eurofins

Food Testing News

N° 22 • November 2006

Lupin - extended allergen labelling

By Bert Pöpping, Eurofins Germany

Lupins are widely used to replace soya. In future, products containing lupins will have to be labelled as containing allergens.

Labelling of foodstuffs is generally regulated by directive 2000/13/EC which, among other issues, deals with best before end (BBE) date, alcohol content and irradiation labelling of foodstuffs. However, in its original version, the labelling of allergens was not included in this directive. In 2003, it was amended to include the labelling of twelve groups of substances which needed to be indicated to protect vulnerable consumers from intolerance and allergenic reactions. Directive 2003/89/EC took effect from November 2005.

In 2006, the European member states agreed to extend the list of products to be labelled under the allergen labelling directive to molluscs and lupins.

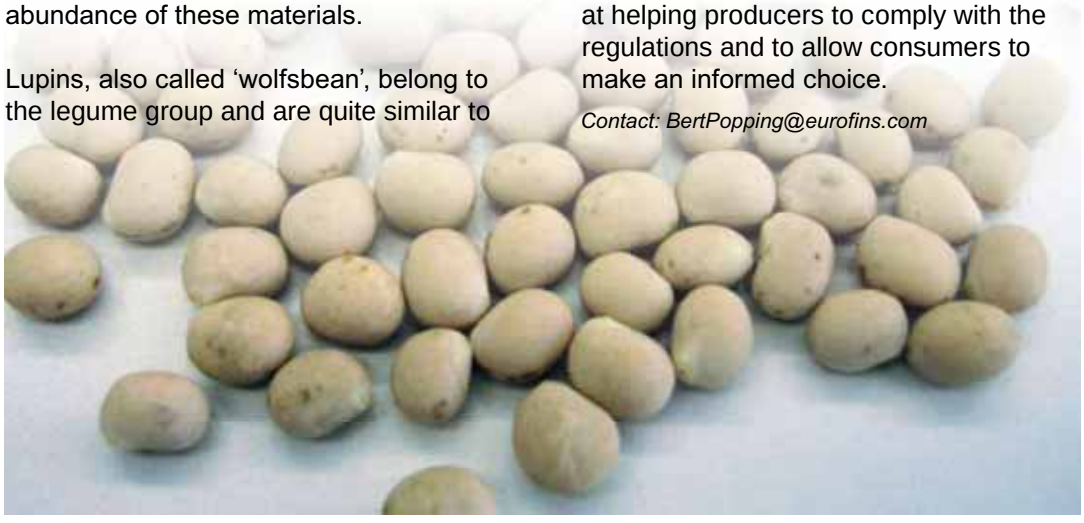
While molluscs do not tend to present a major issue in terms of potential contamination of other products, lupins are much more widely used and the risk of cross contamination is much higher due to the abundance of these materials.

Lupins, also called 'wolfsbean', belong to the legume group and are quite similar to peas, chickpeas and peanuts. The protein content of lupins ranges from 35-45% dry weight (in peas 26% and in soya 40%). In the Mediterranean, lupins have been used in food production for 2000 years. In the past they formed a staple food in Egypt, Greece and India.

At present, lupins are often used instead of soya, due to their high protein content. Since the advent of transgenic soybean and the reluctance of European producers to label their products as transgenic, many recipes have been reformulated, replacing soya with lupin ingredients. Lupin derivatives can thus potentially be found in ready meals, bakery products, sauces and a wide range of other products. Furthermore, the probability of cross contamination of other products produced at the same site as the lupin-containing products is high.

In advance of the amendment of the labelling directive for allergens, Eurofins has implemented and validated two new assays which allow the detection of lupins using ELISA (Enzyme Linked Immuno Sorbent Assay) and PCR (Polymerase Chain Reaction). These assays are aimed at helping producers to comply with the regulations and to allow consumers to make an informed choice.

Contact: BertPopping@eurofins.com



Coumarin in Food

By Gregor Camps, Eurofins | Wiertz-Eggert-Jörissen, Germany

Coumarin is a natural aroma widely prevalent in the plant kingdom. Fruits such as strawberries, cherries or apricots as well as spices, lavender, dill and parsley all contain coumarin.

High quantities can be found in cassia (Chinese cinnamon), woodruff and buffalo grass. Due to its flavouring properties coumarin was used widely in both food and cosmetic preparations. In 1954, the use of coumarin as a food additive was prohibited in the USA because of its hepatotoxicity. In the seventies its carcinogenity was indicated by animal experiments. The council directive 88/388/EC and the Ger-man aroma regulation prohibit the addition of coumarin as such and limit the content to 2 mg/kg in food, 10 mg/kg in alcoholic beverages and 50 mg/kg in chewing gum. The European Food Safety Authority (EFSA) has defined a Tolerable Daily Intake (TDI) of 0.1 mg/kg weight.

Cassia contains approximately 3 g per kg of coumarin. The German Institute for Risk Assessment (BfR) has calculated that children between 2 and 5 years consuming cinnamon cookies containing 70 mg coumarin per kg will exceed the TDI-value three-fold.

