

Technical Information

Spirolate Broth, OMATA

Product Code: DM 1412

Application: Spirolate Broth, OMATA is used for mass cultivation of *Treponema pallidum*, Reiter strain for antigen production and other studies.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Dextrose	5.000
Yeast extract	5.000
Sodium chloride	2.500
Sodium thioglycollate	0.500
L-Cystine hydrochloride	1.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

The general term spirochaete is often used to for *Treponema* species and organisms similar to spiral morphology. Spirolate Broth, OMATA medium was devised by Omata and Disraely⁽¹⁾ for cultivating oral Fusobacteria. It is used for the mass cultivation of Reiter treponemes in a medium without agar for antigen production and other studies. It can also be used for the cultivation of other Spirochetes. Supplementation with fatty acids enhances the growth of Reiter *Treponema*.

Casein enzymic hydrolysate, yeast extract provide nitrogenous growth factors, minerals and vitamin B complex for the growth of Reiter treponemes. Dextrose serves as the carbon source. Sodium chloride maintains osmotic equilibrium of the medium. Thioglycollate minimizes the oxygen tension, which is optimum for the growth of treponemes. L-cystine hydrochloride is a reducing agent and is less toxic to Fusobacteria⁽¹⁾. The addition of TEM-4TR provides fatty acids, which enhances the growth of Reiter treponemes⁽²⁾. Inoculate Spirolate Broth with 0.05 ml aliquots of a 7 days pure culture in Thioglycollate Medium without indicator, supplemented with 10% inactivated sheep, rabbit or bovine serum. Incubate for minimum 7 days at 35-37°C in an anaerobic atmosphere.

Methodology

Suspend 29 grams of powder media in 1000 ml distilled water. Add 0.25 grams of TEM-4TR-Diacetyl Tartaric Acid Ester of Monoglycerides of Animal Origin (TEM-4TR) if desired. Shake well & heat with frequent stirring and boil for 1 minute. Dispense in test tubes filling them half full (about 15-20 ml in 6" inch tubes). If bigger containers are used, maintain the surface to volume ratio similar to that of tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and add sterile inactivated 10% v/v sheep/ rabbit bovine serum.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light straw coloured clear to slightly opalescent solution

Reaction

Reaction of 2.9% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH range 6.90-7.30



Dehydrated Culture Media
Bases / Media Supplements

Cultural Response/Characteristics

DM 1412: Cultural characteristics observed with added 10% inactivated sheep/rabbit bovine serum after an incubation at 35-37°C for minimum 7 days under anaerobic conditions.

Organism

Treponema pallidum (Reiter strain)

Growth

good-luxuriant

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Omata R. R. and Disraely M. N., 1956, J. Bacteriol., 72:677.
2. Power D. A. and Pelczar M. J., 1959, J. Bacteriol., 77 : 789

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performance parameters.

