

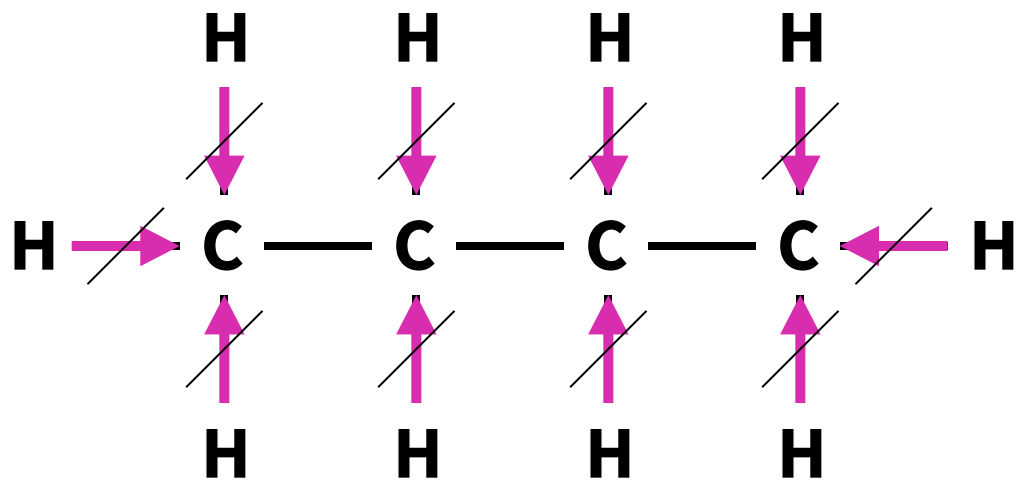


QUÍMICA



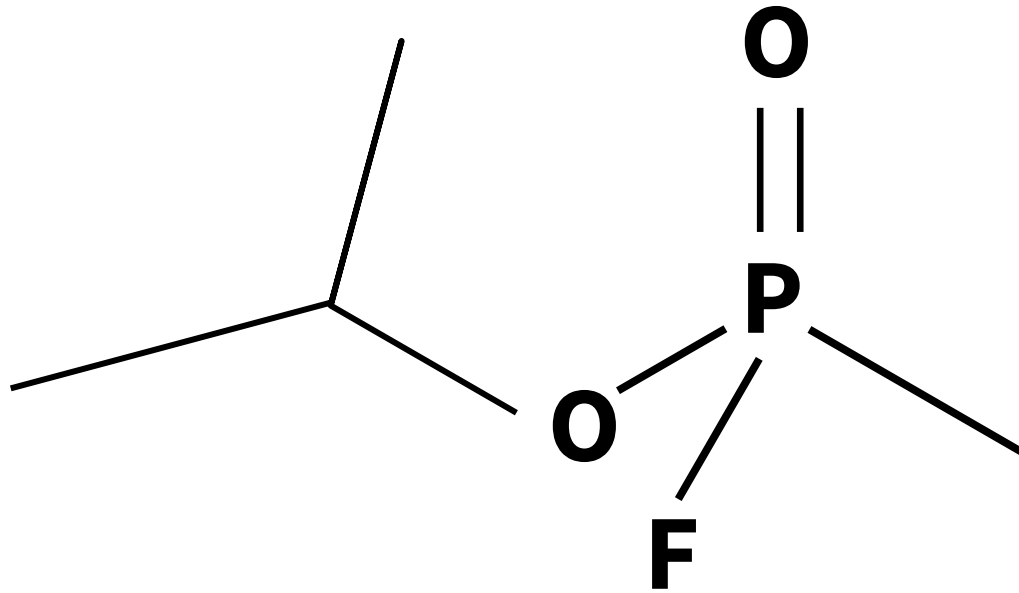
aula

Propriedades físicas dos compostos orgânicos

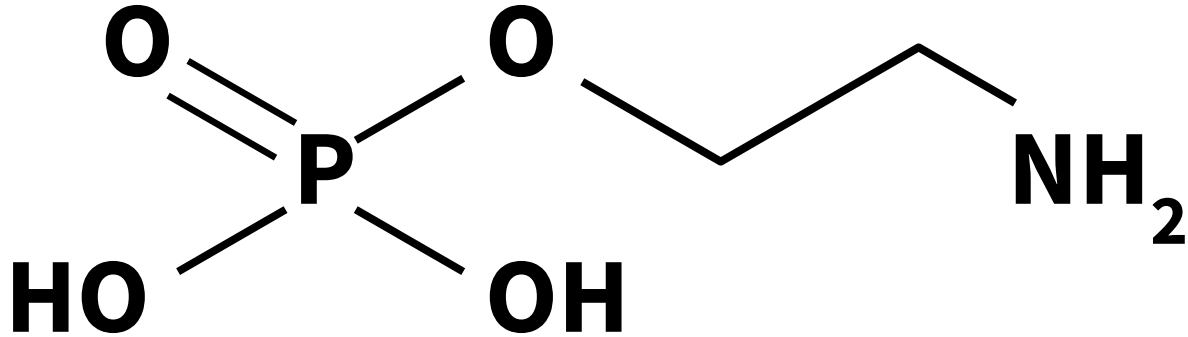


MOLÉCULA APOLAR

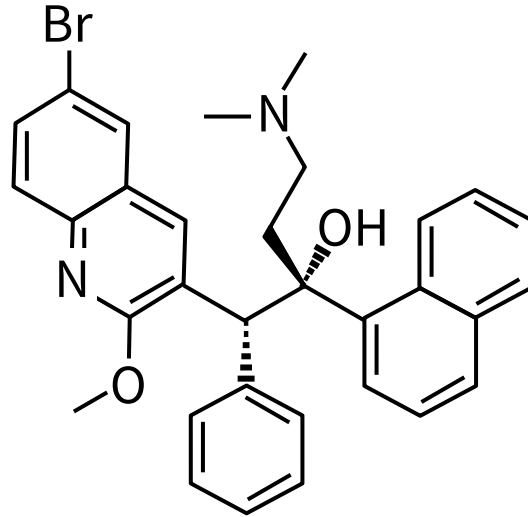
Gás Sarin



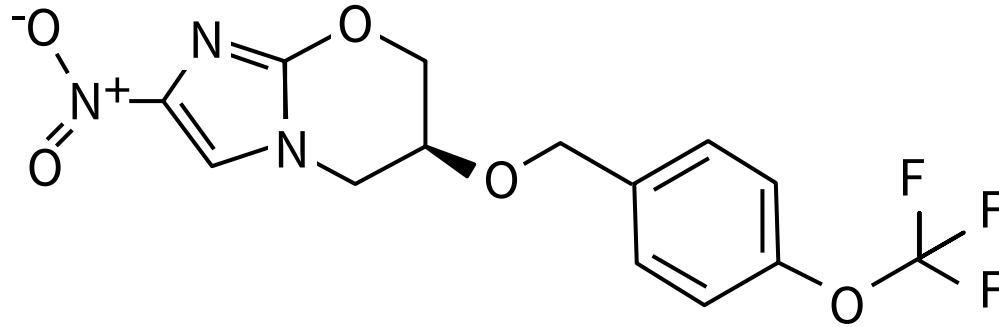
Fosfoetanolamina



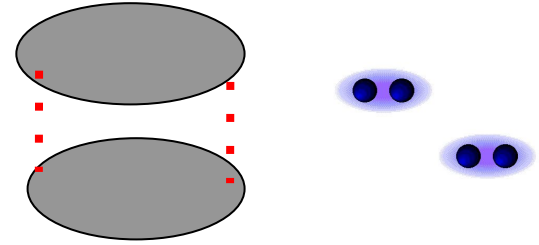
Bedaquilina



