

Issue # 02

Grenoble, July 2019

The Sherpack project started in June 2017 and since the first Newsletter in June 2018 significant progress has again been made.

In the past year, the partners of the project met several times (in Italy, Germany, and Belgium) to discuss the results and the future orientations of the project, with the latest meeting organized in Grenoble (France) in June 2019.

News Results

Focus ON biopolymer emulsion

Progress has been made on the 3 innovative technologies of the project: wet lamination, biopolymer emulsion and polysaccharides grid printing; with samples prepared for all three.

While most ongoing work and detailed results remain, for now, confidential, very promising results have been recently obtained on the biopolymer emulsion. The objective is to develop a water emulsion of a biodegradable polymer to be applied on paper as bottom layer (in contact with food) using water-based coating processes instead of extrusion/coating. The required properties of this layer are excellent water vapour barrier, heat sealability, biodegradability, made of components approved for food contact and from renewable resources (>96%).

Thanks to a new biopolymer composition it is now possible to use a non-toxic solvent. A procedure to produce a stable biopolymer based emulsion in water has been developed, in which the solvent is easily recovered. The viscosity of the emulsion has been adjusted by adding carefully chosen polysaccharides and the first emulsion batch has been applied as coating on paper. Trials on scaling up have now allowed producing a stable emulsion.

In the coming months, the partners involved in this work (mainly ISOF, ITENE and CTP) will concentrate on adapting the emulsion's formulation and procedure with food contact approved surfactants.

The parameters affecting emulsions stability will be studied as well as the coating process parameters to achieve the target properties.





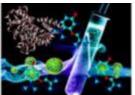
Zoom on partners

Zoom on ISOF

The Institute of Organic Synthesis and Photoreactivity (ISOF) belongs to the Department of Chemical Sciences and Materials Technologies of the National Research Council of Italy (CNR), the largest public Research Institution in Italy. Located in Bologna, ISOF employs more than 50 scientists including chemists, physicists and engineers. ISOF research activities aim to develop technological solutions in the fields of healthcare, solar energy conversion and environmental sustainable materials supported by regional, national, European and international funding through projects of industrial relevance that address the societal challenges of the Europe 2020 strategy, such as SHERPACK.







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Many exciting results are still to come in the project, which will last until November 2020. Stay tuned for Sherpack next newsletter, and feel free to contact us if you have questions.

All the best!

The Sherpack Team

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