

# HOT SOURCE

EXPERT INSIGHTS INTO SAFE, SUSTAINABLE AND HIGH-QUALITY FOOD

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**FOOD SAFETY IN THE GLOBAL FOOD SERVICE INDUSTRY**

**US FDA FINDINGS ON FOOD IMPORT REFUSALS**

**EMERGING CONTAMINANTS IN FOOD**

**SGS LAUNCHES ANIMAL WELFARE AND IDENTITY PRESERVATION STANDARD FOR RABBITS AND HARES**

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**SGS LAUNCHES HALAL AWARENESS TRAINING COURSE**

**SGS WHITE PAPER: UNDERSTANDING SAFETY, QUALITY AND SUPPLY CHAIN BEST PRACTICE IN THE DAIRY INDUSTRY**

**SGS**



## DEAR READER,

Food safety covers a broad range of subjects. In this issue of Hot Source we look at a range of topics all falling within this business critical category.

Improvements in the testing, identification and understanding of substances mean the industry's understanding of contaminants, their safe levels and potential for harm is growing all the time. We explore a selection of emerging contaminants.

Outbreaks of food-borne disease are surprisingly common, causing illness, hospitalization and even death. We look at the barriers and drivers to improving food safety in the hospitality sector.

Incorrect labelling accounts for some 40% of product rejections in the US and Europe. The US FDA is introducing a new nutrition facts panel for all packaged foods, our experts look at the new regulations in detail. On a similar theme to product rejections, we also explore the US FDA's findings on food import refusals.

To help companies that produce, store, transport and supply Halal products, understand the Halal market and its importance to their company, SGS has introduced a new Halal awareness training course, developed in association with the Halal Authority Board.

Leading the field in animal welfare, SGS has launched its Responsible Animal Welfare and Identity Preservation Standard for Rabbit Meat, Fur, Skins and Hair, to ensure, manufacturers, retailers and consumers are informed about the conditions in which they were produced.

In the dairy sector, SGS's new white paper 'Understanding Safety, Quality and Supply Chain Best Practice in the Dairy Industry' introduces readers to the complex issues and risks, and provides in-depth commentary to help you better understand the most important topics requiring monitoring and testing.

For the complete range of SGS services and support visit: [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com).

### SGS AGRICULTURE AND FOOD TEAM

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# FOOD SAFETY IN THE GLOBAL FOOD SERVICE INDUSTRY

With an estimated 48 million US citizens alone affected by food-borne diseases each year, the hospitality industry must reconsider its approach to food safety.

The US Centers for Disease Control and Prevention (CDC) has estimated that each year roughly 1 in 6 Americans, about 48 million people, suffer from food-borne disease. Of these, it is estimated 128,000 people are hospitalised and around 3,000 die<sup>1</sup>. In Europe, a 2015 report published by the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC), confirmed a total of 5,196 food-borne and water-borne outbreaks, 43,183 human cases, 5,946 hospitalisations and 11 deaths in 2013 alone.

Accurate figures for food-borne illness in hospitality venues can be difficult to identify as the majority of cases relate to unspecified agents where there is insufficient data. In 2011, the CDC made estimates for two sources of food-borne illnesses. The first group, listing 31 pathogens, accounted for roughly 9.4 million cases annually, and the second group, unspecified agents where there is insufficient data, represented 38.4 million cases.

Without tracked data for the majority of food-borne illness cases, it is impossible to estimate how many of these cases of food-borne disease can be attributed to the hospitality industry. However, between 2009-2012, the CDC has estimated that restaurants accounted for almost two-thirds of norovirus outbreaks, with 70% of cases implicating food handlers. In Europe, 22.2% of outbreaks were associated with restaurants, hotels, cafes, pubs and bars<sup>2</sup>.

With around 9.5 million workers employed in the US restaurant industry, and 80% of all food service firms employing less than 20 people, it is clear that education is a vital part of the defence against food-borne diseases in the hospitality industry<sup>3</sup>.



The World Health Organization has acknowledged that often it is not a single issue but a combination of factors that are responsible for illness. In the hospitality sector, food handling errors such as failure to ensure critical procedures (cleaning, separation of raw and cooked meat) are effectively followed, insufficient food safety related record keeping and ineffective training are commonly implicated in food-borne illness. These are often attributed to not only a lack of adequate food safety knowledge, but also to time constraints, lack of resources (e.g. financial, time, supplies, etc.) and behavioural issues, including those related to employee motivation and cultural perceptions of food safe practices.

We all work in a global food supply chain and this creates its own problems. When looking at food safety, it is important to consider the influence of employees' own cultural background, upbringing, misconceptions and traditions.

Just as the reasons for food-borne disease are often a combination of

factors, the answer must also be a combination of approaches. Employee education and mentoring are the key to a safer food culture, but this means more than just box-ticking training. It requires leadership from the top down. High levels of food safety competence must be ingrained in business practices at every level, to create a robust "food safety culture".

In the 21st century, businesses must acknowledge that inadequate food safety is not just the matter of a sick customer, it will mean the erosion of brand loyalty and reputation and, in an age of social media, that negative message will spread faster than ever. For the complete range of SGS services and support visit [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com) or send an email to [food@sgs.com](mailto:food@sgs.com).