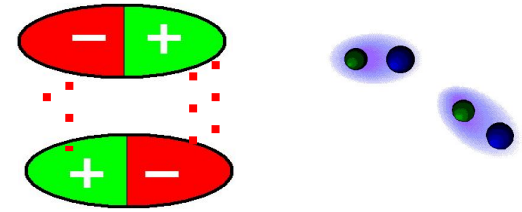
Pretomanida



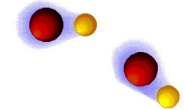
- DIPOLO INDUZIDO (LONDON)
MOLÉCULAS APOLARES



- DIPOLO PERMANENTE
MOLÉCULAS POLARES

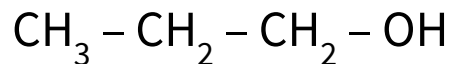


- LIGAÇÕES DE HIDROGÊNIO
MOLÉCULAS POLARES

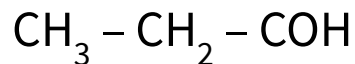


Exercícios

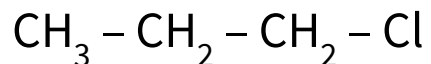
Colocar em ordem crescente de solubilidade em água:



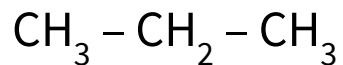
propan-1-ol



propanal



1-cloropopano

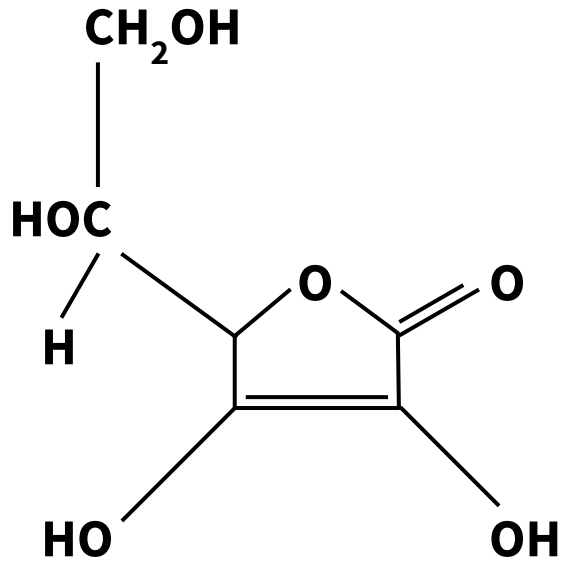


propano

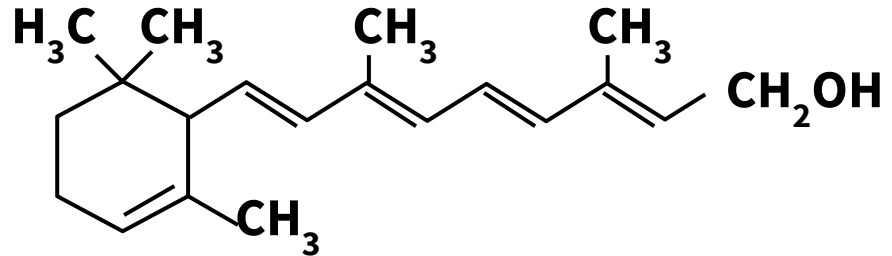
Exercícios

Álcool	Solubilidade em água (g/100g de H ₂ O a 25°C)
CH ₃ OH	Infinita
CH ₃ CH ₂ OH	Infinita
CH ₃ CH ₂ CH ₂ OH	Infinita
CH ₃ CH ₂ CH ₂ CH ₂ OH	8,3
CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ OH	2,4

