

COMPANY PROFILE

Lallemand Biofuels & Distilled Spirits

Lallemand Biofuels & Distilled Spirits is the leading supplier of fermentation ingredients and value-creating services to the fuel ethanol, distilled beverage, and industrial alcohol industries.

Lallemand Biofuels & Distilled Spirits is a unit of Lallemand Inc., the Canada-based yeast and bacteria producer. Lallemand Biofuels & Distilled Spirits (LBDS) was formed in 2012 with the acquisition and integration of North American Bioproducts Corps' alcohol and distilling activities into a new global business unit. It became part of the legal entity Lallemand Specialties Inc. to act as the marketing and distribution arm of the Specialty Division to the worldwide fuel ethanol and distilling industries. It is headquartered in Duluth, GA with a regional office in Milwaukee, WI (United States) and uses a network of refrigerated (for fresh yeast) and other warehouses to serve its customers.

PRODUCTS

Lallemand Biofuels & Distilled Spirits is dedicated to supporting the industry with high-quality, cutting-edge products:

YEAST: Our team supports a range of yeast strains for use in a variety of feedstocks such as cereals, sugar cane, sugar beet juice, and molasses. Yeast strains are selected for use within a wide range of variables such as pH, temperature, and various fermentation processes. Yeast formulations such as stabilized liquid, fresh crumbled, or active dry yeast are available.

NUTRITION: Our yeast nutrients contain proprietary blends of organic and inorganic nitrogen, trace minerals, enzymes, and vitamins that provide yeast with the correct nutrient balance for optimum growth and reproduction.

ANTIMICROBIALS: The Lactoside™ and Bactinex® line of antimicrobials offers a full range of solutions for microbial control in fermentation.

PRODUCTION

Lallemand produces active dry yeast, fresh yeast, and yeast nutrient ingredients at its fourteen plants in North America and Europe. Our yeast (fresh and active dry) is distributed from multiple warehouses within the US (Colorado, Iowa, Wisconsin and Georgia) and internationally from our Fredericia (Denmark) location. Our yeast nutrients are blended and packaged at contract facilities in the U.S. and Europe and distributed from our Wisconsin and Denmark warehouses. Our antimicrobials are produced in the U.S. and distributed from our warehouses in the U.S. and Denmark.

R&D/APPLICATIONS

The Lallemand Biofuels & Distilled Spirits laboratories are located in two locations in North America. As part of the corporate headquarters in Duluth, GA, this LBDS laboratory focuses on quality control, field technical support and applications. The other lab is located within the Industrial Partnership facility of the Canadian National Research Council's Biotechnology Research Institute (BRI) in Montréal.

Lallemand's specialized laboratories are used for yeast scale-up, fermentation modeling and molecular biology. Available services include custom product development and analytical support. Internal research projects are focused on strain selection, yeast nutrition, and fermentation applications. We also collaborate with academic researchers on core research topics and with our customers for pilot- and production-scale applications development.

SALES & SERVICE

Sales and service in the U.S., Canada, and Europe are provided by technical sales representatives experienced in alcohol production. Customer service for Europe is provided by our Europe-based technical sales representatives, with distribution from Lallemand's European facilities. Customer service and distribution outside Europe are provided by select distributors or our dedicated LBDS staff.





PRODUCTS & SERVICES

OUR COMPREHENSIVE APPROACH: Lallemand Biofuels & Distilled Spirits provides a complete fermentation package to the industry, from design engineering firms to the people working on your plant floor. Our single-source philosophy gives you the highest quality ingredients, outstanding service and education, and industry-leading experience. Customers tell us we're different in our hands-on, day-to-day approach to customer service and fermentation management — *we pay attention to the details.*

TRUSTED FERMENTATION INGREDIENTS: When you use products from Lallemand Biofuels & Distilled Spirits, you use the best fermentation ingredients available. Our product line contains several industry standards, including:

- Yeast for Fuel Ethanol and Beverage Alcohol
- Yeast Nutrients for Fuel Ethanol and Beverage Alcohol
- Microbial Control Agents

INDUSTRY-LEADING EXPERTISE: Lallemand Biofuels & Distilled Spirits' technical sales and service team is second to none. We hire industry-experienced sales and technical people who are knowledgeable about the facts and figures of fermentation. We put Fermentation First™ to provide you with solutions that help you maximize profitability.

PARTNERSHIP CONSULTING: We add value to our ingredients by providing you with continuous in-plant expertise. Our experienced technical professionals serve as on-site consultants to your ethanol plant staff, tailoring solutions to achieve your plant's objectives. Our knowledge is your knowledge.



INDUSTRY EDUCATION

The Ethanol Technology Institute, led by Scientific Director Dr. Graeme Walker, publishes The Alcohol Textbook and presents The Alcohol School and The Operators' School. Our Schools offer fundamental education for the evolving ethanol industry. For more about the Schools and the textbook, please visit www.lallemandbds.com.

The Alcohol Textbook is a preeminent reference for fuel, distilled beverage and industrial alcohol producers — now available in a completely revised fifth edition. There is no better tool for understanding the ethanol industry than The Alcohol Textbook.

The Alcohol School was the first to bring higher learning to the industry and has been the only source for comprehensive industry education since 1980. The weeklong program is presented each year in Toulouse, France, and in Montréal, Canada.

The Ethanol Short Course is a comprehensive training program for the fuel ethanol industry. The objective of this course, which is conducted by industry experts, is to educate participants on the basics of fuel ethanol production and offers an in-depth study of similar principles. Lecture style presentations will be given for a more practical or technical understanding of the fuel ethanol production process.

The Operators' School is a three-day program is a practical workshop for ethanol plant operators. This School is organized around lectures demonstrations and troubleshooting, where classroom theory is put into context.

Advanced Lab Training is targeted at Lab Managers and Technicians who are experienced or have completed basic lab training. The Advanced Lab Training is technical in nature and will focus on advanced lab testing methods and data interpretation. Advanced education and instruction will likely offer multiplicity and better prepare technical staff to minimize problematic fermentation events. This event is held in the LBDS lab facility in Duluth, GA usually during the first part of the year.