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<sup>1</sup><http://www.cdc.gov/foodborneburden/index.html>

<sup>2</sup>*EFSA Journal* 2015; 13(1): 3991

<sup>3</sup><http://www.cdc.gov/niosh/docs/2012-105/pdfs/2012-105.pdf>

# US FDA FINDINGS ON FOOD IMPORT REFUSALS

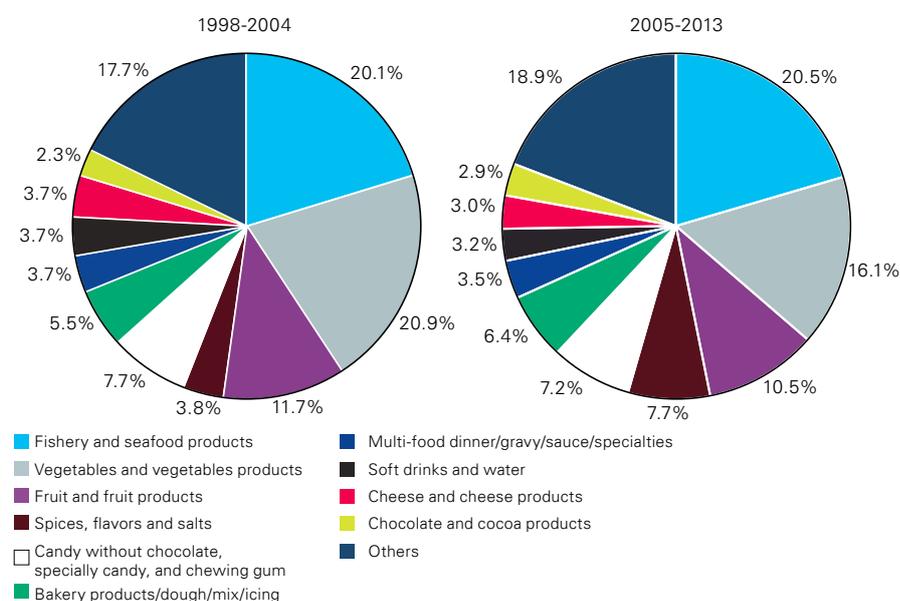
Global food supply chains offer many benefits, but they also present challenges to food safety. In the US, food imports are inspected and approved, or refused, to ensure that safety is not compromised, poor practice is identified and non-compliant products are removed from the supply chain. Official figures demonstrate the scale of the issue.

In March 2016, the United States Department of Agriculture Economic Research Service (USDA ERS) produced a report on United States Food and Drug Administration (US FDA) import refusals between 2005 and 2013. This information was summarized and compared to similar research performed on US FDA import refusals from 1998 to 2004. The US import refusal information is publicly available and data from 2002 to the present day can be searched by country, product and the refusal criteria. This data can also be downloaded into spreadsheets which list all the information, as well as details of the responsible party.

## CATEGORY CONSISTENCY

The US FDA physically inspects roughly 1% of all products imported into the United States, but because they use a targeted risk based approach, they refused 87,552 shipments for 142,679 violations of food during the period between 2005 and 2013. For both periods the top six food categories haven't changed, but their order has. For the top three categories, nothing has really changed for the period of 2005 to 2013, fishery and seafood products is the most refused category with 20.5% of the refusals, vegetables and vegetable product refusals amount to 16.1% of the refusals, and fruit and fruit products account for 10.5% of overall refusals. For the next three categories there has been a shift because the spices, flavours and salts category has slightly more than doubled, from 3.8% to 7.7% of refusals, so have moved from sixth to fourth on the category refusal list. Non-chocolate candy and chewing

**VEGETABLE/VEGETABLE PRODUCTS AND FRUIT/FRUIT PRODUCTS ACCOUNTED FOR SMALLER SHARES OF FDA IMPORTED FOOD REFUSALS IN 2005-13 THAN IN 1998-2004**



gum is fifth with 7.2% of refusals, and bakery products/dough/mix/icing category in sixth. The top six categories contribute roughly 69% of import refusals in the United States between 2005 and 2013.

## ADULTERATION & MISBRANDING

The US FDA has two primary reasons for a refusal; adulteration and misbranding. For the 2005 to 2013 period, adulteration accounted for 57% of the violations and 41% was a result of misbranding. Some 2% of the refusals are difficult to classify into these two categories. For adulteration, there are three categories of adulteration; microbiological, chemical and physical. The primary microbial adulterant is *Salmonella*, followed by *Listeria* while the top chemical adulterants are unsafe colour additives and pesticide residues.

The primary physical adulterant is filth, which can be any extraneous material ranging from but not limited to decomposition, rodent excreta, insects, metals, glass or parasites.

For some categories adulteration is more common, such as the seafood, vegetable, fruit and spice categories while misbranding is more common in categories such as non-chocolate candy and bakery products. Of course each category has its own unique refusal issues, such as in the seafood category where filth is the top issue, followed by *Salmonella* and then veterinary drug residues. For the vegetable category, pesticide residues are the top reason for refusal followed by failure to file scheduling process information for low-acid or acidified canned products and then filth. The fruit category is topped by filth, followed by pesticide residues and then unsafe colour additives.

<sup>1</sup><http://www.ers.usda.gov/media/2051661/eib151.pdf>

<sup>2</sup><http://www.ers.usda.gov/amber-waves/2016-march/patterns-in-fda-food-import-refusals-highlight-most-frequently-detected-problems.aspx#.Vydeg2frvIV>

<sup>3</sup><http://www.accessdata.fda.gov/scripts/importrefusals>



*Salmonella* refusals by category are:

1. Seafood
2. Spices
3. Fruit
4. Vegetables
5. Nuts and edible seeds

*Listeria* refusals by category are:

1. Seafood
2. Cheese and cheese products
3. Fruit
4. Multi-food dinner/gravy/sauce/specialties
5. Vegetables.

For misbranding, the lack of a nutritional panel is the primary reason for refusal, followed by the lack of one or more of the following, an ingredient list, a net content statement and English text.

