

# How to process fish by hand

Learner  
Workbook

<b>Title</b>	<b>Understand how to process fish by hand</b>	
<b>Level</b>	<b>2</b>	
<b>Credit value</b>	<b>2</b>	
<b>Learning Outcomes</b>		<b>Assessment Criteria</b>
<b>The learner will:</b>		<b>The learner can:</b>
1. Know what the requirements are for processing fish by hand		1.1 Outline the tools and equipment required to support hand-processing 1.2 Describe the personal protective clothing required to support hand-processing 1.3 Describe product control and traceability during processing operations 1.4 State why it is important to work within those limits of own authority and competence 1.5 Describe how to carry out and the importance of recording, reporting and communicating.
2. Know how to prepare to process fish by hand		2.1 State how to obtain the relevant process and quality specifications 2.2 Outline how to interpret the relevant process and quality specifications 2.3 Describe how to prepare work-stations in a condition suitable for hand-processing 2.4 Describe how to sharpen, maintain and store knives.
3. Know how to process fish by hand		3.1 Outline how to identify commonly-processed fish species 3.2 State how to assess the quality of whole fish and fish products 3.3 Describe how to carry out the following operations to achieve the required product specification: <ul style="list-style-type: none"> <li>• pin-bone fillets</li> <li>• trim fillets</li> <li>• hand-portion</li> </ul>

	<ul style="list-style-type: none"><li>• skin whole fish</li><li>• steak whole fish</li><li>• slice whole fish</li></ul> <p>3.4 State why accuracy during processing is important</p> <p>3.5 Describe how to maintain work-stations in a condition suitable for hand-processing.</p>
4. Know how to finish hand-processing	<p>4.1 State the common quality problems associated with hand-processing and their likely causes</p> <p>4.2 Outline the action to take when the process specification is not met</p> <p>4.3 State how to deal with fish and fish products that are not fit for use</p> <p>4.4 Describe how to dispose of waste according to organisational procedures</p> <p>4.5 Describe what by-products from the process can be re-worked and recycled.</p>

# Achieving the Unit

The following information will support you with the knowledge requirements to help you achieve this unit.

Whilst the booklet provides a good source of information, it is not exhaustive. We recommend that you research information yourself via the internet or at your local library. Useful sources of information include the Sea Fish Industry Authority ([www.seafish.org](http://www.seafish.org)) and the Seafood Training Academy ([www.seafoodacademy.org](http://www.seafoodacademy.org)).

Seafish have developed a range of training resources in fish processing including:

- Three training DVDs showing methods of processing different species of round and flatfish;
- A fish filleting taught course supported by detailed Trainee and Trainer's workbooks.

There is more information on resources at the end of this workbook, and some fish processing demonstration videos can be accessed via the Library in the Seafood Training Academy website.

.....Good Luck!

Lee Cooper  
Seafish

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## **UNIT DETAILS**

**Unit Number:** FP.102K

**Unit Qualification Number:**

**Title:** Understand how to process fish by hand

**Level:** 2

**Credit Value:** 2

## **UNIT AIMS**

This unit supports workforce development for those who are responsible for the hand processing of fish in fish processing businesses. The unit may also be suitable for processing activities in seafood retail businesses.

The unit is designed for use primarily by operatives and others who carry out these workplace activities. The aim of the unit is to assess knowledge and understanding to recognised National Occupational Standards.

## **CONTENTS**

**Section 1:** Introduction, tools and equipment, PPE, hygiene clothing, organisational procedures, product control and traceability.

**Section 2:** Process specifications, preparing the work area, care of tools, fish identification, processing methods, quality.

**Section 3:** Remedial actions reworking and recycling, waste disposal.

**Section 4:** Recording, reporting and communications, limits on authority

**Section 5:** Additional resources.

## **SECTION ONE:**

### **INTRODUCTION**

Within the context of this Learner Workbook and the associated Improve Proficiency Qualification hand processing is distinguished from hand filleting operations. Filleting by hand covers the removal of flesh from a whole fish (may be headed and gutted) to produce a single, double or quarter fillet.

Hand processing of fish covers other related knife skills including trimming, portioning, skinning and steaking,

Fish filleting and associated knife skills are the backbone of the UK seafood industry.

Much of the output of the seafood manufacturing sector relies on the availability of high quality fish fillets, free of bones and ready to be turned into a fish and chip supper, or the centrepiece of an elaborate seafood meal.

Fish processing is carried out in small fish merchanting companies based in almost every UK port and has been for generations, but increasingly the UK seafood manufacturing industry is being supplied with frozen fish fillets processed overseas and imported in bulk by the container load.

