

IVD in vitro diagnosticum - For professional use only



LEVINE EMB Agar (Eosin Methylene-blue Lactose Agar acc. to LEVINE)

LEVINE EMB agar

**Cat. No. 1.01342.0500
(500 g)**

For the isolation and differentiation of *Escherichia coli* and *Enterobacter* and for the rapid identification of *Candida albicans* according to LEVINE (1918, 1921).

The culture medium complies with the recommendations of the APHA Standard Methods for the Examination of Water and Wastewater (1998) and the United States Pharmacopeia XXIII (1995).

See also General Instruction of Use

Warnings and precautions see www.merck-chemicals.com

Principle

Microbiological method

Mode of Action

The dyes contained in this medium inhibit the growth of many accompanying Gram-positive microorganisms. According to WELD (1952, 1953) and VOGEL and MOSES (1957), LEVINE EMB Agar can be used to identify *Candida albicans* in clinical specimens, if chlorotetracycline hydrochloride is added to inhibit the entire accompanying bacterial flora. LEVINE EMB Agar can also be utilized for the identification of coagulase-positive staphylococci which grow characteristically as colourless "pin-point" colonies and which show good agreement with the results of the coagulase test (MENOLASINO et al. 1960).

Typical Composition (g/litre)

Peptone 10.0; lactose 10.0; di-potassium hydrogen phosphate 2.0; eosin, yellowish 0.4; methylene blue 0.065; agar-agar 13.5.

Preparation and Storage

Cat. No. 1.01342. LEVINE EMB Agar (Eosin Methylene-blue Lactose Agar acc. to LEVINE) (500 g)

Usable up to the expiry date when stored dry and tightly closed at +15 to +25°C. Protect from light.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25°C.

Suspend 36 g/litre, autoclave (15 min at 121 °C), and pour plates.

pH: 7.0 ± 0.2 at 25 °C.

The plates are clear and red-brown.

If cultivating *Candida*, add 0,1 mg tetracycline hydrochloride/litre after autoclaving and mix homogeneously. The culture medium then is blue.

Specimen

e.g. Stool.

Clinical specimen collection, handling and processing, see general instructions of use.

Experimental Procedure and Evaluation

Inoculate by thinly spreading the sample material on the surface of the culture medium.

Incubation: 1-2 days at 35 °C aerobically.

To obtain a primary culture of *Candida*, incubate the plates containing chlorotetracycline in a 10 % carbon dioxide atmosphere (e.g. with Anaerocult® C or C mini).

<i>Appearance of Colonies</i>	<i>Microorganisms</i>
Diameter 2-3 mm, greenish metallic sheen in reflected light, dark or even black centre in transmitted light	Escherichia coli
Diameter 4-6 mm, graybrown centre in transmitted light, no metallic sheen	Enterobacter
Transparent, amber-coloured	Salmonella and Shigella
Colourless, "pin-point" colonies	Coagulase-positive staphylococci
"Spidery" - or "feathery"	Candida albicans
Yeast-like, round, smooth	Other Candida species. Sometimes Nocardia

Quality control

<i>Test strains</i>	<i>Growth</i>	<i>Colonies</i>	
		<i>Blue</i>	<i>Metallic sheen</i>
Escherichia coli ATCC 25922	good / very good	+	+
Escherichia coli ATCC 11775	good / very good	+	+
Escherichia coli 194	good / very good	+	+
Enterobacter cloacae ATCC 13047	good / very good	pale blue	-
Shigella sonnei ATCC 11060	good / very good	-	-
Salmonella typhimurium ATCC 14028	good / very good	-	-
Proteus mirabilis ATCC 14273	good / very good	-	-
Staphylococcus aureus ATCC 25923	none / poor	-	-

Additives

Merck Cat.No.	Product	Pack Size
1.07040.0001	Plate basket	1ea
CN Biosciences	Tetracycline hydrochloride	
1.13682.0001	Anaerocult® C mini	1 x 25
1.14226.0001	Anaeroclip®	1 x 25
1.16275.0001	Anaerocult® C	1 x 10
1.16387.0001	Anaerobic jar	1 ea

Literature

American Public Health Association, American Water Works Association and Water Pollution Control Federation: Standard Methods for the Examination of Water and Wastewater, 20th ed., Washington 1998.

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