### LARGEST SOURCING COUNTRIES SEE MOST REFUSALS

While the three countries seeing most refusals are Mexico, India and China, the data is not a surprise because Mexico ships more vegetables into the US than

any other country. Likewise, India ships more spices and China more seafood to the US, than any other country. So the primary refusal categories for these countries are in line with the amount of product shipped. The more important indicator is when a country has a high level of refusal compared to the amount of product shipped into the US. For example, shipments of cheese and cheese products from France account for 14.1% of the overall category, but they have 36.8% of the refusals.

There are also specific trends to be noted. The volume of US FDA refusals for pesticide residues has increased almost four-fold since 2008. The majority of this increase can be seen in the whole-grain/milled grain products/starch category. *Listeria* refusals are substantially down from the figures noted in 1998 to 2004, with most of this drop coming in the cheese category. This is progress, but not perfection, because refusals for other bacteria categories are mostly in the cheese and cheese product category.

There is one consistent trend. The same violations, for the same product categories, happen year after year, yet total refusals versus the amount of imported product declines because of US FDA budget constraints and shrinking personnel numbers.

### FOCUS ON THE IMPORTER

With the coming compliance dates of the Food Safety Modernisation Act Foreign Supplier Verification Programme, importers will be responsible for assuring that products being imported comply with US regulations. These importers will need to utilise this import refusals information and other data to determine the verification procedures necessary to assure compliance. This may include, for example, a label review, or pesticide, colour additive, pathogen or veterinary drug testing performed by a competent authority. Final random inspection and loading supervision can help to assure that products are not subjected to temperature abuse or other contaminants. In addition, facility audits assure that processes and procedures are in place to pack, process, hold or manufacture safe food.

For the complete range of SGS services and support visit [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com) or send an email to [food@sgs.com](mailto:food@sgs.com).

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# EMERGING CONTAMINANTS IN FOOD

Improvements in the testing, identification and understanding of substances means the food industry's understanding of contaminants, their safe levels and potential for harm is growing all the time. Hot Source explores some of the current crop of emerging contaminants.

Emerging contaminants are not necessarily new substances. They can be substances that have been around for a long time for which:

- New information has been obtained
- Test methodology has improved so a known contaminant can be tested for
- Environmental contamination is now being found in the food or water supply
- Changes in consumption of a substance result in recognition of an issue

What do these contaminants have in common? At some level they all pose a risk to people or animals.

## AMYGDALIN

Amygdalin is the major cyanogenic glycoside present in raw apricot kernels and products derived thereof. Raw apricot kernels have been marketed as an alternative cancer treatment. When the apricot kernel is chewed or ground it degrades into cyanide. "The lethal dose is reported to be 0.5-3.5 mg/kg body weight.<sup>1</sup>" The acute reference dose, the point in daily exposure likely to be without risk of deleterious effects over a lifetime, as per the European Food Safety Authority (EFSA) is 20 ug/kg body weight. This level would be exceeded if a toddler consumed one small kernel or an adult consumed either three small kernels or half a large kernel.

## NICKEL AND OTHER HEAVY METALS

While some heavy metals are checked for and regulated, such as lead, mercury, arsenic, cadmium and chromium, others are not as clearly recognised



as contaminants. However, there are issues with them too. For example, nickel is a naturally occurring metal that is sometimes found in food and water through environmental contamination. Animal studies indicate that long-term exposure can have possible reproductive and development effects<sup>2</sup>. The International Agency for Research on Cancer (IARC) classifies metallic nickel and nickel compounds as possibly carcinogenic to humans<sup>3</sup>. The US Environmental Protection Agency (US EPA) classifies nickel refinery dust and nickel subsulfide as a human carcinogen.

At this time, in the United States and the European Union there is no standard for nickel in food. The EFSA has set a tolerable daily intake of 2.8 mcg/kg of body weight for nickel, and the US EPA has established an oral reference dose of 0.02 mg/kg/day for nickel soluble salts. The US Food and Drug Administration (US FDA) lists elemental nickel as Generally Recognised as Safe

21 Code of Federal Regulations (CFR) 184.1537 as a direct food additive. The European Union has a drinking water and natural mineral water standard of 20 mcg/L for nickel, while in the US the drinking water and bottle water standard is 0.1 mg/L, except in some states that have drinking water standards ranging from 100 ug/L to 150 ug/L. After the EFSA performed a study in 2015 concerning nickel in food (primarily vegetables) and drinking water, experts concluded that chronic dietary exposure to nickel is of concern to the general population.

## ALKALOIDS

Pyrrrolizidine and tropane alkaloids are natural toxins. Alkaloids are back in the news as on 19 February, 2016 European Commission Regulation EU 2016/239<sup>4</sup> amended EU 1881/2006 establishing a limit for atropine and scopolamine, two tropane alkaloids, at 1.0 ug/kg in processed cereal-based foods and baby foods for infants and young children, containing millet, sorghum, buckwheat or their derived products.

<sup>1</sup><http://www.efsa.europa.eu/en/efsajournal/pub/4424>

<sup>2</sup><http://www.efsa.europa.eu/en/topics/topic/metals>

<sup>3</sup><http://www.atsdr.cdc.gov/toxprofiles/tp15-c8.pdf>

<sup>4</sup><http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0239&from=EN>

Some pyrrolizidine alkaloids (PAs), of which there are over 600 known, are genotoxic and carcinogenic. For 1,2-unsaturated PAs the EFSA Panel on Contaminants in the Food Chain (CONTAM Panel) decided it was not appropriate to establish a tolerable daily intake. PAs are known to cause liver damage and possibly death, based on the amount and period of time during which they are consumed. In the US, outbreaks of PA intoxication are rare, but have been caused by the consumption of herbal teas and dietary supplements that contain these alkaloids. The herb comfrey (*Symphytum* spp.) was the main issue<sup>5</sup>. In 2001, the US Food and Drug Administration (FDA) advised the dietary supplement industry to remove comfrey from products consumed orally.<sup>6</sup>

Between January 2014 and April 2015 a study was performed in the EU testing various products for the presence of PAs. One or more PAs were detected in 91% of the herbal teas and in 60% of the food supplements sampled<sup>7</sup>. For measuring PAs, liquid chromatography–mass spectrometry (LC-MS/MS) has become the method of choice.

