Guidelines for Verification of Cleaning Programmes

Fishing Industry Inspection and Certification Council
Wellington
July 1999

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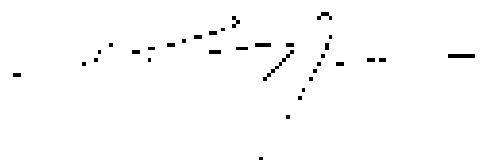
Preface

The Fishing Industry Inspection and Certification Council has agreed that it would be desirable for guidelines to be developed to assist with the verification of cleaning programmes.

These guidelines are intended as recommendations for companies, but it should be noted that the requirements of the legislation and the Fishing Industry IAISs and circulars must be met.



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Amendments

Suggestions are welcomed for alterations, deletions or additions to these guidelines to improve them or to make them better suited to the needs of the fishing industry and inspection staff. Suggestions should be forwarded to the co-ordinator, together with reasons for the change and any relevant experimental or documentary data.

Amendments to these guidelines can be identified by the issue number in the page footer and a # mark next to the changes which have been made.

The co-ordinator of these guidelines is:

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Amendment Record

It is important that these guidelines are kept up-to-date by the prompt incorporation of amendments.

To update these guidelines when you receive an amendment, remove the appropriate outdated pages, destroy them, and replace them with the pages from the new issue. Complete instructions will be given on the covering letter accompanying the amendment. File the covering letter at the back of the guidelines and sign off and date this page.

If you have any queries, please ask your local Inspector.

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1. Introduction

1.1 Purpose

These guidelines have been developed to assist seafood companies in determining the most suitable verification activities for confirming the effectiveness of their cleaning and sanitation programmes.

IAIS 003.1, Section 7 states that:

"Premises shall have a documented programme to verify the efficacy of the cleaning and sanitation programme. The frequency of verification activities shall be sufficient to give the company confidence that the cleaning and sanitation programme is appropriate for the premises/product environment."

1.2 Verification of Cleaning Programmes

There are a number of ways to verify, or confirm, the effectiveness of cleaning and sanitation activities carried out in seafood processing areas. Some methods are outlined below. Each company will need to assess their own requirements and decide on the most appropriate method, or combination of methods, that suit their premises. They will also need to decide on the frequency of any checks carried out as part of the verification. The methods and frequency should be based on the level of food safety risk associated with the product and its processing.

In order to select the most appropriate verification activities, it is important to know and understand the company's cleaning procedures and the chemicals being used, i.e. the job the chemical is designed to do, the concentration it should be used at and any other specific requirements associated with the application of the chemical.

2. Methods to Verify the Effectiveness of Cleaning and Sanitation Activities in Seafood Processing Areas

2.1 Inspection of the Actual Cleaning Process

The cleaning process can be checked by observation while the cleaning and sanitation activities are being performed, and may include the following:

- Is the procedure being carried out properly (as per the documented system)?
- Has the correct chemical been selected for application in the area or on the equipment to be cleaned?
- Is the chemical being applied correctly?
- Is the detergent doing its job, i.e. is it removing the grease and soil adequately?
- Is the surface being rinsed properly, and is any chemical or soil remaining?
- Is the chemical being left for the required time (if this is important)?

2.2 Checks of Cleaning Solutions

Checks of the properties of the cleaning solutions can be useful when carried out in combination with other checks such as those in Section 2.1.

- strength prior to use and, in some cases (such as foot-baths or knife sanitisers), during use;
- temperature (if this is important);
- any other important features.

2.3 Inspection Using the Senses – Look, Smell, Feel

After cleaning and sanitation procedures have been completed, the following can be checked:

- Surfaces should look clean. There should not be any debris (product, scales, slime, dirt, protein, oil, etc.) left on the surface.
- The work areas should smell clean.
- Surfaces should feel clean, without the presence of grease or solid particles.

These checks can either take place immediately after clean down, or during the "pre-op" inspection.

2.4 Information from the Chemical Supplier

It may be possible to gain information from the chemical supplier regarding the bacteriocidal properties of sanitising chemicals in particular. Providing that the chemical

is being used in the way recommended by the supplier, this information could be used to support other verification evidence.

2.5 Microbiological Assessment

There are a number of standard microbiological techniques that can be used. These include:

- **Swabs**
  There are a variety of types available (gauze swabs, swab-sticks, etc.) and most can be purchased pre-sterilised. Selected sites are sampled and the swabs then forwarded to an analytical laboratory for analysis. If the swabs are used with a sterile template (i.e. a metal or plastic ring or square of a known area), the results can be reported as a total count per surface area. Sites selected could include product contact surfaces such as conveyor belts, tables, bins, knives, etc., and may include non-contact surfaces such as floors, drains, underneath tables and equipment.

  To check the effectiveness of the cleaning programme, the swabs should be taken after the last step in the cleaning process has been completed. The sites should be sampled under essentially the same conditions (same day, time, etc.), so that comparisons can be made over time.

- **Contact slides**
  These are used in the same way as the swabs described above but usually contain pre-made media. They are placed on the surface and then incubated at the required temperature on site. The result is a total bacterial count per surface area. The sites selected should include product contact surfaces and may include non-contact surfaces. Information for interpreting results will usually be supplied by the manufacturer. Contact slides should be used after the last step in the cleaning process using the same conditions each time, so that comparisons can be made.

- **Hygiene test swabs**
  These are swab sticks that are bought pre-sterilised in a tube containing a variety of pre-made media. The swab stick is removed from the container, wiped over a surface, then placed back into the container with the pre-made media. This is then incubated at the required temperature. Results are shown by a colour change in the media. The time taken for the colour change to occur depends on the number of organisms that were present on the surface when swabbed. The manufacturer of the product should supply information on instructions for use and interpretation of results.

- **Routine monitoring for *Listeria***
  Both environmental and product *Listeria* tests, as well as any other microbiological assessment of product, can be considered for verification of cleaning and sanitation. However, if a problem does occur (with the product), it may not always be something which is directly associated with the cleaning activities.

Note:
At all times during microbiological sampling, care must be taken to ensure aseptic techniques are used. This means that all swabs and media must be kept sterile until the

time of use and that any unwanted contamination of the swabs or surfaces being sampled is avoided.

For swabs taken immediately after completion of cleaning and sanitation, where the sanitiser is not rinsed off, the surface to be swabbed should be rinsed with potable water first. This prevents any sanitiser left on the surface from continuing to kill the bacteria you are trying to measure.

Also, make sure to follow any instructions from the manufacturer or laboratory.

2.6 Expected Results from the Microbiological Assessment

The expected levels of bacteria present on surfaces after cleaning and sanitation will vary according to factors such as:

- the type of surface**,**
- the desired level of cleanliness,
- the chemicals used**,**
- the method of assessment (including incubation time and temperature)**.**

Where commercial swabs are used, the suppliers should be able to provide guidance on the expected results for good cleaning and sanitation.

Guidelines are available for total bacterial numbers and these can be used to give an indication of the effectiveness.

For example:

Grade	**Per square foot**	**Per 10 cm^2**
Satisfactory	0 - 5000	0 - 540
Fairly satisfactory	5000 - 25000	540 - 2700
Unsatisfactory	Over 25 000	Over 2700

For each premises, surface and chemical, however, companies should establish their own levels that provide the desired outcome.

3. Responsibility for Verification

Staff performing cleaning duties should inspect their own work and report to their supervisor if the methods or chemicals used do not produce the expected results.

At the start of each processing day, a supervisor, company checker or another designated person should carry out a “pre-op” inspection to confirm that the area is clean and ready for processing.

Chemical testing and microbiological sampling may need to be carried out by a trained person, depending on the type of test involved.

