

Scallop Handling and Shucking Practices 2nd Edition

Workplace coaching and training resources



Scallop Shucking and Handling Practices – 2nd Edition

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Introduction

Welcome to Seafish's workplace coaching resources for scallop handling and shucking practices.

These materials were developed with support from the Food Standards Agency in Scotland in 2006 to assist scallop processors in producing safer seafood. This 2nd Edition was developed in 2010, also with Food Standards Agency in Scotland support.

These resources are intended to help scallop processors deliver more effective training to their staff and are designed to be delivered in company, by company staff and at a time and place to suit the company.

The resources consist of

- a written set of coaching notes that include handouts and a general guide to coaching;
- a DVD containing short training films;
 - Managers Introduction;
 - Operative Overview
 - Scallops and HACCP

The general guide to coaching is an existing guide used by Seafish to introduce workplace coaching and assessment skills. This guide will help managers and supervisors to use the Coaching Notes on scallops to instruct their staff.

Additional support is available in the form of a half day HACCP training course delivered by Seafish and our network of Approved Training Providers (ATPs).

Information can be obtained from the Scottish Association for Marine Science (SAMS) who have carried out much of the underlying technical research upon which these materials are based. Their contact details are in the Other Resources section.

For information on general training please contact your local seafood industry ATP (see also www.seafish.org or www.seafoodacademy.org)).

Seafish Training (training@seafish.co.uk) can assist with information on other resources and assistance available to the seafood industry, including other training materials.

The Food Standards Agency in Scotland can be contacted for information on legislation and regulations, although this information is also available from your local EHO.

Copyright on these materials generally rests with Seafish. They are provided to seafood employers to use to train staff and only in that respect can they be freely copied.

They should not be used by any third party unless given express permission in writing by Seafish.

Lee Cooper
Seafish Training Development
March 2010

Important Notice: Before using these training materials for training and coaching we strongly suggest that you log onto this address:

www.seafoodacademy.org/scallops.html

From this page you will be able to find more information on scallops and the food safety issues that need to be addressed.

Scallop Shucking and Handling Practices

Unit 1.1 Maintain Hygiene Standards

Scallop Shucking and Handling Practices

UNIT 1.1 MAINTAIN HYGIENE STANDARDS

Aim To enable operatives to develop and maintain a hygienic work environment through the knowledge and applications of the principles of hygiene, whilst undertaking designated tasks.

COACHING INSTRUCTIONS

Ask: WHAT ARE YOUR RESPONSIBILITIES UNDER CURRENT FOOD SAFETY LEGISLATION?

Obtain answers: To maintain a high standard of personal hygiene
To process Scallops hygienically to ensure a safer product
To identify and promptly report anything that might lead to product contamination.

SESSION 1 - Maintaining Personal Hygiene.

Tell: One of the biggest hygiene problems in the food processing industry is people. Remember that people who handle food have other people's health in their hands and nothing is more dangerous to people than other people.

In Scallop processing problems can happen because we fail to do something we should do, or do something we shouldn't.

In this Session – Personal hygiene we will look at what you should do to make sure you do not contaminate the Scallops with bacteria or viruses through poor personal hygiene.

Handout Information Sheets 1 & 2 and discuss each hygiene practice.

Tell: Hand washing over and above the normal household routine is needed:

- before handling food;
- between different food handling operations, i.e. after shucking and before washing the meats, in order to prevent cross-contamination;
- after using the toilet and before leaving the washroom;
- after smoking, coughing and sneezing or using a handkerchief.

Washing means using soap, hot water and 'method'.

For a suitable method see the handwashing demonstration on your scallop DVD

Scallop Shucking and Handling Practices

Tell: An essential part of personal hygiene is the wearing of clothing designed to protect raw materials and product from contamination when coming into contact with people.

When shucking Scallops you will wear Personal Protective Equipment (PPE) to protect you. Do not confuse this with the clean clothing you should wear to protect the Scallops from you.

For a suitable method see the dressing demonstration on your scallop DVD

Show each item of protective clothing and discuss its purpose

Tell: Protective clothing should be changed as often as necessary and plastic boots should be scrubbed daily with hot water and disinfectant.

Ask: WHAT COULD BE THE CONSEQUENCES OF A FOOD POISONING OUTBREAK CAUSED BY CONTAMINATED SCALLOPS? ¹

Obtain answers: People eating it would be ill.
Scallop sales could decrease through bad publicity.
The person causing the food poisoning could be prosecuted.

Tell: The main symptoms that a sufferer from food poisoning would exhibit are:

- vomiting;
- diarrhoea;
- stomach pains;
- nausea.

This can be caused by bacterial contamination, contamination with viruses or even with algal biotoxins.

Food poisoning bacteria come in two main types. Those which cause poisoning by growing inside people and those which poison by producing a biotoxin (or poison).

Bacteria grow slowly in the cold (5°C) and are killed off by heat (above 63°C). The danger zone therefore for bacterial growth is between 5°C and 63°C. Freezing does not kill bacteria but slows their growth rate down to a standstill.

Handout Information Sheet 3 and discuss food poisoning bacteria.

¹ During Unit 1.1 we will not refer to the issues around Algal Biotoxin contamination poisoning. This Unit is solely about general food hygiene.

Scallop Shucking and Handling Practices

SESSION 2 - Maintaining a Hygienic Working Environment.

Tell: The cleaning operation is a vital part of everyday work. To minimise the risk of food poisoning and maximise the shelf-life of Scallops it is essential to prevent contamination by bacteria, viruses, etc.

A clean working environment promotes food quality and is a pleasanter place to work in. Processing scallops is a particularly messy operation but this should not stop us from keeping the workplace clean with regular clean-as-you-go as well as more thorough cleaning during the working day.

Ask: WHY DO WE NEED TO CARRY OUT CLEANING PROCEDURES?

Obtain answers:

- To avoid food poisoning (e.g. avoid contamination);
- To maintain product quality (e.g. keep products in good condition);
- To satisfy the requirements of legislation (e.g. Food Hygiene Regulations);
- To maintain a safe and tidy working environment (e.g. good housekeeping practices);
- To project a suitable image (e.g. dirty premises give little confidence to a visitor or customer);
- To maximise product shelf-life (e.g. reducing spoilage prolongs shelf-life);
- To remove pests and their waste products (e.g. rats and mice, insects, birds, etc.);
- To maintain equipment and machinery in proper working order.

Handout Information Sheet 4 and discuss the importance of cleaning.

Tell: There are many types of surface to be cleaned in a shellfish processing/preparation area with each surface presenting its own cleaning problems. Basic steps to follow are:

1. Removal of gross 'soil' - this may be achieved by brushing or scraping, or for wet slime and residue by swilling with cold water.
2. Loosen clinging 'soil' - as not all 'soil' can be removed with water, it is sometimes necessary to select a suitable detergent in order to first soften and loosen it before brushing it loose.

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3. Disinfection - after cleaning, many surfaces, and especially those liable to come into contact with fish, need to be disinfected in order to kill bacteria.

Ask: WHAT PARTS OF THE PREMISES WILL NEED CLEANING?

Obtain answers:

- Yards and reception areas.
- Floors.
- Drains.
- Walls and ceilings.
- Windows;
- Chill facilities;
- Processing equipment;
- Toilets;

Handout Information Sheet 5 and discuss cleaning routines.

Tell: Pests are a danger to health in the food industry because they often carry diseases or disease-causing organisms, may contaminate food and food containers and may damage the fabric of the building. The main types of pests are:

- rodents (mice and rats) which are detected by bags and food containers being gnawed open; droppings will be left in dark places and scratch marks will be left on walls and beams;
- insects (wasps, flies and cockroaches) which are attracted to rotting food;
- birds (sparrows, pigeons and seagulls) whose feet and droppings can infect foodstuffs are often detected through their nests;
- cats and dogs through carrying bacteria and through leaving excreta.

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Ask: WHAT CAN YOU DO TO PREVENT INFESTATION BY PESTS?

Obtain
answers:

- Check food regularly to ensure no infestation;
- Store food correctly, particularly off the floor;
- Rotate stocks;
- Keep internal refuse areas clean;
- Empty refuse containers frequently, clean and return;
- Do not overfill external bins;
- Hose down external refuse areas regularly;
- Keep equipment, surfaces and floors clean;
- Clean as you go to minimise the build up of waste;
- Report any evidence of infestation to your supervisor/manager.

Handout Information Sheet 6 and discuss dealing with pests.

RECAP ON MAIN POINTS COVERED AND CHECK UNDERSTANDING THROUGH
QUESTIONING

Scallop Shucking and Handling Practices

Unit 1.2 Scallop Shucking and Handling

Scallop Shucking and Handling Practices

UNIT 1.2 SCALLOP SHUCKING AND HANDLING PRACTICES

Aim To enable operatives to carry out specific Scallop shucking and handling practices which contribute to food safety and a safer seafood product.

