

MyHACCP Study: Honey & Lemon Yogurt

Business name:

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<http://myhaccp.food.gov.uk>

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Management commitment

I am the management and can confirm that I am committed to food safety management based on HACCP.

Terms of reference

This **linear** HACCP plan covers:

Honey & lemon yogurt packed into thermoformed plastic yoghurt pots.

It will start at **Purchase and receipt of raw materials** through to **Despatch to customer**.

The HACCP plan will cover final product safety and will look at the following hazards:

Physical

- Metal
- Wood splinters
- Glass and brittle plastic
- Plasters
- Fruit stones
- Insects
- Paper/board
- Hair

Chemical

- Cleaning & sanitising chemicals
- Chemical residues migrating from packaging

Biological

- Salmonella
- Listeria sp.
- Escherichia coli
- Clostridium botulinum
- Clostridia perfringens
- Staphylococcus aureus
- Campylobacter
- Cryptosporidium (parasitic protozoa)
- Moulds

Allergens

- Milk

The company has in place a number of effective prerequisite programmes, including:

- Supplier approval
- Packaging
- Incoming material specifications
- Finished product specification
- Training (incl. training needs analysis, job descriptions)
- Pest Control
- Glass and plastic management
- Calibration
- Standard Operating Procedures (SOPs)
- Product recall
- Document control
- Audit schedule (incl. HACCP/internal audits)
- Customer complaints
- Tracking non-conformances
- Microbiological control
- Traceability
- Equipment suitability, cleaning and maintenance
- Measures to prevent cross-contamination
- Cleaning and sanitising
- Personnel hygiene and employee facilities
- Contamination control

The location of the above documents is:

All procedures are stored in the prerequisite file in the office.

The HACCP team

Role	Name	Training	Qualifications	Experience
HACCP lead	Eugenie Green <i>(internal)</i>	Advanced HACCP (Level 4) Advanced Food Safety (Level 4)	BSc (Hons) Applied Microbiology	15 years working in the food industry in dairy and bakery sectors.
Quality Assurance	Orran Green <i>(internal)</i>	Intermediate HACCP Allergen awareness Food Hygiene Internal Auditor Principles and Practices	BSc (Hons) Food Manufacturing & Technology	10 years working in the dairy sector
Secretary	Lucy Green <i>(internal)</i>	All training received in-house, 'on the job' training	BA (Hons) Accountancy and Business	25 years working at Coopers & Lybrand Accountants

We confirm that the team have sufficient skills (scientific/technical knowledge and HACCP expertise) to ensure that the HACCP study will be effective.

Product description and intended use

Ingredients

Lemon (Fruitiers Alimentation), Sugar (Sugar Sugar), Honey (Beesness), Yoghurt (Yoghurt and more), Packing (All-types packing).

Physical properties

pH 4.2.

Processing

Yoghurt bought in from local farm.

Packaging

Thermoformed food grade pots with plastic lids in a paper board sleeve.

Storage

On-site stored chilled at 5 degrees or below, distributed at 5 degrees or below.

Shelf life of product

7 days from date of manufacture.

Storing, handling and preparation advice

Keep refrigerated. Do not freeze. Use by the date shown. Once opened consume within 3 days.

Intended Use

Name of the product: Honey and Lemon Yogurt

The product is not suitable for consumption by the general public.

The product is not suitable for the young.

The product is suitable for the elderly.

The product is suitable for pregnant ladies.

The product is suitable for the immunosuppressed / immunocompromised. The product is not suitable for people with allergies or intolerances.

We have considered the likely abuse/unintended use of the product by the consumer in the following ways:

1) Consumers may believe that they can freeze the product, for this reason it is stipulated on the packaging that the product should not be frozen. 2) As the product contains honey it is not suitable for infants, for this reason it is stipulated on the packaging that the product should not be consumed by infants under 36 months. 3) The yogurt contains milk and should not be consumed by those who have allergies to milk. For this reason milk is declared on the ingredients list and typed in bold with an additional note at the bottom to say for allergens see ingredients in bold. 4) The HACCP team have taken into consideration that the customer may use the honey and lemon yoghurt as an ingredient for other products such as cakes and dips whilst other ingredients may be added to the yoghurt such as muesli.

