

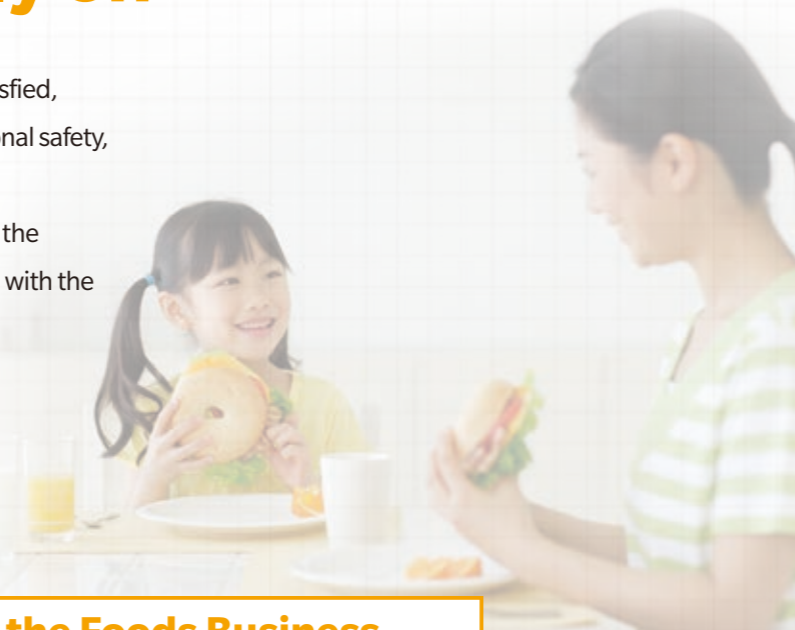
Special Feature

Aiming to Be the Delicious Taste You can Rely on



In order to create products with which customers are truly satisfied, ADEKA undertakes activities in four areas of safety—occupational safety, quality safety, equipment safety, and environmental safety.

This section features examples of initiatives put in place at the Kashima Plant to manage quality safety in the Foods Business, with the aim of continuing to be “The Delicious Taste You can Rely On.”



Quality Safety Supply Chain for the Foods Business

Management through QR code

Gain an accurate grasp of which materials were received when, and the amount received

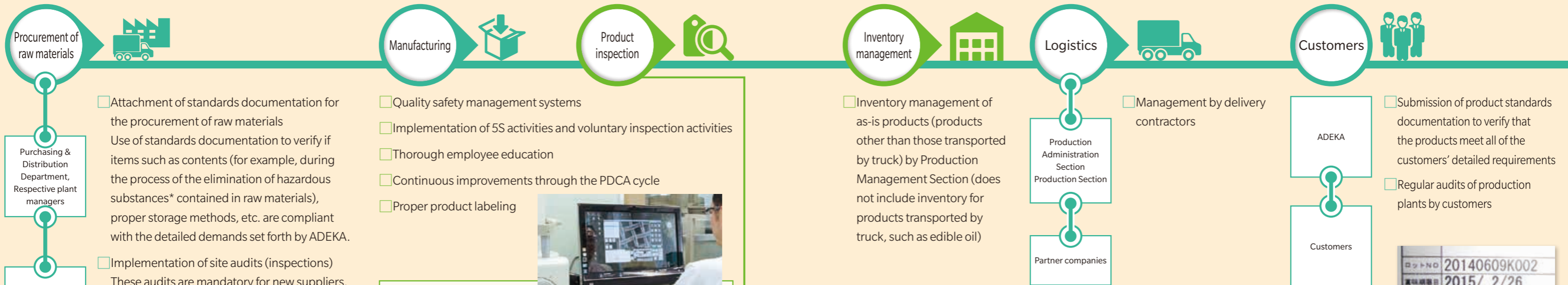
Gain an accurate grasp of which materials were used, and the amount used

Gain an accurate grasp of the lot to which each product belongs

Gain an accurate grasp of which product lots were shipped out from the plant at which points in time, and by what route they reached the customers

System for investigating causes of error. Swift response to customer inquiries and accidents

Traceability



Procurement of raw materials

Purchasing & Distribution Department, Respective plant managers

Suppliers

- Attachment of standards documentation for the procurement of raw materials
Use of standards documentation to verify if items such as contents (for example, during the process of the elimination of hazardous substances* contained in raw materials), proper storage methods, etc. are compliant with the detailed demands set forth by ADEKA.
- Implementation of site audits (inspections)
These audits are mandatory for new suppliers, and are implemented continuously even for existing suppliers.
- Analysis of raw material samples
This analysis is mandatory for new raw materials and new suppliers, while analysis is conducted regularly for existing raw materials.

*Hazardous substances contained in raw materials: Food allergens, bacteria that may cause food poisoning, mold, carcinogenic substances, radioactive substances, heavy metals, etc.

Manufacturing

- Quality safety management systems
- Implementation of 5S activities and voluntary inspection activities
- Thorough employee education
- Continuous improvements through the PDCA cycle
- Proper product labeling

High-precision analysis

The Foods Quality Assurance Section at the Kashima Plant possesses advanced analytical instruments that enable the highly accurate identification of contaminants through a registered database not only of raw materials, but also of each and every material that is used to make the small component parts of production machinery.

Therefore, when product inquiries are received from customers in Japan and overseas, the Kashima Plant conducts an accurate analysis, distributes standard samples to each plant, and unifies the quantitative analysis values as part of its role as the “hub for food analysis.”



We have a high precision analysis system

Product inspection

Inventory management

- Inventory management of as-is products (products other than those transported by truck) by Production Management Section (does not include inventory for products transported by truck, such as edible oil)

Logistics

Production Administration Section
Production Section

Partner companies

- Management by delivery contractors

Customers

ADEKA

Customers

- Submission of product standards documentation to verify that the products meet all of the customers’ detailed requirements
- Regular audits of production plants by customers



Management through QR code
Labels with QR codes are pasted onto all raw materials. All processes, from the receipt of raw materials to production and shipping, are managed through the traceability system using the QR codes.

1. ADEKA’s Quality Safety Management System

ADEKA has established a company-wide quality safety management system, headed by the quality management and PL meetings and based on the Product Liability Management Regulations. The Environment Safety & Quality Assurance Department serves as the contact point for responding to customers, fulfills the functions of monitoring and checking on the Production Department, and is responsible for formulating the relevant regulations, building an overall system, and conducting periodic audits. In doing so, it forms part of the framework for ensuring that production activities reflect the “ADEKA standards.”

Quality safety management system for the Foods Business



2. Enhancing Supply Chain Management

ADEKA requires our employees to approach their work and responsibilities with a sense of ownership. Similarly, in the production plants the fundamental approach is for the representatives of each plant to personally visit external partners, such as suppliers and distributors, in order to conduct site audits and other matters.

At the Kashima Plant, a Foods Quality Assurance Section has been established as an organization under the direct jurisdiction of the plant manager. This Section is responsible for monitoring and controlling quality safety, and strives to maintain and improve product safety by putting forth proposals and recommendations to the Production Department without being bound by the limitations of the production plan.

3. Ensuring Traceability

ADEKA’s Foods Business maintains records in an integrated fashion for information pertaining to suppliers, customers, and production methods for all the processes from procurement to sales. This is part of a traceability system that has been introduced in order to enable swift investigation of causes of error and the subsequent response by tracing the history of events surrounding the product should any problems arise. The system is able to obtain information on the production plant, date of manufacture, and raw materials used by tracking QR codes and lot numbers pasted onto the products. In addition, we are also putting effort into providing stable supplies by linking the traceability system to the inventory management system.

Ensuring traceability is a means of enhancing the trust of our customers. As such, we are working to raise levels of traceability by conducting regular training at the Kashima Plant.



Special Feature **Aiming to Be the Delicious Taste You can Rely on**

Acquisition of FSSC 22000 Certification, and Promotion of Food Safety Management Activities! Initiatives of the Kashima Plant to Maintain and Improve Food Safety and Food Defense

Companies engaged in the production of food products have a responsibility to put in all possible corporate efforts across the supply chain in order to ensure food safety (providing products that do not cause any harm to the health of consumers). It is also vital to take steps to strengthen food defense, which are defense measures against the growing social problem of food terrorism.

The food safety management system “FSSC 22000” is an international certification system that covers both food safety and food defense. In 2011, ADEKA became the first company in the oil and fats processing industry to receive certification for Kashima Plant-West under the system. This was followed by the acquisition of the same certification by the Kashima Plant (December 2014) and the Akashi Plant (March 2015). We aim to maintain and further improve our safety and health management system.

Thorough measures to identify risks and contain them within our expectations

Hazardous factors that may potentially cause damage to the health of consumers include biological hazards, physical hazards, and chemical hazards*. Ensuring food safety through the food safety management system involves conducting detailed risk analysis across all processes from the receipt of raw materials to shipping, putting in place the relevant measures, and providing a stable supply of safe and secure products to customers and consumers.

Food defense refers to the prevention of food terrorism, which includes unexpected attacks with malicious intentions. Efforts related to food defense and food terrorism both focus on taking thorough measures to identify risks, establish the relevant measures, and contain the risks within the scope of expectations.

*Biological hazards: Bacteria, viruses, parasites, etc.
Physical hazards: Metals, glass, plastic, etc.
Chemical hazards: Allergens, detergents, disinfectant, agricultural chemicals, etc.

ADEKA Kashima Plant

In 1970, the Chemicals Business commenced operations in the eastern and western districts of the Kashima Industrial Zone in Ibaraki Prefecture. The integrated production line for margarine commenced operation in 1974, while the cream production line commenced operation in 1990. In 2002, the plant was the first in the oil and fats processing industry to acquire HACCP certification.

Site area

Kashima Plant: 187,000 m²
Kashima Plant-West: 100,000 m²

Main products for the Food Business

Edible oils, Margarine, Shortenings, Whipping cream, Custard cream

Number of employees(as of April 2015)

Entire plant: 236
Partner companies: 251



Food Safety and Health Management System at Kashima Plant

FSSC 22000 (obtained in 2014)

The FSSC 22000 is the latest global standard for food safety management, established by the Global Food Safety Initiative (GFSI).

Based on the previous standard, ISO 22000, this new certification includes an additional requirement, “ISO/TS 22002-1,” which includes elements such as strict health management standards and food defense.

Prerequisite program for general health management (PP)

This is a prerequisite program for the introduction of HACCP.

ADEKA has developed a health management environment that comprises a fundamental “hardware” aspect (facilities, equipment, etc.) and “software” aspect (employee education, etc.).

Every month employees voluntarily conduct inspections of the plant while applying the AIB standards*, and identify any defects or points for improvement. In doing so, they eliminate potential hazards to the food products, and in particular promote the mitigation of contamination risk.

5S Activities

The 5S activities are an initiative that aims to cultivate the habit (*shitsuke*, meaning discipline) of establishing manuals and rules, sorting (*seiri*), straightening (*seiton*), and sanitizing (*seiso*), maintain a high level of standardization (*seketsu*).

The 5S activities involve everyone in the company. Activities that promote understanding and awareness among the participants and which develop the human resources indispensable for the achievement of quality safety are the basis for *monozukuri*. These activities form the roots of food safety and food defense.

Four areas of safety

Four areas of safety have been established as important areas to be secured as the highest priority in plant management. These are occupational safety, quality safety, equipment safety, and environmental safety.

*AIB standards: An integrated global standard established proprietarily by the American Institute of Baking (AIB) based on global laws and regulations pertaining to food safety and health.

Main management systems/activities for areas other than food safety

- Quality ISO (ISO 9001: Obtained certification in 2002)
- Environmental ISO (ISO 14001: Obtained certification in 1998)
- Occupational safety (OHSAS 18001: Obtained certification in 2002)
- IMS (Integrated Management System: Obtained compliance in 2008)
- TPM (“Cross-Organization Production Maintenance and Production Management”: Obtained certification in 1995, 2004, 2007)

Voice

The acquisition of FSSC 22000 has developed into a plant-wide initiative

While the Kashima Plant had obtained HACCP certification, which formed the basis for the certification scheme known as “FSSC 22000,” the requirements for FSSC 22000 involved addressing even the finest details. Hence efforts to acquire FSSC 22000 became a massive task that had to be reviewed from scratch, touching even on procedures that everyone had already become familiar with under HACCP, such as “List of manufacturing processes (flow diagram)” ⇒ “On-site verification” ⇒ “Hazard analysis.”

Although the work of building the system was tackled by a cross-organizational food safety team, it eventually developed into a massive project that involved the entire Kashima Plant.

