



Dairy for life

Food Safety and Quality System



At Fonterra, food safety is everyone's responsibility.

We make food that families everywhere trust.
We maintain that trust by showing up every day
and doing the right thing for food safety.

**Safe Food. Safe People.
World Class Quality.
It's our Promise.**



Delivering What Matters Most to Customers and Consumers

As a global co-operative we feed families everywhere so food safety and quality must sit at the heart of what we do – from the collection of our high quality milk, through every value chain step, to the customer and consumer.

This starts with the commitment of our people, supported by our globally consistent, risk-based Food Safety & Quality system.

Our expectation is uncompromising food safety and world class quality. Regardless of role, everyone in our co-operative plays a part in achieving this. It's a promise we take personally.

Greg McCullough
Director, Safety, Quality & Regulatory

Fonterra

Food Safety & Quality System

Global Food Safety & Quality Policy

Global Food Safety & Quality Standards

Global Quality
Reference Documents

Global Vendor
Requirements

Directives

Standard Operating Procedures

Work Instructions

Records

BU/Functions

Food Safety and Quality System Structure

Alignment

All Fonterra sites, including joint ventures, are aligned with either FSSC22000, ISO22000 or the GSFI equivalent standard.

The Food Safety and Quality System

Encompasses policy, principles, standards, reference documents, procedures and measurement of quality.

- **Food Safety and Quality Policy:** The high-level statement that contains the principles of food safety and quality that must be followed. The Food Safety and Quality Policy is approved by the Fonterra Board of Directors.
- **Global Food Safety and Quality Standards:** The internal mandatory compliance requirements. The standards align with and support the Food Safety and Quality Policy principles.
- **Global Vendor Requirements:** A series of Requirements documents that set out Fonterra's food safety and quality expectations for their business partners and vendors.
- **Global Quality Reference Documents:** Are a mixture of institutional memory, 'how to' methodology and knowledge to support implementation of the Standards and business unit procedures.
- **Business Unit Additional Requirements and Procedures:** Specify the standard work processes (SOPs) to follow to ensure the Food Safety and Quality Standards are implemented and complied with. Business Units (BUs) may also include additional requirements that reflect the needs of the BU.

Business Partners

Around the world we work with many different suppliers, agents, consultants and business partners. Doing business in many different countries and cultures can sometimes be challenging because of different regulations, standards or commonly accepted practices

Fonterra methodically selects its business partners to ensure their commitment to Fonterra food safety and quality requirements.

Suppliers to Fonterra are required to ensure their products, goods and services comply with the issued Fonterra food safety and quality requirements, laws and regulations of the country of manufacture, and the import country market access requirements as appropriate.

Fonterra requires business partners to ensure:

- Fonterra's reputation is upheld
- Fonterra food safety and quality requirements are complied with
- Active monitoring and reporting of quality performance is undertaken

The Fonterra Food Safety and Quality System

The Food Safety and Quality System consists of multiple standards organised within functional groupings. Fonterra uses an Integrated Management System (IMS) based on ISO recommendations with 12 sections following the Plan Do Check Do Act cycle.

They define the rules around food safety and quality.

1. Strategic Planning and Risk Management

Hazard Analysis Critical Control Point (HACCP)

Fonterra implements formal risk management programmes that are developed using the HACCP process. By identifying risks to food safety and implementing appropriate mitigation plans, the HACCP process ensures the focus is on the prevention of food safety issues rather than relying on end final product testing to identify problems. Food safety hazards controlled by the HACCP plan are microbiological, physical and chemical in nature, including allergens.

Regulatory Compliance

Fonterra commits to comply with relevant regulatory requirements of the countries of manufacture and destination. To enable this, all operations have ready access to resources, enabling them to understand the relevant regulatory requirements and international industry best practices.

Biotechnology Management

Fonterra is committed to:

- Undertaking long-term ethical biotechnological research, with the option of commercialising developments, in a responsible manner in line with business strategy and consumer tastes, expectations and preferences

- Meeting biotechnology-related regulatory requirements in all countries in which our products are marketed.
- Finding new ways to maximise the value from every litre of milk for our shareholders, customers and consumers.
- Listening carefully to our customer and consumer preferences in relation to the genetic modification status of our products.
- Taking a risk-based approach until confident that products using modern biotechnologies meet regulatory, customer and consumer expectations.
- Striving to protect the value of New Zealand's global reputation for its position on genetic modification.

Commitment to Customers and Consumers

Our business is based on great customer relationships and our strategy is to grow lasting customer partnerships. How we treat our customers and consumers is important to achieving those partnerships. They look to us to honour our commitments to them, contribute to their success and maintain the highest possible quality and safety standards.

