

Dulbecco's

Modified Eagle Medium

Dulbecco's Modified Eagle Medium (DMEM) is one of the most widely used modification of Eagle's medium. DMEM is a modification of Basal Medium Eagle (BME) that contains four fold concentration of amino acids and vitamins. Additionally, the formulation also includes glycine, serine and ferric nitrate. The original formulation contains 1000mgs/L of Glucose and was originally used to culture embryonic mouse cells. DMEM high glucose is a further modification of original DMEM and contains 4500mgs/L of glucose. The additional glucose has proved to be useful in cultivating various other cell lines including primary cultures of mouse and chicken cells as well as various normal and transformed cell lines.

Suitability of DMEM for Cell Culture of Multiple Cell Types

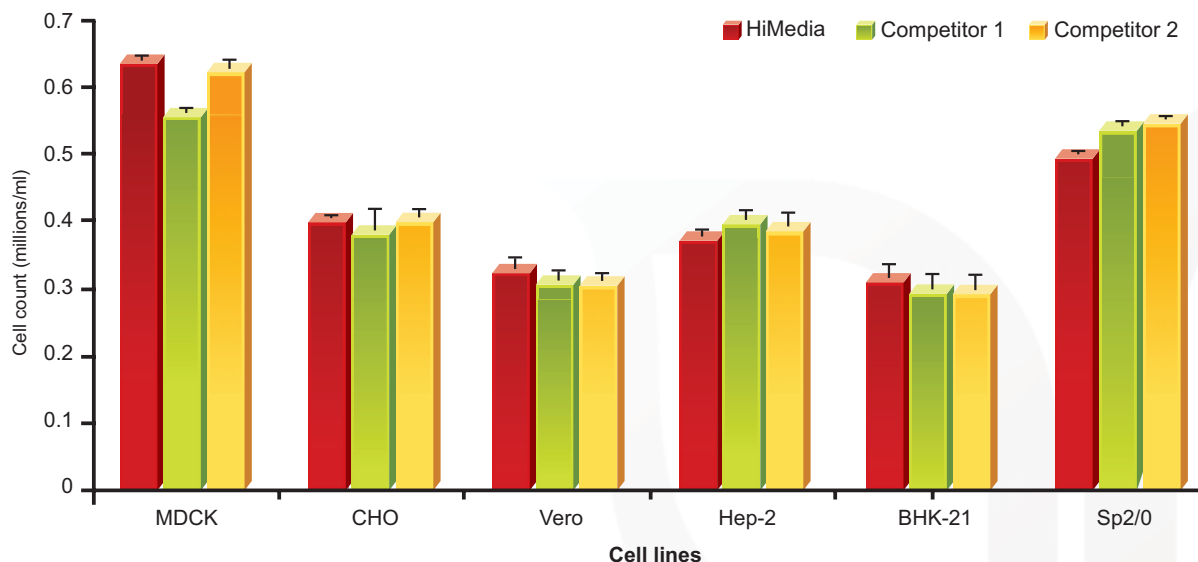


Fig 1.1: Performance of HiMedia and Competitor DMEM in different cell lines.

HiMedia DMEM high glucose supplemented with 10% FBS (Foetal Bovine Serum) was compared to competitor DMEM high glucose 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% CO₂ 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 cells including primary cultures.
- DMEM, low glucose is used for the cultivation of embryonic mouse cells and mouse liver cells.
- Recommended to be used with 5-10% FBS.

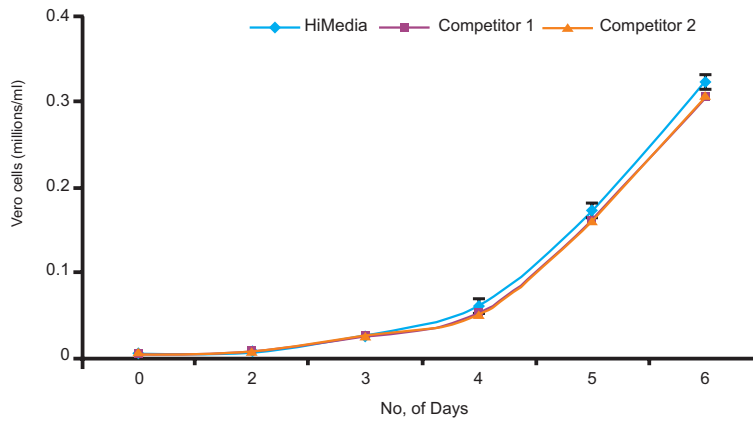


Fig 1.2: Growth curve for Vero cell line.

