

## Smoking and Curing of Meats HACCP Plan Requirements

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Curing is addition of salt, sugar, and nitrite or nitrate to meats for the purposes of preservation, flavor enhancement, or color development. Smoking as it relates to this HACCP requirement is the process by which the shelf life of the meat product is extended due to the anti-microbial properties of some the chemical compounds found in smoke. All facilities wishing to use one or both of the above special processes must have an approved HACCP Plan to control for foodborne pathogens.

In addition to the required information on the General HACCP Plan Checklist, all proposed HACCP Plans must comply with the requirements listed below for the respective process to be considered for approval. A separate HACCP Plan must be completed for each special process and food product.

A food establishment operator shall obtain a waiver from the Washoe County Health District before smoking and or curing of meat that is for use at a food establishment (Section 050.335).

**The following guidelines are required to ensure that the process of smoking and or curing in a food establishment results in a product that is safe for human consumption. Fermentation, smoking and curing are often used in hurdle technology to produce a product that is safe for human consumption. If smoking, fermenting or curing, the process and final product may require validation by a processing authority before approval is granted.**

- A. For smoking as a means to extending shelf life, the below requirements must be met before consideration is given to approval of the special process.
- The facility requesting approval will be required to perform a validation study through a processing authority to confirm that the prepared food product is safe for human consumption
  - The facility requesting approval may be required to keep monitoring logs that demonstrate that each batch is produced under the same parameters analyzed by the processing authority. These logs may include but are not limited to: pH logs, salinity logs, grinding logs, calibration logs, temperature logs and humidity logs.
  - The type of smoke (particulate or liquid) must be declared. If using particulate smoke, the wood must be of an approved type and from an approved source (verified by processing authority).
  - Meat products being smoked must be properly arrange in the smokehouse in order to prevent cross contamination and to facilitate equal distribution of heat and smoke.
  - The facility must demonstrate that temperature, time and humidity meets the USDA's Lethality Standards based on the product (verified by processing authority).
  - Meat must be maintained at the required temperature ( $\leq 41^{\circ}\text{F}$ ) prior to processing.
- B. For curing as a means of extending shelf life, the below requirements must be met before consideration is given to approval of the special process.
- The facility requesting approval will be required to perform a validation study through a processing authority to confirm that the prepared food product is safe for human consumption
  - The facility requesting approval may be required to keep monitoring logs that demonstrate that each batch is made exactly like the sample analyzed by the processing authority. These logs may include but are not limited to: pH logs, salinity logs, grinding logs, calibration logs, temperature logs and humidity logs.
  - Meat must be maintained at the required temperature ( $\leq 41^{\circ}\text{F}$ ) prior to processing.
  - The facility must demonstrate that temperature, time and humidity meets the USDA's Lethality Standards based on the product (verified by processing authority).



- Nitrates will only be approved for use in dry cured meats or dry sausage. The critical limits for nitrates will be specific to the product being cured and will need to be verified by the processing authority.
- When curing with nitrite, the level cannot exceed 120 ppm and must be accompanied by 550ppm sodium ascorbate or sodium erythorbate. Residual nitrite must not exceed 40 ppm. These levels will be monitored by the processing authority.
- A list of all ingredients with corresponding units (lb, fl oz, etc.) must be provided for each product that is produced. Alkaline phosphates must not exceed .5% and must be measured by the processing authority.
- Provide the method of curing (dry, stitch or spray pumping, artery pumping, or multi-needle machine pumping). If brining is performed outside of refrigeration it must be refrigerated to  $\leq 41^{\circ}\text{F}$  within 4 hours and brine should be monitored with a salinometer and logged.