

PRODUCT SPECIFICATION SHEET



Tryptose Agar w/ Thiamine HCl (DM489)

Intended Use

Tryptose Agar w/ Thiamine HCl (DM489) is an infusion free medium for isolation, differentiation and cultivation of fastidious microorganisms.

Product Summary and Explanation

Tryptose media, prepared without extract or infusion of meat, are recommended for the cultivation and isolation of pathogenic and saprophytic bacteria. Historically, it was considered necessary to include meat extract or infusion as a nutritional supplement in culture media. Tryptose was developed while studying the growth requirements of *Brucella*.^(1,2) Huddleson⁽³⁾ found tryptose media to be equal or superior to meat infusion media, providing uniformity for the cultivation and differentiation of fastidious organisms. 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. Tryptose media are particularly well suited for the isolation of *Brucella* from blood. This medium 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⁾

Principles of the Procedure

Tryptose Agar w/ Thiamine HCl contains tryptose which serves as a source of nitrogen for microbial metabolism. Dextrose is a carbon and energy source. Thiamine hydrochloride is a source of vitamins. Sodium chloride maintains the osmotic balance of the medium. Blood Agar may be prepared by adding 5%v/v sterile defibrinated blood to molten sterile Tryptose Agar w/ thiamine hydrochloride at 50°C.

Formula / Liter

Ingredients	Gms / Liter
Tryptose	20.00
Dextrose	1.00
Sodium chloride	5.00
Thiamine hydrochloride	0.005
Agar	15.00
Final pH: 7.2 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.
3. Biosafety Level 2 practices, containment equipment and facilities are recommended for activities with clinical specimens of human or animal origin containing or potentially containing pathogenic *Brucella* spp.
4. Biosafety Level 3 practices, containment equipment and facilities are recommended for all manipulations of cultures of the pathogenic *Brucella* spp. and for experimental animal studies.

Directions

1. Suspend 41 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. For blood media, aseptically add 5% v/v sterile defibrinated blood. Mix well and dispense as desired.

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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
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 of 4.1% solution	pH 7.2 \pm 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: 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).

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Brucella melitensis</i> ATCC 4309	good-luxuriant
2.	<i>Brucella suis</i> ATCC 4314	good-luxuriant
3.	<i>Streptococcus pneumoniae</i> ATCC 6303	good-luxuriant
4.	<i>Streptococcus pyogenes</i> ATCC 19615	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for standard test procedures.

Results

Refer to appropriate references and standard test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 2-30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Tryptose Agar w/ Thiamine HCl

Product Code : DM489

Available Pack sizes : 500gm

References

1. Ruiz Castañeda M., 1947, Proc. Soc. Exp. Biol. Med., 64:114.
2. Huddleson I. F., 1939, Brucellosis in Man and Animals, Oxford University Press, Oxford, England.
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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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Further Information

For further information please contact your local MICROMASTER Representative.



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DM489PI, Rev.0, 01.08.2008

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