

## TM 2373 – TOLUIDINE BLUE DNA AGAR

### INTENDED USE

For detection of thermostable deoxyribonuclease activity.

### PRODUCT SUMMARY AND EXPLANATION

Toluidine Blue DNA Agar is formulated as recommended by APHA for the detection of thermostable deoxyribonuclease activity to establish speciation of Staphylococcus aureus in contaminated foods.

### COMPOSITION

Ingredients	Gms / Ltr
Deoxyribonucleic acid (DNA)	0.300
Calcium chloride	0.0055
Sodium chloride	10.000
Toluidine blue	0.083
Tris (hydroxymethyl) amino methane	6.100
Agar	10.000

### PRINCIPLE

DNA in the medium enables the detection of DNase activity which depolymerizes the DNA resulting in the formation of a clear zone around the microbial growth. Inclusion of toluidine blue aids in detection of DNase activity by the production of a visible bright rose-pink coloured reaction due to its metachromatic properties. Tris amino methane forms the buffering system. Sodium chloride and calcium chloride provides the ions and also maintains osmotic equilibrium.

### INSTRUCTION FOR USE

- Suspend 26.48 grams in 1000 ml sterile distilled water.
- Heat to boiling to dissolve the medium completely and continue to boil for 1 or 2 minutes.
- Sterilization is not necessary then dispense into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

<b>Appearance of Powder</b>	: Light yellow to light grey homogeneous free flowing powder.
<b>Appearance of prepared medium</b>	: Blue coloured clear to slightly opalescent gel forms in Petri plates
<b>pH (at 25°C)</b>	: 9.0±0.2

### INTERPRETATION

Cultural characteristics observed after incubation. 18 hrs old BHI broth culture is heated in boiling water bath for 15 minutes and studied for thermonuclease activity. 5 mm cut wells are cut in agar plates and is filled with 25-30µl of this culture for observation.

Microorganism	ATCC	Inoculum (CFU/ml)	DNase activity	Incubation Temperature	Incubation Period



<i>Staphylococcus aureus</i>	12600	50-100	Positive reaction, pink haloes extending 1mm beyond the well	35-37°C	4 Hours
<i>Staphylococcus epidermidis</i>	14990	50-100	Negative reaction	35-37°C	4 Hours

**PACKAGING:**

In pack size of 100 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. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

**\*For Lab Use Only**  
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