Process flow and confirmation

We have completed a flow diagram covering all steps in the manufacturing process of this product.



A copy of our flow diagram can be obtained from the following location:

HACCP Plan ref: PFD Honey & lemon yogurt, version 1, 01/02/20XX. For a copy see the back of the MyHACCP printout.

On-site confirmation of flow diagram

Lucy Green has confirmed that our flow diagram is correct.

Every process step is identified in our flow diagram.

The flow diagram is an accurate representation of the process from start to finish.

The flow diagram is correct for all shifts (e.g. days, nights and weekend).

The flow diagram is correct during all seasonal variations.

The HACCP lead has signed off and dated the flow diagram as being correct.

The following members of our organisation are responsible for making changes to the flow diagram and storing out of date versions:

- Lucy Green

Identify and list potential hazards

Step No.	Step Name	Biological	Chemical	Physical	Allergens
1a	Receipt and ambient storage of lemons		Insecticides on lemons Pesticides on lemons Unauthorised waxes on lemons	Wood Plastic Card from packaging	
1b	Receipt and ambient storage of sugar			Stones Rubber/silicon Wood Glass	
1c	Receipt and ambient storage of honey	Clostridium botulinum	Antibiotic residues in honey Phenol in honey Chemical residues in honey	Metal Wood Stones Insect parts	
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Salmonella Listeria monocytogenes Staph aureus E.coli		Plastic Metal Glass	Milk
3	Receipt and storage of packaging in warehouse A		Chemicals used in ink which is non-food grade	Metal Wood Plastic	

Step No.	Step Name	Biological	Chemical	Physical	Allergens
4	Cut and de-pip lemons	Staph. aureus	Cleaning chemical residues on equipment	Metal Glass	
5	Mix with water	Cryptosporidium		Metal Glass	
6	Boil	Yeasts and mould		Metal	
7	Drain			Metal	
8	Plunge into cool water	Cryptosporidia (contaminated water supply)			
9	Drain			Metal	
10	Mix	Vegetative pathogens		Metal Plasters Glass	
11	Heat and stir			Metal	
12	Simmer			Glass	
13	Cool < 3 degrees Celsius			Glass	
14	Add honey and mix			Metal Glass	

Step No.	Step Name	Biological	Chemical	Physical	Allergens
15	Yogurt piped into hopper			Metal	
16	Mix	Vegetative pathogens		Metal Glass	
17	Lid and pack	Vegetative pathogens	Polyethylene	Plastic	
18	Metal detection			Metal	
19	Label		Non-food grade ink		
20	Chilled storage	Vegetative pathogens			
21	Despatch			Wood	
22	Water	Cryptosporidia			
23	Cool water	Cryptosporidia			

Severity scores

1a. Receipt and ambient storage of lemons

Hazard	Hazard Description	Severity	Likelihood	Significance
Insecticides on lemons	Insecticides on lemons from supplier	1	1	1
Pesticides on lemons	Pesticides on lemons from supplier	1	1	1
Unauthorised waxes on lemons	Unauthorised waxes on lemons from supplier	2	1	2
Wood	Introduction of wood into lemons from the supplier	1	1	1
Plastic	Introduction of plastic into lemons from the supplier	1	1	1
Card from packaging	Introduction of card into lemons from the supplier	1	1	1

1b. Receipt and ambient storage of sugar

Hazard	Hazard Description	Severity	Likelihood	Significance
Stones	Presence of stones in sugar from supplier	2	1	2

Hazard	Hazard Description	Severity	Likelihood	Significance
Rubber/silicon	Presence of rubber/silicon from supplier	2	1	2
Wood	Presence of wood in sugar from supplier	2	1	2
Glass	Presence of glass in sugar from supplier	2	1	2

