Technical Data

GC Agar Plate

MP434

Intended Use:

GC Agar Base, with added haemoglobin is recommended for selective isolation and cultivation of Gonococci.

Composition**

Ingredients	g / L
Peptone, special	15.000
Corn starch	1.000
Dipotassium hydrogen phosphate	4.000
Potassium dihydrogen phosphate	1.000
Sodium chloride	5.000
Agar	10.000
Final pH (at 25°C)	7.2±0.2

Ingredients	Concentration
Haemoglobin(FD022)	10.00g

Vitamino growth supplement (FD025)

Ingredients	Concentration
Part I	"
Vitamin B12	0.100mg
L-Glutamine	100mg
Adenine sulphate	10mg
Guaninine hydrochloride	0.300mg
p-Aminobenzoic acid (PABA)	0.130mg
L-Cystine	11mg
NAD (Coenzyme I)	2.500mg
Cocarboxylase	1mg
Ferric nitrate	0.200mg
Thiamine hydrochloride	0.030mg
Cysteine hydrochloride	259mg
Part II (Rehydrating fluid)	"
Dextrose	1g
Distilled water	10ml

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Majority of gonococcal infections are uncomplicated lower genital tract infection caused by direct infection of the columnar epithelium of mucosal membranes. Neisseria gonorrhoeae is the causative agent of gonococcal infections. Most Neisseria strains have complex growth requirements; some strains may be exquisitely sensitive to fatty acids, necessitating the incorporation of soluble starch in the growth media (1). Johnston developed a medium that could obtain the growth of Neisseria within 24 hours rather than the usual 48 hours (2). This medium was later modified by Carpenter and Morton (3), by the addition of haemoglobin. This can be replaced with a chemically defined supplement containing essential growth factors available from yeast extract in Vitamino Growth Supplement (Twin Pack) (FD025). X-factor needed for the growth of fastidious Haemophilus species is provided by haemoglobin (FD022).

GC Agar contains special peptone, which supplies essential nutrients to the organisms. The presence of starch ensures that the toxic metabolites produced by *Neisseria* are neutralized. Phosphates prevent changes in the pH due to amine production that can affect the survival of the organisms. Factor-X (hemin) needed for *Haemophilus* species is provided by haemoglobin. The other supplements added provide factor-V i.e. NAD (Nicotinamide Adenine dinucleotide) for *Haemophilus* species and amino acids, coenzymes, ferric ions etc, which improve the growth of pathogenic *Neisseria.* Avoid cotton wool for specimen collection. Inoculate immediately after specimen collection. Specimens should be streaked on the surface of plates so as to get some areas heavily seeded and other areas lightly seeded. Incubation is done at 37°C in an atmosphere of 70% humidity and 5-10% carbon dioxide. All presumptive *Neisseria* must be confirmed by carbohydrate fermentation tests and other serological tests.

Type of specimen

Clinical samples : Respiratory exudates

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Growth supplements like haemoglobin and Vitamino growth supplements must be added for growth of fastidious organisms like *Haemophilus* and Gonococci.
2. Carry out confirmatory tests of all the colonies.

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

Sterile GC Agar Base in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles

Colour of medium

Chocolate brown coloured medium

Quantity of medium

25ml of medium in 90mm disposable plate

pH

7.00-7.40

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed in presence of 5-10% Carbon dioxide (CO2) and 70% humidity after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Haemophilus influenzae ATCC 19418	50-100	good-luxuriant	>=50%
Neisseria gonorrhoeae ATCC 19424	50-100	good-luxuriant	>=50%
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant	>=50%
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant	>=50%
Streptococcus pneumoniae ATCC 6303	50-100	good-luxuriant	>=50%

Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques

Reference

1.Murray P. R., Baron E. J., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2.Johnston J., 1945, J. Vener.26:239.
3.Carpenter C. M. and Morton H. E., 1947, Proc. N.Y. State
4.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S Manual of Clinical Microbiology, 11th Edition. Vol. 1.and Warnock, D.W.(2015).

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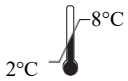
IVD *In vitro* diagnostic medical device



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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