

Curso Máster en Química (Clase 1)



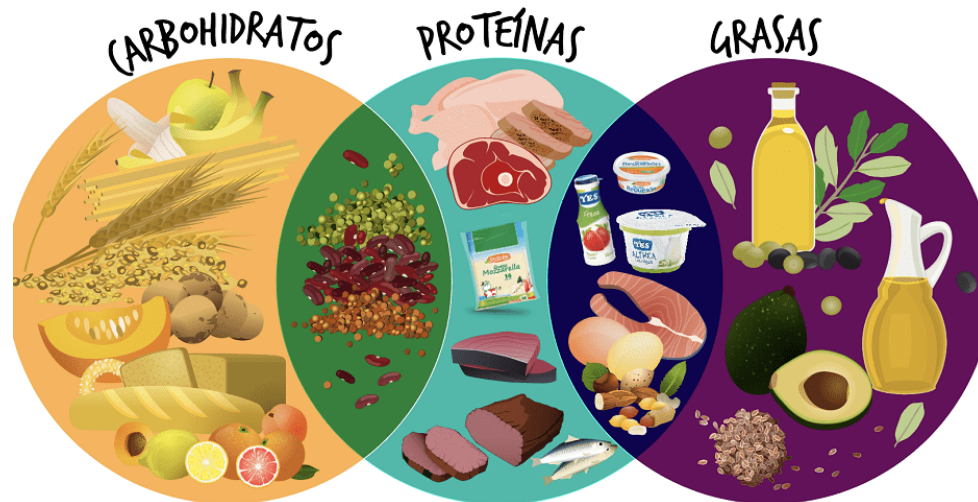
Lic. Sebastián Oddone

ESPECIALISTA EN FERMENTACIONES INDUSTRIALES

Los seres vivos y los alimentos

Somos lo que comemos y bebemos

Macronutrientes

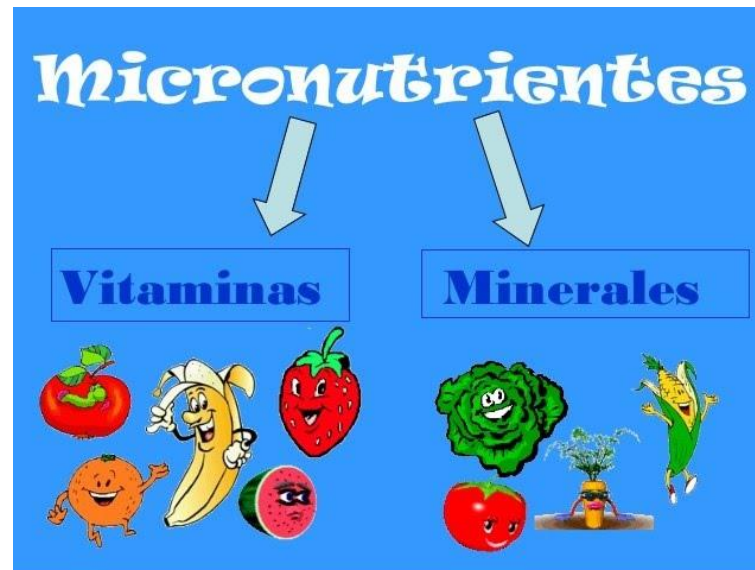


CHON-PS

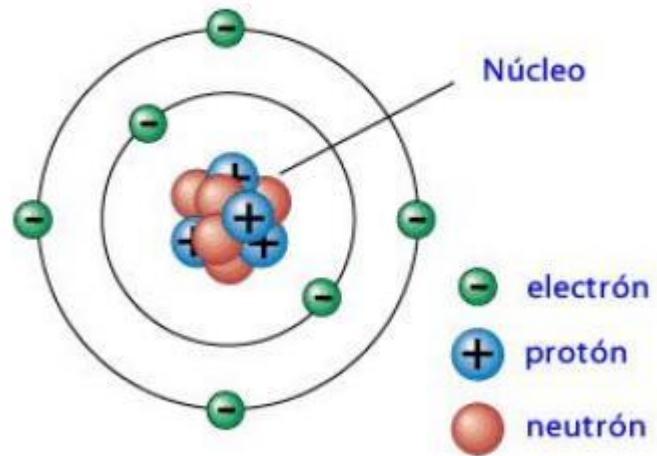
Los seres vivos y los alimentos

Somos lo que comemos y bebemos

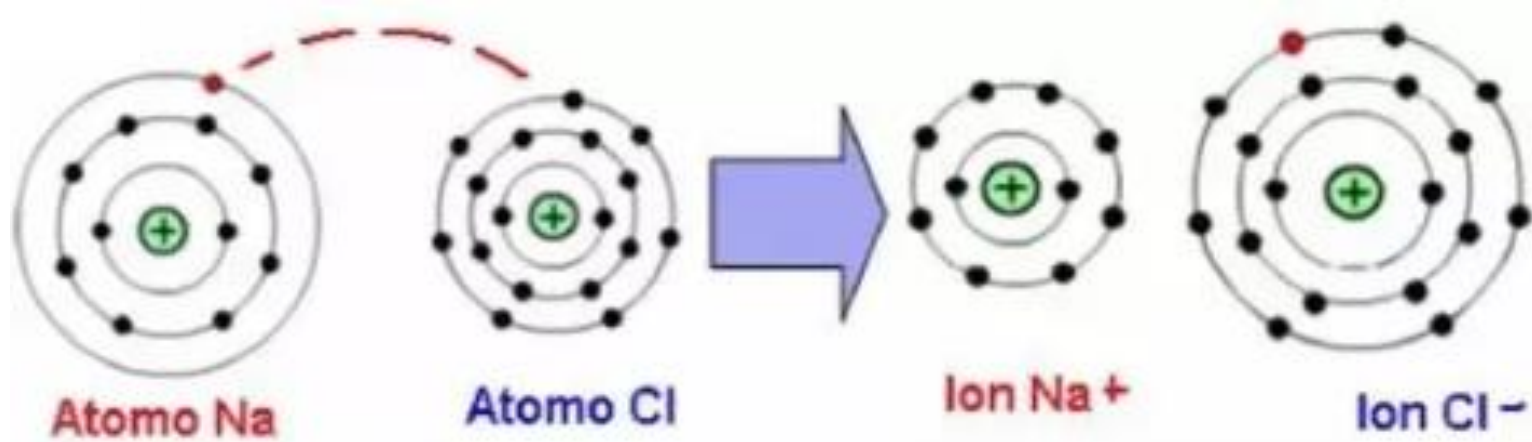
Micronutrientes



Átomos



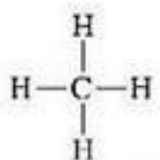
Iones



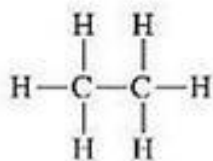
Moléculas



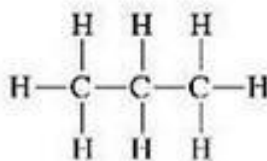
Grupos funcionales (CH)



