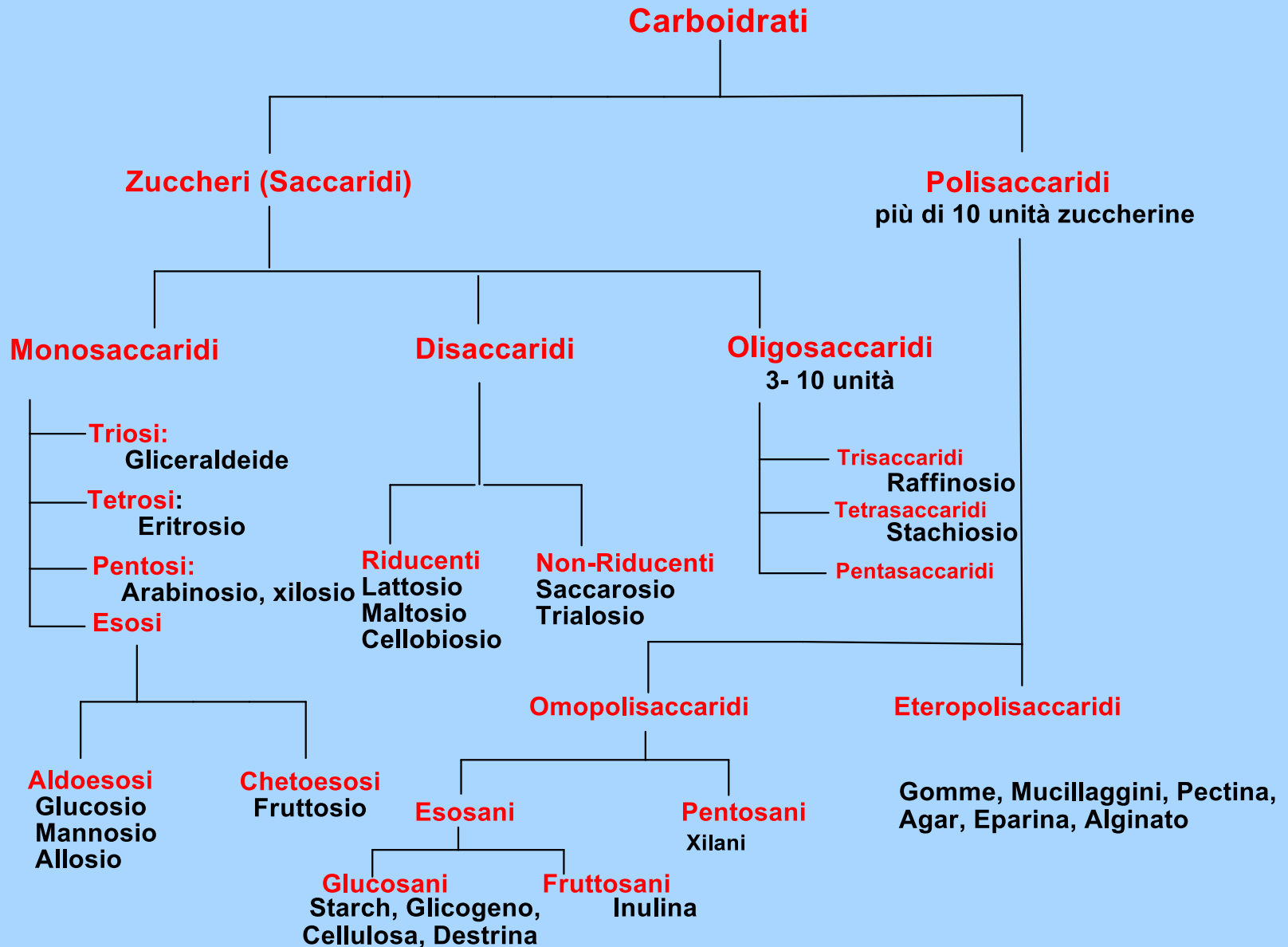


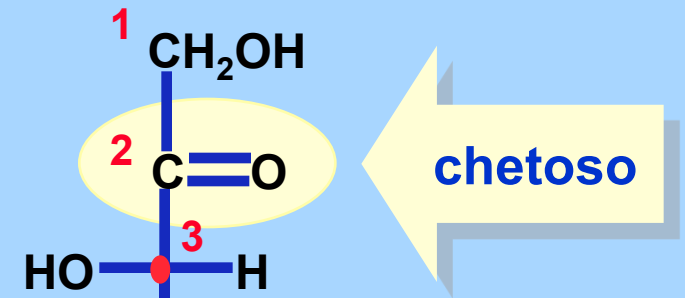
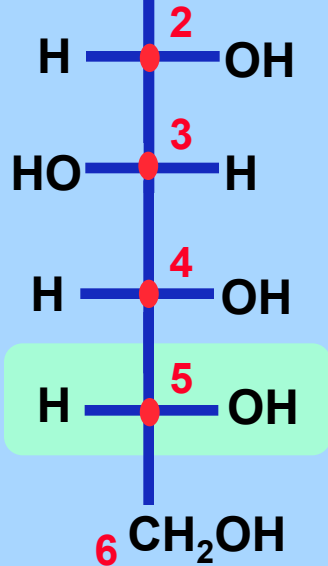
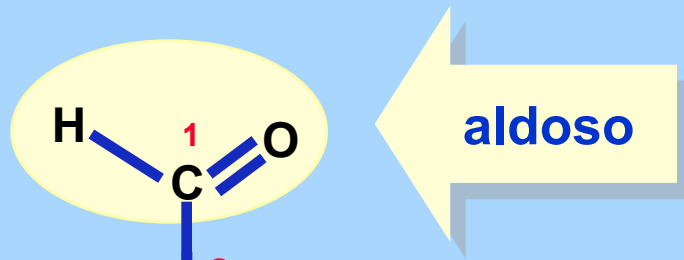
SAGGI DI RICONOSCIMENTO DEI CARBOIDRATI

Prof. Antonio Lavecchia

Classificazione dei Carboidrati



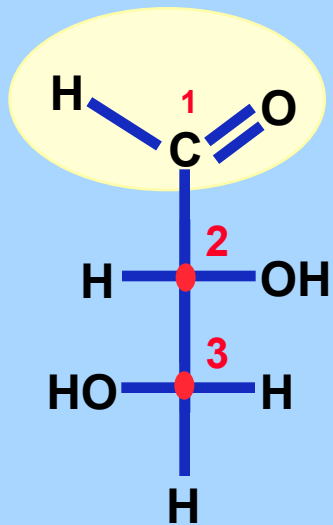
Carboidrati



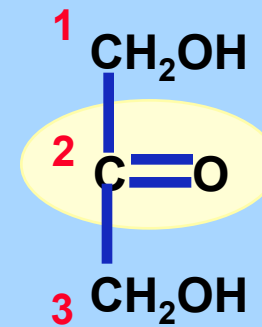
1,3(S),4(R),5(R),6-pentaidrossi-esan-2-one

