

Chapter 5 Cleaning

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5. Introduction

Dirt, food waste and other debris can be a potential source of microbiological and physical hazards and will also attract pests that can contaminate the production environment. Effective cleaning on a regular basis is essential to remove dirt and debris from the food premises. Effective disinfection of clean food contact surfaces is necessary to reduce bacteria to an acceptable level. Poorly executed cleaning programmes and careless storage and use of cleaning materials may give rise to chemical hazards. Procedures are needed to prevent or minimise the risk of such hazards causing illness or injury to consumers.

Examples demonstrating the importance of cleaning:

Problem	Effect	Possible outcome
Poor cleaning within the working environment	Food is contaminated by dirt from the working environment such as dust, rust flakes, lubricating oil and food processing residues	Increases the chances of cross contamination of food products by food poisoning micro-organisms
Food premises is not cleaned properly	Organic material such as meat, blood and other edible and inedible tissues can become contaminated. Moisture can accumulate	Encourages growth of micro-organisms such as Salmonella
Poor cleaning	Pests are attracted to organic material	Pest species, for example, flies, beetles, rodents, are carriers of micro-organisms that can cause food poisoning
Careless use of cleaning agents	Chemicals spill on food	Lead to chemical contamination of food
Ineffective and poor cleaning	Cleaning implements are themselves contaminated during the cleaning process	Lead to cross contamination when implements are next used

5.1. Cleaning and effective cleaning

'Clean' means free from dirt, marking, or soiling. Visibly clean surfaces look, smell and feel clean. Dirt and soil can be organic, for example, fat, blood; or inorganic, for example rust, limescale.

Surfaces in contact with food should be:

- **Physically clean** – all visible dirt / soil / residues have been removed. Best assessed using white moist wipes.
- **Chemically clean** – all cleaning material residues have been removed.
- **Microbiologically clean** – the number of micro-organisms has been reduced to a level acceptable for human health. This usually involves the use of disinfectants.

5.2. Effective cleaning

Effective cleaning depends on the removal of gross physical contamination followed by the correct use of chemical agents. This means using the right chemicals, applying them at the right concentration and application rate using the right equipment, and allowing them time to work.

Cleaning chemicals

- **Detergents** – chemicals used to dissolve grease and remove dirt and soil. Appropriate acidic or alkaline products can also be used.
- **Disinfectants** – chemicals that reduce bacteria to an acceptable level and may kill them. Products may be called germicides, bactericides or biocides. Surfaces need to be clean of grease, dirt and soil before a disinfectant is used - there is little point in disinfecting a dirty surface. As well as the main biocide components, disinfectant formulations may include:
 - surfactants to improve the wetting properties of the product and to control foam production
 - sequesterants to improve suspension of any remaining inorganic soils from the surfaces, to prevent scale forming on contact surfaces and to improve the biocidal activity of the disinfectant
 - stabilisers to prevent disassociation of the disinfectant when used
 - alcohols to decrease drying time by evaporating off the surface and leaving it dry
- **Sanitisers** – two-in-one products that act as both a detergent and a disinfectant. Do not attempt to mix cleaning chemicals yourself.

Dilution rate – is the quantity of water to use with a concentrated chemical before it can be used. Follow the label instructions for the specific situation.

Contact time – is the time that the cleaning chemical needs to be left on the surface to work effectively and manufacturer's instructions should always be followed. Vertical surfaces can present problems when applying the correct contact time. Substances such as foams and gels may be used in the formulation to extend contact time.

Temperature – may be critical for a cleaning chemical to work effectively. In general, higher temperatures are more effective but may give rise to condensation. Products that work at lower temperatures may be available.

Manufacturers and suppliers – can advise on the best chemicals to use in specific situations and on the safe and effective use of cleaning chemicals.

5.3. Cleaning schedule and checklist examples

Operators need to establish effective cleaning and disinfection routines. Cleaning schedules will demonstrate when and how cleaning is to be carried out. A cleaning checklist will help to make sure that no area or piece of equipment is missed and can be used to record problems and action taken.

A cleaning schedule and separate checklist is available in Annex 1. and Annex 2. at the end of this chapter.

