

Technical Data Sheet

Lethen Broth

Ordering number: 1.46264.0020 / 1.46264.0100

Lethen Broth is designed for subcultivation by neutralization of quaternary ammonium compounds as well as for determining the phenol coefficient of cationic surface-active materials, even after disinfection. Lethen Broth is also used to demonstrate the efficacy of preservatives in the cosmetics industry.

Mode of Action

Peptamin and meat extract provide the necessary N- and C-compounds for the growth of a wide variety of microorganisms. Lecithin and Tween® 80 (hence the name "Lethen") neutralize the effect of disinfectants: quaternary ammonium compounds, phenols, hexachlorophene, formalin, and ethanol.

Typical Composition

Peptamin	10 g/l
Meat Extract	5 g/l
Lecithin	0.7 g/l
NaCl	5 g/l
Polysorbate (Tween®) 80	5 g/l

The appearance of the medium is clear and yellowish. The pH value is in the range of 6.8-7.2. The medium can be adjusted and/or supplemented according to the performance criteria required.

Application and Interpretation

The broth is incubated at 33-35 °C for 24-48 hours.

It is recommended – for example as part of an examination for bacterial contamination – in the case of growth, to identify the bacteria with appropriate microbiological methods (e.g. selective media and biochemical testing).

Storage and Shelf Life

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +2 °C to +25 °C.

The testing procedures as described on the CoA can be started up to the expiry date printed on the label.

Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

Quality Control

Control Strains	ATCC #	Inoculum CFU	Incubation	Expected Results
<i>Escherichia coli</i>	8739	10-100	20-24 h at 33-35 °C	good growth; pronounced turbidity
<i>Pseudomonas aeruginosa</i>	9027	10-100	20-24 h at 33-35 °C	good growth; pronounced turbidity
<i>Staphylococcus aureus</i>	6538	10-100	20-24 h at 33-35 °C	good growth; pronounced turbidity
<i>Bacillus subtilis</i>	6633	10-100	20-24 h at 33-35 °C	good growth; pronounced turbidity
<i>Candida albicans</i>	10231	10-100	44-48 h at 20-25 °C	good growth; pronounced turbidity

Please refer to the actual batch related Certificate of Analysis.

Literature

Association of Official Analytical Chemists. (1995): Official methods of analysis, 16th ed. Association of Official Analytical Chemists, Washington, D.C. 4. American Society for Testing Materials. 1991.

FDA Bacteriological Analytical Manual (BAM), 8th Ed. (1995): Chapter 23: Microbiological Methods for Cosmetics.

Quisno, R., Gibby, I.W. and Foter, M.J. (1946): A neutralizing medium for evaluating the germicidal potency of the quarternary ammonium salts. Am. J. Pharm. **118**: 320-323.

Standard test method for preservatives in water-containing cosmetics, E 640-78. Annual Book of ASTM Standards, Philadelphia, PA.

Weber, G.R. and Black, L.A. (1948): Relative efficiency of quarternary inhibitors. Soap and Sanit. Chem. **24**: 134-139.

Ordering Information

Product	Cat. No.	Pack size
Lethen Broth	1.46264.0020	20 x 9.9 ml tube
Lethen Broth	1.46264.1000	100 x 9.9 ml tube

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