

DATA SHEET

Rev.ver: 01

1. Identification

Product name **Iscove's Modified Dulbecco's Medium (IMDM)**
w/ L-Glutamine and 25mM HEPES Buffer
w/o Sodium bicarbonate and Phenol red

Catalog.no **CCMP049**

2. Description

Iscove's Modified Dulbecco's Medium (IMDM) is an enriched version of Dulbecco's Modified Eagle's Medium (DMEM), designed to allow partial or complete replacement of serum with chemically defined components. This formulation includes additional amino acids, sodium selenite, sodium pyruvate, vitamins, and inorganic salts, with potassium nitrate replaced by ferric nitrate. Notably, IMDM was the first culture medium to incorporate HEPES buffer for improved pH stability. When properly supplemented, IMDM effectively supports the growth and proliferation of erythrocyte and macrophage precursor cells, as well as T and B lymphocytes and various hybrid cell types, even under serum-free or reduced-serum conditions.

3. Product Specifications

Appearance	Off-white to Creamish white, homogenous powder.
CO ₂ concentration, optimum	5.0 %
Storage and shelf life	Store at +2°C to +8°C protected from light. Once opened, store at 4°C and use within 6-8 weeks.
Shipping conditions	Ambient

DATA SHEET

Rev.ver: 01

4. Formulation

Components	Concentration mg/L
Amino Acids:	
L-Alanine	25.00
L-Arginine HCl	84.00
L-Asparagine H ₂ O	28.40
L-Aspartic Acid	30.00
L-Cystine 2HCl	91.24
L-Glutamic Acid	75.00
L-Glutamine	584.00
Glycine	30.00
L-Histidine HCl H ₂ O	42.00
L-Isoleucine	105.00
L-Leucine	105.00
L-Lysine HCl	146.00
L-Methionine	30.00
L-Phenylalanine	66.00
L-Proline	40.00
L-Serine	42.00
L-Threonine	95.00
L-Tryptophan	16.00
L-Tyrosine 2Na 2H ₂ O	103.79
L-Valine	94.00
Vitamins:	
D-Biotin	0.013

Components	Concentration mg/L
Choline chloride	4.00
D-Calcium Pantothenate	4.00
Folic Acid	4.00
myo-Inositol	7.20
Nicotinamide	4.00
Pyridoxal HCl	4.00
Riboflavin	0.40
Thiamine HCl	4.00
Vitamin B12	0.013
Inorganic Salts	
CaCl ₂ 2H ₂ O	219.00
MgSO ₄	97.67
KCl	330.00
KNO ₃	0.076
NaHCO ₃	3024.00
NaCl	4505.00
Na ₂ HPO ₄ (anhydrous)	109.00
Na ₂ SeO ₃	0.017
Other Components:	
D-Glucose	4500.00
HEPES	5958.00
Sodium Pyruvate	110.00

Directions:

1. Suspend 17.7gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 3.024gms of Sodium bicarbonate powder or 40.32 ml of 7.5% Sodium bicarbonate for 1 litre of medium and stir until dissolved. solution for 1 litre of medium and stir until dissolved.
3. Adjust the pH to 0.2 - 0.3 pH units below the desired pH using 1N HCl or 1N NaOH since the pH tends to rise during filtration.
4. Make up the final volume to 1000ml with tissue culture grade water.
5. Sterilize the medium immediately by filtering through a sterile membrane filter with a porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
6. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
7. Store liquid medium at 2-8°C and in dark till use.

5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.