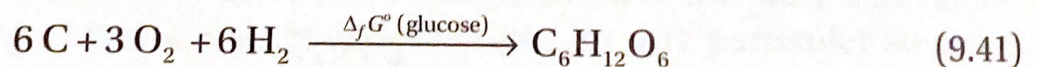


9.8 The free energy of formation of glucose is obtained by considering three combustion reactions

Recall from Section 3.1 that glucose has the chemical formula $C_6H_{12}O_6$. The free energy of formation of glucose is therefore given by the standard free-energy change of the following reaction:



In this reaction, graphite (the most stable form of carbon) is combined with gaseous oxygen and hydrogen to form glucose. This is not a reaction that can be carried out in the laboratory, and so we consider, instead, the following three reactions that yield glucose from the elements:

