

Technical Information

MUG Tryptone Soya Agar

Product Code: DM 2195

Application: - MUG Tryptone Soya Agar is recommended for cultivation of fastidious and non-fastidious microorganisms by fluorogenic method.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
4-Methylumbelliferyl β -D-Glucuronide (MUG)	0.100
Agar	15.000
Final pH (at 25°C)	7.3 \pm 0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

MUG Tryptone Soya Agar is recommended for cultivation of fastidious and non-fastidious microorganisms by fluorogenic method. The medium is rich in nutrients, which makes it suitable for cultivating aerobes as well as anaerobes. Tryptone Soya Agar is used as blood agar base as well as a reference medium when testing selective media to measure the degree of inhibition (1, 2). Tryptone Soya Agar with MUG is same as Tryptone Soya Agar with the addition of MUG, used to detect the organisms based on fluorescence.

Casein enzymic hydrolysate and papaic digest of soyabean meal supply nitrogenous and other growth nutrients. Organisms like *Escherichia coli* cleave MUG by the enzyme β -glucuronidase to release 4-methylumbelliferone, a fluorogenic end product which produces a visible green-blue fluorescence under long wave UV light.

Methodology

Suspend 40.1 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before pour into sterile Petri plates.

Quality Control

Appearance

Cream to yellow 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

Reaction

Reaction of 4.01% w/v aqueous solution at 25°C. pH : 7.3 \pm 0.2

pH Range

7.10-7.50

Cultural Response

DM 2195: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Recovery	Fluorescence (under UV)
Cultural Response				
<i>Bacillus subtilis</i> ATCC 6633	50-100	luxuriant	>=70%	negative
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	>=70%	negative
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant	>=70%	negative
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=70%	positive
<i>Neisseria meningitidis</i> ATCC 13090	50-100	luxuriant	>=70%	negative
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant	>=70%	negative
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	luxuriant	>=70%	negative
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant	>=70%	negative
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	luxuriant	>=70%	negative

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Gillies R.R., 1964, J. Hyg. Camb., 62 : 1.
2. Anon, 1987, J. Food Microbiol., 5 : 291.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
- Central Drug House Pvt. Ltd. reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performance parameters.

