HACCP Code
for Food Safety Programs

HACCP CODE: 2017

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Preface

This **HACCP Code** was prepared by TQCS International Pty Ltd (TQCSI). TQCSI is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) as a third party certification body (ACC S1480196AA) for Management Systems. TQCSI's Food Safety Panel is a group of international food industry experts who are consulted on each biennial amendment to this Code.

This **HACCP Code: 2003**, which is a revision of previous versions, has been specifically prepared for the food industry in response to growing demands by consumers for verification of the quality and, in particular, safety of the food and beverage they consume. The Code is aimed primarily at small businesses such as food producers, processors and manufacturers, distributors of food or beverage, restaurants, hotels and other food and beverage retail outlets. The Code can, similarly, be used by primary producers and businesses associated with the food industry such as packaging.

The Code is a food industry standard to be used as a guide for businesses who are implementing a Food Safety Program, incorporating HACCP, anywhere in the world. The Code is not intended as a replacement for the ISO 9001 Quality Standard or any other quality management system. Rather, it is based on the International Standard and is designed to fill a void for those smaller businesses who have no current requirement for ISO 9001, or who do not have the resources to implement and maintain it. However, as businesses grow, the Code is designed to be easily developed into the full ISO 9001 Standard.

The main feature of this **HACCP Code** is its reference to Hazard Analysis Critical Control Point (HACCP), a proven hazard analysis method used by the food industry, internationally, to reduce the incidence of unsafe food entering the marketplace. The Code also includes aspects of the ISO 9001 Quality Management System requirements and recognised Food Safety Standards which support the HACCP framework.

Food and beverage businesses who are certified to the **HACCP Code** can demonstrate to their customers an ability to prepare safe food or beverage of a specified quality under a certified Food Safety Program, which is audited by an independent, third party certification body. They also demonstrate the flexibility to confidently supply larger customers who require HACCP certification. Appropriately certified organisations may exhibit the International TQCSI HACCP Certified logo, however, use of the logo must not infer product safety or certification (see TQCSI's Rules of Certification).

Reference to 'food' throughout this Code applies equally to 'food' and 'beverage'. The Code itself is represented by the bold type contained herein. To assist in its interpretation, explanations of the relevance of each element of the Code have been included in italics.

Contents

1 Scope

This HACCP Code specifies food safety requirements for use by small businesses within the food and beverage industry to provide objective evidence of their capability to supply food or beverage which meets customer and legislative requirements.

Compliance to this Code is also dependant upon compliance with the relevant State food legislation or industry regulation such as the relevant Food Standards Code.

The Code is aimed at achieving safety of food and beverage. It relies on the business identifying and documenting safety criteria. By applying the principles of HACCP, the hazards to food safety and poor quality are identified. Strategies can then be developed and implemented to minimise hazards.

2 References and Exclusions

This Code makes reference to the HACCP (Hazard Analysis Critical Control Point) method of identifying hazards to the safety of food. It is based on food safety practices and HACCP principles developed by the Codex Alimentarius Commission, as adopted by the World Health Organisation.

While the principles of Codex Alimentarius refer to 'Critical Control Points', this Code encourages businesses to address all 'Control Points' relevant to safety of food.

In implementing a Food Safety Program to comply with this Code, the respective business must ensure it is also complying with all relevant legislative or statutory requirements, industry accepted norms and, where applicable, the relevant Food Standards Code.

Where a particular clause of Section 3 to this Code (Food Safety Practices) does not relate to the activities of the business, it may be excluded from the business' food safety program providing verification for its omission is described. However, all other sections of the Code must be addressed and described in the business' food safety program.

3 Definitions

For the purposes of this Code, the following definitions apply:

Food: edible food or beverage which is fit for human consumption.

Good Agricultural Practice: practices followed by the primary sector to ensure control of processes and a safe working environment.

Good Manufacturing Practices: practices followed by manufacturers and other businesses to ensure the control of processes and a safe working environment.

Good Hygiene Practices: practices followed by the personnel within any food related business to ensure the safety and suitability of food at all stages of production, processing, packaging, transport, storage and sale of safe food.

