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

Urea Agar Base

DM228. For the detection of urease producing organisms.

Contents: See pack label.

Formulation*

Material:	Concentration in medium:
Bacteriological peptone	1.0 g/litre
Potassium dihydrogen phosphate	0.8 g/litre
Phenol red	0.012 g/litre
Dextrose	1.0 g/litre
Di-Sodium hydrogen phosphate	1.2 g/litre
Sodium chloride	5.0 g/litre
Agar	14.0 g/litre
Final pH: 6.8 ± 0.2	

Storage and shelf life
All dehydrated culture media containers should be kept tightly closed and stored in a dry place at 10 to 25°C until the expiry date shown on the pack label.

Precautions
For *in vitro* diagnostic use only. Observe approved hazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal. Refer to Product Safety Data sheet (available on request or via MAST website).

Materials required but not provided
Standard microbiological supplies and equipment such as loops, MAST selective supplements, swabs, applicator sticks, incinerators and incubators, etc., as well as serological and biochemical reagents and additives such as blood.

Procedure
1. Refer to pack label for quantities and volumes required. Prepare MAST Urea Agar Base (DM228) by suspending the powder in distilled or deionised water. For sachet packs, dissolve the entire contents of the sachet in the volume shown on the label.
2. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
3. Cool to 50 to 55°C and add, aseptically, 10ml of MAST 40% w/v Urea Solution (DM228s) to each 190ml of basal medium. Do not reheat the medium once urea has been added.
4. Mix well and distribute into sterile final containers (e.g. tubes or bottles).
5. Allow to set in a slanted position to form a slope and butt.
6. Prepared medium may be used immediately or stored in at 2 to 8°C for up to one week before use.
7. Heavily inoculate the surface of the medium with a pure culture of the organism to be tested by streaking with a straight wire. Do not stab the butt.
8. Incubate aerobically for 3 to 5 hours at 35 to 37°C, then for a further 12 to 18 hours.

Interpretation of results
After incubation record colour development in the medium. A positive reaction (urea hydrolysis) changes the colour of the medium to red (alkaline reaction). The uninoculated butt can be used as a colour comparison. For a negative (no urea hydrolysis) the colour of the medium remains unchanged.

Quality control
Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate expected performance. Do not use the product if the result with the control organism is incorrect. The list below illustrates a range of performance control strains which the end user can easily obtain.

Test Organisms	Result
Escherichia coli ATCC® 25922	Negative
Salmonella typhimurium ATCC® 14028	Negative
Proteus mirabilis ATCC® 29906	Positive (4 to 6 hours)
Klebsiella pneumoniae ATCC® 13883	Positive (18 to 24 hours)

Limitations
Colour diffusion into the butt, particularly from the rapid urease activity of *Proteus* spp., limits its use as a negative control.
After prolonged incubation non-specific alkaline reactions due to peptone utilisation may cause false positive colour change in the medium.

References
Bibliography available on request.

IFU358 DE 07/16 V3
MAST is a Registered Trademark
ATCC is a trademark of the American Type Culture Collection, Manassas, Virginia, USA
*Formulation may change to meet performance criteria