactic acid. It was concluded that the cooking the wood with L-lactic acid was a significant separation system, that the delignification occurred by acid hydrolysis and decomposition, and that esterified cellulose derivatives were produced from wood material.

Keywords: wood components, separation system, L-lactic acid, esterified cellulose derivatives

[\[PDF \(3080K\)\]](#) [\[References\]](#)

Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

To cite this article:

Takeshi Kajimoto, Yuya Tachibana, Yasukatsu Maeda, Shizuo Kubota, Toshimitsu Hata and Yuji Imamura: Mokuzaigakkaishi Vol. 54, No. 6, 319-326 (2008) .

doi:10.2488/jwrs.54.319

JOI JST.JSTAGE/jwrs/54.319

Copyright (c) 2008 by The Japan Wood Research Society



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

