OXALIS Diagnostics Pvt. Ltd.

Technical Data

Xylose Lysine Deoxycholate Agar. (XLD Agar) 100 g / 500 g

Used for isolation and enumeration of isolation of *Salmonella*and *Shigella* spp. from clinical specimens and food samples, water and dairy products.

Product Presentation:

Cat No.	Product description	Pack Size
11240010500	Xylose Lysine Deoxycholate Agar. (XLD Agar)	100 Gram
11240010500	Xylose Lysine Deoxycholate Agar. (XLD Agar)	500 Gram

Principle

XLD Agar is both, a selective and differential medium. Yeast extract provides nutrients while sodium deoxycholate inhibits Gram-positive organisms. Xylose is fermented practically by all enterics except *Shigella*, which enables the differentiation of *Shigella* species. Incorporation of lysine enables the *Salmonella* group to be differentiated from the non-pathogens since, without lysine, *Salmonella* would rapidly ferment xylose and be indistinguishable from non-pathogenic species. After *Salmonella* exhausts the supply of xylose, lysine is attacked, with reversion to an alkaline pH, which mimics the *Shigella* reaction. However, to prevent this reaction by lysine positive coliforms, lactose and sucrose are added in excess to produce acid and hence non-pathogenic H2S producers do not decarboxylate lysine. The acid reaction produced by them prevents the blackening of the colonies. Sodium thiosulphate and ferric ammonium citrate are included for the visualization of hydrogen sulphide production, resulting in the formation of colonies with black centers. Sodium chloride maintains the osmotic balance.

Composition

Ingredients	S Grams / Litre
Sucrose	7.50
Lactose	7.50
Sodium Thiosulphate	6.80
L-Lysine	5.00
Sodium Chloride	5.00
Xylose	3.50
Yeast Extract	3.00
Sodium Deoxycholate	2.50
Ferric Ammonium Citrate	0.80
Phenol Red	0.080
Agar	13.50

Final pH (at 25°C) 7.4±0.2

*Formula adjusted, standardized to suit performance parameters

Type of specimen

Clinical samples - Faeces, Food samples

Specimen Collection and Handling

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light,

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follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

- ✓ Suspend 55.20 g of powder in 1000 mL distilled water.
- ✓ Mix thoroughly.
- ✓ Boil to dissolve the medium completely.
- ✓ DO NOT AUTOCLAVE.
- ✓ Cool immediately in a water bath at 45°C-50°C and pour into sterile petriplates.

Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Quality Control

Dehydrated Appearance: Light beige to pink colored homogeneous, free flowing powder
Prepared Appearance: Red colored clear, slightly opalescent gel forms in petridishes
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18 to 48 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.
Indicative Properties: Colonies are comparable in appearance and indication reaction to the previously tested and approved lot. The test results observed are within the specified temperature and time, inoculating ≤100 cfu of appropriate microorganism.
Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating > 100 cfu of the appropriate microorganism at at 30°C-35°C for > 48 hours.

Cultural Response :

Organism	Type Culture	Growth	Incubation Temperature	Incubation Period
Salmonella enterica subsp*. enterica* serovar *Typhimurium*	ATCC 14028	Good	30°C -35°C	18 Hours
Shigella flexneri	ATCC 12022	Good	30°C -35°C	18 Hours

Inhibitory:

Organism	Type Culture	Growth	Incubation Temperature	Incubation Period
Staphylococcus aureus	ATCC 6538	Inhibited	30°C -35°C	48 Hours

Interpretation of Results

- ✓ Examination of plates for growth after completion of incubation period.

Warranty

- ✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

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Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.
User must be ensure safe disposal of used or unusable preperation of the products.

Reference

1. US Pharmacopeial Convention, Inc. 2001. The United States Pharmacopoeia 25/NF 20-2002. The US Pharmacopeial Convention, Inc; Rockville, Md.

2. IP, 1996, Ministry of Health and Family Welfare, Govt. of India, Vol. 2.

3. US Food and Drug Adm; 1998, Bacteriological Analytical Manual, 8th Ed; Rev. A, AOAC, International, Gaithersburg, Md.

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