

# HOT

**SOURCE**

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#### WHAT IS FSMA VQIP CERTIFICATION?

**FSMA AND LABELING: ENSURING YOU COMPLY WITH THE ALLERGEN LABELING REQUIREMENTS**

**PROTECTING THE VULNERABLE: PROVIDING SAFE BABY FOODS TO THE MARKET**

**INTERMARCHÉ MAPS OWN BRAND ORGANIC PRODUCTS USING SGS TRANSPARENCY-ONE'S UNIQUE DIGITAL SOLUTION**

**FOCUS ON SGS AT GFSI 2019**

**SGS OPENS NEWEST US BASED FOOD MICROBIOLOGICAL TESTING LABORATORY IN CARSON, CALIFORNIA**

**SGS**



**DEAR READER**

In this issue of Hot Source we explore topics including Safe Quality Food in China, FSMA, labeling, cannabis, the Global Food Safety Conference, baby food regulation and stable isotope testing.

Seeking a competitive edge, food producers in China are increasingly turning to Safe Quality Food (SQF) certification for independent third-party verification that products meet the highest standards for safety and quality. Business Development Manager Grace Wang explores these developments.

In the USA, FSMA continues to dominate. In February SGS was accredited by the ANSI to certify foreign food suppliers under the US FDA's Accredited Third-Party Certification Program. At the same time we have continued developing the SGS Digicomply platform to support the industry with FSMA labeling requirements.

Around the world, mothers face a choice between breastfeeding their infants and using manufactured formula. We explore the question of how can the industry ensure that foods for young children are safe and manufactured to the highest standards.

Food fraud has grown vastly due to current conditions in the food market: the complexity of supply chains and consumer demand for high quality food. We explore the topic and how stable isotope analysis can help.

Around the world, the legal status of cannabis is confusing. In some areas it might be sold as an edible product, a supplement, as a product for smoking, and/or as a drug. We delve into the details.

**Focus on SGS at GFSI 2019**

During February's GFSI Global Food Safety Conference we hosted a special session "Managing Supply Chain Risks – How Has the Food Industry Evolved in Recent Years?" featuring a panel of experts drawn from leading stakeholders in the supply, retail and certification sectors. We summarize the key messages.

And finally, we explore the facilities and capabilities of our food testing laboratory in Carson, California, USA.

SGS Food Team

**CONTENTS**

- ▶ SQF Certification Gains Momentum in China 3
- ▶ What is FSMA VQIP Certification? 4
- ▶ FSMA and Labeling: Ensuring You Comply with the Allergen Labeling Requirements 5
- ▶ Protecting the Vulnerable: Providing Safe Baby Foods to the Market 6
- ▶ Confusion Over Cannabis 8
- ▶ Verification of Geographical Origin by Stable Isotope Analysis 10
- ▶ Intermarché Maps Own Brand Organic Products Using SGS Transparency-One's Unique Digital Solution 12
- ▶ Focus on SGS's Session at GFSI 2019 13
- ▶ SGS Opens Newest US Based Food Microbiological Testing Laboratory in Carson, California 14
- ▶ Webinars, Events And Safeguards 15



## SQF

# SQF CERTIFICATION GAINS MOMENTUM IN CHINA

Food producers in China are increasingly turning to Safe Quality Food (SQF) certification, a GFSI-recognized scheme which confirms that food products meet the highest possible standards for safety and quality, to achieve a competitive edge.

Independent third-party certification of a food safety system, demonstrating compliance with international and domestic food safety regulations, is a key method of food safety verification that businesses can use.

Designed to meet the needs of buyers and suppliers worldwide, the Safe Quality Food (SQF) Code covers the entire food supply chain. Recognized by the Global Food Safety Institute (GFSI), SQF includes a range of codes and modules tailored to meet the demands of all industry sectors, thereby ensuring that requirements are specific to your operations. The SQF Quality Code is a feature unique to certification programs of this type.

Certification against SQF can be achieved through a range of food safety codes each designed to meet that sector's very specific needs:

- Primary production code
- Food manufacturing code
- Storage and distribution code
- Manufacturing of food packaging code
- Food retail code

In addition, the SQF Quality Code can be added to any of the above food safety audits (except the Food Retail Code) to demonstrate that a supplier meets global quality standards.

Suppliers certified to the Quality Code are able to use the SQF Quality Shield on their packaging.

Across China, awareness of the SQF Code has been growing over the last five years. Today, it has the attention of Chinese organizations at all levels of the supply chain and the number of SQF

certified companies in mainland China is growing. Most of these certifications were issued by SGS. We are proud to say that some of the country's leading food companies have contracted SGS to conduct audits in pursuit of SQF certification.

Organizations certified against the SQF Quality Code are entitled to display the SQF Shield on product packaging, to show its quality and demonstrate the independence of the verification.

### GLOBAL DAIRY QUALITY

One of the world's biggest and most famous dairy companies that pays close attention to supply chain management and implements management systems in its dairy farms chose SGS as their certification provider. Two of this dairy's farms, located in Tangshan City (Hebei Province) and Shuozhou (Shanxi Province), have successfully achieved SQF certification. They chose SQF to improve quality and food safety management skills and food supply chain transparency, at the same time as enhancing consumers' confidence in food products' quality and safety. This will also increase their competitiveness.

### EDIBLE OILS EXPERTISE

A famous edible oil manufacturer operating factories across China is working hard to provide consumers with healthy, convenient and innovative products. It pays close attention to food safety and quality. Indeed, all four of this company's factories in mainland China have successfully gained SQF food safety and quality certificates.

### INFANT FORMULA SAFETY

Processing infant formula milk powder, a well-established local dairy company's factory in Fuyu County (Heilongjiang Province) implements the highest levels of food safety and quality standards. This company has been successful in achieving SQF food safety and quality certificates, demonstrating the high level of its management skills.

### BRIGHT FUTURE

With increasing focus on food safety and quality, as well as third party verification of food safety systems, SQF certification of facilities is expected to grow, alongside increased recognition of the SQF program in China.

