Simmons Citrate Agar

Catalog : HB0115-2

Simmons Citrate Agar is used for the differentiation of Enterobacteriaceae based on the utilisation of citrate as the sole source of carbon.

Approximate Formula:

Ingredients	gm/liter
Sodium Chloride	5.0
Magnesium Sulfate	0.2
Ammonium Dihydrogen Phosphate	1.0
Dipotassium Hydrogen Phosphate	1.0
Sodium Citrate	5.0
Bromothymol Blue	0.08
Agar	15.0

Final pH 6.8±0.2 at 25℃

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 27.3g of the medium in one liter of distilled water or deionized water. Heat to boiling, to dissolve the medium completely. Mix well and distribute in tubes .Sterilized in an autoclave at 121℃(15 lbs.)for 15 minutes. Allow medium to cool in a slanted position for use as slants..

Principle and Interpretation:

Organisms able to utilize ammonium dihydrogen phosphate and sodium citrate as the sole sources of nitrogen and carbon, respectively, will grow on this medium and produce an alkaline reaction as evidenced by a change in the color of the bromthymol blue indicator from green (neutral) to blue (alkaline). Bromothymol blue is pH indicator.

Appearance:

Dehydrated medium is a free-flowing light yellow-green powder. The prepared medium is a kind of green transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Simmons Citrate Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1℃ for 24-48 hours.

Microorganism	Strains Number	Growth	Remarks
Escherichia coli	ATCC 25922	inhibited	Negative, green
Shigella flexneri	ATCC 12022	inhibited	Negative, green
Shigella sonnei	ATCC 25931	inhibited	Negative, green
Shigella dysenteriae	CMCC(B)51252	inhibited	Negative, green
Salmonella typhimurium	ATCC 14028	good-luxuriant	Postive, blue
Citrobacter freundii	ATCC 43864	good-luxuriant	Postive, blue

References:

1. GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.
2. Simmons. 1926. J. Infect. Dis. *39*:209.
3. MacFaddin. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, Md.

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