COACHING INSTRUCTIONS

Ask: WHAT SHOULD YOU DO TO ENSURE THAT THE SCALLOPS YOU PROCESS ARE SAFE TO EAT?

Obtain answers:

- Maintain a high standard of personal hygiene;
- Process Scallops hygienically to ensure a safer product;
- Identify and promptly report anything that might lead to product contamination or a failure in food safety;
- Ensure that scallops are shucked effectively and washed thoroughly,
- Follow the processes and procedures laid down by management.

Ask: WHAT ARE THE MAIN FOOD SAFETY RISKS FROM BADLY PROCESSED SCALLOPS?

Obtain answers:

- The usual food contamination and spoilage risks that any seafood product could be subject to;
- Specific risks are associated with algal biotoxins including:
 - Amnesic Shellfish Poisoning (ASP)
 - Paralytic Shellfish Poisoning (PSP)
 - Diarrhetic Shellfish Poisoning (DSP)

This section is used to gauge the operative's existing level of understanding

Scallop Shucking and Handling Practices

SESSION 1 – Background to Algal Biotoxin Contamination

Tell: British water are an ideal environment for growing Scallops. Scallops feed on algae growing in seawater and the rich nutrients provide ideal growing conditions for the algae and the Scallops.

Algae also present a problem because British waters occasionally suffer from blooms of various marine algae and some of these algae produce a toxic substance which the Scallops consume along with the algae.

Tell: Domoic Acid is one of the toxic chemicals produced by algae that we have to be very aware of.

Domoic Acid can cause Amnesic Shellfish Poisoning or ASP and this can cause a very serious illness in people who eat too many contaminated scallops. ASP can lead to permanent memory loss.

Tell: There are other algal biotoxins that can lead to Paralytic Shellfish Poisoning (PSP) or to Diarrhetic Shellfish Poisoning (DSP).

PSP and ASP are the most dangerous and can lead to death. DSP will most likely result in an upset stomach.

Tell: Algal biotoxins can take months to leave a Scallop once the Scallop has consumed the contaminated algae. So it is safer to assume that there may be some biotoxin in all the Scallops we process and to make sure that we work towards making our Scallops safer to eat.

As long as the biotoxins are below a certain level when we start, our proper processing and washing procedures will ensure that the biotoxins are flushed out when we finish and that our Scallops are safer to eat.

Tell: Although DSP and PSP biotoxins are found less frequently than the ASP biotoxin, they are a risk to consumers, in-fact, the last few years have shown a rise in the amount of PSP biotoxin being found in the waters around Scotland and whilst there have never been any recorded cases of ASP in the UK, **there have been cases of PSP in the UK**

However, proper processing of scallops is an effective way of dealing with this potential problem. The 10 min wash is as necessary as careful and effective shucking to reduce biotoxins in the edible parts of the scallop.

Handout Information Sheet 7 and discuss how algal biotoxins get into Scallops.

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SESSION 2 – Algal Biotxin Contamination In the Scallop

Tell: To make sure that our Scallops are safer to eat we must first know where the contamination is in the Scallop.

ASK: WHAT ARE THE MAIN PARTS OF A SCALLOP?

Obtain

answers: Use a fresh whole scallop as a visual aid.

Tell: A Scallop is made up of five main parts:

- The shell;
- The mantle or fringe – the bits that the scallop use to detect movement (primitive eyes);
- The gut and other organs that digest and process the algae – the hepatopancreatic gland and the gills;
- The gonads, sometimes called the coral;
- The adductor muscle which holds the two halves of the shell together.

Handout Information Sheet 8 – Scallop Structure

Compare the drawing of a scallop in Sheet 8 with an actual animal and a correctly shucked meat. Try and identify the ducts from the hepatopancreatic gland into the gonad and the adductor muscle using a correctly shucked and washed meat.

ASK: WHICH PARTS OF THE SCALLOP CONTAIN THE MOST ALGAL BIOTOXIN?

Tell: Research has shown that different parts of the Scallop contain different amounts of algal biotoxin.

Handout Information Sheet 9 to see where ASP toxin can be found. This info sheet is based on ASP data, but the distribution is similar for other algal toxins. Use as a general guide.

ASK: HOW DO YOU THINK WE CAN REDUCE ANY BIOTOXIN FROM THE SCALLOPS WE SELL?

Obtain answers:

- Removing viscera carefully and discarding.
- Washing the meat thoroughly FOR 10+ MINS
- Removing the gonad if necessary
- Thorough inspection before packing
- Testing of raw material and final product for toxin levels

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SESSION 3 – Role of storage, shucking, washing and inspection in Scallop safety.

Tell: The **storage** of scallops in a chiller should only be a short term step before shucking. The longer scallops are kept in the chiller the more that will die. Dead scallops can become more contaminated as the gut wall can quickly break down and gut material (which may contain biotoxin) leaks onto the scallop flesh.

Chilled storage after effective shucking and washing is simply to reduce quality loss and does not increase the risk of biotoxin contamination.

Tell: The key elements in ensuring that scallops are safe to eat are the correct shucking, washing and inspection of scallops.

Correct **shucking** means the removal of all the viscera from the scallop, leaving only the meat and the gonad. This will reduce any biotoxin content considerably. Don't puncture the black sac as this can contain high levels of toxin and can contaminate the edible meat.

There may also be some biotoxin left in the remains of the two ducts that lead into the meat and the gonad. These cannot be easily removed by shucking.

Tell: **Rinsing** is important because it can remove all of the surface contamination that happens during shucking and can make it easier to **inspect and trim** any dark material from the scallop.

This will only take around 30 seconds to rinse effectively.

Just as important as effective shucking and trimming though, is the need to flush out any remaining contamination from the two ducts. This is why you should spend **10 mins** or longer **washing** the scallops in plenty of clean running water. It's this contamination that you cannot see that must be removed if we are to be confident that our scallops are safe to eat. Don't confuse a thorough vigorous wash with a gentle soak. Gentle soaking will not flush out contamination from the ducts and reduce ASP and PSP toxin levels significantly.

“a 10 minute vigorous wash with occasional agitation”

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Tell: There is a final stage that is as important as shucking and washing, but it is one that is easy to overlook. As the scallops are packed into their packs they should be inspected for any remaining bits of viscera that were not properly removed during shucking. If there was too much left on the scallop then it should be dealt with by trimming and re-washing.

Handout Information Sheet 10 – reducing biotoxin levels

NB: The information in Sheet 10 is approximate and is intended solely as a means of illustrating the impact various process steps should have on the possible level of any biotoxin in any one scallop.

ASK: WHO IS RESPONSIBLE FOR MAKING SURE THAT THE SCALLOPS WE SEND OUT ARE SAFE?

Obtain answers: The answer should indicate the person has accepted that they are responsible, along with others in the business.

SESSION 4 – HACCP and your role

Tell: In our business we operate a HACCP system which describes what we need to do to ensure we produce safe food. Our HACCP system is written down and everyone in the business has a part to play in the HACCP.

The parts of the HACCP you need to be aware of and your role in the HACCP is as follows.

Coach describes roles etc using appropriate business specific documentation.

Final reminder of stages in ensuring scallop safety.

**Shuck
Rinse
Inspect
Trim
Wash for 10
Check**

Scallop Shucking and Handling Practices

CONCLUSION

The Coach should at the earliest opportunity show the appropriate parts from the Scallop training DVD.

Appropriate follow-up training may be required such as attendance on the Seafish HACCP course *An introduction to HACCP in the seafood industry* (scallop version).

Training on its own is not sufficient to ensure that standards are met and good working practices are followed at all times. Appropriate other measures such as inspection, observations, end-product and raw material testing should be considered as part of the overall food safety management plan for the business.

Contact Training@Seafish.co.uk, your local Seafish approved training provider for more information.

Notes on PSP Toxins

Unlike the toxins that cause ASP, PSP toxins are slow to wash out of scallop meat, but can be absorbed quickly from contaminated material leaked out of punctured black sacs.

This is why when PSP toxin levels can be expected to be higher in your scallops it may be better to sacrifice shucking speeds in order to ensure cross contamination is kept as low as possible.

Dead scallops kept in chilled conditions will suffer from deterioration of their gut wall that can result in increased leakage of contaminated material and higher levels of PSP toxins (as well as ASP) in the edible tissues.

If you suspect² that a batch of scallops may have higher levels of PSP and other toxins then what can you do?

- Minimise time in the chiller prior to shucking;
- Take extra care shucking, rinsing and washing;
- Carry out both raw material testing and end product testing;
- Consider a roe off product as the roe contains much more toxin than the adductor muscle.