With SQF certification SGS can confirm that your organization produces, processes, prepares and handles food products to the highest possible standards globally. We can provide one-stop solutions for SQF certification that include audits, practitioner training, gap analysis and more.

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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## FSMA

# WHAT IS FSMA VQIP CERTIFICATION?

FSMA VQIP Certification is a scheme offered by SGS to cover the FDA's official third-party certification of foreign suppliers. It is an accredited compliance certificate, based on the FSMA Accredited Third-Party Certification (TPP) rule. It helps importers and their suppliers comply with the requirements of the Foreign Supplier Verification Program (FSVP) and VQIP (Voluntary Qualified Importer Program).

## ABOUT VQIP

The Voluntary Qualified Importer Program (or VQIP) is available to US importers and allows expedited entry of their imported food products into the US. One of the requirements of this expedited entry program is supplier certification under the TPP rule.

One of the advantages of expedited entry under VQIP, is that food entering the US is generally released immediately - the regular process for releasing food at US ports of entry takes between two and seven days. Expedited entry represents a huge advantage for food importers who want to quickly have their products on the retail shelves.

## ADVANTAGES OF FSMA CERTIFICATION FOR FOREIGN SUPPLIERS

Foreign suppliers will greatly benefit from FSMA certification because it reduces the number of requests for proof of FSMA audit and/or other compliance requirements from their US importers. FSMA VQIP certification will also help foreign suppliers to attract more US clients. In addition, foreign suppliers can use their FSMA certification to promote their brands, as they will have a certificate to prove they meet US FDA food safety requirements.

## ROUTE TO CERTIFICATION

FSMA VQIP certification can be done in two stages – an optional 'Consultative Audit' followed by the 'Regulatory Audit'.

An optional **consultative audit** is a full, unannounced audit that will report back to the company any gaps in their system.

A **regulatory audit** is also a full, unannounced audit. Upon successful completion, SGS will issue an accredited FSMA VQIP certificate.

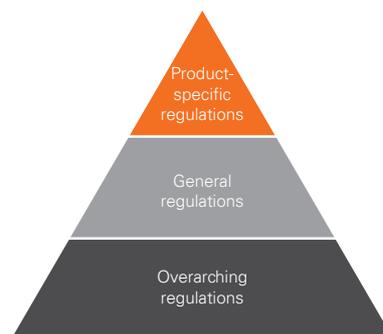
FSMA VQIP certification is valid for 12 months and a recertification audit is required prior to its expiration.



## PREPARING FOR FSMA CERTIFICATION

FSMA VQIP certification is issued for the purposes of the FSMA Accredited Third Party Certification Program (TPP) rule. It attests that a facility complies with the applicable food safety requirements of the FD&C Act and FDA regulations. Therefore, a regulatory audit covers all the applicable food safety regulations that FDA has issued for the purposes of food offered for consumption in the United States.

## LEVELS OF COMPLIANCE



Unlike other voluntary food safety certification schemes, FSMA VQIP certification is a compliance certification. There are 62 regulatory 'scopes' for VQIP in FSMA. Those scopes can be categorized as follows:

- Overarching (or primary) regulations, e.g. Preventative Controls for Human Food, Seafood HACCP, Juice HACCP, etc.
- General and product-specific regulations, e.g. Food Labeling, Macaroni & Noodles, Bakery Products, etc.

## RESPONSIBILITIES OF SGS AS YOUR CERTIFICATION BODY

FSMA VQIP certification entails requirements for certification bodies, such as:

- Performing facility audits unannounced
- Ensuring auditors are competent and objective
- Verifying the effectiveness of corrective actions to address identified deficiencies
- Complying with the requirements of submitting regulatory audit reports to FDA, providing access and maintaining certain certification documents
- Notifying FDA upon discovering a condition that could cause or contribute a serious risk to public health

## ALTERNATIVE TO FSMA VQIP CERTIFICATION

For foreign suppliers and importers who are just looking for an FSMA audit certificate but are not interested in VQIP and the expedited entry program, SGS also offers a certification scheme called 'FSMA FSVP'. Like VQIP, the FSMA FSVP accredited certification program covers the applicable FDA food safety regulations. However, it is a voluntary scheme that addresses the supplier verification requirements in the Preventive Controls rules and the Foreign Supplier Verification Program (FSVP). Therefore, unlike the FSMA VQIP certification scheme, FSMA FSVP certification does not fall under FDA's accredited third-party certification program, but can be a great verification tool for importers and a means for foreign suppliers to demonstrate compliance to their US clients.

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

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## LABELING

# FSMA AND LABELING: ENSURING YOU COMPLY WITH THE ALLERGEN LABELING REQUIREMENTS

Signed into law over seven years ago, the US Food Safety Modernization Act (FSMA) is now well down the road to implementation. FSMA has generated some of the biggest changes to food safety seen in the last 70 years – shifting the food industry's emphasis from reaction to the prevention of foodborne diseases. In this article, we look at how this shift affects food labeling in relation to allergens.

The step change from responding to outbreaks of foodborne disease to actively preventing their occurrence is a cornerstone of FSMA. It demands greater emphasis on:

- Records control
- Registration of food facilities
- Hazard analysis and risk-based preventive controls
- Training
- Supply chain management
- Standards for produce safety
- Sanitary transportation of food
- Prevention of misbranding with respect to allergen labeling

Although labeling is covered by many different aspects of FSMA, in particular it prescribes specific preventive controls for allergens.

## RISK FROM ALLERGENS

According to the US Department for Agriculture's (USDA) Food Safety and Inspection Service, allergens remained the primary cause of food recalls in 2017.<sup>1</sup> Most reactions to allergens are mild and self-limiting but, in about 20 percent of cases, the reactions can lead to anaphylaxis – the systemic reaction to an allergen that can cause breathing passages to swell and shut, and blood pressure to plummet. Anaphylaxis can result in shock and even death.