5.4. Training for cleaners

There are specialist courses for cleaners that can lead to qualifications, such as:

- NVQ / SVQ Levels 1 and 2 in Cleaning and Support Services
- Level 2 in Cleaning Food Premises
- City and Guilds awards in Cleaning Science
- BICSc Cleaning Operators' Proficiency Certificate
- Food Premises Cleaning Certificate

Suppliers of cleaning chemicals may also provide training on the correct use of their chemicals.

Information is available from a number of different organisations; these are listed in section 1.6 in the useful contacts page in chapter 1, the 'Introduction' chapter.

5.5. Legal requirements for cleaning

The following sections set out the cleaning requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. Cleaning in all food premises

L

Legal requirement

852/2004 Annex II Food Premises: Chapter I points 1, 2(a)

A1. Food premises are to be kept clean.

A2. The layout, design, construction, siting and size of food premises are to: (a) permit adequate maintenance, cleaning and / or disinfection, avoid or minimise air-borne contamination ... to allow for the hygienic performance of all operations.

852/2004 Annex II Rooms: Chapter II point 1

A3. In rooms where food is prepared, treated or processed ... the design and layout are to permit good food hygiene practices, including protection against contamination between and during operations. In particular (a) floor surfaces ... (b) wall surfaces ... (e) doors are to be easy to clean and, where necessary, disinfect. (d) windows and other openings ... fitted with insect-proof screens which can be easily removed for cleaning. (f) surfaces (including surfaces of equipment) in areas where food is handled and in particular those in contact with food are to be maintained in sound condition and be easy to clean and, where necessary, to disinfect.

A1. to A3. Compliance regarding cleaning of food premises / rooms

Make sure that:

- food preparation, treatment and processing rooms are designed and laid out so as to permit good food hygiene practices
- the layout, design, construction, siting and size of food premises, including facilities for cleaning and storing working utensils and equipment and refuse stores, allow for adequate cleaning

A1. to A3. Good practice

Take into account the characteristics of the premises, rooms, equipment, fixtures and fittings (for example, accessibility, durability, nature and quality of surfaces) in the design and construction of new food premises, and when existing premises are rebuilt, altered or refurbished.

Cramped conditions in equipment wash rooms will compromise the ability to carry out good hygienic practices and increase the risk of spreading contamination between cleaned and dirty tools and equipment.

See relevant topics in this chapter and chapter 2 on 'Design and Facilities'.

L

Legal requirement

852/2004 Annex II Rooms: Chapter II point 2

A4. Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be ... easy to clean and have an adequate supply of hot and cold water.

A4. Compliance regarding cleaning facilities and their maintenance

- Provide adequate facilities for cleaning, disinfecting and storage of working utensils and equipment.
- Maintain buildings, fittings, equipment and surfaces in a good state of repair to minimise the opportunity for build up of dirt, food and other debris

A4. Good practice

Where cleaning equipment could be a source of cross contamination it should be cleaned and disinfected before re-use. Colour coding of cleaning equipment will help to avoid the spread of contamination, for example, so a mop for cleaning toilet floors is not used in the food production area. Advice on colour coding is available from British Institute of Cleaning Science, see useful contacts section 1.6 in chapter 1, the 'Introduction' chapter.

Once cleaned, move tools and equipment away from where other equipment is being washed to avoid splashing with dirt, dirty water or cleaning chemicals and protect them from other contamination before use.

Cleaning can only be as effective as the condition of the surfaces and equipment being cleaned permits. Damaged, heavily worn or porous surfaces are difficult to clean properly. When choosing materials for maintenance or development work, take account of their ability to be cleaned.

See chapter 4 on 'Maintenance'.