D-fruttosio

Carboidrati

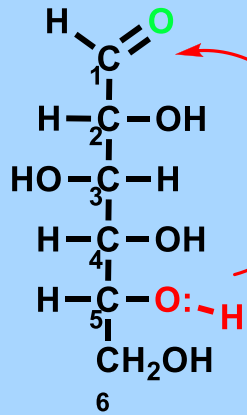


Gliceraldeide

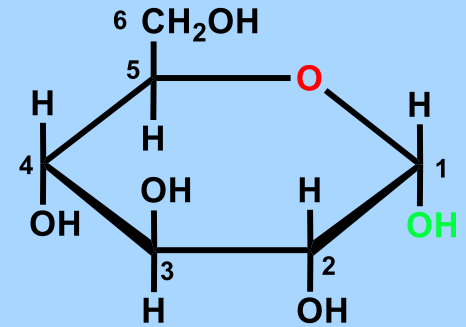
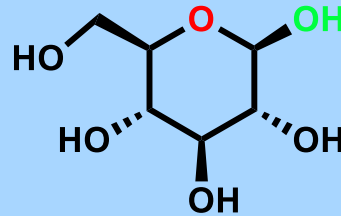
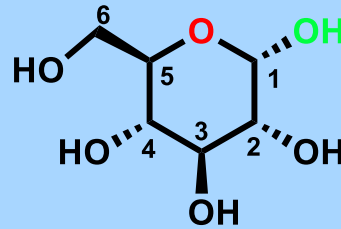


Diidrossiacetone

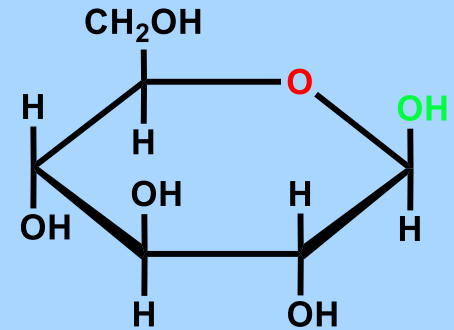
Carboidrati



glucoso

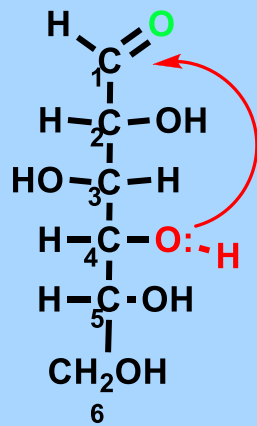


α -D-Glucopiranosio

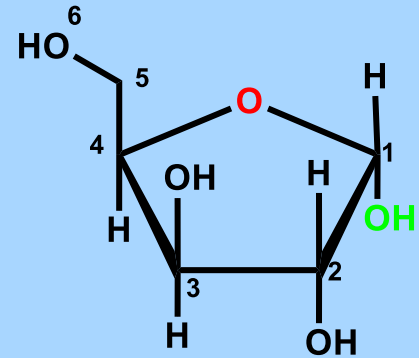
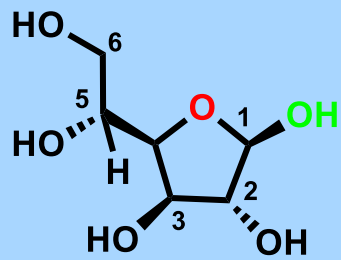


β -D-Glucopiranosio

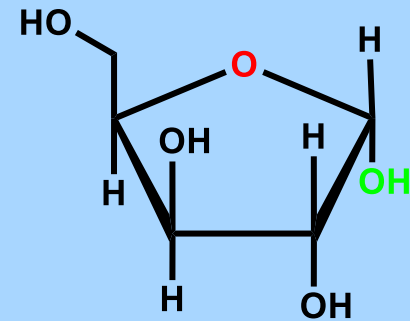
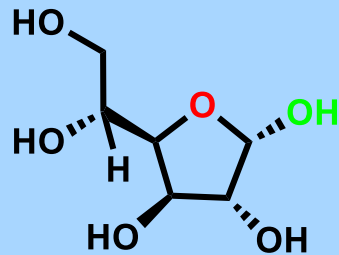
Carboidrati



glucoso

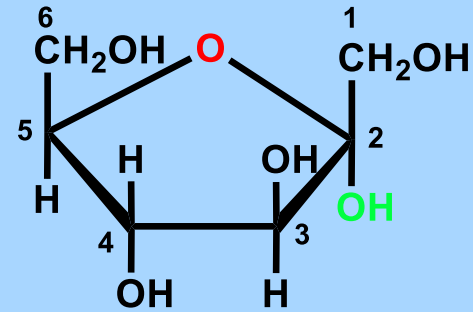
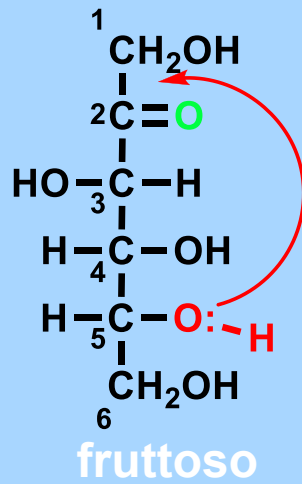


α -D-Glucofuranoso



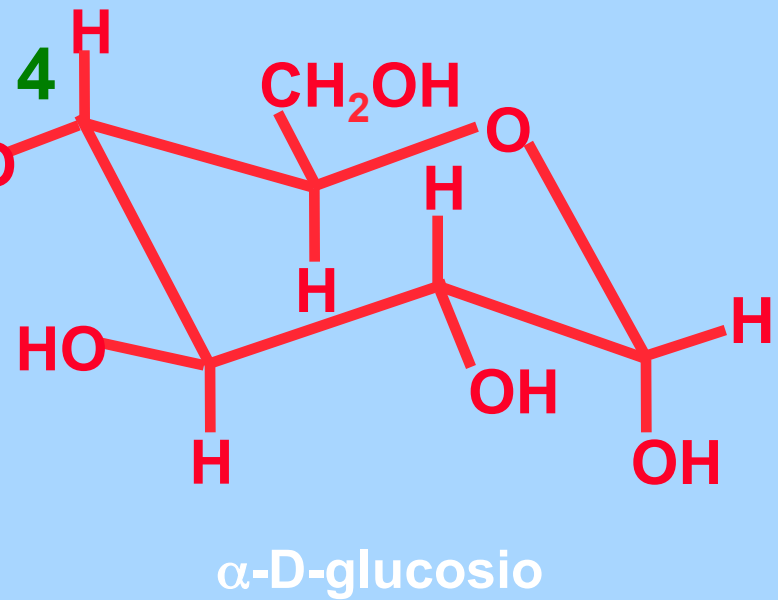
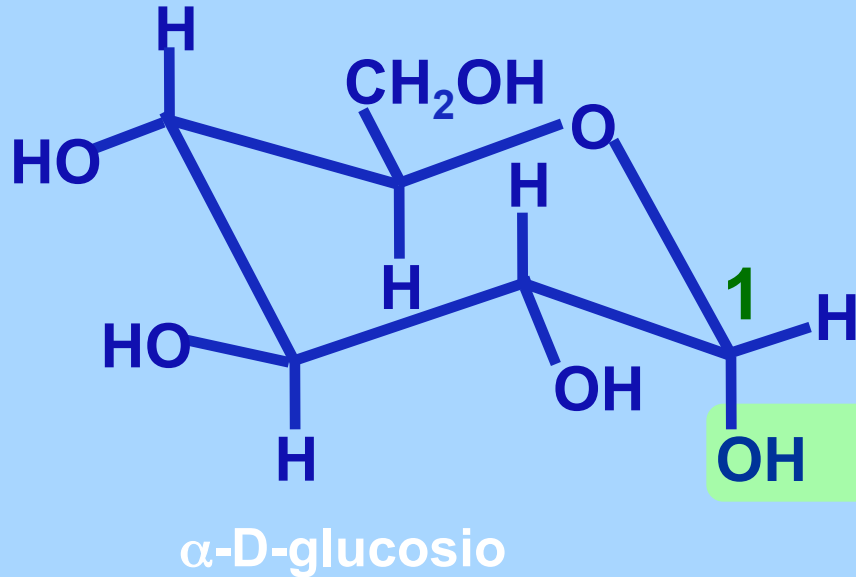
β -D-Glucofuranoso