HACCP: Hazard Analysis Critical Control Point.

Nonconforming Product: raw material or other product that does not meet business requirements or specifications.

Potentially Hazardous Food: food that must be kept at certain temperatures to minimise pathogenic growth or prevent the formation of toxins in the food.

Temperature Control: to maintain food within a temperature range which ensures the microbiological safety of product, ie frozen foods remain frozen (normally -15°C to -18°C), cold foods below 5°C and hot foods above 60°C respectively, unless the microbiological safety of food can otherwise be proven.

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5.3 Responsibility

The business must establish, document, implement and maintain a Food Safety Program incorporating a suitably verified HACCP Plan.

The organisational structure must be described to detail who has functional responsibility for food safety and the interrelation and reporting lines between management and staff. Descriptions of tasks required of staff must be documented.

Management must ensure that all relevant regulatory requirements are complied with.

Explanation: Appropriate documentation must be implemented to support the HACCP Plan. Typically, this is in the form of a manual with supporting procedures and forms.

A common failure of small business is the absence of any formalised reporting and responsibility structure. In many instances, staff are uncertain as to their particular function within the business. It is therefore necessary to develop an organisation chart showing the relative responsibilities and, in particular, nominating those aspects where specific responsibility for food safety has been designated.

A brief description of each position's duties, responsibilities and authorities is required. It may be in the form of a Job Description or Contract of Employment.

Management must periodically review its operations to ensure all legislative and regulatory requirements are complied with.

6 HACCP

6.1 HACCP Team and Product Analysis

A suitably trained and experienced HACCP Team must be established to develop, implement and maintain the HACCP Plan.

In preparation of the HACCP Plan, the HACCP Team must analyse the products relevant to the business, including the scope of the business' operations.

Explanation: The HACCP Plans developed will only be as good as the information considered in developing the Plans. Appropriate staff with relevant qualifications and experience should be selected to comprise the HACCP Team. Even if utilising the services of an external specialist, it is necessary to involve the HACCP Team for particular knowledge of the business' products and processes.

The first role of the HACCP Team is to determine the scope of the HACCP Plan and analyse the types of products to be covered.

6.2 Flow Chart

Each process within the business that might attract hazards to the safety of food must be identified in a flow chart.

The flow chart must be verified by the HACCP Team to ensure all relevant process steps have been identified.

Explanation: The flow chart must identify those steps which have unique hazards within each process. These steps are called Control Points. The use of standard symbology is encouraged.
The HACCP Team must walk through the flow chart to verify its accuracy prior to identifying hazards in each step.

6.3 Analysis of Hazards and Control Measures

The business must identify those hazards to the safety of food which may reasonably be expected without the presence of any control measure.

Control measures must then be identified to limit those hazards arising for each Control Point.

Those hazards which identify a serious risk to the safety of food are to be considered Critical Control Points.

Explanation: Each hazard to the safety of food, which may reasonably be expected to occur if a control measure was not in place, should be identified. Once identified, the potential risk and severity of that hazard should be determined.

Control measures should then be identified for each hazard. These control measures should not include monitoring, rather they should prevent potential hazards occurring in the first place through training, maintenance of equipment or other standard practices.

Those Control Points or steps in the process which represent a serious risk to the safety of food is to be identified as a Critical Control Point. Determination of Critical Control Points must be verifiable and this is often best achieved by the use of a 'decision tree' process.

6.4 Determination and Monitoring of Critical Limits

Critical limits must be established for each Control Point for which, if those critical limits are exceeded, the safety of food may be compromised. These critical limits must be validated against legislative and regulatory requirements.

A means of monitoring those critical limits must be established to ensure the business is made aware whenever they are exceeded.

Explanation: Setting critical limits for each Control Point is vital if the process is to be effectively monitored. Critical limits should be, as far as is possible, objective not subjective (ie "temperatures between 1 and 5°C" is easier to monitor than "temperature correct"). Where an objective limit is not possible to determine, the subjective test must be as clear as possible and not open to varying interpretations (ie "bench clean and shiny appearance without any physical contamination or inappropriate odour" is better than "bench clean").

