

ZUCCHERI O CARBOIDRATI

FORMULA MINIMA $\text{C}_n\text{H}_{2n}\text{O}_n$ $\text{C}(\text{H}_2\text{O})$



$$n = 3$$



$$n = 6$$



PROPRIETÀ: - energetica

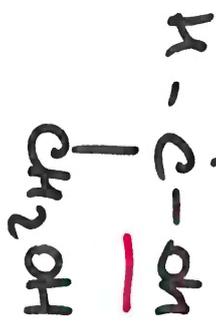
→ riserva: amido (vegetali)
glicogeno

→ sostegno: cellulosa
pareti cellulari
(batteri)
esocitetti: degli insetti

→ funzione di riconoscimento



TRĒOSI \rightarrow 3 atomi di C



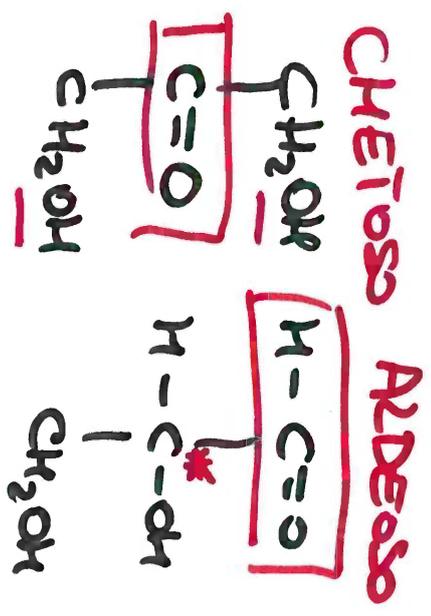
D-TRĒOSO



L-TRĒOSO

} ENANTIOMERI

ISOMERI

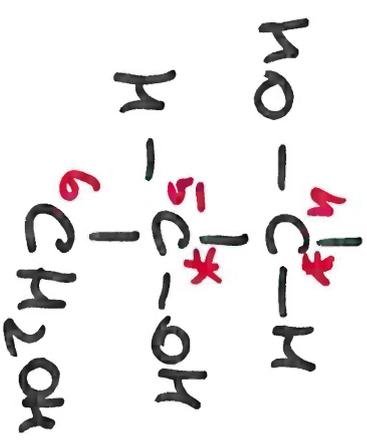


* chirale

Esoso = 6 atomi di C

4 centri chirali

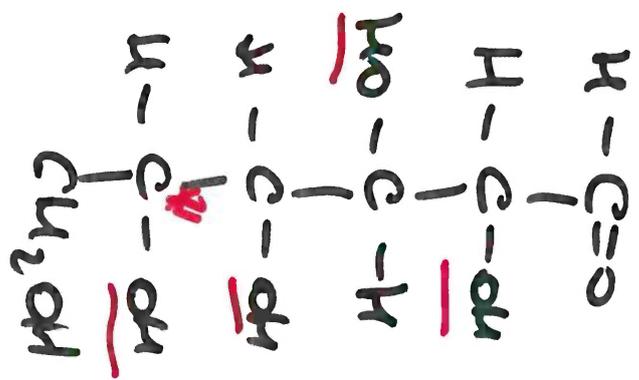
$$2^4 = 16$$



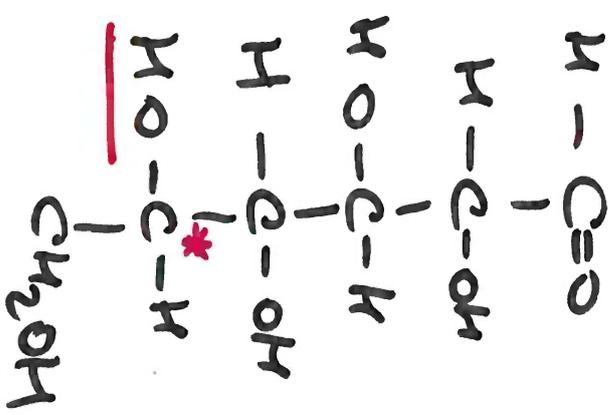
Zuccheri D \Rightarrow -OH del C*
piu' lontano e' a
destra

