

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
1. Receipt of molluscs.	Viral, gross bacterial, algal toxin, chemical or physical contamination, which is unlikely to be removed during subsequent sorting, washing or purification operations.	Obtain molluscs from approved sources only who supply batches with required registration forms.	Y	No supplies to be accepted without registration forms.	Identity, source of each batch. This is to be checked and recorded on Form QC1	Reject any supplies without appropriate registration forms or areas subject to a closure order.
		Do not harvest animals subject to chemical contamination.	Y	Harvest only from waters competent authority approves.	Checks on all batch's at reception that a relevant registration document accompanies each batch.	Reject any batches that do not have a registration document.
		Remove physical contamination such as mud silt and detritus from the shells prior to purification or packing.	N	No dead animals or empty shells to be accepted. No mud-balls to be present in shells. No physical detritus that can be removed by washing to be visually present.	Checks on all batch's at reception.	Reject any batches that do not conform and rewash.
	Molluscs unlikely to deplete, e.g. in weak seasonal condition, or stressed, shocked or damaged by time delays, or temperature abuse.	Do not accept recently "spent" animals, or animals that are likely to spawn.	Y	No batches unlikely to deplete to be accepted.	Identity source and overall health and quality of each batch to be checked and recorded on Form QC1.	Reject batches that do not conform.

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2. Storage of molluscs prior to depuration.	Contamination of molluscs during <u>non-immersed</u> storage, which is unlikely to be removed during subsequent sorting, washing or depuration operations.	Store molluscs off the ground, in a protected and well-drained container or area within the dispatch or purification centre.	N		Bacterial checks on samples after storage. Constant visual checks by operatives.	Check/relay/reject any batches stored improperly.
	Molluscs stressed or shocked by time/temperature abuse during non-immersed storage, such that they may not effectively depurate.	Follow time and temperature storage guidelines, as listed in respective Operating Procedure document, conditions of approval or Seafish guidance document.	Y		Visual checks by operatives prior to loading into the depuration system.	Relay/reject batch.

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3. Clean (Wash) and sort molluscs prior to depuration.	Ineffective cleaning – accumulation of mud, rubbish, dead/dying molluscs, leading to contamination of purification seawater.	Cleaning schedule – cleaning and sorting equipment to be cleared of molluscs, mud, dirt, etc as necessary, and at least between batches.	Y	Full adherence to cleaning schedule.	Daily hygiene audit – results recorded on Form QC6. Visual checks by operatives prior to loading into the depuration system.	Re-clean any dirty equipment. Check/relay/reject batch.
	Ingestion of contaminants during cleaning, which might not be removed by depuration.	Molluscs not to be immersed during cleaning operations.	Y	No molluscs to be immersed.	Constant checking by operatives during mollusc cleaning operations.	Re-clean any dirty equipment. Check/relay/reject batch.
	Molluscs stressed or damaged by cleaning and sorting operations, such that they may not effectively depurate.	Careful washing and handling practices.	Y	No fractures or chipped shells.	Constant checking by operatives during mollusc cleaning operations and prior to loading into the depuration system.	Reject stressed and damaged molluscs.

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4. Conditioning, Immersed Storage for animals that are not to be purified.	Water used is contaminated.	<p>Only animals harvested from category 'A' designated waters are to be used for this process step.</p> <p>Only use "clean seawater" taken from Category 'A' waters, water made up from artificial seawater or water taken from a completed 42 hour purification cycle that has no detritus, faeces, or pseudofaeces in it.</p> <p>Conditioning can take place in natural sites that the competent authority has classified as being class 'A'.</p>	Y	Less than 230 CFU's of E-coli per 100g mollusc flesh and intravalvular fluid.	Record processes, usage and movement of all Seawater.	
			Y	Less than 230 CFU's of E-coli per 100g mollusc flesh and intravalvular fluid.	Record movement of animals onto conditioning site(s).	Return batches that fail the critical limit to the conditioning area or a production area.

