

Glycolysis of other hexoses

I. Regulation Overview

II. Starch Catalysis

A. glycans

1. heteropolysaccharides
2. homopolysaccharides
3. Functions

B. Glycogen

C. Starch

1. Structure
2. Catalysis

III. Other Monosaccharide Entry

A. Fructose

1. fructose 1-Phosphate pathway
 - a. fructose \rightarrow F 1-P
 - 1) enzyme = fructokinase
 - b. F 1-P \rightarrow glyceraldehyde + DHAP
 - 1) enzyme = fructose 1-phosphate aldolase
 - c. Glyceraldehyde \rightarrow G 3-P
 - 1) enzyme = triose kinase

B. Galactose

1. galactose-glucose interconversion pathway
2. galactose \rightarrow gal 1-P
 - a. enzyme = galactokinase
3. Gal 1-P \rightarrow glucose 1-P
 - a. enzyme = galactose 1-phosphouridylyltransferase
 - 1) UDP-galactose and glucose 1-phosphate
 - b. Glu 1-P \rightarrow G 6-P
 - 1) enzyme = phosphoglucomutase
 - c. UDP galactose \rightarrow UDP-glucose
 - 1) enzyme = UDP-glucose 4-epimerase
4. galactosemia
5. lactose intolerance

C. Mannose