

Violet Red Bile Lactose Agar (VRBL) (ISO) (NCM0089)

Intended Use

A medium for the enumeration of coliform organisms in food and dairy products according to ISO 4832:2006 and is not intended for use in the diagnosis of disease or other conditions in humans.

Description

The selectivity of the medium is due to the presence of bile salts and crystal violet. Lactose fermenters produce red/purple colonies often surrounded by a halo of the same color. Non-lactose fermenters produce pale colonies. Selectivity can be increased by incubation at 42-44°C.

Typical Formulation

| | |
|-----------------------------------|-----------|
| Yeast Extract | 3.0 g/L |
| Enzymatic Digest of Animal Tissue | 7.0 g/L |
| Sodium Chloride | 5.0 g/L |
| Bile Salts | 1.5 g/L |
| Lactose | 10.0 g/L |
| Neutral Red | 0.03 g/L |
| Crystal Violet | 0.002 g/L |
| Agar | 12.0 g/L |

Final pH: 7.4 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution

1. Refer to SDS

Preparation

1. Suspend 38.5g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. DO NOT AUTOCLAVE.
4. Cool to 45-50°C.

Test Procedure

- Pour plate (with or without overlay) or surface spread.
- Incubated at 37°C for 18-24 hours for 'coliforms'; 4°C for 10 days for psychrotrophs; 32°C for 24-48 hours for mesotrophs; 42°C for 18 hours for thermotrophs.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing and beige.

Prepared Appearance: Prepared medium is a light, purple-violet clear gel.

Minimum QC:

Escherichia coli WDCM 00013

Enterococcus faecalis WDCM 0087 (inhibition)

Results

Count all red/purple colonies > 0.5mm in diameter. From this calculate the number of coliforms in the original sample.



Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedures

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

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5. Mossel, D.A.A., Eelderink, I. and Sutherland, J.P. (1977). Development and use of single, 'polytropic' diagnostic tubes for the approximate taxonomic grouping of bacteria, isolated from foods, water and medicinal preparations. Zbl. Bakt. Hyg. I., Orig., A 278, 66-79.
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