1. **GOOD OPERATING PRACTICES**

# Section 3.1 Personal Hygiene and Sickness

Personal hygiene and health are important, because they help prevent contamination of food ensuring it remains safe and suitable.

**3.1.1 Hygiene Policies**

Injuries / Plasters Policy

All staff shall inform the manager of sores, infected cuts or wounds or other serious skin infections.

Any minor injuries (for example, scratches, small cuts) shall be covered with medical dressings. These should be brightly coloured (e.g., blue), and impervious. Disposable gloves should be worn over plaster on hands.

Jewellery Policy

Staff must notify management should they be wearing any jewellery to ensure they do not impose a food safety risk to the product or pose a health and safety risk to the staff.

The Manager reserves the right to request staff to remove jewellery that may pose food safety and/or health and safety risks.

Handwashing

Hands must be washed:

* after touching contaminated or unclean equipment, surfaces, or materials,
* between handling foods that contain allergens and foods that do not contain allergens,
* between handling cleaning products or chemicals and food,
* after coughing or sneezing,
* after using the toilet,
* after using your phone,
* after handling rubbish,
* and any other situation where hands must be washed to reduce cross-contamination.

Basic steps for handwashing should include the following steps:

1. Use a designated hand wash basin.
2. **Rinse** off gross organic matter from your hands with running water.
3. Using warm or hot water and liquid soap, lather up hands for 20 seconds
4. **Rinse** hands thoroughly with running water.
5. **Dry hands thoroughly** using paper towels, single use cloths, or an air

dryer. Typically, this should take 20 seconds.

1. Hand sanitiser may then be used as a final step.

Personal Hygiene

* Staff should maintain a good standard of personal cleanliness including the hands, body, clothing and hair.
* Staff shall not eat, smoke or vape in any area where product is processed or stored.
* Personal items (including phones) shall not be brought into the production area.

Smoking/Vaping Policy

There shall be NO SMOKING OR VAPING in the building. Smoking and vaping is permitted in the external designated area.

**3.1.2 Staff Facilities**

Staff have toilet and hand washing facilities provided.

Toilets: Designated hand wash sink, hand drier/paper towels and liquid soap are provided. Hand sanitiser should also be made available for use.

Eating Facilities: Tea and coffee making facilities.

**3.1.3 Protective Clothing**

Staff must wear:

* Enclosed shoes
* Clean clothing
* No loose-fitting clothing that may pose a health and safety hazard around equipment.
* Hair either tied back or contained in hat or hair net.
* Safety glasses for staff working in the bottling hall during production
* Safety ear protection for staff working in the bottling hall during production
* Appropriate safety equipment (PPE) for chemical handling, including for cleaning. Refer to the company Workplace Health and Safety Programme, and safety information provided by chemical suppliers (Safety Data Sheets etc).

**3.1.4 First Aid**

The First Aid Kits are located in the staff room and office, and/or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The manager is responsible for stocking the First Aid Kits. Checks of supplies are to be conducted on a \_\_\_\_\_\_\_\_\_\_\_\_ basis, with replacement items purchased as needed.

Staff must notify the manager of any accidents and/or injuries. Refer to the company Workplace Health and Safety Programme.

**3.1.5 Visitors & Contractors Policies**

Visitors’ Book

All visitors and contractors must report to the office on arrival and complete the Visitor’s book.

All visitors and contractors must abide by the Company’s following Hygiene Policies:

Protective Clothing

All visitors must wear:

* Enclosed shoes
* Safety glasses if the bottling line is operating (as appropriate)
* High Viz jacket (as appropriate)

All maintenance contractors must wear:

* Clean clothes
* Disposable hat provided by the Company
* Enclosed shoes
* Safety glasses if the bottling line is operating (as appropriate)
* High Viz jacket (as appropriate)
* Appropriate safety equipment (PPE) for the work being conducted, and the operating environment.

Food Products and Packaging Policy

* Visitors and contractors are NOT permitted to touch products and/or packaging during the time of visit unless specifically directed by management.
* Visitors and contractors are NOT permitted to eat or drink products during the time of visit unless specifically directed by management.

Injuries / Plasters Policy

* A medical dressing shall cover any minor injuries (for example, scratches, small cuts).
* These should be brightly coloured (e.g., blue), and impervious
* Disposable gloves should be worn over plasters on hands

Jewellery / Personal Items Policy

* All jewellery worn shall be secure
* The Manager reserves the right to request visitors and contractors to remove jewellery.
* Personal items, including phones, to be kept secure at all times
* Tools, toolboxes/bags and equipment brought on site should be clean. Sanitation (using sanitiser provided, or sanitised wipes) should be performed on tools that will come in contact with product surfaces.

Smoking / Vaping Policy

There shall be NO SMOKING OR VAPING on the premises.

Communicable Diseases

* No one is permitted on site if suffering from vomiting or diarrhoea OR has had an episode of vomiting or diarrhoea in the 48 hours prior to entering the food premises.
* If anyone has a vomiting episode whilst at work this must be reported immediately to the manager.
* No one with jaundice who is suspected of having hepatitis A, or who has hepatitis A, is permitted on site.
* No one is permitted on site if they have scaly, weeping or infected skin.

# Section 3.1.6 Staff Sickness

Only operators whose health is not putting product at risk may handle product.

All staff that are food-handlers, i.e., any person who comes into direct contact with food or the equipment or utensils used to prepare food (e.g., brewery staff, packing staff, front-of-house etc).

