



# PRODUCT SPECIFICATION SHEET

## Casein Hydrolysate Yeast Extract Broth (CAYE) (DM1050)

### Intended Use

Casein Hydrolysate Yeast Extract Broth (CAYE) (DM1050) is recommended for cultivation of *Vibrio cholerae* cultures while testing their enterotoxigenicity.

### Product Summary and Explanation

*Vibrio cholerae*, a gram-negative, facultative anaerobe found in brackish or saltwater and is the causative agent of cholera outbreaks and epidemics. It is characterized by various biochemical properties and antigenic types and because of its obligate requirement for sodium ion; it can be differentiated from other halophilic *Vibrio* species.<sup>(1)</sup> 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 used for cultivating *Vibrio cholerae* while testing their enterotoxigenicity as these media enhance the production of *Vibrio* enterotoxin and is formulated as per APHA.<sup>(2)</sup>

### Principles of the Procedure

Casein Hydrolysate Yeast Extract Broth (CAYE) contains casein acid hydrolysate which provides nitrogenous compounds and other essential nutrients for growth of *Vibrios*. Yeast extract supplies B-vitamins to the growing *Vibrios*. Dextrose is the fermentable carbohydrate. Dipotassium phosphate serves as a buffering agent.

### Formula / Liter

Ingredients	Gms / Liter
Casein acid hydrolysate	30.00
Yeast extract	4.00
Dipotassium phosphate	0.50
Dextrose	2.00
Final pH : 7.2 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

### Directions

1. Suspend 36.5 grams of the medium in one litre distilled water.
2. Heat if necessary to ensure complete solution.
3. Dispense and autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

### Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Amber coloured, clear solution without any precipitate
Reaction of 3.65% Solution	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Not Applicable

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

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	<i>Vibrio cholerae</i> ATCC 15748	50-100	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.





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## Test Procedure

Inoculate test cultures from TN Agar (DM689) slants to tubes of CAYE Broth and incubate overnight at  $30^{\circ} \pm 2^{\circ}\text{C}$  which is further used for immunological testing of enterotoxigenicity. Refer to appropriate references for standard test procedures.

## Results

Refer to appropriate references for interpretation of results.

## Storage

Store the sealed bottle containing the dehydrated medium at  $10 - 30^{\circ}\text{C}$ . Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

## Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

## Packaging

**Product Name : Casein Hydrolysate Yeast Extract Broth (CAYE)**

**Product Code : DM1050**

**Available Pack sizes : 500gm**

## References

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, 4<sup>th</sup> Ed., APHA, Washington, D.C.

## Further Information

For further information please contact your local MICROMASTER Representative.



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DM1050PSS,QAD/FR/024,Rev.00/01.01.2018





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