

# GUIA DIDACTICA DE NOMBRES Y FORMULAS DE COMPUESTOS ORGANICOS

## GRUPOS FUNCIONALES

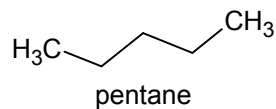
GRUPO FUNCIONAL	FORMULA GENERAL	EJEMPLO	
ALCANOS	$\text{H}_3\text{C}-\text{CH}_2-\text{CH}_3$		Propano
ALQUENOS	$\text{H}_2\text{C}=\text{CH}_2$		1- penteno
ALQUINOS	$\text{HC}\equiv\text{CH}$		1- pentino
ALCOHOLES	$\text{H}_3\text{C}-\text{OH}$		Etanol
ALDEHIDOS			Pentanal
CETONAS			3 - Heptanona
ETERES	$\text{H}_3\text{C}-\text{O}-\text{CH}_3$		Metilpropileter
AROMATICOS			Clorobenceno
AMINAS	$\text{H}_3\text{C}-\text{NH}_2$		Hexananamina
ACIDOS CARBOXILICOS			Acido octanoico

## NOMBRES Y FORMULAS DE ALCANOS

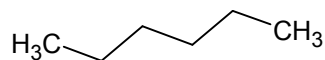
Los alcanos son compuestos formados por átomos de carbono e hidrógeno para nombrar alcanos lineales, utilice la terminación ANO y los prefijos para indicar el número de átomos de carbono

met = 1 et = 2 Prop = 3 but = 4 Pent Hexa = 6 Hept = 7 Octa = 8 nona = 9 deca = 10

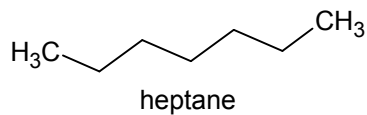
CH<sub>4</sub>  
methane



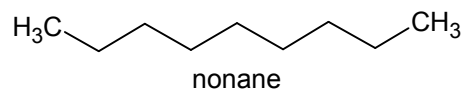
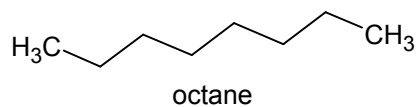
H<sub>3</sub>C—CH<sub>3</sub>  
ethane



H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>3</sub>  
propane



H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>3</sub>  
butane



## ALCANOS RAMIFICADOS

Para nombrar alcanos ramificados utilice los grupos alquílicos

Metil  $\text{CH}_3$

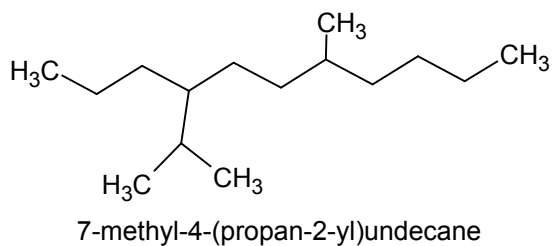
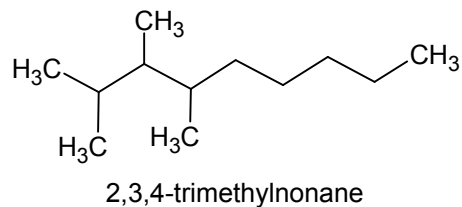
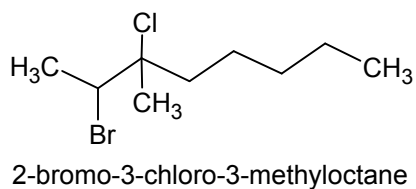
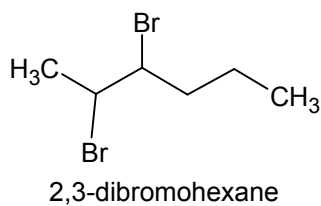
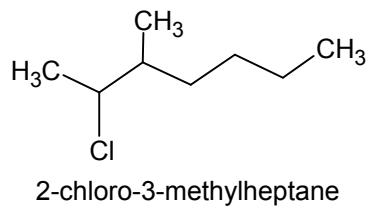
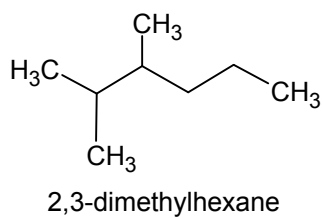
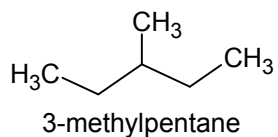
Etil  $-\text{CH}_2\text{CH}_3$

