

TECHNICAL DATA SHEET

Dextrose Agar

Principle

The dextrose agar consists of tryptose, peptone, dextrose, sodium chloride, and agar. Tryptose provide amino acids, peptides, and nitrogenous compounds. Peptone provide essential nutrients for growth: nitrogen, vitamins, minerals and amino acids. Dextrose is the fermentable carbohydrate providing carbon and energy; Sodium chloride maintains the osmotic balance.

Use: For cultivation of wide variety of microorganisms.

Contents*

Ingredients	Gram/Litre
Tryptose	10.000
Peptone	3.000
Dextrose (Glucose)	10.000
Sodium Chloride	5.000
Agar	15.000
pH at 25°C	7.3 ± 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 43.0 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 distribute aseptically in desired. Allow to cool at room temperature and inoculate test sample aseptically.

Specimens types analyzed

Food and dairy samples and water samples, 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	Light beige colored free flowing, homogeneous powder
Reaction of 4.3% 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 yellow color, slightly opalescent gel With 5% blood: Cherry red colored, slightly opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37°C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed with and without 5% sterile defibrinated blood after incubation at 35±2°C for 18-24 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth w/o blood	Recovery w/o blood	Growth w/ blood	Recovery w/ blood
<i>Bordetella pertussis</i>	8467	Good	≥ 50%	Luxuriant	≥ 70%
<i>Streptococcus pyogenes</i>	19615	Good	≥ 50%	Luxuriant	≥ 70%
<i>Escherichia coli</i>	8739	Good	≥ 50%	Luxuriant	≥ 70%
<i>Clostridium perfringens</i>	3624	Fair to Good	≤ 50%	Luxuriant	≥ 70%

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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. American Public Health Association, (1978) Standard Methods for the Examination of Dairy Products, 14th Ed., Washington D.C.
2. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
3. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. 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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