



# FOOD FRAUD – Threats & Impacts



## THE INDUSTRY'S RESPONSE

YVES Rey, Corporate Quality General Manager – Danone  
GFSI Board Member and Former Chairman

## Outline

- Introduction to GFSI
- Food Fraud
  - Types
  - Drivers
  - Impact
- Food Industry's Response
- Analytical Testing Strategy



## GFSI: Global Food Safety Initiative

- Launched in 2000 – GFSI is an industry-driven initiative gathering world's leading food safety experts
- GFSI provides leadership & guidance on food safety management systems
- GFSI is managed by the CGF
  - CGF is a global parity-based industry network which brings together CEOs from 400 companies across 70 countries
  - CGF member companies have combined sales of € 2.5 Tr.
  - CGF is governed by a Board of Directors including 50 manufacturers and retailers



## GFSI Mission

### The mission

Provide continuous improvement in food safety management systems to ensure confidence in the delivery of safe food to consumers worldwide.



## GFSI Objectives

### GFSI Objectives:

- Reduce food safety risks
- Manage cost in the supply chain
- Develop competencies and capacity building
- Facilitate knowledge exchange and networking



### Key Activities:

- Specifying in its guidance document, the requirements for food safety schemes and how these requirements should be implemented controlled and monitored
- Driving global change through multi-stakeholder projects on strategic food safety issues



## A Global Multi-Stakeholder Platform



## Platform for Collaboration

## Building Confidence in Certification

Benchmarking & recognition of food safety management schemes against the **GFSI Guidance Document**

- Sets the requirements for food safety management schemes and key elements for the production of food and feed
- Defines the requirements for the effective management and control of conforming schemes
- Puts in place transparent procedures for the GFSI benchmarking process

## 'Once Certified, Accepted Everywhere'

These are the recognized schemes:



## Other Activities within GFSI

### Global Markets Programmes

- Tool for development of supplier food safety management systems toward certification
- Targets less developed companies in primary production and manufacturing
- Facilitating their market access



### Auditor Competence

- Consensus on the skills, knowledge and attributes that a competent food safety auditor should possess



