

HOT SOURCE

EXPERT INSIGHTS INTO SAFE, SUSTAINABLE AND HIGH-QUALITY FOOD

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INTRODUCING SGS'S AGRICULTURE AND FOOD TESTING LABORATORY IN BROOKINGS, SOUTH DAKOTA

SGS



DEAR READER,

As 2017 draws to a close, religious festivals and celebrations abound. From Halloween and Thanksgiving, to Christmas and New Year, the scope for food safety failures increases significantly. We look at some of the most common hot, cold, pre-cooked and unpasteurised foods that present a potential risk to consumers and how risk can be minimised.

Looking back to the beginning of 2017, the Food Safety System Certification (FSSC) Foundation released the latest update to FSSC 22000. We explore the changes and additional requirements that Version 4 brings to what is an already incredibly successful food safety standard. The changes bring FSSC 22000 right up to date with the latest requirements set by the GFSI in their benchmarking document 7.1.

Following introduction of Regulation (EU) No 1169/2011 on the provision of food information to consumers the EU is currently evaluating its food labelling regulations to check they remain relevant and “fit for purpose”. We revisit the requirements and responsibilities placed on the food industry to ensure accuracy and veracity.

Labelling regulations also impact the issue of food waste, an issue currently being addressed by the EU where more than 80 million tonnes of food are wasted annually. We look at the new guidelines recently adopted by the European Commission in an effort to tackle the issue.

Reflecting feedback from more than 200 respondents, the IFIA 2016 Food Fraud and Traceability Survey results have been published. We review the trends and consider their implications.

Building on our already successful source to store supply chain transparency solution, Transparency-One, in partnership with Microsoft, has announced an initiative to deliver improved supply chain data security with the introduction of blockchain services. Discover how this innovation increases data security.

In our regular laboratory services series, we explore the testing and analysis services available at our new purpose-built state-of-the-art laboratory in Brookings, South Dakota which is ISO 17025 accredited and the only SGS laboratory in North America offering NGS testing.

For the complete range of SGS services and support visit: www.foodsafety.sgs.com

SGS AGRICULTURE AND FOOD TEAM

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EU NUTRITION AND HEALTH CLAIMS ON FOOD LABELLING – UPDATE

Food operators are increasingly using health and/or nutritional claims to differentiate themselves in the marketplace. The European Union (EU) is currently evaluating its food labelling regulations to check they remain relevant and “fit for purpose”.

Foods are increasingly being labelled and advertised with nutritional and/or health claims. Food operators know that promoting nutritional, physiological and/or other health benefits, may give a product a competitive advantage over similar products.

To protect consumers, all products need to be accurately and adequately labelled.

CLAIMS CHANGE PERCEPTIONS

Foods promoted with claims may be perceived by consumers as having a nutritional, physiological or other health advantage over similar or other products to which such nutrients and other substances are not added. This may encourage consumers to make choices which directly influence their total intake of individual nutrients or other substances in a way which would run counter to scientific advice.

In the EU, general food labelling requirements are outlined in Regulation (EU) No 1169/2011. In force since 2014, it amends Regulation (EC) No 1924/2006 (NHC: Nutritional and Health Claims Regulation) in regards to nutritional information printed on food products. It has been mandatory since 13 December 2016.

ENABLING HEALTHIER CHOICES

Regulation (EC) No 1924/2006 governs the use of nutrition and health claims in labelling, presentation and advertising. It seeks to enable consumers to make healthier choices by protecting them from misleading information and ensuring a level playing field for food business operators within the EU market. Nutrition claims are statements like ‘low fat’ or ‘high fibre’, and makes a link between food constituents and health – for example, ‘Vitamin D is needed for the normal growth and development of bone in children’.

This legal framework is used by food business operators who want to highlight a product’s beneficial effect in relation to health and nutrition. It covers product labelling, advertising and all commercial communications, including leaflets,



promotional materials, websites and campaigns. All claims made in the EU must be clear, accurate and based on scientific evidence. Food bearing claims that could mislead EU consumers are prohibited.

