TM 1271 – PLET AGAR BASE

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.anthracis* from suspected environmental specimens, animal products or clinical specimens, inhibiting *Bacillus cereus* .

COMPOSITION

Ingredients	Gms / Ltr
Beef heart, infusion from	500.00
Tryptose	10.000
Sodium chloride	5.000
EDTA	0.300
Thallous 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. Thallous acetate and Polymyxin are inhibitory agents allowing growth of *B.anthracis* while inhibiting contaminants. Lysozyme specifically suppresses the growth of gram-negative contaminants. PLET Agar Base inhibits growth of most strains of *B.cereus, B.subtilis* , other *Bacillus* species, *Enterobacteriaceae* and *Pseudomonas* species.

INSTRUCTION FOR USE
- Dissolve 40.34 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 with added Anthracis Selective Supplement after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Bacillus cereus	10876	$>10^3$	Inhibited	0%	35-37°C	36-40 Hours
Bacillus anthracis	14578	50-100	Luxuriant	>=70%	35-37°C	36-40 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

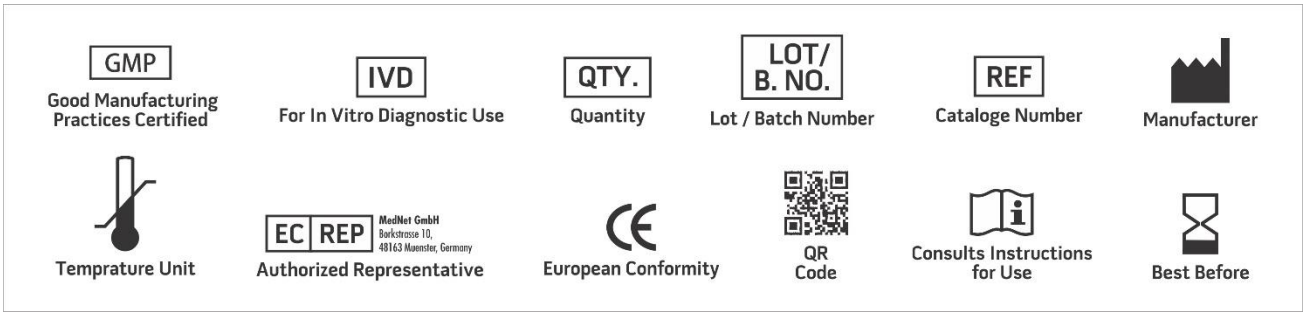
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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 P. R., Baron J. H., 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.



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

***For Lab Use Only**

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