



Arabinose Agar Base

M1576

Arabinose Agar is recommended for selective isolation of *Enterococcus faecium* from faeces, sewage and water samples.

Composition**

Ingredients	Gms / Litre
Peptone, special	23.000
Corn starch	1.000
Sodium chloride	5.000
Arabinose	10.000
Phenol red	0.100
Agar	15.000
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 27.05 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add the rehydrated contents of 1 vial of Enterococcus faecium Selective Supplement (FD226). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Arabinose Agar Base is based on arabinose fermentation by *Enterococcus* species. *Enterococcus* species are becoming increasingly important agents of human diseases, largely because of their resistance to antimicrobial agents (1), thereby becoming a major cause of nosocomial infections (2). The use of selective medium for the isolation of Enterococci has been previously reviewed and Arabinose Agar Base with *Enterococcus faecium* Selective Supplement (FD226) (containing cephalixin and aztreonam) is recommended for the selective isolation of *E. faecium* from heavily contaminated sites (3).

Peptone special serves as a source of nitrogen, carbon and essential growth nutrients. Corn starch neutralizes the toxic metabolites formed where as sodium chloride maintains the osmotic equilibrium. Arabinose is the fermentable carbohydrate. *E. faecium* ferments arabinose, producing acidic conditions. This acidity developed is visualized as a colour change from red to yellow, due to the phenol red indicator in the medium.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 5.41% w/v aqueous solution at 25°C. pH : 7.8±0.2

pH

7.60-8.00

Cultural Response

M1576: Cultural characteristics observed with added Enterococcus faecium Selective Supplement(FD226) after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum(CFU)	Growth	Recovery	Colour of Colony
Cultural Response <i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited	0%	

<i>Enterococcus faecalis</i> ATCC 50-100 29212	good-luxuriant	$\geq 50\%$	colourless-pink
<i>Enterococcus faecium</i> ATCC 50-100 19434	good-luxuriant	$\geq 50\%$	yellow
<i>Enterococcus hirae</i> ATCC 50-100 10541	good-luxuriant	$\geq 50\%$	colourless-pink
<i>Pseudomonas aeruginosa</i> $\geq 10^3$ ATCC 27853	inhibited	0%	
<i>Staphylococcus aureus</i> $\geq 10^3$ ATCC 25923	inhibited	0%	

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

Reference

1. Eliopoulous G. M., Eliopoulous C. T., 1990, Eur. J. Clin Microbiol. Infect. Dis., 9:118-126
2. Chenoweth C., Schaberg D., Eur. J. Clin. Microbiol. Infect. Dis., 1990:80-89,
3. Ford M., Perry J. D. and Gould F. K., 1994, J. Clin. Microbiol., 32:2999-3001.

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