

## Certificate of Analysis

### PREPARED MICROBIOLOGICAL MEDIA



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## TRYPTIC SOY BROTH W/ LECITHIN AND POLYSORBATE 80

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Catalogue Number	CMG104-1000ml, w/ Lecithin and Polysorbate 80
Product Description	Tryptic Soy Broth W/ Lecithin & Polysorbate 80, 1000ml/bottle
Lot Number	1268
Date of Manufacture	15 December 2022
Expiry Date	19 April 2023

### INTENDED USE

Tryptic Soy Broth w/ Lecithin and Polysorbate 80 is a broth medium recommended for use in quantitative procedures for the detection and enumeration of microorganisms present on surfaces of sanitary importance.

### SUMMARY AND EXPLANATION

In 1948, Weber and Black reported lecithin, added to a broth medium in sufficient concentration, would effectively neutralize quaternary ammonium compounds.<sup>1</sup> In further testing, Brummer combined lecithin and polysorbate 80 in an agar medium and reported it adequately neutralized disinfectants.<sup>2</sup> Tryptic Soy Broth (TSB) is prepared according to the formula for Soybean-Casein Digest Broth recommended in the *United States Pharmacopeia* (USP).<sup>3</sup> TSB w/ Lecithin and Polysorbate 80 is also used in environmental air sampling procedures.

### PRINCIPLE

Casein peptone and soy peptone provide essential amino acids, peptides, and nitrogenous substances necessary for the growth of bacteria. Sodium chloride is a source of essential electrolytes and maintains osmotic equilibrium. Lecithin and polysorbate 80 are added to neutralize residual compounds that may be present on the material being sampled.

### REAGENTS (FORMULA)

Casein Peptone .....	15.0	g
Lecithin.....	5.0	g
Tween 80 .....	40.0	ml
Deionized Water.....	960.0	ml

<u>QA Testing:</u>	<u>Result:</u>	<u>Expected:</u>
<b>Characteristics</b>	Pass	Pass
<b>Sterility</b>	Pass	Pass
<b>Performance</b>	Pass	Pass

pH 7.3 ± 0.2 \* @ 25°C  
Appearance Light Yellow, Clear  
Storage Condition Refrigerate, 2-8°C

\*pH 7.3 ± 0.2 \*Adjusted and/or supplemented as required to meet performance criteria.

Sterility Method Autoclave  
Sterility Test Pass

(Incubate the containers inoculated with bacterial strains at 30 to 35°C for a maximum of 3 days and at 22.5 ± 2.5°C for the fungi.

Organisms	Incubation	Results
<i>Aspergillus brasiliensis</i> ATCC® 16404	Aerobic, up to 72 h @ 29-31°C	Good Growth
<i>Candida albicans</i> ATCC® 10231	Aerobic, up to 72 h @ 29-31°C	Good Growth
<i>Bacillus subtilis</i> ATCC® 6633	Aerobic, 18-24 h @ 33-37°C	Good Growth
<i>Pseudomonas aeruginosa</i> ATCC® 9027	Aerobic, 18-24 h @ 33-37°C	Good Growth
<i>Staphylococcus aureus</i> ATCC® 6538	Aerobic, 18-24 h @ 33-37°C	Good Growth
<i>Escherichia coli</i> ATCC® 8739	Aerobic, 18-24 h @ 33-37°C	Growth

\*\**Aspergillus brasiliensis* (=A. niger) and other filamentous fungi may produce a heavy mycelium on top of the broth and mycelial fragments in the broth rather than a homogenous turbidity

## BIBLIOGRAPHY

1. Weber, G.R. and L.A. Black. 1948. Soap and Sanit. Chem. 24:134-155.
2. Brummer, B. 1976. Appl. Environ. Microbiol. 32 :80-84.
3. The United States Pharmacopeia. 2009. 32<sup>nd</sup> ed. United States Pharmacopeial Convention, Rockville, MD.

Released By: Mehdi Kargar

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All our prepared media products are manufactured at our site in RCFN, University of Manitoba and tested both at our site and by department of Microbiology, University of Manitoba.

The generation of this certificate confirms all sterilization and performance criteria have been achieved.

NOTE: Expiry Date only valid if packs stored unopened at Ambient Room Temperature not exceeding 25°C.

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