1c. Receipt and ambient storage of honey

Hazard	Hazard Description	Severity	Likelihood	Significance
Clostridium botulinum	Presence of Cl. botulinum in honey from supplier	3	1	3
Antibiotic residues in honey	Presence of antibiotic residues in honey from supplier	2	1	2
Phenol in honey	Presence of phenol in honey from supplier	2	1	2
Chemical residues in honey	Presence of chemical residues in honey from barrels from the supplier	1	1	1
Metal	Presence of metal in honey from the supplier	1	1	1
Wood	Presence of wood in honey from the supplier	1	1	1
Stones	Presence of stones in honey from the supplier	1	1	1
Insect parts	Presence of insect parts in honey from the supplier	1	2	2

2. Chilled receipt and storage of natural yoghurt <5 degrees Celsius

Hazard	Hazard Description	Severity	Likelihood	Significance
Salmonella	Presence of Salmonella in natural yoghurt from the supplier	3	1	3
Listeria monocytogenes	Presence of Listeria in yoghurt from the supplier	3	1	3
Staph aureus	Presence of Staph aureus in yoghurt from the supplier	3	1	3
E. coli	Presence of E. coli in yoghurt from the supplier	3	1	3
Plastic	Presence of plastic in yoghurt from the supplier	3	1	3
Metal	Presence of metal in yoghurt from the supplier	3	1	3
Glass	Presence of glass in yoghurt from the supplier	3	1	3
Milk	Milk not declared as an allergen from supplier	3	1	3

3. Receipt and storage of packaging in warehouse A

Hazard	Hazard Description	Severity	Likelihood	Significance
Chemicals used in ink which is non-food grade	Presence of non-food grade ink on packaging from supplier	1	1	1

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Presence of metal in packaging from the supplier	1	1	1
Wood	Presence of wood in packaging from the supplier	1	1	1
Plastic	Presence of plastic in packaging from the supplier	1	1	1

4. Cut and de-piplemons

Hazard	Hazard Description	Severity	Likelihood	Significance
Staph. aureus	Introduction of Staph aureus from personnel	2	1	2
Cleaning chemical residues on equipment	Introduction of chemical residues from cleaning chemicals used to clean equipment	2	1	2
Metal	Introduction of metal from equipment	2	1	2
Glass	Introduction of glass from broken lighting	2	1	2

5. Mix with water

Hazard	Hazard Description	Severity	Likelihood	Significance
Cryptosporidium	Introduction of Cryptosporidia from contaminated water supply	3	1	3
Metal	Introduction of metal from equipment	3	1	3
Glass	Introduction of glass from broken lighting	3	1	3

6. Boil

Hazard	Hazard Description	Severity	Likelihood	Significance
Yeasts and mould	Survival of yeast and mould due to inefficient blanching	2	1	2
Metal	Introduction of metal from equipment	3	1	3

7. Drain

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Introduction of metal from equipment when draining	3	1	3

8. Plunge into coolwater

Hazard	Hazard Description	Severity	Likelihood	Significance
Cryptosporidia (contaminated water supply)	Introduction of Cryptosporidia due to contaminated water supply	2	1	2

9. Drain

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Introduction of metal from equipment when draining chopped lemons	2	1	2

10. Mix

Hazard	Hazard Description	Severity	Likelihood	Significance
Vegetative pathogens	Introduction of vegetative pathogens due to dirty equipment	3	1	3
Metal	Introduction of metal from equipment	3	1	3
Plasters	Introduction of plasters from personnel when mixing	2	1	2

Hazard	Hazard Description	Severity	Likelihood	Significance
Glass	Introduction of glass from broken lighting	3	1	3

11. Heat and stir

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Introduction of metal from equipment when stirring mixture	2	1	2

12. Simmer

Hazard	Hazard Description	Severity	Likelihood	Significance
Glass	Introduction of glass from broken lighting	3	1	3

13. Cool < 3 degrees Celsius

Hazard	Hazard Description	Severity	Likelihood	Significance
Glass	Introduction of glass from broken lighting	3	1	3

14. Add honey and mix

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Introduction of metal from equipment	2	1	2
Glass	Introduction of glass from broken lighting	3	1	3