In the US, around 30,000 cases of anaphylaxis are reported each year. This results in hospitalization for around 2,000 sufferers, of whom around 150 will tragically lose their lives. When someone presents at an emergency room with anaphylaxis, the most likely cause is a food allergy, which most

commonly will have been triggered by nuts or sesame seeds.

## PREVENTIVE CONTROLS

The Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA) defined the labeling requirements relating to the 'Big 8' allergens – milk, eggs, fish, shellfish, nuts, peanuts, wheat and soybeans.<sup>2</sup> These allergens, which account for about 80% of all food allergies, can be introduced into a food product in many ways, from human error to accidental cross-contact. With the introduction of FSMA and its emphasis on undeclared allergens, these are now described as hazards that should be controlled.

Since food allergies are so serious and an allergic consumer must avoid any allergen found in certain foods, clear and accurate labeling is a must. Our research into label design has shown that inaccurate or unclear labeling contributes to about 45% of incidents. This is largely because the labeling process is a manual one that depends entirely upon human skill and competence. On top of this, the task involves many independent jobs and the transference of data, both of which can result in inaccuracies. There are no shortcuts to the job, no automated or mechanized cross-checks designed to identify mistakes at their origin, and no way to compare old and new. This means that, without expert oversight, the risk of inaccurate labeling can be high.

The change in emphasis introduced by FSMA means companies are now required to invest in systems and technologies designed to improve the

labeling process to reduce risk and improve overall efficiency. According to the FDA, the estimated annual cost of performing label controls to prevent allergen mislabeling varies from around USD 7,000 for a small facility to more than USD 120,000 for a large establishment.<sup>3</sup>

## COMPLIANCE LABELWISE

**Compliance Labelwise** is our system to support businesses with food labeling and product information reviews. Augmenting human expertise with state-of-the-art Artificial Intelligence, it provides an extra layer of support in the reduction of risk in a company's internal processes.

Compliance Labelwise can validate declared allergens, provide alerts when missing information is detected and monitor online content to spot misalignments on e-retailers webpages. In addition, our label compliance teams have the expertise and experience to review your product labels against FSMA and other labeling requirements.

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><https://www.fsis.usda.gov/wps/portal/food/foodsafety/topics/recalls-and-public-health-alerts/recall-summaries>

<sup>2</sup><https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Allergens/ucm106187.htm>

<sup>3</sup><http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Reports/EconomicAnalyses/UCM472884.pdf>



**BABY FOOD****PROTECTING THE VULNERABLE: PROVIDING SAFE BABY FOODS TO THE MARKET**

How can we be sure the foods we feed our young children are safe and manufactured to the highest standards for quality?

Around the world, mothers face a choice between breastfeeding their infants and using manufactured formula. The decision between natural and synthetic can be affected by several factors, including prevailing cultural attitudes and the personal situation of the mother. While industrialized countries are seeing a return to breastfeeding, this is not the case in many countries. Ultimately, most children will eventually receive manufactured food products at some point. To protect infants and children, these products must be manufactured to the very highest standards for quality and safety.

**TYPES OF BABY/INFANT FOOD**

After extensive scientific research into the changing nutritional requirements of developing babies, industry has created a range of products to satiate each child's needs. These include:

1. Infant formulas – for hungry babies or as a replacement to breastmilk
2. Follow-on formula – supplements to solid foods
3. Solid food – e.g. cereal-based products prepared using milk or vegetable, potato and/or meat purées
4. Hypoallergenic (HA) infant formula - recommended to babies of parents with allergies. Available both as 1 and 2
5. Formula for special medical purposes – e.g. for a child with a diagnosed protein allergy

**CAUSE FOR CONCERN**

In 2008, the world learned about the devastating effects of what became known as the Chinese milk scandal. The scandal involved the adulteration of milk and infant formula with melamine. It affected 300,000 children, hospitalized

around 54,000 babies, and killed six. The severity of the event resulted in a nationwide shunning of domestic milk products, especially Chinese-made nutritionals like infant formula.<sup>1</sup>

This is not an isolated incident. In the last few years there have been several cases of infant food products being recalled, for a wide variety of reasons. In 2017, 57 tons of frozen organic chicken bites were recalled in the US because they contained bone fragments.<sup>2</sup>

In 2018, one multinational's infant formula was found to contain insects and their baby formula tested positive for the *Cronobacter sakazakii* bacteria.<sup>3</sup> Also in 2018, baby food pouches were found to be defective in Canada<sup>4</sup>, organic baby rice cereal was incorrectly labeled in Australia and New Zealand<sup>5</sup>, and laboratory analysis of 50 leading baby food brands in the US showed that two-thirds contained 'worrisome'



<sup>1</sup><https://www.dairyreporter.com/Article/2019/02/20/Melamine-10-years-on-Foreign-and-foreign-firms-vie-for-position>

<sup>2</sup><https://www.foodsafetynews.com/2017/06/toddler-foods-chicken-bites-recalled-because-of-bone-fragments/>

<sup>3</sup><https://www.foodsafetynews.com/2018/08/company-governments-investigate-contaminated-infant-formula-powder/>

<sup>4</sup><http://www.inspection.gc.ca/about-the-cfia/newsroom/food-recall-warnings/complete-listing/2018-05-26/eng/1527371146055/1527371148679>

<sup>5</sup><https://au.news.yahoo.com/popular-baby-food-recalled-safety-fears-062849867.html>

levels of heavy metals (cadmium, lead, mercury, and inorganic arsenic).<sup>6</sup> So far in 2019, we have seen recalls for Salmonella in baby formula in France<sup>7</sup>, possible choking hazards in baby gripe water in the US<sup>8</sup>, and baby food products that could permit the growth of the bacteria that causes botulism in Canada.<sup>9</sup>

These represent just some of the incidents involving infant foods. While the effects of poor quality control, contamination, and unsafe practices can be disastrous for consumers, the consequences for businesses can be severe. Recalls can be financially debilitating but, if the products reach consumers, the potential ramifications can be far higher. In the case of the Chinese milk scandal, two people were sentenced to death and a third imprisoned for life.

