

# MAST® Culture Media and Supplements

## Technical Information Sheet

**Product Code DM 130**



## D.C.A. (Hynes)

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

### 1. Description

MAST Desoxycholate Citrate Agar is based on Hynes<sup>1</sup> modification of Leifson's medium.<sup>2</sup> Specially purified sodium desoxycholate is used to give good isolation of Gram-negative intestinal pathogens. Growth of coliforms is suppressed by a combination of sodium citrate and sodium

desoxycholate but if any do grow they are differentiated by lactose fermentation. Swarming of *Proteus* spp. is prevented. The consistency of colonies, including those of *Sh.sonnei*, is suitable for the performance of slide agglutination reactions.

### 2. Typical Formula\*

Formula	grams per litre
Lactose	10.0
Sodium citrate	5.0
Ferric ammonium citrate	1.0
Sodium thiosulphate	2.5
Bile salts	2.0
Peptone	17.0
Neutral Red	0.025
Agar	14.0
<b>pH approx. 7.2</b>	

### 3. Directions

1. Suspend by swirling 51.5g of powder in 1 litre, or the contents of the sachet in the stated volume of distilled or deionised water in a large flask.
2. Allow to stand for 15 minutes and bring to the boil until completely dissolved. **DO NOT AUTOCLAVE.**
3. Allow to cool to about 50°C, mix well and pour plates.

#### 4. In Use

Inoculation may be carried out direct from the faecal specimen or after enrichment in MAST Selenite F Broth (DM210). As with all selective procedures, it is advisable to simultaneously inoculate another medium such as MacConkey Agar without salt (DM140) or Brilliant Green Agar (DM105) etc. Lactose fermenting organisms are mainly inhibited but may give pink colonies with a surrounding precipitate.

Certain late lactose fermenting organisms e.g. *Sh.sonnei* may become pale pink if incubation is extended to 40 hours. Most salmonellae and shigellae are non-lactose fermenting and appear as colourless colonies; salmonellae often with a black central dot indicative of H<sub>2</sub>S production. Final identification may be made by serological and biochemical methods.

#### 5. References

1. Hynes M. *J Path Bact* 1942; **54**: 193-207.
2. Leifson E. *J Path Bact* 1935; **40**: 581-599.



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\*Formulation may be modified to meet performance criteria

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