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(54) Titre : VIANDE CUITE

(54) Title: COOKED MEAT

(57) Abrégé/Abstract:

A method of removing free, unbound water from cooked meat characterised in that the meat is treated with a water absorbing material during or after cooking.



Cooked Meat

5 A method of removing free, unbound water from cooked
meat characterised in that the meat is treated with a
water absorbing material during or after cooking.

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Cooked meat

The present invention relates to a method of removing free, unbound water from cooked meat.

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In the manufacture of cooked ham which is sliced and gas packed, one major problem is free water leakage. Meat proteins are denatured during heat treatment and this causes the water-holding capacity of the meat to decrease. Thus, a cooked ham can never bind or immobilise all the water in the product before heating and if this free water is not allowed to escape before packaging, it appears as visible drip in the packages. When the drip exceeds about 0.3% of the weight of the product (depending on the package size and measuring method), the visual quality of the product is severely reduced.

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In spite of attempts to increase the water holding capacity of ham which include such factors as the use of high quality raw materials (pH 5.7 to 6.1), good salt distribution, efficient tumbling and optimum thermal treatment, the drip problem is not necessarily reduced. It is possible to add polyphosphates, citrate, proteins or carbohydrates to the injection brine to improve the water holding capacity of the products but such components are either not permitted by food legislation in many countries or they are not desired in high quality, pure meat products.

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We have devised a method of removing free, unbound water from cooked meat before packaging.

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Accordingly, the present invention provides a method of removing free, unbound water from cooked meat characterised in that the meat is treated with a water absorbing material during or after cooking.

The present invention is especially advantageous when the cooked meat is a cooked ham or a similar cooked, cured and/or marinated product made from pork, beef, mutton, turkey etc.

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The water absorbing material should be food acceptable and may be a tissue such as paper sheet or a pad of cellulose fibres such as paper or other natural or synthetic absorbing materials.

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Conveniently, the meat is wrapped in the water absorbing material before or after cooking. If the meat is wrapped in the water absorbing material before cooking the water removal takes place during the cooking process usually over a period of from 3 to 10 hours.

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If the meat is wrapped in the water absorbable material after cooking, the water removal may take place before chilling, during chilling, during chilled storage or after slicing. The duration of the treatment generally lasts for from one to several days and preferably from 1 to 4 days conveniently at a storage temperature up to 6°C, preferably 0°C to 4°C.

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During the treatment the meat is advantageously pressed either in a mould or casing e.g. the mould or casing used for cooking or by means of the atmosphere in a vacuum bag.

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In a preferred embodiment of the invention, before cooking, the fresh meat is conventionally cut and trimmed, injected with brine and tumbled at a temperature not exceeding 6°C while allowing at least 24 hours holding (tumbling and resting) between injection and cooking to obtain good salt distribution. The cooking may be carried out in a mould or a casing after which the meat is wrapped in the water absorbing material either directly or after chilling. After

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treatment with the water absorbing material, the meat may be sliced and gas packed in a modified atmosphere.

5 The following Example further illustrates the present invention.

Example 1

10 Fresh hams having pH 5.7 were cut and trimmed. A brine solution having the composition given in Table I was injected with a FOMACO multineedle injector in an amount of 180 g/kg ham.

TABLE I

| | | |
|----|----------------|-------|
| 15 | | % |
| | Water | 83.56 |
| | Curing salt | 13.26 |
| | Dextrose | 3.0 |
| 20 | Ascorbate | 0.17 |
| | Garlic extract | 0.01 |

25 The injected ham was treated under vacuum in Dorit 90 litre tumblers for 15 hours using an interval programme (10 min. on - 10 min. off).

30 The ham was then packed in 12 kg capacity moulds and treated in vacuum for 2 minutes to reduce air pockets before closing the moulds. A total resting time of 15 hours, partly in the moulds, was included to allow for even salt distribution.

The cooking was carried out stepwise as follows:

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1. 62°C chamber temperature to 55°C internal product temperature
 2. 74°C chamber temperature to 68°C internal product temperature

3. Holding at 68°C for 1.5 hours.

The moulds were cooled with a water shower for 10 minutes to ease handling and then opened to drain and weigh the products. Each ham was wrapped in absorbing paper using 500 g paper/ham, then vacuum packed and chilled at 2°C. After 3 days of storage, the hams were weighed to determine the total yield, then sliced (2 mm thickness) and packed in batches of 4 slices in modified atmosphere packages (2 mm headspace, 20% CO₂, 80% N₂). The drip was evaluated visually after one week at 8°C. The yield (corrected for an estimated 5% slicing loss) was 92% and the packages were completely free from visible drip.

Comparative Example

Fresh hams were treated in a similar manner to that described in Example 1 except that they were not wrapped in absorbing paper, vacuum packed and chilled. The yield (corrected for an estimated 5% slicing loss) varied between 97.5 and 102% and all the packages had considerable amounts of visible drip.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A method of removing free, unbound water from cooked meat characterised in that the meat is treated with a water absorbing material after cooking.
2. A method according to claim 1 characterised in that the cooked meat is cooked ham.
3. A method according to claim 1 characterised in that the water absorbable material is paper sheet, a pad of cellulose fibres or other natural or synthetic absorbing materials.
4. A method according to claim 1 characterised in that the meat is wrapped in the water absorbing material.
5. A method according to claim 1 characterised in that the treatment with the water absorbable material is carried out, before chilling, during chilling, during chilled storage or after slicing.
6. A method according to claim 1 characterised in that during the treatment with the water absorbable material the meat is pressed either in a mould or casing or by means of the atmosphere in a vacuum bag.
7. A method according to claim 6 characterised in that the mould or casing is the mould or casing used for cooking.
8. A method according to claim 5 characterised in that the treatment with the water absorbable material is carried out for a period of from 1 to 4 days at a storage temperature from 0°C to 4°C.

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9. A method according to claim 1 characterised in that after the treatment with the water absorbing paper, the meat is sliced and gas packed in a modified atmosphere.

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