

Annex A - Sample Submission Instructions

Types, condition, and minimum sample size of shellfish accepted for testing

Samples may be submitted as live shellfish only. Prior to submitting live shellfish, mud and sediment adhering to the shellfish should be removed (where possible). This is best achieved by rinsing/scrubbing with clean sea water or freshwater of potable quality. If these are not available, the seawater from the immediate area of sampling may be used instead. Do not totally re-immense the shellfish in water as this may cause them to open. Allow them to drain before placing in the sample container.

Samples should arrive at the laboratory in good condition so opened, gaping or damaged shells should not be included in the sample. Samples should only consist of animals that are within the normal commercial size range. Immature/juvenile animals may provide results that are unrepresentative of mature stock harvested for human consumption.

The number of individual shellfish required for testing is dependent on the species. Cefas require the customer to submit the number of individual shellfish or minimum weight (in the shell) stipulated. The table below indicates recommendations of weight/quantities, in order to meet these minimum requirements.

For representative testing to be undertaken, you will need to supply sufficient numbers of individual shellfish to yield at least 50 grams of meat. As a minimum quantity, regardless of the weight, 10 viable animals will be required to undertake testing.

SHELLFISH SPECIES AND REQUIRED ANIMAL NUMBERS

Species	<i>Recommended number of individual shellfish to fulfil weight requirement (50 g) unless otherwise specified</i>
Pacific oysters <i>Magallana (Crassostrea) gigas</i>	12 - 18
Native oysters <i>Ostrea edulis</i>	12 - 18
Mussels <i>Mytilus spp.</i>	15 - 30
Cockles <i>Cerastoderma edule</i>	35 - 55
King scallops <i>Pecten maximus</i>	12 - 18
Queen scallops <i>Aequipecten opercularis</i>	18 - 35
Razor clams <i>Ensis spp.</i>	12 - 18
Hard clams <i>Mercenaria mercenaria</i>	12 - 18
Surf clams <i>Spisula solida</i>	35 - 55
European otter clams <i>Lutraria lutraria</i>	12 - 18
Palourdes clams <i>Ruditapes (Tapes) decussatus</i>	18 - 35
Manila clams <i>Ruditapes (Tapes) philippinarum</i>	18 - 35
Sand gapers <i>Mya arenaria</i>	12 - 18
Abalone <i>Haliotis spp</i>	12 - 18
Sea urchins **	12 - 60 depending on diameter. Please contact to discuss.
Other species - by prior request only	Please contact to discuss.

** The testing of Sea urchins is not included in CEFAS's accreditation to ISO/ IEC 17025:2017.

Important notes:

- If you are sending samples for more than one type of analysis, we will require you to submit the minimum number of shellfish necessary for **each** test. Please ensure that these are provided in separate bags and are clearly labelled.
Sample(s) consisting of other types of shellfish/processed shellfish will be rejected on arrival, unless exception has been agreed with Cefas in advance.
- It may be possible to test a sample comprising fewer than 10 individual animals. For advice, please **contact cst@cefas.gov.uk before shipping materials.**

Packaging & Transport

Customers should send a sample in a suitable insulated package using an overnight courier service to ensure that the sample arrives at the laboratory as soon as possible. This is imperative as it allows testing to commence within 48 hours of sample collection.

