

HOW TO DEVELOP AN EFFECTIVE CLEANING PROGRAMME IN A FOOD PREMISES

N.B. Many suppliers of cleaning materials and equipment offer advisory services that may help you in carrying out this important task.

CONTENTS:

[Stage 1 – Review the cleaning needs of the business](#)

[Stage 2 – Review and select appropriate cleaning equipment](#)

[Stage 3 – Select appropriate cleaning chemicals](#) – this section includes background information on detergents, disinfectants, and related issues.

[Stage 4 – Prepare a cleaning schedule](#) (overview, benefits, what it should cover, the three phases involved in preparing a cleaning schedule)

[A Practical Step-by-Step Guide](#)

[Appendices](#) (examples of various monitoring forms, a suggested cleaning/hygiene procedure sheet and a list of rules for employees carrying out cleaning tasks)

STAGE 1 – REVIEW THE CLEANING NEEDS OF THE BUSINESS

This can be done, for example, by asking yourself a number of questions:

- What surfaces have to be cleaned – structural surfaces, food equipment, worktop surfaces etc.?
- What kind of material needs to be removed from these surfaces –for example, is there blood, grease or food debris present?
- How extensive is the soiling?
- What's the condition of the dirt – is it long-stranding, fresh, soaked-in or burnt-on? Soil becomes more difficult to remove when it is left to dry and harden, or when it is heated (e.g. carbonised grease)
- What cleaning equipment is needed?
- What chemicals would best achieve the necessary level of cleanliness? Remember, not everything will require disinfection.
- Establish what needs to be disinfected i.e.
 - food contact surfaces e.g. food processing equipment, chopping boards, food implements e.g. knives, choppers, work surfaces, food containers
 - hand contact surfaces (e.g. WC flush and door handles, light switches, nailbrushes, door handles of food storage equipment such as refrigerators, ovens and cupboards)
 - food workers' hands
 - cleaning equipment and materials themselves (mops, cleaning cloths, brushes and scrapers)
- Are there any factors that may adversely affect the efficiency of a cleaning chemical e.g. water hardness?
- How cost-effective are the methods available?
- How big is the cleaning task – i.e. scale and number of tasks involved?

STAGE 2 –REVIEW AND SELECT APPROPRIATE CLEANING EQUIPMENT

- Abrasives – scouring pads, abrasive pads etc.; these help to concentrate the work of the cleaner into the (better) removal of stubborn deposits
- Brushes – various designs/uses; durability considerations; use must not be such that there is a risk of contaminating food (e.g. by bristles) and food preparation areas from dust (use of mop may be better in certain circumstances)
- Cleaning cloths – can cause more problems than they resolve. Single use/disposable varieties may be preferable for many cleaning tasks because many studies have shown re-usable cloths to be the most heavily contaminated items in food preparation areas. However, if re-usable cloths are to be used, such cloths should be:
 - replaced with clean ones frequently during the work period,
 - cleaned, rinsed thoroughly, wrung out, *then*
 - soaked in a frequently changed disinfectant solution for the appropriate contact time.
- Dishwashers – commonly used for both cleaning and disinfecting (using heat). The wash cycle usually operates at around 60⁰C, with a final rinse temperature between 82⁰C and 88⁰C.
- Floor mops and floor cloths – these should be cleaned and disinfected in the same manner as for other cleaning cloths above. Remember that mops should be left to dry with the head uppermost to speed drying. Mop buckets should be turned upside down to drain and dry properly.
- Floor tools – brooms, scrapers, deck scrubbers, squeegees
- High pressure hoses - can be used to clean walls and floors in food processing factories but there is potential for spreading contamination through airborne droplets.
- Sinks – double sinks can be used where dishwashers are impractical or not chosen for some reason. The following procedure is recommended:
 - Scrape off any heavy or loose soil
 - Rinse in cold water
 - Place articles in the first sink in a detergent solution at 50⁰C – 60⁰C; replace cool or dirty water as necessary; scrub with brush to loosen residues; re-immerses in first sink to wash off loosened residues
 - Place articles in the second sink to rinse off chemical residues for 30 seconds, either:
 - o in hot water (around 82⁰C) to achieve disinfection, or
 - o in water at a lower temperature (around 60⁰C) with a chemical disinfectant added to the water
 - Remove articles, allow to drain and air dry before returning to storage in a suitable location
- Vacuum cleaners – may include wet vacuums for lifting water and wet soil from a floor.

