

For the determination of citrate utilization by Enterobacteriaceae.

Formula in g/L

Ammonium dihydrogen phosphate	1,00	Dipotassium phosphate.....	1,00
Sodium chloride	5,00	Sodium citrate	2,00
Magnesium sulphate.....	0,20	Bromothymol blue.....	0,08
Agar.....	15,00		

Final pH at 25°C: 6,8 ± 0,2

Principle:

Simmons Citrate LAB-AGAR™ is used for to differentiate Gram - negative enteric bacilli on the basis of sodium citrate utilization as a source of carbon and inorganic ammonium salt utilization as a source of nitrogen. It is recommended for the differentiation of Enterobacteriaceae isolated from clinical samples and coliforms from water.

It used in the same as Koser Citrate Broth for the utilization of citrate as one of the IMVIC reactions.

Magnesium sulphate is a co-factor for various metabolic. Sodium chloride maintains the osmotic balance.

Dipotassium phosphate is the buffer. Bromothymol blue is a pH indicator.

Preparation: suspend 24,28 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation until complete dissolution. Distribute into test tubes and sterilize in autoclave at 121°C for 15 minutes. After autoclawing , allow medium to solidify in a slanted position.

Alternatively, the medium can be poured into Petri dishes.

The prepared medium in tubes should be stored at 2-8°C.

Procedure:

- ★ With an inoculating needle, prick the center of well isolated colonies obtained from a solid media
- ★ Loosen closure on the tube before incubating
- ★ Incubate at 37±1°C for 18-24 hours

Result

- ★ Color of the medium green– negative reaction
- ★ Color of the medium blue – positive reaction

Storage / Shelf life

- ★ Once opened keep powdered medium closed to avoid hydration at 2 - 30°C
- ★ The expiration date is indicated on the label.

Microbiological test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 37±1°C; 30°C and observed after 24 hours

Microorganisms	Growth	Medium color
Enterobacter aerogenes ATCC 13048	Good	Blue
Escherichia coli ATCC 25922	Inhibited	Green
Salmonella Enteritidis ATCC 13076	Good	Blue
*Yersinia enterocolitica ATCC 27729	Inhibited	Green

* Incubate at 30°C for 24 hours

Packaging: 500 g