Carboidrati

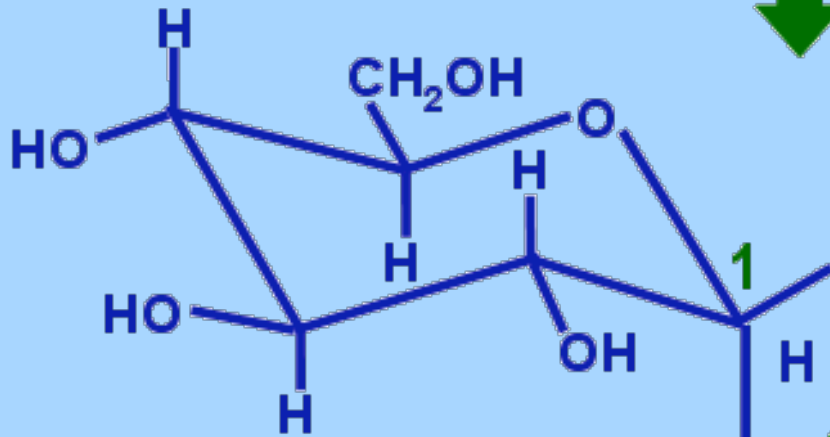


α-D-fruttofuranoso

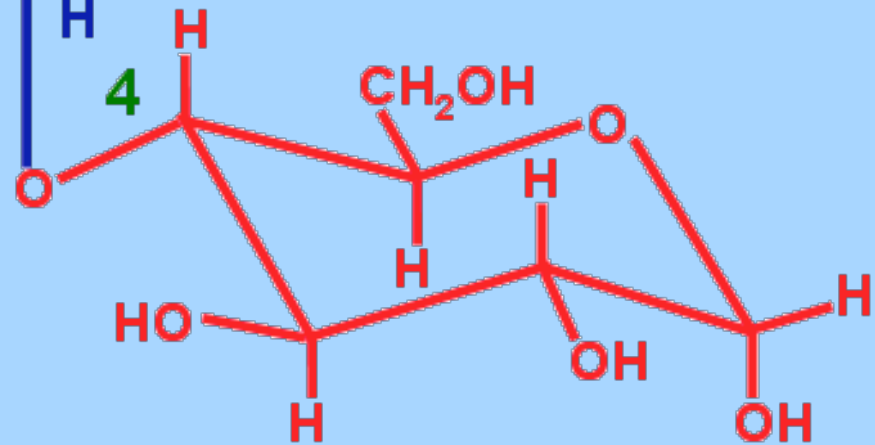
due monosaccaridi
si legano con
legame glicosidico



