

## Product Insert

### ANAEROBIC TISSUE TRANSPORT MEDIUM (ATTM and ATTM-SP)

#### Products

AS-915	Anaerobic Tissue Transport Medium Surgery Pack (ATTM-SP)	5 tubes / pkg
AS-919	Anaerobic Tissue Transport Medium (ATTM)	5 tubes / pkg

#### Intended Use

Anaerobic Tissue Transport Medium (ATTM and ATTM-SP) is a mineral salt based semi-solid media with reducing agents designed as a holding medium to maintain the viability of microorganisms, both anaerobic and aerobic, through collection, transport, and shipment of clinical specimens.

#### Summary

ATTM and ATTM-SP contain buffered mineral salts in a semi-solid media, with sodium thioglycollate and cysteine added to provide a reduced environment. This combination has been prepared to produce an environment which maintains the viability of most microorganisms without significant multiplication and allows for the dilution of inhibitors present in clinical material. This medium is designed to meet the stringent viability requirements of obligate anaerobes. All tubes are supplied with a rubber lined phenolic screw cap that allows for direct introduction of tissue samples. Resazurin is added as a color indicator of significant oxygen exposure to the media. This media is prepared, dispensed, and packaged under oxygen-free conditions.

#### Formulation\*

Sodium Thioglycollate	1.00	g
Sodium Phosphate Dibasic	1.15	g
Sodium Chloride	3.00	g
Potassium Chloride	0.20	g
Potassium Phosphate Monobasic	0.20	g
Magnesium Sulfate Heptahydrate	0.10	g
Gellan Gum	4.00	g
L-Cysteine Hydrochloride	1.00	g
Resazurin (0.025% solution)	4.00	mL
DI Water	1.00	L

Final pH: 7.5 ± 0.5 at 25°C

Final volume: 8.0 mL ± 1.2 mL

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

#### Precautions

For *IN VITRO DIAGNOSTIC USE* only. Utilize approved biohazard precautions and aseptic technique when using this product. This product is for use by properly trained and qualified personnel only. Sterilize all biohazard waste prior to disposal.

#### Storage and Shelf Life

**Storage:** Upon receipt, store at room temperature in original packaging until used. Avoid overheating or freezing. Do not use medium if there are signs of deterioration (shrinking, cracking, or discoloration due to oxidation of media) or contamination. The expiration date applies to the product in its original packaging and stored as directed. Do not use product past the expiration date shown on the label.

**Shelf Life:** AS-915 (ATTM-SP) 6 months from date of manufacture.  
 AS-919 (ATTM) 6 months from date of manufacture.

## Procedure

**Specimen Collection:** Protect specimens for anaerobic culture from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

**Methods for Use:** ATTM and ATTM-SP are suitable for use as a transport and holding medium for clinical specimens collected as tissue samples. As with any clinical specimen, this media should be inoculated using aseptic technique immediately upon collection. For tissue samples, open tube by screw cap and place tissue on the surface of the semisolid medium; inserting the tissue into the gel is not necessary. Immediately close the tube. Oxygen contact within the medium should be minimized. Once inoculated, keep at room temperature, and deliver to the laboratory for processing as soon as possible. Swabs are not recommended for use as anaerobic specimen collection devices; however, this medium can accommodate swabs, if necessary. Detailed instructions for processing anaerobic cultures can be found in the appropriate references.

**ATTM Surgery Pack (AS-915):** The contents and outer surface of the tube are sterile. To open, peel the envelope apart. While wearing sterile gloves, remove the tube from the packaging and take the tube into the sterile surgical area.

## Materials Required, But Not Provided

Standard microbiological supplies and equipment such as: loops, paper points, disinfectant, syringes with needles, sterile forceps, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, other culture media, and serological and biochemical reagents may be required.

## Interpretations of Results

Results for the recovery of anaerobic bacteria will largely depend on proper and adequate specimen collection, timely transport, and processing in the laboratory. If used properly, this media should maintain the viability of microorganisms, anaerobic and aerobic, present within a clinical specimen until transported and processed within the laboratory.

## Limitations

ATTM and ATTM-SP are designed as a holding medium to maintain the viability of microorganisms contained within a specimen during transport. This media will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. Specimens should be transported and processed in the laboratory in a timely manner since delay may result in overgrowth by one organism present in a specimen from polymicrobial infections. Consult reference materials for additional information.

## Quality Control

The following organisms are routinely used for quality assurance testing at Anaerobe Systems. To determine the holding capacity of ATTM and ATTM-SP, an ATCC isolate strain (listed below), from 24-hour growth, is inoculated into the media aerobically and held for 48 hours at room temperature. Each organism is streaked onto Anaerobic Brucella Blood Agar (BRU, catalog #: AS-111) in an anaerobic environment to obtain isolated colonies. Plates are incubated at 35–37°C for 48 hours and growth is observed.

Organism Tested	ATCC #	Results	Time
<i>Bacteroides fragilis</i> *	25285	Growth	24 hrs
<i>Prevotella melaninogenica</i> *	25845	Growth	24 – 48 hrs
<i>Cutibacterium acnes</i> *	6919	Growth	24 – 48 hrs
<i>Fusobacterium nucleatum</i> *	25586	Growth	24 hrs
<i>Peptostreptococcus anaerobius</i> *	27337	Growth	24 hrs

\* Organisms specified by CLSI for quality control testing of anaerobic microbiological transport systems.

**User Quality Control:** The final determination to the extent and quantity of user laboratory quality control must be determined by the end user.

If sterility testing is to be performed on this product, a representative sample of the lot(s) should be incubated anaerobically and aerobically for 48 – 96 hours.

If the holding capacity of this medium is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth.

Organism	ATCC#
B. fragilis	25285
P. melaninogenica	25845
C. acnes	6919
F. nucleatum	25586
P. anaerobius	27337

**Physical Appearance:** ATTM and ATTM-SP should appear as a clear to slightly hazy, colorless, semi-solid medium in a 28 mm x 61 mm glass tube with a rubber lined phenolic cap.

## References

1. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfield. 1977. *Media for the Isolation, Characterization and Identification of Obligately Anaerobic Bacteria*. USDHHS, CDC. Atlanta, GA 30333.
2. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.
3. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1987. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061
4. Jousimeis-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KYL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.
5. CLSI. *Quality Control for Commercially Prepared Microbiological Transport Systems; Approved Standard*. CLSI document M40-A2. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898 USA, 2014.

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