

Violet Red Bile Agar (VRBA)



Medium used for the isolation and cultivation of coliforms in food and dairy products.

*Equally use with MFDS(MB-V1058K), QIA (MB-V1058Q) and Violet Red Bile Lactose Agar Modified (MB-V0898).

• CONTENTS (Liter)

Yeast Extract	3.0 g
Peptone	7.0 g
Bile Salts No.3	1.5 g
Sodium Chloride	5.0 g
Lactose	10.0 g
Neutral Red	0.03 g
Crystal Violet	0.002 g
Agar	15.0 g
Final pH = 7.4 ± 0.1 at 25°C	

• PROCEDURE

Suspend 41.53 G of powder to 1 L of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. Mix well. Pour into petri dishes.

• INTERPRETATION

Violet Red Bile Agar (VRBA) is a medium used for the isolation and cultivation of coliforms in food and dairy products. Yeast extract provides B-complex vitamins. Peptone is a source of carbon, nitrogen, vitamins and minerals. Bile salts no.3 and crystal violet inhibit the growth of Gram-positive bacteria. Sodium chloride maintains the osmotic balance. Lactose fermentation causes an acidification of the medium by the enterobacter with color change of the indicator towards deep red and the bile salts precipitation. Neutral red is a pH indicator. Agar is the solidifying agent.

• TECHNIC

Inoculate the plates with spreading the specimen on surface of the medium using a sterile loop. Incubate at 35 ± 1°C for 24 ± 2 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: reddish beige

Prepared medium

Appearance: slightly opalescent

Color: reddish purple

Incubation conditions: 35 ± 1°C / 24 ± 2 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
<i>Enterobacter aerogenes</i>	13048	50-100	good	pink colonies
<i>Escherichia coli</i>	25922	50-100	good	deep red colonies with bile precipitate
<i>Staphylococcus aureus</i>	25923	≥10 ³	inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, 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 are evident. Store prepared medium at 2 - 8°C.

• REFERENCES

1. ISO 4832: 1991. Microbiology - General guidance for the enumeration of coliforms-colony count technique.
2. Mossel, D.A.A., M.J. Koopman, and E. Jongerius (1967). Enumeration of *Bacillus cereus* in foods. Appl. Microb.15 (3): 650-653.
3. ISO 7402: 1993. Microbiology - General guidance for the enumeration of Enterobacteriaceae without resuscitation - MPN technique and colony count technique.
4. ISO 8523: 1991. Microbiology - General guidance for the detection of Enterobacteriaceae with pre-enrichment.
5. Refer to the MFDS and QIA.

• PACKAGE

Cat. No : MB-V1058 Violet Red Bile Agar (VRBA)	500 G
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