You or your staff must not work with food when you/they are sick with an illness that can be passed on through food. That means:

* Any staff or visitors who have vomited (in the absence of other obvious causes, e.g., morning sickness or alcohol poisoning), had diarrhoea (other than that associated with conditions such as Irritable Bowel Syndrome, Chrohn’s Disease or ulcerative colitis) or jaundice in the 48 hours before entering your business, or who develop these symptoms when on your premises, must immediately tell the day-to-day manager, or delegate
* Staff must stay away from the production and packing areas, until 48 hours after symptoms have stopped.
* Staff that are sick may be able to complete tasks that do not involve them entering food preparation areas or coming into direct contact with food.
* A written record of when staff were sick including the exclusion period must be kept. Refer to: Sickness Return to Work Checksheet (Form 4)

Records:

*Form 4: Sickness Return to Work Checklist*

# Section 3.2 Traceability

Raw Materials

The brewer must record the batch numbers of all raw materials/ingredients on the Inwards Goods Inspection form (Form 2) and relevant production records.

Products

Each batch of product is given an individual batch.

Ideally the batch numbers should be recorded on all record forms, including dispatch records for full traceability. It is noted that in some cases this may not be practical, however in a recall situation where clear traceability to individual products is not achieved the size of the recall is likely to be much larger than otherwise.

All final products should be able to be traced back to raw materials batch numbers.

Packaging

Bottles and Caps:

The label containing the batch number for the bottles/cans is on the pallet. This label shall be removed, dated, and collated with the day’s records. Alternatively, photos of packaging traceability information may be maintained together with date/s of use.

The label containing the batch number for the caps is on the carton. This label shall be removed, dated, and collated with the day’s records. Alternatively, photos of cap traceability information may be maintained together with date/s of use.

Records:

*Form 2: Inwards Good Inspection*

Production Records (may be electronic e.g., Beersmith, Xero (Unleashed) etc)

# Section 3.3 Glass Handling & Foreign Matter

Glass, Ceramic and Hard Brittle Plastics Breakages

Any broken items must be effectively removed from the processing and storage environments.

When handling broken items all possible precautions should be taken to avoid personal injury.

1. Stop production if bottle broken on-line.
2. Isolate the affected area where the items breakage occurred.
3. Inform all staff who are likely to enter the area and restrict them from entering the area.
4. Using a designated (labelled) brush and shovel sweep up item pieces from the affected area(s) and surrounding area(s), including equipment and all other items.
5. Discard directly into a designated glass breakage bin. Note: There is a designated recycling bin for broken glass.
6. Thoroughly inspect the affected area(s) to ensure that all small pieces and fragments of the broken items are removed.
7. Carry out a thorough clean-down of the affected equipment and environment.
8. Note: Should a bottle break on the bottling line, enough bottles before and after the broken bottle shall be removed and discarded to waste. The number to be removed should be based on a risk assessment.
9. Record breakage and post clean-down inspection on the Glass Breakage Record (Form 9).

Handling and Storage of Glass Bottles

1. The bottles are received in secure packaging to prevent contamination and ensure they are not damaged during transportation and storage.
2. The pallet is fork-lifted to the bottling area.
3. The staff shall manually remove the outer plastic covering from the top down, layer by layer as required.
4. If manually handling is required, staff shall touch only the neck or body of the bottles. Staff shall NOT touch the top/lip of the bottles.
5. This ensures the stack remains stable. Should only a portion of the pallet be used the stack can be re-wrapped to protect the bottles from the environment.
6. There are cardboard pallet stabilisers positioned between each layer of bottles.
7. Should broken glass be identified during the depalletizing or bottle staging process follow the breakage procedures detailed in Steps 2-7 and 9 on the previous page.

Records:

*Form 9: Glass Breakage Record*

# Section 3.4 Allergen Management

People with a food allergy or a food intolerance need to know what is in their food or drink, so they can decide if it is safe for them to consume it.

The Allergen Bureau ([www.allergenbureau.net](http://www.allergenbureau.net) ) estimates 4-8% of children and 1-2% of adults have a food allergy. When people eat food containing an allergen to which they are sensitive, symptoms range from mild to severe and affect the:

* Respiratory tract (wheezing, asthma)
* Gut (nausea, vomiting, diarrhoea)
* Skin (hives, eczema, itching)

By far the most serious condition is anaphylaxis – blood pressure drops, breathing is restricted, and the victim goes into shock; some people die of anaphylactic shock.

There are some allergens in Australia and New Zealand that it is a mandatory requirement to identify in food (typically noted on the label for a packaged food). The allergen list is updated periodically by Food Standards Australia New Zealand (FSANZ). The allergens noted in this section reflect the Food Standards Code requirements as of February 2024.

**3.5.1 Mandatory Food Allergen Labelling**

Common food allergens and/or substances capable of causing an intolerance, must be declared\* on food labels. These are:

* Cereals containing gluten and their products (e.g., *wheat, rye, barley, oats*)
* Wheat
* Egg
* Fish
* Milk (includes milk from cows, deer, goats, sheep, buffalo) (e.g., *lactose*)
* Crustaceans (e.g., *crab, crayfish, lobster, scampi, shrimp, prawns*)
* Molluscs (e.g., *clams, cockles, cuttlefish, kina, mussels, octopus, oysters, periwinkles, pipi, paua, sea snails, scallops, squid, tuatua*)
* Soy
* Sesame
* Peanuts
* Lupin
* Added sulphites in concentrations of 10mg/kg or more
* Tree nuts (declare the specific nut, as below)
  + Almonds
  + Brazil nuts
  + Cashews
  + Hazelnuts
  + Macadamias
  + Pecans
  + Pine nuts
  + Pistachios
  + Walnuts

\*If an allergen is an ingredient, part of a compound ingredient, a food additive,

or is used as a processing aid, you must put this on your label.

