Rogosa SL Agar • Rogosa SL Broth

Intended Use

Rogosa SL Agar and Rogosa SL Broth are used for cultivating oral, vaginal and fecal lactobacilli.

Summary and Explanation

Rogosa SL Agar and Broth, also known as RMW Agar/Broth, are a modification of media described by Rogosa, Mitchell and Wiseman.^{1,2} These media are used for isolation, enumeration and identification of lactobacilli in oral bacteriology, feces, vaginal specimens and foodstuffs.^{3,4} The low pH and high acetate concentrations effectively suppress other bacterial flora allowing lactobacilli to flourish.

Principles of the Procedure

Peptone provides carbon and nitrogen. Yeast extract is a source of trace elements, vitamins and amino acids. Dextrose, arabinose and saccharose are carbohydrate sources that provide carbon. Sodium acetate and ammonium citrate inhibit streptococci, molds and other oral microbial flora and restrict swarming. Monopotassium phosphate provides buffering capability. Magnesium sulfate, manganese sulfate and ferrous sulfate are sources of inorganic ions. Polysorbate 80 acts as a surfactant. Agar is the solidifying agent.

Formulae

Difco[™] Rogosa SL Agar

Approximate Formula* Per Liter

| Tryptone |) q |
|-------------------------|------|
| Yeast Extract |) q |
| Dextrose |) q |
| Arabinose |) a |
| Saccharose |) q |
| Sodium Acetate |) q |
| Ammonium Citrate |) q |
| Monopotassium Phosphate |) q |
| Magnesium Sulfate | 57 g |
| Manganese Sulfate0.1 | 12 a |
| Ferrous Sulfate |)3 a |
| Polysorbate 801.0 |) q |
| Agar |) g |

Difco[™] Rogosa SL Broth

Consists of the same ingredients without the agar. *Adjusted and/or supplemented as required to meet performance criteria

Directions for Preparation from Dehydrated Product

- 1. Suspend the powder in 1 L of purified water: Difco[™] Rogosa SL Agar – 75 g; Difco[™] Rogosa SL Broth – 59.7 g. Mix thoroughly.
- 2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
- 3. Add 1.32 mL of glacial acetic acid and mix thoroughly.
- 4. Boil for 2-3 minutes. DO NOT AUTOCLAVE.
- 5. Test samples of the finished product for performance using stable, typical control cultures.

User Quality Control

Identity Specifications Difee TM De

| Difco Rogosa SL'Agar | | | | |
|----------------------|--|--|--|--|
| | Dehydrated Appearance: | Beige, homogeneous with soft clumps. | | |
| | Solution: | 7.5% solution, soluble in purified water upon boiling. Solution is light amber, slightly opales- cent and may have a slight precipitate. | | |
| | Prepared Appearance: | Light amber, slightly opalescent. | | |
| | Reaction of 7.5% Solution (with glacial acetic acid | | | |
| | and repoiling) at 25°C. | pH 5.4 ± 0.2 | | |
| | Difco™ Rogosa SL Broth | | | |
| | Dehydrated Appearance: | Beige, appears moist, with soft clumps. | | |
| | Solution: | 6.0% solution, soluble in purified water upon boiling. Solution is light amber, clear to slightly opalescent. | | |
| | Prepared Appearance: | Light amber, clear to slightly opalescent. | | |
| | Reaction of 6.0% Solution (with glacial acetic acid | | | |
| | and reboiling) at 25°C: | pH 5.4 ± 0.2 | | |

Cultural Response

Difco[™] Rogosa SL Agar or Rogosa SL Broth

Prepare the medium per label directions. Inoculate the agar medium using the pour plate technique and incubate at $35 \pm 2^{\circ}$ C for 40-48 hours. Inoculate the broth medium and incubate at $35 \pm 2^{\circ}$ C for 18-48 hours.

| ORGANISM | ATCC™ | INOCULUM CFU | RECOVERY |
|--|-------|------------------------------------|-------------------------------|
| Lactobacillus rhamnosus | 9595 | 10 ² -10 ³ | Good |
| Lactobacillus delbrueckii subsp. lactis | 4797 | 10 ² -10 ³ | Good |
| Staphylococcus aureus | 25923 | 10 ³ -2×10 ³ | Marked to complete inhibition |

Procedure

See appropriate references for specific procedures.

Expected Results

Refer to appropriate references and procedures for results.

Limitation of the Procedure

The salt in the formulation makes the media unsuitable for isolation of dairy lactobacilli; e.g., L. lactis, L. bulgaricus and L. helveticus.⁴

References

- Rogosa, Mitchell and Wiseman. 1951. J. Bacteriol. 62:132.
 Rogosa, Mitchell and Wiseman. 1951. J. Dental Res. 30:682.
- Hall, Ledenbach and Flowers. 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
 MacFaddin. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, Md.

Availability

Difco[™] Rogosa SL Agar

COMPF

Cat. No. 248020 Dehydrated - 500 g* Japan

Cat. No. 251542 Prepared Plates - Ctn. of 100*

Difco[™] Rogosa SL Broth

COMPF Cat. No. 247810 Dehydrated - 500 g* *Store at 2-8°C

