

INDIGOIDINE NATURAL BLUE DYE

The indigoidine compound developed at Utah State uses an innovative method to produce a natural, safe deep blue dye that retains its brightness.

PROBLEM

Dyes are commonly used in food, clothing, cosmetics, paper and other consumer products. While it's most important to keep unpurified dyes out of food and drinks, consumers are increasingly aware of synthetic ingredients found in everyday products and look for natural substitutes whenever possible. With growing concern over meeting consumer demand, many companies are ready to replace some or all of their synthetic chemical-based dyes, especially blue, with natural dyes.

SOLUTION

Researchers at Utah State took a blue tint originally synthesized from a bacterial strain that does not produce significant quantities of indigoidine and mimicked the organism's biosynthetic machinery inside a heterologous host cell: E. coli. These mostly harmless bacteria can produce significantly higher yields of the blue pigment and do so without using synthetic compounds that could pose a threat to human health and the environment.

BENEFITS

The blue color of the indigoidine compound is bright and sustainable. As a natural dye, it has promising health benefits as an antioxidant and antimicrobial actor. Because of a new purification process patented with the compound, indigoidine natural blue dye is safe to use in food and drinks.

APPLICATIONS

Indigoidine natural blue dye is a promising alternative to the synthetic dyes used to colored jeans, leather, food, beverages, cosmetics and paper.

CONTACT

Questions about this technology including licensing availability can be directed to:

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PATENT STATUS

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WEBSITE

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indigoidine](http://rgs.usu.edu/techtransfer/indigoidine)