The European Commission (EC) manages different procedures for the various claim types and authorisation can only be given if the claim matches a permitted nutrition claim. For reference the EU maintains a public Register of Nutrition and Health Claims¹, containing all permitted nutrition claims and all authorised and non-authorised health claims.

Adopted in 2006, the Regulation remains incomplete because nutrient profiles, due for completion in January 2009, and health claims relating to plants and their preparations in food, have yet to be established. In addition, discussions concerning health claims relating to plants and their preparations have now led to a broader debate regarding the use of plants and their preparations in foods.

REGULATION EVALUATION

The EC announced on 19 May 2015, in its ‘Better Regulation’ communication, that it would be evaluating the Regulation. The evaluation is focusing on nutrient profiles and health claims relating to plants and their preparations, as well as considering the more general regulatory framework for the use of such substances in foods, since these closely relate to the use of health claims.

The evaluation will assess whether two specific elements required for the

implementation of the Regulation have proven to be “fit for purpose” and whether, to date, the Regulation has achieved its overall objectives, with minimum burden, relating to reliable information for consumers and the facilitation of free movement for foods displaying claims. The appraisal will also examine whether the unimplemented nutrient profiles are still warranted and adequate to ensure the objectives of the Regulation. Nutrient profiles are thresholds for nutrients such as fat, salt and sugars. Products containing levels of nutrients above the thresholds cannot display a positive health message.

Finally, the evaluation will also examine the current rules concerning health claims for plants and their preparations used in foods and see whether they are adequate and how the use of such claims interacts with the current food regulatory framework for plants and their preparations.

The results of this evaluation will be used to decide on the future direction of regulation relating to health and nutrition claims in food.

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¹ http://ec.europa.eu/food/safety/labelling_nutrition/claims/register/public/?event=register.home

FOOD REDISTRIBUTION GUIDELINES TO TACKLE WASTAGE ACROSS THE EU

In the EU, approximately 88 million tonnes of food are wasted annually, almost 173 kg per person. To tackle the issue the European Commission has recently adopted new guidelines¹ for food donations in order to facilitate the redistribution of edible and safe food for those in need.

These new guidelines, EU guidelines on food donation (2017/C 361/01), are part of a wider EU-level policy to tackle food waste. But how big an issue is food waste globally and specifically in Europe?

GLOBAL FOOD WASTAGE

Globally, approximately one third of food produced is wasted or lost, amounting to 1.3 billion tonnes per year. At the same time in excess of 1 billion people go hungry. In addition, food waste represents a waste of labour, energy, land and other inputs used to produce food². In industrialised countries, food waste is as high as in developing countries, however it occurs at different stages of the food chain. In developing countries, more than 40% of food losses happen at the post-harvest and processing stages, while in developed countries over 40% occurs at the retail and consumer level of the food chain³.

In an effort to identify ways to combat food loss and waste, the Food and Agriculture Organisation of the United Nations (FAO) launched a global initiative – Save Food – in 2011, with four pillars:

- Awareness raising
- Collaboration
- Policy, strategy and programme development
- Support to investment programmes and projects

Drawing on expertise from around the world, Save Food involves representatives from donors, bi – and multi-lateral agencies, financial institutions and private sector partners (the food packaging industry and others) to develop and implement a programme on food loss and waste reduction.



MAJOR CAUSES OF FOOD WASTAGE IN THE EU

In the EU, more than half (53%) of food waste occurs at household level, which, together with waste at the retail and food services level, represent the major causes of food waste in the region (70%).

The associated costs have been estimated at a staggering 143 billion euros, of which 98 billion are attributed to household level waste⁴. Specific factors that contribute to food waste in the EU include:

- Overproduction
- Lack of demand for certain products during certain seasons
- Product and marketing standards
- High quality standards for retail sales
- Difficulty in anticipating customer numbers in catering services
- Insufficient shopping and meal planning at household level
- Large portion sizes in restaurants
- Retail practices and promotions such as 'buy X get Y free'

- Misunderstanding of 'best before' and 'use by' dates which leads to edible food being thrown away
- Inadequate storage and transport conditions in the food supply chain
- Mismanagement of stock by manufacturers and retailers

Almost all of these factors are preventable.

