

## RPMI 1640 – Medium (Powder Medium)

RPMI 1640 Powder Medium

Product No. A2040

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### Description

Powder mixture to prepare RPMI 1640 - Medium according to Moore, G.E. *et al.* (1967) J.A.M.A. **199**,519

without L-Glutamine

without Phenol red

without Sodium hydrogen carbonate

Hygroscopic!

Storage: 2-8°C

### Instructions

General Information: Powdered media and salts are very hygroscopic and must be stored under dry conditions. After opening the package the whole contents must be dissolved at once.

Reconstitute the powdered form of media to produce 1X liquid medium, as the different amino acids may precipitate at higher concentrations. They potentially can form salts which are of low solubility in concentrated solutions. If supplements are needed, they can be added before filtration (unsterile) or after filtration (sterile).

Use bidistilled or deionized, pyrogen-free water to reconstitute powder media.

### Preparing sterile filtered liquid medium

- 1.) Add water to the required quantity of powdered medium (use approx. 90 % of the required amount of water so as to adjust the pH later). Flush out any remaining powder from the container. Stir until completely dissolved. The temperature of the water should be between 15-30°C
- 2.) When the powder is completely dissolved, **add Sodium hydrogen carbonate (NaHCO<sub>3</sub>) 2.0 g per liter of final medium** and dissolve completely as well.
- 3.) Adjust to the desired pH value (physiological optimum is pH 6.8 - 7.2) with 1 M HCl or 1 M NaOH while stirring.

**Note:** The pH should be approx. 0.2 units lower than the target pH, since pH will rise slightly during filtration when CO<sub>2</sub> leaks out.

- 4.) After adjusting the pH, add water to the appropriate final volume and mix well. Filter immediately under sterile conditions.
- 5.) Store the medium at 2-8°C protected from light.

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### Composition:

Components		mg/L final medium
<b>Inorganic salts</b>	Calcium chloride x 2H <sub>2</sub> O	62,27
	Potassium chloride	400
	Magnesium sulfate dried	69,77
	Sodium chloride	5950,49
	Sodium nitrate	72
	di-Sodium hydrogen phosphate anhydr.	800
<b>Other Components</b>	D(+)-Glucose anhydr.	2000
	L-Glutathione red.	1
<b>Amino acids</b>	L-Arginine x HCl	241,86
	L-Asparagine x H <sub>2</sub> O	50
	L-Aspartic acid	20
	L-Cystine	50
	L-Glutamic acid	20
	Glycine	10
	L-Histidine base	15
	L-Hydroxyproline	20
	L-Isoleucine	50
	L-Leucine	50
	L-Lysine x HCl	40
	L-Methionine	15
	L-Phenylalanine	15
	L-Proline	20
	L-Serine (non animal origin)	30
	L-Threonine	20
	L-Tryptophan	5
	L-Tyrosine	20
	L-Valine	20
<b>Vitamins</b>	4-Amino benzoic acid	1
	D(+)-Biotin	0,2
	D-Calcium pantothenate	0,25
	Choline chloride	3
	Folic acid	1
	myo-Inositol	35
	Nicotinamide	1
	Pyridoxine x HCl	1
	Riboflavin	0,2
	Thiamine x HCl	1
Vitamin B12	0,005	