## Benefits of the GFSI Approach

### Supply chain

- Improved product integrity
- Better access to market
- Reduces duplication

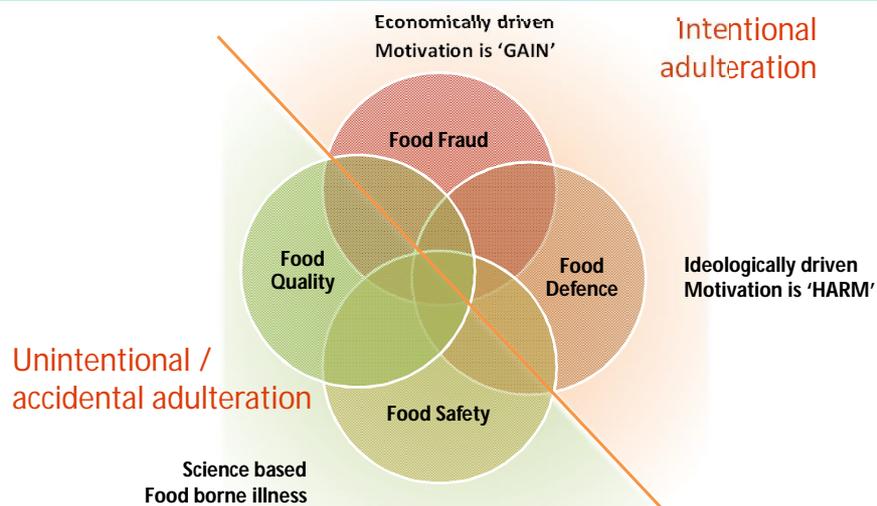


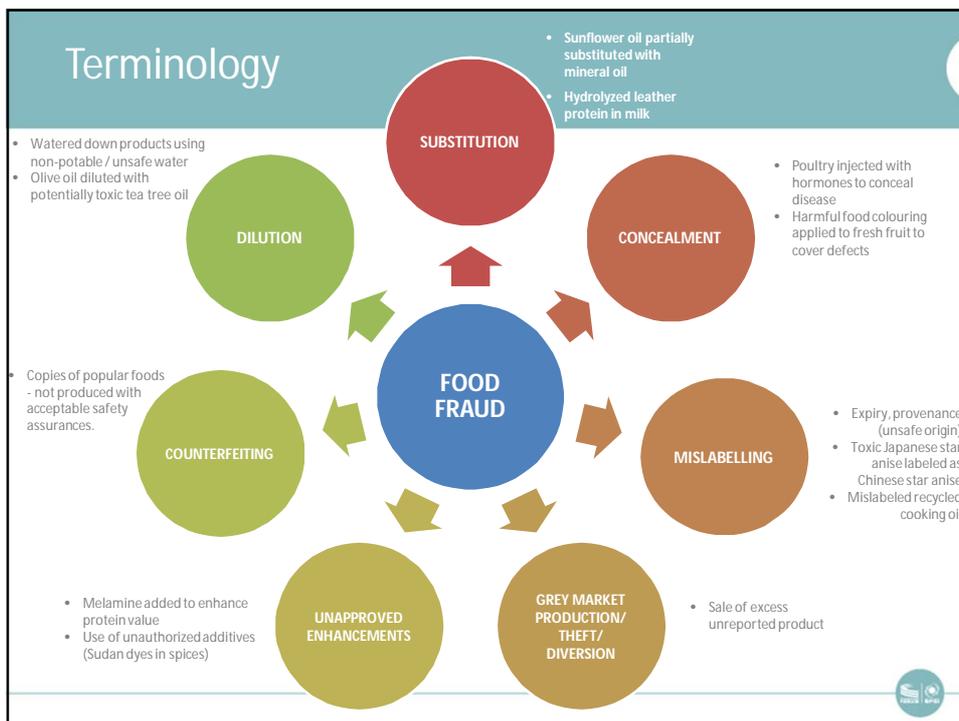
### Public Health

- Improved public health
- Complement legislation
- Reduced foodborne diseases
- Country reputation & local economy



## Food Fraud in the Context of Food Safety





## Food Fraud: A Global Concern

**Arrests in France in new horsemeat scandal**

**False food labels on 82 'impure oils' in China**

**Testing reveals third of food products mislabelled**

**India's milk prices hiked again, though much of it is adulterated**

**South Africa study finds donkey meat sold as beef**

**Walmart Recalls Tainted Donkey Meat in China**

## Top Foods & Ingredients for Fraud



**Fish**



**Olive Oil**



**Milk**



**Honey**

\* Source: In 'Development and application of a database of food ingredient fraud and economically motivated adulteration from 1980 to 2010'. J.C. Moore et al. (2012). J. of Food Science Vol. 77(4), 118-126.

## Why is Food Fraud increasing?



complex food supply chains



Challenging economic times



Increasing pressure for unscrupulous suppliers to commit food fraud

**Food supply is becoming more global**



## Example of Complex Supply Chain

### The horsemeat scandal



Source: www.economie.gouv.fr

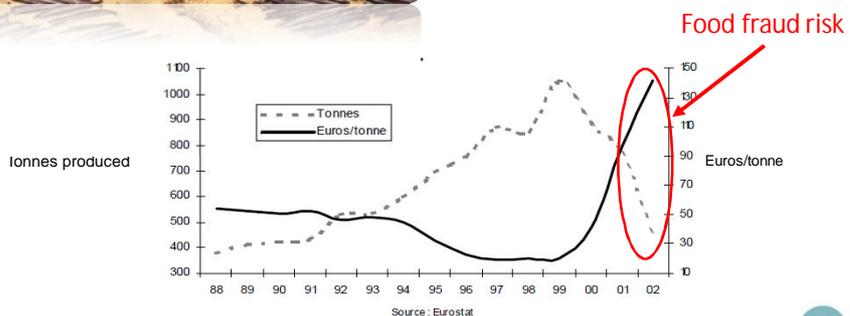


## Example of Rising Price

Vanilla: a classic case of supply and demand ...