## PROTECTING INFANTS

Around the world, standards exist to maintain quality and protect babies and infants. In many countries, baby foods are covered under general food standards regulations. Some countries then choose to add specific requirements on top of these. For example, the US has specific nutrient levels for children less than four years old, with specific parameters on how the nutrient facts panel must be displayed and what can be stated about the nutrients.<sup>10</sup>

As the country at the center of the milk scandal, China has introduced two national standards based on international Codex Alimentarius standards. These are:

1. GB 10765-2010 - National Food Safety Standard, Infant Formula
2. GB 10767-2010 - National Food Safety Standard, Older Infants and Young Children Formula

In the European Union (EU), Directive 2006/141/EC states that follow-on milk, formula used as a supplement to solid food, must only be introduced in the seventh month. This regulation will be replaced by Ordinance (EU) 2017/127 on February 22, 2020. The EU also regulates solid foods under Directive 2006/125/EC.

## FOCUS ON GLYCIDYL AND 3-MCPD

As research methods improve, previously unknown or unheeded substances are being identified. If it is determined that these represent a threat to the child, new regulations are introduced.

The EU has recently focused on glycidyl and 3-MCPD derivatives, which are toxicologically relevant process contaminants. As industry better understands the existence and impacts of these substances, it has led to the introduction of Ordinance (EU) 2018/290, which came into force in each Member State before March 2018. This is the first time maximum content levels for glycidyl fatty acid esters (glycidols), amongst other things, have been given for:

- Plant oils and fats used in the production of solid foods and cereal-based foods for babies and infants
- Infant first milk, follow-on milk and foods for special medical purposes for babies and infants (in powder form)
- Infant first milk, follow-on milk and foods for special medical purposes for babies and infants (as a liquid)

## SGS SOLUTIONS

SGS offers a comprehensive range of services to help industry deliver safe and compliant baby and infant food products to the market. Our experts understand the various standards employed around the world and can offer consultation and testing solutions to expedite access to these markets.

SGS provides analysis for the following analytical parameters in baby foods:

- Vitamins: fat and water-soluble vitamins, vitaminoids, carotenoids and secondary plant substances
- Mineral substances: Bulk and trace elements, including with low detection limits
- Nutritional values: Calorific value, ash, protein, carbohydrates, fat, fatty acids, fiber, sodium chloride, sugar and amino acids



- Contaminants and residues: Heavy metals, mineral oil residues (MOSH/MOAH), 3-MCPD and glycidyl esters, free MCPD and glycidol, polycyclic aromatic hydrocarbons (PAH), pesticides, plasticizers (phthalates), dioxins and PCBs, mycotoxins, pyrrolizidine alkaloids/tropane alkaloids, nitrates/nitrites, veterinary medicinal product residues and metabolites thereof
- Microbiology
- Allergens
- Species identification using PCR and NGS (next generation sequencing)
- GMO screening

To learn more about how SGS can help you ensure safety and quality in your infant foods and other specialist foods visit [www.sgs.com/healthfood](http://www.sgs.com/healthfood).

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

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<sup>6</sup><https://www.consumerreports.org/food-safety/heavy-metals-in-baby-food/>

<sup>7</sup><https://www.reuters.com/article/us-france-babymilk-recall/lactalis-recalls-baby-milk-from-spanish-site-linked-to-salmonella-idUSKCN1PJ1Y3>

<sup>8</sup><https://eu.usatoday.com/story/money/2019/02/18/baby-gripe-water-sold-dollar-general-recalled-kingston-pharma/2912791002/>

<sup>9</sup><https://www.foodsafetynews.com/2019/02/potential-for-botulism-prompts-company-to-recall-natural-baby-and-toddler-foods/#more-181126>

<sup>10</sup><http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm2006828.htm>

## CANNABIS

## CONFUSION OVER CANNABIS

Most countries recognize *Cannabis sativa* containing delta-9-tetrahydrocannabinol (THC), and products containing higher levels of natural or synthetically derived THC, as drugs. Confusion, however, surrounds varieties of *Cannabis sativa* known as hemp and products containing hemp and its non-psychoactive derivative, cannabidiol (CBD).

The legal status of cannabis around the world is confusing. In some areas it might be sold as an edible product, a supplement, as a product for smoking, and/or as a drug. To make it more confusing, this lawfulness might only apply to certain areas under specific conditions.

### WHAT IS CANNABIS?

To begin with, though commonly considered to be the same – cannabis, hemp and marijuana are different. They do all belong to the same plant family – cannabis – with two primary classifications, Indica and Sativa.

**Hemp:** a variety of *Cannabis sativa* L

**Marijuana:** can be considered a member of either the *Cannabis sativa* or *Cannabis indica* families

With low THC, hemp usually has high CBD which offsets any THC, while marijuana (with high THC) is more likely to be consumed by smoking or in foods (edible).

CBD, the most popular extract fraction, can be obtained from hemp and marijuana. This is the active ingredient in cannabis derived products.

### LEGAL STATUS OF HEMP AND HEMP-DERIVED PRODUCTS

Hemp is a variety of *Cannabis sativa* L. that is low in THC but high in CBD. Its legality, and that of products derived from it, varies throughout the world. Some ingredients taken from hemp are recognized as safe, others could possibly be considered novel foods or

supplements, and some products are considered drugs.

Globally, the legal approach to hemp is varied. The European Union classes hemp and its derivatives (seeds, oils, flour and defatted seeds) as food and food ingredients. They are not considered novel foods because there is a history of consumption.<sup>1</sup> This rule does not, however, apply in every Member State.

