

## G.C. MEDIUM

Basal medium for *Haemophilus spp* and *Neisseria spp* isolation and cultivation.

### TYPICAL FORMULAS

| G.C. MEDIUM                    | (g/l) |
|--------------------------------|-------|
| Proteose Peptone No.3          | 15.0  |
| Corn Starch                    | 1.0   |
| Potassium Phosphate, Dibasic   | 4.0   |
| Potassium Phosphate, Monobasic | 1.0   |
| Sodium Chloride                | 5.0   |
| Agar                           | 17.0  |

| V.C.N. supplement | (mg / vial *) |
|-------------------|---------------|
| Vancomycin        | 1.5 mg        |
| Colistin Sulfate  | 3.75 mg       |
| Nystatin          | 6250 UI       |

\*1 vial for 500 ml of medium

| V.C.N.T. supplement | (mg / vial *) |
|---------------------|---------------|
| Vancomycin          | 1.5 mg        |
| Colistin Sulfate    | 3.75 mg       |
| Nystatin            | 6250 UI       |
| Trimethoprim        | 2.5 mg        |

\*1 vial for 500 ml of medium

| VITALEX growth supplement | (mg / vial *) |
|---------------------------|---------------|
| Vitamin B12               | 0.1 mg        |
| L-Glutamine               | 100.0 mg      |
| Adenine SO <sub>4</sub>   | 10.0 mg       |
| Guanine HCl               | 0.3 mg        |
| p-Aminobenzoic Acid       | 0.13 mg       |
| NAD (Coenzyme 1)          | 2.5 mg        |
| Coccarboxylase            | 1.0 mg        |
| Ferric Nitrate            | 0.2 mg        |
| Thiamine hydrochloride    | 0.03 mg       |
| Cysteine hydrochloride    | 259.0 mg      |

### VITALEX RESTORING solution

|                 |        |
|-----------------|--------|
| Glucose         | 0.5 mg |
| Distilled water | 5.0 ml |

\*1 vial for 500 ml of medium

| HAEMOPHILUS supplement | (mg / vial *) |
|------------------------|---------------|
| Bacitracin             | 150.0 mg      |
| Vancomycin             | 5.0 mg        |
| Clyndamicin            | 0.5 mg        |

\*1 vial for 500 ml of medium

| L.C.A.T. supplement | (mg / vial *) |
|---------------------|---------------|
| Lincomycin          | 0.5 mg        |
| Colistin Sulfate    | 3.0 mg        |
| Amphotericin B      | 0.5 mg        |
| Trimethoprim        | 3.25 mg       |

\*1 vial for 500 ml of medium

| V.C.A.T. supplement | (mg / vial *) |
|---------------------|---------------|
| Vancomycin          | 1.0 mg        |
| Colistin Sulfate    | 3.75 mg       |
| Amphotericin B      | 0.5 mg        |
| Trimethoprim        | 1.5 mg        |

\*1 vial for 500 ml of medium

Final pH = 7.2 ± 0.2 at 25 °C.



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## DIRECTIONS

Suspend 43.0 g of powder in 1 liter of distilled or deionized water. Heat until completely dissolved.

Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C.

Add 5-10% of defibrinated horse blood (code 83396) to the sterilized medium aseptically and heat in a water bath heat-controlled to 80 °C for 15 minutes.

Cool to 45-50 °C and add 2 vial of Vitalex growth supplement reconstituted with 5 ml of Vitalex restoring solution (code 81023). Additionally add 2 vial of V.C.N. supplement (code 81022), reconstituted with 5 ml of distilled water, in order to obtain a *Neisseria* selective medium.

For the examination of specimens of rectal origins, V.C.N.T. supplement (code 81024), instead of V.C.N. supplement, may be added in order to inhibit the overgrowth and swarming of *Proteus spp.*

Add 2 vial of Haemophilus supplement (code 81014), reconstituted with 5 ml of distilled water, in order to obtain a *Haemophilus* selective medium. Prepare the medium as directed and pour into Petri dishes.