Glicosidi: Maltosio



α -D-glucosio



α -D-glucosio

MALTOSIO

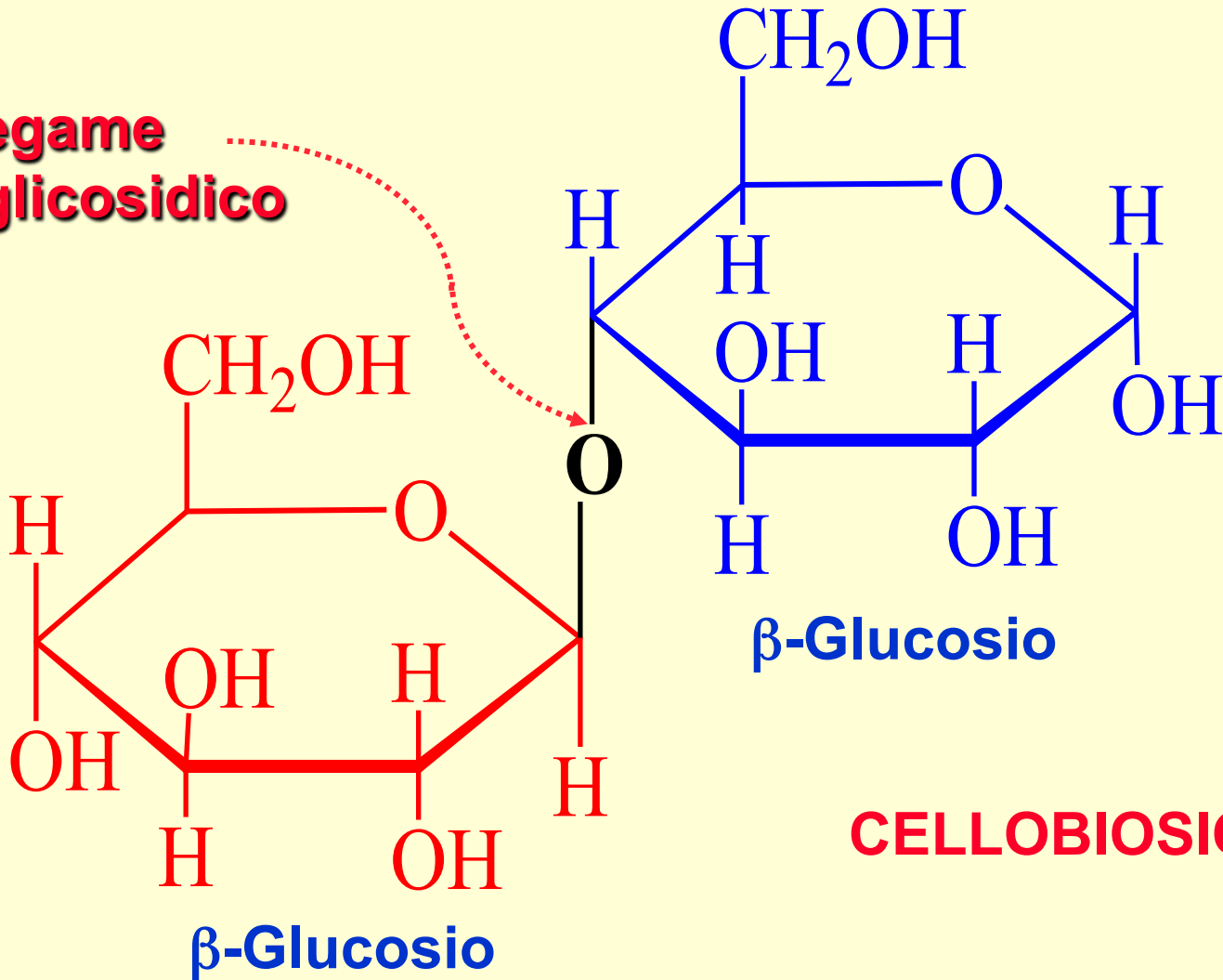
α -D-glucopiranosil-4-D-glucopiranosio

Ha proprietà riducenti



Glicosidi: Cellobiosio

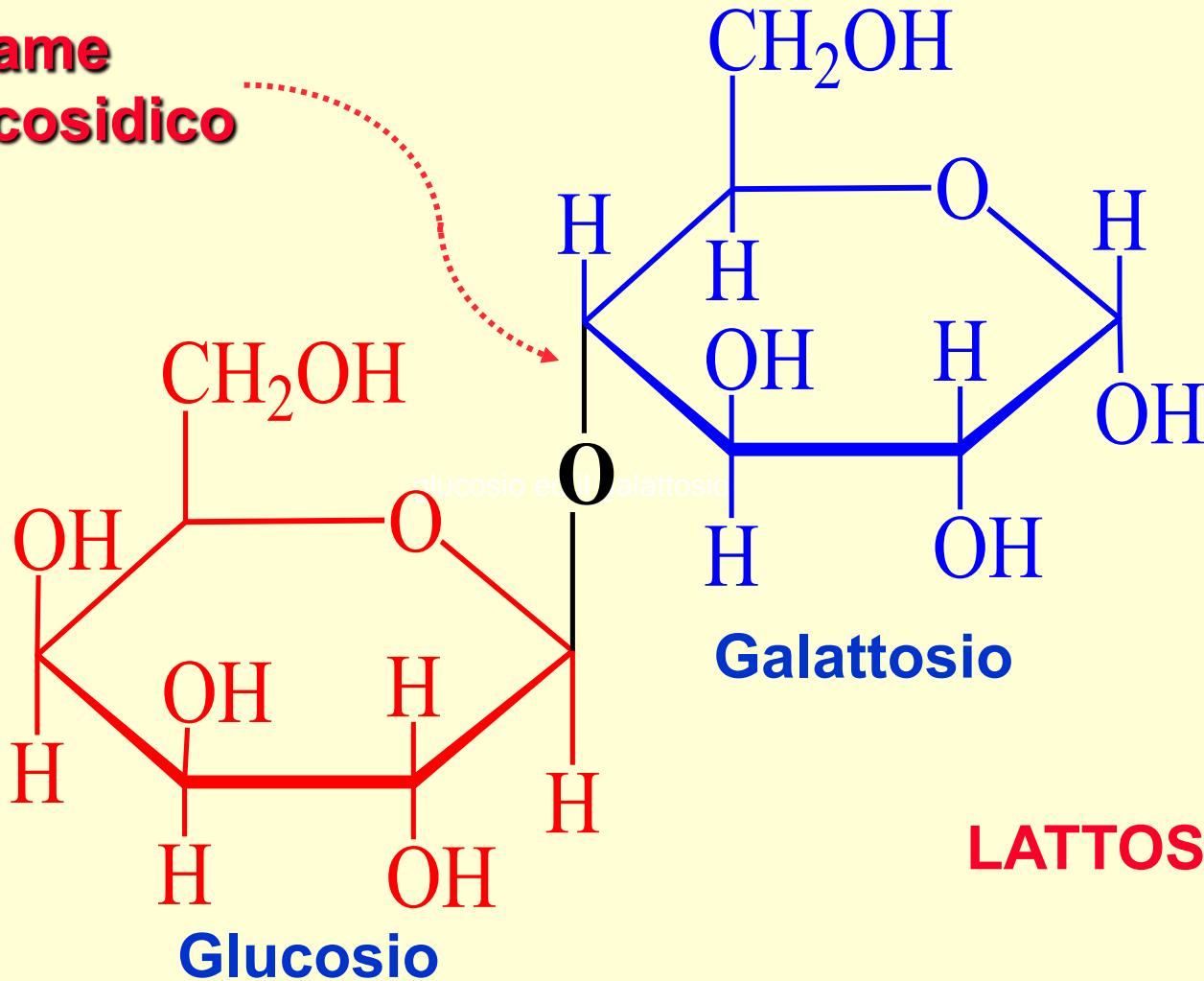
**Legame
1,4- β -glicosidico**



β -D-glucopiranosil-4-D-glucopiranosio