L

Legal requirement

852/2004 Annex II Equipment: Chapter V point 1(a & (b))

- A5.** All articles, fittings and equipment with which food comes into contact are to:
- (a) be effectively cleaned, and where necessary, disinfected. Cleaning and disinfection are to take place at a frequency sufficient to avoid any risk of contamination
 - (b) be so constructed, ... and be kept in such good order repair and condition

A5. Compliance regarding frequency of cleaning and disinfection

Make sure that:

- cleaning and disinfecting are at a frequency sufficient to avoid any risk of contamination
- food preparation, treatment and processing room floors, walls, doors, surfaces (including equipment surfaces) especially those in contact with food, as well as food waste, inedible by-products and other refuse containers, are easy to disinfect
- all articles, fittings and equipment with which food comes into contact are disinfected where necessary and frequently enough to avoid any risk of contamination

A5. Good practice

Surfaces that come into contact with food may need to be cleaned and disinfected more than once a day. The frequency of cleaning of other surfaces and areas will depend on the level of soiling and risk of transfer of contamination to products.

Deep cleaning – periodically (a weekly basis is highly recommended) equipment and fixtures that are difficult to access, for example, extractor fans, should be stripped down and thoroughly cleaned to remove built up dirt / debris. This is also an opportunity for maintenance work to be carried out (see later).

Provide instructions to make sure that disinfectant use is effective by avoiding common situations such as:

- lack of cleaning before disinfection
- use of incorrect disinfectants
- incorrect use of disinfectants
- biofilm build up, which prevents penetration by chemical disinfectants
- poor rinsing or non-rinsing of disinfectants

Ensure the following surfaces and equipment at least are disinfected:

- food contact surfaces and equipment
- hand contact surfaces
- cleaning equipment and materials

TIP



Clean-as-you-go policy – Consider instructing production staff to adopt a clean-as-you-go policy for routine removal of excessive dirt / debris to minimise the accumulation of contamination during the working day.



Legal requirement

852/2004 Annex II Food Premises: Chapter I point 10

A6. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

A6. Compliance regarding the use and storage of cleaning chemicals

- Use cleaning chemicals that are specifically approved for the intended situation and use them safely. Always follow the manufacturer's instructions. The Control of Substances Hazardous to Health Regulations (COSHH) 2002 (for GB) and COSHH 2003 as amended (for NI) apply to a wide range of cleaning chemicals used at work. See www.legislation.gov.uk. Chemical suppliers provide safety data.
- Store cleaning chemicals safely and securely so that there is no risk to the safety of food or to human health.

A6. Good practice

The chemicals used need to be appropriate for the area or equipment to be cleaned. See 'Cleaning chemicals' in the introduction of this chapter.

Cleaning chemicals are potentially dangerous and can harm people and may contaminate food if used incorrectly. They may also damage surfaces and equipment.

For further information visit the Health and Safety Executive website (www.hse.gov.uk) about the safe use of cleaning chemicals and for general information, including COSHH.

For NI enquiries contact the Health and Safety Executive NI (www.hseni.gov.uk).



Legal requirement

852/2004 Annex II Transport: Chapter IV point 1

A7. Conveyances and / or containers used for transporting foodstuffs are to be kept clean.

A7. Compliance regarding cleaning procedures

Make sure that:

- food premises, as well as vehicles and containers used to transport foodstuffs, are kept clean
- cleaning procedures are effective in removing dirt, debris and where necessary in reduction or destruction of micro-organisms through disinfection. See 'effective cleaning' in 'Introduction'

A7. Good practice

Follow these steps (unless using an alternative regime, for example, as set out in the chemical manufacturer's instructions) to clean effectively:

1. Pre-clean – remove any obvious food and dirt by sweeping, wiping or scraping off loose debris, followed by a pre-rinse
2. Main clean – use diluted detergent to remove grease and any remaining food and dirt by scrubbing off the main body of adhered soil. A good physical clean is the most important part of a cleaning programme
3. Intermediate rinse – rinse with clean water to remove detergent and loosened food and dirt
4. Disinfection – use a disinfectant to reduce or kill micro-organisms
5. Final rinse – rinse with potable water to remove disinfectant after a suitable contact time (if rinsing is included in the manufacturer's instructions)



Legal requirement

852/2004 Annex II Food Waste: Chapter VI points 2 & 3

A8. These containers (food waste, non-edible by-products and other refuse) are to be of an appropriate construction, kept in sound condition, be easy to clean and, where necessary, to disinfect.

