

Purple Lactose Agar

Medium for the isolation, enumeration and differentiation of pathogenic bacteria in urine specimens.

DESCRIPTION

Purple Lactose Agar is a medium used for microbiological urine analysis since it supports the growth of all urinary potential pathogens providing good differentiation between lactose fermenters and non-fermenters.

TYPICAL FORMULA	(g/l)
Peptone	5.0
Beef Extract	3.0
Lactose	10.0
Bromcresol Purple	0.025
Agar	15.0
Final pH 6.8 ± 0.2 at 25°C	

METHOD PRINCIPLE

Peptone and beef extract provide amino acids, nitrogen, carbon, vitamins and minerals required for organisms growth. Lactose is the fermentable carbohydrate. Bromcresol purple is the pH indicator which changes color to yellow when lactose fermentation lowers the pH. Agar is the solidifying agent. Lack of electrolytes suppresses the swarming of *Proteus* and *Shigella* species.

PREPARATION

Dehydrated medium Suspend 33 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes.

TEST PROCEDURE

Urine must be directly streaked over the agar surface no later than 2 h after collection or must be kept at 2-8°C (not longer than 24 h) to avoid microbial overgrowth. Use a calibrated loop (0.01 or 0.001 ml) to inoculate the medium with the undiluted, well-mixed urine sample. Incubate aerobically at 35 ± 2°C for 18-48 h.

RESULTS INTERPRETATION

Count the number of colonies on the plate. Each colony correspond to 100 or 1000 CFU/ml of urine, using a 0.01 ml or 0.001 ml loop, respectively. Observe the color and the morphology of the colonies for presumptive identification according to the ID table. Further tests should be performed for confirmation.

ID Table.

Microorganism	Colony Appearance
<i>Enterococcus</i> spp	Small yellowish to white colonies surrounded by yellow medium
<i>E. coli</i> (lactose positive)	Medium-sized to large yellow colonies surrounded by yellow medium
<i>E. coli</i> (lactose negative), <i>Proteus</i> spp	Medium-sized to large gray colonies surrounded by blu-violet medium
<i>E. cloacae</i>	Medium-sized light yellow colonies surrounded by yellowish to bluish medium
<i>Salmonella</i> spp	Medium-sized to large gray-white colonies surrounded by blu-violet medium
<i>M. morgani</i> , <i>S. aureus</i> , <i>Providencia</i> , <i>Shigella</i> spp	Medium-sized gray colonies surrounded by blu-violet medium

APPEARANCE

Dehydrated medium: free-flowing, homogeneous, beige.

Prepared medium: slightly opalescent, blue-violet.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store prepared plates at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.
Ready-to-use plates: 6 months.

QUALITY CONTROL

Plates are inoculated with the microbial strains indicated in the QC table.
Inoculum for productivity: 50-100 CFU.
Incubation conditions: aerobically at 35 ± 2°C for 18-24 hours.

QC Table.

Microorganism		Growth	Specification
<i>Escherichia coli</i>	ATCC® 25922	Good	Yellow colonies, yellow medium
<i>Enterobacter cloacae</i>	ATCC® 13047	Good	Light yellow colonies, yellow to bluish medium
<i>Proteus mirabilis</i>	ATCC® 12453	Good	Blue-gray colonies, no swarming, blue-violet medium
<i>Enterococcus faecalis</i>	ATCC® 29212	Good	Yellow colonies, yellow medium
<i>Salmonella Typhimurium</i>	ATCC® 14028	Good	Gray-white colonies, blue-violet medium

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 intended for *in vitro* diagnostic use only and must be used by properly trained operators only.

DISPOSAL OF WASTE

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








BIBLIOGRAPHY

- Sandys G.H. (1960) A new method for preventing swarming of *Proteus* spp with a description of a new medium suitable for use in routine laboratory practice. J. Med. Lab. Technol. 17:224.
- Mackey J.P. and G.H. Sandys (1966) Diagnosis of urinary tract infections. Br. Med. J. 1:1173.

PRESENTATION

		Contents	Ref.
Purple Lactose Agar	90 mm ready-to-use plates	20 plates	10014
Purple Lactose Agar	90 mm ready-to-use plates	100 plates	10014*
Purple Lactose Agar	140 mm ready-to-use plates	10 plates	10249
Purple Lactose Agar	Dehydrated medium	500 g of powder	610044
Purple Lactose Agar	Dehydrated medium	100 g of powder	620044

TABLE OF SYMBOLS

LOT Batch code	IVD <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse

Distribué par :

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