RPMI 1640 Amino Acid Solution (50X)

Sterile-filtered
Endotoxin tested
Cell culture tested

Catalog Number **LS 009-01**
Storage Temperature 2~8°C

Product Description

Twenty amino acids are required for cell growth and proliferation. These are divided into two groups: a) Essential amino acids: Those that are not manufactured by animal cells and need to be supplemented in culture media. b) Non essential amino acids: These can be synthesized by animal cells, and need not to be supplemented in culture media. The concentration of amino acids usually limits the maximum cell concentration attainable, and the balance may influence cell survival and growth rate.

Essential Amino Acids		Nonessential Amino Acids
L-Arginine	L-Methionine	L-Alanine
L-Cysteine	L-Phenylalanine	L-Asparagine
L-Glutamine	L-Threonine	L-Aspartic acid
L-Histidine	L-Tryptophan	L-Glutamic acid
L-Isoleucine	L-Tyrosine	Glycine
L-Leucine	L-Valine	L-Proline
L-Lysine		L-Serine

LS 009-01 contains RPMI 1640 essential amino acids in cell/tissue culture grade water (**LS 016-01**). The selection of a nutrient medium is strongly influenced by (1) type of cell, (2) type of culture (monolayer, suspension, or clonal) and (3) degree of chemical definition necessary. It is important to review the literature for recommendations concerning medium, supplementation and physiological parameters required for a specific cell line.

Storage/Stability

The RPMI 1640 amino acid solution should be stored at 2~8°C. Deterioration of the liquid may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Biological Performance Characteristics

The growth-maintaining capacity of RPMI 1640 amino acid solution is tested in RPMI 1640 containing 5% FBS using an appropriate cell line(s). Growth rates are examined through three subculture generations and compared with parallel cultures grown in standardized control medium. Cells are counted and growth is plotted as a logarithmic function of time in culture, and seeding efficiency, doubling time, and the final cell density are determined. During the testing period, cultures are examined microscopically for a typical morphology and evidence of cytotoxicity.

Precaution

For *In Vitro* Use Only

mg/L

Componenets	LS 009-01
L-Arginine (free base)	10000.00
L-Asparegine·H_2O	2840.65
L-Aspartic Acid	1000.00
L-Cystine	2500.00
L-Glutamic Acid	1000.00
Glycine	500.00
L-Histidine (free base)	750.00
Hydroxy-L-Proline	1000.00
L-Isoleucine	2500.00
L-Leucine	2500.00
L-Lysine·HCl	2000.00
L-Methionine	750.00
L-Phenylalanine	750.00
L-Proline	1000.00
L-Serine	1500.00
L-Threonine	1000.00
L-Tryptophan	250.00
L-Tyrosine	1159.86
L-Valine	1000.00

Product Profile	
Appearance	Clear colorless solution
Endotoxin	≤ 1.0 EU/ml
Sterility	Sterilized by 0.2 μm filtration system. Sterility tests are performed in accordance with protocols described in USP.

References

Eagle, H. 1959. Amino Acid Metabolism in Mammalian Cell Cultures. *Science.* 130, 432-437.
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Lodish, H. et. al., Molecular Cell Biology, Darnell, J. E. 3rd ed.,Scientific American Books, Inc., 1995, New York, USA.
Darling, D. C. and Morgan, S. J., Animal Cells; Culture and Media; Essential Data, Rickwood, D. and Hames, B. D. edi., John Wiley and Sons, Inc., 1994, Chichester, UK.

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