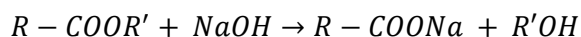




### **What is the saponification of ester reaction?**

Saponification is the chemical reaction of an ester with an alkali (such as sodium hydroxide or potassium hydroxide) to form a salt (soap) and an alcohol. The process of saponification is an important step in the manufacture of soap and involves the hydrolysis of the ester bonds in the ester molecules.

The reaction of an ester with an alkali to form a soap and alcohol can be represented by the following equation:



In this equation, R and R' represent the alkyl groups of the ester, and NaOH represents the alkali. The product of the reaction is a soap (sodium or potassium salt of the carboxylic acid) and an alcohol (the alcohol produced by the hydrolysis of the ester).

Saponification is an exothermic reaction, which means that it releases heat as it occurs. It is also reversible, which means that the products of the reaction can be converted back into the starting materials under the right conditions.

Overall, saponification is an important chemical reaction in the synthesis of soap and has numerous applications in the chemical and personal care industries.