Once the critical limit is established, a means of monitoring that limit is to be determined and documented. Monitoring should be of the critical limit and not of the preventive measure. Staff who normally perform the operational process are often best placed to monitor the critical limits.

6.5 Corrective & Preventive Action

The business must determine immediate corrective action in response to critical limits being exceeded. The business must also determine longer term, preventive action to prevent a reoccurrence.

Explanation: If critical limits are exceeded, it is important to empower staff sufficiently to allow them to properly and effectively address the problem. This is the most important part of the

HACCP Plan and the reason why HACCP Plans are displayed for staff to use and react to.

As far as is possible, corrective action should be taken by the staff responsible for monitoring the critical limit.

Similarly, if a critical limit has been exceeded, the relevant preventive measure has obviously failed and management should review the preventive measure – this is normally described as preventive action.

Supervisory staff responsible for the preventive measure of each Control Point should normally be responsible for taking this preventive action.

6.6 Records

Records must be maintained for the monitoring of critical limits relevant to any Critical Control Point.

Explanation: Objective evidence of the monitoring of critical limits is required whenever those hazards are considered to be Critical Control Points. Records may also be retained for other Control Points.

These records must be verified by management at such regularity which ensures that if critical limits are exceeded, appropriate corrective action can be taken to prevent contamination or unsafe food being consumed.

Records must be retained for a period in which the monitoring may reasonably be questioned by appropriate authorities.

6.7 Verification

Verification of the HACCP Plan must be conducted to ensure the business is confident that the safety of food is assured and any relevant product specifications are being complied with.

Such verification must include a regular review of records, appropriate and responsible microbiological or chemical testing of product, and appropriate review of the HACCP Plan at regular intervals.

Explanation: Verification of the HACCP Plan is vital to ensure its ongoing relevance. A separate form is normally maintained which lists the various means of verifying the HACCP Plan.

Such verification must also include microbiological tests of foods (and chemical tests where relevant) at intervals which will give reasonable confidence that the food processes used in the business is ensuring safe food for the customer and that any product specifications are being met.

Similarly, microbiological testing must verify use by or best by dates which are determined by the business. The results of testing must be analysed and understood by management and, if applicable, any breaches of critical limits must be investigated. Where the laboratory reports are not understood, management must take appropriate steps to understand them.

Verification records, including laboratory reports of any testing conducted, must be retained for an appropriate period.

7 Support

7.1 Competence and Awareness

Management must provide appropriate training for staff to ensure they are equipped to perform their tasks, including training in any relevant documented procedure. Copies of relevant certificates issued by external training organisations proving a person's competence level must also be retained by the business, where appropriate.

All staff involved in the handling of food, particularly in its preparation and delivery, must be competent in food hygiene and safety. Similarly, they must understand their personal obligations for hygienic handling of food and records of such training must be retained.

Staff must also be trained in their responsibilities regarding notifying their supervisors when ill.

Induction training for new staff must include food handling training where prior appropriate training cannot be demonstrated.

Explanation: All staff must be adequately trained to perform the function for which they are employed. To enable this to be identified and planned, it is necessary to maintain sufficient records which show the qualifications, skills and training performed by each member of the business.

This is particularly so in respect to those persons who handle, organise or control the preparation, processing and movement of food. Management must be confident that relevant staff are competent in food hygiene and safety.

Staff must be made aware of their individual responsibilities to report any illness they may be suffering which may affect the safety of food. Similarly, during the induction process, staff must undergo food handling training unless prior training is sufficient.

7.2 Document Control

The business must ensure a procedure is in place to control documentation which is used to control operations that affect food safety and control of documentation.

Explanation: Maintaining appropriate documents relevant to the running of a business is a sound management practice that must be encouraged. Moreover, third party certification will be based on documentary evidence that the HACCP Plan is being followed.

In order to ensure that staff are using current documentation that instructs and/or details the manner of performing work, it is important to ensure that superseded documentation cannot be used.

As businesses move to computerised documentation, the same philosophy must apply to ensure only the current, approved method of conducting business is available to staff.