Vitamina C e vitamina A

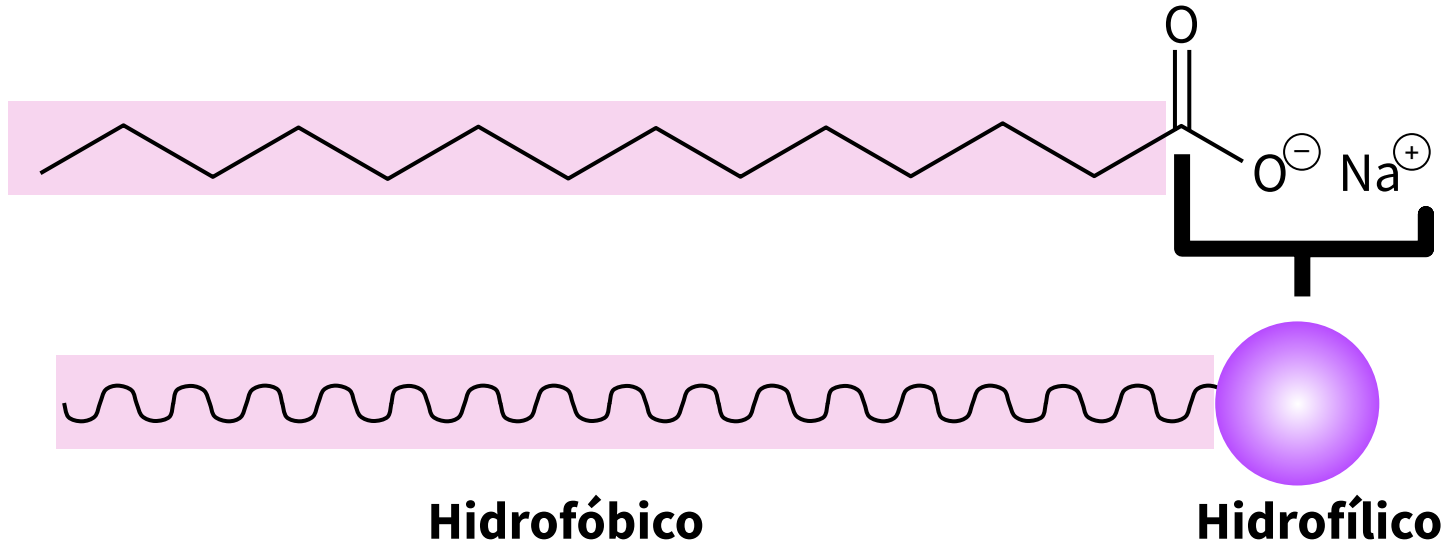


Vitamina C
Hidrossolúvel



Vitamina A
Lipossolúvel

Caráter Anfipático



PF e PE

1º) TIPO de FORÇA

L. HIDRO

DIP-DIP

DIP-INST



“MAIOR FORÇA; MAIOR PF e PE”

2º) MASSA MOLAR

“FORÇAS IGUAIS”

MAIOR MASSA;
MAIOR PF e PE

Intensidade da força

Para moléculas de massa molecular semelhante, quanto maior a intensidade das forças intermoleculares, maior o ponto de ebulição.

	$\text{CH}_3\text{CH}_2\text{CH}_3$	CH_3Cl	$\text{CH}_3\text{CH}_2\text{OH}$
Massa molar	44 g/mol	50,5 g/mol	46 g/mol
Tipo de interação	Dipolo instantâneo-dipolo induzido	Dipolo permanente	Ligações ou pontes de hidrogênio
Ponto de ebulição	-42,1°C	-23,8°C	+78,5°C

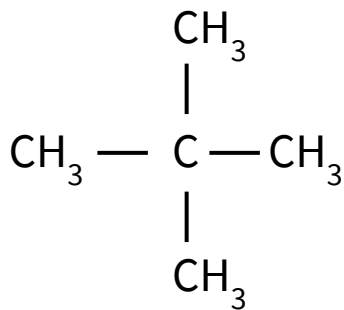
Massa molar

Tamanho da cadeia carbônica

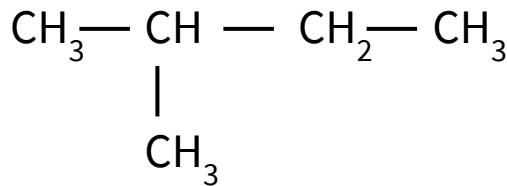
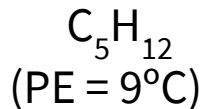
Molécula	Interação molecular	Ponto de ebulição
C_5H_{12}	Dipolo instantâneo-dipolo induzido	36°C
C_6H_{14}	Dipolo instantâneo-dipolo induzido	69°C
C_8H_{18}	Dipolo instantâneo-dipolo induzido	126°C

Presença de ramificações

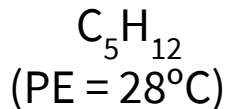
Para moléculas de massa molecular semelhante, quanto mais extensa a cadeia carbônica (menor número de ramificações), maior o PE.



