

DATA SHEET

Rev.ver: 01

1. Identification

Product name **McCoy's 5A Medium** (For suspension culture) With L-Glutamine Without Calcium chloride and Sodium bicarbonate

Catalog.no **CCMP056**

2. Description

McCoy's 5A Medium was originally developed in 1955 at the Roswell Park Memorial Institute, Buffalo, New York, during studies on the nutritional requirements of the Walker 256 carcinoma. Its initial formulation was based on amino acid concentrations similar to those in Eagle's Medium, along with the water-soluble vitamins from Medium 199. Subsequent modifications, including those introduced by Iwakata and Grace, led to the final version published in 1960. This optimized formulation features increased levels of folic acid, vitamin B12, and peptone, enhancing its ability to support the growth of primary cultures from various tissue types.

McCoy's 5A Medium supplemented with L-Glutamine and specifically modified for suspension cell culture applications. To accommodate suspension growth, calcium chloride has been omitted. Users are encouraged to consult relevant literature for guidelines on appropriate medium supplementation and physiological conditions suitable for specific cell lines.

3. Product Specifications

Appearance	Off-white to Creamish white, homogenous powder.
Solubility	Clear solution at 12.5 gms/L.
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

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4. Formulation

Components	Concentration mg/L
Amino Acids:	
L-Alanine	13.360
L-Arginine HCl	42.140
L-Asparagine anhydrous	45.030
L-Aspartic Acid	19.970
L-Cystine 2HCl	31.500
L-Glutamic Acid	22.070
L-Glutamine	219.200
Glycine	7.510
L-Histidine HCl H ₂ O	20.960
L-Isoleucine	39.360
L-Leucine	39.360
L-Lysine HCl	36.540
L-Methionine	14.920
L-Phenylalanine	16.520
L-Proline	17.270
L-Serine	26.280
L-Threonine	17.870
L-Tryptophan	3.060
L-Tyrosine 2Na 2H ₂ O	26.100
L-Valine	17.570
L-Hydroxyproline	19.670
Vitamins:	
D-Biotin	0.200
Choline chloride	5.000
Ascorbic acid	0.6330

Components	Concentration mg/L
D-Calcium Pantothenate	0.200
Folic Acid	10.000
Niacin	0.500
Niacinamide	0.500
Pyridoxal HCl	0.500
Pyridoxine hydrochloride	0.500
Thiamine HCl	0.200
Vitamin B12	2.000
i-Inositol	36.000
p-Amino benzoic acid (PABA)	1.000
Riboflavin	0.200
Inorganic Salts	
MgSO ₄	97.720
KCl	400.000
Sodium chloride	6460.000
Sodium phosphate monobasic anhydrous	1220.00
Other Components:	
D-Glucose	3000.00
Glutathione reduced	0.500
Peptic digest of animal tissue	600.000
Phenol red sodium salt	11.000

Directions:

1. Suspend 12.5gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 2.20gms of Sodium bicarbonate powder or 29.3ml 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.