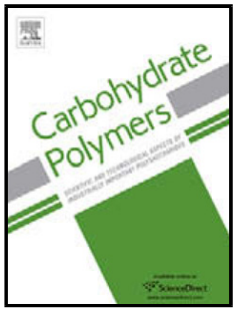

Title: Synthesis and evaluation of functional alginate hydrogels based on click chemistry for drug delivery applications

Authors: Clara García-Astrain, Luc Avérous

PII: S0144-8617(18)30244-3
DOI: https://doi.org/10.1016/j.carbpol.2018.02.086
Reference: CARP 13348

To appear in:

Received date: 11-12-2017
Revised date: 1-2-2018
Accepted date: 27-2-2018

Please cite this article as: García-Astrain, Clara., & Avérous, Luc., Synthesis and evaluation of functional alginate hydrogels based on click chemistry for drug delivery applications.*Carbohydrate Polymers* https://doi.org/10.1016/j.carbpol.2018.02.086

Synthesis and evaluation of functional alginate hydrogels based on click chemistry for drug delivery applications

*Clara García-Astrain, Luc Avérous**

BioTeam/ICPEES-ECPM, UMR CNRS 7515, Université de Strasbourg, Strasbourg Cedex 2, France.

**Corresponding author: email: luc.averous@unistra.fr, Tel : 33 (0)368852784*

Highlights

- Alginate hydrogels were cross-linked via Diels-Alder click chemistry
- Alginate was modified with furan groups to different extents
- Hydrogels showed pH-sensitivity and pulsatile swelling
- Hydrogels were tested for the controlled release of vanillin

ABSTRACT

Environment-sensitive alginate-based hydrogels for drug delivery applications are receiving increasing attention. However, most work in this field involves traditional cross-linking strategies which led to hydrogels with poor long-term stability. Herein, a series of chemically