

1.8: Ethers

Learning Objective

- How to name ethers.

In organic chemistry, any **alkyl group** can be abbreviated as **R**. An **ether**, in which the carbons of two alkyl groups are linked to the same oxygen, can be abbreviated as **R-O-R**.

This molecule is often referred to simply as “ether”. Its common name is diethyl ether, and its IUPAC name is ethoxyethane.



Figure 1.8.1: ethoxyethane

The common name of this molecule is ethyl methyl ether, and its IUPAC name is methoxyethane.



Figure 1.8.2: methoxyethane

Practice Questions

- What are the common and IUPAC names of Molecule A?



Figure 1.8.3: Molecule A

- The name of this molecule is 2-methoxy-3-methylbutane. Number the carbons.



Figure 1.8.4: 2-methoxy-3-methylbutane

- Number the carbons. What is the name of Molecule B?

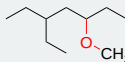


Figure 1.8.5: Molecule B

- The name of this molecule is 4-butoxy-2-butanol. Number the carbons.

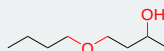


Figure 1.8.6: 4-butoxy-2-butanol

- Number the carbons. What is the name of Molecule C?

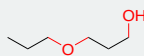


Figure 1.8.7: Molecule C

- What additions do we make to our existing naming rules to name ethers?
- Write the steps that you use to name an ether in order, as instructions for a student who doesn't know how to do it.
- Draw any ether and go through the steps in naming your molecule.

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