

DEV Lactose Peptone MUG Broth

Liquid medium for the enrichment and detection of coliform bacteria and *E. coli* in water.

TYPICAL FORMULA	(g/l)
Meat Peptone	17.0
Soy Peptone	3.0
Lactose	10.0
Sodium Chloride	5.0
Bromocresol Purple	0.02
L-Tryptophan	1.0
4-Methylumbelliferyl- β -D-glucuronide (MUG)	0.1
Final pH 7.2 \pm 0.2 at 25°C	

DESCRIPTION

DEV Lactose Peptone MUG Broth is a liquid medium used for the enrichment and detection of coliform bacteria in water. In addition, the medium allows to demonstrate the presence of *Escherichia coli* by UV fluorescence and positive indole test.

PRINCIPLE

Peptones supply amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of microorganism. Lactose is the fermentable carbohydrate. Sodium chloride maintains the osmotic balance of the medium. Bromocresol purple is the pH indicator. Tryptophan is an amino acid useful for the optimisation of direct indole test. β -D glucuronidase enzyme, produced by *E. coli*, cleaves MUG to yield a fluorogenic product that is detectable under long-wave (366 nm) UV light.

PREPARATION

Suspend 36.1 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Pour 10 ml per tube each containing a Durham gas collecting tube. Sterilize at 121°C for 15 minutes.

TECHNIQUE

Inoculate 1 ml sample in a tube. Incubate at 35 \pm 2°C for 16-24 hours. If no gas has formed in the inverted Durham tube extend incubation for further 24 hours.

INTERPRETATION OF RESULTS

Coliform bacteria ferment lactose with acid and gas production. Turbidity accompanied by a colour change of the medium from purple to yellow indicate presence of coliform organisms. In addition check the tubes under UV light at about 360-370 nm. Slightly blue fluorescence indicates the presence of *E. coli*. Confirm by performing indole test reaction (ref. 80252). If no fluorescence occurs, incubate for another 24 hours prior to add Kovac's Reagent.

STORAGE AND TRANSPORT CONDITIONS

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

- Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung, VCH Verlagsgesellschaft, D-6940 Weinheim
Verordnung über Trinkwasser und über Wasser für Lebensmittelbetriebe vom 12. Dezember 1990, Bundesgesetzbl., Teil I; 2613 (1990)



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PRODUCT SPECIFICATIONS

NAME

DEV Lactose Peptone MUG Broth

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGING

Ref.	Content	Packaging
610502	500 g	500 g of powder in plastic bottle

pH OF THE MEDIUM

7.2 ± 0.2

USE

DEV Lactose Peptone MUG Broth is a liquid medium used for the enrichment and detection of coliform bacteria in water. In addition, the medium allows to demonstrate the presence of *Escherichia coli* by UV fluorescence and positive indole test

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Powder medium

Appearance: free-flowing, homogeneous

Colour: beige

Ready-to-use medium

Appearance: clear

Colour: purple

SHELF LIFE










4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: ≤100 CFU
Incubation Conditions: 24-48 h at 35 ± 2°C

Microorganism		Growth	Color change to yellow	Gas formation	Fluorescence	Indole reaction
<i>Escherichia coli</i>	ATCC® 25922	Good	+	+	+	+
<i>Klebsiella pneumoniae</i>	ATCC® 13883	Good	+	+	-	---
<i>Enterococcus faecalis</i>	ATCC® 19433	Good	±	-	---	---
<i>Aeromonas hydrophila</i>	ATCC® 7966	Good	-	-	---	---
<i>Salmonella typhimurium</i>	ATCC® 14028	Good	-	-	---	---

TABLE OF SYMBOLS

 LOT	Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 REF	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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