This challenge from overseas to the UK processing workforce means that we must work harder to ensure that the fish we process can compete on quality.

Quality rather than price is the strength of the UK processing sector. To this end we must maintain flesh quality through good temperature control and handling practices. Quality must be ensured by providing well cut fillets free of pin bones and unwanted tissues.

We must also keep avoidable costs to a minimum. Avoidable costs include excessive wastage through poor yields, excessive waste disposal and effluent costs, and loss through low production rates.

One way of achieving these aims is through effective staff training in good fish processing techniques, something that this Learner Workbook aims to contribute to.

Fish processing is also practiced by the thousands of fishmongers and seafood chefs operating throughout the UK. While this Learner Workbook is primarily aimed at processors and fishmongers, there is much to interest the seafood chef here as well.

## **TOOLS AND EQUIPMENT** (Ref: 1.1)

Depending on the species and cuts, processors working in processing factories may be required to use a wide a range of tools and equipment as appropriate to most fishmongers.

This section has been written with the fishmonger in mind, but is equally applicable to the processor worker.

All knives used in fish processing must have moulded plastic handles – they are easier to keep **hygienically clean** than wooden handles. Chefs will of course use colour coded handles for preparing different types of food products to avoid cross contamination.

### **Requirement**

#### **Boning Knife**

5 inch **hard stainless steel** knife, designed to cut through small bones without losing its edge. Ideal for fish and easy to handle.



### **Filleting Knife**

7 inch **soft stainless steel** knife, designed to bend when pressure is applied to the side of the blade through the handle. Again, ideal for fish filleting and skinning.



### **Steaking Knife**

10 inch **hard stainless steel** knife, ideal for steaking whole fish and cutting through large bones



### **Fish Scaler**

Light weight alloy scaler with a small head and blunt teeth. Designed to remove scales with ease when drawn down the length of the fish from tail to head, without scattering the scales around your work area.

### **Scissors**

Sharp, sturdy short bladed kitchen scissors with a strong handle. Ideal for trimming fins, regardless of the size.



**Smooth Steel** A smooth steel is designed specifically to sharpen soft stainless knives such as filleting knives. Frequent light use will ensure a razor sharp edge is maintained.





## **PERSONAL PROTECTIVE EQUIPMENT (PPE)** (Ref: 1.2)

Because the processing operation requires you to handle a sharp knife and some fish have sharp spines you will need some form of cut resistant gloves. You may also wish to wear some form of water proof glove and an apron to protect you from prolonged exposure to water.

If it is cold then your clothing should be suitably warm, and of course your footwear must be appropriate to a wet environment.

PPE must be fit for purpose and supplied free of charge by your employer. You have a responsibility to wear it, look after it and when it needs replacing to bring this to the attention of your employer.

The hat, hairnet, clean coat, plastic arm covers, beard snood etc are not PPE as they are not there to protect you from injury during shucking. They -'are there to protect the food from contamination by you.

PPE is covered by Health and Safety legislation, whereas the need for hygiene clothing is covered by various Food Safety Laws.

## **HYGIENE CLOTHING**

When handling fish it is essential that your outdoor, everyday clothes are covered. The important reason for this is to protect the product from any loose material such as hairs or fluff which might fall from your clothes onto the fish. Remember you are handling food. People will eventually eat what you are producing.

### **Head coverings**

- Either a hairnet or hat with a snood which completely encloses the hair;
- Beard net - moustache or beard should also be completely covered.

### **Overalls**

- Everyday clothing covered by a clean washable overall;
- Waterproof apron – disposable or washable;
- Disposable plastic sleeve protectors.

## **Footwear**

- White rubber Wellington boots – waterproof and cleanable.

Never wear outdoor shoes in a food preparation area – if wearing special boots is impractical, outdoor shoes should be covered with disposable plastic boot covers. And, don't wear your rubber boots outside of the work area as you don't know what you will pick up on the soles.

## **Maintaining Clothing**

Your hygiene clothing must be kept clean, to help prevent contamination of the products.

- When you have finished work, scrub clean your apron and boots, wash them with a dilute solution of detergent or bactericidal cleaner and leave to dry;
- Alternatively, you may have a cleaning service to do this for you;
- Fabric items, such as overalls and cloth hats must be laundered after each processing session.

Disposable items must be used once only. Use fresh each time.

## ORGANISATIONAL PROCEDURES

Organisational procedures are usually based around a combination of three demands:

- What the Law and regulations require;
- What is generally good practice and required to simply do the job right;
- Particular requirements specific to your business – the ‘do it our way’ principle.

