

GC Agar

For the isolation and cultivation of *Neisseria gonorrhoeae* and other fastidious organisms.

REF: BS.1/GC01.100.0100	100 Gram	REF: BS.1/GC01.250.01250	250 Gram
REF: BS.1/GC01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

GC Agar is used with lysed blood and other supplements for the isolation and cultivation of *Neisseria gonorrhoeae* and other fastidious organisms. GC Agar is not intended for use in the diagnosis of disease or other conditions in humans.

METHOD PRINCIPLE

The rich peptone mixture is enhanced by the use of corn starch to absorb toxic metabolites and a buffering system is used to maintain neutral pH. The medium is made selective by the use of various antibiotic cocktails. Thayer and Martin originally recommended the use of vancomycin, colistin and nystatin and the addition of trimethoprim which is useful in preventing the swarming of proteus. More recently the emergence of vancomycin sensitive gonococci has made the selective agents (lincomycin, colistin, amphotericin, trimethoprim) the combination of choice. Enrichment of the base is usually by the addition of lysed blood. Alternatively, chocolate blood or hemoglobin powder and Thayer and Martin's mixture of vitamins, amino acids and coenzymes can be used. GC Growth Supplement can be added to this medium to aid in the isolation of *Neisseria* spp.

MEDIA COMPOSITION

Item	Formula per liter of medium
-Peptone	15.0 gm
-Corn Starch	1.0 gm
-Sodium Chloride	5.0 gm
-Dipotassium Hydrogen Phosphate	4.0 gm
-Potassium Dihydrogen Phosphate	1.0 gm
-Agar	10.0 gm

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
S56: dispose of this material and its container at hazardous or special waste collection point.
S57: use appropriate container to avoid environmental contamination.
S61: avoid release in environment.

For further information, refer to the GC Agar material safety data sheet.

STORAGE AND STABILITY

BioScien GC Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on

the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

Final pH 7.2 ± 0.2 at 25°C

PREPARATION

Dissolve 36 grams in 1 liter of distilled water. Boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C Aseptically add 5-10% sterile defibrinated blood. Heat in a water bath at 70-80°C. Remove when the medium turns chocolate brown. Pour into sterile petri dishes.

Deterioration

The color of **BioScien** GC Agar is Cream to yellow homogeneous free flowing powder. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Clinical samples : urine, respiratory exudates

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after incubation at 35-37°C for 18-24H, then sub-cultured on MacConkey Agar, incubated and examined after 18-24 hours.

Microorganism	Result
<i>Haemophilus influenzae</i> ATCC 19418	Good Luxuriant growth
<i>Streptococcus pyogenes</i> ATCC 19615	Good Luxuriant growth
<i>Streptococcus pneumoniae</i> ATCC 6303	Good Luxuriant growth
<i>Neisseria gonorrhoeae</i> ATCC 19424	good-luxuriant (with added antibiotic supplements)
<i>Neisseria meningitidis</i> ATCC 13090	good-luxuriant (with added antibiotic supplements)

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact **BioScien** technical support.

REFERENCES

1. Martin J. E. and Lester A., 1971, HSMHA Health Rep., 86:30.
2. Murray P. R., Baron E. J., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C
3. Johnston J., 1945, J. Vener. Dis. Inform., 26:239.
4. Carpenter C. M. and Morton H. E., 1947, Proc. N.Y. State Assoc. Public Hlth. Lab., 27:58.
5. Young, H. 1978. Cultural diagnoses of gonorrhoea with modified New York City (MNYC) medium. Brit. Journ. Ven. Dis. 54: 36-40:
6. Thayer, J. D. and Martin, J. E. 1966. Improved medium selective for the cultivation of N. gonorrhoeae and N. Meningitidis: Public Health rep. 81: 559-562.

SYMBOLS IN PRODUCT LABELLING	
 For in-vitro diagnostic use	 Number of <n> test in the pack
 Batch Code/Lot number	 Caution
 Catalogue Number	 Do not use if package is damaged
 Temperature Limitation	 Consult Instruction for use
 Expiration Date	
 Manufactured by	