Novasep and Danisco announce the first betaine industrial production process from bioethanol side-stream

Joint project will offer a cost-effective, environmentally friendly process to produce betaine, an animal feed ingredient in short supply

Pompey, France, and Copenhagen, Denmark, December 15, 2010 - Novasep Process, the bioprocess division of Novasep, a leading supplier of manufacturing solutions to the life sciences industry, and Danisco, a world leader in food and feed ingredients, enzymes and bio-based solutions announce today the scale-up of an innovative process for the production of natural betaine. The plant will be the first to exploit a new extraction process using vinasse, a byproduct of sugar-beet-derived bioethanol. Its use will enable Danisco to substantially increase the availability of natural betaine, which is globally used as a technical animal feed ingredient and currently in short supply.

Danisco pioneered the research and application of natural betaine in animal nutrition in the early 1990s and has clearly demonstrated superior value compared to synthetic alternatives. Unlike synthetic betaine, natural betaine acts as an osmolyte, improving intestinal health and reducing the negative impact of heat-stress on animal production. Currently, market demand for natural betaine outweighs production. The betaine from the new plant will be sold by Danisco as Betafin™.

As well as increasing the availability of betaine, the new process will allow the betaine-extracted bioethanol vinasses (residues) to be further recycled and sold as crop fertilizer. Until now, it was possible to extract natural betaine only from sugar-beet molasses, a side stream of sugar production. The new process will be increasingly valuable as the increase of the bioethanol production using beets will generate more and more vinasses.

Novasep Process is responsible for the engineering of the new plant and will provide the complete process line which combines Danisco’s proprietary chromatographic technology, known as NS2P, with membrane and evaporation steps. This project is the latest development of the FAST alliance between Novasep and Danisco in the field of betaine extraction and purification, which has already given birth to several betaine production plants.

“I am delighted about this new milestone in our longstanding relationship with Danisco,” said Antoine Baule, president of Novasep Process, the bioprocess division of Novasep. “By playing a key role in this project, Novasep has again demonstrated its leadership in the development or scale-up of innovative processes in the industrial biotech industry, and its ability to collaborate with key customers and engineering partners in the long term through win-win partnerships.”

Juhani Kuusisto, director of operations at Danisco in charge of betaine sourcing added: “I am very happy about our cooperation with Novasep Process. This new project demonstrates Danisco’s ability to adjust to new market developments and to adapt its NS2P process to new feedstock. This process will substantially increase natural betaine availability on the market place.”

Danisco and Novasep will provide technological support for the betaine production plant with De Smet Engineers and Contractors, being in charge of building construction, erection services and auxiliaries supply of the new development. Tereos, a world player in sugar, starch and bioethanol production, will supply the vinasses and operate the plant at its facility in Origny, France.

About Novasep
Novasep develops, markets and operates innovative technologies providing life science industries with safe and cost-effective production of active molecules. The global manufacturing solutions offered by Novasep include process development services; purification equipment and systems; contract manufacturing services; and complex active molecules. The applications of Novasep’s offering cover the pharmaceutical, biopharmaceutical, food, functional ingredients and bio-industries markets.

www.novasep.com
About Danisco
With a rich and innovative portfolio, Danisco is a world leader in food and feed ingredients, enzymes and bio-based solutions. Using nature’s own materials, science and the knowledge of our 6,800 people, we design and deliver bio-based ingredients that meet market demand for healthier and safer products. Danisco’s ingredients are used globally in a wide range of industries – from bakery, dairy and beverages to animal feed, laundry detergents and bioethanol – to enable functional, economic and sustainable solutions. Headquartered in Denmark and operating from more than 80 locations, Danisco’s key focus is to become our customers’ First choice and a truly market-driven global business.
www.danisco.com

About Tereos
Tereos is a cooperative agro-industrial group specialized in the primary processing of sugar beet, sugar cane and grains. Tereos provides sustainable outlets for 1,000,000 hectares of agricultural production through 35 industrial facilities across three continents: Europe, South America and Africa.
Tereos has 14,000 permanent employees, who work on producing and processing sugar beet, sugar cane and grains and marketing a full range of sugar, starch, alcohol and bioethanol products, as well as by-products intended for animal feed and electrical power. Tereos is now a global leader in the various sectors in which it operates.
www.tereos.com

About De Smet Engineers and Contractors
De Smet Engineers & Contractors (DSEC) is a privately held limited liability company incorporated in Belgium in 1989. It has an established reputation as a general contractor (EPC Contractor), specializing in the agro-industrial field, i.e.: sugar and sugar derivates, bioethanol, vegetable oil extraction and refining, biodiesel and bioenergy generation from biomass (cogeneration).
DSEC is in a position to provide Investors, Banks, Lenders and Credit Insurance Companies with a single point responsibility set-up that includes design and engineering, equipment supply and construction services with guaranteed performances under one contract.
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