The acid-catalyzed reaction of an enolizable aldehyde or an enolizable ketone with an iminium ion, usually generated in situ by the reaction of formaldehyde with a secondary amine, followed by a base to give a β-aminoaldehyde of a β-aminoketone, respectively, is known as the Mannich reaction. The product of the Mannich reaction is called the Mannich base.

eg:

\[
\begin{align*}
\text{Ketone} & \xrightarrow{1. \text{Et}_2\text{NH, HCHO}} \xrightarrow{\text{catalyst: aq. HCl}} \xrightarrow{2. \text{aq. NaOH}} \text{Mannich base} \\
\end{align*}
\]

mechanism:

Contributors

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