

## Clostridial Agar

### Intended Use

Clostridial Agar is recommended for the selective isolation of pathogenic *Clostridia* from mixed flora.

### Summary

One of the major species of anaerobic bacteria to cause disease in humans is *Clostridium*. *Clostridium* species cause tetanus and gas gangrene that ultimately leads to tissue damage. Another *Clostridium* species produces the lethal botulinum toxin, the causative agent of botulism. Clostridial Agar formulated by Vera is recommended for the selective isolation of pathogenic *Clostridia* from mixed flora. The media is well supplemented to support good growth of *Clostridium* species.

### Principle

Tryptone and soya peptone provide the essential nutrients, mainly the nitrogen compounds. Dextrose serves as the carbon or fermentable carbohydrate source. L-cystine is an amino acid, which promotes the growth of *Clostridia*. Sodium thioglycollate and sodium formaldehyde sulfoxylate are the reducing agents that help to create low oxidation-reduction potential enabling the growth of *Clostridia*.

Accompanying enteric bacteria including *Proteus*, *Pseudomonas* and *Bacillus* species are inhibited by neomycin-sulphate and sodium azide incorporated in the medium. The ideal method of inoculation of Clostridial Agar is direct inoculation of sterile, cooled medium with the specimen (in tubes). Alternatively, agar plates of the medium can also be inoculated by streaking.

### Formula\*

Ingredients	g/L
Tryptone	17.0
Soya peptone	3.0
Dextrose	6.0
Sodium chloride	2.5
Sodium thioglycollate	1.8
L-Cystine	0.25
Sodium formaldehyde sulfoxylate	1.0
Neomycin sulphate	0.15
Sodium azide	0.2
Agar	14.5
Final pH (at 25°C)	7.0 ± 0.2

\*Adjusted to suit performance parameters.

### Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

### Type of Specimen

Clinical samples – blood  
Food and dairy samples

### Specimen Collection and Handling

Ensure that all samples are properly labelled.

Follow appropriate techniques for handling samples as per established guidelines.

Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.

The samples must be stored and tested within the permissible time duration.

After use, contaminated materials must be sterilized by autoclaving before discarding.

## Directions

1. Suspend 46.40 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 118°C for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C.
5. Mix well and pour into sterile petridishes.

**Warning: Sodium azide tends to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.**

## Quality Control

**Dehydrated Appearance:** Cream to beige coloured, homogenous, free flowing powder.

**Prepared Appearance:** Yellow coloured, clear to slightly opalescent gel forms in petridishes.

**Cultural Response:** Cultural characteristics observed after incubation at 35°C-37°C for 18 - 28 hours.

Organism (ATCC)	Growth
<i>Clostridium perfringens</i> (12924)	Good
<i>Clostridium sporogenes</i> (11437)	Good
<i>Clostridium tetani</i> (10779)	Good
<i>Escherichia coli</i> (25922)	inhibited
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> (25923)	inhibited

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

## Precautions/Limitations

Further biochemical test must be carried out for confirmation

## Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## Reference

1. Alcamo E. I., 2001, Fundamentals of Microbiology, 6th Ed., Jones and Bartlett Publishers.
2. Vera, 1962, Presented Pa. Soc. Med. Tech., York, Pa.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

## Product Presentation:

Cat No.	Product description	Pack Size
201030120500	Dehydrated Culture Media	500 g

## Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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