Vero cells were seeded at 6×10^4 cells/ml in triplicate in a 24 well plate and incubated at 37°C with 5% CO_2 and 95% air. Samples were taken daily after two days and evaluated for cell density and morphology. Cell growth and morphology in HiMedia media was found comparable to the competitors media.

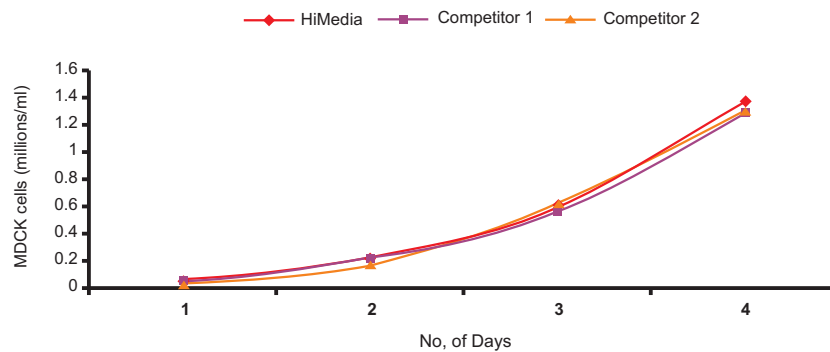


Fig 1.3: Growth curve for MDCK cell line.

MDCK cells were seeded at 6×10^4 cells/ml in triplicate in a 24 well plate and incubated at 37°C with 5% CO_2 and 95% air. Samples were taken daily after two days and evaluated for cell density and morphology. Cell growth and morphology in HiMedia media was found comparable to the competitors media.

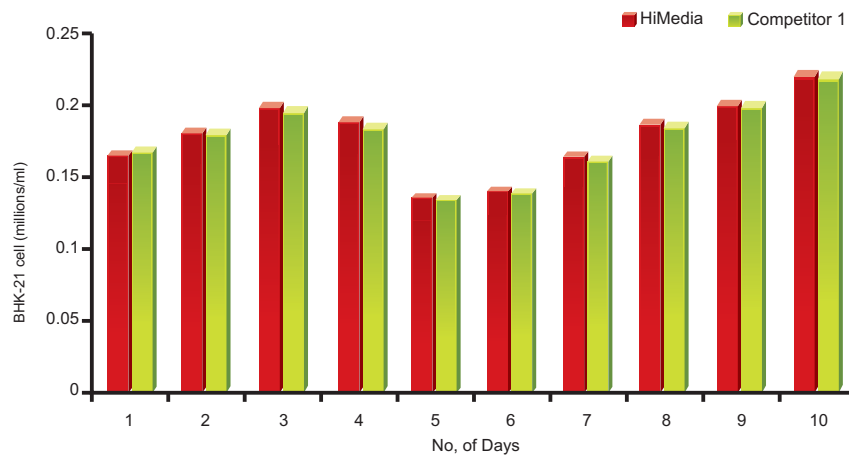


Fig 1.4 Serial subculture of BHK-21 cells

BHK-21 cells were seeded at 4×10^4 cells/ml and incubated at 37°C with 5% CO_2 and 95% air. Cells were passaged every 24 hours and evaluated for cell density and morphology. Cell growth and morphology in HiMedia media was found comparable to the competitor media.