In the better run businesses, greater emphasis is placed on the demands of legislation and the requirements of industry good practices. Sadly, in some businesses the key driver is ‘we do it this way, because we’ve always done it this way’.

Whatever the nature of your seafood job, there will be a whole raft of company procedures that are based on the needs of food safety legislation, health and safety legislation, employment law etc.

The need to wash hands, wear hygienic clothing, use appropriate PPE, lift and handle weights appropriately, work responsibly, maintain records etc all have legislation at heart.

The need to minimise waste, reduce water usage, clean as you go, minimise temperature abuse of the fish or shellfish, handle with care etc are largely driven by industry good practices.

### ACTIVITY

With your supervisor’s assistance, list the 10 most important<sup>1</sup> company or organisational procedures related to your job. For each procedure make a decision (tick the box) on what is the key reason for the procedure.

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<sup>1</sup> I’ll let you decide on what basis a procedure is important or not. Insert text or a tick as appropriate.

	Why is it important?			
	Procedure ✍	Law ✓	Good practice ✓	Other ✍

Do you draw any conclusions from this list?

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Although your employer has a duty to ensure you receive adequate training, supervision and instruction so that you can comply with these organisational and legal procedures, it is also your responsibility to ensure that you are complying with the law by following company procedures.

## **PRODUCT CONTROL AND TRACEABILITY** (Ref 1.3)

An important aspect of seafood quality and safety assurance is to be able to trace products, ingredients, suppliers, retailer, processing operations or storage procedures through the seafood chain. This is especially important when problems occur. Traceability describes the systematic recording of information about a seafood product from point of harvesting to point of sale.

Hand in hand with traceability is product control and labelling.

Without labels that are unique to each individual product or production batch, it would be impossible to track fish and shellfish through the seafood chain and to know at each step in the chain how they had been handled and processed.

This ability to trace and track batches of seafood and to know what you and others have done to them is a key part of product control.

### **Advantages of product control / traceability / labelling**

- To meet legal requirements;
- An effective food safety assurance tool;
- Allows companies to manage suppliers and customers;
  - Improved mutual trust between supplier/customers;
  - Reduced quality assurance checks if the supplier is trusted;
  - Potential losses reduced if problems arise;
  - Better cost accounting means more profitable businesses;
- Automated systems can save time.

Each step in the seafood chain will potentially generate information for the product, including fish reception, processing, packing and despatch.

## ACTIVITY

Discuss with your supervisor and briefly record your conclusions to the following questions about the product control and traceability arrangements in your company.

Q. What information do you need to check when receiving fish to process?

Q. After processing a batch of fish, what kind of records must you complete?

Q. Do you understand the arrangements for product control and traceability in place for processing operations in your company? Yes/ No

If No, please discuss with your supervisor.

If yes, please briefly describe them here.

## SECTION TWO:

### PROCESS SPECIFICATIONS (Ref: 2.1, 2.2)

At the end of Section One you were asked to list the 10 most important organisational procedures related to your job as a fish filleter. Perhaps the list included process and quality specifications or standard operating procedures?

Each processing specification will have its own specific requirements, but almost all processing specifications will have common requirements. List the main requirements of your chosen processing specification here:

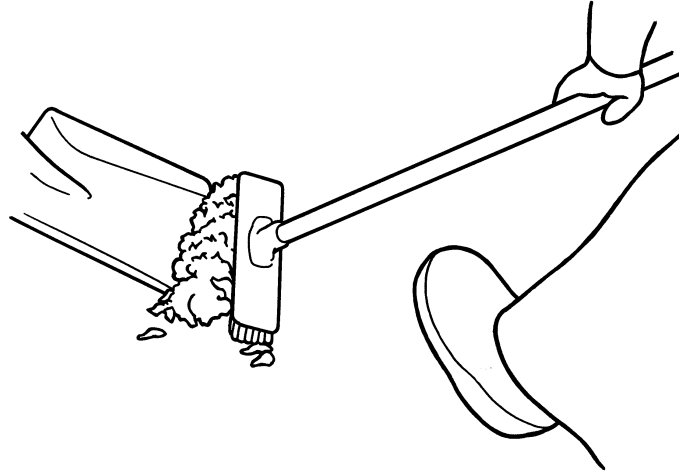
- The fish species to be processed;
- The type of finished cut required;
- The quantities to be processed;
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- Recording requirements.

If you have any problems interpreting the specification then discuss it with your line manager.

