

This plan conforms to the following legislation and regulations:-

The Food Hygiene (England) Regulations 2006

The Food Standards Act 1999

Weights and Measures Act 2005

European Regulation (EC) 834/2007 & 889/2008

European Regulation (EC) 1935/2004

Study: Charles Faram & Co Ltd	HACCP ANALYSIS	Issue Number: 11
Prepared by: P Corbett and T Luckham	Issue Date: Aug 2015	
Revised by: R Luckham	Date: Oct 2022	To Be Reviewed: Annually

Changes to the Manual

June 2010: -	Change of team members. Inclusion of reference to relevant legislation and regulations at front of plan.
June 2011: -	Include additional checks and procedures for organic hops.
Feb 2014: -	Include CCPs for pelleting hops. Include additional details and purging for processing organic hop pellets.
Aug 2015: -	Hops being blown across 'gravity trap' replaces 'shaker' tray to remove foreign objects from broken up hops.
April 2016: -	Change of team members.
April 2017: -	Reviewed the HACCP plan.
Sept 2017: -	Reviewed the HACCP plan.
Sept 2018: -	Reviewed the HACCP plan.
Oct 2019: -	CCP 5 added – air filter to remove string / twine Change of team members & reviewed the HACCP plan.
Nov 2020: -	Reviewed the HACCP plan.
Dec 2021: -	Reviewed the HACCP plan.
Oct 2022: -	Reviewed, Change of team members

Holders of the HACCP Manual

Electronic version (master copy) – Location - Z:\QC\Quality Control\HACCP

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Management Commitment

Proposed by: Tim Luckham Approvers Name: Paul Corbett

Revised HACCP Plan Approved: October 2022

<u>Scope</u>

The scope included all process steps from receipt of materials to final packaged product into warehouse.

The survey included all chemical and physical hazards; microbial hazards were included when product safety or wholesomeness were potentially affected.

The scope did not include the following:

- hazards in materials used for construction of equipment
- Lubrication: all points where there is potential for incidental food contact of lubricant with product are lubricated with food grade oil.
- the storage of chemicals
- pre-requisites: these are dealt with on a site-wide basis before the HACCP study and these aspects are maintained as
 effective by regular audits
- Deliberate sabotage: issues such as site security are dealt with under pre-requisites.

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Pre-requisites

The pre-requisites are:

- Buildings are maintained and secure
- Equipment fit-for-purpose
- Planned maintenance schedule in operation
- All processing machines to use food grade oils and lubricants
- Supplier quality assurance; purchase to specification
- Housekeeping and hygiene
- Personal hygiene
- Workwear supplied
- Staff facilities in place
- Pest control in place and effective
- Policies in place to prevent glass and ceramics entering processing lines
- Control of transport
- Staff training
- Hops supplied are dried to below 12% moisture
- Any pesticides used are done so within permitted levels. Pesticide and heavy metal residue are within permitted levels
- All packaging materials are suitable for purpose. Packing in contact with hops is of food grade.

HACCP Team Members

Russ Johnson (Warehouse Manager) Tim Luckham (Quality / Production Manager) Rich Luckham (Quality & Production Coordinator)

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Product Description

The products are mainly packaged hops; hops are purchased in pockets and bales and are re-packaged and pressed into 5 kilo or 20 kilo Freshpak bags or are processed in to Type 90 pellets in cartons of either 4 x 5kg, 2 x 10kg or 1kg foil bags.

Intended Use of Products

The products are intended for use in the brewing process.

Table 1Impact Rating

Impact rating	Impact	Definition
1	Low	Consumption of the hazard might cause a consumer distaste but will not have any significant adverse physical health effect.
2	Moderate	Consumption of the hazard might cause mild adverse physical health effect or a health effect if the consumer was exposed to the hazard over a long period of time.
3	Severe	Consumption of the hazard might cause severe physical problems (possible hospitalisation/death) in some/all people.

Table 2 Likelihood rating

Likelihood rating	Likelihood	Definition
1	Low	The hazard is present intermittently and if control of the product was absent at this point the hazard would be present in only one part of one batch of product.
2	Moderate	The hazard is present intermittently and if control of the product was absent at this

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		point the hazard would be present in the whole of one batch of product.
3	The hazard is present continuously and if control of the product was absent at this	
	Severe	point the hazard would affect several batches of product.

Risk = Impact x likelihood

Any hazard scoring 3 or more is a significant hazard and must be included in the HACCP study.

