

## **MERMAN LRM Registration Guidance**

### **Document History:**

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03/04/2014: Arwen Bargery - general updates

### **Intended Audience:**

AQC Data Submitters, Responsible Officers

### **Aim:**

This document aims to provide guidance for the registration of new LRM, CRM and SRM codes for ICES.

### **Process:**

Labs must register their new Laboratory Reference Materials with ICES to be able to legitimately submit AQC data against those determinands for which the LRM is used. Labs must submit their completed registration forms annually to BODC by **15<sup>th</sup> April**. These are passed to ICES for registration and labs are informed when a new code has been produced. The registration form can be downloaded from the MERMAN webpage.

[http://www.bodc.ac.uk/projects/uk/merman/project\\_specific/ICES\\_LRM\\_registration\\_template.xls](http://www.bodc.ac.uk/projects/uk/merman/project_specific/ICES_LRM_registration_template.xls)

### **Differences between CRMs, SRMs and LRMs:**

1. **Certified Reference Materials (CRM)** –commercially available standards providing a high accuracy of the concentration of the parameters in the standard.  
Labs using CRMs must use the certified values as given on the official reference material sheet provided by the suppliers.

If your CRM **is NOT** registered with ICES, please submit the official CRM reference sheet to BODC. To check if your CRM is already registered with ICES, please check the ICES vocabulary list <http://vocab.ices.dk/> (Look up CRMCO)

**Note:** Labs should not do their own in-house validation to acquire their own concentration and standard deviation values for these materials – the values are predefined and labs should be trying to achieve these values, by changing laboratory practices if necessary. Acquiring their own validation values does not give an indication of how well the lab is performing and values will be biased by laboratory limitations.

2. **Standard Reference Materials (SRM)** - are used for standards that have been used in an intercalibration. For example, all QUASIMEME standards would be considered "SRM's". Please ensure your SRM is already registered at ICES and use the standard values as provided on the reference sheet as provided with the material. ICES take the necessary information from 'participation result files' which is why these should be sent to ICES via the Sharepoint service.

If your SRM **is NOT** registered with ICES, please submit the official reference sheet to BODC. Please check at <http://vocab.ices.dk/> (Look up CRMCO)

3. **Laboratory Reference Materials (LRM)** - standards which have been created in the lab. Sample information and techniques should be documented using the LRM registration form. See guidance below.  
(See Appendix 1 for an example of the registration form)

## Completing the LRM Registration Form:

### a) COUNTRY – LAB submitting LRM

Input reporting CMA and Laboratory Code

### b) Name of LRM

If the material is an in-house LRM you can suggest your own codename, as long as it doesn't already exist.

Please check ICES website for existing codes and to get an idea about their labelling: <http://vocab.ices.dk/> (Look up CRMCO)

### c) Description

*Examples: "water sample from the Arun", "seawater from lat/long spiked with HG"*

Question to consider when filling this in:

- Where is the reference material from?
- How has your standard been made?
- Who makes the standard?
- Who uses them and when?

"AQC Standard" is not acceptable.

### d) Year Prepared

As prepared.

New batches of LRM will need to be registered with ICES with new the new values. The year should be updated accordingly.

### e) Used for data type (biota, water, sediment etc.)

Data type that the standard is prepared for and measured against.

### f) Year of Control Chart

The years that the same control chart has been used for this LRM.

The particular control chart results are input in the MERMAN AQC sheet.

### g) Basis (wet/dry/lipid)

The basis that the LRM has been made up in.

### h) Unit of measurement

Units that the LRM components are measured in.

These should match the units that are reported for the contaminants in the AQC and sample data to ensure there are no uncertainty calculation errors.

**NOTE:** ICES do not prevent data from being entered if the units/basis of the reference material are different to the assigned value or data result value. Different units and basis may however prevent calculations for automatic extractions and result in the omission of the reference material to the assessors. If mg/kg and µg/kg are reported and both on a dry weight basis, this would not give a calculation problem, however conversions between bases may be an issue.

## New batches of existing LRMs:

New batches of a LRM must be registered with ICES with their new reference values. The previous LRM code should be suffixed and used to highlight that an existing LRM has been updated.

E.g. SEPW005 would become SEPW005**b** etc.

## Further Information:

For any queries to do with LRMs and other reference materials please email [merman@bodc.ac.uk](mailto:merman@bodc.ac.uk)

