SDA Growth Medium w/o TRP

SDA Growth Medium w/o TRP is a synthetic defined agar media for the selective growth of *Saccharomyces cerevisiae*.

**Composition**:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Grams/Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium dihydrogen phosphate</td>
<td>1.00</td>
</tr>
<tr>
<td>Magnesium sulphate</td>
<td>0.50</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>0.10</td>
</tr>
<tr>
<td>Calcium chloride</td>
<td>0.10</td>
</tr>
<tr>
<td>Biotin</td>
<td>0.002 mg</td>
</tr>
<tr>
<td>Calcium pantothenate</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>Folic acid</td>
<td>0.002 mg</td>
</tr>
<tr>
<td>Inositol</td>
<td>2.00 mg</td>
</tr>
<tr>
<td>Niacin</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>PABA</td>
<td>0.2 mg</td>
</tr>
<tr>
<td>Pyridoxin, HCl</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>Riboflavin</td>
<td>0.2 mg</td>
</tr>
<tr>
<td>Thiamine HCl</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>Boric acid</td>
<td>0.5 mg</td>
</tr>
<tr>
<td>Copper sulphate</td>
<td>0.04 mg</td>
</tr>
<tr>
<td>Potassium iodide</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>Ferric chloride</td>
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</tr>
<tr>
<td>Manganese sulphate</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>Sodium molybdate</td>
<td>0.2 mg</td>
</tr>
<tr>
<td>Zinc sulphate</td>
<td>0.4 mg</td>
</tr>
<tr>
<td>Ammonium sulphate</td>
<td>5.00</td>
</tr>
<tr>
<td>Dextrose</td>
<td>20.00</td>
</tr>
<tr>
<td>Adenine</td>
<td>0.010</td>
</tr>
<tr>
<td>L-Arginine HCl</td>
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</tr>
<tr>
<td>L-Aspartic acid</td>
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</tr>
<tr>
<td>L-Histidine HCl</td>
<td>0.020</td>
</tr>
<tr>
<td>L-Isoleucine</td>
<td>0.050</td>
</tr>
<tr>
<td>L-Leucine</td>
<td>0.100</td>
</tr>
<tr>
<td>L-Lysine HCl</td>
<td>0.050</td>
</tr>
<tr>
<td>L-Methionine</td>
<td>0.020</td>
</tr>
<tr>
<td>L-Phenylalanine</td>
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</tr>
<tr>
<td>L-Threonine</td>
<td>0.100</td>
</tr>
<tr>
<td>L-Tyrosine</td>
<td>0.050</td>
</tr>
</tbody>
</table>
Uracil 0.020
L-Valine 0.140
Agar 15.00

** Formula adjusted, standardized to suit performance parameters

**Directions:**

Suspend 42.44 grams in 1000 ml distilled water. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Mix well and dispense as desired.

**Principle and Interpretation:**

SDA Growth Medium w/o TRP is a synthetic defined agar media for the selective growth of *Saccharomyces cerevisiae*. Synthetically Defined media known as Yeast Nitrogen Base Media for the growth of Yeast cells were first cited by Wickerham (1, 2). SDA Growth Medium w/o TRP includes a yeast nitrogen base along with ammonium sulfate, and dextrose as the carbon source, which is further supplemented with various amino acids except tryptophan which makes it a dropout growth medium for yeast cells. A tryptophan auxotrophic yeast mutant cannot grow on this media but a wild-type or a tryptophan prototrophic yeast strain can grow. The tryptophan auxotroph has a mutation in a gene (e.g. TRP1) of the tryptophan synthesis pathway and this mutant strain will grow in this medium if tryptophan is supplied from outside e.g. from a plasmid which contains TRP1 gene (3). For this purpose, a trp1 mutant strain of *S. cerevisiae* is transformed with a TRP1 containing plasmid and the transformants can be selected by growing the cells on SDA Growth Media w/o TRP. Hence this medium is very useful in molecular genetics.

**Quality Control:**

**Appearance of Powder:**
Cream to yellow colored, homogeneous, free flowing powder.

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

**Colour and Clarity:**
Light yellow coloured, clear to slightly opalescent gel forms in Petri plates.

**Cultural Response:**
Cultural characteristics observed after an incubation at 25-30°C for 18 - 48 hours.
Organisms (ATCC)  
Saccharomyces cerevisiae  
Growth  
good-luxuriant

References:


Storage and Shelf-life:

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Disclaimer:

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