

The Alcohol School 2018



Agenda

Montréal

InterContinental Montréal

September 9-14, 2018



ETHANOL
TECHNOLOGY
INSTITUTE

6120 West Douglas Avenue
Milwaukee, WI 53218 USA
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Ethanol Technology Institute Staff

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Hotel Information

InterContinental Montréal

360 rue St-Antoine Ouest
Montréal, Québec H2Y 3X4 Canada
514 987-9900
Fax 514 847-8730
<https://aws.passkey.com/go/AlcoholSchool2018>

Montréal Information

Greater Montréal Convention and Tourism Bureau

www.tourism-montreal.org

Facility Visits

Préfontaine Yeast Plant

Lallemand Inc.

1620 rue Préfontaine
Montréal, Québec H1W 2N8
Canada
514 522-2133
www.lallemand.com

National Research Council of Canada

6100 Royal Mount
Montréal, Québec H4P 2R2
Canada
514 496-6100
www.nrc-cnrc.gc.ca/eng/

Diageo Global Supply Valleyfield

1 rue Salaberry
Valleyfield, Québec J6T 2G9
Canada
450 373-3230
www.diageo.com

Greenfield Global Quebec, Inc.

3300 boulevard Marie-Victorin
Varenes, Québec J3X 1P7
Canada
450 652-1800
www.greenfield.com

The Alcohol School 2018



Sunday

SEPT 9, 2018

5:00 pm – 9:00 pm

REGISTRATION AND WELCOME

Chez Plume
Bistro

Once you've checked into the hotel, please come and find the Alcohol School staff at the Chez Plume Bistro (on the reception desk level across the bridge) anytime after 5 pm. You will have a chance to register for the school, have your picture taken (to later share with your classmates for networking purposes), put your school materials back in your room, and then join us for hors d'oeuvres and an open bar to say hello to old and new friends and get the week off to a good start.

The Alcohol School 2018



Monday

fuel alcohol session

SEPT 10, 2018

7:30 am – 8:30 am	REGISTRATION	SARAH BERNHARDT ROOM
8:30 am – 8:45 am	Welcome <i>Angus Ballard, Lallemand Biofuels & Distilled Spirits (USA)</i>	
8:45 am – 9:00 am	Introduction to the Agenda <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>	
9:00 am – 9:30 am	The Global Fuel Alcohol Industry <i>Craig Pilgrim, Lallemand Biofuels & Distilled Spirits (USA)</i>	
9:30 am – 10:00 am	The Global Distilled Spirits Industry <i>Steve Wright, Lallemand Biofuels & Distilled Spirits and Spiritech (Canada)</i>	
10:00 am – 10:30 am	COFFEE BREAK	
10:30 am – 11:10 am	Grain Receiving, Storage and Milling <i>Chris Richards, Lallemand Biofuels & Distilled Spirits (Canada)</i>	
11:10 am – 11:50 am	Enzymes as Processing Aids in Alcohol Production <i>Phil Shaffer, Lallemand Biofuels & Distilled Spirits (USA)</i>	
11:50 am – 12:00 pm	STRETCH/COMFORT BREAK	
12:00 pm – 12:30 pm	Maximizing Starch Conversion to Ethanol <i>Tony Newton, BASF (USA)</i>	
12:30 pm – 1:00 pm	Troubleshooting Problem Fermentations <i>Ben Sunderhaus, Lallemand Biofuels & Distilled Spirits (USA)</i>	
1:00 pm – 2:00 pm	LUNCH	Maisonneuve
2:00 pm – 2:45 pm	Feedstocks for Fuel Alcohol Production <i>Dale Monceaux, AdvanceBio LLC (USA)</i>	SARAH BERNHARDT ROOM
2:45 pm – 3:30 pm	Wet Mill Processes for Corn Ethanol Production <i>Scott Kohl, White Energy (USA)</i>	
3:30 pm – 4:00 pm	COFFEE BREAK	
4:00 pm – 4:45 pm	Grain Mashing for Fuel Alcohol <i>Tera Stoughtenger, Lallemand Biofuels & Distilled Spirits (USA)</i>	
4:45 pm – 5:30 pm	Fractionation Technologies for Alcohol Production <i>Vijay Singh, University of Illinois (USA)</i>	