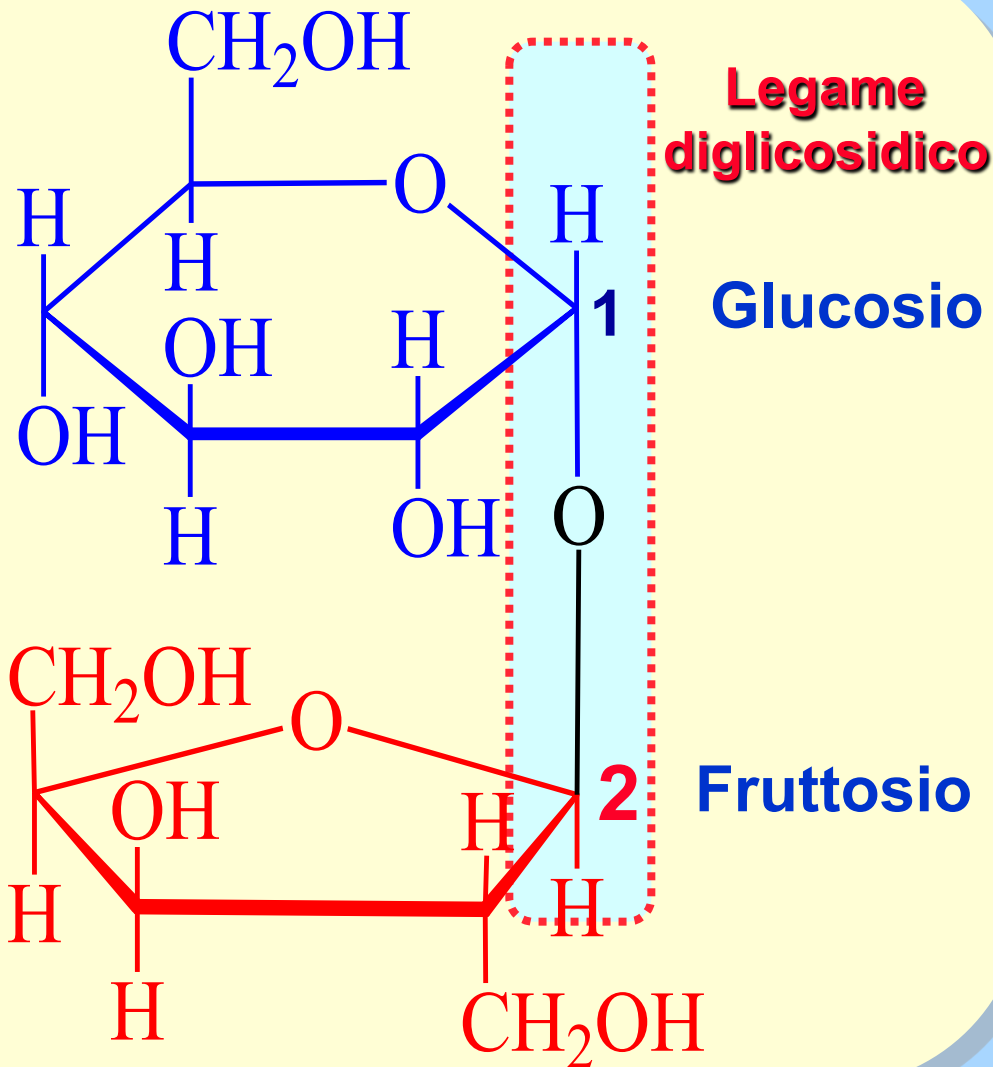
Glicosidi: Lattosio

**Legame
1,4- β -glicosidico**



β -D-galattopiranosil-4-D-glucopiranosio

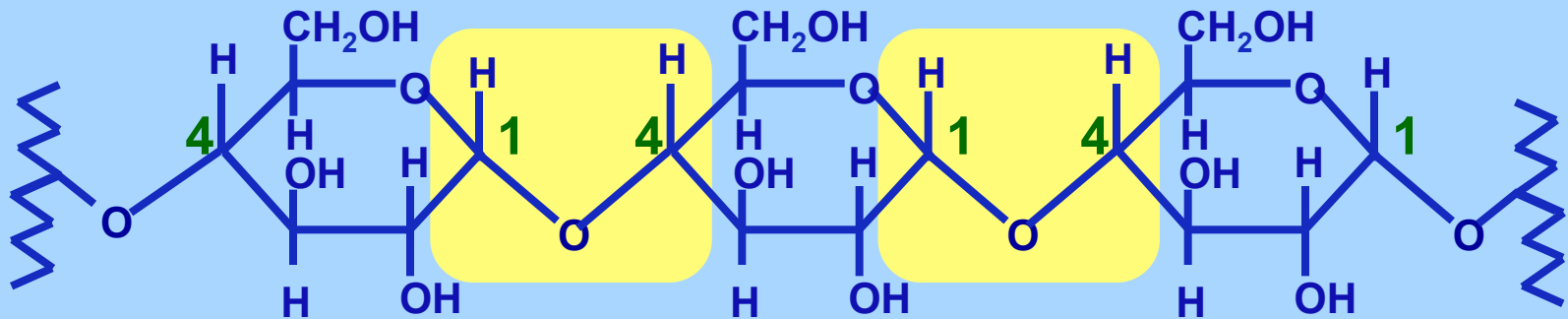
Glicosidi: Saccarosio



SACCAROSIO

α -D-glucopiranosil- β -D-fruttofuranoside

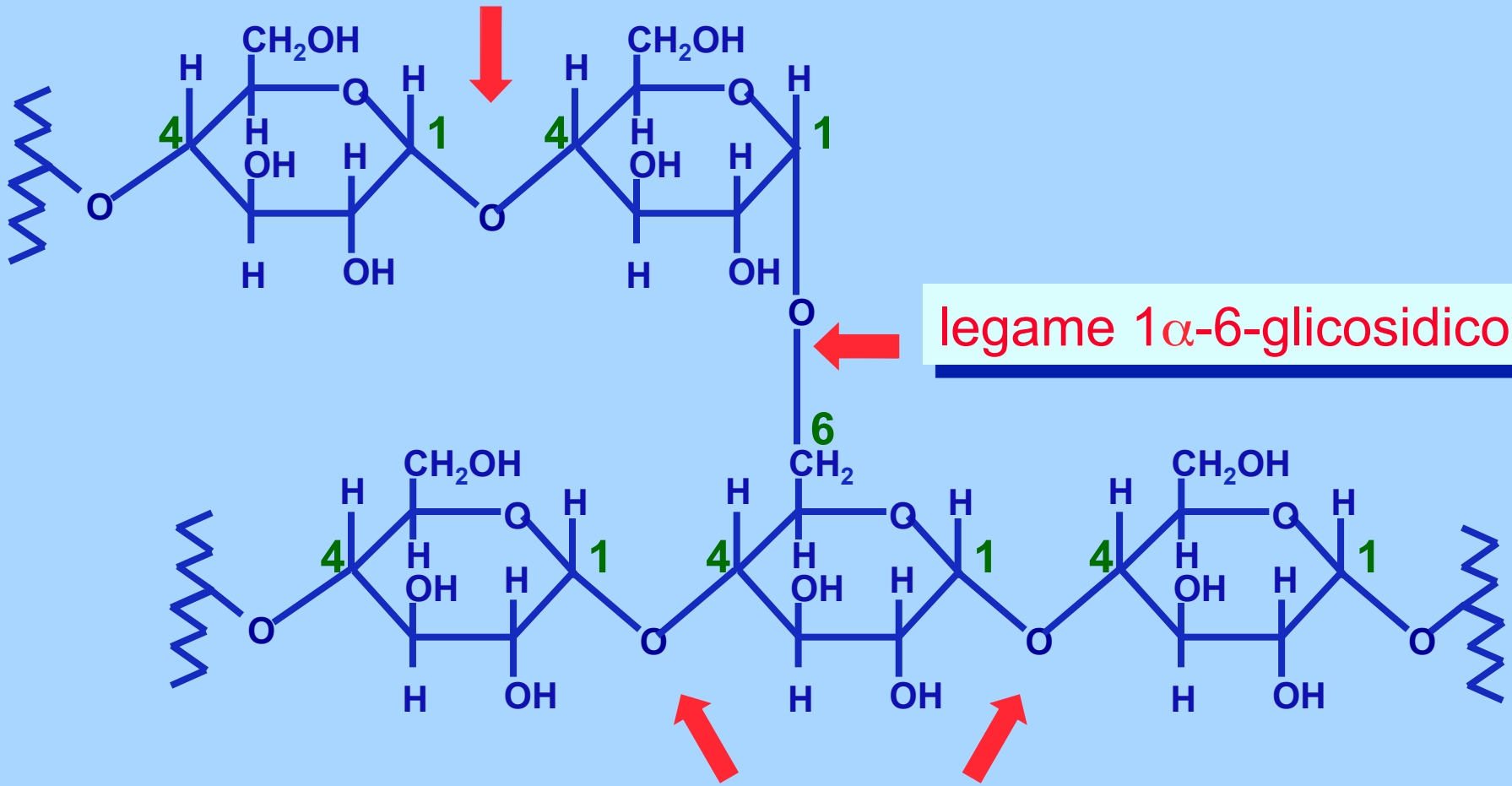
Amilosio



