



Instructions for Use

TRYPTIC SOY BROTH (TSB) WITH LECITHIN AND TWEEN® 20, USP

Cat. no. U53	TSB with Lecithin and Tween® 20, USP, 100ml Bottle, 100ml	20 bottles/box
Cat. no. U241	TSB with Lecithin and Tween® 20, USP, 240ml Wide Mouth Jar, 90ml	12 jars/box
Cat. no. U261	TSB with Lecithin and Tween® 20, USP, 240ml Wide Mouth Jar, 100ml	12 jars/box

INTENDED USE

Hardy Diagnostics Tryptic Soy Broth (TSB) with Lecithin and Tween® 20, USP, aids in neutralizing disinfectants and emulsifying oil and water mixtures. TSB is also known as Soybean-Casein Digest Medium and conforms to the formula given by the U.S. Pharmacopeia. TSB with Lecithin and Tween® 20, USP, is recommended for the cultivation of microorganisms from environmental surfaces and for sterility testing various products.

This product is not intended to be used for the diagnosis of human disease.

SUMMARY

The formulation of TSB with Lecithin and Tween® 20 is prepared according to the United States Pharmacopeia (USP) standards formula for Soybean-Casein Digest Medium.⁽⁴⁾ It is also included in approved procedures in the *Compendium of Methods for the Microbiological Examination of Foods* and *Standard Methods for the Examination of Water and Wastewater*.^(1,3)

Hardy Diagnostics TSB with Lecithin and Tween® 20, USP, contains digests of soybean meal and casein to provide amino acids and other nitrogenous compounds. Sodium chloride is added to help cells maintain osmotic equilibrium. Lecithin and Tween® 20 are added to neutralize germicidal or disinfectant residues found on sanitized surfaces. Quaternary ammonium compounds are neutralized by lecithin while phenolic disinfectants and hexachlorophene are neutralized by Tween® 20. Together, lecithin and Tween® 20 neutralize ethanol.^(1,3) Tween® 20 also aids as an emulsifier and stabilizer for oil and water mixtures to improve sterility testing of oil-based products.

FORMULA

Ingredients per liter of deionized water:*

Tryptic Soy Broth (TSB) with Lecithin and Tween® 20, USP	
Tween® 20	40.0gm
Pancreatic Digest of Casein	17.0gm
Sodium Chloride	5.0gm
Papaic Digest of Soybean Meal	3.0gm
Dextrose	2.5gm
Dipotassium Phosphate	2.5gm
Lecithin	5.0gm

Final pH 7.3 +/- 0.2 at 25°C.

* Adjusted and/or supplemented as required to meet performance criteria.

STORAGE AND SHELF LIFE

Storage: Upon receipt store at 2-25°C. away from direct light. Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), contamination, or if the expiration date has passed. Product is light and temperature sensitive; protect from light, excessive heat, moisture, and freezing.

The expiration date applies to the product in its intact packaging when stored as directed.

The expiration dating on the product label applies to the product in its intact packaging when stored as directed. The product may be used and tested up to the expiration date on the product label and incubated for the recommended quality control incubation times.

Refer to the document "[Storage](#)" on the Hardy Diagnostics [Technical Document](#) website for more information.

PRECAUTIONS

This product may contain components of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not guarantee the absence of transmissible pathogenic agents. Therefore, it is recommended that these products be treated as potentially infectious, and handle observing the usual universal blood precautions. Do not ingest, inhale, or allow to come into contact with skin.

This product is for laboratory use only. It is to be used only by adequately trained and qualified laboratory personnel. Observe approved biohazard precautions and aseptic techniques. All laboratory specimens should be considered infectious and handled according to "standard precautions." The "Guidelines for Isolation Precautions" is available from the Centers for Disease Control and Prevention at www.cdc.gov/ncidod/dhqp/gl_isolation.html.

For additional information regarding specific precautions for the prevention of the transmission of all infectious agents from laboratory instruments and materials, and for recommendations for the management of exposure to infectious disease, refer to CLSI document M-29: *Protection of Laboratory Workers from Occupationally Acquired Infections: Approved Guideline*.