7.3 Records

Records relating to food safety must be maintained to demonstrate that the food preparation

processes and essential monitoring or tests that have been identified in the HACCP Plan have been completed.

Records must be retained for sufficient time to ensure the thorough investigation of any food safety related problem that might occur.

Explanation: Records must be retained in an orderly and controlled fashion to prove the safety of food. This proof may be required by auditors to ensure that processes have been carried out as planned, or alternatively, may be a means of identification and traceability. It is, therefore, necessary to maintain records in a clear, concise and easy to use manner.

7.4 Measuring Equipment

All measuring equipment must be regularly calibrated or checked to an accuracy appropriate to its use.

Explanation: Most businesses use equipment to measure the conformance to specification of the product being provided. This equipment may, at times, develop an error and provide inaccurate measurement and/or data, which may result in nonconforming product being supplied to the customer. Such equipment must be identified and regularly calibrated or checked in a manner that ensures its continued accuracy.

This calibration/checking activity must be conducted using methods that are traceable to nationally recognised standards or are otherwise confidently accurate. Records of respective equipment and calibration/checking activity must be maintained, describing actual calibration or checking results and error adjustments made, if required.

8 Operation

8.1 Procedures

The business must establish and maintain documented procedures to ensure the appropriate control of Critical Control Points.

Explanation: Work instructions, procedures or checklists must be maintained for those steps considered Critical Control Points. Businesses are encouraged to also maintain them for other Control Points.

These Work instructions, procedures or checklists are to be readily available for staff to refer to, as and when required.

8.2 Good Manufacturing, Good Hygiene and Good Agricultural Practices

The business must establish and maintain documented procedures to ensure that the principles of good manufacturing practice and good hygiene practice are observed.

Particularly, the business must ensure the premises are maintained in a clean and sanitary condition and that food contact areas and utensils are sanitised before use, where applicable.

The primary sector must ensure good agricultural practices are observed, particularly

ensuring the safety of food.

Explanation: The principles of GMP and GHP are a sound basis for the development of any business. The guidance of the Food Standards Code for food safety practices must be observed to prevent the contamination of food.

GMP and GHP is to include, where relevant, upkeep of the facilities, pest control, waste control, use of protective clothing, cleaning and sanitisation of equipment including maintenance, and the selection and use of chemicals, where appropriate.

Environmental swabbing or other monitoring of surface areas and equipment is encouraged to verify that the cleaning processes in place are effective.

Similarly, the business and employees must be aware of their responsibilities for safe food handling. Appropriate procedures must be developed to ensure these issues are implemented in each business.

GAP for primary industries is to also include, where relevant, agricultural and veterinary chemical selection, application, storage and disposal.

8.3 Food Safety Practices

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8.3.1 Food Receipt

The business must ensure that any raw materials or other food received is protected from the likelihood of contamination.

The business must maintain records of all suppliers of any raw material or other food received.

Potentially hazardous food must be received under temperature control.

Explanation: Food is, all too often, contaminated or spoilt at the time of delivery. Each business must ensure food is delivered in an appropriate, safe condition. Particularly, frozen food must be received frozen hard and potentially hazardous food must be received within temperature control.

Each business is required to have a temperature measuring device to be able to record the temperature of potentially hazardous food received. Normally this will need to be a probe thermometer.

8.3.2 Food Storage

Food in storage must be protected from the likelihood of contamination and potentially hazardous food must be maintained under temperature control.

Explanation: Potentially hazardous food must be stored as soon as possible after receipt to ensure it remains in temperature control. All food must be stored in such a manner that prevents

contamination, particularly from pest infestation and contamination from unclean storage areas.

8.3.3 Food Processing

Appropriate action must be taken to prevent the likelihood of contamination during food production.

Environmental conditions must ensure food is not contaminated during processing and, as far as possible, deny pathogenic growth.

When cooling cooked food, businesses are to ensure the food cools:

- **from 60°C to 21°C within two hours, and**
- **from 21°C to 5°C within a further four hours,**

unless the business can otherwise demonstrate the safety of the food.

Food being reheated must be heated above 60°C unless the business can otherwise demonstrate the safety of the food.