Current price: 30 € / kg  
But in 2003: prices reached 500 € / kg



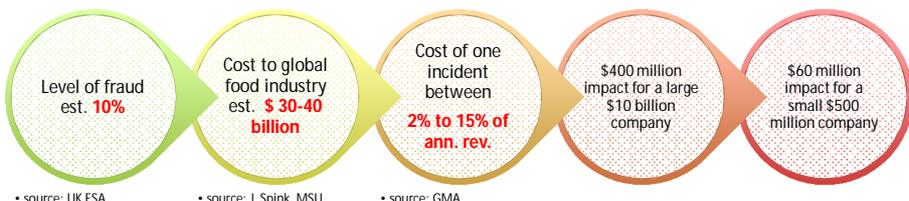
Source: Eurostat



## Some Numbers on Food Fraud



Over **2,100** records



• source: UK FSA

• source: J. Spink, MSU

• source: GMA



## The Impact of Food Fraud

### Impact on business

- Consumer trust
- Lost sales
- Crisis management

### Impact on consumer

- Most cases of food fraud not harmful
- But there are some notable exceptions



## Global Response

U.S.-China Food Safety Cooperation

HM Government  
Elliott Review into the Integrity of Food Supply Networks - interim  
December 2013

GFSI GUIDANCE DOCUMENT  
Sixth Edition

Food Integrity: Methods, Detection and Deterrence

Food and Drink

FOOD AUTHENTICITY  
How to Help Protect Your Business from Food Fraud

## Food Related Crime

TRAFFICKING IN ILLEGIT GOODS PROGRAMME

**EUROPOL**  
FOCAL POINT COPY

**OPERATION OPSON II**

INTERNATIONAL WEEK OF ACTION (IWA)  
TARGETING COUNTERFEIT AND SUBSTANDARD FOODSTUFF

WWW.INTERPOL.IT  
WWW.EUROPOL.ORG/EU

### THOUSANDS OF TONNES OF FAKE FOOD AND DRINK SEIZED IN INTERPOL-EUROPOL OPERATION

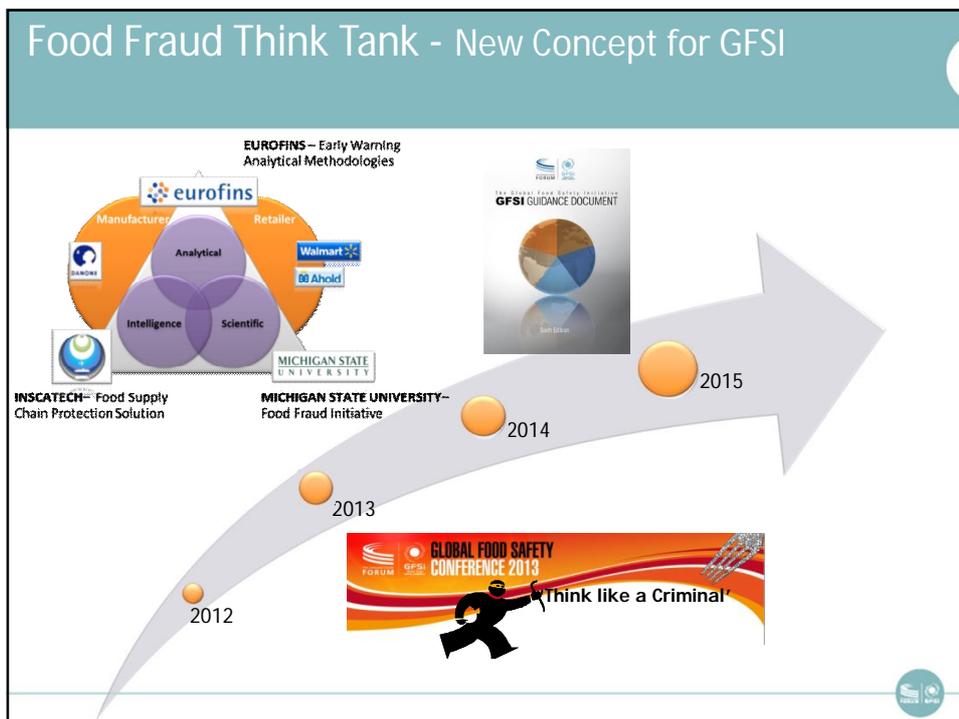
The Hague, the Netherlands  
13 February 2014

More than 1200 tonnes of fake or substandard food and nearly 430 000 litres of counterfeit drinks have been seized in an Interpol-Europol coordinated operation across 33 countries in the Americas, Asia and Europe.

Targeting the organised crime networks behind the illicit trade in counterfeit and unregulated food and drink, Operation Opson III led to the recovery of more than 131 000 litres of oil and vinegar, more than 80 000 biscuits and chocolate bars, 20 tonnes of spices and condiments, 186 tonnes of cereals, 45 tonnes of dairy products and 42 litres of honey. In total some 96 people were arrested or detained with investigations continuing in many countries.

