





Document ID:	TDS-MCP-077-50L	Version:	001
Date of Issue:	10-MAR-2023	Approved by:	Dr. Iman Kamranfar
Review Date:	10-JAN-2025	Signature:	
Title:	<b>TECHNICAL DATA SHEET</b>		

<b>Product Name</b>	MEM Eagle Joklik Suspension Modification (JMEM)
<b>Filtration/Treatment</b>	With L-Glutamine, without Calcium Chloride
<b>Product Codes</b>	MCP-077-50L
<b>Shelf Life</b>	48 months
<b>Storage Temperature</b>	2 to 8 °C
<b>Shipping Temperature</b>	ambient
<b>Substance</b>	<b>Concentration (mg/L)</b>
<b>Amino Acids</b>	
L-Arginine, Hydrochloride	126.00
L-Cystine, Dihydrochloride	32.40
L-Glutamine	292.00
L-Histidine, Hydrochloride, Monohydrate	42.00
L-Isoleucine	52.00
L-Leucine	52.00
L-Lysine, Hydrochloride	72.50
L-Methionine	15.00
L-Phenylalanine	32.00
L-Threonine	48.00
L-Tryptophan	10.00
L-Tyrosine, Disodium, Dihydrate	54.52
L-Valine	46.00
<b>Vitamins</b>	
Choline Chloride	1.00
D-Calcium Pantothenate	1.00
Folic Acid	1.00
Myo-Inositol	2.00
Niacinamide	1.00
Pyridoxal, Hydrochloride	1.00
Riboflavin	0.10
Thiamine, Hydrochloride	1.00
<b>Other Components</b>	
D-Glucose, Anhydrous	2000.00
Phenol Red, Sodium Salt	10.00
<b>Inorganic Salts</b>	<b>Concentration (mg/L)</b>
Magnesium Chloride, Anhydrous	94.00
Potassium Chloride	400.00
Sodium Chloride	6500.00
Sodium dihydrogen phosphate (anhydrous)	1154.00
<b>Specifications</b>	
Appearance	Light orange to tan powder
Solubility	11.40 g/L in ≤ 30 minutes
Moisture Content	≤ 2.0 %
pH without NaHCO <sub>3</sub>	4.5 – 5.5

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pH with NaHCO <sub>3</sub>	6.5 - 7.5
Osmolality without NaHCO <sub>3</sub>	240-280 mM/kg
Osmolality with NaHCO <sub>3</sub>	280-320 mM/kg
Endotoxin	≤ 1.0 EU/ml
Mycoplasma	Not detected
Cell Culture – Cell Growth Promotion	3 Passages
Viability	≥ 75%

*Note: Sodium Bicarbonate is not included in the powdered media (2200.00 mg/L).*

### Instructions for Use

- **Preparation of 1 liter liquid medium**

1. Suspend 11.40 g in 900 ml tissue culture-grade water with constant, gentle stirring until the powder is completely solubilized. Do not heat the water.
2. Add 2.2 g of sodium bicarbonate powder for 1 liter of medium and stir until dissolved.
3. Adjust the pH to 0.1 to 0.3 pH units below the desired pH using 1 N HCl or 1 N NaOH since the pH tends to rise during filtration.
4. Add tissue culture-grade water to bring the solution to 1000 ml.
5. Filter Sterilize the medium immediately using a sterile membrane filter with a porosity of 0.22 micron or less. Use 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. Do not autoclave. The product contains heat-labile compounds that can be damaged with autoclaving.
8. Store liquid medium at +2°C to +8°C and in dark until use.

- **Additional Information**

- pH and sodium bicarbonate concentration of the prepared medium are critical factors affecting cell growth. This is also influenced by the amount of medium and volume of culture vessel used (surface to volume ratio). For example, in large bottles pH tends to rise perceptibly as a significant volume of carbon dioxide is released. Therefore, optimal conditions of pH, sodium bicarbonate concentration, surface to volume ratio must be determined for each cell type. We recommend stringent monitoring of pH. If needed, pH can be adjusted by using sterile 1 N HCl or 1 N NaOH or by bubbling in carbon dioxide.
- If required, supplements can be added to the medium prior to or after filter sterilization observing sterility precautions. Shelf life of the medium will depend on the nature of supplement added to the medium.

### Storage and Stability

1. All the powdered media and prepared liquid culture media should be stored at 2-8°C. Use before the expiry date.
2. Opened bottles should be capped tightly and kept in a dark, and low-humidity environment. Prepared liquid media should be kept at 4°C and used within a short period of time (max shelf life of the liquid media in proper storage conditions: 12 months).
3. Preparation of concentrated medium is not recommended since free base amino acids and salt complexes having low solubility may precipitate in the concentrated medium.

**THIS PRODUCT IS FOR LABORATORY USE ONLY.**