

Tutts Clump Cider HACCP

Potential Hazards Overview

| <u>Contaminant</u> | <u>Origin</u> | <u>Ingress</u> | <u>Risk/Severity</u> |
|-----------------------------------|----------------------|---------------------|----------------------|
| Purexol 2 & Met/sulphite solution | Cleaning Agent | Process contaminant | Low/Low |
| Foreign Bodies | Rodent, insect, bird | Process contaminant | Low/Low |

Commentary

As a product of food manufacture, during which apples are made into Cider, risks of microbial contamination leading to serious threat to consumers has always been judged as **low**.

We have never had a problem, but within the industry as a whole, by far the majority of actions against, and product recalls by, has been concerned with ingress of product contaminants such as caustic, glass or foreign bodies. As a manually operated 'craft' Cider maker, all operations are carried out with direct input by the operator. Hence there is a reliance on methods and routines, rather than automation and process monitoring which then requires interpretation and historic analysis.

Process Summary

The processes of making Cider is only carried out between August and December each year when fresh apples and pears are available. All fruit is sourced locally by us and is all pesticide free. The fruit is processed within a few days of arrival so rodent ingress is eliminated. All fruit is hand sorted and any bad ones discarded, then fruit is washed in a tank of fresh water supplied by Thames Water, then fruit is put through a mill and turned into pulp. This pulp is then put in the press to press out the juice. This juice is then pumped into 220 litre containers, which are fitted with an airtight lid and an air lock to allow co2 gases to escape, and left to ferment. The spent pomace is collected at the end of each day by a local farmer.

Cleaning and Sterilising

Plant

The protocols used are to clean and sterilise each fermentation vessel after every use. The process of fermentation results in dead yeast residues, removable by fresh water, Sanitising is carried out with Purexol 2 followed by a met/sulphite solution, which dissociates with correct use into harmless residues.

Containers

Vessels are cleaned and sterilised with high-pressure water and rinsed with cold water. Both these cycles are done by hand, and supervised by the operator. Vessels are inspected individually before filling and eventually at the point of use the product is delivered to the consumer via an in line filter. All equipment is cleaned with fresh water, Purexol 2 and met/sulphite solution, so is low risk.

Bottles

About 70% of production is filled into glass bottles at the bottling contractors site, the remainder is filled into barrels and bag in box at our premises. Again this is done by hand so cleanliness is observed continually.

Hazard Analysis

Generalised ratings used for assessments

Key: Likelihood of occurrence (1-3)/Severity of outcome (1-3)

Likelihood of occurrence

Severity of product contamination

1. No or minimal risk 2. Definite risk 3.High risk

1.No or low severity. 2.Moderate severity 3. Severe outcome

| Hazard | Rate | CCP | Protocol | CCP/ Monitor | Controls |
|--|-------------|--------------|--------------------------------|--|------------------|
| Additions Met/sulphite solution | 1 | Yeast | Procedure Storage chemicals | At use/Operator separate storage/ “ | Ullage Ullage |
| Cleaning Met/sulphite solution | 1 | Vessel | Procedure | Prior to fill/fermentation | Ullage |
| Cask Washing Foreign Body/Contaminant | 1 | Empty vessel | Procedure | After wash inspection | Re-wash |
| Met/sulphite solution | 1 | Filling | Procedure | Hand operator | Reject |

Product Tractability – Summary of records

All: Batch brewing record is recorded by GYLE NUMBER, a unique code for each batch giving date, quality and record of materials used with relevant batch number

Brewing Materials

All fruit is recorded from its source

Brewing Procedures

Non-conforming results – generally quality issues

Cask filling

Record of date, operator and batch or gyle number

Product Recall

Customer details: Hard copy and computer.