## PREPARING THE WORK AREA (Ref: 2.3, 3.5)

Before you start to fillet or process fish you must make sure that the area where you will be working is suitable and ready for use. Use the following checklist

The **workroom** area should be clean and tidy, free from any rubbish, and any external doors and windows should either be closed or covered with suitable barriers to exclude flies and other pests.



**Tools** you will need should be assembled. Check that they are clean, sharp and do not have loose handles. Any tools which you will not need must be correctly stored away from the preparation area.

**Cutting tables** and blocks must be clean and free from all debris.

**Bins** for the storage of fish waste must be clean, and emptied as required.

**Clean boxes** for the storage of the finished product should be in place.

Supplies of **ice and protective film** for covering the finished product should be in place, and replenished as needed during the day.

Put on **protective clothing** and wash hands.

Only when you are sure that everything is ready should you begin work.

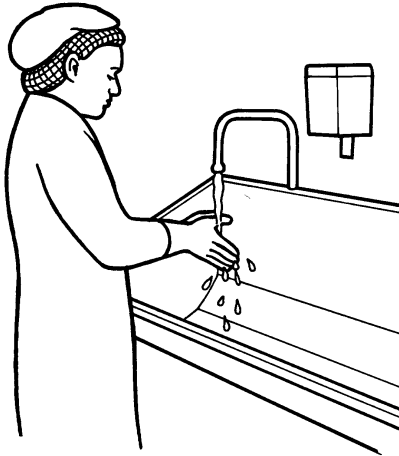
### Hand Washing

Your employer will have trained you in how to effectively wash your hands and will have a procedure on when and how to do this.



We think this is so important that we're including our own brief guide to hand washing here.

### Hand Washing - a summary



- Wet hands before applying liquid soap.
  - Apply liquid soap (one pull of dispenser).
  - Rub hands together vigorously for about 10-15 seconds (count – it's longer than you think!!).
  - Make sure you wash both sides of the hands, fingers, thumbs, nails and wrists.
  - Rinse thoroughly with clean water.
  - Dry thoroughly with a clean paper towel.
  - Apply alcohol liquid/gel to hands and massage into all surfaces.
  - Allow to air dry (do not wipe your hands on your clean overall).
- If gloves are to be worn, apply alcohol liquid/gel to glove surfaces before work.

### Don't Forget

- Although wearing of wedding bands is allowed in food production areas, these are a potential source of infection and can be a site for bacterial pockets. Always lift and turn the band when washing/disinfecting.
- Nail varnish should never be worn in food factories. False nails or nail extensions are also not permitted.
- Nails should always be short and clean.
- All skin lesions, cuts or abrasions should be covered with a blue plaster or official dressing. Any infected cuts or skin problems should be reported prior to work

### Clean as you go

Clean as you go means keeping your work station in a tidy and hygienic condition so that you can continue to work through your shift. It also applies to you and the periodic need to change clothing and wash hands both for breaks and at other times during the working day.

## CARE OF TOOLS & KNIFE SAFETY (Ref: 2.4)

- Always store your knives safely in a knife rack or sterilising rack when not in use.
- Be aware of where your knives are in relation to where your hands are.
- Don't leave a naked blade lying on the block when the knife is not in use.
- Never cut towards yourself.
- Never hold a knife by the blade.
- Always use the right tool for the job – don't try to steak with a filleting knife.
- Keep your knives sharp – you are more likely to inflict a serious wound if you slip with a blunt knife because you are applying more pressure to force the knife through the flesh.

## SHARPENING KNIVES

For a very worn or dull blade it may be necessary to regrind using a rotary grinding wheel. The knife must be held at an angle of roughly 20° to the grinding surface to produce a good lasting edge. It is advisable to wear safety goggles when using a grinding wheel to protect your eyes from sparks. If carried out in a processing factory then this is usually a specialized role.

To maintain an edge on the knife, use either a steel or a chantry.

### Using a Sharpening Steel

Place the pointed end of the steel firmly on the work bench with the handle uppermost. Angle the knife away from your body and using firm movements, stroke the edge of the knife blade down the steel from top to bottom, at the same time moving it across the steel from the knife handle to the point of the blade. The knife blade should be at about a 20° angle to the steel. Repeat the action on the other side of the steel with the opposite side of the knife.

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## Using a Chantry

A chantry consists of two sharpening surfaces housed in a plasticised metal case. The two sharpening surfaces are held at an angle to each other so that when you draw the knife backwards and forwards through the gap in a sawing motion, the blade is automatically presented to the sharpening surfaces at the correct angle. This is much easier for a novice to use.



