

# PRODUCT INFORMATION



## Simmons Citrate Agar

Cat. No. S19-111

Date of Issue:  
10/01/17

### DESCRIPTION

Simmons Citrate Agar is used as a differential medium for the identification of enteric bacteria, using citrate as the sole source of carbon. Koser developed a fluid medium to determine citrate utilization with Simmon further modifying the formula by adding 1.5% agar and bromthymol blue as an indicator. The medium can be used to distinguish between *Escherichia coli* and *Enterobacter aerogenes* and to assist in differentiating members of the *Salmonella* genus. Organisms able to metabolize the citrate grow well on the surface of the medium and alkalize the medium changing it from green to blue

### PREPARATION

Mix 24.2 grams of the medium in one liter of purified water until evenly dispersed. Heat with repeated stirring to dissolve completely. Autoclave at 121°C for 15 minutes. After autoclaving, place medium on a slant and allow for solidification.

#### Formula\* per Liter:

|                                     |       |
|-------------------------------------|-------|
| Sodium Chloride .....               | 5.0g  |
| Sodium Citrate .....                | 2.0g  |
| Ammonium Dihydrogen Phosphate ..... | 1.0g  |
| Potassium Phosphate Dibasic .....   | 1.0g  |
| Magnesium Sulfate .....             | 0.2g  |
| Bromothymol Blue.....               | 0.08g |
| Agar.....                           | 15.0g |

**Final pH:** 6.9 ± 0.2 at 25°C

\* Grams per liter may be adjusted or formula supplemented to obtain desired performance.

### QUALITY CONTROL SPECIFICATIONS

1. The powder is homogeneous, free flowing light beige with a green tinge.
2. Visually the prepared medium is clear to trace hazy and forest green.
3. Expected cultural response after 18-48 hours at 35°C.

#### Organism:

*Escherichia coli* ATCC® 25922  
*Enterobacter aerogenes* ATCC® 13048  
*Salmonella typhimurium* ATCC® 14028  
*Salmonella choleraesuis* ATCC® 13076  
*Shigella flexneria* ATCC® 12022

#### Result:

Inhibition, Green Medium  
Growth, Blue Medium  
Growth, Blue Medium  
Growth, Blue Medium  
Inhibition, Green Medium

### STORAGE

Store the sealed bottle containing the dehydrated medium at 2 to 30°C. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect it from moisture and light. The dehydrated medium should be discarded if it is not free flowing or if the color has changed from the original color.