



## Craig's Medium

M974

Craigs Medium is recommended for 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
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 34.5 grams in 1000 ml distilled water. Heat if necessary to ensure complete solution. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to room temperature. Aseptically add 2 ml of filter sterilized 20% glucose solution per 100 ml. Mix well.

### Principle And Interpretation

*Vibrio cholerae* is a gram-negative bacterium that causes cholera in humans. Cholera is the prototype of diarrheal syndromes in which the disease is caused through the production of toxins that interrupt normal intra-intestinal exchange of water and electrolytes. A variety of laboratory diagnosis of cholera and toxin detection have been developed.

Craigs Medium has similar composition to that of CAYE Broth, which was formulated as per APHA (1) for cultivating *V. cholerae* while testing their enteropathogenicity.

For testing the enterotoxin production of *V. cholerae*, the culture is to be grown in Craigs Medium as this medium enhances the production of *Vibrio* enterotoxin. Medium contents like casein acid hydrolysate and yeast extract provide the essential nitrogenous nutrients and B-complex vitamins to the growing *Vibrios*. Dipotassium phosphate helps in maintaining buffering conditions in the medium. Glucose is the energy source.

Inoculate test cultures from TN Agar (M950) slants to tubes of Craigs Medium and incubate overnight at  $30 \pm 2^\circ\text{C}$  which is then further used for immunological testing of enterotoxigenicity.

### Quality Control

#### Appearance

Light yellow to beige homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Amber coloured, clear solution without any precipitate

#### Reaction

Reaction of 3.45% w/v aqueous solution at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

M974: Cultural characteristics observed after an incubation at 25-30°C for 18-24 hours.

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

### Storage and Shelf Life

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

### Reference

1. 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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