

**Supplemental Table 1: Detailed Media Composition**

	<b>Concentration (<math>\mu\text{M}</math>)</b>		
	<b>RPMI</b>	<b>HPLM-MIN</b>	<b>HPLM</b>
<b>Glucose</b>	11111	5000	5000
<b><i>Proteinogenic Amino acids</i></b>			
<b>Alanine</b>	0	430	430
<b>Arginine</b>	1149	110	110
<b>Asparagine</b>	378	50	50
<b>Aspartate</b>	150	20	20
<b>Cysteine</b>	0	40	40
<b>Cystine</b>	208	100	100
<b>Glutamate</b>	136	80	80
<b>Glutamine</b>	2055	550	550
<b>Glycine</b>	133	300	300
<b>Histidine</b>	97	110	110
<b>Hydroxyproline</b>	153	0	0
<b>Isoleucine</b>	382	70	70
<b>Leucine</b>	382	160	160
<b>Lysine</b>	219	200	200
<b>Methionine</b>	101	30	30
<b>Phenylalanine</b>	91	80	80
<b>Proline</b>	174	200	200
<b>Serine</b>	286	150	150
<b>Threonine</b>	168	140	140
<b>Tryptophan</b>	25	60	60
<b>Tyrosine</b>	11	80	80
<b>Valine</b>	171	220	220
<b><i>Ions</i></b>			
<b>Na<sup>+</sup></b>	138525	132271	132271
<b>K<sup>+</sup></b>	5333	4142	4142
<b>Ca<sup>2+</sup></b>	424	2390	2390
<b>Mg<sup>2+</sup></b>	407	830	830
<b>NH<sup>4+</sup></b>	0	40	40
<b>Cl<sup>-</sup></b>	108781	116196	116196
<b>HCO<sup>3-</sup></b>	23809	24000	24000
<b>PO<sub>4</sub><sup>3-</sup></b>	5634	966	966
<b>SO<sub>4</sub><sup>2-</sup></b>	407	350	350
<b>NO<sup>3-</sup></b>	848	80	80
<b><i>Additional Polar Metabolites</i></b>			
<b>2-hydroxybutyrate</b>			50

<b>3-hydroxybutyrate</b>			50
<b>4-hydroxyproline</b>			20
<b>Acetate</b>			40
<b>Acetone</b>			60
<b>Acetylcarnitine</b>			5
<b>Acetylglycine</b>			90
<b><math>\alpha</math>-aminobutyrate</b>			20
<b><math>\alpha</math>-ketoglutarate</b>			5
<b>Betaine</b>			70
<b>Carnitine</b>			40
<b>Citrate</b>			130
<b>Citrulline</b>			40
<b>Creatine</b>			40
<b>Creatinine</b>			75
<b>Formate</b>			50
<b>Fructose</b>			40
<b>Galactose</b>			60
<b>Glutathione</b>			25
<b>Glycerol</b>			120
<b>Hypoxanthine</b>			10
<b>Lactate</b>			1600
<b>Malate</b>			5
<b>Malonate</b>			10
<b>Ornithine</b>			70
<b>Pyruvate</b>			50
<b>Succinate</b>			20
<b>Taurine</b>			90
<b>Urea</b>			5000
<b>Uric Acid</b>			350
<b>Uridine</b>			3