

CM 22638 - XYLOSE LYSINE DEOXYCHOLATE (XLD) AGAR PLATE

INTENDED USE

For selective isolation and enumeration of *Salmonella Typhi* and other *Salmonella* species with the harmonized method of USP/EP/BP/JP/IP.

PRODUCT SUMMARY AND EXPLANATION

Xylose Lysine Deoxycholate agar (XLD agar) is a selective growth medium used in the isolation of *Salmonella* and *Shigella* species from clinical samples or food products. XLD Agar has been recommended for the identification of Enterobacteriaceae and for the microbiological testing of foods, water and dairy products. The media formulation does not allow the overgrowth of other organisms over *Salmonella* and *Shigella*. XLD Agar is one of the media used in the Microbial Limit Tests in the USP & EP.

COMPOSITION

Ingredients	Gms / Ltr
Agar	13.500
Sucrose	7.500
Lactose monohydrate	7.500
Sodium thiosulphate	6.800
L-Lysine	5.000
Sodium chloride	5.000
Xylose	3.500
Yeast extract	3.000
Sodium deoxycholate	2.500
Ferric ammonium citrate	0.800
Phenol red	0.080

PRINCIPLE

XLD Agar is both a selective and differential medium. The selective agent in XLD Agar is sodium deoxycholate, which inhibits the growth of gram-positive organisms. It contains yeast extract as a source of nutrients and vitamins. The carbohydrate source is xylose which is fermented by most enteric except for *Shigella* species, and these colonies appear red on this medium as a result. A second differential mechanism for *Salmonella* is employed by the addition of lysine. Lysine decarboxylation reverts the pH of the medium to an alkaline condition. To avoid this reversal to a *Shigella* reaction, lactose and sucrose are added in excess. The addition of sodium thiosulfate and ferric ammonium citrate as a sulphur source and indicator, respectively, allows hydrogen sulphide forming organisms to produce colonies with black centers, under alkaline conditions. Organisms which ferment xylose, are lysine decarboxylase-negative, and do not ferment lactose or sucrose cause an acid pH in the medium, and form yellow colonies.

INSTRUCTION FOR USE

Either streak, inoculate or surface spread the test inoculum aseptically on the plate.

QUALITY CONTROL SPECIFICATIONS

Appearance : Red color Medium



Quantity of Medium	:	25ml of medium in 90mm plates.
pH (at 25°C)	:	7.4± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Cultural response was observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Recovery	Incubation Temperature	Incubation period
<i>Salmonella typhimurium</i>	14028	50-100	Good-Luxuriant	Red with black centres	≥50%	30-35°C	18 – 48 Hours
<i>Salmonella typhi</i>	6539	50-100	Good-Luxuriant	Red with black centres	≥50%	30-35°C	18 – 48 Hours
<i>Proteus mirabilis</i>	25933	50-100	Good-Luxuriant	Grey with black centres	≥50%	30-35°C	18 – 48 Hours
<i>Shigella flexneri</i>	12022	50-100	Fair	Red	30-40%	30-35°C	18 – 48 Hours
<i>Shigella sonnei</i>	25931	50-100	Fair	Red	30-40%	30-35°C	18 – 48 Hours
<i>Escherichia coli</i>	25922	50-100	Partial inhibition	Yellow	20-30%	30-35°C	18 – 48 Hours
<i>Escherichia coli</i>	8739	50-100	Partial inhibition	Yellow	20-30%	30-35°C	18 – 48 Hours
<i>Staphylococcus aureus</i>	25923	≥1000	Inhibited	-	0%	30-35°C	≥72 Hours
<i>Staphylococcus aureus</i>	6538	≥1000	Inhibited	-	0%	30-35°C	≥72 Hours
<i>Enterococcus faecalis</i>	29212	≥1000	Inhibited	-	0%	30-35°C	≥72 Hours

PACKAGING:

Doubled layered packing containing 5 No. of plates with one silica gel desiccant bag packed inside it.

STORAGE

On receipt, store the plates at 15–30 °C. Avoid freezing and overheating. Do not open until ready to use. Prepared plates stored in their original sleeve wrapping until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times. Allow the medium to warm to room temperature before inoculation.

Product Deterioration: Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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8. Eaton A. D., Clesceri L. S., Rice E. W., and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
9. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
 good-luxuriant good-luxuriant 50 -100 50 -100 50 -100 $\geq 10^3$ $\geq 10^3$ $\geq 10^3$ 50 -100 50 -100 50 -100 50 -100 50 -100
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QTY.
Quantity

**LOT/
B. NO.**
Lot / Batch Number


Temperature Unit


Manufacturer


Best Before

GMP
Certification of
Good Manufacturing Practices

REF
Catalogue No.

EC REP
Authorized Representative
Müller GmbH
 Parkstrasse 10,
 48163 Münster, Germany

CE
European Conformity




Consults Instructions for use :

IVD
For In Vitro Diagnostic Use

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

