

# FOOD TECHNOLOGY CENTRE

## Innovation for the Food & Bioresource Industries

Prince Edward Island, CANADA

### NEWSLETTER

February 2010

#### Featured in this issue:

- Soup from the Seas Chowder Mix
- Adding Herbs
- ÄKTA Crossflow Filtration System
- Food Safety Workshops
- Retort Operators Course

#### Free Preliminary Consultation

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

#### Microbiology Laboratory Services

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

*Preparations are required prior to receipt of samples, therefore please call 24 hours prior to sample drop off or results will not be received in a timely manner. Micro lab receiving hours: Monday to Thursday, 8:30 a.m. to 3:30 p.m., unless previous arrangements have been made.*

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

#### Funding Programs

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

### Soup from the Seas – Creamy Seafood Chowder Mix

By Esther Lee, M.Sc., Food Scientist



When fisherman and business entrepreneur Phillip Surette, of Yarmouth, Nova Scotia, thought of a product idea in 2006, he approached the Food Technology Centre for technical assistance in developing the product. His idea was to develop a soup base mix that could be sold together with seafood to increase his seafood sales. The requirements for the product were simple but specific - a dry soup base that could easily be turned into seafood chowder, calling for only a few additional ingredients, with preparation time of 15-20 minutes. Of course, most importantly, it would need to be a tasty, flavourful, creamy chowder made with seafood freshly brought from the seas.

The packaging selection and label printing were completed after FTC's food science team found the sources of ingredients and developed the formulation along with preparation instructions for the product. The next step for Mr. Surette was to test market the product. He began to receive positive responses from customers when he first presented the prepared seafood chowder at the Fisherman's Market in Yarmouth and at the Halifax Farmer's Market.

The **Soup from the Seas - Creamy Seafood Chowder Mix** contains 105g of dry ingredients in bags that give 5 cup servings each of seafood chowder. It has no preservatives, and cooking instructions are simple and easy to follow - "Easy as 1, 2, 3." Only milk, seafood and water need to be added, and it is ready for serving in 20 minutes. This product is now available at Sobeys' seafood departments in Nova Scotia.

For more information on the product, please contact Mr. Phillip Surette of Phillip Surette Holdings Ltd. at [psurette1@ns.sympatico.ca](mailto:psurette1@ns.sympatico.ca). For further information on product development services available at FTC, please contact Yaw Dako, Food Technologist at (902) 569-7699.

### Does your food product need a flavour boost? . . . Or perhaps some antioxidant activity?

By Kathy MacEwen, B.Sc. Library Technician



If the answer is yes then try adding herbs. Whether dried or fresh, herbs are the fragrant leaves of plants that are used to heighten the aroma and flavour of many cooked dishes. The mint family (*Lamiaceae*) gives us herbs such as mint, sage, rosemary, thyme and oregano. The carrot family (*Apiaceae*) provides us with parsley, dill, fennel and cilantro.

The question that concerns most cooks is when to

The **Prince Edward Island Food Products Development Fund** will assist Prince Edward Island businesses with projects conducted at the Food Technology Centre. Companies from our neighbouring provinces of New Brunswick and Nova Scotia also have funding support available from their provincial governments for product development activities conducted at FTC. Contact Yaw Dako, Food Technologist (902) 569-7699.

## 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](#).

## Food Safety Workshops

- Control of *L. monocytogenes* in Seafood Processing Plants, Sydney, NS, one day, March.
- Plant Sanitation and *Listeria* Control for Plant Workers, Sydney, NS, one day, March.

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](mailto:jklandri@gov.pe.ca)

## Prince Edward Island Food Technology Centre

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add fresh or dried herbs to a dish and whether to add whole or chopped. The fragrance of whole herbs is contained within the leaves and it takes longer to draw out the flavour from whole uncut herbs. Therefore they should be added at the start of cooking. Fresh whole parsley, bay leaves and thyme are often tied together and added to stocks and soups early. When chopped, the leaves' cells are broken open and the volatile aromas escape. Chopped herbs are therefore added to dishes just before serving. If dried herbs are used in cooking they are usually added early on the cooking process to allow moisture to re-hydrate them, thus allowing the aromas to escape. Dried herbs are also often preferable for use in food processing because fresh herbs are more of a challenge in products that require a longer shelf-life.

Fresh herbs contain 80 to 90% water but may also contain many polyphenols with antioxidant properties that can help prevent cell damage in our body and reduce the risk of cancer and heart disease. The Food Technology Centre has equipment and technologies capable of extracting some of these compounds. These extracts are sometimes preferred for use in food products where using the whole herb is not possible.

So spice up your cooking with herbs. Not only will they improve the aroma and add flavour to your dish, they also have the potential to improve your health.

## Featured Equipment: ÄKTA Crossflow system by GE Healthcare

*Gosia Zawadzka, M.Sc., Senior Analytical Technologist*



The Food Technology Centre has obtained a fully automated ÄKTA Crossflow filtration system to assist our clients in development of downstream processing. Recent advances in cross flow filtration have increased the consistency and quality of microfiltration and ultrafiltration performance which has become a technology of choice for natural product extraction in the pharmaceutical and food industries.

Cross flow filtration is also called Tangential Flow Filtration because the feed solution flows across the membrane surface and this helps to prevent fouling of the membrane. In conventional (dead end) filtration, the feed is directed at the surface of the filtering media and does not circulate. Therefore as the filter cake builds up, the filtration characteristics change, the flow decreases and eventually the process stops.

The ÄKTA Crossflow can be used for all cross flow operations, from cell harvest by microfiltration to final ultrafiltration to purify and concentrate as well as diafiltration. Membrane and cartridge selection is part of process optimization using relatively inexpensive 50 cm<sup>2</sup> cassettes or hollow fibres with up to 150 cm<sup>2</sup> filtration area. The system enables automation at very small scale and a minimum capacity of 61 mL. Despite the small size of these filters, the system can provide valuable data for effective scale up to industrial process.

The ÄKTA Crossflow system has demonstrated high efficiency in microbial challenge tests, fulfilling USP 27 requirements of a 6 log reduction in colony forming units.

## Training for Retort Operators

A Retort Operator course is tentatively planned for April 14-17, 2010. For information please contact Ebo Budu-Amoako at [ebamoako@gov.pe.ca](mailto:ebamoako@gov.pe.ca)