

A study on the extraction of citrated cellulose nanocrystals from cotton textiles was conducted at Stockholm University, led by Professor Aji Mathew in collaboration with RISE—Research Institutes of Sweden and VTT—Technical Research Centre of Finland.

Citrated cellulose nanocrystals from post-consumer cotton textiles

The main steps for the extraction of citrated cellulose nanocrystals (CitCNCs) from post-consumer cotton textiles are shown. An esterification with citric acid followed by mechanical fibrillation results in CitCNCs with high yield and high surface charge attributed to the carboxylic groups covalently attached *via* mono and di-ester linkages.



