

**Intertek**

## An Introduction to ISO 22000: Food Safety Management Systems



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## What is ISO 22000?

ISO 22000, *Food safety management systems - Requirements for any organization in the food chain*, was first published in 2005. The standard provides international harmonization in the field of food safety standards, offering a tool to implement HACCP (Hazard Analysis and Critical Control Point) throughout the food supply chain.

The goal of ISO 22000 is to control, and reduce to an acceptable level, any safety hazards identified for the end products delivered to the next step of the food chain. (An *end product* is defined as a product that will not undergo any further processing or transformation by the organization.) The standard combines the following generally-recognized key elements to ensure food safety at all points of the food chain:

- Requirements for good manufacturing practices or prerequisite programs
- Requirements for HACCP according to the principles of the Codex Alimentarius (an international commission established to develop food safety standards and guidelines)
- Requirements for a management system
- Interactive communication between suppliers, customers, and regulatory authorities

ISO 22000:2005 is fully compatible with ISO 9001:2000, so it is suitable for the development of a fully integrated, risk-based management system. This also means that organizations with an existing management system should find it fairly easy to expand its scope to include ISO 22000.

ISO 22000 was the first in a new family of standards related to food safety:

- ISO/TS 22004:2005 provides guidance on the application of ISO 22000:2005.
- ISO 22005:2007 provides requirements for the design and implementation of a feed and food traceability system.
- ISO/TS 22003:2007 sets requirements for registrars that provide auditing and certification to ISO 22000.

## Highlights of the standard

While similar in philosophy to ISO 9001 and ISO 14001, ISO 22000 contains clauses that are specific to the food industry, including:

- The establishment of *prerequisite programs (PRPs)*, which define the basic conditions and activities needed to maintain a hygienic environment, both within the organization and throughout the food chain (7.2, 7.5, Annex C)
- The identification and control of food safety hazards, and the determination of an acceptable level of risk (7.4)
- The establishment of a HACCP plan, including the identification and monitoring of *critical control points*: process steps at which controls can be applied to prevent or eliminate a food safety hazard, or reduce it to an acceptable level (7.6)
- The handling of potentially unsafe food products to ensure that they do not enter the food chain (7.10.3)
- The establishment of a food safety team responsible for tasks such as hazard analysis, selection of control measures, establishment of PRPs, and planning of internal audits (5.5 and 7.3.2)
- The information and characteristics needed for both raw materials and end products to ensure that a proper hazard analysis can be conducted (7.3.3)
- The establishment of a communications plan with external parties – such as suppliers, customers, and regulatory authorities – to ensure that food safety information is available to all (5.6.1)

## Applicability of the standard

There are many other food safety standards available, but most of them are limited in scope. ISO 22000 is the only one to cover all organizations that produce, manufacture, handle, or supply food or feed, such as:

- Agricultural producers
- Feed and food manufacturers
- Processors
- Food outlets and caterers
- Retailers
- Service providers
- Transportation operators
- Storage providers
- Equipment manufacturers
- Biochemical manufacturers
- Packaging material manufacturers

## ISO 22000 compared with other standards

<b>Standard</b>	<b>Scope</b>	<b>Level of Recognition</b>	<b>Focus</b>
ISO 22000	All firms in the food chain	Global	Management system
BRC Food Safety	Food manufacturers	Global, but more prominent in Europe	Product
IFS	Producers of food for retailers	European	Product
GlobalGAP	Agricultural producers and retailers	Global, but more prominent in Europe	Product
SQF 1000	Agricultural producers	Global, but more prominent in the U.S.	Management system

## The global impact of ISO 22000

Prior to ISO 22000, a great number of standards had been developed in different countries, and organizations in the food sector used their own codes to audit their suppliers. The sheer number of standards (and the costs of conforming to all of them), combined with the increased globalization of the food industry, made it nearly impossible to keep up with the different requirements in the global food market. Additionally, foodborne illnesses increased significantly in all markets, resulting in both economic losses and damaged reputations.

