

XLD AGAR / M-ENDO LES AGAR (MELA)

INTENDED USE:

XLD Agar is a moderately selective and differential medium for the isolation, cultivation and differentiation of gram-negative enteric microorganisms from both clinical and non-clinical specimens.

m Endo Agar LES is used for enumerating coliforms in water by membrane filtration.

PRINCIPLE AND INTERPRETATION:

XLD Agar is both a selective and differential medium. It utilizes sodium desoxycholate as the selective agent and, therefore, it is inhibitory to gram-positive microorganisms. Xylose is incorporated into the medium since it is fermented by practically all enterics except for the shigellae and this property enables the differentiation of Shigella species. Lysine is included to enable the Salmonella group to be differentiated from the nonpathogens since without lysine, salmonellae rapidly would ferment the xylose and be indistinguishable from nonpathogenic species. After the salmonellae exhaust the supply of xylose, the lysine is attacked via the enzyme, lysine decarboxylase, with reversion to an alkaline pH which mimics the Shigella reaction. To prevent similar reversion by lysine positive coliforms, lactose and saccharose (sucrose) were added to produce acid in excess. To add to the differentiating ability of the formulation, an H₂S indicator system, consisting of sodium thiosulfate and ferric ammonium citrate, is included for the visualization of the hydrogen sulfide produced, resulting in the formation of colonies

with black centers. The nonpathogenic H₂S-producers do not decarboxylate lysine; therefore, the acid reaction produced by them prevents the blackening of the colonies.

m Endo Agar LES contains peptones as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins, which stimulate bacterial growth. Lactose is the carbohydrate. Phosphates are buffering agents. Sodium chloride maintains the osmotic balance of the medium. Sodium desoxycholate and sodium lauryl sulfate are added as inhibitors. Basic fuchsin is a pH indicator. Sodium sulfite is added to decolorize the basic fuchsin solution. Agar is the solidifying agent. Lactose-fermenting bacteria produce acetaldehyde that reacts with the sodium sulfite and fuchsin to form red colonies. The development of a metallic sheen occurs when the organism produces aldehydes with the rapid fermentation of lactose. If the inoculum is too heavy, the sheen will be suppressed. Lactose-nonfermenting bacteria form clear, colorless colonies.

COMPOSITION:

XLD AGAR	
Ingredients	Gr/Liter
Yeast extract	3 gr
L-Lysine HCl	5 gr
Xylose	3,75 gr
Lactose	7,5 gr
Sucrose	7,5 gr
Sodium desoxycholate	1 gr
Sodium chloride	5 gr
Sodium thiosulphate	6,8 gr
Ferric ammonium citrate	0,8 gr
Phenol red	0,08 gr
Agar	12,5 gr

pH: 7,4 ± 0,2

*Formula adjusted, standardized to suit performance parameters

PRECAUTIONS:

For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

QUALITY CONTROL:

1. Sterility Control:

Incubation 48 hours at 30-35°C and 72 hours at 20-25°C: NO GROWTH

CETRIMIDE AGAR	
Ingredients	Gr/Liter
Yeast Extract	1,2 gr
Casitone	3,7 gr
Thiopeptone	3,7 gr
Tryptose	7,5 gr
Lactose .	9,4 gr
Dipotassium Phosphate	3,3 gr
Monopotassium Phosphate	1 gr
Sodium Chloride	3,7 gr
Sodium Desoxycholate	0,1 gr
Sodium Lauryl Sulfate	0,05 gr
Sodium Sulfite	1,6 gr
Basic Fuchsin	0,8 gr
Agar	15 gr

pH: 7,2 ± 0,2

2.Physical/Chemical Control

	XLD Agar	m-ENDO LES AGAR
pH:	7,4 ± 0,2	7,2 ± 0,2
Apperance:	Pinkish red	Clear and pale pink

3.Microbiological Control: Incubation at 35± 2 °C during 24-48 h

Microorganism	Inoculum (CFU)	Results	
		XLD Agar	m-ENDO LES AGAR
Salmonella typhimurium ATCC 14028	10-100	Black centered colonies	-
Shigella flexneri ATCC 12022	10-100	Pink	-
Proteus spp.	10-100	Black centered pink colonies	-
Enterococcus faecalis ATCC 29212	100-1000	Inhibition	-
Escherichia coli ATCC 25922	100-1000	Partial inhibition	-
Escherichia coli ATCC 25922	10-100	-	Reddish
Salmonella typhimurium ATCC 14028	10-100	-	Colourless
Enterococcus faecalis ATCC 29212	100-1000	-	Inhibition

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2 - 12°C. Use before expiry date on the label.Do not use beyond stated expiry date.

DISPOSAL:

Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 03024
Packaging: Single wrap
Content: 10 plates/each package

REFERENCES:

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7. National Committee for Clinical Laboratory Standards. 2001. Approved Guideline M29-A2. Protection of laboratory workers from occupationally acquired infections, 2nd ed. NCCLS, Wayne, PA.
8. Garner, J.S. 1996. Hospital Infection Control Practices Advisory Committee, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Guideline for isolation precautions in hospitals. Infect. Control Hospital Epidemiol. 17:53-80.
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10. McCarthy, Delaney and Grasso. 1961. Water Sewage Works 108:238.
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STERILE A	Aseptic Sterile
LOT	Batch Code
REF	Catalogue Number
CONTROL -	Negative Controls
CONTROL +	Positive Controls



Use by



Temperature
Limitation



Do not reuse



Contains sufficient
for <n> tests



Look at user manual



Manufacturer