

TECHNICAL DATA SHEET

Richard's Synthetic Agar

Principle

Richard's Synthetic Agar are composed potassium nitrate, monopotassium dihydrogen phosphate, magnesium sulphate, ferric chloride, sucrose and agar. Potassium nitrate is a nitrogen source. Monopotassium dihydrogen phosphate is buffering agents. Magnesium sulfate, ferric chloride provides essential ions. Sucrose supply carbon and energy source. And agar is a solidifying agent.

Use: For cultivation and isolation of fungi from soil samples

Contents*

Ingredients	Gram/Litre
Potassium nitrate	10.000
Monopotassium dihydrogen phosphate	5.000
Magnesium sulphate	2.500
Ferric chloride	0.020
Sucrose	50.000
Agar	15.000

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 82.52 grams in 1000 ml distilled water. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C. Distribute aseptically in desired and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Soil samples

Precautions to be taken

These plant tissue culture 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.

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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	White to light beige colored, free flowing, homogeneous powder
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored slightly opalescent gel
Negative control	Performed using sterile distilled water

Different Microbial Response

Prepare media as per the label directions. Inoculate and incubate the plates at desired temperature and period. The optimum incubation for Yeasts and molds is $25 \pm 2^{\circ}\text{C}$ for 2-3 days.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
<i>Candida albicans</i>	10231	50-100	Luxuriant	$\geq 60\%$
<i>Saccharomyces cerevisiae</i>	9763	50-100	Luxuriant	$\geq 60\%$
<i>Aspergillus brasiliensis</i>	16404	50-100	Luxuriant	$\geq 60\%$

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.

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.

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Reference

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2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Subba Rao N. S, *Soil Microorganisms and Plant Growth*-(Oxford and IBHPublishing Co.)
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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