The development of the ISO 22000 standard began in 2001, with a recommendation from the Danish Standardization Body to the secretary of ISO's technical committee ISO/TC 34 (Food Products). ISO then developed the standard in conjunction with the Codex Alimentarius Commission (an international body jointly established by the World Health Organization and the United Nations Food and Agriculture Organization) and experts from the food industry. In August 2005, the final draft was unanimously approved by all 23 national standard bodies participating in the working group. ISO 22000 was subsequently published on September 1, 2005.

There is great interest in ISO 22000 globally. It has already been adopted as the national standard in the more than 40 countries that participate in the European Committee for Standardization (CEN).<sup>1</sup> In many other countries, regulatory authorities recommend the implementation and use of the standard.

Early adopters of ISO 22000 have found that the standard is a great improvement over other specifications, helping them to better fulfill legal and food safety requirements, build process-based food safety management systems, and focus on continuous improvement.<sup>2</sup>

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<sup>1</sup> Global Food Safety Initiative, *GFSI Technical Committee Position Paper: What is ISO 22000?*, September 2007, 3.

<sup>2</sup> Roger Frost, "Early adopters underline benefits of new ISO standard for safe food supply chains," *ISO Management Systems*, March-April 2006, 21-25.

## Why seek compliance to ISO 22000?

Compliance with the ISO 22000 standard helps organizations in the food industry because it:

- **Meets food industry expectations:** It is now widely known that safety hazards can develop at any point in the food chain. ISO 22000's broad applicability helps any organization to control these hazards.
- **Imposes structured and targeted communications:** Interactive communication, both internally and externally, is essential for the identification and control of food safety hazards.
- **Subjects all control measures to hazard analysis:** This thorough analysis helps the organization to more easily determine which safety hazards need to be controlled, and which combination of control measures is most effective in doing so.
- **Fills the gap between ISO 9001 and HACCP:** ISO 9001 does not provide guidelines for determining and controlling food safety hazards, like the critical control point (CCP) method in HACCP. But HACCP does not include ISO 9001's key concepts of continuous improvement and customer satisfaction. ISO 22000 covers all of these points.
- **Lower risk of liability:** When an unsafe food product enters the market, the entire food chain suffers from consumers' exposure to hazards. By implementing ISO 22000, all organizations in the food chain can take responsibility for consumer safety, consequently lowering their risk of having to cover insurance payments and legal costs.

Some of the advantages of third-party certification to ISO 22000 include:

- **Expanded market access:** The demand for certified suppliers in the food industry is growing. Since ISO 22000 is supported by government and food safety experts worldwide, your certification will open the door to many domestic and international business opportunities.

- **Reduced cost of sales:** Your certification establishes your company's credibility and commitment to safety from day one. Because the task of explaining the specifics and demonstrating the effectiveness of your management system is more straightforward, it takes less time to earn your prospective customers' trust and confidence.
- **Streamlined quality management:** Certification to ISO 22000 reduces the complexity and overhead required to administer separate proprietary programs for individual customers. This leads to a reduction in both second- and third-party system audits and, ultimately, a common quality system approach among all suppliers in the food chain.

## How Intertek can help

Intertek became accredited to provide ISO 22000 certification in October 2006. We can assess your system to the ISO 22000 standard independently, or combined with other standards such as ISO 9001, ISO 14001, OHSAS 18001, IFS, or BRC. Our extensive experience in the food industry translates in to your ability to leverage best practices for continual improvement.

To learn more, visit [www.intertek-sc.com](http://www.intertek-sc.com) and select *Certification Services > Services for the Food Sector*.

## About the author

Stefan Nygren is an Intertek auditor based in Kista, Sweden. He has 12 years of experience auditing food safety and management systems. In that time, he has performed more than 800 audits for organizations in the food sector.