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Monday beverage alcohol session SEPT 10, 2018

7:30 am – 8:30 am	REGISTRATION	SARAH BERNHARDT ROOM	
8:30 am – 8:45 am	Welcome <i>Angus Ballard, Lallemand Biofuels & Distilled Spirits (USA)</i>		
8:45 am – 9:00 am	Introduction to the Agenda <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>		
9:00 am – 9:30 am	The Global Fuel Alcohol Industry <i>Craig Pilgrim, Lallemand Biofuels & Distilled Spirits (USA)</i>		
9:30 am – 10:00 am	The Global Distilled Spirits Industry <i>Steve Wright, Lallemand Biofuels & Distilled Spirits and Spiritech (Canada)</i>		
10:00 am – 10:30 am	COFFEE BREAK		
10:30 am – 11:10 am	Grain Receiving, Storage and Milling <i>Chris Richards, Lallemand Biofuels & Distilled Spirits (Canada)</i>		
11:10 am – 11:50 am	Enzymes as Processing Aids in Alcohol Production <i>Phil Shaffer, Lallemand Biofuels & Distilled Spirits (USA)</i>		
11:50 am – 12:00 pm	STRETCH/COMFORT BREAK		
12:00 pm – 12:30 pm	Maximizing Starch Conversion to Ethanol <i>Tony Newton, BASF (USA)</i>		
12:30 pm – 1:00 pm	Troubleshooting Problem Fermentations <i>Ben Sunderhaus, Lallemand Biofuels & Distilled Spirits (USA)</i>		
1:00 pm – 2:00 pm	LUNCH		Maisonneuve
2:00 pm – 2:45 pm	Raw Materials for Beverage Alcohol Production <i>Douglas Murray, Diageo (Scotland)</i>		SALON SHERWOOD
2:45 pm – 3:30 pm	Mash Preparation in the Beverage Distilling Industry <i>Steve Wright, Lallemand Biofuels & Distilled Spirits and Spiritech (Canada)</i>		
3:30 pm – 4:00 pm	COFFEE BREAK		
4:00 pm – 4:45 pm	Rum Production <i>Shernell Layne, Lallemand Biofuels & Distilled Spirits (Barbados)</i>		
4:45 pm – 5:30 pm	Canadian Whisky Production & Aspects of Continuous Improvement <i>Martin Laberge, Diageo Global Supply (Canada)</i>		

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Tuesday

combined
session

SEPT 11, 2018

8:30 am – 9:20 am	Sugar Feedstocks for Fuel and Beverage Alcohol <i>Jaime Finguerut, Centro de Tecnologia Canavieira, CTC (Brazil)</i>	SARAH BERNHARDT ROOM
9:20 am – 10:10 am	Current Challenges and New Opportunities in Alcohol Production <i>Vijay Singh, University of Illinois (USA)</i>	
10:10 am – 10:40 am	COFFEE BREAK	
10:40 am – 11:30 am	Physiology of Ethanol-Producing Yeasts <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>	
11:30 am – 12:20 pm	Back to the Basics of Yeast & Fermentation <i>Mike Ingledew, Professor Emeritus, University of Saskatchewan (Canada)</i>	
12:20 pm – 12:30 pm	STRETCH/COMFORT BREAK	
12:30 pm – 1:00 pm	Yeast Production for Fuel and Beverage Alcohol <i>Tobias Fischborn, Lallemand R & D (Canada)</i>	
1:00 pm – 2:00 pm	LUNCH	Maisonneuve
2:00 pm – 2:45 pm	Yeast: Propagation for Fuel and Beverage Alcohol <i>Craig Wills, Lallemand Biofuels & Distilled Spirits (USA)</i>	SARAH BERNHARDT ROOM
2:45 pm – 3:30 pm	Distillation: Theory <i>Phil Madson, KATZEN International Inc (USA)</i>	
3:30 pm – 4:00 pm	COFFEE BREAK	
4:00 pm – 4:45 pm	Distillation: Practice & Troubleshooting <i>John Cengel, KATZEN International Inc. (USA)</i>	
4:45 pm – 5:30 pm	Membrane Technologies for Alcohol Production <i>Stephan Blum, Whitefox (Canada)</i>	