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5. Load molluscs into depuration containers or tanks.	Overloading molluscs in deep layers, which may inhibit their functioning.	Specified loading patterns.	Y	Total adherence to specified loading patterns.	Supervisor to check, and record results on Form QC2.	Check/reload/reject batch.
	Exceeding the designed total load of the purification system, which may result in oxygen depletion?	Specifications included in Conditions of Approval.	Y	Total adherence to Conditions of Approval.	Supervisor to check, and record results on Form QC2.	Check/reload/reject batch.
	Poor loading of tanks – water flow impeded, or molluscs stressed by turbulent water flow, possibly inhibiting mollusc functioning.	Specified loading patterns.	Y	Total adherence to specified loading patterns.	Supervisor to check, and record results on Form QC2.	Check/reload/reject batch.
	Possible cross-contamination between batches of molluscs from Category A and B harvesting areas.	Batch control.	Y	Total adherence to batch control procedures.	Supervisor to check, and record results on Form QC2.	Any batches from Class A harvesting areas must now be considered to be from Class B.
	Compromised purification conditions resulting from a mixture of bivalve species, or other fish and crustacea.	Batch control.	Y	Total adherence to batch control procedures.	Supervisor to check, and record results on Form QC2.	Reject all batches of molluscs.

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6. Fill purification system with clean seawater.	Temperature shock on immersion that may inhibit activity of molluscs, or which may induce spawning and death, this also contaminates the seawater.	Specified tank filling procedures. Maintain seawater temperature limits, as detailed in respective Operating Procedure Document.	Y	Minimum water temperature to be within limits set by competent authority for each species. Seafish 'advises' maximum temperatures	Temperature of seawater to be monitored and recorded for each batch, on Form QC2.	Delay filling tanks until seawater temperature is within critical limits.
	Incomplete filling of system leaving molluscs exposed during depuration. Animals do not purify out of the water.	Specified tank filling procedures, as detailed in respective Operating Procedure Document and Conditions of Approval.	Y	Full adherence to Conditions of Approval.	Supervisor to check, and record results on Form QC2.	Fill tank according to Conditions of Approval. Check/reject molluscs.
	Seawater turbid. Detritus in the water 'shades' the UV light resulting in ineffective sterilisation of water.	Seawater should be clear in appearance.	Y	Grossly turbid water not to be used.	Supervisor to check, and record results on Form QC2.	Stop filling with water. Empty system and clean down. Refill using filter or settling tank to remove detritus.
	Salinity not correct. Animals will not respire effectively therefore may not purify themselves.	Seawater salinity limits, as detailed in respective Operating Procedure Document and 'Conditions of Approval'.	Y	Maintain minimum salinity set by competent authority.	Supervisor to check, and record results on Form QC2.	Delay filling tanks until seawater salinity is within critical limits.

