

Skin friendly biopolymers from corn and potato



Crop	Potato <i>Solanum tuberosum</i> Corn <i>Zea mays L.</i>
Croppart	Seed Roots / Tubers
Application area	<div style="background-color: #6a3d9a; color: white; padding: 5px; text-align: center;">Fine chemicals</div> <div style="background-color: #c00000; color: white; padding: 5px; text-align: center;">Materials</div>
Status	Start-up stage
Relevant plant compounds	<div style="background-color: #d3d3d3; padding: 5px; text-align: center; margin-bottom: 5px;">Starch</div> <div style="background-color: #d3d3d3; padding: 5px; text-align: center;">Cellulose</div>

Description

Harnessing the extraordinary antimicrobial, antioxidant, absorbency, and skin compatibility features of biopolymers and decoupling the production of exemplary high-volume products from the depletion of fossil resources by utilising primary as well as food waste biomass, the project aims to provide functionally improved, significantly more sustainable, and price-competitive everyday products, namely baby diapers, facial beauty masks, and non-woven tissue to be used in wound dressings.

Examples of end products

Sustainable diapers

A new biodegradable diaper consisting of a bio-based topsheet with antimicrobial and skin beneficial functionalities and a bio-based superabsorbent layer;



Cosmetic masks



Novel cosmetic masks based on textiles or films made from biopolymers and impregnated with molecules beneficial for the skin

Wound dressing textiles

Nano-structured highly skin-compatible textiles for wound dressing

Pros and cons

-  Creating sustainable polymers
 -  create awareness about the opportunities of bio-based materials

 -  New product on a very competing market
 -  Challenges in upscaling the product
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Resources

<http://polybioskin.eu/#overview> Initiative website