§ 318.23 Heat-processing and stabilization requirements for uncured meat patties.

(a) Definitions. For purposes of this section, the following definitions shall apply:

(1) Patty. A shaped and formed, comminuted, flattened cake of meat food product.

(2) Comminuted. A processing term describing the reduction in size of pieces of meat, including chopping, flaking, grinding, or mincing, but not including chunking or sectioning.

(3) Partially-cooked patties. Meat patties that have been heat processed for less time or using lower internal temperatures than are prescribed by paragraph (b)(1) of this section.

(4) Char-marked patties. Meat patties that have been marked by a heat source and that have been heat processed for less time or using lower internal temperatures than are prescribed by paragraph (b)(1) of this section.

(b) Heat-processing procedures for fully-cooked patties. (1) Official establishments which manufacture fully-cooked patties shall use one of the following heat-processing procedures:

<table>
<thead>
<tr>
<th>Minimum internal temperature at the center of each patty (Degrees)</th>
<th>Minimum holding time after required internal temperature is reached (Time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>151</td>
<td>66.1</td>
</tr>
<tr>
<td>152</td>
<td>66.7</td>
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<tr>
<td>153</td>
<td>67.2</td>
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<td>154</td>
<td>67.8</td>
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<tr>
<td>155</td>
<td>68.3</td>
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<tr>
<td>156</td>
<td>68.9</td>
</tr>
<tr>
<td>157 (and up)</td>
<td>69.4 (and up)</td>
</tr>
</tbody>
</table>

(2) The official establishment shall measure the holding time and temperature of at least one fully-cooked patty from each production line each hour of production to assure control of the heat process. The temperature measuring device shall be accurate within 1 degree F.

(3) Requirements for handling heating deviations. (i) If for any reason a heating deviation has occurred, the official establishment shall investigate and identify the cause; take steps to assure that the deviation will not recur; and place on file in the official establishment, available to any duly authorized FSIS program employee, a report of the investigation, the cause of the deviation, and the steps taken to prevent recurrence.

(ii) In addition, in the case of a heating deviation, the official establishment may reprocess the affected product, using one of the methods in paragraph (b)(1) in this section; use the affected product as an ingredient in another product processed to one of the temperature and time combinations in paragraph (b)(1) in this section, provided this does not violate the final product’s standard of composition, upset the order of predominance of ingredients, or perceptibly affect the normal product characteristics; or relabel the affected product as a partially-cooked patty product, if it meets the stabilization requirements in paragraph (c) of this section.

(c) Stabilization. (1) Fully cooked, partially cooked, and char-marked meat patties must be produced using processes ensuring no multiplication of

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1 The equation for the narrative description of the calculation for added water is as follows: \( AW = TW - (TP - (P - 1.0))^4 \). Where \( AW \) = Added Water, \( TW \) = Total Water Determined by Laboratory Analysis, \( TP \) = Total Protein Determined by Laboratory Analysis, \( P \) = Protein Contributed by Group 2 Protein-Contributing Ingredients, 1.0 = Percent Allowance for Group 2 Protein-Contributing Ingredients, 4 = Moisture-Protein Ratio for Cooked Sausage.
§ 318.24 Product prepared using advanced meat/bone separation machinery; process control.

(a) General. Meat, as defined in §301.2 of this subchapter, may be derived by mechanically separating skeletal muscle tissue from the bones of livestock, other than skulls or vertebral column bones of cattle 30 months of age and older as provided in §310.22 of this subchapter, using advances in mechanical meat/bone separation machinery (i.e., AMR systems) that, in accordance with this section, recover meat—

(1) Without significant incorporation of bone solids or bone marrow as measured by the presence of calcium and iron in excess of the requirements in this section, and

(2) Without the presence of any brain, trigeminal ganglia, spinal cord, or dorsal root ganglia (DRG).

(b) Process control. As a prerequisite to labeling or using product as meat derived by the mechanical separation of skeletal muscle tissue from livestock bones, the operator of an establishment must develop, implement, and maintain procedures that ensure that the establishment’s production process is in control.

(1) The production process is not in control if the skulls entering the AMR system contain any brain or trigeminal ganglia tissue, if the vertebral column bones entering the AMR system contain any spinal cord, if the recovered product fails otherwise under any provision of paragraph (c)(1), if the product is not properly labeled under the provisions of paragraph (c)(2), or if the spent bone materials are not properly handled under the provisions of paragraph (c)(3) of this section.

(2) The establishment must document its production process controls in writing. The program must be designed to ensure the on-going effectiveness of the process controls. If the establishment processes cattle, the program must be in its HACCP plan, its Sanitation SOP, or other prerequisite program. The program shall describe the on-going verification activities that will be performed, including the observation of the bones entering the AMR system for brain, trigeminal ganglia, and spinal cord; the testing of the product exiting the AMR system for bone solids, bone

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