

Joint News Release of LANXESS and Genomatica

### **First production of bio-based polybutylene terephthalate (PBT) in a world-scale plant using 1,4-butanediol (BDO) made from renewable feedstock**

- **20 tons of bio-based BDO made with Genomatica's process converted into PBT**
- **Product quality of bio-based PBT fully within specification and equivalent to petro-based PBT**

**Leverkusen, San Diego** – LANXESS and Genomatica announce that LANXESS has run a production campaign of bio-based PBT in LANXESS' world-scale production plant using 20 metric tons of bio-based BDO made with Genomatica's commercially-proven process. This BDO fully complied with the demanding LANXESS specifications for petro-based BDO allowing a direct feed of 100% bio-based BDO into the continuous production process.

The properties and the quality of the resulting bio-based PBT are fully equivalent to conventional petro-based PBT with regard to all tested parameters. The world-scale PBT plant, with a capacity of 80,000 metric tons per year, is located in Hamm-Uentrop, Germany, and operated as a joint venture in which LANXESS has a share of 50%.

Genomatica's BDO process technology converts sugars – a renewable feedstock – into the major chemical BDO in a patented, 'direct' fermentation process.

"We were excited to validate the bio-based BDO made with Genomatica's process as a one-to-one replacement for petro-based BDO for the production of our PBT," said Hartwig Meier, Head of Global Product and Application Development of the High Performance Materials Business Unit of LANXESS. "This is a strong signal to the market and a tremendous step forward in our future

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plans to offer our high-tech plastic Pocan in a bio-based version, too. Due to its unchanged properties Pocan compounds based on bio-based PBT can directly be used in established application fields such as automotive or electro & electronics area. This fits very well with our strategy of 'Green Mobility'."

"LANXESS' achievement proves how quickly bio-based monomers can be integrated into world-scale polymer production plants when you deliver the exact same performance for an existing, high-volume chemical," said Christophe Schilling, Ph.D., CEO of Genomatica. "This is additional proof that we got the details right."

#### **About Lanxess**

LANXESS is a leading specialty chemicals company with sales of EUR 9.1 billion in 2012 and roughly 17,400 employees in 31 countries. The company is currently represented at 50 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainability indices Dow Jones Sustainability Index (DJSI) World and FTSE4Good as well as the Carbon Disclosure Leadership Index (CDLI).

#### **About Genomatica**

Genomatica is a widely-recognized technology leader for the chemical industry. It delivers new manufacturing processes that enable its licensee partners to produce the world's most widely-used chemicals a 'better way', from renewable feedstocks, with better economics and greater sustainability than petroleum-based processes. Genomatica's first process, for BDO, is now commercial. Genomatica is also developing processes for other high-volume chemicals, including butadiene. Genomatica's recognition includes the 'Wall Street Journal Technology Innovation Award', 'ICIS Top 40 Power Players: Ones to watch', the 'EPA Presidential Green Chemistry Challenge Award' and being voted two years in a row 'No.1 in the Biofuels Digest's 30 Hottest Companies in Renewable Chemicals and Biobased Materials'. More information at [www.genomatica.com](http://www.genomatica.com).



With any questions to Genomatica concerning this news release, please contact: Rob Adler, tel. 001 415.984.1970 x0104, [radler@pr-vantage.com](mailto:radler@pr-vantage.com).

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## News Release

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### **Forward-Looking Statements.**

This news release may contain forward-looking statements based on current assumptions and forecasts made by LANXESS AG management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

### **Information for editors:**

All LANXESS news releases and their accompanying photos can be found at <http://press.lanxess.com>. Recent photos of the Board of Management and other LANXESS image material are available at <http://photos.lanxess.com>. The latest TV footage, audiofiles and podcasts can be found at <http://multimedia.lanxess.com>.

You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.

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