

PART TWO**14. TRANSPORT HYGIENE**

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14.1 WHY IS TRANSPORT HYGIENE IMPORTANT?

During transport food may be exposed to microbiological and physical hazards from the environment or through cross-contamination from other food. The same hazards can apply to animals. Poor cleaning or maintenance of transport vehicles may also give rise to chemical hazards. Procedures are needed to prevent or minimise the risk of such hazards causing illness or injury to consumers.

For example:

- Transport of live animals under poor conditions may cause stress, injury and increased soiling of hide/fleece with faecal material which will increase the possibility of the spread of disease.
- Inadequate separation between exposed and packaged meat during transport may result in cross contamination of food.
- Transport in poorly cleaned, maintained or unsuitable vehicles or containers can result in microbiological, physical or chemical cross contamination of food.

14.2 WHAT ARE THE LEGAL REQUIREMENTS FOR TRANSPORT HYGIENE?**14.2.1 WHICH OPERATIONS DOES THE LAW APPLY TO?**

<i>Operations</i>	<i>Relevant Sections of 14.2.2 below</i>
Red Meat Slaughter (including farmed game)	A, B, C
White Meat Slaughter (including farmed game)	A, B, C
Approved Farm Slaughter of poultry and game	A, C
Wild Game Handling	A, C
Meat Cutting and Production of Meat Products, Mince Meat, Meat Preparations and MSM	A, D
Edible By-Products	A

14.2.2 WHAT ARE THE OPERATORS LEGAL OBLIGATIONS?**A. TRANSPORT (GENERAL)**

1. Conveyances and/or containers used for transporting foodstuffs are to be kept clean and maintained in good repair and condition to protect foodstuffs from contamination and are, where necessary, to be designed and constructed to permit adequate cleaning and/or disinfection.
2. Receptacles in vehicles and/or containers are not to be used for transporting anything other than foodstuffs where this may result in contamination.
3. Where conveyances and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, there is, where necessary, to be effective separation of products.
4. Where conveyances and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, there is to be effective cleaning between loads to avoid the risk of contamination.
5. Foodstuffs in conveyances and/or containers are to be so placed and protected as to minimise the risk of contamination.

852/2004 Annex II **Transport** Chapter IV: points 1-3, 5, 6.

6. At all stages of production, processing and distribution, food is to be protected against

any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

7. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during...transport of food provided that it does not result in a risk to health.

852/2004 Annex II **Foodstuffs**: Chapter IX points 3 & 5.

B. TRANSPORT OF LIVE ANIMALS TO SLAUGHTERHOUSES

1. During collection and transport [to slaughterhouses], animals must be handled carefully without causing unnecessary distress.
2. Animals showing symptoms of disease or originating in herds/flocks known to be contaminated with agents of public health importance may only be transported to the slaughterhouse when the competent authority so permits.
3. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of means of transport for livestock.

853/2004 Annex III **Slaughterhouses**: Section I Chapter I points 1, 2, 6 & Section II Chapter I points 1, 2, 6(b)

4. Crates for delivering [poultry & lagomorphs] to the slaughterhouse and modules, where used, must be made of non-corrodible material and be easy to clean and disinfect. Immediately after emptying and, if necessary, before re-use, all equipment used for collecting and delivering live animals, must be cleaned, washed and disinfected.
5. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of equipment such as crates;

853/2004 Annex III **Slaughterhouses**: Section II Chapter II points 3 & 6(a)

C. TRANSPORT OF CARCASSES TO SLAUGHTERHOUSES

1. Domestic ungulates that have undergone emergency slaughter outside the

slaughterhouse may be used for human consumption only if it complies with the following requirements. The slaughtered and bled animal must be transported to the slaughterhouse hygienically and without undue delay. ... Any viscera must accompany the slaughtered animal to the slaughterhouse and be identified as belonging to that animal.

853/2004 Annex III **Emergency Slaughter**: Section I Chapter VI: points 3 & 4

2. In the case of poultry reared for the production of 'foie gras', the uneviscerated birds must be transported immediately and, if necessary, refrigerated to a slaughterhouse or cutting plant.
3. Delayed eviscerated poultry obtained on the farm of production may be kept for up to 15 days at a temperature of not more than 4°C. It must then be eviscerated in a slaughterhouse or in a cutting plant located in the same Member State.