In the US, the signing of the Agricultural Improvement Act of 2018 – commonly known as the Farm Bill of 2018 – on December 20, 2018, allowed the legal selling of hemp and its derivatives if they contain less than 0.3% of THC on a dry weight basis.<sup>2</sup> The United States Food and Drug Administration (US FDA) recognizes hemp seed, hemp seed protein powder and hemp seed oil as Generally Recognized As Safe (GRAS).<sup>3</sup> This change did not, however, override state laws and so, if a state prohibits the sale of hemp products, that law stays in-force.<sup>4</sup>

In other countries: Australia and New Zealand have allowed the sale of hemp with no or very low levels of THC under food standards since November 12, 2017<sup>5</sup>; Canada has allowed hemp products with less than 0.3% THC hemp since 1998<sup>6</sup>. Since January 1, 2010, the Yunnan Department of Agricultural in China has allowed the cultivation of hemp with less than 0.3% THC and now China provides about 50% of the world's industrial hemp products. In Japan the cultivation is illegal but the sale of products is legal.



### LEGAL STATUS OF CANNABIDIOL (CBD)

The legal status of CBD can be equally difficult to understand. Depending on the country and which authority is being asked, CBD can be classified as a food, supplement and/or drug.

The European Foods Safety Agency (EFSA) is considering a novel food application for CBD in food supplements with a daily intake of up to 130 milligrams (mg).<sup>7</sup> This determination means items currently cannot legally be marketed as supplements and should be removed from sale until the novel food determination is finalized.<sup>8</sup>

The US FDA states CBD, whether derived from hemp or not, is a drug. It is therefore not legal as a supplement or food ingredient. Eight states, however, have approved its use without a doctor's recommendation, thereby also allowing recreational use.<sup>9</sup> Other states require the recommendation of an authorized medical professional, thereby creating a quasi-drug status. It is illegal to sell CBD across state lines.

Elsewhere, Canada made CBD legal for recreational and medical use on October 17, 2018. This rule does not, however,

<sup>1</sup>[http://ec.europa.eu/food/safety/novel\\_food/catalogue/search/public/index.cfm](http://ec.europa.eu/food/safety/novel_food/catalogue/search/public/index.cfm)

<sup>2</sup><https://www.congress.gov/bill/115th-congress/house-bill/2/text>

<sup>3</sup><https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm628988.htm>

<sup>4</sup><http://www.ncsl.org/research/agriculture-and-rural-development/state-industrial-hemp-statutes.aspx>

<sup>5</sup><http://www.foodstandards.gov.au/consumer/generalissues/hemp/Pages/default.aspx>

<sup>6</sup><https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/producing-selling-hemp/about-hemp-canada-hemp-industry/frequently-asked-questions.html#a6>

<sup>7</sup>[http://ec.europa.eu/food/safety/novel\\_food/catalogue/search/public/index.cfm](http://ec.europa.eu/food/safety/novel_food/catalogue/search/public/index.cfm)

<sup>8</sup><https://cbd.oileurope.com/cbd-legality/food-supplement-guidelines-for-cbd-products>

<sup>9</sup><https://healthcare.findlaw.com/patient-rights/medical-marijuana-laws-by-state.html>

override provincial laws and so CBD may remain illegal in some provinces. Switzerland allows the sale of CBD and other cannabis products with less than 1% THC. A number of countries, including Argentina, Australia and Chile recognize CBD as a drug.<sup>10</sup> The World Health Organization recommends that CBD is not scheduled as a psychotropic substance.<sup>11</sup>

**LEGAL STATUS OF SMOKING OR EDIBLE CANNABIS (MARIJUANA)**

In the US, certain states now allow the sale of edible cannabis products, authorizing their own licensing and testing requirements. For example, the State of Washington considers the product matrix and the production chain. This means testing requirements can involve potency, moisture and water activity, foreign matter screening, enterobacteria, pathogenic *E. coli* and *Salmonella*, mycotoxins (total aflatoxin, ochratoxin A – both max 20 ug/kg), heavy metal screening (inorganic arsenic, cadmium, lead and mercury) and residual solvent screening.<sup>12</sup> In addition, pesticide residues must not exceed listed action levels and non-listed residues must not exceed 0.1 mg/kg.<sup>13</sup> There is, however, no consistency between state requirements, with some authorities demanding specific test requirements and others remaining vague.

Canada has allowed products for smoking since October 17, 2018, but is still considering regulations for edible and topical products. The main difference between these items and the non-cannabis items will be the level and limit of THC, such as 10 mg THC per package. For edible solid products, therefore, all other food or cosmetic safety requirements will apply. However, the addition of certain ingredients – vitamins, minerals, caffeine and alcohol – are prohibited. In addition, it will be illegal to sell to minors and packaging must be plain with specific labeling requirements.<sup>14</sup>

The Netherlands considers cannabis to be a soft drug – see also hash, sleeping pills and sedatives – and it can be sold in coffee shops. People are restricted to a maximum of 5g of soft drugs per day and it is illegal to sell to under 18s and non-residents. Stock in the coffee shop cannot exceed 500g and they cannot also sell hard drugs or alcohol.

Asian countries that are moving towards legalization include: Thailand, Malaysia, Sri Lanka, South Korea, China and Japan. Some analysts believe medicinal cannabis could be legalized in Thailand by the end of the year. Sri Lanka is beginning to cultivate cannabis for medicinal export and is considering legalizing Ayurvedic use. In China and Japan, cannabis remains illegal but both have approved limited cultivation and officially sanctioned research into the plant's potential benefits.

**SGS SOLUTIONS**

Confusion is the defining term when looking at the legal status' surround cannabis and products made from cannabis. Manufacturers and suppliers of these products need to understand both the technical characteristics of their product in relation to THC levels and the legal status in their target market.

With a global network of experts and dedicated laboratories, SGS offers a comprehensive range of services to help manufacturers and suppliers of cannabis products remain legal and compliant.

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

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<sup>10</sup><https://www.cannabisbusinesstimes.com/article/cannabis-legalization-world-map>  
<sup>11</sup><https://www.who.int/medicines/access/controlled-substances/CannabidiolCriticalReview.pdf>  
<sup>12</sup><https://apps.leg.wa.gov/wac/default.aspx?cite=314-55-102>  
<sup>13</sup><https://apps.leg.wa.gov/wac/default.aspx?cite=314-55-108>  
<sup>14</sup><https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/resources/proposed-regulations-edible-cannabis-extracts-topicals.html>

**AUTHENTICITY****VERIFICATION OF GEOGRAPHICAL ORIGIN BY STABLE ISOTOPE ANALYSIS**

Food fraud has grown enormously in recent years because of two key factors: the complexity of supply chains and consumer demand for high quality foods. These factors have combined to create a situation that is a real challenge for industry.

