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## Draft New Zealand Food Standard for the Production of Uncooked Comminuted, Fermented Meat

**Important Note:**

This proposed standard is work in progress and is a draft version. The proposed Standard, if implemented, will be enabled by law under both the Food Act 1981 and the Animal Products Act 1999 in order to cover all producers of UCFM. This draft Standard is written in a general format however if the proposed Standard is implemented under both Acts then the Standard will be adapted later to suit the two different regimes.

1. Title

Production of Uncooked Comminuted, Fermented Meat (UCFM)

2. Commencement

[This is a draft standard, commencement date will be set following consultation]

3. Interpretation

**APA** means Animal Products Act 1999

**Back slopping** means using the partially fermented batter from a previous batch to initiate fermentation in a subsequent batch

**Batter mix** means all the ingredients in the UCFM recipe that have been combined prior to filling a casing

**Cooked** means product which has been heated so that its core temperature has reached 65°C for 10 minutes, or an equivalent combination of time and temperature, during production

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**Fermentation** means the anaerobic breakdown of sugar into lactic acid within the batter mix

**Food Safety Programme** means a food safety programme approved under the Food Act 1981

**Maturation** means the process of ageing the fermented UCFM to promote drying at a specified temperature and time

**Process Lethality** means the total kill of *Escherichia coli* resulting from the fermentation and maturation process determined from predictive modelling or challenge studies

**Risk Management Programme** means a risk management programme registered under the Animal Products Act 1999

**Starter Culture** means a preparation of microbiologically-safe micro organisms, prepared for the purpose of fermenting meat, which:

- a. produces a controlled reduction of the pH of the meat mix; and
- b. inhibits other bacteria in the meat through:
  - i. generally competing for the nutrients in the meat medium; and
  - ii. producing microbial inhibitors; and
- c. results in the desired quality

**UCFM** means comminuted fermented meat which has not been cooked

**Validation** means evidence obtained by the manufacturing company to confirm the process (fermentation and maturation) outlined in the approved Food Safety Programme or registered Risk Management Programme is complete and effective and will deliver the expected food safety outcomes

**Verification (external)** means checks carried out by an external Party to determine compliance against a set standard

**Verification (internal)** means checks made, via the use of methods, procedures and tests, in addition to monitoring, to determine ongoing compliance against a set standard

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#### 4. Standards for processing UCFM

- a. UCFM must be produced in accordance with this clause
- b. UCFM must be produced in accordance with an approved Food Safety Programme or registered Risk Management Programme which:
  - i. has been validated to ensure the number of *Escherichia coli* organisms in the final UCFM comply with the microbiological limits in Standard 1.6.1 in the Australia New Zealand Food Standards Code; and
  - ii. demonstrates that the production process handles the variation in *Escherichia coli* numbers present in the ingoing raw meat ingredients
- c. The *Escherichia coli* count of ingoing raw meat ingredients used in UCFM must be known (to the 98th percentile) and be equivalent to or below the process lethality for the validated process. This can be achieved by use of at least one of the following:
  - i. for meat produced in New Zealand, the New Zealand National Microbiological Database (NMD) (if applicable), or for meat imported from another country, an equivalent overseas data source
  - ii. adequate data provided by the company supplying the raw meat ingredients; or
  - iii. if using raw meat ingredients that are not part of the NMD then; adequate data collected by the manufacturer may be used to validate the microbiological status
- d. As part of the internal verification requirements of the approved Food Safety Programme or registered Risk Management Programme, the number of *Escherichia coli* organisms must be measured and recorded for the product after it has finished its maturation and is ready for sale
  - i. the frequency of checks is to be determined by the manufacturing company
- e. Validation may be achieved by the use of predictive modelling or challenge studies
- f. Fermentation of UCFM must be initiated through the use of a starter culture
- g. Meat and batter mix used in the preparation of UCFM must, if stored by the manufacturing company, be stored at 5°C or colder prior to fermentation

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- h. During UCFM production the following matters must be monitored and recorded by the manufacturer, at suitable frequencies for each batch:
- i. the temperature and time of fermentation of UCFM; and
  - ii. the temperature and time of maturation/drying of UCFM; and
  - iii. the temperature and time of smoking of UCFM (if applicable)
- i. During UCFM production the following matters must be monitored and recorded by the manufacturer at a frequency determined by the manufacturer:
- i. pH and water activity of UCFM

It is recommended good manufacturing practice that:

- the pH of a fermenting UCFM is taken every 12 hours over the first 48 hours to ensure that the pH has reached 5.3 or lower within this time period; and
- the weight loss or water activity ( $A_w$ ) is taken during the process to ensure that the required outcome is met

For shelf stability without refrigeration a UCFM should have:

- a pH of less than 5.0; or
- a water activity of 0.90 or lower; or
- a combination of pH less than 5.0 and a water activity of less than 0.95

For non-meat ingredients the microbiological status should be obtained from the supplier or via microbiological testing by the manufacturing company

- j. Back slopping is not allowed, but the re-processing of fully processed compliant product is allowed

This means any product that has been through a validated fermentation and maturation process and which has met the microbiological criteria set out in the Australia New Zealand Food

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Standards Code, Standard 1.6.1, e.g. salami ends and trim can be used as a component of a subsequent batch.

- k. The measurements recorded during production of UCFM must be kept for an appropriate period as specified in the approved Food Safety Programme or registered Risk Management Programme