853/2004 Annex III **On Farm Slaughter**: Section II Chapter VI: points 8 & 9

4. Slaughtered and bled animals [farmed ratites and farmed ungulates] are transported to the slaughterhouse hygienically and without undue delay. If transport takes more than two hours, the animals are, if necessary refrigerated. [].

853/2004 Annex III **Farmed Game**: Section III: point 3(h)

5. During transport to the game-handling establishment, heaping must be avoided.

853/2004 Annex III **Large Wild Game**: Section IV Chapter II: point 6

D. TRANSPORT OF CUT MEAT, MINCED MEAT, MEAT PREPARATIONS AND MECHANICALLY SEPARATED MEAT

1. Meat [of domestic ungulates] must attain the temperature specified in point 1 [3°C for offal and 7°C for other meat throughout the meat] before transport, and remain at that temperature during transport. However, transport may also take place if the competent authority so authorises to enable the production of specific products, provided that:
 - (a) such transport takes place in accordance with the requirements that the competent authority specifies in respect of transport from one given establishment to another; and
 - (b) the meat leaves the slaughterhouse or a cutting room on the same site as the slaughter premises, immediately and transport takes no more than two hours.

853/2004 Annex III **Red Meat** Section I Storage & Transport Chapter VII point 3, **Farmed Game**: Section III point 1

2. Exposed meat must be ... transported separately from packaged meat, unless ... transported at different times or in such a way that the packaging material and the manner of ... transport cannot be a source of contamination for the meat.

853/2004 Annex III Section I Chapter VII point 5 and Section II Chapter V point 4

3. Frozen MSM must be wrapped or packaged before ... transport,

853/2004 Annex III Section V Chapter III: points 2(c), 3(c), 4(f).

14.2.3 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre- and post-operational hygiene procedures and controls on food entering and leaving the establishment continuously and properly.

854/2004 Article 4 points 4c and 4l

14.3 HOW MAY OPERATORS DEMONSTRATE COMPLIANCE?

Food Business Operators may demonstrate compliance with their legal obligations for transport hygiene on an ongoing basis by providing evidence, including appropriate documentation, that:

- New, rebuilt, altered, or refurbished premises are sited, designed, laid out, constructed, and equipped to ensure that unloading, transporting and loading of food and animals can be carried out hygienically.
- Procedures exist to maintain transport hygiene effectively by:
 - Maintaining and cleaning vehicles and transport containers adequately.
 - Providing appropriate instruction and/or training about transport hygiene to staff
 - Setting out clear instructions for all transport hygiene requirements.
 - Ensuring that food containers are not used to transport non-food materials.
 - Ensuring that there is physical separation between food/non-food products and between exposed/packaged meat during storage and transport.
 - Ensuring that live animals and, where appropriate, carcasses, are delivered in an appropriate condition.
- Arrangements exist to maintain and monitor transport hygiene and take corrective action if there is a failure.

Note: Transport of incoming and outgoing products may be provided by third parties, e.g. specialist contractors or livestock producers, which are not under the control of the food business operator. Compliance with legislation concerning transport is the responsibility of the transport supplier, but the operator receiving or dispatching food should consider alternative arrangements if there is evidence that those requirements are not being met.

14.3.1 DESIGN AND LAYOUT, MAINTENANCE CLEANING

GUIDE TO COMPLIANCE	ADVICE FOR OPERATORS
<i>Design & Layout of Premises</i>	<i>Design & Layout of Premises</i>
<ul style="list-style-type: none"> The layout, design, construction, siting and size of food premises provide adequate working space to allow for the hygienic performance of all operations; permit good food hygiene practices. <p>852/2004 Annex II Section I Chapter I point 2</p> <ul style="list-style-type: none"> Appropriate facilities are provided for the washing, cleaning and disinfection of livestock vehicles and equipment such as crates (see 14.3.3 below). <p>B3, B5</p>	<p><i>Consider transport hygiene requirements in relation to throughput in relation to throughput, including suitable access, delivery and dispatch arrangements, with loading/unloading areas designed to avoid contamination and facilities for cleaning vehicles and containers between clean and dirty loads to avoid cross contamination. See Chapter 1 (Design & Facilities).</i></p> <p>Loading and Unloading Operations - prevent contamination of meat from fumes, dust, rain, pests, birds, leaves etc. during loading and unloading between premises and vehicles.</p>
<i>Vehicle Design (Food)</i>	<i>Vehicle Design (Food)</i>
<ul style="list-style-type: none"> Food transport vehicles are designed and constructed to allow easy cleaning and/or disinfection <p>A1</p>	<p><i>Use vehicles that are enclosed and watertight with internal surfaces that are smooth and uniform for easy cleaning and have few crevices or sharp corners in which dirt can accumulate.</i></p> <p><i>It should be possible to clean inside and outside of the vehicles using a hose or pressure wash.</i></p>
<i>Vehicle Design (Live animals)</i>	<i>Vehicle Design (Live animals)</i>
<ul style="list-style-type: none"> Live animals are handled carefully during transport. <p>B1</p>	<p><i>Farmed animal transport is regulated in GB by The Welfare of Animals (Transport) Order 1997 (WATO) (SI 1997/1480) and in Northern Ireland by The Welfare of Animals (Transport) (NI) Order 1997. See Part Four Chapter x (Animal Welfare).</i></p>

