CERTIFIED REFERENCE MATERIALS

CRMS ARE IDEAL FOR

Daily Controls | Method Validation | Media Quality Control

ilac-MRA

A2LA ACCREDITED
CERT #3189.03

Table of Contents

Supporting testing laboratories in achieving their quality goals since 1994

Why use CRMs?

The use of Certified Reference Materials (CRMs) for the verification of methods and traceability of results is a well accepted scientific principle.

CRMs have established properties which are documented on each certificate and are ideal for use as daily controls.

When a CRM is tested, the results obtained can be directly compared to the certified values. When the test results fall within the acceptable range, the laboratory can be confident in the success of the test method.

Documenting the use of CRMs provides evidence of your laboratory's ability to produce reliable test results.

IFM CRMs are Superior

Each IFM CRM contains certified numbers of multiple organisms, presented in simple formats which are able to serve as both positive and negative controls in test systems, thus saving time and resources.

CRM Features:

- Applicable to both quantitative (enumeration) and qualitative (detection) tests.
- May be used as a standalone control material, or added to a sample to verify the organism recovery from a particular sample type.
- The expected count and range of values, as well as preparation instructions are documented on the CRM certificate.
- The microbial load of a CRM working solution can be easily adjusted by changing the dilution factor of the CRM material.
- Easily monitor ongoing test performance and quickly detect outlying results via a simple comparison of results against the certified values.
- Ongoing use will assist in maintaining testing quality by providing long-term performance trends.
- Control charts are included with every CRM certificate.

In Summary

- Overall quality control can be effectively managed.
- Both the short and long term performance of a laboratory can be optimised.

Compared to in-house culture preparations, IFM CRMs will save considerable time and resources!

CRM PRODUCT RANGES

IFM CRMs are presented in 2 distinct formats:

- Food Matrix (FM): presented as a set of 5 sachets containing quantified organisms in a natural dry food material.
- Multi Vial (MV): presented as a set of 3 vials containing quantified organisms in freeze dried format.

All organisms are traceable to cultures in the IFM culture collection.

FM Range

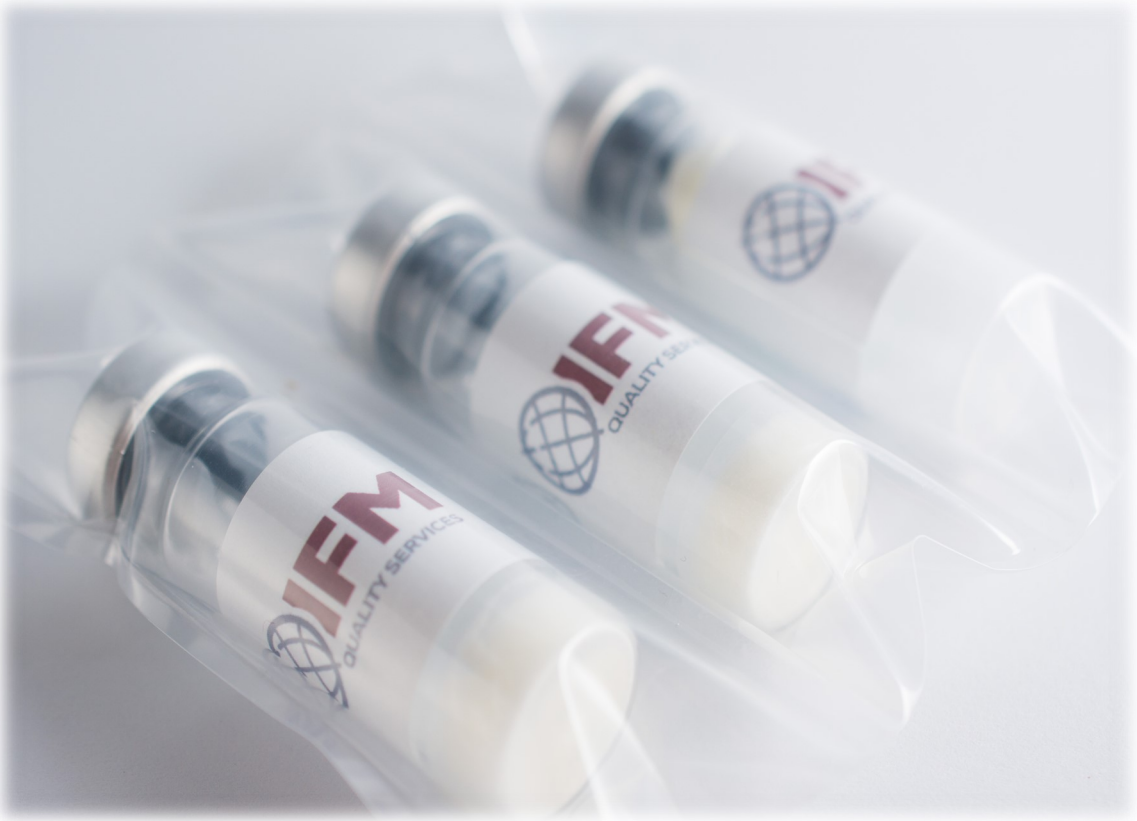
CRM	Intended Purpose	Organism Content
FM0030	Hygiene Control	• *Aspergillus niger* • *Candida utilis* • *Escherichia coli* • *Klebsiella aerogenes*
FM0031	Gram Positive Control	• *Bacillus cereus* • *Lacticaseibacillus rhamnosus* • *Staphylococcus aureus*
FM0032	Coliform Control	• *Escherichia coli* • *Klebsiella aerogenes*
FM0046	Listeria and Salmonella Control	• *Listeria monocytogenes* • *Salmonella* Hofit

