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AnaSelect Oxyrase® for Broth Product Insert

AnaSelect Oxyrase® for Broth is a sterile enzyme additive used to produce anaerobic conditions in BHI broth supplemented with Vitamin K and Hemin. AnaSelect enhances the recovery of anaerobes from mixed cultures by preferentially limiting growth of aerobe and facultative microorganisms while allowing anaerobes to grow.

Handling and Storage Instructions

AnaSelect Oxyrase® for Broth will arrive thawed but cold. You have the following storage options:

1. **Long Term Storage:** Store the product at a constant -10°C to -20°C temperature. You can thaw and re-freeze AnaSelect Oxyrase® for Broth five times without affecting its activity and performance. When stored in this manner, the product will maintain its full activity to the expiration date on the label.
2. **Short Term Storage:** Store the product at 4°C for use within 30 days.
3. You can inoculate tubes with AnaSelect Oxyrase for Broth up to 5 days in advance when stored at 4°C .

Thawing AnaSelect Oxyrase® for Broth

A convenient way to thaw AnaSelect Oxyrase® for Broth is to place it in the refrigerator overnight. If necessary, you can also thaw the product by warming. When warming the product, always keep it cold to the touch. Do not exceed a warming temperature of 37°C . Only apply heat to the outside of the container while ice is still present inside. Frequently mix the product by gently swirling the contents. When all ice has melted, keep the product chilled by placing the bottle in ice until ready to use.

Gently mix the product before use or distribution to ensure uniform activity of thawed samples. You can accomplish this by thoroughly swirling the completely thawed product. Do not agitate vigorously. Vigorous agitation, such as shaking, causes foaming and denaturing of the protein in the product which will result in loss of activity.

Instructions for Use

1. Aseptically, add one drop of AnaSelect Oxyrase for Broth to each ml of BHI broth medium. Do not mix.
2. Incubate at room temperature. The broth will be anaerobic within 30 minutes.
3. Inoculate the sample into the tube so that the inoculum doesn't show turbidity and incubate at 37°C in standard aerobic incubator for 3 days and up to 5 days.

Observation

After incubation, sample from the bottom of the tube or bottle. Gram stain and characterize the microbial population. Isolate the anaerobe further by streaking onto a Blood OxyPlate®, OxyPRAS™ plate, or suitable media for growing anaerobes.

Product Performance

AnaSelect Oxyrase® for Broth creates an anaerobic environment when added to broth medium. Oxyrase® reduces dissolved oxygen rapidly from broth media and keeps the oxygen in the trapped air space inside the tube from intruding into the broth. AnaSelect components enhances the isolation of anaerobes by preferentially limiting growth of aerobes and facultatives but has little to no effect on anaerobes.

Summary and Explanation

AnaSelect Oxyrase® for Broth is formulated product that contains The Oxyrase® Enzyme System, substrates, and inhibitors. When used as recommended with broth media, AnaSelect Oxyrase® for Broth reduces oxygen concentration to less than 10 ppBillion within 30 minutes. These conditions favor the growth of anaerobes while the inhibitors in the AnaSelect OB limits the growth of aerobes and facultatives. Since AnaSelect Oxyrase® for Broth removes reintroduced oxygen repeatedly, you may gently mix cultures by swirling or inverting the container. This is convenient for observing and sampling culture.



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Precautions

AnaSelect Oxyrase® for Broth is for In Vitro use only. For best results, use AnaSelect Oxyrase® for Broth in BHI broth. AnaSelect Oxyrase® for Broth is a filtered sterilized product and must be handled aseptically to maintain sterility. Some microorganisms produce significant amounts of gas during growth. Caps can be loosely fixed to allow for the escape of gas and to prevent build up of pressure due to gas production. Loose fitting caps will not compromise anaerobiosis in the broth medium.

AnaSelect Oxyrase® for Broth contains a low concentration of azide. Use care in handling and disposing this product. See the Material Safety Data Sheet supplied with this product.

Limitations

AnaSelect Oxyrase® for Broth contains a penicillin binding protein that may inactivate penicillin and some related antibiotics.

Under some conditions or for some strains, the agents in selective media may limit growth of the target microbe or allow growth of the unwanted microbe. Selectivity, for or against, a microbe is affected by the number of microbes in the specimen. The specimen may need to be dilute so that the facultative microbes don't overwhelm the system. AnaSelect Oxyrase® for Broth may show slight precipitate when an incubated tube is standing for a few days.

User Quality Control

The performance of AnaSelect Oxyrase® for Broth may be verified by inoculating the medium with pure cultures of stable, anaerobic and facultative control microorganisms. Recommended anaerobes include *Bacteroides fragilis* ATCC 25285 and *Fusobacterium nucleatum* ATCC 25586. Recommended facultative microorganism includes *Escherichia coli* ATCC 25922. Other important points to remember when testing the media are listed below.

- Follow instructions for using AnaSelect Oxyrase® for Broth.
- Use only fresh cultures that are 18 to 24 hours old.
- Inoculate a 0.1 ml suspension of anaerobic microorganism equal to a McFarland No. 0.5 turbidity standard. Inoculate a 0.1 ml suspension of facultative microorganisms diluted 1:100 from a McFarland No. 0.5 turbidity standard.
- Incubate without agitation at 35 C to 37 C for 24 - 72 hours in an aerobic incubator.

As a control, inoculate another broth medium with AnaSelect Oxyrase® for Broth and incubate at 35 C to 37 C in an aerobic incubator.

If the AnaSelect Oxyrase® for Broth is performing as specified, the tubes with the anaerobes will show a heavy turbidity where the tubes with the facultatives will have a light precipitate produced by the AnaSelect Oxyrase® for Broth. Compare the inoculated tubes to the control.

Guarantee

AnaSelect Oxyrase® for Broth has a shelf life of 9 months under recommended storage and use conditions. We guarantee that each order will have a minimum shelf life of 3 months when shipped. Longer useable shelf life needs to be requested when an order is placed. If AnaSelect Oxyrase® for Broth does not create an anaerobic environment in broth media as specified and preferentially limit the growth of facultatives under recommended storage and use conditions, Oxyrase Inc. will refund your purchase price. To receive a purchase refund, write or call us with your invoice number and the product lot number, which is located on the label. Oxyrase, Inc. is available to answer any questions about this product and its applications.