SUSTAINABLE DEVELOPMENT GOALS

To tackle food waste, the EU and its Member States have committed to meet the United Nations' Sustainable Development Goal (SDG)⁵, specifically Goal 12.3 to halve the amount of food waste at the retail and household level by 2030. The EU Circular Economy Package⁶ and its Annex⁷ outline actions and timetables, including a revised directive proposal⁸, in order to achieve the SDG targets on food waste. In addition, an EU Platform on Food Losses and Food Waste⁹ has been set up to support EU-wide actions and involved all societal stakeholders. Key among these actions are those targeted at date marking and food donations,

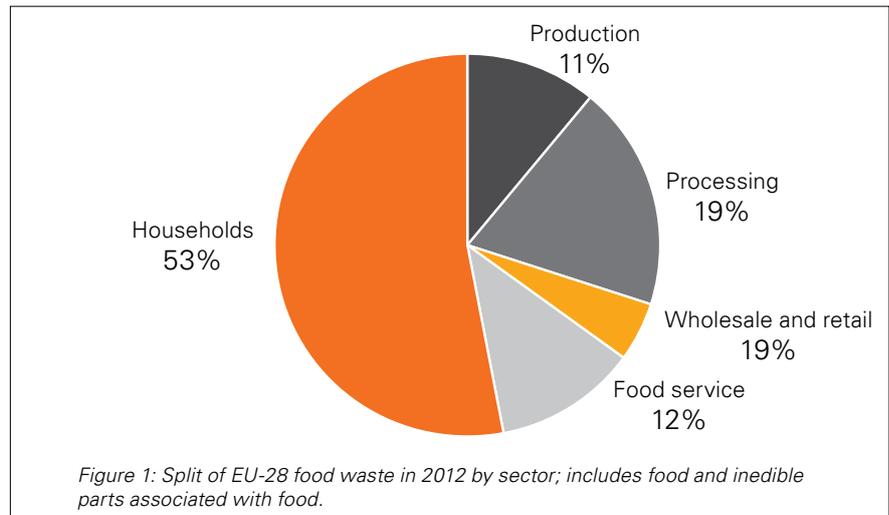
which respectively lie at the 'prevention' and 'cure' stages of the problem.

DATE MARKING

As far as date marking is concerned, a better understanding of date marking on labels can prevent and reduce food waste in the EU, especially since it has been estimated that 15-33% of food waste can be linked to date marking due, amongst others, to misunderstanding of how these dates should be interpreted¹⁰. Practices from food business operators and varying national rules in EU Member States, such as using the term 'sell by' or stringent shelf life requirements, can have additional impacts on food waste generation.

Possible EU level actions would be to extend the list of non-perishable foods in Reg. (EU) 1169/2011¹¹ that are exempted from the obligation to have a 'best before' date on food labelling (date of minimum durability). To date only vinegars, sugar and salt are exempted. Another action would be to modify the terminology 'best before' to something that is better understood by consumers. Any such actions on date marking should not only contribute to food waste reduction and meeting consumer needs, but should continue to ensure food safety.

A market study on date marking and its use by food business operators and control authorities has already been launched¹² by the European Commission and the results are expected towards the end of 2017.



FOOD REDISTRIBUTION

Another key EU action is to facilitate the redistribution of surplus foods and fight food poverty, where safe to do so, for example by facilitating the compliance of providers and recipients of surplus food with specific requirements (e.g. safety, hygiene, traceability, VAT etc.) and harmonising the interpretation of EU rules across national Member State regulatory authorities¹³.

The recent EU guidelines¹ on food donations take an important step towards this. The guidelines define the concepts of food redistribution, surplus food and specify the actors involved, as well as the roles and obligations of such actors, including charity organisations. Furthermore, they include guidance on the sorting of surplus foods,

traceability, legal aspects, and cover hygiene regulations and general hygiene requirements for all food donation activities, including specific hygiene requirements for foods of animal origin and surplus food from hospitality, catering and food service sectors.

Finally, they provide guidance on the freezing of surplus foods, food information for consumers as well as date marking, and fiscal rules, VAT and fiscal incentives to promote food donations.

A pilot project to be launched within 2017 will further assess food donation practices in the EU and promote dissemination and uptake of the above-mentioned Food Donation guidelines¹³.