POTENTIAL HAZARDS AND CONTROL MEASURES AT CHARLES FARAM & CO LTD

PROCESS STEP Warehouse Storage	HAZARD DESCRIPTION	IMPACT	LIKELIHOOD	RISK	CONTROL MEASURES	ССР
Hops from supplier	High moisture content	1	1	1	Moisture meter checks	
	Organic Hops Not actually organic	1	1	1	Check documentation against incoming bales	
	Manual Handling	1	1	1	Manual handling training	
Truck into store	No hazards	1	1	1	Control of Vehicle Movements – QA68	
Cold store / Production areas	Pest contamination	1	1	1	Pest Control in place	
	Contamination from other products	1	1	1	Segregation / Stored in separate buildings	

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For 5 kilo bags						
Clean down for Organic	Contamination of organic hops with non-organic hops or substances	1	3	3	Complete organic clean down procedure & check list	Yes CCP 1
	Contamination from operators	1	1	1	PPE worn by all production staff	

PROCESS STEP For 5kg Freshpak	HAZARD DESCRIPTION	IMPACT	LIKELIHOOD	RISK	CONTROL MEASURES	ССР
Break clumps	No hazards					
Loading hop batch passes across magnets and gravity trap	Contamination from metals, wood, glass and heavier objects not already removed	3	1	3	Gravity trap and magnets in place	Yes CCP 2
Weigh 5 Kilo	No hazards					
Into chamber	No hazards					
Press	Mechanical failure leaking hydraulic fluid	1	3	3	Physical viewing of leaks Planned maintenance	Yes CCP 3
Foil bags	Contamination from foil	1	1	1	Food grade material from approved suppliers	
Manually bale into foil bags	Contamination from operator	1	1	1	Operators supplied with PPE	
Weigh (manually remove hops to weight)	No hazards					
Remove oxygen from packs	Nitrogen	1	1	1	Procedural testing for residual oxygen	

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Package on	No hazards			
conveyor				
Label	No hazards			
Palletise	No hazards			
Pack into outer carton	No hazards			

PROCESS STEP	HAZARD DESCRIPTION	IMPACT	LIKELIHOOD	RISK	CONTROL MEASURES	ССР
Label carton	No hazards					
Stack on pallets	No hazards					
Store	No hazards					
Despatch	No hazards					
Additional steps for 20 kilo bags						
Split pocket / bale in 4	Contamination from operator	1	1	1	Operators supplied with PPE	
For T90 Pellets						
Clean down for Organic	Contamination of organic hops with non-organic hops or substances	1	3	3	Complete organic clean down procedure & check list. Purge 30kg hop pellets through plant (and discard / sell as non-organic)	Yes CCP 1
Break clumps	No hazards					
Loading hop batch passes across magnets and gravity trap	Contamination from metals, wood, glass and heavier objects not already removed	3	1	3	Gravity trap and magnets in place	Yes CCP 4

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Into pellet hopper	String/twine mixed in with pellets	1	2	2	Air filter in place to remove any lighter objects (string / twine etc	Yes CCP 5
Into auto weigher	No hazards					
Into bagging machine - foil bags	Contamination from foil	1	1	1	Approved suppliers – food grade material	
Remove oxygen from forming tube	Nitrogen	1	1	1	Procedural testing for residual oxygen	
Pack foil bags into cartons	No hazards					
Label	No hazards					
Stack on pallets	No hazards					
Store	No hazards					
Despatch	No hazards					

Critical Control Points were identified using a decision tree

PROCESS STEP	HAZARD	CONTROL	CCP	CRITICAL LIMITS	MONITORING	CORRECTIVE ACTIONS
	DESCRIPTION	MEASURES			PROCEDURES	
Organic processing	Contamination from non-organic hops	Complete clean down of all machinery and work area's	CCP1	Operators follow procedures for cleaning	Production & Quality Manager authorises commencement of production	Operator stops production. Authorised to commence by Production & Quality Manager.

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Freshpak process hop material passes over magnets and gravity trap	Contamination from metals and heavier objects not already removed	Gravity trap and magnets in place	CCP 2	Operator checks and cleans gravity trap and magnets daily	Operator records checks on the daily log sheet. The records are monitored by the Production & Quality Manager	Operator stops processing. Supervisor quarantines packed product for checking. Released only by signature of Production & Quality Manager.
Press	Hydraulic fluid	Physical viewing of leaks	CCP 3	Operator checks daily for leaks before the start of processing	Operator records checks on the daily log sheet. The records are monitored by the Production & Quality Manager.	Operator stops press. Supervisor quarantines packed product for checking. Released only by signature of Production & Quality Manager.
Pelleting process hop material passes over magnets and gravity trap	Contamination from metals and heavier objects not already removed	Gravity trap and magnets in place	CCP 4	Operator checks and cleans gravity trap and magnets daily	Operator records checks on the daily log sheet. (Process Checks for Magnet and Gravity Trap QA79) The records are monitored by the Production & Quality Manager.	Operator stops processing. Supervisor quarantines packed product for checking. Released only by signature of Production & Quality Manager.
Hopper – Pellets pass across the hopper air filter removes any non- pellet material	Contamination from string and twine objects not already removed	Air Filter in place	CCP 5	Operator checks and cleans Air filter weekly	Operator records checks on the cleaning. Daily Hygiene Record Pelleting QA3) The records are monitored by the Production & Quality Manager.	Operator stops processing. Supervisor quarantines packed product for checking. Released only by signature of Production & Quality Manager.