## PERCHLORATE

Perchlorate can be found naturally in deposits of nitrate, and potash as an environmental contaminant from the use of nitrate fertilizers as well as from the disposal of ammonium perchlorate from rocket propellants, explosives, fireworks, flares and air-bag inflators.<sup>8</sup> At high enough concentrations perchlorate can inhibit the proper function of the thyroid gland. The US dietary reference dose is 0.7 ug/kg body weight per day.<sup>9</sup> In Europe, for intra-Union trade, parameters were established in 2013 and then changed in 2015. These parameters include 0.75 mg/kg for dried

tea and 0.02 mg/kg for foods for infants and young children – ready to eat.<sup>10</sup> Although already established and being monitored this qualifies as an emerging contaminant because on 29 April 2015 the EU adopted further monitoring of perchlorate and in 2016 will establish maximum levels in certain foods.<sup>11</sup>

## MONITORING AND IDENTIFICATION

These are just some of the emerging contaminants. Further monitoring is being performed on brominated flame retardants in food and water. Alongside these, there is also a list including pharmaceuticals, personal care products, nanomaterials, hormones and veterinary drugs that pass from the waste stream into the water stream, and are now being found in the food supply chain.<sup>12</sup>

Many of these compounds are known to affect animals and humans adversely at specific levels, but investigations are ongoing into how continuous exposure at low or extremely low levels affects us. This understanding, coupled with the ability of laboratories to detect these compounds at extremely low levels, allows the industry to prevent or remove contaminated food and waters from the feed stream.

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<sup>5</sup><http://www.fda.gov/downloads/Food/FoodborneIllnessContaminants/UCM297627.pdf>

<sup>6</sup><http://www.fda.gov/Food/RecallsOutbreaksEmergencies/SafetyAlertsAdvisories/ucm111219.htm>

<sup>7</sup>[http://www.efsa.europa.eu/sites/default/files/scientific\\_output/files/main\\_documents/859e.pdf](http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/859e.pdf)

<sup>8</sup>[http://ec.europa.eu/food/safety/chemical\\_safety/contaminants/catalogue/perchlorate\\_en.htm](http://ec.europa.eu/food/safety/chemical_safety/contaminants/catalogue/perchlorate_en.htm)

<sup>9</sup><http://www.fda.gov/Food/FoodborneIllnessContaminants/ChemicalContaminants/ucm077572.htm>

<sup>10</sup>[http://ec.europa.eu/food/safety/docs/cs\\_contaminants\\_catalogue\\_perchlorate\\_statement\\_food\\_update\\_en.pdf](http://ec.europa.eu/food/safety/docs/cs_contaminants_catalogue_perchlorate_statement_food_update_en.pdf)

<sup>11</sup>[http://ec.europa.eu/food/safety/chemical\\_safety/contaminants/catalogue/perchlorate\\_en.htm](http://ec.europa.eu/food/safety/chemical_safety/contaminants/catalogue/perchlorate_en.htm)

<sup>12</sup><https://www.oecd.org/tad/sustainable-agriculture/49848768.pdf>

# SGS LAUNCHES ANIMAL WELFARE AND IDENTITY PRESERVATION STANDARD FOR RABBITS AND HARES

Rabbits and hares bred for their meat are sourced in countries where local consumption is a tradition. The main producing countries are located in Europe and China. To ensure farmers, retailers and consumers are sufficiently informed about the origin of products and the conditions in which they were produced, SGS has launched the Responsible Animal Welfare and Identity Preservation (RAWIP) Standard for Rabbit Meat, Fur, Skins and Hair.

In an era when retailers and consumers demand evidence of responsible sourcing, RAWIP offers independent, third-party assessment of all aspects of animal rearing. Created to improve the welfare of animals at the same time as providing evidence of responsible sourcing, the standard also incorporates traceability of meat from breeding and farming, through transport and slaughterhouses to processing.

Today, EU rabbit meat production is estimated to be around 520,000 TEC (tonnes in carcass weight equivalent) annually and is concentrated in Mediterranean countries such as Italy, Spain and France, which together produce 76% of the EU total. This means that approximately 260 million rabbits are farmed for meat production in the EU. The RAWIP standard refers to best practices where the industry is prosperous, as these locations have the means and interest. Internationally, the largest producer of rabbit products is the People's Republic of China. The technical guidance is applied and desired as in Europe, to achieve better meat and by-products.

## SEVEN STANDARD CATEGORIES

While the focus of this article is on farming and animal welfare, the RAWIP standard covers seven categories and all by-products, from farm to factory, including:

1. Farm and farm animals multiplication
2. Transporters
3. Slaughter
4. Pre-tanneries
5. Tanneries

6. Traders, warehouses and assemblers
7. Yarn factories

Applications for certification from farm and farm animal multiplication businesses will need to meet the requirements of the standard's animal welfare and chain of custody modules.

## ANIMAL WELFARE MODULE

Dealing with conditions on the farm and the conditions in which animals are bred, this module covers:

- Staffing
- Inspection
- Record keeping
- Freedom of movement
- Buildings and accommodation
- Health of animals and veterinary care
- Feed & water
- Breeding
- General requirements – Good Agricultural Practices – Legal

## CHAIN OF CUSTODY MODULE

The RAWIP chain of custody module verifies and guarantees that from the point of entry to the supply chain, through all stages of transportation and production to the final product, an item's origin and identity is known and documented. From the farm to the end product, the chain of custody preserves the identity of materials. This approach helps to ensure transparency and traceability.

