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X.L.D. Agar

DM230. An improved medium for the isolation of enteric pathogens.

Contents: See pack label.

Formulation*

Material:	Concentration in medium:
Peptone	1.0g/litre
Yeast extract	2.0g/litre
Lactose	7.5g/litre
Sucrose	7.5g/litre
Xylose	3.75g/litre
Sodium chloride	5.0g/litre
L-Lysine	5.0g/litre
Sodium thiosulphate	4.34g/litre
Ferric ammonium citrate	0.8g/litre
Sodium desoxycholate	1.0g/litre
Phenol red	0.072g/litre
Agar A	15.0g/litre
Final pH: 7.3 ± 0.2	

Storage and shelf life
All dehydrated culture media containers should be kept tightly closed and stored in a dry place at 10 to 25°C until the expiry date shown on the pack label.

Precautions
For *in vitro* diagnostic use only. Observe approved hazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal. Refer to Product Safety Data sheet (available on request or via MAST website).

Materials required but not provided
Standard microbiological supplies and equipment such as loops, MAST selective supplements, swabs, applicator sticks, incinerators and incubators, etc., as well as serological and biochemical reagents and additives such as blood.

Procedure
1. Refer to pack label for quantities and volumes required. Prepare MAST X.L.D. Agar (DM230) by suspending the powder in distilled or deionised water. For sachet packs, dissolve the entire contents of the sachet in the volume shown on the label.
2. Allow to stand for approximately 15 minutes and bring to the boil until completely dissolved. DO NOT AUTOCLAVE.
3. Allow to cool to 50 to 55°C, mix well and pour culture plates (15 to 20ml per plate) and allow to set.
4. Prepared culture plates may be used immediately or stored in plastic bags at 2 to 8°C for up to one week before use.
5. Inoculate plates directly with faeces, rectal swabs or a subculture from a suitable enrichment medium e.g. MAST Tetrathionate Broth (DM219S). Streak out for single colonies.
6. Incubate plates aerobically for 18 to 24 hours at 35 to 37°C. It is important that incubation is not continued beyond 24 hours as this allows reversion of pH in non-pathogens.

Interpretation of results
After incubation record growth of organisms. Typical characteristics to note include: colony size morphology and pigmentation.
Most enteric organisms will ferment xylose to produce acid, giving bright yellow colonies often surrounded by hazy zones of bile salt precipitation. In contrast, *Shigella* colonies are irregular and pink/red in appearance. Salmonellae will also decarboxylate the lysine which results in the maintenance of the neutral pH and the reduction of thiosulphate to produce H_2S, giving smooth pink/red colonies with a black centre.

Quality control
Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate expected performance. Do not use the product if the result with the control organism is incorrect. The list below illustrates a range of performance control strains which the end user can easily obtain.

Test Organisms	Result
Escherichia coli ATCC® 25922	Partial inhibition
Enterococcus faecalis ATCC® 29212	Partial inhibition
Salmonella typhimurium ATCC® 14028	Growth
Shigella flexneri ATCC® 12022	Growth

References
Bibliography available on request.

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*Formulation may change to meet performance criteria