Technical Data

Fluid Thioglycollate Medium w/0.5% Tween 80 and 0.5% Soya Lecithin

LQ553D

Intended use

Recommended for cultivation of wide variety of microorganisms and for determining efficiency of sanitization of containers, equipment surfaces, water miscible cosmetics etc.

Composition**

Ingredients	Gms / Litre
Tryptone #	15.000
Yeast extract	5.000
Glucose monohydrate	5.500
Sodium chloride	2.500
L-Cystine	0.500
Sodium thioglycollate	0.500
Resazurin sodium	0.001
Agar	0.750
Tween 80 (Polysorbate 80)	5.000
Soya Lecithin	5.000
pH after sterilization (at 25°C)	7.1±0.5

**Formula adjusted, standardized to suit performance parameters
- Equivalent to Pancreatic digest of casein

Directions

Label the ready to use LQ553D bottle. Inoculate 50-100 cfu sample and incubate at specified temperature and time.

Principle And Interpretation

Brewer (1) formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes including microaerophiles by adding a reducing agent and small amount of agar. The BP (2), EP (3), IP (4) ,USP (5), and AOAC (6) have recommended the media for sterility testing of antibiotics, biologicals and foods and for determining the phenol coefficient and sporicidal effect of disinfectants.

Tryptone, yeast extract, glucose provide carbon, nitrogen compounds, long chain amino acids, vitamin B complex growth factors necessary for bacterial multiplication. L-cystine and sodium thioglycollate allows *Clostridium* to grow in this medium even under aerobic conditions. Also the small amount of agar used in the medium favors the growth of aerobes as well as anaerobes in the medium by maintaining low redox potential for stabilizing the medium (1). Sodium thioglycollate act as a reducing agent and neutralizes the toxic effects of mercurial preservatives and peroxides formed in the medium, thereby promoting anaerobiosis, and making the medium suitable to test materials containing heavy metals (7). Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red (8-10). Soya lecithin and Tween 80 serve as the neutralizer.

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling

For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines (2-5)
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. 1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile Fluid Thioglycollate Medium w/0.5% Tween 80 and 0.5% Soya Lecithin in glass bottle.

Colour

Light straw coloured opalescent solution with upper 10% or less medium pink-purple on standing.

Quantity of Medium

500 ml of medium in glass bottle.

pH

6.60- 7.60

Sterility test

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 30-35°C for not more than 3 days.

Growth promoting properties

Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating ≤ 100 cfu at 30-35°C for or not more than 3 days for aerobes and anaerobes.

Sterility Testing + Validation

The medium is tested with suitable strains of microrganisms inoculating <=100cfu and incubating at 20-25°C for not more than 3 days in case of bacteria and not more than 5 days in case of fungi.

Organism	Inoculum (CFU)	Growth@	Incubation at
Growth promoting			
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	luxuriant	30-35°C
**Bacillus spizizenii* ATCC 6633 (00003*)	50-100	luxuriant	30-35°C
^*Pseudomonas paraeruginosa* ATCC 9027 (00026*)	50-100	luxuriant	30-35°C
$ Kocuria rhizophila ATCC 9341	50-100	luxuriant	30-35°C
Clostridium sporogenes ATCC 19404 (00008)*	50- 100	luxuriant	30-35°C
Clostridium sporogenes ATCC 11437	50-100	luxuriant	30-35°C
^^*Phocaeicola vulgatus ATCC 8482*	50-100	luxuriant	30-35°C
Sterility Testing- Growth promotion+Validation			
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	luxuriant	20-25°C
**Bacillus spizizenii* ATCC 6633 (00003*)	50-100	luxuriant	20-25°C
^*Pseudomonas paraeruginosa* ATCC 9027 (00026*)	50-100	luxuriant	20-25°C
$ *Kocuria rhizophila* ATCC 9341	50-100	luxuriant	20-25°C
Candida albicans ATCC 10231 (00054*)	50-100	luxuriant	20-25°C

#Aspergillus brasiliensis ATCC 16404 (00053*)	50-100	luxuriant	20-25°C

Key : * Corresponding WDCM number
^ Formerly known as *Pseudomonas aeruginosa*
$ Formerly known as *Micrococcus luteus*
** Formerly known as *Bacillus subtilis* subsp. *spizizenii*
^^ Formerly known as *Bacteroides vulgatus*
# Formerly known as *Aspergillus niger*
@ Luxuriant refers to turbid growth and /or single colonies.

Storage and Shelf Life

Store between 15-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (11,12).

Reference

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