

## Product Information

### 22099 CASO MUG Agar (Tryptone Soya MUG Agar, Tryptic Soy MUG Agar, Soybean Casein digest MUG Agar)

This universal medium without indicator or inhibitor is intended for a broad range of applications including enumeration, isolation and cultivation of a wide variety of microorganisms, in particular *E. coli*. It is also suitable for the cultivation of more fastidious microorganisms. A positive indole reaction and fluorescence under UV lamp provide confirmation for *E. coli*. It is suitable for the cultivation of both aerobes and anaerobes. As it does not contain the X and V factors, it is suitable for identification of *Haemophilus* sp. by adding X (Hemin) and V (DPN) factors strips. Recommended by the "Schweizerisches Lebensmittelbuch" 5<sup>th</sup> ed., chapter 56A.

#### Composition:

Ingredients	Grams/Litre
Casein peptone	16.0
Soy peptone	5.0
Sodium chloride	6.0
Tryptophan	1.0
Methylumbelliferyl- $\beta$ -D-glucuronide	0.07
Agar	13.0

Final pH 7.3 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

#### Directions :

Dissolve 41.1 g in 1 litre distilled water and autoclave at 121°C for 15 minutes. Cool to 45-50°C. Mix gently and dispense into sterile Petri dishes or sterile culture tubes.

Check the plates under UV light at about 360-370 nm. Slightly blue fluorescence indicates the presence of *E. coli*. For confirmation the indole test can be made with Kovac's reagent (Cat. No. 60983). Cover a colony with 10-20  $\mu$ l Kovac's reagent. A change of color to red after 2-10 seconds indicates indole formation.

#### Principle and Interpretation:

Casein peptone and Soya peptone provide nitrogen, vitamins and minerals. The natural sugars from Soya peptone promote bacterial growth. Sodium chloride ensures osmotic balance. The addition of tryptophan improves the indole reaction.

The medium may also be used as a blood agar base. Add 7% of sterile blood to the sterile molten medium which has been cooled to approximately 45°C. CASO MUG Agar can also be used for the preparation of chocolate agar. Because CASO MUG Agar contains no additional carbohydrates it may be used, by adding blood, for the determination of haemolysis. When supplemented with 0.7g lecithin (Cat. No. 44924) and 5g Polysorbate (Tween 80 Cat. No. P8074) per litre of CASO MUG Agar, the medium can be used as Microbial Content Test Agar for testing quaternary ammonium compounds.

CASO MUG Agar is recommended as a reference medium when testing selective media, to measure the degree of inhibition. A medium for isolation of *Bacteroides gracilis* is prepared from CASO MUG Agar by adding formate (e.g. Sodium formate; Cat. No. 71540), fumarate (e.g. Sodium fumarate; Cat. No. F1506), and nitrate (e.g. Sodium nitrate; Cat. No. 31440). The medium is made selective using nalidixic acid (Cat. No. N8878 and teicoplanin.

$\beta$ -D-glucuronidase, which is produced by *E. coli*, cleaves 4-Methylumbelliferyl- $\beta$ -D-glucuronide to 4-methylumbelliferone and glucuronide. The fluorogen 4-methylumbelliferone can be detected under a long wavelength UV lamp. In addition the indole test can be made with Kovac's reagent (Cat. No. 60983).

## Product Information

Cultural characteristics after 18-48 hours at 35°C (if necessary 76 hours).

Organisms (ATCC)	Growth	Fluorescence	Indole reaction
<i>Escherichia coli</i> (25922)	+++	+	+
<i>Staphylococcus aureus</i> (25923)	+++	-	-
<i>Streptococcus pneumoniae</i> (6305)	+++	-	-
<i>Streptococcus pyrogenes</i> (19615)	+++	-	-

### References:

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