



## McCOY'S 5A MEDIUM [MODIFIED]

With L-Glutamine, Without Sodium Bicarbonate  
Product Number **M4892**

### Product Description

In 1959, McCoy and his coworkers reported the amino acid requirements for in vitro cultivation of Novikoff Hepatoma Cells. These studies were performed using Basal Medium 5A and subsequently modified to create a new medium known as McCoy's 5A Medium.

<b>Components</b>	<b>g/L</b>
L-Alanine	0.01336
L-Arginine•HCl	0.04214
L-Asparagine•H <sub>2</sub> O	0.04503
L-Aspartic Acid	0.01997
L-Cysteine	0.02424
L-Glutamic Acid	0.02207
L-Glutamine	0.21915
Glycine	0.00751
L-Histidine•HCl•H <sub>2</sub> O	0.02096
Hydroxy-L-proline	0.01967
L-Isoleucine	0.03936
L-Leucine	0.03936
L-Lysine•HCl	0.03654
L-Methionine	0.01492
L-Phenylalanine	0.01652
L-Proline	0.01727
L-Serine	0.02628
L-Threonine	0.01787
L-Tryptophan	0.00306
L-Tyrosine•2Na•2H <sub>2</sub> O	0.0261
L-Valine	0.01757
Ascorbic Acid	0.0005625
p-Aminobenzoic Acid	0.001
D-Biotin	0.0002
Choline Chloride	0.005
Folic Acid	0.01
myo-Inositol	0.036
Niacinamide	0.0005
Nicotinic Acid	0.0005
D-Pantothenic Acid (hemicalcium)	0.0002
Pyridoxal•HCl	0.0005
Pyridoxine•HCl	0.0005
Riboflavin	0.0002
Thiamine•HCl	0.0002
Vitamin B-12	0.002
Calcium Chloride (anhydrous)	0.09995
Magnesium Sulfate (anhydrous)	0.0976876
Potassium Chloride	0.4
Sodium Chloride	6.46
Sodium Phosphate Monobasic (anhydrous)	0.504
Peptone	0.6
D-Glucose	3.0
Glutathione (reduced)	0.0005
Phenol Red•Na	0.011

## Precautions and Disclaimer

### REAGENT

For R&D use only. Not for drug, household or other uses.

### Preparation Instructions

Powdered media are hygroscopic and should be protected from moisture. The entire contents of each package should be used immediately after opening. Preparing a concentrated solution of medium is not recommended as precipitates may form. Supplements can be added prior to filtration or introduced aseptically to sterile medium.

1. Measure out 90% of final required volume of water. Water temperature should be 15-20°C.
2. While gently stirring the water, add the powdered medium. Stir until dissolved. Do NOT heat.
3. Rinse original package with a small amount of water to remove all traces of powder. Add to solution in step 2.
4. To the solution in step 3, add 2.2 g sodium bicarbonate or 29.3 ml of sodium bicarbonate solution [7.5%w/v] for each liter of final volume of medium being prepared. Stir until dissolved.
5. While stirring, adjust the pH of the medium to 0.1-0.3 pH units below the desired pH since it may rise during filtration. The use of 1N HCl or 1N NaOH is recommended.
6. Add additional water to bring the solution to final volume.
7. Sterilize immediately by filtration using a membrane with a porosity of 0.22 microns.
8. Aseptically dispense medium into sterile container.

### Storage and Stability

Store the dry powdered medium at 2-8 °C under dry conditions and liquid medium at 2-8 °C in the dark. Deterioration of the powdered medium may be recognized by any or all of the following: [1] color change, [2] granulation/clumping, [3] insolubility. Deterioration of the liquid medium may be recognized by any or all of the following: [1] pH change, [2] precipitate or particulates, [3] cloudy appearance [4] color change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

### Procedure

#### MATERIALS REQUIRED BUT NOT PROVIDED

Water for tissue culture use [W3500]  
Sodium Bicarbonate [S5761] or  
Sodium Bicarbonate Solution, 7.5% [S8761]  
1N Hydrochloric Acid [H9892]  
1N Sodium Hydroxide [S2770]  
Medium additives as required

## References

1. McCoy, T.A., Maxwell, M. and Kruse, P.F., (1959). Amino Acid Requirement of the Novikoff Hepatoma *in vitro*. Proc. Soc Exp. Biol. Med. 100, 115-118.

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