



## Kligler Iron Agar | AS-1261

Used to differentiate *Enterobacteriaceae* members based on their ability to ferment dextrose and lactose and to liberate sulfides.

Kligler Iron Agar (KIA), a differential medium, is used to distinguish between *Enterobacteriaceae* strains based on their ability to ferment glucose and lactose as well as produce hydrogen sulfide. Peptones, yeast extract, glucose, lactose, ferric ammonium citrate, sodium thiosulfate, and phenol red are all present in the medium. Whereas non-lactose fermenters first ferment glucose, producing an acid slant and an alkaline butt, lactose fermenters produce acid throughout the tube. The generation of hydrogen sulfide is indicated by a black precipitate. *Shigella* and *Salmonella* are among the enteric pathogens that are thought to be identified using KIA.

### Composition (gr/L)

Peptone from Casein	15
Peptone from Meat	5
Meat Extract	3
Yeast Extract	3
Sodium Chloride	5
Lactose	10
Dextrose	1
Phenol Red	0.024
Sodium Thiosulfate	0.5
Ammonium Iron (III) Citrate	0.5
Agar	12
Final pH at 25°C	7.4 ± 0.2

### Preparation

Dissolve 55 g of the powder into 1 liter distilled water. Autoclave at 121 °C for 15 minutes. Cool in slanted position to form deep butts.

### Quality Control

Dehydrated Appearance: Fine, homogeneous, free of extraneous material

Prepared Appearance: Medium to dark, orange to red, with or without a tint of brown, clear to slightly hazy.

Reaction of 5.5% Solution at 25°C: pH 7.4 ± 0.2

### Microbial Test Results

Incubate at 35±2 °C for 24 hours.

Organism (ATCC)	Recovery	Slant	Butt	H <sub>2</sub> S
<i>Salmonella enterica</i> (14028)	Good	Alkaline	Acid w/o gas	+
<i>Escherichia coli</i> (25922)	Good	Acid	Acid w/ gas	-
<i>Pseudomonas aeruginosa</i> (27853)	Good	Alkaline	Alkaline w/o gas	-

### Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.