L \Rightarrow sinistra

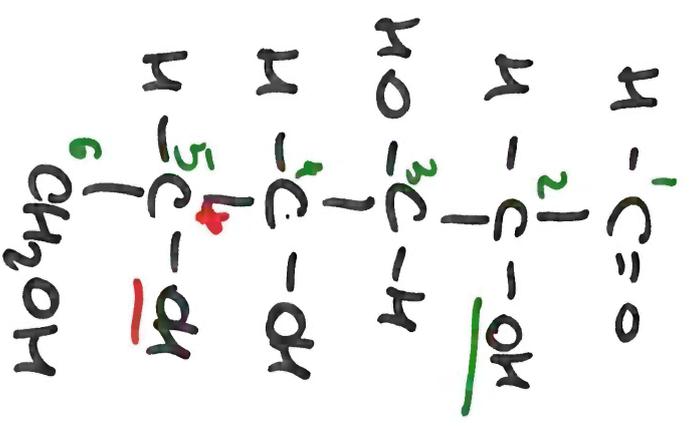
Glucosio



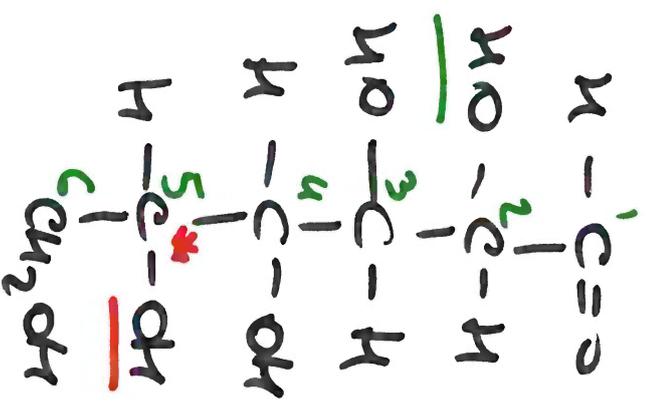
D-glucosio



L-glucosio



D-glucosio



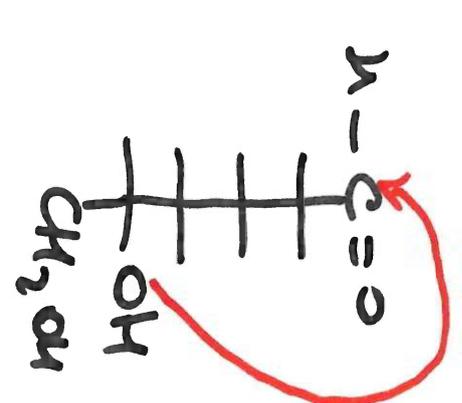
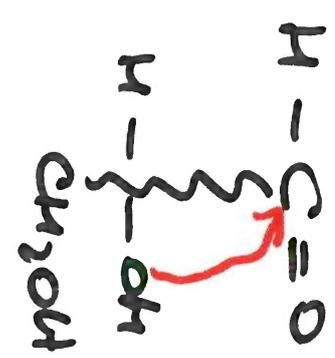
D-mannosio

→ configurazione diversa

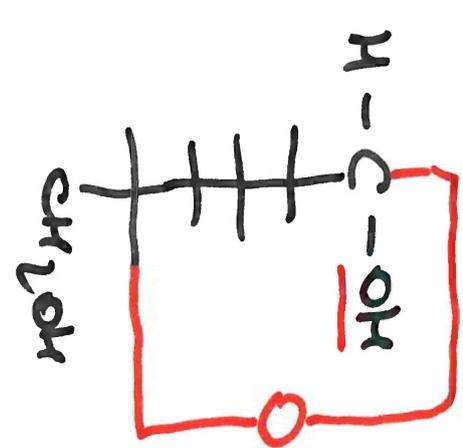
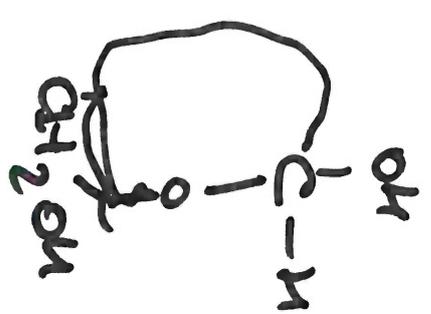
⇒ EPIMERI

FORMULE DI FISCHER:

