

## CHEMISTRY DAILY PLAN

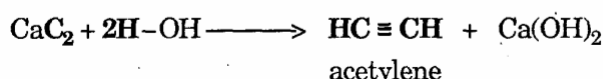
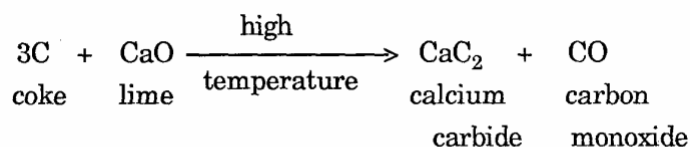
**Class:**

**Date:**

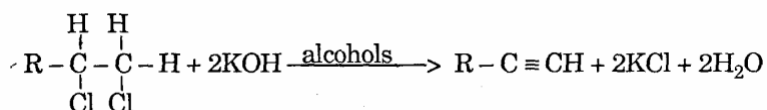
**Subject:** *Preparation of Alkynes*

**Time:**

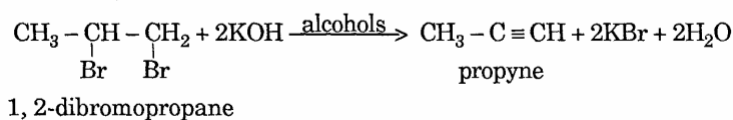
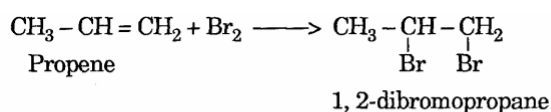
1. Acetylene is prepared industrially from limestone and coke. The first step gives calcium carbide. The hydrolysis of calcium carbide produces acetylene.



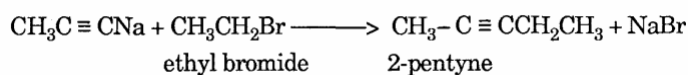
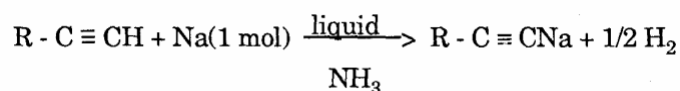
2. The dehydrohalogenation reaction used for alkenes can also be used for the synthesis of alkynes. The starting substance must be a dihalide with both halogens on the same or on adjacent carbon atoms.



The synthesis of propyne may be illustrated as a two-step process starting from propene:



3. The acetylene is converted into an acetylide salt. Acetylides react with alkyl halides to give new alkyne as shown below.



This method can be used to synthesize higher alkynes from acetylene.

**Problem :** How many liters of oxygen gas at STP are required to burn a sample of acetylene which is obtained from 12.8 g of calcium carbide  $\text{CaC}_2$ ?