

TM 1497 – ANAEROBIC BASAL AGAR

INTENDED USE

For cultivation of anaerobic microorganisms, like *Bacteroides* and other fastidious anaerobes.

PRODUCT SUMMARY AND EXPLANATION

Bacteroides comprise a major portion of the human normal flora, predominating in the intestinal tract. These organisms are, like other anaerobes, generally opportunistic and can cause a variety of infections throughout the body. The most common infections include pleuropulmonary, intra-abdominal and infections of the female urogenital tract. *Bacteroides* make up about one-third of the total anaerobic isolates obtained from various infections. Anaerobic Basal media are very nutritious and hence recommended for fastidious anaerobes like *Bacteroides* species. Anaerobic organisms require reducing conditions and an absence of dissolved oxygen in the medium. Strict anaerobes obtain its energy and intermediates through oxidation utilizing hydrogen acceptors other than oxygen. Anaerobes are unable to grow if the medium contains dissolved oxygen. Prereducing the medium by boiling to drive off the oxygen can expel this. Also reducing agents such as thioglycollate or cysteine can be added to the medium.

Anaerobic basal agar can be made selective for gram-negative anaerobes by the addition of Non-spore. Anaerobic Supplement and G.N. Spore Anaerobic Supplement. The media can also be made selective for non-sporing anaerobes by the addition of Non-spore Anaerobic Supplement. Anaerobic Basal Agar can be inoculated directly by surface streaking.

COMPOSITION

| Ingredients | Gms / Ltr |
|--------------------------------|-----------|
| Peptic digest of animal tissue | 16.000 |
| Yeast extract | 7.000 |
| Sodium chloride | 5.000 |
| Starch | 1.000 |
| Dextrose | 1.000 |
| Sodium pyruvate | 1.000 |
| Arginine | 1.000 |
| Sodium succinate | 0.500 |
| Sodium bicarbonate | 0.400 |
| L-Cysteine HCl | 0.250 |
| Ferric pyrophosphate | 0.500 |
| Hemin | 0.005 |
| Vitamin K | 0.0005 |
| Dithiothreitol | 0.250 |
| Agar | 12.000 |

PRINCIPLE

Peptic digest of animal tissue and yeast extract provide nitrogen, carbon and vitamin source. Starch absorbs the toxic metabolites produced. Hemin and Vitamin K serves as essential growth factors for *Bacteroides* species. Sodium succinate helps to improve the growth of *Bacteroides* species. Sodium pyruvate serves as the energy source. It also mimics the role of catalase and degrades traces of hydrogen peroxide, which may be produced by the action of molecular oxygen on



media components. Arginine and L-cysteine helps to revive and enhance the growth of certain anaerobes. It along with dithiothreitol also serves as reducing agent.

INSTRUCTION FOR USE

- Dissolve 45.9 grams in 1000 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 50-55°C and aseptically add 5-10% sterile defibrinated horse blood.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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|--------------------------------------|--|
| Appearance of Powder | : Cream to yellow homogeneous free flowing powder. |
| Appearance of prepared medium | : Basal medium: Light amber; After addition of 5% v/v sterile defibrinated blood: Cherry red Basal medium: clear to slightly opalescent ; After addition of 5% v/v sterile defibrinated blood: opaque gel forms in Petri plates. |
| pH (at 25°C) | : 7.0±0.2 |

INTERPRETATION

Cultural characteristics observed after incubation (anaerobically).

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Incubation Temperature | Incubation Period |
|--------------------------------------|-------|-------------------|-----------|----------|------------------------|-------------------|
| <i>Peptostreptococcus anaerobius</i> | 27337 | 50-100 | Luxuriant | ≥70% | 35°C | 48-72 Hours |
| <i>Prevotella melaninogenicus</i> | 15930 | 50-100 | Luxuriant | ≥70% | 35°C | 48-72 Hours |
| <i>Clostridium perfringens</i> | 13124 | 50-100 | Luxuriant | ≥70% | 35°C | 48-72 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



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5. Lev M. Keudell KC and Milford AF. J. bact, 1971:108:175-8.
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|  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 Borkstrasse 10, 48163 Moenster, 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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