

# Minimum

## Essential Medium

**M**inimum Essential Medium is a modification of Basal Medium Eagle (BME). It was developed by Harry Eagle to meet the specific nutritional requirements of certain subtypes of Hela cells and normal mammalian fibroblasts. MEM includes higher concentration of amino acids so as to closely approximate the protein composition of cultured mammalian cells. MEM can be used either with Earle's salts and Hank's salts and can also be additionally supplemented with non-essential amino acids (NEAA). The modification can be further modified by eliminating calcium to facilitate growth of cells in suspension cultures.

### Suitability of MEM for Cell Culture of Multiple Cell Types

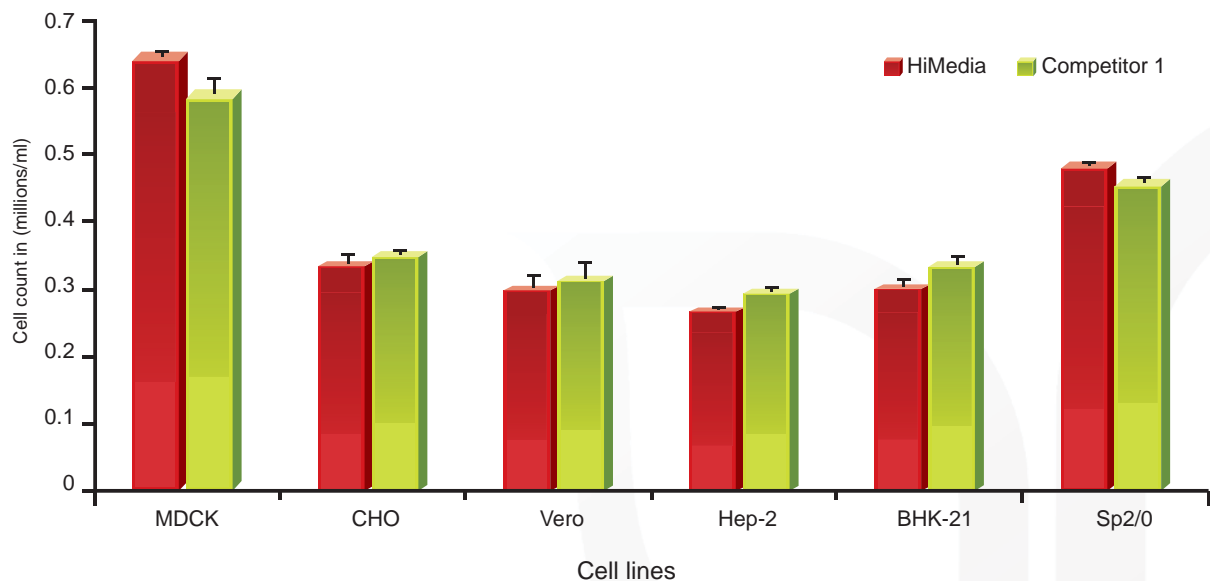


Fig 1.1: Comparative Performance of HiMedia and Competitor MEM in different cell lines.

*HiMedia MEM supplemented with 10% FBS (Fetal Bovine Serum) was compared to competitor MEM for growth promotion test for various cell lines. Seeding densities varied as per the cell line. Cells were seeded in triplicate in a 24 well plate and incubated at 37°C with 5% CO<sub>2</sub> and 95% air over a 4 day passage cycle. Samples were taken daily and evaluated for cell density and morphology. Data depicted in the graph represents the average count obtained on day 4 of the third passage.*

### Applications

- Cultivation of wide variety of mammalian cells.
- Recommended to be used with 5-10% FBS.

