


KLIGLER IRON AGAR MOD. Differential medium for enterobacteria identification.	
---	---

TYPICAL FORMULA (g/l)

Proteose peptone	20.0
Sodium Chloride	5.0
Yeast Extract	3.0
Meat extract	3.0
Ferric citrate	0.3
Sodium Thiosulphate	0.3
Lactose	10.0
Glucose	1.0
Phenol Red	0.05
Agar	12.0

Final pH = 7.4 ± 0.2 at 25°C.

DIRECTIONS

Suspend 55 g of powder in 1 litre of distilled or deionized water. Heat to boiling until completely dissolved. Dispense into final tubes. Sterilize in autoclave at 121°C for 15 minutes. Cool in a slanting position.

DESCRIPTION

KLIGER IRON AGAR is a solid medium used to distinguish between *Enterobacteriaceae* on the basis of their ability to ferment lactose and / or glucose and to produce hydrogen sulphide.

TECHNIQUE

Inoculate by stabbing the butt and abundantly streaking the slope. Incubate at 36±1°C for 18-24 hours and check the colour of the medium both in the butt and at the slope. Also check for the presence of gas in the butt and the presence of the black precipitate (H₂S).

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Colour: pinkish beige.

Prepared medium

Appearance: slightly opalescent, slight precipitate.

Colour: slightly orange-red.

Incubation conditions: 36±1°C / 18-24 hours.

Microorganisms	ATCC	Growth	Slant/Butt	Gas	H ₂ S
<i>Citrobacter freundii</i>	8090	good	Acid/ acid	+	+
<i>Escherichia coli</i>	25922	good	Acid/ acid	+	-
<i>Proteus vulgaris</i>	13315	good	Alkaline/ acid	-	+

PERFORMANCE AND LIMITATIONS

A pure culture is essential when inoculating Kligler Iron Agar. If inoculated with a mixed culture, irregular observations may occur.

STORAGE

The powder is very hygroscopic: store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C.

REFERENCES

- Macfaddin, J.F. (1976). Biochemical tests for identification of medical bacteria.
- Kliger, I.J. (1918). J.Exp. Med. **28**: 319-322.

PACKAGING

Code 610211 KLIGER IRON AGAR MOD.(9.0 l).....	500 g
Code 620211 KLIGER IRON AGAR MOD.(1.8 l).....	100 g