

Top quality for your high-end applications

## Organosolv lignin

### Process

Organosolv lignin is of high quality and purity, which makes it ideal for both direct use and upgrading into high-value chemicals. It is obtained from wood by a potential aqueous pre-extraction, followed by ethanol-water fractionation. The spent liquor is heated under reduced pressure to remove ethanol and precipitate the lignin. After filtration, the lignin is dried under reduced pressure.

### Specifications

Lignin can be delivered based on customer needs in a reproducible quality. We are able to work with various feedstocks such as beech, wheat straw or spruce.

Specification	Typical value (beech wood)
Dry content	~ 95%
Residual sugar content	< 20 mg/g
Particle size	Diameter at 10% 10 µm Diameter at 50% 105 µm Diameter at 90% 350 µm
Molecular weight	$M_n$ ~1100 g/mol $M_w$ ~2800 g/mol
Glass transition temperature $T_g$	120–125°C
Content of methoxyl groups	~ 7,5 mmol/g
Content of aliphatic OH	~ 1,7 mmol/g
Content of phenolic OH	~ 3,9 mmol/g
Content of COOH	~ 0,1 mmol/g
S/G ratio	~ 2
Sum heavy metals	< 1g/kg
Most common allergens*	< 1 mg/kg
Microbial load*	< 10 CFU/g

### Availability

Organosolv lignin is available in kg scale from Fraunhofer's pilot plant. Please also contact us for larger amounts and specific quality requirements, such as GMP-grade.



### Contact

Dr. Christine Rasche  
Head of Innovation Field  
Regenerative Resources  
Phone: +49 3461 439103  
christine.rasche@igb.fraunhofer.de



Fraunhofer Center for Chemical-  
Biotechnological Processes CBP  
Am Haupttor (Tor 12, Bau 1251)  
06237 Leuna  
www.cbp.fraunhofer.de

\* More details particularly on analysis of heavy metals, allergens and microbial load are available upon request.

1 Filter press for lignin separation.

2 Organosolv lignin press cake before drying.