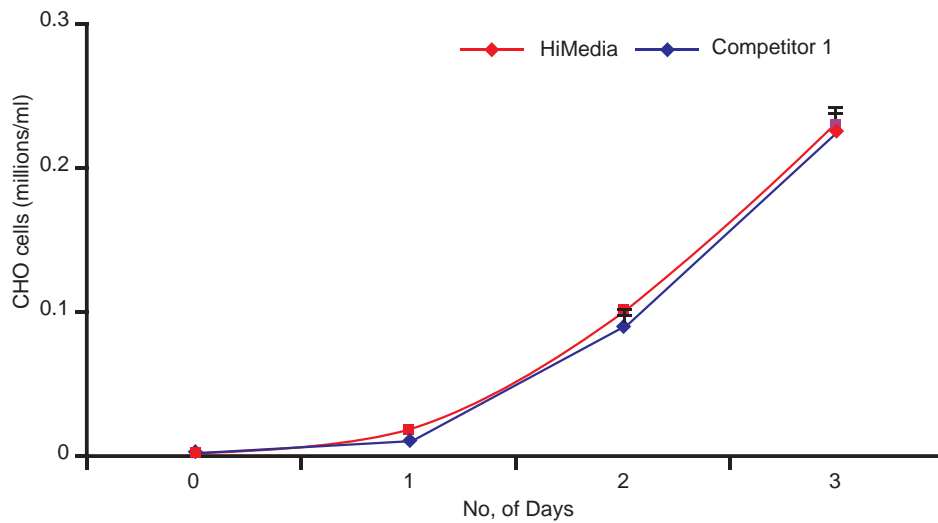


Fig 1.2: Growth curve for CHO cell line.

CHO cells were seeded at  $0.012 \times 10^6$  cells/ml in triplicate in a 24 well plate and incubated at  $37^\circ\text{C}$  with 5%  $\text{CO}_2$  and 95% air. Samples were taken every 24 hours and evaluated for cell density and morphology. Cell growth and morphology of HiMedia was found comparable to the competitor media.

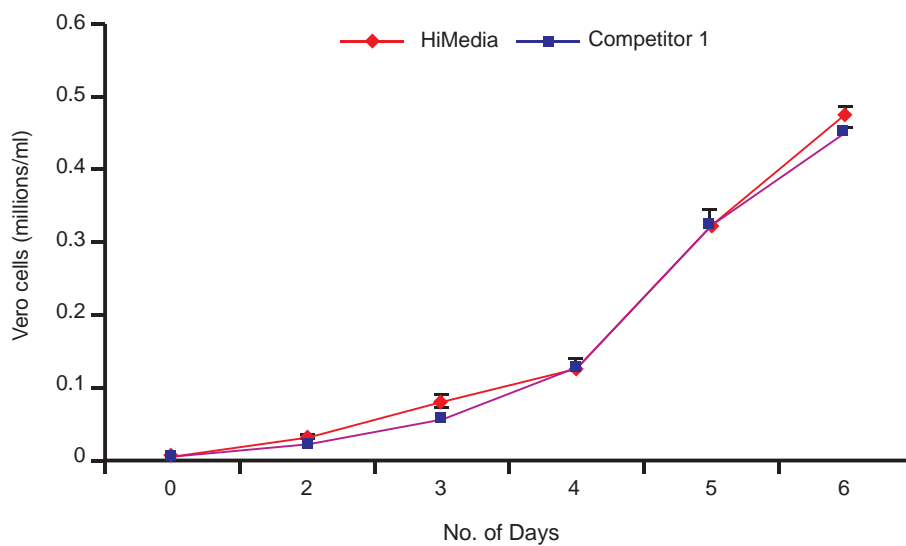


Fig 1.3: Growth curve for Vero cell line.

Vero cells were seeded at  $0.1 \times 10^6$  cells/ml in triplicate in a 24 well plate and incubated at  $37^\circ\text{C}$  with 5%  $\text{CO}_2$  and 95% air. Samples were taken daily after two days and evaluated for cell density and morphology. Cell growth and morphology of HiMedia was found comparable to the competitor media.