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7. Mollusc purification and seawater circulation.	Inadequate seawater flow and aeration, resulting in low dissolved oxygen levels, and low levels of mollusc activity.	Specified dissolved oxygen levels, as detailed in respective Operating Procedure Document.	Y	Full adherence to 'Conditions of Approval' and Operating Procedure Document. Competent authority may set a minimum flow rate.	Supervisor to check dissolved oxygen levels, and record results on Form QC9. Constant visual checks on molluscs during depuration. Use flow meter.	Check/reject molluscs. Increase flow rate. If situation persists reduce biomass in tanks for subsequent loads.
	Excessive flow rates and turbulence, leading to re-suspension of detritus and its ingestion by molluscs.	Seawater flow rates, as specified in respective Operating Procedure Document.	Y	Full adherence to Operating Procedure Document. Competent authority may set a minimum flow rate.	Supervisor to check water flow rates, and record results on Form QC2.	Check/reject molluscs. Reset flow rates.
	Seawater temperature too low, resulting in low levels of mollusc activity.	Minimum temperature levels, as set in Conditions of Approval, and in respective Operating Procedure Document.	Y	Full adherence to Conditions of Approval.	Supervisor to check water temperature and record results on Form QC2.	Check/reject molluscs. Raise water temperature. Extend depuration period.
	Seawater temperature too high, resulting in low dissolved oxygen levels, and stressing the molluscs. Spawning may take place.	Maximum temperature levels, as set out in respective Operating Procedure Document.	Y	Full adherence to Operating Procedure Document.	Supervisor to check water temperature and record results on Form QC2.	Check/reject molluscs. Lower water temperature. Extend depuration period. Empty and clean depuration system. If spawning takes place reject all animals, clean down and reload with new batch.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
7. (Cont'd) Mollusc purification and seawater circulation.	Microbiological contamination in recirculated seawater ingested by molluscs.	UV treatment of recirculated seawater, as specified in Conditions of Approval.		Full adherence to Conditions of Approval.	Visual checks that UV lamps are operating. Supervisor to record periods of UV lamp operation and dates of lamp changes, on Form QC7.	Check/reject molluscs. Empty and refill tank. Clean/replace UV lamp. Extend depuration period.
	Physical disturbance of the depuration system causing the re-suspension of detritus and its ingestion by molluscs. Contamination or dilution of the seawater in the purification tank by seabirds, or rainfall or flooding. Seawater reuse beyond that proscribed in 'Conditions of Approval' Excess ammonia may inhibit metabolism or kill animals.	Careful working practices. Protect any exterior tanks. Water salinity levels, as set out in Conditions of approval. Comply with 'Conditions of Approval' and Seafish advice.	Y Y	Visual checks to ensure that water is visibly clear. Full adherence to Conditions of Approval. Maintain minimum frequency of reuse set by competent authority.	 Water salinity levels to be monitored by Supervisor, and results recorded on Form QC2. Record frequency of reuse on form.	Check/reject molluscs. Empty and refill tank. Extend depuration period. Check/reject molluscs. Resalinate/renew seawater. Extend depuration period.
	Physical disturbance of the depuration system causing the re-suspension of detritus and its ingestion by molluscs.	Careful working practices.	Y	Visual checks to ensure that water is visibly clear.		Check/reject molluscs. Empty and refill tank. Extend depuration period.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
7. (Cont'd) Mollusc purification and seawater circulation.	Contamination or dilution of the seawater in the purification tank by seabirds, or rainfall or flooding.	Protect any exterior tanks. Water salinity levels, as set out in Conditions of approval.	Y	Full adherence to Conditions of Approval.	Water salinity levels to be monitored by Supervisor, and results recorded on Form QC2.	Check/reject molluscs. Resalinate/renew seawater.
	Seawater reuse beyond that proscribed in 'Conditions of Approval' Excess ammonia may inhibit metabolism or kill animals.	Comply with 'Conditions of Approval' and Seafish advice.	Y	Maintain minimum frequency of reuse set by competent authority.	Record frequency of reuse on form.	Extend depuration period.
	Deterioration in seawater quality inhibiting mollusc quality.	UV treatment of recirculated seawater, as specified in Conditions of Approval.	Y	Full adherence to Conditions of Approval.	Visual checks on water clarity and turbidity, and activity of top molluscs. Supervisor to complete UV Usage Form QC7	Clean/replace UV lamps. Check/reject molluscs. Extend depuration period. Empty and refill tank. Wash molluscs. Restart depuration cycle.
	Molluscs remain moribund as a result of stress, weak seasonal condition.	UV lamp cleaning and replacement schedule.	Y	Follow handling advice in Seafish advice.	Visual checks prior to depuration procedure.	Check seawater quality, flow, aeration and temperature. Reject batch. Replace seawater in system.
	Depuration system failure (e.g. power cuts, pump breakdown,) resulting in loss of control of depuration process – possible stress of molluscs.	Visual checks during depuration procedure.	Y	Full adherence to Conditions of Approval. Maintain a minimum of 42 hrs of purification.	Supervisor to check start and finish times, and record results on Form QC2.	Drain seawater if seawater flow or aeration is likely to be halted for a significant period of time. Check/re-purify/reject molluscs.
		System failure plans.	Y			