Note: Standardised alcoholic beverages (that is beer, cider, fruit wine, fruit wine product, liqueur, mead, perry, spirit, vegetable wine, vegetable wine product, wine and wine products) don't need an ingredients list, but still need to display the required allergen name (as above) on the label, but it doesn’t need to be bold or in any particular place.

**Exemptions**

The following are not required to be declared as allergens when the condition noted applies:

Gluten (the cereal or its hybridised strain) that is present in beer or spirits

Wheat (the wheat or its hybridised strain, including alcohol distilled from wheat) that is present in beer or spirits

Fish - isinglass derived from fish swim bladders and used as a clarifying agent in beer or wine

Milk - alcohol distilled from whey

Refer to: <https://www.mpi.govt.nz/food-business/labelling-composition-food-drinks/allergen-declarations-warnings-and-advisory-statements-on-food-labels/> for further information.

**Other allergens**

There are some other allergens that you may need to declare on your product. These have special rules for how to declare them. These are: Royal jelly, Bee pollen and Propolis.

|  |  |  |  |
| --- | --- | --- | --- |
| **Allergen** | **Statement** | **Wording for statement** | **Specifications** |
| Royal jelly or a food containing royal jelly | Warning  statement | This product contains royal jelly which has been reported to cause severe allergic reactions and in rare cases, fatalities, especially in asthma and allergy sufferers. | You must use these exact words  and they must be 3 mm or bigger  (or > 1.5 mm for small packages). |
| Bee pollen or a food containing bee pollen | Advisory  statement | You can choose the words to use but you must indicate the product contains bee pollen which can cause severe allergic reactions | No exact specifications. |
| Propolis or a food  containing propolis | Advisory  statement | You can choose the words to use but you must indicate that the product contains propolis which can cause severe allergic reactions. | No exact specifications. |

**3.5.2 Allergen Control**

Allergenic Ingredients and Process Aids

* The manager (or appropriate delegate) is required to identify all ingredients and process aids that contain known (Food Standards Code listed) allergens.
* These ingredients and process aids are stored in dedicated containers (may be original packaging) in a designated area.
* Any spillage is cleaned up immediately and recorded.

Managing Cross Contamination risk

Cross contact allergens occur when a residue or other trace amount of an allergenic substance is unintentionally added into a food not intended to contain that allergenic substance, and where such occurrences are sporadic, is also considered. Allergen risk management is (or may be) managed through a combination of some of the following:

* Hazards associated with allergen risk are identified in the HACCP worksheets
* Product Specifications / Product testing
* Approved Supplier process
* Correct labelling
* Good brewery and warehouse management, including receipt and storage of products, cleaning procedures, waste management
* Avoiding cross contact of non-allergenic ingredients with allergenic materials, or between different allergenic materials.
* Staff training, supervision and hygiene
* Production scheduling
* Equipment and premises design
* New product development
* This shall ensure there is no potential allergen contamination from staff food.

Refer to: <https://allergenbureau.net/resources/allergen-bureau-resources/> for further information.

# Section 3.5 Cleaning and Sanitising

Note: *If the business is registered under the Food Act with a National Programme Level 3 cleaning records are not required unless something has gone wrong. You need to be able to identify when something has gone wrong and be able to fix it.*

**3.5.1 Cleaning Information**

* All cleaning chemicals shall be appropriate for food industry / brewery use.
* All cleaning chemicals shall be clearly labelled, prepared and used according to the directions of the manufacturer.
* Containers shall be closed/lidded securely immediately after use and stored safely. Bunding, secure storage, or segregation of incompatible types of chemicals may be required – refer to the chemical supplier for guidance.
* All required safety equipment / clothing shall be worn correctly during use of chemicals.
* All cleaning equipment shall be of a suitable standard that allows for effective cleaning and does not pose a hazard to the processing area or equipment.
* Cleaning equipment shall be maintained in a hygienic condition between uses
* Sub-standard cleaning equipment shall be discarded.
* Hoses should be stored on the hose reel when not in use.
* Access to the chemical storage shall be restricted to trained and authorised staff.
* Cleaning and maintenance chemicals shall be stored away from brewing chemicals
* Cleaning methods shall be updated when new chemicals or equipment are introduced, or when equipment is modified.
* Cleaning is also carried out after building and equipment maintenance.

**3.5.2 Cleaning Schedule & Methods**

A record of all cleaning procedures (including safety information, e.g., personal protective equipment (PPE) that should be worn / used) for all cleaning tasks is maintained (refer Form 11 – Cleaning Schedule & Methods) detailing:

* Cleaning Task (e.g., tank CIP)
* Equipment covered (e.g., tanks, hoses, pipes, heat-exchange, pumps, filler, bottling/canning plant, keg filler)
* Frequency
* Cleaning chemicals required and dilutions
* Personal protective equipment (PPE) required
* Cleaning equipment required
* Cleaning Method – step by step
* Cleaning record (if completed)

Records:

*Form 10: Cleaning Record (Optional for National Programme)*

*Form 11: Cleaning Schedule & Methods*

*Form 12:* *Chemical Register*

*Form 8: When Something Goes Wrong*

# Section 3.6 Pest Control

The risk of pest infestation on site and consequent, potential product contamination must be minimised. Pest control may either be subcontracted to a competent pest control company or conducted by suitably trained company personnel. Records of findings should be maintained.

