



Arcobacter Selective Broth Base

M1894

For the enrichment and cultivation of *Arcobacter* spp.

Composition**

Ingredients	Gms / Litre
Peptone	18.000
Sodium chloride	5.000
Yeast extract	1.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add rehydrated contents of one vial of Arcobacter Selective Supplement (FD304) and add 5% w/v sterile lysed defibrinated horse blood. Mix well and dispense into sterile tubes.

Principle And Interpretation

Arcobacter selective isolation from food and environment samples, prior enrichment in Arcobacter selective isolation broth should be performed (1). *Arcobacter* are aerotolerant, *Campylobacter* -like organisms frequently isolated from cattle and pigs suffering from abortion and enteritis (2).

Only two of the four *Arcobacter* species have been associated with human infections. *A. butzleri* has been isolated from patients with bacteremia, endocarditis, peritonitis and diarrhoea (3,4). *A. cryaerophilus* group 1B has been isolated from patients with bacteremia and diarrhoea (5,6) although it is a much less common human isolate than *A. butzleri* (7)

Peptones and yeast extract provide essential growth nutrients for the growth of *Arcobacter* species. Sodium chloride maintains osmotic equilibrium in addition to providing essential ions for growth. Cefoperazone, amphotericin-B, 5-fluorouracil, novobiocin and trimethoprim are used as selective supplement (FD304) which eliminate the contaminating microflora.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Basal Medium : Light yellow coloured clear solution. After addition of 5 % w/v sterile lysed defibrinated horse blood: Cherry red coloured opaque solution.

Reaction

pH of 2.4% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural response

Cultural characteristics observed with added Arcobacter Selective Supplement, after an incubation at 28°C for 48 hours under microaerobic conditions.

Cultural Response

Organism	Inoculum (CFU)	Growth
Cultural Response		
<i>Arcobacter butzleri</i> ATCC 12481	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited

<i>Enterococcus faecalis</i> ATCC >=10 ³ 29212	inhibited
<i>Proteus mirabilis</i> ATCC >=10 ³ 25933	inhibited

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

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Revision : 0/ 2013



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