



## INSTRUCTIONS FOR USE

### PEPTONE YEAST EXTRACT BROTH WITH GLUCOSE (PYG BROTH)

#### PRODUCTS

AS-822	Peptone Yeast Extract Broth with Glucose (PYG BROTH) – 7 mL tube	10 tubes / pkg
AS-8221	Peptone Yeast Extract Broth with Glucose (PYG BROTH) – 100 mL bottle	1 bottle / pkg
AS-8222	Peptone Yeast Extract Broth with Glucose (PYG BROTH) – 250 mL bottle	1 bottle / pkg
AS-8225	Peptone Yeast Extract Broth with Glucose (PYG BROTH) – 500 mL bottle	1 bottle / pkg

#### INTENDED PURPOSE

TruPRAS™ Anaerobic Culture Media is intended for the transport, preservation, or cultivation of a wide variety of microorganisms from specimens to aid in the isolation of bacteria for in vitro diagnostic and / or research / general laboratory purposes.

#### INTENDED USERS

Scientists, laboratory, and healthcare professionals trained in anaerobic microbiology techniques working in areas such as clinical, research, industrial, pharmaceutical and veterinary applications.

#### FORMULATION\*

PYG BROTH is an enriched, non-selective broth used for the growth of anaerobic bacteria. These media are supplemented with hemin and vitamin K<sub>1</sub> to support the recovery of fastidious organisms such as *Prevotella* spp., *Porphyromonas* spp., and the *Bacteroides fragilis* group. Resazurin is included as a redox indicator. PRAS (pre-reduced anaerobically sterilized) biochemicals are considered the gold standard for biochemical testing and characterization of anaerobes. PYG is a nonselective broth originally developed by the VPI group for chromatographic analysis of metabolic products resulting from glucose fermentation. This analysis aids in the identification of clinically significant anaerobes. This medium is prepared, dispensed, and packaged under oxygen-free conditions using TruPRAS™ Technology to prevent the formation of oxidized products prior to use. This product is supplied ready to use, with no pre-reduction step required.

Pancreatic digest of casein	20.00	g
Yeast extract	10.00	g
L-cysteine hydrochloride	0.50	g
Hemin	5.00	mg
Vitamin K <sub>1</sub>	10.00	mg
Resazurin	1.00	mg
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
Glucose	10.00	g
DI Water	1.00	L

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

Final pH: 7.3 ± 0.3 at 25°C



Final volume: 7.0 mL ± 0.7 mL for AS-822  
Final volume: 100.0 mL ± 10.0 mL for AS-8221  
Final volume: 250.0 mL ± 25.0 mL for AS-8222  
Final volume: 500.0 mL ± 50.0 mL for AS-8225

## 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. This product is manufactured as a single use device.

Report serious incidents that occur in direct relation to this product to [tech@biolog.com](mailto:tech@biolog.com). As necessary, report serious incidents to the regulatory authority in which the user is established.

This product may contain components of animal origin. All components of animal origin have been sourced from Bovine Spongiform Encephalopathy- (BSE-) free and Transmissible Spongiform Encephalopathy- (TSE-) free countries. Certified knowledge of the origin of animal derived components does not guarantee the absence of transmissible pathogenic agents. It is recommended that Universal Precautions be observed.

When working with anaerobic culture media, the potential for ergonomic hazards may exist due to repetitive motions, awkward postures, improper bench/chair heights or poor lighting. Although it is beyond the scope and provision of products by Anaerobe Systems, it should be recognized and mitigated by the end user in the laboratory environment.

## STORAGE AND SHELF LIFE

**Storage:** Upon receipt, store at room temperature (15 – 25°C) 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), contamination, broken cap, or cracked glass. 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 the 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. The selection of specimens for culture is made by physicians or scientists collecting the sample.

**Methods for Use:** PYG BROTH should be inoculated directly with a pure culture of the organism. This media is supplied in tubes with a screw cap fitted with a Hungate-style septum, allowing for direct inoculation using a syringe. Disinfect the rubber septum with alcohol before piercing it with a sterile needle. Slowly inject the inoculum into the medium. Immediately place the inoculated tube into an anaerobic atmosphere and incubate at 35 – 37°C for 24 to 48 hours. Extended incubation may be necessary for the recovery of slow-growing anaerobes. Refer to the listed references for detailed instructions on the processing of anaerobic cultures. As packaged, this medium constitutes a qualitative, manual method.

## 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

**Fermentation and Metabolic Activity:** When used correctly, fermentation is indicated by a decrease in pH following incubation of the inoculated media. Uninoculated PYG BROTH should contain only trace amounts, if any, of volatile and non-volatile fatty acids when analyzed by gas-liquid chromatography (GLC). PYG BROTH cultures of appropriate control strains, such as *Bacteroides fragilis*, *Fusobacterium necrophorum*, and *Clostridium perfringens*, should produce characteristic metabolic end products when tested using gas chromatography. PYG BROTH should support robust growth of anaerobic bacteria isolated from a specimen.

**pH Measurement:** Once visible growth has been achieved, pH can be measured directly in the culture tube using a pH meter equipped with a long, thin combination electrode. After each reading, thoroughly rinse the electrode with distilled water into a container containing disinfectant. Disinfect the electrode again before returning it to the storage solution.

