

HA Deoxycholate Lactose Agar

Selective agar for the enumeration and isolation of Coliform bacteria from milk, water, ice-cream and other materials.

This culture medium complies with the recommendations of the APHA (1992) for the examinations of foods.

Mode of Action

The concentrations of deoxycholate and citrate are so low that the coliform bacteria can grow normally whereas the accompanying Gram-positive bacteria are largely inhibited. Degradation of lactose to acid is detected by the pH indicator neutral red which changes its colour to red, and by a zone of precipitation caused by bile acid.

Typical Composition (g/litre)

Peptones 10.0; lactose 10.0; sodium chloride 5.0; sodium citrate 2.0; sodium deoxycholate 0.5; neutral red 0.033; agar-agar 12.5.

Preparation

Suspend 40 g/litre in demin. water and heat in a boiling water bath or a current of steam. **Do not autoclave**, pour plates.

pH: 7.1 ± 0.2 at 25 °C.

The plates are clear and red-brown.

- The culture medium should be prepared and used the same day.

Experimental Procedure and Evaluation

Inoculate the culture medium by the spread-plate or pour-plate method.

Incubation: 24 hours at 35 °C aerobically.

Appearance of Colonies	Microorganisms
Red, surrounded by zone of precipitate	Lactose-positive: <i>Escherichia coli</i>
Pale with a pink centre and surrounded by a zone of precipitate	Weakly lactose-positive: <i>Enterobacter</i> , <i>Klebsiella</i> and others
Colourless	Lactose-negative: <i>Salmonella</i> , <i>Shigella</i> , <i>Proteus</i> , <i>Pseudomonas</i> and others

Literature

American Public Health Association: Compendium of Methods for the Microbiological Examinations of Foods. 3rd ed., 1992.

Ordering Information

Product	Merck Cat. No.	Pack size
Deoxycholate Lactose Agar	1.02894.0500	500 g



Enterobacter cloacae
ATCC 13047



Salmonella enteritidis
ATCC 13076

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Quality control

Test strains	Inoculum (cfu/ml)	Recovery rate (%)	Colony colour	Precipitate
<i>Escherichia coli</i> ATCC 25922	10^3 - 10^5	≥ 40	red	+
<i>Klebsiella pneumoniae</i> ATCC 13883	10^3 - 10^5	≥ 40	pink / red	\pm
<i>Enterobacter cloacae</i> ATCC 13047	10^3 - 10^5	≥ 40	pink / red	\pm
<i>Salmonella typhimurium</i> ATCC 14028	10^3 - 10^5	≥ 40	colourless	-
<i>Salmonella enteritidis</i> ATCC 13076	10^3 - 10^5	≥ 40	colourless	
<i>Shigella flexneri</i> ATCC 12022	10^3 - 10^5	≥ 40	colourless	
<i>Proteus mirabilis</i> ATCC 14273	10^3 - 10^5	≥ 40	colourless	
<i>Enterococcus faecalis</i> ATCC 11700	$>10^5$	≥ 0.01		
<i>Staphylococcus aureus</i> ATCC 25923	$>10^5$	≥ 0.01		