² Seasonal and geographical trends in toxin levels are often well known. This is why accurate and honest reporting of catch areas by harvesters is essential.

Scallop Shucking and Handling Practices

Information Sheets

INFORMATION SHEET NO. 1

Areas Covered by Hygiene Practices

Hygiene practices cover a number of important areas. It is important that you know and understand some of the regulations and techniques for the following areas:

- Receipt of raw materials and their storage before processing;
- Selection of tools and equipment for processing scallops;
- Disposal of waste and clean as you go;
- Pest control and the secure storage and disposal of waste;
- General cleaning practices;
- Maintaining personal hygiene;
- Access to food handling area by staff and visitors.

INFORMATION SHEET NO. 2

Personal Hygiene Practices

Hands must be washed frequently, and always after using the toilet. Keep nails in good condition as cracked nails can harbour bacteria. Use of nail varnish is not recommended.

Bathing must occur frequently. Body odour may offend visitors, customers and colleagues.

Hair must be clean. Should not be combed or handled whilst handling foodstuffs and must be kept under a cap or hat. A hairnet may be required by your employer..

Nose/Mouth/Forehead should not be touched with the hands. Coughing and sneezing should be accompanied by the appropriate use of a tissue and the washing of hands afterwards is always necessary.

Teeth must be cleaned at least daily as healthy mouths are essential for pleasant breath.

Jewellery must either be removed before commencing work or worn underneath your outer clothes. Rings must only be plain band, e.g. wedding rings and even these should be covered in high risk establishments.

Watches must be removed before commencing work.

Cosmetics should only be worn in a minimum amount.

Smoking should only be carried out in designated 'smoking areas'. Anywhere else is prohibited.

Spitting is completely unhygienic and illegal in food preparation areas.

Cuts and sores should be covered with a brightly-coloured metal-detectable waterproof dressing.

Burns should be examined and attended to immediately.

Illness must be reported to the supervisor/manager without fail or delay. It is illegal to handle food when suffering from certain illnesses.

Clothing for work should always be clean and worn correctly. The correct protective clothing must be worn whilst working. Boots should be well-fitting, comfortable and afford adequate protection for the feet. Feet should be well cared for and socks should be changed daily.

INFORMATION SHEET NO. 3

Food Poisoning Bacteria

There are at more than 8 types of bacteria reported as responsible for the majority of food poisoning outbreaks in the UK.

Of these, the key ones are:

Campylobacter is the commonest cause of gastroenteritis in the UK. While infection is commonly foodborne, it can also result from environmental exposure to the bacteria. Sufferers may experience stomach cramps, diarrhoea (with blood in stools), headaches, fever etc. The condition usually clears after a week, but a return about several weeks later is not uncommon. Main routes to infection are thought to be cross contamination through poor hygiene practices or transmission from raw poultry, red meat, unpasteurised milk, wild birds, dogs and cats

Salmonella – an anaerobic* bacteria that grows between 7°C and 47°C. If enough are consumed they are not all destroyed by stomach acid and can multiply in the intestine causing diarrhoea. They produce a toxin that causes a fever. Commonly found in the faeces of animals – more than 15% of seagulls are carriers. Although Salmonella poisoning in seafood has been reported, contamination in high risk (eg. Chickens) and ready to eat foods are the main risks from this bacterium.

E coli – Anaerobic and normally part of our intestines and faeces. Usually used as an indicator of faecal pollution in coastal waters. Some types of E coli are more dangerous than others. E coli 0157 is a particularly serious food borne pathogen.

Listeria monocytogenes – this is a low temperature pathogen that can multiply as low as -1.5°C and as high as 42°C. It may be found in a range of food products including some smoked fish. This is a relatively rare form of food poisoning, which rarely affects healthy people, and is much less common than infection with salmonella or campylobacter. Although infections with listeria are much rarer than salmonella and campylobacter, it is a potentially life-threatening disease. Symptoms can include flu-like symptoms as well as diarrhoea and other more serious symptoms, such as septicæmia. Healthy individuals tend not to be seriously affected, but there are some groups of people who are at particular risk from infection with Listeria. These are: pregnant women, the elderly and those suffering from a long term medical illness and whose immune systems are compromised.

Clostridium – there are two types of Clostridium species that cause food poisoning.

Clostridium perfringens - anaerobic* bacteria that grows between 15°C and 52°C. This bacterium will form spores when stressed and the spores will allow it to survive adverse conditions such as high temperatures. Many cooking operations are insufficient to destroy these spores and the toxin they produce is unaffected. Usually food poisoning occurs due to poor food handling practices where food is warmed or incorrectly reheated or cooked.

Symptoms are usually abdominal cramps and watery diarrhoea.

Clostridium botulinum - similar in many ways to C. perfringens, this is a potentially fatal food poisoning organism. Ideal temperatures for multiplication are 20°C and 30°C and the bacterium produces a toxin that affects the nervous system. Fortunately the toxin is easily destroyed by heating during cooking.

Poisoning occurs if bacteria multiply in the food and produce the toxin, and the food is then not cooked before eating. A well known example was an incident involving canned salmon contaminated after canning through faulty can sealing. The canning process of all canned foods is designed to kill off the spores of C. botulinum so that our canned food is safe to eat. In this instance the controls failed and people died as a result.

Staphylococcus aureus – able to survive in salted products and capable of multiplying with or without oxygen, this organism is common on the skin, nose and throats of adults. Growing between 7°C and 48°C this bacterium can produce a toxin able to survive boiling for more than 30mins. Most outbreaks are caused by contamination of cooked foods by hands contaminated by touching the mouth or nose.

Food poisoning symptoms include nausea, vomiting, diarrhoea, and dehydration.

Bacillus cereus – spore forming and leading to two types of food poisoning. The most common form in the UK leads to nausea and vomiting a few hours after eating contaminated food (rice, vegetable, soups etc). This is caused by a toxin that is almost immune to any form of cooking related heating. The second form is the result of ingesting bacteria that multiply and produce the toxin in the intestine. Symptoms from this form appear 8 to 16 hours later.

Vibrio parahaemolyticus – an anaerobic bacteria that is particularly interesting as it is found in the marine environment. Able to multiply between 8°C and 44°C, it can multiply very rapidly around 36°C.

Outbreaks are most commonly associated with imported seafood (prawns and dressed crab) where it grows well in the higher water temperatures. Occasionally found in UK waters, particularly in the south.

Food poisoning symptoms include fever, nausea, vomiting, watery diarrhoea, cramps, chills and dehydration

* Anaerobic – doesn't require oxygen to multiply, indeed oxygen may act like a poison to some anaerobic organisms.

INFORMATION SHEET NO. 4

The Importance of Cleaning

The cleaning operation is a vital part of everyday work. It is important that you know and understand why cleaning is such an important activity in any food handling operation. The reasons we clean include the following:

- to avoid contamination and therefore avoid food poisoning
- to maintain product quality by keeping products in good condition
- to satisfy the requirements of legislation, such as the Food Hygiene Regulations
- to maintain a safe and tidy working environment through good housekeeping practices
- to project a suitable image and give confidence to a visitor or customer
- to maximise product shelf-life, as reducing spoilage prolongs shelf-life
- to remove pests, such as rats and mice, insects and birds and their waste products
- to maintain equipment and machinery in proper working order.

There is a factory cleaning video programme available on the Seafish *Strikeback 2* DVD and also online at <http://www.seafoodacademy.org/> - look in the Library

INFORMATION SHEET NO. 5

Suggested Cleaning Routines

AREA	HOW OFTEN	METHOD
Yard, waste storage and reception	During the day	Brush clean and hose down.
	End of the day	Rinse with a residual disinfectant and leave overnight. Waste bins should also be emptied, cleaned then rinsed out with a residual disinfectant solution.
Floors (processing and preparation)	During the day	Brush clean and hose down.
	End of the day	Wash with detergent solution; rinse with a residual disinfectant and leave overnight.
(retail)	During the day	Brush clean.
	End of the day	Wash with detergent solution; rinse with a residual disinfectant and leave overnight.
Drains	End of the day	Wash with detergent solution and sluice thoroughly with cold water. Remove grids and clean by brushing or high pressure spraying.
	Once a week	Pour a strong bleach solution (50:50) down the drain.
Walls, ceiling and woodwork	During the day	Swill or wash with cold water. Use a hot detergent solution to remove hardened fish slime.
	Once a month	Wash with a mild-alkaline detergent.
Windows	During the day	Wash and polish with a wash leather.
	End of the day	Wipe with a non-residual disinfectant and rinse with cold water.
Chill facilities	Once a day	Hose down floors and walls.
	Once a week	Wash out before using hand brush and bucket before sponge drying. Wash down all surfaces with a non-odorous, mild-alkaline detergent. Wash shelving and storage trays with a non-odorous, mild-alkaline detergent; rinse, disinfect with a non-residual disinfectant and rinse again.

