

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 134



Hektoen Enteric Agar

A differential, selective medium for the isolation of *Shigella* and *Salmonella*.

1. Description

MAST Hektoen Enteric Agar is a selective medium for the isolation and differentiation of *Shigella* and *Salmonella*. The medium is based upon the work of King and Metzger (1968)¹ at the Hektoen Institute for Medical Research (U.S.A.). They devised a medium which grew shigellae as readily as other pathogens, while inhibiting normal intestinal flora and which facilitated presumptive

colonial recognition of enteric pathogens. The inhibition of shigellae by bile salts was reduced by the addition of increased carbohydrates and peptones and by the use of an indicator system of minimal toxicity. The ability of Hektoen Enteric Agar to grow shigellae and salmonellae has been confirmed by Taylor and Schelhart (1971).²

2. Typical Formula*

Formula	grams per litre
Peptone mixture	25.0
Lactose	10.0
Sucrose	12.0
Salicin	1.0
Sodium chloride	2.0
Sodium thiosulphate (anhydrous)	1.0
Ferric ammonium citrate	2.0
Trisodium citrate	1.25
Bile salts	1.5
Acid fuchsin	0.025
Bromo-thymol blue	0.05
Agar	14.0
pH approx.7.2	

3. Directions

1. Suspend by swirling 69.8g of powder in 1 litre of distilled or deionised water.
2. Allow to stand for 10-15 minutes.
3. Heat gently and boil for a few seconds until the agar dissolves. DO NOT AUTOCLAVE.
4. Cool to 55-60°C, mix well and pour plates.

4. In Use

Inoculate the medium directly from the specimen or after enrichment in MAST Selenite F Broth (DM210). Streak with a wire loop to obtain well isolated colonies. Incubate for 18-24 hours at 37°C.

Improved colonial differentiation between salmonellae and shigellae is achieved by prolonging the incubation period.

Colony Characteristics

Shigella spp./*Providencia* - green colonies.

Salmonella spp. - blue/green colonies with or without black centres.

Pseudomonas spp. - green/brown irregular colonies.

Coliforms - salmon-coloured colonies.

5. References

1. King S, Metzger WI. *Appl Microbiol.* 1968; **16**: 577-578.
2. Taylor WI, Schelhart Dorothy. *Appl Microbiol.* 1971; **21**: 32-37.



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



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*Formulation may be modified to meet performance criteria

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