

Appendix 5: Cooling of meats after cooking

Whole cooked bulk meat products such as hams and processed sausages are inherently slow to cool due to their size and shape. Standard 3.2.2 clause 7(3) allows for alternative cooling processes to be used if the business can demonstrate that the process used will not adversely affect the microbiological safety of the food, as outlined under clause 25. It is important that alternative cooling processes are checked with the relevant enforcement agency.

Australian Standard AS 4696:2007 *Hygienic Production and Transportation of Meat and Meat Products for Human Consumption* specifies alternative cooling requirements for cooling cured and uncured meat products. These cooling regimes have been based on scientific evidence that showed that the growth of *Clostridium perfringens* can be controlled to safe levels.

Cooling requirements for cooked meat products (AS 4696: 2007)

| Temperature | Maximum time (hours) to achieve temperature specified | |
|--------------|---|------------------------------|
| | Uncured products | Cured* products |
| 52°C to 12°C | Within 6 hours | Within 7.5 hours |
| 12°C to 5°C | Within 24 hours [§] | Within 24 hours [§] |

* A product is cured if curing salts have been added at a level that preserves the product, being a minimum 2.5% salt on water phase and 100 ppm nitrite in-going.

§ the cooling to 5°C must be within 24 hours of completion of cooking and is in addition to cooling from 52°C to 12°C within the specified time.

Businesses should monitor the cooling process to make sure it meets the specified requirement.

If a producer of ready-to-eat meats is unable to meet these cooling requirements, it must be able to validate the alternative process it wishes to use. Meat and Livestock Australia provide guidance on documenting alternative arrangements for cooling in Guidelines for the Safe Manufacture of Smallgoods — see Resources and References.