

Fish authenticity discussed at Eurofins Local Authority Seminar

By Dr. Michèle Lees and Pauleen Stallard, Eurofins Scientific

«Fish is now a global commodity» according to Christopher Leftwich, Chief Inspector of the Fishmongers' Company, one of London's most ancient City Guilds. «As long as a country is approved by Europe we can obtain the fish from that country. Provided the price is right!» he added during a tour of Billingsgate Market, the UK largest inland fish market, where regular supplies of fish and shellfish arrive from as far away as New Zealand, Sri Lanka, Seychelles, and South America.

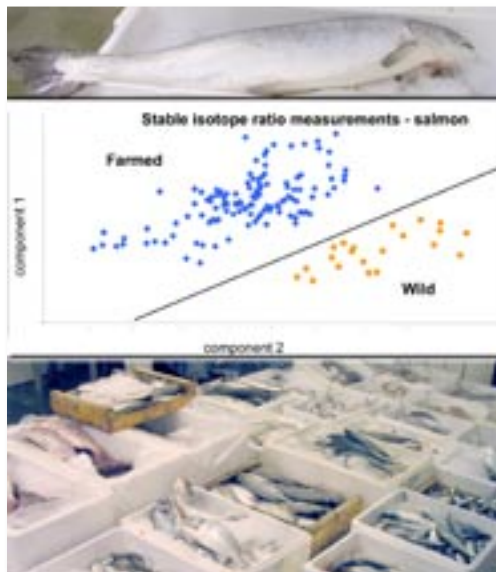
Mr Leftwich was one of the key speakers at the Local Authority Update Seminar, organised by Eurofins Scientific UK as part of their Technical Seminar Programme, that took place in both Chester and London in November last year.

Labelling of fish products

Another of the speakers, Mark Woolfe from the Food Standards Agency (FSA), provided a review of fish labelling regulations including the latest Commission Regulation (EC) No. 2065/2001. From January 1st 2002 all fishery products on sale to consumers must indicate whether the fish is wild or farmed and where it is from. For wild fish, there are 12 catch areas based on the FAO fisheries landing statistics which need to be used. Farmed fish products must specify the EU Member State or Third Country where production took place.

Wild vs. farmed fish

Eurofins Scientific's R&D laboratories in Nantes, France have recently completed an EU-funded project on salmon authenticity*. The work, also part sponsored by the FSA, has used stable isotope analysis to distinguish wild and farmed salmon. $^{18}\text{O}/^{16}\text{O}$, $^{15}\text{N}/^{14}\text{N}$ and $^{13}\text{C}/^{12}\text{C}$ isotope ratio measurements are carried out on oil extracted from the fish flesh. Since the fish lipids are closely related to the fish diet, these parameters provide a clear differentiation between wild and farmed salmon.



Progress in aquaculture techniques has led to year-round availability of farmed salmon, the consumption of which has increased considerably. Other species such as trout, turbot, sea bass and sea bream are also now farmed successfully and although the difference between farmed and wild varieties may be obvious to the experienced eye of a Billingsgate fishmonger this is not always the case for the average consumer or for the enforcement officers. Work is continuing in Eurofins laboratories to extend the data base to other farmed fish such as sea bass and halibut.

Eurofins Laboratories Ltd runs Continued Professional Development Seminars, technical briefings and workshops that are held throughout the UK on topical Local Authority issues, e.g. GMO, sampling strategies, New Meat Regulations, Due Diligence & Preparing for Court. Further details on the seminar including the presentations themselves can be found at:

www.eurofins.co.uk/laupdate/seminars.

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* EC Contract N° G6RD-CT-2001-00512 (COFAWS)

Monitoring schemes help in promotion of milk in France

By Bernard Cochin, Syndilait



IPLC (Institut Professionnel du Lait de Consommation) was created in 1999 by the French professional organisation, Syndilait, in order to improve the

image of milk in the eyes of consumers and retailers in France and the rest of Europe.

