

# GC (Chocolate Agar Base) Agar



Medium used for the isolation and cultivation of Haemophilus spp. and Neisseria spp.

## • CONTENTS (Liter)

Proteose Peptone No.3	15.0 g
Corn Starch	1.0 g
Dipotassium Phosphate	4.0 g
Monopotassium Phosphate	1.0 g
Sodium Chloride	5.0 g
Agar	17.0 g
Final pH = 7.2 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 43.0 G of powder in 950 mL - 900 mL of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Aseptically add 5 - 10% of Horse Blood Defibrinated (MB-H1883) and heat in a water bath heat-controlled to 80°C for 15 minutes. Cool to 45 - 50°C in water bath. To improve the nutritional characteristics of the medium, Vitalex Growth supplement (MB-V1823) can be added. Aseptically Add 2 vials of antibiotic supplements such as V.C.N. supplement (MB-V1822), V.C.N.T. supplement (MB-V1824), V.C.A.T. supplement (MB-V1841) or L.C.A.T. supplement (MB-1812) to increase the selectivity of the medium. Mix well. Pour into petri dishes.

### Vitalex Growth supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

Vitamin B12	0.05 mg
L-Glutamine	50.0 mg
Adenine SO <sub>4</sub>	5.0 mg
Guanine HCl	0.15 mg
p-Aminobenzoic Acid	0.065 mg
NAD (Coenzyme 1)	1.25 mg
Ferric Nitrate	0.1 mg
Cysteine Hydrochloride	129.5 mg
Glucose	500.0 mg
Cystine	5.5 mg
Thiamine Hydrochloride	0.015 mg
Thiamine Pyrophosphate	0.5 mg

### V.C.N. supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

Vancomycin	1.5 mg
Colistin Sulfate	3.75 mg
Nystatin	6,250 IU

**V.C.N.T. supplement**

1 vial contents (each vial is sufficient for 500 mL of medium)

Vancomycin	1.5 mg
Colistin Sulfate	3.75 mg
Nystatin	6,250 IU
Trimethoprim	2.5 mg

**V.C.A.T. supplement**

1 vial contents (each vial is sufficient for 500 mL of medium)

Vancomycin	1.0 mg
Colistin Sulfate	3.75 mg
Amphotericin B	0.5 mg
Trimethoprim	1.5 mg

**L.C.A.T. supplement**

1 vial contents (each vial is sufficient for 500 mL of medium)

Lincomycin	0.5 mg
Colistin Sulfate	3.0 mg
Amphotericin B	0.5 mg
Trimethoprim	3.25 mg

**• INTERPRETATION**

GC (Chocolate Agar Base) Agar is a medium used for the isolation and cultivation of *Haemophilus* spp. and *Neisseria* spp. Proteose peptone No.3 provides nitrogen, carbon, vitamins and minerals for the growth of microorganisms. Corn starch neutralizes toxic metabolic by products. Dipotassium phosphate and monopotassium phosphate are the buffering agents. Sodium chloride maintains the osmotic balance. Agar is the solidifying agent. Vitalex Growth supplement provides V factor (NAD) for *Haemophilus* species and vitamins, amino acids, coenzymes, glucose, ferric ions and other factors which improve the growth of pathogenic *Neisseria*. V.C.N. supplement, V.C.N.T. supplement and V.C.A.T. supplement are used for the isolation of *Neisseria* spp. L.C.A.T. supplement is used for the isolation of pathogen *Neisseria* spp.

**• TECHNIC**

Inoculate the specimen using a sterile loop to the medium. Incubate at  $35 \pm 2^{\circ}\text{C}$  for 24 - 48 hours under microaerobic condition. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

### Prepared medium

Appearance: opaque

Color: chocolate brown

Incubation conditions:  $35 \pm 2^{\circ}\text{C}$  / 24 - 48 hours under microaerobic condition

Microorganism	ATCC	Growth
<i>Neisseria meningitidis</i>	13100	good
<i>Haemophilus influenzae</i>	19418	good

Incubation conditions:

$35 \pm 2^{\circ}\text{C}$  / 24 - 48 hours under microaerobic condition / basal medium + selective supplement (V.C.N., V.C.N.T., V.C.A.T. or L.C.A.T. supplement)

Microorganism	ATCC	Growth
<i>Neisseria meningitidis</i>	13100	good
<i>Staphylococcus aureus</i>	25923	partially inhibited

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at  $2 - 8^{\circ}\text{C}$ .

## • REFERENCES

1. Chapin, C.K., G.V. Doern (1983). J. Clin. Microbiol. 17: 1163-1165.
2. Martin, J.E., Armstrong J.H., Smith P.B. (1974). Appl. Microbiol. 27: 802-805.
3. NCCLS document M22-A2, 1996. Quality Assurance for Commercially prepared Microbiological Culture Media-Second ed. Approved Standard.
4. Seth, A. (1970). Brit. J. Vener. Dis. 46: 201-202.

## • PACKAGE

Cat. No : MB-G1022 GC (Chocolate Agar Base) Agar	500 G
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