Rye Agar A

Intended Use:
Recommended for the isolation of *Phytophthora infestans*.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
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<tbody>
<tr>
<td>Rye</td>
<td>60.000</td>
</tr>
<tr>
<td>Sucrose</td>
<td>20.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
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</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Suspend 95 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 20 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

*Phytophthora infestans* is an oomycete that causes the serious potato disease known as late blight or potato blight. The organism can also infect tomatoes and some other members of the Solanaceae (6). *Phytophthora infestans* produces microscopic, asexual spores called sporangia. When the environment is highly conducive for disease, sporangia are airborne and spread for miles. The fungus will also survive in infected tubers that remain in soil from the previous season. Seed pieces can also be infected and harbor the pathogen (1,2,3).

Type of specimen
Plant samples - Seeds, vegetables.

Specimen Collection and Handling
For plant samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions
Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations
1. Some strains may show poor growth due to nutritional variations.
2. Further biochemical and serological tests must be carried out for complete identification.

Performance and Evaluation
Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to light brown hygroscopic soft lumps which can be easily broken down to powder

Gelling
Firm, comparable with 2.0% Agar gel.
Colour and Clarity of prepared medium
Medium amber coloured opaque gel forms in Petri plates

Cultural Response
Cultural characteristics observed after an incubation at 30°C for 2 weeks.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phytophthora infestans</td>
<td>50-100</td>
<td>good</td>
</tr>
</tbody>
</table>

Storage and Shelf Life
Store dehydrated powder between 10-30°C and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label.

Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference