

Preventative Maintenance and Reactive Maintenance Standards

Scheduling, Conducting and Recording Preventative Maintenance and Managing Reactive Maintenance

Development

To define detail, scope and purpose.

Development

This information can be used to develop food safety and quality programs that meet the requirements of modern Regulatory, Customer and Industry Standards:

- We take the time to explain the expectations and requirements of food safety and quality compliance as these relate to your food safety and quality programs.
- You may choose to use our Premium Resources to build, enhance or upgrade your food safety and quality program.
- We encourage you to share this webpage with any food compliance associates and peers you believe may benefit from our commitment to providing our users with user friendly information and resources to achieve superior Food Compliance Culture.
- We welcome your suggestions for additions of general or specific content through the haccp.com Contact Page.

Key Definitions for Preventative Maintenance and Reactive Maintenance Standards

- Calibration: The comparison of a measuring device against a known reference standard, and its adjustment where required, to confirm it provides accurate readings.
- Closeout: The documented confirmation that maintenance work has been completed to an acceptable standard, including removal of tools and materials, cleaning, and release of the equipment or area back into use.
- Equipment Register: A controlled list of equipment, plant, and fittings that identifies each item and its maintenance requirements.
- Foreign Body: Any material that is not intended to be part of the food and may contaminate it, such as tools, screws, bolts, or machinery parts.
- Preventative Maintenance: Preventative maintenance includes tasks performed on equipment, premises, and surroundings to prevent failure. It is a proactive process designed to prevent food safety and quality incidents. Preventative maintenance includes regular scheduled and proceduralised inspection, cleaning, and replacement of worn parts, materials, and systems. Preventative maintenance helps to prevent failure of parts, materials, and systems by ensuring they are in good working order.
- Reactive Maintenance: A form of maintenance in which equipment and facilities are repaired only in response to a breakdown or a fault.
- Temporary Repair: A short-term repair that allows equipment or premises to continue operating until a permanent repair can be completed, and which must be controlled and recorded.

Preventative Maintenance and Reactive Maintenance Standards Development

When considering the development, documentation, and implementation of Preventative Maintenance and Reactive Maintenance Standards within food safety and quality management systems, the following information should be considered to ensure effective outcomes:

About Preventative Maintenance and Reactive Maintenance Standards



Scheduled maintenance keeps premises and equipment in good working order.

Maintenance can be defined within two distinct categories, preventative and reactive. Preventative maintenance is scheduled and conducted on an ongoing basis. Reactive maintenance is conducted as required, usually when breakdowns occur. Details of preventative or reactive maintenance should be recorded and archived as part of the food safety and quality systems. Scheduled maintenance activities should include requirements for premises, equipment, utensils, and surroundings.

Maintenance procedures define the intent and schedule for the premises and equipment, which may also include calibration requirements. The term Preventative Maintenance is commonly used, as it creates the assurance of a proactive maintenance program, which is far more effective than a reactive approach.

A documented maintenance policy, procedure, and scheduled maintenance program may include:

- What is to be included within the schedule;
- Who is responsible;
- What is required for preventative maintenance, for example, a specified type of service using a specified type of lubricant or part;
- Where and when the maintenance is to be undertaken;
- How the maintenance is to be undertaken;
- Closeout procedures to ensure the maintenance has been appropriately completed to an acceptable standard;
- Food safety and quality-related requirements during and after the maintenance procedure;
- Specific training or skills required by the persons undertaking the maintenance procedure;
- Workplace Health and Safety requirements;
- Requirements for contractors or visitors participating in the maintenance process; and
- Relevant criteria for maintenance providers included within the approved supplier program.

Further information regarding the design of premises and equipment can be found within the haccp.com Premises Design and Construction Standards and Equipment Design and Construction Standards Food Standard Elements.

