



## PRODUCT SPECIFICATION SHEET

### Maintenance (SCY) Medium (DM344)

#### Intended Use

Maintenance (SCY) Medium (DM344) is recommended for maintenance of iron bacteria.

#### Product Summary and Explanation

Iron bacteria are considered to be capable of metabolizing reduced iron present in their aqueous habitat and depositing it in the form of hydrated ferric oxide on or in their mucilaginous secretions. The resulting ferric oxide is insoluble, and appears as brown gelatinous slime which imparts a reddish tinge and an unpleasant odour to drinking water and may render the supply unsuitable for domestic or industrial purposes. Maintenance (SCY) Medium is prepared in accordance with APHA<sup>(1)</sup> and is used for the maintenance of iron bacteria. Isolation and maintenance media have proven successful for identifying various groups of filamentous organisms including iron bacteria.<sup>(2)</sup> *Sphaerotilus-Leptothrix* group are filamentous bacteria that form sheath. The sheathed bacteria have the ability to deposit ferric hydroxide and sometimes manganese dioxide on their sheaths.<sup>(3)</sup> Iron bacteria, especially those belonging to *Sphaerotilus-Leptothrix* group thrive in this media, which is too dilute to support proliferation of more rapidly growing organisms.

#### Principles of the Procedure

Maintenance (SCY) Medium contains casein enzymic hydrolysate, yeast extract, papaic digest of soyabean meal and thiamine in the medium provide the necessary carbon, nitrogen, vitamins and minerals. Sucrose is the carbon source. Dipotassium phosphate provides buffering to the medium and sodium chloride provides the essential ions.

#### Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	0.91
Papaic digest of soyabean meal	0.03
Yeast extract	0.25
Sucrose	1.00
Sodium chloride	0.05
Dipotassium hydrogen phosphate	0.02
Thiamine	0.0004
Agar	10.00
Final pH: 7.3 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

#### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

#### Directions

1. Suspend 12.26 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Aseptically add filter-sterilized solution of cyanocobalamin to a final concentration of 0.01 mg/litre.





## PRODUCT SPECIFICATION SHEET

5. Mix well and dispense as desired.

### Quality Control Specifications

Dehydrated Appearance	White to cream homogeneous free flowing powder
Prepared Medium	Cream coloured clear to slightly opalescent gel forms in Petri plates or in tubes as slants
Reaction of 1.2% Solution	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.0% Agar gel

**Expected Cultural Response:** Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours with added cyanocobalamin.

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Leptothrix discophora</i> ATCC 43182	good-luxuriant
2.	<i>Sphaerotilus natans</i> ATCC 13338	good-luxuriant
3.	<i>Thiobacillus thioparus</i> ATCC 8158	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

### Test Procedure

1. Prepare agar slants and aseptically pipette 3 ml sterile tap water on the slant surfaces.
2. Inoculate and incubate at room temperature until turbid growth develops in liquid layer.
3. The cells remain viable for 3 months at refrigeration temperature.
4. Refer appropriate references for specific test procedures.

### Results

Refer appropriate references and test procedures for interpretation of results.

### Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

### Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

### Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.





## PRODUCT SPECIFICATION SHEET

### Packaging

Product Name : Maintenance (SCY) Medium

Product Code : DM344

Available Pack sizes : 500gm

### References

1. Eaton A. D., Clesceri L. S., Rice E. W. and Greenberg A W.(Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
2. Van Veen W. L., 1973, Antonie Van Leeuwenhoek (Holland), 39:189.
3. Balows A., Truper H. G., Dworkin M., Harder W., Schleifer K. H., (Eds.), The Prokaryotes, 2nd Edition, Vol. III, SpringerVerlag.

### Further Information

For further information please contact your local MICROMASTER Representative.



**MICROMASTER LABORATORIES PRIVATE LIMITED**

DM344PSS,QAD/FR/024,Rev.00/01.01.2018

Unit 38/39, Kalpataru Industrial Estate,

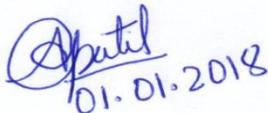
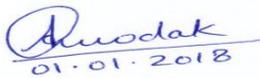
Near Runwal Estate, Behind 'R-Mall' ,Ghodbunder Raod,

Thane (W) - 400607. M.S. INDIA.

Ph: +91-22-25895505, 4760, Cell: 9320126789.

Email: [micromaster@micromasterlab.com](mailto:micromaster@micromasterlab.com)

[sales@micromasterlab.com](mailto:sales@micromasterlab.com)

Prepared By	Checked By	Approved By
 01.01.2018	 01.01.2018	 01.01.2018
Microbiologist	Head Quality Control	Head Quality Assurance

### Disclaimer :

All Products conform exclusively to the information contained in this and other related Micromaster Publications. Users must ensure that the product(s) is appropriate for their application, prior to use. The information published in this publication is based on research and development work carried out in our laboratory and is to the best of our knowledge true and accurate. Micromaster Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are intended for laboratory, diagnostic, research or further manufacturing use only and not for human or animal or therapeutic use, unless otherwise specified. Statements included herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

