Condalab

Reference: 4002 **Technical Data Sheet**

Product: KLIGLER IRON AGAR

Specification

Solid differential medium for primary identification of enterobacteria based on the fermentation of two sugars and the hydrogen sulfide production according to ISO standard.

Presentation

	Packaging Details	Shelf Life	Storage
20 Tubes / Slant Tube 16 x 110mm with: 7,5 ± 0,3 ml	1 box with 20 tubes, 16x113 mm glass tubes, ink labelled and metal cap.	9 months	8-25°C

Composition

Composition (g/l):

Peptone	20.0
Meat extract	3.00
Yeast extract	3.00
Sodium chloride	5.00
Lactose	10.0
Glucose	1.00
Ferric citrate	0.50
Sodium thiosulfate	0.50
Phenol red	0.03
Agar	15.0

Description /Technique

Kligler Agar is a differential medium that has all the characteristics of the 2-Sugar Russell Agar and Lead Acetate Medium for H_2S detection. In this medium, lactose fermentation and hydrogen sulfide production can be detected, allowing a presumptive identification of most enterobacteria. Sugar fermentation is shown by acid production, which turns the indicator from red to yellow. Since there is only a small amount of sugar (dextrose) in the medium, acid production due to its fermentation is very limited and re-oxidation of the indicator occurs on the surface of the medium, causing the indicator to remain red. When lactose is fermented, a large amount of acid is produced re-oxidation does not occur and the entire medium turns yellow.
Hydrogen sulfide production is indicated by the medium turning black, due to the reaction of H_2S (liberated from thiosulfate) with the iron ions presents in the ammonium iron citrate.
Kligler Iron Agar is used in slanted tubes with short slant and a generous butt, which are inoculated on the surface and also stab inoculated. The inoculum must be copious; it has to come from a solid medium, otherwise, readings may be delayed (up to additional 2-3 days). Normal incubation is 18-24 hours at 36°C ±0,2.
A large production of H_2S may make the readings difficult, and hence early readings are strongly recommended.
To inoculate tubes follow the standard laboratory methods or the applicable norms:stab inoculation, loop inoculation.

Quality control

Physical/Chemical control

Color : Reddish pH: 7.4 ± 0.2 at 25°C

Microbiological control

Inoculate by stabbing the butt + streak the slant
Aerobiosis. Incubation at 36 ± 2°C, reading at 18-24 h

Microorganism	Growth
Shigella flexneri ATCC® 12022, WDCM 00126	Good /Slant: Alk/Butt:Ac /Gas (-)/ SH2(-)
Escherichia coli ATCC® 8739, WDCM 00012	Good / Slant:Ac /Butt:Ac /Gas (+)/ SH2(-)
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good /Slant: Alk/Butt:Ac /Gas (+)/ SH2(+)
Proteus mirabilis ATCC® 43071	Good /Slant: Alk/Butt:Ac /Gas (+)/ SH2(+)

Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH
Check at 7 days after incubation in same conditions

Bibliography

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