TECHNICAL DATA SHEET

Article No. 9171

XLD Agar (Xylose Lysine Desoxycholate Agar) Ph. Eur., prepared plates

SYNONYMS

Xylose Lysine Deoxycholate Agar

SPECIFICATION

Solid medium for the isolation of enteropathogenic species, especially *Salmonella* and *Shigella* according to Pharmacopeial Harmonised Method and ISO Standard.

Color: red
pH: 7.4 ±0.2 at 25 ºC

COMPOSITION IN G/L

Xylose	3.50
L-Lysine HCl	5.00
Lactose	7.50
Sucrose	7.50
Sodium chloride	5.00
Yeast extract	3.00
Phenol red	0.08
Sodium desoxycholate	2.50
Sodium thiosulfate	6.80
Ammonium ferric citrate	0.80
Agar	15.0

PACKAGING DETAILS

9171-20PLATES
20 prepared plates 90 mm
Content: 21 ±2 ml
Packaging unit: 1 box with 2 packs of 10 plates/pack. Single cellophane.

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Persönlich haftende Gesellschafterin:
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Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer /
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GUIDELINES

Description:
Xylose Lysine Desoxycholate Agar is a selective differential medium, suitable for the detection of pathogenic enterobacteria, especially *Shigella*. Gram positive microbiota are inhibited by the low amount of desoxycholate, whilst *Shigella* grows. Xylose, lactose or sucrose fermentation results in acidification of the medium, which is seen by the indicator turning yellow around the colonies. This color disappears after 24 hours, so observations must be carried out between 18 and 24 hours. Hydrogen sulfide production from thiosulfate is easily detected because colonies become darker due to the ferric sulfide precipitation. Lysine decarboxylation to cadaverine may also be observed in the medium, since it produces alkalinization and consequently the indicator turns into red.
All these reactions allow a good differentiation of *Shigella*. *Edwardsiella* and *Proteus inconstans* are the only enterobacteria other than *Shigella* which do not ferment xylose and therefore show negative fermentation reaction. *Salmonella* ferment xylose, but it is consumed quickly and alkalinization of the medium due to lysine decarboxylation may mask the reaction. *Salmonella* colonies become darker due to ferrous sulfide precipitates, which is also a common property with *Edwardsiella*.
Other types of enterobacteria do not suffer this phenomenon, since acid accumulation due to lactose and sucrose fermentation is so high that it avoids pH reversion by decarboxylation and even ferrous sulfide precipitate in the first 24 hours.
In quality control, typical colonial appearances on XLD medium is described after 18-48 hours of incubation at 30-35 ºC.

MICROBIOLOGICAL CONTROL

According to USP & European Pharmacopeia.

Inoculate with 10-100 CFU acc. to harmonized Parmacopoeia or with 100-1000 CFU for selectivity.

Analytical methodology acc. to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 30-35 ºC. Reading at 18-24/48 h.

Microorganism	Growth
S. typhimurium ATCC® 14028, WDCM 00031	Good - red colonies, black center (SH_2 +)
Salmonella abony NCTC® 6017	Good - red colonies, black center (SH_2 +)
Stph. aureus ATCC® 6538, WDCM 00032	Inhibited

Sterility control:
Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

BIBLIOGRAPHY

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STORAGE

2-14 °C

SHELF LIFE

3 months