## Accepted Manuscript

Title: Synthesis, thermal properties and cell-compatibility of photocrosslinked cinnamoyl-modified hydroxypropyl cellulose

Authors: Shinya Yano, Takumi Iwase, Naozumi Teramoto, Toshiaki Shimasaki, Mitsuhiro Shibata



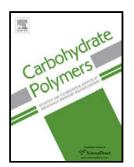
S0144-8617(17)31504-7 https://doi.org/10.1016/j.carbpol.2017.12.087 CARP 13149

To appear in:

Received date:	31-8-2017
Revised date:	26-12-2017
Accepted date:	31-12-2017

Please cite this article as: Yano, Shinya., Iwase, Takumi., Teramoto, Naozumi., Shimasaki, Toshiaki., & Shibata, Mitsuhiro., Synthesis, thermal properties and cell-compatibility of photocrosslinked cinnamoyl-modified hydroxypropyl cellulose. *Carbohydrate Polymers* https://doi.org/10.1016/j.carbpol.2017.12.087

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

## Synthesis, thermal properties and cell-compatibility of photocrosslinked cinnamoyl-modified hydroxypropyl cellulose

Shinya Yano, Takumi Iwase, Naozumi Teramoto,\* Toshiaki Shimasaki and Mitsuhiro Shibata

Department of Applied Chemistry, Faculty of Engineering, Chiba Institute of Technology, 2-17-1 Tsudanuma, Narashino, Chiba 275-0016, Japan

\* Corresponding author. Tel.: +81-47-478-0406; fax: +81-47-478-0406

E-mail address: teramoto.naozumi@it-chiba.ac.jp

Highlights

- Cinnamoyl-modified HPC with DS 1.3 to 3.0 were synthesized by the esterification reaction of HPC with various amount of cinnamoyl chloride.
- Thermal analysis using DSC and TGA showed that the HPC-C with higher DS has a glass transition temperature and higher thermal stability.
- The UV-visible spectrum of each HPC-C changed by UV irradiation, and the reduction of the absorbance at 280 nm suggests the dimerization of cinnamoyl groups.
- The cell proliferation test revealed that the photocrosslinked HPC-C films have good compatibility with fibroblast cells.

Download English Version:

## https://daneshyari.com/en/article/7784003

Download Persian Version:

https://daneshyari.com/article/7784003

Daneshyari.com