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8. Drain seawater from purification system to below all the molluscs.	<p>Changes in water flow rate and direction causing re-suspension of detritus and its ingestion by the molluscs.</p> <p>Initial drainage incomplete, leaving molluscs immersed and subject to ingestion of detritus when disturbed.</p>	<p>Visual checks during drainage.</p> <p>Full drainage of system.</p>	<p>Y</p> <p>Y</p>	<p>Drain tanks using designed drainage points with pumps running.</p>	<p>Visual checks during drainage.</p> <p>Visual checks during drainage.</p>	<p>Check / reject animals refill Restart depuration cycle.</p> <p>Restart depuration.</p>

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9. Remove molluscs from purification tanks and containers.	Ingestion of detritus by molluscs.	Complete drainage of system prior to removal of molluscs.	Y	No emptying of molluscs before tanks have drained.	Visual checks during drainage.	Restart depuration.
	Inadequate separation of unpurified and purified molluscs. Allowing unpurified to go to packing	All batches to be distinctly marked and separated.	Y	No mixing at all.	Identification and monitoring of batches to be incorporated into management plans.	Stop dispatching. Trace back pack/batches to source. If mixed batches have been identified as dispatched institute recall procedures.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
10. Wash and sort purified molluscs. De-clump and de-beard if appropriate.	Ineffective cleaning and sorting of molluscs, leaving contamination that may be subsequently ingested.	Cleaning schedule.	Y		Visual check of equipment prior to washing/sorting. Visual inspection of molluscs during these operations.	Re-clean any dirty equipment. Check/re-purify/reject molluscs.
	Ingestion of contaminants by molluscs.	Do not immerse molluscs during cleaning.	Y		Constant visual checks during these operations.	Check/re-purify/reject molluscs.
	Molluscs stressed or damaged during cleaning and/or sorting operations, such that they may die before sale to the consumer.	Careful handling practices.	Y	Less than 1.	Constant visual checks during these operations.	Reject any stressed or damaged molluscs.
	Ineffective clean down of same washing and or de-clumping machine used for purified and un-purified animals.	Check that machine has no animals in it prior to use.	Y		Visual check of equipment prior to washing/sorting.	Re-clean any dirty equipment. Check/re-purify/reject molluscs.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
11. Pack and label molluscs.	Damage to or contamination of, molluscs during packing operations, such that they may die during transit.	Careful handling during this stage.	Y	No damaged or contaminated molluscs to be packed.	Constant visual checks during packing operations.	Reject molluscs.
	Contamination of molluscs resulting from the use of inappropriate packaging materials.	Cleaning schedule covering packing area.	Y	No contaminated or unsuitable packaging materials to be used.	Daily hygiene checks, with results recorded on Form QC6.	Clean packing area. Check/reject molluscs.
		Use only suitable packaging materials, sourced from approved suppliers, and stored in dedicated clean, dry surroundings.	Y	All packs to be labelled.	Constant visual checks during packing operations.	Reject packaging. Check/reject molluscs. Clean packaging store.
	Animals are contaminated by excessive waste products.	Packaging materials should have drainage holes or absorbent pads, to prevent the ingestion of contaminated liquor by molluscs during storage or transit.	Y	Molluscs should not be immersed in 'meltwater' or fluids when packed.	Constant visual checks during packing operations.	Re-label packs.