Note: *If the business is registered under the Food Act with a National Programme Level 3 Pest Control records are not required unless something has gone wrong. You need to be able to identify when something has gone wrong and be able to fix it.*

**3.6.1 Pest Prevention**

The pest control programme includes rodents, insects, birds, dogs and cats.

The Company operates the following precautions and programmes in order to discourage the entry of and control pests on-site:

* The yard and external drains are kept clean
* The external lawns are kept trim; building surrounds are kept free from vegetation
* Waste disposal containers (including for spent grain) are kept covered, tidy and clean
* Rubbish bins covered and removed regularly
* Clearing and cleaning is carried out regularly (“clean as you go”). Spills etc. are cleaned up straight away. Cleaning schedule tasks are completed.
* Food sources (e.g., ingredients) are stored where possible in pest proof containers or off the floor (e.g., on pallets)
* Building is pest proof
* Doors and hatches are kept closed when in not use
* Sealed bait stations (rats/mice) outside the building and along fence lines
* Sealed non-toxic stations (rats/mice) inside the building (non-production areas)
* Cockroach/Ant bait stations within the building

**3.6.2 Pest** **Control Programme**

Where the company operates its own pest control programme:

A pest control site map (showing the location of bait stations, monitoring devices, flying insect control units) is held on file. The bait stations are checked at least monthly by designated staff. This is recorded either on the Pest Control Record (Form 5).

It is the responsibility of the manager to ensure:

1. all pest control chemicals have a Safety Data Sheet (SDS) and approved for use in a food premises
2. pest control chemicals are securely stored
3. pest control equipment, i.e., bait stations, traps, are suitable for containing the pest control chemical
4. recording of monitoring date
5. recording of monitoring findings e.g., evidence of pest activity, no evidence of pest activity.
6. staff conducting the pest checks have been trained, with records kept

All staff shall be observant of any evidence of pests during processing and cleaning.

Upon the detection of evidence and/or pests, the manager is notified, and action will be taken to remove them from the premises. This may include calling in the pest control operator for professional eradication and destruction methods. The notification shall be recorded on the When Something Goes Wrong form.

Where the company contracts a pest control service provider:

Refer to Section 2.1.1 of this Food Safety Programme for supplier specifications. Service visits to be conducted at an appropriate frequency based on risk (as per the service provider’s recommendations). Detailed service reports to be provided – outlining any observations and actions taken.

Records:

*Form 5: Pest Control Record*

*Form 6: Pest Control Schedule*

*Form 12: Chemical register*

*Form 8: When Something Goes Wrong Form*

# Section 3.7 Repairs & Maintenance

**3.7.1 Internal Premises Standard**

The internal environment of the processing room, storage areas and bottling plant room shall be designed and constructed to ensure:

* Floors are free draining and able to be washed
* Walls and ceiling are free of flaking paint, cracks and holes
* Doors are functioning
* Fixtures and fittings are functioning, clean and in good repair
* Lights should be covered in areas where raw materials, ingredients or finished products are exposed

**3.7.2 External Premises Standard**

The external environment of the premises shall be clean and tidy. The building shall be of sound construction and be pest proof.

**3.7.3 Good Operating Practices Monitoring Procedure**

The building and premises shall be inspected at least monthly. This is the responsibility of the manager. The inspection is recorded on the Good Operating Practices Assessment form.

A tick (√) in the ‘Yes’ 🞏 shall indicate an acceptable standard and a tick (√) in the ‘No’ 🞏 shall indicate an unacceptable standard. The details of the defects shall be recorded in the “Findings / Corrective Action” sections.

Staff shall report all unscheduled repairs and maintenance as they occur immediately to the manager who will notify the manager.

Corrective Action:

If a defect is identified the corrective action must be carried out as soon as possible. The corrective action must be recorded on the When Something Goes Wrong Form. The manager must verify the completion of the corrective action.

Records:

*Form 15: Good Operating Practices Assessment Form*

*Form 8:* *When Something Goes Wrong Form*

**3.7.4 Equipment Maintenance Programme**

The equipment repairs and maintenance programme is the responsibility of the company manager. The manager shall ensure the following:

Equipment Design

* All equipment is suitable for use
* Processing equipment is suitable to facilitate effective cleaning
* All equipment is operational

Equipment for Product Contact Use

* Equipment in direct contact with the product shall be constructed of stainless steel or other smooth, impervious and cleanable materials that are approved and appropriate for food use. Plastic surfaces must be suitable for food contact use.
* The design shall eliminate trapping of liquids during cleaning process.

Equipment Storage

* Equipment shall be stored in a clean condition, protected from contamination and pests.
* Equipment shall be cleaned and sanitised upon recommissioning.

During Maintenance

* Methods use shall ensure product safety is not affected.
* All maintenance personnel adhere to the company's hygiene policies.
* Chemicals used in maintenance processes shall be identified and shall not present a risk to the product.
* Machinery lubricants shall be suitable for use on food equipment.

Post-Maintenance

* The maintenance process includes ensuring tools, equipment, and materials used are removed prior to the re-commencement of production.
* Removal of debris, waste and surplus equipment on exit of maintenance area.
* Cleaning shall be carried out post-maintenance.

Maintenance Tools

* Tools shall not present a risk to the product and be in good condition.