A9. Refuse stores are to be ... managed in such a way as to enable them to be kept clean.

A1. to A9. Compliance regarding cleaning practices and cleaning schedules

- Protect food preparation, treatment and processing rooms against contamination between and during operations.
- Keep food premises clean including:
 - surfaces where food is handled
 - all articles, fittings and equipment with which food comes into contact
 - containers for waste, by products and other refuse
 - refuse stores
 - as well as vehicles and containers used to transport foodstuffs
- Include all articles, fittings and equipment in the cleaning schedule. Pay particular attention to high level areas and the undersides of equipment that may allow the accumulation of dirt, food debris and other soil. For example, the undersides of trimming tables and equipment where there may be a narrow gap between the equipment and the floor.
- Easy to clean surfaces – equipment, including food containers, for example, dolavs, need to be in reasonable condition (intact, not scored or heavily worn or ridged) so that it can be cleaned effectively.

- Cleaning-in-place – CIP systems may be useful in larger poultry plants where processing equipment is difficult or dangerous to reach for routine cleaning. Install such systems only after consultation with the manufacturers of both the equipment and of the cleaning chemicals and validate their effectiveness.

A1. to A9. Good practice

During food production the cleaning procedure must not present a risk of contamination of the food.

If cleaning while production is in progress is unavoidable, food must be protected from splashing, aerosol spray or other contamination. Do not use high-pressure hoses, disinfectants and other cleaning chemicals on equipment, structure and fittings while food is present. Use shovels, squeegees and other tools in place of water sprays to move debris away from the working environment.

TIP



Cleaning areas – Take special care when cleaning areas such as around electrical installations, extractor vents and rubber door seals.

Set out working instructions and cleaning schedules for the entire premises. This includes facilities and equipment such as chillers, by-product rooms, and stores, packing and loading areas; animal unloading bays, lairage pens, shackling areas; overhead structures, drains, locker / changing rooms, water storage tanks, toilets, rest rooms and outside areas.

The cleaning schedule should set out:

- what areas / items are to be cleaned
- who is responsible for cleaning them
- how often each area / item is to be cleaned, including whether more thorough cleaning (deep clean) is required periodically
- chemicals, materials and equipment to be used for different areas / items
- how the cleaning is to be done
- how long the cleaning procedure for each area / item should usually take
- safety precautions to be taken, including use of protective clothing and safe use, storage and disposal of chemicals
- who is to check that the required cleaning has been carried out
- action to be taken if the person checking the cleaning finds something wrong

F

Cleaning schedules – simplified versions of cleaning schedules may be acceptable as long as they provide information on who does what, how and when, including which disinfectant is used.



Legal requirement

852/2004 Annex II Training: Chapter XII point 1

A10. Food business operators ensure that food handlers are supervised and instructed and / or trained in food hygiene matters commensurate with their work activity.

A10. Compliance regarding training, instruction and supervision in food hygiene

- Make sure that food handlers are supervised and instructed and / or trained in food hygiene matters commensurate with their work activity.

A10. Good practice

Instruct staff about the food safety hazards associated with inadequate cleaning and the need to report problems promptly. See '5.4. Training for cleaners'.

Training / instruction should cover chemical safety; the use of protective clothing and equipment; proper use, the storage and disposal of cleaning chemicals as well as the correct use and cleaning of equipment and how to choose the chemicals and equipment suitable for the task. Supervise as necessary and issue reminders if lapses occur.

Make production staff responsible for keeping their own working area as clean as possible throughout the day ('clean-as-you-go'). This will help to reduce the accumulation of waste and make post-production cleaning easier.

Everyone with cleaning responsibilities, including production staff, in-house cleaners and any contract staff, needs to know and follow the company's cleaning procedures so that cleaning operations do not contaminate food.

Keep accurate individual training records to show what instruction / training has been given. See chapter 7 on 'Training'.

Cleaning contractors – if using contract cleaners, choose carefully. Ask for evidence of competence, for example, training certificates or references.

TIP



Cleaners – Agree how many cleaners and the level of service and supervision to be provided.

