1. **SCOPE**

Packing of basket to unloading of retort

1. **PURPOSE**

To ensure that there is no survival and growth of biological contaminants of public health significance mainly (*Clostridium botulinum*)

1. **DEFINITIONS**
   1. **HACCP:** Hazard Analysis Critical Control Points
   2. **Corrective Action:** Procedures to be followed when a deviation occurs.
   3. **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.
   4. **Critical Limit:** A criterion that must be met for each preventative measure associated with a critical control point.
   5. **Deviation:** Failure to meet a critical limit.
   6. **Hazard:** A biological, chemical, or physical property that may cause a food to be unsafe for consumption
   7. **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
   8. **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.
   9. **Validation:** The use of methods, procedures, or tests other than those used in monitoring and verifying to ensure the HACCP procedures results are correct.
   10. **Contaminant:** any substance that causes water, air or food to no longer be suitable for use
2. **PROCEDURE**
3. **Responsibility**

**Retort operators/Functional Responsibility**

1. For each retort cook, the following are monitored:
2. Initial temperature of each cook. This is determined by setting aside the first can which is sealed and taking the temperature of this can when all baskets for that cook have been packed into retort and the cook is about to start. The minimum initial temperature should be 150°F.
3. The start and end time for the venting process. The venting time should be a minimum of 11 minutes for retort #1 and 13 minutes for retort #2.
4. The temperature at the end of the venting schedule is recorded and should be at least 220 oF.
5. The retort temperature as indicated by the retort thermometer attached to the retort should be a minimum of 241°F for A2 and 247°F for A10 cans.
6. The retort time (from the time the temperature reaches 240°F to the time the steam is turned off) should be a minimum of 52 minutes(A2 ) & (A10) 246°F for a minimum of 58 minutes
7. For each cook, the recorder chart should be started so that an automated record of the cook is also available.
8. **The Retort Operator/ Maintenance Manager**
9. If there are any deviations from the specifications, the Maintenance Manager is notified and the boiler is adjusted where appropriate.
10. **The Retort Operator/ Food Safety Team Leader/ Functional Responsibility**
11. If there are deviations from the specifications, the Food Safety Team Leader is also notified and the batch held for a period of 14 days.
12. The Deviation Cook Scheduled developed by the Process Authority, Scientific Research Council, is followed when a deviation occurs.
13. **A deviation report is completed if:** 
    1. The initial temperature falls below 150°F
    2. The venting time is less than 11 minutes for retort #1 and 13 minutes for retort #2
    3. The temperature at the end of venting is below 220°F
    4. The temperature of the Retort thermometer during the cook falls below 241°F/247oF
    5. The cook time at 240°F is less than 52 minutes (A2) & 58 minutes at 246°F for A10
    6. The temperature on the recorder chart rises above the temperature of the retort thermometer.
14. **Verification**
15. **QC Officer/ Functional Manager**

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

1. **Food Safety Team Leader/Function Responsibility**
2. This CCP is reviewed at least weekly
3. As a validation to the cooking process samples are sent to an approved external lab for Commercial Sterility every 1 in 15 batch.
4. **RECORDS**

The log of CCP2 Monitoring Form

[..\..\..\..\FORMS\CCP Forms\Callaloo\CCP 2 & 3 Retorting & Cooling\CCP4 & 5 Retorting & Cooling.docx](../../../../FORMS/CCP%20Forms/Callaloo/CCP%202%20&%203%20Retorting%20&%20Cooling/CCP4%20&%205%20Retorting%20&%20Cooling.docx)

Recorder Chart (Submitted along with monitoring record)

Deviation cook schedule

CCP Review Form

[..\..\..\..\FORMS\CCP Forms\Callaloo\CCP Review Form-Callaloo A2\CCP Review Form-Callaloo December 3, 2018.docx](../../../../FORMS/CCP%20Forms/Callaloo/CCP%20Review%20Form-Callaloo%20A2/CCP%20Review%20Form-Callaloo%20December%203,%202018.docx)

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 Callaloo 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**

7.1 **APPROVAL AUTHORITY**

|  |  |  |
| --- | --- | --- |
| REVISED BY | APPROVAL BY | DATE |
| Food Safety Team | Food Safety Team | September 25, 2018 |