AEROMONAS SELECTIVE BLOOD AGAR

- For in vitro use only - Catalogue No. PA26

Our Aeromonas Selective Blood Agar is a selective medium used for the isolation of *Aeromonas* species from a variety of samples including clinical specimens.

Aeromonas hydrophilia has been increasingly implicated in gastrointestinal disease; Adder et al. found *A. hydrophilia* only in patients with diarrhea and none in the control group. Kelly reported the use of media containing ampicllin for the selective isolation of *Aeromonas*.

The growth components of the medium include pancreatic digest of casein, peptic digest of animal tissue, liver digest, yeast extract, and defibrinated sheep blood. The presence of ampicllin inhibits a variety of competing bacteria including those commonly found in stool specimens.

Formula per Litre of Medium

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

pH 7.3 ± 0.2

Recommended Procedure

1. Allow medium to adjust to room temperature prior to inoculation.
2. Using a direct inoculum from the specimen, perform a four-quadrant streak to obtain well-isolated colonies.
3. Incubate aerobically at 35°C.
4. Examine plates after 24 hours for typical colonies and confirm as *Aeromonas* spp.

Interpretation of Results

Typically *Aeromonas* colonies appear as β-hemolytic colonies on Aeromonas Selective Blood; some species such as *A. caviae* are non-hemolytic and therefore further testing of non-hemolytic colonies may also prove beneficial. Typical colonies should be confirmed as presumptive *Aeromonas* spp. by performing an oxidase test and inoculating into Hugh & Leifsons O/F medium. *Aeromonas* spp. will give a positive oxidase reaction and demonstrate both oxidative and fermentative metabolism. *Pseudomonas* spp. will also be oxidase positive, but do not possess fermentative metabolism.

Organism	Oxidase	Indole	Glucose Fermentation
Aeromonas	+	+	+
Plesiomonas	+	+	+
Enterobacteriaceae	–	Variable	+
Pseudomonas	+	–	–

Additional biochemical and serological test should be performed on isolated colonies from pure culture in order to complete identification.

- *Ampicillin-susceptible Aeromonas strains such as A. trota may be inhibited on this medium*
- *If only beta-hemolytic colonies are tested, 10% of Aeromonas isolates will be missed. Therefore morphologically similar Aeromonas-like colonies that are non-hemolytic should also be tested as non-hemolytic strains do occur*
- *Pseudomonas species may grow on this medium but can be ruled out by colony morphology alone*

Quality Control

After checking for correct pH, colour, depth, and sterility, the following organisms are used to determine the growth performance of the completed medium.

Organism	Expected Result
Aeromonas hydrophilia ATCC 7966	Growth, β-hemolytic
Staphylococcus aureus ATCC 25923	Partial inhibition

Storage and Shelf Life

Our Aeromonas Selective Blood Agar should be stored at 4°C to 8°C and protected from light. The medium side should be uppermost to prevent excessive accumulation of moisture on the agar surface. Under these conditions the medium has a shelf life of 6 weeks from the date of manufacture.

References

1. Agger WA et al. J Clin Micro 1985; 21:909.
2. Kelly MT, Stroh EMD, Jessop J. Comparison of blood agar, ampicillin blood agar, MacConkey-ampicllin-Tween agar, and modified cefsulodin-irgasan-novobiocin agar for isolation of *Aeromonas* spp. from stool specimens. J Clin Micro 1988; 26:1738-46.
3. Isenberg HD, Ed. Clinical microbiology procedures handbook, Vol 1. Washington, DC: ASM, 1992.
4. Murray PR, Baron EJ, Pfaller MA, Tenover FC, Yolken RH. Manual of clinical microbiology. 7th ed. Washington D.C.: ASM, 1999.

Original: April 2003
Revised / Reviewed: October 2014