STAGE 3 – SELECT APPROPRIATE CLEANING CHEMICALS

Manufacturers now supply cleaning products in a variety of forms (e.g. liquid, gel, aerosol) and formulations to the extent that labels can be a bit bewildering. A product can often contain a range of chemical additives specifically formulated to suit particular cleaning needs. You need to make sure that the products you buy will satisfy your needs and circumstances for both cleaning (removal of soil using detergents) and disinfection. Cleaning product suppliers will often provide information and help regarding the use of their products.

Background information to aid your decision is as follows:

Removing dirt (or 'soil' in cleaning jargon)

There are a number of ways in which soil can be removed from hard surfaces. These depend on the nature of the soil and include:

- Where it is necessary to remove fat or grease, **detergents** are used to dissolve the fat/grease and suspend the resulting particles in water so that they can be easily removed.
- Another way in which fat-based soils can be removed is to use **alkaline cleaners** – for example, the cleaning of greasy equipment, or where there may be carbonised grease or burnt food, although care must be taken in this case as the chemicals may be caustic
- 'Denatured protein' soil can arise when soluble proteins (e.g. from milk, meat juices) are heated, denature and become insoluble, then adhere firmly to any surface they are near, in effect becoming 'baked on'. If they are put straight into hot water detergent solutions or dishwashers, the soil will bind even more firmly onto the surface. Consequently, a cool or warm wash stage should be used first.

Detergents

There are four main categories of detergent, classified according to the electrical charge of the chemical itself, as follows:

Anionic detergents – these are the largest group of detergents, with the active chemicals having a negative electrical charge. They have very good wetting properties and foam easily. However, they are not compatible with disinfectants called quaternary ammonium compounds (commonly abbreviated to 'Quats', QATs or QACs) as they stop them being able to kill germs.

Cationic detergents – these are positively charged detergents and tend to have a lower cleaning ability.

NB Anionic and cationic detergents have opposing (electrical) charges and must never be used together as they would cancel each other out.

Non-ionic detergents – these carry no electrical charge and can therefore be mixed with either anionic or cationic detergents.

Amphoteric detergents – the electrical charge depends on the pH of the solution.

Disinfectants

Two main factors affect the choice of disinfectant:

- Which germs are you trying to destroy? Some disinfectants are more effective against particular germs than others (determined by the nature of the disinfectant and structure of the cell wall of the germ). Some can be used against a wide range of germs.
- Under what conditions would the disinfectant be used? The presence of soiling can greatly reduce the efficiency of a disinfectant, depending on the amount and type of soil concerned. Other issues to consider include the nature of the surface to be disinfected, and issues of safety, compatibility, dilution, contact time and cost arising from using the product.

Types of disinfectants

Although there are a large number of disinfectants on the market, they are formulated from a more limited range of 'active ingredient' types. *Always establish what the active ingredient is so that you can assess its advantages and drawbacks for your particular circumstances.*

The most common types of disinfectants are:

Chlorine-based disinfectants – e.g. sodium hypochlorite. Probably the most useful and commonly used chemical disinfectants in the food industry.

Advantages:

- Destroy a wide range of germs
- Rapid action
- Very low toxicity
- Negligible taint (generally)
- Cheap
- Available in dry powder or tablet form, which are stable in storage

Disadvantages:

- Corrosive to some metals
- Activity declines in storage, but in cool conditions should retain most of their activity for 6 months
- Activity much reduced in the presence of soiling
- Do not wet surfaces very well – therefore look for products that contain compatible detergents to give increased wetting power.

