



## Modified Proteose Agar

M1606

Modified Proteose Agar is used with added enrichment for the isolation and cultivation of *Neisseria* and *Haemophilus* species.

### Composition\*\*

Ingredients	Gms / Litre
Proteose peptone	20.000
Dextrose	0.500
Sodium chloride	5.000
Disodium phosphate	5.000
Agar	15.000
Final pH ( at 25°C)	7.3±0.2

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

### Directions

Suspend 45.5 grams in 490 ml distilled water. Mix thoroughly. Heat to boiling with frequent agitation to dissolve the medium. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add 500 ml sterile 2% solution of haemoglobin (FD022) and 10 ml of Vitamino Growth Supplement (FD025). Mix thoroughly.

### Principle And Interpretation

Most *Neisseria* and *Haemophilus* strains are nutritionally fastidious and have complex growth requirements. All *Haemophilus* species require either exogenous hemin (X-Factor), NAD (V- Factor) or both (1).

Modified Proteose Agar is generally used for the isolation of *Neisseria*. With added haemoglobin and Vitamino Growth Supplement (FD025) (2, 3), the medium is used for the isolation of gonococci and *Haemophilus*.

Proteose peptone (equivalent to Proteose Peptone No.3) provides nitrogen, vitamins and amino acids. Dextrose is a carbon source. Sodium chloride maintains the osmotic balance in the medium, while disodium phosphate buffers the medium. Modified Proteose Agar is intended for use with supplementation by 2% Haemoglobin and Vitamino Growth Supplement (FD025) which improves the growth rate of *Neisseria* and *Haemophilus* species. Haemoglobin provides X factor (hemin) required for growth of *Haemophilus* and enhances growth of *Neisseria*. Vitamino Growth supplement serves as an additional source of glutamine and co-carboxylase. Refer appropriate references for standard procedures (1, 4, 5).

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Basal medium: Light to medium amber coloured opalescent gel with slight flocculent precipitate. After addition of haemoglobin : Chocolate brown coloured opaque gel forms in Petri plates

#### Reaction

Reaction of 4.55% w/v aqueous solution at 25°C. pH : 7.3±0.2

#### pH

7.10-7.50

#### Cultural Response

M1606: Cultural characteristics observed with added 2% haemoglobin solution (FD022), Yeast autolysate Supplement (FD027) or Vitamino Growth Supplement (FD025), after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
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<i>Neisseria gonorrhoeae</i> ATCC 43070	50-100	good	50-70%
<i>Neisseria meningitidis</i> ATCC 13102	50-100	good	50-70%
<i>Neisseria sicca</i> ATCC 9913	50-100	good	50-70%
<i>Haemophilus influenzae</i> ATCC 10211	50-100	good	50-70%

### 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. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Lankford C. E., Scott V., Cox M. F. and Cooke W. R., 1943, J. Bacteriol., 45:321.
3. Lankford C. E. and Snell E. E., 1943, J. Bacteriol., 45:410.
4. Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol.1, American Society for Microbiology, Washington, D.C.
5. Forbes B. A., Sahm A. S., and Weissfeld D. F., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed. Mosby, Inc., St. Louis, Mo.

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