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**FISH IDENTIFICATION** (Ref: 3.1, 3.3)

It's important that you can recognise all of the various species and forms that you are likely to encounter during normal processing activities.

Most seafood processing businesses will specialise in a few types of species, while fish merchants and fishmongers/retailers will need to be able to identify a larger number of species.

**ACTIVITY**

List the main species you are likely to be asked to process and the different types of cuts you can do.

Species	Cut

Fishmongers may well have to deal with 20+ species of fish and shellfish as frozen, chilled, cooked, and live products.

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While the basic fish skeleton is similar for all commercial species in the UK, there are important differences between round and flatfish. If you are not already able to describe the skeletal structure in broad terms, then take time to examine a well processed fish frame to see how the layout of bones affects the standard processing techniques.

(Ref: 2.4)



## **PROCESSING METHODS** (Ref: 3.3)

Whether you are an experienced fish processor or someone who has recently been trained to process, there are four criteria which will be used to judge your competence as a processor.

For three of these criteria the newly trained processor is expected to be almost as good as the experienced worker as everyone processing fish in a business is expected to meet the company standards for:

- Quality of processed product:
  - The 'neatness' of the cut flesh;
  - The lack of unwanted tissues (belly cavity lining etc).
- The yield of the processed product:
  - Maximum edible flesh on the product;
  - Minimum edible flesh left on the frame.
- Good working practices:
  - Hygienic working;
  - Safe working;
  - Team Working.

The fourth criterion is speed or rate of throughput. The experienced fish processor is able to process fish with a speed and gracefulness that you, the newly trained processor, will only reach after many hours of cutting fish.

Provided though you are not wasting product, and are making satisfactory progress towards improved throughput then you will soon be an asset to your employer.

There is one part of processing that you, as a newly trained processor are often better able to do than the experienced worker, and that is to describe the steps in processing a fish. At this stage you are probably still talking yourself through the process, but when you become proficient the whole processing process blends into a seamless single motion, starting with a whole fish and ending with the finished products.

You will be expected to become proficient (and able to describe) in portioning, trimming, pin-boning, skinning and steaking fish by hand to produce a range of fish products for further processing and sale.

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Seafish has produced a series of training packs (DVD and written materials) that describe processing methods in detail. Here is a very brief summary by way of illustration of a processing method.

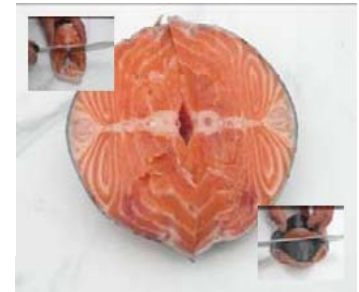
### Flat fish head off and trim

Processing Step	Key issues
Place dark side up, head towards you. Use a boning knife to remove the small head using the bony structure to guide you.	Twist head upwards for better access while cutting. Apply more pressure to cut through backbone.
Hold the fish off the table and using your scissors remove the tail fin and the fins down either 'edge' of the fish.	Hold the fish tail end towards you to cut against the natural movement of the fins.
Using your knife cut through the backbone membrane in the body cavity and scrape out any blood. Wash out with clean water.	
Use your scissors to trim around the head end of the fish and to remove the smaller pectoral fins.	



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### Steaking a fish



In the space below, describe the various steps in producing steaks from a fish such as a cod or salmon. Include any key safety or quality/yield issues.

Processing Step	Key issues
<p>Continue on a blank sheet of paper if you need more room</p>	



## **QUALITY** (Ref: 3.2)

There are two aspects to fish quality that fish processors need to be aware of.

There is the organoleptic quality of the fish flesh. What it tastes looks and smells like – how fresh the fish is. This type of freshness<sup>2</sup> quality is very dependent upon how well the fish has been handled, how cool it has been kept since harvesting, and how long it has been out of the water.

Organoleptic (freshness) quality is gradually lost over time.

It will have an effect on the processor as poorer quality fish will have softer flesh and be harder to process well. The processor can also do their part in helping to maintain quality by using good handling practices:

- **RECEPTION** - When wet fish is received, boxes must be opened and the contents checked for quality and to ensure that they are covered with flake or shale ice. Keep lids on the boxes, store in a chilled room or container until required, ideally at a temperature of between -1°C to +1°C. If it is any colder, the fish will freeze, any warmer and the fish will start to deteriorate.
- **DURING PROCESSING** - Do not expose either whole fish or processed material to temperatures above 5° C for any longer than is absolutely necessary for the processing. Keep the fish in ice and only take out as much raw material as you can comfortably process in 10 minutes.
- **AFTER PROCESSING** - Store prepared products according to instructions. Place flat in a clean box, cover with plastic sheet to minimise ice damage and cover with a good layer of ice before putting the lid on the box and returning it to the chilled holding area. Treat the products gently, do not screw them up or throw them into the box anyhow. The flesh is delicate and easily damaged by rough handling and by direct exposure to the ice.

