

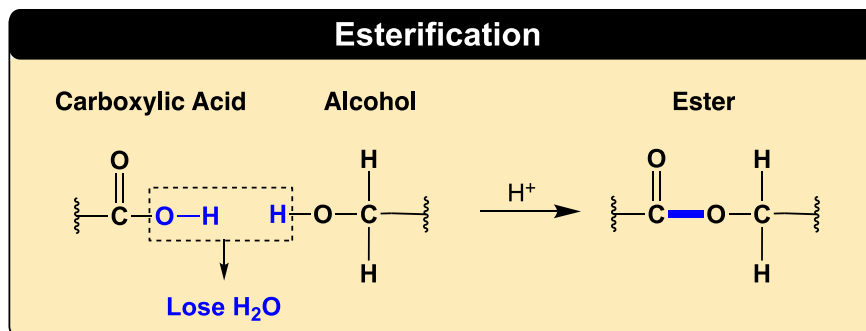
## CONCEPT: ESTER REACTIONS: ESTERIFICATION

• Under this type of reaction a carboxylic acid and an alcohol undergo a *condensation* reaction to form an ester.

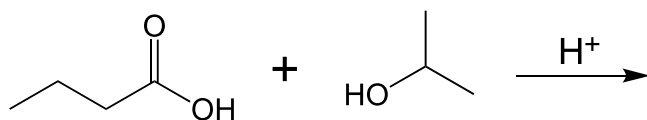
□ **Condensation Reaction:** a reaction that combines two molecules through the loss of \_\_\_\_\_.

- The carboxylic acid loses its \_\_\_\_\_ and the alcohol oxygen loses its \_\_\_\_\_.

□ An \_\_\_\_\_ catalyst is required for the reaction to start.



**EXAMPLE:** Determine the ester product formed when butanoic acid reacts with 2-propanol.



**PRACTICE:** Aspirin also known as acetylsalicylic acid possesses an ester group that is formed from the reaction between ethanoic acid and salicylic acid. Determine the structure of aspirin after the condensation between ethanoic acid and salicylic acid.

