MOLECULAR BIOLOGY

Molecular Biology Growth Media

Technical Information

EMM Growth Medium

Product Code: G1051

EMM Growth Medium is a minimal defined media for the growth of *Schizosaccharomyces pombe*.

Composition**

Ingredients	Grams/Litre
Phthalic acid K+	3.00
Disodium hydrogen phosphate	2.20
Ammonium chloride	5.00
Dextrose	20.00
Magnesium chloride, $6H_2O$	1.05
Calcium chloride, $2H_2O$	0.0147
Potassium chloride	1.00
Sodium sulphate	0.04
Pantothenic acid	0.001
Nicotinic acid	0.01
Myoinositol	0.01
Biotin	0.001
Boric acid	0.0005
Manganese sulphate	0.0004
Zinc sulphate, $7H_2O$	0.0004
Ferric chloride , $6H_2O$	0.0002
Molybdic acid	40 mcg
Potassium iodide	0.0001
Copper sulphate, $5H_2O$	40 mcg
Citric acid	0.001

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 32.32 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle and Interpretation

EMM Growth Medium is a minimal defined media for the growth of *Schizosaccharomyces pombe*. Yeasts are unicellular eukaryotes and extensively studied model organism in molecular genetics. The fission yeast *Schizosaccharomyces pombe* is a model eukaryote which is very useful in studies of cell cycle and chromosome dynamics. These cells maintain their shape by growing through the cell tips and divide by medial fission to produce two daughter cells of equal sizes that makes them a powerful tool in cell cycle research. It was first developed as an experimental model in the 1950's for studying genetics (1, 2) and for studying the cell cycle (3, 4). EMM (Edinburgh Minimal Media) Growth Medium is used for the maintenance and propagation of *S.pombe* in various molecular microbiology procedures. It functions as a minimal defined medium for fission yeast growth and it contains dextrose, minerals and trace elements. Dextrose serves as the carbon source.

Quality control

Appearance of Powder :
White to light yellow coloured, homogeneous, free flowing powder.
Colour and Clarity :
Colurless to light yellow coloured, clear solution without any precipitate.
Cultural Response :
Cultural characteristics observed after an incubation at 25-30°C for 18 - 48 hours.

Organisms (ATCC)	**Growth**
Schizosaccharomyces pombe	good-luxuriant

Storage and Shelf Life

- Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C.
- Use before expiry date on the label.

Reference

1. Leupold U. (1950) CR Trav Lab Carlsberg Ser Physiol 24:381-480.
2. Leupold U. (1993) The origins of *Schizosaccharomyces pombe* genetics. In: Hall MN, Linder P. eds. The early Days of Yeast Genetics. New York. Cold Spring Harbor Laboratory Press. 125-128.
3. Mitchinson JM. (1975) Exp Cell Res 13:244-262.
4. Mitchinson JM. (1990) Bioessays 4:189-191.

Disclaimer :

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