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Kligler's Iron Agar

DM137

Intended Use
For the differentiation of Enterobacterales based on hydrogen sulphide production and double sugar fermentation.

Contents
See pack label.

Formulation*

Material:	Concentration in medium:
Peptone mixture	18.0g/litre
Meat extract	4.0g/litre
Yeast extract	3.0g/litre
Lactose	10.0g/litre
Dextrose	1.0g/litre
Sodium chloride	5.0g/litre
Sodium thiosulphate	0.3g/litre
Ferric ammonium citrate	0.3g/litre
Phenol red	0.05g/litre
Agar A	14.0g/litre
Final pH: 7.4 ± 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® Kligler's Iron Agar (DM137D) 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. Bring to the boil and dissolve completely.
3. Mix well and distribute into suitable containers.
4. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
5. Allow to set in a slanted position to from a long slope and a 2.5cm butt.
6. Prepared culture medium may be used immediately or stored at 2 to 8°C for up to one week before use.
7. MAST® Kligler's Iron Agar (DM137D) is recommended for the identification of colonies taken from plating media e.g. MAST® MacConkey Agar (DM141D), and MAST® DCA Hynes (DM130D). Inoculate the medium by streaking test samples, picked from the centre of isolated colonies across the slant and stabbing the butt.
8. Incubate aerobically for 18 to 24 hours at 35 to 37°C

Interpretation of results
After incubation record growth of organisms. Typical characteristics to note include: colony size and morphology, acid (yellow) / alkaline (red) reactions, gas production (indicated by cracks or bubbles in the medium) and hydrogen sulphide production (indicated by a black precipitate in the butt).

Genera and species	Slope	Butt	Gas	H_2S
Escherichia	A(K)	A	+(-)	-
Shigella	K	A	-	-
S.typhi	K	A	-	+(-)
Other salmonella	K	A	+(-)	+++(-)
Proteus vulgaris	N/C	A	+	+++
P.mirabilis	N/C	A	+	+++
P.morganii	N/C	A	-(+)	-
P.rettgeri	N/C	A	-	-
Klebsiella	A	A	++	-

A = Acid K= Alkaline N/C= No Change. Symbols enclosed in parentheses indicate occasional reactions.

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	Growth, Acid slope/acid butt/gas
Proteus vulgaris ATCC® 6380	Growth, Alkaline slope/acid butt/H_2S

References
Bibliography available on request.

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*Formulation may change to meet performance criteria