A nucleophilic acyl substitution reaction is a nucleophilic substitution reaction in which the net reaction is the replacement of a ligand bonded to the carbonyl carbon in an acyl group with a nucleophile.

eg. 1:

\[
\text{net reaction:} \quad \text{C} = \text{C} + \text{NH}_3 \rightarrow \text{C} = \text{C} + \text{HCl}
\]

eg. 2:

\[
\text{net reaction:} \quad \text{C} = \text{C} + \text{NH}_3 \rightarrow \text{C} = \text{C} + \text{OH} \quad \text{C} = \text{C} + \text{Cl}^-
\]

Contributors

- Gamini Gunawardena from the OChemPal site (Utah Valley University)