



NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

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Fish Component Reverse Ring Test Protocol

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If you have any questions or comments about this protocol document then please contact nmbaqc@apemltd.co.uk.

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1. Objective

The aims of the Fish Reverse Ring Test (F-RRT) exercise are:

- To examine participants inter-laboratory variation in the accuracy of fish species identification;
- To provide another opinion on the identification of specimens that might have caused problems for the participant;
- To encourage the use of reference collections, including reference specimens and relevant taxonomic literature;
- To examine identifications given to fresh specimens instead of preserved fish.

The Fish Reverse Ring Test exercise is intended to examine the in-situ identifications given to fish specimens sampled in the preceding survey period. The submission of problem taxa is encouraged and laboratories may also use this exercise for the verification of reference specimens from their collection. The Fish Reverse Ring Test is assessed and reported by the scheme component's contractor (currently APEM Ltd.). Any significant issues raised are reviewed by the component contract manager, on behalf of the NMBAQC committee.

2. Protocol

A maximum of fifteen specimens from a participating laboratory's recent fish monitoring surveys may be submitted. Free choice is allowed for specimen selection, but all should be from Northern European waters. Duplicate examples of species may be submitted for the purpose of establishing growth series or to clarify problem taxa or specimens. **One of the fifteen specimens supplied may be an unidentified problem taxon** (this specimen should be indicated as such on the data sheet). Notes on collection location, date, identification keys used and any other pertinent information should be added on the forms provided. All data should be sent electronically to nmbaqc@apemltd.co.uk and/or included in the consignment.

The specimens received will be identified to the most accurate taxonomic level that can be achieved, with reference to standard NMBAQC scheme practice, as appropriate; the NMBAQC scheme does not undertake to identify every specimen to species level. If there are any disagreements, upon return of the specimens, we will provide explanations of our identifications, using reference material and images, where necessary. We reserve the right to return specimens 'unidentified' if

unacceptable quantities of fish/mixtures of species are contained within a taxon bag or the preparation instructions have not been followed.

3. Preparation

- All specimens should be sent frozen or preserved in **70% Industrial Denatured Alcohol (IDA)**;
- All specimens should be sealed in the individually labelled bags provided or appropriately labelled pots;
- All specimens should be accompanied by their respective label from the data sheet provided and the information requested on the sheet should be completed;
- Packaging instructions for transport of frozen specimens should be followed, specifically the use of a 'next day' courier service to dispatch Monday–Thursday only.

All specimens will be returned when analysis is complete unless it has been indicated that we may keep/dispose of the material.

4. Fish Reverse Ring Test Interim Reports

Laboratory results will be reported to participants in a table format. The table contains the participant's original identification data (scientific name, including common name and length in mm if given) and identifications provided by the scheme. Agreed identifications will contain a dash in the appropriate row. Where there are differences of identification, the correct scientific name and common name are given. Differences of identification are characterised as either a taxonomic error (TE) for the incorrect species or genus name, or a taxonomic discrepancy (TD) for the use of synonyms and mis-spellings. Specimens submitted as a 'problem taxon' are not counted as a taxonomic error or discrepancy. A short comment on the reason for different identifications is given.

Participants are encouraged to discuss reasons for their identifications, against NMBAQC identifications, if they believe the contractor's identifications to have been erroneous. These will be further investigated. If necessary, third party expert opinion will be sought and corrected identifications discussed in the final F-RRT Bulletin.

5. Fish Reverse Ring Test Bulletin Reports

The Fish Reverse Ring Test bulletin will contain a list of all species and number of specimens submitted by participants along with the total number of taxonomic errors and discrepancies (Table 1). Each taxonomic difference or problematic taxa will be listed (Table 2).

A discussion will be included for each species with a taxonomic error to summarise reasons for the name used by NMBAQC, compared to the participant(s). Images of submitted specimens will be included; where possible images of species named by participants will be included for comparison (F-RRT11 onwards). A discussion of taxonomic discrepancies will be included to note spelling errors and out of date nomenclature. A discussion of problematic taxa will be included with images of submitted specimens (F-RRT11 onwards); where possible other similar species will be included for comparison. Reasons for NMBAQC identification will be included to aid future identification of problematic taxa (F-RRT11 onwards). Relevant identification literature will be cited to help aid future species identifications.

Fish Reverse Ring Test bulletins are designed as a reference document for taxonomic identifications, particularly with problem taxa.

6. Timescale

Details of the exercise, data sheets, labelled specimen bags and specimen consignment boxes are typically distributed in September or October. The deadline for submission of participants specimens is approximately two months following the distribution of consignment boxes. Interim reports are typically completed within two weeks of the submission deadline. The final report (F-RRT Bulletin) is issued approximately one month after the interim reports to allow time for participants to submit any comments.

If an extension to the timescale is required please contact nmbaqc@apemltd.co.uk, as soon as possible.

All queries regarding identifications provided in the Interim reports must be submitted to nmbaqc@apemltd.co.uk within two weeks of issue of the interim report. Delay in the submission of queries may cause serious delay to the production of the Fish Ring Test bulletin.

7. Previous Fish Reverse Ring Test Bulletins

[F-RRTO1](#)

[F-RRTO2](#)

[F-RRTO3](#)

[F-RRTO4](#)

[F-RRTO5](#)

[F-RRTO6](#)

[F-RRTO7](#)

[F-RRTO8](#)

[F-RRTO9](#)

[F-RRT10](#)

[F-RRT11](#)

[F-RRT12](#)