Refrigeration Maintenance and Calibration

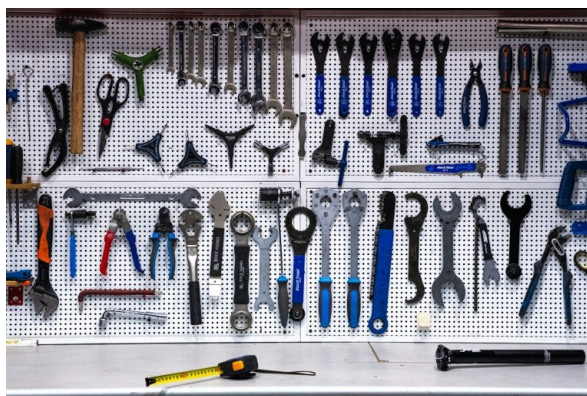


Refrigeration units need regular servicing, clean fans and condensers, and intact door seals.

Whether monitored by external or internal parties, refrigeration plays a crucial part in any food safety program. The following protocols should be considered regarding the maintenance of refrigerated systems:

- Any required repairs or related incidents must be reported to appropriate staff in a manner that constitutes objective corrective actions;
- Refrigeration service schedules should be carried out in line with legislation and industry-specific guidelines;
- If your business uses temperature control as a major critical control point, you may need to pay more attention to refrigeration maintenance than other businesses that don't rely on refrigerated equipment as much;
- Fan, extraction, and condenser units should be regularly cleaned to exclude dust and grease build-up;
- Door seals must be maintained so as not to reduce the capacity of the equipment to retain appropriate temperatures nor to provide a breeding ground for bacterial pathogens;
- The calibration of all fitted temperature measuring devices should be carried out at a frequency defined by risk, manufacturer guidance, and legislation;
- Refrigerated units should not be overfull. Leaving space for airflow reduces the chance of a breakdown and enables the unit to bring product temperatures down, or hold them, at optimum levels; and
- Preventative maintenance and required repairs should be initiated to appropriate schedules, and all activities must be documented as part of the food safety program.

Outcomes of Maintenance Non-compliance



Tool control helps prevent tools and parts from becoming foreign bodies in food.

Failures of maintenance programs may result in:

- Downtime;
- Non-conforming product, which may need to be discarded or reworked as appropriate;
- Excessive by-product creation or product loss;
- Risk of tools, screws, bolts, or machinery parts entering the product, which is a physical hazard;
- Loss of sales; and

- Employee overtime.

Maintenance program failures may occur due to:

- Machinery or vehicle failure and servicing;
- Machine or equipment adjustment;
- Structural failure or power failure;
- Lack of planned or effectively implemented preventative maintenance.

Maintenance failures can be avoided where possible by well-structured and effective preventative maintenance systems. Such systems should emphasise proactive rather than reactive maintenance.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Development requirements in relation to their items.

References

- Codex Alimentarius codes of practice, including the General Principles of Food Hygiene;
- World Health Organization food safety fact sheet.

Preventative Maintenance and Reactive Maintenance Standards Development Key Points

- Preventative Maintenance and Reactive Maintenance Standards programs must be developed to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The Senior Management of your business facilitate a commitment to ensuring adequate resources to the development of your Preventative Maintenance and Reactive Maintenance Standards program;
- Should you require additional resources for the development of Preventative Maintenance and Reactive Maintenance Standards program elements, please discuss this with the relevant Senior Management representative;
- A properly developed Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly-developed Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Documentation

To establish the developed detail in a viewable format to facilitate information.

Documentation

Document: A document provides guidance and/or direction for performing work, making decisions, or rendering judgments that affect the safety or quality of the products or services that customers receive.

Documented policies, procedures, work instructions, and schedules form the basis of any food safety and quality management system. The following documentation formats may be considered to ensure ongoing compliance with specified requirements for Preventative Maintenance and Reactive Maintenance Standards:

- Preventative Maintenance and Reactive Maintenance Standards policy;
- Preventative Maintenance and Reactive Maintenance Standards development procedures;
- Preventative Maintenance and Reactive Maintenance Standards implementation procedures and work instructions;
- Preventative Maintenance and Reactive Maintenance Standards monitoring procedures;
- Preventative Maintenance and Reactive Maintenance Standards corrective and preventative action procedures;
- Preventative Maintenance and Reactive Maintenance Standards verification schedule

- Preventative Maintenance and Reactive Maintenance Standards verification procedures;
- Preventative Maintenance and Reactive Maintenance Standards validation schedule;
- Preventative Maintenance and Reactive Maintenance Standards validation procedures;
- Preventative Maintenance and Reactive Maintenance Standards training procedures.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Documentation requirements in relation to their items.

You may wish to visit the Preventative Maintenance and Reactive Maintenance Standards Templates section of haccp.com for examples of Preventative Maintenance and Reactive Maintenance Standards documentation, record, and resource formats commonly applied within food safety and quality systems.

Preventative Maintenance and Reactive Maintenance Standards Documentation Key Points

- Preventative Maintenance and Reactive Maintenance Standards programs must be documented to meet relevant Regulatory, Industry, and Customer standards and requirements;
- All documented Preventative Maintenance and Reactive Maintenance Standards program elements must be controlled to ensure compliance;
- Key documented Preventative Maintenance and Reactive Maintenance Standards program elements should be available to your business team at all times to ensure they can facilitate required tasks;
- A properly documented Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly documented Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Implementation

To facilitate the application of the documentation.

Implementation

Implementation: Implementation is the application of documented food safety and quality system elements into the actual business operation.

The implementation of Preventative Maintenance and Reactive Maintenance Standards within any food business requires genuine commitment from senior management, staff, and visitors to ensure the nominated goals of implementation are achievable on an ongoing basis. It is a step that requires significant planning and consideration of general and specific food business circumstances to ensure the outcomes of Preventative Maintenance and Reactive Maintenance Standards do not negatively impact the safety and quality of the food items dispatched from the business.

Implementation of Preventative Maintenance and Reactive Maintenance Standards must include the clear definition of responsibilities and authorities for all levels of participation by senior management, staff, and visitors to the site.

When implementing Preventative Maintenance and Reactive Maintenance Standards within food safety and quality system, you may wish to consider the following requirements before completion:

- Communication and display of the Preventative Maintenance and Reactive Maintenance Standards policy;
- Completion of Verification and Validation of Preventative Maintenance and Reactive Maintenance Standards development procedures;
- Availability of Preventative Maintenance and Reactive Maintenance Standards implementation procedures and work instructions;
- Availability of Preventative Maintenance and Reactive Maintenance Standards monitoring procedures and record templates where applicable;

- Availability of Preventative Maintenance and Reactive Maintenance Standards corrective and preventative action procedures and record templates where applicable;
- Availability of the Preventative Maintenance and Reactive Maintenance Standards verification schedule;
- Availability of Preventative Maintenance and Reactive Maintenance Standards verification procedures;
- Availability of the Preventative Maintenance and Reactive Maintenance Standards validation schedule;
- Availability of Preventative Maintenance and Reactive Maintenance Standards validation procedures;
- Completion of Preventative Maintenance and Reactive Maintenance Standards training procedures;
- Completion of product design and development requirements related to Preventative Maintenance and Reactive Maintenance Standards;
- Completion of process design and development requirements related to Preventative Maintenance and Reactive Maintenance Standards;
- Completion of training for team members who have responsibilities and involvement within Preventative Maintenance and Reactive Maintenance Standards;
- Completion of competency approval for team members who have responsibilities and involvement within Preventative Maintenance and Reactive Maintenance Standards.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Implementation requirements in relation to their items.

Preventative Maintenance and Reactive Maintenance Standards Implementation Key Points

- Preventative Maintenance and Reactive Maintenance Standards programs must be Implemented to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Your Preventative Maintenance and Reactive Maintenance Standards program must be fully implemented as per relevant documented Policies, Procedures, and Work Instructions;
- The implementation of Preventative Maintenance and Reactive Maintenance Standards requires a commitment to the provision of resources by the Senior Management of your business;
- A properly implemented Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly implemented Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Monitoring

To review, confirm and document evidence of the implementation against documented limits.

