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# PRESS RELEASE

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## **5-HMF leader AVA-CO2 successfully develops interface for different FDCA oxidation routes.**

**World leader in 5-HMF production, AVA-CO2 has successfully developed its patented, water-based 5-Hydroxymethylfurfural (5-HMF) process even further. A newly developed interface allows for the use of different solvents which are tailored to the oxidation processes for producing 2,5-Furandicarboxylic acid (FDCA) on an industrial scale. This development enables a more flexible implementation of industrial 5-HMF and FDCA production, paving the way for using polyethylene furanoate (PEF) in competitive application markets such as bottles or films for food packaging.**

A downstream product of 5-HMF, FDCA is the basis for PEF. PEF has superior product properties such as an improved gas barrier, a higher modulus and a lower melting point compared to petro-based polyethylene terephthalate (PET), a less sustainable alternative which PEF can replace. As well as targeting bottling or films for food packaging, AVA-CO2 sees additional potential to open up new markets, which have so far not been served by PET or other plastics. PEF-based products can also be used in the cosmetics, personal care, detergent and medical technology industries.

The water-based process patented by AVA-CO2 for a low-cost industrial production of bio-based platform chemical 5-HMF is scalable and provides the 'missing link' for large-scale production of FDCA and PEF. The new development will allow AVA-CO2 to use water as well as other solvents such as acetic acid in FDCA oxidation processes based on 5-HMF. The new interface allows for example for the use of 5-HMF as a 'drop-in' in purified terephthalic acid (PTA) production plants.

In 2019, AVA-CO2 will start production of 5-HMF / FDCA in an industrial production plant with a total capacity of 120,000 tonnes FDCA per year. In a first phase starting in 2019, the plant will produce 30,000 tonnes of FDCA to be used for specific PEF applications. First PEF products – based on 5-HMF produced by AVA-CO2 subsidiary company AVA Biochem – will be jointly-produced and tested with globally active partners from the value chain. A first financing round for the plant's engineering work has already been completed.

"Further developing the existing, highly-efficient 5-HMF production process is another important milestone for AVA-CO2, opening up new, fantastic cooperation opportunities with different partners across the value chain. With this new interface, sustainable, innovative and competitive PEF-based solutions are a step closer," said Thomas M. Kläusli, Chief Marketing Officer and Spokesperson for AVA-CO2.

### **About AVA-CO2**

Biochemistry company AVA-CO2 is a leader in the use of hydrothermal processes for material and energetic use of biomass. The range of services provided by the company include a patented process for large-scale production of bio-based platform chemical 5-HMF (5-hydroxymethylfurfural). This is a renewable substitute for petro-based raw materials in the chemical and pharmaceutical industries and is also the basis for FDCA and therefore 100% bio-based PEF packaging. The Swiss company has its headquarters in Zug and subsidiaries elsewhere in Switzerland and Germany.

### **Contact AVA-CO2**

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