

## TM 1770– ANTIBIOTIC ASSAY MEDIUM NO. 38 (as per USP)

### INTENDED USE

For microbiological assay of Ticarcillin using *Pseudomonas aeruginosa*.

### PRODUCT SUMMARY AND EXPLANATION

This medium follows the specification of CFR and is routinely employed for agar diffusion assay of Ticarcillin using Gram negative test organisms specially *Psuedomonas aeruginosa*. This medium is used as both base agar and seed agar for assay of Ticarcillin. Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar.

### COMPOSITION

| Ingredients     | Gms / Ltr |
|-----------------|-----------|
| Peptone         | 15.000    |
| Soya peptone    | 5.000     |
| Dextrose        | 5.500     |
| Sodium chloride | 4.000     |
| Sodium sulphite | 0.200     |
| L-Cystine       | 0.700     |
| Agar            | 15.000    |

### PRINCIPLE

Peptone and Soya peptone provides essential nutrients and growth factors for the growth of test organisms. Dextrose serves as carbon source. Sodium chloride maintains the osmotic equilibrium. L-cystine and sodium sulphite are sulphur providers that aids assimilation of sulphur during microbial growth. L-cystine also acts as growth stimulator and enrich the medium with amino acid source for promoting the growth. The high nutritional content along with high sulfur (cystine and sodium sulphite) content improves growth with chromogenicity of test organism *Psuedomonas*.

### INSTRUCTION FOR USE

- Dissolve 45.4 grams in 1000 ml purified/ distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

|                               |   |
|-------------------------------|---|
| Appearance of Powder          | : Cream to yellow homogeneous free flowing powder.                        |
| Appearance of prepared medium | : Yellow coloured clear to slightly opalescent gel forms in Petri plates. |
| pH (at 25°C)                  | : 7.0±0.1   |

### INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism                 | ATCC  | Inoculum (CFU/ml) | Growth    | Recovery | Antibiotics assayed | Incubation Temperature | Incubation Period |
|-------------------------------|-------|-------------------|-----------|----------|---------------------|------------------------|-------------------|
| <i>Pseudomonas aeruginosa</i> | 29336 | 50-100            | Luxuriant | >=70%    | Ticarcillin         | 35 -37°C               | 18-24 Hours       |

#### PACKAGING:

In pack size of 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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 if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

#### DISPOSAL

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

#### REFERENCES

1. United States Pharmacopoeia / National Formulary (USP21/NF164) 1985, US Pharmacopoeial Convention, Inc., Rockville, MD.
2. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983 Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April 1).

|   |  |  |   |   |   |
|---|--|--|---|---|---|
| <br>GMP<br>Good Manufacturing<br>Practices Certified | <br>IVD<br>For In Vitro Diagnostic Use  | <br>QTY.<br>Quantity    | <br>LOT/<br>B. NO.<br>Lot / Batch Number | <br>REF<br>Catalogue Number          | <br>Manufacturer |
| <br>Temperature Unit                                 | <br>EC REP<br>Authorized Representative<br>MedNet GmbH<br>Barkstrasse 10,<br>48163 Münster, Germany | <br>European Conformity | <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**  
Revision: 08 Nov., 2019