

TM 2269 – PLET AGAR BASE, MODIFIED

INTENDED USE

For selective isolation and cultivation of *Bacillus anthracis*.

PRODUCT SUMMARY AND EXPLANATION

Anthrax is an infectious disease caused by spores of the bacterium *Bacillus anthracis*. In human anthrax, the bacillus is usually demonstrable in material from a malignant pustule, sometimes in sputum from pulmonary anthrax and also in the blood in the septicemic stage of all forms of the infections. Man is relatively resistant to anthrax and laboratory workers are rarely infected. However great care should be taken to avoid escape of the long surviving spores into laboratory environment and all the procedures should be carried out in safety cabinet. Anthrax cannot spread directly from human to human but anthrax spores can be transported by human clothings, shoes etc. In humans, anthrax is caused by exposure to dead infected animals, consumptions of infected animal tissue or exposure to light density anthrax spores from animal wool, fur, hide, etc.

PLET Agar Base originally formulated by Knisley is the best selective medium for cultivation of *B.anthraxis* from suspected environmental specimens, animal products or clinical specimens, inhibiting *Bacillus cereus*. PLET Agar Base, Modified Medium is similar to base except that it contains increased concentration of EDTA, which helps in inhibiting *Staphylococcus aureus*.

COMPOSITION

Ingredients	Gms / Ltr
Beef heart, infusion from	500.00
Tryptose	10.000
Sodium chloride	5.000
EDTA	0.350
Thallos acetate	0.040
Agar	15.000

PRINCIPLE

The medium consists of Beef heart infusion from solids and Tryptose which provide the carbonaceous and nitrogenous compounds necessary for growth whereas sodium chloride provides the osmotic equilibrium. Thallos acetate and Polymyxin are inhibitory agents allowing growth of *B.anthraxis* while inhibiting contaminants. Lysozyme specifically suppresses the growth of gram-negative contaminants. PLET Agar Base, modified inhibits growth of most strains of *B.cereus*, *B.subtilis*, other *Bacillus* species, *Enterobacteriaceae* and *Pseudomonas* species.

INSTRUCTION FOR USE

- Dissolve 40.40 grams in 990 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 50°C.
- Aseptically add rehydrated contents of 1 vial of Anthracis Selective Supplement.
- Mix well and dispense as desired.



QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
- Appearance of prepared medium** : Light amber coloured clear to slightly opalescent gel forms in Petri plates.
- pH (at 25°C)** : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Bacillus cereus</i>	10876	>10 ³	Inhibited	0%	35-37°C	36-40 Hours
<i>Bacillus anthracis</i>	14578	50-100	Luxuriant	>=70%	35-37°C	36-40 Hours
<i>Staphylococcus aureus</i>	25923	>10 ³	Inhibited	0%	35-37°C	36-40 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. Knisely R.F. 1966, J. Bacteriol, 92:784-786.
2. Norris J. R., Berkley C.W., Logan N.A., and ODonnell A.G., 1981. In M. P. Starr et al (ed) The Prokaryotes : a Handbook on Habitats, Isolation and Identification of Bacteria, Vol. 2, Springer Verlag, Berlin.
3. Parry J.M., Turnbull P.C.B. and Gibson J.R., 1983, A Colour Atlas of Bacillus species. Wolfe Medical Publications, London, United Kingdom.
4. Murray et al, 1999, Manual of Clinical Microbiology, 7th Edition, ASM Press, Washington, D.C.



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 MedNet GmbH Baukstrasse 10, 49163 Muenster, Germany Authorized Representative	 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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