15. Yogurt piped into hopper

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Introduction of metal from equipment	3	1	3

16. Mix

Hazard	Hazard Description	Severity	Likelihood	Significance
Vegetative pathogens	Introduction of vegetative pathogens due to dirty equipment	3	1	3
Metal	Introduction of metal from damaged equipment	3	1	3
Glass	Introduction of glass from broken lighting	3	1	3

17. Lid and pack

Hazard	Hazard Description	Severity	Likelihood	Significance
Vegetative pathogens	Introduction of vegetative pathogens due to incorrect sealing of lids	3	1	3
Polyethylene	Introduction of polyethylene (sealing agent) migrating from packaging to food	2	1	2
Plastic	Introduction of plastic from damaged lids	3	1	3

18. Metal detection

Hazard	Hazard Description	Severity	Likelihood	Significance
Metal	Survival of metal to remain in product when the detector fails to detect and / or reject metal	3	1	3

19. Label

Hazard	Hazard Description	Severity	Likelihood	Significance
Non-food grade ink	Introduction of non-food grade ink migrating into product if using incorrect packaging	2	1	2

20. Chilled storage

Hazard	Hazard Description	Severity	Likelihood	Significance
Vegetative pathogens	Growth of vegetative pathogens due to time and temperature abuse	3	1	3

21. Despatch

Hazard	Hazard Description	Severity	Likelihood	Significance
Wood	Introduction of wooden splinters from wooden pallets used in the warehouse	3	1	3

22. Water

Hazard	Hazard Description	Severity	Likelihood	Significance
Cryptosporidia	Introduction of Cryptosporidia from contaminated water supply	2	1	2

23. Cool water

Hazard	Hazard Description	Severity	Likelihood	Significance
Cryptosporidia	Introduction of contaminated water supply	2	1	2

The threshold, above which we consider the hazard to be 'significant' is: **3**

Control Measures

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
1c	Receipt and ambient storage of honey	Clostridium botulinum	Presence of Cl. botulinum in honey from supplier	Approved supplier Specifications
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Salmonella	Presence of Salmonella in natural yoghurt from the supplier	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Listeria monocytogenes	Presence of Listeria in yoghurt from the supplier	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Staph aureus	Presence of Staph aureus in yoghurt from the supplier	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	E.coli	Presence of E.coli in yoghurt from the supplier	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Plastic	Presence of plastic in yoghurt from the supplier	Approved supplier Specifications Receipt of incoming goods procedure Training
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Metal	Presence of metal in yoghurt from the supplier	Approved supplier Specifications Receipt of incoming goods procedure Training Metal detection
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Glass	Presence of glass in yoghurt from the supplier	Approved supplier Specifications Receipt of incoming goods procedure Training

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
2	Chilled receipt and storage of natural yoghurt <5 degrees Celsius	Milk	Milk not declared as an allergen from supplier	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training
5	Mix with water	Cryptosporidium	Introduction of Cryptosporidia from contaminated water supply	Approved supplier
5	Mix with water	Metal	Introduction of metal from equipment	Pre-start up checks PPM Training Metal detection
5	Mix with water	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check
6	Boil	Metal	Introduction of metal from equipment	Pre-start up checks PPM Training Metal detection

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
7	Drain	Metal	Introduction of metal from equipment when draining	Pre-start up checks PPM Training Metal detection
10	Mix	Vegetative pathogens	Introduction of vegetative pathogens due to dirty equipment	Training Cleaning procedure SOP
10	Mix	Metal	Introduction of metal from equipment	Pre-start up checks PPM Training Metal detection
10	Mix	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check
12	Simmer	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check
13	Cool < 3 degrees celcius	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
14	Add honey and mix	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check
15	Yogurt piped into hopper	Metal	Introduction of metal from equipment	Pre-start up checks PPM Training Metal detection
16	Mix	Vegetative pathogens	Introduction of vegetative pathogens due to dirty equipment	Cleaning schedules Training SOP
16	Mix	Metal	Introduction of metal from damaged equipment	Pre-start up checks PPM Training Metal detection
16	Mix	Glass	Introduction of glass from broken lighting	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check
17	Lid and pack	Vegetative pathogens	Introduction of vegetative pathogens due to incorrect sealing of lids	PPM Training Pre-start up checks