Explanation: The onus is on the business to ensure they process safe food. Where a process step is needed to reduce pathogens to a safe level, the business must use a process which is reasonably accepted as being able to achieve microbiological safety.

Cooling of foods following cooking, particularly wet meat dishes and sauces, must be achieved in the nominated time frame to prevent uncontrolled pathogenic growth. Regrettably, in hot climates such as Australia, this is often difficult to achieve and the business must prove through microbiological testing that their process for cooling food is safe. In such cases, cooling periods must be nominated and be as close as possible to those described above. Relevant test results must be retained as evidence.

Similarly, reheating food must ensure the food reaches a temperature greater than 60℃.

8.3.4 Food Display

All measures must be taken to prevent contamination of food on display.

Explanation: Specific rules apply for displaying unpackaged, ready to eat food for self service. Ready to eat food that is not intended for self service must not be displayed unless it is wrapped.

8.3.5 Food Packaging

Any packaging process, including the materials used for packaging, must prevent contamination of food.

Explanation: The business must ensure the packaging material and the method of packaging does not contaminate or cause spoilage of food.

8.3.6 Food Transportation

All food must be protected from the likelihood of contamination during transportation. Potentially hazardous food must be transported under temperature control.

Explanation: The business must effectively ensure potentially hazardous food is transported in a clean, refrigerated vehicle. Transportation of all food should be in a covered vehicle.

8.3.7 Food Disposal

Food being disposed of must be kept separate from other food.

Explanation: Food being disposed of must be separated and readily identifiable. Unwrapped food may not be re-sold to other customers. Refrozen potentially hazardous food may not be sold unless it was thawed and refrozen for the purposes of processing.

8.3.8 Food Recall

The business must have documented procedures in place to ensure the recall of unsafe raw product or food.

Explanation: Food Recall applies equally to primary producers, manufacturers, distributors and retailers. The relevant Food Industry Recall Protocol should be used as the basis for all food recall.

Businesses should also ensure they have procedures to deal with the recall of raw product or food by the relevant supplier – this is particularly relevant to distributors and retailers.

8.4 Sales

The business must establish and maintain documented procedures for accepting customer orders.
Before accepting orders, the business must ensure it is capable of meeting the contractual requirements.

Explanation: All too frequently in business, problems occur when the customer's expectations aren't met because the provider of the product didn't realise exactly what was required. It is imperative to have a fool-proof system to ensure the customer's requirements are known when taking orders.

The process for making an amendment to or cancelling an existing order should also be considered.

Moreover, the business must be able to deliver the respective product. Significant legal repercussions can arise if the business does not perform in accordance with the contract.

8.4.1 Purchasing

The business must provide clear and concise requirements when purchasing product which affects the safety of food.

Only those preservatives, processing aids or additives that have been approved for use by the relevant State or Federal authority may be used. They shall only be used for the purpose for which they were approved.

Explanation: Safety of food usually begins with the product provided by the supplier. Therefore, the eventual safety of food provided to a customer is directly dependent upon the original supply of the raw material, etc. It is essential that suppliers are advised of exactly what is required to be provided.

All purchasing documents relevant to food safety should contain information that can be clearly understood and interpreted by the supplier.

In some instances, it is not practical that this information is provided in hard copy to the supplier. In these situations, records should be maintained in-house regarding the orders that have been placed and the product received in response to those orders.

It is essential to build customer confidence in the business' operation, particularly in relation to food protection and in the use of approved additives, chemicals and preservatives. It is also essential that proof of this use in accordance with manufacturer recommendations is available, where applicable.

8.4.2 Selection of Suppliers

The business must select suppliers on the basis of their ability to meet contractual requirements, including any specific quality assurance or food safety requirements.

Explanation: The business shall conduct an initial evaluation of suppliers that are to be used to provide product for inclusion in the business' food.

This evaluation must result in a list of approved or preferred suppliers and this list must be reviewed from time to time to include or reject new suppliers and/or those who are not performing.

This evaluation process should also consider the ability to trace product through appropriate labelling requirements (ie presence of prescribed allergens or genetically modified ingredients).

The list must be made available to staff responsible for ordering goods.

