TECHNICAL DATA SHEET

Article No. 9649

XLD Agar (Xylose Lysine Desoxycholate Agar) ISO, prepared plates

SYNONYMS

Xylose Lysine Deoxycholate Agar

SPECIFICATION

Medium for the isolation of enteropathogenic species, especially *Salmonella* and *Shigella* according to ISO Standards.

Color: red
pH: 7.4 ±0.2 at 25 ºC

COMPOSITION IN G/L

Xylose	3.75
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	1.00
Sodium thiosulfate	6.80
Ammonium ferric citrate	0.80
Agar	15.0

PACKAGING DETAILS

9649-20PLATES
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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Amtsgericht Stuttgart / HRB-Nr. 252035
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GUIDELINES

Description:
Xylose Lysine Desoxycholate Agar is a selective differential medium, suitable for the detection of pathogenic enterobacteria in food and animal feeding stuff, especially *Shigella*. A modification in the original formulation of Taylor allows the medium to perform to the specifications of ISO standards. Gram positive microbiota are inhibited by a low amount of desoxycholate, whilst *Shigella* grows. Xylose, lactose and sucrose fermentation produce acidification of the medium which is shown by the indicator surrounding the colonies turning yellow. This color disappears after 24 hours, so interpretation must be carried out between 18-24 hours. Sulfide production from thiosulfate is easily detected because colonies become darker, due to the ferric sulfide precipitate. Lysine decarboxylation to cadaverine may also be observed in the medium, since it produces alkalinization and consequently the indicator turns red.
All these reactions allow a good differentiation of *Shigella*, which other than *Edwarsiella* and *Proteus inconstans* are the only enterobacteria that do not ferment xylose and therefore show a negative fermentation reaction. *Salmonella* does ferment xylose, but it is consumed quickly and the medium becomes alkalised due to lysine decarboxylation, which may hide the reaction. The difference between *Shigella* and *Salmonella* is that the latter colonies become darker due to ferrous sulfide precipitates, which is also a common characteristic of *Edwardsiella*. Other types of enterobacteria do not suffer this phenomenon, since acid accumulation due to lactose and sucrose fermentation is so intense that it avoids pH reversion by decarboxylation and even ferrous sulfide precipitate in the first 24 hours.
In the quality control, the typical colonial aspects of Enterobacteriaceae appear after incubation for 24 ±3 h at 37 °C.

MICROBIOLOGICAL CONTROL

Spiral Spreading: Practical range 100 ±20 CFU. Min. 50 CFU (productivity) / 10^4-10^6 CFU (selectivity).

Microbiological control acc. to ISO 11133:2014/A1:2018.

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

Aerobiosis. Incubation at 37 ±1 ºC, reading after 24 ±3 h.

Microorganism	Growth
Enterococcus faecalis ATCC® 29212, WDCM 00087	Inhibited
S. typhimurium ATCC® 14028, WDCM 00031	Good (≥50 %) - red colonies, black center
Salmonella enterica ATCC® 13076, WDCM 00030	Good (≥50 %) - red colonies, black center
Escherichia coli ATCC® 25922, WDCM 00013	Partially inhibited (≤30 %) - yellow colonies

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