### Interpretation of pH values:

Strong acid production response: pH ≤ 5.5  
 Weak acid production response: pH 5.5 – 6.0  
 No acid production response: pH > 6.0

## LIMITATIONS

PYG BROTH will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. In some cases, this media may not grow every anaerobic strain. Consult reference materials for additional information.

## QUALITY CONTROL

The following organisms are routinely used for quality control testing at Anaerobe Systems using the specifications outlined in the CLSI document M22-A3: Quality Control for Commercially Prepared Microbiological Culture Media.

Organism Tested	ATCC® #	Results
<i>Bacteroides fragilis</i>	25285	Growth
<i>Prevotella melaninogenica</i>	25845	Growth
<i>Phocaeicola vulgatus</i>	8482	Growth
<i>Fusobacterium nucleatum</i>	25586	Growth
<i>Fusobacterium necrophorum</i>	25286	Growth
<i>Clostridium perfringens</i>	13124	Growth
<i>Clostridium novyi</i>	7659	Growth
<i>Peptostreptococcus anaerobius</i>	27337	Growth
<i>Cutibacterium acnes</i>	6919	Growth
<i>Staphylococcus aureus</i>	25923	Growth
<i>Peptoniphilus asaccharolyticus</i>	29743	Growth

**Biochemical Utilization:** The following organisms are routinely used at Anaerobe Systems for biochemical utilization tests. Acid production is determined by measuring pH after incubation. A strong acid response is indicated by a pH of 5.5 or below, a weak acid response by a pH of 5.5 to 6.0, and a no acid production response by a pH of 6.0 or above.

Organism Tested	ATCC® #	Results
<i>Bacteroides fragilis</i>	25285	Strong
<i>Peptoniphilus asaccharolyticus</i>	29743	No acid
<i>Fusobacterium necrophorum</i>	25286	Weak



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

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

Organism	ATCC® #	Results
Bacteroides fragilis	25285	Growth
Clostridium perfringens	13124	Growth
Peptoniphilus asaccarolyticus	29743	Growth
Staphylococcus aureus	25923	Growth
Fusobacterium necrophorum	25286	Growth

**Physical Appearance:** PYG BROTH should appear as a clear golden-yellow to golden-brown liquid.

ATCC® is a registered trademark of American Type Culture Collection.

## REFERENCES

1. CLSI. *Principles and Procedures for Detection of Anaerobes in Clinical Specimens; Approved Guideline*. CLSI document M56-A. Clinical and Laboratory Standards Institute; 2014
2. Leber AL, Burnham CA, eds. *Clinical Microbiology Procedures Handbook*. 5th ed. 4 vols. Washington, DC: ASM Press; 2023.
3. Carroll KC, Pfaller MA, eds. *Manual of Clinical Microbiology*. 13th ed. 4 vols. Hoboken, NJ: Wiley-Blackwell; 2023.
4. Jousimies-Somer HR, Sutter VL, eds. *Wadsworth-KTL Anaerobic Bacteriology Manual*. 6th ed. Belmont, CA: Star Publishing Company; 2002.
5. CLSI. *Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition*. CLSI document M22-A3. Wayne, PA: Clinical and Laboratory Standards Institute; 2004.
6. U.S. Department of Agriculture, Animal and Plant Health Inspection Service. *Animal Health Status of Regions*. Published March 12, 2025. <https://www.aphis.usda.gov/regionalization-evaluation-services/region-health-status>
7. European Commission. *Note for guidance on minimising the risk of transmitting animal spongiform encephalopathy agents via human and veterinary medicinal products (EMA/410/01 Rev. 3)*. Published March 5, 2011. <https://op.europa.eu/en/publication-detail/-/publication/3392e464-ba89-4ae4-955c-a07f617c8e06/language-en>

## GLOSSARY OF SYMBOLS

SYMBOL	TITLE	DESCRIPTION	STANDARD	REF #
<b>REF</b>	Catalog number	Indicates the manufacturer's catalog number so that the medical device can be identified.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.1.1
<b>LOT</b>	Lot number/ Batch code	Indicates the manufacturer's batch code so that the batch or lot can be identified.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labeling, and information to be supplied	5.1.5



	Use-by date	Indicates the date after which the medical device is not to be used.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.1.4
	Authorized Representative	Indicates the Authorized Representative in the identified country or jurisdiction.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.1.2
	Do not re-use/ Single use only	Indicates a medical device that is intended for one single use only.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.4.2
	Consult instructions for use or consult electronic instructions for use	Indicates the need for the user to consult the instructions for use.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.4.3
	Temperature limit	Indicates the temperature limits to which the medical device can be safely exposed.	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.3.7
	In vitro diagnostic medical device	Indicates that a medical device is intended to be used as an in vitro diagnostic medical device	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling, and information to be supplied	5.5.1
	CE Mark European Conformity	Designates that the product labeled is authorized for sale in European countries.	EU IVDR (EU) 2017/746	

**AUTHORIZED REPRESENTATIVE INFORMATION**

**EC REP**  
 Casus Europe B.V.  
 Lange Vlietstraat 2b  
 3511 BK Utrecht  
 The Netherlands

**CH REP**  
 Casus Switzerland GmbH  
 Hinterbergstrasse 49  
 6312 Steinhausen  
 Switzerland