B. Cleaning of livestock facilities (red meat)

L

Legal requirement

853/2004 Annex III Slaughterhouses: Section I Chapter II points 1 & 6

B1. Slaughterhouses must have adequate and hygienic lairage facilities or, climate permitting, waiting pens that are easy to clean and disinfect.

B2. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of means of transport for livestock. However, slaughterhouses need not have these places and facilities if the competent authority so permits and official authorised places and facilities exist nearby.

B1. and B2. Compliance regarding the cleaning of lairages, and livestock transport vehicles

Make sure that:

- lairages or waiting pens are kept clean
- facilities to clean, wash and disinfect livestock transport are provided
- vehicles used to deliver livestock to a slaughterhouse are cleaned and 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
- in England and 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, in accordance with Transport of Animals legislation
- the slaughterhouse operator keeps a completed, signed copy for 3 months and makes it available for inspection on request. The operator sends a copy of the completed declarations to their local authority by fax (or other means agreed) on the day of receipt
- in Scotland and Northern Ireland: there is no requirement for the driver to complete a declaration, in accordance with Transport of Animals legislation

B1. and B2. Good practice

Include areas used for keeping livestock in the company's cleaning schedule. See 'E1. and E2.' in chapter 2 on 'Design and facilities'. Cleansing and disinfection of livestock transport vehicles may take place at the slaughterhouse or elsewhere. See 'E5.' in chapter on 'Design and facilities'.

In England and Wales – the cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals (Cleansing and Disinfection) (England) (Wales) Orders. For additional information on legislation see:

<http://webarchive.nationalarchives.gov.uk/20130402151656/http://archive.defra.gov.uk/foodfarm/farm/animal/diseases/biosecurity/cleansing.htm>

The Order requires the cleansing and disinfection of the means of transport before and after carrying specified animals, cleansing and disinfection of the wheels, mudguards and wheel arches

of a means of transport. For health and safety reasons the order does not require the use of disinfectants in the driver's cab but this should be thoroughly cleansed.

Drivers are required to give written declarations specifying where cleansing and disinfection will take place when empty vehicles leave slaughterhouses or livestock market premises. Local authorities enforce these orders. FM/AW 27 declaration forms are available to download at: <https://www.gov.uk/government/publications/transport-of-animals-undertaking-to-cleanse-and-disinfect-vehicles>

In Scotland – the cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals (Cleansing and Disinfection) (Scotland) Regulations 2005: http://www.legislation.gov.uk/ssi/2005/653/pdfs/ssi_20050653_en.pdf

In Northern Ireland – the cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals & Poultry (Cleansing and Disinfection) Order (Northern Ireland) 2000 (SR 2000 No. 293): http://www.legislation.gov.uk/nisr/2000/293/pdfs/nisr_20000293_en.pdf

These are similar to the English Order, except for the disinfection of drivers' cabs (which could be required) and the non-requirement of driver declarations.

B1. and B2. Compliance regarding the use of approved disinfectants

- Use only disinfectants approved under animal disease legislation for disinfecting livestock vehicles. Diseases of Animals legislation.

B1. and B2. Good practice

Up to date lists and information on disinfectants approved under The Diseases of Animals (Approved Disinfectants) Orders for England, Scotland and Wales are available from Defra at: www.gov.uk/defra-approved-disinfectant-when-and-how-to-use-it and http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList_SI

For Northern Ireland:

<https://www.daera-ni.gov.uk/publications/approved-disinfectants>

The disinfectant used shall be approved under General Orders and as necessary disease specific Orders where relevant to the animals transported and the location of the source farm (such as TB Order disinfectant where TB reactors are transported to slaughter).

B1. and B2. Compliance regarding the disposal after cleaning

- The person responsible for cleaning the vehicle and any equipment must ensure that all contaminants removed are destroyed; treated so as to remove the risk of transmission of disease; or disposed of safely so that animals have no access to it.

B1. and B2. Good practice

The Transport of Animals (Cleansing and Disinfection) (England) (Wales) Orders and the Transport of Animals (Cleansing & Disinfection) (Scotland) Regulations 2005 specify how the material, removed from the means of transport, must be disposed of after cleansing. Similar

directions are given in the Transport of Animals & Poultry (Cleansing and Disinfection) Order (Northern Ireland).

