Accepted Manuscript

Title: Effects of chain length of the cross-linking agent on rheological and swelling characteristics of dextran hydrogels

Authors: Hamed Salimi-Kenari, Faeze Mollaie, Erfan Dashtimoghadam, Mohammad Imani, Bo Nyström

PII: S0144-8617(17)31212-2

DOI: https://doi.org/10.1016/j.carbpol.2017.10.056

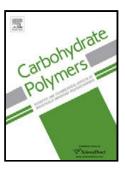
Reference: CARP 12905

To appear in:

Received date: 24-8-2017 Revised date: 11-10-2017 Accepted date: 16-10-2017

Please cite this article as: Salimi-Kenari, Hamed., Mollaie, Faeze., Dashtimoghadam, Erfan., Imani, Mohammad., & Nyström, Bo., Effects of chain length of the cross-linking agent on rheological and swelling characteristics of dextran hydrogels. *Carbohydrate Polymers* https://doi.org/10.1016/j.carbpol.2017.10.056

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

Effects of chain length of the cross-linking agent on rheological and swelling characteristics of dextran hydrogels

Hamed Salimi-Kenari¹, Faeze Mollaie¹, Erfan Dashtimoghadam², Mohammad Imani³, Bo Nyström^{4*}

- 1. Faculty of Engineering & Technology, University of Mazandaran, P.O. Box 416, Babolsar, Iran
- 2. Department of Chemistry, University of North Carolina, Chapel Hill, NC 27599, USA.
 - 3. Novel Drug Delivery Systems Department, Iran Polymer and Petrochemical Institute, P.O.Box 14965/115, Tehran, Iran
 - 4. Department of Chemistry, University of Oslo, P.O. Box 1033, Blindern, N-0315 Oslo, Norway.

Highlights

- Formation of Dextran hydrogels through different chemical cross-linker agents.
- Influence of the size of the cross-linker molecules on the gelation characteristics.
- The size of the cross-linker molecules clearly affects the gelation properties.
- The swelling features of the gel are altered by the chain length of the cross-linker.

ABSTRACT

Rheological characteristics during chemical gelation of semidilute solutions of dextran in the presence of cross-linking agents of different chain length are reported. Effects of cross-linker chain length on the gel point, structure of the gel network, and

Download English Version:

https://daneshyari.com/en/article/7784446

Download Persian Version:

https://daneshyari.com/article/7784446

<u>Daneshyari.com</u>