An amide is a carboxylic acid derivative that has the following general structural formula.

\[
\begin{align*}
\text{R}^1 & - \text{C} - \text{N} - \text{R}^2 \\
& \quad \text{R}^3
\end{align*}
\]

R1, R2, and R3 could be hydrogen atoms, alkyl groups, aryl groups, or any combination thereof.

eg:

\[
\begin{align*}
\text{H} - \text{C} - \text{N} & - \text{H} \\
& \quad \text{CH}_3 - \text{C} - \text{N} - \text{H} \\
\text{H} - \text{O} - \text{N} & - \text{CH}_3 \\
& \quad \text{CH}_3 - \text{O} - \text{N} - \text{CH}_3 \\
\text{H} - \text{OC} - \text{N} - \text{CH}_3 & \quad \text{CH}_3 - \text{OC} - \text{N} - \text{CH}_3 \\
\text{H} - \text{OC} - \text{N} - \text{H} & \quad \text{CH}_3 - \text{OC} - \text{N} - \text{H}
\end{align*}
\]

The O=C—N group in an amide is called the amide group.
see also primary amide, secondary amide, tertiary amide, lactam

Contributors

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