



# Technical Data

## MUG Tryptone Soya HiCynth™ Agar

MCD1195

MUG Tryptone Soya HiCynth™ Agar is used for cultivation of fastidious and non-fastidious microorganisms by fluorogenic method.

### Composition\*\*

Ingredients	Gms / Litre
HiCynth™ Peptone No.1*	15.000
HiCynth™ Peptone No.6*	5.000
Sodium chloride	5.000
4-Methylumbelliferyl β-D-Glucuronide (MUG)	0.100
Agar	15.000
Final pH ( at 25°C)	7.3±0.2

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

\*Chemically defined peptones

### Directions

Suspend 40.1 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. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

MUG Tryptone Soya HiCynth™ Agar is used 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 HiCynth™ Agar with MUG is same as Tryptone Soya HiCynth™ Agar with the addition of MUG, used to detect the organisms based on fluorescence.

HiCynth™ Peptone No.1 and HiCynth™ Peptone No.6 provides nitrogenous and carbanaceous compounds, long chain amino acids, vitamins 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.

### 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 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±0.2

#### pH

7.10-7.50

#### Cultural Response

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

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Fluorescence (under UV)
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	≥70%	positive
<i>Bacillus subtilis</i> ATCC 6633	50-100	luxuriant	≥70%	negative

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<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	>=70%	negative
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant	>=70%	negative
<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

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

### Reference

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

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### Disclaimer :

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