B212	**KLIGLER IRON AGAR**

Formula

Ingredients :	**gms/lit.**
Peptone	15.00
Meat Extract B#	3.00
Yeast extract	3.00
Proteose peptone	5.00
Lactose	10.00
Dextrose	1.00
Ferrous sulphate	0.20
Sodium chloride	5.00
Sodium thiosulphate	0.30
Phenol red	0.024
Agar	15.00

#- Equivalent to Beef extract

Final pH (at 25°C) : 7.4 ± 0.2

Directions :

Suspend 57.52 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Mix well and distribute into tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in slanted position to form slopes with about 1-inch butts.
Best reactions are obtained on freshly prepared medium. Do not use screw capped tubes or bottles.

Principle :

Kligler Iron Agar combines the principles of Russell double sugar agar and lead acetate agar into one medium. This combination permits the differentiation of the gram-negative bacilli both by their ability to ferment dextrose or lactose and to produce hydrogen sulfide. Meat Extract B, Yeast Extract, Peptone, and Proteose Peptone provide nitrogen, vitamins and minerals. Ferrous sulfate and sodium thiosulfate are the indicators of hydrogen sulfide production. Phenol red is the pH indicator. Sodium chloride maintains the osmotic balance of the medium. Agar is the solidifying agent.

QC Tests – (I)Dehydrated Medium	
Colour :	Light yellow to pink
Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium	
pH (post autoclaving/heating) :	7.4 ± 0.2
Colour (post autoclaving/heating) :	Reddish orange to red
Clarity (post autoclaving/heating) :	Clear to slightly opalescent
(III)Q.C. Test Microbiological	

Cultural characteristics observed after18 – 48 hrs at 35-37°C.

MICROORGANISM (ATCC)	GROWTH	SLANT	BUTT	GAS	H_2S
Citrobacter freundii (8090)	Luxuriant	A	A	+	+
Escherichia coli (25922)	Luxuriant	A	A	+	-
Enterobacter aerogenes (13048)	Luxuriant	A	A	+	-
Klebsiella pneumoniae (13883)	Luxuriant	A	A	+	-
Proteus vulgaris (6380)	Luxuriant	K	A	-	+
Salmonella enteritidis (13076)	Luxuriant	K	A	+	+
Salmonella paratyphi A (5006)	Luxuriant	K	A	+	-
Salmonella schottmuelleri (10719)	Luxuriant	K	A	+	+
Salmonella typhi (6539)	Luxuriant	K	A	-	+
Shigella flexneri (12022)	Luxuriant	K	A	-	-
Pseudomonas aeruginosa (27853)	Luxuriant	K	K	-	-

Key : A = acid production (yellow)
K = alkaline reaction (red)
+ = positive or blacking
- = negative reaction (no change)

Refer disclaimer Overleaf

Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
Use :	For differential identification of gram-negative enteric bacilli on the basis of fermentation of dextrose, lactose and H_2S production.				
Storage :	Dehydrated medium- below 30°C Prepared medium– Between 2 to 8°C.				
Packing :	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B212	57.52 g/l	8.69L	7.4 ± 0.2	NIL	121^0C / 15 minutes