OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

VIOLET RED BILE AGAR (VRBA) WITH MUG CM0978

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Typical Formula*

	grams per litre
Yeast extract	3.0
Peptone	7.0
Sodium chloride	5.0
Bile salts No.3	1.5
Lactose	10.0
Neutral red	0.03
Crystal violet	0.002
4-methylumbelliferyl-β-D-glucuronide (MUG)	0.1
Agar	12.0

* adjusted as required to meet performance standards

Directions

Suspend 38.6g in 1 litre of distilled water. With frequent agitation, bring to the boil to dissolve completely. Cool to 50°C. Mix well and pour into sterile Petri dishes or hold at 45°C when using the pour plate technique. DO NOT AUTOCLAVE.

Physical Characteristics

Straw/pink, free-flowing powder
Colour on reconstitution – pink/red or pink/orange
Moisture level - less than or equal to 7%
pH - 7.4 ± 0.2 at 25°C
Clarity - clear
Gel strength - firm, comparable to 12.0g/litre of agar

Microbiological Tests Using Optimum Inoculum Dilution

Reactions after incubation at 37°C for 24 hours

Inoculation using pour plate technique

Medium is challenged with 50-150 colony-forming units

Klebsiella pneumoniae	ATCC®29665	1-2mm purple/pink colonies, slight halo
Proteus mirabilis	ATCC®12453	Pinpoint-0.5mm purple/pink colonies, no halo
Escherichia coli	ATCC®8739	1-3mm purple/pink colonies with halo, positive blue fluorescence

Escherichia coli	ATCC®25922	1-2mm purple/pink colonies with halo, positive blue fluorescence

There shall be no gassing in the medium.

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

Inoculation using surface plate technique

Medium is challenged with 10-100 colony-forming units

Shigella sonnei	ATCC®25931	1-2mm straw colonies with fluorescence
Enterobacter aerogenes	ATCC®13048	0.5-2mm pink colonies, dark centre
Pseudomonas aeruginosa	ATCC®27853	2-3mm colourless/straw colonies

After incubation examine plates using long wave UV light (365nm), plates inoculated with *Escherichia coli* and *Shigella sonnei* should exhibit a blue fluorescence.

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Staphylococcus aureus	ATCC®25923	No growth
Enterococcus faecalis	ATCC®29212	No growth or pinpoint colourless/pink colonies
Proteus mirabilis	ATCC®12453	0.5-2mm straw colonies, no swarming

Negative strains are inhibited or produce a negative diagnostic reaction.

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Revision History

Section / Step	Description of Change	Reason for Change	Reference
Microbiological characteristics	Clarification of *Escherichia coli* diagnostic reaction.	Change control	MBD-2022-0424