## DESCRIPTION

G.C. MEDIUM, supplemented with enrichment and selective supplements, is used to isolate and cultivate gonococci, meningococci and *Haemophilus spp.* Haemophilus supplement, containing bacitracin, vancomycin and clindamycin, can be added for the selective isolation of *H. influenzae* from specimens contaminated with upper respiratory tract microbial flora.

## TECHNIQUE

Inoculate by rolling a culture swab across a segment of the plate or in a large "Z" pattern so that an adequate area of the plate is inoculated. Streaking of the plate is carried out with a sterile loop to ensure an adequate dispersion of the organisms. Plates are incubated at 36 ± 1 °C, in a sealed jar with at least 70% humidity and 5-10% carbon dioxide. Examine the plates after 24 hours incubation and, if negative, incubate for further 24 hours. Presumptive gonococcus colonies are identified by the Gram stain, oxidase and sugar fermentation reactions.

## QUALITY CONTROL

### Dehydrated medium

Appearance: free-flowing granules.

Color: beige.

### Prepared medium

Appearance: opaque.

Color: chocolate brown.

Incubation conditions: 36 ± 1 °C for 24-48 hours, 5-10% CO<sub>2</sub>, basal medium.

| Microorganism                 | ATCC  | Growth |
|-------------------------------|-------|--------|
| <i>Neisseria gonorrhoeae</i>  | 43069 | good   |
| <i>Haemophilus influenzae</i> | 10211 | good   |

Incubation conditions:

36 ± 1 °C for 24-48 hours, 5-10% CO<sub>2</sub>, basal medium + V.C.N., V.C.N.T., V.C.A.T. or L.C.A.T. supplement.

| Microorganism                 | ATCC  | Growth              |
|-------------------------------|-------|---------------------|
| <i>Neisseria gonorrhoeae</i>  | 43069 | good                |
| <i>Neisseria meningitidis</i> | 13090 | good                |
| <i>Staphylococcus aureus</i>  | 25923 | partially inhibited |

Incubation conditions:

36 ± 1 °C for 24-48 hours, 5-10% CO<sub>2</sub>, basal medium + Haemophilus supplement.

| Microorganism                 | ATCC  | Growth |
|-------------------------------|-------|--------|
| <i>Enterococcus faecalis</i>  | 19433 | good   |
| <i>Haemophilus influenzae</i> | 10211 | good   |

## PERFORMANCE AND LIMITATIONS

G.C. Medium is intended for use with supplementation. Although certain diagnostic tests may be directly on this medium, biochemical and, if indicated, immunological testing using pure cultures are recommended for complete identification. Improper specimen collection, environment, temperature, CO<sub>2</sub> level, moisture and pH can adversely affect the growth and the viability of the organisms.



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### STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.  
Store prepared plates at 2-8 °C.








### REFERENCES

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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.

### PRESENTATION

| Product                   | REF    | $\Sigma$ |
|---------------------------|--------|----------|
| G.C. MEDIUM (11.6 l)      | 610022 | 500 g    |
| G.C. MEDIUM (2.3 l)       | 620022 | 100 g    |
| HORSE BLOOD DEFIBRINATED  | 83396  | 100 ml   |
| VITALEX growth supplement | 81023  | 10 vials |
| L.C.A.T. supplement       | 81012  | 10 vials |
| V.C.A.T. supplement       | 81041  | 10 vials |
| V.C.N. supplement         | 81022  | 10 vials |
| V.C.N. T. supplement      | 81024  | 10 vials |
| HAEMOPHILUS supplement    | 81014  | 10 vials |

### TABLE OF SYMBOLS

|                             |   |  |   |  |
|-----------------------------|---|--|---|--|
| <b>LOT</b> Batch code       |  Caution, consult accompanying documents |  Manufacturer |  Contains sufficient for <n> tests | <b>IVD</b> <i>In Vitro</i> Diagnostic Medical Device   |
| <b>REF</b> Catalogue number |  Fragile, handle with care               |  Use by       |  Temperature limitation            |  Keep away from heat source |



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