



## Violet Red Bile Lactose Agar

Selective medium for the enumeration of coliforms  
in food, water and other materials, according to APHA and ISO 4832.

### DESCRIPTION

Violet Red Bile Lactose Agar is a selective medium used for the isolation and enumeration of coliform bacteria in food, water and other materials of sanitary importance, according to APHA and ISO 4832.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Animal Tissues	7.0
Yeast Extract	3.0
Lactose	10.0
Sodium Chloride	5.0
Bile Salts	1.5
Neutral Red	0.03
Crystal Violet	0.002
Agar	14.0

Final pH 7.4 ± 0.2 at 25°C

### METHOD PRINCIPLE

Enzymatic digest of animal tissues provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Lactose is the fermentable carbohydrate. Sodium chloride maintains the osmotic balance of the medium. Bile salts and Crystal violet are selective agents effective against Gram-positive cocci. Neutral red is the pH indicator. Agar is the solidifying agent.

### PREPARATION

<u>Dehydrated medium</u>	Suspend 40.5 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. DO NOT AUTOCLAVE.
<u>Medium in tubes/bottles</u>	Melt the content of the tube/bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the tube/bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

### TEST PROCEDURE

1. Perform serial dilutions of the test sample in order to achieve a colony count of between 10 and 150 colonies per plate. Use a suitable diluent such as Buffered Peptone Water (ref. 24099) or Maximum Recovery Broth (ref. 20071).
2. Inoculate the medium by pour plating or spread plating method.
3. Incubate aerobically at 30°C or 37°C, depending on the organisms under study, for 24 ± 2 hours.

For environmental hygiene monitoring, use a swab and the sampling template 10x10 (ref. 96762) to sample a well defined area of the test surface. Then, inoculate the medium by streaking the swab over the plate. Otherwise, RODAC plates can be directly used for surface sampling by firmly pressing the agar medium against the test area for a few seconds.

### INTERPRETING RESULTS

Select plates containing 10-150 colonies. Count the purplish-red colonies with a diameter of at least 0.5 mm.

Atypical colonies (e.g. smaller size) and all colonies derived from milk products should be confirmed by using Brilliant Green Lactose Bile Broth 2% (ref. 20102).

### APPEARANCE

Dehydrated medium: free-flowing, homogeneous, beige to reddish-beige.

Prepared medium: slightly opalescent, reddish-purple.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store tubes and 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.

Medium in tubes/bottles: 2 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.

Inoculum for selectivity:  $10^4$ - $10^6$  CFU.

Inoculum for specificity:  $10^3$ - $10^4$  CFU.

Incubation conditions: aerobically at  $30 \pm 1^\circ\text{C}$  for  $24 \pm 2$  hours.

**QC Table.**

Microorganism	Specification	
<i>Escherichia coli</i>	WDCM 00012	Good growth, purplish-red colonies with or without precipitation halo
<i>Enterococcus faecalis</i>	WDCM 00009	Inhibition
<i>Pseudomonas aeruginosa</i>	WDCM 00025	Colorless to beige colonies

**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 professional use only and must be used by properly trained operators.

**DISPOSAL OF WASTE**

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









**BIBLIOGRAPHY**

1. EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
2. ISO 4832:2006. Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coliforms – Colony count technique.
3. Davidson, Roth, and Gambrel-Lenarz (2004) In Wehr and Frank (ed.) Standard methods for the microbiological examination of dairy products, 17<sup>th</sup> ed. American Public Health Association, Washington, D.C.
4. Kornacki and Johnson (2001) In Downes and Ito (ed.) Compendium of methods for the microbiological examination of foods, 4<sup>th</sup> ed. American Public Health Association, Washington D.C.

**PRESENTATION**

		Contents	Ref.
Violet Red Bile Lactose Agar	90 mm ready-to-use plates	20 plates	11183
Violet Red Bile Lactose Agar	90 mm ready-to-use plates	100 plates	11183*
Violet Red Bile Lactose Agar	55 mm ready-to-use RODAC plates (in blister packs)	20 plates	15326
Violet Red Bile Lactose Agar	55 mm ready-to-use RODAC plates	20 plates	15326L
Violet Red Bile Lactose Agar	Tubes	20 x 22 ml tubes	31076
Violet Red Bile Lactose Agar	Tubes	10 x 22 ml tubes	34076
Violet Red Bile Lactose Agar	Bottles	6 x 100 ml bottles	402460
Violet Red Bile Lactose Agar	Dehydrated medium	500 g of powder	610058
Violet Red Bile Lactose Agar	Dehydrated medium	100 g of powder	620058
Violet Red Bile Lactose Agar	Dehydrated medium	5 kg of powder	6100585

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	 Keep away from sunlight	 Manufacturer	 Use by	 Fragile, handle with care
<b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse



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