Monitor



Temperature measuring devices must be calibrated to give accurate readings.

Monitoring: Monitoring is the act of reviewing and confirming measurable parameters of a defined process or product status.

Monitoring requirements within food industry sectors are generally identified against limits of acceptability defined within HACCP plans, implementation procedures, and work instructions. Monitoring usually includes some element of record-keeping, which may be maintained manually or through digital systems. It is important to consider that advancements in technology have spawned many systems and processes which are self-monitored and/or self-adjusted when variances are identified. Regardless of the system used, the goal of any monitoring activity is to provide sufficient evidence that any limit of acceptability has been met.

Traditional Preventative Maintenance and Reactive Maintenance Standards monitoring requirements include manual recording and the application of corrective actions when the results of monitoring are found to be outside acceptable limits. Corrective Actions should also generally be strongly linked to the monitoring process where applied to ensure full traceability of the applied actions.

Common monitoring activities and record formats may apply to Preventative Maintenance and Reactive Maintenance Standards:

- **Maintenance Schedule:** A Maintenance Schedule format is commonly used to define the activities required and their responsibility, frequency, and methods. These are commonly linked to Maintenance Records;
- **Maintenance Records:** Maintenance records are commonly formatted to include details of maintenance activities undertaken, by whom, date of completion, and tasks completed. An alternative is a Maintenance Log format, which includes the same information in an abbreviated form;
- **Equipment Register Entry and Equipment Entry Records:** These identify each item of equipment and record its entry into service, maintenance requirements, and any changes;
- **Pre-Maintenance and Post-Maintenance Checklists:** These confirm that equipment is safe and ready for maintenance, and that closeout, cleaning, tool and parts checks, and release back into production have been completed;
- **Reactive Maintenance Logs and Temporary Repairs Logs:** These record breakdowns, the actions taken, and any temporary repairs, including when each temporary repair is to be replaced with a permanent repair;
- **Toolbox Inventories:** These confirm that tools and parts are accounted for before and after maintenance to prevent foreign bodies entering product;
- **Overdue Task Reviews:** These identify maintenance tasks that have not been completed on schedule so that they can be rescheduled and assessed for risk; and
- **Refrigeration Temperature and Seal Checks:** These confirm that refrigerated equipment is holding temperature and that door seals remain intact.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Monitoring requirements in relation to their items.

You may wish to visit the Preventative Maintenance and Reactive Maintenance Standards Templates section of haccp.com for examples of Preventative Maintenance and Reactive Maintenance Standards documentation, record,

and resource formats commonly applied within food safety and quality systems.

Preventative Maintenance and Reactive Maintenance Standards Monitoring Key Points

- Monitoring provides real-time confirmation and evidence that your risk-based FS&Q Controls are effectively implemented;
- Preventative Maintenance and Reactive Maintenance Standards programs must be monitored to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Monitoring of Preventative Maintenance and Reactive Maintenance Standards must be facilitated as per relevant documented Policies, Procedures and Work Instructions;
- Nominated monitoring records for Preventative Maintenance and Reactive Maintenance Standards must be maintained as per relevant documented Policies, Procedures, and Work Instructions;
- A properly monitored Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly monitored Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Corrective Action and Preventative Action

To apply “real time” interventions to documented monitoring limits.

Corrective Action and Preventative Action

Corrective Action: Corrective action is mandatory action to be taken when a deviation to the Quality System occurs, particularly to a Critical Control Point. Preventative Action: At any step in the process where a hazard has been identified, preventative action must be put into place to prevent re-occurrence.

Corrective Action and Preventative Action are implemented to ensure that any identified non-conformance issues are documented, investigated, and rectified within appropriate time frames.

Corrective action is any action applied to regain control over a product, process, policy, or procedure that has been identified as being non-conforming outside nominated limits of acceptability.

Preventative action is any action applied to prevent any identified non-conformance from reoccurring.