If you want to keep up to date with policies and regulatory developments, visit www.digicomply.sgs.com – the regulatory intelligence network.

¹ European Commission Notice – EU guidelines on food donation 201. Official Journal /C 361/1

² FAO food loss and food waste website

³ European Commission Stop Food Waste webpage

⁴ Estimates of European Food Waste Levels (2016) FUSIONS EU project

⁵ United Nations website on Sustainable Development Goals

⁶ Closing the loop – An EU action plan for the Circular Economy. COM (2015)14 final

⁷ Annex to 'Closing the loop – An EU action plan for the Circular Economy'

⁸ Proposal amending directive 2008/98/EC. COM(2015) 595 Final

⁹ EU Platform on Food Losses and Food waste website

¹⁰ European Commission Date Marking and food waste website

¹¹ Regulation (EU) 1169/2011 on the provision of food information to consumers L304/18

¹² Terms of Reference: Market Study on Date Marking

¹³ European Commission website on Food Donation

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FOOD SAFETY FOR THE HOLIDAY SEASON

As 2017 draws to a close, religious festivals and celebrations abound. From Halloween and Thanksgiving, to Christmas and New Year, the scope for food safety failures increases significantly.

Hot, cold, pre-cooked and unpasteurised foods all present a potential risk to consumers, especially the elderly, children under five and pregnant women.

TUCKING IN TO TURKEY

Families at both Thanksgiving and Christmas celebrations will often tuck in to a special dinner including roast turkey. *Campylobacter* and *Salmonella* pathogens are commonly found on raw poultry. At this time of year, food poisoning cases typically increase as consumers cooking at home, and even commercial restaurants, are unfamiliar with best practice and cooking times for this large bird and its dense meat.

In the UK, *Campylobacter* is the most common cause of food poisoning. Out of an average 280,000 cases of food poisoning each year, it is responsible for 72,000 of them¹. In the USA, this festive season sees an increase in *Salmonella* poisoning, a pathogen that the Centre for Disease Control and Prevention (CDC) estimates as the cause of 1 million cases of food poisoning annually, including some 380 deaths².

Food processors and manufacturers need to ensure they comply with, in the USA for example, the US Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) standard for *Salmonella* and *Campylobacter* pathogen reduction³.

MILK AND CHEESES

Listeria monocytogenes causes listeriosis, a serious disease for pregnant women, newborns, and adults with a weakened immune system. This type of *Listeria* is a life-threatening bacterium commonly found in raw animal products such as milk, eggs and unpasteurised cheeses such as brie and Roquefort.

During the holiday season, consumption of these raw foods soar, presenting an increased risk to consumers whether

they are dining out, attending parties or eating at home.

HOMEMADE EGGNOG

Delicious homemade eggnog with raw eggs is a holiday favourite. However, adding alcohol such as rum or whiskey might be great while sitting in front a fireplace, but it will not kill *Salmonella*. Using fully cooked or pasteurised eggs and keeping the drink cold is the way to prevent illnesses⁴.

While many believe that *Salmonella* in eggs is just a problem in the United States, Japan and Europe, it isn't. In Europe, 11 million shell eggs from Israel were recalled recently, adding to the fipronil headache⁵.

SHELLFISH AND SEAFOOD

Particular attention should be paid to the preparation of seafood and shellfish products. Often served raw or lightly preserved (oysters, carpaccio, gravlax, sashimi), there is limited scope for the consumer to mitigate or reduce the risk of food poisoning caused by pathogens. Processors and operators must implement rigorous food safety standards and optimise risk-testing programmes to identify food before products reach the end-retailer.

Seafood is particularly prone to contamination with *Listeria monocytogenes* and *Vibrio vulnificus*.

AVOIDING RAW MEAT

Any product made with raw, partially cooked meat, such as foie gras, beef/steak tartare, tiger meat (raw beef), or a cannibal sandwich comes with the potential horrors of *E. coli* O157:H7, *Salmonella*, *Listeria monocytogenes* and *Campylobacter* bacteria. Grinding your own cuts of meat doesn't prevent the problem. Cooking thoroughly is the solution, unless one uses irradiated ground beef, pasteurised eggs and spices treated to remove pathogens.



