

Table 6.10: ATP requirement for polymer synthesis by *Escherichia coli* using glucose-mineral salts medium.

Polymer	ATP required for the synthesis of polymer to make up one gram dry wt cell material (mmol/g dry wt)
Polysaccharide	2.1
Protein	
Glucose to amino acids	1.4
Polymerization (translation)	19.1
Lipid	0.1
RNA	
Glucose to ribonucleotides	3.5
Polymerization (transcription)	0.9
DNA	
Glucose to deoxyribonucleotides	0.9
Polymerization	0.2
Transport	5.2
RNA turnover	1.4
Overall	34.8