

TECHNICAL DATA SHEET

Columbia Blood Agar Base w/ Hemin

Principle

The Columbia blood agar base with hemin is composed of special peptone, corn starch, sodium chloride, hemin and agar. The special peptone support growth of fastidious microorganisms. The corn starch is source of carbon and energy source and also neutralizes toxic metabolites. Sodium chloride maintains the osmotic balance of the medium. Hemin stimulates growth of various fastidious organisms. Agar is a solidifying agent.

Use: An enriched base for preparation of chocolate and blood agar and for various selective & identification media.

Contents*

Ingredients	Gram/Litre
Special peptone	23.000
Corn starch	1.000
Sodium Chloride	5.000
Hemin	0.010
Agar	15.000
pH at 25°C	7.3 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 44.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45°C and add heat sensitive compounds.

- **For Blood Agar:** Add 5% v/v sterile defibrinated sheep blood to sterile cool base.
- **For Chocolate Agar:** Add 10% v/v sterile defibrinated sheep blood to sterile cool base. Heat to 80°C for 10 minutes with constant agitation. The selectivity of medium can be increased by adding different antimicrobials to sterile base.
- **For Brucella species:** Add rehydrated contents of with polymyxin B sulphate (2500IU), Bacitracin (12500IU), Nystatin (50000IU), cycloheximide (50 mg), Naildixic acid (2.5 mg) and vancomycin (10 mg) to 500 ml sterile molten base.
- **For Campylobacter species:** Add rehydrated contents with vancomycin (5mg), trimethoprim (2.5mg), cefsulodin (2.5mg) and amphotericin (2.5 mg) to 500 ml sterile molten base fortified with sodium pyruvate (0.125 g), sodium metabisulphite (0.125 g) and ferrous sulphate (0.125g).

OXFORD LAB FINE CHEM LLP

ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com



- **For Gardnerella species:** Add rehydrated contents with gentamicin sulphate (2.0 mg) nalidixic acid (15 mg) and amphotericin (1mg) to 500 ml sterile molten base.
- **For Cocci:** Add rehydrated contents with colistin sulphate (5 mg) and oxolinic acid (2.5mg) to 500 ml sterile molten base.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 4.4% solution	7.3 $\pm$ 0.2 at 25 °C
pH	7.10- 7.50
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Basal medium: Light amber colored clear to slightly opalescent gel. On standing the molten medium shows haziness. After addition of 5%w/v sterile defibrinated blood: Cherry red coloured opaque gel.
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed with added 5% w/v sterile defibrinated blood, after incubation at 33-37°C for 24-48 hours.

Organism	ATCC	Inoculum CFU	Observed CFU	Recovery (%)	Haemolysis
<i>Staphylococcus aureus</i>	25923	50-100	Luxurious	≥ 60%	Beta or gamma
<i>Staphylococcus epidermidis</i>	12228	50-100	Luxurious	≥ 60%	Gamma
<i>Streptococcus pyogenes</i>	19615	50-100	Luxurious	≥ 60%	Beta
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxurious	≥ 60%	Alpha

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution..

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. 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.

OXFORD LAB FINE CHEM LLP

ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com



Disclaimer:

The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Oxford Lab Fine Chem LLP makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Oxford Lab Fine Chem LLP will not be responsible for damages resulting from use of or reliance upon this information.