ANIMAL PROTEINS

At any time of year, food derived from animal proteins has the potential to cause debilitating food poisoning. Deaths are thankfully rare, but there are plenty of examples of poor food hygiene and preparation, resulting in mass outbreaks of food poisoning, damaging the businesses and brands who supplied the products, and ruining the holiday season for consumers unlucky enough to fall ill.

Avoid the pitfalls of the holiday season, both personally and in business. Ensure your food safety strategies, plans and systems are rigorously implemented – if they're found to be lacking, the business is still culpable, so instigate a programme of continuous monitoring and improvement to ensure any gaps are identified and rectified promptly.

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

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¹<https://www.food.gov.uk/science/microbiology/campylobacterevidenceprogramme>

²<https://www.cdc.gov/salmonella/index.html>

³https://www.fsis.usda.gov/wps/wcm/connect/b0790997-2e74-48bf-9799-85814bac9ceb/28_IM_PR_Sal_Campy.pdf?MOD=AJPERES

⁴<https://www.foodsafety.gov/blog/2014/12/homemade-eggnog-make-it-safely.html>

⁵<http://www.foodsafetynews.com/2017/09/salmonella-contamination-forces-massive-egg-recall-in-israel/#.WfuVvk03rvIU>

WHAT'S NEW IN FSSC 22000 VERSION 4.1?

At the beginning of 2017 the Food Safety System Certification (FSSC) Foundation released the latest update to its enormously successful food safety standard FSSC 22000.

The standard was released to bring what has been an already incredibly successful food safety standard right up to date with the latest requirements set by the GFSI in their benchmarking document 7.1.

While the previous versions of the FSSC standard had been comprehensive in their content and coverage there were some areas which would no longer fully comply with the new GFSI benchmarking document.

The standard itself is comprised of three components:

1. ISO 22000:2005
2. A series of Industry Based Pre-requisite programmes (PRP):
 - ISO/TS 22002-1 PRP on food safety – Part 1: Food manufacturing
 - ISO/TS 22002-2 PRP on food safety – Part 2: Catering
 - ISO/TS 22002-3 PRP on food safety – Part 3: Farming
 - ISO/TS 22002-4 PRP on food safety – Part 4: Food packaging manufacturing
 - ISO/TS 22002-6 PRP on food safety – Part 6: Feed and animal food production
 - NTA8059 PRP on food safety for transport and storage
 - PAS 222 PRP on food safety for food safety in retail
3. FSSC Additional Requirements

FLEXIBLE AND STRAIGHTFORWARD

Using the globally recognised ISO 22000 as its foundation, FSSC 22000 provides a firm base from which a management system can be constructed. Complementing this with the requirements of the individual industry pre-requisite programmes, as well as the additional FSSC prescribed requirements, makes the standard comprehensive but still flexible and straightforward to implement.

ADDITIONAL REQUIREMENTS

The biggest change was within the FSSC additional requirements which has grown in number from seven to nine. However, it is not only the number but the content

of the additional requirements that have changed.

1. Management of services
2. Product labelling
3. Food defence
4. Food fraud prevention
5. Logo use
6. Management of allergens (for categories C, I and K only)
7. Environmental monitoring (for categories C, I and K only)
8. Formulation of products (for sub-category DII, pet food for dogs and cats only)
9. Management of natural resources (for category A only)

Within these new requirements one of the biggest changes is the increased focus on food fraud and food defence. As we are all aware the number of food fraud and food defence related incidents is on the rise. Certainly, in food fraud many of these incidents do not directly impact food safety, however they do impact on public perception of the participants within the food chain. These are both important considerations and although not completely new they are more formalised than previously and have defined requirements to conduct assessments and implement control plans to manage potential threats and vulnerabilities. These will require a detailed review of certified sites' activities to determine how threats/vulnerabilities identified can be minimised or adequately managed to reduce overall risk level.

The new additional requirements present a more in-depth approach to food safety and will pose some greater challenges to already established food safety management systems.

As well as changes to the standard requirements there has been a change in the protocol regarding the conduct of the audits. The scheme now requires that at least one audit in the three-year cycle is performed unannounced. This is a completely unannounced audit with no prior warning or notification from the auditor.