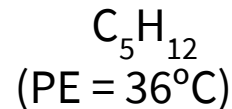
Dimetilpropano



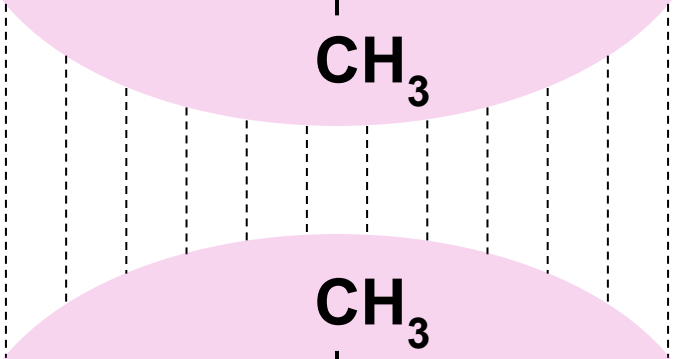
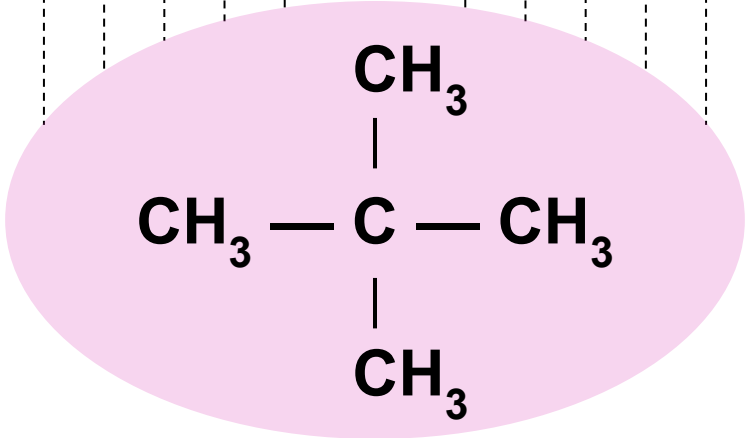
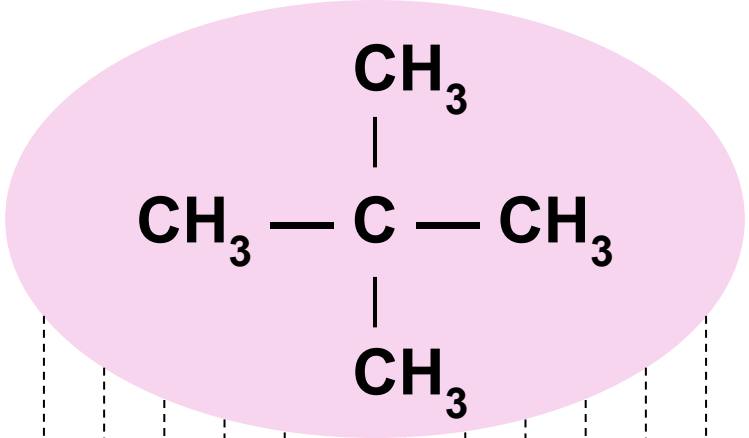
Metilbutano



Pentano







Exercícios

(Unesp) Há quatro aminas de fórmula molecular C_3H_9N .

a) Escreva as fórmulas estruturais das quatro aminas.

b) Qual dessas aminas tem ponto de ebulição menor que as outras três? Justifique a resposta em termos de estrutura e forças intermoleculares.



QUÍMICA



aula

Propriedades físicas dos compostos orgânicos