4.3.2 TRANSPORT OF FOODSTUFFS

GUIDE TO COMPLIANCE	ADVICE TO OPERATORS
Training and instruction	Training and instruction
<ul style="list-style-type: none"> Food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. <p>852/2004 Annex II Chapter XII point 1</p>	<p><i>Instruct staff, especially company drivers and loading/unloading staff about the food safety hazards associated with transport, including the need for effective cleaning, separation of clean/dirty loads and exposed/packaged meat, the need to follow instructions and to report failing controls promptly. Supervise as appropriate and issue reminders if lapses occur.</i></p> <p><i>Keep accurate individual training records to show what instruction/training has been given. See also Chapter 6 (Training).</i></p>
Maintenance	Maintenance
<ul style="list-style-type: none"> Vehicles and/or containers used for transporting foodstuffs are maintained in good repair and condition. <p>A1</p>	<p><i>Include company vehicles and food containers in the company's maintenance regime so they are inspected, maintained and repaired as necessary. See Chapter 3 (Maintenance).</i></p>
General cleaning	General cleaning
<ul style="list-style-type: none"> Vehicles and/or containers used for transporting foodstuffs are kept clean. <p><i>See other cleaning requirements below.</i></p> <p>A1</p>	<p><i>Include company vehicles and food containers in the company's cleaning regime so they are cleaned regularly and / or whenever they become soiled with, for example, wood from pallets, nails, dust, cardboard, plastic or metal from containers, leaves and any other waste.</i></p> <p><i>Keep doors of cleaned vehicles and containers closed until loading takes place to minimise the opportunities for contamination.</i></p>
Separation of products	Separation of products
<ul style="list-style-type: none"> Exposed meat is transported separately 	<p><i>To minimise the risk of contamination of exposed</i></p>

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<p>from packaged meat, unless transported at different times or in such a way that the packaging material and the manner of transport cannot be a source of contamination for the meat.</p> <p>D2</p> <ul style="list-style-type: none"> Where vehicles and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, products are effectively separated where necessary. <p>A3</p> <ul style="list-style-type: none"> Where vehicles and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, there is effective cleaning between loads to avoid the risk of contamination. <p>A4</p> <ul style="list-style-type: none"> Foodstuffs in vehicles and/or containers are placed and protected so as to minimise the risk of contamination. <p>A6</p>	<p><i>meat from packaged meat or other goods, transport them separately, or in the same vehicle at a different time or at the same time with either a permanent barrier between them that can be cleaned and disinfected or by using an appropriately placed polythene covering to prevent air-borne cross-contamination.</i></p> <p><i>Clean and disinfect vehicles and containers used to transport exposed meat between each load to minimise cross-contamination.</i></p> <p><i>Position rails to minimise contact with the sides of the vehicle and between carcasses. Hang carcasses high enough and securely enough so that there is no contact with the floor.</i></p> <p><i>Use barriers inside the container or vehicle to separate exposed meat from other contents.</i></p> <p><i>Wrapping pallets with shrink film is only a temporary solution as it is quickly damaged, exposing dirty, cracked wood again.</i></p>
<p>Temperature Controls</p> <ul style="list-style-type: none"> The cold chain is not interrupted, except for limited periods to accommodate the practicalities of handling during transport, provided that it does not result in a risk to health. <p>A7</p> <ul style="list-style-type: none"> Red meat is transported at or below 3°C for offal and 7°C for other meat, 	<p>Temperature Controls</p> <p><i>Transport red meat at or below 3°C for offal and 7°C for other meat, throughout the meat. An exception may be made for warm transport within 2 hours of slaughter to specified premises on a case by case basis authorised by the OV (who signs for the record).</i></p> <p><i>Transport white meat at or below 4°C.</i></p> <p><i>Load and unload exposed meat quickly so that the</i></p>

