
BioColEol

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Ontwikkeling van textielproducten en verpakkingen op basis van biogebaseerde polymeren en kleurstoffen en evaluatie van de end-of-life mogelijkheden

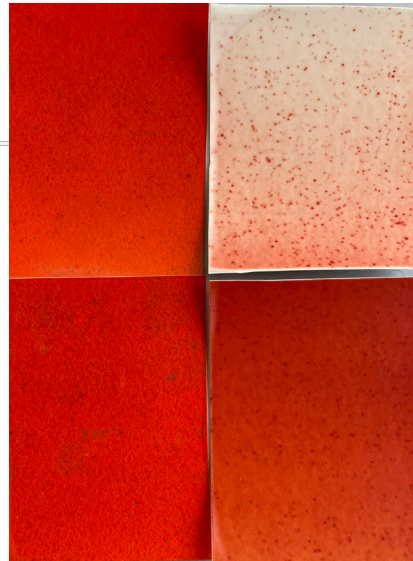
Biobased colorants

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Synthesis new
biobased
colorants

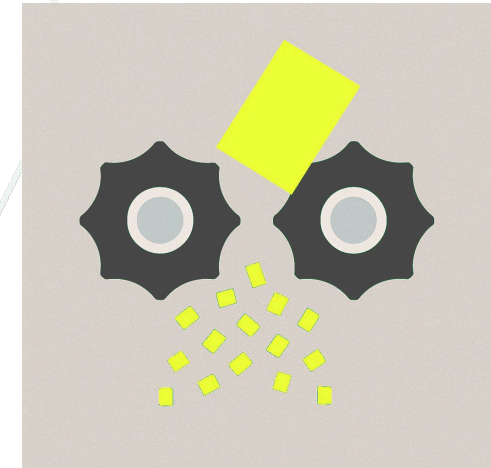
avans
hogeschool



Improving color
stability



Discolouration



Mechanical
recycling



Maastricht University

WP1: Projectmanagement (M1-M36)

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- ▶ Financial claims
 - Every 6 months
 - Claims to be submitted in the portal
 - Please inform Centexbel as coordinator when claims are submitted since validation needs to be done by Centexbel
- ▶ Co-financing
 - EZ?
 - Provincie Limburg?
 - Provincie Oost-Vlaanderen?
 - FIO to be asked after receipt of Provincie Oost-Vlaanderen
- ▶ Stuurgroep/projectgroep?

WP2: Communication (M1-M36)

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- Website (in progress): <https://biocoleol.eu/>
- A3 poster: we will make and send to you, you need to print out

Output	Value	End
A3 poster of the project	All partners	Start
Publications	8	M36
Newsletters	6	M36
Technologiedag/Workshop	2	M36
Dissimination at (international) congresses	5	M36
Final event	1	M36
Valorisation to companies	8	M36

WP3: Production of biobased colorants (M1-M36)

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- Synthesis of new biobased colorants based on curcumine, purpurine, alizarin and others
- Chemical modification to improve color fastness
- Upscaling of biocolorants with good color fastness

Output	Value	End
Colorants from curcumin	2	M24
Colorants from purpurine, alizarine, luteoline or norbixine	2	M24
Synthesis of 50g colorants	2	M24
Production of 0,5 – 1 kg	1	M36

WP4: Processing of biobased colorants in biopolymers and optimisation (M1-M36)

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- Evaluation of color stability and procesability of the colorants
- Improvement of the biocolorants with additives
- Production of demonstrators in different processing techniques
 - Film extrusion, textile extrusion, IM,..
- Supply material for WP5 and WP6

Output	Value	End
Evaluation color stability	4	M24
Evaluation of improving the color stability	4	M24
Production of demonstrators	4	M36

WP5: end-of-life recycling of biopolymers with colorants (M6-M36)

- ▶ Thermomechanical recycling
 - ▶ From colored plastics but also after decolorization
 - ▶ Schredding, compounding, characterisation
 - ▶ Analysis of material degradation
- ▶ Biodegradation
 - ▶ Influence of colorants on biodegradation

Output	Value	End
Report on development of machine learning on material degradation	3	M36
Report on biodegradation	1	M36

WP6: Decolorization (M6-M36)

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- Upgrading of colored recycling streams through decolorization of biopolymers
- Analyzing different extraction techniques (UV/VIS; scCO₂; solvents)
- Reprocessing of decolorized polymers
- Supply material for WP5

Output	Value	End
Protocols for decolorization	4	M36
Demonstration of succesful decolorization	4	M36
Evaluation recyclability colorants	1	M36

WP7: LCA (M24-M36)

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- ▶ Analysis of environmental impact of the materials
 - ▶ Both colorants and 1 of the demonstrators
- ▶ Who is able to support in this?
 - ▶ CTB is able to do a basic screening

Output	Value	End
LCA screening of 2 biobased colorants	1	M36
LCA screening of a project demonstrators	1	M36

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Gefinancierd door
de Europese Unie

BioColEol

 provincie
Oost-Vlaanderen



avans
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GENT



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