

FOOD TECHNOLOGY CENTRE

Innovation for the Food & Bioresource Industries

Prince Edward Island, CANADA

NEWSLETTER

March 2008

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Success Stories

We love to help our clients succeed! A few of their success stories are available on a new feature on FTC's website. See [Success Stories](#).

Free Preliminary Consultation

FTC provides free preliminary consultation services and FTC will help you source appropriate funding for your food development projects.

Supercritical Fluid Extraction Workshop

The Food Technology Centre, in partnership with Agriculture and Agri-Food Canada, is offering a 2½ day [Supercritical Fluid Extraction Workshop](#) to be held March 25-27, 2008 in Charlottetown. The presenter will be Mr. Rodger Marentis, of Supercritical Solutions LLC in Pennsylvania, a consultant with many years of experience in this technology.

The workshop will cover fundamentals of supercritical processing and examples of industrial applications, with emphasis on practical implementation of the technology. Immediately following the workshop, there will be the opportunity for one-on-one or small group meetings with Mr. Marentis for those interested in discussing potential extraction processes in detail. Please contact ftcweb@gov.pe.ca if you are interested in attending.

Featured Client: First Venture Technologies Corporation

Project Leader: Lawan Suleiman, PhD, Natural Products Extraction Biochemist

[First Venture Technologies Corporation \(FVTC\)](#) is a Canadian functional foods and biological health products company with headquarters in Vancouver, BC. First Venture Technologies is commercializing its intellectual property-protected yeast strains that reduce ethyl carbamate, a known animal and probable human carcinogen that is naturally-occurring during the production of and in many cases subsequent storage of many common fermented foods and beverages. Ethyl carbamate, also known as urethane, is a naturally-occurring contaminant of the fermentation process. This contaminant is classified by the World Health Organization as a Group 2A carcinogen — probably carcinogenic in humans. Ethyl carbamate is known to be present in common diet items like wine, sake, fruit and grain spirits, bread, soy sauce, beer and yogurt.



The functionally-enhanced yeast strains (*Saccharomyces cerevisiae*) developed using FVTC's proprietary technology are designed to reduce the levels of EC during the fermentation process by optimizing the utilization of the urea metabolic pathway of the yeast. Urea is a major precursor of EC formation in fermented food and beverages.

FVTC is currently working under contract in collaboration with PEI Food Technology Centre to develop a cost-effective industrial manufacturing process for commercial production of the company's proprietary active dry yeast products.

[To read the complete article](#)

For more detail please contact Geoff Lee, glee@firstventuretech.com.

For information on FTC's fermentation services, contact Dr. Lawan Suleiman, Natural Products Extraction Biochemist at (902) 368-5086; email: lsuleiman@gov.pe.ca

Labelling Claims — A Serious Issue

By Vanessa Neale, B.Sc., Sr. Microbiology Laboratory Technologist

With increasing consumer awareness and consciousness about making healthy nutrition and dietary choices, the request for food analysis in the areas of allergens, country of origin and species present in foods is on the rise. Food allergens are becoming an issue with consumers with respect to individual susceptibility to various raw materials and ingredients within foods. Labelling information on food products such as Canada Grade A, which is only a grading system within Canada, and does not necessarily indicate a Canadian product, and the "Made in Canada" claim, which may contain raw ingredients from countries with potentially inadequate food safety practices, are examples that may lead to consumer misconception. Many ethnic groups avoid eating specific animals and depend on proper ingredient identification listed on food products.

Products listed as reduced fat, trans fat free, and high in fibre are only a few of the many claims that are being made through the process of food analysis. If you would like to know more about FTC's labelling services, please contact the FTC Chemistry Laboratory at 902-368-5934.



The **2008 Canadian Institute of Food Science and Technology/ Agriculture and Agri-Food Canada Conference** will be held in Charlottetown, PE, May 25 - 27.

The Conference Committee has developed a program that will explore emerging environmental and health issues related to food and food production systems. See the [Program at a Glance](#).

