

## TM 544 - STANDARD METHODS AGAR (PLATE COUNT AGAR) (ISO 4833-1 & 2:2013)

### INTENDED USE

For determination of plate counts of microorganisms in foods, water, waste water and also from clinical samples.

### PRODUCT SUMMARY AND EXPLANATION

Plate count agar is used for determination of plate counts of microorganisms from samples. This media was formulated and described by Buchbinder et al. Plate count agar is also suitable for determining bacterial count in food and water, indicating microbial contamination. This culture medium complies with the specifications given by ISO 4833-1 & 2:2013 and APHA.

### COMPOSITION

| Ingredients   | Gms / Ltr |
|---------------|-----------|
| Agar          | 15.000    |
| Tryptone      | 5.000     |
| Yeast extract | 2.500     |
| Dextrose      | 1.000     |

### PRINCIPLE

The medium consists of Tryptone which provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly the B-group. Dextrose is the fermentable sugar providing carbon and energy. Agar acts as a solidifying agent.

### INSTRUCTION FOR USE

- Dissolve 23.50 grams in 1000ml distilled water.
- Gently heat to boiling with gentle swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes
- Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

|   |   |  |
|---|---|--|
| Appearance of Dehydrated powder               | : | Cream to yellow, homogeneous free flowing powder                   |
| Appearance of Prepared medium<br>pH (at 25°C) | : | Light yellow colored, clear to slightly opalescent gel<br>7.0± 0.2 |

### INTERPRETATION

Cultural characteristics observed after an incubation.

| Microorganism            | ATCC  | Inoculum (CFU/ml) | Growth    | Recovery | Incubation Temperature | Incubation Period |
|--------------------------|-------|-------------------|-----------|----------|------------------------|-------------------|
| <i>Bacillus subtilis</i> | 6633  | 50-100            | Luxuriant | >=70%    | 35-37°C                | 18-48 Hours       |
| <i>Escherichia coli</i>  | 25922 | 50-100            | Luxuriant | >=70%    | 35-37°C                | 18-48 Hours       |



|                               |       |        |           |       |         |             |
|-------------------------------|-------|--------|-----------|-------|---------|-------------|
| <i>Lactobacillus casei</i>    | 9595  | 50-100 | Luxuriant | >=70% | 35-37°C | 18-48 Hours |
| <i>Staphylococcus aureus</i>  | 25923 | 50-100 | Luxuriant | >=70% | 35-37°C | 18-48 Hours |
| <i>Streptococcus pyogenes</i> | 19615 | 50-100 | Luxuriant | >=70% | 35-37°C | 18-48 Hours |
| <i>Enterococcus faecalis</i>  | 29212 | 50-100 | Luxuriant | >=70% | 35-37°C | 18-48 Hours |

**PACKAGING:**

In 100 & 500 gm packaging size.

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

**DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

**REFERENCES**

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc., Washington, D.C. (1978).
2. E.W. Frampton, et al., Comparison of β-glucuronidase and indole-based direct plating methods for enumeration of unstressed E. coli, (1990). J. Food Protect. 53,933.
3. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.

|  |   |   |   |   |
|--|---|---|---|---|
| <br>GMP<br>Good Manufacturing Practices Certified | <br>IVD<br>For In Vitro Diagnostic Use   | <br>QTY.<br>Quantity | <br>REF<br>Catalogue Number          | <br>Manufacturer |
| <br>Temperature Unit                              | <br>LOT/<br>B. NO.<br>Lot / Batch Number | <br>QR<br>Code       | <br>Consults Instructions<br>for Use | <br>Best Before  |

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
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