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11. Pack and label molluscs (contd).	Loss of traceability.	Secure attachment of labels to each package.	Y	Each Batch should have a label attached to or in the packaging.	Constant visual checks during packing operations.	Re-label packs.
	Consumers accept product that may be in advanced stage of deterioration.	Use date of durability or declaration that "These animals must be alive when sold".	Y	Health mark or registration document must accompany each batch.	Date of durability checked or appropriate statement printed on label.	Re-label packs.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
12. Brief rewatering or immersed storage in clean seawater.	Water used is contaminated.	Only use "clean seawater" taken from Category 'A' waters, water made up from Artificial seawater or water taken from a completed 42 hour purification cycle that has no detritus, faeces or pseudofaeces in it.	Y	Less than 230 CFU's of E-coli per 100g mollusc flesh and intravalvular fluid.	Record processes, usage and movement of all seawater.	Check/re-purify/reject batches.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
13a. Store packed molluscs. (Non-immersed)	Biological contamination of molluscs.	Store product off the ground, in a protected and well-drained area within the depuration centre.	Y		Constant visual checks of storage practices.	Check/re-purify/reject batches. Clean storage area.
		Bacterial analysis of samples.		<230 E. coli plus must meet the 'End Product Standard'.		Re-purify/reject molluscs.
	Molluscs stressed or shocked by time delay, such that they might die before they reach the end consumer.	Short storage times.	Y	As set out in Operating Procedure document.		Check/re-purify/reject batches.
	Failure to maintain chilled or iced temperature. Molluscs become stressed, loss condition and can die.	Follow time and temperature storage guidelines, as listed in respective Operating Procedure document.	Y	As set out in Operating Procedure document.	Maintain visual checks using thermometers. Maintain QC forms 3, 5, and 9.	Reject any batches with dead animals in them.
13b. Store packed molluscs. (immersed)	Ingestion of contaminants by molluscs during any <u>immersed</u> storage, which are unlikely to be, removed during subsequent sorting, washing, or depuration operations.	Store molluscs only in clean seawater.	Y	<230 <i>E. coli</i>	Appropriate bacterial checks on samples after immersed storage – results recorded on Form QC4. Raw Material storage Record QC5 to be completed for each batch.	Re-purify batch if bacteria levels high. Reject batch if bacteria levels excessive.

Process Step	Hazards	Controls	CCP	Critical Limits	Monitoring Procedures	Corrective Actions
14. Dispatch of molluscs.	Contamination of molluscs during dispatch and distribution.	Move molluscs quickly but carefully from storage areas onto vehicles.	Y		Ensure molluscs are not left lying around.	Check/reject molluscs.
		Use reputable transport company. Ensure vehicles are clean.			Visual check before loading starts.	Clean vehicle before loading. Review transport procedures.
	Store molluscs off the vehicle floor.		Visual checks during loading.		Re-load vehicle.	
	Molluscs stressed or shocked by time delay or temperature rises, such that they might die before they reach the end consumer.	Move molluscs quickly but carefully from storage areas onto vehicles.	Y		Ensure molluscs are not left lying around.	Ensure molluscs are not left lying around. Check/reject molluscs.
Loss of traceability of product back to source.		Use reputable transport company, with temperature-controlled vehicles.		Thermographs checked at destination.	Review transport procedures.	
		Dispatch documents recording batches and destinations.	Y	Form QC3 to be completed for each batch dispatched.	Review dispatch procedures.	

6. End Product Testing

The final safety net of any operation has been described is End Product Testing (EPT). The minimum standard is less than 230 colony forming units (CFU's) of *E.coli* per 100g of Flesh and intravalvular using the MPN test.

However, Seafish advise that in a correctly working system a level of (or below) 40 CFUs per 100g of Flesh and intravalvular should be consistently achieved. Frequency is currently advised through a document entitled "Guidance on the Frequency of Microbiological Sampling of Purified Mollusc's by Operators of Purification Centres".

This was produced in 1995 by a working group of the SAGB in association with the then LACOTS, Department of Health, MAFF, and SOAFD. It is expected that this advice may be updated at some stage in the near future.

Live Bivalve Mollusc HACCP

7. Monitoring Pro-formas

Form No.	Covering
QC1	Mollusc Reception Record
QC2	Purification Tank Operation Record
QC3	Mollusc Dispatch Form
QC4	Bacteriological Testing Records covering: Un-Purified Live Bivalves Purification System Water Purified Live Bivalves
NB – The above monitoring procedures are strongly recommend by Seafish	
NB – The monitoring procedures below are recommended for Best Practice and Due Diligence procedures.	
QC5	Raw Material Storage Record
QC6	Daily Hygiene Audit
QC7	UV Usage and Replacement Record
QC8	Water Use & Re-Use Record
QC9	Chill Store Temperature Record
QC10	Staff Hygiene Regulations
QC11	Employee Training Record
QC12	Visitor Health Questionnaire
QC13	Master Cleaning Schedule
QC14	Complaints Log
QC15	Glass and Hard Plastics Monitoring Form
QC16	Incident Log

Notes:

1. For the guidance of staff undertaking monitoring, the forms show wherever relevant, targets and actions to be taken if targets are not met.
2. The staff member undertaking the monitoring should sign the form.
3. All monitoring forms should be counter-signed by management.
4. All monitoring forms should be retained for at least two years.

