

Technical Information

Casein Hydrolysate Yeast Extract Broth

Product Code: DM 1910

Application: - CAYE broth is used for use in cultivation of *Vibrio cholerae* while testing their enterotoxigenicity.

Composition**

Ingredients	Gms / Litre
Casein acid hydrolysate	30.000
Yeast extract	4.000
Dipotassium phosphate	0.500
Dextrose	2.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Vibrio cholerae, a gram-negative bacterium is the causative agent of cholera outbreaks and epidemics. It is characterized by various biochemical properties and antigenic types. It can be differentiated from other halophilic *Vibrio* species because of its obligate requirement for sodium ion (1). Isolates of *V.cholerae* or *V.mimicus*, determined either biochemically or serologically, should be further tested for the production of cholera enterotoxin (CT) or cytotoxins Casein Hydrolysate Yeast Extract Broth is formulated as per APHA (2) for cultivating *Vibrio cholerae* while testing their enterotoxigenicity as these media inhibit the production of *Vibrio* enterotoxin.

The medium contents like casein acid hydrolysate and yeast extract supply the essential nitrogenous nutrients and B-vitamins to the growing *Vibrios*. Dextrose acts as a the fermentable carbohydrate. Dipotassium phosphate helps buffers the medium.

Inoculate test cultures from TN Agar (DM1950) slants to tubes of CAYE Broth and incubate overnight at 30° ± 2°C which is further used for immunological testing of enterotoxigenicity.

Methodology

Suspend 36.5 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat if necessary to ensure complete solution. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity

Amber coloured, clear solution without any precipitate

Reaction

Reaction of 3.65% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH Range

7.00-7.40

Cultural Response

DM1910: Cultural characteristics observed after an incubation at 32°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
<i>Vibrio cholerae</i> ATCC 15748	50-100	good-luxuriant



Dehydrated Culture Media
Bases / Media Supplements

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Singleton F. L., Atwell R., Jangi S., and Clowell R. R., 1982, Appl. Environ. Microbiol., 44:1047

2. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.

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