



ETHERS

Ethers are a class of organic compounds that contain an oxygen between two alkyl or aryl groups. They have the formula $R-O-R'$, where R and R' are alkyl groups. These compounds are used in **dye, perfumes, oils, waxes** and **industrial use**. Ethers are named as **alkoxyalkanes**.



NOMENCLATURE OF ETHERS

Ethers are compounds having two alkyl or aryl groups bonded to an oxygen atom, as in the formula R_1-O-R_2 . The ether functional group does not have a characteristic **IUPAC** nomenclature suffix, so it is necessary to designate it as a substituent. To do so the common alkoxy substituents are given names derived from their alkyl component (**below**):

ALKYL GROUP	NAME	ALKOXY GROUP	NAME
CH_3-	Methyl	CH_3O-	Methoxy
CH_3CH_2-	Ethyl	CH_3CH_2O-	Ethoxy
$(CH_3)_2CH-$	Isopropyl	$(CH_3)_2CHO-$	Isopropoxy
$(CH_3)_3C-$	Tert-Butyl	$(CH_3)_3CO-$	Tert-Butoxy
C_6H_5-	Phenyl	C_6H_5O-	Phenoxy

Ethers can be named by naming each of the two carbon groups as a separate word followed by a space and the word ether. The **-OR** group can also be named as a substituent using the group name, alkoxy.

PREPARATION



- 1 Proceeds via carbocation intermediate, rearrangement may take place.
- 2 Do not proceed via carbocation intermediate, rearrangement is avoided.
- 3 Gives methyl ether ($RCH_2CH_2OCH_3$)

