25.9
Ketoses
Ketoses are carbohydrates that have a ketone carbonyl group in their open-chain form. C-2 is usually the carbonyl carbon.
Examples

D-Ribulose: \( \text{CH}_2\text{OH} - \text{O} - \text{OH} - \text{CH}_2\text{OH} \)

L-Xyulose: \( \text{CH}_2\text{OH} - \text{O} - \text{OH} - \text{H} - \text{H} \)

D-Fructose: \( \text{CH}_2\text{OH} - \text{O} - \text{H} - \text{OH} - \text{CH}_2\text{OH} \)
25.10
Deoxy Sugars
Deoxy Sugars

Often one or more of the carbons of a carbohydrate will lack an oxygen substituent. Such compounds are called deoxy sugars.
Examples

2-Deoxy-D-ribose

6-Deoxy-L-mannose
25.11
Amino Sugars
Amino Sugars

An amino sugar has one or more of its oxygens replaced by nitrogen.
Example

N-Acetyl-D-glucosamine
Example

L-Daunosamine
25.12
Branched-Chain Carbohydrates
Carbohydrates that don't have a continuous chain of carbon-carbon bonds are called branched-chain carbohydrates.
Examples

D-Apiose

L-Vancosamine