Iodophors

Advantages:

- Destroy a wide range of germs
- Act rapidly
- Not as temperature dependent as other disinfectants
- Some are capable of being effective under heavy soiling conditions, due to having detergent properties

Disadvantages:

- Rapidly lose their activity under alkaline conditions. To counteract this, stabilising acids are often added but these can increase corrosivity
- May stain on some surfaces
- Can be expensive

Quaternary ammonium compounds ('Quats', QATs or QACs) – e.g. Benzalkonium chloride (Zephiran). There are a number of Quats that differ quite markedly in chemical configuration giving rise to different germ-killing properties. Although compatible with non-ionic detergents, their overall bactericidal effectiveness is dependent on the type of non-ionic detergent used in the formulation and on the ratio of Quats to non-ionic detergent. Always check suitability for your purposes.

Advantages:

- Colourless, odourless, tasteless i.e. low taint potential
- Non-corrosive
- Strongly antimicrobial – very good at killing germs
- Excellent chemical stability
- Good water solubility

Disadvantages

- Antimicrobial activity rapidly neutralised by soaps, anionic detergents and soiling. Therefore, they disinfect best on visually clean or lightly soiled surfaces.
- Variable activity - far more active against certain types of germs (e.g. 'Gram positive' bacteria) than others (e.g. 'Gram negative' bacteria).
- May be affected by hard water salts found in certain water supplies.

Amphoteric Compounds – used extensively in the food industry.

Advantages

- Relatively non-toxic
- Low irritancy
- Non-corrosive
- Spectrum of activity similar to Quats.
- Less limitations in use than Quats i.e. generally more easily rinsed, compatible with a wider range of detergents, less affected by water hardness.

Disadvantages

Activity is reduced by heavy soiling – therefore only recommended for use on previously cleaned or lightly soiled surfaces.

Alcohols – Alcohol disinfectants are becoming more common in the food industry, often being incorporated into disinfectant products to enhance activity. They do this by damaging proteins in the bacterial cell wall and disrupting its proper functioning; by 'punching holes' in the cell wall like this, they also enable other disinfectants to work more easily. The effectiveness of alcohols is dependent on having the correct concentration (in water). For example, ethanol and iso-propanol are most effective as disinfectants at concentrations of 60% - 70% (volume to volume) in water.

Related Issues To Be Aware Of...

Safety – Many disinfectants have toxic properties; some are highly corrosive and can damage skin and eyes. Product safety information and safety data sheets should be supplied, read, understood and followed. Appropriate protective clothing should be worn as required.

Compatibility – Certain disinfectants are incompatible with other substances and can become inactivated. Therefore if detergents etc. have been used to clean a surface before using a disinfectant, the treated surface should be rinsed with clean water before applying the disinfectant.

Making up dilutions – In many instances the disinfectant will be supplied in a concentrated form and it will be necessary to prepare a dilution before it can be used. The manufacturer's directions must always be followed, as over dilution will make the disinfectant ineffective. Graduated (marked) measures for the amount of disinfectant and the amount of water needed should be used. Staff should receive instruction and training on the proper method of preparing the dilution.

Contact time – Chemical disinfectants need sufficient 'contact time' with the surface if they are to work properly i.e. destroy germs to a sufficiently safe level. Manufacturer's instructions in this regard should always be observed.

STAGE 4 – PREPARE A CLEANING SCHEDULE

INTRODUCTION

A properly drafted set of cleaning procedures will provide you with hygiene that is:

Consistent – from day-to-day and person-to-person

Managed – rather than relying on ad hoc arrangements

Accountable – provides a record of who cleaned what, when and how well it was cleaned

Trainable – provides a step-by-step guidance document to train new starters and to act as an aide-memoir for existing staff

Safe – helps to ensure that staff are aware of, and comply with, safe and recommended working procedures

BENEFITS

1. Clearly demonstrates the existence of a food safety control measure – helping you to comply with the requirement (in the Food Safety (General Food Hygiene) Regulations 1995) to prevent the contamination of food by pathogens (harmful germs), foreign objects and chemicals.
2. May contribute to a 'due diligence' defence: it is an offence to sell food which is unfit, substandard or which may cause harm to the person consuming it. The principal legal defence available to a person accused of such an offence is one of 'due diligence'. For this they have to prove that they "took all reasonable precautions and exercised all due diligence to avoid committing the offence". Although there is no legal requirement for a written/documented cleaning schedule, the availability of written records may be extremely valuable in helping to establish a defence in cases where food has been contaminated.