The introduction of a mandatory unannounced audit will significantly change the culture around food safety, moving it from a planned annual event into something that must be truly embedded within an organisation.

As well as these changes, the scope of the scheme has also been increased to cover new areas within the food chain:

- Transport and storage
- Catering
- Retail

These extra scopes allow the FSSC standard to be applied to the entire food chain, from farm to fork.

For sites with existing certification to FSSC it is mandatory to transition to the new standard in 2018. This can be done at a surveillance or renewal visit. If sites wish they can be certified to version 4.1 immediately.

SGS was recently accredited by UKAS to FSSC version 4.1 so we are now able to deliver accredited certification against the standard.

For more information, [watch our recent webinar What's new in version 4 of FSSC 22000?](#)

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

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IFIA PUBLISHES 2016 FOOD FRAUD AND TRACEABILITY SURVEY

With over 200 responses from stakeholders in the food manufacturing, processing and retailing sector, the survey shows that businesses are aware of the necessity for full traceability within food supply chains.

The Food Committee of the International Federation of Inspections Agencies (IFIA) has published the results of its second 'Food Fraud and Traceability Survey'. The survey asked food producers, manufacturers and retailers from around the world a series of 32 questions relating to food fraud and traceability in food supply chains.

The 2016 survey received 215 responses, down from 225 in 2015, with the majority of responders being located in Europe (65%), but with answers also being received from North and Latin America, India, Asia-Pacific and China. Most responders represented food manufacturing businesses (61%) and claimed to employ between 50 and 500 people (44%).

Responders to the survey recognised the importance of traceability within food supply chains, with 81% of responders saying it was 'very important'. Reasons for this recognition included consumer expectations, the work of NGOs and the media, and an acknowledgement that poor traceability left the business open to financial risk.

The risk of financial losses seems to be well-founded with only 44% saying they had experienced no losses in the previous twelve months and 10% reporting they had experienced high losses due to a lack of supply chain controls. In addition, 10% of responses also indicated that they had experienced high losses on account of food fraud, with 60% claiming no losses from food fraud. Overall, revenue losses due to food fraud and insufficient supply chain controls were down on 2015 figures but remained high.

When looking at legal requirements relating to food traceability, 76% of responders indicated that obligations within their country were fully understood but only 60% said they were being fully implemented. Both responses showed a slight decrease



from the results in 2015 but it should be acknowledged that 76% felt that, if fully implemented and understood, their country's regulations were sufficient. Two-thirds of respondents located in China, India, Latin and North America reported significantly higher levels of poor implementation.

In addition to questions over effective implementation, the survey also showed that, while product traceability systems were often in place within their businesses, the respondents did not necessarily have confidence in them. The survey showed that product traceability systems have been implemented in businesses both inside and outside the European Union (89% and 80% respectively), with most including raw materials. Despite this, and with an acknowledgement that poor supply chain transparency risks damaging consumer confidence and financial solvency, only 56% claimed to have full confidence in their own traceability systems.

On a positive note, the survey did show that certification schemes are increasingly becoming an important factor for businesses when choosing suppliers. In 2015, only 48% of respondents stated that GFSI certification was a 'very important' factor when choosing suppliers, this number has increased to 60% in 2016. A similar

trend is also observed when looking at the use of third-party food testing and inspection services – in 2015 only 79% felt it was 'important' or 'very important', that figure rose to 92% in 2016.

To conclude, the survey shows that, while businesses are aware of the necessity for full traceability within food supply chains, there is still a long way to go before all ingredients can be successfully traced back to their origin. In addition, the survey also found that, while regulations exist to combat food fraud and improve traceability, they are not currently being fully implemented.

The link to the 2017 IFIA survey on Food Fraud and Traceability is open until the end of 2017, we encourage all food industry participants to complete the survey: <https://ifiafoodcommittee.typeform.com/to/QbBN9U>

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 **SGS Agriculture and Food**

TRANSPARENCY-ONE INCREASES SUPPLY CHAIN SECURITY WITH BLOCKCHAIN TECHNOLOGY

Building on the already successful source to store supply chain transparency solution, Transparency-One, in partnership with Microsoft, heightens supply chain data security with the introduction of blockchain services.