Its main objective was the implementation of a quality control scheme which is, in effect, more comprehensive than current legislation. The checks include analyses and plant inspections - of which the latter are only available to members of IPLC.

Today, 16 companies with 41 production sites have become members of IPLC. These companies account for 90% of total French milk production. Only members are

allowed to use the IPLC logo on their product packaging. In addition to its initial quality control objectives, IPLC also offers additional services to its members by conducting market surveys and providing information on trends and hazards that may affect the members' activities.

Results of IPLC survey conducted in 2003

In 2003, IPLC inspected 43 plants and collected 894 milk samples of which 150 were taken from the production sites and 744 from the retail outlet shelves. More than 9700 analyses were performed: 8700 nutritional tests and 1000 checks for contaminants. The analyses were performed by independent laboratories of which Eurofins Scientific was one. Eurofins Scientific was able to contribute as a result of its considerable analytical expertise in the field of the chemical contaminants:

heavy metals, mycotoxins, pesticide residues, dioxins and coplanar PCBs, as well as vitamin determinations in the case of milk samples with guaranteed vitamin content.

Members' milk samples are tested in accordance with the IPLC control scheme, while those of non-members are tested in accordance with European regulations. The testing programme is constantly updated and includes an increasing number of residue checks. Invaluable analytical data have been collected, proving to be a major asset to the French dairy sector and enabling the members to react in the event of a crisis.

After only 5 years in operation, IPLC has been praised by the French control bodies for its success in significantly improving the quality of milk.

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The German Quality & Safety Control Seal

By Werner Nader, Eurofins Germany

The QS (Quality & Safety) Control Seal was developed in order to deal with the concerns of consumers following many food crises which have occurred during the last few decades. The goal of the QS system is to assure transparency and control of the supply chain of meat products as well as fresh vegetables, fruit and potatoes during each processing step taking the product from the farm to the consumer's fork.

Today the majority of farmers, slaughterhouses, processing companies and retailers in the German meat business participate in the programme. According to specific guidelines, QS-participants must establish a system of self-control and documentation, which is regularly reviewed by independent and QS-approved control companies. Because of the globalisation of food production and trade, QS is not restricted to German participants only, but open to all international companies prepared to com-

mit themselves to the audited quality assurance system of QS.

QS and analytical controls in feed production

Over 95 % of the German feed industry is registered and controlled by QS. A requirement of QS is that all farmers and companies who produce and import formulated feed or raw materials for feed, must now, for the first time, analyse their products for unwanted and toxic substances on a regular basis. The analytical programme is designed to serve the needs of the specific feedstuff (e.g. for mineral and composed feed, fats and oils, meals etc.) and includes analysis of dioxins, indicator PCBs, heavy metals, aflatoxin B1, vomitoxin, zearalenon, animal constituents, antibiotics, salmonella, PACs (polycyclic aromatic hydrocarbons) and pesticides including chlormequat. As a result of the recent confirmation of the presence of animal meal in sugar beet pellets and corn gluten, QS recommends more frequent testing

of feed for these meals according to EU-Directive 2003/126/EC (microscopy) and the purchase of tested feed and raw materials only.



Eurofins is the ideal partner for all participants in the QS-system. All tests required by QS are performed within Eurofins laboratories under the highest standards of quality. In addition to analysis, the new Eurofins I Wiertz-Eggert-Jörissen service centre in Bremen for feed, grain and pet food offers expert consultation for feed producers to enable them to fulfil both the requirements of the EU feed legislation and the QS feed guidelines.

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Detection of allergens: implementation of customised control schemes

By Andreas Pardigol, Eurofins Scientific France

Allergies to various food products have become a major concern to consumers.