The operation, conducted throughout December 2013 and January 2014, and supported for the first time by the European Commission's Directorate General for Health and Consumers, involved police, customs, national food regulatory bodies and partners from the private sector, with checks carried out at shops, markets, airports, seaports and private homes.





## Recommendations by Think Tank

# FOOD FRAUD MITIGATION

Vulnerability Assessments

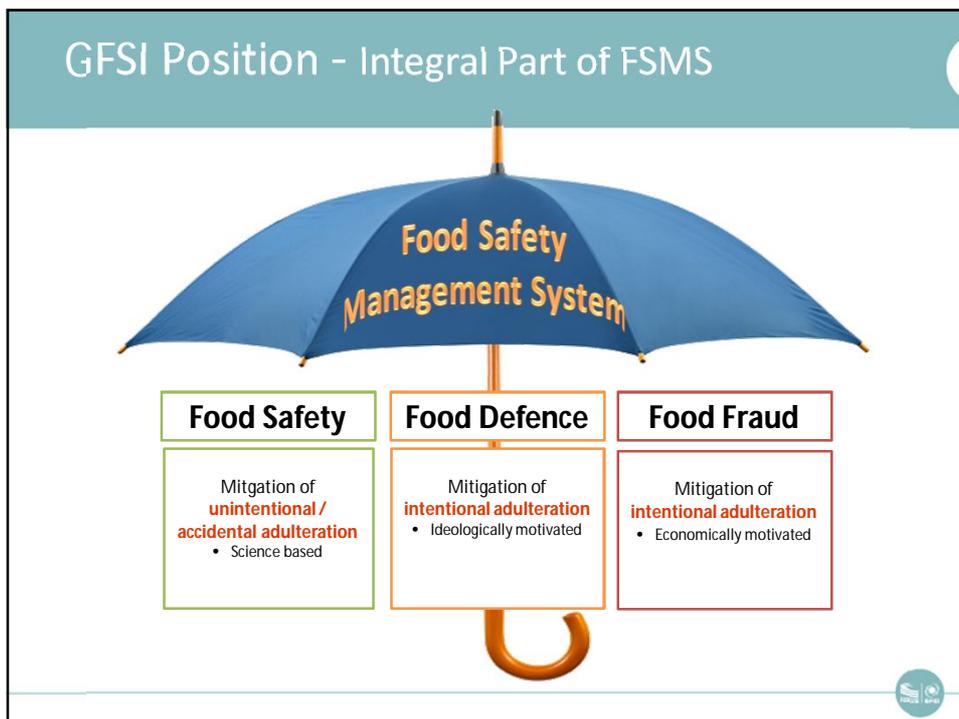
- Supply chain mapping
- Socio-economic
- Behavioural
- Geo-political
- Historical



**'Think like a Criminal'**

Vulnerability Control Plan

- Monitoring strategy
- Origin/label verification
- Specification management
- Supplier audits
- Analytical testing strategy
- Anti-counterfeit technologies



## GFSI Position



**Decision:**

Incorporation of new key elements in Guidance Document

- Cascade to food safety management schemes via benchmarking process
- Incorporation in company's food safety management system