Suggested Cleaning Routines (continued)

AREA	HOW OFTEN	METHOD
Processing equipment	During the day	Rinse with cold water.
	End of the day	Scrub down with mild-alkaline detergent solution; rinse then disinfect. Finally rinse in hot water.
Toilets	During the day	Wipe down taps, sinks, door handles, chains, etc. with a cloth soaked in a residual disinfectant solution. Make sure that soap, nail brushes and clean towels are provided.
Display surfaces	During the day	Wipe up any spills immediately.
	End of the day	Scrub down with mild-alkaline detergent solution; rinse then disinfect. Finally rinse in warm water.

The actual cleaning schedule for your company should be used as this suggested cleaning routine is generic and only intended as a guide.

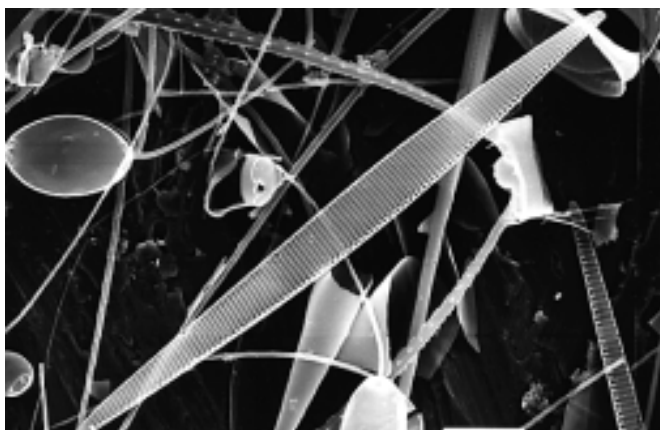
INFORMATION SHEET NO. 6

Dealing with Pests

PEST	SUGGESTED ACTION	PREVENTION MEASURES
Rats	Environmental Health Department informed and help sought.	Fit openings with fine mesh wire grills. Keep area clean and tidy and remove any waste paper or empty boxes immediately. Keep food in sealed containers and avoid leaving scraps of food lying around.
Mice	Set traps or use a pest control company	Use same methods as for rats.
Birds	Scare them away from the premises.	Do not feed birds with waste food and keep all food covered. Stop them gaining access through windows or openings.
Dogs	Eject immediately	Display a prominent notice prohibiting dogs. Keep dogs out.
Cats	Eject immediately	Do not encourage cats or allow others to feed them. Keep cats out.
Flies and wasps	Fit electric fly traps (if not already fitted)	Adopt indirect ventilation. Try to screen off open doors and windows. Keep waste foodstuffs covered.
Ants	If the infestation is severe contact the Environmental Health Department	Keep waste food well-covered and the outside area tidy.

INFORMATION SHEET NO. 7

How Algal Toxins Get Into Scallops



*Pseudonitzschia*ⁱ (pictured) is a marine algae that is the main source of the toxin (Domoic Acid) that can cause Amnesic Shellfish Poisoning.

*Alexandrium*ⁱ is a group of marine algae that produce the toxins that lead to Paralytic Shellfish Poisoning (PSP). The PSP toxin is called Saxotoxin.

Dinophysis is an organism that produces some of the toxins

responsible for Diarrhetic Shellfish Poisoning (DSP). There is a wide range of toxins included in the DSP-causing group and these are often described as lipophilic toxins.

When the scallops consume any of these toxin containing algae they are not affected by the toxin they absorb but can end up storing dangerous amounts in their tissues.

A few facts about Algal Toxins

- An **Algal Bloom** is when the algae grow very quickly and there is a lot of them in the sea. These blooms are more likely to happen at particular times of the year. Blooms of different algae are common all over the world and the problems they cause are not just restricted to Scottish waters and to scallops.
- **Algal Blooms** happen as part of a natural cycle involving many different factors such as water temperature, weather patterns and the availability of the right nutrients.
- It is frequently suggested that the presence of fish farms along the West Coast of Scotland act as a possible cause of algal blooms, but is no evidence supporting this.
- Once the live scallop has absorbed any toxins from an algal bloom it can take weeks or months for it to be excreted by the scallop.
- The area affected by algal blooms and toxin can be very extensive and persistent, lasting for several weeks. When you are aware of a toxic bloom in the area that you harvest from you should seriously consider the potential risks from your product and include this in any judgements you make with respects to your end product test regime or whether you should harvest at all.
- Studies, surveys and end product testing show that, at some time of the year, many scallop grounds can be affected and that we need to process ALL our scallops safely, and conduct regular checks to ensure they do not present a risk to health

ⁱ Pronounced sue-doe-knits-ee-ah and alek-sand-dree-yum



Figure 1 Fishing vessel operating in vicinity of Harmful Algal Bloom

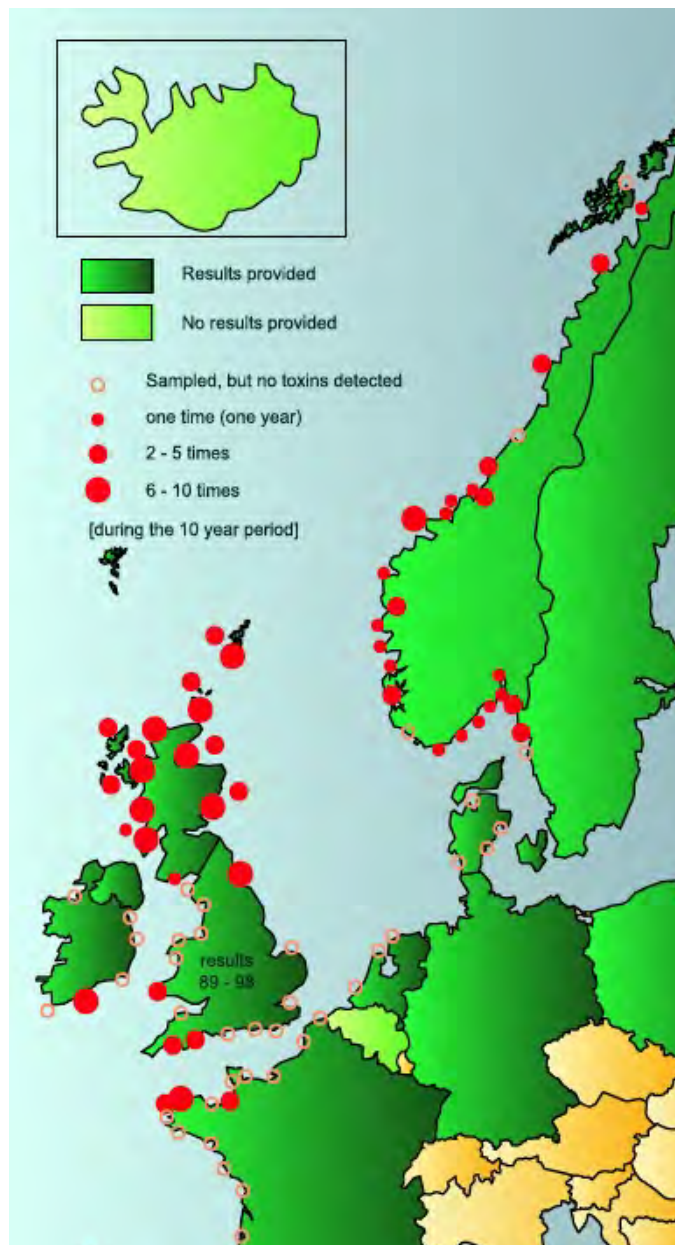
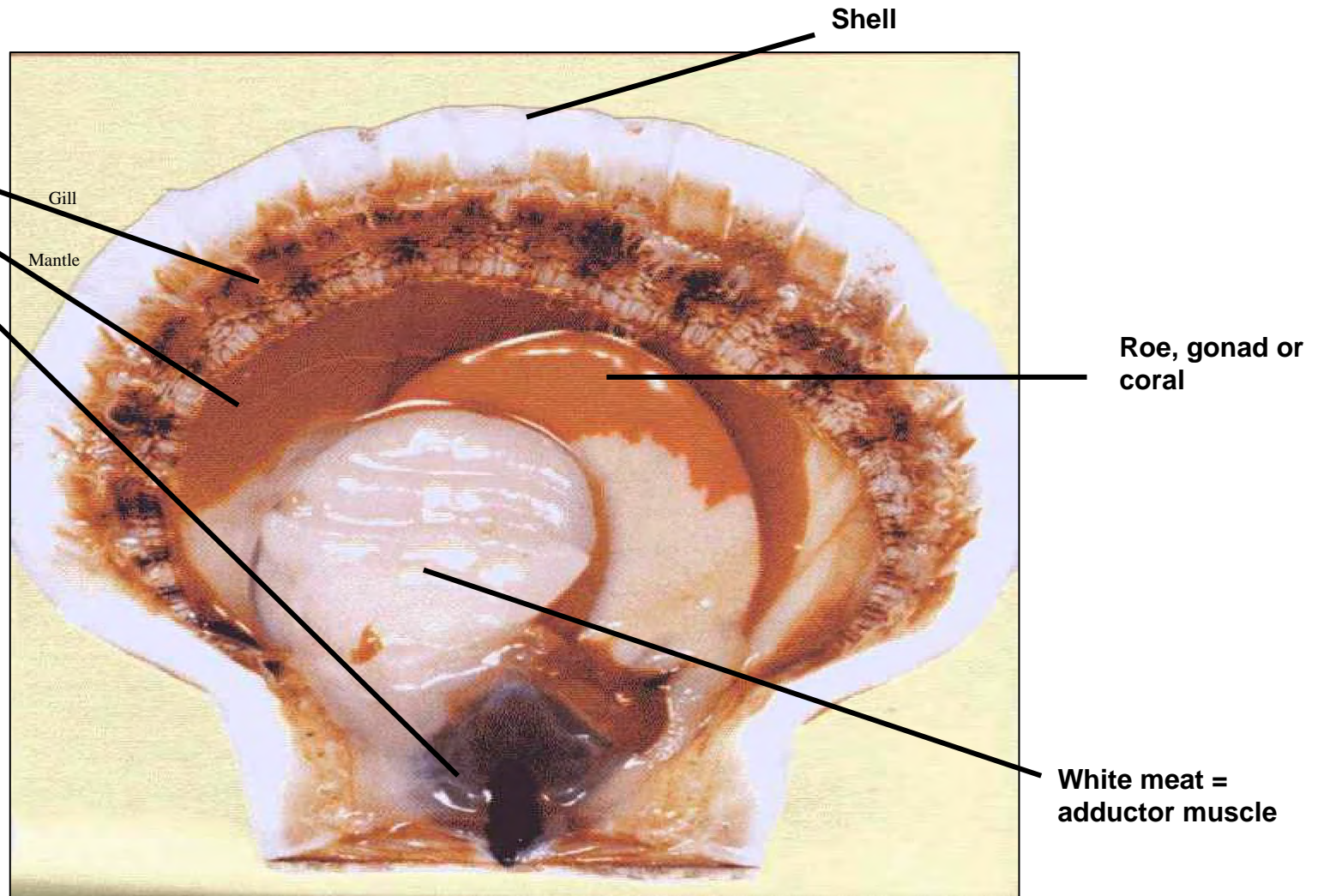


Figure 2 Location where Paralytic Shellfish Poisoning toxins were found in Europe 1993-2002. Original Source unknown.

INFORMATION SHEET NO. 8 SCALLOP STRUCTURE

**Gill, Mantle &
Hepatopancreas = Viscera**

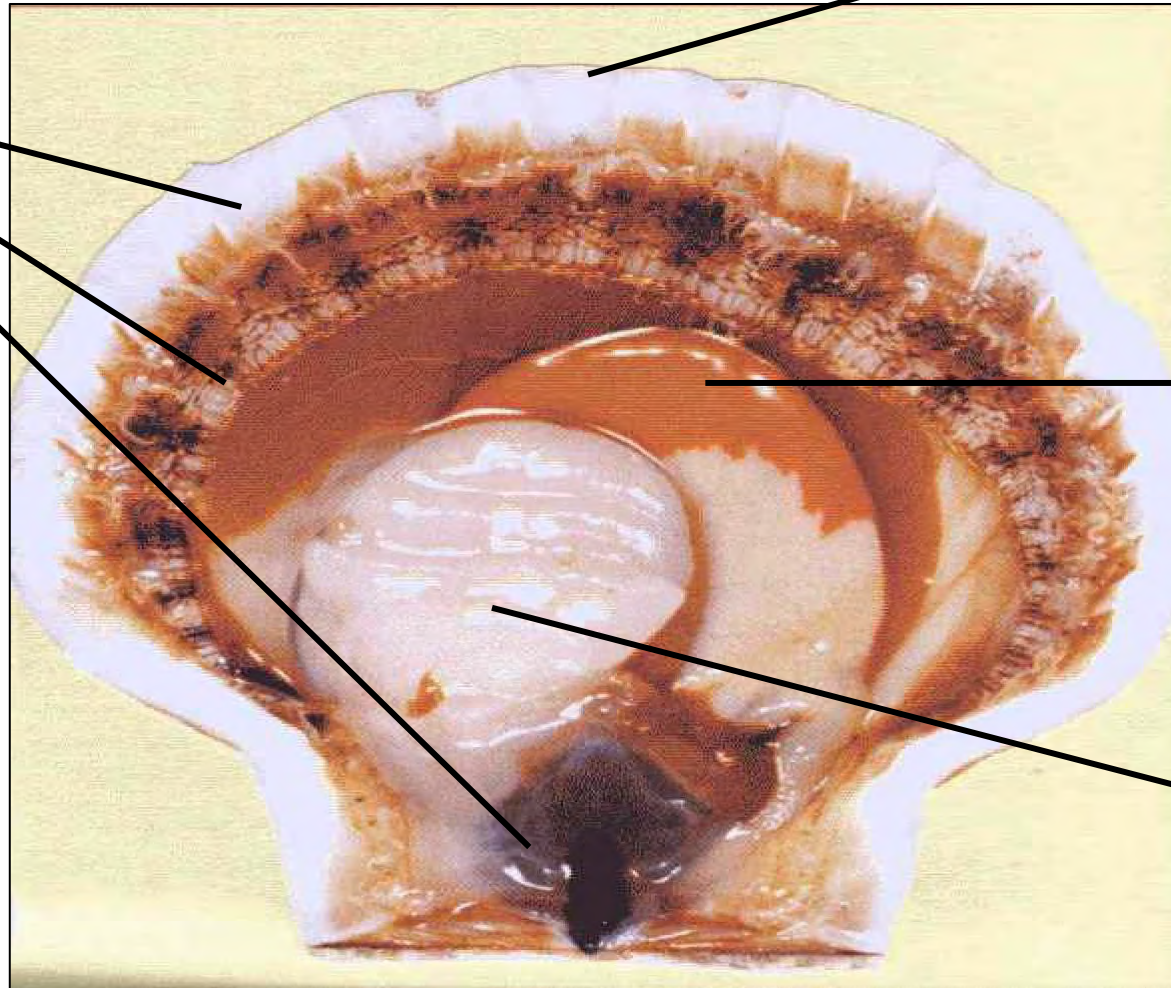


INFORMATION SHEET NO. 9 WHERE IS THE ASP TOXIN?

**Gill, Mantle &
Hepatopancreas = Viscera**

90%

Shell - None



**Roe, gonad or
coral**

9%

**White meat =
adductor muscle**

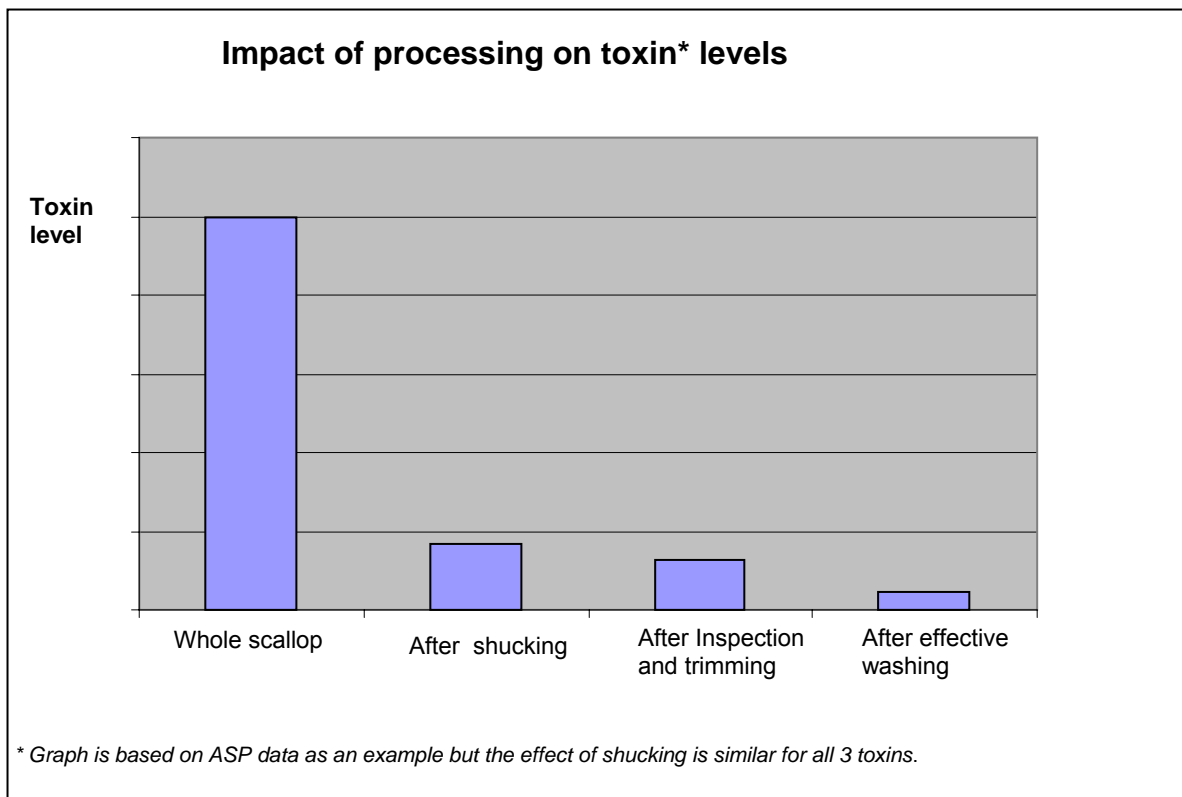
1%

INFORMATION SHEET NO. 10

Reducing Toxin Levels

Toxin levels are reduced by:

- Correct shucking;
- Careful inspection and if required trimming;
- Effective washing for at least 10 minutes with occasional agitation.



- Shucking is important, but on it's own it is not enough. It needs to be followed by careful trimming and thorough washing.
- Washing is more than a 30 sec rinse under a tap, it's a thorough wash to flush out any remaining contamination using running clean water for 10 mins or more. Agitation or tossing of the scallops is also required to ensure that the gut loops are properly flushed.
- Even shucked and well washed scallops may still contain a little unwanted material and this can be picked up during inspection as part of the packing activity.

INFORMATION SHEET NO. 11

GENERAL GOOD MANUFACTURING PRACTICE FOR SCALLOPS

Best Practice Shucking Guide for Operators

Do not store unshucked scallops for too long in the chiller. The gut wall can quickly break down after death and leaking gut contents can significantly increase biotoxin contamination*.

All animals with cracked or crushed shells should always be discarded.

“Shucked” product must be kept separate from fluid juices produced from “shucked” scallops and separate from the “shucked” gut.

Rinse the flesh of the scallop briefly in clean water before inspecting.

Examine the product to ensure that it meets the “shucking” visual standard. Any product that does not should be re-trimmed before washing.

Batch separation must be maintained at all times.

Wash down tables and knives between batches.

Waste soft parts of the scallop (e.g. hepatopancreas and trimmings) should be “shucked” into separate bins immediately and not allowed on the “shucking” table.

Once the scallop has been shucked, rinsed, inspected and trimmed it is ready for a thorough wash for at least 10 minutes in clean running water with occasional agitation.



The Finished Product

* ⁱ Handling waste - the scallop meats and gonad must be removed and kept well away from the gut and other material as the latter acts as a source of contamination even when its been cut away. So no delays in shucking, don't ever leave meats in contact with the hepatopancreas, once the shells are opened. Data from SAMS TALISMAN Project

INFORMATION SHEET NO. 12

GENERAL GOOD MANUFACTURING PRACTICE FOR SCALLOPS

Best Practice Shucking Guide for Management

1. "Shucking" must be carried out in an establishment approved with appropriate facilities compliant with appropriate regulations.
2. All raw material must be accompanied by a valid movement document.
3. Movement documents (which the EU now refers to as Registration Documents) must be kept for each batch received for processing (i.e. for a minimum of 12 months).
4. Scallops should be marked specifically for separation and traceability recorded.
5. All "shuckers" should be trained in "shucking" technique according to current best practice. Competence in this technique should be evaluated to ensure adequacy.
6. Work should be carried out, where possible, in teams with an opener separate from the final shucker.
7. Scallops should be visually inspected at all stages but in particular at the post shucking stage prior to washing, and finally during packing.
8. Broken scallops must be removed at intake prior to commencement of processing.
9. "Shucked" product must be kept separate from hepatopancreas fluid (juices) emanating from "shucked" scallops and separate from "shucked" hepatopancreas (gut). Separate receptacles should be provided for "shucked" product and process waste.
10. Metal identification tags should be added to each and every pan to maintain traceability.
11. Batch separation must be maintained at all times.
12. Wash down tables and knives between batches. Cleaning records must be kept on file for inspection at approval visit.
13. Potable wash waters used for soaking the scallops must be discarded after use and not reused. Scallops should be washed in running water using a colander type system for at least 10 mins with occasional agitation. Visual inspections should be carried out for sand and evidence of untrimmed material.

14. During storage raw material must be segregated and scallops should be marked specifically for separation. Chilled storage of unshucked scallops has a potential riskⁱⁱ of gut wall breakdown leading to additional contamination of the scallop meat. Avoid long storage of unshucked scallops.
15. For secondary processing fresh soak water must be used for each batch of scallops. Soak changes should be recorded on Quality Control sheets.
16. All processed waste must be consigned to incineration. Disposal records must be held for inspection at approval visit.
17. The Batch number from the movement document should be carried over to the labelling. Label records must be held for inspection at approval visit.

Your HACCP Plan must give due regard to biotoxin related risks and should ensure that your controls are effective.

ⁱⁱ Storage time may well be very important. If scallops are left in the cold chill for a protracted periods then the integrity of the gut wall will be lost and in effect the edible parts are soaking in a DA soup. While the research shows this can still be washed off to below 20 ug /g it requires longer. Where scallops have a high DA burden, the length of time in storage should be minimised and /or account taken of this is washing times. Data from SAMS TALISMAN Project

Scallop Shucking and Handling Practices

Guide to Coaching

A BRIEF GUIDE TO COACHING AND TRAINING

CONTENTS

- 1. Introduction**
- 2. How to use the materials**
- 3. Materials supplied and their use**
 - 3.1 Trainer's guide
- 4. Designing effective training/coaching**
 - 4.1 Motivation of the trainee
 - 4.2 Providing learning in easy stages
 - 4.3 Reinforcing the learning
 - 4.4 Revision of the learning
 - 4.5 Evaluation of the effectiveness of the learning
 - 4.6 Guidelines for developing the skills of learning

Annex 1 Information for trainers/coaches delivering vocational qualifications.

Assessment planning and reviewing
Collection of performance evidence
Collection of knowledge evidence
Making judgements of competence and providing constructive feedback

Annex 2 Glossary of Terms

1. Introduction

This brief guide has been produced to assist persons delivering Seafish flexible training materials (FTM) ther Seafish workplace coaching and training resources.

It is recommended that you read through the whole guide before starting any training and/or coaching sessions.

If you are using the pack as part of a staff training programme, you may omit sessions, or parts of those sessions, which cover procedures not adopted by your company or are additional to your needs.

This pack is protected by copyright. Copies may only be taken, therefore, of the materials within the pack, which have been designed for use as handouts, information sheets and masters of overhead transparencies.

2. How to use the materials

The FTM or workforce training pack has been designed to be used for both group delivery and individual coaching. The materials supplied in the pack also provide for a flexible learning approach if used in conjunction with appropriate Open Learning Material.

Workplace coaching and training can take many forms and generally the following purposes can be achieved:

- the provision of basic skills and knowledge through direct instruction, guided reading, visual aids and discussions;
- the development of related background knowledge by visits, external courses and guided reading;
- practice in using skills and knowledge in ‘non-critical’ situations through projects, case studies, role-playing and discussions. In small companies this may be achieved by attendance at external courses;
- planned experience under supervision by doing the job or certain tasks in the work situation.

It is also possible to customise the supplied material or introduce other learning materials to make the learning more specific to your company. To help you do this, the material supplied has extra spaces to allow you to insert your own information.

3. Materials supplied and their use

3.1 Trainer's guide

The aim of training is to make trainees more effective in their jobs by bringing them to an agreed standard of proficiency as quickly as possible. This can be achieved by providing the trainees with the necessary skills, knowledge and understanding required for their job. An effective method of providing this information is to carry out formalised training sessions away from the workplace.

3.1.1 Session plans

These contain the aims and objectives for each unit as well as the topics to be covered for each session. Each session plan provides sufficient guidance for the aims and objectives stated at the beginning of each unit to be achieved.

The plans have been designed to provide the required underpinning knowledge and understanding to candidates undertaking the Food and Drink Manufacturing Operations Vocational Qualifications within the fish processing sector.

Use of the plans are strongly recommended for the delivery of each session, but you should use your own experience and expertise to expand the basic points and to cover each session in as fine a detail as you require.

Each session plan covers the recommended theory, demonstration and trainee participation activities which are required to enable learning to take place. An explanation of each section is given below.

AIM

This box indicates the area of work covered by the unit and reflects the title of the appropriate unit of competence within the Food and Drink Manufacturing Operations Vocational Qualifications.

OBJECTIVES

The aim and objectives express the overall coverage of the unit as well as what a trainee will be able to do after completing each unit.

They can also be used to check that the learning provided is sufficient to meet the trainee's/candidate's needs.

SESSION 1

(This session should take approximately 15 minutes)

At the beginning of each plan, there are suggested timings.

The timings stated are for guidance only and reflect the relative importance or complexity of the sessions to be covered.

The methods column indicates when to show overhead transparencies, handout information sheets, carry out group exercises or group discussions.

The column space can also be used by you to add any personal notes and company-specific information.

3.1.2 Overhead transparencies

These have been provided to enable you to prepare your own materials for use on the overhead projector if copied onto acetate sheets, or as handouts, posters if copied onto paper or card etc.

3.1.3 Information sheets

They provide more detailed information on specific topics and can be photocopied for use as handouts for trainees to keep as reminders.

The relevant information sheet for each topic is clearly indicated in the additional notes column.

3.1.4 Setting up a group training session

When preparing for a training session you should always ensure that:

- you set aside enough time to complete the session that you intend to cover without having to rush;
- you have prepared enough handouts and information sheets for the numbers of trainees;
- the trainees have sufficient time and are in a suitably-relaxed frame of mind to complete the learning programme;
- you have pen and paper available for each trainee to use;
- you have read through the session which you intend to cover beforehand and are thoroughly conversant with the learning programme to be delivered;
- you have a quiet, well-lit area available for the learning input, except for practical work and demonstrations when it is advisable to use the actual equipment in the workplace;
- any audio-visual equipment to be used during the session, such as an overhead projector, slide projector, etc. is in working order prior to the start;
- short rest periods – tea/coffee breaks, for example – are included within sessions. These rest periods not only break up the learning, but also allow the trainees to ‘switch off’ for a short time thus making them more receptive when the session resumes.

4. Designing effective training/coaching

When designing or planning a programme of learning, it is useful to consider the following principles:

4.1 Motivation of the trainee

For effective learning to take place, you have to create an interest in the learning process. This can be achieved by providing the trainee(s) with the answers to three questions:

- a) What are the trainee(s) trying to achieve in undertaking this learning?
- b) Why do the trainee(s) need to learn anything from the sessions?
- c) How are the trainee(s) going to learn in the session?

Any introduction to a learning session must therefore contain the answers to these questions.

Usually, a) is covered by clear and precise session aims and objectives, b) by selling the benefits of the learning, such as more responsibility, better health and safety systems of work, etc. and c) by explaining the learning methods to be used such as demonstration, discussion, exercises, practise, etc.

4.2 Providing learning in easy stages

New information is best absorbed in easy stages and the most effective way to present information is in small steps placed in a logical sequence.

Each stage or session should take into account the rate at which the trainee(s) will learn.

During the early stages of the programme, the trainee(s) may find the learning quite strenuous and the amount to be taught should be judged to stretch the trainee(s) sufficiently without producing mental fatigue.

Trainee(s) can only absorb a certain amount of information in a given time and new information is always more meaningful if it can be linked to existing knowledge. Sessions should therefore be designed to build upon existing knowledge, skills and experience.

4.3 Reinforcing the learning

This is an important principle which should be considered as follows:

- learning two or more parts of the same subject in sequence will assist reinforcement because they share a common relationship:
- repetition of the main points of the session and final summary will assist reinforcement because this will allow the trainee(s) time to absorb the new information.

4.4 Revision of the learning

This is used to clear up any doubts that the trainee(s) may have, to review progress, to identify any obstacles that may have inhibited progress and to establish a common base for moving forward.

Revision can also be used during, and at the end of, a series of sessions dealing with the same topic or subject.

4.5 Evaluation of the effectiveness of the learning

In order to evaluate the effectiveness of the learning at the end of the session, you need to check the trainee(s) level of performance, as well as their level of knowledge and understanding.

In many cases, coaching to a standard, followed by practice under supervision may be considered sufficient evidence of competent performance. In other cases, it may be decided to perform an end-of-coaching test or even to evaluate the performance of the entire workforce as a unit.

In general, tests are most valid when carried out at the workplace, but in some cases this is not possible. These include where:

- there is a high risk of accident;
- trainee error could cause damage to expensive plant or equipment;
- the task is unplanned or irregular – faults, irregularities, emergencies, etc.
- there is a large amount of knowledge to master.
- a longer term change in attitude is the aim.

A trainee's knowledge and understanding can be checked using a number of methods. These include:

- the trainee talking their way through the task and explaining what they are doing and why;
- the trainee providing answers to a series of job-related questions;
- using multi-choice questions;
- using written questions.

The first two methods are the most appropriate for use at the workplace. The second and third methods can be used when there is a large body of knowledge to master. The fourth methods should only be used when it is necessary to check the trainees powers of expression.

4.6 Guidelines for developing the skills of learning

DO	show that all your trainees have a contribution to make	BY	making sure that you take notice of their views.
DON'T	make things too easy	BY	doing the difficult part for trainees.
DO	make them seek help when they need it	BY	not rushing in with help too soon
DON'T	do it for them when they ask for help, but encourage them to work it out for themselves	BY	giving them clues or hints
DO	encourage trainees to identify and correct their own mistakes	BY	providing examples and guiding them with questions.
DO	allow them time to work something out for themselves	BY	giving them 'pondering' time. If they feel pushed for time they may become stressed.
DON'T	give unrealistic feedback	BY	giving undue praise or overcritical comment.
DO	develop the trainees' interest in learning to do things for themselves	BY	discussing with them how they intend to go about learning something.
DO	develop the trainees' awareness of how to assess what they have done	BY	getting them to check their own work and assess it for quality.

Annex 1

INFORMATION ON ASSESSMENTS FOR TRAINERS/COACHES

NB: Not all of these activities will apply to candidates at levels 3 and 4 where greater emphasis is placed on documentary evidence of competence and understanding, and less emphasis on observation of performance.

Assessment planning and reviewing : for vocational qualifications candidates

It is essential that the assessor and the candidate work together to build up the collection of evidence. The assessor will need to:

- negotiate an action plan for the development of the collection of evidence;
- build in time for reviewing progress and revising the plan if necessary;
- ensure that the advice given to candidates is valid and appropriate;
- advise candidates if evidence is of the wrong standard, invalid, insufficient or unreliable and suggest ways in which it may be improved or alternative or additional sources sought;
- assist candidates who have not been involved in this type of activity before and who may find evidence collection difficult;
- assist candidates in planning the evidence against specific elements, performance criteria and range statements;
- work with the candidate to identify further areas of experience or gaps in achievement and plan further action;
- help the candidate to plan the layout of the collection so that evidence is clearly presented for final assessment and verification.

Collection of performance evidence

Direct Observation

This does not have to mean people standing by with clip boards marking every movement! In fact, the assessor must try to be as unobtrusive as possible in order not to adversely affect the candidate's performance. Its main advantages is the possibility of seeing natural performance in the work place. It offers the opportunity of allowing the candidate to demonstrate his or her skills, and ability to perform, in the range of situations demanded by the performance criteria and range statement. The key advantage is that the candidate is operating within a whole work role as required by occupational competence.

Key Issues

Any activity which results in an outcome or production can use that outcome as the evidence of performance. Observation may therefore not be necessary other than as a validation of the actual candidate performance.

The need to assess the consistency of performance by the candidate. (A 'flash in the pan' is not competence!). It may be accompanied by other techniques, such as asking the candidate to "talk me through what you are doing and why you are doing it", or the use of open questions to check knowledge and understanding after observation.

Candidates are not robots and may be nervous when being observed, however unobtrusively. The use of questions is therefore particularly valuable if the candidate has made unimportant mistakes through nervousness.

Observation has a more natural place in continuous assessment, the basis for effective learning and development of competence, and enabling direct feedback to the learner.

Simulated Performance

Some companies, colleges and training centres are able to create situations in which assessment can take place. Examples may include mock-up equipment and machinery. It should be stressed that the actual equipment specified in the performance criteria must be used.

Key Issues

This method can involve considerable expense in equipment and materials, but is particularly valuable when not all of the range statements can be observed in the workplace, or when the candidate is learning.

It is also valuable when Health & Safety aspects are of importance or when the use of expensive equipment in the workplace may involve considerable expense should anything go wrong.

In addition the candidate may feel under considerable pressure.

The candidate may be put in the position of being asked to demonstrate competence beyond that asked for in the wording of the element of competence in question. Similarly, they may only be

able to perform a part, as the conditions of simulation do not allow for the additional 'real work' environment.