Our globalized complex supply chains provide food fraudsters with numerous opportunities to adulterate high value food products with cheaper ingredients. Although it is difficult to define one type of food fraud as the most common, it is probable substitution/mislabeled is the single biggest problem. Within this category, we find the issue of mislabeling of products regarding their provenance or geographical origin.

**OPPORTUNITIES FOR ADULTERATION**

Consumers receive lots of information concerning their food, much of it misleading or diverse. For 'premium' products the issue can be greater because they often rely on geographical origin as a factor in their higher value. For instance, they may come from a Protected Designation of Origin (PDO) or a Protected Geographical Indication

(PGI), from an emotion-driven priority like local or regional, or, alternatively, from an area that is black-listed.

With the price disparity between premium and 'conventional' products growing, there is greater scope for profit in these geographically-based products through adulteration. At the same time, it also provides opportunities for the food industry to secure its production, differentiate in the market and develop a brand to a premium level.

It is important to make a clear differentiation between the assurance of transparency across the supply chain and the actual verification of the authenticity of a product's provenance. Supply chain management through a system like Transparency-One is essential to provide secure and complete information about the claims made for a product, i.e. where it should

come from. This does not, however, serve as evidence of the authenticity of a product, only as a transparent declaration of its provenance. Whether this declaration is genuine can only be answered by analytical verification of its geographical origin.

**TECHNOLOGY ADVANCES**

Today's technology allows the use of different techniques to provide evidence of the geographical origin verification of a product. Techniques are mostly non-targeted, creating fingerprints or profiles of a product using different analytes, parameters or indices. These variables connect the information hidden in a product to local conditions in the area of production. Among the available techniques, Stable Isotope Analysis has a prominent position for reasons such as:

- A. The multi-isotope fingerprint (carbon, nitrogen, sulfur, hydrogen and oxygen isotope ratios) contains a wealth of information about the local climate, the soil and the geological background, the plant's physiology and metabolism, the fertilizers, the animal feed, even to details such as the proximity to the sea, greenhouse production and organic farming
- B. Stable Isotope Analysis has been used for decades in proving geographical origin claims, having elevated the current knowledge and expertise to high standards for diverse matrices and topic complexity
- C. Today, it is an affordable testing solution, offered in a strictly commercial way and in versions that are based on the science but converted into a simple service



The use of stable isotopes in the verification of the geographical origin of food led to the creation of isotope databases, collecting data for a certain region, country or many countries. These isotope databases are product-specific. They provide general information of the expected variation of the isotope fingerprint between the given areas. Identifying that databases have certain advantages and disadvantages, it is recommended in many cases to use instead a targeted and specific authentic reference dataset that refers to each case.

This Reference Sample System (RSS) can be used to control the supply chain, to check a suspect source of products or to compare charges. The principle is that usually the question is not "where does it come from" but rather "is this truly from there?". In order to provide an accurate answer, there is a need for the direct comparison of the tested samples with authentic, specific reference samples from a given area and for a given time period (e.g. harvest year).

#### DATABASE-DRIVEN

A good and functional database needs a lot of data. It also needs to be updated for seasonal and annual variations. However, isotope databases can be a strong tool for quick screening of certain products. The need for reliable authentic samples is significant. The development of a reliable database takes time and costs could be high. As for the need to keep an isotope database up-to-date, experience shows that the seasonal variations of fingerprints due to different conditions could potentially be more significant than geographical variations, especially between neighboring areas.

#### REFERENCE SAMPLE SYSTEM (RSS)

The RSS provides high reliability through its multi-component approach. The service includes not only an analysis and its results but also an illustrated way to present the outcome of the testing that can be used in the longer term for monitoring the deviations of a product across time. The outcome is a full service, not just a one-off test. Further, the RSS uses contemporary fingerprints that help to avoid seasonal variations.

Nature does not follow political borders. Isotope fingerprints, like any kind of chemical fingerprint, do not alter between the two sides of country

borders or regional boundaries. The verification of geographical origin is a forensic investigation, where scientific evidence is used in order to provide evidence for or against a hypothesis. There is no characteristic fingerprint for Italian tomatoes, German asparagus or salmon from North Atlantic. Nevertheless, comparing isotope fingerprints makes it possible to get to a reasonable conclusion regarding the geographical origin claim of a product and to identify a false declaration based on solid scientific arguments.

#### RISK MITIGATION

During recent years, new versions of food safety standards have included a comprehensive requirement for risk assessment, including food fraud as a major influencing parameter. Companies are required to deliver risk mitigation plans, taking measures against the risk of food fraud in their supplies. Such schemes will often include analytical testing because it removes doubt and dramatically decreases the risk of food fraud incidents, like false declarations of geographical origin.

Furthermore, Stable Isotope Analysis is a powerful tool in a variety of other food authenticity issues. For example: the differentiation between natural and artificial flavorings, the detection of unauthorized food component additions (e.g. sugars in juices, honey and syrups,

water in wine and juices, alcohol in wine and spirits etc.), and the identification of animal or plant-derived ingredients. We will cover these aspects in more detail in future articles.

The need to prevent food fraud is now being taken seriously by all stakeholders. Governments and the food industry have awoken to the issues surrounding Country of Origin Labeling as higher value for local and regional foods directly affect the marketplace. Ensuring the geographical origin and labeling of ingredients is correct has therefore become a major factor in maintaining market dominance for these 'premium' products. Geographical Origin Verification is a useful tool in protecting these products because it not only helps to reduce fraud in your supply chains, it also benefits your customers and helps to protect your business and the food industry.