**When:**

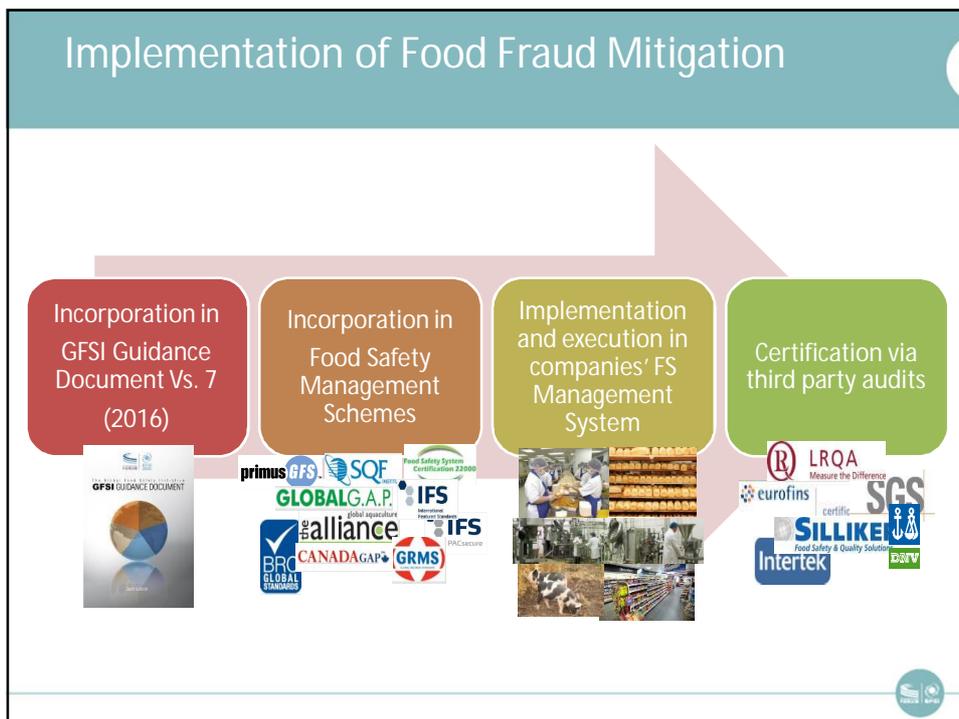
Many ongoing initiatives on food fraud

- **Leading** role for GFSI
- Direction & Alignment



Schemes and companies need time for this new challenge

**'GFSI Position Paper'** issued in 2014, followed by Incorporation in **'Version 7'** in early 2016



## Initiative on the 'HOW'



**SSAFE**

Practical guidance

→

Help companies undertake a vulnerability assessment

+

Help companies prepare a plan to control the identified vulnerabilities





SSAFE is a non-profit organization aiming to strengthen recognized food protection systems through public private partnerships.

For more information visit [www.ssafe-food.org/](http://www.ssafe-food.org/)

## The Analytical Testing Strategy

# FOOD FRAUD MITIGATION

Vulnerability Assessments

- Supply chain mapping
- Socio-economic
- Behavioural
- Geo-political
- Historical



**'Think like a Criminal'**

Vulnerability Control Plan

- Monitoring strategy
- Origin/label verification
- Specification management
- Supplier audits
- Analytical testing strategy
- Anti-counterfeit technologies

