

# Fibenol

Fiber Beyond Oil



Fibenol is implementing a new cutting-edge technology to produce materials from wood residues.

Our main products are lignin, sugars and specialty cellulose. These sustainable bio-based materials can be used as replacements for fossil-based materials in producing plastics, construction materials, fuels and many other things.

## TIMELINE

2016 - Scouting technologies for wood residues valorization

2017 - Sunburst™ technology selected

2018 - Demo plant funding secured

2020 - Pilot line operational

2022 - Commissioning of the demo plant

2023 - Conceptual planning of the first industrial-size plant

## Sourcing

We use hardwood residues from forestry and the wood processing industry in **Estonia**. The residues we use originate only from certified and sustainably managed forests.

## Technology

Our unique **Sunburst™ pre-treatment technology** that fractionates hardwood residues into lignin, sugar and specialty cellulose with over 90% efficiency.



Our plant operates on 100% renewable energy.

### LIGNOVA™

Crude – 86-89% lignin, 5% cellulose  
Pure – 93-96% lignin, no cellulose

Aromatic biopolymer extracted from wood

#### Applications:

Plastics  
Adhesives & resins  
Foams



### SPECIALITY CELLULOSE

Micro-scale specialty cellulose with nano-scale properties

Available in different grades with varying lignin content

#### Applications:

Concrete  
Pulp and paper  
Paints and adhesives



### CELLULOSIC SUGARS

C5 sugars - rich in xylose derived from hemicellulose

C6 sugars - rich in glucose derived from cellulose

#### Applications:

Biofuels  
Biochemicals  
Personal care



Be the first in line to change your product inputs into fully sustainable?



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# LIGNOVA™ - High-purity hydrolysis lignin from hardwood residues

## Benefits of using LIGNOVA:

- sulfur-free
- no smell
- near-native structure

LIGNOVA™ comes in two different purities: Crude and Pure.

## Cellulosic sugars - Sustainably sourced hardwood sugars

### Benefits of using cellulosic sugars:

- highly fermentable
- low inhibitors
- low CO2 footprint and land-use change; non-food competing

Cellulosic sugars are available in two varieties, xylose-rich C5, and glucose-rich C6.

## Specialty cellulose - Sustainably sourced specialty cellulose

### Benefits of using specialty cellulose:

- nanomaterial characteristic
- strength additive in the paper, by not impairing the drainage of the pulp
- as viscosity modifying agent and enhances the freeze-thaw resistance of concrete
- functional filler in all-cellulose composites
- improves resistance to oxygen, grease, and oil permeability in barrier coatings

Specialty cellulose is available in different purities: Crude, Blond, and White.



For more information visit:  
[fibenol.com/products](https://fibenol.com/products)