

Ethers R-O-R

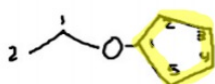
Nomenclature

IUPAC- the alkyl groups on each side of the oxygen are named as branches in alphabetical order: followed by ether

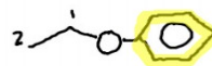
Common- the smaller of the R groups (alkyl groups) and the oxygen are blended together as a branch - prefix + oxy, the larger R group is named as the parent.



ethyl methyl ether
methoxy ethane



cyclopentyl ethyl ether
ethoxy cyclopentane



ethyl phenyl ether
ethoxy benzene

Properties

1. generally soluble in H_2O
2. very poor polar (weak), extremely protected
3. very good organic solvents
4. generally unreactive
5. boiling points are similar to comparative hydrocarbons.

Thiols - R-SH (sulfhydryl group)

Nomenclature

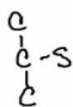
IUPAC - name compound adding thiol at the end and # locator in front

Common name - mercaptan - name parent as an alkyl branch followed by mercaptan

C-S

methane thiol

methyl mercaptan



2-propane thiol

isopropyl mercaptan

Properties

1. nonpolar
2. low bp (little difference between isomers)
3. low to no solubility in H_2O
4. little to no hydrogen bonding