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

Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

M17 Agar Base

Principle

Lowrie and Pearce developed M16 media, and Terzaghi and Sandine modified M16 media by buffering them with disodium-β-glycerophosphate and called it M17. The International Dairy Federation also recommends M17 for isolating and enumerating the lactic streptococci in dairy products. Lactic streptococci are acid-producing bacteria, so they require nutritious culture media for optimum growth. M17 is composed of peptone, soya peptone, yeast extract, beef extract, lactose, ascorbic acid, magnesium sulphate and agar. Peptone, soya peptone and beef extract provide nitrogen, carbon, vitamins and mineral sources. Yeast extract provides vitamin B complex. Lactose is a fermentable carbohydrate that produces acid. Ascorbic acid stimulates the growth of lactic streptococci, and magnesium sulphate provides essential ions for growth. Agar is the solidifying agent. Media supplemented with disodium-β-glycerophosphate buffer the medium.

Use: For cultivation of lactic Streptococci and plaque assay of lactic bacteriophages.

Contents*

Ingredients	Gram/Litre
Peptone	5.000
Soya Peptone	5.000
Yeast Extract	2.500
Beef Extract	5.000
Lactose Ascorbic acid	5.000
Magnesium sulphate	0.500
Agar	0.250
pH at 25˚C	10.000
	7.1 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 33.25 grams in 1000 ml distilled water. Add 19 grams of Disodium βGlycerophosphate. 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 petri plates. Ensure complete solidification and inoculate test sample aseptically.

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Specimens' types analyzed
Food and dairy 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 to tan colored, free flowing, homogeneous powder**
Reaction of 3.32% solution	**7.1 ± 0.2 at 25 ˚C**
pH	**6.90 – 7.30**
Gelling	**Firm comparable with 1.0% agar gel**
Color and clarity of ready medium	**Light to medium amber colored, slightly opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37ºC for 18-72 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 observed after incubation at 33-37°C for 24-48 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
Lactobacillus fermentum	**9338**	**50-100**	**Luxuriant**	**≥ 60%**
Lactobacillus plantarum	**8014**	**50-100**	**Luxuriant**	**≥ 60%**
Enterococcus faecalis	**14506**	**50-100**	**Good**	**≥ 50%**

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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. **Terzaghi and Sandine. 1975. Appl. Microbiol. 29:807**
2. **DeMan, J. C., M. Rogosa, and M. E. Sharpe. (1960). *A medium for the cultivation of lactobacilli*. J. Appl. Bacteriol. 23:130.**
3. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
4. ***Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
5. **International Dairy Federation. 1981. Identification and enumeration of microorganisms in fermented milks. Joint IDF/ISO/AOAC Group E44**

Disclaimer:

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