

Aldol “de Mayo”

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What is an Aldol Reaction?

- If you combine a carbonyl with a strong base it creates an enolate anion (who is the worker) triggering a reaction to form something new
- Creating instead a Aldehyde + Alcohol
 - Margarita
- Thus the name
 - Al = aldehyde
 - dol = alcohol



Aldol

Terminology

- Carbonyl (Sombrero)
 - Aldehyde (-al)
 - Ketone (-one)
 - Carboxylic acid (-oic acid)



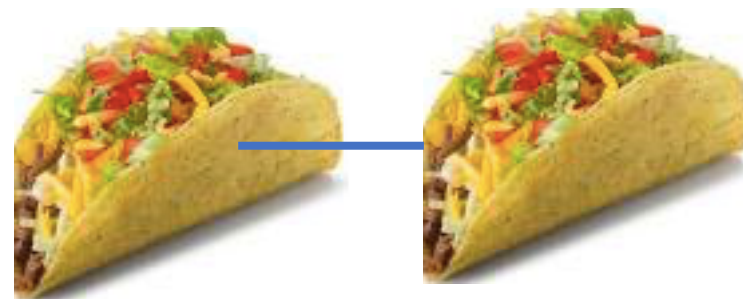
Carbonyl

- Enolate anion
 - Anion formed by removal of an alpha hydrogen from the Carbonyl
 - similar to a taco after the tomatoes have been removed



Important Abstract Concepts

- Even though the reaction looks “linear” on paper remember, the reactants are in a mixture (plenty to keep adding to the reaction)
- Unlike the midterm goofy answer I gave on one of the questions, Carbon always has 4 bonds (not 5 – wow)
- Our friend – Tetrahedral Carbonyl Addition Intermediate – crucial step to form a new carbon to carbon bond



Tetrahedral Carbonyl Addition

Bottom Line



Carbonyl

+ **BASE** =

Taco (no Tomatoes)
Enolate Anion

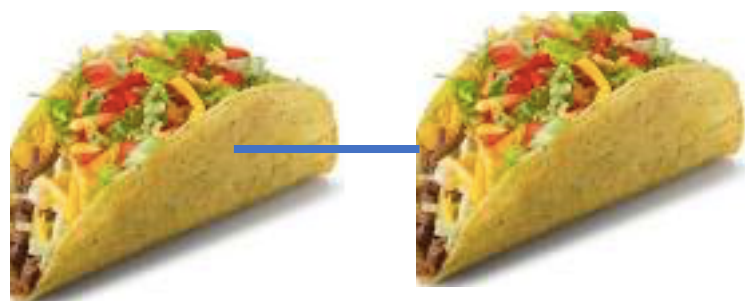
Taco (no Tomatoes)
Enolate Anion



=



Tetrahedral Carbonyl Addition



+ **Proton Donor** =



Aldol

Real Example

(reference page 587 Textbook)

- Handwritten
- SEE PDF...