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<p>unless conditions authorised by the competent authority are followed and the meat is transported immediately and takes no more than two hours.</p> <p>D1</p>	<p><i>cold chain can be maintained. See Chapter 13 (Temperature Controls).</i></p>
Transport of Frozen MRM	Transport of Frozen MRM
<ul style="list-style-type: none"> Frozen MSM is wrapped or packaged before transport. <p>D3</p>	

14.3.3 TRANSPORT OF LIVE ANIMALS TO SLAUGHTERHOUSES

GUIDE TO COMPLIANCE	ADVICE FOR OPERATORS
Transport & Unloading of Vehicles	Transport & Unloading of Vehicles
<ul style="list-style-type: none"> The WATO legislation (see 14.3.1 above) governing the transport of live animals includes obligations to ensure that suitable provision has been made for the safety of the animals during unloading and their care on arrival. Permission is obtained from the competent authority before sick or diseased animals are transported to the slaughterhouse. <p>Annex III, Section II, point 2 (c)</p>	<p><i>Arrange for live animals to be delivered directly to the lairage.</i></p> <p><i>Clean healthy livestock should not become injured or stressed during transport and the opportunity for animals to become contaminated should be minimised. Stressed and dirty animals present a food safety risk. For further information on Animal Welfare see Part Four Chapter 5</i></p> <p><i>The transport of sick animals could spread disease. For further information on Animal Health issues see Chapter x.</i></p>
Cleaning of Livestock Vehicles	Cleaning of Livestock Vehicles
<ul style="list-style-type: none"> Vehicles used to deliver livestock to a slaughterhouse are cleansed and 	<p><i>Cleansing and disinfection of vehicles may take place at the slaughterhouse or elsewhere. Nothing in the</i></p>

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<p>disinfected as soon as is practicable after unloading, and always within 24 hours or before next being used to carry livestock, whichever is the sooner.</p> <ul style="list-style-type: none"> In England & Wales: Except where otherwise permitted, if a vehicle delivering animals (except horses) is to leave the site without being cleaned and disinfected, the slaughterhouse operator issues the driver with form FM/AW 27 for completion and signature, declaring where cleaning and disinfection will take place. The slaughterhouse operator keeps the completed, signed top copy for 3 months and makes it available for inspection on request. The operator sends a copy of the completed declarations to his local authority by fax (or other means agreed method) on the day of receipt. In Scotland & Northern Ireland there is no requirement for the driver to complete a declaration. <p>Transport of Animals legislation</p>	<p><i>Orders requires the use of disinfectant inside the driver's cab.</i></p> <p><i>The cleaning and disinfection of farmed animal transport is regulated in England and Wales by The Transport of Animals (Cleansing and Disinfection) (England) (Wales) Orders. For further information see www.defra.gov.uk/animalh/diseases/control/candd.htm</i></p> <p><i>FM/AW 27 declaration forms are available free of charge from the local Animal Health Divisional Office.</i></p> <p><i>The cleaning and disinfection of farmed animal transport is regulated in Scotland by The Transport of Animals (Cleansing and Disinfection) (Scotland) Regulations and in Northern Ireland by The Transport of Animals & Poultry (Cleansing and Disinfection) Order (Northern Ireland) 2000.</i></p>
<p>Crates</p>	<p>Crates</p>
<ul style="list-style-type: none"> Crates (and modules if used) are made of a suitable corrosion-resistant material and designed to allow easy cleaning and disinfection. <p>B4</p> <ul style="list-style-type: none"> Crates used to transport poultry and lagomorphs are cleaned and disinfected 	<p><i>Durable plastics are suitable materials for poultry crates. They should not include crevices or inaccessible corners that make cleaning difficult.</i></p> <p><i>The legislation on cleaning and disinfection of vehicles (see above) also covers equipment, except that containers may be destroyed. It allows for cleaning as soon as reasonably practicable and not more than 24</i></p>

