

ProductInformation

Iscove's Modified Dulbecco's Medium (IMDM)

Guilbert and Iscove demonstrated that precursor cells of erythrocytes and macrophages could be cultured in a totally defined serum-free medium supplemented with albumin, transferrin, lecithin, and selenium. This medium is a modification of Dulbecco's Modified Eagle's Medium (DME) containing selenium, additional amino acids and vitamins, sodium pyruvate, HEPES buffer, and potassium nitrate instead of ferric nitrate. Further studies demonstrated that Iscove's Medium would support murine B lymphocytes, hemopoietic tissue from bone marrow, B cells stimulated with lipopolysaccharide, T lymphocytes, and a variety of hybrid cells.

REFERENCES

1. Iscove, N.N and Melchers, F. (1978). Complete Replacement of Serum by Albumin, Transferrin, and Soybean Lipid in Cultures of Lipopolysaccharide-Reactive B Lymphocytes. J. Exp. Medicine. 147, 923-933.
2. Iscove, N.N., Guilbert, L.J. and Weyman, C. (1980). Complete Replacement of Serum in Primary Cultures of Erythropoietin Dependent Red Cell Precursors [CFU-E] by Albumin, Transferrin, Iron, Unsaturated Fatty Acid, Lecithin and Cholesterol. Exp. Cell Research. 126, 121-126.

COMPONENT	I 2510 & I 7633 g/L	I 2762 & I 3390 [1X] g/L
INORGANIC SALTS		
CaCl ₂ •2H ₂ O	0.219	0.219
MgSO ₄ (anhyd)	0.09767	0.09767
KCl	0.33	0.33
KNO ₃	0.000076	0.000076
NaHCO ₃	—	3.024
NaCl	4.505	4.505
NaH ₂ PO ₄ (anhyd)	0.109	0.109
Na ₂ SeO ₃	0.000017	0.000017
AMINO ACIDS		
Alanine	0.025	0.025
L-Arginine•HCl	0.084	0.084
L-Asparagine•H ₂ O	0.0284	0.0284
L-Aspartic Acid	0.03	0.03
L-Cystine•2HCl	0.09124	0.09124
L-Glutamic Acid	0.075	0.075
L-Glutamine	0.584	—
Glycine	0.03	0.03
L-Histidine•HCl•H ₂ O	0.042	0.042
L-Isoleucine	0.105	0.105
L-Leucine	0.105	0.105
L-Lysine•HCl	0.146	0.146
L-Methionine	0.03	0.03
L-Phenylalanine	0.066	0.066
L-Proline	0.04	0.04
L-Serine	0.042	0.042
L-Threonine	0.095	0.095
L-Tryptophan	0.016	0.016
L-Tyrosine•2Na•2H ₂ O	0.10379	0.10379
L-Valine	0.094	0.094

Formulas continued on next page

Iscove's Modified Dulbecco's Medium (IMDM) *continued*

<u>COMPONENT</u>	I 2510 & I 7633 g/L	I 2762 & I3390 [1X] g/L
VITAMINS		
D-Biotin	0.000013	0.000013
Choline Chloride	0.004	0.004
Folic Acid	0.004	0.004
myo-Inositol	0.0072	0.0072
Niacinamide	0.004	0.004
D-Pantothenic Acid•½Ca	0.004	0.004
Pyridoxal•HCl	0.004	0.004
Riboflavin	0.0004	0.0004
Thiamine•HCl	0.004	0.004
Vitamin B-12	0.000013	0.000013
OTHER		
D-Glucose	4.5	4.5
HEPES	5.958	5.958
Phenol Red•Na	0.016	0.016
Pyruvic Acid•Na	0.11	0.11
ADD		
NaHCO ₃	3.024	—
L-Glutamine	—	0.584
Grams of powder required to prepare 1 L	17.7	N/A