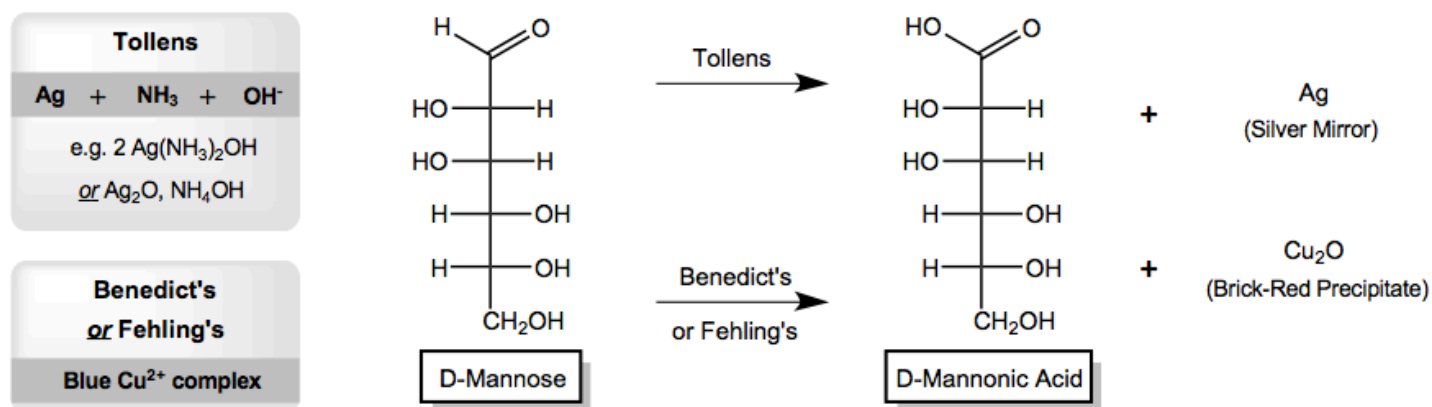


## CONCEPT: MONOSACCHARIDES – REDUCING SUGARS

Bromine water provides high yields of aldonic acid, but does not undergo a \_\_\_\_\_ transformation.

• **Tollens, Benedict's and Fehling's Tests** also transform *reducing sugars* into aldonic acid, while providing visual cues.

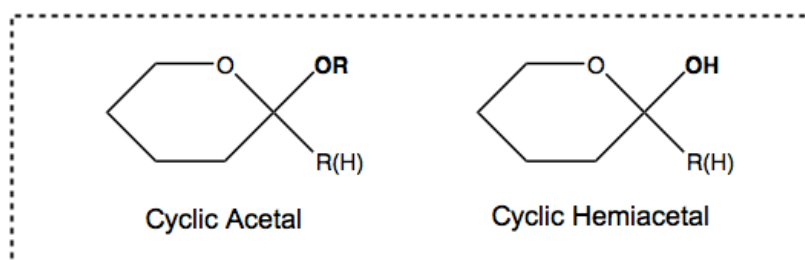
□ Tests \_\_\_\_\_ any sugar capable of forming *straight-chain* aldoses or ketoses



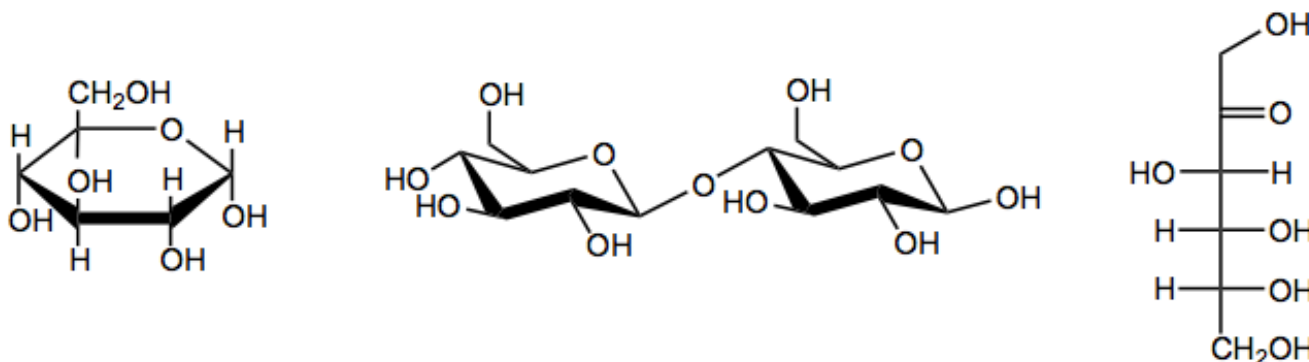
### Definition of Reducing Sugars:

- Any straight-chain monosaccharide
- Any cyclic monosaccharide, disaccharide or sugar derivative with cyclic **hemiacetal groups**

□ Hemiacetal groups can be \_\_\_\_\_ to straight-chain saccharides. *Acetals cannot.*



**EXAMPLE:** Identify the following sugars as reducing sugars (RS) or non-reducing sugars (NS)



**PRACTICE:** Identify the following sugars as reducing sugars (RS) or non-reducing sugars (NS)

