Enterococcus Differential Agar Base (TITG Agar Base) M1896

For selective isolation and differentiation of *Enterococcus faecalis* and *Enterococcus faecium*

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Beef extract	8.000
Glucose	10.000
Thallium acetate	1.000
Agar	14.000
Final pH (at 25°C)	6.05 ±0.05

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 43 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add rehydrated contents of one vial of TTC solution 1% (FD057). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Enterococci were formerly classified as faecal steptococci. Enterococci serves as an indicator organism in monitoring food samples as it is cause of faecal contamination. Of the various species of Enterococci, *E.faecalis* and *E.faecium* are frequently found in humans. The presence of Enterococci in food samples has been studied. (2,4).

A variety of selective media have been recommended for the isolation of *Enterococcus* species (3). Enterococcus Differential Agar Base was designed for the selective isolation and differentiation between *Enterococcus faecalis* and *Enterococcus faecium* . The differentiation is based depending upon the reduction of tetrazolium. *Enterococcus faecalis* produces colonies with a deep red centre and a narrow white periphery, whereas *Enterococcus faecium* produces white or pale pink coloured colonies.

Proteose peptone and beef extract serves as a source of nitrogen and vitamins. Glucose serves as a source of carbohydrate. The medium incorporates thallium acetate as a selective inhibitory agent(1).

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.4% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.30% w/v aqueous solution at 25°C. pH : 6.05±0.05

pH
6.00-6.10

Cultural Response
Cultural characteristics observed with added TTC Solution 1% (FD057) after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony

Cultural Response

Enterococcus faecalis ATCC 29212	50-100	good-luxuriant	>=50%	red or maroon
Escherichia coli ATCC 25922	>=10^3	inhibited	0%	
Enterococcus faecium ATCC 19434	50-100	good-luxuriant	>=50%	Colourless
Lactococcus lactis ATCC 19435	>=10^3	inhibited	0%	

Storage and Shelf Life

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

Reference

1.Barnes,E.M.(1956)Methods for the isolation of faecal streptococci(Lancefield group D)from bacon factories.J.Appl.Bacteriol.19,193-203.
2.Devriese, L.A., Pot, B., Van Damme, L., Kersters, K and Haesebrouk, F. (1995) Identification of Enterococcus species isolated from food of animal origin. Int. J. Food Microbiol. 26, 187-197.
3.Domig, K.J., Mayer, H.K. and Kneifel, W (2003a) Methods used for isolation, enumeration, characterization and identification of Enterococcus species.1. Media fro isolation and enumeration. Int.J.Food Microbiol.88 147-164.
4.Knudtson, L.M. and Hartman, P.A. (1993) Enterococci in pork processing. J.Food Prot. 56, 6-9.

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