

TECHNICAL DATA SHEET

Trichoderma Harzianum Selective Agar Base

Principle

Trichoderma harzianum is an efficient bio-control agent that is commercially produced to prevent development of several soil pathogenic fungi. *Trichoderma harzianum* selective agar base composed of magnesium sulphate, dipotassium hydrogen phosphate, ammonium nitrate, potassium chloride, glucose, rose Bengal and agar. Glucose serves as a source of energy as well as carbohydrate and dipotassium hydrogen phosphate buffers the medium. Magnesium sulphate and potassium chloride acts as a source of ions required for various enzymatic reactions. Ammonium nitrate provides source of nitrogen. Rose Bengal is a selective agent that inhibits bacterial growth and restricts the size and height of colonies of more rapidly growing molds.

Use: For selective isolation of *Trichoderma harzianum*

Contents*

Ingredients	Gram/Liter
Magnesium Sulphate heptahydrate	0.200
Dipotassium Hydrogen phosphate	0.900
Ammonium Nitrate	1.000
Potassium Chloride	0.150
Glucose	3.000
Rose Bengal	0.150
Agar	20.000

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 25.40 grams in 960 ml distilled water, boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C. Mix well and pour into sterile petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Note: The further selectivity can be achieved by incorporating filter sterilized 40 ml of, Chloramphenicol (0.250 g), Streptomycin (0.090 g), Quintozene (0.0200 g), Propamocarb (0.926 g) to sterilized molten medium.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light pinkish beige colored free flowing, homogeneous powder
Gelling	Firm comparable with 2% agar gel
Color and clarity of set medium	Light pink colored, clear to slightly opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 25-30°C for 5-6 days
Indicative properties	Optimum at ≤ 100 CFU at 25-30°C for 5-6 days
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 25-30°C for 5-6 days.

Organism	Microbial culture	Inoculum (CFU)	Growth
<i>Trichoderma harzianum</i>	Lab isolate	50-100	Luxuriant
<i>Escherichia coli</i>	ATCC-8739	50-100	Inhibited
<i>Staphylococcus aureus</i>	ATCC-25923	50-100	Inhibited

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

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Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J. H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock. D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Subba Rao N. S., (1977), Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi.
4. Williams, J., Clarkson, J.M., Mills, P.R., and Cooper, R.M. (2003) A Selective Medium for Quantitative Reisolation of Trichoderma harzianum from Agaricus bisporus Compost.

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