**3.7.5 Preventative Maintenance Schedule**

A Preventative Maintenance Schedule (Form 14) is maintained noting the following:

* Item
* Preventative Maintenance type
* Contractor
* Frequency

A record of the maintenance completed must be retained. This can be noted on the Repairs & Maintenance Record or the contractor invoice and/or service report can be retained (as records), as long as these include the date, type of work, contractor details and are signed to note the work was completed and equipment/area inspected and cleaned post maintenance).

**3.7.6 Unplanned Repairs and Maintenance**

Staff shall notify the manager of all breakages and any necessary repairs on equipment and/or premises. The manager shall notify and direct the maintenance staff to complete these repairs.

When equipment breakdown occurs during processing, and corrective action could pose a hazard to the production then the following must take place:

* The product and packaging to be removed from the room, or
* The product and packaging protected, and/or
* The equipment removed from the room.
* A record\* retained

\*A record of the maintenance completed must be retained. This can be noted on the Repairs & Maintenance Record or the contractor invoice and/or service report can be retained (as records), as long as these include the date, type of work, contactor details and are signed to note the work was completed and equipment/area inspected and cleaned post maintenance).

Records:

*Form 13: Repairs & Maintenance Record*

*Form 14: Preventative Maintenance Schedule*

*Form 8: When Something Goes Wrong Form*

# Section 3.8 Calibration

**3.8.1 Calibration**

To ensure the reliability of measuring equipment and instruments used for critical measurements we check the calibration accuracy of these on a regular schedule, against a known standard and record the result and any corrective action where required.

In some cases, these checks may be requirement to meet a regulatory standard (e.g., Weights and Measures or Food Standards Code), or may be conducted as part of good operating practice.

A list of equipment, calibration type, frequency and standard is listed in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equipment Type** | **Requirement** | **Calibration Method** | **Calibration Frequency** | **Calibration Standard** |
| Weighing Scales | GOP / Regulatory**\*** | Monthly | Monthly | Test Weights |
| External | Annual | Test Weights |
| pH meter | GOP | As per manufacturer’s instructions | Before use | Standardised  Buffer Solutions |
| Handheld Probe  Thermometer | GOP | Ice Point / Boiling Point Test | 3 monthly | Ice slurry  Boiling Water |
| External | Annual | Test across (and outside) operating range |
| Handheld Infra-red  Thermometer | GOP | Ice Point | 3 monthly | Ice slurry |
| GOP | External | Annual | Test across (and outside) operating range |
| Hydrometer | Regulatory\* | As per manufacturer’s instructions | 3 monthly | Standardised specific gravity solution (corrected for temperature) |
| Anton Paar Density Meter | Regulatory\* | As per manufacturer’s instructions | 3 monthly | Standardised specific gravity solution |
| Refractometers | GOP | As per manufacturer’s instructions | 3 monthly | Distilled Water / Standardised  Sugar Solutions |
| Data Logger | GOP | Ice Point / Boiling Point Test | 3 monthly | Ice slurry  Boiling Water |
| External | Annual | Test across (and outside) operating range |

*\*Refer below*

Records:

*Form 16: Calibration Check Record*

External Calibration Certificates

Weighing Scales

The weighing scales may not have a calibration check if these are not used to determine the final declared weight (therefore not required to meet the Weights and Measures Act 1987) or used for measuring additives (or similar) regulated by the food standards code.

Checks may be made using certified test weights (monthly) or being sent to an appropriate external contractor for testing with a calibration certificate issued.

The scales must be checked with weights in the operating range (typical use) of the scales and the record noting the scale display weight (no rounding etc). To be considered accurate (pass) the weight should be within 1 unit of the smallest increment (e.g. +/- 0.1g, +/- 0.5g etc). If not the use of the scales should be reviewed and where accuracy is critical the scales sent for repair or replacement.

pH Meter

The pH meter is calibrated typically before use (at least weekly) using standard buffer solutions as per the manufacturer’s instructions.

Handheld Thermometers

These can be calibrated in-house (Boiling Point / Ice Point checks, or just Ice Point for Infra-red thermo meters). While unlikely to be required for a regulatory purpose, the accuracy should be checked 3 monthly as part of good operating practices.

Density Meters & Hydrometers

These can be calibrated in-house or externally. If used to demonstrate compliance with customs and/or food standards code (alcohol level declarations) they must be conducted with a record maintained of these checks.

Refractometers

These can be calibrated in-house (standardised sugar solutions). While only used for process control / monitoring, the accuracy should be checked 3 monthly as part of good operating practices.

# Section 3.9 Testing and Monitoring

**3.9.1 Water Supply**

The water is supplied from:

🞏 The local City / District Council supply

🞏 The brewer’s own supply\* (roof/tank, bore water, surface water).

Self-supply\* water samples must be tested annually, and the water must meet all of the limits in the table below: *to discuss, as not in current Food Notice, but still in NP3 guidance*

|  |  |
| --- | --- |
| **Measurement** | **Criteria** |
| *Escherichia coli* | Less than 1 in any 100 ml sample\*\* |
| Turbidity | Turbidity Must not exceed 5 Nephelometric Turbidity Units (NTU) |
| Chlorine (when chlorinated) | Not less than 0.2mg/l (ppm) free available chlorine with a minimum of 30 minutes contact time |
| pH (when chlorinated) | 6.5 – 8.0 |

\*\**Escherichia coli* testing must be performed by an accredited laboratory.

We must retest water no later than 1 week after:

* getting water from a new self-supplied source, or
* knowing of a change to the environment or activities that may affect the safety and suitability of water (e.g., an adverse event, such as flooding or an earthquake).

**3.9.2 Alcohol Content Testing**

Frequency: This is carried out at the introduction of a new alcoholic beverage. The results are used to standardise the processing methods to ensure the correct alcohol percentage is achieved.

