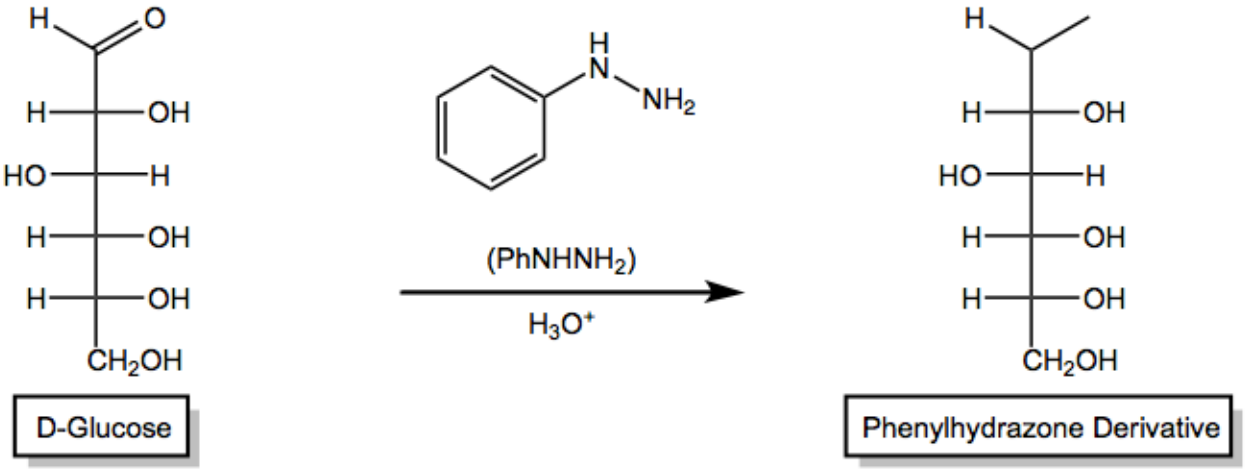
CONCEPT: MONOSACCHARIDES – OSAZONES

Aldose aldehydes are susceptible to the same *nucleophilic addition* reactions that we learned in carbonyl chemistry

● When exposed to ____ _____ derivatives in acid, aldoses can transform into *imine derivatives*

□ When phenylhydrazine is the imine derivative used, the product is referred to as a phenylhydrazone.



● Surprisingly, when exposed to additional eq. phenylhydrazine, the imine derivative continues to tautomerize and react

□ The resulting product is a C1-C2 *diphenylhydrazone* derivative known as an ***osazone***

□ In 1888, Emil Fischer used osazones to prove that glucose and mannose were *epimers*