

Dry Fermented Sausage Hazard Analysis of Critical Control Points (HACCP) Checklist for Operators

When thinking about your HACCP plan, a good place to start is by writing out your entire process as if you were explaining it to a new employee and the plan was all they had to make your product correctly from start to finish. Which steps are critical to making a safe process (critical control points and critical limits)? What should they do if something goes wrong at one of these steps (corrective actions)? How will you know they did it correctly (records)? And who will ensure they did it correctly (verification)?

Before a plan may be approved a food establishment must have a satisfactory inspection history for the past year

Please include:

- Variance request application form
- Copies of your last two semi-annual inspections
- Name of each food product(s)
- A list of all ingredients. Include a copy of starter culture label and instructions
- Explanation of designated work area for special processing
- Information on how the product will be tracked (batch number) until used in the facility
- An accurate, step-by-step description (the food flow) of how the product is formulated, prepared, mixed, measured, formed, fermented, dried, etc. for each product
- Laboratory analysis will be required to verify onsite testing. A test batch will be required to demonstrate the process meets standards for pH and water activity (Aw)
- Mandatory requirements in your HACCP plan:
 - Use of certified pork (trichinae-free) or the equivalent as defined by the USDA
 - Use of commercial starter cultures
 - Each batch needs to be tested for pH drop
 - A pH meter is required. Staff must know how to use, calibrate and maintain the meter
 - A water activity (a_w) meter is required. Each batch must be tested for final water activity
 - Provide a method to measure humidity in the drying process

- 1 gram resolution scale for measuring nitrite
 - Degree-hour calculation for process
- A process yielding a 5-log reduction of E. coli O157:H7 needs to be included. There is scientific documentation for four approved options to produce a safe product by either cooking or applying a mild heat treatment, which are:
- Ferment at 90F to pH of 5.3 and apply cook, then dry for ≥ 7 days (large casing)
 - Ferment at 90F to pH of 4.6 and hold at 90F for ≥ 6 days (small casing)
 - Ferment at 90F to pH of 4.6 and apply cook (small and large casing)
 - Ferment at 110F to pH 4.6 and hold at 110F for ≥ 4 days (small and large casing)
- Appropriate Standard Operating Procedures (SOPs) including, but not limited to; procedures minimizing bare hand contact with ready-to-eat foods, handwashing protocols and how cross contamination between raw and ready-to-eat foods will be prevented and where the processing will occur. Also include a list of equipment and materials used in the process. Describe how equipment is cleaned and sanitized. Explain how often in the process equipment is cleaned (before beginning, between types of foods, etc.). Outline how new staff will be trained on proper procedure for your process. There are templates available at: <http://sop.nfsmi.org/HACCPBasedSOPs.php>
- Identification of the most important food safety control(s) for each process. Each of these important food safety controls is called a Critical Control Point (CCP). CCPs for dried fermented sausage usually include; pH drop, final A_w , parts per million (ppm) of nitrite/nitrates used and meeting the degree-hour rule for fermentation. More complicated sausage processes will have more CCPs.

For Each Critical Control Point:

- Identify acceptable levels. These levels are called Critical Limits (CLs). Critical Limits must be things you can measure. Examples are; pH drop to 4.6 within ___ hours or equivalent degree hours, water activity (a_w) less than .85, ___ ppm nitrite, etc.
- Describe how the CLs will be measured. Include who will measure, how they will measure and when they will measure.
- Who will verify that the measurements and procedures are correctly documented and followed? How often will this be done?
- What are the actions taken by the person in charge if the CLs for each critical control point are not met? Corrective actions (CA) need to be specific to the critical limit. For example, what will you do when the pH does not reach 4.6 in ___ hours? What will happen if the a_w is not .85 when tested?
- Include samples of the logs that will be used to keep track of the measurements, verify the procedures are correct, and record CAs when CLs are not met. A single form could be used for all.
- Provide a food safety training program that shows employees and supervisors know how to perform the steps in this plan, how to use necessary equipment and how to implement corrective actions.
- Provide a refrigeration temperature log to assure your refrigeration units can hold at 41F or less. Cooling verification charts and final cook temperature veri-

This checklist must be complete before submission to OHA

fication charts will also be required.

- Include a statement that an approved, signed copy of the plan will be kept on the premises for review by the regulatory authority. Also a statement that the regulatory authority will be informed in advance of any significant changes in the process that may affect the accuracy or effectiveness of the plan.

Sample Dry Fermented Sausage Food Flow – Salami