Propil  $-\text{CH}_2\text{CH}_2\text{CH}_3$

Isopropil  $\text{CH}_3\text{CH}_2\text{CH}_3$

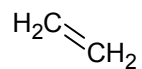
Butil  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$

Secbutil  $\text{CH}_3\text{CHCH}_2\text{CH}_3$

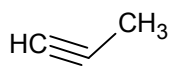


## ALQUENOS Y ALQUINOS

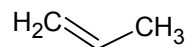
1. Para nombrar alquenos utilice la terminación ENO y para alquinos INO que indican los enlaces dobles y triples y las mismas reglas de para alcanos
2. Con números indique la posición cuando hallan múltiples enlaces dobles y triples



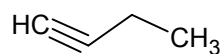
ethene



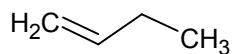
prop-1-yne



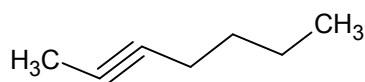
prop-1-ene



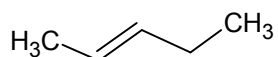
but-1-yne



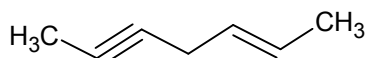
but-1-ene



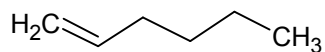
hept-2-yne



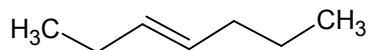
(2E)-pent-2-ene



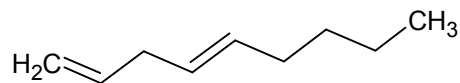
(2E)-hept-2-en-5-yne



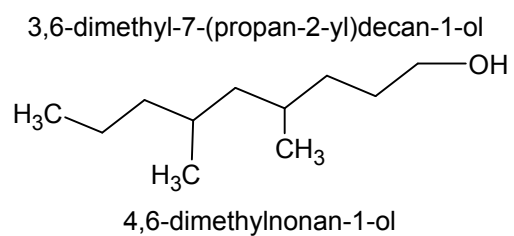
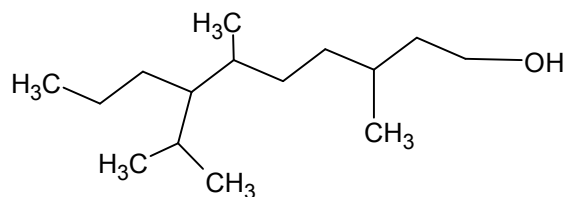
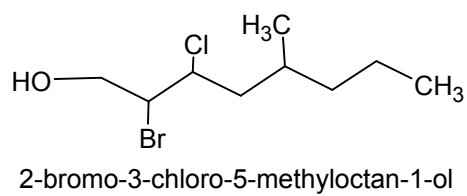
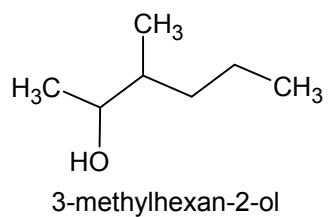
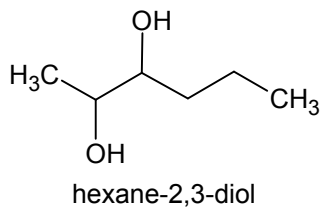
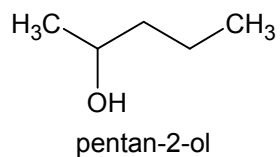
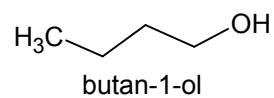
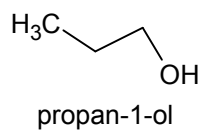
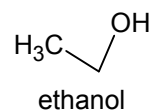
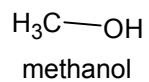
hex-1-ene



