

FOOD TECHNOLOGY CENTRE

Innovation for the Food & Bioresource Industries

Prince Edward Island, CANADA

NEWSLETTER

June 2007

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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 conducted at the Food Technology Centre. Support is also available for product development activities conducted 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 Dr. Leigh Gao, Food Scientist/Engineer at 902-368-5465.

FTC can provide solutions in **natural products extraction** and nutraceuticals/functional foods product development. Contact Dr. Edward Charter, Manager, Food Science & Natural Products Extraction, at 902-368-5912.

Training for Retort Operators

Our retort training workshop completed in January was so successful we decided to hold another one. The Food Technology Centre is planning to present another five-day retort operator's course entitled [Canned Foods: Thermal Processing and Container Evaluation](#) in September, 2007.

Featured Client: OvoPharm Limited

By: Lawan D. Suleiman, PhD



Eggs are generally thought of as a staple for breakfast or a key ingredient in baking but now they may also be used to treat a wide range of ills. Immunoglobulin (IgY) is acid- and heat-resistant and can be used orally to prevent or mitigate infectious intestinal diseases in young animals and humans. IgY extracted from eggs has become a viable alternative to antibiotics, especially given the prevalence of antibiotic resistance to microorganisms that is being raised by the medical community.

OvoPharm Limited is a Charlottetown-based company that is developing a novel series of ovo-biotechnology products sourced from Japanese Quail eggs. OvoPharm intends to market a range of avian polyclonal IgY antibody products targeting specific disease applications, and to commercialize innovative and targeted egg-based polyclonal antibody products for the nutraceutical, pharmaceutical and animal feed industries. The Food Technology Centre has been contracted to develop extraction and purification methods which will carryover to industrial scale processing. The focus of the work is on separation and purification of the IgY fraction from the protein of quail eggs.

OvoPharm Limited specializes in the production of egg-based polyclonal antibody products. For more detail please contact Reid Barnett (CEO), Ovopharm@eastlink.ca

Shellfish and Seafood Season — Safety Analysis in the Microbiology Lab

By Wendy MacRae, Microbiology Technologist

Now that spring is finally here and the shellfish and seafood industries are in full swing we would like to remind all clients and potential clients that advance notice of samples arriving at the labs is very important. The spring and summer season brings a large influx of samples to the lab. The lab staff prepare sterile media for each analysis that is performed. This entails several hours to prepare the media and then sterilize it prior to use. If samples arrive that we are not aware of, their analysis can be delayed until the following day. Once samples are set up for analysis they require adequate time for any organisms to grow. The lab follows approved methods that clearly state minimum incubation periods that must be adhered to in order to obtain accurate results. The micro lab strives to obtain and report results as soon as possible. Therefore, it is very important that clients give the lab advance notification that samples are being sent in so that the lab staff are prepared and ready to process the samples as quickly as possible.

As samples arrive at the lab they are placed in the appropriate storage areas, ie. freezer or fridge (4 C) as needed. The temperature of the sample is recorded. Microbial growth can continue if the samples are not maintained at an appropriate temperature during transport to the laboratory. Ideally samples should arrive frozen or below 10 C. This will minimize any possible increase in the microbial load for the sample. It is difficult to determine if high counts were a result of mishandling and temperature abuse during transport or the actual count of the sample. This is why it is necessary to take a few minutes to properly prepare any sample for transport prior to sample submission.

A completed sample submission form ([see link below](#)) needs to accompany any samples arriving at the lab. In some instances clients will fax ahead a copy of the sample submission form or include it with the samples. This helps process the sample quickly. The

Supercritical Fluid Extraction Workshop

The [SFE workshop](#) which was postponed has been tentatively rescheduled to be held September 17-19, 2007. Please contact ftcweb@gov.pe.ca if you are interested in attending. (We will be getting in touch with those who replied to our first call for interest.)

Available courses:

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

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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

submission form must contain the client information, sample identification and analysis requested. The sample identification will be used when issuing the final report. How the sample is identified here is how it will be identified on the report. If the analysis that is required is not present on the form, it can be written in the blank spaces provided.

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

The microbiology lab appreciates your business and continues to look for ways to improve our service to better meet our clients needs. To obtain swabbing supplies and sterile bottles, or for further information about our laboratory services, please call our microbiology laboratory at (902) 368-5937.

Cocoa — a Delightful Ingredient

By Esther Lee, Food Scientist

Diets rich in fruits and vegetables are believed to promote health and delay onset of several diseases. These benefits are attributed to multiple compounds present in fruits and vegetables. The well-known compounds among these include antioxidants such as Vitamin C, Vitamin E, polyphenols, and carotenoids. Antioxidants limit potential damage to cells in the body by reducing and inhibiting the actions of free radicals that are byproducts or cause harmful chain reactions in the cells of the body.

Among the antioxidant compounds, a particular type in the polyphenol group called flavanols, naturally present in tea, wine, fruits, and in cocoa, has recently gained much attention. In measurements of antioxidant power, cocoa is found to contain high levels of flavanols. Furthermore, published studies suggest that flavanol-rich cocoa intake can enhance human body functions in different ways: increased blood flow improving cardiovascular and brain functions, skin density, and skin hydration.

Fueled by the growing trends in healthy living, innovative approaches to developing food products are well underway by adding antioxidant-rich ingredients in their formulations and processing. New types of cocoa-based products high in flavanols incorporating different functional ingredients such as omega-3 fatty acids, vitamins, and minerals are being introduced into the market. The confectionery industry, one of the growing product areas in the functional and nutraceutical foods market, is leading the way by using cocoa in their new products, much to the delight of consumers who appreciate guilt-free chocolate consumption.

Nutraceutical products now eligible for lower priced milk ingredients – Canadian Dairy Commission

Canadian manufacturers of milk protein concentrate (liquid or dry) and skim milk (liquid or dry) destined for sale/use in eligible nutraceutical products are now able to access competitively priced milk components used to make these ingredients under Milk Class 4(a)1.

Canadian companies interested in using milk protein concentrate (MPC) or skim milk products such as skim milk powder must contact a Canadian manufacturer/supplier to negotiate the actual purchase price.

The following is a list of the nutraceutical type products deemed to qualify for competitively priced MPC and other skim milk products under Milk Class 4(a)1:

- Weight / muscle gain formulations
- Medical recovery drinks
- Sports recovery drinks
- Meal replacement products (bar products excluded)
- Infant food formulations

For more information, contact any Canadian dairy processor/ingredient supplier. You may also contact Charles Boisvert, Innovation Champion, Dairy Marketing Program, Canadian Dairy Commission, (613)-792-2084 or cboisvert@agr.gc.ca.