

Xylose Lysine Desoxycholate (XLD) Agar

Product No. CM219

Intended Use

Used for the selective isolation of *Salmonella* and *Shigella*. (GB, FDA BAM, ISO)

Specification 250 g

Ingredients	(g/L)
Yeast Extract	3.0
L-Lysine	5.0
Xylose	3.75
Lactose	7.5
Sucrose	7.5
Sodium Deoxycholate	2.5
Sodium Chloride	5.0
Sodium Thiosulfate	6.8
Ferric Ammonium Citrate	0.8
Phenol Red	0.08
Agar	15.0
(pH 7.4 ± 0.2)	

Additional Reagents

No

Principle and Interpretation

Xylose is incorporated into the medium because it is fermented by practically all enterics except for the *shigellae*. Lysine is included to enable the *Salmonella* group to be differentiated from the nonpathogens. H₂S indicator system, consisting of sodium thiosulfate and ferric ammonium citrate, is included for the visualization of the hydrogen sulfide produced, resulting in the formation of colonies with black centers. The nonpathogenic H₂S producers do not decarboxylate lysine; therefore, the acid reaction produced by them prevents the blackening of the colonies. Sodium chloride maintains the osmotic balance. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. It utilizes sodium desoxycholate as the selective agent, therefore, it is inhibitory to gram-positive microorganisms. Agar is the solidifying agent.

Directions

Suspend 58.9 g of the powder in 1 L of distilled water. Mix thoroughly. Heat with frequent agitation and boil for 1-2 minute to completely dissolve the powder. DO NOT AUTOCLAVE. Cool to approximately $48^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and use immediately.

Precautions

No

Quality Control

Microorganisms	Inoculum (CFU)	Reference Medium	Method	Incubation	Growth (Productivity Ratio : PR)
<i>Salmonella Typhimurium</i> ATCC 14028	50-250	TSA	quantitative	$36^{\circ}\text{C} \pm 1^{\circ}\text{C}$ $18\text{h} \pm 24\text{h}$	PR ≥ 0.5 Red With black centers
<i>Salmonella Typhimurium</i> CICC 25045 [CMCC(B) 50976]					
<i>Shigella flexneri</i> CMCC 51572	50-250	TSA	quantitative	$36^{\circ}\text{C} \pm 1^{\circ}\text{C}$ $18\text{h} \pm 24\text{h}$	PR ≥ 0.5 Red
<i>Staphylococcus aureus</i> ATCC 6538	-	-	Semi-quantitative	$36^{\circ}\text{C} \pm 1^{\circ}\text{C}$ $18\text{h}-24\text{h}$	G ≤ 1
<i>Staphylococcus aureus</i> CICC 25018 [CMCC(B) 26305]					

Storage Conditions

Keep container tightly closed and store in a cool dry place.

Shelf Life

3 years.

Related Products

Product No.	Product Name	Specification
CM219	Xylose Lysine Desoxycholate (XLD) Agar	250 g
CM219-07	Xylose Lysine Desoxycholate (XLD)	100 mL \times 10
PB030A	Xylose Lysine Desoxycholate (XLD)	20 Plates

For laboratory use in industry or R&D purpose. Not for drug, household or other uses.