

PRODUCT INFORMATION

EC Medium with MUG

Cat. No. E05-101

DESCRIPTION

EC Medium with MUG may be used for the selective growth of coliform bacteria and for the fluorogenic detection of *Escherichia coli* in water and food samples.

Casein provides the nutrients for growth and lactose the energy source as a carbohydrate. Sodium chloride maintains osmotic balance, the potassium salts have a buffering capacity, and the bile salts act as a selective agent inhibiting Gram-positive bacteria, bacilli and enterococci while allowing *E. coli* to grow.

The β-D-glucuronidase of *E. coli* hydrolyzes MUG and yields a fluorogenic product that can be detected under UV light, thus providing another criterion to determine the presence of this microorganism.

FORMULA (g/L)

Enzymatic Digest of Casein	20.0 g	Sodium Chloride	5.0 g
Lactose	5.0 g	Bile Salts #3	1.5 g
Dipotassium Phosphate	4.0 g	MUG Reagent	0.05 g
Monopotassium Phosphate	1.5 g		

Final pH: 6.9 ± 0.2 at 25 °C

*Grams per liter may be adjusted or formula supplemented to obtain desired performance.

PREPARATION

Mix 37 grams of the medium in one liter of purified water until evenly dispersed. Heat with repeated stirring and boil for one minute to dissolve completely. Distribute and autoclave at 121°C for 15 minutes.

INSTRUCTIONS FOR USE

Inoculate and incubate at 35±2 °C or 44.5±0.5 °C and observe after 24-48 hours under UV light.

QUALITY CONTROL SPECIFICATIONS

1. The powder is homogenous, free flowing and light beige.
2. Visually the prepared medium is brilliant to clear and pale to light yellow.
3. Expected cultural response after 18-24 hours at 35 °C and 45 °C.
- 4.

ORGANISM	RESULTS (35±2 °C)			RESULTS (44.5±0.5 °C)		
	Growth	Gas	Fluor	Growth	Gas	Fluor
<i>Escherichia coli</i> ATCC 11775	Growth	+	+	Growth	+	+
<i>Escherichia coli</i> ATCC 25922	Growth	+	+	Growth	+	+
<i>Enterobacter aerogenes</i> ATCC 13048	Growth	+	-	Poor/fair	-	-
<i>Enterococcus faecalis</i> ATCC 29212	Inhibited	-	-	Inhibited	-	-

STORAGE

Store the sealed bottle containing the dehydrated medium at 2 to 30°C. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect it from moisture and light. The dehydrated medium should be discarded if it is not free flowing or if the color has changed from the original color.