

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

TOULOUSE, FRANCE, April 23, 2024 /EINPresswire.com/ -- [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.



Pili biobased anthranilic acid powder. Credits Marie-Sarah Adenis

"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".

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*Guillaume Boissonnat-Wu,
Pili's Scientific and Industrial
Director*

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.

Julie LACONDEMINE

Pili

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