

## TM 1235 - MUG TRYPTONE SOYA AGAR (MUG CASO AGAR)

### INTENDED USE

For cultivation of fastidious and nonfastidious microorganisms using fluorogenic method.

### PRODUCT SUMMARY AND EXPLANATION

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

### COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
4-Methylumbelliferyl $\beta$ -D-Glucuronide (MUG)	0.100
Agar	15.000

### PRINCIPLE

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

### INSTRUCTION FOR USE

- Dissolve 40.1 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.3±0.2

### INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Fluorescence (under UV)	Incubation Temperature	Incubation Period
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<i>Bacillus subtilis</i>	6633	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Candida albicans</i>	10231	10-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Clostridium sporogenes</i>	11437	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70%	Positive	35-37°C	18-48 Hours
<i>Neisseria meningitidis</i>	13090	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Staphylococcus epidermidis</i>	12228	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours
<i>Streptococcus pyogenes</i>	19615	50-100	Luxuriant	>=70%	Negative	35-37°C	18-48 Hours

#### PACKAGING:

In pack size of 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

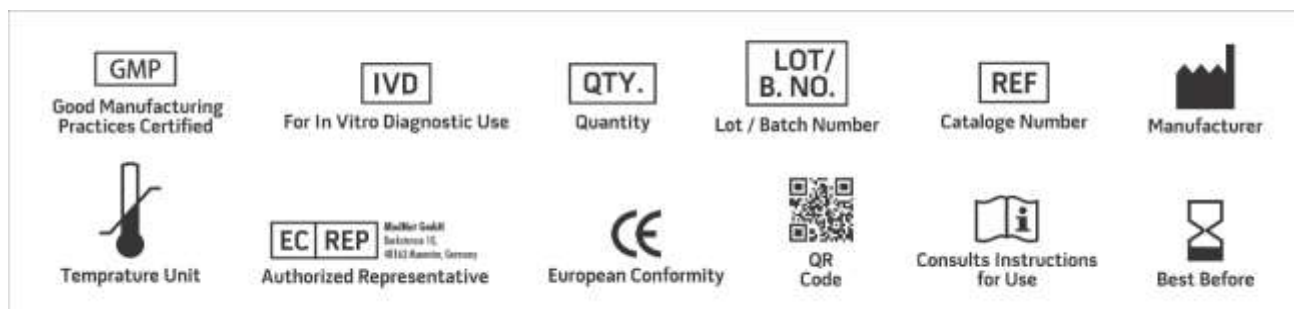
#### DISPOSAL



After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## REFERENCES

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



**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
Revision: 08 Nov., 2019