

TM 2340 - SPIROLATE BROTH, OMATA

INTENDED USE

For mass cultivation of *Treponema pallidum*, Reiter strain for antigen production and other studies.

PRODUCT SUMMARY AND EXPLANATION

The general term spirochaete is often used to embrace *Treponema* species and organisms similar to spiral morphology. Spirolate Broth, OMATA medium was formulated by Omata and Disraely 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*.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

Casein enzymic hydrolysate, yeast extract provides 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. The addition of TEM-4TR provides fatty acids, which enhances the growth of Reiter treponemes. 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.

INSTRUCTION FOR USE

- Dissolve 29 grams 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.
- 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 psi pressure (121°C) for 15 minutes.
- Cool and add sterile inactivated 10% v/v sheep/ rabbit bovine serum.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light straw coloured clear to slightly opalescent solution.
pH (at 25°C)	: 7.1±0.2

INTERPRETATION



Cultural characteristics observed with added 10% inactivated sheep/rabbit bovine serum after an incubation under anaerobic conditions.

Microorganism	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Treponema pallidum</i>	50-100	Good-luxuriant	35 - 37°C	7 days

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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