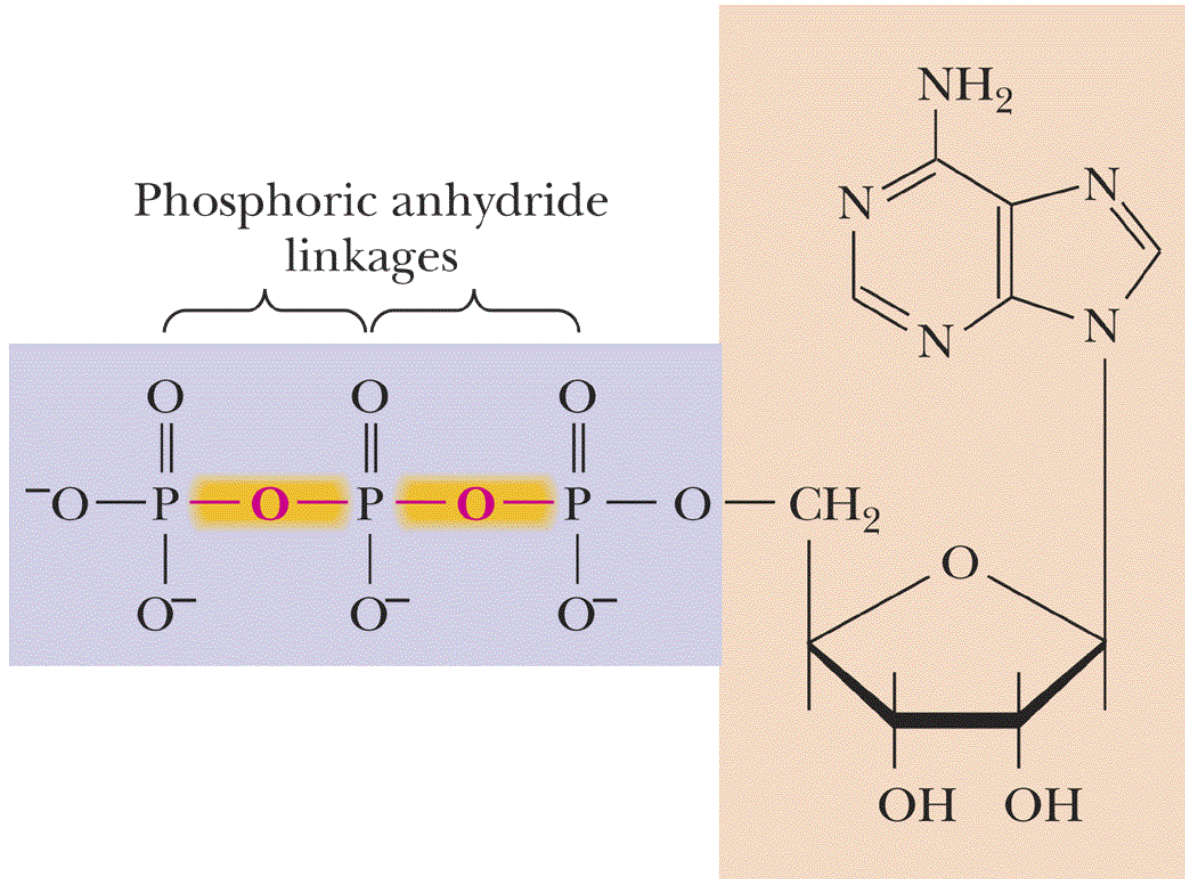


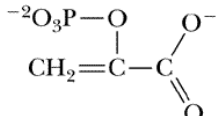
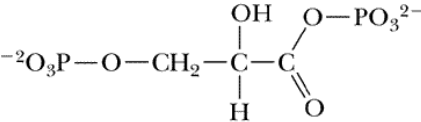
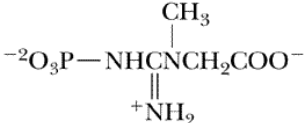
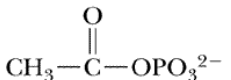
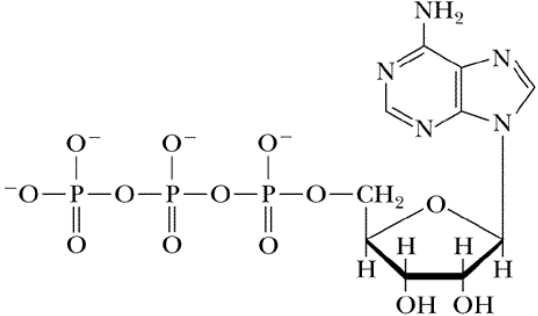
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Figure 3.9



ATP
(adenosine-5'-triphosphate)

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 Table 3.3 (part 1)

Table 3.3 Free Energies of Hydrolysis of Some High-Energy Compounds*

| Compound (and Hydrolysis Product) | $\Delta G^{\circ'}$ (kJ/mol) | Structure |
|--|---------------------------------|--|
| Phosphoenolpyruvate (pyruvate + P_i) | -62.2 |  |
| 1,3-Bisphosphoglycerate (3-phosphoglycerate + P_i) | -49.6 |  |
| Creatine phosphate (creatine + P_i) | -43.3 |  |
| Acetyl phosphate (acetate + P_i) | -43.3 |  |
| Adenosine-5'-triphosphate (ADP + P_i), excess Mg^{2+} | -30.5 |  |

(Continued)

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 Table 3.3 (part 2)

Table 3.3 Free Energies of Hydrolysis of Some High-Energy Compounds* (Continued)

| Compound (and Hydrolysis Product) | ΔG° (kJ/mol) | Structure |
|---|--------------------------------|---------------------------|
| Adenosine-5'-diphosphate (AMP + P_i) | -35.7 | |
| Pyrophosphate (P_i + P_i) in 5 mM Mg^{2+} | -33.6 | |
| Adenosine-5'-triphosphate (AMP + PP_i), excess Mg^{2+} | -32.3 | (See ATP structure above) |
| Acetyl-coenzyme A (acetate + CoA) | -31.5 | |

(Continued)

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 Table 3.3 (part 3)

Table 3.3 Free Energies of Hydrolysis of Some High-Energy Compounds* (Continued)

| Compound (and Hydrolysis Product) | $\Delta G^{\circ'}$ (kJ/mol) | Structure |
|--|---------------------------------|-----------|
| Lower-Energy Phosphate Compounds | | |
| Glucose-1-P (glucose + P _i) | -21.0 | |
| Glucose-6-P (glucose + P _i) | -13.9 | |
| Adenosine-5'-monophosphate (adenosine + P _i) | -9.2 | |

*Adapted primarily from *Handbook of Biochemistry and Molecular Biology*, 1976, 3rd ed. In *Physical and Chemical Data*, G. Fasman, ed., Vol. 1, pp. 296-304. Boca Raton, FL: CRC Press.