While you will not be expected to be able to assess the organoleptic quality of fish using any of the formal systems, you should be able to spot the occasional rogue fish that is of much poorer quality than the rest of the fish in your batch and take the appropriate steps as prescribed by your company. Spotting the occasional rogue fillet is harder as you may only have the colour, texture and firmness of the flesh itself to go on.

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<sup>2</sup> Not to be confused with fresh meaning never been frozen.

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The other aspect of quality is the quality of your processing, and here you must be able to objectively assess how well your products are turning out.

The acceptable quality of products is likely to be specified in a product specification and may be backed up by photographic examples.

## ACTIVITY

Examine the appropriate quality specification and list the quality criteria below. We have provided a few categories to get you started.

Species:

Type of cut:

Quality Criteria:

Cut edges should be –

Bones (inc. pin bones) –

Belly flap trimming –

Yield at least –

Have you any other criteria? Please add here.

## **Microbiological Quality of Fish Products**

The assessment of the microbiological contamination of fish products is an issue for your Quality Assurance team, rather you. Provided you work hygienically, avoid contamination and maintain good temperature control there is little else you can do personally to ensure the microbiological safety of the products.

## **Fit For Use**

There are a number of reasons why particular fish may be considered unfit for use:

- Fish is of very poor organoleptic quality – visual clues include appearance of whole fish, appearance of cut fish, smell etc;
- Fish exceeds microbiological criteria set by customer;
- Unable to produce a product of the required size.

Sometimes it is possible to rework the fillet or to remedy the problem, but too often the only sensible response is to send that fish or product to waste.

We will explore these issues in more detail in section four.

## **Accuracy and Yield** (Ref: 3.4)

Usually when we think of accuracy in processing it is simply a case of achieving the maximum yield from that particular fish.

There are however examples where greater accuracy results in a necessary lower yield. Occasionally a customer specification for a product will not only have a tight minimum weight, but also a tight maximum weight as well.

Products that are overweight will have to be trimmed, which adds time and cost to the work. It can be better to adjust the cut to produce pieces within the weight range consistently, even at the expense of a reduced overall yield.

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### **Common Quality Problems** (Ref: 4.2)

Some of the problems you are likely to encounter are not of your making.

Badly gutted fish, fish that have been squashed into overfilled boxes and poorly iced fish are all problems that may make your job harder.

You will have control over some of the other problems common in processing.

Whatever the problem there will be a cause and an impact. There is space below to complete three of our examples and to add two of your own.

Problem	Cause	Impact
Badly gutted fish	Bad practice onboard fishing vessel	Accelerated spoilage from gut contents, poor quality fish product.
Squashed and distorted fish	Overfilled boxes, fish not laid out before icing	Slower to process and poorer yields.
Softer than usual fish flesh		
Gaping flesh in the final product		
Red spots or bruises in flesh of products		

## **SECTION THREE:**

### **REMEDIAL ACTIONS, REWORKING AND RECYCLING**

(Ref: 4.2, 4.3, 4.5)

The process specification determines whether or not the products you produce are what are required, or not.

Products may not meet the requirements of the process specification for several different reasons. Some reasons require remedial action, some reworking or recycling and some will simply lead to waste.

For the purposes of this Learning Workbook we will define remedial action as action taken to remedy a fault that does not lead to reworking, recycling or waste.

### **Examples**

#### **Remedial Action:**

- Temperature of products post-processing are too high.
  - Causes will include:
    - Fish or fillets too long out of chiller;
    - Fish or fillets not iced properly.
  - Solutions include:
    - Add ice to tank water in warmer weather;
    - Remove smaller batches from chiller prior to processing;
    - Leave fish in ice until needed, ice products promptly.
- Ice damage to products.
  - Causes include:
    - Poor icing technique;
    - Protective poly film not used;
    - Overfilled boxes of iced products.
  - Solutions include:
    - Use poly film to protect products from ice drip wash;
    - Don't overfill or overstack boxes of products.

## Reworking

- Products quality is out of specification.
  - Causes will include:
    - Poorly processed fish;
    - Excessive bones;
    - Nematode worms;
    - Blood spots and bruises.
  - Solutions will include:
    - Products to be re-cut and trimmed;
    - Bones to be pulled or cut out;
    - Candling and removal of visible worms;
    - Cutting out and careful trimming to remove unsightly tissue.

