

## Plate Count Agar (Standard Methods Agar) BIS

### Intended Use

Plate Count Agar (Standard Methods Agar) is used for obtaining microbial plate counts from milk and dairy products, foods, water and other materials of sanitary importance in compliance with BIS specification IS 5402:2012.

### Summary

Plate Count Agar is formulated as described by Buchbinder *et al.*, It is equivalent to the medium recommended by APHA for the plate count of microorganisms in milk and other dairy products and may also be used to determine sanitary quality of foods, water and other materials. This medium is suitable for obtaining bacterial counts of sterile rooms. It is included in the Bacteriological Analytical Manual for food and cosmetics testing.

### Principle

Tryptone provides nitrogenous substances and other amino acids. Yeast extract provides B complex vitamins while glucose is the energy source.

### Formula\*

Ingredients	g/L
Enzymatic Digest of Casein	5.0
Yeast Extract	2.5
Glucose, Anhydrous	1.0
Agar	15.0
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

Food, Milk and Dairy samples; Water samples

### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

For food and dairy samples, follow appropriate techniques for handling specimens as per established guidelines.

For water samples, follow appropriate techniques for handling specimens as per established guidelines and local standards.

Specimens should be obtained before antimicrobial agents have been administered.

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

### Directions

1. Suspend 23.50 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

### Quality Control

**Dehydrated Appearance:** Light yellow coloured, homogenous, free flowing powder.

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

**Growth Promotion Test:** Growth promotion is carried out in accordance with BIS and growth is observed after an incubation at 30°C-35°C for 18 - 48 hours.

**Growth Promoting Properties:** The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.

<b>Organism (ATCC)</b>	<b>Growth</b>
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> (6538)	Good
<i>Escherichia coli</i> (8739)	Good
<i>Bacillus spizizenii</i> (6633)	Good
<i>Enterococcus faecalis</i> (29212)	Good
<i>Pseudomonas aeruginosa</i> (9027)	Good

**Note:** For good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

### Interpretation of Results

Count the number of colonies and express as colony forming units (cfu) per gram or mL of sample, taking into account the applicable dilution factor.

### 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

1. This medium is a general purpose medium and may not support the growth of fastidious organisms.
2. Sterile solidified medium can be remelted only once.

### 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. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17<sup>th</sup> Ed., APHA Inc., Washington, D.C.
3. FDA Bacteriological Analytical Manual, 2005, 18<sup>th</sup> Ed., AOAC, Washington, DC
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

### Product Presentation:

<b>Cat No.</b>	<b>Product description</b>	<b>Pack Size</b>
201160220100	Dehydrated Culture Media	100 g
201160220500	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.