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## TECHNICAL DATA SHEET (TDS)

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**Product: Xylose Lysine Deoxycholate (XLD) Agar**

Selective & Differential Medium for Salmonella and Shigella Isolation

Catalogue Number: AS-1378

Medium Type: Selective & Differential Enteric Culture Medium

Form: Dehydrated Powder

HS Code: 3821.00.00

Issue Date: 25 February 2026

### 1. Product Overview

XLD Agar is a selective and differential medium formulated for the isolation and differentiation of Salmonella and Shigella species from food, environmental, and laboratory samples. The medium supports detection of carbohydrate fermentation, lysine decarboxylation, and hydrogen sulfide production.

### 2. Principle of the Medium

Carbohydrates (xylose, lactose, sucrose) enable differentiation via fermentation. Lysine allows detection of decarboxylation reactions typical of Salmonella. Sodium deoxycholate inhibits Gram-positive organisms. Phenol red indicates pH changes. Ferric ammonium citrate detects hydrogen sulfide (H<sub>2</sub>S) formation.

### 3. Typical Composition (per litre)

<b>Yeast Extract</b>	<b>3.0 g</b>
<b>Peptone / Proteose Peptone</b>	<b>10.0 g</b>
<b>Lactose</b>	<b>7.5 g</b>
<b>Sucrose</b>	<b>7.5 g</b>
<b>Xylose</b>	<b>4.0 g</b>
<b>Sodium Chloride</b>	<b>5.0 g</b>
<b>Sodium Deoxycholate</b>	<b>0.8 g</b>
<b>Ferric Ammonium Citrate</b>	<b>0.8 g</b>
<b>Phenol Red</b>	<b>0.025 g</b>
<b>Agar</b>	<b>15.0 g</b>
<b>Final pH (25°C)</b>	<b>7.4 ± 0.2</b>

### 4. Preparation

Suspend 61.55 g in 1 L of purified water.

Heat with agitation until completely dissolved.

Sterilise by autoclaving at 121 °C for 15 minutes.

Cool to 45–50 °C and pour into sterile Petri dishes.

### 5. Incubation Conditions

Temperature: 35–37 °C

Incubation Time: 18–24 hours (up to 48 hours if required)

### 6. Interpretation of Results

Red colonies: *Shigella* spp. (non-fermenters)

Yellow colonies: Carbohydrate fermenters

Red colonies with black centres: *Salmonella* spp. (H<sub>2</sub>S production)

### 7. Storage & Stability

Dehydrated medium: Store at 15–30 °C, dry and tightly sealed.

Prepared plates: Store at 2–8 °C, protected from light.

Shelf life as indicated on label when stored properly.

### 8. Quality Assurance

Manufactured under controlled conditions.

Batch-specific Certificate of Analysis (COA) available.

Performance validated using reference strains.