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The right water technology when combining chocolate with fruit

Wastewater varies depending on what is being produced. A fruit preparation manufacturer added chocolate to its range of flavours – thereby adding fatty components to its wastewater. The result was a challenge that it decided to overcome with the expertise of EnviroChemie.

Fruit concentrate is a key part of many foods. As such, most yoghurt makers, for example, do not produce their own fruit concentrate, but instead procure it from specialised manufacturers.

An anaerobic Biomar wastewater treatment plant from EnviroChemie has been cleaning the wastewater generated by a manufacturer of fruit preparations for 15 years, in doing so reliably ensuring that the required effluent limits are met. This produces up to 3,000 cubic metres of biogas daily, which the company uses to generate steam.

When the stracciatella flavour was added to its range of products, the composition of the wastewater also changed. In this case, the wastewater contained up to 500 mg/l more fats or lipophilic substances. Because this mixture is rather unusual for a fruit preparation manufacturer, it also had less process experience in this area. After all, fat can compromise the existing biological wastewater plant, as it was not designed for this purpose.

In this case, the most efficient solution was an additional treatment step: a Flomar dissolved-air flotation plant. This series is especially suitable for treating wastewater with a high proportion of fat and is also compact and saves space. EnviroChemie integrated the pretreatment step into the existing plant during ongoing operation – an important customer requirement.

As a result, the company now has a sustainable solution for treating its production wastewater. The biological wastewater treatment process generates biogas, which significantly lowers primary energy demand and improves its carbon footprint. At the same time, the procedure for separating the sludge from the wastewater is designed in such a way that as little sludge is produced as possible, thereby optimising disposal costs.

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