Review of the cleaning and sanitation verification activities should be included as part of a company’s internal compliance programme. The review may include viewing “pre-op” check sheets, checks of the cleaning process, analysis of results of microbiological tests, etc.

4. Frequency

4.1 Initial Checks

As for most company checks, the frequency for carrying out the verification checks of the cleaning and sanitation procedures is determined by performance. Initially, checks should be made every time the cleaning procedure is carried out. Once it has been confirmed that the procedures can achieve the required outcome on a regular basis (e.g. over 1–2 weeks), the frequency of checks can be reduced. If problems are found at any time, the frequency should be increased until there is confidence that the procedures are being carried out effectively again. Also, if new cleaning or sanitising chemicals are purchased, additional checks should be carried out to confirm the effectiveness of the new products.

4.2 Routine Checks

For a premises operating normally, with good cleaning and sanitation procedures, the frequency of checks is recommended as follows (see Table 4.1):

- **Inspection using the senses**
  These simple but effective checks can be carried out after every cleaning procedure has been completed or as part of the "pre-op" inspection. They would form part of the daily checks completed by one of the company checkers.

- **Inspection of the actual cleaning process**
  Frequency for these activities will vary. Cleaning staff should check their own work each time, whereas chemical testing may be carried out each shift, daily or weekly. All checks such as these should be recorded in some way so that the company internal compliance person has good evidence to verify the cleaning and sanitation activities.

  An overall review of the cleaning procedure may be carried out less often, i.e. 6 monthly or annually.

- **Microbiological sampling**
  Unless a company needs to have regular information about the microbiological status of its processing areas, this type of sampling would mainly be used to confirm a cleaning and sanitation procedure as effective on a one-off basis. Samples would probably be taken every day for a period of at least a week to allow for normal variation.

  Reconfirmation may be carried out if the cleaning procedure changes in any way, if chemicals are changed, if key personnel change, if new equipment is brought in to be cleaned etc. It may also be useful to carry out a regular confirmation at least 6 monthly or annually.

Table 4.1: Summary of verification activities for cleaning and sanitation

Verification activity	Responsibility	Frequency	Records
Inspection of the cleaning process while it is being done	Company checker, or Cleaning gang supervisor	Daily or weekly Review of records by internal compliance person weekly or 2 weekly	Daily/weekly check sheets for cleaning Internal compliance check sheets
Check cleaning and sanitising solutions	Company checker, or Supervisor, or Internal compliance person	Daily or weekly as part of cleaning and sanitation programme As part of Internal compliance programme – weekly to monthly	As above
Sensory checks: • immediately after cleaning, or • as part of "pre-op" check	Company checker	Daily Review of records by internal compliance person weekly or 2 weekly	As above
Information from supplier	Quality assurance person, or Internal compliance person	When new chemicals are purchased and check annually with supplier to confirm	Reports from suppliers. File with cleaning and sanitation programme
Microbiological tests	Quality assurance person, or Internal compliance person	For new chemical, premises or when trouble-shooting, daily for 7-14 days. Otherwise consult expert to determine frequency or need.	Test results and interpretation.
Product tests and results from *Listeria* monitoring	Quality assurance person, or Internal compliance person	Use results when available to support other verification evidence.	Test results.

5. Records

It is important that accurate records be kept of all verification activities in order to determine the effectiveness of the cleaning programme, these may be in the form of checklists, comments, test measurements, review reports and microbiological reports.

6. Elements of the Documented Programme

Verification of cleaning and sanitation programmes may form part of the documented cleaning and sanitation programme or the internal compliance programme. It should contain the following elements:

Responsibility — This may lie with a number of people or a single person and will depend on the type of activities used.

Verification activities — All checks that are carried out to verify the effectiveness should be documented.

Frequency — The frequency of each activity will need to be determined and documented.

Corrective action — The programme should allow for corrective action that is taken if the verification activities indicate that the cleaning and sanitation programme is not effective.

Records – Records of all activities, findings and any subsequent corrective action should be kept.