Labelling tolerances:

* Labelling of alcohol content for Beer must be accurate to within 0.3% alcohol by volume
* Labelling of alcohol content for Spirits must be accurate to within 0.5% of alcohol by volume
* Do we need to include other alcoholic beverages here – cider/perry etc….

Responsibility:

It is the responsibility of the Manager to:

1. Carry out the sampling.
2. Deliver samples to testing laboratory.
3. Receive and review test results from testing laboratory.
4. Activate necessary actions.
5. File the test report.

**3.9.3 Product Testing**

New Product Testing: All new products shall be tested at an accredited external laboratory on the introduction of product and end of shelf-life testing.

Test Types:

* Alcohol percentage testing
* Gluten free verification (if claims are made on labelling)

Specification:

* Alcohol percentage verification within specification
* Gluten is non detectable in the sample (to the limit of detection (LOD) typically <3ppm)

Routine Shelf-Life Testing

At least 2 bottles per run may be held as retention samples.

These shall be sensory tested at the end of the product shelf life.

Sensory testing including clarity, colour, flavour and aroma. Records should be kept. Refer to Shelf-Life Testing Record

Sampling Method

1. It is the responsibility of the manager to ensure the end of shelf-life product testing is carried out.
2. The sample bottle is retrieved from storage and taken to the on-site testing area.
3. One sample bottle is opened, and the contents are poured into clean, clear glasses.
4. The colour, clarity and aroma are assessed.
5. The samples are then tasted and assessed for flavour.
6. Should the assessment detect any non-conformances, the second (unopened) bottle shall be sent to an approved testing laboratory for further investigative testing. This may include microbiological yeast count testing to detect wild yeast contamination, and/or chemicals testing to detect chemical contamination. Advice may need to be sought from the laboratory, or a suitable specialist, on which testing parameters should be analysed.

Responsibility

It is the responsibility of the manager to:

* Carry out the sampling.
* Deliver samples to testing laboratory.
* Receive and review test results from testing laboratory.
* Activate necessary actions.
* File the test report.

# Section 3.10 Staff Training

It is the responsibility of the manager to ensure the training is carried out and is recorded on the staff training records. Staff and visitors need enough knowledge to manage risks to food safety and suitability.

Staff could include owner/operators, managers, volunteers, family, and friends who may carry out food related tasks in your business. Visitors could include ingredient delivery people, maintenance personnel etc.

Staff need to be trained:

* before they start handling food, ingredients etc or processing
* before we introduce or change a procedure,
* whenever the staff need it (e.g., after something has gone wrong).

**3.10.1 Induction Training**

All staff shall receive induction training as soon as practicable from the commencement of employment.

The induction training shall cover the following:

* Staff Responsibilities and Authorities (Section 1.4)
* Allergen contamination prevention (Section 3.5)
* Staff Facilities (Section 3.12)
* Personal Hygiene Policies (Section 3.1.1)
* Protective Clothing (Section 3.1.3)
* Locations of First Aid (Section 3.1.4)
* Visitors policy (Section 3.1.5)
* Staff sickness (Section 3.1.6)
* Pest Sightings (Section 3.6.2)
* Notification of maintenance issues (Section 3.7.6)

Re-fresher induction training shall be carried out at least two yearly, or if there has been significant amendment to the induction procedures, or changes to a staff member’s role.

**3.10.2 Operating Procedures Training**

Employees shall undergo a one-to-one, buddy-system training in the manufacturing procedures. These include Cleaning (Section 3.6) and Glass Handling (Section 3.3).

**3.10.3 Management Training**

The manager shall be trained in the MPI National Programme Level 3 Guidance, and Brewers Guild of NZ National Programme, Level 3 template. This includes all procedures, and an introduction in the understanding of Hazard Analysis and Critical Control Point (HACCP).

Records:

*Form 3: Staff Training Record*

External training course certificates

# Section 3.11 Services

**3.11.1 Waste**

|  |  |  |
| --- | --- | --- |
| **Waste Type** | **Waste Container Type** | **Disposal Method / Frequency** |
| General waste | Bin in processing areas,  Skip in external yard | Company notifies contractor when skip is full.  Removed by contractor. |
| Cardboard | Skip in external yard | Contractor |
| Soft Plastics | Skip in external yard | Contractor |
| Glass | Skip in external yard | Contractor |
| Spent grain | Auger onto contractor’s truck deck  Other Method: \_\_\_\_\_\_\_\_\_ | Contractor removes the truck when the deck is full. |
| Cleaning Wastewater | Trade waste drainage system | Continuous |
| Waste Product | Trade waste drainage system | As required |

**3.11.2 Water**

Water can carry harmful bugs and chemicals which can make people sick. We must only use safe uncontaminated water for food/beverage preparation (e.g., hand washing, processing and/or cleaning).

Supplied by a registered drinking water supplier

The water is supplied from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_District / City Council

If our registered drinking water supplier notifies us that our water is unsafe, we will follow the advice they provide (e.g., boil water notice).

Supplied by a self-supply source

Our water source(s) are:

🞏 roof water source

🞏 surface water source

🞏 ground water source

Details:

We must use a water treatment system to make sure water for food processing, hand washing and cleaning, is safe at the point of use. The water is treated using:

🞏 Filtration

🞏 Chlorination

🞏 UV disinfection

🞏 Ozonation

🞏 Other:

**1. Filtration**

Filtration can remove particles, chemicals, algal toxins and parasites.

