

Christensen Citrate Agar



Medium used for the differentiation of enteric pathogens and coliforms on the basis of citrate utilization.

*Equally use with QIA (MB-C0804Q).

• CONTENTS (Liter)

Sodium Citrate	3.0 g
Dextrose	0.2 g
Yeast Extract	0.5 g
L-Cysteine monohydrochloride	0.1 g
Ferric Ammonium Citrate	0.4 g
Monopotassium Phosphate	1.0 g
Sodium Chloride	5.0 g
Sodium Thiosulfate	0.08 g
Phenol Red	0.012 g
Agar	15.0 g
Final pH = 6.9 ± 0.2 at 25°C.	

• PROCEDURE

Suspend 25.24 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Mix well. Dispense in tubes. Arrange tubes in a slanted position. If necessary, dispense the medium before autoclave.

• INTERPRETATION

Christensen Citrate Agar is a medium used for the differentiation of enteric pathogens and coliforms on the basis of citrate utilization. Yeast extract provides vitamins. Dextrose provides carbohydrates. Sodium citrate provides the energy source for citrate utilizing organisms. L-cysteine monohydrochloride is the reducing agent. Monopotassium phosphate is the buffering agent. Sodium chloride maintains the osmotic balance. Ferric ammonium citrate is the component of H₂S indicator system. Sodium thiosulfate neutralizes iodine and chlorine. Phenol red is a pH indicator to changes its color to yellow. Agar is the solidifying agent.

• TECHNIC

Inoculate the tube to stab the bottom and spreading the specimen on the slant surface using a sterile needle. Incubate at 35 - 37 °C for 24 - 48 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: light yellow to pink.

Prepared medium

Appearance: clear with no precipitate.

Color: orange red.

Incubation conditions: 35 - 37 °C / 24 - 48 hours

Microorganism	ATCC	Growth	Citrate utilization
<i>Escherichia coli</i>	25922	good	-
<i>Enterobacter aerogenes</i>	13048	good	+
<i>Klebsiella pneumoniae</i>	13883	good	weakly positive
<i>Salmonella typhimurium</i>	14028	good	+
<i>Shigella flexneri</i>	12022	good	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

• REFERENCES

1. Christensen W.B., 1949, Research Bull., Weld County Health Dept., Greenley Co., 1:3.
2. Edwards P.R. and Ewing W. H., 1955 and 1962, Identification of Enterobacteriaceae Minneapolis, Burgess Publishing Co., pg. 179 and 242.
3. Horward B., 1994, Clinical and Pathogenic Microbiology, 2nd ed., Mosby Year Book, Inc.
4. Branson D., 1972, Methods in Clinical Bacteriology, Springfield, III: C. Thomas, 1
5. Refer to the QIA.

• PACKAGE

Cat. No : MB-C0804 Christensen Citrate Agar	500 G
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