

Vibrant all-natural dyes harvested from microorganisms could bring sustainability to fashion and food industries

Biotechnology is revolutionizing the world of natural color production, bringing forth a new era of captivating shades. Advances such as Givaudan's upcoming acid stable blue are proving that ancient techniques can be used in new ways to create vibrant colors that perform well in application.

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However, biotechnology also includes concepts like the fermentation of fungi and yeast. In fact, fermentation is the most traditional method of biotechnology. It has been known for centuries to produce food products like yogurt, cheese, beer, wine, kimchi, or fermented bean paste. More recently, it also includes the cultivation of microorganisms to obtain substances like protein and polysaccharides as well as natural pigments.

"We truly believe that these ancient techniques can be applied in new ways, serving as a great enabler to deliver vibrant natural colors with exciting opportunities to improve stability and performance. For example, we can use superhero microorganisms that grow in harsh conditions of temperature, salinity, or acidity to produce colors with superior performance," says Raja Chouket, Category Technical Leader for Givaudan Sense Colour.

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"In our case, the biomass of a microalgae is produced to obtain the food colorant. By selecting the right conditions tailored for the microorganism, we can maximize the amount of biomass and color molecules produced," says Markus Kaufmann, Research Investigator at Givaudan Taste & Wellbeing.

[**This is an excerpt. Read the original post here**](#)