

SCHEDULE 2

Rendering

Part II

Rendering Methods

Method 1

Continuous or Batch Pressure

Reduction

1. If the particle size of the animal by-products to be rendered is more than 50 mm, the animal by-products shall be reduced in size using equipment specified in the approval, set so that the particle size after reduction is no greater than 50 mm or such smaller size as the approval shall specify. The effectiveness of the equipment shall be checked daily and its condition recorded. If checks disclose the existence of particles larger than is permitted in the approval, the process shall be stopped and repairs made before the process is resumed.

Time and temperature

2. After reduction the animal by-products shall be heated to a core temperature of more than 133°C for at least 20 minutes without interruption at a pressure of at least 3 bar.
3. The rendering may be carried out in batch or continuous systems.

Method 2

Natural Fat Batch

Reduction

1. If the particle size of the animal by-products to be rendered is more than 150 mm, the animal by-products shall be reduced in size using equipment specified in the approval, set so that the particle size after reduction is no greater than 150 mm or such smaller size as the approval shall specify. The effectiveness of the equipment shall be checked daily and its condition recorded. If checks disclose the existence of particles larger than is permitted in the approval, the process shall be stopped and repairs made before the process is resumed.

Time and temperature

2. After reduction the animal by-products shall be heated to a core temperature greater than 100°C for at least 125 minutes, a core temperature greater than 110°C for at least 120 minutes and a core temperature greater than 120°C for at least 50 minutes.
3. The rendering shall be carried out in a batch system.
4. The animal by-products may be cooked such that the time-temperature requirements are achieved at the same time.

Method 3

Natural Fat

Continuous or Batch

Reduction

1. If the particle size of the animal by-products to be rendered is more than 30 mm, the animal by-products shall be reduced in size using equipment specified in the approval, set so that the particle size after reduction is no greater than 30 mm or such smaller size as the approval shall specify. The effectiveness of the equipment shall be checked daily and its condition recorded. If checks disclose the existence of particles larger than is permitted in the approval, the process shall be stopped and repairs made before the process is resumed.

Time and temperature

2. After reduction, the animal by-products shall be heated to a core temperature greater than 100°C for at least 95 minutes, a core temperature greater than 110°C for at least 55 minutes and a core temperature greater than 120°C for at least 13 minutes.

3. The rendering may be carried out in batch or continuous systems.

4. The animal by-products may be cooked such that the time-temperature requirements are achieved at the same time.

Method 4

Added Fat

Continuous or Batch

Reduction

1. If the particle size of the animal by-products to be rendered is more than 30 mm, the animal by-products shall be reduced in size using equipment specified in the approval, set so that the particle size after reduction is no greater than 30 mm or such smaller size as the approval shall specify. The effectiveness of the equipment shall be checked daily and its condition recorded. If checks disclose the existence of particles larger than is permitted in the approval, the process shall be stopped and repairs made before the process is resumed.

Time and temperature

2. After reduction the animal by-products shall be placed in a vessel with added fat and heated to a core temperature greater than 100°C for at least 16 minutes, a core temperature greater than 110°C for at least 13 minutes, a core temperature greater than 120°C for at least 8 minutes and a core temperature greater than 130°C for at least 3 minutes.

3. The rendering may be carried out in batch or continuous systems.

4. The animal by-products may be cooked such that the time-temperature requirements are achieved at the same time.

Method 5

Defatted

Continuous or Batch

Reduction

1. If the particle size of the animal by-products to be rendered is more than 20 mm, the animal by-products shall be reduced in size using equipment specified in the approval set so that the particle size after reduction is no greater than 20 mm or such smaller size as the approval shall specify. The effectiveness of the equipment shall be checked daily and its condition recorded. If checks disclose the existence of particles larger than is permitted in the approval, the process shall be stopped and repairs made before the process is resumed.

Time and temperature

2. After reduction the animal by-products shall be heated until they coagulate and then pressed so that fat and water are removed from the proteinaceous material. The proteinaceous material shall then be heated to a core temperature greater than 80°C for at least 120 minutes and a core temperature greater than 100°C for at least 60 minutes.

3. The rendering may be carried out in batch or continuous systems.

4. The animal by-products may be cooked such that the time-temperature requirements are achieved at the same time.

Method 6

Aquatic Animals

Combined Acidification and Heat Treatment

1. The animal by-products shall be reduced to a size specified in the approval. They shall then be mixed with formic acid to reduce the pH to a level specified in the approval. They shall then be stored for a period specified in the approval.

2. They shall then be heated to the temperature and time criteria specified in the approval.

3. After heat treatment, the product shall be separated into liquid, fat and greaves by mechanical means. In order to obtain an animal protein concentrate, the liquid shall be pumped into two heat exchangers which are steam heated and equipped with vacuum chambers in order for its moisture to be removed in the form of water vapour. The greaves shall then be added to the protein concentrate.