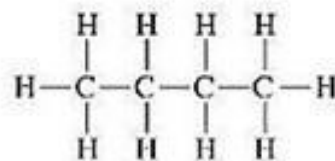
Metano, CH_4



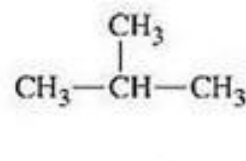
etano, C_2H_6



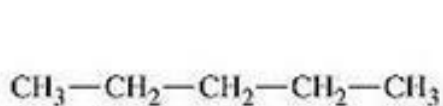
Propano, C_3H_8



Butano, C_4H_{10}

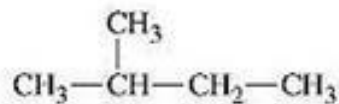


Isobutano, C_4H_{10}

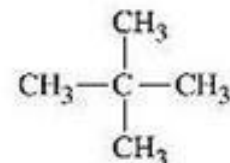


or $\text{H}-(\text{CH}_2)_5-\text{H}$

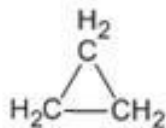
pentano, C_5H_{12}



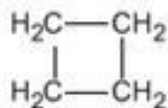
isopentano, C_5H_{12}



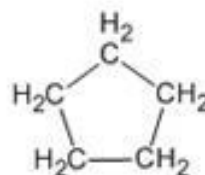
neopentano, C_5H_{12}



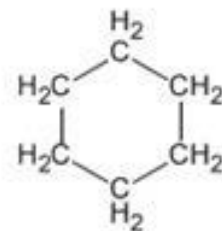
Ciclopropano



Ciclobutano



Ciclopentano



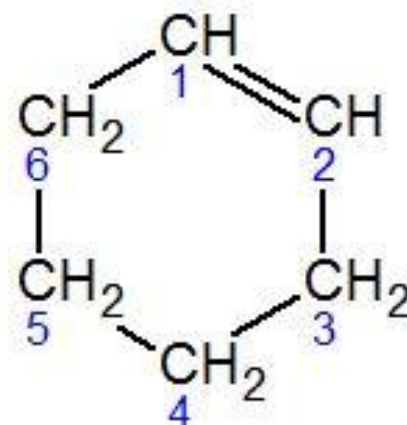
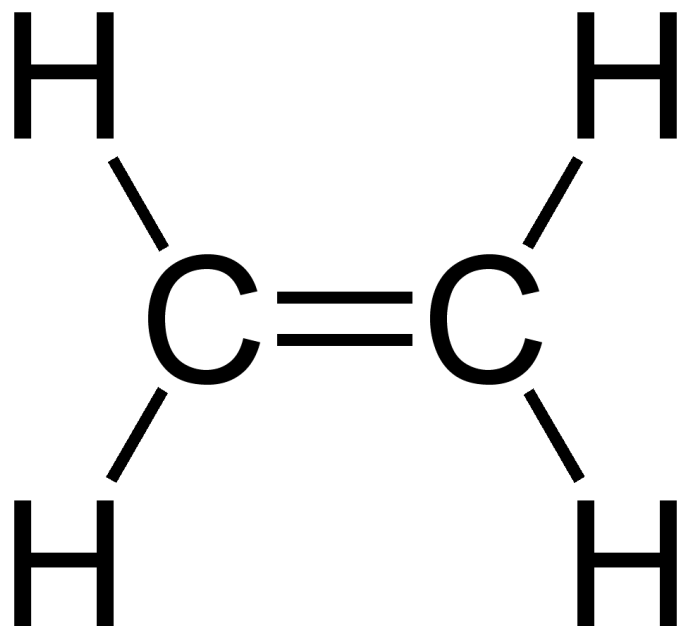
Ciclohexano

Grupo Alcano:

Contiene uniones simples entre C y H o C y C

Son hidrofóbicos

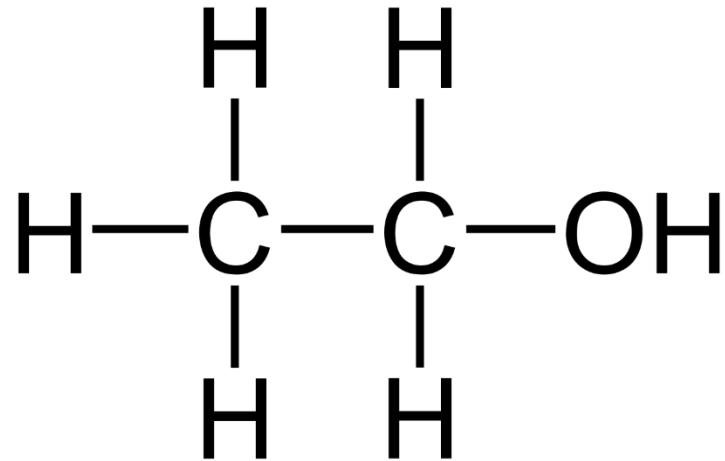
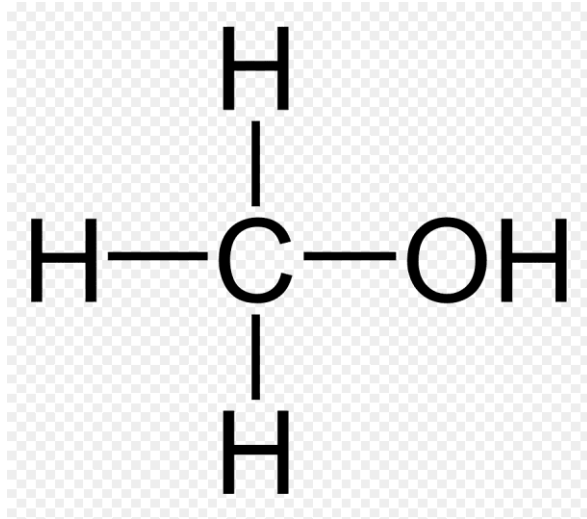
Grupos funcionales (CH)



