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OxyPRAS Plus® Phenylethyl Alcohol (PEA) Blood Agar Plate Product Insert

Intended Use

OxyPRAS Plus® PEA Blood Agar plates are a prepared, ready-to-use, enriched, selective medium intended for the in vitro isolation and cultivation of obligately anaerobic bacteria, especially gram-positive anaerobes, from clinical and non-clinical materials. PEA inhibits most gram-negative facultatively anaerobic bacteria, such as those of the family Enterobacteriaceae. Growth of anaerobes on OxyPRAS Plus® plates requires anaerobic incubation in a bag, jar, or chamber.

Intended Users

For use by trained laboratory personnel in clinical, reference, research, industrial, pharmaceutical, and veterinary microbiology settings.

Summary and Explanation

Phenylethyl alcohol medium with blood and vitamin K1 is an enriched, selective medium useful for the isolation of anaerobes (1,2,3,4). OxyPRAS Plus® plates are supplied Pre-Reduced Anaerobically Sterilized (PRAS) using the Oxyrase® Enzyme System.

Principles of the Procedure

Phenylethyl alcohol selectively reduces the growth of facultatively anaerobic gram-negative bacteria without affecting the growth of gram-positive microorganisms, and keeps Proteus spp. from swarming without inhibiting the growth of obligately anaerobic bacteria (5). Vitamin K1 enhances the growth of some Bacteroides spp. (6). Defibrinated sheep blood provides additional nutrients and enables the demonstration of hemolytic reactions. The Oxyrase® Enzyme System used in OxyPRAS Plus® plates provides a reduced medium before sterilization and maintains the medium in a reduced state for storage and during use. The Oxyrase® Enzyme System prevents the formation of undesirable oxidation products in these PRAS plates.

Reagents

Media formulation (approximate, per liter of deionized water). Initial pH: 7.45 (+/- 0.15).

Component	Amount
Enzymatic Digest of Casein	15.0 g
Enzymatic Digest of Soybean Meal	5.0 g
Sodium Chloride	5.0 g
Phenylethanol	2.5 g
Agar	15.0 g
Vitamin K1	1.0 mg
Defibrinated Sheep Blood	51.0 mL
Oxyrase® Enzyme System	proprietary
Deionized water	to final volume

This formula is typical. Production lots may be adjusted to offset variances in raw materials in order to meet performance criteria.

Warnings and Precautions

- For In Vitro Diagnostic Use.
- OxyPRAS Plus® PEA Blood Agar plates are packaged aseptically and must be handled aseptically to maintain sterility during use.
- Specimens and used culture plates may contain infectious agents; observe standard (universal) biohazard precautions when handling.
- Dispose of used plates as biohazardous waste; sterilize before disposal in accordance with applicable regulations.
- This product contains material of animal origin. Source animals are documented to be free of BSE/TSE.
- A Safety Data Sheet (SDS) is available on our website.

Storage and Handling

- OxyPRAS Plus® PEA Blood Agar plates will arrive at room temperature.
- Store the product at 2°C to 8°C.
- The expiration date is 4 months from the date of manufacture; refer to the plate/label for the actual expiration date.

Specimen Collection and Handling

Collect, transport, and process specimens using standard techniques for the recovery of anaerobic bacteria. Prompt processing and protection of specimens from oxygen exposure maximize anaerobe recovery. Consult appropriate references for specimen selection, collection, transport, and storage.

Materials Required But Not Provided

Anaerobic bag, jar, or chamber with an appropriate oxygen-removal system; an anaerobic indicator (such as OxyBlue™); inoculating loops or swabs; an incubator capable of 35–37°C; and additional media, reagents, and equipment for Gram stain, subculture, and identification, as required.

Directions for Use

1. Before use, allow OxyPRAS Plus® PEA Blood Agar plates to warm to room temperature.
2. Remove the plate from the protective pouch.
3. Examine the plate for contamination, evidence of oxidation or discoloration (i.e., the plate is bright red instead of dark red), and the expiration date.
4. Inoculate and streak the plate using standard technique.
5. After inoculation is complete, invert the plate and incubate at 35–37°C in an anaerobic bag, jar, or chamber to maintain an anaerobic environment.
6. Use an appropriate indicator (such as OxyBlue™) inside the anaerobic bag, jar, or chamber to test and confirm anaerobiosis.
7. Examine the plate for growth after 2 to 3 days of incubation.

Quality Control

Oxyrase, Inc. certifies that samples of each lot were quality control tested and performed acceptably to Oxyrase, Inc. specifications, which incorporate CLSI M22-A3. The following tests were confirmed:

Organism	ATCC No.	Result
B. fragilis	25285	Growth in 2-3 days
S. aureus	25923	Growth in 2-3 days
P. mirabilis	12453	Swarming inhibited for three days
S. pyogenes	19615	Growth in 2-3 days

Physical appearance: uninoculated medium is red with no surface imperfections.

Each laboratory should establish its own quality control program in accordance with applicable accreditation and regulatory requirements. The organisms listed above are recommended for user quality control.

Results and Interpretation

Examine the plates for growth following incubation. As a selective medium, PEA suppresses most facultatively anaerobic gram-negative bacteria and prevents Proteus swarming. Interpret colony morphology and irregular hemolysis together with other laboratory findings, and confirm isolates by additional identification procedures.

Limitations of the Procedure

- Detection of growth or of a pigmentation change in slower-growing anaerobes may require a longer incubation time on this medium.
- Plates may only allow for growth of select organisms. Additional testing may be required to identify the various colony types grown.
- The Oxyrase® Enzyme System contains a penicillin-binding protein that may interfere with penicillin and some related antibiotics.

Product Guarantee

Oxyrase, Inc. guarantees a 28-day shelf life from the shipment date; arrange a longer shelf life at the time the order is placed. If OxyPRAS Plus® PEA Blood Agar plates arrive with less than a 28-day shelf life, are contaminated or oxidized, or fail when used as specified, Oxyrase, Inc. will refund the purchase price. To request a refund, contact Oxyrase, Inc. with the lot

number printed on the plate; return of the product may be required for investigation. Oxyrase, Inc. welcomes questions regarding this product and its applications.

Bibliography

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6. Gibbons, R.J., and MacDonald, J.B. 1960. Hemin and Vitamin K Compounds as Required Factors for the Cultivation of Certain Strains of Bacteroides melaninogenicus. J. Bacteriol. 80: 164-170.
7. Clinical and Laboratory Standards Institute (CLSI). Quality Assurance for Commercially Prepared Microbiological Culture Media; Approved Standard—Third Edition. CLSI document M22-A3.

Key to Symbols

Symbol	Meaning
IVD	For in vitro diagnostic use
REF	Catalog number
LOT	Batch code / lot number
⧖ (hourglass)	Use-by / expiration date
2–8°C	Temperature limit (store at 2°C to 8°C)
☖ (factory)	Manufacturer
ⓘ (book)	Consult instructions for use

Products

Catalog No. (REF): P-PEA-BA, P-PEA-10, M-BKP-3, M-BKBP-3

Manufactured by Oxyrase, Inc., 3000 Park Ave. West, Mansfield, OH 44906, USA. **For In Vitro Diagnostic Use.**

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