PRODUCT SPECIFICATION SHEET

DM741 *Aeromonas* Starch DNA Agar Base

Intended Use

Aeromonas starch DNA agar base is used for selective isolation of Aeromonas species in food, water and environmental samples.

Product Summary and Explanation

Aeromonas are Gram-negative, rod shaped bacteria that are non-spore forming, oxidase positive and facultatively anaerobic. *Aeromonas* species are found in freshwater systems, marine environments, soils, agricultural products and in the intestines of fish, reptiles, amphibia and higher vertebrates. Nutritional requirements of Aeromonads are simple, with aerogenic fermentation of many monosaccharides, disaccharides, glycosides and some alcoholic sugars (d-mannitol, glycerol) exhibited. Most Aeromonas species are responsible for reduction of nitrogen. There are two groups of Aeromonas sp. Psychrophilic non-motile and Mesophilic motile species. Psychrophilic non-motile species are fish pathogens growing at temperatures between 22-28℃. Mesophilic motile strains grow between 35℃-42℃, associated with gastroenteritis, diarrheal infections, infections of wound, septicaemia and soft tissue infection.

Aeromonas can be isolated from lakes, rivers, marine environments, chlorinated water, potable waters and intestines of poikilothermic animals.

Principles of the Procedure

Peptone and Soya Peptone provide essential nitrogen and carbon source, long chain amino acid, vitamins and other essential nutrients. Sodium chloride maintains osmotic equilibrium

Formula / Liter

Ingredients	Gms / Liter
Peptone	**15.0**
Soya Peptone	**5.0**
Sodium Chloride	**5.0**
Deoxyribonucleic Acid (DNA)	2.0
Corn starch	10.0
Agar	15.0
Final pH: 7.5 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

1. Directions

2. Suspend 52 grams of the medium in one liter of distilled water.
3. Heat to boiling, to dissolve the medium completely.
4. Pour into sterile Petri plates to a depth of 1.5 mm.
5. Allow the media surface to dry for one or two days at room temperature.
6. Use light inoculum and make a single streak and two-point inoculations near the other sides of the plate.
7. Mix well and pour into sterile petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured, clear to slightly opalescent gel forms in Petri plates.
Reaction of 3.47% solution	pH 7.5 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 25- 30°C for 6-7 days.

Sr. No.	Organisms	Results to be achieved	
		Growth	Morphology
1.	*Kloeckera apiculata ATCC 9774*	Good-luxuriant	-
2.	*Saccharomyces uvarum ATCC 9080*	Good-luxuriant	-

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

Test Procedure

1. Dolmans technique is used to inoculate the medium plates. Smear a single line at one end of the plate and in two separate points at the opposite end using a light inoculum from an actively growing culture.
2. Place two sterile slides, one on the central section of the smear and one on one of the two-punctiform inocula.
3. Incubate for 72-96 hours, after incubation take off the growth of the point inoculations and the smear without the slide and observe the morphology of the vegetative cells under a microscope.
4. Also observe the zone underlying the slides for the formation of mycelium or pseudomycelium under the microscope.
5. Observe the colonial morphology.

Results

1. Using the high-dry objective, observe *Aeromonas* colonies.
2. Refer appropriate references and specific test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 2 - 8°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

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

Limitations of the Procedure

1. Yeasts grown on a rich medium may carry a reserve of nitrogen in the form of protein. Possible errors due to this reserve are eliminated by making two serial transfers in the complete medium.
2. When the first transfer is seven days old, the culture is shaken and one loopful is transferred to a second tube of the complete medium containing the same source of nitrogen.
3. If a positive test is obtained when the second culture is seven days old, the organism being tested assimilates this particular nitrogen source.
4. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Aeromonas Starch DNA Agar Base

Product Code : DM741

Available Pack sizes : 100 gm, 500 gm

References

- Aeromonas. Aeromonas - an overview | ScienceDirect Topics. (n.d.). Retrieved October 26, 2021, from https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/aeromonas.
- Behera, B., Bhoriwal, S., Mathur, P., Sagar, S., Singhal, M., & Misra, M. C. (2011, January). Post-traumatic skin and soft tissue infection due to aeromonas hydrophila. Indian journal of critical care medicine : peer-reviewed, official publication of Indian Society of Critical Care Medicine. Retrieved October 26, 2021, from https://www.ncbi.nlm.nih.gov/pubmed/21633548.
- Levine, S. M., Frangos, S. G., Hanna, B., Colen, K., & Levine, J. P. (2010, September 1). Aeromonas septicemia after medicinal leech use following replantation of severed digits. American Journal of Critical Care. Retrieved October 26, 2021, from https://aacnjournals.org/ajcconline/article/19/5/471/5528/Aeromonas-Septicemia-After-Medicinal-Leech-Use.

Further Information

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