3. Provides a checklist – which ensures that all areas, equipment and surfaces that require cleaning are included.
4. Provides clarity – staff know what their cleaning duties are and when/how to carry them out.

WHAT SHOULD A CLEANING SCHEDULE COVER?

- What is being cleaned i.e. correct identification of all areas, equipment, surfaces etc. that require cleaning (don't forget to include the cleaning equipment itself!)
- Who is responsible for carrying out particular cleaning tasks
- What cleaning tools and chemicals are needed
- What health and safety precautions need to be taken (including the use of personal protective equipment)
- What (step-by-step) methods or procedures the cleaner should observe
- The frequency with which the particular cleaning task is to be carried out

DRAFTING A CLEANING SCHEDULE

If you do not yet have a cleaning schedule – don't panic! In addition to following the advice in this guidance document, there are several sources of information and help available to you:

- Your local Environmental Health Officer/ Food Safety Officer. Advice is free and many offer easy-to-complete proformas for you to use when preparing your schedule and monitoring its effectiveness
- Your hygiene chemical supplier – many offer a free advice service and 'cleaning schedule packs' to help you on your way

Drafting a cleaning schedule can be considered as a three phase process:

Phase One

A useful first stage is to review your current cleaning arrangements and standards of hygiene. Get involved with your cleaning staff and see how the cleaning of particular pieces of equipment is currently being carried out. Review what is *actually* carried out at the moment against what is really needed to meet hygiene requirements.

Phase Two

Using the expertise of your hygiene chemical company and the involvement of your cleaning staff, work towards accurate step-by-step specifications for all cleaning operations so as to secure good hygiene standards. The involvement of cleaning staff in this process (and in looking at drafts of proposed cleaning procedures) is more likely to lead to better 'ownership' of the task and better compliance with procedures.

Phase Three

Document the cleaning procedures in a cleaning schedule – a set of documents that cover all cleaning tasks in your premises. Cleaning schedules can have a variety of designs but it's important for you to establish a format

that works for you and your cleaning staff. Here is a typical layout of headings for a cleaning schedule proforma.

ROOM: [Step 1]

Item	Person Responsible	Products and Equipment Required	Method	Frequency
[Step 2]	[Step 3]	[Step 3]	[Step 3]	[Step 3]

A PRACTICAL STEP-BY-STEP GUIDE

To help you implement a cleaning schedule in a food business, using the proforma outlined above, the following 9-step practical guide may be of use

Step 1:

At the top of the schedule, write down the room to which the sheet refers. You may need more than one sheet per room.

Step 2:

In the 'Item' column list all the items that require cleaning in the room. Where there are several items which share identical cleaning requirements list them all in one box. An indicative list of possible items (some with suggested cleaning frequencies *) that might be included in this column is as follows: (* Please note that these suggested frequencies are for guidance only – it is your responsibility to determine the level and frequency of cleaning required at your premises).

- Bain-Maries and hot cupboards - *daily*
- Boilers and steamers - *weekly*
- Canopies - *weekly*
- Ceiling - *3 monthly*
- Chopping boards, work surfaces - *after use*
- Cleaning equipment itself! - *daily, as required*
- Cutlery, crockery, pots & pans - *daily*
- Deep fat fryers - *weekly*
- Dish cloths, drying cloths - *as required and at least daily*
- Display cabinets - *daily, as required*
- Doors/windows - *weekly, as required*
- Drains and gullies - *daily, weekly*
- Electric fly killers - *weekly, as required*
- Floors - *daily, as required*
- Hand contact surfaces (e.g. light switches, WC cubicle locks, WC flush handles, door/cupboard handles)- *daily, as required*
- Hand-wash basins - *daily, as required*
- Hand soap dispensers - *daily, as required*
- Glass washer - *weekly*

