

TECHNICAL DATA SHEET

Spirolate Broth, OMATA

Principle

Spirolate Broth, OMATA medium was formulated by Omata and Disraely (1956) for cultivating Spirochetes and oral Fusobacteria. It is used for the mass cultivation of Reiter treponemes for antigen production and other studies. It can also be used for the cultivation of other.

Supplementation with fatty acids enhances the growth of *Reiter Treponema*. The media is composed of casein enzymic hydrolysate, yeast extract, sodium chloride, sodium thioglycollate and L-cystine hydrochloride. The 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 and L-cystine hydrochloride maintains anaerobic conditions 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.

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

Contents*

Ingredients	Gram/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
pH at 25°C	7.1 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 29.00 grams in 1000 ml distilled water. Add 0.25 g of TEM-4TR-diacetyl tartaric acid ester is desired. Boil to dissolve the medium completely and distribute in test tubes till half filled. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and add 10% sterile inactivated sheep bovine serum. Inoculate test sample aseptically.

Specimens types analyzed

Pure isolates etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 2.9% solution	7.1 ±0.2 at 25 °C
pH	6.90- 7.30
Color and clarity of ready medium	Pale yellow colored clear to slightly opalescent solution.
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed with added 10% inactivated sheep bovine serum after incubation at 3537°C for minimum 7 days under anaerobic conditions.

Organism	Inoculum	Growth
<i>Treponema pallidum</i>	50-100	Luxurious

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Omata, R. R., and M. N. Disraely. (1956). *A selective medium for oral fusobacteria*. J. Bacteriol. 72:677-680
2. Kanoë, M., Y. Izuchi, and M. Toda. (1978). *Isolation of Fusobacterium necrophorum from bovine ruminal lesions*. Jpn. J. Vet. Sci. 40:275-27.

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