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

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**TRANSPARENCY**

# INTERMARCHÉ MAPS OWN BRAND ORGANIC PRODUCTS USING **SGS** TRANSPARENCY-ONE'S UNIQUE DIGITAL SOLUTION

To meet distributors' increasingly stringent demands for quality, SGS Transparency-One last year launched a unique digital solution allowing companies to identify, analyze, and monitor all suppliers, components, and production sites in their supply chains.

The solution enables businesses to improve social and environmental risk management, ensure the food safety of their products, and boost consumer confidence.

Intermarché has chosen SGS Transparency-One to map all of its own-brand organic products, 495 ranked products to date. Launched eight months ago, this project has already identified more than 4,200 suppliers located in 41 countries at all levels and collected their social and environmental quality certificates.

Tighter regulations and greater consumer demand for transparency are forcing companies to strengthen their tools for managing and controlling product traceability throughout the supply chain, from primary production to the consumer.

"For Les Mousquetaires, quality and traceability are essential. The demand for "organic" labeled products is growing rapidly. We realized that we didn't have a detailed view of the entire supply chain for our own-brand organic products. To be able to answer consumers' questions, we asked SGS Transparency-One to set up an accurate mapping system, all the way down to primary production. We continue to make good progress and encourage suppliers at all levels to join this initiative to give our customers the fullest guarantees in terms of quality, food safety, and environmental and social commitment," said Olivier Touzé, Director of Quality and Sustainable Development at Les Mousquetaires Group.

The tool uses real-time supply chain data to identify product origins and reduce risks. Each client can review all the facilities in their supply chain and ensure their suppliers comply with regulations for product safety, sustainability, and social responsibility

"Our solution, in partnership with Transparency-One, allows us to create a detailed map of all the different entities involved in a supply chain, collect and verify suppliers' certifications, and make targeted recommendations based on each supplier's control of the process. It's the most advanced solution on the market today, a new social network for suppliers," said Guy Escarfail, Vice President, Global Head of SGS Digital Supply Chain Solutions.

**ABOUT INTERMARCHÉ**

With its unique status as "Producer & Retailer," Intermarché places the well-being of consumers at the heart of its commitments. Its unique positioning in French distribution, as the fourth largest agrifood operator and second largest independent distributor in France, gives Intermarché the ability to continuously adapt to consumers' expectations and societal challenges, to "Produce Better" and "Eat Better".

**ABOUT SGS**

SGS is the world's leading provider of inspection, verification and certification services. Recognized as the standard in terms of quality and integrity, SGS has more than 97,000 employees, and operates a network of over 2,600 offices and laboratories around the world.

**ABOUT TRANSPARENCY-ONE**

Transparency-One enables companies to discover, analyze, and monitor all suppliers, components, and facilities in the entire supply chain. Transparency-One combines cutting-edge graph database technology, supply chain expertise, and global supplier onboarding services, in partnership with SGS, to help all supply chain stakeholders reduce business risk. The company is based in Boston, Massachusetts with offices in Paris, France.

To learn more about Transparency-One, contact:

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GFSI

## FOCUS ON SGS'S SESSION AT GFSI 2019

February's GFSI Global Food Safety Conference 2019 in Nice, France, was hailed a great success, attracting more than 1,000 delegates from over 60 countries.

Held at the Nice Acropolis Convention Center, February 25-28, the annual Global Food Safety Conference brought together food safety professionals from around the world. It provided a unique opportunity for specialists representing different sectors and regions to meet and share their innovative solutions to improving food safety.

During the event, SGS hosted a special session entitled, "Managing Supply Chain Risks – How Has the Food Industry Evolved in Recent Years?"

Held on February 28, the event featured a panel of experts drawn from leading stakeholders in the supply, retail and certification sectors. Moderated by SGS's AFL Business Manager in South Africa, Donna Brown Crockart, the panel consisted of:

- Natalie Dyenson, Vice President, Food Safety & Quality, Dole Food Company
- Christine Summers, AGMM, Costco
- Thies Dol, Global Food Safety & GMP Manager at DSM

The special session addressed key questions relating to global food supply chains, including the ways industry is managing and mitigating risk in its supply chains and the extent to which regulations drive food safety culture around the world. The panel also discussed the latest methods being employed to identify supply chain risks and minimize their impact.

Donna began the discussion by putting into context the need to improve the food safety culture in our supply chains. Recent World Health Organization (WHO) figures on foodborne diseases showed 1 in 10 people will be affected by foodborne diseases a year, with 420,000 dying. She then reviewed figures that showed 85% of companies with global supply chain had experienced at least one disruption in the last year and that 90% did not quantify risk when making outsourcing decisions. The need for effective supply chain management systems is clear from these figures, to protect both businesses and their supply chains, and their customers.

Donna concluded her introduction by divulging the results of SGS's recent survey into current global industry

practices. Conducted in Q1 of 2019, the survey combined data from 290 participants, operating in 65 countries, and provided several indications of where supply chain management could be improved to promote better food safety practices.

### SUPPLY CHAIN MANAGEMENT SURVEY: SELECTED FINDINGS

The survey found that food safety remained the number one priority for businesses (90%), followed by regulatory compliance (88.62%) and traceability (84.48%). Respondents also expressed the view that regulatory non-compliance had the greatest potential for negative impact on their businesses (70.7%), followed by quality performance (65.5%), food safety crises (63.1%), supply chain interruptions (59.3%) and food fraud (57.9%).

Worryingly, 87% of responders believed their company's approach to supply chain risk management was "not very effective", with the survey showing 46% of businesses focused only on Tier-1 suppliers and 68% relying on Tier-1 suppliers to manage their own supply chains. While 57% of responders did see a benefit in implementing a supply chain management tool, only 45% don't currently employ such a tool.

These figures might contribute towards an explanation for why the industry has such low levels of confidence in its supply chain management practices: only 19% felt their system was effective at managing Tier-1 suppliers and only 8.3% reckoned it was effective at managing Tier-2 downstream. Only 13.8% of responders felt their system could effectively identify and assess risk in the supply chain, with 12.8% feeling their system offered effective risk management and mitigation.

