

# FOOD TECHNOLOGY CENTRE

*Innovation for the Food & Bioresource Industries*

Prince Edward Island, CANADA

## NEWSLETTER

November 2006

### Featured in this issue:

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- Consumer Concerns about Food Safety
- Supercritical Fluid Extraction
- New Tax Incentive for Bioscience Companies

### Free Preliminary Consultation

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

The **Prince Edward Island Food Products Development Fund** will assist Island businesses with projects carried out at the P.E.I. Food Technology Centre. Support is also available for product development activities carried out at FTC for companies in our neighbouring provinces through the NS, NB, and NL governments. Contact Yaw Dako, Food Technologist (902-569-7699)

FTC provides certified **organic processing** services. Contact Leigh Gao, Food Scientist/Engineer at 902-368-5465.

### 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.

A listing of [food processing equipment](#) is available on our website. Most pieces of equipment are mobile,

## Soy Hardy Roasted Soy Nuts



A name synonymous in PEI with certified organic soy products is Hardy's Organic Products, Alberton, PE. The company is well known in PEI and other maritime provinces for their **Soy Hardy** brand Tofu which is sold through Sobeys, Loblaws and various retail and health food stores across the Maritimes.

Hardy's Organic Products recently developed a line of certified organic roasted Soy Nuts which includes *Fire Hot*, *Sea Salt* and *All Dressed Up* flavours. This product line was developed using organically grown soybeans roasted in a specially designed bean roaster that gives Soy Nuts a pleasing crunchy texture and great taste. Prior to launching the Soy Nuts products on the market, the company approached the Food Technology Centre (FTC) for technical assistance in determining the right packaging and nutritional labeling, and to conduct a shelf-life study of the **Soy Hardy** line of Soy Nut products.

With technical assistance provided by FTC and considerable effort by the company, the **Soy Hardy** certified organic line of roasted Soy Nuts was launched in August 2006. The products can be found in Co-Op Atlantic stores and in various health food stores in Ontario.

Hardy's Organic Products can be reached at 902-853-4014 or by e-mail at [soyhardy@pei.sympatico.ca](mailto:soyhardy@pei.sympatico.ca). For further information on technical services available at FTC, please contact Yaw Dako, Food Technologist, at 902-569-7699 or by e-mail at [yadako@gov.pe.ca](mailto:yadako@gov.pe.ca).

## Consumer Concerns about Food Safety

*By Ebo Budu-Amoako, Senior Microbiologist/Laboratory Manager*

Food safety, nutrition and health are truly important issues of ever-increasing consumer interest, particularly as markets are becoming global. Today's consumers are interested in and concerned about such issues as food labeling, health claims and the wholesomeness of what they eat and drink.

The regulatory system that ensures the safety and quality of food is already very rigorous for food considered high risk such as meat, poultry, eggs, seafood and dairy.

The regulatory approach taken to manage hazards on fresh produce has been to ask the industry to make changes voluntarily. The recent foodborne illness outbreaks due to the consumption of spinach contaminated with *E. coli* O157:H7 has escalated interest and heightened levels of consumer concerns. It has also instigated a call on the regulatory community to revamp the regulations for fruit and vegetable production, particularly given that these products may be consumed raw.

Whether there is a voluntary approach or enforcement in monitoring food safety standards in the fresh produce industry, it will require that appropriate food safety measures be in place during production, harvesting, processing and distribution.

permitting operators to customize processing lines. A range of pumps and auxiliary equipment is also available. For further information, contact Edward Charter, Manager, Food Science & Natural Products Extraction at (902) 368-5912.

### Food Safety Workshops

A course is being planned in cooperation with the NB Food & Beverage Processors Association:

- [Seafood HACCP Workshop \(QMP\)](#), Moncton, NB; **Revised Date: Nov. 22-24, 2006**

The course outlines of our Food Safety Workshops are available on our website at: <http://www.gov.pe.ca/ftc/index.php3?number=1016055&lang=E>. For further information on these, please contact Jim Landrigan at 902-368-5772 or by email at [jklandrigan@gov.pe.ca](mailto:jklandrigan@gov.pe.ca)

### 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](mailto:jvdocher@gov.pe.ca)

**For further information on our Centre, please visit our website:**  
[www.gov.pe.ca/ftc](http://www.gov.pe.ca/ftc)

This can be accomplished by establishing a food safety control program known as the Hazard Analysis Critical Control Point (HACCP) system. HACCP is a systematic approach to the identification, evaluation and control of food safety hazards. It is based on the premise that if the food production process starts with quality raw materials and is diligently monitored from the farm to the consumer, the final product will be safe.

The Food Technology Centre has assisted many companies to establish and maintain HACCP systems. Ebo Budu-Amoako, Senior Microbiologist/Laboratory Manager, may be contacted at 902-368-5769 or by email: [ebamoako@gov.pe.ca](mailto:ebamoako@gov.pe.ca).

## Featured Equipment — Supercritical Fluid Extraction (SFE) Technology for Natural Products Extraction

*By Stephen Porter, Chemical Engineer*



A supercritical fluid is any substance at a temperature and pressure above its thermodynamic critical point. It has the unique ability to diffuse through solids like a gas, and dissolve materials like a liquid. Additionally, it can readily change in density upon minor changes in temperature or pressure. These properties make it suitable as a substitute for organic solvents in a process called **Supercritical Fluid Extraction**. Carbon dioxide and water are the most commonly used supercritical fluids.

For engineering purposes, supercritical fluids can be regarded as "hybrid solvents" with properties between those of gases and liquids, i.e. a solvent with a low viscosity, high diffusion rates and no surface tension. In the case of supercritical carbon dioxide, the viscosity is in the range of 0.02-0.1 cP (centiPoise), where liquids have viscosities of approximately 0.5-1.0 cP and gases approximately 0.01 cP, respectively. Target compounds tend to dissolve up to 10 times as quickly into supercritical fluids compared to liquid solvents. Also, the properties of supercritical fluids can be finely adjusted with pressure to allow for very targeted extraction of soluble compounds.

The SF extraction units at the Food Technology Centre are both based on carbon dioxide as the primary fluid with the capability to add a co-solvent to modify the extraction conditions. The units available at the FTC are in two size ranges: 2L for preliminary trials and 12L for pilot level testing. Both units were designed and manufactured by Thar Technologies Inc. For further information, please contact Dr. Edward Charter, Manager, Food Science & Natural Products Extraction, at 902-368-5912.

## Funding Profile: New Tax Incentive for Bioscience Companies

A new comprehensive tax incentive package for the Prince Edward Island bioscience industry was recently launched by the provincial government to encourage existing companies to expand and focus on commercial opportunities in the industry and to help attract new companies to the province.

Under this new tax incentive program, bioscience companies of more than 10 employees and a \$750,000 annual payroll are eligible to receive a full rebate on their provincial corporate income taxes for up to 10 years. Money rebated to bioscience companies will be reinvested, helping to create more jobs and opportunities in the sector.

For more information, please contact: Phil Muise, PEI Business Development, 1-902-368-5899.