

LACTOBACILLUS SELECTIVE AGAR BASE (7234)

Intended Use

Lactobacillus Selective Agar Base is used for the isolation and enumeration of lactobacilli.

Product Summary and Explanation

Lactobacillus Selective Agar Base was developed by Rogosa, Mitchell, and Wiseman.^{1,2} This medium is used for isolation, enumeration, and identification of lactobacilli in oral specimens, feces, vaginal cultures, and foods.^{3,4} The low pH and high acetate concentrations effectively suppress other bacterial flora allowing lactobacilli to flourish.

Principles of the Procedure

Enzymatic Digest of Casein provides carbon, nitrogen, and amino acids used to support general growth requirements in Lactobacillus Selective Agar Base. Yeast Extract is a major source of vitamins. Dextrose is a carbohydrate. Sodium Acetate Hydrate and Ammonium Citrate inhibit streptococci, molds, and other oral microbial flora and restrict swarming. Monopotassium Phosphate is the buffering agent. Magnesium Sulfate, Manganese Sulfate and Ferrous Sulfate are sources of inorganic ions. Polysorbate 80 acts as a surfactant. Agar is the solidifying agent.

Formula / Liter

| | |
|----------------------------------|---------|
| Enzymatic Digest of Casein | 10 g |
| Yeast Extract..... | 5 g |
| Monopotassium Phosphate | 6 g |
| Ammonium Citrate | 2 g |
| Dextrose..... | 20 g |
| Sodium Acetate Hydrate | 25 g |
| Magnesium Sulfate | 0.575 g |
| Manganese Sulfate | 0.12 g |
| Ferrous Sulfate | 0.034 g |
| Polysorbate 80 | 1 g |
| Agar | 15 g |

Final pH: 5.5 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Supplement

Glacial Acetic Acid, 1.32 mL

Precautions

1. For Laboratory Use.
2. IRRITANT. May cause irritation to skin, eyes, and respiratory tract.

Directions

1. Suspend 84 g of the medium in one liter of purified water. Mix thoroughly.
2. Add 1.32 mL of glacial acetic acid.
3. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
4. Avoid overheating. DO NOT AUTOCLAVE.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige to amber.

Prepared Appearance: Prepared medium is hazy and light beige to amber.

Expected Cultural Response: Cultural response on Lactobacillus Selective Agar Base at 35°C after 48 - 98 hours incubation.

| Microorganism | Response |
|---|-----------------|
| <i>Escherichia coli</i> ATCC® 25922 | inhibited |
| <i>Lactobacillus casei</i> ATCC® 393 | growth |
| <i>Lactobacillus fermentum</i> ATCC® 9338 | growth |
| <i>Lactobacillus plantarum</i> ATCC® 8014 | growth |
| <i>Staphylococcus aureus</i> ATCC® 25923 | inhibited |

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for specific procedures.

Results

Refer to appropriate references and procedures for results.

Storage

Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. Due to varying nutritional requirements, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Organisms other than lactobacilli may grow on this medium. Isolates must be confirmed by appropriate biochemical tests.

Packaging

| | | | |
|--|-----------------|--------------|--------------|
| Lactobacillus Selective Agar Base | Code No. | 7234A | 500 g |
| | | 7234B | 2 kg |
| | | 7234C | 10 kg |

References

1. Rogosa, M., J. A. Mitchell, and R. F. Wiseman. 1951. A selective medium for the isolation and enumeration of oral and fecal lactobacilli. *J. Bacteriol.* **62**:132.
2. Rogosa, M., J. A. Mitchell, and R. F. Wiseman. 1951. A selective medium for the isolation and enumeration of oral and fecal lactobacilli. *J. Dental Res.* **30**:682.
3. Vedamuthu, E. R., M. Raccach, B. A. Glatz, E. W. Seitz, and M. S. Reddy. 1992. Acid-producing microorganisms. *In* C. Vanderzant, and D. F. Splittstoesser (eds.). *Compendium of methods for the microbiological examination of foods*, 3rd ed. American Public Health Association, Washington, D.C.

Technical Information

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (410)780-5120 or fax us at (410)780-5470.