Cheese recovery guidance

Guidance for businesses and local authorities to ensure that cheese recovery is carried out in accordance with the food hygiene legislation.
This guidance was first published in 2007.

Introduction

This guidance has been developed by the Food Standards Agency in conjunction with Dairy UK Ltd and food authority and industry stakeholders, who provided details of current practices. The guidance was also informed by information on some of the handling and manufacturing processes employed by companies who use recovered cheese as a raw material. It aims to assist the UK dairy industry and local authorities to ensure that cheese recovery is carried out in accordance with the food hygiene legislation.

In the context of this guidance, the term 'cheese recovery' covers the handling of the following types of cheese and their preparation and/or processing for human consumption:

- line recovery
- fines
- mis-shapes
- offcuts
- downgrade and quality rejects
- returns
- cheese contaminated with visible mould which is not present as part of the production process or integral to the final product

Important
All references to legislation refer to assimilated legislation in England and Wales and equivalent EU legislation in Northern Ireland (NI).

Establishments involved in cheese recovery operations must be approved under the terms of Regulation (EC) 853/2004 and the approval needs to clearly specify the cheese recovery activities undertaken. HACCP plans and procedures, records and raw material specifications must demonstrate clearly how hazards associated with cheese recovery are controlled by the food businesses and that raw materials are fit for human consumption. In addition, appropriate traceability arrangements must be in place in keeping with Article 18 of Regulation (EC) 178/2002.

The FSA has given advice to enforcement authorities that the use of 'floor sweepings' in the food chain is wholly unacceptable, regardless of any further sorting or processing to which the sweepings may be subjected. Such material must be disposed of in accordance with Regulation (EC) 1069/2009 on animal by-products and other relevant waste or environmental legislation. Advice is available from the Defra website.

Guidance

Important
Cheese contaminated with visible mould which is not present as part of the production process or integral to the final product will normally need to be disposed of in accordance with animal by-product legislation.

An exception to this is large blocks of hard cheese where the mould is hygienically removed in accordance with Table 2. The remaining block may then go for further preparation and/or processing for human consumption.

The mouldy offcuts removed from the hard cheese may be released for further processing for human consumption where a company is operating to a purchaser's specification of no more than 10% visual mould per pack. Assessment as to whether each pack meets the specification should be made based on inspection of the unopened pack and only made with reference to mould which can be seen. Black mould seen on cheese offcuts may be Aspergillus section Nigri which indicates that temperature conditions may at some point have been high enough to support growth of other Aspergillus species, which may produce aflatoxins. Cheese offcuts contaminated with black mould should therefore be disposed of in accordance with the animal by-product legislation.

Each pack needs to carry an identification mark (Regulation (EC) 853/2004 Article 5) and be clearly identified as 'cheese for further processing'. Such cheese should be transported under appropriate hygiene and temperature control conditions. Vacuum packaging or freezing is recommended to prevent further growth of any mould which may be present.

The 10% visual mould criterion applies immediately prior to despatch by the supplier both where offcuts are transported to intermediate premises for bulking and onward shipment for processing and where the offcuts are despatched directly for processing. The criterion does not apply to gratings or shavings which have developed mould as these are not acceptable for processing for human consumption. Product not meeting the 10% maximum visual mould specification should be disposed of in accordance with animal by-product legislation.

'Hard' cheese is difficult to define but is considered to include cheeses such as:

- Cheddar
- Cheshire
- Wensleydale
- Leicester
- Gloucester

Harder varieties of mould ripened cheeses (such as Stilton, Gorgonzola) and traditionally produced cheeses with mould growth on the rind, contain mould because it is part of the production process or integral to the final product. They are not therefore subject to the above guidance.

Mould removal from any soft cheese contaminated with visible mould which is not present as part of the production process or integral to the final product should not be carried out due to greater penetration of the mould into the product. The whole cheese should be disposed of in accordance with animal by-product legislation.

Table 1 groups the types of cheese which are covered by the guidance and specifies how they should be handled.

More detail is provided in Table 2 on the handling of large blocks of hard cheese contaminated with visible mould not present as part of the production process or integral to the final product.

Table 1: The types of cheese which are covered by the guidance and how they should be handled

Type of cheese	Further preparation and/or processing	Disposal as animal by-product
1	N/A	Yes
2	Yes	N/A
3(a)	Yes, if within use by date	Yes, if not within use by date
3(b)	Yes	N/A
4	N/A	Yes
5(a)	N/A	Yes
5(b)	Yes, with conditions (see below)	N/A
6	Yes, with conditions (see below)	Yes

5(b) Conditions - Only following removal of mould as part of a documented HACCP process, as specified below.

6 Conditions - Only when there is no more than 10% visual mould per pack and product is destined for further processing.

Type 1 - Cheese which has not been collected hygienically e.g. has been in contact with the floor.

Type 2 - Cheese which does not meet customer specifications but which has been processed, collected and stored hygienically. Likely to include:

- line recovery, fines, mis-shapes, offcuts, etc.
- cheese which has been mis-labelled, e.g. wrong barcode, wrong use by/best before date - if there is any uncertainty about the correct use-by date, the cheese should be disposed of in accordance with animal by-product legislation
- cheese which does not meet customer specifications for quality (e.g. flavour, composition etc.) and may be described as downgrade or quality rejects

Type 3 - Cheese returned to the manufacturer from a secure source (e.g. retailer's distribution store, retail sale) which may:

a) carry a use-by date

b) carry a best before date

Type 4 - Cheese returned from an unsecure source (e.g. consumer) where there is no documented information about shelf life or storage conditions.

