CHRISTENSEN CITRATE AGAR

ProductInformation

Product Number **C7595**

Product Description
Christensen Citrate Agar is used for the differentiation of enteric pathogens and coliforms on the basis of citrate utilization. Organisms that metabolize citrate as a sole source of carbon cleave citrate to oxaloacetate and acetate via the citritase enzyme. Another enzyme, oxaloacetate decarboxylase, then converts oxaloacetate to pyruvate and CO_2. The CO_2 combines with sodium and water to form sodium carbonate, an alkaline compound. As a result, the pH of the medium rises and the phenol red indicator changes from orange red to cerise. The yeast extract provides the necessary vitamins for the growth of the microorganisms. L-cysteine hydrochloride functions as a reducing agent. Dextrose is the fermentable carbohydrate. Sodium citrate is the energy source for the citrate utilizing organisms. Care should be taken while inoculating, as a too heavy inoculum may give a false positive result (4).

Components

Item	g/L
Yeast Extract	0.50
L-Cysteine Hydrochloride	0.10
Sodium Citrate	3.00
Dextrose	0.20
Monopotassium Phosphate	1.00
Sodium Chloride	5.00
Phenol Red	0.012
Agar	15.00

Final pH (at 25°C) 6.9 ± 0.2

Precautions and Disclaimer For laboratory use only. Not for drug, household or other uses.

Preparation Instructions
Suspend 24.8 grams of Christensen Citrate Agar in 1000 mls of distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs. pressure (121°) for 15 minutes. Cool the tubes in a slanted position.

Storage
Store the dehydrated medium at 24°C and the prepared medium at 2-8°C.

Product Profile

Appearance	Light pink colored, homogeneous, free flowing powder.
Gelling	Firm
Color and Clarity	Orange red colored, very slightly opalescent gel forms in slants.
Cultural Response	Cultural characteristics observed after 24-48 hours at 37°C.

Organisms	(ATCC)	Growth	Slant Color
Escherichia coli	(25922)	luxuriant	no change
Enterobacter aerogenes	(13048)	luxuriant	Cerise
Salmonella typhimurium	(14028)	luxuriant	Cerise
Salmonella enteritidis	(13076)	luxuriant	Cerise
Klebsiella pneumoniae	(13883)	luxuriant	orange-pink
Shigella flexneri	(12022)	luxuriant	no change
Shigella sonnei	(25931)	luxuriant	no change

References

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2. Edwards P.R., et al., (1955 and 1962). Identification of Enterobacteriaceae. Burgess Publishing Co. Minneapolis p. 179 and 242.
3. Horward, B., (1994). Clinical and Pathogenic Microbiology. 2nd Edition. Mosby Year Book, Inc.
4. Branson, D.,(1972). Methods in Clinical Bacteriology, C. Thomas. 15. Springfield, Illinois.
5. American Type Culture Collection, Manassas, Va. U.S.A.

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