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<p>after emptying.</p> <p>B4</p> <ul style="list-style-type: none"> If necessary, before re-use all equipment for collecting and delivering the livestock is cleaned and disinfected. <p>B4</p>	<p>hours after the journey is completed, while the hygiene legislation requires cleaning immediately after emptying and if necessary, before re-use.</p> <p>Cleaning and disinfection chemicals - follow the label instructions on the recommended concentration and method of application of chemicals.</p> <p>[Outcome of research on crate washing]</p>
<p>Approved Disinfectants</p> <ul style="list-style-type: none"> Only approved disinfectants under animal disease legislation are used for disinfecting livestock vehicles. <p>Diseases of Animals legislation</p>	<p>Approved Disinfectants</p> <p>For further information on the use and up-to-date lists of disinfectants approved under <i>The Diseases of Animals (Approved Disinfectants) Orders for England, Scotland and Wales</i>: contact Defra at 1A Page Street, London SW1P 4PQ, Tel: 020 7904 6135 (www.defra.gov.uk/animalh/diseases/control/testing_disinfectants.htm).</p> <p>For Northern Ireland: contact DARD at Dundonald House, Upper Newtownards Road, Belfast BT4 3SB, Tel: 028 9052 0100 (www.dardni.gov.uk/vetservice/aspdisinfectants/disinfectantsintro.asp)</p>
<p>Disposal of material after cleaning</p> <ul style="list-style-type: none"> The person responsible for cleaning the vehicle and any equipment ensures that all contaminants removed are destroyed; treated so as to remove the risk of transmission of disease; or disposed of so that animals have no access to it. <p>Diseases of Animals legislation</p>	<p>Disposal of material after cleaning</p> <p>For further information see Chapter 10 (Waste Management).</p>

14.3.4 TRANSPORT OF CARCASSES TO SLAUGHTERHOUSES

GUIDE TO COMPLIANCE	ADVICE FOR OPERATORS
<i>Transport of Carcasses</i>	<i>Transport of Carcasses</i>
<ul style="list-style-type: none"> Carcasses of animals slaughtered on farm are transported for further processing without delay and, where necessary, refrigerated. (Delayed eviscerated poultry is transported at or below 4°C). <p>C2, C3, C4</p> <ul style="list-style-type: none"> Red meat animals that are eviscerated before transport are taken to the slaughterhouse with their viscera correlated to each individual animal. <p>C1</p> <ul style="list-style-type: none"> During transport of large wild game to a game-handling establishment, heaping of carcasses is avoided. <p>C5</p>	<p><i>Poultry, lagomorphs, ratites and farmed game may be slaughtered on farm if the requirements are met.</i></p> <p><i>If transport time is expected to take more than two hours, carcasses will normally need to be refrigerated.</i></p> <p><i>Transport viscera in clean, watertight covered containers. Use tags or labels to identify each set of viscera with its carcass.</i></p> <p><i>In the case of large wild game, the viscera need not accompany the carcass where an inspection has been carried out by a trained hunter and the accompanying hunter declaration states that no abnormal characteristics have been identified, no abnormal behaviour identified and no suspicion of environmental contamination.</i></p>

14.3.5 MAINTAINING AND MONITORING TRANSPORT HYGIENE PROCEDURES

GUIDE TO COMPLIANCE	ADVICE FOR OPERATORS
<i>Operator Responsibilities</i>	<i>Operator Responsibilities</i>
<ul style="list-style-type: none"> The operator is responsible for food safety in the food business. <p>852/2004 Article 1 point 1a</p>	<p><i>Operator Responsibility</i> includes maintaining and monitoring company transport hygiene procedures and taking corrective action if there is a failure.</p> <p><i>Delegation</i> – responsibility for maintaining and monitoring transport hygiene procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to</p>

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ensure that corrective action is taken when necessary.

Monitoring – check periodically that transport staff, including contract hauliers if used, are meeting the transport hygiene requirements and that welfare rules are being followed. Where vehicles are company owned, checks may be carried out as part of the company's cleaning and maintenance programme. Where contract hauliers are used, the service contract may cover vehicle inspections and associated record keeping.

Frequency of monitoring – this will depend on the likelihood of a problem being found. Once a month may be sufficient for premises with experienced staff and where procedures are unchanged. The work of new or temporary people who are less familiar with the procedures may need to be monitored more frequently.

Records - keep an accurate, dated account (e.g. in a daybook) of each periodic monitoring check, notes for cleaners or loaders/unloaders of issues requiring special attention, and of any corrective action taken.

Corrective action – take action when failures of the company's transport hygiene procedures are identified. Such action may include:

- Dealing with any product that has been contaminated;
- Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;
- Improving staff instructions and training;
- Advise non-company hauliers of transport requirements.