Mollusc Reception Form

QC1

Date and Time of Reception		/ /200	: hrs	/ /200	: hrs	/ /200	: hrs	/ /200	: hrs	
Registration Document No or Allocated Batch No										
Species										
Quantity										
Supplier										
Source (Harvesting Area and Category)										
Delivery Vehicle Inspection	Hygiene OK	Yes	No	Yes	No	Yes	No	Yes	No	
	Temp. °C									
Mollusc Inspection OK?		Yes	No	Yes	No	Yes	No	Yes	No	
Batch accepted?		Yes	No	Yes	No	Yes	No	Yes	No	
Comments										
Signature of Receiver:					Countersigned by:					

NB Registration documents must be date-stamped and retained

Purification Tank Operation Record

QC2

Tank No. _____

Purification Tank Loading	Species	
	Quantity of molluscs	Boxes KG
	Registration Document no./ batch no.	
	Seawater use no.	
	Date of original supply of seawater	
	Seawater salinity	‰
	Period of UV use to date	Hours
	Signature of operator:	

During Purification	Start of cycle		2 to 3 hours after start		Mid-cycle		End of cycle	
Date	/ /200		/ /200		/ /200		/ /200	
Time	: hrs		: hrs		: hrs		: hrs	
Water level OK	Yes	No			Yes	No	Yes	No
Water flow OK	Yes	No			Yes	No	Yes	No
UV lamps OK	Yes	No			Yes	No	Yes	No
Water temp.	°C				°C		°C	
Dissolved oxygen level								
Water appearance and odour OK			Yes	No	Yes	No	Yes	No
Mollusc activity OK			Yes	No	Yes	No	Yes	No
Signature of operator								

After purification	Seawater dumped or retained	Dumped	Retained
	Tank and containers cleaned	Yes	No
	Cumulative total of UV use	Hours	
	Signature of operator:		

Comments (Record of breakdowns; spawning in tanks; failure of molluscs to function; addition or change of water; dumping of molluscs; etc)

Signature of operator: _____

Countersigned By: _____ Date: _____

Mollusc Dispatch Record

QC3

Date and time of dispatch		/ /200	: hrs	/ /200	: hrs	/ /200	: hrs	/ /200	: hrs
Species									
Quantity		Packs	kg	Packs	kg	Packs	kg	Packs	kg
Original registration document or batch nos.									
Carrier									
Destination									
Delivery vehicle check	Hygiene OK	Yes	No	Yes	No	Yes	No	Yes	No
	Temp. control operating	Yes	No	Yes	No	Yes	No	Yes	No
Comments									
Signature of dispatcher									

Countersigned by : _____

Date: _____

Bacterial Testing Record

QC4

Date sample taken									
Mollusc samples	Reception or purified	Reception	Purified	Reception	Purified	Reception	Purified	Reception	Purified
	Purification tank no.								
	Species								
	Harvest area and category								
	Registration document no. or batch no.								
Water Samples	Purification tank water supplied to								
	Date of original supply of seawater								
Laboratory									
<i>E. Coli</i> count		Per 100g or ml		Per 100g or ml		Per 100g or ml		Per 100g or ml	
Comments									
Signed by:									

NB – *E.coli* count should be less than 4,600 CFUs at reception and must be less than 230 CFUs when purified

Wet/Dry Raw Material Storage Record

QC5

Species		
Batch no.		
Source		
Date received		
Date transferred to storage		
Method of storage		
Pre or post-purification		
Storage Quality Checks		
Animals active (Y/N)	Water salinity	Water/dry storage temperature
Date removed from storage		
Moved to purification tank or customer	Purification tank no.	Customer
<p>Signed by: _____ Date: _____</p>		

