OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Columbia Agar

Principle

The Columbia agar is prepared in accordance harmonized principles of USP/EP/IP. Columbia is composed of pancreatic digest of casein, meat peptic digest, heart pancreatic digest, yeast extract, maize starch, sodium chloride and agar. The pancreatic digest of casein, meat peptic digest, heart pancreatic digest and yeast extract support growth of fastidious microorganisms. The pancreatic digest of casein, meat peptic digest and yeast extract provide nitrogen carbon amino acid and vitamins. The heart pancreatic digest supply additional nitrogen and amino acids. Maize starch serves as an energy source and also neutralizes toxic metabolites. Sodium chloride maintains the osmotic balance of the medium. Agar is a solidifying agent.

Use: For the detection of Clostridium sporogenes from pharmaceutical products.

Contents*

Ingredients	Gram/Liter
Pancreatic Digest of Casein	10.00
Meat Peptic Digest	5.00
Heart Pancreatic Digest	3.00
Yeast Extract	5.00
Maize Starch	1.00
Sodium Chloride	5.00
Agar	15.00
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 check. 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, if necessary, add gentamicin sulphate corresponding to 20 mg of gentamicin base and pour into sterile petri dishes. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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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 ±0.2 at 25 ˚C**
pH	**7.10- 7.50**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**Light amber colored clear to slightly opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 24-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response

Cultural characteristics was observed under anaerobic conditions after incubation at 35 ± 2°C for 24-48 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
Clostridium sporogenes	**11437**	**50-100**	**Luxuriant**	**≥ 60%**
Clostridium perfringens	**3624**	**50-100**	**Luxuriant**	**≥ 60%**

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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.**
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4. ***European Pharmacopoeia*, (2011), European Dept. for the quality of Medicines.**
5. ***Indian Pharmacopoeia*, (2018), Govt. of India, the Controller of Publication, New Delhi**
6. ***The Japanese Pharmacopoeia*, 17th Ed. (2016), The Ministry of Health, Labor and Welfare**
7. ***The United States Pharmacopoeia*, (2014), The United States Pharmacopeial Convention. 12601 Twinbrook Parkway, Rockvukke, MD 20852.**

Disclaimer:

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