## STANDARD REFERENCES

Laws and regulations vary by country. For the purpose of this standard, SGS has used:

- The present directives of the European Community
- The guidance of the publication of the code of animal welfare of production of rabbits under the Ministerio de Agricultura, Alimentacion y Medio Ambiente MAGRAMA (Ministry of Agriculture, Nutrition and Environment of Spain)



and under the direct responsibility of INTERCUN, in collaboration and with the technical execution of the study by the Universitat Politecnica de Valencia IVIA dated May 2012

- The UK's Code of Recommendations for the Welfare of Livestock (PB0080) Department of Environment for Food and Rural Affairs (DEFRA)

Should local best practices be available that exceed those used in the RAWIP standard, they shall be considered in addition to laws and directives.

### **CERTIFICATION**

For certification against the RAWIP standard, SGS conducts an independent third-party audit of a farm/farmer's Animal Welfare Policy and Quality Management System. Supply chain verification is an integral part of the process. It demonstrates that products produced in accordance with the Animal Welfare Policy are traceable.

The certification process involves an on-site audit of policies, processes and management systems. The auditor will review the organisation's plans, procedures, policies, physical conditions and records, and observes their implementation on-site. Any non-conformances are documented and at the end of the audit the site will be notified. To achieve certification the organisation is required to correct all non-conformances and to prevent their recurrence.

The certification body (SGS) reviews the auditors report and decides whether to accept the evidence or request a resubmission. In some circumstances, the standard describes and requires a further visit to verify closure of non-conformances. The final decision on certification rests not with the auditor, but with an individual within the certification body who was not involved with the audit or the site, thereby ensuring the independence of the RAWIP standard. Ongoing certification is validated by annual surveillance audits.

Certification against this standard also includes the verification of legal requirements. However, it does not substitute compliance with any regulation in force.

### **STAKEHOLDER INPUT**

To develop this standard, an in-depth evaluation of the rabbit and hare supply was undertaken and the final document is based on this and on input received from stakeholders, supply chain members, farmers, farming organisations, brands and industry experts, as well as information based on European legislation, organisations and industrial associations. Considerations were made in relation to the different species of rabbit and hare.

Looking beyond food safety, which a range of other standards and certification schemes cover, and

focussing on animal welfare, the RAWIP standard helps farmers in the rabbit and hare meat supply chain to operate in accordance with common animal welfare principles.

### **SGS SERVICES**

With an extensive global network of auditors and certification experts, SGS can deliver audit and assessment against the RAWIP standard worldwide.

For the complete range of SGS services and support visit [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com) or send an email to [food@sgs.com](mailto:food@sgs.com).

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### **ANIMAL WELFARE – FIVE FREEDOMS**

Commonly, animal welfare is defined by five 'freedoms', sometimes known as Brambell's Five Freedoms, which are a compact of rights for animals under human control, including those intended for food (and by-products). Originally developed from a UK government report on livestock husbandry in 1965, the five freedoms have been adopted by representative groups, including the World Organisation for Animal Health (OIE).

They are:

1. Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour
2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment
4. Freedom to express (most) normal behaviour by providing sufficient space, proper facilities and company of the animal's own kind
5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Though these freedoms may seem rather general, countries have built on these concepts to further define animal welfare through directives and the application of laws.

# US FDA INTRODUCES NEW NUTRITION PANEL FOR PACKAGED FOODS

The US Food and Drug Administration (US FDA) has announced the introduction of a new nutrition facts panel for all packaged foods. Manufacturers with annual food sales greater than \$10,000,000 USD will need to be compliant by 26 July 2018. All other companies will be required to complete the change by 26 July 2019.

The US Food and Drug Administration (US FDA) has announced an amendment to its food labelling regulations covering conventional foods and dietary supplements. Following the publication on 27 May 2016, companies will be required to introduce a new nutrition facts panel on their products as of the effective date of 26 July 2016

Compliance with the Revision of the Nutrition and Supplement Facts Label rule has been set for 26 July 2018, for manufacturers with annual food sales greater than \$10,000,000 USD, and 26 July 2019, for companies with annual food sales below \$10,000,000. This change does not affect meat, poultry, processed eggs, siluriformes and most alcoholic beverages.

The new panel has been designed to include nutritional information that will assist consumers in maintaining healthy dietary practices. To this end, the nutrition fact label has been redesigned to ensure the consumer has

access to the information they require to make informed decisions. The US FDA has deemed this information to be consistent with current understanding on the associations between nutrients and chronic diseases, health-related conditions, physiological endpoints, and/or maintaining a healthy dietary pattern that reflects current public health conditions in the United States. The information also reflects current understanding of consumer knowledge and consumption patterns.

In order to abide by the amended rule, the new nutrition fact panel must include the following:

- Highlighted “calories” and “servings per container” by using a larger and bolder font
- Declaration of the amount in grams and percent Daily Value (%DV) of added sugars
- New Daily Values for Sodium, dietary fibre and vitamin D
- Required declaration of Vitamin D and Potassium, both the amounts and %DV
- Required amount declaration of Calcium and Iron
- A new abbreviated footnote to explain %DV

The US FDA has also updated the label requirements concerning portion size in three ways:

- The updated serving sizes will now reflect what the modern US consumer actually eats
- Items that could be consumed at one or more sitting must now provide a dual column showing data for “per serving” and “per package”

- Packages that are 1 to 2 servings per container will be considered a single serving container and will have the appropriate nutrition facts panel

The US FDA also intends to update the supplement facts panels for dietary supplements in line with the changes to nutrition fact panels. This will include information such as the changes to %DV, the prominence of calories and the revised footnote.