## Recycling

The most common reason for recycling fish products is that it simply cannot be used for its original purpose.

This includes products so far out of specification that they cannot be reworked, as well as the various off-cuts of fish that are small but contain valuable fish flesh.

The frame from the filleting operation contains flesh that can be extracted manually or by a flesh/bone separator to produce fish mince.

Traditional markets for cheeks (usually cod), tongues and belly flaps are much smaller than they used to be and these by-products are more likely to be used to produce fish mince.

Material that cannot be used for human consumption because of food safety or quality reasons may still be used in the production of fish meal.

## **WASTE DISPOSAL**<sup>3</sup> (Ref: 4.4)

There are two waste products from the hand fish processing process.

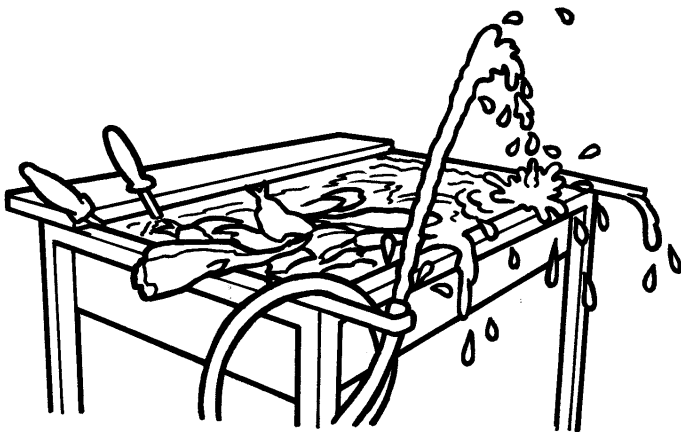
First solids that cannot be reworked or recycled because of reasons of food quality or food safety, and second, water.

Much of the solid material can be used in fish meal production, but is not because it doesn't end up in a skip, but is washed down the drains at the end of the working day.

Excessive effluent production is a real issue in fish processing operations where excessive amounts of water are used, and little is done to keep solid material out of the drains.

The water companies' charges are made up of:

- The water supply charge;
  - The more water used the higher the costs.
- The effluent charge;
  - The volume is based on all the water you use;
  - The strength charge is based on the amount of organic material going down you drains.



Simple precautions such as turning off the taps during breaks, fixing leaks, only using water as needed will minimise the volume of water charged for AS WELL AS the volume of effluent charged for.

Keeping waste material out of the drains will reduce the effluent strength charges.

Together these represent a significant cost to a fish processing business.

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<sup>3</sup> Seafish have extensive waste minimisation training and technical materials available.

## SECTION FOUR

### RECORDING, REPORTING AND COMMUNICATING (Ref: 1.5)

Recording, reporting and communicating are essential activities that take place every day while we are at work. They probably take place every hour of our working day, so just what are we recording, reporting and communicating about?

Here are a few of our ideas on general issues.

- Product, processing or packaging specifications;
  - You may be given a written report on a new process specification.
- Targets, schedules or deadlines;
  - You may verbally communicate to your supervisor that a scheduled task has been completed.
- Results, scheduled milestones, routine outcomes;
  - You may record the completion of each check of the metal detector.
- Health and Safety or Food safety issues;
  - This could include you reporting problems to your supervisor, or receiving updates on changes to policy.
- Impending operational problems;
  - Verbal reports on what might go wrong;
- On-going operational problems;
  - Usually verbal reports on what's being done to fix the problem.
- Task Handovers;
  - Informing those taking over from you at the end of your shift.

These are pretty general. Can you list below three different examples of a communication, a report and a record from a typical working day during intake operations?

By way of a definition:

A report is usually one way – you report to someone, or they report to you. Communications are usually two way – information is exchanged and may be discussed.

Records – a permanent or semi permanent record of an outcome – almost always written.



<b>Examples of Records made</b>	
<b>Reports – verbal or written</b>	
<b>Communications – what were they about?</b>	

### The Importance of Communication and Reporting



What do you think may happen if communications and reporting were absent, delayed or inaccurate?

Think about this for a moment or two before looking at our list.

Perhaps even make your own list to compare to ours.

Communications and reports that are delayed, inaccurate, incomplete or absent may lead to:

- Misunderstandings and confusion;
- Poor working relationships between colleagues and team members;
- Drop in H&S or food safety performance;
- Production problems that may lead to increased waste or increased costs;
- Damage to equipment or machinery;
- Quality losses and perhaps even product recalls;
- Loss of sales / customers due to poor quality, out of specification products etc.

