

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
CELL CULTURE FACILITY
Media Production Formulations

RPMI 1640

(with 25mM Hepes, 2.0g/L NaHCO₃ Media)

CCF Product Code Number: CCFAE002 (Old Code AK500)

Compound	Formula	mg/L
Part A: Inorganic Salts		
Calcium nitrate·4H ₂ O	Ca(NO ₃) ₂ ·4H ₂ O	100.00
Magnesium sulfate heptahydrate	MgSO ₄ · 7 H ₂ O	100.00
Potassium chloride	KCl	400.00
Sodium bicarbonate	NaHCO ₃	2000.00
Sodium chloride	NaCl	5300.00
Sodium phosphate heptahydrate	Na ₂ HP0 ₄ · 7 H ₂ O	1512.00
Part B: Other components		
D-Glucose	C ₆ H ₁₂ O ₆	2000.00
Glutathione (reduced)	C ₁₀ H ₁₇ N ₃ O ₆ S	1.00
Hepes,(25mM)	C ₈ H ₁₈ N ₂ O ₄ S	5960.00
Phenol Red	C ₁₉ H ₁₃ O ₅ S·Na ₂	5.00
Part C: Amino Acids		
L-Arginine (free base)	C ₆ H ₁₄ N ₄ O ₂	200.00
L-Asparagine (free base)	C ₄ H ₈ N ₂ O ₃	50.00
L-Aspartic acid	C ₄ H ₇ N ₁ O ₄	20.00
L-Cystine	C ₆ H ₁₂ N ₂ O ₄ S ₂	50.00
L-Glutamic acid	C ₅ H ₉ NO ₄	20.00
L-Glutamine	C ₅ H ₁₀ N ₂ O ₃	300.00
Glycine	C ₂ H ₅ NO ₂	10.00
L-Histidine (freebase)	C₆H₉N₃O₂	15.00

L-Hydroxyproline	$C_5H_9NO_3$	20.00
L-Isoleucine (Allo free)	$C_6H_{13}NO_2$	50.00
L-Leucine, (methionine free)	$C_6H_{13}NO_2$	50.00
L-Lysine HCl	$C_6H_{14}N_2O_2 \cdot HCl$	40.00
L-Methionine	$C_5H_{11}NO_2S$	15.00
L-Phenylalanine	$C_9H_{11}NO_2$	15.00
L-Proline (H-L-Proline free)	$C_5H_9NO_3$	20.00
L-Serine	$C_3H_7NO_3$	30.00
L-Threonine (Allo free)	$C_4H_9NO_3$	20.00
L-Tryptophan	$C_{11}H_{12}N_2O_2$	5.00
L-Tyrosine	$C_9H_{11}NO_3$	20.00
L-Valine	$C_5H_{11}NO_2$	20.00

Part D: Vitamins

Biotin	$C_{10}H_{16}N_2O_3S$	0.20
D-Calcium pantothenate	$C_{18}H_{32}CaN_2O_{10}$	0.25
Choline chloride	$C_5H_{14}ClNO$	3.00
Folic acid	$C_{19}H_{19}N_7O_6$	1.00
i-Inositol	$C_6H_{12}O_6$	35.00
Nicotinamide	$C_6H_6N_2O$	1.00
Para-Amino Benzoic Acid	$C_7H_6NO_2$	1.00
Pyridoxine hydrochloride	$C_8H_{11}NO_3 \cdot HCl$	1.00
Riboflavin	$C_{17}H_{20}N_4O_6$	0.20
Thiamine hydrochloride	$C_{12}H_{17}ClN_4OS \cdot HCl$	1.00
Vitamin B ₁₂	$C_{63}H_{88}CoN_{14}O_{14}P$	0.005

pH 7.4 Osmolarity: 305-316 mOsm