Grupo Alqueno:

Contiene uniones dobles C y C. Los cíclicos son aromáticos
Son hidrofóbicos

Grupos funcionales (CHO)

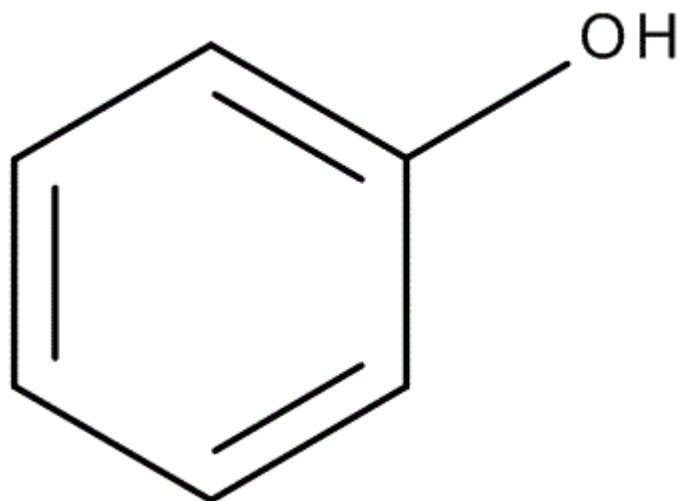


Grupo Alcohol:

Un –OH unido a un carbono que no se encuentra unido a otro oxígeno o nitrógeno

La presencia de grupos –OH hace que las moléculas sean hidrofílicas

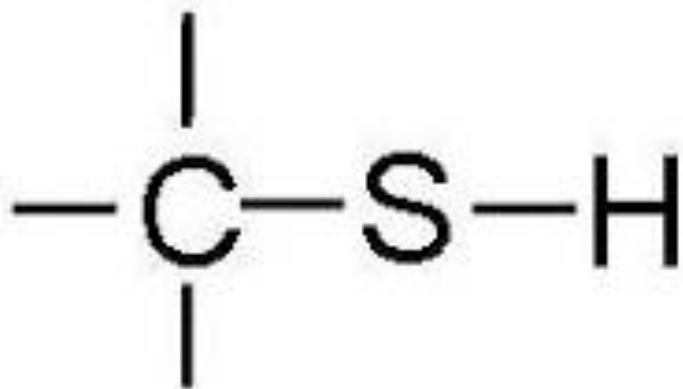
Grupos funcionales (CHO)



Fenol:

Un -OH unido a un carbono anillo aromático

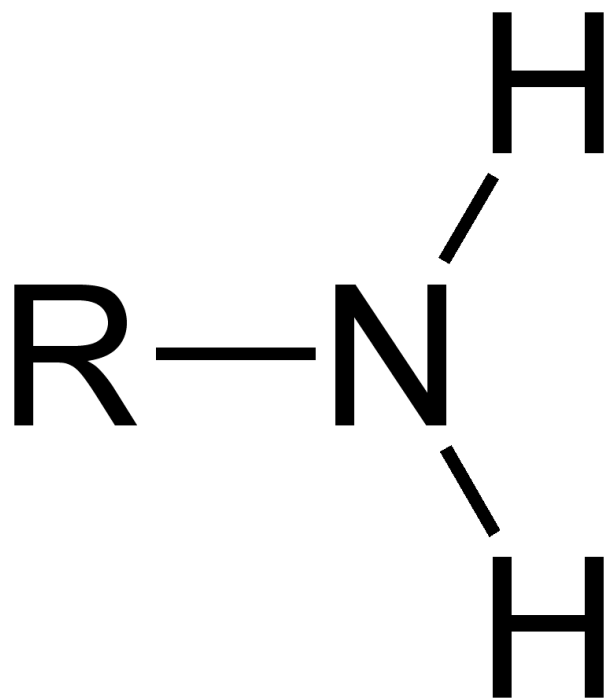
Grupos funcionales



Tiol:

Un -SH unido a un grupo carbono

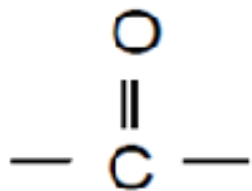
Grupos funcionales (CHON)



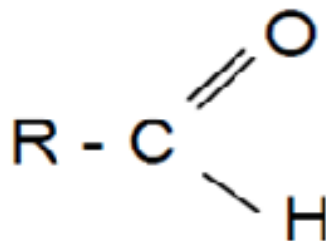
Amino:

Un -NH_2 unido a un grupo carbono

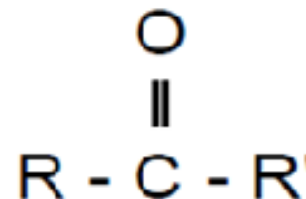
Grupos funcionales



Carbonilo



Aldehído

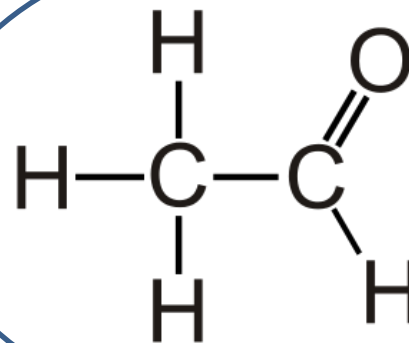


Cetona

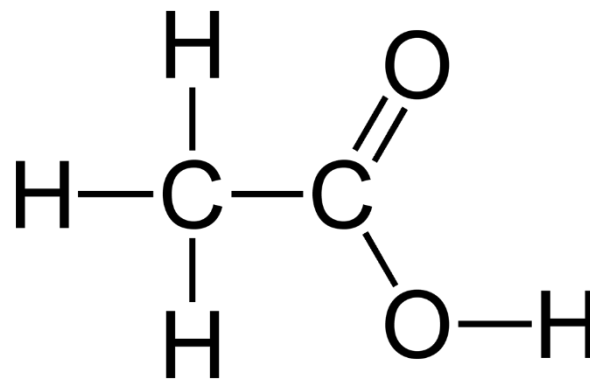
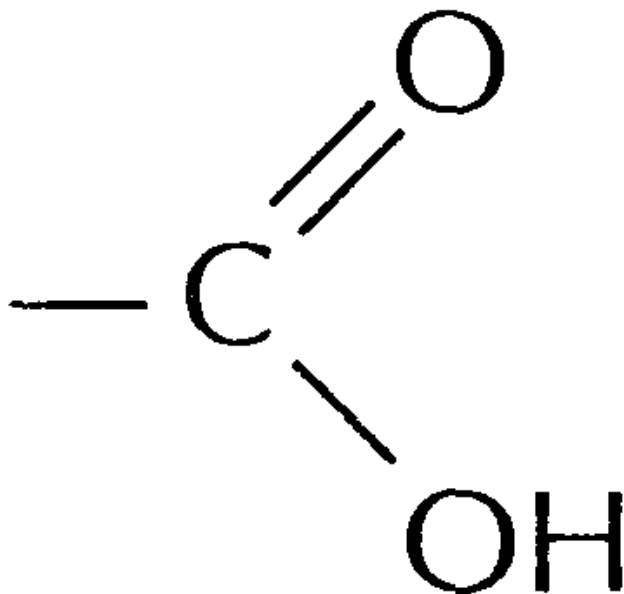
Carbonilo/Aldehído/Cetona:

Un $-\text{C}=\text{O}$ en extremo (aldehído) o en el medio (cetona)

Ejemplo: Etanal, acetaldehído



Grupos funcionales

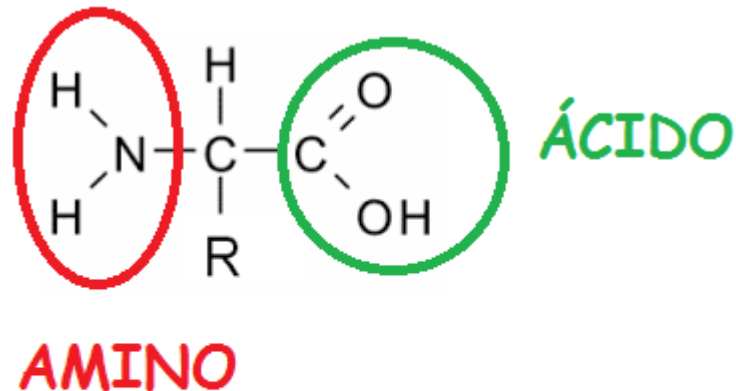


Carboxilo:

Un --C=O y un --OH

Forman los ácidos orgánicos (ácidos carboxílicos), ejemplo ácido acético (etanoico)

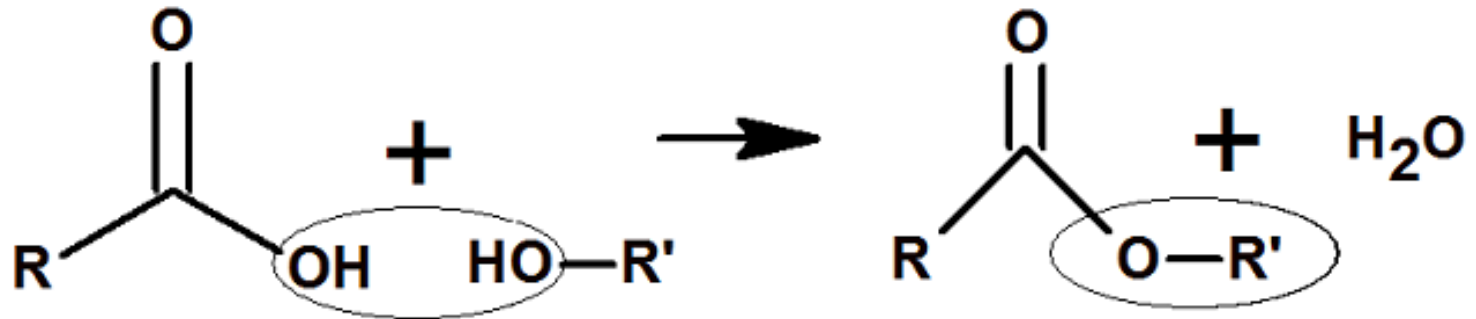
Grupos funcionales combinados



Amino y Carboxilo juntos:

Forman los aminoácidos

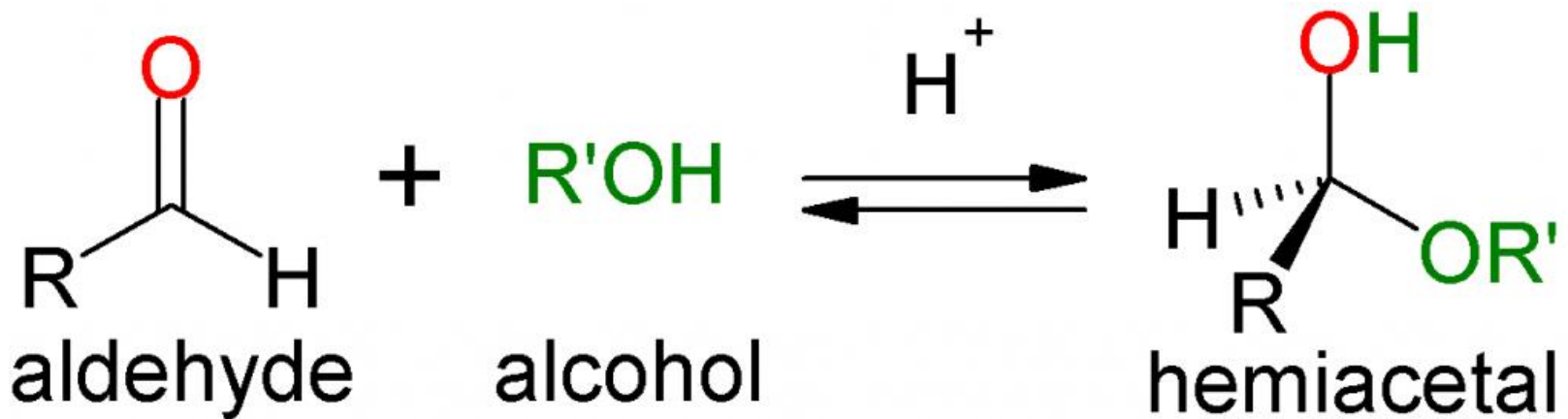
Grupos funcionales combinados



Esteres:

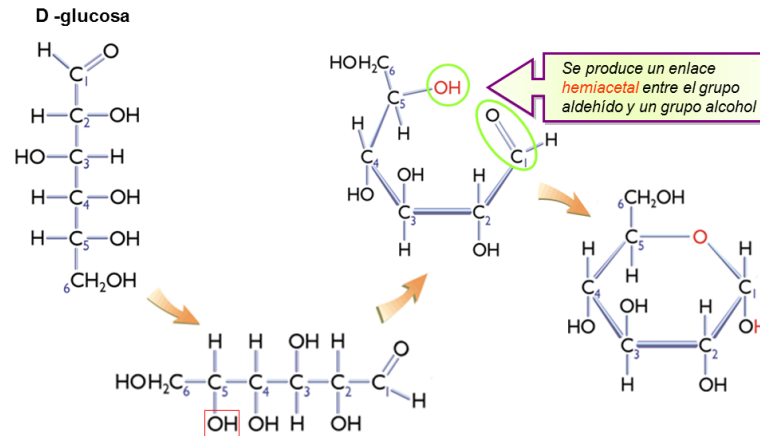
Cuando se combina un grupo ácido con un grupo alcohol

Grupos funcionales combinados

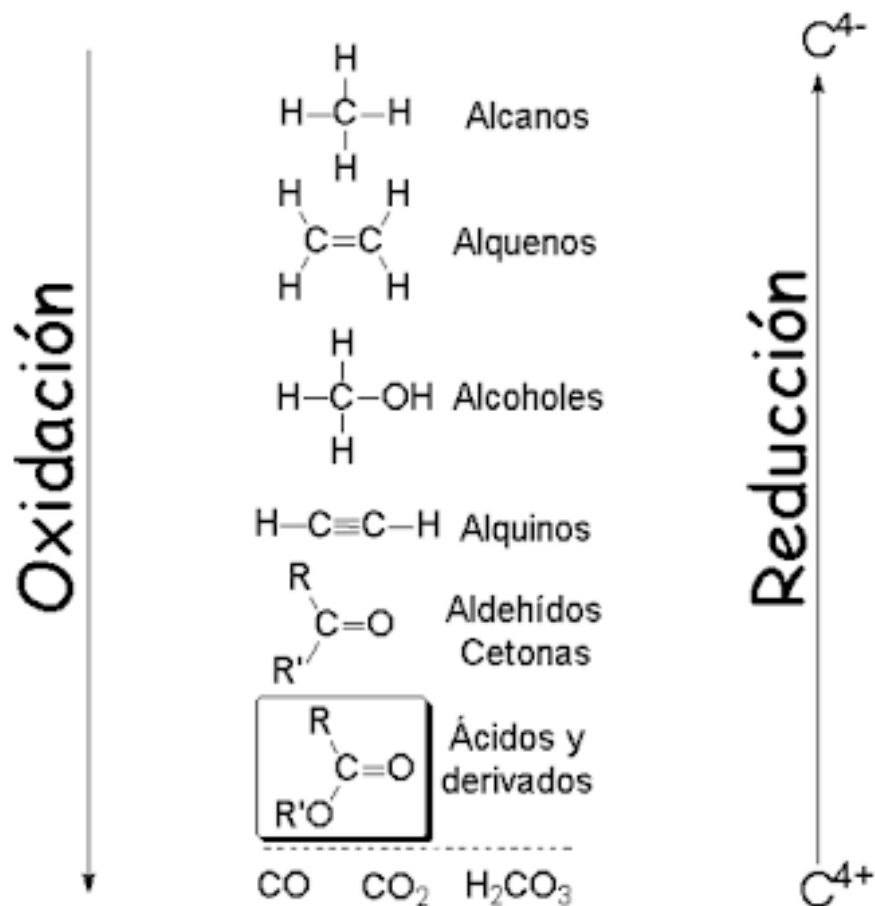


Hemiacetal:

Ejemplo: los azúcares, glucosa

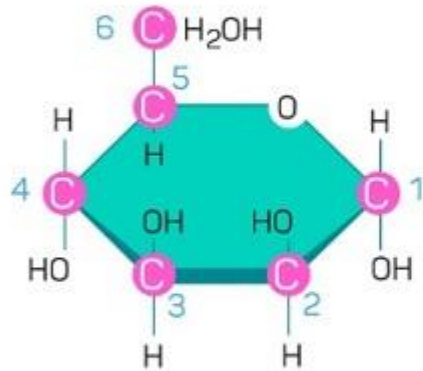


Oxidación

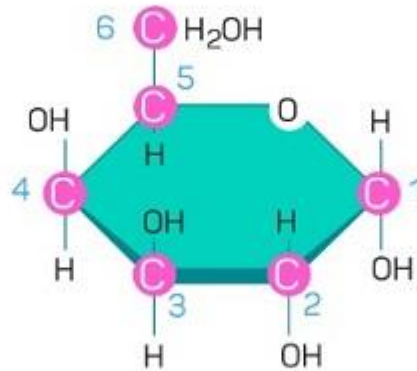


Azúcares

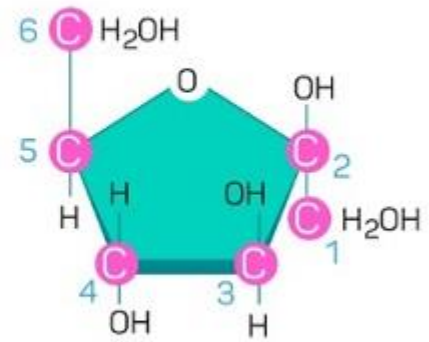
EJEMPLOS DE MONOSACÁRIDOS



Glucosa



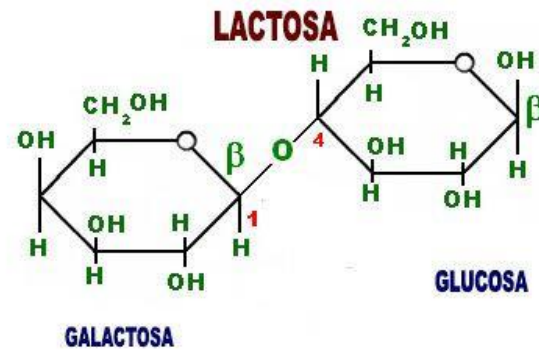
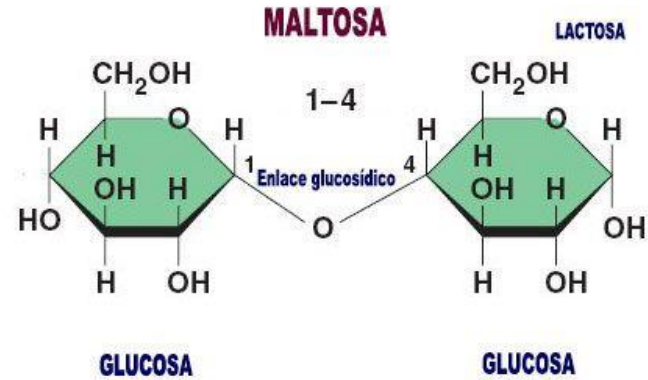
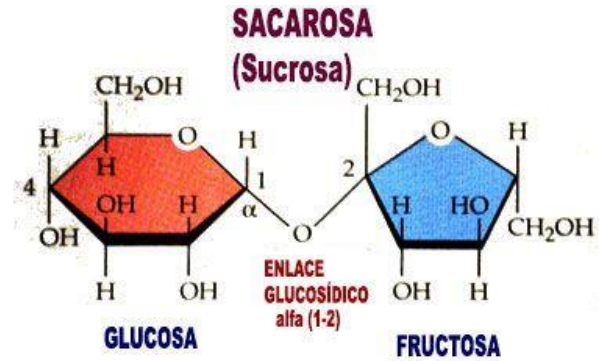
Galactosa



