PRODUCT INFORMATION

Product Type: PETRI DISHES 90mm

Cat No. PD206 - VIOLET RED BILE GLUCOSE AGAR

Intended Use:
For the detection and enumeration of *Enterobacteriaceae* in food, animal feed and environmental samples.

Principle and Uses:
Enterobacteriaceae are usually considered by food manufacturers as hygiene indicators and thus used to monitor the effectiveness of preventive measures taken.
Violet Red Bile Glucose Agar is recommended by ISO 21528-1 for the detection and the enumeration with a pre-enrichment step and with the MPN technique of *Enterobacteriaceae*, when the microorganisms sought are expected to need resuscitation, and when the number sought is expected to be below 100 per milliliter or per gram of test sample.
Peptone provides essential growth factors for bacterial growth; yeast extract is a source of B-vitamins complex for growth stimulation; sodium chloride maintains the osmotic balance. The medium relies on the use of the selective inhibitory components crystal violet and bile salts which suppress the growth of Gram-positive bacteria and the indicator system glucose and neutral red. The dissimilation of glucose causes acidification of the medium, with the consequent precipitation of bile salts and neutral red uptake. The *Enterobacteriaceae* grow with red-pink to red-violet colonies surrounded by a red precipitation zone. Non-glucose fermenters (e.g., *Pseudomonas, Acinetobacter, Alcaligenes* etc.) exhibit transparent, colourless colonies. Some Gram-negative bacteria other than *Enterobacteriaceae* may grow but may be limited by the overlay procedure.
Compliance: CCAM, COMPF, EP, ISO, JP, USP

Test Procedure
Detection of *Enterobacteriaceae* after pre-enrichment
Inoculate VRBG Agar plates with a loop from each of the incubated cultures obtained after enrichment in Buffered Peptone Water. Incubate the plates at 37 ± 1 °C for 24 h ± 2 h

Reading And Interpretation
After incubation, observe the bacterial growth and record the specific morphological and chromatic characteristics of the colonies. Typical *Enterobacteriaceae* colonies are pink to red or purple (with or without precipitation haloes). Select well-isolated colonies from each of the incubated plates for the biochemical confirmation tests: oxidase reaction (-) and glucose fermentation (+).

Limitations Of the Methods
- Occasionally enterococci grow on this medium; however, the colonies are pinpoint. If in doubt perform a Gram staining and a catalase test (Gram-positive cocci, catalase-negative).
- Medium is not completely specific for enterics; other accompanying bacteria may give the same reactions. Further biochemical tests are necessary for positive identification.
- Medium selectivity diminishes after 24 hours of incubation and organisms previously suppressed may exhibit growth.

Composition

Peptone - 7.0 g/L
Yeast extract - 3.0 g/L
Sodium chloride - 5.0 g/L
Bile salts No.3 - 1.5 g/L
Glucose - 10.0 g/L
Neutral red - 30.0 mg/L
Crystal violet - 2.0 mg/L
Agar - 15.0 g/L

Storage: 2-8°C
Appearance: Clear, slightly opalescent, and reddish-purple in color
pH Range: 7.2 - 7.6

Package contents: 10 plates in a package
Exp. Date: Printed on label and on the item.
Required materials not supplied: Laboratory equipment as required.

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Waste Disposal

After interpretation all plates should be destroyed by standard incineration methods.

Performance Testing Results

GPT: inoculum 10-100 cfu
Inhibitory properties: inoculum 10000 cfu

Test	ATCC	Incubation Temp. (℃)	Incubation Cond	Reaction 1	
Escherichia coli	8739	30-35 ℃	Aerobic, 18 hours	Growth	Pink
Escherichia coli	25922	30-35 ℃	Aerobic, 18 hours	Growth	Pink
Pseudomonas paraeruginosa	9027	30-35 ℃	Aerobic, 18 hours	Growth	Colorless
Salmonella typhimurium	14028	30-35 ℃	Aerobic, 18 hours	Growth	Purple
Enterococcus faecalis	19433	30-35 ℃	Aerobic, 48 hours	Inhibited	

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