In organic chemistry laboratory, diazomethane has two common uses.

1. Conversion of carboxylic acids to methyl esters

   eg:

   \[
   \text{C}_6\text{H}_{12}\text{O} + \text{CH}_2\text{N}_2 \rightarrow \text{C}_6\text{H}_{12}\text{OCH}_3 + \text{N}_2
   \]

   mechanism:

2. Conversion of alkenes to cyclopropanes

   eg:

   \[
   \text{CH}_3\text{CH}=\text{CHCH}_3 + \text{CH}_2\text{N}_2 \rightarrow \text{C}_3\text{H}_6
   \]

   mechanism:
see also diazonium ion

Contributors

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