Step No.	Step Name.	Hazard	Hazard Description	Control Measures
17	Lid and pack	Plastic	Introduction of plastic from damaged lids	Training SOP Pre-use check
18	Metal detection	Metal	Survival of metal to remain in product when the detector fails to detect and / or reject metal	PPM Calibration SOP Metal detection policy Training
20	Chilled storage	Vegetative pathogens	Growth of vegetative pathogens due to time and temperature abuse	Calibration Temperature control PPM Training
21	Despatch	Wood	Introduction of wooden splinters from wooden pallets used in the warehouse	Training Wood policy

CCPs for significant hazards

For this study, we are using the **Campden** decision tree.

Step No.	Hazard	Control Measures	Decision Tree	CCP?
1c	Clostridium botulinum	Approved supplier Specifications	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	Salmonella	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	Listeria monocytogenes	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
2	Staph aureus	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	E.coli	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	Plastic	Approved supplier Specifications Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	Metal	Approved supplier Specifications Receipt of incoming goods procedure Training Metal detection	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
2	Glass	Approved supplier Specifications Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
2	Milk	Approved supplier Specifications Temperature control Receipt of incoming goods procedure Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
5	Cryptosporidium	Approved supplier	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
5	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
5	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
6	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No
7	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No
10	Vegetative pathogens	Training Cleaning procedure SOP	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
10	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No
10	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
12	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
13	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
14	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
15	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No
16	Vegetative pathogens	Cleaning schedules Training SOP	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
16	Metal	Pre-start up checks PPM Training Metal detection	Q1: No Q2: Yes Q2a: N/a Q3: No Q4: Yes Q5: Yes	No

Step No.	Hazard	Control Measures	Decision Tree	CCP?
16	Glass	Brittle glass and plastic policy Training Glass breakage procedure Pre-start up check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
17	Vegetative pathogens	PPM Training Pre-start up checks	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
17	Plastic	Training SOP Pre-use check	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
18	Metal	PPM Calibration SOP Metal detection policy Training	Q1: No Q2: Yes Q2a: N/a Q3: Yes Q4: N/a Q5: N/a	Yes

Step No.	Hazard	Control Measures	Decision Tree	CCP?
20	Vegetative pathogens	Calibration Temperature control PPM Training	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No
21	Wood	Training Wood policy	Q1: Yes Q2: N/a Q2a: N/a Q3: N/a Q4: N/a Q5: N/a	No

Critical limits for the CCPs

The following critical limits have been established for the CCPs.

Step No.	Step Name.	Hazard	Critical limit	How was the critical limit determined?	Will the critical limit control the specific hazard?	Can the critical limit be measured or observed in real time?
18	Metal detection	Metal	Ferrous 1.0mm, Non-ferrous 1.5mm and Stainless Steel 2.5mm	We sought advice from the company that supplied the metal detector to determine the CCP. The smallest pieces of metal detectable by the metal detection machine was used to set the critical limit.	Yes	Yes

