Reference: 101241ZF **Technical Data Sheet**

Product: **XLD Agar (EP)**

Specification

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

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 1 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14 ºC

Composition

Composition (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 deoxycholate	2.50
Sodium thiosulfate	6.80
Ammonium ferric citrate	0.80
Agar	13,5

Description /Technique

Xylose Lysine Deoxycholate 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 deoxycholate, whilst *Shigella* grows.
Xylose, lactose or sucrose fermentation produces the acidification of the medium, and this is seen by the indicator turning yellow, surrounding the colonies. This colour 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 precipitate.
Lysine decarboxylation to cadaverine may also be observed in the medium, since it produces alkalinization and consequently the indicator turns to 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 the quality control, typical colonial appearances on XLD medium after 18-48 hours of incubation at 30-35ºC are described.

Precautions

For in vitro diagnostic use. Do not reuse. For professional use only.
Do not use the product if it shows evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

Quality control

Physical/Chemical control

Color : Red pH: 7.4 ± 0.2 at 25ºC

Microbiological control

According to USP & European Pharmacopoeia

Inoculate with 10-100 CFU according to harmonized Pharmacopoeia or with 100-1000 CFU for selectivity.

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

Aerobiosis. Incubation at 30-35ºC. Reading at 18h (Productivity) and 48h (Selectivity)

Microorganism	Growth
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good- Cult. medium & red colonies, black center (SH_2+).
Salmonella abony NCTC® 6017	Good- Cult. medium & red colonies, black center (SH_2+).
Staphylococcus 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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· PASCUAL ANDERSON, Mª R. (1992) Microbiología Alimentaria. Díaz de Santos, S.A. Madrid.
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Storage

Storage conditions: 2-14ºC
Avoid direct contact with surfaces that can freeze product.