Manure and digestive tract content is Category 2 Animal by-product and must be disposed of accordingly. See chapter on 'Animal by-products' and the Edible co-products guide at: www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide.

C. Cleaning of vehicles and crates (white meat)

L

Legal requirement

853/2004 Annex III Slaughterhouses: Section II Chapter I point 3

C1. Crates for delivering animals 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.

C1. Compliance regarding poultry crates

- Use crates (and modules if used) made of a suitable corrosion-resistant material and designed to allow easy cleaning and disinfection.

C1. Good practice

Poultry crates – durable plastics are suitable materials for poultry crates. They should not include crevices or inaccessible corners that make cleaning difficult. See ‘C.’ in chapter 2 on ‘Design and facilities’.

C1. Compliance regarding crate washing

- Make sure that immediately after emptying and, if necessary, before re-use, all equipment used for collecting and delivering live animals, is cleaned, washed and disinfected.

C1. Good practice

Crate washing – follow six stages to achieve visually and microbiologically clean crates:

- initial removal of large amounts of solid debris
- pre-wash
- soaking to loosen adherent dirt
- main wash to remove dirt
- rinse
- disinfection

Stage 1 – collect all loosened debris into bins, floor spillage and contaminated residual fluid in lorries is unacceptable as it is likely to contaminate cleaned crates.

Stage 2 – avoid spilling, splashing or spraying wash water on to the floor, through use of guards, shields, and direct the overflow into a drain. Consider making one person responsible for checking and cleaning run-off screens and water jet nozzles regularly during the day. Change wash water frequently, especially if crates are particularly dirty.

Stage 3 – use recommended detergents and follow manufacturer’s instructions. Added quantities of water should include extra detergent.

Stage 4 – as Stage 2. Remove as much residual water from crates leaving the main wash as possible.

Stage 5 – ideally, separate the main wash and rinse sections, for example, using plastic flaps. To avoid diluting the disinfectant at the next stage, remove as much residual water from crates leaving the rinse stage as possible.

Stage 6 – use recommended amounts of disinfectant. Check regularly for nozzle blockage. Locate jets to spray all surfaces of passing crates. A minimum of 3 seconds contact time will help ensure good wetting of all surfaces. To avoid re-contamination of cleaned, disinfected crates, separate the rinse and disinfection sections as much as possible, for example, using plastic flaps if sharing the same booth.

For approved disinfectants and disposal of material after cleaning – see ‘B.’

L

Legal requirement

853/2004 Annex III Slaughterhouses: Section II Chapter II point 6

C2. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of (a) transport equipment such as crates; and (b) means of transport. These places and facilities are not compulsory for (b) if officially authorised places and facilities exist nearby.

C2. Compliance regarding facilities for cleaning vehicles and crates

- Provide facilities to clean, wash and disinfect the means of transport and delivery crates / modules.

C2. Good practice

Facilities for cleaning poultry transport vehicles – see ‘F2’ in chapter 2 on ‘Design and facilities’.

Facilities for cleaning crates – these must be provided on site. Also see ‘F2’ in chapter 2 on ‘Design and facilities’.

D. Cleaning of meat production tools

L

Legal requirement

853/2004 Annex III Slaughterhouses: Section I Chapter II point 3 & Section II Chapter II point 3 / Cutting: Section I Chapter III point 5 & Section II Chapter III point 5 / On Farm Poultry: Section II Chapter IV point 4 / Farmed Game: Section III points 1 & 2 / Production establishments: Section V Chapter I point 5

D1. Operators must have facilities for disinfecting tools with hot water supplied at not less than 82°C, or an alternative system having an equivalent effect.

D1. Compliance regarding knives and other implements

- Cleanse and disinfect all equipment and implements that come into contact with fresh meat - see 'A5'.
- Disinfect meat production tools in water at a temperature of not less than 82°C or an alternative method having the equivalent effect.

D1. Good practice

Clean and disinfect implements that come into contact with meat before the start of work, after every break, and whenever the implements become soiled.