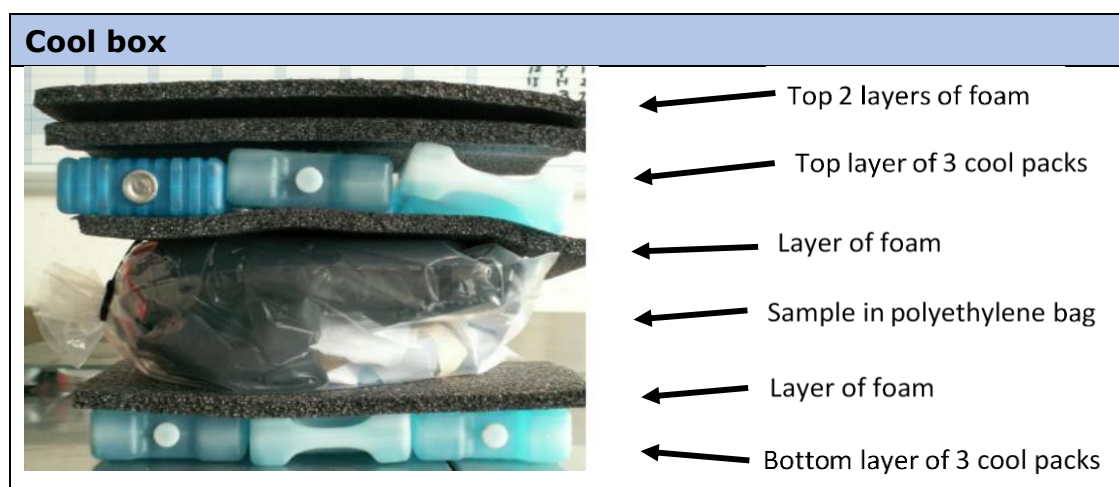
Only live shellfish samples can be tested for bacteriological testing. All samples should be transported in a cool box (or similar) and must be kept between 0 °C to 10 °C during transit. Samples should be received at the laboratory live and not frozen (freezing can alter the levels of bacteria in the sample).

Packaging Guidance

It is recommended that cool packs are frozen in a freezer for a minimum of 48 hours, prior to use.

Place the sample inside a polythene bag, which is then securely tied (double bagging is recommended to prevent puncture of the bag(s) by the shells). A Sample Submission Form must be fully completed and placed inside a separate polythene bag and secured to the sample.

Pack the sample/s in a cool box (or similar). Take care to ensure the shellfish do not come into direct contact with the cool packs. Below is an example on how to pack a sample inside a cool box to maintain an internal temperature between 0 °C to 10 °C during transit and to ensure the shellfish do not come into contact with the frozen cool packs.



Please note, if submitting more than one sample in the same cool box, each sample must be accompanied by its own Sample Submission Form. Care should be taken to ensure the Sample Submission Form remains attached to the relevant sample so that samples are easily identifiable on arrival at the laboratory.

Once the sample/s are correctly assembled ensure the cool box lid (or similar) is closed sufficiently with adhesive tape to prevent leakage before sending the box via Royal Mail Special Delivery or similar carriers/couriers.

If submitting more than one sample in the same cool box, each sample must be accompanied by its own Sample Submission Form. Care should be taken to ensure the Sample Submission Form remains attached to the relevant sample so that samples are easily identifiable on arrival at the laboratory.

Samples must be delivered to the laboratory as soon as possible and within **48 hours of collection**. If short term (up to 24 hours only) is required before dispatch/delivery is absolutely necessary, store live or fresh shellfish between 2 °C and 8 °C.

It is essential that the packaging guidance provided is strictly followed. Failure to adhere to these guidelines may result in the refusal of samples.

Important notes:

- Please note that the laboratory does not return transport boxes provided by the customer, unless agreed in advance with the customer. Please note that a charge will apply

Submission to the laboratory

Delivery will be at the expense of the customer. It will be the responsibility of the customer to ensure samples are delivered in good condition, clearly labelled for identification and within the required arrival temperature. Please ensure samples are sent with an accompanying Sample Submission Form.

Unlabelled samples arriving at the laboratory with incomplete paperwork or those in poor condition will not be tested and will be destroyed. Samples should be mailed to the address below and must indicate the relevant department (bacteriology):

Cefas Shellfish Testing (Bacteriology)
Barrack Road
Weymouth
Dorset
DT4 8UB, UK

Cefas will require a minimum of one week's notice from acceptance of an Order Form prior to sample submission.

If the sample delivery is delayed beyond the date specified in the Sample Submission Form, you will notify us of the delay in writing by contacting cst@cefas.gov.uk. It is also recommended that you advise the laboratory by emailing cst@cefas.gov.uk when samples are posted as this will help staff identify which samples are due and whether these have been delayed in the post.

For testing to be initiated on the day of receipt, samples must arrive at the laboratory **before 10:00am on Monday to Thursday inclusive**. Samples arriving after 10:00 Monday to Thursday will be tested the following day. Samples arriving after 10:00 Friday will only be tested under exceptional circumstances, subject to prior agreement.

Important notes:

- Please note that the laboratory is closed on bank holidays and for two weeks during the Christmas period. The laboratory may also only operate a minimum testing service on Civil Service privilege days. These will be advised with a minimum 2 weeks notice.