The outcomes of corrective and preventative actions should result in regained process control after effective application. Specified corrective actions are commonly linked to the HACCP Plans and the food business certification process.

Below are Corrective Action and Preventative Action examples which may be associated with Preventative Maintenance and Reactive Maintenance Standards related non-conformance:

- Review of the Preventative Maintenance and Reactive Maintenance Standards policy;
- Review of Preventative Maintenance and Reactive Maintenance Standards development procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards implementation procedures and work instructions;
- Review of Preventative Maintenance and Reactive Maintenance Standards monitoring procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards corrective and preventative action procedures;
- Review of the Preventative Maintenance and Reactive Maintenance Standards verification schedule;
- Review of Preventative Maintenance and Reactive Maintenance Standards verification procedures;
- Review of the Preventative Maintenance and Reactive Maintenance Standards validation schedule;
- Review of Preventative Maintenance and Reactive Maintenance Standards validation procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards training procedures;
- Re-training in Preventative Maintenance and Reactive Maintenance Standards;

- Reassessment and rescheduling of overdue maintenance tasks;
- Replacement of temporary repairs with permanent repairs within a defined time;
- Inspection for lost tools, parts, or fittings, and clearance of the area before production restarts;
- Removal from use or tagging out of failed or unsafe equipment;
- Review of management review activities to include Preventative Maintenance and Reactive Maintenance Standards as an agenda item;
- Initiation of product hold procedures where safety or quality may be compromised;
- Initiation of a product recall or product withdrawal procedures where investigations show that there is a substantial safety and/or quality risk to the released product;
- Contacting stakeholders including customers regarding any confirmed or potential Preventative Maintenance and Reactive Maintenance Standards concerns involving their product.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Corrective Action requirements in relation to their items.

You may wish to visit the Corrective Action and Preventative Action section of haccp.com for examples of best practice applications for this food safety and quality system element.

Preventative Maintenance and Reactive Maintenance Standards Corrective Action and Preventative Action Key Points

- The implementation of Corrective Action and Preventative Action provides confidence that your FS&Q Program is effectively implemented and that FS&Q criteria are being met;
- Where deviations or variations are observed, Corrective Action and Preventative Actions must be facilitated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Corrective Action and Preventative Action of Preventative Maintenance and Reactive Maintenance Standards must be facilitated as per relevant documented Policies, Procedures and Work Instructions;
- Records of Corrective Action and Preventative Action must for Preventative Maintenance and Reactive Maintenance Standards be maintained per relevant documented Policies, Procedures and Work Instructions;
- Proper application of Corrective Action and Preventative Action for your Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- Poor application of Corrective Action and Preventative Action for your Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Verification

To review and confirm documented monitoring and corrective actions against documented parameters.

Verify

Verification: The act of reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether items, processes, services, or documents conform to specified requirements.

Verification is the detailed review of all food safety and quality system elements to confirm that they are effectively developed, documented, implemented, monitored, and reviewed. All food safety and quality system elements, including documented policies, procedures, training, HACCP plans, and their operational applications must be verified on an ongoing scheduled basis. The verification process commonly includes a defined schedule for which verification activities are required, how often they are conducted, who is responsible, and detailed documented procedures for each nominated verification activity.

The general goal of an established verification process is to ensure any systemic non-conformance issues are identified and rectified within an appropriate time frame. When non-conformance issues are identified through the verification process, Corrective Actions and Preventative Actions should be implemented to ensure they do not

impact the effectiveness of the food safety and quality system.

