ARENA
BioScien

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EGG YOLK AGAR

Recommended for isolation and identification of Clostridia and certain other anaerobes.

REF: BS.1/EY01.100.0100	100 Gram	REF: BS.1/EY01.250.0250	250 Gram
REF: BS.1/EY01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

Egg Yolk Agar is used for the isolation and differentiation of Clostridium species and other relevant anaerobic organisms based on lecithinase and lipase activity. Hayward first recognized the value of egg yolk opacity in the identification of Clostridium perfringens and referred to this result as the Nagler reaction. The alpha toxin of C. perfringens has phospholipase activity and hence, when grown on a medium containing egg yolk phospholipid (lecithin), results in the release of diglycerides that is seen as an area of opacity around the bacterial colonies.

METHOD PRINCIPLE

Pancreatic digest of casein and beef extract supply amino acids, and other complex nitrogenous components. Yeast extract also serves as a source amino acids but, more importantly it is rich in B-complex vitamins that are essential for growth.

MEDIA COMPOSITION

Ingredient	Per Liter
Pancreatic Digest of Casein	10.0 gm
Beef Extract	3.0 gm
Yeast Extract	1.0 gm
Sodium Chloride	5.0 gm
Agar	15.0 gm

Final pH 7.4 ± 0.2 at 25°C

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or Special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Egg yolk agar material safety data sheet.

MEDIA PREPARATION, STORAGE AND STABILITY [2]

BioScien Egg yolk Agar dehydrated media are stable until expiration date stated on label when properly stored 10-30°C.

Hydrated Egg yolk Agar media is prepared by Suspend 34 grams in 900 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Dispense 90 ml amounts in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes. Cool to 45-50°C and add 10 ml of sterile egg yolk emulsion per 90 ml of medium. Mix well and pour into sterile Petri plates. Adjust the pH to 7.4±0.2, Pour into a sterile petri dishes. Prior to inoculation, media plates should be reduced by placing in an anaerobic jar for 18-24 hours. An enrichment broth should be simultaneously inoculated with the test sample to detect small number of anaerobic organisms. Standard procedures for the isolation of organism should be referred. Incubation should be carried out for 18-48 hours and continued for 7 days. After use, contaminated materials must be sterilized by autoclaving before discarding. Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Final pH 7.4 ± 0.2 at 25°C

Deterioration

The color of ***BioScien*** Egg yolk Agar medium is cream to yellow homogeneous free flowing powder, dehydrated medium is Basal medium: Medium amber coloured, clear to slightly opalescent gel After addition of egg yolk emulsion: Yellow coloured opaque gel forms in Petri plates If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN COLLECTION AND PRESERVATION

Clinical- stool, abscess, etc.; Food samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile petri-dishes
- Incubator
- Autoclave

CHARACTERISTICS OF THE COLONIES

Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	Proteolytic activity	Lecithinase Activity	Lipase Activity
Bacteroides fragilis ATCC 25285	50-100	good-luxuriant	negative	negative reaction	negative reaction
Clostridium botulinum ATCC 25763	50-100	good-luxuriant	Positive, clear zone surrounding colonies	negative reaction	negative reaction
Clostridium butyricum ATCC 13732	50-100	good-luxuriant	Positive, clear zone surrounding colonies	negative reaction	negative reaction
Clostridium perfringens ATCC 12924	50-100	good-luxuriant	negative	positive, opaque zone around the colony	negative reaction
Clostridium sporogenes ATCC 11437	50-100	good-luxuriant	Positive, clear zone surrounding colonies	negative reaction	positive, irridescent sheen on the colony surface and medium

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

PERFORMANCE CHARACTERISTICS

Performance of the medium is expected when used as per the direction on the label within the when stored at recommended temperature.

REFERENCES

1.Labbe R., 1989, Clostridium perfringens, In Foodborne Bacterial Pathogens Ed., Doyle M. P., P.191, Marcel Dekker, New York , N.Y.
2.Duncan C. L., 1973, A. J. Bacteriol., 113:932
3.Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Ed., CRC Press.
4.McClung and Toabe, 1947, J. Bacteriol., 53:139
5.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
6.Isenberg (Ed.), 1992, Clinical Microbiology Procedures Handbook, American Society for Microbiology, Washington, D.C.
7.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.

SYMBOLS IN PRODUCT LABELLING	
IVD For in-vitro diagnostic use	Σ Number of <n> test in the pack
LOT Batch Code/Lot number	Caution
REF Catalogue Number	Do not use if package is damaged
Temperature Limitation	Consult Instruction for use
Expiration Date	
Manufactured by	