AEROMONAS SELECTIVE AGAR

PRODUCT:

Plate Media:

Aeromonas Selective Agar With 5% Sheep Blood, item no. P2607

PURPOSE:

Aeromonas Selective Agar is used for the selective isolation of *Aeromonas* species from stool specimens.

PRINCIPLE:

The pathogenicity of *Aeromonas* species in gastrointestinal disease is controversial. Studies by Figura et al.[2] found no significance in prevalence in the stools of patients with diarrhea compared to those in the control group, while Agger et al.[1] found *A. hydrophila* only in patients with diarrhea and none in the normal control group. The difference in findings may be related to geographic location, season of collection, or the culture media used for isolation.[6] *Aeromonas* species are widely distributed in stagnant and fresh water; occurrences of infections are predominantly during the period from May to November, probably due to the aquatic origin of the bacteria. *Aeromonas* species have been described in wound infections, cellulitis, acute diarrhea, septicemia (mostly associated with hepatobiliary disease or with malignancy, especially leukemia), and urine.

Aeromonas hydrophila has been increasingly implicated in gastrointestinal disease, and stool cultures are being routinely screened for aeromonads using ampicillin-containing blood agar.[5] Aeromonas Selective Agar With 5% Sheep Blood consists of ampicillin, which inhibits the growth of most of the normal stool flora, and blood agar base #2, which contains a complementary nutritional source of proteins, and vitamins.

FORMULA:

Approximate, per liter of deionized filtered water.

Pancreatic Digest of Casein	7.5 g
Peptic Digest of Animal Tissue	7.5
Liver Digest	2.5
Yeast Extract	5.0
Sodium Chloride	5.0
Agar	12.0
Sheep Blood	50.0 ml
Ampicillin	20.0 mg

Final pH 7.4 ± 0.2 at 25°C

PRECAUTIONS:*

For in vitro diagnostic use. Observe approved biohazard precautions.

Storage: Upon receipt store at 2-8°C away from direct light. Media should not be used if there are signs of deterioration (shrinking, cracking, or discoloration), or if the expiration date has passed.

Limitations: Ampicillin susceptible *Aeromonas* species are inhibited on this medium.

Approximately 10% of *Aeromonas* species will not be detected if beta-hemolysis is the only criterion used for screening.

PROCEDURE: *

Specimen Collection: Information on specimen collection is found in standard reference material. In general, specimens should be protected from extremes of heat and cold and should be delivered to the laboratory within 2-3 hours. If there is a delay, suitable transport media such as Cary-Blair Transport Medium or Enteric Pathogen Transport must be used to maintain the viability of the organisms.

Method of Use: Prior to inoculation, the medium should be brought to room temperature. Directly inoculate the stool specimen or inoculate a sampling from a well-mixed transport medium onto the selective agar using standard microbiological procedures. Streak the inoculum so as to obtain isolated colonies. Incubate aerobically at 35°C for 18-24 hours.

Interpretation: Screen beta-hemolytic and nonhemolytic colonies with the oxidase text; oxidase-positive, gram-negative bacilli are then tested for the presence of indole. A definitive identification can be made after further biochemical testing is performed.

Presumptive Identification:

Microorganism:	**Oxidase**	**Indole**	**Glucose Fermentation**
Aeromonas species	(+)	(+)	(+)
Plesiomonas species	(+)	(+)	(+)
family *Enterobacteriaceae*	(-)	Variable	(+)
Pseudomonas species	(+)	(-)	(-)

Materials Required but Not Provided: Standard microbiological supplies and equipment such as loops, needles, incubator, incinerator, transport media, and staining reagents are not provided.

QUALITY CONTROL: *

Microorganisms Used (ATCC #):	**Expected Results:**
Aeromonas hydrophila (49140)	Growth
Staphylococcus aureus (25923)	Inhibition, partial to complete
Escherichia coli (25922)	Inhibition, partial to complete

User Quality Control: Check for signs of contamination and deterioration.

BIBLIOGRAPHY:

1. Agger, W. A., et al., *J. Clin. Microbiol*., 21:909, 1985.
2. Figura, N., et al., *J. Clin. Microbiol*., 23:595, 1986.
3. Finegold, S. M., and E. J. Baron, *Bailey and Scott's Diagnostic Microbiology*, 7th ed., C. V. Mosby, St. Louis, 1986.
4. Janda, J. M., et al., *J. Clin. Microbiol*., 20:1221, 1984.
5. Kelly, J. T., et al., *J. Clin. Microbiol*., 26:1738, 1988.
6. Koneman, E. W., et al., *Color Atlas and Textbook of Diagnostic Microbiology*, 3rd ed., J. B. Lippincott, Philadelphia, 1988.
7. Lennette, E. H., et al., *Manual of Clinical Microbiology*, 4th ed., American Society for Microbiology, Washington, D. C., 1985.

*For more detailed information, consult appropriate references and/or details in the preface of the PML Technical Manual.

PML MICROBIOLOGICALS, INC.
Data #115

Revision Date: January 2001