8.5 Identification, Traceability & Labelling

The business must be able to identify from where raw materials and food was purchased. Product must also be traceable to the supplier so that recalls or other investigation can be readily facilitated, if required. Product must be clearly identified during and following production.

Procedures must be documented on how identification and traceability is addressed within the business.

Labelling must comply with all legislative and regulatory requirements.

Explanation: Where possible and critical to the safety of food, product must be identified upon receipt and this identification must remain during processing and dispatch activities.

This will provide traceability of product to the supplier in the event of a safety problem being identified.

Following dispatch from the premises, suitable records should be maintained, where practical, to provide for the traceability and identification of that product to the original supplier.

Where legislative or regulatory requirements apply for labelling (such as the Food Standards Code in Australasia) those requirements must be fully complied with. This is particularly important for genetically modified foods or allergens which must be declared.

9 Performance Evaluation

9.1 Monitoring and Evaluation

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9.2 Internal Audits

The business must conduct internal audits to verify that activities comply with documented requirements and to determine the effectiveness of the Food Safety Program. Action must be taken to correct any deficiencies found.

Explanation: It is necessary to ensure that the Food Safety Program designed and implemented in a business continues to operate as intended. This Program is normally documented in the form of a HACCP Manual, HACCP Plans and work instructions. Therefore, regular internal audits must be conducted (12 monthly or 6 monthly), ensuring that what is said to be done (documented instructions) is actually being done.

Where it is identified that activities are occurring at variance to the documented methods, they must be identified and corrective action initiated.

10 Improvement

10.1 Nonconformances

The business must establish and maintain documented procedures to ensure that product which does not conform to specified requirements is prevented from unintended use and to ensure customer complaints are identified and actioned.

The business must have a documented procedure for identifying the cause of significant problems affecting food quality and safety which are found either in the raw material or during preparation, storage, sale or delivery. Appropriate action must then be taken to reduce the likelihood of the problem occurring again.

Explanation: When things go wrong, it is important to analyse the more serious nonconformances to prevent them occurring again. Staff must be encouraged to bring these problems to the attention of management without fear of retribution.

When material or product is found to be nonconforming (eg out of date, contaminated, stale, unsightly, etc) it must be labelled and quarantined in an area known to all staff such that will

prevent unintended use. Alternatively it may, of course, be immediately discarded, however, whatever action is taken, care must be exercised to ensure there is no cross-contamination with other product.

Nonconformances (or 'problems') occur from many aspects of business including as a result of customer complaints (internal and external customers), raw material received from suppliers, product or service failure during preparation, final product or service delivery and measuring equipment inaccuracies. They may, in fact, be suggestions for improvement made by staff or customers. Nonconformances may be logged in some manner that allows management to review them from time to time to identify trends (eg a diary, notebook or some other register).

Following the identification of significant nonconformances or repeating (trending) nonconformances identified through customer complaints, etc, it is essential to conduct an analysis of those nonconformances which will enable continual improvement and prevent a recurrence. This action is called corrective action and requires a determination of the root cause of the problem.

While documentary evidence of corrective action is not mandatory, the business must be justifiably confident that appropriate action has been taken.

10.2 Corrective Action

Where management considers nonconformances to be significant or repetitive, an investigation is to be conducted to identify the root cause of the issue and appropriate corrective action taken to reduce the likelihood of the issue occurring again. The investigation and results of corrective action are to be documented.

Explanation: At the core of any management system is the continual improvement process. Following the identification of significant nonconformances or repeating (trending) nonconformances identified through customer complaints, etc, it is essential to conduct an analysis of those nonconformances to identify which action taken will enable continual improvement and prevent a recurrence. This action is called 'corrective action' and requires a determination of the root cause of the problem and action taken to address the root cause. Sufficient evidence of corrective action must be retained to prove the continual improvement process is working.

Similarly, if a workplace safety or environmental impact is identified or an accident, incident or near miss occurs, the business must investigate the root cause of the impact in order to prevent recurrence.

Preventive action referred to in international standards is merely identifying a 'potential' issue and taking action to prevent its impact on the business. The same corrective action process may apply to preventive action.