With about 40% of product rejections in the EU and America resulting from improper labelling, it is important that food manufacturers can accurately list ingredients, using a method compliant with market regulations. SGS has the expertise and experience to support businesses across the food industry as they transition to the new requirements. Our food label reviews services, and nutritional and composition testing can help companies ensure regulatory compliance, while saving cost, time and possible reputation damage due to product recalls.

For the complete range of SGS services and support visit [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com) or send an email to [food@sgs.com](mailto:food@sgs.com).

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 **SGS Agriculture and Food**

**NEW LABEL / WHAT'S DIFFERENT**

Servings: larger, bolder type

New: added sugars

Change in nutrients required

Nutrition Facts	
8 servings per container	
Serving size 2/3 cup (55g)	
Amount per serving	
<b>Calories</b>	<b>230</b>
% Daily Value*	
Total Fat 1g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	20%
Includes 10g Added Sugars	
Protein 3g	
Vitamin D 0mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 230mg	6%

Serving sizes updated

Calories: larger type

Updated daily values

Actual amounts declared

New footnote



# SGS LAUNCHES HALAL AWARENESS TRAINING COURSE

With the global Halal food and beverages market now worth ca. USD 1.4 trillion annually, SGS has introduced its new Halal Awareness Training course, developed in association with the Halal Authority Board (HAB), to help the industry understand the importance of complying with Halal requirements.



This one-day programme has been designed to help companies that produce, store, transport and supply halal products, understand the Halal market and its importance to their company.

Halal now accounts for 16% of the entire global food industry; the World Halal Forum recently estimated that the global food and beverage market is now worth ca. USD 1.4 trillion annually<sup>1</sup>.

The Halal market is not just restricted to food, although this is the most significant and well known product group. The market also incorporates pharmaceuticals, cosmetics, miscellaneous such as fashion, travel and media as well ancillary items such as toothpastes and packaging.

With the world's Muslim population of 1.8 billion expected to double by 2060, matched to an increase in disposable income, Halal is now a sector of the global market industry can no longer afford to ignore.

For businesses wishing to enter the global Halal market, it is not always easy. It is estimated that there are around 300 halal certification bodies in about 48 countries around the world<sup>2</sup>. These include: local government departments in countries such as Malaysia, Indonesia, Singapore, Thailand and the Philippines; non-profit organisations; private for-profit businesses and private individuals while there have been reported cases of self-certification. With such a range of certifying bodies represented globally, it is easy for consumer trust to be undermined.

Currently there is no single globally recognised standard for Halal and this can be a concern for businesses keen to provide compliant Halal to the global market. The SGS Halal Awareness Training program is designed to help delegates gain a comprehensive understanding of Halal standards and the market, and include the following topics:

- The Halal market
- Principles of Halal & Haram
- Generic Halal standards
- Halal compliance requirements
- Ensuring your site is Halal compliant; best practices and common failures
- Halal certification and auditing

The course includes real life examples and can be tailored for in-house training against the client's specific business requirements to maximise effectiveness and team learning.

At a time when the demand for Halal products is on the rise, it is important that companies consider their options with regard to Halal compliance. Part of the SGS Academy training course portfolio, the SGS Halal Awareness Training includes a combination of theory and practical tips to facilitate compliance. Based on SGS's unrivalled understanding of global standards, auditing and problem solving expertise, the course is designed to provide expert advice to companies hoping to capitalise on this growing market.

## SGS ACADEMY – TRANSFORMING PEOPLE AND BUSINESSES

As the leader in professional training, SGS Academy draws on the company's years of worldwide experience to provide effective learning and development opportunities. We make a difference to individuals, teams and businesses, nurturing talent and enabling continuous organisational progression.

For the complete range of SGS services and support visit [www.foodsafety.sgs.com](http://www.foodsafety.sgs.com) or send an email to [food@sgs.com](mailto:food@sgs.com).

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<sup>1</sup><http://www.sgs.com/en/news/2015/11/recent-facts-on-the-global-halal-market-and-the-role-of-halal-certification>

<sup>2</sup><http://www.thenational.ae/uae/health/call-to-unify-halal-standards-in-the-uae>

# SGS'S FOOD TESTING CAPABILITIES IN TURKEY

## INTRODUCING SGS IN TURKEY

- Employees: 83
- Laboratories: 3
- Laboratory space: 3,300 m<sup>2</sup>
- Locations: Istanbul  
Mersin (2 laboratories)

## TESTING SERVICES

SGS has three agriculture and food laboratories operating in the country's main ports, one in Istanbul and two in Mersin. Equipped with state-of-the-art equipment and staffed by experienced and knowledgeable scientists and technicians, these facilities deliver a full and diverse range of testing and analysis services for commodities and food. These include:

- GMO screening, identification and quantification
- Mycotoxins
- Pesticide residues
- Heavy metals and minerals
- Proximate analysis
- Microorganisms
- Antioxidants
- Preservatives
- Additives
- Sensory analysis
- Adulteration and origin testing (meat & dairy products)
- Antibiotic residues

Operating across all sectors, we cover a wide range of food and feeds, including food and feed additives, ready to eat foods, fresh and dried fruits/vegetables, dairy products, meat products, egg and egg by-products, seafood, confectionaries, beverages, oil seeds, agricultural products, oils and fats, feeds and by-products, honey, process water.

## ACCREDITATIONS

SGS's laboratories in Turkey are Government approved and TURKAK accredited in accordance with ISO 17025. In addition, both Mersin labs are GOST accredited in accordance with ISO 17025, while our Mersin food lab holds



*GMO Testing at SGS Istanbul Lab*



*Honey Testing at SGS Mersin Lab*

a EURL QS certificate, and our Istanbul laboratory is also GAFTA and FOSFA approved.