Daily Hygiene Audit

QC6

Week commencing: _____

Area/Surface	Mon	Tues	Wed	Thurs	Fri	Sat
Exterior yard						
Mollusc storage areas (interior)						
Washing areas						
Purification areas						
Grading areas						
Packing areas						
Dispatch area						
Tables, workbenches						
Purification tanks						
UV lights						
Staff changing area						
Staff toilets						
Staff canteen						
Chill store						
Packaging store						
Dry goods store						
Comments						

Manager or supervisor to initial boxes to indicate that the areas or items of equipment are acceptably clean at the start of the working day. Any problems are to be noted in the Comments box, and the necessary action taken.

Countersigned By: _____

Date: _____

UV Usage and Replacement Record

QC7

Purification unit no. and description			
UV lamp type and strength			
No. of lamps for unit			
Date lamps started		Lamps to be changed after? Hours*	

Dates of Checks and Cumulative Hours			
Date	Reading	Date	Reading
Hours of use at exchange			

Signed by: _____ **Date:** _____

Water Use and Re-Use Record

QC8

Raw or artificial seawater used	Raw	Artificial
Date and time of abstraction or creation		
Mixing tank no. for artificial creation		
Volume of seawater abstracted or created	Litres	Litres
First quantity used	Litres	Litres
Water used in system or tank no.		
Date transferred to "used" tank storage		
Time transferred to "used" tank storage		
Volume transferred to "used" tank storage	Litres	Litres
Second quantity used	Litres	Litres
Water used in system or tank no.		
Date transferred to "used" tank storage		
Time transferred to "used" tank storage		
Volume transferred to "used" tank storage	Litres	Litres
Third quantity used	Litres	Litres
Water used in system or tank no.		
Date transferred to "used" tank storage		
Time transferred to "used" tank storage		
Volume transferred to "used" tank storage	Litres	Litres

Countersigned by: _____

Date: _____

Chill Store Temperature Log

QC9

Month: _____

	AM		PM			AM		PM
1					17			
2					18			
3					19			
4					20			
5					21			
6					22			
7					23			
8					24			
9					25			
10					26			
11					27			
12					28			
13					29			
14					30			
15					31			
16					Target air temperature range: +1°C to +5°C. If outside this range, inform management immediately.			

Signed: _____

Countersigned: _____

Staff Hygiene Regulations

QC10

1. All staff must wear suitable clean protective clothing.
2. Hats and hairnets when worn must completely enclose the hair.
3. Outdoor clothes should not be worn inside the work areas.
4. Staff must not wear watches or loose jewellery in final packing areas.
5. Staff must only drink, eat or smoke in designated areas. Spitting is totally forbidden.
6. Staff must not wear strong perfumes or aftershaves.
7. Staff must wash and dry their hands each time they enter the work area, and after visits to the toilet.
8. Staff must not blow noses, cough or sneeze over molluscs.
9. Staff must inform management if they are suffering from vomiting, diarrhoea, other stomach upsets, skin complaints or cuts.

I have read and understood the Company's rules, and agree to abide by them.

Signed: _____ **Date:** _____

Print Name: _____

Employee Training Record

QC11

Employee name: _____

Date started with company: _____

Position within company: _____

Details of qualifications, previous experience, and training:

-
-
-
-

Type Of work	Training required	Training completed (manager to date and sign)
	Pre-work hygiene induction	
	Introduction to Food Hygiene certificate	

- Each employee will be assessed for training requirements in their tasks.
- The manager is responsible for organising training, and will date and sign the training record when training has been successfully completed.
- All new employees will be given an induction before handling molluscs.

All employees will sit the Seafish Introduction to Food Hygiene course within 3 months of starting work.

Visitor and Contractor Questionnaire

QC12

Name: _____

Company: _____

Have you suffered from sickness or diarrhoea in the last 7 days?	Yes/No
Have you been in contact with anyone suffering from sickness or diarrhoea in the last 7 days?	Yes/No
Do you currently have a cough or cold?	Yes/No
Do you currently have any skin condition, open cuts, boils or septic wounds?	Yes/No

If you have answered **Yes** to any of the above you may not be allowed to enter purification, storage or packing areas.

