

News Release

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BASF and Isobionics launch Isobionics Santalol, an alternative to sandalwood oil

Ludwigshafen, Germany, July 15, 2020 - BASF Nutrition & Health and Isobionics® are launching their first joint product, Isobionics® Santalol. Thanks to its woody odor profile, the new fragrance in BASF's portfolio is a convincing alternative to sandalwood oil.

The proprietary manufacturing process of Isobionics Santalol makes the product unique. It is produced on a biotechnological basis from renewable raw materials: The starting material for the fermentation process is corn starch obtained from corn grown in Europe. Fermentation is an ancient cultural technique known from processes such as brewing beer and baking bread. In this process, a substance is converted into another substance with the help of microorganisms such as bacteria or fungi.

The original sandalwood oil is extracted from the wood and roots of the white sandalwood tree. The trees are not ready for harvesting until they are about 30 years old. Their existence is highly endangered by overexploitation. The sandalwood tree is therefore on the Red List of the International Union for Conservation of Nature (IUCN). However, the demand for the popular scent remains unchecked.

"With our new development we focus on the needs of our customers, who demand reliability in the supply of raw materials. Isobionics Santalol is highly available and conserves natural resources. It offers consistent high quality and is independent of weather and harvesting conditions," says Steffen Goetz, Head of BASF's Aroma Ingredients business.

"Replacing real sandalwood oil is a challenge that we have mastered with Isobionics Santalol. Our Santalol is the heart of sandalwood oil," says Toine Janssen, founder of Isobionics. "In fragrance compositions, Isobionics Santalol brings more volume and warmth. Floral-oriental fine fragrances are enhanced by the creamy sandalwood note."

As an alternative to sandalwood oil, Isobionics Santalol is particularly suitable for use in perfumes and exclusive personal care products. Other products derived from the company's proprietary biotechnology platform include citrus oil components such as valencene and nootkatone.

BASF acquired Isobionics, a leading innovator in biotechnology for the production of natural flavor ingredients, in September of last year. The market launch of the new fragrance demonstrates the successful collaboration between the two companies.

About BASF's Nutrition & Health division

BASF Nutrition & Health provides a comprehensive product and service portfolio for the human and animal nutrition, pharmaceutical, ethanol and flavor & fragrance industries. Together with our customers, we play an active role in enhancing the nutrition, health and wellbeing of consumers all over the world. Our products fulfill the highest safety, regulatory and sustainability standards. Our human nutrition solutions include vitamins and carotenoids, plant sterols, lutein and sterol esters, emulsifiers, high-concentrated omega-3 fatty acids, human milk oligosaccharide and peptides. Vitamins and carotenoids also form an important part of our animal nutrition portfolio, as do other feed additives such as trace elements, enzymes and organic acids. We provide the pharmaceutical industry with a broad range of excipients and selected large-volume active pharmaceutical ingredients such as ibuprofen and omega-3 fatty acids. Leveraging our advanced technology, we create high performance industrial enzymes for different markets, such as ethanol production. Furthermore, we offer aroma ingredients such as citral, geraniol and L-menthol. BASF Nutrition &

Health operates sites in Europe, North America, South America and in Asia-Pacific. For more information, go to www.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 117,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2019. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.