Press Release

Pili has successfully industrialized a biobased aniline derivative to decarbonize the chemical industry

- The first biobased aromatic platform molecule commercially available on a ton scale
- A key step towards decarbonizing the chemical industry and overcoming the use of fossil resources as raw materials
- An opportunity to substitute petro-based ingredients derived from aromatics chemistry by biobased counterparts for a wide range of markets: colorants, pigments, flavors, fragrances, cosmetics, materials, fine chemicals, etc.

Pili biobased anthranilic acid powder. Credits Marie-Sarah Adenis

April 23rd, 2024, Toulouse - Pili, an innovative French company at the forefront of sustainable colorant and pigment production, has taken a major step towards decarbonizing the chemical industry. It has produced several tons of a 100% biobased aromatic compound via a robust and reproducible industrial process.

" *For non-chemists, aromatic compounds are particularly stable cyclic molecular structures. They are the building blocks of many of our everyday products, such as dyes, fragrances, flavors and some cosmetic and pharmaceutical ingredients*" explains **Jérémie Blache, Pili's CEO**. "*This is a revolution in the chemical sector! We offer the first petroleum-free aromatic raw material on an industrial scale*".

To produce a sustainable and abundant source of aromatic compounds, Pili uses industrial fermentation based on its proprietary micro-organisms. Fermentation makes it

possible to avoid fossil raw materials by using non-food sugars derived from biomass. The advantages of fermentation are twofold: it's a proven technology already widely used in the food and pharmaceutical industries. Moreover, this process is based on soft synthesis conditions requiring less energy than the petrochemical pathway.

With this innovative process, Pili has succeeded in industrializing the production of **anthranilic acid**, **a 100% biobased** mono-aromatic intermediate, which the company already converts into dyes and pigments.

Several tons of this 90% purity aniline derivative, have already been produced at industrial grade. This reference is REACH registered and ready to be commercialized as an intermediate. Like all the products in Pili's portfolio, a Life Cycle Assessment of the biobased anthranilic acid is conducted to evaluate its environmental impact.

" *Anthranilic acid is a very interesting platform molecule. Anilines, carboxylic acids, phenols, salicylates... the chemistry accessible from this intermediate is wide.*" notes **Guillaume Boissonnat-Wu, Pili's Scientific and Industrial Director**. " *Pili is able to develop all or part of the synthesis pathways from this intermediate towards references of dyes, pigments, fragrances, flavors and other aromatic compounds, all based on the principles of green chemistry*."

While Pili currently directs its efforts towards dyes and pigment manufacturing, the possibilities offered by the industrialization of this biobased aromatic intermediate are vast. To extend its ambitions to other markets, Pili will collaborate with partners interested in co-developing ingredients derived from aromatics chemistry and committed to decarbonizing their product portfolios.

In addition to this first biobased compound, the company is actively developing other mono and polyaromatic molecules. Its ambition is clear: becoming the leader in the large-scale production of biobased aromatic compounds, paving the way for a significant decarbonization of the chemical industry and our daily lives.

About Pili

Pili is the leader in biobased dyes and pigments. Its unique fermentation and sustainable chemistry processes, enable the production of high-performance, and low-carbon colors.

Its technology aims at decarbonizing the color industry by drastically reducing the use of chemicals and fossil resources, particularly oil. Its products are designed for the textile, inks, paints & coatings and plastics sectors.

Founded in 2015, Pili operates from 3 different sites: Toulouse White Biotechnology (TWB), Paris region and the Roches-Roussillon industrial platform. With around 40 employees to date, the company has invested over €35 million since its launch to industrialize its innovative processes.

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