

e-Newsletter: Ensuring the Integrity of the European food chain

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FoodIntegrity is a European five-year project, which will draw from a well of experience consisting of 38 partners in the EU, China and Iceland to tackle issues surround the authenticity of food. The project will provide a focal point for the sharing and exploitation of European research aimed at protecting the integrity of food production in Europe.

Welcome to the second edition of the FoodIntegrity Newsletter. The aim is to provide you with a brief update on *some* of the progress on this multi-faceted project and let you know how you can get involved. We hope you find the newsletter useful.

Please contact us at foodintegrity@fera.co.uk with any suggestions for improvement.

Jana Hajslova and Monika Tomaniova, University of Chemistry and Technology, Prague, Czech Republic, guest editors

Project highlights:

2nd FoodIntegrity Consortium meeting and conference and workshops – Summary:

Poster awards:

The posters winners presented in the FoodIntegrity Conference are the following:

1. Non-destructive determination of chicken filet adulteration by near-infrared spectroscopy

Yannick Weesepoel¹, Eleftheria Tzoumeleka¹, Rita Boerrigter-Ennling¹, Saskia Van Ruth^{1,2}

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University, The Netherlands

2nd FoodIntegrity week, organised by AZTI-Tecnalia, was held in Bilbao, Spain, on 24-27 March 2015

Nearly 170 delegates from 24 countries attended this event.

The week included the following events:

- 2nd meeting of the FoodIntegrity consortium (24–25 March 2015)
- 2nd FoodIntegrity conference "Assuring the integrity of the food chain: food authenticity research priorities and funding opportunities" (26 March 2015)

This conference presented the latest research outputs from the FoodIntegrity project and details of funding opportunities for research on food authenticity:

Stakeholder perspectives from regulatory, industry and consumer sectors

Latest research from FoodIntegrity

- Development of an Early warning system for predicting food fraud
- European expert network on food authenticity
- European knowledgebase on analytical methodology and databases for food authenticity
- Chinese consumer attitudes to European products

Research priorities and calls

- Establish how researchers can apply to access the 2015 FoodIntegrity research calls
- Horizon 2020 strategic requirements in the food sector
- Future research on food authenticity

2. A non-targeted fingerprinting approach for authenticity testing of spices and herbs using spectroscopy and chemometrics

Janet Riedl, Carsten Fauhl-Hassek, Susanne Esslinger

Federal Institute of Risks Assessment, Berlin

3. High efficient DNA extraction from oil samples through microscale solid phase extraction (µSPE) on functionalized micropillars

Marta Prado, Karola Böhme, Lorena Diéguez

INL – International Iberian Nanotechnology Laboratory, Braga, Portugal



- Series of workshops (27 March 2015)
 - Keeping safety and integrity in the food chain: A view from many sides

Food integrity and food authenticity are new buzz words, defined in part as undiminished foods that are in perfect condition. The SAFE consortium message is that food safety is an integral part of food integrity: a food whose origin is unknown cannot be assured to be safe. At this workshop, leading research scientists, industry representatives, consumer groups and regulators addressed the intersection of food safety and food integrity.

- Formation of a Network of Excellence for Food Authenticity Analysis: The Key Challenges

The aim of this workshop was to formulate the rationale for a Network of Excellence (NoE) for Food Authenticity. The key objective of the proposed NoE will be to help solve the large number of challenges associated with Food Authenticity including (i) the development and standardisation of sampling and detection methodology for a wide range of foodstuff, (ii) information and technology transfer, (iii) formation of working groups and (iv) staff exchanges between participating laboratories.

- Early Warning System

The eventual goal was to identify food products and ingredients most susceptible to food fraud and rank these according to industry experts' beliefs about levels of fraud risks with these products and ingredients, considering a number of relevant key factors including the characteristics of products and ingredients and supply chains, the existing industry and regulatory capacity to detect fraud and level penalties faced by fraudsters operating in these chains. The information gathered at the workshop will feed into the development of an early food fraud warning system designed to help industry and regulators to better anticipate possible fraud incidents across main food supply chains.

For more information and presentations visit FoodIntegrity website <u>here</u>, conference website <u>here</u>, or Book of Abstracts <u>here</u>.



