

# Cellulose extraction



## Description

Unique lignin upgrading technology based on cost-competitive alkali-O<sub>2</sub> oxidation using non-toxic bulk chemicals to produce versatile lignin dispersants.



## Objectives

- To assess potential impacts on environment and on society for the implementation of its biorefining technology to produce the organosolv lignin, to quantify the Social Return on Investment and the technical cost to demonstrate sustainability, business potential and socio-economic impacts of lignin-based products,
- To ensure exploitation of results and efficient management of project data, to define business models and plans including relevant market analyses and to contribute to the process scale-up.

## Activities

- Sustainability assessment:
  - Life-Cycle Assessment LCA,
  - Life-Cycle Costing LCC,
  - Social Life-Cycle Assessment SLCA,
- Market uptake:
  - Market analysis,
  - Business plan.

## Challenges

- Input data complex to collect 
- Technical knowledge required 
- Legal & legislation barriers 
- Technology readiness level 

## Expected outcomes

- + 20% bio-based chemical and materials, - 15% alkali consumption,
- - 50% investment costs, - 60/70% operational costs,
- Comprehensive analysis of potential market niches, competitive advantages, internal and external levers,
- Commercial strategy to assure solid market uptake.

