

Technical Data

Casitose Yeast Extract Broth (CAYE)

Intended Use:

Recommended for cultivation of Vibrio cholerae cultures while testing their enterotoxigenicity.

Composition**

Ingredients	g / L	
Acicase TM #	30.000	
Yeast extract	4.000	
Dipotassium hydrogen phosphate	0.500	
Dextrose (Glucose)	2.000	
Final pH (at 25°C)	7.2 ± 0.2	
**Formula adjusted, standardized to suit performance parameters		
# Equivalent to casein acid hydrolysate		

Directions

Suspend 36.5 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And 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 halolphillic *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. Casitose Yeast Extract Broth is formulated as per APHA (2) for cultivating *Vibrio cholerae* while testing their enterotoxigenicity as these media enhance the production of *Vibrio* enterotoxin.

The medium contents like AcicaseTM and yeast extract provide the essential nitrogenous nutrients and B-vitamins to the growing *Vibrio's*. Dextrose is the fermentable carbohydrate. Dipotassium phosphate helps buffers the medium. Inoculate test cultures from TN Agar (M950) slants to tubes of CAYE Broth and incubate overnight at $30^\circ \pm 2^\circ$ C which is further used for immunological testing of enterotoxigenicity.

Type of specimen

Clinical samples - Stool samples; Food samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

- 1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
- 2. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

M910

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder **Colour and Clarity of prepared medium** 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** 7.00-7.40

Cultural Response

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

Organism	Inoculum	Growth
	(CFU)	
Vibrio cholerae ATCC	50-100	good-luxuriant
15748		

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

- 1. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
- 2. Singleton F. L., Atwell R., Jangi S., and Clowell R. R., 1982, Appl. Environ. Microbiol., 44:1047
- 3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- 4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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