

TM 2052 – DEXTROSE STARCH AGAR

INTENDED USE

For propagating pure cultures of *Neisseria gonorrhoeae* and other fastidious organisms.

PRODUCT SUMMARY AND EXPLANATION

Neisseria is a large group of gram-negative proteobacteria. *Neisseria meningitidis*, the causative agent of meningitis, is responsible for a large amount of morbidity and mortality throughout the world while *Neisseria gonorrhoeae* is the causative agent of the sexually transmitted disease gonorrhea that is second in cases reported only to chlamydia (CDC). These fastidious organisms can be cultivated on Dextrose Starch Agar. The medium is highly nutritious and supports the luxuriant growth of various fastidious organisms like *N. meningitidis*, *Streptococcus pyogenes* and *Streptococcus pneumoniae* without the need of supplementation with additives. Organisms lacking the ability of starch hydrolysis can be maintained on this medium. Organism capable of hydrolyzing starch will create acidic conditions thereby making it unsuitable for maintenance.

Dextrose Starch Agar was used to test the activity of various antibiotics against *Neisseria* species by the agar dilution technique as demonstrated by Wilkins, Lewis and Barbiers. *N. meningitidis* grow luxuriantly on this medium, when the plates are kept in 4-6% CO₂ environment or in the presence of abundant moisture. Swancara has described a method of obtaining partial carbon-dioxide tension and this can be used for incubation of Dextrose Starch Agar plates inoculated with *N. meningitidis*.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	15.000
Dextrose (Glucose)	2.000
Starch, soluble	10.000
Sodium chloride	5.000
Disodium hydrogen phosphate	3.000
Gelatin	20.000
Agar	10.000

PRINCIPLE

The medium consists of Proteose peptone and gelatin which serve as sources of nitrogen and carbon essential for microbial growth. Dextrose serves as the energy source. Starch neutralizes toxic fatty acids that may be present in the agar. Sodium chloride maintains the osmotic balance and buffering is achieved by inclusion of disodium phosphate.

INSTRUCTION FOR USE

- Dissolve 65 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense in tubes as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the medium in a slanted position.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured, opalescent gel with flocculent precipitate forms in tubes as slants.
pH (at 25°C)	: 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation in an anaerobic environment.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Neisseria gonorrhoeae</i>	19424	50-100	Luxuriant	35-37 °C	18-48 Hours
<i>Neisseria meningitidis</i>	13090	50-100	Luxuriant	35-37 °C	18-48 Hours
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxuriant	35-37 °C	18-48 Hours
<i>Streptococcus pyogenes</i>	19615	50-100	Luxuriant	35-37 °C	18-48 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

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. 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.
3. Swancara, 1948, Am. J. Med. Tech., 14:214.
4. Wilkins, Lewis and Barbiers, 1956, Antibiot. Chemother., 6:149.



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 Buckstrasse 10 48163 Münster, 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 Lab Use Only**
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