The toxicological evaluation of coumarin is still a matter of controversy and coumarin was withdrawn from the draft of the new European aroma regulations. In contrast, the German BfR demands that the limit of 2 mg/kg for food should be maintained.

The German Federal Ministry for Food (BMELV) has now published reference values for cinnamon containing products such as cookies. These should be used as a reference for checking food safety in accordance with article 14 of regulation (EC) 178/2002 which states that no unsafe food is permitted on the market. German food authorities require the commitment of big producers only to market products containing less than 2 mg/kg coumarin.

Eurofins | Wiertz-Eggert-Jörissen offers different analyses for the determination of coumarin in spices, alcoholic beverages, cinnamon containing baked goods and aromas.

Contact: GregorCamps@eurofins.de

New biomolecular assays for food analysis

By Andreas Pardigol, Eurofins Scientific Analytics, France

To provide a rapid response to a market in constant evolution, Eurofins Molecular Biology laboratories work continuously to develop novel diagnostic tools, and to improve existing methods to meet customers' needs.

Pathogens

Eurofins has on several occasions demonstrated its flexibility in cases where rapid implementation of new assays is pivotal. A well known example is the recent bird flu issue. In early 2006 Eurofins launched a novel test based on Reverse Transcriptase-PCR technology detecting RNA sequences from influenza virus type H5N1. The immediate availability of this test made it possible for feed and food producers to monitor their goods, thus helping them to restore consumer confidence in their products.

GMOs

Another example is the detection of genetically modified organisms: Eurofins offers a complete test range for detection and quantification of GMOs tailored to clients' needs. Non authorised genetically modified rice was recently detected in Europe, and Eurofins was among one of the first laboratories to offer specific and fully validated screening and identification methods. Eurofins has been able to employ its experience in detecting biotech crops, not only to ensure that clients can make an informed choice but also to help biotech companies to apply for approval where a highly sensitive and specific detection system for the GM crop is mandatory.

Allergens

A major food safety concern now increasing in importance is the detection of allergens. Eurofins laboratories offer a broad range of tests, developed and validated within the framework of European projects. Eurofins has been a leader in establishing customised method validation programs, taking into account the nature of the customer's products in order to avoid false positive or false negative results due to matrix effects.
In this way, the customers can rest assured that the most suitable analytical method is applied to their products.

Contact: AndreasPardigol@eurofins.com
BertPopping@Eurofins.com

15 years of Eurofins International Seminars

By Fayçal Bellatif, Eurofins Formation Conseil, France

The first session of the international molecular biology seminar was held in 1991 in Paris by the Agrogène company.

Usually organised in February each year, the seminars rapidly became an annual rendezvous for outstanding scientists, professionals and institutions worldwide, all with an interest in GMOs, genotyping and traceability issues.

In 2004, Agrogène joined the Eurofins Group and the scope of the seminar was extended to global food and feed safety issues. Since then the seminar program has addressed the latest developments in risk management for agriculture, feed and food chains and provided global overviews in these areas. In 2006 the name of the seminar was changed to "Eurofins International Seminar" (EIS) in order to reflect its new scope. More than 65% of the participants attend at least twice, 70% attendees are from countries other than France and all 5 continents are represented. The delegates are generally scientific directors, quality assessors, R&D managers, academic experts, representatives of administrations and international authorities.

February 2007 edition

The coming meeting on February 22 & 23, 2007 will include more than 20 presentations given by well-known international speakers representing international authorities (EFSA, the European Commission, FAO, ISAAA, ISO…) as well as professional associations and representatives of the main actors in the area (AGPM, BASF, Bayer, the Black Sea Biotechnology Association, China Agricultural University…). GMO issues including specific crises and traceability within the supply chains remain a key topic. Additional conferences on various contaminants (mycotoxins, allergens, acrylamide, dioxins...) are the second key part of the forthcoming session. Regulatory, nutritional, analytical and scientific aspects will all be addressed.

This seminar is the definitive platform for debate within the supply chains; it is an ideal opportunity for all stakeholders to share knowledge and improve feed and food safety management systems. Registration and further details are available on www.formation-conseil.com.

Contact: FaycalBellatif@eurofins.com

Morphine in Poppy Seeds

By Scarlett Biselli , Eurofins | Wiertz-Eggert-Jörissen, Germany

The opiate alkaloid morphine, present in poppy seed intended for use in food, has recently given rise to a major concern following breathing difficulties experienced by a baby who had been fed with cooked poppy seeds in milk.

In the light of this incident, the German Federal Institute for Risk Assessment (BfR) evaluated the morphine content of poppy seeds in April 2005 and the analysis of morphine and opiates was recommended. Different benchmarks and standard values will be used for current monitoring. A legal limit inside Europe only exists in Hungary: 30 mg/kg morphine in poppy seed. Benchmarks in Germany are between 10-20 mg/kg for poppy seed and 4 mg/kg for products derived from poppy seeds (www.bfr.bund.de).

