Toluidine Blue DNA Agar

Intended Use
Toluidine Blue DNA Agar is a medium used for detection of thermostable deoxyribonuclease activity.

Summary & Principle
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. 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.

Formula*

Ingredients	**g/L**
Deoxyribonucleic Acid (DNA)	0.3
Calcium Chloride	0.0055
Sodium Chloride	10.0
Toluidine Blue	0.083
Tris (Hydroxymethyl) Amino Methane	6.1
Agar	10.0
Final pH (at 25°C)	9.0 ± 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.

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 26.48 g of the powder in 1000 mL sterile purified / distilled water.
2. Heat to boiling to dissolve the powder completely and continue to boil for 1 or 2 minutes.
3. Sterilization is not necessary.
4. Dispense into sterile petridishes.

Quality Control
Dehydrated Appearance: Light blue coloured, homogenous, free flowing powder.
Prepared Appearance: Blue coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: 18 hours old BHI broth culture is heated in boiling water bath for 15 minutes and studied for thermonuclease activity. 5 mm cut well are cut in agar plates and is filled with 25-30 µl of this culture and incubated at 35°C-37°C for 4 hours (or it can be also be incubated at 50°C for 2 hours) and observed for results.

Organisms (ATCC)	**DNase activity**
Staphylococcus aureus (12600)	Positive reaction, pink halos extending 1 mm beyond the well
Staphylococcus epidermidis strain PCI 1200 (14990)	Negative reaction

Performance and Evaluation

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

1. Directions
2. Storage
3. Expiry

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. 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.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200820100	Dehydrated Culture Media	100 g
201200820500	Dehydrated Culture Media	500 g