Question #61106, Chemistry, Other

Describe the conversion of G-3-P into pyruvate during the glycolytic process.

Answer:

Glycolysis is the metabolic pathway that converts glucose $C_6H_{12}O_6$, into pyruvate, $CH_3COCOO^- + H^+$. Glycolysis utilize G-3-P as a substrate. In this process an additional phosphate group (not from ATP) is first added to each G-3-P (not shown in the figure). This addition also reduces two NAD+ to two NADH by adding two electrons and a proton to each. At this point, the two phosphates that are on each molecule are removed, and added back to ADP molecules, generating 4 ATP molecules, and 2 pyruvate molecules (Figure 1).

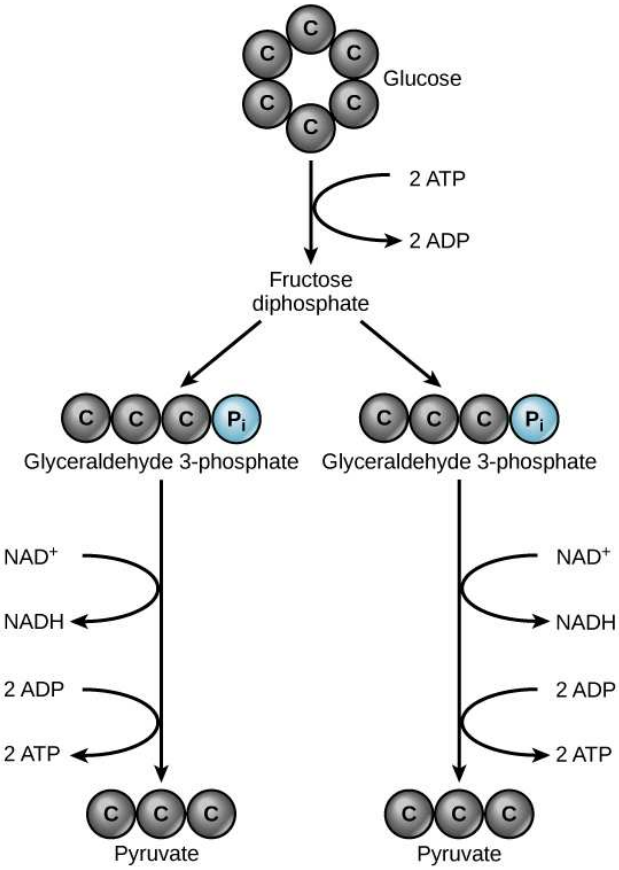

Figure 1 - The basic steps of glycolysis