Where extra customer requirements such as Organic or Religious requirements are required, we will work with our customers to understand their requirements to meet their needs.

Some of our sites manufacture product for susceptible populations. Fonterra has defined additional quality system measures to be implemented when manufacturing products for susceptible population customers and consumers.

The Fonterra Food Safety and Quality System

2. People and Culture

Fonterra continues to invest in its people and their capability, strengthening its food safety and quality culture and mindset globally. Fonterra has set clear expectations, including what it stands for and what it expects of its people as a result. This is delivered through a best practice cultural maturity model.

Roles and Responsibilities

Responsibility for quality starts at the top. For the Fonterra Food Safety and Quality System to be successful there must be total commitment to quality from management and total involvement from everyone at all levels throughout our organisation.

Competence and Awareness

Our people are critical in the delivery of high quality and safe products. They are our eyes, our ears and our conscience throughout the whole supply chain.

Training builds a performance culture by:

- Ensuring staff understand quality concepts
- Ensuring staff understand the competencies required
- Providing staff with appropriate learning and development opportunities

All staff receive a level of training that ensures awareness of the relevant quality, food safety and regulatory requirements. On-the-job training is based around documented standard operating procedures which are developed for all tasks within Fonterra's operations that have the potential to impact food safety and / or quality.

3. Commerce

This section is under development.



The Fonterra Food Safety and Quality System

4. Information

Documentation

When planning, manufacturing, storing and transporting food products, it is vitally important to demonstrate control over the process. What needs to be achieved, how it is to be achieved and proving what was achieved is demonstrated using documented procedures and records.

5. Assets and Inventory

Facilities and Equipment

Manufacturing and storage facilities, and process equipment are designed and constructed to a standard that ensures product safety and quality is not compromised.

Maintenance

Our engineering division provides maintenance services to our manufacturing and storage facilities, and process equipment, to a standard that ensures food safety and quality is not compromised.

Raw Milk Harvesting, Collection and Transport

Raw milk is harvested, stored and transported in a manner that prevents adulteration, contamination, deterioration or other damage.

The maintenance of milk quality starts on the farm. We ensure that the farm meets identified standards and is producing safe, quality and traceable milk.

Management of Goods for Manufacturing Use

Documented procedures for the acceptance of incoming goods ensure that the goods are free from contamination and meet the agreed acceptance criteria.

Our process requires the receipt of incoming goods to be recorded, and includes undertaking any specified testing and/or checking to be performed at receipt.

Where materials do not meet acceptance requirements following inspection at receipt, documented quarantine and release/reject procedures clearly identify how these goods are to be handled.

Warehousing, Logistics and Distribution

Facilities used for the receipt, storage and dispatch of all goods are maintained such that the quality and integrity of the products stored is not compromised. Precautions are taken to protect the products from contaminants such as insects, rodents, odours, unapproved chemicals, excessive temperature fluctuations and physical damage. Temperature-controlled warehouses have monitoring and recording systems to demonstrate that the stored product is maintained at the specified storage temperatures. The stock management system provides complete traceability of all items into, during and out from storage enabling the dispatch of products on a 'first in, first out' basis.

Utilities

The provision of the high quality services such as water, steam, air, electricity, gases, cooling and refrigeration is crucial to the manufacture of quality product. These are available in the quantities required and they are of a standard that will not detrimentally impact product quality.

The Fonterra Food Safety and Quality System

6. Operational Processes and Controls

Integrated Security

Food integrity is critically important because our products will ultimately be consumed. To protect the integrity of our food, the security of our manufacturing, distribution and storage facilities is of critical importance.

To assure customers of the integrity of our products, Fonterra implements strategies throughout the supply chain to reduce and minimise the risk of criminal tampering.

Design and Manufacture of Quality Food

Our future success and that of our customers depends on our ability to continually develop, manufacture and supply safe, high quality products that meet changing customer and consumer needs. This is achieved through a structured approach to the development of new products and the continuous improvement to existing products, processes, technology and packaging.

Product Specification

Key product information is identified in a product specification, which follows a documented process to control the specification development, change and approval process.



Product Shelf Life

Understanding the behaviour of our dairy products during storage and distribution is key to being able to provide our customers and consumers with products that are of consistent quality including safe food, functional, and nutritional value. Shelf life evaluation is part of our innovation process, and ongoing verification of the parameter for routine production is required.

Product Planning and Scheduling

Customers need to be assured that we will deliver the quantity of product they request, to the agreed quality standards, when they require it. A structured planning and scheduling process is employed that allows us to confidently commit to agreed delivery dates.

Good Manufacturing Practice (GMP)

GMP is the combination of manufacturing and management practices focussed on ensuring that food products are consistently produced to meet specifications and customer expectations.

Implementation of GMP also ensures the prerequisite programmes required to support the Hazard Analysis Critical Control Point (HACCP) plan are appropriately managed.

Heat Treatment

To ensure the safety of our products, all milk components are subjected to a validated and verified heat and hold process step. Strict monitoring requirements are in place to ensure the correct level of heat treatment has been applied, and therefore public health hazards associated with pathogenic organisms in milk or foods have been eliminated, and spoilage organisms are reduced to an acceptable level for the shelf life of the products.

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Foreign Matter Control

Foreign matter is any unexpected contaminant found in a product and includes glass, metal, rubber, grease etc. The control of foreign matter throughout the process is critical to ensure product quality is maintained.

Identified foreign matter risks are eliminated or controlled to ensure that risk to the product is minimised. Foreign matter control is achieved by ensuring objects in the environment are adequately managed to ensure the product is not contaminated. Equipment such as x-ray, metal detectors, filters, screens and magnets (as appropriate to the product being manufactured) are integral components of our manufacturing processes.

Pathogen Management

Pathogens in the environment have the potential to detrimentally affect food safety and quality. Good building design and maintenance, and the implementation of good manufacturing practices prevents pathogens from contaminating the manufacturing environment.

All Fonterra facilities have an effective pathogen management plan and a monitoring programme, based on the risk to product.

Pest Management

Fonterra operates pest management programmes to protect the products, ingredients, processing aids and packaging from damage and/or infestation.

Good building design and maintenance, and the implementation of good manufacturing practices prevent pests from accessing manufacturing and storage facilities.

Allergen Management

Allergen control is achieved throughout the supply chain, using a documented risk analysis such as HACCP, to identify and control all allergens on the manufacturing site and within the manufacturing plant. Potential for cross-contamination of dairy products by non-dairy allergens is managed to ensure that our dairy products are safe for the intended customer or consumer.

Where required, a dedicated, segregated storage area is used for allergenic materials to minimise the potential for cross contamination between allergenic and non-allergenic materials, and between materials containing different allergens. Production planning, product scheduling and documented cleaning activities are used to limit the potential for cross contamination between allergen and non-allergen products.

Religious Requirements/Special Status Requirements

For products destined for customers whose religious faith has specific requirements, these requirements are understood and met.

These specific religious requirements are identified in the relevant product specification and are managed via business unit procedures.

The same applies to other products with status requirements such as Organic goods.

Cleaning and Sanitising

Maintaining a clean and sanitary operation is critical for the sustained production and delivery of high quality products. Documented cleaning and sanitising programmes ensure processes, processing equipment, processing areas, and storage and distribution facilities are maintained in a safe hygienic state.

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Packing and Packaging

The packing process is tightly controlled, including the use of a controlled hygiene environment, and final package integrity and presentation checks, to ensure quality and safety of our products.

Packaging is used to protect our products and minimise damage throughout their lifecycle. It protects the products from the atmosphere, micro-organisms and pests from the time of packing until they are consumed. Packaging is both functional and aesthetically pleasing. It is the image that Fonterra presents to its customers and consumers.

Packaging is developed with consideration of the environmental impacts of the packaging from the design phase to end-of-life.

Net Contents Control

Net pack content is accurately achieved and maintained to ensure customer satisfaction, and to meet regulatory requirements. Instruments used for weight control are validated and calibrated for their intended use.

Product Identification and Traceability

Fonterra's comprehensive traceability system provides full knowledge of the movement history and current location of all finished and semi-finished goods at all times when within Fonterra control. This level of knowledge is increasingly required from customers, consumers and regulators.

Effective product traceability is achieved by coding and labelling each product package with key information that enables traceability from in-market back through the distribution chain to the manufacturer.

Some consumer packaged products also have QR (Quick Response) codes to enable access via technology to further traceability and authenticity information.

Our traceability system is audited regularly both internally and externally through international customer and government audits. To ensure the effectiveness of our traceability system, traceability simulation exercises are carried out regularly.

Product Release

Documented procedures accurately define the process required to ensure the quality is verified against the internal product specifications.



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7. Preparedness and Response

Product Recall and Withdrawal

Product withdrawals or recalls are required in situations where it is deemed necessary to remove products from the supply chain. To ensure we are able to react to a product withdrawal or recall, all operations have documented procedures to manage this process.

Preparedness and Response

To ensure we consistently deliver on our promise to our customers, Fonterra operates a formal risk based business continuity programme. This programme focuses on making sure plans identify potential adverse impacts that could threaten our organisation. It provides a framework for building resilience and effective responses that safeguard the interests of our key stakeholders, reputation, brand and value creating activities.

8. Change

Management of Change

The commitment to continuous improvement results in changes being made to processes and systems. To enable the change to be successful, the process is controlled and documented and there is approval from stakeholders. HACCP is reviewed when there are changes to inputs, processes or products. Consequently, there is no detrimental impact on personnel, food safety and quality.

9. Suppliers and Contractors

Approval of Vendors

Our manufacturing operations produce a wide range of products from bulk commodity ingredients to consumer products, including formulated baby foods.

To successfully manufacture our product range, a wide variety of goods such as raw materials, ingredients, packaging, promotional items and services are required. These goods are sourced from suppliers locally and globally. To ensure the quality of the products or services provided, specifications are agreed with the supplier and routine assessments are undertaken to ensure the supplier is able to produce products to Fonterra's requirements.

Management of Third Party Manufacturers (TPMs)

TPMs who manufacture and/or pack products into Fonterra branded packaging are approved and performance monitored to ensure that Fonterra's food safety and quality requirements are complied with, the Fonterra brand is protected and our promise of providing safe and nutritious food to our customers and consumers is upheld.

Third Party Laboratories

Where it is appropriate to contract out analytical work, a controlled process is in place when appointing contract laboratories to ensure systems and procedures, validity of methods and accuracy of results.

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10. Planned Monitoring

Internal Audit

To ensure the Fonterra Food Safety and Quality System is implemented and operating as required, all operations are audited periodically to identify areas of non-compliance and opportunity for improvement.

Validation and Verification

Validation provides a high degree of assurance that a process will consistently produce an outcome that meets pre-determined specification and quality requirements. Verification activities such as the ongoing checks are carried out to determine whether a programme has been operated in compliance with quality procedures and standards and the desired outcomes are being met. Critical Control Point monitoring records are checked daily by supervising personnel.

Calibration and Verification of Measuring Devices

A calibration and verification schedule is maintained and identifies all critical devices and reference instruments, with the current calibration status. To maintain the calibrated state critical devices and reference instruments are protected from adjustments that would invalidate the measurement results.

Global Product Integrity Limits (GPILs)

Fonterra has developed GPILs for microbiological and chemical contaminants, and physical parameters. The GPILs are based on accepted global practices/criteria/standards. By making these GPILs applicable to all global operations, the same level of safety is assured for all Fonterra's customers.

Product Sampling and Testing

Chemical, physical, microbiological, functional and sensory testing is performed in accordance with an agreed sampling and testing regime to confirm final product quality complies with specification. The identification and control of product quality at key points throughout the process provides the operator with information which can be acted on to ensure the product quality is achieved. In-process sample locations and sampling techniques provide samples for testing which are truly representative of the product at the designated point in the process. Testing is performed by laboratories accredited to an internationally recognised quality standard.

Chemical Contaminants Monitoring Programme

An appropriate chemical contaminants monitoring programme is in place.



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11. Reactive Investigation

Incident and Non-Conformance Management

Fonterra maintains robust testing, verification, and audit processes to ensure that non-conformances are identified and corrected. A corrective action plan with implementation timeframe and assigned responsibilities is developed. Effectiveness checks are performed to ensure corrective and preventive actions are effectively implemented to prevent future issues.

Management of Non-Conforming Product

Fonterra has standards and procedures to manage non-conforming products, including identification of the affected products and control measures to be undertaken. Products that are deemed to be unsafe or not fit for human or animal consumption are disposed of in such a manner that ensures they are not able to re-enter the food chain.

Complaint Management

Fonterra has an all-encompassing complaint management system. All complaints are seen as an opportunity for improvement.

12. Review and Action

Continual Improvement

Continual improvement is an essential, proactive process for the ongoing development and growth of Fonterra. Continual improvement not only helps to produce quality products and services that meet and exceed our customers' expectations, it also helps to improve operational performance. The Fonterra Food Safety and Quality System ensures a continual improvement process exists via design processes, system and process audits, validation, product verification, management review and corrective and preventative actions.

Safe Food. Safe People. World Class Quality. It's our Promise.

We make food, so we need to make sure what comes out of our factory is safe.

**Mike Nepia
Team Leader, Powder Packing
Kauri**



**By working together we meet our promise
of delivering safe, high quality food every
single day - for our kids, our grandmas,
our mates and our communities.**

Tātou Tātou.

**Safe Food. Safe People.
World Class Quality. It's our Promise.**