The following examples of verification activities may apply to Preventative Maintenance and Reactive Maintenance Standards:

- Review of the Preventative Maintenance and Reactive Maintenance Standards policy;
- Review of Preventative Maintenance and Reactive Maintenance Standards development procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards implementation procedures and work instructions;
- Review of Preventative Maintenance and Reactive Maintenance Standards monitoring procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards monitoring records;
- Review of the maintenance schedule against the equipment register to confirm all equipment is covered;
- Sampling of completed maintenance work against records, including closeout and post-maintenance clearance;
- Review of temporary repairs that remain open beyond their defined limit;
- Review of calibration certificates and records for measuring devices;
- Review of Preventative Maintenance and Reactive Maintenance Standards corrective and preventative action procedures;
- Review of the Preventative Maintenance and Reactive Maintenance Standards verification schedule;
- Review of Preventative Maintenance and Reactive Maintenance Standards verification procedures;
- Review of the Preventative Maintenance and Reactive Maintenance Standards validation schedule;
- Review of Preventative Maintenance and Reactive Maintenance Standards validation procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards training procedures;
- Review of Preventative Maintenance and Reactive Maintenance Standards performance since the last review and historically;
- Analytical testing, such as foreign body and environmental testing, to confirm the effectiveness of Preventative Maintenance and Reactive Maintenance Standards;
- Inclusion of Preventative Maintenance and Reactive Maintenance Standards as an agenda item within the Management Review Process.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Verification requirements in relation to their items.

You may wish to visit the Verification Activities section of haccp.com for examples of best practice applications for this food safety and quality system element.

Preventative Maintenance and Reactive Maintenance Standards Verification Key Points

- Your verification program provides evidence that your FS&Q Controls have worked;
- Preventative Maintenance and Reactive Maintenance Standards programs must be verified to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The verification of Preventative Maintenance and Reactive Maintenance Standards must be facilitated as per relevant documented Policies, Procedures and Work Instructions;
- Nominated verification records for Preventative Maintenance and Reactive Maintenance Standards must be maintained as per relevant documented Policies, Procedures and Work Instructions;
- A properly verified Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly verified Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Validation

To confirm the documented monitoring or procedural limits.

Validate

Validation: The process of gathering evidence to provide a scientific basis for the documented act of demonstrating that a procedure, process, and activity will consistently lead to the expected results. It often includes the qualification of systems and equipment.

Validation is the provision of evidence to support the limits of control or acceptability for food safety or quality parameters nominated within systemic elements. Limits of control or acceptability are commonly included within documented food safety and quality systems elements such as procedures, HACCP plans, and specifications. Common sources of validation include regulatory and legislative standards, finished product specifications and customer requirements, industry codes of practice and guidelines, verified and validated research, historical product, and process control outcomes, and analytical testing.

The general goal of an established validation process is to ensure any systemic non-conformance issues are identified and rectified within an appropriate time frame. When non-conformance issues are identified through the validation process, Corrective Actions and Preventative Actions should be implemented to ensure they do not impact the effectiveness of the food safety and quality system.

Validation activities are commonly defined within the verification schedules and procedures of established food safety and quality management systems.

The following examples may apply to validation of the limits of control or acceptability for Preventative Maintenance and Reactive Maintenance Standards:

- Confirmation of nominated food safety and food quality control limits for Preventative Maintenance and Reactive Maintenance Standards. These limits may apply to regulatory, industry, customer, or finished product specifications;
- Confirmation that maintenance frequencies are suitable for the equipment, its risk, and manufacturer guidance;
- Confirmation that post-maintenance clearance, cleaning, and sanitation steps are effective in returning equipment to a hygienic state; and
- Confirmation of analytical testing methods being used to confirm the effectiveness of Preventative Maintenance and Reactive Maintenance Standards and ensure the accuracy of outcomes.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Validation requirements in relation to their items.

You may wish to visit the Validation Activities section of haccp.com for examples of best practice applications for this food safety and quality system element.

Preventative Maintenance and Reactive Maintenance Standards Validation Key Points

- Your validation program provides evidence that your FS&Q Controls will work;
- Preventative Maintenance and Reactive Maintenance Standards programs must be validated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The validation of Preventative Maintenance and Reactive Maintenance Standards must be facilitated as per relevant documented Policies, Procedures and Work Instructions;
- Nominated validation records and supporting documentation for Preventative Maintenance and Reactive Maintenance Standards must be maintained as per relevant documented Policies, Procedures and Work Instructions;
- A properly validated Preventative Maintenance and Reactive Maintenance Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly validated Preventative Maintenance and Reactive Maintenance Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and

Customer standards and requirements.