The HACCP Plan

Process step	Step no.	Hazard	Control measure	Critical limit	Monitoring procedures	Corrective action
Metal detection	18	Metal	PPM Calibration SOP Metal detection policy Training	Ferrous 1.0mm, Non-ferrous 1.5mm and Stainless Steel 2.5mm	<p>Routine checks that the metal detector is able to both detect and reject metal test pieces (2.5mm Stainless Steel, 1.5 Non-Ferrous and 1.0 F).</p> <p>A trained metal detection operator will carry out this activity and a trained deputy will carry out this activity in the absence of the operator.</p> <p>Monitoring activity frequency: Monitoring activity frequency= Start up, after break and at hourly intervals during a run</p> <p>How the monitoring activities are carried out: The three test pieces will be placed onto the top of three individual yoghurt pots, these are referred to as 'test pots'. Each test pot will be passed through the metal detector. The operator will check that the machine is able to detect and reject the test yoghurt pots. The operator will check that the machine is able to detect and reject the test yoghurt pots.</p> <p>The following people are responsible for monitoring actions at this CCP: Metal detection operator. The deputy is: Deputy metal detection operator</p>	<p>Corrective action to be taken: If the machine does not detect and reject any metal detection pieces in the test pots the metal detection operator will stop the line, report the issue and call an engineer to fix and check the machine. Production will only continue once the Technical Manager and/or the Production Manager give authorisation.</p> <p>To prevent reoccurrence a full investigation will be carried out to identify the root cause/s and a review of procedures and the HACCP plan will be undertaken.</p> <p>Personnel who have the authority to take the stated corrective action: Trained metal detection operators.</p> <p>To prevent any 'potentially' unsafe product from reaching the consumer, all product from the last good check will be quarantined and stored in the chill storage area labelled QUARANTINE. All of these pots will need to be re-tested to ensure none of them contain metal. Any product found to contain metal will be thrown away and the metal within the product examined to identify its source.</p>

The results of monitoring are recorded: CCP 1 monitoring records file.

Monitoring records will be checked and signed off by **Technical Manager** at the frequency of: **Daily (minimum)**

Actions for product produced when the CPP was out of control will be recorded in: Non-conforming product file ref: NCP002.

All personnel are trained and competent for performing the activities stated.

Records of competency are maintained.

Verification

Validation study

Validation of the Metal Detector was carried out by an external company called 'Safe Produce'. The records for this can be found in the Validation Study section of the HACCP plan. Senior members of the company were involved in this validation to ensure the worst case scenario was carried out as part of the validation.

Eugenie Green is responsible for ensuring the contents of the HACCP plan are validated and will also formally sign off the HACCP plan.

The following verification activities are undertaken:

Internal audits of

- Prerequisites
- Records of monitoring
- Corrective actions

External auditing programmes

- Supplier audits

Finished product

- Microbiological testing
- Chemical testing

Interim product

- Microbiological testing
- Chemical testing

Other

- Environmental monitoring of production area
- Addressing the findings of customer and third party audits
- Trending and analysing customer complaints

Reviewing

- Product disposal
- Trending of monitoring results

All verification records are maintained

The HACCP system is formally reviewed **Annually**.

Eugenie Green is responsible for carrying out a formal annual review.

The following triggers will initiate a review in the organisation:

- Change in raw material/ingredients/product formulation/packaging
- Change of raw material supplier
- Changes in layout and environment of the factory
- Changes in cleaning and disinfection programme (i.e. a change to any supporting prerequisite programme)
- Emergence of foodborne pathogens with public health significance
- Changes in legislation
- New scientific/technical knowledge (e.g. new information on hazards and control measures)
- Unexpected use of product by the consumer

All records from reviews are documented, brought to the attention of senior management and used to keep the HACCP plan up-to-date.

Documentation and record keeping

Documentation relating to this HACCP study that the business retains:

- Scope of the study
- Reference to prerequisite programmes
- HACCP team members with details of their role, experience, training and qualifications
- Product description
- Intended use of the product
- Flow diagram, and the confirmation that it is correct
- Relevant hazards (as determined from the hazard analysis) and control measures
- Details of all CCP's that have been determined
- Details of verification activities, including the programme for scheduled review and a list of factors that should initiate a review

Other supporting information that is retained

Scope of the study

Reference to prerequisite programmes

HACCP team members with details of their role, experience, training and qualifications

Product description

Intended use of the product

Flow diagram, and confirmation that it is correct

Relevant hazards (as determined from the hazard analysis) and control measures

Details of all CCP's that have been determined

Details of verification activities, including the programme for scheduled review and a list of factors that should initiate a review

Documentation control

All documentation has a unique reference number which is up-dated if the document is changed. A record of all documentation held and corresponding reference numbers can be found in the 'document control' section of the food safety management system folder.

The maximum length of time we retain this information for is **10 years**

All records are accessible, accurate and up to date.