



Thiosulphate Agar

M726

Thiosulphate Agar is recommended for cultivation of sulphur metabolizing bacteria present in soil specimens.

Composition**

Ingredients	Gms / Litre
Sodium thiosulphate	5.000
Dipotassium hydrogen phosphate	0.100
Sodium bicarbonate	0.200
Ammonium chloride	0.100
Agar	20.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25.4 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Add excess of calcium carbonate if desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle And Interpretation

The various transformations of sulphur in the biosphere can be summed up as a cyclic reaction involving

- decomposition of organic sulphur compounds into subunits which are in turn converted into inorganic compounds through a process of mineralization,
- assimilation of sulphur into the protoplasm of microorganisms, a process referred to as immobilization,
- oxidation of inorganic sulphur compounds into elemental sulphur, and
- reduction of sulphate.

Desulfovibrio desulfuricans is a species of sulphate-reducing bacteria that reduce inorganic sulphate into hydrogen sulphide. Thiosulphate Agar is used for cultivation of sulphur metabolizing bacteria (1). *D. desulfuricans* reduces sodium thiosulphate in the medium to hydrogen sulphide (1). Other salts serve to fulfill the essential ion requirement of bacteria.

Quality Control

Appearance

Cream to yellow coarse powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates or tubes.

Cultural Response

M726: Cultural characteristics observed after an incubation at 30°C for 7 days under anaerobic conditions.

Organism

Growth

Desulfovibrio desulfuricans luxuriant
ATCC 13541

Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Reference

- Subba Rao N. S., Soil Microorganisms and Plant Growth, (Oxford and IBH Publishing Co.)

Disclaimer :

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