



Lignin processing

University College Ghent



Project Details

Project coordinators	Ingeborg Stals Ludwig Cardon
Other applicants	Flemish industrial partners (SME's)
Sector	Biochemical engineering Polymer and Material Technology
Call of Interest	<input checked="" type="checkbox"/> CORNET <input type="checkbox"/> EraSME
Proposal summary:	Upscaling the production of high value lignin Development of innovative polymer blends and materials
Advantages for SMEs, trade or industry:	Partial replacement of non-sustainable products Improved functional properties Innovative products
Profile of partners sought:	Industrial partners interested in testing the use/blending of lignin in their existing products / applications Academic & industrial partners with expertise in the field



Technology

- ▶ Thermochemical lignocellulose fractionation on kg scale
- ▶ Bio-polymer processing

Application fields

- ▶ (Bio-)polymers, coatings and textiles

Objectives and outcomes

- ▶ Upscaling the production of high value lignin
- ▶ Development of innovative polymer blends and materials
 - Lignin-reinforced polymers and rubbers
 - Thermoplastic applications: blending in different ratios with known (bio)polymers; PLA, PE and PP
 - The effect of additives (e.g. plasticizers)
 - Testing of lignin-based formaldehyde resins
 - Evaluation of processibility using a single screw micro-extruder and mold injection.
 - Lignin dispersion for hydrophobic coatings



Benefit for participating SMEs/Associations

- Partial replacement of non-sustainable traditional products with lignin biopolymers
- Improved functional properties

Estimated costs and duration

- 2 years
- 350.000 euro

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