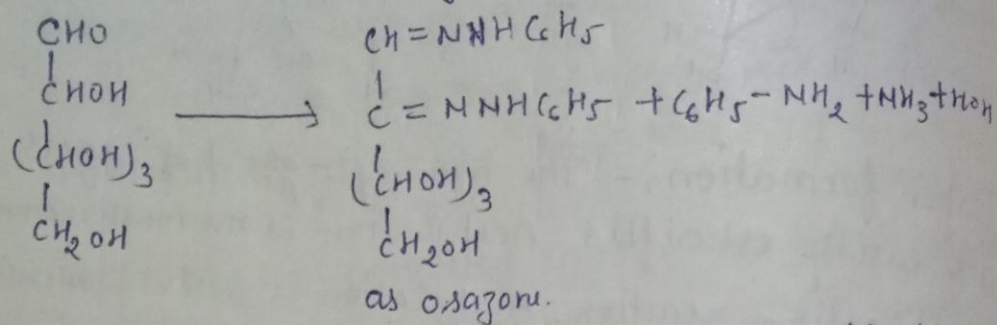


Reaction with Phenylhydrazine: Osazone formation
 Aldehyde and ketones react with one equivalent of phenylhydrazine, forming phenylhydrazone. In contrast, α -hydroxy carbonyl compounds react with three equivalents of phenylhydrazine to form bis-phenylhydrazone, commonly called osazones.



Mechanism of osazone formation:- The first equivalent of phenylhydrazine forms phenylhydrazone with the aldehyde or ketone group as expected. Phenylhydrazone then undergoes the rearrangement, known as Amadori rearrangement, to give α -iminoketone (IV) in case of aldoses or α -iminoaldehyde (in case of ketoses) with the loss of aniline.

