

Extraction of Cellulose Nanocrystals from Soy Pods

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Abstract : The use of cellulose nanocrystals as reinforcing agents in polymer nanocomposites is promising. In this study, we tested four different methods of mercerization were divided into two stages. The sample was treated in 5% NaOH solution for 30 minutes at 50 ° C in the first stage and 30vol H₂O₂ for 2 hours at 50 ° C in the second step, which showed better results. For the extraction of the sample obtained nanocrystals positive result was that the solution was treated with H₂SO₄ 60% (w / w) for 1 hour at 50 ° C. The results were positive and showed that it is possible to extract CNC at low temperatures.

Keywords : soy pods, cellulose nanocrystals, temperature, acid concentration

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