

TECHNICAL DATA SHEET

Article No. 9863

VRBD Agar (Violet Red Bile Dextrose Agar), prepared culture medium

SYNONYMS

VRBG, MacConkey Dextrose Agar

SPECIFICATION

Prepared medium. Selective solid medium for the enumeration of enterobacteria, according to ISO 21528 and Pharmacopeial Harmonised Methods.

Colour: Violet-pink
pH: 7.4 ± 0.2 at 25 °C

COMPOSITION IN G/L

Yeast extract	3.000
Pancreatic digest of gelatin	7.000
Salts bile	1.500
D(+)-Glucose	10.000
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.002
Agar	13.000

PACKAGING DETAILS

9863-10x125ML

10 prepared bottles

Volume: 125 ± 3 ml

Packaging unit: 1 box with 10 125-ml-bottles. Plastic screw inner cap.

9863-10x200ML

10 prepared bottles

Volume: 200 ± 5 ml

Packaging unit: 1 box with 10 250-ml-bottles. Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended



9863-10x450ML

10 prepared bottles

Volume: 450 ± 5 ml

Packaging unit: 1 box with 10 500-ml-bottles. Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended

GUIDELINES**Description:**

This medium is a modification of the Violet Red Bile Agar and the MacConkey Agar as described by Mossel et al. The addition of glucose to the Violet Red Bile Agar enhances both the growth of the most fastidious *Enterobacteria* and the recovery of those having suffered from adverse conditions. Mossel himself realized that by removing the lactose and keeping the glucose, the medium's efficiency remained stable. This medium can be used as a presumptive medium for *Escherichia coli* (by fluorescent reaction) if before sterilization MUG is added.

Technique:

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.

Melt the medium contained in the bottles in a water bath or in a microwave oven, avoiding overheating, before pouring into Petri dishes when cooled to room temperature.

Once solidified on a flat surface, Spread the plates by streaking methodology or by spiral method. Incubate the plates right side up aerobically at 35 ± 2.0°C for 24 h.

(Incubation times longer than those mentioned above, different inoculation methods or different incubation temperatures may be required depending on the sample, on the specifications,...) This medium can be inoculated directly or after any enrichment broth. After incubation, enumerate all the reddish-violet colonies that have appeared onto the surface of the agar, with a red-violet halo due to bile salts precipitation.

Presumptive isolation of *Escherichia coli* or coliforms must be confirmed by further microbiological and biochemical tests. Calculate total microbial count per ml of sample by multiplying the average number of colonies per plate by the inverse dilution factor if streaked a diluted sample. Report results as Colony Forming Unit (CFU's) per ml or g along with incubation time and temperature, that enables to differentiate total coliforms and fecal coliforms.

Note: The solid mediums can be melted in different ways: autoclave, bath and, if the customer considers appropriate, also the microwave. Whenever the microwave option is chosen, it is necessary to take certain safety measures to avoid breaking of the containers, such as loosening the screw cap and putting the bottle or tube in a water bath in the microwave. The fusion temperature and time will depend on the shape of the container, the volume of medium and the heat source. Avoid overheating as both the heating periods.

MICROBIOLOGICAL CONTROL

Melting - pour plates - inoculation

Practical range 100 ± 20 CFU. min. 50 CFU (productivity) / 10⁴-10⁶ CFU (selectivity)

Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020

Aerobiosis. Incubation: 30-35 °C. Reading at 24h (E.P.) / 37 ± 1 °C. Reading at 24 h (ISO)

Note: results ATCC® 8739/6538/9027 (30-35 °C) & ATCC® 8739/25922/19433/14028 (37 °C)

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Microorganism	Growth
<i>Pseudomonas aeruginosa</i> ATCC® 9027, WDCM 00026	Good
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good (50%)- Red purple colonies - biliary precipitate
<i>Salmonella typhimurium</i> ATCC® 14028, WDCM 00031	Good (50%)- Red purple colonies - biliary precipitate
<i>Staphylococcus aureus</i> ATCC® 6538, WDCM 00032	Inhibited
<i>Enterococcus faecalis</i> ATCC® 19433, WDCM 00009	Inhibited
<i>Escherichia coli</i> ATCC® 25922, WDCM 00013	Good (50%)- Red purple colonies - biliary precipitate
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good (50%)- Red purple colonies - biliary precipitate

Sterility control:

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

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STORAGE

8-25 °C

SHELF LIFE

12 months months unopened from date of manufacture



