Press release

Lactips launches Plastic Free Paper: the first paper packaging solution that is free from plastic or controversial substances and fully recyclable and compostable

- **Innovation developed in collaboration with the eco-organization CITEO to rethink the world of packaging, while ensuring full control over their end-of-life, food preservation and food safety**
- **Plastic Free Paper: the only coating solution to replace plastics and chemical treatments for sealable packaging papers, a barrier to oxygen, fats and mineral oils**
- **Plastic Free Paper is adapted for industrial use for food and non-food applications**

Saint-Jean-Bonnefonds, October 11, 2021 – Lactips, the French company specialized in producing a 100% biosourced casein-based plastic material that is biodegradable in water and home compostable, has developed a solution for paper or cardboard packaging with a view to strengthening the protection and conservation of food products without impacting their recycling. Paper packaging solutions, which are increasingly popular with manufacturers, particularly due to their appeal with end consumers, often contain adjuvants which limit their recyclability or prevent their biodegradability. Lactips has developed a first-generation Plastic Free Paper to offer manufacturers an innovative solution for sustainable, high-performance paper or cardboard packaging.

Paper packaging solutions increasingly effective, but often at the expense of their recyclability

With a recycling rate of around 74%[1] in 2020 in Europe, supported by efficient collection, sorting and recycling channels, paper is a material that is fully aligned with a circular economy strategy.

However, on its own, it cannot be used for food packaging as it is permeable to water, oxygen and even fats. As a result, paper is often used in conjunction with plastic materials, which are sometimes metalized to ensure that products are preserved.

These plastic coatings make the recycling of the paper more difficult and generate waste which is virtually impossible to sort and ends up being incinerated or sent to landfill.

Certain grease-proof food papers are treated with per- or poly-fluorinated alkyl substances (PFAS), which, due to these compounds passing into food products, have been flagged as a health risk by the European Food Safety Authority (EFSA) in a report published in 2020[2].

1 https://www.cepi.org/wp-content/uploads/2021/07/WEB-PAGES_EPRC-Monitoring-Report-2020_20210716.pdf
2 https://www.efsa.europa.eu/en/news/pfas-food-efsa-assesses-risks-and-sets-tolerable-intake

Denmark has already banned PFAS in paper and cardboard since 2020. In addition, Germany, the Netherlands, Sweden and Norway have officially announced plans to submit a proposal to the European Chemicals Agency (ECHA) by July 19, 2022 to restrict PFAS.

Plastic Free Paper, a first generation of biodegradable and recyclable packaging

Lactips has developed, with support from the eco-organization CITEO, a new cellulose matrix coating solution that ensures the total recyclability of papers and cardboards. This first generation combines the paper with the thermoplastic developed by Lactips to meet the challenges relating to performance capabilities and sustainable development.

100% biosourced, home compostable and heat-sealed, the Plastic Free Paper solution provides the oxygen, fat and mineral oil barriers that are essential for preserving food products and is fully compliant with food contact standards.

Tests carried out with Centre Technique du Papier (CTP) in France and Papiertechnische Stiftung (PTS) in Germany have confirmed that there is no impact on the recyclability of the papers and cardboards for the first two applications available:

- Replacing the sealable plastic layer for non-food packaging, such as mailing films or food films for dry or fatty products (tea bags, confectionery, pet chews, etc.)
- Replacing per- or poly-fluorinated alkyl substances (PFAS) for papers that need to be grease-proof (e.g. fast food packaging)

The Plastic Free Paper solution offers a real alternative for manufacturers (processors and/or brands) in the context of their environmental efforts and the application of the European directive restricting single-use plastics (Directive 2019/904/EC). The material developed by Lactips is not a plastic, but a natural polymer, in accordance with European Regulation no.1907/2006 (REACH), and is therefore exempt from the demands and restrictions set by this directive.

Laurent Lyannaz, Functional Products and Services Project Leader at the CTP, explains: *"The CTP has carried out laboratory work on a natural polymer based on a protein developed by Lactips. The product was able to be applied and deposited with a conventional coating process (coating by wire wound bars) on various papers without any difficulties. The features of the coated papers confirmed that this biosourced product can effectively develop oxygen and fat barrier properties. These products were then tested for their recyclability."* Alain Cochaux, Recycling Project Leader at CTP confirms*: "The results showed that these new products are recyclable because they are compatible with industrial processes for standard recycling. The papers manufactured based on the recycling of these products are also visually attractive. The Lactips coating does not prevent the recycling of papers and cardboards in the packaging recycling sector, as defined by European Directive 2018/852/EU on packaging and packaging waste."*

"Our mission at Lactips is to rethink plastic packaging with a view to limiting its impacts. We wanted to offer manufacturers and brands a range of alternative solutions that are responsible and above all aligned with performance requirements and their industrial processes in order to help them with their ecological and regulatory transformation. Lactips' Plastic Free Paper is a perfect response to these challenges, and we are very proud that we will be able to launch its sales within the next few months", concludes Marie-Hélène Gramatikoff, Lactips CEO and co-founder.

About Lactips

Because plastics are a necessity for human activities, but controlling their end-of-life is essential, Lactips manufactures a natural polymer with multiple technical and high-performance properties, biodegradable, to support manufacturers in their ecological transition. Meeting the challenges of sustainable development in the packaging sector and adapted to the needs of manufacturers, Lactips' CareTips pellets are used to produce 100% natural and biodegradable in water and in home composting solutions. This new material is also suitable for food products.

Created in 2014 by Marie-Hélène Gramatikoff, plastics engineer and business strategy specialist, and Frédéric Prochazka, PhD, lecturer-researcher at Saint-Etienne University, Lactips employs 60 people today and is working to deploy a 2,500 sq.m new production site to further increase its annual capacity to over 3,000 tons. Lactips, a

signatory member of the United Nations Global Compact, is one of the 20 high potential companies in the French Tech Green20 program, has been awarded the GreenTech Innovation label and is one of the first companies to be awarded the "1000 Efficient Solutions" label by the Solar Impulse Foundation.

Learn more at: www.lactips.com

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