Casitose Yeast Extract Salts Broth Base (CAYES)

M1238

Intended Use:

Recommended for isolation of *Escherichia coli* in food in accordance with APHA.

Composition**

Ingredients	g / L
Acicase™ #	20.000
Yeast extract	6.000
Sodium chloride	2.500
Dipotassium hydrogen phosphate	8.710
Final pH (at 25°C)	8.5±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Casein Acid hydrolysate

Directions

Suspend 37.21 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. If desired add 1ml of filter sterilized Trace Salts Solution (containing 5.0% magnesium sulphate, 0.5% manganese chloride, 0.5% ferric chloride dissolved with 0.1N Sulphuric acid).

Principle And Interpretation

Casitose Yeast Extract Salts Broth Base (CAYES) is recommended by APHA (1) for cultivation of *Escherichia coli* from food samples.

Acicase and yeast extract provide necessary nitrogenous source, for growth of *E.coli.*

Salts in the medium that is sodium chloride and dipotassium phosphate maintains osmotic balance of the cell. Dipotassium phosphate also helps in buffering of the medium.

Type of specimen

Food samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. This medium is general purpose medium and may not support the growth of fastidious organisms.
2. Further biochemical tests must be carried out for confirmation.

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.

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 3.72% w/v aqueous solution at 25°C. pH : 8.5±0.2

pH

8.30-8.70

Cultural Response

Cultural characteristics after an incubation at 35-37°C for 18-24 hours

Organism	Inoculum (CFU)	Growth
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.

2. 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.

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.

Revision : 03 / 2024