



CERTIFIED REFERENCE MATERIALS



CRMS ARE IDEAL FOR

Daily controls | Method validation | Media quality control





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Who is IFM

IFM is an A2LA accredited

- Testing Laboratory (ISO/IEC 17025)
- Proficiency Testing Provider (ISO/IEC 17043)
- Reference Material Producer (ISO/IEC 17034)



Supporting testing laboratories in achieving their quality goals since 1994



“Big picture” thinking

Your laboratory has a duty of care that extends well beyond simply processing samples!

Clients will make critical decisions based on the reports you provide. However, do you have complete confidence in the reported results? Does your laboratory have the necessary evidence?

Why use CRMs?

The use of Certified Reference Materials for the verification of methods and traceability of results is a well accepted scientific principle. The manufacturing and testing of IFM CRMs is strictly controlled. All CRMs have established properties which are documented on each certificate. CRMs 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.



All IFM multi-organism microbiological CRMs can be used for both qualitative and quantitative applications.



IFM CRMs are superior CRMs

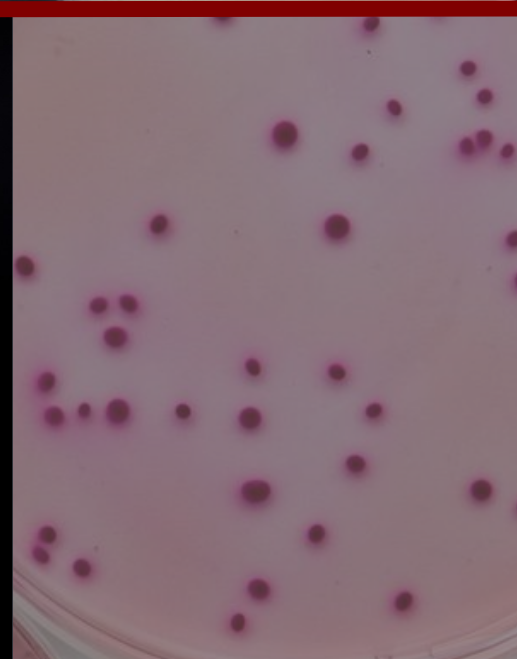
All IFM CRMs contain certified numbers of multiple organisms, presented in easy-to-test formats. This eliminates the need for laboratory staff to spend time and resources culturing multiple organisms and performing multiple dilutions to achieve the desired organism concentrations. IFM CRMs also afford the opportunity for one CRM product to serve as both positive and negative controls in test systems.

Features

- CRMs can be used for both quantitative (enumeration) and qualitative (detection) tests.
- A CRM 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.
For example, when the working solution Coliform count is 150-650 cfu/mL, a 1:10 dilution of the working solution will provide a new target range of 15-65 cfu/mL.
- Ongoing monitoring of test performance and the detection of outlying results is easily achieved by comparing results to the certified values.
- The continued use of CRMs will assist in maintaining testing quality by providing long-term performance trends.
- CRMs are considered key in maintaining the reliability of measurements over time. By comparing test results to certified values, trends in laboratory performance are easily determined. To assist in this process, IFM includes control charts in 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 that can then be freed up for other tasks.



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	<ul style="list-style-type: none"><i>Aspergillus niger</i> (IFM0019)<i>Candida utilis</i> (IFM0016)<i>Escherichia coli</i> (IFM2005)<i>Klebsiella aerogenes</i> (IFM2201)
FM0031	Gram Positive Control	<ul style="list-style-type: none"><i>Bacillus cereus</i> (IFM1600)<i>Lactocaseibacillus casei</i> (IFM1504)<i>Staphylococcus aureus</i> (IFM3004)
FM0032	Coliform Control	<ul style="list-style-type: none"><i>Escherichia coli</i> (IFM 2005)<i>Klebsiella aerogenes</i> (IFM 2201)
FM0046	Listeria and Salmonella Control	<ul style="list-style-type: none"><i>Listeria monocytogenes</i> (IFM1011)<i>Salmonella</i> Hofit (IFM2318)



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.
- ⇒ Each product unit consists of 5 sachets. This is intended to be your weekly supply.





