A rearrangement is a reaction in which the reactant and the products are constitutional isomers and the reactant is converted to the product by the migration of one or more ligands from one point of the reactant to another.

eg. 1:

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

eg. 2:

\[
\begin{align*}
\text{H} & \quad \text{H} \\
\text{H} & \quad \text{H} \\
\text{H} & \quad \text{H} \\
\text{C} & \quad \text{C} \\
\text{C} & \quad \text{C} \\
\text{O} & \quad \text{O} \\
\text{H} & \quad \text{H} \\
\end{align*}
\]

Some reactions in which the reactant and the product are not constitutional isomers are identified as rearrangements. This is because the multistep reaction involves one or more steps that are by definition rearrangements (e.g., pinacol rearrangement).

see also degenerate rearrangement, carbocation rearrangement

Contributors

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