Anaerobic Agar Plate

Intended Use
Anaerobic Agar Plate is used for cultivation of anaerobic microorganisms.

Summary
Anaerobic Agar was originally designed for surface cultivation of members of the genus *Clostridium* and other anaerobic organisms on plates. This medium is suitable for isolation of facultative and obligate anaerobes and for the study of colonial morphology as colonies can be readily seen on the light coloured agar and are easily accessible. Anaerobic bacteria vary in their sensitivity to oxygen and nutritional requirements. Anaerobic bacteria lack cytochromes and thus are unable to use oxygen as a terminal electron acceptor.

Principle
Pancreatic digest of casein in the medium provides nitrogen, vitamins, minerals and amino acids essential for growth. Dextrose is the fermentable carbohydrate providing a source of carbon and energy. Sodium chloride maintains the osmotic equilibrium. Sodium thioglycollate and sodium formaldehyde sulphoxylate are reducing agents generating a low oxidation-reduction potential, thus maintaining good anaerobic conditions. Methylene blue serves as an indicator of anaerobiosis with a blue colour indicating the presence of oxygen.

Formula*

Ingredients	**g/L**
Pancreatic Digest of Casein	20.0
Dextrose	10.0
Sodium Chloride	5.0
Sodium Thioglycollate	2.0
Sodium Formaldehyde Sulphoxylate	1.0
Methylene Blue	0.002
Agar	20.0

*Adjusted to suit performance parameters.

Additional Material Required
Anaerobic Container / Anaerobic Culture Jar, Gas Pack, Anaerobic Indicator Strip & Bacteriological Incubator.

Instructions for use
1. Open the sterile pack and remove Anaerobic Agar Plates aseptically.
2. Inoculate/streak the plate as per standard procedure.
3. Incubate the plates as per standard guidelines.
4. The plates must be incubated in inverted position.

Reading and interpretation
1. After incubation, observe the microbial growth and count the colonies.
2. Interpretation is assured by user.

Quality Control
Appearance: Gel with smooth, even surface, without any cracks, bubbles and drying or shrinking of media.
Colour of Medium: Light green coloured slightly opalescent gel.
Quantity of Medium: 26 ± 2 g media in 90 mm petriplate.
pH at 25°C ± 2°C: 7.2 ± 0.2
Cultural Response: Cultural characteristics observed after an incubation of 18-48 hours at 35 ± 2°C when incubated anaerobically.

Organism (ATCC)	Growth
Clostridium sporogenes (11437)	Good
Clostridium sporogenes (19404)	Good
Bacteroides fragilis (25285)	Good
Clostridium perfringens (13124)	Good

Precautions/Limitations

1. Methylene blue is inhibitory to some anaerobic microorganisms.
2. Clinical specimens must be obtained properly and transported to the laboratory in suitable anaerobic transport container.
3. It is essential to determine the environment of the medium so as to ascertain whether it is anaerobic.
4. To ascertain whether an organism is an anaerobe, it is essential to perform aero tolerance testing on each isolate recovered.

Storage and Shelf Life

1. Store between 15°C-25°C to avoid water condensation. Condensation can be prevented by avoiding quick temperature shifts and mechanical stress.
2. Under optimal conditions, the medium has a shelf life of 3 months. Use before expiry mentioned on the label.

Reference

1. Brewer J. H., 1942, Science, 95:587; Vera J., 1942, J. Bacteriol., 44:497.
2. Isenberg, 1992.Clinical Microbiology Procedures Handbook, American Society for Microbiology, Washington, D.C.
3. Baron E. J., Peterson & Finegold S. M., Bailey & Scotts Diagnostic Microbiology, 9th Ed., 1994, Mosby-Year Book, Inc., St. Louis, Mo.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product	Pack Size
205010480100	Anaerobic Agar Plate	100 Plates