

PRODUCT INFORMATION

Product Type: Tubes

Cat No. TT134 - SIMMONS CITRATE AGAR

Intended Use:

Simmons Citrate Agar is recommended for the differentiation of the family Enterobacteriaceae based on whether or not citrate is utilized as the sole source of carbon.

Principles and uses:

The surface of the medium in the tubes is lightly inoculated by streaking and, where slopes are used, the butt of medium is inoculated by stabbing. Incubation for 48 hours at 35°C is recommended.

Positive growth (i.e. citrate utilization) produces an alkaline reaction and changes the color of the medium from green to bright blue, whilst in a negative test (i.e. no citrate utilization) the color of the medium remains unchanged. *Escherichia coli* including serotypes from epidemic infantile enteritis, as well as *Shigella*, *Yersinia* and *Edwardsiella* species do not grow on the medium. *Serratia* and the majority of the *Enterobacter*, *Citrobacter*, *Klebsiella*, *Proteus* and *Providencia* species, except *Morganella morganii* and *Klebsiella rhinoscleromatis* utilise citrate and produce the characteristic blue coloration.

Simmons Citrate Agar may be used to differentiate citrate-positive *Salmonella enteritidis* and members of *Salmonella* subgenus II, III and IV from the citrate-negative *Salmonella typhi*, *Salmonella paratyphi A*, *Salmonella pullorum* and *Salmonella gallinarum*.

Precautions:

It is important not to carry over any nutrients into the citrate medium because this will result in false positive tests. Dilute the inoculum in saline before inoculating the citrate medium to avoid a carry-over of other carbon sources.

Formulation

| | |
|-------------------------------|----------|
| Magnesium sulphate | 0.2 g/L |
| Ammonium dihydrogen phosphate | 0.2 g/L |
| Sodium ammonium phosphate | 0.8 g/L |
| Sodium citrate, tribasic | 2.0 g/L |
| Sodium chloride | 5.0 g/L |
| Bromothymol blue | 0.08 g/L |
| Agar | 15.0 g/L |

Storage: 15-25 °C

Final pH: 6.6 - 7.0

Appearance: Dark blue-green colored gel

Package contents: 20 Tubes

Shelf life: 3.5 months

Exp. Date: Printed on label and on the item.

Required materials not supplied: Laboratory equipment as required.

Warning and Precautions:

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Tubes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Tubes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

Waste Disposal

After interpretation all items should be destroyed by standard incineration methods.

Performance Testing Results

Streaking from fresh colony culture (+ Lignin)

| TEST | ATCC | Incubation Temp. (°C) | Incubation Cond. | Reaction 1 | |
|----------------------------------|-------|-----------------------|----------------------|------------|---------------|
| <i>Klebsiella pneumoniae</i> | 13883 | 33-37 °C | Aerobic, 18-24 hours | Growth | Blue reaction |
| <i>Enterobacter aerogenes</i> | 13048 | 33-37 °C | Aerobic, 18-24 hours | Growth | Blue reaction |
| <i>Salmonella typhimurium</i> | 14028 | 33-37 °C | Aerobic, 18-24 hours | Growth | Blue reaction |
| <i>Escherichia coli</i> | 25922 | 33-37 °C | Aerobic, 18-24 hours | Inhibited | |
| <i>Shigella flexneri</i> Type 29 | 29903 | 33-37 °C | Aerobic, 18-24 hours | Inhibited | |