



Lactobacillus Selection Oxgall Agar Base (LBS Oxgall Agar)

M1165

Lactobacillus Selection Oxgall Agar is recommended for the selective isolation, cultivation and enumeration of Lactobacilli.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Yeast extract	5.000
Dextrose	20.000
Sodium acetate	25.000
Monopotassium hydrogen phosphate	6.000
Ammonium citrate	2.000
Oxgall	1.500
Polysorbate 80	1.000
Magnesium sulphate	0.575
Manganese sulphate	0.120
Ferrous sulphate	0.034
Agar	15.000
Final pH (at 25°C)	5.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 86.23 grams in 1000 ml distilled water containing 1.32 ml glacial acetic acid. Heat to boiling with frequent stirring for 1-2 minutes to dissolve the medium completely. DO NOT AUTOCLAVE. If storage of medium is necessary sterilize by autoclaving at 118°C for 15 minutes.

Principle And Interpretation

Lactobacilli grow in a variety of habitats, wherever high levels of soluble carbohydrate, protein background products, vitamins and a low oxygen tension occur (1). These sites include the oral cavity, the intestinal tract (2, 3), the vagina (4), food products (5) and dairy products (6).

Lactobacillus Selection Oxgall Agar Base, formulated by Gilliland and Speck (8) is recommended by APHA for the isolation and enumeration of lactobacilli (5). Lactobacillus Selection Oxgall Agar Base is similar in composition to Lactobacillus Selection Agar Base, the only difference being the additional oxgall added to the former (5).

Casein enzymic hydrolysate and yeast extract serve as sources of essential nutrients. Dextrose is the carbohydrate and energy source. Polysorbate 80 serves as an additional source of growth factors and fatty acids required for metabolism of Lactobacillus species. Selectivity of the medium is obtained due to the presence of ammonium citrate and sodium acetate. These inhibit the accompanying microbial and fungal flora and also restrict swarming of colonies (7). The low acidic pH of the medium obtained by addition of glacial acetic acid is inhibitory to several bacterial species. Sulphates provide essential ions. Lactobacillus Selection Oxgall Agar Base is made selective for bile-resistant lactobacilli by incorporating 0.15% oxgall.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 8.62% w/v aqueous solution at 25°C. pH : 5.4±0.2

pH

5.20-5.60

Cultural Response

M1165: Cultural characteristics observed in presence of 3-5% Carbon dioxide(CO₂) after an incubation at 35-37°C for 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Lactobacillus acidophilus</i> ATCC 4356	50-100	luxuriant	>=50%
<i>Lactobacillus plantarum</i> ATCC 8014	50-100	luxuriant	>=50%
<i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited	0%
<i>Staphylococcus aureus</i> ATCC 25923	>=10 ³	inhibited	0%
<i>Lactobacillus casei</i> ATCC 9595	50-100	luxuriant	>=50%
<i>Enterococcus faecalis</i> ATCC 29212	>=10 ³	inhibited	0%
<i>Proteus vulgaris</i> ATCC 13315	>=10 ³	inhibited	0%

Storage and Shelf Life

Store dehydrated powder and prepared medium at 2 - 8°C in tightly closed container. Use before expiry date on the label.

Reference

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