

Amino acids, cofactors and others									
reagent	molar mass	final concentration in the reaction in mM	mass in g for 1500 reactions à 15 µl	dose size in g	cost in \$ for dose size (September 2015)	amount for 1500 reactions per dose	cost for 1500 reactions	cost for one reaction	
L-Aspartic acid	133.10	2.00	5.99E-03	100	18.51	5.99E-05	1.11E-03	7.39E-07	
CoA Na-salt	767.54	0.27	4.66E-03	0.01	57.58	4.66E-01	2.68E+01	1.79E-02	
E. coli tRNA	–	–	3.83E-03	0.1	178.45	3.83E-02	6.83E+00	4.55E-03	
Folic acid (Ca-salt hydrate)	473.44	0.07	7.67E-04	0.25	70.58	3.07E-03	2.17E-01	1.44E-04	
Glycine	75.07	2.00	3.38E-03	500	44.50	6.76E-06	3.01E-04	2.00E-07	
L-Alanine	89.09	2.00	4.01E-03	1	10.86	4.01E-03	4.35E-02	2.90E-05	
L-Arginine	174.20	2.00	7.84E-03	100	46.81	7.84E-05	3.67E-03	2.45E-06	
L-Asparagin monohydrat	150.14	2.00	6.76E-03	25	21.00	2.70E-04	5.68E-03	3.78E-06	
L-Cysteine	121.16	2.00	5.45E-03	2.5	12.28	2.18E-03	2.68E-02	1.79E-05	
L-Glutamine	146.14	2.00	6.58E-03	100	56.60	6.58E-05	3.72E-03	2.48E-06	
L-Glutamic acid	147.13	2.00	6.62E-03	100	21.27	6.62E-05	1.41E-03	9.39E-07	
L-Histidine	155.15	2.00	6.98E-03	5	11.66	1.40E-03	1.63E-02	1.09E-05	
L-Isoleucine	131.18	2.00	5.90E-03	1	12.73	5.90E-03	7.51E-02	5.01E-05	
L-Leucine	131.18	2.00	5.90E-03	25	17.71	2.36E-04	4.18E-03	2.79E-06	
L-Methionine	149.21	2.00	6.71E-03	5	11.66	1.34E-03	1.57E-02	1.04E-05	
L-Threonine	119.12	2.00	5.36E-03	1	10.86	5.36E-03	5.82E-02	3.88E-05	
L-Tryptophan	204.23	2.00	9.19E-03	1	12.10	9.19E-03	1.11E-01	7.42E-05	
NAD	663.43	0.33	4.93E-03	0.25	52.24	1.97E-02	1.03E+00	6.86E-04	
Na-Oxalate	134.00	4.00	1.21E-02	100	24.30	1.21E-04	2.93E-03	1.95E-06	
L-Phenylalanine	165.19	2.00	7.43E-03	100	75.21	7.43E-05	5.59E-03	3.73E-06	
Phosphoenolpyruvate (PEP)	168.04	33.00	1.25E-01	0.25	92.12	4.99E-01	4.60E+01	3.06E-02	
L-Proline	115.13	2.00	5.18E-03	0.01	18.60	5.18E-01	9.64E+00	6.42E-03	
Putrescine	88.15	1.00	1.98E-03	0.1	28.57	1.98E-02	5.67E-01	3.78E-04	
Spermidine	145.25	1.50	4.90E-03	1	27.59	4.90E-03	1.35E-01	9.02E-05	
L-Valine	117.15	2.00	5.27E-03	1	14.06	5.27E-03	7.41E-02	4.94E-05	
K-Glutamate	203.23	80.00	3.66E-01	100	50.91	3.66E-03	1.86E-01	1.24E-04	
Mg-Glutamate	388.61	4.00	3.50E-02	250	43.70	1.40E-04	6.11E-03	4.08E-06	
							9.19E+01	6.12E-02	

NTPs									
reagent	molar mass	final concentration in the reaction in mM	Volume in mL for 1500 reactions à 15 µl	dose size in mL	cost in \$ for dose size (September 2015)	amount for 1500 reactions per dose	cost for 1500 reactions	cost for one reaction	
ATP 100 mM	573.10	1.5	0.3375	0.25	27.50	1.35	37.13	2.48E-02	
GTP 100 mM	523.18	1.5	0.3375	0.25	27.50	1.35	37.13	2.48E-02	
UTP 100 mM	550.10	0.9	0.2025	0.25	27.50	0.81	22.28	1.49E-02	
CTP 100 mM	549.10	0.9	0.2025	0.25	27.50	0.81	22.28	1.49E-02	
							1.19E+02	7.92E-02	

Extract for 1500 reactions à 15 µL			
medium		S30A washing buffer	
reagent	cost in \$ for 5 L of 2xYT+P medium	reagent	cost for 1 L of S30A washing buffer
K <sub>2</sub> HPO <sub>4</sub>	3.94	DTT	0.10
KH <sub>2</sub> PO <sub>4</sub>	1.00	K-Glutamate	6.21
NaCl	0.76	Mg-Glutamate	0.95
Tryptone	10.08		7.26
Yeast extract	7.94		30.98
	23.72		

All together	Costs for 1500 reactions	cost in \$ for a single 15 µL CFPS reaction
Amino acids, cofactors and others	91.87	0.061
NTPs	118.80	0.079
Extract	30.98	0.021
<b>TOTAL</b>	<b>241.66</b>	<b>0.161</b>

subtotals with green background