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OxyStab™ Product Insert

OxyStab™ (OSTB) is a **Pre-Reduced Anaerobically Sterilized** nutritionally enriched medium that is reduced with cysteine and is used for isolating and growing pure bacterial cultures. Facultative and anaerobe microorganisms will be preserved without the need for further effort. OSTB consists of a sterile vial, containing 5 mL of BHI agar medium and the Oxyrase® Enzyme System.

Precautions:

OSTB are packaged aseptically and must be handled aseptically to maintain sterility during use. A **Safety Data Sheet** is available on our website.

Product Characteristics:

OxyStab™ is a nutritious agar made from infusions of brain, heart tissue, and peptones that supply protein and other nutrients necessary to support the growth of microorganisms.

OSTB is supplemented with Vitamin K₁ and Hemin which provide growth factors required by certain obligate anaerobes (1,2,3,4,5), and supports growth of fastidious anaerobes. OSTB agar is reduced with cysteine and anaerobically sterilized using the Oxyrase® Enzyme System. Anaerobic sterilization of a reduced medium prevents the formation of undesirable oxidation products that interfere with growth of anaerobes.

For anaerobe microorganisms, fastidious, obligate, and facultative, the Oxyrase® Enzyme System helps repair injured and damaged cells during incubation. The Oxyrase® Enzyme System helps repair injured and damaged cells during incubation.

Each 5 mL tube is sealed with a screw cap lid, to ensure its sterility and ease of use.

Media Formulation (per liter)

Brain Heart Infusion Agar	37.0 g
Cysteine Hydrochloride	40.0 mg
Hemin	5.0 mg
Vitamin K ₁	1.0 mL
Powdered Agar	6.0 g
Succinic Acid	4.7 g
Lactate	6.0 g
Oxyrase® Enzyme System	- proprietary -
Deionized Water	(made up to final volume)

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

Limitations:

OSTB allows for growth of strict and facultative anaerobes. To identify microorganisms grown in OSTB, streak inoculate onto plates for individual colony isolation.

The Oxyrase® Enzyme System contains a penicillin binding protein that may interfere with penicillin and some related antibiotics.

Handling and Storage Instructions:

OSTB will arrive at room temperature and is to be stored at 2 - 8°C.

Once inoculated:

Facultative anaerobes: *S. aureus*, *P. mirabilis*, and *E. coli* were recovered after 9 months of storage at 2 - 8°C.

Strict anaerobes: *B. fragilis* and *C. perfringens* were recovered after 9 months of storage at 2 - 8°C.

Instructions for Use:

Preparing a Culture for Storage:

1. Aseptically, pick a pure colony using a sterile needle.
2. Remove lid of OSTB and insert needle into the center of the agar.
3. Push needle to bottom of tube and recap lid. (Once the needle is pulled from the agar, the agar will self-seal, keeping the inoculated environment of the media anaerobic.)
4. Incubate inoculated OSTB tube at 35 - 38°C for 48 - 72 hours. (Time and temperature may be modified based on the specified organism's growth requirements.)
5. Store OSTB at the appropriate temperature for later recovery.

Recovery a Culture from Storage:

Method 1 (direct inoculate):

1. Prepare an appropriate anaerobic or aerobic broth medium.
2. Remove lid of OSTB, and aseptically re-insert cool, sterile needle into existing line of growth.
3. Pull out needle, and mix needle in appropriate broth medium.
4. Incubate inoculated broth suspension at 35 - 38°C for 48 - 72 hours. (Time and temperature may be modified based on the specified organism's growth requirements.)
5. Aseptically, subculture broth suspension accordingly.

Method 2 (overlay inoculate):

1. Prepare an appropriate anaerobic or aerobic broth medium.
2. Remove lid of OSTB, and aseptically add 1 mL of broth medium to the OSTB as an overlay.
3. Incubate OSTB with overlay at 35 - 38°C for 48 - 72 hours. (Time and temperature may be modified based on the specified organism's growth requirements.)
4. Aseptically, transfer or pipette a volume of incubated overlay and subculture accordingly.

Quality Control:

Oxyrase, Inc. certifies that samples of each lot were quality control tested and performed acceptably according to Oxyrase, Inc.'s specifications.

Guarantee:

OxyStab™ has a shelf-life of 12 months from date of manufacture under recommended storage and use conditions.

If OSTB does not recover growth specified under recommended storage and use conditions, Oxyrase, Inc. will refund your purchase price. To receive a product refund, write or call Oxyrase Inc. with the product lot number printed directly on the tube in question (a return of defective product may be required for further investigation and evaluation). Oxyrase, Inc. is available to answer any questions about this product and its applications.

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3. Dowell, V.R. Jr., and T.M. Hawkins. 1974. **Laboratory Methods in Anaerobic Bacteriology**. CDC Laboratory Manual, DHEW Publications No. (CDC) 79-8272.
4. Starr, G.E., G.E. Killgore, and V.R. Dowell, Jr. 1971. Comparison of Schaedler Agar and Trypticase Soy-Yeast Extract Agar for the Cultivation of Anaerobic Bacteria. Appl Microbiol. 22(4): 655-658.
5. Gibbons, R.J., and MacDonald, J.B. 1960. Hemin and Vitamin K Compounds as Required Factors for the Cultivation of Certain Strains of *Bacteriodes melaninogenicus*. J Bacteriol. 80: 164-170.