Polimero del glucosio con legami 1α -4-glicosidici fra i monomeri

Amilopectina

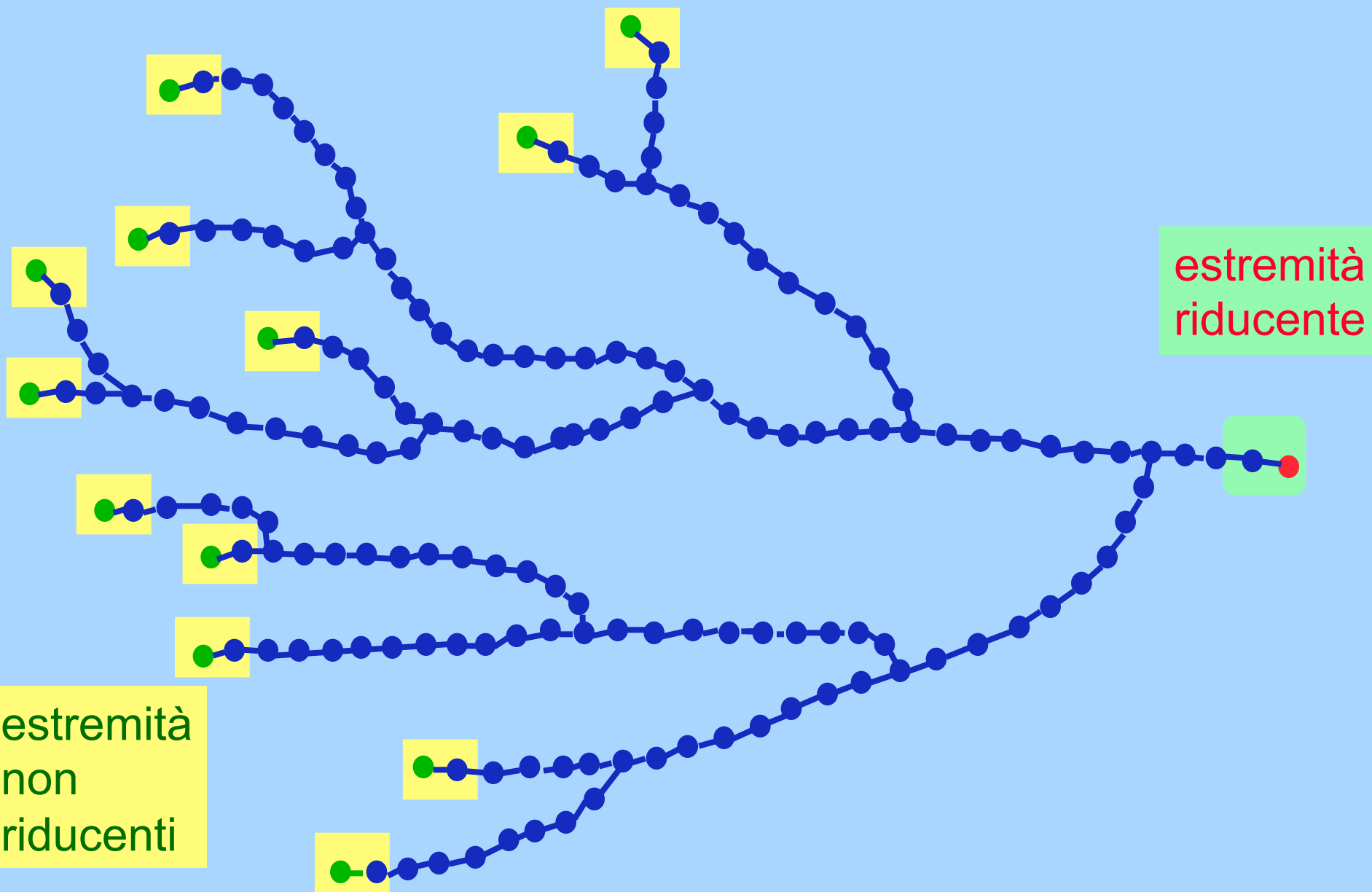
legami 1α -4-glicosidici



legame 1α -6-glicosidico

legami 1α -4-glicosidici

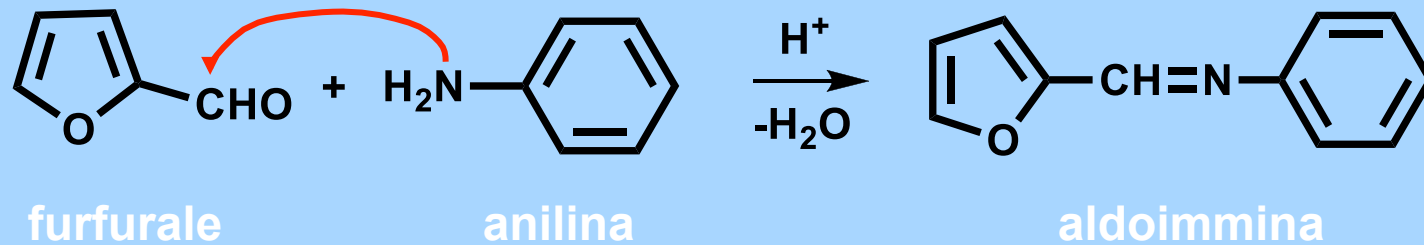
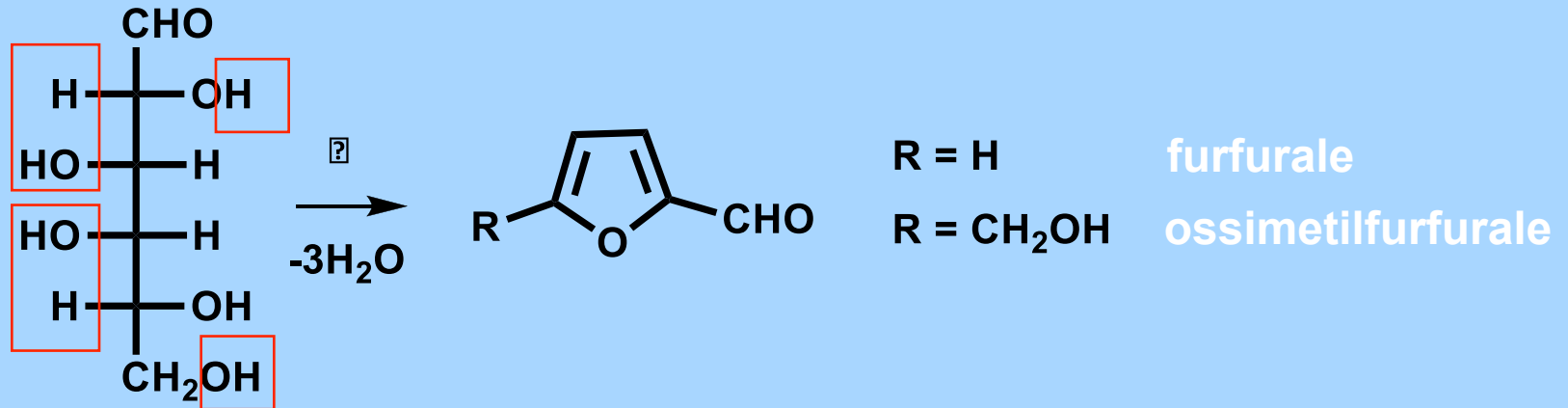
il glicogeno muscolare contiene più di 10000 unità di glucosio