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Wednesday

combined
session

SEPT 12, 2018

7:40 am	BUSES FOR ALL TO NRC RESEARCH LABS	NRC RESEARCH LABS
8:30 am – 8:40 am	Welcome to Lallemand R&D at NRC <i>Frederic D'Aoust, Lallemand Biofuels & Distilled Spirits (Canada)</i>	
8:40 am – 8:50 am	Introduction to Mascoma <i>Emily Stonehouse, Lallemand Biofuels & Distilled Spirits and Mascoma (USA)</i>	
8:50 am – 9:30 am	New Yeasts for Fuel and Beverage Alcohol <i>Emily Stonehouse, Lallemand Biofuels & Distilled Spirits and Mascoma (USA)</i>	
9:30 am – 10:00 am	Bacterial Contamination in Alcohol Production <i>Jayne Kalbfleisch, Lallemand Biofuels & Distilled Spirits (USA)</i>	
10:00 am – 10:30 am	Contamination Control in a Distillery <i>Francois van Zyl, Lallemand Biofuels & Distilled Spirits (USA)</i>	
10:30 am – 10:55 am	COFFEE BREAK	
11:00 am – 12:00 pm	LAB VISITS	
12:00 pm – 12:30 pm	Applications of Lactic Acid Bacteria in Alcohol Production <i>Jim Steele, Lallemand Biofuels & Distilled Spirits (USA)</i>	
12:30 pm – 1:30 pm	LUNCH	
1:35 pm – 2:40 pm	LAB VISITS	
2:45 pm – 3:20 pm	Key Analytical Methods for Process Monitoring <i>Caleb Ogden, Lallemand Biofuels & Distilled Spirits (USA)</i>	
3:20 pm – 3:50 pm	COFFEE BREAK	
3:50 pm – 4:30 pm	Process Control to Improve Alcohol Yield <i>Hank Brittain, OpX Control Inc (USA)</i>	
4:30 pm – 5:00 pm	Yield, Efficiency and Profitability in Alcohol Plants. <i>Jack Swanson, Lallemand Biofuels & Distilled Spirits (USA)</i>	
5:05 pm	BUSES BACK TO HOTEL	Les Voutes (caves under hotel)
7:00 pm – 10:30 pm	Wine, Beer and Spirits Tasting <i>Complimentary food provided</i>	
Lab Visit I <i>Technology Lab, LBDS</i>	Tour of Fuel Ethanol and Distilled Beverage Laboratory <i>Discussions on various aspects of fermentations applied to beverages and biofuels</i>	
Lab Visit II <i>Strain Development Lab</i>	Tour of Molecular Biology Strain Improvement Laboratory <i>Demonstration of yeast mutagenesis and screening techniques</i>	
Lab Visit III <i>Microbiology Lab</i>	Tour of Culture Collection/Microbiology Laboratory <i>Demonstration of yeast counting by microscope and plating</i>	
Lab Visit IVa <i>Process Lab</i>	Tour of Yeast Scale-up and Process Control Laboratory <i>Demonstration of yeast production and scale-up strategies</i>	
Lab Visit IVb <i>Beer Lab</i>	Tour of Beer Application Laboratory <i>Demonstration of characterization of beer yeast and fermentation ingredients</i>	
Lab Visit V <i>Genetics Lab</i>	Tour of Genetic Identification Laboratory <i>Demonstration of yeast and bacteria identification</i>	
Lab Visit VI <i>Animal Nutrition Lab</i>	Tour of Animal Nutrition Laboratory <i>Discussion of the use of coproducts and their values for animal nutrition</i>	