Skills test

A skills test is a straight forward method of assessing a candidate's speed and accuracy. They are usually included in a training programme at various stages and require the candidate to complete a task, or series of tasks without interruption.

Key Issues

There can be considerable expense in the terms of equipment and materials.

The candidate may feel under considerable pressure, much more so than under normal working conditions (see comments on 'tests').

The test usually only focuses on specific task or tasks which are not necessarily closely related to performing those tasks in work situations with the additional variations and 'contingencies' that requires.

The advantages are that the industries that use them (engineering for example) have an objective measurement of a candidate's ability to perform a specific task to the criteria required.

Collection of knowledge evidence

Oral questioning

Interviewing is often thought of as an imprecise, highly subjective technique of assessment. However, it requires considerable skills from the assessor who is required to work with a candidate who may feel under pressure and possibly requires some reassurance that this is not an aggressive 'cross examination'. By employing skills such as questioning and listening, the candidate may be drawn to examine a 'critical incident' in such a way that the assessor can explore and determine additional information not available through direct observation.

Key Issues

The assessor must have the required skills and may need considerable training.

It is particularly valuable in exploring underpinning knowledge and understanding.

It can be time consuming, and may require a place away from the actual work situation (due to noise etc.)

A candidate may feel under pressure.

The candidate may benefit from informal feedback, both indirect (being asked additional questions) and direct feedback immediately from the assessor.

Written tests or examinations

This is the traditional method of collecting evidence of knowledge and understanding and may involve open written answers or multiple choice question papers.

Key Issues

Candidates may have been adversely affected by past experience in the educational system. Their performance under these conditions may not necessarily, therefore, reflect a true picture of their vocational ability.

Any written assessment requires, often considerable, skills in literacy. Candidates may have papers refused or penalised for lack of literacy, legibility, poor spelling or grammar etc.

The environment created for tests or exams, the 'test conditions' are often so stressful that some people are rendered virtually incapable.

The rationale of tests depends on the ability of the candidate to recall selected information 'on demand' and may therefore include an element of 'luck' in the selection of questions, particularly in multi-choice tests.

The feedback is often just the overall 'mark' which does not offer the candidate the opportunity to review their performance and identify possible future steps.

Considerable expertise is required on the part of the trainer to ensure that the test is fair and pitched at the right level.

The advantages are that every candidate is subjected to exactly the same test, under exactly the same conditions. It is therefore a measure of objective decision making.

Written Assignments or Projects

These are often used instead of standard examination papers and are often combined with an open learning approach. Examples may include preparation of plans, reports, recommendations for improvement and the collection of data.

Key Issues

As with the written test and examinations, this method may require a level of literacy that is not necessarily required in doing the actual task in the occupational area. Presentation of materials also often becomes a 'crucial' element. As with tests and examinations, the writing of assignments and planning of projects require a high level of skill on the part of the trainer, and a high level of liaison if the trainer is not the main assessor.

There is also a need to ensure that the material submitted has been personally undertaken by the candidate.

The main advantage is that candidates have taken responsibility for their own learning and have used initiative to find out necessary information.

Making judgements of competence and providing constructive feedback

Making a judgement of competence

- all performance criteria must be met and evidenced for achievement to be recorded.
- performance must cover all the circumstances specified by the range statement.
- underpinning knowledge and understanding must be evidenced, particularly in those parts of the range which cannot be evidenced by direct means.
- only the performance criteria for each element may be used – no additional personal standards may be added – this ensures objective judgement.

In a nutshell, the assessor is looking for:

- sufficiency of evidence;
- validity of evidence;
- reliability of evidence.

NB where prior experience is being accredited, the same process applies.

Sufficiency of evidence means that the assessor is fully satisfied that, in each of the range cases:

- all the performance criteria, together with the associated range statements and underpinning knowledge and understanding have been evidenced;
- the candidate can perform the task competently and also has the necessary background knowledge and understanding
- evidence to predict the future performance of the candidate is sufficient, i.e. that the candidate can cope fully with the job role, both when things go well and with the unexpected.

NB The criteria for assessment may be defined in the assessment specification.

Constructive Feedback

The skill of giving constructive feedback to candidates on their performance is of particular importance, when a candidate is learning.

- Assessment alone is only part of the key to candidates' progress and achievement.
- Once the assessment has been made, candidates need to know how they are progressing and what they have achieved.
- It is, therefore, essential for assessors to feed back the results of assessment as soon as possible afterwards to encourage and offer a basis for progression.

- Candidates, particularly young adults, relate well to assessors who encourage, motivate and show genuine interest in their candidates, and who reflect these qualities in their feedback.
- Feedback is of particular importance during formative assessment – i.e. when the candidate is learning – as well as after summative assessment – i.e. when the candidate is being assessed against all performance criteria.

Feedback should always:

- be based on candidate self-assessment;
- be constructive;
- start with the positive – give encouragement;
- refer to behaviour that can be changed;
- offer alternatives – never criticism;
- use descriptive rather than evaluative language;
- be owned by the giver – his or her opinion only;
- leave the recipient with a choice;
- leave the recipient feeling motivated;
- leave the recipient knowing exactly what has been achieved and what needs to be done next.

GLOSSARY OF TERMS

Assessment	The process of checking whether a person is competent in the elements of competence laid down by the Lead Body. There are no grades of competence within NVQs and SVQs; a person assessed is either competent or not yet competent. Assessment is carried out by an Assessor (often a line manager) who must either be qualified or working towards achieving the Assessor qualification. There are different methods of assessment, but it usually consists mainly of observing the person doing their work and checking their underpinning knowledge and understanding.
Competence	The ability to perform at work. It refers to areas such as personal effectiveness as well as the performance of actual tasks.
Element of Competence	The smallest component that can be assessed.
FDQC	Food and Drink Qualifications council – The Standards setting body for the Food and Drink Industry and Joint Awarding Body with City and Guilds in England & Wales and SQA in Scotland for Food & Drink vocational qualifications.
NTO	National Training Organisation. The body, approved by government, that represents an occupational sector or group of sectors. Seafish is your NTO.
QCA	Qualification and Curriculum Authority– The Organisation set up to introduce the national framework of NVQs and to accredit qualifications.
NVQ	National Vocational Qualification.
Occupational Standard	The level to which a person should perform in the workplace. Standards are laid down by a Lead Body and not by individual professional associations or employers.
Performance Criteria	These explain how an element of competence should be performed.
Range Statement	This lists the kinds of conditions and contexts in which an element of competence should be performed.
SQA	Scottish Qualification Authority. SQA is the body responsible for accrediting and awarding Vocational Qualifications in Scotland.
SVQ	Scottish Vocational Qualification.
Unit of Competence	A unit is the smallest part of a Vocational Qualification for which you can receive an award. An individual Unit Certificate is available.

Scallop Shucking and Handling Practices

Other Resources

Other Resources

Training DVD

The training DVD produced by Seafish has three individual scallop programmes.

Managers' Overview – Information for managers

Importance of HACCP – used in the HACCP training course and of interest to those involved in HACCP.

Scallop Processing – a general guide to scallop food safety for processors.

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Introduction to HACCP in the Seafood Industry (Scallop Version)

This half day (4 hr) long programme is a joint award between Seafish and the Royal Environmental Health Institute for Scotland.

The course covers basic HACCP principles and has been revised to meet the needs of scallop processors.

The course is ideal for supervisors, team leaders and those managers that have yet to undertake any HACCP training.

Technical Information

The findings of a range of studies have been used to develop the current good practices in scallop handling and shucking and are an important source of information.

For further information on the contents of these studies please contact

Dr Maeve S. Kelly
Scottish Association for Marine Science
Oban, Argyll, Scotland. PA37 1QA.
Tel 01631 559233
e-mail maeve.kelly@sams.ac.uk

Guide to Coaching

Included in this pack are generic notes on how to use workplace coaching and training resources. Additionally, Seafish has available a distance learning pack – *coaching in the workplace* and a training film *workplace coaching* which you will find are useful guides to improving your coaching skills.

Online Support and eLearning

For more information on training in the seafood industry please access www.seafish.org

For free information on seafood, guidance and training materials online please access www.seafoodacademy.org

The Seafood Training Academy site has information on scallops as well as links to online versions of these materials (including DVD programmes, factsheets etc).

Specific webpages for Scallop Processors, Scallop Divers and Seafood Chefs using scallops can be accessed via this web address.
www.seafoodacademy.org/scallops.html

Food Safety Training is available via eLearning.

Intermediate food hygiene by eLearning – for managers and supervisors, REHIS accredited.

Elementary or Level 2 food safety for operatives and supervisors – REHIS and CIEH accredited.

To find out more please consult either of the two websites above, or contact your local Seafish approved training provider, or email training@seafish.co.uk