Product Insert

DILUTION BLANKS (DIL BLANK)

Products

AS-907	Dilution Blank – 7 mL	10 Tubes / pkg
AS-908	Dilution Blank – 9 mL	10 Tubes / pkg
AS-910	Dilution Blank – 10 mL	10 Tubes / pkg
AS-917	Dilution Blank – 3 mL	10 Tubes / pkg
AS-918	Dilution Blank – 18 mL	10 Tubes / pkg
AS-9181	Dilution Blank – 100 mL Bottle	1 Bottle / pkg
AS-9183	Dilution Blank – 250 mL Bottle	1 Bottle / pkg
AS-918-500	Dilution Blank – 500 mL Bottle	1 Bottle / pkg

Intended Use

Dilution Blanks are a buffered mineral salt base solution with reducing agents, designed as a holding medium for maintaining viability of microorganisms, especially anaerobes, in order to determine the number of viable organisms present in a sample.

Summary

Bacterial cells are often diluted from their original dense concentration to a sparse concentration to become suitable for use in microscopy, quantitation, genetic analysis, or metabolic studies. Dilution Blanks are a buffered mineral salt solution with sodium thioglycollate and L-cysteine added to provide a reduced environment. This formulation has been prepared to provide an environment which maintains the viability of most microorganisms without significant multiplication. Dilution Blanks have been designed to meet the stringent viability requirements of obligate anaerobes. This medium is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Magnesium Sulfate Heptahydrate	0.10	g
Potassium Phosphate Monobasic	0.20	g
Potassium Chloride	0.20	g
Sodium Phosphate Dibasic	1.15	g
Sodium Chloride	3.00	g
Sodium Thioglycollate	1.00	g
L-Cysteine Hydrochloride (25.0% solution)	2.00	mL
DI Water	1.00	L

Final pH: 7.5 ± 0.5 at 25° C
Final volume: 7.0 mL ± 0.7 mL for AS-907
Final volume: 9.0 mL ± 0.9 mL for AS-908
Final volume: 10.0 mL ± 1.0 mL for AS-910
Final volume: 3.0 mL ± 0.3 mL for AS-917
Final volume: 18.0 mL ± 1.8 mL for AS-918
Final volume: 100.0 mL ± 10.0 mL for AS-9181
Final volume: 250.0 mL ± 25.0 mL for AS-9183
Final volume: 500.0 mL ± 50.0 mL for AS-918-500

*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 only by properly-trained and qualified personnel. Sterilize all biohazard waste prior to disposal.

Storage and Shelf Life

Storage: Upon receipt, store at room temperature in original package until used. Avoid overheating or freezing. Do not use media if there are signs of deterioration (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: 1 year from date of manufacture.

Procedure

Specimen Collection: Specimens for anaerobic culture should be protected from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

Methods for Use: Dilution Blanks should be inoculated to a 0.5 McFarland Standard of bacterial suspension, by aseptic and anaerobic technique. After completion of a serial 10-fold dilution that produces statistically valid plate counts, immediately inoculated a Brucella blood agar plate (AS-111). For syringe application (AS-907, 908, 910, 917 only), the rubber septum in the cap should be disinfected and the fluid specimen directly injected into the tube at a slow rate. Inoculated tubes, once processed, should be kept at room temperature, and processed as soon as possible. Detailed instruction for processing anaerobic cultures can be found in the appropriate references.

Materials Required, But Not Provided

Standard microbiological supplies and equipment such as loops, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, disinfectant, other culture media, and serological / biochemical reagents.

Interpretation of Results

If properly used, Dilution Blanks will maintain the viability of microorganisms within clinical material in order to determine the number of viable organisms present in the sample. Organisms are serially diluted and recovered on BRU agar (AS-111).

Limitations

Dilution Blanks are designed to be a holding medium to maintain the viability of microorganisms contained in a specimen. Other media will be required for isolation and identification of clinical isolates. Specimens should be transported to the laboratory and processed as soon as possible, as delayed processing may result in overgrowth by one organism in a specimen from polymicrobial infections. Consult reference materials for additional information.

Quality Control

The following organisms are routinely used for quality control testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time
Bacteroides fragilis	25285	Growth	24 hrs
Prevotella melaninogenica	25845	Growth	24 – 48 hrs

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 media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth.

Organism	ATCC #	Expected Growth
B. fragilis	25285	24 hrs
P. melaninogenica	25845	48 hrs

Physical Appearance: Dilution Blanks should appear as a clear liquid.

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 Culture Media; Approved Standard- Third Edition.* (2004). CLSI document M22-A3. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898.

6. Gerhardt, P., Murray, R. G. E., Costilow, R. N., Nester, E. W., Wood, W. A, Krieg, N. R. and Philips, G. B. 1981. *Manual of Methods for General Bacteriology*. ASM Washington DC 20006.

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