Tryptose Agar, w/ Thiamine HCl

M996

Tryptose Agar, w/Thiamine HCl is used for the isolation, cultivation and differentiation of fastidious microorganisms in an infusion free medium.

Composition**

Ingredients	Gms / Litre
Tryptose	20.000
Dextrose	1.000
Sodium chloride	5.000
Thiamine hydrochloride	0.005
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41 grams in 1000 ml distilled water. Heat to boiling to dissolve the media completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For blood media, aseptically add 5% v/v sterile defibrinated blood. Mix well and dispense as desired.

Principle And Interpretation

Huddleson used Tryptose media for the isolation of *Brucella* species from man (1). Tryptose containing media, rather than the conventionally used meat infusion media have been used for the enumeration and isolation of *Brucella* species (2, 3). Addition of thiamine to tryptose media enhanced the recovery of *Brucella* species especially *Brucella suis* (4, 5). These media can be used as general purpose media for cultivation of wide variety of organisms. It can also be supplemented with defibrinated blood (sheep, horse) to prepare blood agar for the isolation of fastidious organisms like *Brucella* . Tryptose Agar with thiamine HCl is recommended by APHA (6) and Diagnostic Procedures and Reagents (7) for the isolation and cultivation of *Brucella* species and also Streptococci, meningococci, pneumococci and other pathogenic bacteria (8).

Dextrose is the source of energy. Tryptose serves as nitrogen source while sodium chloride maintains osmotic equilibrium. Blood Agar may be prepared by adding 5%v/v sterile defibrinated blood to molten sterile Tryptose Agar w/ thiamine hydrochloride at 50°C.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of Prepared medium
Basal Medium : Yellow coloured clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates.

Reaction
Reaction of 4.1% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M996: Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours with added 5% v/v sterile defibrinated blood in presence of 10% Carbon dioxide(CO2).

Organism	Growth
Brucella melitensis ATCC 4309	good-luxuriant

Brucella suis ATCC 4314	good-luxuriant
Streptococcus pneumoniae ATCC 6303	good-luxuriant
Streptococcus pyogenes ATCC 19615	good-luxuriant

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 the label.

Reference

1.Huddleson I. F., 1943, Brucellosis in man and animals, rev., Ed., The Commonwealth Fund, New York, N.Y.
2.Ruiz Castañeda M., 1947, Proc. Soc. Exp. Biol. Med., 64:114.
3.Huddleson I. F., 1939, Brucellosis in Man and Animals, Oxford University Press, Oxford, England.
4.McCullough W. G., Mills R. L., Herbst E. J., Roessler W. J. and Brewer C. R., 1947, J. Bacteriol., 53:5.
5.Atlas R. M., 2004, Handbook of Microbiological Media, Lawrence C. Parks, (Ed.), 3rd Edition, CRC Press.
6.Standard Methods for the Microbiological Examination of Dairy Products, 9th Ed., 1948, APHA Inc., New York.
7.Diagnostic Procedures and Reagentsm, 1950, 3rd Edition, APHA, New York.
8.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore

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