We need a filtration system if our water supply:

* Is turbid or contains a lot of suspended particles (above 1NTU). Filtering the water first will help ensure further treatment (chlorination and UV) is successful
* Is at risk of contamination with sewage, farm run-off, animals that may contain parasites such as Cryptosporidium and Giardia, or
* Contains chemical contaminants or is at risk of chemical contamination

Topics to discuss with our water professional

Factors determining a filter’s ability to remove specific types of contaminants include the material the filter is made from, the filter grade (how fine the filter is) and the flow rate of water through the filter.

* Filters are usually installed in the reticulation system between the water source (e.g. tank, bore, dam, and creek) and other treatment steps (e.g. chlorine disinfection, UV light disinfection)
* Cloudy or dirty-looking water will require filtration before it can be disinfected. Particles and dirt in the water make disinfection less effective. Filtering water with a high sediment load can be made more effective by adding a coagulation chemical before the water is filtered. Coagulation chemicals cause small particles in the water to clump together.
* Types of filters include cartridge filters, filters containing sand or silica, ceramic filters, activated carbon filters and reverse osmosis filtration. The choice of filter and filtration method will be determined by the contaminants that need to be removed.

Maintenance

All equipment used with food (including water equipment) must be maintained so that it doesn’t make food unsafe. We need to ensure filters are regularly replaced or cleaned (in accordance with the manufacturer’s instructions) in order to remain effective. Filters should allow a steady flow of clean water to pass through them. Dirty filters enable bacteria to grow which can then be released and re-contaminate the filtered water. Clogged filters can also lead to more wear on the pump and the need for more maintenance. The manufacturer’s operating and maintenance instructions must be carefully followed.

Monitoring

Water quality needs to be regularly checked after filtration. If the flow-rate decreases or the water becomes turbid (dirty or cloudy), the filter may need replacing more frequently than scheduled. Some filter systems include a pressure gauge that indicates when filters need replacing.

**2. Chlorine disinfection**

Chlorine controls many harmful microbes but is not very effective in controlling parasites such as *Giardia* and *Cryptosporidium* or treating water with a high sediment load. Parasites and sediment are better dealt with by filtering the water before adding chlorine (see above).

Topics to discuss with our water professional

* Chlorine can be manually dosed directly into the tank (a good method for emergency disinfection) but treatment is better carried out using an automated system to regularly inject and maintain a suitable level of chlorine.
* Chlorine is an accessible, economical and effective means of treating a large volume of water.

Maintenance

We must maintain the chlorine dosing equipment so the correct amount of chlorine is used. It’s important to make sure there is enough chlorine in the water.

Monitoring

If checking for free chlorine and an online chlorine meter is not incorporated into the treatment system, a suitable test kit (such as a swimming pool chlorine kit) must be used. This will measure and monitor levels of chlorine and pH in the system and identify whether our chlorine dosing needs adjusting. We should regularly (e.g. weekly) monitor the amount of chlorine in the water as it leaves the taps, to check the level of disinfectant – especially if the treatment system has not been used for a while. It is desirable to have at least 0.2 mg/L free chlorine in water used for drinking, hand washing and food preparation.

For chlorine to work effectively, the pH of the water must be 6.5 - 8.0. A pH of greater than 8 can decrease the efficiency of chlorine disinfection

**3. Ultraviolet (UV) light disinfection**

Ultraviolet (UV) light kills many kinds of harmful microbes. Some UV light systems are effective against *Giardia* and *Cryptosporidium*. You’ll need to check this with a water professional.

Topics to discuss with our water professional

* UV light can’t penetrate dirty or cloudy water so filtration is often necessary (see Filtration above).
* In a power outage alternative disinfection (e.g. chlorination) will be needed.

Maintenance

A UV light system needs a reliable power source, regular inspection, and careful maintenance to ensure it remains effective. Always follow the manufacturer’s instructions.

UV lamps have a limited effective life span and need to be replaced regularly in accordance with the manufacturer’s instructions, or every six months whichever is the most often.

A UV light system needs regular checking to ensure:

* It has a stable power supply and the system is switched on.
* The lamps are intact, operating and free from a build-up of scum.

Any repairs or replacement identified should be carried out promptly.

The water must be tested at least annually (refer FSP section 3.8.1)*to discuss, as not in current Food Notice, but still in NP3 guidance*

**Water System Maintenance**

Water pipes must:

* be kept in a sound condition to prevent contaminants entering the system
* flushed after repairs or maintenance to clean the system
* flushed to remove stagnant water, if they’re not used for more than seven days

Water tanks must be:

* kept clean and in good repair to prevent any build-up of sediment
* have covered and screened openings to protect against access by animals, birds and debris.

Lower quality water

Water tanks, pipes and outlet taps of any water supplies on site that are not suitable for food processing, or personal hygiene, or cleaning must be clearly identified (e.g. grey water for irrigation). These water supplies must not be used for food processing, or personal hygiene, or cleaning.

Backflow devices

Backflow devices must be maintained in accordance with the manufacturer’s instructions to prevent contamination of clean water.

Water pipes, equipment and tanks

The pipes, pumps and storage tanks that deliver the water from its source to the tap are collectively called the reticulation system. It’s important our business’s water system doesn’t contaminate any water and is kept clean and in good repair. Pipes and outlet taps from an unsuitable water source should be clearly identified to prevent this water being used (cross-connected) for any food-related activity.

How to flush our business’s water system

Open taps to allow a substantial water flow. The length of time the water will need to flow will depend on the size of our building and water system. Enough water should be run through the taps to ensure pipes end up with fresh water in them.

