Product Insert

PEPTONE YEAST EXTRACT BROTH WITH GLUCOSE AND FORMATE/FUMARATE FA/GLC (PYG FF FA/GLC)

Products

AS-858 Peptone Yeast Extract Broth with Glucose and Formate/Fumarate FA/GLC (PYG FF FA/GLC) 10 Tubes / pkg

Intended Use

Peptone Yeast Extract Broth with Glucose and Formate/Fumarate FA/GLC (PYG FF FA/GLC) is designed for the determination of glucose fermentation and formate/fumarate stimulation by anaerobic bacteria for identification. PYG FF FA/GLC is recommended for use in identifying *Campylobacter ureolyticus* within the MIDI MIS procedures.

Summary

PYG FF FA/GLC is a non-selective broth medium that was formulated by the VPI group for use in chromatographic analysis of cellular fatty acids and short chain fatty acid end products from the fermentation of glucose and utilization/stimulation by formate/fumarate. This analysis is useful in the identification of clinically significant anaerobic bacteria, like *Campylobacter ureolyticus*. This media is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Bacto Peptone	5.00	g
Pepticase	5.00	g
Yeast Extract	10.00	g
L-Cysteine Hydrochloride (25.0% solution)	2.00	mL
Hemin (0.1% solution)	5.00	mL
Vitamin K_1 (1.0% solution)	0.10	mL
Resazurin (0.025% solution)	4.00	mL
Calcium Chloride	0.008	g
Magnesium Sulfate	0.016	g
Potassium Phosphate Monobasic	0.04	g
Potassium Phosphate Dibasic	0.04	g
Sodium Chloride	0.08	g
Sodium Bicarbonate	0.32	g
Sodium Formate	1.80	g
Sodium Fumarate	1.80	g
Glucose	10.00	g
DI Water	1.00	L

Final pH: 7.2 ± 0.3 at 25° C
Final volume: 10.0 mL ± 1.0 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 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: Inoculate PYG FF FA/GLC directly with a pure culture of the organism. Inoculated tubes should be immediately placed into an anaerobic atmosphere and incubated at 35-37°C for 24 - 48 hours. Extended periods of incubation may be required to recover some anaerobes. Detailed instructions for processing anaerobic cultures can be found in the listed 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

Uninoculated PY based broths should show only trace amounts, if any, of volatile and nonvolatile fatty acids when tested with gas liquid chromatography. If used properly, this medium, when cultured with appropriate control strains, will show characteristic metabolic products when analyzed using MIDI MIS system. For interpretation of chromatographic results, consult the MIDI MIS manual.

Limitations

PYG FF FA/GLC will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. Consult reference materials for additional information.

Quality Control

The following organisms are routinely used for quality assurance performance testing, for growth and the fermentation of glucose, at Anaerobe Systems. Formate/Fumarate utilization is determined on the basis of growth stimulation when compared to Peptone Yeast Extract Broth w/ Glucose (PYG).

Organism Tested	ATCC #	Results	Time	Growth Stimulation
Bacteroides fragilis*	25285	Growth	24 hrs	
Prevotella melaninogenica	25845	Growth	24 – 48 hrs	
Bacteroides vulgatus	8482	Growth	24 hrs	
Fusobacterium nucleatum	25586	Growth	24 – 48 hrs	
Fusobacterium necrophorum	25286	Growth	24 – 48 hrs	
Clostridium perfringens	13124	Growth	24 hrs	
Peptostreptococcus anaerobius	27337	Growth	24 hrs	
Peptoniphilus asaccharolyticus	29743	Growth	24 – 48 hrs	
Campylobacter ureolyticus*	33387	Growth	24 – 48 hrs	+

*Organisms recommended by MIDI MIS manual for quality control.

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 nutritive/stimulation capacity of this media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth/stimulation.

Organism	ATCC #	Expected Growth	Growth Stimulation
B. fragilis	25285	24 hrs	
C. perfringens	13124	24 hrs	
C. ureolyticus	33387	24 – 48 hrs	+
F. necrophorum	25286	24 – 48 hrs	

Physical Appearance: PYG FF FA/GLC should appear as a clear, golden-yellow 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. Sherlock Microbial Identification System (MIS). Operating Manual, Version 6. MIDI, Inc. Newark, DE 19713.

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