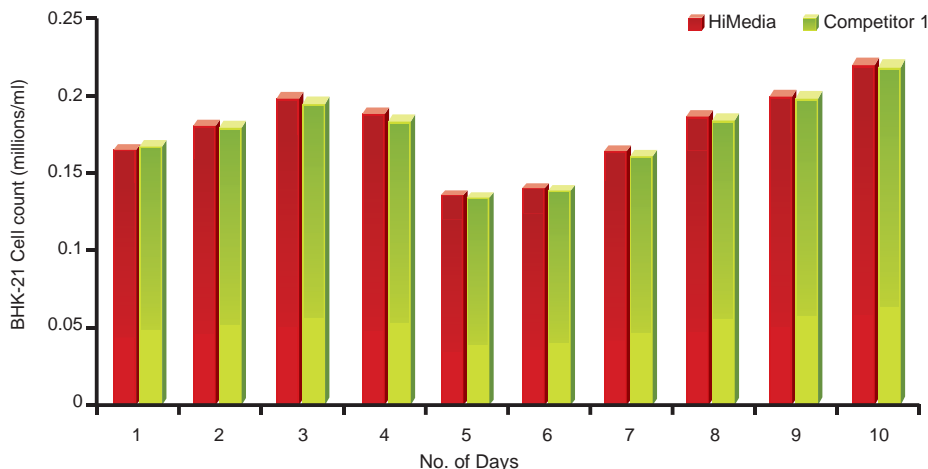


Fig 1.4 Serial subculture of BHK-21 cells

BHK-21 cells were seeded at  $0.04 \times 10^6$  cells/ml and incubated at 37°C with 5% CO<sub>2</sub> and 95% air. Cells were passaged every 24 hours and evaluated for cell density and morphology. Cell growth and morphology of Himedia media was found comparable to the competitor media.

## Ordering Information

### Powder Media

Media Specifications		Codes
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and L-Glutamine w/o Sodium bicarbonate and NEAA	AT020
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA and L-Glutamine w/o Sodium bicarbonate	AT047
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and NEAA w/o L-Glutamine and Sodium bicarbonate	AT047A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA and L-Glutamine w/o Phenol red and Sodium bicarbonate	AT046
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and NEAA w/o L-Glutamine, Phenol red and Sodium bicarbonate	AT046A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, L-Glutamine and 25mM HEPES buffer w/o Sodium bicarbonate	AT074
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA, L-Glutamine and 25mM HEPES buffer w/o Sodium bicarbonate	AT153
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA, Sodium pyruvate and L-Glutamine w/o Sodium bicarbonate	AT154
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and L-Glutamine w/o Sodium bicarbonate, NEAA and Phenol red	AT159
Minimum Essential Medium Eagle (MEM)	w/ Earle's Salts, L-Glutamine, NEAA, Sodium Pyruvate and 15mM HEPES buffer w/o Sodium bicarbonate	AT182
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts and L-Glutamine w/o Sodium bicarbonate	AT056
Minimum Essential Medium Eagle (MEM)	w/ Hanks's salts w/o L-Glutamine and Sodium bicarbonate	AT056A
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts, L-Glutamine and NEAA w/o Sodium bicarbonate	AT048
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts, L-Glutamine and 25mM HEPES buffer w/o Sodium bicarbonate	AT075
Minimum Essential Medium Eagle (MEM) (Modified for Autoclaving)	w/ Earle's salts and NEAA w/o L-Glutamine and Sodium bicarbonate	AT017A
Minimum Essential Medium Eagle (MEM) (Modified for Autoclaving)	w/ Earle's salts w/o L-Glutamine, NEAA and Sodium bicarbonate	AT077A
Minimum Essential Medium Eagle (MEM) (Modified for Autoclaving)	w/ Hank's salts and NEAA w/o L-Glutamine and Sodium bicarbonate	AT045A
Minimum Essential Medium Eagle (MEM) Joklik Modification (For Suspension Culture)	w/ L-Glutamine w/o Calcium chloride and Sodium bicarbonate	AT079
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ L-Glutamine, Ribonucleosides and Deoxyribonucleosides w/o Sodium bicarbonate	AT080
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ Ribonucleosides and Deoxyribonucleosides w/o L-Glutamine and Sodium bicarbonate	AT080A
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/o L-Glutamine, Ribonucleosides, Deoxyribonucleosides and Sodium bicarbonate	AT081A
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ L-Glutamine w/o Ribonucleosides, Deoxyribonucleosides and Sodium bicarbonate	AT081

