Ethyl Violet Azide Dextrose Agar M1397

Ethyl Violet Azide Dextrose Agar is used for detecting and confirming Streptococci and as confirmative medium for faecal pollution indication in water and other specimens.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>20.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>5.000</td>
</tr>
<tr>
<td>Dipotassium phosphate</td>
<td>2.700</td>
</tr>
<tr>
<td>Monopotassium phosphate</td>
<td>2.700</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>0.400</td>
</tr>
<tr>
<td>Ethyl violet</td>
<td>0.00083</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
</tbody>
</table>

**Final pH (at 25°C)** 7.0±0.2

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Suspend 50.8 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

**Warning:** Sodium azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

**Principle And Interpretation**

Ethyl Violet Azide Broth is based on the formulation of Litsky et al (3) and is a modification of medium developed by Litsky et al (2) with reduced amount of dextrose and increased dye concentration, making the medium highly specific for Enterococci. The presence of Enterococci acts as a valuable index of faecal or sewage pollution in water (1).

Ethyl Violet Azide Dextrose Agar is a modification of Ethyl Violet Azide Broth (M426) (3) where 1.5% agar is added as a solidifying agent. It is used for detection and confirmation of Streptococci. It is based on original formulation of Litsky et al (4). Ethyl Violet Azide Dextrose Agar medium has 0.5% dextrose and was found equally productive as the medium described originally containing 1.5% dextrose. It was found that the medium with the lesser amount of carbohydrate was less adversely affected by heat during sterilization. Litsky et al (4) studied a variety of dyes and selective agents for Streptococci and developed a confirmatory medium using ethyl violet and sodium azide as selective agents. Combination of 0.0083gm% of ethyl violet dye and 0.04gm% of azide provided the best selective action favouring growth of Streptococci (4).

E.V.A. Dextrose Agar contain casein enzymic hydrolysate as source of carbon, nitrogen, vitamins and minerals. Dextrose is the fermentable carbohydrate. Sodium azide and ethyl violet inhibit gram-positive bacilli and gram-positive cocci other than Enterococci. Monopotassium and dipotassium phosphates buffer the medium. Sodium chloride provides osmotic balance.

**Quality Control**

**Appearance**
Cream to yellow homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**
Light amber coloured, clear to slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 5.08% w/v aqueous solution at 25°C. pH : 7.0±0.2

**pH**
6.80-7.20

**Cultural Response**
M1397: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC 25922</em></td>
<td>&gt;=10³</td>
<td>inhibited</td>
<td>0%</td>
</tr>
<tr>
<td><em>Enterococcus faecalis ATCC 50-100</em></td>
<td></td>
<td>good-luxuriant</td>
<td>&gt;50%</td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**
Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry date on the label.

**Reference**

Disclaimer:
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