For example, on-site verification was carried out alongside site operation managers, and the opinions of the managers of each division and department were sought regarding the new procedures established to fulfill the certification requirements.

Various forms of cooperation, undertaken among many co-workers, all contributed to raising interest and deepening understanding about the new system.

Naotake Yasuda

Manager, Foods Quality Assurance Section, Administration Department, Kashima Plant



Initiatives of the Kashima Plant to Maintain and Improve Food Safety and Food Defense

Improvements Toward the Acquisition of FSSC 22000 Certification

ADEKA's food production plants have continued to undertake voluntary improvement activities by formulating their own annual plans based on the four areas of safety (quality safety).

While the results of inspections show that most of the items required for FSSC 22000 certification have been fulfilled, this section introduces some of the initiatives that are being implemented with the aim of achieving further improvements.



Voice

Putting in place measures to foster "on-site capabilities" in order to ensure the proper functioning of the new system

At the Kashima Plant, effort is being put into conducting voluntary inspection activities. In these activities, cross-organizational teams patrol the work sites of other divisions and departments and identify problematic areas. Every month a group comprising four to five members, including members from partner companies, conducts inspections, discusses its observations during a post-inspection opinion exchange session, and summarizes its findings in a report. In order to ensure that the management system functions properly, it is vital to continuously carry out improvements through the implementation of the PDCA cycle. Furthermore, in order to acquire FSSC 22000 certification, the plant must also fulfill the requirement of establishing an annual verification plan, and carry out verification and improvement activities based on this plan. The voluntary inspection is also an initiative that provides indirect support for such improvements.

Food safety and food defense are unified elements. For example, regardless of the extent to which we increase the number of monitoring cameras, they will be meaningless if an oversight in the work actually occurs. The key to ensuring that this new initiative functions effectively lies in arming each individual with the correct understanding and awareness. Hence we aim to continue to actively propose activities, such as the opinion exchange session, which foster on-site capabilities.

Norihiro Kawamukai
Manager, Section-2, Food Production Department, Kashima Plant



01 Preventing Cross-Contamination Setting up guide poles and rotating gates at hand-washing areas

Hand-washing areas have been designed with hygienically. The respective areas have been labeled with numbers to ensure that employees follow the procedures, moving from hand washing to the jet towel and alcohol disinfectant without having to touch anything with their hands. This facility had been in place from even before the FSSC 22000 certification. However, who have completed their hand-washing and dose not end is potential for cross-contamination, it prevents contamination by the one-way in a guide pole.



Hand-washing area where workers can wash their hands without touching anything



Guide poles and rotating gates

02 Management of Material Procurement (Allergen-Containing Materials)/Prevention of Cross-Contamination Classifying racks according to raw materials that contain allergens and those that do not

Efforts are being made to prevent cross-contamination by classifying racks according to raw materials that contain allergens and those that do not. Stainless steel plates are used for the nameplates, thereby preventing contamination by paper and paper dust. In addition, spaces are secured beneath the racks to facilitate easy cleaning.



Switching from stickers to stainless steel plates



Securing spaces beneath the racks

03 Equipment, Suitability Cleaning, and Maintenance (Preventing Contamination Originating from Facilities and Equipment) Installing covers, etc. in open locations, and setting up monitoring cameras

Although the mixing of large quantities of raw materials is carried out in a closed system controlled by computers, small quantities of raw materials are mixed by manually introducing them into the input ports provided for raw materials. Stainless steel covers are installed over such open areas in order to prevent contaminants from dropping in from above, while tunnel-style covers are installed over the cardboard box conveyor lines before the boxes are filled.

In addition, monitoring cameras have been set up in all locations.



Installation of covers over the tops of raw material input ports, and setting up of monitoring cameras



Installing tunnel-style covers over cardboard box conveyor lines

04 Food Defense, Biovigilance* and Bioterrorism Increasing the number of monitoring cameras as part of efforts to strengthen food defense

Monitoring cameras are set up in locations where there is a high risk of contamination. The videos taken by the cameras can be checked 24 hours a day on monitors set up in a separate room, and the data is saved in a physically locked hard disk, making it impossible to falsify the records

*Biovigilance: Continuous monitoring against microbial contamination



The hard disk is stored in a locked rack



Constant monitoring of the videos taken by the cameras