

# FOOD TECHNOLOGY CENTRE

*Innovation for the Food & Bioresource Industries*

Prince Edward Island, CANADA

## NEWSLETTER

July/August 2008

### Featured in this issue:

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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.

FTC can provide solutions in **natural products extraction** and nutraceuticals/ functional foods product development. FTC has the equipment and the expertise to help you develop new products and techniques that will help you to design extraction, separation and purification methods and to reduce your production costs. For further information, please contact Dr. Edward Charter, Manager, Food Science & Natural Products Extraction, at 902-368-5912.

### 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.

### AgraWest now a Major Supplier to KFC

In the USA, KFC serves steaming hot mashed potato with their finger-lickin' good chicken. If you eat at KFC restaurants on the eastern seaboard of the USA, the mashed potato you are served originates in Prince Edward Island and is made by [AgraWest Foods](#) in Souris, PEI.



Food Scientists at the Food Technology Centre worked with Jamie Trainor, plant manager at AgraWest Foods, to develop a high quality instant mashed potato mix made from dehydrated potato granules. A convenient, cost effective, and tasty product was prepared into a prototype batch and presented to KFC's purchasing team.

Recently, KFC has increased their volume and now AgraWest is supplying KFC with 200,000 kg of dehydrated mashed potato granules every month that are prepared in their restaurants by adding hot water. This product is a significant business for AgraWest which employs 100 people in Souris, PEI.

For more information about the mashed potato mix, please contact: Jamie Trainor at AgraWest Investments; Email: [jtrainor@agrawest.com](mailto:jtrainor@agrawest.com).

### 2008 Atlantic Dairy Ingredients Seminar

Thursday, Sept. 18, 2008

at The Culinary Institute of Canada, Charlottetown, PEI



Canadian Dairy  
Commission

Commission  
canadienne du lait

The *Food Technology Centre* is very pleased to be jointly hosting this dairy seminar with the *Canadian Dairy Commission*.

Dairy and food product formulations are only as good as the ingredients and technology used in their manufacture. Taste, functionality and health attributes are critical factors when designing products to satisfy the needs and wants of baby boomers, sports and recreation enthusiasts and a growing ethnic population.

Manufacturers of prepared foods, enriched dairy products, and nutraceutical formulations must keep up with the latest discoveries in science, technology, and marketing to remain competitive and profitable in a rapidly evolving marketplace.

A panel of experts in the fields of food science and nutrition, demographics, product innovation, and functional foods will provide seminar participants with a wealth of information on all of these issues. See the [Program](#).

The conference is directed at (i) dairy and traditional food product manufacturers; (ii) nutraceutical and functional food product manufacturers; (iii) marketers; (iv) dairy and food industry associations; (v) dairy and food scientists; (vi) product development professionals; and (vii) agrifood agencies.

The [registration form](#) is available online. Early bird rates are available for a limited time

## Food Safety Workshops

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

FTC will be offering several food safety courses for the Atlantic Food and Beverage Processors Association this Fall in Newfoundland and Labrador, New Brunswick, Nova Scotia and Prince Edward Island. Please check our website in August for courses and locations.

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)

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

only.

For those of you who are interested in visiting Charlottetown for this seminar, please note that the [PEI International Shellfish Festival](#) begins on the following day.

## Active Food Packaging

*By Lilian Yu, M.Sc., P.Eng., Food Scientist*

Active packaging, sometimes referred to as interactive packaging, is used to sense internal or external environmental changes and to respond by changing its own properties or attributes and hence the internal package environment. The goal of active packaging is to aid in the preservation and quality retention of commercially processed and packaged food products.

Active packaging systems by design may absorb or release substances to or from the food or its environment. The ingredient required to achieve the effect may be packed in sachets, labels or incorporated into the packaging material itself (e.g., plastic films).

The best known and most widely used active packaging technologies for foods remove oxygen from the package environment. There are many oxygen scavengers which are commercially available. Another widely used technology is relative humidity control within the package. Silica gel, glucose syrup and salts are commonly used for water vapour active packaging. Others technologies, such as gas permeability control, carbon dioxide control and odour removal, aroma emissions and antimicrobials (e.g., ethylene scavengers in fresh fruit bulk-shipment; ethanol-releasing sachets for bakery products of high moisture content to suppress mould growth) are also used in active packaging.

For further information on active food packaging, please contact Lilian Yu, Food Scientist, at (902) 368-6154; email: [lyu@gov.pe.ca](mailto:lyu@gov.pe.ca)

## Airlift Fermentor

*By Lawan Suleiman, PhD, Natural Products Extraction Biochemist*

When considering the design and use of a fermentor, cooling, oxygen transfer, and mass transport between nutrients and microorganisms are important to consider. The increased demand of oxygen for substrates utilization and the rising cost of energy and capital investment mean that fermentor design has a significant impact on cost of production.



Traditionally, fermentors were designed primarily with mechanical agitation and heat exchangers. The rate of oxygen transfer depended on the interfacial areas generated by agitation, and therefore on power input to the fermentor. Studies further indicated that the total power consumption, including stirring and air compression, was about 2 kWh/kg dry cells.

Airlift fermentors which do not use mechanical agitation received increased attention in the late 1960's as a result of their higher efficiency in mass transfer. Airlift fermentors show promise in terms of large scale fermentation. In fact, the world's largest industrial fermentor is an Airlift fermentor, probably due to the reasons described above. Within the Airlift fermentor, bubbles rising in the draft tube cause mixing, and gas movement carries the fluid and cells up this tube. This motion allows the fluid and the cells to circulate in the fermentor, achieving higher oxygen transfer rates.

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