Transparency-One enables companies to discover, analyse, and monitor all suppliers, components, and facilities in the entire supply chain. The addition of blockchain services means customers can add an additional layer of security to their data by storing the critical supply chain information captured in Transparency-One in Microsoft Azure's Blockchain Services.

DATA SECURITY

This innovation increases the security of the data stored in Transparency-One by creating a ledger of all transactions between supply chain partners, and making it immutable. With this technology, all transactions, including any updates or modifications, are immediately recorded and stored in the blockchain. Data can then be accessed by designated supply chain partners, providing full transparency at each step of the supply chain.

HOW DOES IT WORK?

Transparency-One blockchain users achieve an additional layer of data protection by adding their supply chain data to an Ethereum blockchain. With a single click, complete supply chain information is permanently recorded in the blockchain.

ENSURING DATA INTEGRITY

While blockchain technology provides a record of all supply chain changes, additional measures are needed to guarantee data accuracy. Transparency-One's partnership with SGS provides validation services to ensure the quality, integrity, and security of supply chain data.

As part of the Transparency-One service, SGS verifies the information entered into the platform via integration with its own



databases and its supplier onboarding team. Any declared supplier certifications are verified by an SGS team, then tagged. Once data is verified and tagged, it can no longer be changed by the supplier; any subsequent changes are stored as additional transactions in the blockchain, providing full traceability of the changes. This integration provides Transparency-One users with supply chain data that is 100% secure and accurate.

"Blockchain is a powerful technology that can play an integral role in helping businesses achieve end-to-end supply chain transparency, in any industry," said Frédéric Daniel, Chief Technology Officer of Transparency-One. "Transparency-One maps the complete supply chain down to the raw material, and blockchain ensures that every step of the process is permanently recorded, providing an even higher level of data security."

"Blockchain is a transformational technology with the ability to significantly reduce the friction of doing business and

transform supply chain solutions," said ShiSh Shridhar, Microsoft Worldwide Retail Industry Solutions Director. "Transparency-One's value proposition to map the entire supply chain, track compliance, and provide analytics to proactively manage business risks, combined with the Microsoft Azure's Blockchain Services, will enable organizations to ensure the security and integrity of supply chain data."

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 **SGS Agriculture and Food**

INTRODUCING SGS'S AGRICULTURE AND FOOD TESTING LABORATORY IN BROOKINGS, SOUTH DAKOTA

Moving to a new purpose-built site in March 2017, SGS's state-of-the-art laboratory in Brookings, South Dakota, brings together three laboratories under one roof. The site offers a comprehensive range of food and agricultural testing services.

Established:	1993
Employees:	100 full-time, 30 part-time
Laboratories:	3 (Seed Testing, Analytical Chemistry, Research/GLP)
Laboratory space:	68,000 sq. ft.
Location:	Brookings, South Dakota, USA

SERVICES

Brookings offers a broad spectrum of food and agricultural testing services, including:

- Chemical and physical testing for:
 - Contaminants – pesticide residues, heavy metals, melamine, mycotoxins, allergens, GMO, etc.
 - Nutritional analysis – full Nutrition Facts Table to meet US FDA/USDA, vitamins, minerals/metals, amino acids, proximates, total sugars, fatty acid profile, etc.
- DNA testing:
 - Polymerase chain reaction (PCR)
 - Next Generation Sequencing (NGS)

This laboratory also offers Regulatory Compliance Services such as label validation, Prop 65 assessment, US Market Assessment, GRAS review and Product Protocol creation for food, pet food and dietary supplements.

ACCREDITATIONS

Accredited to the ISO 17025 standard since 2009, this laboratory is also EPA-approved for GLP (Good Laboratory Practices), ISO 9001 certified, and ISTA (International Seed Testing Association) accredited.

PRODUCTS COVERED

This facility is staffed and equipped to deliver tests across a broad range of food categories, including:

- Beverages
- Dairy
- Grains & cereals



- Pastries
- Meat & poultry
- Seafood
- Fruits & vegetables
- Herbs & spices
- Tea & coffee
- Processed, canned & frozen foods
- Oils & fats
- Bottle water
- Confectionaries & chocolate
- Pet food

The site also offers testing for over 400 species of seeds, soil and plant tissue.