Approximately 10.000 tons of poppy seed are traded in Germany. The raw seed is mainly imported from the Czech Republic, Turkey, Austria, the Netherlands, Spain and Australia. In some individual cases poppy seed samples with high alkaloid contents (>100 mg/kg) have entered the market. Highly contaminated poppy seed was often found to originate in Australia and since October 2005, many traders try to avoid import of Australian poppy seeds.

The importation of raw materials with morphine content below 20 mg/kg is difficult and at the moment restricted to few countries of origin. The morphine content depends on the seed variety, but is also influenced by the harvesting techniques. Processing procedures such as washing, grinding, heating and baking can significantly reduce or even eliminate the morphine content.

Since October 2005 Eurofins | Wiertz-Eggert-Jörissen has been able to analyse morphine and its accompanying substances (papaverine, noscapine, codeine)

using an HPLC-MS/MS method. This method has the advantage that, in most cases, no specific sample preparation is necessary. The method thus offers a quick and safe way to monitor the quality of goods being processed or traded.

Contact: Scarlett.Biselli@wej.de

eurofins

Food Testing

in brief

Chemical Control joins Eurofins Group in Italy

Chemical Control is a laboratory specialised in research, consultancy and analysis in the field of chemical, physico-chemical, microbiological and molecular biological testing of food.

Founded in 1979, Chemical Control today has 50 highly qualified staff members and technologically innovative analytical equipment. The laboratory space of area about 3000 m^2 is organised in accordance with GLP (Good Laboratory Practices).

The laboratory is fully accredited by SINAL in compliance with UNI CEI EN ISO/IEC 17025:2000 standard (lab. n. 0490) and also by the Italian Ministry of Health, the Italian Ministry of Research and the Japanese Ministry of Health. Quality of work is assured by regular participation in national and international proficiency testing schemes.

Chemical Control successfully collaborates with major players in the food sector and with retailers.

The laboratory offers a large spectrum of analytical tests covering nutritional parameters, shelf life studies, vitamins, pesticides, veterinary residue analysis, microbiological and entomological analyses as well as molecular biology.

E-mail: chemical@cnnet.it
Phone: +39 0171 412470
www.chemicalcontrol.it

Eurofins lab among the oldest in Europe

In summer 2006 Eurofins acquired Steins Laboratorium in Denmark. This laboratory is among the oldest contract laboratories in Europe - founded in June 1857 by S. Groth and A.N. Ørsted - son of the world-renowned H.C. Ørsted. The laboratory rapidly gained a strong reputation for impartiality and reliability and published its first table of averages for useful substances in 15 feedstuffs in 1877, even before the first Danish law on the inspection of foodstuffs was passed in 1891.

Steins is today a well-established brand name in Scandinavia with recognised expertise in agriculture, dairy and other industries and trade. Steins is also participating on many ministerial boards and commissions.

Steins runs highly specialised and automated laboratories with a total of 290 employees, in Denmark and Sweden and Poland.

We are all looking forward to celebrating Eurofins | Steins 150th anniversary next year.

Contact: sj@steins.dk

Dioxins and dioxin-like PCBs

Reminder: the new Commission Regulation (EC) No 199/2006 (food) and Commission Directive 2006/13/EC (feed) will take effect from November 2006. These define the maximum levels for dioxins as well as for the sum of dioxins and dioxin-like PCBs, both of which must be met.

Eurofins laboratories can provide reliable testing services for the control of foods and feedstuffs.

Contact: welcome@gfa-ms.de

Eurofins partnership for aquaculture with IFFO

The International Fishmeal and Fish Oil Organisation (IFFO) has selected Eurofins to provide analytical services to its members. Customer-tailored analytical packages, in particular for the detection of contaminants, are offered by all Eurofins laboratories worldwide to members of IFFO.

Contact: thomasherrmann@eurofins.de

Eurofins Scientific Scandinavia
Sv. Aage Linde / sal@eurofins.dk
Tel. : +45 70 22 42 66

Eurofins Scientific Germany
Thomas Herrmann /ThomasHerrmann@eurofins.de
Tel. : +49 40 49294 700

Eurofins Scientific France
François Vigneau / FrancoisVigneau@eurofins.com
Tel. : +33 2 51 83 21 00

Eurofins Scientific Netherlands
Mercedes Prinsen / m.prinsen@analytico.com
Tel. : +31 513 67 22 99

Eurofins Scientific UK
Barry Hilton / BarryHilton@eurofins.co.uk
Tel.: +44 151 647 9175

Eurofins Scientific US
Lars Reimann / LarsReimann@eurofinsUS.com
Tel. : +1 901 507 3959

Eurofins Scientific Switzerland
Klaus Fuchs / KlausFuchs@eurofins.com
Tel. : +41 62 858 71 06

Others countries
Marcel Dumoulin / MarcelDumoulin@eurofins.com
Tel. : +33 2 51 83 21 06

Newsletter editorial team:
S. Noster-Vallée, E. Long, F. Vigneau, M. Champion, M. L. Martin, L. Reimann, Florian Heupel.
Design : P. Vestergaard Soelberg.

See also our newsletter Product Testing on www.eurofins.com

For further information please refer to our website www.eurofins.com