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Thursday fuel alcohol session SEPT 13, 2018

8:30 am – 9:20 am	Dryhouse Technologies in Distilleries <i>Dale Monceaux, AdvanceBio LLC (USA)</i>	SARAH BERNHARDT ROOM
9:20 am – 10:10 am	Oil Separation from Corn Ethanol Processes <i>Jennifer Aurandt-Pilgrim, Trucent (USA)</i>	
10:10 am – 10:40 am	COFFEE BREAK	
10:40 am – 11:30 am	Management of Distillery Residues <i>Alain Gadbois, Veolia Water Technologies (Canada)</i>	
11:30 am – 12:20 pm	New Technologies for Fuel Alcohol Production <i>Scott Kohl, White Energy (USA)</i>	
12:20 pm – 1:30 pm	LUNCH	
1:30 pm – 5:00 pm	Plant Tours to Greenfield Global, OR Diageo Global Supply OR Lallemand's Préfontaine Yeast Plant	

OPTION #1 Greenfield Global Quebec Inc., Varennes, Québec

Greenfield Global Quebec Inc. is an ICM-designed plant, completed in early 2007, that produces fuel-grade ethanol, carbon dioxide, distillers' dried grains, and MWDGS. Current capacity is 160 million liters (around 42 million US gallons) of fuel-grade ethanol per year, made from 15 million bushels of Québec corn. In 2008, Greenfield Global completed a second ICM-designed plant in Johnstown, Ontario, that produces 200 million liters of fuel-grade ethanol.

OPTION #2 Diageo Global Supply, Salaberry-de-Valleyfield, Québec

The original building dates from 1909 and became a distillery in 1938 producing alcohol for military purposes. It became a whisky distillery in 1945 with the first whisky, Golden Wedding, being produced. During the fifties, new products such as Schenley OFC, Ron Carioca Rum, and Troika Premium Vodka came online. The sixties saw the construction of additional warehouses for aging and the addition of a grain dryer. On October 22, 1969, the one-millionth barrel was produced, followed by the second millionth in 1986. Today, the plant continues to produce world-renowned brands such as Smirnoff vodka, Captain Morgan rums, Gordon's London Dry gin, and VO Canadian whisky. In 2008 the plant was acquired by Diageo, the largest spirits manufacturer in the world. With the 2015 addition of a can line for RTDs and a specialty line for all Crown Royal reserve brands, today the plant produces over 5.5 million cases of beverage alcohol annually.

OPTION #3 Lallemand's Préfontaine Yeast Plant Montréal, Québec

Lallemand was founded in Montréal at the end of the 19th century by a young immigrant from the Alsace region of France, Fred "Lallemand." The plant on Préfontaine Street was built in 1915, with production of baker's yeast starting there in 1923. Roland Chagnon acquired the business in 1952 and set it on a path of expansion. The Chagnon family remains the current owner. Today, the plant produces a range of liquid, cake, and dry yeasts for the fuel ethanol, beverage alcohol, and baking industries.

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Thursday

beverage alcohol session

SEPT 13, 2018

8:30 am – 9:20 am	Beverage Alcohol Distillation Batch & Continuous Processes <i>Alan Wolstenholme, Caledonian Solutions (Scotland)</i>	SALON SHERWOOD
9:20 am – 10:10 am	Flavour Distillation for Grain Whisky <i>Douglas Murray, Diageo (Scotland)</i>	
10:10 am – 10:40 am	COFFEE BREAK	
10:40 am – 11:30 am	Pilot Fermentations for Yield Potential Analysis & Conversion Process Optimization <i>Kevin Smith, Brown-Forman Corporation (USA)</i>	
11:30 am – 12:20 pm	Analytical Methods for Distilled Spirits <i>Douglas Murray, Diageo (Scotland)</i>	
12:20 pm – 1:30 pm	LUNCH	
1:30 pm – 5:00 pm	Plant Tours to Greenfield Global, OR Diageo Global Supply OR Lallemand's Préfontaine Yeast Plant	

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Thursday tour options SEPT 13, 2018

General Description

Each delegate will visit only one of the three tour options shown.

