

UNIT 19 – ALDEHYDES AND KETONES: ADDITION REACTIONS

OCSL: 5.4, 5.6, 5.7

VTOC: [Nomenclature of Aldehydes & Ketones](#)
[Reversible Addition Reactions](#)
[Hydration & Hemiacetal Formation](#)
[Acetal Formation](#)
[Imine Formation](#)
[Enamine Formation](#)
[Reactions of phosphorous ylides](#)

UCalg: [The Wittig Reaction](#)
Using Nitrogen Nucleophiles
[Primary Amines](#) and [Derivatives](#)
[Secondary Amines to give Enamines](#)
Using Oxygen Nucleophiles
[Formation of Hydrates](#)
[Alcohols to Acetals](#)

UCDavis [Section 11.3: Hemiacetals, hemiketals, and hydrates](#)
[Section 11.4: Acetals and ketals](#)
[Section 11.6: Imine \(Schiff base\) formation](#)
[13.6B: The Wittig reaction](#)
[Addition of Alcohols to form Hemiacetals and Acetals](#)

Skills:

- 19A. Provide systematic names for aldehydes and ketones
- 19B. Draw the mechanism of imine, enamine and acetal formation.
- 19C. Predict the products of imine, enamine, acetal reactions and their hydrolysis. Predict the products of Wittig reactions.
- 19D. Use aldehyde and ketone addition reactions as part of multistep synthesis.