1. **SCOPE**
2. Packing of basket to unloading of retort
3. **PURPOSE**
4. To ensure that there is no survival and growth of biological contaminants of public health significance (mainly *Clostridium botulinum*)
5. **DEFINITIONS**
   1. **Hypoglycin:** is a naturally occurring toxic organic compound found in ackee

* 1. **Contaminant:** any substance that causes water air or food to no longer be suitable for use
  2. **HACCP:** Hazard Analysis Critical Control Points
  3. **Corrective Action:** Procedures to be followed when a deviation occurs.
  4. **Critical Control Point (CCP):** A step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.
  5. **Critical Limit:** A criterion that must be met for each preventative measure associated with a critical control point.
  6. **Deviation:** Failure to meet a critical limit.
  7. **Hazard:** A biological, chemical, or physical property that may cause a food to be unsafe for consumption
  8. **Monitor:** To conduct a planed sequence of observations or measurements to assess whether a CCP is under control and to produce an accurate record for future use in
  9. **Verification:** The use of methods, procedures, or tests in addition to those used in monitoring to determine if the HACCP procedure results are in compliance.
  10. **Validation:** The use of methods, procedures, or tests other than those used in monitoring and verifying to ensure the HACCP procedures results are correct.

1. **PROCEDURE**
2. **Responsibility**

**Retort operators/Functional Responsibility**

1. **Critical Limits and Monitoring**
2. For each retort cook, the following are monitored:
3. Initial temperature of each cook. Before the start of processing, the IT of each retort load should be determined from a can representative of the coldest can for each retort load. This should be taken from the first can from the first retort basket. This can should be removed, labeled and set aside. When the retort is full and ready to be closed, the can should be shaken, punctured and the centre Temperature taken. The minimum initial temperature should be 130oF.
4. The start and end time for the venting process (See TSL Recommended Venting procedure). The venting time should be a minimum of 11 minutes for retort #1 and 13 minutes for retort #2
5. The temperature at the end of the venting schedule is recorded and should be at least 220oF.

**Acidified Brine (Citric acid)**

1. The retort temperature as indicated by the thermometer attached to the retort should be a minimum of 245oF.
2. The retort time for A2 cans (from the time the temperature reaches and is held at 245oF) should be a minimum of 6 minutes

**Non-acidified (2.5 %, Salt only)**

1. The retort temperature as indicated by the thermometer attached to the retort should be a minimum of 245oF.
2. The retort time for A2 cans (from the time the temperature reaches and is held at 245oF) should be a minimum of 10 minutes
3. For each cook, the recorder chart should be started so that an automated record of the cook is also available.
   * 1. **The Retort Operator/ Maintenance Manager**
4. If there are any deviations from the specifications, the Process Authority, Technological Solutions Limited is contacted, for adjustments to the cook time. The maintenance manager will adjust boiler if the issue is steam related.

1. **The Retort Operator/ QC Manager** **/ Functional Responsibility**
2. If there are deviations from the specifications, the QC Manager is also notified and the batch held. This lot is released against commercial sterility results for that cook batch.

1. A deviation report is completed if:
2. The initial temperature falls below 130oF
3. The venting time is less than 11 minutes for retort #1 and 13 minutes for retort #2
4. The temperature at the end of venting is below 220oF
5. The temperature of the retort thermometer during the cook falls below 245oF
6. The cook time at 245oF for A2 cans is 6 minutes for acidified and 10 minutes for non-acidified.
7. The temperature on the recorder chart rises above the temperature of the retort thermometer.
8. **Verification**
9. **QC Assistant/Functional Responsibility**

In addition, it is verified by spot checks of cook records against the actual readings.

1. **Quality Manager/** **Functional Responsibility**

Review the monitoring forms weekly. Send one batch per Ackee season for Commercial Sterility

1. **RECORDS**

The log of CCP4 Monitoring Form

[..\..\..\..\FORMS\CCP Forms\Ackee\CCP 4 & 5 Retorting & Cooling\CCP 4 & 5 Retorting & Cooling March 21, 2016.docx](file:///\\Dc2\j\FoodSafety\FSSC%2022000%20Management%20System\FORMS\CCP%20Forms\Ackee\CCP%204%20&%205%20Retorting%20&%20Cooling\CCP%204%20&%205%20Retorting%20&%20Cooling%20March%2021,%202016.docx)

CCP Review Form

[..\..\..\..\FORMS\CCP Forms\Ackee\Review Form Ackee\CCP Review Form - Ackee.docx](file:///T:\FSSC%2022000%20Management%20System\FORMS\CCP%20Forms\Ackee\Review%20Form%20Ackee\CCP%20Review%20Form%20-%20Ackee.docx)

Chart recorder (Submitted along with monitoring record)

Deviation cook schedule

1. **REFERENCES**

Corrections and Corrective Actions

[..\..\..\ManagementSystemProcedures\CorrectionsAndCorrectiveActions\CorrectionsandCorrectiveActions.docx](file:///\\Dc2\j\FoodSafety\FSSC%2022000%20Management%20System\PROCEDURES\ManagementSystemProcedures\CorrectionsAndCorrectiveActions\CorrectionsandCorrectiveActions.docx)

Calibration Records for the Thermometer and Pressure Gauge (Located in QC lab)

Scheduled Process for Acidified Ackee in Brine (A2 & A10) (Located in QC lab)

Vent Schedule (Retort 1& 2) (Located in QC lab)

Retort Inspection Report (Located in QC lab)

1. **DOCUMENT CONTROL INFORMATION**
2. **APPROVAL AUTHORITY**

|  |  |  |  |
| --- | --- | --- | --- |
| Authored by; | REVISED BY | APPROVAL BY | DATE |
| Monacia Williams | Food Safety Team | Food Safety Team | September 25, 2018 |