



ISO & food

Quality and safety from farm to fork



ISO food standards create confidence in the products we eat and drink

ISO food standards provide benefits for all participants in the supply chain, from farm to transportation and logistics, from manufacturing to retailing and services, from consumers to regulators and analytical laboratories

ISO brings all stakeholders on board to share best practice, promote state-of-the-art technology, and ensure safety and quality





Did you know ?
ISO 3591 determines the size of wine tasting glasses. Cheers !
ISO 7304 provides cooking times for spaghetti. Bon appetit !
ISO 3103 explains how to make the perfect cup of tea. With or without milk ?

Global standards for global supply chains

Meeting the demands of a rapidly growing world population requires International Standards to promote the quality and safety of food, as well as the efficiency of the food supply chain, so that we make the best of our resources in a sustainable way.

ISO – what it is, what it achieves

ISO (International Organization for Standardization) is the world’s largest developer of voluntary International Standards providing benefits for business, government and society.

ISO is a network comprising the national standards institutes of 163* countries. ISO standards make a positive contribution to the world we live in. They ensure vital features such as quality, ecology, safety, reliability, compatibility, interoperability, efficiency and effectiveness – and at an economical cost. They facilitate trade, spread knowledge, and share technological advances and good management practices.

Why ISO standards for food ?

Today more than ever, food products regularly cross national boundaries at every stage of the supply chain, from farm to fork. ISO International Standards create confidence in the products we eat or drink by ensuring the world uses the same recipe when it comes to food quality, safety and efficiency.

ISO provides a platform for developing practical tools through common understanding and cooperation with all

stakeholders on board, from agricultural producers, to food manufacturers, laboratories, regulators, consumers, etc. Working through its network of national members, its standards bring together the foremost expertise in the world and disseminate it to both developed and developing countries.

ISO standards are powerful tools for taking action on global challenges like sustainability and climate change by for example, disseminating best practice on new technologies less detrimental to the environment.

By implementing voluntary ISO standards, companies make a proactive commitment to the principles they stand for: quality, transparency, accountability and safety.

Who benefits from ISO standards ?

Industry: Farmers, manufacturers, retailers and service providers benefit from not having to comply with multiple specifications and requirements for different markets. ISO standards make industry more competitive and promote global trade. They disseminate best practice and innovations so that industry does not need to reinvent the wheel, while at the same time facilitating market access to the latest technologies.

Regulators: Regulators can rely on trusted internationally harmonized solutions, which are continually reviewed and improved, as a technical basis for market-friendly regulations that meet the expectations of citizens.

Consumers: ISO standards ensure the safety and quality of products to protect consumers worldwide. They address issues of concern to consumers such as nutritional value, labeling and declaration, taste, hygiene, genetically modified organisms, limits on additives, pesticides, contaminants, and so on.

Food security

A growing world population and urbanization, evolving eating habits, and an increasing demand for biofuels present serious challenges for ensuring food security. Today, an estimated one billion suffer from hunger. International Standards for state-of-the-art food production technology, such as irrigation and agricultural machinery, optimize production process and ensure that the latest innovations are available to farmers and manufacturers from around the world – increasing availability of nutritious food and bringing down costs.

* As of January 2012





Food safety management

ISO has developed a series of standards for food safety management systems that can be used by any organization in the food supply chain. It features :

- **ISO 22000:2005** – Overall requirements (by the end of 2010, some 18 630 certifications to ISO 22000 had been issued in 138 countries)
- **ISO/TS 22002-1:2009** – Specific prerequisites for food manufacturing
- **ISO/TS 22002-3:2011** – Specific prerequisites for farming
- **ISO/TS 22003:2007** – Guidelines for audit and certification bodies
- **ISO 22004:2005** – Guidelines for applying ISO 22000
- **ISO 22005:2007** – Traceability in the feed and food chain.

What ISO standards for food ?

From agricultural machinery to logistics, from transportation to manufacturing, from quality and safety to management and traceability, from labeling and packaging to storage – ISO standards cover every step of the food and feed supply chain.

Some 1 000* ISO standards out of a current total of some 19 000* are specifically dedicated to food, most of them developed by the following technical committees (TCs) :

- **Food products (ISO/TC 34)** – Covers the food and feed chain from primary production to consumption for practically all products, from cereals to coffee, from spices to milk and cheese. Nearly 800* standards provide terminology, tests, analysis and sampling methods (including for sensory analysis), product specifications, quality management and requirements for packaging, storage and transportation for food and animal feed. Its recent work addresses food irradiation, detection of genetically modified organisms and molecular biomarkers.
- **Essential oils (ISO/TC 54)** – Focuses on essential oils used in food products, perfumes, cosmetics, phytotherapy, aromatherapy, and so on.

Its more than 120* ISO standards help ensure quality in testing, transport, labeling, nomenclature, terminology etc.

- **Starch and its by-products (ISO/TC 93)** – Found in foods like potatoes, maize and wheat, starch provides about half of the world's daily calorie intake, and its extraction is one of the most important agro-industries worldwide. ISO standards provide valuable methods of analysis for the industry.
- **Fisheries and aquaculture (ISO/TC 234)** – Aims to promote sustainable development of the sector ; outline specifications for technical equipment adapted to local environments ; improve surveillance and management of marine resources ; generate international agreement on terminology and sampling methods ; and ensure safety. Examples of standards under development include environmental monitoring of the seabed impacts from finfish farms (ISO 12878) and methods for calculating fish-in/fish-out ratios (ISO 16566).



Melamine and milk

In 2008, a number of children died and many became seriously ill after drinking milk contaminated by melamine. In response to this crisis, ISO and the International Dairy Federation prepared technical specification ISO/TS 15495, which provides a robust internationally recognized means for regulatory authorities, manufacturers and producers to determine the presence of melamine, in order to ensure the integrity and safety of milk products and prevent future incidents.





ISO Central Secretariat

1, chemin
de la Voie-Creuse
Case postale 56
CH - 1211 Genève 20
Switzerland
Tel. +41 22 749 01 11
Fax +41 22 733 34 30
E-mail central@iso.org
Web www.iso.org

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ISO's partners

The development of International Standards cannot take place in isolation. The value of ISO standards relies heavily on its multi-stakeholder approach, which consolidates contributions from industry, government, research, academia, international organizations and NGOs representing all stakeholders including consumers and small businesses.

ISO works closely with key organizations for the food industry such as the Codex Alimentarius Commission (CAC), the Food and Agriculture Organization, the Global Food Safety Initiative, the International Dairy Federation, and the World Health Organization.

ISO's observer status to the CAC provides an opportunity for the coordination of issues related to a variety of ISO standards that are adopted and used by Codex in its work. ISO also has observer status at the World Trade Organization's Committee on Technical Barriers to Trade and Committee on Sanitary and Phytosanitary Measures.



ISO resources

ISO's Website (in English and French, with top levels in Russian and individual publications in other languages)

www.iso.org

ISO Focus+ magazine

(10 editions annually in English and French)

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Proven benefits

In a study on the benefits of standards, large Singaporean supermarket chain, NTUC Fair-price, estimated that the use of just four standards led to savings of USD 13.6 million over the last 10 years, as well as significantly increasing their operational efficiency. www.iso.org/iso/benefits_of_standards