MV Range

CRM	Intended purpose	Organism content
MV0026	Universal Food and Water Control	<ul style="list-style-type: none">• <i>Aeromonas hydrophila</i> (IFM 5800)• <i>Bacillus cereus</i> (IFM1600)• <i>Clostridium perfringens</i> (IFM1704)• <i>Enterococcus faecalis</i> (IFM3301)• <i>Escherichia coli</i> (IFM2005)• <i>Klebsiella aerogenes</i> (IFM2201)• <i>Pseudomonas aeruginosa</i> (IFM5005)
MV0037	Legionella Control	<ul style="list-style-type: none">• <i>Fluoribacter bozemanae</i> (IFM5506)• <i>Legionella pneumophila</i> SG1 (IFM5504)



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.
- ⇒ Each product unit consists of 3 vials.






CRM certificates

[Click this link to view IFM's CRM certificate directory](#)

All IFM certificates are ISO 17034 compliant. Certificates comprise 2 pages. Page 1 features are outlined below.


FM0030_RM4647_20211220_20220311



3 REFERENCE MATERIAL CERTIFICATE

This certificate supersedes all previous issues.

IFM Daily Controls



A2LA Accredited
Reference Material Producer
Certificate Number 3189.03

4 Product Name	FM0030 Hygiene Daily Control					
5 Batch Number	RM4647					
Hazard Information	This material contains micro-organisms. Please take suitable precautions at all times when handling this reference material. Please download Safety Data Sheet via below link: http://proficiency.ifmqs.com.au/dropbox/information/OMT025_MSDS_Microbiological_Reference_Material.pdf					
6 Description of the Material	generic powder					
Presentation	Each set is overpacked in a plastic bag units provided: 5 units each unit consists of: 10-12 g units are contained in: plastic sachet					
Organism Content	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Organism Name (IFM Number)</th> </tr> </thead> <tbody> <tr> <td><i>Aspergillus niger</i> (0019)</td> </tr> <tr> <td><i>Candida utilis</i> (0016)</td> </tr> <tr> <td><i>Escherichia coli</i> (2005)</td> </tr> <tr> <td><i>Klebsiella aerogenes</i> (2201)</td> </tr> </tbody> </table>	Organism Name (IFM Number)	<i>Aspergillus niger</i> (0019)	<i>Candida utilis</i> (0016)	<i>Escherichia coli</i> (2005)	<i>Klebsiella aerogenes</i> (2201)
Organism Name (IFM Number)						
<i>Aspergillus niger</i> (0019)						
<i>Candida utilis</i> (0016)						
<i>Escherichia coli</i> (2005)						
<i>Klebsiella aerogenes</i> (2201)						
7 Intended Use	Microbiological Reference Material					

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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. Intended use

8. Name and contact details of the Reference Materials Producer

9. Organism content

CRM certificates

Please note that there is a certificate expiry and a 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.

FM0030_RM4647_20211220_20220311

10 Store unopened material at 3°C - 5°C protected from light until used. Use aseptic technique at all times.

11 Instructions for Use

12 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: December 20, 2021

13 Certificate Expiry: March 11, 2022. This material will be recertified after this expiry date.

Product Expiry: October 22, 2022

14 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.

Tests were conducted on: November 29, 2021
5 replicate data points were used to generate this certificate

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

Test Name (Method Reference)	Coliform (IFM0705)	E. coli (IFM0705)	Mould (IFM0703_3)	SPC (IFM0701_3)	Yeast (IFM0703_3)			
Assigned Value	6.1E+02	5.7E+02	3.7E+03	9.7E+03	2.9E+02			
Uncertainty of the Assigned Value (log)	0.04	0.06	0.04	0.03	0.04			
Calculated limits for daily control purposes								
High limit	2.2E+03	1.4E+03	6.3E+03	2.3E+04	7.3E+02			
Low limit	3.2E+01	1.4E+02	1.9E+03	2.8E+03	7.5E+01			

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16 Authorised By: Trevor Rumbekuan, Production Officer

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- 10.** Storage information
- 11.** Instructions for use
- 12.** Minimum sample size
- 13.** Period of validity
- 14.** Measurement procedure

- 15.** Property of interest, property value and associated uncertainty
- 16.** Name and function of RMP's approving officer

IFM operates globally with representatives located in Europe, South East Asia, China, the Middle East, South Africa, North and South America.

Our services are requested by a diverse range of organizations, including accreditation bodies, regulatory authorities, government agencies and private companies.

[Click this link to view IFM Distributors](#)

For the countries listed, IFM kindly asks that you place orders via the official IFM distributor servicing your region.

IFM Quality Services:



Supporting quality in testing around the globe



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