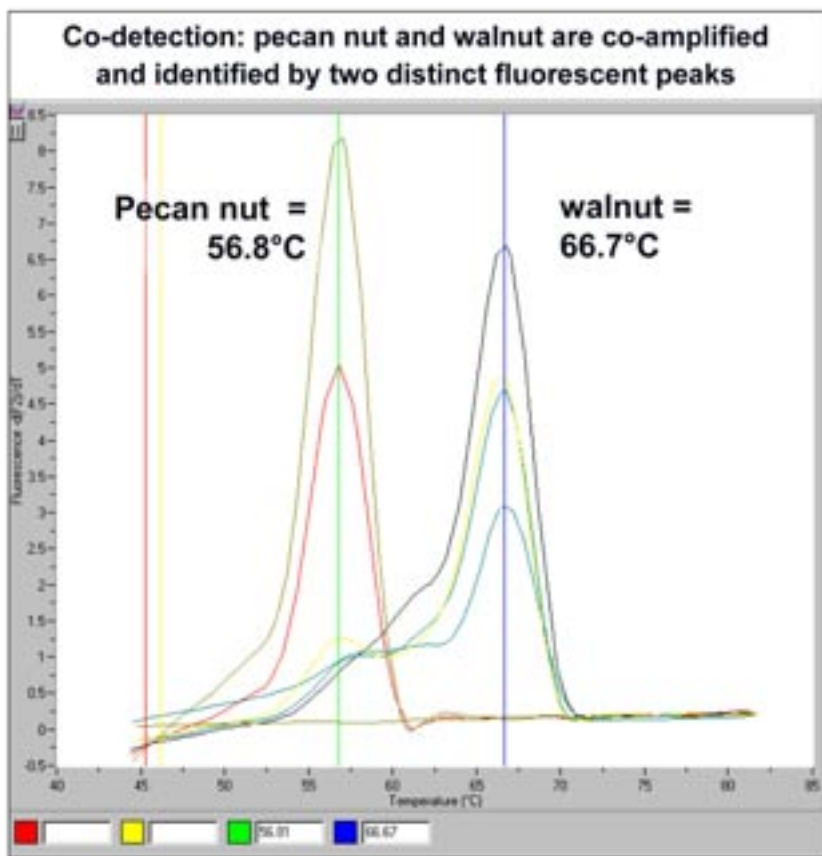
In the initial version of European Directive 2000/13/EC, ingredients representing less than 25% of the product, even those potentially having allergenic effects, did not require labelling. This rule has now been modified by Directive 2003/89/EC which took effect on November 25, 2003. A list of ingredients with potentially allergenic effects, and thus subject to specific labelling rules is published in the Annex of this directive. This list must be considered when designing and implementing testing schemes for allergens. Following ongoing validation, a final version of the list will be adopted before November 25, 2007.

PCR and ELISA tests

Suitable control schemes to implement should include testing for all ingredients included in the Annex using methods of sufficient sensitivity for the detection of even trace amounts of the allergens or of the species considered to be responsible for allergies. Both PCR and ELISA tests are available for these purposes but the application of each method is different:

PCR tests are generally applied for quality control of raw materials entering the production chain and during all stages of the production process. As an example, this method is able to detect a single hazelnut in a batch of corn. It is therefore the method of choice for detection of cross contamination. PCR is also often used to check the cleaning process in a HACCP scheme.

ELISA tests are suitable for checking whether or not a product that has undergone industrial processing still contains allergenic proteins. These tests require a precise knowledge of the target allergens for each matrix.



Customised validation service

The limits of detection for the ELISA tests and the Multi-Aller-Gene[®] PCR Screening test developed by Eurofins have been validated with a precision that has never been reached before on a large variety of matrices e.g. milk powder, cleaning water, chocolate products, desserts, dairy products, salted biscuits, flour and other raw materials. However, the performance of a method, and especially its sensitivity, can vary according to the product. It is therefore recommended that the limit of detection is first validated for the matrix concerned.