Training, Competency and Resources

Skills, knowledge and competency requirements to facilitate development, documentation, implementation, monitoring, corrective action, verification and validation of every Food Safety and Quality System Element.

Skills and Knowledge

Skills and Knowledge: Skills and knowledge are attributes of human interactions commonly linked to competency within any specified job-related task.

Training and competency requirements for Preventative Maintenance and Reactive Maintenance Standards must be ongoing, including regularly scheduled reviews to ensure the effectiveness of training and competency outcomes.

Team members who have defined responsibilities regarding Preventative Maintenance and Reactive Maintenance Standards should have a knowledge including:

- Basic Preventative Maintenance and Reactive Maintenance Standards requirements;
- Positive outcomes of Preventative Maintenance and Reactive Maintenance Standards;
- Negative outcomes of a lack of Preventative Maintenance and Reactive Maintenance Standards;
- Current Preventative Maintenance and Reactive Maintenance Standards procedures, methods, and techniques;
- General operational, corporate, and social awareness regarding Preventative Maintenance and Reactive Maintenance Standards;
- Food safety conduct during maintenance, including tool control, foreign body prevention, and post-maintenance clearance; and
- Regulatory, industry, and customer requirements regarding Preventative Maintenance and Reactive Maintenance Standards.

Team members who have defined responsibilities regarding Preventative Maintenance and Reactive Maintenance Standards should have skills including:

- Competency regarding basic Preventative Maintenance and Reactive Maintenance Standards;
- Correct completion of maintenance records, checklists, and closeout procedures;
- Effective application of current Preventative Maintenance and Reactive Maintenance Standards procedures, methods, and techniques;
- The basic development, documentation, and implementation of HACCP and Prerequisite Programs within the food industry sector.

Team members who have defined responsibilities regarding Preventative Maintenance and Reactive Maintenance Standards should have access to resources including:

- Preventative Maintenance and Reactive Maintenance Standards training, including induction for maintenance contractors;
- Preventative Maintenance and Reactive Maintenance Standards associations and events;
- Regulatory standards, industry and customer information and updates regarding Preventative Maintenance and Reactive Maintenance Standards;
- Incidents within the food industry sector regarding Preventative Maintenance and Reactive Maintenance Standards;
- Commitment to Preventative Maintenance and Reactive Maintenance Standards by senior management;
- Suitably qualified food industry professionals with verified experience in Preventative Maintenance and Reactive Maintenance Standards;
- Effective communication systems including email, internet, and phone through which Preventative Maintenance and Reactive Maintenance Standards information can be sent and received within suitable timeframes.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Preventative Maintenance and Reactive Maintenance Standards Training, Competency, and Resources

requirements in relation to their items.

You may wish to visit the Training, Competency, and Resources section of haccp.com for examples of best practice applications for this food safety and quality system element.

Preventative Maintenance and Reactive Maintenance Standards Training, Skills, and Knowledge Key Points

- Your Training, Skills, and Knowledge program ensures all participating personnel, visitors, and contracted have the required skills and knowledge to effectively facilitate the requirements of your FS&Q Program;
- Training, Skills and Knowledge programs for Preventative Maintenance and Reactive Maintenance Standards must be facilitated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Training, Skills and Knowledge programs for Preventative Maintenance and Reactive Maintenance Standards must be facilitated as per relevant documented Policies, Procedures and Work Instructions;
- Training, Skills, and Knowledge records for Preventative Maintenance and Reactive Maintenance Standards must be maintained as per relevant documented Policies, Procedures and Work Instructions;
- Properly applied Training, Skills and Knowledge programs for Preventative Maintenance and Reactive Maintenance Standards will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- Poorly applied Training, Skills, and Knowledge programs for Preventative Maintenance and Reactive Maintenance Standards will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.



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