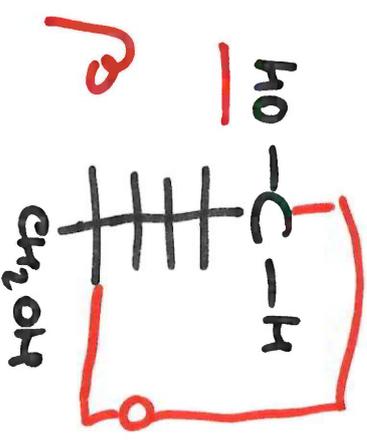
struttura aperta



D-Зucchero

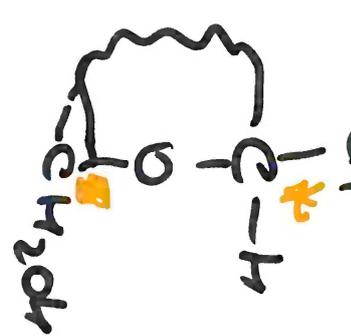


аномеро β



аномеро α

ETHI ACETALE



chiral

Il soluzione, gli aldosi e i chetosi che formano strutture ad anello sono in **equilibrio tra le diverse forme cicliche e le forme a catena aperta.**

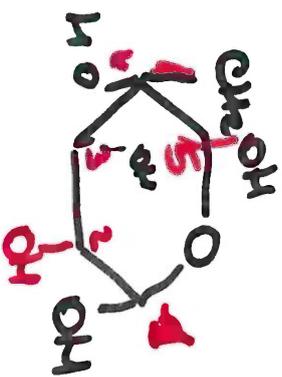
A 31°C il D-glucosio è presente come miscela all'equilibrio costituita da:

- un 64% di anomero β ,
- un 36 % di anomero α
- una quantità molto piccole di struttura aperta.

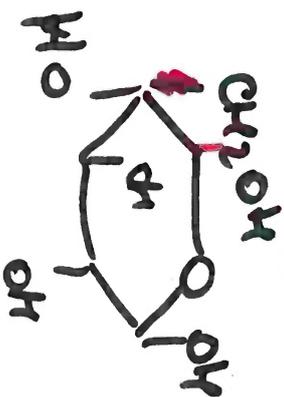
Il ribosio per esempio all'equilibrio è una miscela di:

- 58.5% di β -D-ribopiranosio,
- 21.5% di α -D-ribopiranosio,
- 13.5% di β -D-ribofuranosio
- 6.5% di α -D-ribofuranosio
- più una frazione trascurabile di struttura aperta.

L'abbondanza relativa delle varie forme riflette la loro stabilità.



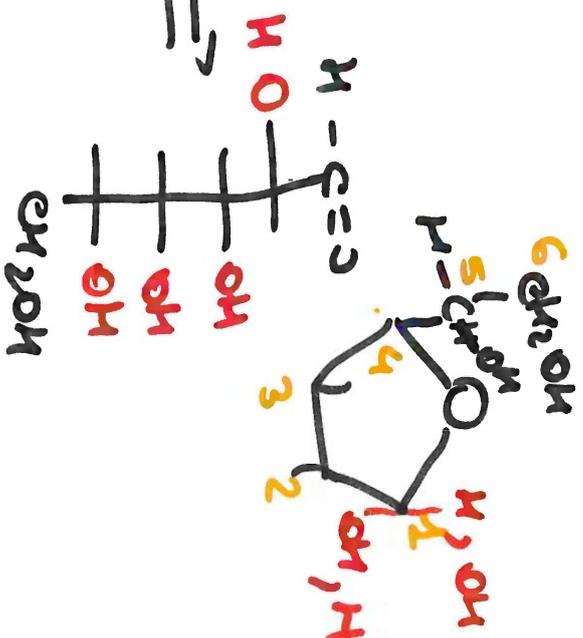
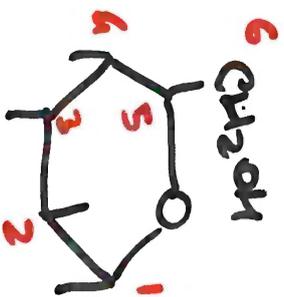
α -D-glucose
36%