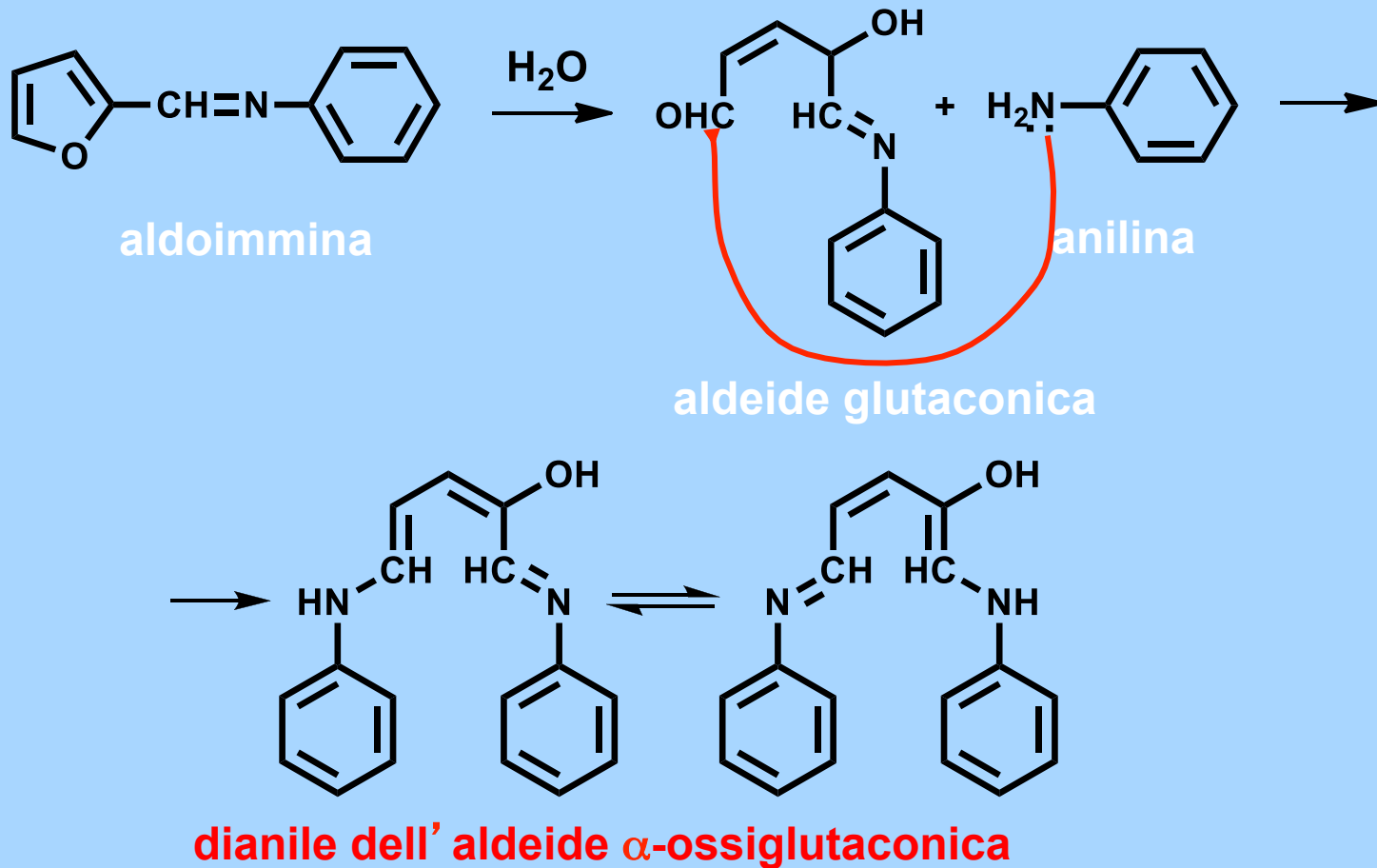
Riconoscimento dei Carboidrati

- **Saggio con acetato di anilina**
- **Saggio di Molish**
- **Saggio di Fehling**
- **Reazione di Tollens**
- **Saggio di Barfoed**
- **Saggio con Floroglucina**
- **Saggio di Seliwanoff**

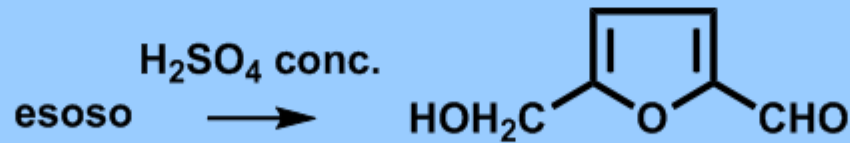
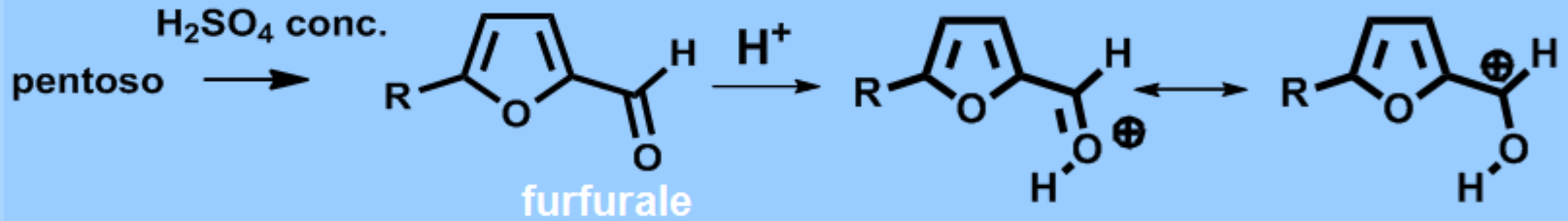
Saggio con Acetato di Anilina



