

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 (LBDS), based in Milwaukee, WI, is a business unit of the Canadian yeast and bacteria producer, Lallemand, Inc. LBDS acts as the marketing and distribution arm of Lallemand Specialties, Inc. to the worldwide fuel ethanol and distilled spirits industries. Our global presence, research based product development initiatives, and partnership focused approach allow us to offer a complete fermentation package to our customers.

PRODUCTS

TRUSTED FERMENTATION INGREDIENTS: When you use products from LBDS, you use the best fermentation ingredients available. Lallemand Biofuels & Distilled Spirits is dedicated to supporting the industry with high-quality, cutting-edge products.

Lallemand produces, packages, and distributes active dry yeast, fresh yeast, and yeast nutrients at plants in North America and Europe. Our antimicrobials are produced in the U.S. and distributed from our warehouses in the U.S. and Europe.

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.

ENZYMES: Enzymes are essential processing aids that are required to achieve fermentation rates, yield, and completion.

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

BACTERIA: Our newest product line for distilled spirits producers; DistilaBact™ LP is a lactic acid bacteria product for managing sour mash production.

SALES & TECHNICAL CONSULTING

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 the solutions that help you maximize profitability.

Sales and technical services are provided by a network of globally based dedicated staff in key markets; North and South America and Europe. And with a network of staff and distributors in emerging markets; Africa and Asia.

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.

R&D/APPLICATIONS

Lallemand Biofuels & Distilled Spirits laboratories are located in two locations in North America. Our facility in Lebanon, NH actually houses two labs; one dedicated to applications testing and one to research and development. As second research and development 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.

Value Added Services tests are part of a comprehensive assessment program designed to help improve fermentation efficiency and ensure that your fermentation and LBDS' products are performing to the highest standards.

We also collaborate with academic researchers on core research topics and with our customers for pilot- and production-scale applications development.





INDUSTRY EDUCATION

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

The Alcohol Textbook is a preeminent reference for fuel, distilled beverage, and industrial alcohol producers - now available in a completely revised sixth 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 week long program is presented each year in a European location in the spring and in Montréal, Canada for the fall.

The Alcohol School Concise, our newest training program, is a condensed version of The Alcohol School designed to move around to various regions and offers an agenda tailored to the main spirit production of that region.

The Biofuels Academy is designed as The Practical Workshop for Ethanol Plant Operators and is organized around lectures and troubleshooting exercises, where classroom theory is put into context. The lectures are designed to cover the complete processing areas, consisting of raw materials through distillation and co-products. To support the program, laboratory and functional demonstrations will be conducted as part of the training. Troubleshooting and case studies are also discussed, along with the needs for proper documentation control and baseline studies.

Lunch and Learns are a series of short, single topic one day trainings offered to fuel ethanol producers. A technical service team member will come to your facility and give one on one instruction to your team members on a selected topic.

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.