When communications and reports are on time, accurate and fit for purpose, what may be the results?

- A more efficient, effective and pleasant(er) workplace.

## **Effective Communication**

How is this achieved?

### **1. Providing information:**

- Find somewhere appropriate to communicate – where the noise levels are suitable;
- Be precise and stick to the points;
- Use notes if appropriate;
- Maintain appropriate eye contact;
- Use polite gestures;
- Pay attention to the recipient's body language;
  - a. Are they showing an interest?
  - b. Have you 'lost them'?
  - c. Are they taking notes?
- Ask occasional questions to check their understanding of the messages.

### **2. Receiving Information:**

- Listen carefully;
- Identify the important points;
- Take notes if appropriate;

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- Ask questions to confirm your understanding;
  - a. Use open questions or paraphrase what is being said;
  - b. Avoid closed questions unless you really want a Yes or No as the reply;
- Check all important information with the information provider;
- Show you are paying attention by:
  - a. The way you stand;
  - b. Making appropriate eye contact;
  - c. Asking the right questions.

## Effective Recording

The main purpose of records are to provide:

- Evidence of what happened during the work period;
  - evidence that certain steps were taken;
  - evidence of any problems, or the absence of problems;
  - A record of key data such as temperatures, quantities, batch numbers etc.
- Confirmation that the people tasked with collecting and writing down data actually did so – that’s why you have to sign and date forms;
- Information for:
  - financial analysis;
  - problem solving and fault diagnosis;
  - traceability.

Many of the records we keep are routine, with the same data recorded batch after batch, day after day. The very routine nature of recording may make you assume it is not important and it doesn’t really matter. IT DOES!

It is important to the customer, your bosses and you.

A wise woman once said: “if it’s not written down, it didn’t happen.” We can take that to mean, if you keep careful, accurate and honest records of what you do, as required by your employer, then should a problem arise they will be your best defence, and that of your bosses as well.

This only works though if you write down what actually happens, not what you think should have happened.

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So:

- Write down the actual temperature of the delivery, the one you actually measured;
- Write down the actual time the check weigher was tested, not the time it was supposed to have been tested:
- And please, don't fill in records in advance.

Recording what has happened is an important part of any seafood processing or handling operation. Almost everything you or your colleagues do will result in a record somewhere in the company.

Records and the accurate recording of data are essential if the business is to survive and prosper and your job is to be secure. We need to record all kinds of information during our working day. What kind of records do you need to complete during a normal intake operation?

Document name	Describe its purpose

**LIMITS ON AUTHORITY (Ref: 1.4)**

We all have limits on our authority, even the Managing Director. Usually these limits are tested when something goes wrong. Do you know your limits? What you can and cannot do?

What do you do if there is something wrong with the fish you are given to process? Describe the limit of your authority in case of a problem.

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What do you think are the possible problems that may be caused if you do not stay within the limits of your authority?

List them here and then talk to your supervisor to see if you have listed everything.

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As you become more experienced in your job, will the limits of your authority increase? Yes / No

If yes, how will they change?

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## **SECTION FIVE:**

### **ADDITIONAL RESOURCES**

#### PROCESSING RELATED

1. Fish Filleting Training programme – an accredited training programme available from Seafish approved trainers.
2. Fish processing video demonstrations – online at [www.seafoodacademy.org](http://www.seafoodacademy.org)
3. *Seafood and Eat It* – a 6 DVD masterclass with three DVDs of fish processing methods. (DVDs available individually).

#### GENERAL

1. Food Safety training courses from level 1 to level 3:
  - a. Available in various languages;
  - b. Available as taught courses, open learning programmes and by eLearning<sup>4</sup>;
  - c. CIEH and REHIS approved.
2. Health and Safety training courses:
  - a. Level 1 taught course;
  - b. Level 2 as a taught course or open learning module;
  - c. CIEH and REHIS approved.

For information on all of these training resources and others, contact Seafish:

Seafish Training  
Sea Fish Industry Authority  
Humber Seafood Institute  
Europarc  
Grimsby

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<sup>4</sup> A free to study, level 2 course is available at [www.seafoodacademy.org](http://www.seafoodacademy.org)

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DN37 9TZ

Tel 01472 252300

Email training @seafish.co.uk

See also: [www.seafish.org](http://www.seafish.org) and [www.seafoodacademy.org](http://www.seafoodacademy.org)