Sterilize all biohazard waste before disposal.

Refer to the document "[Precautions When Using Media](#)" on the Hardy Diagnostics [Technical Document](#) website for more information.

Refer to the document [SDS Search](#) instructions on the Hardy Diagnostics website for more information.

PROCEDURE

Specimen Collection: TSB with Lecithin and Tween® 20, USP, is not recommended for primary isolation. Consult listed references for information on specimen collection.^(1,3,4)

Method of Use: Allow medium to warm to room temperature prior to inoculation. Consult listed references for information concerning testing procedures.^(1,3,4)

Data should be collected and recorded according to a designed monitoring system that statistically provides for the accurate acquisition of data.

INTERPRETATION OF RESULTS

Consult listed references for more detailed information concerning plate count methods.^(1,3,4)

LIMITATIONS

It is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on colonies from pure culture for complete identification.

Results can be uninterpretable or misleading unless a statistical method for monitoring is designed.

Microbial contamination on a surface cannot be completely characterized by a single assay.

Refer to the document "[Limitations of Procedures and Warranty](#)" on the Hardy Diagnostics [Technical Document](#) website for more information.

MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as loops, swabs, applicator sticks, other culture media, incinerators, and incubators, etc., as well as serological and biochemical reagents, are not provided.

QUALITY CONTROL

Hardy Diagnostics tests each lot of commercially manufactured media using appropriate quality control microorganisms and quality specifications as outlined on the Certificates of Analysis (CofA). The following organisms are routinely used for testing at Hardy Diagnostics:

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
<i>Staphylococcus aureus</i> ATCC® 6538	J	24-72 hrs	30-35°C	Aerobic	Growth
<i>Pseudomonas aeruginosa</i> ATCC® 9027	J	24-72 hrs	30-35°C	Aerobic	Growth
<i>Bacillus subtilis</i> ATCC® 6633	J	24-72 hrs	30-35°C	Aerobic	Growth
<i>Bacillus subtilis</i> ATCC® 6633	J	24-72 hrs	20-25°C	Aerobic	Growth
<i>Candida albicans</i> ATCC® 10231	J	3-5 days	20-25°C	Aerobic	Growth
<i>Aspergillus brasiliensis</i> ATCC® 16404	J	5 days	20-25°C	Aerobic	Growth

* Refer to the document "[Inoculation Procedures for Media QC](#)" on the Hardy Diagnostics [Technical Document](#) website for more information.

USER QUALITY CONTROL

End users of commercially prepared culture media should perform QC testing in accordance with applicable government regulatory agencies, and in compliance with accreditation requirements. Hardy Diagnostics recommends end users check for signs of contamination and deterioration and, if dictated by laboratory quality control procedures or regulation, perform quality control testing to demonstrate growth or a positive reaction and to demonstrate inhibition or a negative reaction, if applicable. Hardy Diagnostics quality control testing is documented on the certificates of analysis (CofA) available from Hardy Diagnostics [Certificates of Analysis](#) website. In addition, refer to the following documents on the Hardy Diagnostics [Technical Document](#) website for more information on QC: "[Introduction to Quality Control](#)" and "[Finished Product Quality Control Procedures](#)," or see reference(s) for more specific information.

PHYSICAL APPEARANCE

Tryptic Soy Broth (TSB) with Lecithin and Tween[®] 20, USP, should appear clear and light amber in color.

REFERENCES

1. American Public Health Association. *Standard Methods for the Examination of Water and Wastewater*, APHA, Washington, D.C.
2. *Quality Assurance for Commercially Prepared Microbiological Culture Media*, M22. Clinical and Laboratory Standards Institute (CLSI - formerly NCCLS), Wayne, PA.
3. APHA Technical Committee on Microbiological Methods for Foods. *Compendium of Methods for the Microbiological Examination of Foods*, APHA, Washington, D.C.
4. The Official Compendia of Standards. *USP-NF*. United States Pharmacopeial Convention, Rockville, MD.

ATCC is a registered trademark of the American Type Culture Collection.
Tween is a registered trademark of ICI Americas, Inc.

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[Ordering Information](#)

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