Ice making machines	- <i>daily, weekly, monthly, quarterly, in accordance with manufacturer's instructions</i>
Knives, choppers etc.	- <i>after use/daily, as required</i>
Light fittings	- <i>3 monthly</i>
Microwave ovens	- <i>daily, as required</i>
Ovens & grills	- <i>daily, as required</i>
Refrigerators, cold stores, freezers	- <i>weekly</i>
Refuse/waste bins and lids	- <i>after emptying</i>
Scales, tills etc.	- <i>daily, after use</i>
Shelving, racking & cupboards	- <i>monthly, as required</i>
Sinks & drainers	- <i>daily, weekly</i>
Slicers, mincers, peelers, mixers	- <i>after use</i>
Toilets and toilet areas	- <i>daily, as required</i>
Walls	- <i>weekly, monthly</i>

Step 3:

For each item or area identified as needing cleaning, write down:

- The person responsible
- The cleaning products and equipment (including any safety equipment) required
- The cleaning procedure to be followed, expressed in a clear step-by-step way. Each specified procedure needs to follow the hygiene chemical supplier's instructions for use which may be found on product labels/packaging or on product information sheets. Where more detailed cleaning procedures might be desired or applicable, an alternative approach (if thought to be necessary) could be to make reference to specific numbered Cleaning/Hygiene Procedure (CHP) sheets (See appendix 11).

Step 4:

Repeat the process for every room

Step 5:

Ensure that all staff are instructed or trained in their cleaning responsibilities, the chemicals to be used, and the procedures to be followed. They should understand the cleaning schedule system and associated monitoring. You may wish to record that instruction/training has been given to specific members of staff on a training record form.

Step 6:

Keep the relevant parts of the cleaning schedule readily available for referral by staff. This can be done by various means, including:

1. Fixing each part of the schedule in a suitable prominent place in the room that it relates to. A plastic wallet will help protect it.
2. Keep the whole schedule and other cleaning-related documents (e.g. product information and hazard data sheets) in a file in a readily accessible location.

Step 7:

- At regular intervals, appropriate to specified cleaning frequencies, check on the cleaning carried out. In this way any instances of inadequate cleaning can be identified and steps taken quickly to put things right.
- You may wish to record your findings on a cleaning monitoring form, that could then be useful as part of a due diligence defence in the event of legal action against you being considered.
- You could consider periodically carrying out more regular monitoring than usual in order to focus the attention and activities of cleaning staff in this important aspect of food hygiene.
- If recording of cleaning monitoring is carried out (and we recommend that it should be) it should be done in a way and at a level appropriate to your business needs. Forms used to record cleaning monitoring can be very varied, being designed to suit different needs and circumstances. It is important to find an approach and forms that suit your particular requirements and work for you. The simpler your recording system is, the more likely it is that it will be used properly and consistently by all cleaning staff. **Examples of cleaning monitoring forms are provided as appendices to this guidance.** You can peruse, choose and manipulate them to meet your particular needs.

N.B.

- The 'general' forms will allow you to approach the monitoring of cleaning in a general room-by-room way.
- The 'detailed' forms will allow you to create forms tailored to your particular premises by listing items requiring checks within each room (one or more sheets per room).

Step 8:

Complete relevant parts of the form(s) to record anything you find wrong and what you do to put things right. An example of a partially completed form is given in Appendix 10.

Step 9:

Make sure that all faults have been remedied before finally signing off the sheet.

