

## Accepted Manuscript

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PII: S0144-8617(17)30670-7  
DOI: <http://dx.doi.org/doi:10.1016/j.carbpol.2017.06.033>  
Reference: CARP 12421

To appear in:

Received date: 20-3-2017  
Revised date: 29-5-2017  
Accepted date: 7-6-2017

Please cite this article as: Muhitdinov, Bahtiyor., Heinze, Thomas., Normakhamatov, Nodirali., & Turaev, Abbaskhan., Preparation of sodium cellulose sulfate oligomers by free-radical depolymerization. *Carbohydrate Polymers* <http://dx.doi.org/10.1016/j.carbpol.2017.06.033>

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# Preparation of sodium cellulose sulfate oligomers by free-radical depolymerization

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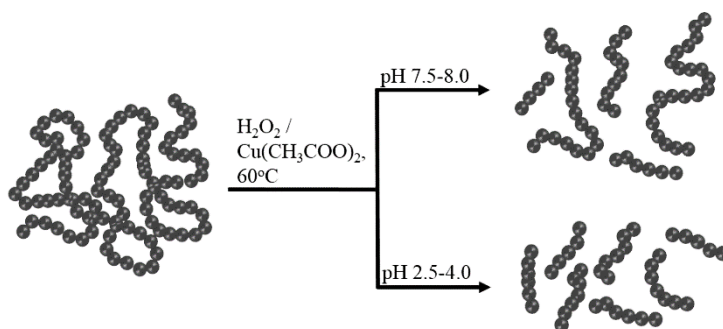
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## Graphical abstract



## Highlights

- Sodium cellulose sulfate (SCS) samples with various DS and DP were synthesized.
- SCSs were depolymerized with  $\text{Cu}(\text{CH}_3\text{COO})_2/\text{H}_2\text{O}_2$  at pH 7.5-8.0 and pH 2.5-4.0.
- SCS oligomers with retained primary structures were obtained by depolymerization.
- Depolymerization at pH 2.5-4.0 was around twofold faster than that of at pH 7.5-8.0.
- Free-radical degradation can be used to prepare cellulose oligosaccharide sulfates.

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