OXALIS Diagnostics Pvt. Ltd.

Technical Data

Columbia Agar (Columbia Blood Agar Base). 100 g / 500 g

Used as a highly nutritious, general-purpose medium for the isolation and cultivation of non-fastidious and fastidious microorganisms, with or without addition of blood, from a variety of clinical and non-clinical specimens.

Product Presentation:

Cat No.	Product description	Pack Size
11030040100	Columbia Agar	100 Gram
11030040500	Columbia Agar	500 Gram

Principle

Peptone special provides essential nutrients. Corn starch serves as the energy source and also neutralizes toxic metabolites. Columbia Blood Agar Base is used as a base for media containing blood and for selective media formulations in which different combinations of antimicrobial agents are added as additives. It also promotes typical colonial morphology; better pigment production and more sharply defined hemolytic reaction. Sheep blood permits the detection of hemolysis and also provides heme (X factor), which is required for the growth of many bacteria. However, it is devoid of V factor (Nicotinamide Adenine Dinucleotide) and hence *Haemophilus influenzae*, which needs both X and V factors, will not grow on this medium.

Composition

Ingredients	Grams / Litre
Pancreatic Digest of casein	10.0
Proteose peptone	5.0
Yeast Extract	5.0
Beef Heart Infusion from 500 g	3.0
Corn Starch	1.0
Sodium Chloride	5.0
Agar	15.0

Final pH (at 25°C) 7.3± 0.2

*Formula adjusted, standardized to suit performance parameters

Type of specimen

Clinical samples – Blood, Respiratory exudates

Specimen Collection and Handling

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

- ✓ Suspend 44.00g of powder in 1000 mL distilled water.
- ✓ Mix thoroughly.
- ✓ Boil to dissolve the medium completely.
- ✓ Sterilize by autoclaving 121°C for 15 minutes or as per validated cycle.

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- ✓ For preparation of blood agar, Cool the base to 45°C - 50°C and add 5% sterile defibrinated blood.

Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Quality Control

Dehydrated Appearance: Light yellow coloured, homogenous and free flowing powder.
Prepared Appearance: Basal medium: Light amber coloured slightly opalescent gel.
With addition of 5% defibrinated blood: Cherry red coloured opaque gel forms in petridishes.
Growth Promotion Test: Cultural characteristics observed after an incubation of 24-48 hours at 35°C - 37°C under anaerobic condition.

Cultural Response :

Organism	Type Culture	Growth	Haemolysys	Incubation Temperature	Incubation Period
Streptococcus pyogenes	ATCC 19615	Good	Beta	35°C -37°C	18 Hours
Staphylococcus aureus	ATCC 25923	Good	Beta	35°C -37°C	18 Hours
Staphylococcus aureus	ATCC 6538	Good	Beta	35°C -37°C	18 Hours
Streptococcus pneumoniae	ATCC 6303	Good	Alpha	35°C -37°C	18 Hours

Interpretation of Results

- ✓ After incubation most plates will show an area of confluent growth.
- ✓ Because the streaking procedure is, in effect, a “dilution” technique, diminishing numbers ofmicroorganisms are deposited on the streaked areas. Consequently, one or more of these areas should exhibit isolated colonies of the organisms contained in the specimen.
- ✓ Further, growth of each organism may be semi-quantitatively scored on the basis of growth in each of the streaked areas.

Warranty

- ✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.
User must be ensure safe disposal of used or unusable preparation of the products.

Reference

1. Fildes P., 1920, Br. J. Exp. Pathol., 1:129.
2. Fildes P., 1921, Br. J. Exp. Pathol., 2:16.
3. Chapin K. C. and Doern G. V., 1983, J. Clin. Microbiol., 17:1163.

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