

# Tryptic Soy Agar + 0.1% Penase + Neutralizing

General purpose medium for environmental monitoring with inactivation of penicillins and disinfectants.

TYPICAL FORMULA	(g/l)
Casein Peptone	15.0
Soy Peptone	5.0
Sodium Chloride	5.0
Agar	15.0
Histidine	1.0
Lecithin	0.7
Polysorbate 80	5.0
Sodium Thiosulfate	0.5
Penase*	1.0 ml
Final pH 7.3 ± 0.2	

\* Potency: 2 x 10<sup>3</sup> LU/ml/min; Inactivation of Penicillin G: 1 x 10<sup>6</sup> IU/ml.

#### DESCRIPTION

Tryptic Soy Agar + 0.1% Penase + Neutralizing is a general purpose medium used for environmental monitoring with inactivation of penicillins and disinfectants.

#### PRINCIPLE

Casein peptone and soy peptone provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of microorganism. Sodium chloride maintains the osmotic balance of the medium. Agar is the solidifying agent. Histidine inactivates aldehydes. Lecithin neutralizes quaternary ammonium compounds. Polysorbate 80 (Tween 80) is effective against phenolic compounds and mercurial derivates. Sodium thiosulfate neutralizes halogen compounds. Penase is a preparation of penicillinase for inactivating residuals of penicillins.

- 1 Levy Unit (LU) is defined as the amount of penicillinase that inactivates 59.3 IU of Penicillin G per hour at pH 7.0 at 25°C.
- 1 International Unit (IU) is defined as the amount of enzyme needed to hydrolyze 1 µmole of Penicillin G (Penicillinase) per minute at pH 7.0 at 25°C.

#### TECHNIQUE

Use settle plate sampling method. Alternatively, if sample is being cultured from a swab, inoculate the plates by streaking directly the swab on the medium surface.

For detection of bacteria incubate the plates at 30-35°C for 18-72 hours. For detection of yeasts and moulds incubate at 20-25°C for 2-7 days.

#### INTERPRETATION OF RESULTS

Observe daily for the formation of colonies.

#### STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

#### WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. it is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used by properly trained operators only.

## DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

#### REFERENCES

- 1. Swanson, K.J., F.F. Busta, E.H. Peterson, and M.G. Johnson (1992). Colony Count Methods, p. 75-95.
- 2. USP 33 NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. The United States Pharmacopeial Convention, Rockville, MD. USA.
- 3. USP 33 NF 28 (2011) <1116> Microbiological evaluation of clean rooms. The United States Pharmacopeial Convention,
- Rockville, MD. USA.
  European Pharmacopeia 7.0 (2011) 7<sup>th</sup> ed. Chapters 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. Council of Europe Strasbourg, France.



LIOFILCHEM<sup>®</sup> S.r.I.



# PRODUCT SPECIFICATIONS

#### NAME

Tryptic Soy Agar + 0.1% Penase + Neutralizing

# PRESENTATION

Ready-to-use plates (90 mm) containing 22 ± 1 ml of medium

# STORAGE

10-25°C

### PACKAGING

Ref.	Content	Packaging
10086	20 plates	<ul> <li>10 plates in thermally soldered film</li> <li>2 x 10 plates in cardboard box</li> </ul>

# pH OF THE MEDIUM

 $7.3 \pm 0.2$ 

## USE

Tryptic Soy Agar + 0.1% Penase + Neutralizing is a general purpose medium used for environmental monitoring with inactivation of penicillins and disinfectants

#### TECHNIQUE

Refer to technical sheet of the product

#### APPEARANCE OF THE MEDIUM

Clear or slightly opalescent, amber

# SHELFLIFE

6 months

# QUALITY CONTROL

- 1. Control of general characteristics, label and print
- Sterility control 48 hours and 7 days at 22.5 ± 2.5°C, in aerobiosis 48 hours and 7 days at 32.5 ± 2.5°C, in aerobiosis
   Microbiological control
- Inoculum for productivity: 50-100 CFU Inoculum for evaluation of penicillinase activity: 10<sup>4</sup>-10<sup>5</sup> CFU Incubation Conditions: 18-24 h at 32.5 ± 2.5°C, 48-72 h at 22.5 ± 2.5°C\*, in aerobiosis

#### Microorganism

# Growth

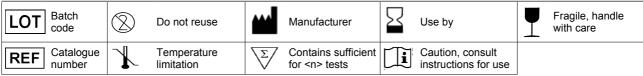
Staphylococcus aureus	ATCC® 6538	Good
Escherichia coli	ATCC® 8739	Good
Pseudomonas aeruginosa	ATCC® 9027	Good
Bacillus subtilis	ATCC® 6633	Good
Candida albicans*	ATCC® 10231	Good
Aspergillus brasiliensis*	ATCC® 16404	Good

# Control of penicillinase activity with disc diffusion method

## Microorganism

Staphylococcus aureus	ATCC® 6538	No inhibition by Penicillin G 10 IU and Ampicillin 10 $\mu$ g
Escherichia coli	ATCC® 8739	No inhibition by Ampicillin 10 µg

## TABLE OF SYMBOLS



Specification

