PRODUCT SPECIFICATION SHEET

Ethyl Violet Azide Dextrose Agar (DM1298)

Intended Use

Ethyl Violet Azide Dextrose Agar is recommended for the isolation and confirmation of Streptococci from water, food, and other contaminated sample.

Product Summary and Explanation

Ethyl violet azide dextrose agar is a selective medium containing ethyl violet and sodium azide as a selective agent to promote growth of enterococci from sewage contaminated water. Ethyl violet azide dextrose agar is a modification of Ethyl violet azide dextrose broth which presumptively identifies the streptococci. However, because gram-positive bacteria other than enterococci grow in the medium, confirmation is necessary. Litsky et al. studied various dyes and selective agents and formulated a medium using ethyl violet and sodium azide as selective agents. The medium known as ethyl violet azide (EVA) broth is specific for Enterococci. Fecal Enterococci turn the medium turbid with a purple sediment on rear of the colony.

Principles of the Procedure

Ethyl violet azide dextrose agar contains Casein enzymic hydrolysate which supplies carbon, hydrogen, nitrogen, vitamins and other minerals in the medium. Ethyl violet and sodium azide inhibits gram-positive bacilli and gram-positive cocci other than enterococci. Monopotassium phosphate and Dipotassium phosphate buffers the medium. Sodium chloride provides osmotic balance. Agar is a solidifying agent. Lesser amount of carbohydrates in the medium less adversely affects the medium during sterilization. Less amount of carbohydrate and higher amount of dye makes this medium more selective for isolation of Streptococci.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	20.000
Dextrose	5.000
Dipotassium phosphate	2.700
Monopotassium phosphate	2.700
Sodium chloride	5.000
Sodium azide	0.400
Ethyl violet	0.00083
Agar	15.000
Final pH: 7.0±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.

Directions

1. Suspend 50.80 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.

Caution: Sodium azide is toxic. Azides also react with metals and its disposal must be highly diluted. Explosive metals azides are also formed with plumbing materials flushing off disposal with large amount of water is required.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured, clear to slightly opalescent gel
Reaction of 4.0% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response:

Sr. No.	Organisms	Results to be achieved CFU)		
		Inoculum (CFU)	Growth	Recovery
1	*Escherichia coli ATCC 25922*	>=10^3	Inhibited	0%
2	*Enterococcus faecalis ATCC 29212*	50-100	Good-luxuriant	>50%

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

Test Procedure

1. For clinical specimens, refer to appropriate standard references for details on testing protocol to obtain isolated colonies from specimens.
2. For water, food, dairy or cosmetic samples, refer to appropriate standard references for details on test methods.
3. For pharmaceutical samples, refer to *USP* General Chapter <61> for details on the examination of nonsterile products and performing microbial enumeration tests.

Results

After incubation, it is desirable to have isolated colonies of organisms from the original sample. Subculture colonies of interest, so that positive identification can be made by means of biochemical and/or serological testing.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°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. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Ethyl Violet Azide Dextrose Agar
Product Code : DM1298
Available Pack sizes : 100gm/ 500gm

References

1. Litsky, W., Mallmann, W. L., & Fifield, C. W. (1953). A new medium for the detection of enterococci in water. American Journal of Public Health and the Nations Health, 43(7), 873–879. https://doi.org/10.2105/ajph.43.7.873
2. CHAUHAN, A. B. H. I. S. H. E. K. (2021). Microbiological methods for environment, food and Pharmaceutical Analysis. SPRINGER.
3. Larkin, E. P., Litsky, W., & Fuller, J. E. (1955). Fecal streptococci in frozen foods. Applied Microbiology, 3(2), 98–101. https://doi.org/10.1128/am.3.2.98-101.1955
4. Greenberg, A. E., Trussell, R. R., & Clesceri, L. S. (1985). Standard methods for the examination of water and wastewater. American Public Health Association.
5. Difco laboratories, Incorporated. (1943). Manual of Dehydrated Culture Media and reagents.
6. Atlas, R. M. (2010). Handbook of Microbiological Media. ASM Press.

Further Information
For further information please contact your local MICROMASTER Representative.

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