Food Safety Workshops

Course outlines of all our Food Safety Workshops are available on the [Training page](#) of our FTC website.

For further information on these, or if you would like a course held in your area, please contact Jim Landrigan at 902-368-5772 or by email at jklandri@gov.pe.ca

Funding Programs

Links to information about programs available from our funding partners are available on FTC's website. See [Funding Programs](#).

Prince Edward Island Food Technology Centre

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Feedback: If you have ideas for future newsletters or any comments, we would love to hear from you. Please call Janet Docherty at 902-368-5226 or email jvdocher@gov.pe.ca

Microbiology Laboratory Services

- [Sample Submission forms](#)
- [Requirements for the collection and shipping of samples](#)
- [Specific instructions for the collection and shipping of shellfish samples](#)

To obtain swabbing supplies and sterile bottles, or for further information about our laboratory services, please call our microbiology laboratory at (902) 368-5937.

Featured Equipment: Varian Prostar/Prepstar HPLC System

By Megan Classen, Assistant Extraction Technologist

The Varian ProStar/PrepStar HPLC system facilitates the purification of a broad range of natural product extracts. This system offers repeatable and precise results that are easily programmed and performed, and its components can be set up to suit our clients' specific purification needs.



The versatile Varian ProStar/PrepStar system consists of solvent delivery modules, manual sample injectors, and a detector that easily and efficiently completes the purification process. Through the use of a mobile phase the sample is injected at high pressure through a column packed with a stationary phase. The retention time of the sample depends on the characteristics of its analytes, the mobile phase, and the stationary phase. In addition to performing HPLC analytical methods, installation of larger prep columns allows

for injection of up to 10 mL of extract to be purified over one chromatographic cycle.

The versatile PrepStar 218 pump can be used as an isocratic pump, slave pump, master pump or a sample injection pump in prep systems. In order to allow for gradient flow, the system is equipped with two PrepStar 218 pumps that work with 200 mL or 25 mL pump heads, depending on desired flow rate. The interchangeable flow heads and mixers can accommodate higher flow rates, inert flow paths and biocompatible needs. Isocratic or gradient flow rates up to 200 mL/min can be achieved with 100% accuracy at maximum pump head flow rates. Titanium and chemically inert plastic flow heads offer protection from ions released from components in the fluid path. The PrepStar 218 was designed to operate accurately and precisely by employing a pressure module and solvent mixer at the rear of the pump to ensure precise gradient and pressure is maintained.

Extending the competency of the system is the ProStar 325 Dual Wavelength UV-Vis detector, which can be used from analytical to preparative applications. The wide absorbance range from 190-700 nm requires fewer sample dilutions and offers valuable detection for a multitude of samples. The UV deuterium source and quartz halogen are controlled by the Galaxie Chromatography Data System to provide precise wavelengths. This system also controls the ProStar 701 fraction collector, which accurately collects fractions in response to time, volume, slope, or a combination of these parameters.



Featured FOODTECH Canada Centre: Guelph Food Technology Centre

Thirteen similar centres across Canada have formed a network incorporated as **FOODTECH Canada**. The purpose of this network is to provide technical support for Canada's food processors to commercialise new products, to enable the centres to work on large projects that they could not do on their own, and to allow the centres to focus on their particular expertise. This month we are featuring a **FOODTECH Canada** Centre in Guelph, Ontario.

[Guelph Food Technology Centre \(GFTC\)](#) is Canada's only independent food technology centre. It provides creative, confidential technical solutions, training, consulting and auditing to the Canadian food value chain. Each year, GFTC assists over 500 companies and organizations and trains more than 3,600 people. GFTC helps their clients compete globally by strengthening the very foundations of their business – their products, processes and people and by offering a comprehensive range of services, from product development, technical packaging services and process development, to food safety and quality systems and technical training programs. For more information on the GFTC visit their website at www.gftc.ca.