Delegates were surprised to learn that only 28% of those surveyed felt their company employed a supplier selection and approval process that they would describe as "very effective". 72.4% of respondents stated that supplier certification status was the dominant factor affecting supplier selection, higher than a commitment to quality and safety at 71.4%. Of less concern when



selecting a supplier were internal quality and safety standards (48.6%) and technical expertise (47.9%).

The survey also demonstrated that the key obstacles to effective supply chain management were seen as being poor communication and collaboration (60%), poor supplier understanding of the required regulatory compliance (49%), an underestimation of risk impacts (47%), the cost of implementing supply chain risk management strategies (45.2%) and a lack of end-to-end visibility, traceability and transparency (44.8%).

Finally, the survey showed that 54.8% of responders intended to conduct risk audits of key suppliers to improve their supply chain management. In addition, 41% said they expected to create a supplier risk register, 35.9% planned to carry out formal mapping of their suppliers, and 25% would introduce a supply chain management system.

The take out of the session was that effective supply chain risk management strategies require the set up and implementation of appropriate processes and technologies to sense and respond to events as they happen. It requires the introduction of risk and visibility at the center of an organization's supply chain strategy, allowing businesses to understand and mitigate risks while meeting regulatory and internal quality compliance requirements, as well as satisfying consumer demands for greater transparency.

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).

**FOOD TESTING**

# SGS OPENS NEWEST US BASED FOOD MICROBIOLOGICAL TESTING LABORATORY IN CARSON, CALIFORNIA

Our new, state-of-the-art food microbiological testing laboratory in Carson, California is now open for business.

Established: 2019  
 Laboratories: 1  
 Laboratory space: 2,400 sq. ft.  
 Location: Carson, CA

**SERVICES**

The Carson laboratory offers a broad spectrum of food and agricultural testing services, including:

- Product testing:
  - Microbiological – qualitative pathogens and quantitative-spoilage and indicator organisms
  - Chemical – parameters including allergens, fat, protein, rancidity indicators
  - Physical – parameters including appearance, odor, taste, texture

- Research and development
  - Method validation (AOAC or client specific)
  - Process validations
  - Product validation
  - Shelf-life studies
  - USP antimicrobial effectiveness
  - USP preparatory testing
- Food safety consultation
- Training
- Regulatory advisories and recommendations

**ACCREDITATIONS**

Our Carson laboratory is ISO 17025 accredited by A2LA (American Association for Laboratory Accreditation), delivering microbiological testing services that meet the highest standards for laboratory quality systems, accuracy, reliability and customer service.

**PRODUCTS COVERED**

This facility is staffed and equipped to deliver tests across every food category including:

- Baked goods
- Beverages, wines and spirits
- Confectionary and chocolate

- Dairy
- Dietary and nutritional supplements
- Fruits and vegetables
- Grains and cereals
- Herbs and spices
- Meat and poultry
- Oils and fats
- Pet food
- Processed, canned and frozen foods
- Seafood
- Tea and coffee

**EXPERIENCE AND EXPERTISE**

We offer a dedicated 24/7 resource of degree qualified scientists, with operational and industry experience, to ensure clients are provided with accurate information efficiently. Our teams are also available in the labs seven days a week for client emergencies.

For further information, contact:

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SGS WEBINARS	LANGUAGE	WEBINAR STATUS & LINK
Understanding the Farm Sustainability Assessment Program	EN	<a href="#">On-demand</a>
Food Fraud Mitigation, Detection and FSMA Compliance	EN	<a href="#">On-demand</a>
BRC Standard for Agents & Brokers – Update on changes for Issue 2	EN	<a href="#">On-demand</a>
Understanding the Aquaculture Stewardship Council Program	EN	<a href="#">On-demand</a>
Kosher Certification: Trends, Challenges and Opportunities	EN	<a href="#">On-demand</a>
Understanding the Best Aquaculture Practices Program	EN	<a href="#">On-demand</a>
The New FSMA Certification: What You Need To Know	EN	<a href="#">On-demand</a>
FSSC 22000: A Brief Overview	EN	<a href="#">On-demand</a>
Food Fraud Watch	EN	<a href="#">On-demand</a>
Improve Food Authenticity, Traceability And Safety Using NGS	EN	<a href="#">On-demand</a>
FSMA Requirements For Animal Feed & Pet Food Companies – Implementation Tool Kit	EN	<a href="#">On-demand</a>
ISO 22000:2018 – A Brief Overview	EN	<a href="#">On-demand</a>
Understanding FSMA Labeling and Allergen Requirements	EN	<a href="#">On-demand</a>
BRC Standard for Food Safety – Key changes and pitfalls to avoid for Issue 8	EN	<a href="#">On-demand</a>
FSMA: Process Method Validation and Environmental Monitoring Requirements	EN	<a href="#">On-demand</a>
Food Product Recalls – Using AI to Scan Large Datasets and Constantly Monitor Food Safety Information	EN	<a href="#">On-demand</a>

EVENT	COUNTRY	LOCATION	DATES	EVENT TYPE	STAND #
American Spice Trade Association Annual Meeting	USA	Fernandina Beach	April 7-9	Meeting	
AFI Annual Food Import Convention	USA	Austin	April 11-13	Meeting	
Seafood Expo Global 2019	Belgium	Brussels	May 7-9	Tradeshaw	4765
Vitafood Europe	Switzerland	Geneva	May 7-9	Tradeshaw	G76
Food Sure	Netherlands	Amsterdam	May 13-14	Conference	2
4th Nutraceutical and Functional Food Asia Pacific Event 2019	Singapore	Singapore	June 25-26	Tradeshaw	B
IAFP	USA	Louisville	July 21-24	Tradeshaw	328

## SAFEGUARDS

- US Approval of Hemp Ingredients in Food and Dietary Ingredients ▶
- USDA AMS US National Bioengineered Food Disclosure Standard Finalized ▶

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WHEN YOU NEED TO BE SURE

**SGS**