

**TECHNICAL SHEET**

<b>B1478</b>	<b>SIMMONS CITRATE AGAR</b>		
<b>Formula</b>			
<b>Ingredients:</b>		<b>gms/lit.</b>	
Ammonium dihydrogen phosphate	0.80		
Sodium Ammonium phosphate	0.80		
Sodium citrate	2.00		
Sodium chloride	5.00		
Magnesium sulphate	0.20		
Bromothymol blue	0.08		
Agar	15.00		
Final pH (at 25°C) :	7.0 ± 0.2		
<b>Directions :</b>			
Suspend 23.0 gms in 1000ml distilled water. Boil to dissolve the medium completely. Mix well & distribute in tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. All glassware must be chemically clean and alkali free.			
<b>Principle :</b>			
The ammonium dihydrogen phosphate is the sole source of nitrogen in Simmons Citrate Agar. Magnesium is a cofactor for a variety of metabolic reactions. Phosphate acts as a buffer. Sodium citrate is the sole source of carbon in this medium. Sodium chloride maintains the osmotic balance of the medium. Agar is the solidifying agent. Bromo thymol blue is the pH indicator. Organisms that can utilize ammonium dihydrogen phosphate and sodium citrate as their sole sources of nitrogen and carbon will grow on this medium and produce a colour change from green (neutral) to blue (alkaline).			
<b>QC Tests - (I) Dehydrated Medium</b>			
Colour :	Yellow		
Appearance :	Homogeneous Free Flowing powder		
<b>(II) Rehydrated medium</b>			
pH (post autoclaving/heating) :	7.0 ± 0.2		
Colour (post autoclaving/heating) :	Green forest green		
Clarity (post autoclaving/heating) :	Slightly opalescent		
<b>(III) Q.C. Test Microbiological</b>			
Cultural characteristics observed after 18 – 24 hrs.at 35- 37°C.			
MICROORGANISM (ATCC )	GROWTH	COLOUR OF MEDIUM	CITRATE UTILIZATION
Enterobacter aerogenes (13048)	Good - Luxuriant	Blue	+
Salmonella enteritidis (13076 )	Good - Luxuriant	Blue	+
Salmonella typhimurium (14028)	Good - Luxuriant	Blue	+
Salmonella typhi ( 6539 )	Fair to good	Green	-
Escherichia coli (25922)	Inhibited	Green	-
Shigella dysenteriae (13313 )	Inhibited	Green	-

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<b>Precautions :</b>	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
<b>Limitations :</b>	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
	2. When inoculating a variety of biochemicals, flame the inoculating loop or needle before streaking Simmons Citrate Agar or inoculate Simmons Citrate Agar first to avoid a false positive result.				
	3. Some citrate positive organisms require 48 hours or longer incubation for a pH change to occur.				
<b>Use:</b>	A synthetic medium recommended for differentiating members of Enterobacteriaceae on the basis of citrate utilization.				
<b>Storage:</b>	Dehydrated medium- below 30°C Prepared medium- Between 2 to 8°C.				
<b>Packing :</b>	500 gm bottle				
<b>Product profile:</b>	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
<b>B1478</b>	23.0 G/L	21.739 L	7.0 ± 0.2	Nil	121°C / 15 minutes

**Disclaimer:**

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