(3E)-hept-3-ene

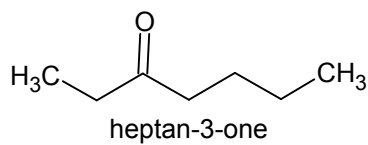
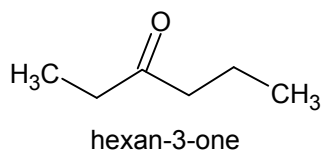
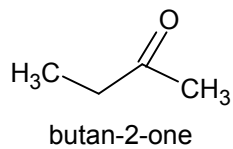
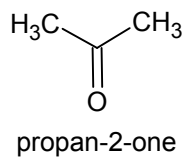
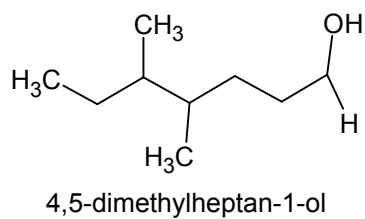
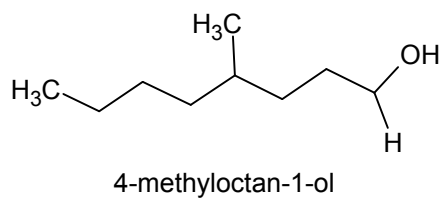
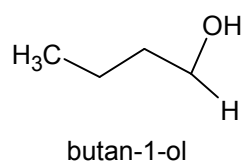
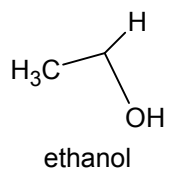
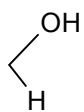


(4E)-nona-1,4-diene



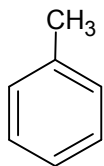
## ALDEHIDOS Y CETONAS

Para nombrar aldehídos utilice la terminación AL y en cetonas la terminación ONA  
Y las mismas reglas de alcanos Formula general aldehídos RHO y cetonas RCOR

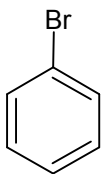


AROMATICOS Compuestos del benceno  $C_6H_6$

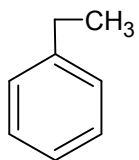
1. Para nombrar aromáticos, se nombra el radical seguido de la palabra benceno
2. Si dos o más grupos sustituyentes se ordenan alfabéticamente



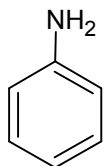
methylbenzene



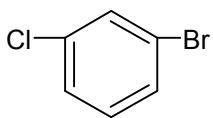
bromobenzene



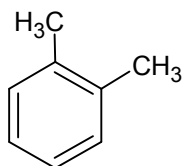
ethylbenzene



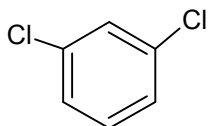
aniline



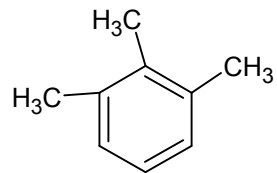
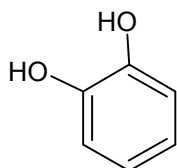
1-bromo-3-chlorobenzene



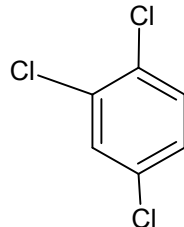
1,2-dimethylbenzene



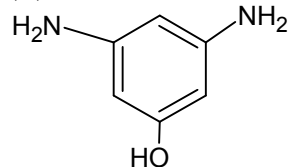
1,3-dichlorobenzene



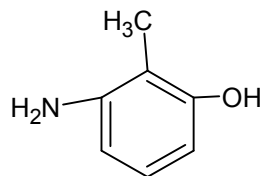
1,2,3-trimethylbenzene



1,2,4-trichlorobenzene



3,5-diaminophenol



3-amino-2-methylphenol