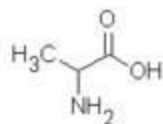
Fructosa

Azúcares

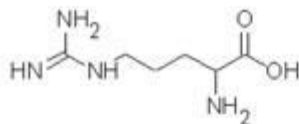
Disacáridos



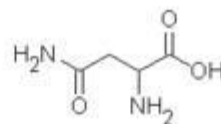
Aminoàcids



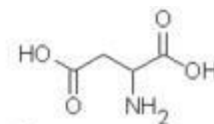
Alanina (Ala)



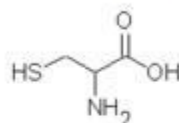
Arginina (Arg)



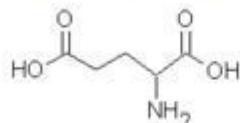
Aspargina (Asn)



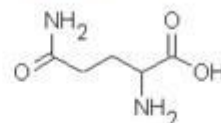
Àcid aspàrtic (Asp)



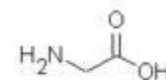
Cisteïna (Cys)



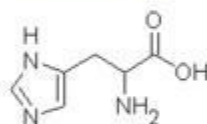
Àcid glutàmic (Glu)



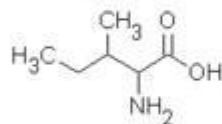
Glutamina (Gln)



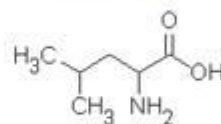
Glicina (Gly)



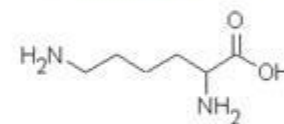
Histidina (His)



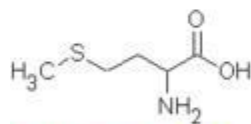
Isoleucina (Ile)



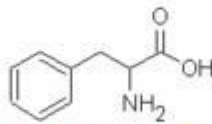
Leucina (Leu)



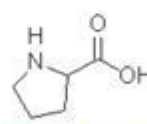
Lisina (Lys)



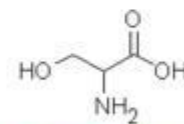
Metionina (Met)



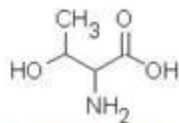
Fenilalanina (Phe)



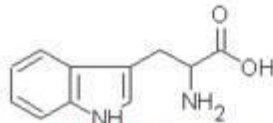
Prolina (Pro)



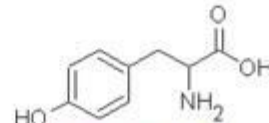
Serina (Ser)



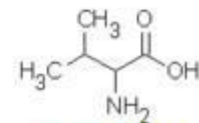
Treonina (Thr)



Triptòfan (Trp)



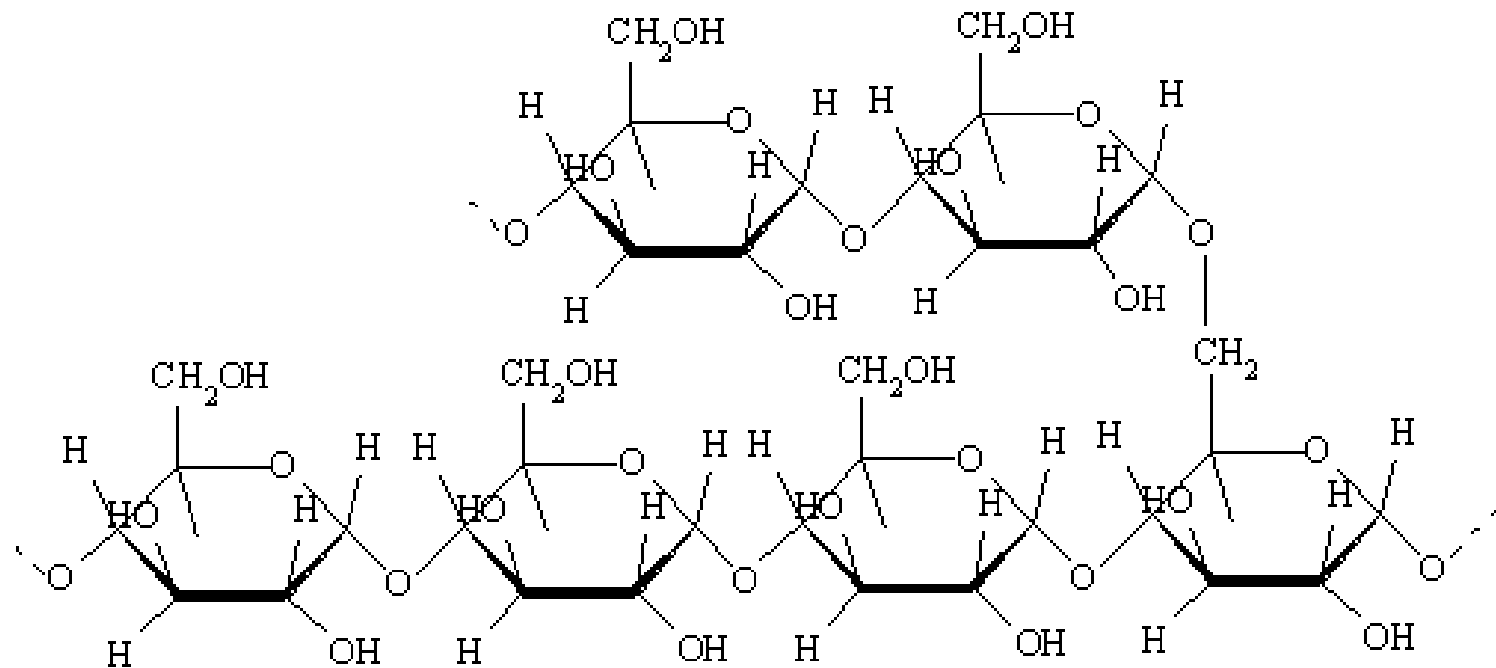
Tirosina (Tyr)