EXPERIENCE AND EXPERTISE

Begun as a seed testing laboratory in 1993, SGS has more than 24 years' experience of providing food and agricultural testing services in Brookings. Amalgamating the three laboratories into one purpose-built facility in 2017 has allowed the site to develop its ISO 17025 scope to include additional food testing and establish the only SGS laboratory in North America offering NGS testing.

The new site is 30% larger than the previous three sites combined and is equipped with state-of-the-art technology, including:

- Sciex 6500+ QQQ (Triple Quad) Mass Spectrometer with Shimadzu Nexera XR HPLC (High Pressure Liquid Chromatograph) for extremely low-level detection
- Additional HPLC/MSMS (High performance liquid chromatography-tandem mass spectrometry)
- GC/MS (Gas Chromatography – Mass Spectrometer)
- ICP/MS (Inductively Coupled Plasma – Mass Spectrometer)
- PCR (Polymerase Chain Reaction)
- Thermo Fisher 5S Next Generation Sequencer and Ion Chef

From its central position in the US, Brookings offers accurate and effective food and agricultural testing and analysis services, with fast turnaround times and competitive pricing.

For further information, contact SGS in Brookings:

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 [SGS Agriculture and Food](#)

SGS WEBINARS

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

WEBINAR	LANGUAGE	WEBINAR STATUS AND LINK
FSMA Foreign Supplier Verification Program Rule Requirements	EN	On-demand
Exploring Key Changes in Issue 3 of BRC Storage & Distribution	EN	On-demand
What's New in Version 4 of FSSC 22000?	EN	On-demand
"FSMA Requirements for Animal Feed and Pet Food Companies – Tips for Successful Implementation"	EN	On-demand
Gluten-Free Certification and Gluten Risk Management	EN	On-demand
Food Defense: Update on Current Guidelines and Future Trends	EN	On-demand
Supply Chain Risks: Why Transparency Matters	EN	On-demand
Integrating FSMA with Existing Food Safety Systems	EN	On-demand
BRC Packaging	EN	On-demand
BRC Issue 7	EN	On-demand
BRC Agents and Brokers	EN	On-demand
Global Halal Certification: Key Trends, Challenges and Opportunities	EN	On-demand
Kosher Certification: Trends, Challenges and Opportunities	EN	On-demand
Exploring Version 2 of IFS Cash and Carry	EN	On-demand
FSMA and the Global Supply Chain – Compliance Strategies and Smart Technologies for Managing Regulatory Data	EN	On-demand
Halal Requirements for the UAE	EN	On-demand
GFSI Food Defense & Intentional Adulteration in FSMA	EN	On-demand
Examining Corporate Social Responsibility in the Seafood Sector	EN	On-demand
Understanding, Monitoring and Meeting Differing Pesticide MRLs in Food and Animal Feed	EN	On-demand

UPCOMING SGS FOOD EVENTS

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

EVENT	COUNTRY	LOCATION	DATES	EVENT TYPE	STAND #
India International Seafood Expo	India	Goa	January 27-29	Tradeshaw	E16
5th Food Labeling: Evolving Regulatory Compliance Conference	USA	Arlington, VA	January 29-30	Conference	
Global Food Safety Conference	Japan	Tokyo	March 5-8	Conference	108-111
North American Seafood Expo	USA	Boston	March 11-13	Tradeshaw	681
Supply Chain Conference	USA	Orlando	April 15-17	Conference	
Brussels Seafood Expo	Belgium	Brussels	April 24-26	Tradeshaw	11 2665

SAFEGUARDS

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

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THE LATEST SAFEGUARDS

- Canada Implements MRLs for Spirotetramat in Crops – [view](#)
- EU Further Amends Proposal for BPA in Food Contact Materials and Articles – [view](#)
- Vietnam Proposes Technical Regulation for Certain Food Contact Materials and Articles – [view](#)

FOR ENQUIRIES

Please contact:
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WHEN YOU NEED TO BE SURE