For the implementation of a control scheme, Eurofins offers three-stage customised method validation on defined products:

1. Review of the product range, identification of the critical products and checking points; definition of the most appropriate analytical strategy;
2. Validation of the analytical method for the products concerned: preparation of validation

samples and determination of the limit of detection. A validation file with the results is provided;

3. Implementation of a customised testing scheme specifically validated for the products and the industrial process concerned.

Validated testing schemes the answer to consumers' needs for optimised control of allergens, one of today's major health hazards, within the food chain.

Combined PCR testing for allergens and GMO

Eurofins' PCR analyses are based on a modular concept including the preparation steps for homogenisation of the samples, DNA extraction, quality control, etc. The Multi-Aller-Gene[®] and GMO testing programmes include several common steps, thus allowing the inclusion of both GMO and allergen testing in a combined testing scheme, at limited cost and with short turnaround times.

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in brief

- Managing the food safety cycle -

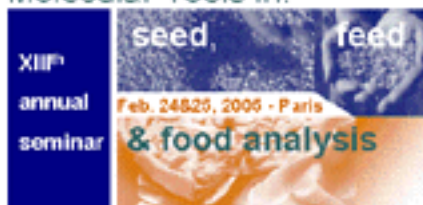


**International Conference
Rome - Feb. 3&4, 2005**

eurofins will be there as a
speaker, sponsor and exhibitor

Eurofins will support the annual International Food Safety Conference which will take place in **Rome on February 3 & 4, 2005**. A presentation will be given by a member of the Eurofins Group concerning an international standard for GM/ Non GM traceability within the supply chain. Several of Eurofins senior managers will be present to meet delegates.

Molecular Tools in:



The XIIIth session of the Molecular Biology International Seminar taking place in **Paris (France) on February 24 & 25** will cover the most recent developments and applications of these techniques in the seed, feed and food industries. Now a regular part of the programme is a review of key events involving GMOs which have taken place over the previous year (latest regulations, new standards.) The discussions will include case studies. This year in particular the situation in China and Africa will be discussed from both economic and nutritional perspectives. The official working language of the seminar is English.

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BioFach 2005

1,900 exhibitors and over 29,500 trade visitors attended BioFach Nürnberg (Germany) in 2004. Internationality, innovation and consistently high quality of the organic products on display distinguish BioFach in the organic industry. Organic Monitor estimates the world wide turnover for organic products at around € 23 billion. The European market with approx. € 11 billion is the largest single market after the USA. The BioFach fair will take place in **2005 from February 24 to 27**. Eurofins will again exhibit in **Hall 9, Booth no. 519** - we will look forward to meeting you there.



IFW 2005

The 45th event of the International Fruit Juice Week, organised every year in Germany by the publishers of "FLÜSSIGES OBST" and "FRUIT PROCESSING", will take place on **March 16-18, 2005 in Cologne**. This event focuses not only on process and market trends, but also addresses questions related to quality control such as: How can the industry meet the IFS requirements in practice? Eurofins Scientific will attend and make a presentation highlighting analytical tools for quality control.

<http://ifw2005.confructa-medien.com>
Phone: +49 (0)2634 9235-0



SQUALIM, the 1st European Trade Show dealing with agricultural and food products with official insignia of quality and origin, will take place on **June 6-8, 2005 in Nantes, France**. The SQUALIM trade show is expected to attract 10,000 professionals from the agro-food transformation industry, producers, distributors and caterers. Eurofins Scientific will help in designing an information space at the show dedicated to quality procedures and analytical tools.

www.squalim.com



The 8th Food Authenticity and Safety International Symposium organised on **October 19 & 20, 2005 in Nantes (France)**, will specifically focus on **beverages and fruit-based products**. Leading experts in analytical testing, product control and enforcement will attend this programme designed for all those involved in the food trade. FASIS is a key event for promoting quality, authenticity, safety and traceability, which are essential values for all customers, and for forging a network of contacts that will extend well beyond the symposium.

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