Only those on the Diageo tour will be provided with a box lunch due to the distance from the hotel. Other delegates will have lunch on their own and then join their tour group. Spaces are limited, and tours will be filled on a first-come, first-served basis.

	TOUR OPTION 1: Greenfield Global Quebec Inc.		TOUR OPTION 2: Diageo Global Supply		TOUR OPTION 3: Lallemand's Préfontaine Yeast Plant	
	Group gh	Groups ij	Group a	Group b		
12:30			bus	bus		12:30
1			box lunch served	box lunch served		1
1:30	bus	bus			bus	1:30
2	Greenfield Global Quebec Inc. Fuel Plant	Greenfield Global Quebec Inc. Fuel Plant	Diageo Global Supply Valleyfield Distillery	Diageo Global Supply Valleyfield Distillery	Lallemand Préfontaine Yeast Plant Montréal	2
2:30						2:30
3						3
3:30						3:30
4						4
4:30					bus	4:30
5	bus	bus				5
5:30						5:30
6						6
6:30			bus	bus		6:30
7						7
7:30						7:30

Option 1: Greenfield Global Quebec Inc. Fuel Plant in Varennes, QC. Groups 1g, 1h, 1i, 1j

Option 2: Diageo Global Supply's Distillery in Valleyfield, QC. Lunch on the bus followed by the tour. Groups 2a, 2b

Option 3: Lallemand's Préfontaine Yeast Plant in Montréal. Groups 3e, 3f

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Friday fuel alcohol session SEPT 14, 2018

8:30 am – 9:10 am	2nd Generation Biofuels: Ethanol from Lignocellulose <i>Raquel Rodriguez, Lallemand Biofuels & Distilled Spirits (Spain)</i>	SARAH BERNHARDT ROOM
9:10 am – 9:50 am	Cellulolytic Enhancement of Dry Grind Corn Ethanol Processes <i>Charles Abbas, iBiocat Inc. (USA)</i>	
9:50 am – 10:10 am	COFFEE BREAK	
10:10 am – 10:50 am	Cellulosic Ethanol Production: State of Development <i>Susanne Retka Schill, Editor/Writer (USA)</i>	
10:50 am – 11:00 am	STRETCH/COMFORT BREAK	

Friday beverage alcohol session SEPT 14, 2018

8:30 am – 9:10 am	Gin and Vodka Production <i>Kirsty Black, Arbikie Distillery (Scotland)</i>	SALON SHERWOOD
9:10 am – 9:50 am	Craft Distilling: Challenges and Opportunities <i>Paul Cirka, Cirka Distilleries (Canada)</i>	
9:50 am – 10:10 am	COFFEE BREAK	
10:10 am – 10:50 am	Distilled Spirits Maturation <i>Don Livermore, Hiram Walker & Sons Ltd. (Canada)</i>	
10:50 am – 11:00 am	STRETCH/COMFORT BREAK	

Friday combined session SEPT 14, 2018

11:00 am – 11:40 am	A Nutritionist's View of Distillers Grains <i>Kurt Rosentrater, Iowa State University (USA)</i>	SARAH BERNHARDT ROOM
11:40 am – 12:30 pm	Technical Opportunities in the Industry – Where are we Going? <i>Phil Madson, KATZEN International Inc. (USA)</i>	
12:30 am – 1:00 pm	Course Wrap-up and Presentation of Certificates	