Instructions For Use

Anaerobic Agar (Brewer)

Solid medium for the cultivation of anaerobic and microaerophilic bacteria.

DESCRIPTION

Anaerobic Agar (Brewer) is a nonselective culture medium used for the cultivation of facultative and strict anaerobes, especially *Clostridium* species.

This medium is based on a formula originally developed by Brewer.

TYPICAL FORMULA*	(g/l)
Pancreatic Digest of Casein	5.0
Proteose Peptone No. 3	10.0
Yeast Extract	5.0
Glucose	10.0
Sodium Chloride	5.0
Sodium Thioglycollate	2.0
Sodium Formaldehyde Sulfoxylate	1.0
Resazurin	0.002
Agar	20.0
Final pH 7.2 ± 0.2 at 25°C	

*Formula may be adjusted and/or supplemented as required to meet performance specifications;
Grams per litre of purified water.

METHOD PRINCIPLE

Peptones provide nitrogen, carbon, amino acids, vitamins and minerals for organism growth. Yeast extract is a source of vitamins, particularly of group B. Glucose is the fermentable carbohydrate. Sodium chloride maintains the osmotic balance of the medium. Sodium thioglycollate and sodium formaldehyde sulfoxylate are the reducing agents. Resazurin is an indicator of anaerobiosis. Agar is the solidifying agent.

PREPARATION

Dehydrated medium: Suspend 58.0 g of the powder in 1 liter of distilled or deionized water. Heat to boil shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Mix well and distribute into final containers.

TEST PROCEDURE

Tests can be performed using Standard Petri Dishes or Brewer Anaerobic Agar Plates.

Inoculate the medium either by streaking the sample onto the agar surface or by the pour plate method.

Immediately incubate anaerobically at 35 ± 2°C for 18-48 hours. Longer incubation time may be necessary to recover some anaerobes.

Notes:

1. If the medium has not been prepared fresh before use, it is necessary to heat and remelt to expel the dissolved oxygen.
2. The medium can be incubated in ambient atmosphere if used in combination with a Brewer's lid replacing the standard Petri dish lid. Brewer described a special Petri dish cover that allowed surface cultivation of anaerobes and microaerophiles without the use of anaerobic equipment such as an anaerobic jar or pouch.

INTERPRETING RESULTS

Observe the microbial growth.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store the prepared medium at 2-8°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.

QUALITY CONTROL

Appearance of Dehydrated Medium: Free-flowing, homogeneous, beige.

Appearance of Prepared Medium: Clear, light green.

Expected Cultural Response:

Control strain		Inoculum	Incubation	Specification
Bacteroides fragilis	ATCC 25285	10^3-10^4 CFU	Anaerobic 18-48 h 35 ± 2°C	Good growth
Clostridium perfringens	ATCC 13124			
Clostridium sporogenes	ATCC 19404			

Please refer to the actual batch related Certificate of Analysis (CoA).

WARNING AND PRECAUTIONS

For professional use only. Operators must be trained and have certain experience in the laboratory methods. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

1. Brewer JH (1942) A new Petri dish cover and technique for use in the cultivation of anaerobes and microaerophiles. Science 95:587.

Product	Format	Packaging	Ref.
Anaerobic Agar (Brewer)	Powder	500 g	610320

There may be additional product ref. numbers as well. For an updated listing of available products, visit **liofilchem.com**

TABLE OF SYMBOLS

LOT	Batch code
REF	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult Instruction For Use
	Do not reuse
	Keep away from light

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