Credits to Michele Lees, Eurofins

## The Analytical Testing Strategy

~~MORE TESTING?~~



Credits to Michele Lees, Eurofins



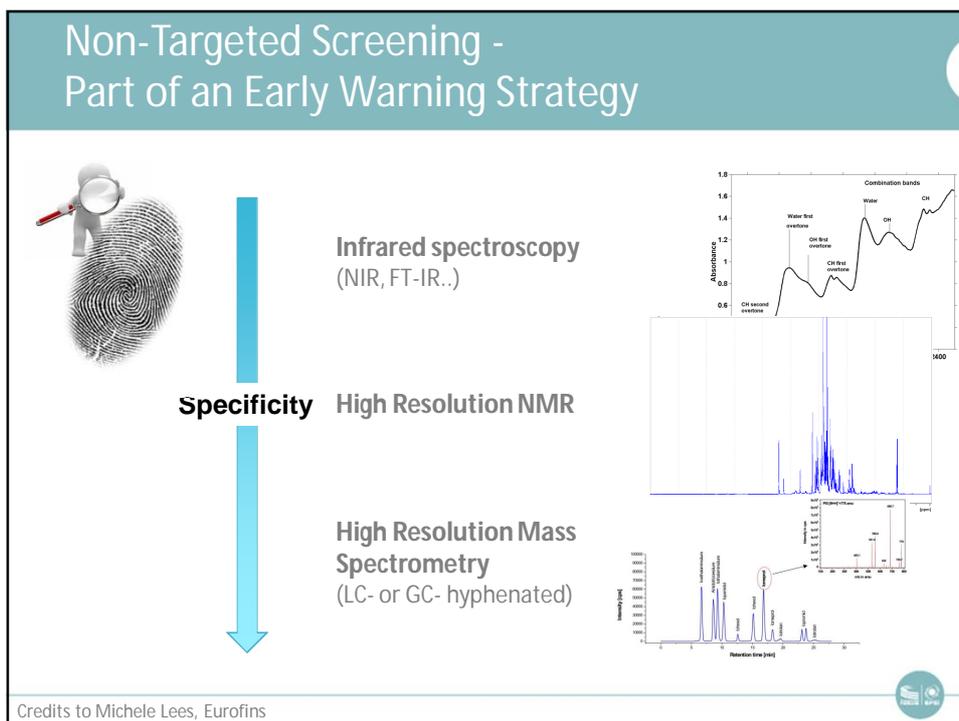
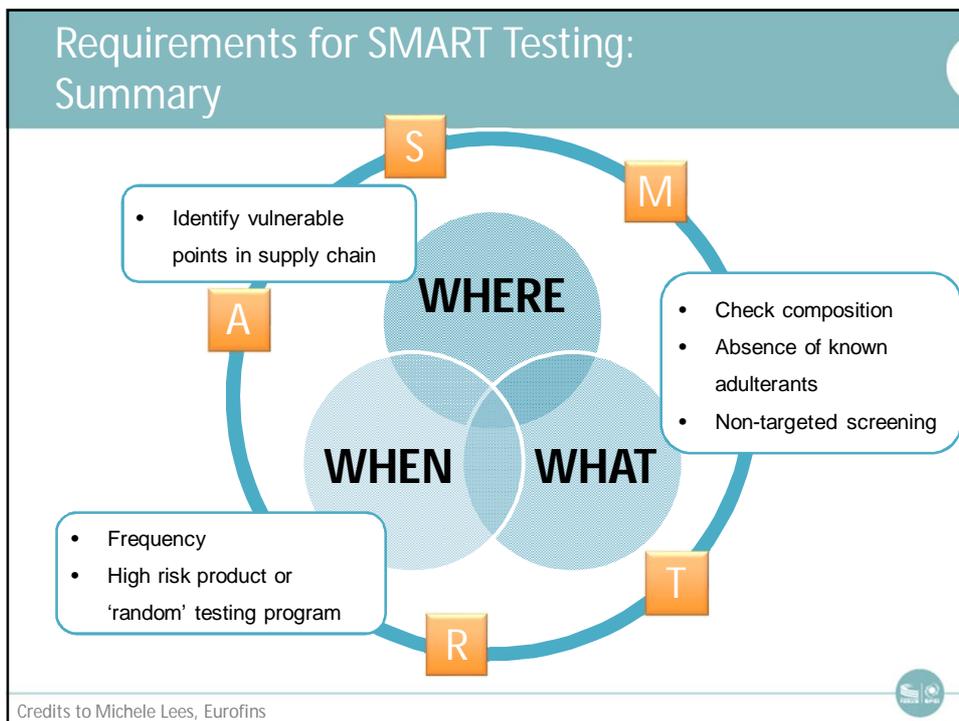
## Detecting Fraud...



<b>Targeted Analysis</b>		<b>Non-Targeted analysis</b>
⇒ target list of components		⇒ product/ingredient profile
<b>we know what to look for and only find what we are looking for</b>		<b>we also find what we are NOT looking for</b>

Credits to Michele Lees, Eurofins





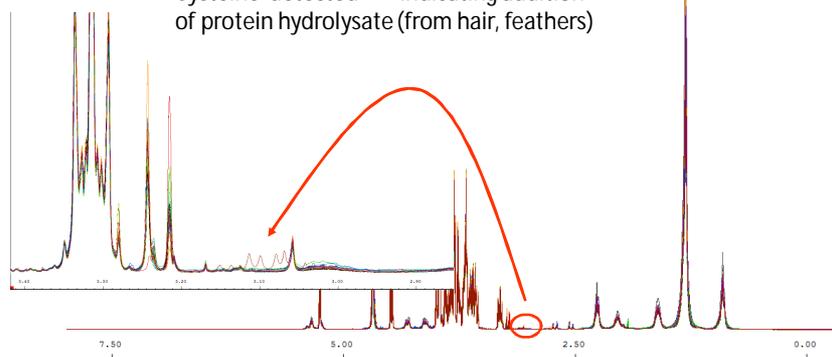
## Non-Targeted Screening - Part of an Early Warning Strategy

Example:  
High Resolution NMR as a monitoring tool for milk



AgriFood GPS  
FOODS OF AGRICULTURE BY UNIVERSITY OF FRIEDRICH-SCHILLER

Cysteine detected  $\Rightarrow$  indicating addition  
of protein hydrolysate (from hair, feathers)



Credits to Michele Lees, Eurofins



**Look Beyond the Obvious  
&  
Find the Needle in the Haystack!**



**THANK YOU**

yves.rey@danone.com