A distinction can be made between meat production tools such as knives, which should be disinfected using water at 82°C for at least 20 seconds (unless alternative systems are in use - see 'D8' in chapter 2 on 'Design and facilities'), and implements such as grading or temperature probes that come into contact with meat, where Regulation 852/2004 does not prescribe the method of disinfection. Some food grade disinfectant wipes (70% alcohol wipes) may be sufficient for implements such as probes.

See 'G11' and 'H6' in chapter 11 on 'Acceptance and slaughter of animals', 'A16' in chapter 12 on 'Dressing of carcasses', and 'B7. and B8.' in chapter 14 on 'Cutting of meat'.

Wild game – no specific requirement but will need to sterilise knives under 'A5'.

5.6. Official control requirements

L

Legal requirement

854/2004 Article 4 point 4c

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures continuously and properly.

854/2004 Article 4 point 5

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly....

5.7. Applying procedures continuously and properly

L

Legal requirement

852/2004 Article 1 point 1(a)

The operator is responsible for food safety in the food business.

852/2004 Article 5 point 1

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

178/2002 Article 17

Food ... business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods ... satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

5.7. Compliance regarding operator responsibility for cleaning procedures

- Operator responsibility includes applying and verifying company's cleaning procedures and taking corrective action if those procedures fail.
- Implement and maintain a permanent procedure or procedures based on the HACCP principles.

5.7. Good practice

Operator responsibility includes maintaining and monitoring cleaning procedures and taking corrective action if there is a failure. These procedures should be based on HACCP principles - see chapter 9 on 'HACCP principles'.

Delegation – responsibility for applying and verifying the company's cleaning procedures may be delegated to a nominated person, to whom problems are reported and who has sufficient authority to ensure that corrective action is taken when necessary.

Verification – carry out a daily pre-operational hygiene inspection of food handling areas to check that cleaning has been carried out properly and thoroughly before work starts. Pay particular attention to equipment and work surfaces that come into contact with food material, or are known to be difficult to clean or are easily contaminated.

Inspect other areas for evidence of build up of dirt / debris and other soiling, as well as other issues that may lead to cleaning problems, including damaged surfaces, poor maintenance, restricted access, poor storage or signs of pest presence.

Check periodically that the cleaning schedule and instructions are being followed by staff and / or contractors, that cleaning chemicals, equipment and procedures are effective particularly in areas known to present problems and that corrective actions are taken if necessary.

Frequency of verification – other than the daily pre-op inspection, this will depend on the area / item and the likelihood of a problem being found. Once a month may be sufficient for management checks on experienced staff / contractors that are following long-standing cleaning and disinfection procedures in easy-to-clean premises. More frequent checks may be needed if there is new staff or procedures.

Microbiological testing – microbiological or rapid hygiene monitoring of cleaned surfaces will help assess the effectiveness of cleaning and disinfection. See chapter 13 on 'Microbiological criteria'.

Records – keep an accurate, dated account (for example, on a cleaning checklist that cleaners can refer to and use) of the result of each periodic verification check, notes about areas requiring special attention, and of any corrective action taken.

Corrective action – take action when failures of the company's cleaning procedures are identified to ensure that control is restored.

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
- ending the service contract
- amending the cleaning schedule and validating its effectiveness
- improving staff training

Annex 1. Cleaning schedule example

CLEANING SCHEDULE EXAMPLE			Issued by [Name] [Date]		
<i>CLEANING OF:</i>	<i>Method, Chemical, Time</i>	<i>Equipment</i>	<i>PPE</i>	<i>Frequency</i>	<i>Notes</i>
Room / Area [A]	XXXXX + disinfection			Daily	
Machine [1]	YYYY			D +breaks	
Vehicle [1]	ZZZZ			D	+ deep clean

Annex 2. Cleaning checklist example

CLEANING CHECKLIST EXAMPLE								[Week 1 (year)]
AREA / ITEM / VEHICLE	Initialled by Cleaner							NOTES / ACTION
	M	T	W	T	F	S	S	
Area [A]								
Machine [1]								
Vehicle [1]								
Verified by: [signature]								[Date]