Appendices:

1. [Cleaning monitoring – general / periodic check](#)
2. [Cleaning monitoring – daily \(general\)](#)
3. [Cleaning monitoring – daily \(detailed\)](#)
4. [Cleaning monitoring – weekly \(general\)](#)
5. [Cleaning monitoring – weekly \(detailed\)](#)
6. [Cleaning monitoring – monthly \(general\)](#)
7. [Cleaning monitoring – monthly \(detailed\)](#)
8. [Cleaning monitoring – quarterly \(general\)](#)
9. [Cleaning monitoring – quarterly \(detailed\)](#)
10. [Partially completed example of Cleaning monitoring \(general/periodic\) check form](#)
11. [Cleaning/Hygiene Procedure Sheet](#)
12. [Rules for Employees Carrying Out Cleaning Tasks](#)

CLEANING MONITORING: GENERAL / PERIODIC CHECK

Use ✓ or ✗ to indicate if cleaning is satisfactory

DATE	ROOM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **DAILY - GENERAL**

Use ✓ or ✗ to indicate if cleaning is satisfactory

WEEK COMMENCING: MONDAY _____

ROOM	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **DAILY - DETAILED**

Use ✓ or ✗ to indicate if cleaning is satisfactory

AREA/ROOM: _____ WEEK COMMENCING: MONDAY _____

ITEM	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **WEEKLY - GENERAL**

Use ✓ or ✗ to indicate if cleaning is satisfactory

WEEK COMMENCING: Monday

(Week No.)

ROOM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **WEEKLY - DETAILED**

Use ✓ or ✗ to indicate if cleaning is satisfactory

WEEK COMMENCING: Monday

(Week No.)

AREA/ROOM: _____

ITEM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: MONTHLY - GENERAL

Use ✓ or ✗ to indicate if cleaning is satisfactory

MONTH:

ROOM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **MONTHLY - DETAILED**

Use ✓ or ✗ to indicate if cleaning is satisfactory

MONTH:

AREA/ROOM: _____

ITEM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **QUARTERLY - GENERAL**

Use ✓ or ✗ to indicate if cleaning is satisfactory

QUARTER: 1 2 3 4 (*circle*)

DATE: _____

ROOM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: **QUARTERLY - DETAILED**

Use ✓ or ✗ to indicate if cleaning is satisfactory

QUARTER: 1 2 3 4 (*circle*)

DATE: _____

AREA/ROOM: _____

ITEM	Details of any Action Required/Taken	Signed off by Supervisor (initials & date)

CLEANING MONITORING: GENERAL / PERIODIC CHECK

Use ✓ or ✗ to indicate if cleaning is satisfactory

DATE	ROOM	Details of any Action Required/Taken and Date Completed	Supervisor (initials & date)
13 /8/ 05	Main kitchen	Grease on floor under cooker Dirt/soil on tiles rear of hand wash basin Window ledges dirty Cleaner told 13/8/05; All checked 14/8/05 – all OK	SME 14/8/05
13 /8/ 05	Dry goods store	✓	SME 13/8/05
13 /8/ 05	Food Prep Room	Meat slicer handle dirty Soap dispenser handle dirty Food debris beneath chopping block Cleaner told 13/8/05; cleaning items checked 14/8/05 – all OK Cleaning schedule to be revised. Cleaning schedule revised 19/8/05	SME 14/8/05 SME 20/8/05

CLEANING/HYGIENE PROCEDURE SHEET (CHP SHEET)

[Specify item / area to be cleaned here]

[Insert your own
CHP Ref. No.
Here]

FREQUENCY: *[specify the frequency of the cleaning task here]*

CLEANING PROCEDURE/METHOD:

Products/Equipment To Be Used:

[Numbered or bullet point list here; include personal protective equipment]

Preparation:

[Numbered or bullet point list of steps/actions here]

Cleaning:

[Numbered or bullet point list of steps/actions here]

Post-Cleaning:

[List steps/actions here – use numbers or bullet points]

Rules For Employees **Carrying Out Cleaning Tasks**

NEVER

Mix cleaning chemicals

Decant cleaning chemicals into unmarked containers

ALWAYS:

Follow manufacturers' instructions

Know what you're doing – be trained!

Wear protective clothing as directed

Isolate electrically-operated machinery from the electricity supply before cleaning it

Keep chemicals away from food in a marked, lockable cupboard

Wash hands after using cleaning chemicals

Finish up by cleaning and disinfecting the cleaning equipment itself