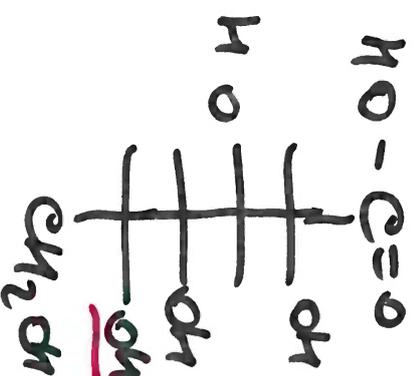
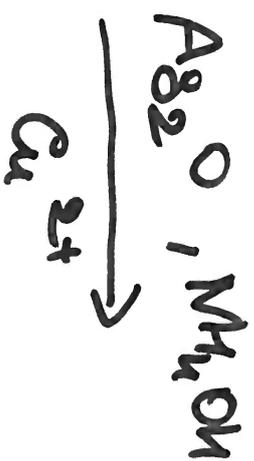
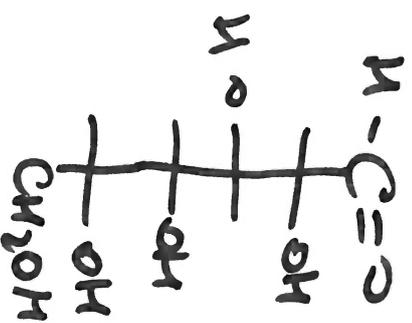
β -D-glucose
64%

ФОРМЕ ПРОСРЕТИСКИ

D1 НАРВОРТН

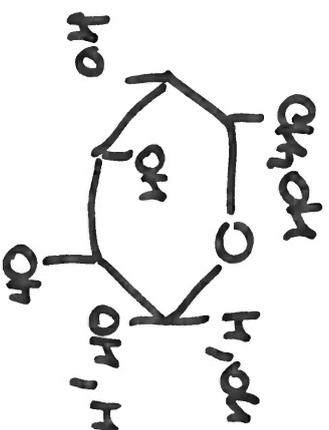


Glucosio è uno zucchero riducente

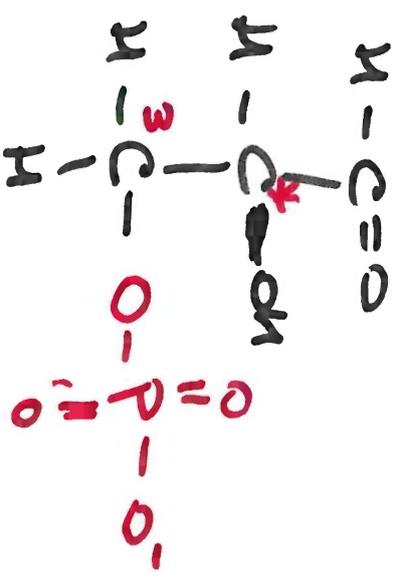


D-glucosio

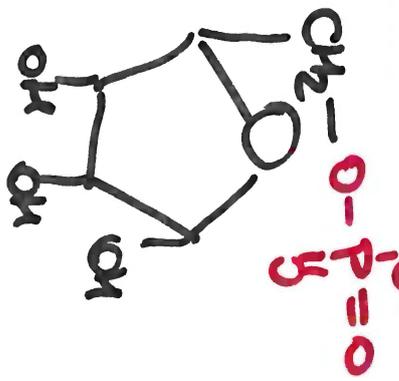
Acido D-glucosico



ZUCCHERI FOSFATI



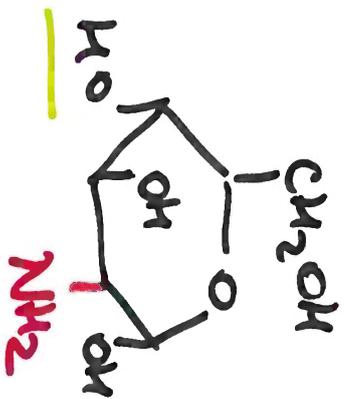
D-glicera aldeide - 3 - fosfato



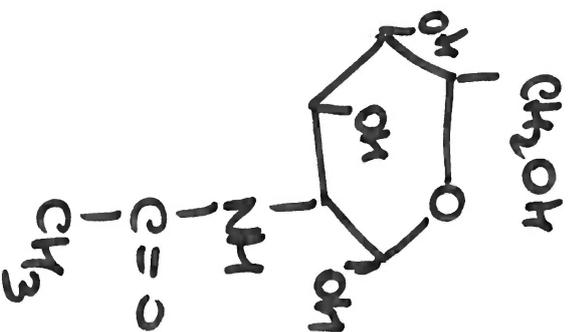
α , D-ribosio-5-fosfato

Zucchero a
5 atomi di C

АМИНО ЗУСЧВР



α, D -glucosaminina



N-ацетил- α, D -галктоза =
samina

ГАЛАКТОЗИО