So easy to use!

FM CRM preparation and storage instructions are included on the certificate.

- ⇒ To prepare the working solution, weigh out the powder in a 1:10 dilution.
- ⇒ The CRM is now ready for use! Dilute as necessary using the certified values on the certificate.
- ⇒ The current version of the certificate is always available on the IFM website.

Click this link to view IFM's CRM certificate directory



MV Range

CRM	Intended Purpose	Organism Content
MV0029	Universal Food and Water Control	• *Bacillus cereus* • *Clostridium perfringens* • *Enterococcus faecalis* • *Escherichia coli* • *Klebsiella aerogenes* • *Pseudomonas aeruginosa*
MV0037	Legionella Control	• *Fluoribacter bozemanae* • *Legionella pneumophila* SG1

So easy to use!

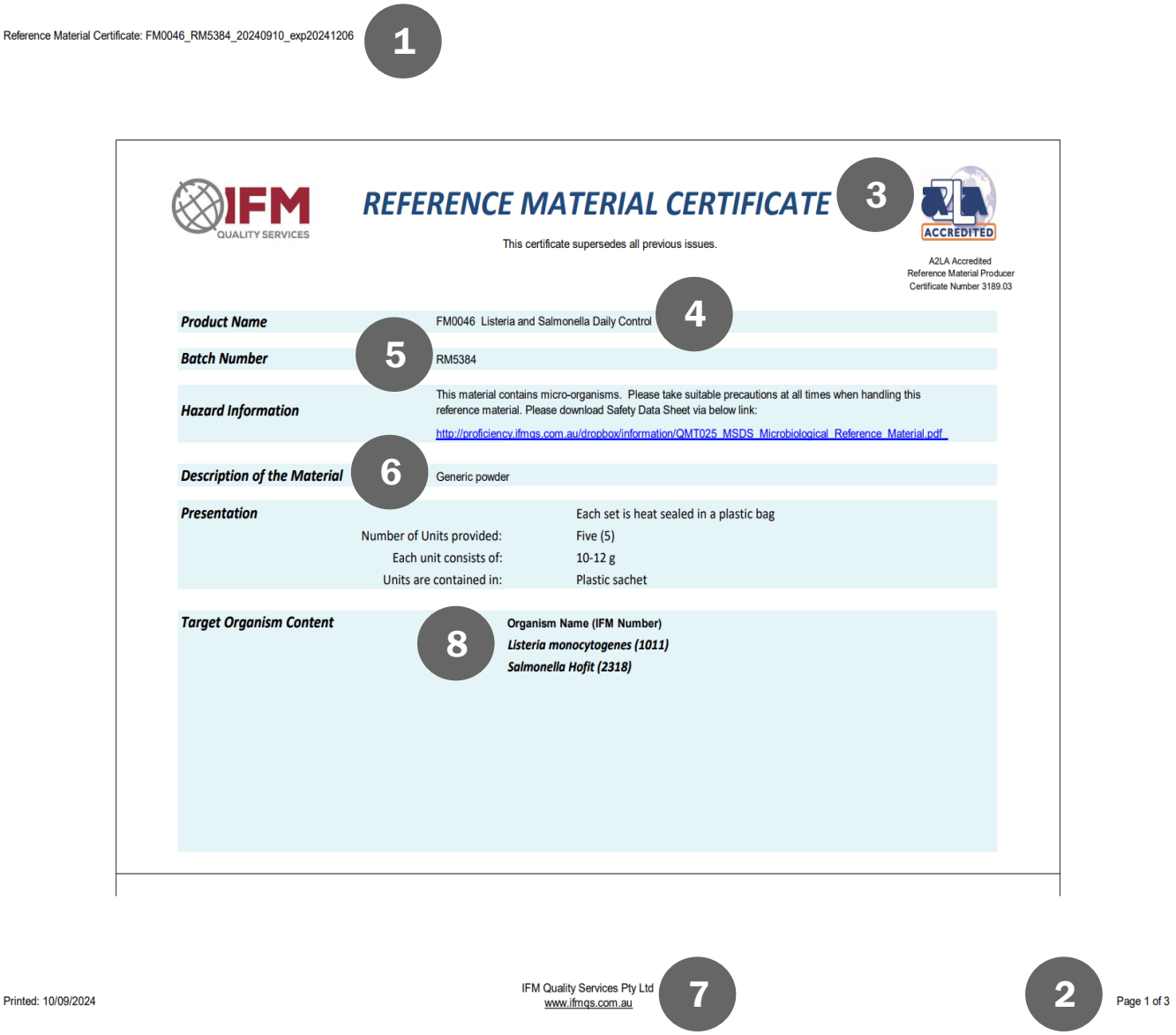
MV CRM preparation and storage instructions are included on the certificate.

- ⇒ To prepare the working solution, add 10mL of diluent to one vial. Leave at room temperature for 30 minutes.
- ⇒ The CRM is now ready for use! Dilute as necessary using the certified values on the certificate.
- ⇒ The current version of the certificate is always available on the IFM website.

Click this link to view IFM's CRM certificate directory

CRM Certificates

All IFM certificates are ISO 17034 compliant. Certificates comprise 3 pages. **Page 1** features are outlined below.



1. Document version
2. Page number
3. Title of the document
4. Name of the RM
5. Unique identifier of the RM
6. Description of the CRM
7. Name and contact details of the Reference Materials Producer
8. Organism content