Ordering Information

Media Specifications		Codes
Powder Media*		
DMEM	w/o L-Glutamine, Phenol red, Glucose, Sodium pyruvate and Sodium bicarbonate	AT063A
DMEM	w/ L-Glutamine and Sodium pyruvate w/o Glucose and Sodium bicarbonate	AT186
DMEM, Low Glucose	w/ L-Glutamine, 1gm Glucose per litre & Sodium pyruvate w/o Sodium bicarbonate	AT006
DMEM, Low Glucose	w/ 1gm Glucose per litre and Sodium pyruvate w/o L-Glutamine and Sodium bicarbonate	AT006A
DMEM, Low Glucose	w/ L-Glutamine, 1 gm Glucose per litre and Sodium pyruvate w/o Folic Acid and Sodium bicarbonate	AT006F
DMEM, Low Glucose (Modified for Autoclaving)	w/1gm Glucose per litre and Sodium pyruvate w/o L-Glutamine and Sodium bicarbonate	AT065A
DMEM, Low Glucose	w/ 1.0 gm Glucose per litre, L-Glutamine, 25mM HEPES buffer and Sodium pyruvate w/o Sodium bicarbonate	AT149
DMEM, Low Glucose	w/ 1 gm Glucose per litre, L-Glutamine and Sodium pyruvate w/o Sodium bicarbonate and Phenol red	AT183
DMEM, Low Glucose	w/ 1gm Glucose per litre and Sodium pyruvate w/o L-Glutamine, Phenol red and Sodium bicarbonate	AT183A
DMEM, High Glucose	w/ L-Glutamine, 4.5 gm Glucose per litre and Sodium pyruvate w/o Sodium bicarbonate	AT007
DMEM, High Glucose	w/ 4.5gm Glucose per litre and Sodium pyruvate w/o L-Glutamine and Sodium bicarbonate	AT007A
DMEM, High Glucose	w/ L-Glutamine, 4.5 gm Glucose per litre and Sodium pyruvate w/o Folic Acid and Sodium bicarbonate	AT007F
DMEM, High Glucose	w/ 4.5 gm Glucose per litre, L-Glutamine and Sodium pyruvate w/o Sodium bicarbonate and Phenol red	AT190
DMEM, High Glucose	w/ 4.5 gm Glucose per litre and L-Glutamine w/o Sodium bicarbonate and Sodium pyruvate	AT066
DMEM, High Glucose	w/ 4.5gm Glucose per litre w/o L-Glutamine, Sodium pyruvate and Sodium bicarbonate	AT066A
DMEM, High Glucose	w/ L-Glutamine, 4.5 gm Glucose per litre and 25mM HEPES buffer w/o Sodium bicarbonate and Sodium pyruvate	AT067
DMEM, High Glucose	w/4.5 gm Glucose per litre and L-Glutamine w/o Sodium bicarbonate, Sodium phosphate and Sodium pyruvate	AT068
DMEM, High Glucose	w/4.5 gm Glucose per litre, L-Glutamine, 25mM HEPES buffer and Sodium pyruvate w/o Sodium bicarbonate	AT151
DMEM, High Glucose	w/ 4.5 gms Glucose per litre and L-Glutamine w/o Phenol red, Sodium bicarbonate and Sodium pyruvate	AT170
DMEM, High Glucose	w/ 4.5 gms Glucose per litre w/o L-Glutamine, Phenol red, Sodium bicarbonate and Sodium pyruvate	AT170A
DMEM, High Glucose	w/ 4.5 gms Glucose per litre, 25mM HEPES buffer, L-Glutamine and Sodium pyruvate w/o Sodium bicarbonate and Phenol red	AT187



