S\textsubscript{N}2 mechanism (S-substitution, N-nucleophilic, 2-second order) is one of the two limiting mechanisms of nucleophilic aliphatic substitution at saturated carbon. It is a one-step mechanism:

![SN2 mechanism diagram](image)

A nucleophilic aliphatic substitution at saturated carbon occurring via S\textsubscript{N}2 mechanism is called an S\textsubscript{N}2 reaction. The rate law of an S\textsubscript{N}2 reaction is

\[
\text{rate} = k [\text{substrate}][\text{nucleophile}]
\]

According to the rate law, an S\textsubscript{N}2 reaction is second order overall, and the concentration of both substrate and nucleophile affect the rate of reaction, which is consistent with the single-step mechanism.

see also [S\textsubscript{N}1 mechanism](#)

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**Contributors**

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