17213 Violet Red Bile Dextrose Agar (Violet Red Bile Glucose Agar without Lactose; VRBG Agar; VRBD Agar; Violet Red Bile Dextrose Agar)

Violet Red Bile Glucose Agar is used for detection and enumeration of Enterobacteriaceae in food products. It is also recommended by ISO Committee under the specifications 21528-1:2017 and 21528-2:2017.

Composition:

Ingredients	Grams/Litre
Peptic digest of animal tissue	7.0
Yeast extract	3.0
Sodium chloride	5.0
Bile salts mixture	1.5
Glucose	10.0
Neutral Red	0.03
Crystal Violet	0.002
Agar	12.0
Final pH (at 25°C) 7.4 ± 0.2	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance:	Faintly brown coloured, homogeneous, free flowing powder.
Gelling:	Firms
Color and Clarity:	Slightly Red to brown coloured, clear gel form in Petri plates

Directions:
Suspend 38.53 g in 1 litre distilled water. Heat to boiling to dissolve the medium completely. Do not autoclave. Mix well and pour into sterile petri plates.

Principle and Interpretation:
It is selective medium recommended for detection of all the members of the Enterobacteriaceae that can reveal the hygienic conditions in the food processing units at various stages such as raw materials, plant operation and processed foods (1,6,7). Mossel et al (2,3,4) added glucose and excluded lactose from the medium observing improved detection of coliforms. Incubation can be carried out at different temperatures and incubation time depending upon the group of *Enterobacteriaceae* to be recovered (5). ISO committee recommends this medium for the detection and enumeration of Enterobacteriaceae (6,7).

Cultural characteristics after 18-24 hours at 35-37°C

Organism (ATCC)	Growth	Colour of Colony
Enterobacter aerogenes (13048)	+++	pink-red
Escherichia coli (25922)	+++	pink-red
Salmonella enteritidis (13076)	+++	light pink
Staphylococcus aureus (25923)	-	-

References:
1. WHO Technical Report series N. 598, Geneva, p 51 (1976)
2. D.A.A. Mossel, W.H.J. Mengerink, H.H. Scholts, J. Bacteriol, 84:381 (1962)
3. D.A.A. Mossel, et al., Lab. practice, 27 No., 12, 1049 (1978)
4. D.A.A. Mossel, et al., Food Protect., 42, 470 (1979)
5. D.A.A. Mossel, et al., J. Appl. Bact., 60, 289 (1986)
6. ISO 21528-1:2017; Microbiology of the food chain — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 1: Detection of Enterobacteriaceae
7. ISO 21528-2:2017; Microbiology of the food chain — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 2: Colony-count technique

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.