Valina (Val)

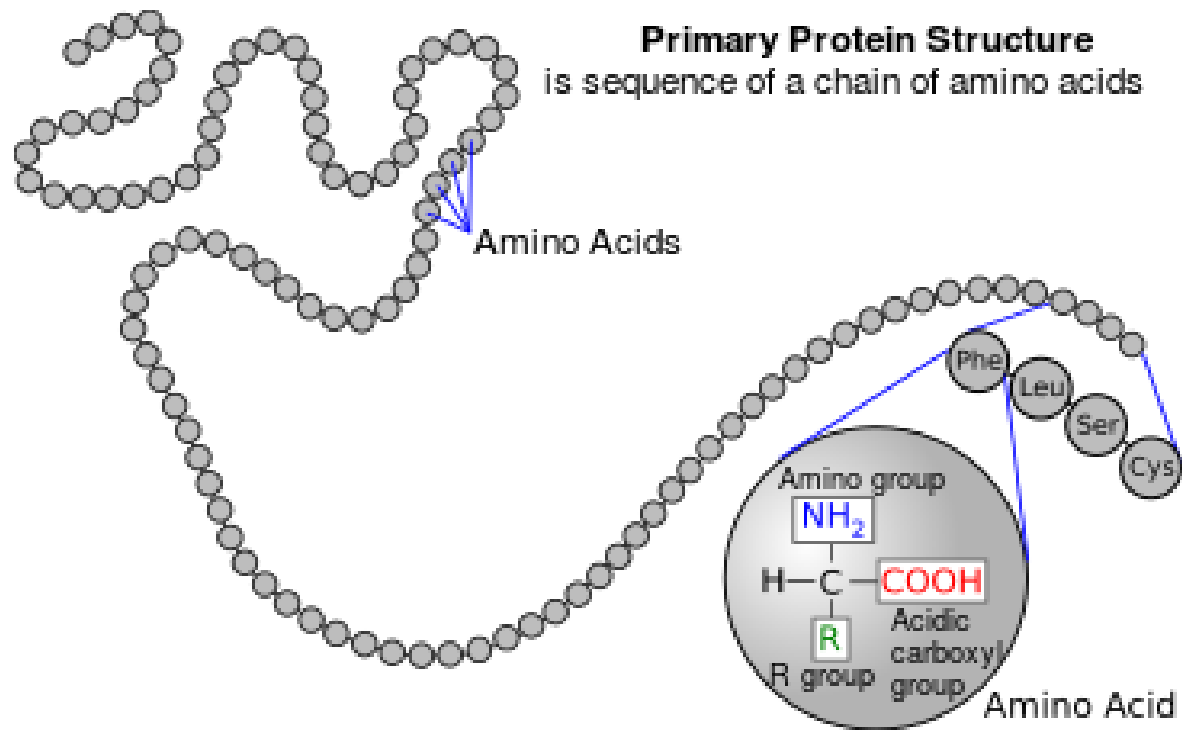
Macromoléculas

Polisacáridos



Macromoléculas

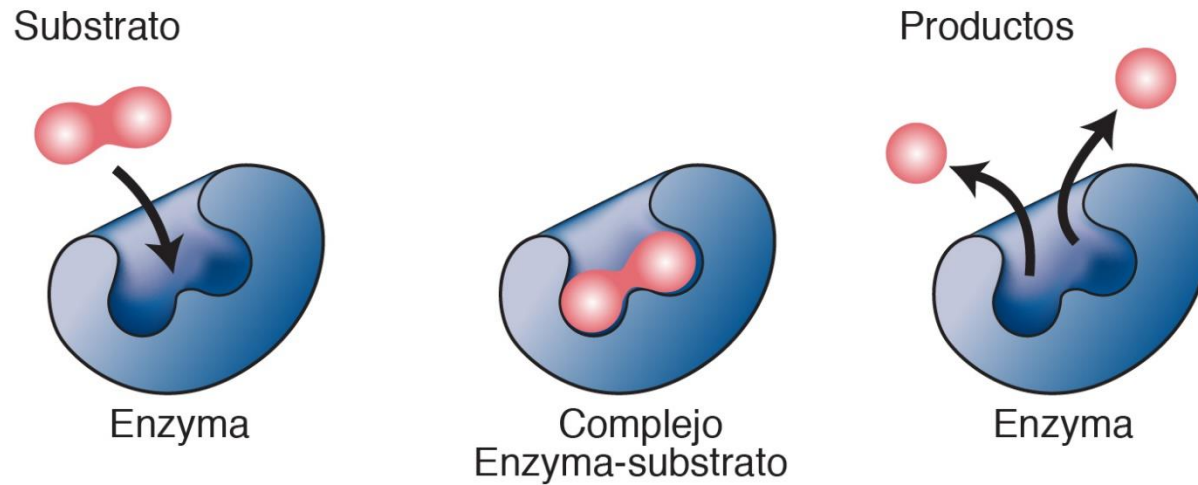
Proteínas



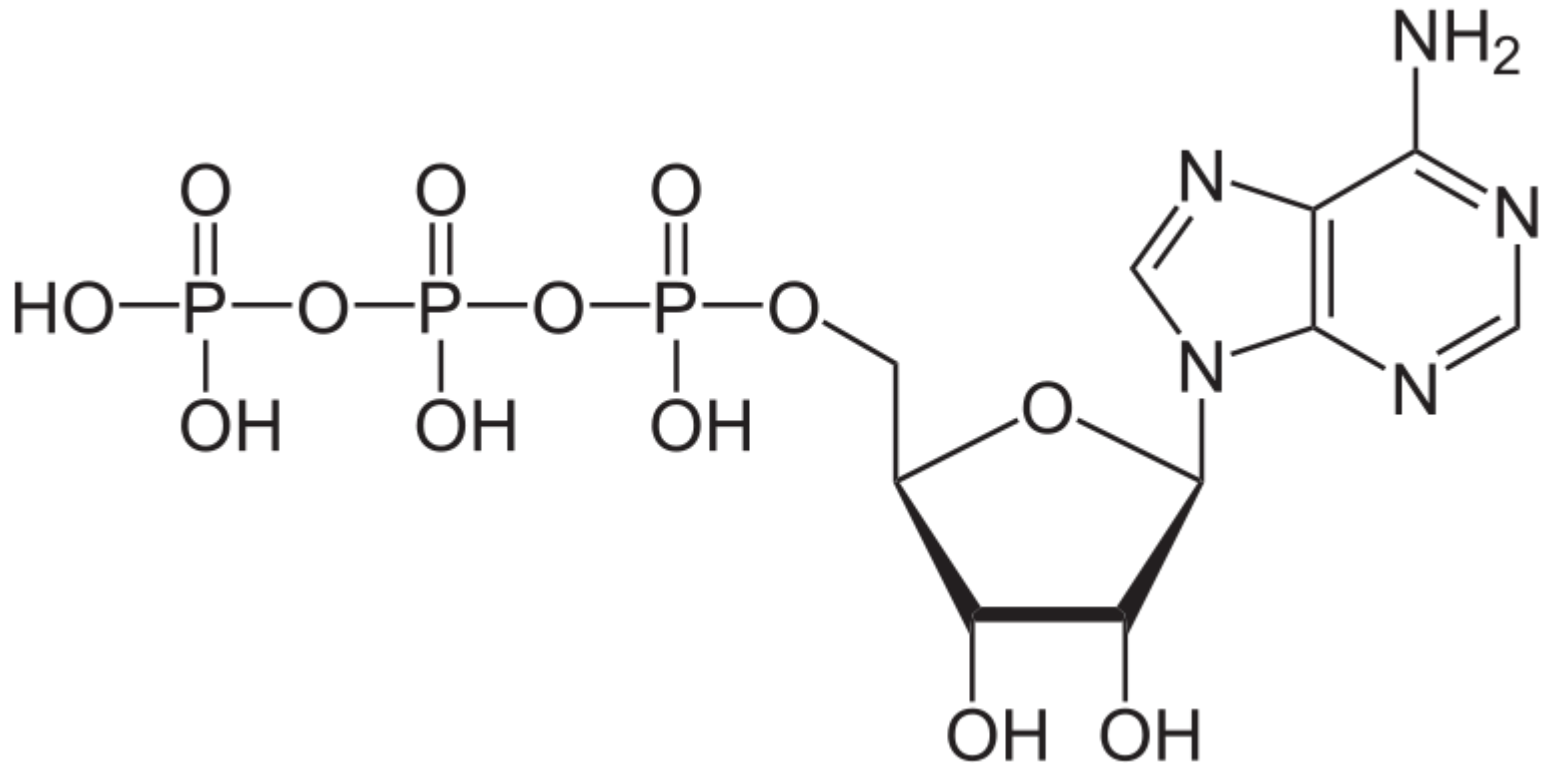
Macromoléculas

Enzimas

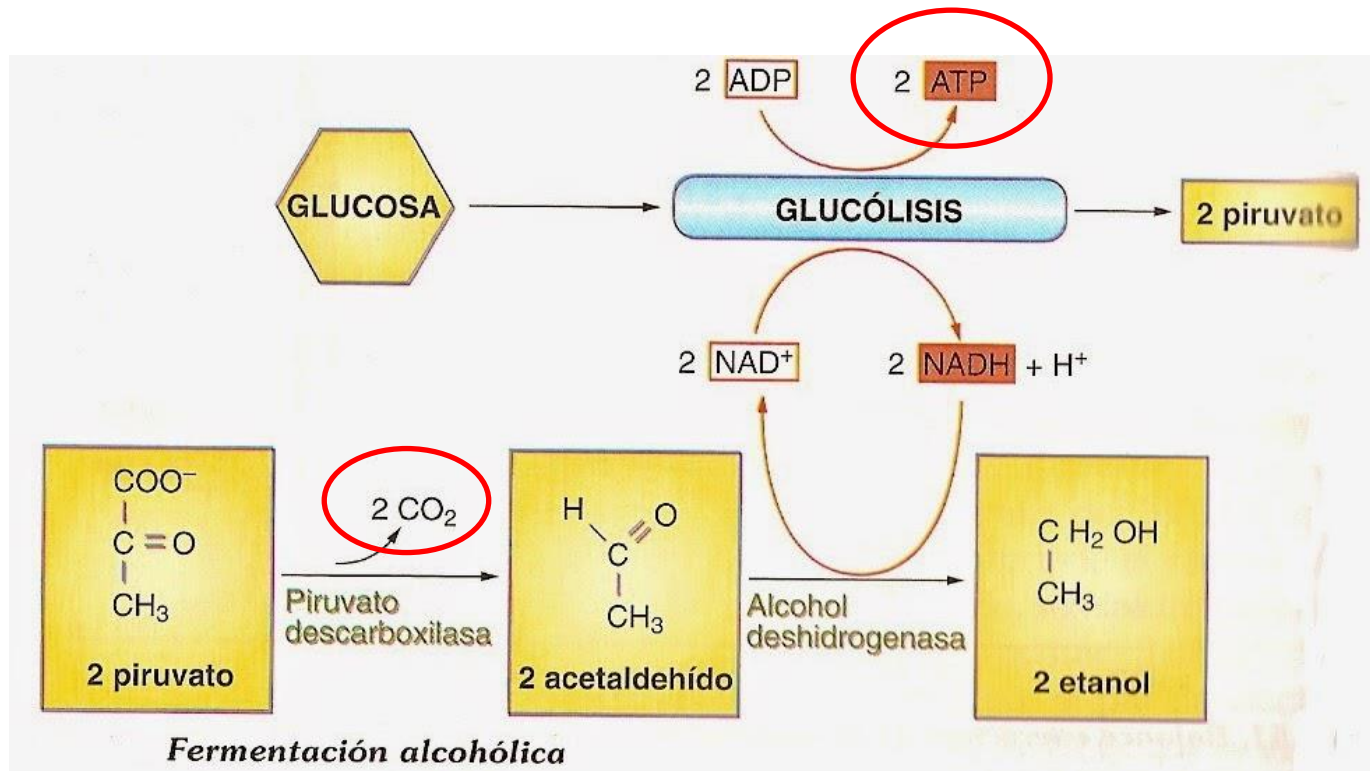
Mecanismo de la actividad de una enzima



La molécula de la energía (ATP)



Fermentación alcohólica





Nuestros datos

Canal de YouTube
Capacitaciones El Molino



Nuestra WEB
www.capacitacioneselmolino.com



Instagram

Instagram y Facebook
Insumos El Molino



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