



Tryptose Broth, w/ Thiamine HCl

M997

Tryptose Broth, w/Thiamine HCl is used for the 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
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 26 grams in 1000 ml distilled water. If desired, add 0.5-1% agar to the medium. 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).

This medium can be used as general purpose medium for cultivation of wide variety of organisms. It can also be supplemented with defibrinated blood (sheep, horse) to prepare blood containing medium for the isolation of fastidious organisms like *Brucella*. Tryptose Broth 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of Prepared medium

Basal Medium : Yellow coloured clear to slightly opalescent Solution. After addition of 5% v/v sterile defibrinated blood: cherry red coloured opaque solution forms in tubes.

Reaction

Reaction of 2.6% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M997: 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
<i>Brucella melitensis</i> ATCC 4309	good-luxuriant
<i>Brucella suis</i> ATCC 4314	good-luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6303	good-luxuriant

Streptococcus pyogenes good-luxuriant
ATCC 19615

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 Reagents, 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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