Schaedler Agar

M291

Intended Use:

Recommended for enumeration of various aerobic and anaerobic bacterial species present in gastrointestinal tract.

Composition**

Ingredients	g/ L
Tryptone	5.670
Proteose peptone	5.000
Soya peptone	1.000
Yeast extract	5.000
Dextrose (Glucose)	5.830
Sodium chloride	1.670
Dipotassium hydrogen phosphate	0.830
Tris (hydroxymethyl) aminomethane	3.000
L-Cystine	0.400
Hemin	0.010
Agar	15.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 43.41 grams in 950 ml purified/distilled water. Heat to boiling with frequent agitation to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and add 5% v/v sterile defibrinated sheep blood if desired. Mix well before dispensing. Avoid overheating and photooxidation of the medium, as it will retard the growth of bacteria.

If desired, add rehydrated contents of 1 vial each of Vitamin K1 Supplement (FD114) and CNA Supplement (FD115) to prepare Schaedler CNA Agar or to prepare Schaedler KV Agar, aseptically add rehydrated contents of 1 vial each of Vitamin K1 Supplement (FD114) and KV Supplement (FD116) respectively to 1000 ml of Schaedler Agar.

Principle And Interpretation

Schaedler Agar was originally formulated by Schaedler et al (1) and further modified by Mata et al (2) with formulation changes (3) for cultivation and enumeration of aerobic and anaerobic microorganisms. Schaedler Agar supplemented with Vitamin K1 and 5% sheep blood is used for the recovery of fastidious anaerobic bacteria such as *Bacteroides*. Inclusion of Colistin and Nalidixic acid in the formulation (Schaedler CNA Agar) along with 5% sheep blood is used for the selective isolation of the anaerobic gram-positive cocci (4), Peptococcus and Peptostreptococcus species. Inclusion of Kanamycin and Vancomycin in the formulation (Schaedler KV Agar) along with 5% sheep blood is used for selective isolation of gram-negative anaerobes.Schaedler Agar serve as an excellent basal media to which blood or other enrichments can be added to enhance the recovery of fastidious anaerobic organisms.

The combination of tryptone, proteose peptone and Soya peptone, Yeast extract and L-cystine provide nitrogenous growth factors, vitamins and other essential growth nutrients. Dextrose serves as energy source. Hemin and sheep blood stimulates the growth of fastidious microorganisms and stimulates growth of other *Bacteroides* species and gram-positive spore formers (5). Addition of Sodium Polyanethol Sulphonate (SPS) is recommended when using this medium for blood culture (6). It inhibits phagocytosis and neutralizes the antibacterial activity of fresh blood components (7,8). Vitamin K1 enables the cultivation of *Bacteroides melaninogenicus* (9) and stimulates growth of other *Bacteroides* species and gram-positive spore formers (5).

Type of specimen

Clinical samples - Genital specimen, Upper respiratory swab

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (10,11).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.Further biochemical and serological tests must be carried out for complete identification.
3.Hemin and sheep blood stimulates the growth of fastidious microorganisms and stimulates growth of other *Bacteroides* species and gram-positive spore formers.

Performance and Evaluation

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

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.34% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours under anaerobic condition.

Organism	Inoculum (CFU)	Growth	Recovery
Bacteroides fragilis ATCC 25285	50-100	luxuriant	>=50%
Clostridium butyricum ATCC 13732	50-100	luxuriant	>=50%
Clostridium perfringens ATCC 12924	50-100	luxuriant	>=50%
Clostridium sporogenes ATCC 11437	50-100	luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=50%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

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. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (10,11).

Reference

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6. Rosner, 1968, Am. J. Clin. Pathol., 49:216.

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10. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

11. 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.

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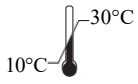
IVD *In vitro* diagnostic medical device



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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