m ENDO AGAR LES

INTENDED USE
Remel m Endo Agar LES is a solid medium recommended for use in quantitative procedures for the enumeration of coliforms by membrane filtration.

SUMMARY AND EXPLANATION
Coliforms are indicator organisms used for assessing the effectiveness of water treatment and disinfection, and for monitoring the sanitary integrity of water and wastewater. m Endo Agar LES is prepared according to the formulation of McCarthy, Delaney, and Grasso.[1] It is recommended by the American Public Health Association (APHA) in *Standard Methods for the Examination of Water and Wastewater* and *Compendium of Methods for the Microbiological Examination of Foods* for the enumeration of coliforms in water, wastewater, and foods.[2,3]

PRINCIPLE
Casein peptone and casein-meat polypeptone provide essential nutrients necessary for the growth of bacteria. Yeast extract provides B-complex vitamins and is a growth enhancer. Dipotassium phosphate and monopotassium phosphate serve as buffers. Sodium chloride is a source of essential electrolytes and maintains osmotic equilibrium. Sodium lauryl sulfate and sodium deoxycholate are selective agents which inhibit the growth of gram-positive bacteria. Basic fuchsin is a pH indicator. Lactose-fermenters exhibit a red color caused by the aldehyde reaction with sodium sulfite and basic fuchsin. A metallic sheen occurs when the organism produces aldehydes with the fermentation of lactose. Nonlactose-fermenting colonies are colorless to light pink.

REAGENTS (CLASSICAL FORMULA)*

Lactose	9.4 g	Sodium Sulfite	1.6 g
Casein Peptone	7.5 g	Monopotassium Phosphate	1.0 g
Casein-Meat Polypeptone	7.4 g	Basic Fuchsin	0.8 g
Dipotassium Phosphate	3.3 g	Sodium Deoxycholate	0.1 g
Sodium Chloride	3.7 g	Sodium Lauryl Sulfate	0.05 g
Yeast Extract	1.2 g	Agar	15.0 g
		Demineralized Water	1000.0 ml

pH 7.2 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS
This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 51 g of medium in 1000 ml of demineralized water containing 20 ml of 95% ethanol.
2. Heat to boiling with agitation to completely dissolve. **Do not autoclave.**
3. Cool to 45-50°C and dispense into appropriate containers.
4. Protect plates from light and use the same day as prepared.

PROCEDURE
1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.[2,3]

QUALITY CONTROL
Each lot number of m Endo Agar LES has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL	INCUBATION	RESULTS
Enterobacter aerogenes ATCC® 13048	Aerobic, 18-24 h @ 33-37°C	Red colonies, green sheen
Escherichia coli ATCC® 25922	Aerobic, 18-24 h @ 33-37°C	Red colonies, green sheen
Salmonella enterica serovar Typhimurium ATCC® 14028	Aerobic, 18-24 h @ 33-37°C	Light pink colonies
Staphylococcus aureus ATCC® 25923	Aerobic, 18-24 h @ 33-37°C	Inhibition (partial to complete)

LIMITATIONS
1. The medium should be used the same day it is prepared and kept protected from light.[4]

BIBLIOGRAPHY

1. McCarthy, J.A., J.E. Delaney, and R.J. Grasso. 1961. Water and Sewage Works. 108:238-243.
2. Eaton, A.D., L.S. Clesceri, E.W. Rice, and A.E. Greenberg. 2005. Standard Methods for the Examination of Water and Wastewater. 21st ed. APHA, Washington, D.C
3. Downes, F.P. and K. Ito. 2001. Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA, Washington, D.C.
4. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

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