

LANXESS expands design software with food module

- **LewaPlus calculates treatment of sugar solutions in a practice-oriented way**
- **Design of new systems and optimization of existing ion exchange systems**
- **Free choice of regeneration and rinsing steps enables reliable calculation of operating costs**

LANXESS AG

Contact: Ilona Kawan
Corporate Communications /
Trade & Technical Press
Kennedyplatz 1
50569 Cologne
Germany

Phone: +49 221 8885-1684
ilona.kawan@lanxess.com

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Cologne, April 7, 2022 – The specialty chemicals company LANXESS has added functions for the food industry to its LewaPlus design software. The new module enables the dimensioning of ion exchange systems including a number of unique process configurations that can be achieved only with Lewatit types specially developed for food applications. The intuitive LewaPlus design software has been a comprehensive tool aiding in the planning and design of industrial water treatment systems with ion exchange and membrane systems for ten years.

“Now we can also offer the advantages of the LewaPlus software, which is available in eleven languages and is utilized by users in 90 countries on six continents, to our customers in the food industry. This will enable users from this industry to design systems with even greater practice orientation and convenience,” said Dr. Nadja Hermsdorf, Technical Marketing Manager in the Liquid Purification Technologies (LPT) business unit at LANXESS.

As of now, the new module will be available for download. There will be no charge for using it nor for participating in a webinar series that LANXESS is already offering for training purposes.

Dimensioning of new systems for treating sugar solutions

In systems for treating sugar, the regeneration and rinsing steps needed for the operation of ion exchangers are very different. As a

result, it becomes a challenge to develop a general rule for the most efficient way to regenerate an ion exchanger while making optimum use of capacity. With LewaPlus, design software for the industrial treatment of aqueous sugar solutions is available for the first time. The new module allows these individual steps to be designed in a specific way such that it is possible to calculate the quantities of water and chemicals actually needed.

The sugar solutions are end products that arise from starch treatment, such as glucose, dextrose or HFS 42 and HFS 55 (high fructose syrup with a fructose concentration of 42 or 55 percent in the dry substance). "Consideration is already being given to expanding the module in the future. We are planning to facilitate system design for further products from the food industry. For example, these include gelatin, liquid sugar, thin sugar beet juice and really all components of food and drink that are treated using ion exchangers in order to significantly improve product quality," announced Hermsdorf.

Costs at a glance

The cost calculation that is already available in LewaPlus for industrial water treatment with ion exchangers has also been incorporated in the new food module. It can be used to determine the investment and operating costs of a production system for treating sugar solutions. The investment costs include expenses for installing the system as well as procuring the ion exchange resins. The operating costs comprise expenditure on regeneration, water supply and wastewater disposal. A cost forecast helps users to estimate the expenses over the course of the system's planned total service life (total cost of ownership, TCO).

Optimization of existing systems for treating sugar solutions

The new LewaPlus module also enables users to check the cost effectiveness of existing sugar treatment systems. This means

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LANXESS is offering the first software solution that makes it possible to estimate the optimum use of ion exchangers for producing the best possible quality of sugar. Potential savings in the operating costs can also be identified.

The properties of sugar solutions are subject to major fluctuations not only in terms of salt content and sugar composition, but also in relation to color, taste and smell. "With existing systems, we often find that the ion exchange capacity could be better utilized and that there is improvement potential in terms of water and chemical consumption in particular. Ultimately, sustainability considerations as well as reductions in operating costs, through reductions in waste, use of chemicals and water consumption, for example, are playing an increasingly important role," said Hermsdorf.

Detailed information on products and services can be found at <https://lanxess.com/en/Products-and-Solutions/Brands/Lewatit/LewaPlus-Software>. The LewaPlus design software can be downloaded from there free of charge. Interested parties can also register for the webinars on the new module there.

LANXESS is a leading specialty chemicals company with sales of EUR 7.6 billion in 2021. The company currently has about 14,900 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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Information for editors:

LANXESS AG

Contact: Ilona Kawan
Corporate Communications /
Trade & Technical Press
Kennedyplatz 1
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Germany

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News Release

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