Entry permitted by: _____

Date: _____

Please follow these rules, designed to eliminate product contamination:

1. Please remove watches and any loose jewellery such as earrings.
2. Please wear the protective clothing provided.
3. Please do not handle molluscs, unless invited to do so.
4. Please do not change any equipment settings, unless invited.
5. You are not allowed to eat, smoke or drink in work or storage areas. Spitting is totally forbidden.
6. Please do not blow your nose, sneeze or cough over the molluscs.
7. Please wash hands each time you enter the work areas, especially after visits to the toilet.
8. Please do not wear strong perfumes or aftershaves.
9. Please sign below to confirm that you have read and understood the above rules.

Signed: _____

Print Name: _____

Master Cleaning Schedule

QC13

Area/surface	Period	Chemicals required	Application, dilution and rinsing
Exterior yard	Daily		
Mollusc storage areas (interior)	Daily		
Washing areas	Daily		
Purification areas	Daily		
Grading areas	Daily		
Packing areas	Daily		
Dispatch area	Daily		
Tables, workbenches	Daily and as-you-go		
Purification tanks	After each use		
UV lights	As necessary		
Staff changing area	Daily		
Staff toilets	Daily		
Staff canteen	Daily		
Chill store	Weekly		
Packaging store	Weekly		
Dry goods store	Weekly		
<p>Notes:</p> <ol style="list-style-type: none"> 1. Manager or supervisor will carry out a daily hygiene audit, and record results on Form QC6. 2. PPE (gloves, goggles, etc) must be worn when using chemicals, as appropriate. 3. When not in use chemicals must be stored in a locked cupboard. 			

Complaints Log

QC14

Complaint no.	
Customer:	
Date complaint received:	
Complaint received by:	
Batch No. or Hygiene Mark No.	
Details of complaint:	
Corrective action required:	
Corrective action completed:	Signed by: _____ Date: _____
Countersigned by: _____ Date: _____	
Note: A complaints log must be fully completed for each complaint received. The forms must be numbered in sequence.	

Monthly Glass and Hard Plastics Audit

QC15

Month: _____

Audited By: _____

Location/Item	Intact (Y/N)	Comments if 'No'
Staff areas - toilets		
Mirrors		
Light covers		
Windows		
Door glass		
Staff areas - canteen		
Windows		
Light covers		
Door glass		
Clock		
Staff changing area		
Windows		
Light covers		
Door glass		
Clock		
Dry goods/packageing store		
Light covers		
Windows		
Door glass		
Offices		
Windows		
Light covers		
Door glass		
Clock		
Product intake area		
Windows		
Light covers		
Door glass		
Depuration area		
Windows		
Light covers		
Door glass		
UV lights		
Product storage/dispatch area		
Windows		
Light covers		
Door glass		
Chill store		
Light covers		
Temperature dials		

Countersigned: _____

Date: _____

Purification Incident Log

QC16

Incident log no: _____

Date: _____

Nature and extent of incident:			
Incident reported by:			
EHO informed?	Yes/No	By Whom:	Phone/Email/Fax/Letter
Date(s) of EHO visit(s):			
EHO comments:			
Immediate actions taken:			
Follow-up actions required		Actions completed (date and sign)	
<p>Countersigned _____ Date: _____</p>			

NB

- Incident logs to be numbered in sequence
- Details of any correspondence with EHOs, customers, other interested parties, etc should be attached to this form.

8. List of Operating Procedures

These simple documents are written by the individual business to reflect the profile of the operation. They are based on the conditions of approval and are intended to be short and simple.

Document No.	Document Title
OP 1	Batch Control Procedures
OP 2	Procedures for Molluscs into Loading Tanks or Containers
OP 3	Procedures for Filling Tanks or Containers with Seawater
OP 4	Purification Procedures for Oysters
OP 5	Purification Procedures for Mussels
OP 6	Purification Procedures for
OP 7	Purification Procedures for