## SCOPE AND SCALE

In 2015, SGS's agriculture and food laboratories in Turkey carried out 181,000 analyses on some 51,000 samples. This network of testing and analysis facilities has the capabilities and equipment to conduct more than 1,800 analyses, some 85% of which are accredited.

With extensive experience and expertise, our laboratories in Turkey can support clients on the widest range of projects, offering high technical capability, fast turnaround times and competitive prices.

## CONTACT SGS TURKEY

To find the SGS laboratory best equipped to meet your needs, contact:

### SGS TURKEY

Phone: +90 212 368 40 00

E-mail: [food.turkey@sgs.com](mailto:food.turkey@sgs.com)

 [SGS Agriculture and Food](#)

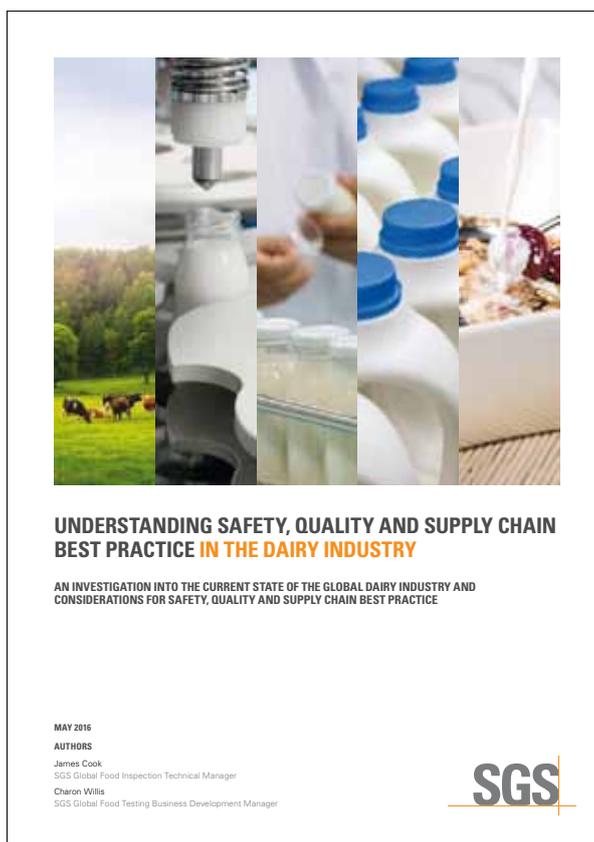
# SGS WHITE PAPER: UNDERSTANDING SAFETY, QUALITY AND SUPPLY CHAIN BEST PRACTICE IN THE DAIRY INDUSTRY

## HOW DO YOU DELIVER TRUSTED DAIRY PRODUCTS IN A GLOBAL MARKETPLACE?

Reports of *Listeria* outbreaks in US ice cream, detergents linked to Indian milk, and *Botulism* scares in Chinese milk powder due to New Zealand imports – all media headlines that make consumers question the safety of dairy products. In order to retain, or in some cases regain, consumer trust in the dairy industry you need to stay informed on the complex mix of issues and risks. To save you time and research, SGS' new white paper investigates the wide range of issues currently facing the dairy industry, and provides in-depth commentary to help you better understand the most important topics requiring monitoring and testing.

Topics covered in the SGS white paper: Understanding Safety, Quality and Supply Chain Best Practice in the Dairy Industry include:

- **State of the Global Dairy Industry:** Is the dairy industry experiencing a 'market imbalance' today? Where are tomorrow's future import/export markets? Find out in this chapter.
- **International Standards and Regulations:** Could a Codex standard for 'whey permeate' mean new growth for an underutilised product? What are the Codex Alimentarius Commission (Codex) and International Dairy Federation (IDF) standards and regulations for the dairy industry? Examine the main guidance steering dairy worldwide in this chapter.
- **Safety and Quality Issues in the Dairy Industry:** How do farmers really use antibiotics? Does dairy really contain what it claims on the packet? Has the rise of raw milk lead to an increase of pathogenic bacterial contaminants? Is packaging a source of mineral oil migration? Learn the answers to these questions and more in this chapter.



- **Consumer Health and Wellbeing:** Milk – the number one self-reported food allergen? When a product claims 'lactose-free' what does it mean? Is 'organic' driving dairy fraud? In this chapter discover how to reassure and keep consumers safe.
- **Best Practices in the Dairy Supply Chain:** Does your organisation operate without a supply chain management tool? How can a 360-degree quality, safety and compliance programme become reality? What are the 'top resilience' improvement factors? Get to grips with the fundamentals of supply chain security in this chapter.
- **Global Dairy Consumption, Import and Export:** Biggest exporters?

Largest importers? What are the product categories set for growth? Get all the facts and figures of the global dairy industry in this chapter.

Download your free copy [here](#)  
For more information contact:

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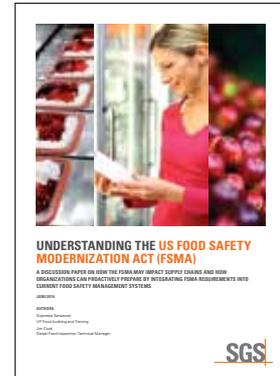
## UPDATED WHITE PAPER: UNDERSTANDING THE US FOOD SAFETY MODERNIZATION ACT (FSMA)

This updated document introduces the Food and Drug Administration (FDA) Food Safety Modernization Act (FSMA) and how the finalized rules are likely to impact the food industry. The key provisions are detailed and compared against current industry-standard GFSI-recognized schemes.

Advice is provided on how to prepare to meet the FSMA requirements, including

a step-by-step process guide. This is further developed by a comparison with, and discussion around, Global Food Safety Initiative recognized schemes and the simpler move from these certifications to complete preparedness for FSMA compliance.

