

## Ochem Reaction Flashcards PDF

### Ochem Reaction Flashcards PDF

*Disclaimer: The ochem reaction flashcards pdf was generated with the help of StudyBlaze AI. Please be aware that AI can make mistakes. Please consult your teacher if you're unsure about your solution or think there might have been a mistake. Or reach out directly to the StudyBlaze team at [max@studyblaze.io](mailto:max@studyblaze.io).*

What is the mechanism of the SN1 reaction?

The SN1 reaction mechanism involves two steps: first, the formation of a carbocation intermediate after the leaving group departs, followed by the nucleophile attacking the carbocation.

What is the main characteristic of an SN2 reaction?

The main characteristic of an SN2 reaction is that it involves a single concerted step where the nucleophile attacks the substrate at the same time as the leaving group departs.

What type of substrate is favored for SN1 reactions?

SN1 reactions are favored by tertiary substrates due to the stability of the carbocation formed.

What type of substrate is favored for SN2 reactions?

SN2 reactions are favored by primary substrates because they are less sterically hindered, allowing for easier nucleophilic attack.

What is the role of the solvent in an SN1 reaction?

In an SN1 reaction, the solvent plays a crucial role as it stabilizes the carbocation intermediate and the leaving group.

What is the stereochemical outcome of an SN2 reaction?

The stereochemical outcome of an SN2 reaction is inversion of configuration at the carbon center where the reaction occurs.

What is a common example of a nucleophile used in SN2 reactions?

A common example of a nucleophile used in SN2 reactions is hydroxide ion (OH<sup>-</sup>).

What is the effect of steric hindrance on SN2 reactions?

Steric hindrance negatively affects SN2 reactions, as increased steric bulk around the reactive center makes it more difficult for the nucleophile to approach and attack.

What is the significance of the leaving group in nucleophilic substitution reactions?

The leaving group is significant in nucleophilic substitution reactions because a good leaving group can stabilize the transition state and facilitate the reaction.

What are some examples of good leaving groups?

Examples of good leaving groups include halides (like Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>), water (H<sub>2</sub>O), and tosylate (OTs).