

**CAL AGAR (CELLOBIOSE ARGININE LYSINE AGAR)****TM 1152**for isolation and biochemical identification of *Yersinia enterocolitica***Composition**

Ingredients	Gms/Ltr.
Agar	20.00
L - Arginine	6.50
L - Lysine hydrochloride	6.50
Sodium chloride	5.00
Cellobiose	3.50
Yeast extract	3.00
Sodium deoxycholate	1.50
Neutral red	0.03

* Dehydrated powder, store in a dry place, in tightly-sealed containers at 24°C and protect from direct Sunlight.

Instructions for Use

Dissolve 46.00gms in 1000 ml of distilled water. Heat the medium to boiling with intermittent swirling and agitation till the medium dissolve completely. DO NOT AUTOCLAVE or DO NOT OVER HEAT. Cool to 45 - 50°C and mix well before pouring into the sterile Petri plates.

Appearance: Red colour, slightly opalescent gel

pH (at 25°C): 7.1 ± 0.2

Principle

CAL AGAR (CELLOBIOSE ARGININE LYSINE AGAR) is used for isolation and biochemical identification of *Yersinia enterocolitica*. *Yersinia enterocolitica* is a group of Gram negative bacteria which are responsible to cause the zoonotic disease called yersiniosis. The disease is also known as pseudotuberculosis which commonly infected through the consumption of contaminated foods such as undercooked meat products, unpasteurized milk or contaminated water. The medium contains Yeast extract to provide the carbon, nitrogen vitamins and other nutrients to growing organisms in the medium. Cellobiose is the source of carbohydrate and energy. The amino acids, L - Arginine and L - Lysine hydrochloride are added to make the medium differential; the amino acids will undergo decarboxylation reaction and functions for the same. Sodium deoxycholate is a selective agent which can inhibit the growth of undesired Gram positive bacteria. Sodium chloride is added to maintain the osmotic balance of the medium. Neutral red is a pH indicator which can alter the colour of the medium if acid is produced by the organisms through fermentation in the medium. Agar is used as a solidifying agent.



PRODUCT DATA SHEET

Interpretation

Cultural characteristics observed after inoculating the organisms and subsequent incubation at 35 – 37°C for 24 – 48 hours.

Microorganisms	ATCC	Inoculum (CFU)	Growth
<i>Yersinia enterocolitica</i>	27729	10 ³ - 10 ⁵	Luxuriant
<i>Escherichia coli</i>	25922	10 ³ - 10 ⁵	Good
<i>Proteus mirabilis</i>	25933	10 ³ - 10 ⁵	Good

References

1. Dudley M.V. and Shotts E.B. 1979. J. Clin. Microbiol., 10(2):180.
2. MacFaddin J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.