John O'Brien, Nestle, Key note speaker



Peter Whelan, FSAI, Key note speaker



Paul Brereton, FERA, FoodIntegrity coordinator Begoña Perez Villarreal, AZTI, conference organizer



Nearly 170 delegates from 24 countries attended the 2nd FoodIntegrity conference "Assuring the integrity of the food chain: food authenticity research priorities and funding opportunities"



Michele Lees and Miles Thomas, representatives of WP Knowledge base



Discussion groups

FoodIntegrity first project results:



FoodIntegrity Knowledge base: and information resource on food authenticity, description of the database and progress achieved so far

FoodIntegrity aims to bring together available information on suitable analytical tools and associated reference data for the detection of food fraud in a Knowledge Base, to facilitate access to this information for industry, regulatory authorities and research organisations.

The main work carried out so far has been devoted to designing and developing a suitable structure for the online searchable FoodIntegrity database. This tool will provide a central resource that maps methods onto commodities and authenticity questions - a Web tool with details of major food commodities, potential food fraud issues, and links to existing methods and associated analytical data if available.



<u>Industrial perspective of relevant food chains vulnerabilities vs Current analytical methods</u> and technologies that can be applied

FoodIntegrity aims to bring together available data on industrially exploited analytical tools for detection of food fraud, and identify reliable indicators/markers to use for horizon scanning of possible fraud events.

Relevant feedbacks from either a number of different areas (vendor assurance, quality assurance, purchasing department, R&D, etc...) or a number of suppliers/co-packers and industrial stakeholders along many different supply chains were collected, rationalized and combined, with regard to the application of analytical methodology, traceability issues, consumer issues and communication/media effects/repercussions.

Useful information was selected, extracting from all the methods, according to the problems, which is considered the most reliable one and which are the gaps in the sense of industry monitoring and control needs.

This permits to facilitate further prioritization-procurement setting phases and to better and exhaustively integrate extensive databases on analytical techniques and their application status/validation.



Chinese consumer attitudes to food fraud, short description of the survey and its outcomes

A number of highly publicised food scares have negatively impacted Chinese consumers' confidence in Government controlled food inspection and certification schemes. FoodIntegrity research examined Chinese consumers' attitudes and perceptions towards the safety and integrity of imported European foods. Although European food products are usually associated with high standards in production, labelling and safety, these trusted 'credence' attributes make some imports susceptible to imitation and counterfeiting.



The Qualitative method of focus groups was conducted in three Chinese cities Beijing, Guangzhou and Chengdu. The research investigated the psychological factors underpinning attitudes towards food safety and the perceived authenticity and traceability claims associated with (i) infant formula milk, (ii) olive oil, and (iii) Scotch whisky.

Participants perceived food safety to be problematic and recognised fraudulent activities associated with European food imports. The degree of 'outrage' depended upon the potential severity of the implications for their health. Food safety concerns were framed in terms of 'cumulative long term effects' and included chemical and physical concerns. Barriers to perceived food safety were underpinned by perceptions relating to (i) a lack of confidence and skills to judge food quality and safety, and (ii) the resulting inability to make an informed choice about food purchasing decisions. A number of risk relieving strategies associated with purchasing and evaluating foods and domestic practices were identified to compensate for perceived food safety risks.

PARTICIPATE in SURVEYS!



Survey of the Olive oil sector, short description of the survey and its outcomes

FoodIntegrity has conducted a research to understand the current problems and sensitivities of the olive oil market. A series of questions have been presented to the different actors on olive oil field: farmers, producers, importers/exporters, retailers, regulatory bodies, analysts and consumers.

The aim was to know their opinion and to identify the research needs about different aspects related to quality, traceability, regulation, standard methods and other issues. The objective was also to identify current and incipient problems that directly concern the production, commercialisation and consumption of this product. In order to favour the distribution of the survey into actors, it has been translated into different languages and distributed all over the world. Inputs from project partners allowed selection of the questions that are the most relevant in the sector today.

