1.Glycolysis is a cytoplasmic pathway which breaks down glucose into two three-carbon compounds and generates energy. Glucose is trapped by phosphorylation, with the help of the enzyme hexokinase. Adenosine triphosphate (ATP) is used in this reaction and the product, glucose-6-P, inhibits hexokinase. Glycolysis takes place in 10 steps, five of which are in the preparatory phase and five are in the pay-off phase. Phosphofructokinase is the rate-limiting enzyme. ATP is generated by substrate-level phosphorylation by high-energy compounds, such as 1,3-bisphosphoglycerate and phosphoenolpyruvate.