Type 5 - Hard cheese contaminated with visible mould not present as part of the production process or integral to the final product. May be either:

a) small pieces e.g. offcuts, gratings, shavings

b) large blocks

Type 6 - Mouldy cheese offcuts arising from the removal of mould from large blocks of hard cheese, i.e. Type 5 (b). This does not include gratings or shavings which are not acceptable for processing for human consumption.

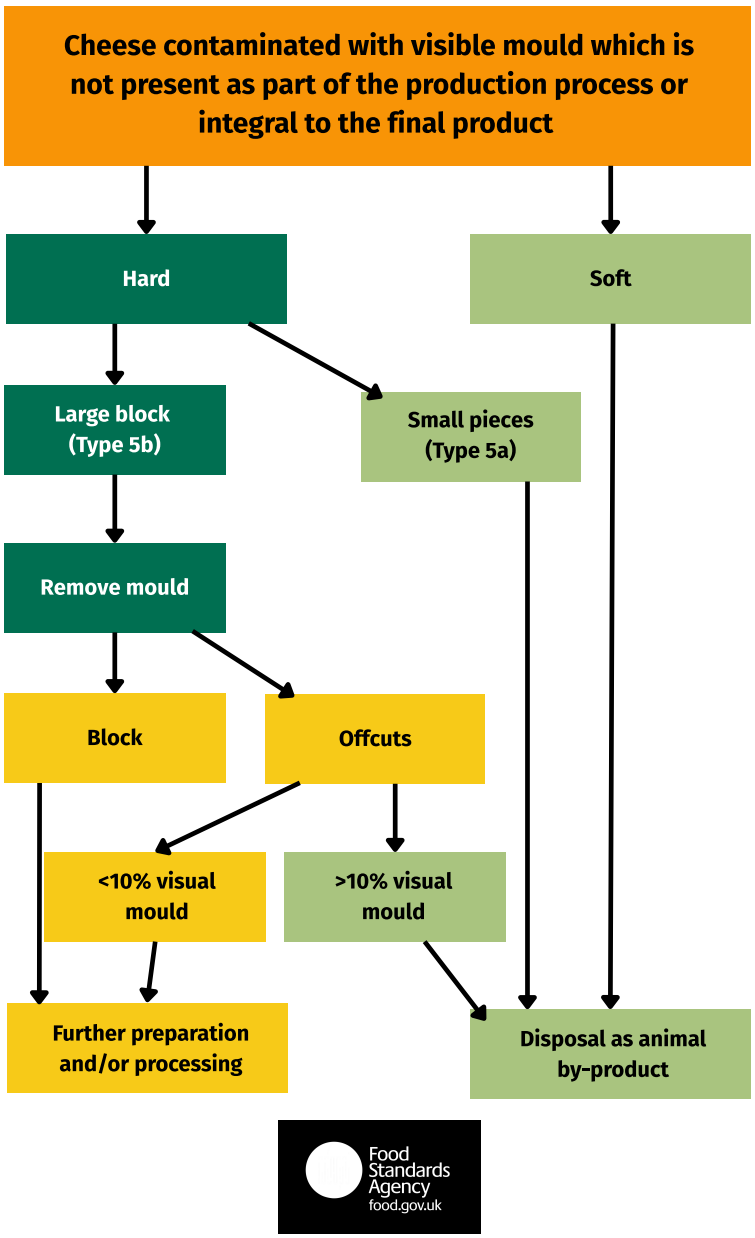
Table 2: Large blocks of hard cheese contaminated with visible mould not present as part of the production process or integral to the final product.

Level of contamination	Description	Action
Low	Small (<3cm), isolated colonies	Hygienically remove colonies plus any discolouration
Medium	Moderate contamination and no deep penetration into the cheese	Hygienically remove all mould and any discoloration plus 1cm thickness of undiscoloured cheese
High	Heavy contamination with penetration into the cheese	Hygienically remove all mould and any discolouration plus 2cm thickness of undiscoloured cheese

References:

1. Chapman, W. B., Cooper, S. J., Norton, D. M., Williams, A. R. and Jarvis, B. (1983). Mycotoxins in molded cheeses. In Proceedings of the International Symposium on Mycotoxins, Cairo, Egypt, 6-8 September 1981, ed. K. Naguib, M. M. Naguib, D. L. Park and A. E. Pohland. Food and Drug Administration, Rockville, Maryland, USA and National Research Centre, Cairo, Egypt, pp. 363- 373.
2. Bullerman, L. B. (1981). Public health significance of molds and mycotoxins in fermented dairy products. J. Dairy Sci., 64, 2439-2452.
3. Mycotoxins in Dairy Foods edited by Hans P. van Egmond. Published: London; New York: Elsevier Applied Science,1989.

Flowchart: Cheese recovery guidance



Structured text version of Flowchart: Cheese recovery guidance

Starting point

Cheese contaminated with visible mould which is not present as part of the production process or integral to the final product.

Stage 1 - Cheese type

Hard (go to stage 2) or Soft (**go to Outcome 2**).

Stage 2 - Hard cheese size

Large block - type 5b (go to stage 3) or Small pieces - type 5a (**go to Outcome 2**).

Stage 3 - Actions for hard large cheese block (type 5b)

Remove mould (go to stage 4).

Stage 4 – Actions for remaining hard cheese following mould removal from the large block

Offcuts (go to stage 5) or Block (**go to Outcome 1**).

Stage 5 – Further actions for offcuts

Less than 10% visual mould (**go to Outcome 1**) or More than 10% visual mould (**go to Outcome 2**).

Outcome 1

Further preparation and/or processing.

Outcome 2

Disposal as animal by-product.