The questions dealt with many of the most controversial issues today, and therefore significant number of questions related to traceability was also included. Answers from more than 20 countries have been collected; from more than 700 answers, 63% corresponded to consumers. In general terms, the survey revealed a concern in quality and safety regarding olive oil traceability and divided opinion in some issues related to labelling and authenticity tools.

OLIVE OIL SECTOR: You can still contribute !!!

Survey to understand the current problems and sensitivities of the olive oil market

Please express your opinion in a free and anonymous way here.



SEAFOOD SECTOR:

Survey to understand the misdescription incidents in seafood sector (HOtels, REstaurants, CAfes)

Please take your time, help us and will get into the prize draw to win an amazing prize! More information on procedure for samples' collection can be found here.

Identifying the gaps in current research on food authenticity – FoodIntegrity research procurement:



The FoodIntegrity project will commission €3M of research in the area of food authenticity and traceability, in 2015. There is a **call for proposals** to address the four topics that were identified from a comprehensive gap analysis with stakeholder input and evaluation. **Deadline to submit a project proposal is 14th August 2015.** More details can be found here.

Dissemination activities: JOIN US at FoodIntegrity EVENTS!



1st FoodIntegrity Open day at RAFA 2015 will, be organised as satellite event of the 7th International Symposium on Recent Advances in Food Analysis (RAFA 2015), on 4-5 November 2015, Prague, Czech Republic.

You can join us and discuss with FoodIntegrity experts the latest developments and strategies in the field of food integrity - safety, quality, authenticity and traceability. Please register at RAFA 2015 $\underline{\text{here}}$.



Conference venue, Diplomat conference centre, Prague

3rd FoodIntegrity conference will be organised on 6-7 April 2016 in Prague, Czech Republic.

Two days conference will present the latest research outputs from the FoodIntegrity project including e.g.:

- New activities on (i) Non targeted analysis, (ii) Complex foods, (iii) Transparency along the food chain, (iv) Rapid methods
- Food Fraud System in the EU (and beyond worldwide network)
- Demonstration how a European knowledgebase on analytical methodology and databases for food authenticity can be exploited by stakeholders
- Analytical tools for food authentication
- Data processing and interpretation in the context of regulatory requirements
- 2nd workshop on "Developing a network of expertise in food analysis" aimed at formulation of the rationale for establishing of the proposed Network of Excellence (NoE) for Food Authenticity

How to get involved?





Do you wish to receive information about news, progress and events related to the FoodIntegrity project?

Please register for the project COMMUNICATION here.



Do you wish to become a FoodIntegrity stakeholder and be able to affect or be affected by FoodIntegrity project activities?

Please register as a FoodIntegrity STAKEHOLDER to the FoodIntegrity Network here.



🤝 Do you wish to become a FoodIntegrity expert and be called in for an advice and/or contribution to the project activities?

Please register as a FoodIntegrity EXPERT to the FoodIntegrity Network here.

The FoodIntegrity Network is a platform for stakeholders and experts to exchange knowledge and expertise in food authenticity, safety and quality; and to rapidly share information and intelligence about suspected and actual incidents to protect consumers and food products from damaging effects of food misdescription. The overall objectives of the FI Network is to bring together producers, distributors, processors, retailers, regulators, researchers enforcers and consumers to assure the integrity of the food chain.

Dates for diary:



FoodIntegrity Associated events:

7th International Symposium on Recent Advances in Food Analysis (RAFA 2015)

3-6 November 2015, Prague, Czech Republic



FoodIntegrity Open day at RAFA 2015

4-5 November 2015, Prague, Czech Republic.

3rd FoodIntegrity conference

6-7 April 2016, Prague, Czech Republic

External events:

EUROANALYSIS 2015

6-10 September 2015, Bordeaux, France

129th AOAC Annual Meeting & Exposition

27-30 September 2015, Los Angeles, California, USA

4th MS-food Day

7-9 October 2015, Foggia, Italy

EUROFOODCHEM XVIII

13-16 October 2015, Madrid, Spain

29th EFFoST International Conference

Food Science Research and Innovation: Delivering sustainable solutions to the global economy and society

10-12 November 2015, Athens, Greece

We hope you have found this e-Newsletter interesting and informative. We would welcome your views on any of the issues covered. Please email foodintegrity@fera.co.uk.

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