

Table 1. Intracellular concentration (mM) of phosphorylated metabolites before (0 min) and after (5 min) addition of vinylglycolate (5 mM) or 2-ketobutyrate (3 mM)

	0 min ^c	5 min ^d	Ratio 5 min/0 min
ATP	3.5 ± 0.4	2.4	0.69
GTP	1.9 ± 0.5	0.9	0.47
UTP	2.0 ± 0.5	2.9	1.45
CTP	1.2 ± 0.3	2.3	1.92
ADP	0.15 ± 0.05	0.3	2.00
NDPC ^a	2.0 ± 0.8	0.8	0.40
Acetyl CoA	0.45 ± 0.15	0.08	0.18
Acyl CoA ^b	0.06 ± 0.03	0.55	9.17
pppGpp	0.004 ± 0.001	0.12	30.00
ppGpp	0.023 ± 0.005	1.33	5.78
G6P	1.25 ± 0.2	0.40	0.32
F6P	0.95 ± 0.2	0.23	0.24
F1-6DP	5.1 ± 0.8	0.13 (0.9)	0.025 (0.18)
PEP	0.15 ± 0.05	0.70 (0.2)	4.06 (1.33)
PRPP	0.50 ± 0.15	0.03	0.06
PP	0.80 ± 0.20	0.03	0.04

It is worth noting that under steady state conditions (0 min) the metabolite concentrations we find are in excellent agreement with the values given by Lowry et al. (1971) although we use 100 to 1000-fold less cell material than these authors. The values given in brackets correspond to results obtained with 2-ketobutyrate which are significantly at variance from results obtained with vinylglycolate

^a NDPC (nucleotide diphosphocarbohydrate) represents the sum of concentrations of all nucleotide diphosphocarbohydrates. Since the spots are on the edge of the chromatogram the value is affected by a large fluctuation. The major contribution (70%) is from UDP Glc

^b Acyl CoA represents higher acyl derivatives of coenzyme A; at 5 min this corresponds to acrylyl CoA (vinylglycolate) or propionyl CoA (2-ketobutyrate)

^c Mean of five independent experiments

^d Mean of two experiments (vinylglycolate). The results obtained with 2-ketobutyrate are very similar except for the figures in brackets