Download your copy of: [Understanding the US Food Safety Modernization Act](#)



## TRANSPARENCY-ONE : SUPPLY CHAIN VISIBILITY

This white paper discusses the profound transformation taking place in food shopping and shopper behaviour, and the challenges in monitoring the supply chain and measuring product compliance to drive consumer trust. This document aims to promote understanding of the

tool, the risk factors that drive supply chain compliance today and how it can be computed in a way that allows organisations to adapt quickly to improve supply chain quality and safety.

Download your copy of: [Transparency-One: Supply Chain Visibility](#)

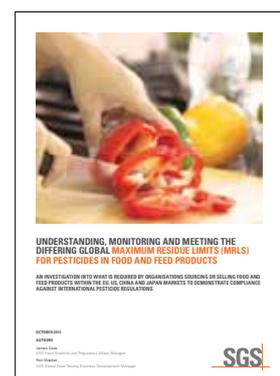


## UNDERSTANDING, MONITORING AND MEETING THE DIFFERING GLOBAL MAXIMUM RESIDUE LIMITS (MRLS) FOR PESTICIDES IN FOOD AND FEED PRODUCTS

The purpose of this white paper is to provide an overview on current thinking within the food industry for how best to manage pesticide residue risk in food products and supply chains. The aim is to promote an understanding of the origins of pesticide residues, and current industry challenges due to increasing regulations for the management and compliance of products destined for the EU, US, China and Japan.

This paper is aimed equally at those organisations with established pesticide residues risk control and management plans as well as those considering development and implementation of risk protocols.

Download your copy of: [Understanding, Monitoring and Meeting the Differing Global Maximum Residue Limits \(MRLs\) for Pesticides in Food and Feed Products White Paper](#)



## SGS WEBINARS

For a complete list of SGS seminars, courses and webinars, please check our [events calendar](#).

WEBINAR	LANGUAGE	WEBINAR STATUS & LINK
BRC Packaging	EN	<a href="#">Sep 7 - Register Here</a>
BRC Issue 7	EN	<a href="#">On-demand</a>
BRC Agents and Brokers	EN	<a href="#">On-demand</a>
Halal Certification	EN	<a href="#">On-demand</a>
GFSI Special Session Recap: Shaping Food Safety Culture in Food Service	EN	<a href="#">On-demand</a>
Supply Chain Transparency	EN	<a href="#">On-demand</a>
BRC Packaging Issue 5: An overview of key requirements and benefits	EN	<a href="#">On-demand</a>
FSSC Packaging: Overview of requirements, suitability and benefits for your business	EN	<a href="#">On-demand</a>
GFSI Global Markets Programme explained: A comparison between BRC and IFS options	EN	<a href="#">On-demand</a>
How well do you know your Supply Chain?	EN	<a href="#">On-demand</a>
Food Defence / Food Fraud	EN	<a href="#">On-demand</a>

## SAFEGUARDS

SafeGuards are SGS technical bulletins concentrating on new product standards, regulations and test methods.

Subscribe to SafeGuards: [www.sgs.com/ConsumerSubscribe](http://www.sgs.com/ConsumerSubscribe)

Browse the SafeGuards Library: [www.sgs.com/safeguards](http://www.sgs.com/safeguards)

## UPCOMING SGS FOOD EVENTS

For more events, please check the [online events calendar](#).

EVENT	COUNTRY	LOCATION	DATES	EVENT TYPE	STAND #
IFT	USA	Chicago, IL	July 16-19 2016	Tradeshow	4517
<a href="#">SGS Second Annual Quality and Risk Management Summit</a>	USA	Denver, CO	October 5-6 2016	Summit	
<a href="#">SQF Conference</a>	USA	Orlando, FL	October 25-27 2016	Conference	22
<a href="#">Gulfood Manufacturing</a>	UAE	Dubai, United Arab Emirates	November 7-9 2016	Tradeshow	
<a href="#">Next Level Symposium</a>	USA	Indian Wells, CA	December 6-7 2016	Conference	TBD
<a href="#">Food Safety Consortium</a>	USA	Schaumburg, IL	December 7-8 2016	Conference	TBD

### THE LATEST SAFEGUARDS

- US EPA Amended Tolerance Level of Fluensulfone in Crops – [View](#)
- Thailand Publishes New Regulation For Guideline Daily Amount (GDA) Labeling – [View](#)
- US FDA Finalizes the FSMA Intentional adulteration Rule – [View](#)
- CFIA Modifies the Allergen Section of the Labeling Tool and Lists Information for Canary Seeds – [View](#)
- US FDA Modernizes Nutrition Facts Label for Packaged Foods – [View](#)
- EU Extends Duration of Provisional MRLs for Rafoxanide in Bovine and Ovine Milk – [View](#)
- US FDA Menu Labeling Rule Final Guidance and Enforcement Date – [View](#)
- EU Amends Maximum Residues Levels of Atrazine in Foods – [View](#)
- EU Amends MRLs For Captan, Propiconazole And Spiroxamine In Certain Products – [View](#)
- RASFF 2015 Market Surveillance Report For Food Contact Materials Published – [View](#)
- US FDA Finalizes the FSMA Sanitary Transportation Rule – [View](#)
- US FDA Proposes an Action Level for Inorganic Arsenic in Rice Cereal – [View](#)
- New Zealand Introduces MRLs for Agricultural Compound Residues in Various Food Commodities – [View](#)
- EU Amends Requirements for Gelatin, Collagen and Highly Refined Products of Animal Origin – [View](#)
- USDA FSIS Microbial Performance Standard for Raw Ground Poultry and Chicken Parts – [View](#)
- USDA FSIS Inspection Program for Fish under the Order Siluriformes Update – [View](#)

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WHEN YOU NEED TO BE SURE

