

# MAST® Culture Media and Supplements

## Technical Information Sheet

**Product Code DM 137**



## Kligler's Iron Agar

For the differentiation of the *Enterobacteriaceae* on the basis of double sugar fermentation and hydrogen sulphide production.

### 1. Description

MAST Kligler's Iron Agar is based on Bailey and Lacey's modification<sup>1</sup> of the original Kligler formulation.<sup>3</sup> They recommended the use of phenol red indicator, to give enhanced differentiation of enteric organisms. Kligler's

Iron Agar is reported to give more reliable H<sub>2</sub>S results than Triple Sugar Iron Agar (DM224), with certain sucrose fermenting organisms.<sup>4</sup>

### 2. Typical Formula\*

Formula	grams per litre
Meat extract	4.0
Peptone mixture	18.0
Lactose	10.0
Ferric ammonium citrate	0.3
Phenol red	0.05
Yeast extract	3.0
Sodium chloride	5.0
Dextrose	1.0
Sodium thiosulphate	0.3
Agar	14.0
<b>pH approx.7.4</b>	

### 3. Directions

1. Suspend 55.6g in 1 litre or the contents of the sachet in the stated volume of distilled or deionised water.
2. Bring to the boil and dissolve completely.
3. Mix well and distribute.
4. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
5. Allow to set as slopes with 1 inch butts.

#### 4. Typical Result

Genera and species	Slope	Butt	Gas	H <sub>2</sub> S
Escherichia	A(K)	A	+(-)	-
Shigella	K	A	-	-
<i>S.typhi</i>	K	A	-	+(-)
Other salmonella	K	A	+(-)	+++(-)
<i>Proteus vulgaris</i>	N/C	A	+	+++
<i>P.mirabilis</i>	N/C	A	+	+++
<i>P.morganii</i>	N/C	A	+(-)	-
<i>P.rettgeri</i>	N/C	A	-	-
Klebsiella	A	A	++	-

**A = Acid K= Alkaline N/C= No Change.**

Symbols enclosed in parentheses indicate occasional reactions.

#### 5. In Use

Kligler's Iron Agar should be used in conjunction with MAST Urea Agar Base (DM228) for differentiating non lactose fermenting colonies from selective media. Smear the surface of the Kligler slope and stab the butt with a single colony or pure subculture. Incubate for 18-48 hours at 37°C.

#### 6. References

1. Bailey Sadie F, Lacey GR. *J Bacteriol* 1927; **13**: 182-189.
2. Kligler IJ. *Am J Pub Hlth.* 1917; **7**: 1042-1044.
3. Kligler IJ. *J Exp Med.* 1918; **28**: 319-322
4. Bulmash JM, Fulton M, *J Bacteriol* 1964; **88**: (6) 1813.



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\*Formulation may be modified to meet performance criteria

SJW|10/17|V.2