

100 years of citric acids from a town called Tienen

Citrique Belge
Tienen, Belgium



In 1916, Alphonse Cappuyns began research into the production of citric acid through the fermentation of sugar. 100 years later, Citrique Belge is one of the largest citric acid manufacturers in the world.

The citric acid is extracted from the sugar via two separate production processes: fermentation and refining.

The fermentation starts with the processing of the molasses, where the citric acid is extracted from the sugar by spraying a mould.

In the second step, which is refining, the citric acid is filtered and purified. This results in the production of crystals. It is in this last step of the “fluid-bed” process that Munters technology comes into play.

Advantages:

- Low energy bill
- Positive total cost of ownership
- Innovation without production downtime
- Stable installation
- Less control tasks
- Healthier environment



Left: Kristof Scheepmans, Sales Engineer Munters
Right: Pieter Spaepen, Project leader Citrique Belge



A sustainable solution

“Munters is the reference for process drying and climate control for production purposes and that’s why we approached them in the first place” says Pieter Spaepen, Project Manager of Citrique Belgium. “The old installation had to be replaced, and it was no longer able to help deliver the vision and standards of Citrique Belge. The new installation had to meet current standards of safety, health, reliability and sustainability, which are the standards that Munters solutions reliably meet. Using this system, we bring in 55,000 m³/h of outside air with a maximum temperature of 34°C and 15 grams of continuous drying, which means 3.5 grams of moisture per kg of air.

The system was designed by Munters to be extremely sustainable by using the right technology combined with the available utilities on site. Low pressure steam and the use of cooling tower water are just a few of the considerations that ensure a low energy bill and a positive Total Cost of Ownership (TCO).

“The Munters project team also helped to ensure that the production process did not grind to a halt at any point during the conversion and testing,” adds Pieter, “which was a major plus in our collaboration. In September 2019 we started up our Munters installation. Our partnership with Munters, and the installation of the DSS3000, has proved to be the right choice”.

Stable and safe installation, less control tasks, thus saving time.

It is also now safer work environment for the people of Citrique as they no longer come into contact with the carcinogenic waste products left behind by the old liquid lithium chloride installation. What’s more, the Munters sorption dryer is so stable and hassle-free that fewer control tasks are required to keep the system running, freeing up extra time for Citrique Belge staff to focus on the core task: producing citric acid efficiently and healthily for customers.

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