Sample Submission Form – Bacteriology

Sample Reference Number *:	
Contact name:	
Senders address:	
Contact number (landline/mobile):	
Reporting email:	
Date & time of collection:	
Dispatch date:	
Sample quantity (Number of individual animals in sample):	

*** This reference must be unique to each sample and should be a maximum of ten characters. Please ensure you do not refer to the exact geographical origin of your sample.**

Analysis required - Tick the box that corresponds to the type of test required & species being tested. Please also indicate sample temperature, at time of collection.			
Species name	E. coli	E. coli & Salmonella	Sample temp (°C)
Pacific oysters <i>Magallana (Crassostrea) gigas</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Native oysters <i>Ostrea edulis</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Mussels <i>Mytilus spp.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Cockles <i>Cerastode rmaedule</i>	<input type="checkbox"/>	<input type="checkbox"/>	
King scallops <i>Pecten maximus</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Queen scallops <i>Aequipecten opercularis</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Razor clams <i>Ensis spp.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Hard clams <i>Mercenaria mercenaria</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Surf clams <i>Spisula solida</i>	<input type="checkbox"/>	<input type="checkbox"/>	
European otter clams <i>Lutraria lutraria</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Palourdes clams <i>Ruditapes (Tapes) decussatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Manila clams <i>Ruditapes (Tapes) philippinarum</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Sand gapers <i>Mya arenaria</i>	<input type="checkbox"/>		
Abalone <i>Haliotis spp</i>	<input type="checkbox"/>		
Sea urchins	<input type="checkbox"/>		
Other species - by prior request only	<input type="checkbox"/>	<input type="checkbox"/>	
Please include details of "other species" in box to the right. (include genus & species)			
Sample state - Specify the state of the sample (e.g., whole or homogenized). If homogenized, provide details such as whether it includes the whole animal (including guts) or just the adductor muscle and roe.			

Annex B – Testing and Reporting

Testing methods and reporting format

Samples will be checked on receipt and prior to analysis for their suitability for testing. Any sample found unsuitable or insufficient for testing will be reported to the customer without undue delay.

The tests undertaken by the laboratory on each sample will be as specified on the sample submission form completed by the customer (assuming sufficient material is provided for the full suite of requested tests).

For further information regarding the methods used for analysis, please contact cst@cefas.gov.uk. Specifically, samples will be tested using the following methods:

Bacterial *E. coli* testing - the EU reference method for *E. coli* in bivalve shellfish: **ISO TS 16649-3** - Microbiology of food and animal feedings stuffs - Horizontal method for the enumeration of β -glucuronidase-positive *Escherichia coli* - Part 3: Most probable number technique using 5-bromo-4-chloro-3-indolyl- β -D glucuronide. Test results will be reported as *E. coli* MPN per 100g shellfish flesh and intravalvular fluid.

***Salmonella* spp.** - the EU reference method for *Salmonella* in bivalve shellfish: **ISO 6579** - Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Salmonella* spp. Test results will be reported as detected or not detected in 25g shellfish flesh and intravalvular fluid.

For further information in relation to *E. coli* and *Salmonella*, please contact cst@cefas.gov.uk

Turnaround Times & Reporting of Results

Results will be reported electronically to the contact person whose details are provided on the sample submission form. If you require the results to be sent to additional or different contacts arrangements must be agreed in advance. Please indicate this on the form or **contact us**.

Results will be reported within the following timescales:

E. coli 100% of results reported within 7 WD of sample receipt

***Salmonella* spp.** 100% of negative results reported within 7 WD of sample receipt

* Please note, for samples presenting presumptive *Salmonella* spp., reporting times may be longer than stated above. This is to allow for secondary confirmation testing.

Important notes:

- The timeframes given above are for samples submitted by the cut-off times and on the testing days specified in Appendix A. A one working day delay will apply to samples received after the specified cut-off times. The laboratory will advise if samples have been received late.
- Occasionally, quality control issues can arise. If this occurs, it will not always be possible to report results within the timeframes given above. In a small proportion of cases properties inherent to the sample may mean that it is not possible to obtain a valid result even after retesting. In these events we will contact you to discuss available options.

