

CM 20525 – CYSTINE HEART AGAR BASE

INTENDED USE

For isolation, detection and cultivation of saprophytic fungi, yeasts and moulds.

PRODUCT SUMMARY AND EXPLANATION

Francisella tularensis is the cause of tularemia, a plague-like disease of rodents and other small organisms. It was first described in humans in 1907. The organisms are strict aerobes; fresh isolates cannot be cultured on ordinary medium but require a complex medium containing blood, or tissue extracts and cystine. Several media formulations were employed to isolate this microorganism. Blood Dextrose Cystine Agar, described by Francis was found to be satisfactory for cultivating F.tularensis. Addition of 0.05% cystine and 1% dextrose to Heart Infusion Agar can also be employed for cultivation of F.tularensis. Subsequently haemoglobin was added to Cystine Heart Agar Base to develop a satisfactory cultivation medium for F.tularensis. This medium is also known as Cystine Glucose Blood Agar and is the most suitable medium for isolating F.tularensis. Hemoglobin provides additional nutrients and growth factors. This medium also supports growth of gram-negative cocci and other pathogenic microorganisms without additional enrichment. Cystine Heart Agar Base can be supplemented with Rabbit blood and antimicrobial agents.

This medium is a nutritionally rich medium, which may also be used for cultivating many other organisms generally difficult to grow. Overgrowth by contaminating organisms can be reduced by incorporating 100-500 units penicillin per ml into the medium. F.tularensis is a Biosafety Level 2 pathogen that can be transmitted by aerosols or by penetration of unbroken skin. Wearing of gowns, gloves and masks is recommended for people handling suspected infectious material.

COMPOSITION

Ingredients	Gms / Ltr
Beef heart infusion (solids)	10.000
Proteose peptone	10.000
Dextrose	10.000
Sodium chloride	5.000
L-Cystine	1.000
Agar	15.000

PRINCIPLE

Beef heart infusion (solids) and proteose peptone are sources of carbon, nitrogen, vitamins and minerals. Dextrose is an energy source. L-Cystine is the source of amino acid. Sodium chloride provides the essential ions.

INSTRUCTION FOR USE

Dissolve 51 grams in 1000 ml purified/ distilled water.

Heat to boiling to dissolve the medium completely.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

When to be enriched with haemoglobin (2%), suspend 10.2 grams of medium in 100 ml distilled water.

Sterilize as above. Cool medium to 50°C and aseptically add 100 ml of 2% sterile haemoglobin solution.

Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Basal medium :Amber coloured clear to slightly opalescent gel After addition of 2% haemoglobin solution: Chocolate brown coloured opaque gel forms in Petri plates.
pH (at 25°C)	: 6.8±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 2% Haemoglobin.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Francisella tularensis	29684	50-100	Luxuriant	>=70%	35-37°C	40-48 Hours
Neisseria meningitidis	13090	50-100	Luxuriant	>=70%	35-37°C	40-48 Hours
Streptococcus pneumoniae	6303	50-100	Luxuriant	>=70%	35-37°C	40-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	>=70%	35-37°C	40-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.




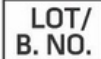








DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

- Francis, 1928, JAMA, 91:1155.
- Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. 1. American Society for Microbiology, Washington, D.C.
- Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
- Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., Tenover F. C., (Ed.), 1999, Manual of Clinical Microbiology, 7th Ed. American Society for Microbiology, Washington, D.C.
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- U.S. Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, 1999, Biosafety in Microbiological and Biomedical Laboratories, 4th Ed., HHS Publication.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckhorn 10 48163 Huesenik, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
*For LabUse Only