Ordering Information

Media Specifications		Codes
Liquid Media*		
DMEM	w/ L-Glutamine, Sodium pyruvate and Sodium bicarbonate w/o Glucose	AL186A
DMEM, Low Glucose	w/ 1.0gm Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o L-Glutamine	AL006
DMEM, Low Glucose	w/ 1gm Glucose per litre, L-Glutamine, Sodium pyruvate and Sodium bicarbonate	AL006A
DMEM, Low Glucose	w/ L-Glutamine, 1gm Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o Folic Acid	AL006F
DMEM, Low Glucose	w/ 1.0gm Glucose per litre, L-Glutamine, 25mM HEPES buffer, Sodium pyruvate and Sodium bicarbonate	AL149A
DMEM, Low Glucose	w/ 1gm Glucose per litre, L-Glutamine, Sodium pyruvate and Sodium bicarbonate w/o Phenol red	AL183A
DMEM, Low Glucose	w/ 1gm Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o L-Glutamine and Phenol red	AL183
DMEM, High Glucose	w/4.5 gm Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o L-Glutamine	AL007
DMEM, High Glucose	w/L-Glutamine, 4.5 gm Glucose per litre, Sodium pyruvate and 3.7 gm per litre Sodium bicarbonate	AL007A
DMEM, High Glucose	w/ 4mM L-Glutamine, 4.5 gm Glucose per litre 1 mM Sodium pyruvate and 1.5g/L Sodium bicarbonate	AL007S❖
DMEM, High Glucose	w/ L-Glutamine, 4.5 g/l Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o Folic Acid	AL007F
DMEM, High Glucose	w/ 4.5 gm Glucose per litre and Sodium bicarbonate w/o L-Glutamine and Sodium pyruvate	AL066
DMEM, High Glucose	w/ L-Glutamine, 4.5 gm Glucose per litre and Sodium bicarbonate w/o Sodium pyruvate	AL066A
DMEM, High Glucose	w/ 4.5 gm Glucose per litre and Sodium bicarbonate w/o L-Glutamine and Sodium pyruvate Hybridoma tested	AL111
DMEM, High Glucose	w/ 4.5 gm Glucose per litre, Sodium pyruvate and Sodium bicarbonate w/o L-Glutamine and Phenol red	AL101
DMEM, High Glucose	w/ L-Glutamine, 4.5gm Glucose per litre, 25mM HEPES buffer and Sodium bicarbonate w/o Sodium pyruvate	AL067A
DMEM, High Glucose	w/ L-Glutamine, 4.5gm Glucose per litre and Sodium bicarbonate w/o Sodium pyruvate and Sodium phosphate	AL068A
DMEM, High Glucose	w/ 4.5gm Glucose per litre, L-Glutamine, Sodium pyruvate, 25mM HEPES and Sodium bicarbonate	AL151A
DMEM, High Glucose	w/ 4.5 gms Glucose per litre and sodium bicarbonate w/o L-Glutamine, Sodium pyruvate and phenol red	AL170
DMEM, High Glucose	w/ L-Glutamine, 4.5 gm Glucose per litre and sodium bicarbonate w/o Sodium pyruvate and phenol red	AL170A
HiGlutaXL™ Dulbecco's Modified Eagle Medium, High Glucose	w/ L-Alanyl-L-Glutamine, Sodium bicarbonate and Sodium pyruvate	AL007G
HiGlutaXL™ Dulbecco's Modified Eagle Medium, High Glucose	w/ 4.5gms per litre Glucose, L-Alanyl L-Glutamine and Sodium bicarbonate w/o Sodium pyruvate	AL066G
LoSera™ Dulbecco's Modified Eagle Medium, High Glucose	w/ Sodium bicarbonate and Sodium pyruvate w/o L-Glutamine	RSL003
LoSera™ Dulbecco's Modified Eagle Medium, High Glucose	w/ L-Alanyl-L-Glutamine, Sodium pyruvate and Sodium bicarbonate	RSL003G
LoSera™ Dulbecco's Modified Eagle Medium/ Nutrient Mixture F-12 Ham (1:1)	w/ Trace elements and Sodium bicarbonate w/o L-Glutamine and HEPES buffer	RSL005
LoSera™ Dulbecco's Modified Eagle Medium/ Nutrient Mixture F-12 Ham (1:1)	w/ HEPES buffer, Sodium bicarbonate and Trace elements w/o L-Glutamine	RSL006
LoSera™ Dulbecco's Modified Eagle Medium/ Nutrient Mixture F-12 Ham (1:1)	w/ L-Alanyl-L-Glutamine, HEPES buffer, Sodium bicarbonate and Trace elements	RSL006G

❖ 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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