

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 215



D.S.T. Agar (sulphonamide antagonist free)

For all antibiotic susceptibility testing.

1. Description

One of the main problems with antibiotic susceptibility testing has been the presence of sulphonamide antagonists in culture media. Traditionally, lysed blood has been added to the medium to reduce the effects of sulphonamide antagonists¹ and has been successful, in part due to the conversion of thymidine, a potent sulphonamide antagonist, to thymine.

In 1978, Aymes and Smith,^{2,3} reported that the addition of the ribonucleoside uridine to laboratory media renders it more suitable for susceptibility testing of sulphonamides and trimethoprim. They stated that the presence of uridine effectively ensures that the medium is free of sulphonamide antagonists and so the addition of lysed blood to the medium is unnecessary for non-fastidious organisms.

MAST D.S.T. Agar contains specially selected peptones which are low in sulphonamide antagonists. It also contains uridine as recommended by Aymes and

Smith. In a more recent survey⁴ it was shown that more reliable susceptibility test results were achieved in those laboratories using a test medium supplemented by the addition of lysed blood. Errors with the sulphonamide group were reduced by the addition of lysed blood, particularly where a D.S.T. Agar was used.

It should be noted that certain thymineless mutants will not grow on a medium containing uridine or lysed blood. If such organisms are encountered, Mueller Hinton Agar (DM170) without the addition of lysed blood may be used. MAST D.S.T. Agar is suitable for susceptibility testing of all organisms to the major groups of antibiotics by the disc diffusion and agar dilution methods. A further application is the microbiological assay of aminoglycosides in serum for the routine monitoring of therapy with this potentially toxic group of antibiotics.

2. Technical Formula*

Formula	grams per litre
Peptone	16.0
Sodium chloride	5.0
Uridine	0.5
Agar	16.0

pH approx.7.3 after autoclaving

4 References

1. Ferone R, Bushby SRM, Burchall JJ, Moore WD, Smith D. *Antimicrobial Agents Chemother.* 1975; **7**: 91-98.
2. Aymes SGB, Smith JT. *J Antimicrobial Chemother.* 1978; **4**: 415-419.
3. Aymes SGB, Smith JT. *J Antimicrobial Chemother.* 1978; **4**: 421-429.
4. Snell JJS, Brown DFJ, Gardner PS. *J Clin Pathol.* 1982; **35**: 1169-1176.

3. Directions

1. Suspend by swirling 37.5g of powder in 1 litre or the contents of the sachet in the stated volume of distilled or deionised water. Boil to dissolve completely.
2. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
3. After cooling to 55°C, 5-7% lysed blood may be added if required.
4. Thoroughly mix before pouring



Mast Group Ltd.
Mast House, Derby Road, Bootle
Liverpool, Merseyside, L20 1EA
United Kingdom
Tel: + 44 (0) 151 472 1444
Fax: + 44 (0) 151 944 1332
email: sales@mastgrp.com
Web: www.mastgrp.com

Mast Diagnostica GmbH
Feldstrasse 20
DE-23858 Reinfeld
Germany
Tel: + 49 (0) 4533 2007 0
Fax: + 49 (0) 4533 2007 68
email: mast@mast-diagnostica.de
Web: www.mastgrp.com

Mast Diagnostic
12 rue Jean-Jacques Mention
CS91106, 80011 Amiens, CEDEX 1
France
Tél: + 33 (0) 3 22 80 80 67
Fax: + 33 (0) 3 22 80 99 22
email: info@mast-diagnostic.fr
Web: www.mastgrp.com



MAST® is a registered Trademark

*Formulation may be modified to meet performance criteria

SJW|10/17|V.2