Design and construction

Our water system is or has been designed and installed to prevent cross-connections, dead ends, unused pipes and backflow.

Tanks

Ensure all overflow, blow-off, clean-out or vent pipes are turned downwards to prevent rain entering the water system. Screen the tanks with removable, fine-

mesh screens to keep out vermin and other contamination.

Ensure all inlet and outlet pipes of storage tanks are properly supported and located to minimise the effects of settling, i.e. they don’t allow sediment that has settled at the bottom of the tank to enter the pipes.

Use a cover on treated water storage tanks. Covers should be watertight, constructed of permanent materials (i.e. not wood), provided with handles and locks, and designed to drain freely, i.e. they don’t encourage pooling and they prevent the contamination of the stored water.

Maintenance of the water system

Disinfect all tanks before they’re put into service and after extensive repairs or cleaning. Ensure that this is regularly maintained and inspected (refer Good Operating Practices Assessment Form 15). Parts of your water system that need to have checks (at least annually – Internal Audit Checklist Form 17) include backflow devices to make sure they are working correctly and water storage tanks to ensure they are clean and in good repair.

Complete the Maintenance schedule to identify the checks and when they need to be carried out.

Focus cleaning on removing accumulated sediments, leaf litter and other objects, such as insects and animals, that may have got into the tank.

Sediment can build up in the bottom of tanks and this might need to be removed. You can do this by either using tank cleaning contractors or installing a tank vacuum.

When we repair or change our water system, we make sure we flush it with clean water before using the water for food processing.

**Roof Water**

Water collection

* Water must be collected only from roofs and gutters that have been made from safe substances (e.g., no lead-based paint, bitumen, exposed timber, or copper guttering).
* Contamination from birds, animals, and leaves must be reduced by screening guttering, removing overhanging branches and vegetation.
* Aerials and satellite dishes must be mounted away from the roof to reduce contamination from birds.
* A first flush device must be installed and used to divert the first flush of water when it rains.

**Surface water or groundwater supply**

To ensure water from surface (streams, creeks, lakes) or underground (bore) sources is clean and safe for making food, for cleaning food areas and for serving to customers.

Water is sourced from: [tick as appropriate]

🞏 Surface or insecure groundwater (follow instructions later)

🞏 Secure groundwater (a supply that meets the definition of “secure” in the Drinking Water Standards for New Zealand, (while you continue to meet this definition you need to do nothing further.)

🞏 A supply that is currently subject to a Public Health Risk Management Programme (while you continue to meet this definition you need to do nothing further).

Surface or insecure groundwater

Wherever possible on-site water intakes must be protected from:

* Livestock – fenced-off from access to the water source (e.g. stream, lake, bore).
* Animal effluent – manure spreading does not take place on pastures near the water source.
* Silage – is not stored near the water source.
* Human waste – there is clear space (buffer zone) between the water source and land used for human effluent disposal (e.g. septic tank drainage fields, long drop toilets).

The local council must be contacted to determine naturally occurring chemicals that are likely to be present in source water.

These are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Checks have been carried out for activities that may cause chemical contamination of the water supply (e.g. industry, landfills, and chemical storage areas) upstream of, and surrounding, the water source.

The following activities/contaminants might be of concern to the water supply:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The potential hazards identified above must be taken into account in water treatment.

Regular checks are made to identify any new sources of hazards or changes to hazards.

Groundwater sources

The bore head must be designed correctly and maintained so that it is protected against surface contamination.

Bore head security for groundwater supplies

Poorly constructed and maintained well bore heads can introduce contamination into the groundwater.

* Seal the area between the casing and the surrounding ground with concrete to stop rain or surface water carrying contaminants into the well.
* Seal between the casing and any hoses or cables going down the well shaft.
* Lock a protector cap on an unused well.
* Keep rubbish, pesticides, fertiliser, animals and compost away from the well bore head.
* Seal any free-flowing wells.
* Regularly check that the well bore head is protected from surface contamination

Records:

*Form 15: Good Operating Practices Assessment*

*Form 17: Internal Audit Checklist*

External laboratory water testing result reports

**3.11.3 Lighting**

Lighting may be a combination of both natural and artificial lighting. Should a light bulb break a When Something Goes Wrong From (Form 8) shall be completed.

**3.11.4 Ventilation**

Ventilation is a combination of natural ventilation and ceiling extraction fans.

# 3.12 Chemical Control

We maintain strict control over our chemicals to ensure that anyone who handles the chemicals (1) is competent and understand their correct use and storage; and (2) minimises the potential for contamination of products, packaging, other inputs, equipment and the surrounding environment.

We do this by:

* Careful selection of the right chemicals (for the intended purpose), by reading manufacturer instructions prior to purchase, discussing with the chemical supplier etc.
* Periodically we review the range of chemicals we need to determine whether we can cut down the number of chemicals we hold in stock (certain chemicals can serve more than one purpose), and
* consider whether there are suitable products available that contain less hazardous components, or which could be applied at lower concentrations

A register of all chemicals (including pest control, cleaning and maintenance chemicals) used / held on-site is maintained (refer Form 12 – Chemical Register) detailing:

* Chemical Name
* Chemical Type
* Supplier
* Use (Purpose)
* Storage location
* Safety Data Sheet reference

Appropriate safety information should be held on-site and easily accessible for the chemical user as required. This would typically be an SDS (Safety Data Sheet) held in the brewery or chemical storage area. These must be no older than 5 years from the date of issue/review.

Records:

*Form 12:* *Chemical Register*