## Ordering Information

### Liquid Media

Media Specifications		Codes
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and Sodium bicarbonate w/o NEAA and L-Glutamine	AL020
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, L-Glutamine and 2.2 gms per litre Sodium bicarbonate w/o NEAA	AL020A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA and Sodium bicarbonate w/o L-Glutamine	AL047
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, L-Glutamine, NEAA and 2.2 gms per litre Sodium bicarbonate	AL047A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA and L-Glutamine and Sodium bicarbonate, <b>Hybridoma tested</b>	AL047H
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, 2mM L-Glutamine, NEAA, 1mM Sodium pyruvate and 1.5 gms per liter Sodium bicarbonate	AL047S❖
Minimum Essential Medium Eagle (MEM)	w/ Earle's salt, L-Glutamine, Sodium pyruvate and Sodium bicarbonate	AL154A
Minimum Essential Medium Eagle (MEM), 2X	w/ Earle's salt, NEAA, L-Glutamine and Sodium bicarbonate w/o Phenol red	AL178A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, L-Glutamine, NEAA, 15mM HEPES buffer, Sodium pyruvate and Sodium bicarbonate	AL182A
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, 25mM HEPES Buffer and Sodium bicarbonate w/o NEAA and L-Glutamine	AL194
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts and Sodium bicarbonate w/o L-Glutamine	AL056
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts, L-Glutamine and Sodium bicarbonate	AL056A
Minimum Essential Medium Eagle (MEM)	w/ Hank's salts, L-Glutamine, 25mM HEPES buffer and Sodium bicarbonate	AL075A
Minimum Essential Medium Eagle (MEM) (For Suspension Culture)	w/ Spinner salts and Sodium bicarbonate w/o L-Glutamine	AL019
Minimum Essential Medium Eagle (MEM) Joklik Modification (For Suspension Culture)	w/ Sodium bicarbonate w/o L-Glutamine	AL079
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ Sodium bicarbonate w/o L-Glutamine, Ribonucleosides and Deoxyribonucleoside	AL081
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ L-Glutamine and Sodium bicarbonate w/o Deoxyribonucleosides and Ribonucleosides	AL081A
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ Ribonucleosides, Deoxyribonucleosides and Sodium bicarbonate w/o L-Glutamine	AL080
Minimum Essential Medium Eagle (MEM) (Alpha Modification)	w/ Deoxyribonucleosides, Ribonucleosides, L-Glutamine and Sodium bicarbonate	AL080A
Minimum Essential Medium Eagle (MEM), 10X	w/ Earle's salts and NEAA w/o Sodium bicarbonate and L-Glutamine	AL104
Minimum Essential Medium Eagle (MEM) 10X	w/ Hank's salts w/o L-Glutamine and Sodium bicarbonate	AL190
Minimum Essential Medium Eagle (MEM) 10X	w/ Earle's salts w/o NEAA, L-Glutamine and Sodium bicarbonate	AL191
HiGlutaXL™ Minimum Essential Medium Eagle	w/ L-Alanyl-L-Glutamine, Earle's salts and Sodium bicarbonate w/o NEAA	AL020G
HiGlutaXL™ Minimum Essential Medium Eagle	w/ L-Alanyl-L-Glutamine, Earle's salts, NEAA and Sodium bicarbonate	AL047G
HiGlutaXL™ Minimum Essential Medium Eagle	w/ L-Alanyl-L-Glutamine, Hank's salts and Sodium bicarbonate	AL056G
HiGlutaXL™ Minimum Essential Medium (MEM), Alpha Modification	w/ L-Alanyl-L-Glutamine, Deoxyribonucleosides and Ribonucleosides and Sodium bicarbonate	AL080G
HiGlutaXL™ Minimum Essential Medium (MEM), Alpha Modification	w/ L-Alanyl-L-Glutamine and Sodium bicarbonate w/o Deoxyribonucleosides and Ribonucleosides	AL081G
Minimum Essential Medium Eagle (MEM)	w/ Earle's salts and 1.5 gms per litre Sodium bicarbonate w/o NEAA and L-Glutamine	AL020S
LoSera™ Minimum Essential Medium Eagle (MEM)	w/ Earle's salts, NEAA and Sodium bicarbonate w/o L-Glutamine	RSL008
LoSera™ Minimum Essential Medium (MEM)	w/ Earle's salts, L-Alanyl-L-Glutamine, NEAA and sodium bicarbonate	RSL008G

❖ As per ATCC composition • Powder media available in 1L, 5L & 20L packing. • Liquid media available in 5X100ML, 2X500ML, 6X500ML and 18X500ML  
• Bulk packing available on request. • Customised Media available on request.



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