

BIOMARK Laboratories-INDIA

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TECHNICAL SHEET

B1568		ZINC SOLUBILIZING MEDIUM	
Formula			
Ingredients :		gms/lit.	
Dextrose (Glucose)		10.00	
Ammonium sulphate		1.00	
Potassium chloride		0.20	
Dipotassium hydrogen phosphate		0.10	
Magnesium sulphate, heptahydrate		0.20	
Zinc oxide		1.00	
Final pH (at 25°C):Self			
Directions:			
Suspend 12.40 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.			
Principle:			
Among all micro nutrients, Zinc is a rather unique element for plant nutrition. Zinc (Zn) is one of the essential micronutrients required for optimum plant growth. Substantial quantity of applied inorganic zinc in soil is converted into unavailable form. Zinc solubilizing bacteria are potential alternates for zinc supplement. Zinc solubilizing bacteria solubilize both the insoluble zinc compounds, though Zinc oxide is more effectively solubilized in comparison to Zinc carbonate. Dextrose acts as an energy source. Different salts provide various essential ions required for promoting growth of zinc solubilizers. Solubilization of zinc phosphate occurred by both an increase in the H ⁺ concentration of the medium, probably a consequence of ammonia assimilation, and the production of gluconic acid. This medium is recommended for the growth and maintenance of zinc solubilizing bacteria.			
Type of specimen : Soil samples.			
Specimen Collection and Handling:			
For soil samples, follow appropriate techniques for sample collection as per established and current guidelines of soil microbiology and local standards.			
After use, contaminated materials must be sterilized by autoclaving before discarding.			
QC Tests – (I) Dehydrated Medium			
Colour:		Cream to white	
Appearance:		Homogeneous Free Flowing powder	
(II) Rehydrated medium			
pH (post autoclaving/heating):		Self	
Colour (post autoclaving/heating):		Creamish white	
Clarity (post autoclaving/heating):		slightly opalescent solution	
(III) Q.C. Test Microbiological			
Cultural characteristics observed after an incubation at 25-30°C for 3-4 days.			
MICROORGANISM (ATCC)	GROWTH	ZINC SOLUBILIZATION	
Pseudomonas fluorescens (49838)	Luxuriant	Clearing of the broth	
Pseudomonas fluorescens (13525)	Luxuriant	Clearing of the broth	
Bacillus cereus (10876)	Luxuriant	Clearing of the broth	
Warning & Precautions :	1. For In vitro diagnostic Use. By professionals only. 2. Read the label carefully before opening the container. Wear PPE wares. Follow established good microbiology laboratory practices while handling specimens and cultures and take standard precautions for handling specimens. 3. For safety guidelines refer individual safety data sheet.		

Refer disclaimer Overleaf

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Limitations :	1. Further biochemical testing must be carried out for further identification.				
Use:	Recommended for growth and maintenance of zinc solubilizing soil microorganisms.				
Storage:	Dehydrated medium-below 30°C Prepared medium- Between 2 to 8°C.				
Disposal:	Ensure safe disposal by autoclaving/or incineration of used or usable preparation of this product. Follow established laboratory procedures while disposing all infectious material and those coming in contact must be decontaminated and disposed off with existing laboratory technics.				
Packing:	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B1568	12.40 g/l	40.323 L	Self	Nil	121 ⁰ C /15 min.

Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related BIOMARKLABORATORIES publications.

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