CRM Certificates

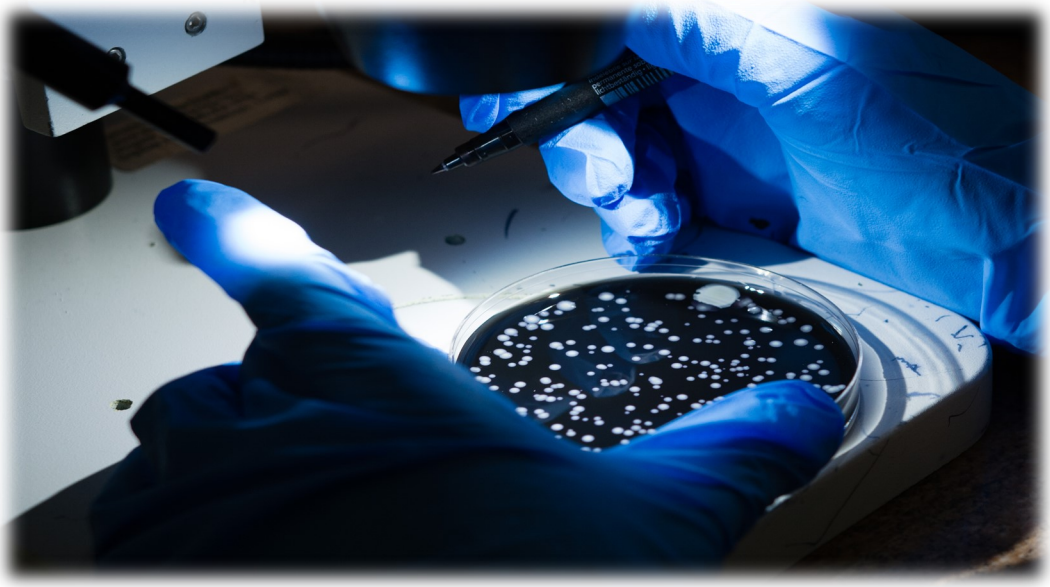
Please note the certificate expiry and CRM product expiry.

An updated certificate will be issued when the current certificate expiry passes.

This process will continue until the product expiry elapses.
Page 2 features are outlined below.

Intended Use	Microbiological Reference Material	
Instructions for Use **9**	Store unopened material at 3 ˚C - 5˚C protected from light until used. Use aseptic technique at all times.	
10	Accurately weigh a minimum of 10 g of powder and prepare a working solution using Peptone Water or Butterfields Solution. While the most common dilution is 1:10, any ratio can be used to yield desired counts. The presented powder is ready-to-test as presented.	
	Once prepared, materials can be stored between 3 ˚C - 5˚C protected from light. Mix thoroughly before testing to resuspend settled product. Materials can be used throughout the day. Use the materials within 24 hours.	
Values quoted in this certificate do not apply when the reference material is used in a manner contrary to the instructions. Values quoted have been statistically verified using the instructions described above. The specified volume in the instructions is the minimum sample size required to yield the defined quantitative parameters.		
Date of Certification	September 10, 2024 **11**	
Certificate Expiry	December 6, 2024	This material will be recertified after this expiry date.
Product Expiry	December 31, 2025	

9. Storage information **10.** Instructions for use
11. Period of validity



CRM Certificates

Page 3 features are outlined below.

12 ***Certified values and their uncertainties***

Data was log transformed prior to applying statistical processes. The assigned value is the average of results on the declared day of test. The uncertainty of the assigned value is the largest standard error of each conducted test series. The lower limit takes into account the expected decline of the microbe levels over the certification interval. These have been calculated using all factors as described in ISO 17034.

15 Tests were conducted on: August 28, 2024

5 replicate data points were used to generate this certificate

Results are expressed as cfu/g of material that is "ready-to-test".

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Test Name (Method Reference)	Assigned Value	Uncertainty of the Assigned Value (log)	Standard Deviation (log)	Calculated Limits for Daily Control Purposes	
				High limit	Low limit
Listeria mono (IFM0713.1)	1.1E+04	0.02	0.05	2.6E+04	3.9E+03
Salmonella (IFM0712.3)	2.5E+03	0.07	0.15	4.6E+03	1.0E+03
SPC (IFM0701.3)	6.7E+03	0.00	0.01	1.6E+04	1.9E+03

Additional Test Comments/Information

*Test Names marked with an * are not within the scope of accreditation*

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Authorised By Trevor Rumbekuwan, Production Officer 14

12. Measurement procedure
13. Property of interest, assigned values (including low and high limits) and associated uncertainty
14. Authorising staff name
15. Date of IFM testing
16. Additional comments or information (if applicable)

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