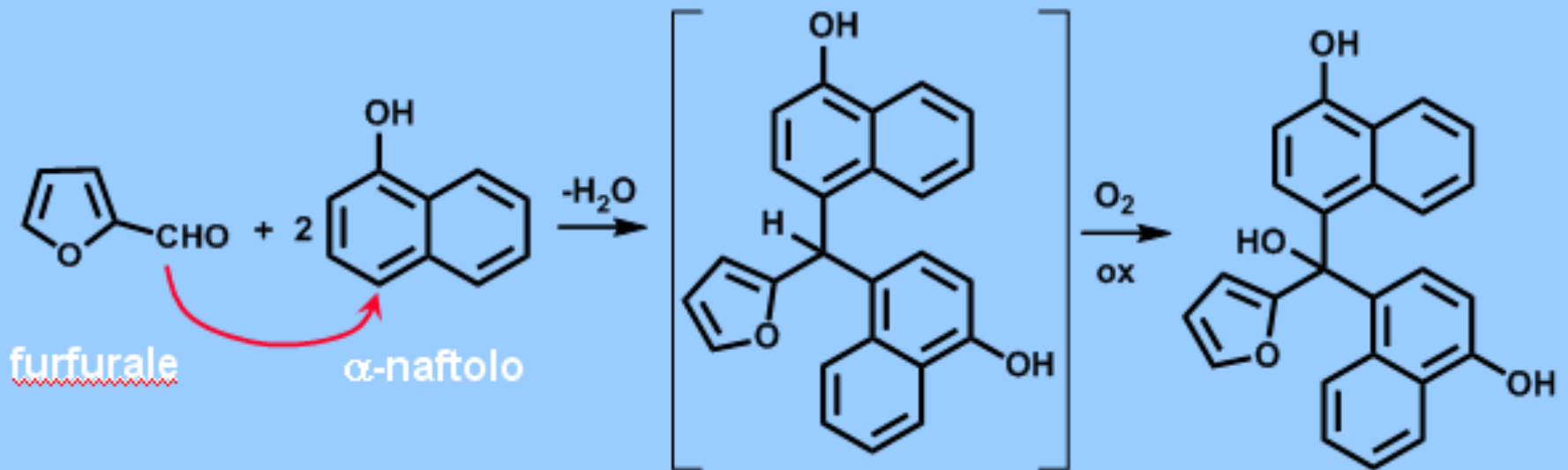
Saggio con Acetato di Anilina



Saggio di Molish

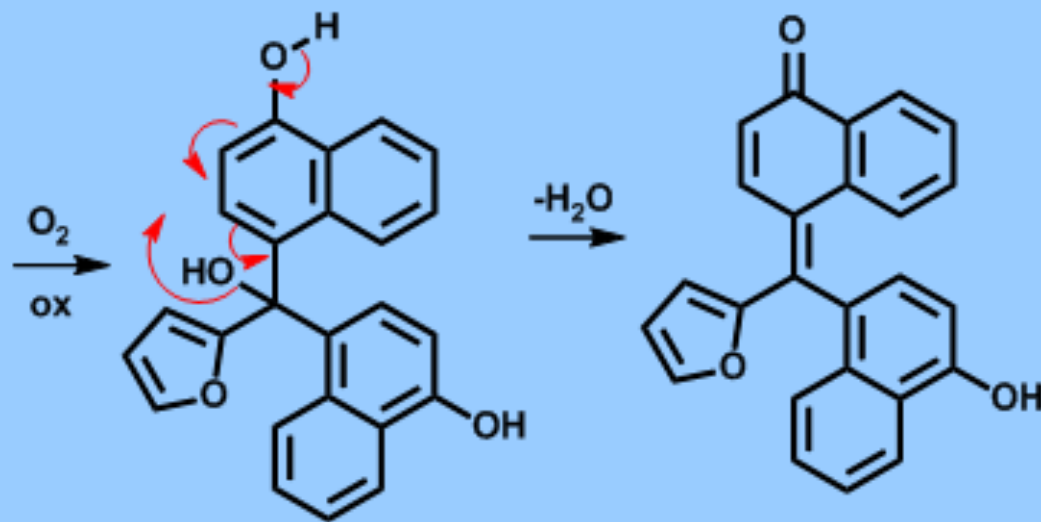


ossimetilfurfurale



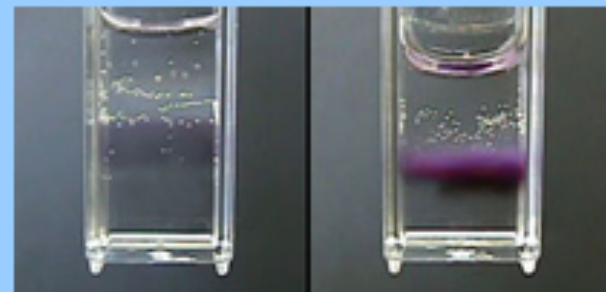
Carbinolo 3°

Saggio di Molish



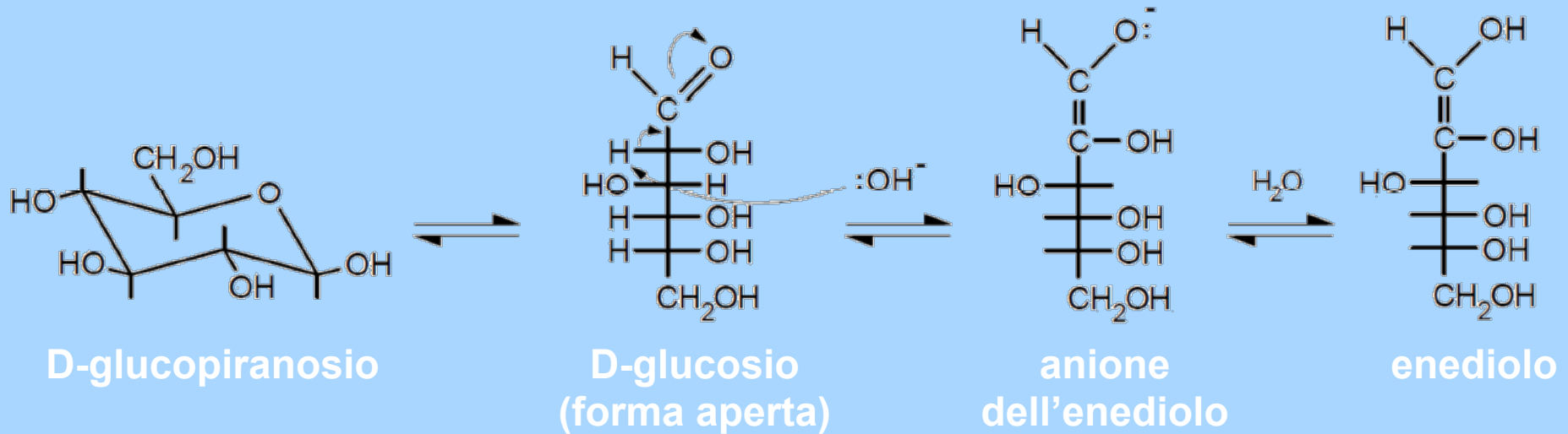
Carbinolo 3°

Viola

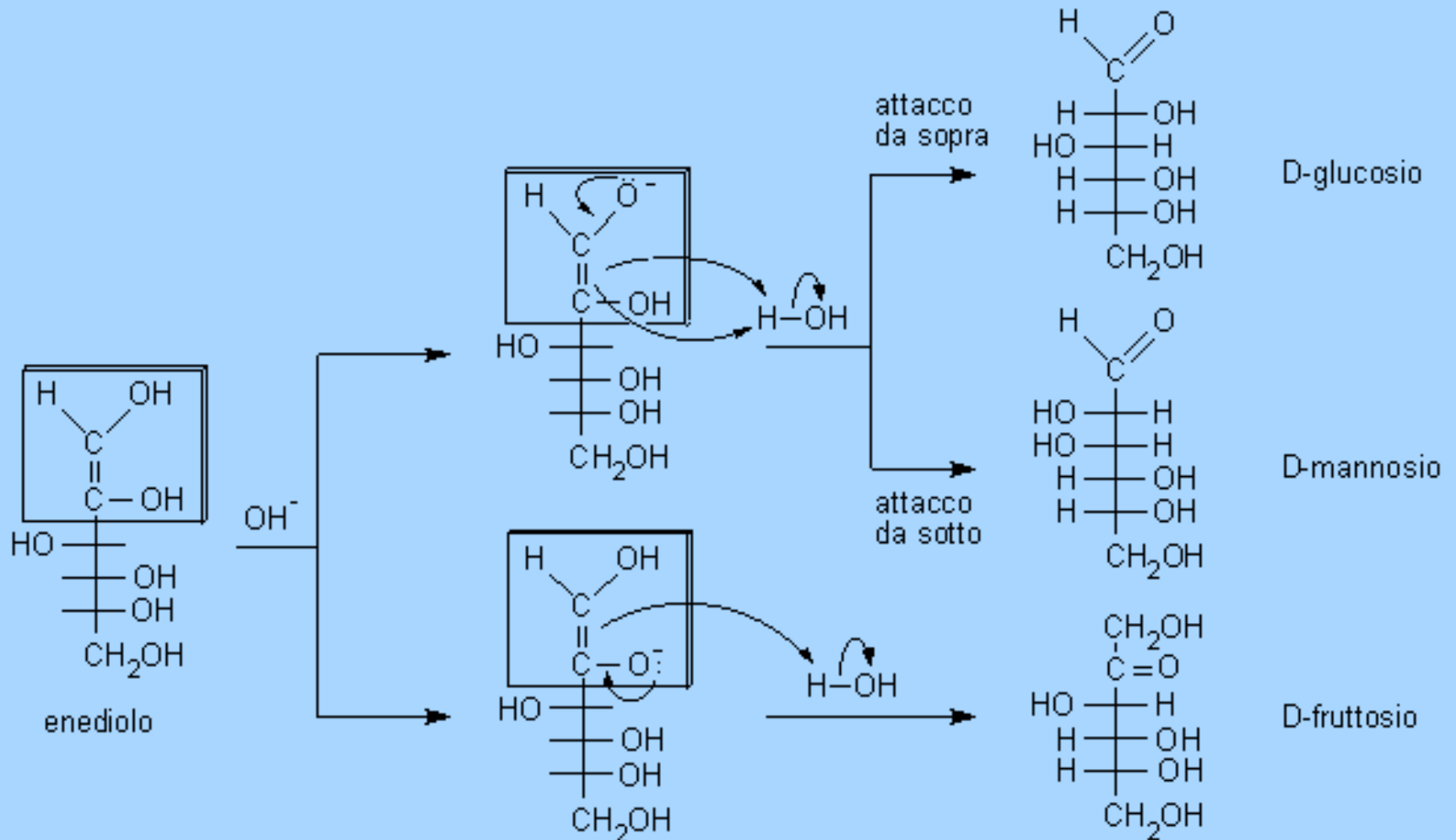


Campione	Tempo medio utile alla formazione dell'anello viola-porpora	Intensità (1-6)
Glucosio	31 s	1
Fruttosio	0 s	6
Galattosio	20 s	2
Lattosio	40 s	2
Saccarosio	0 s	6
Cellulosa	25 s	3
Amido	16 s	4
Incognito	0 s	5
Controllo	Incolore	--

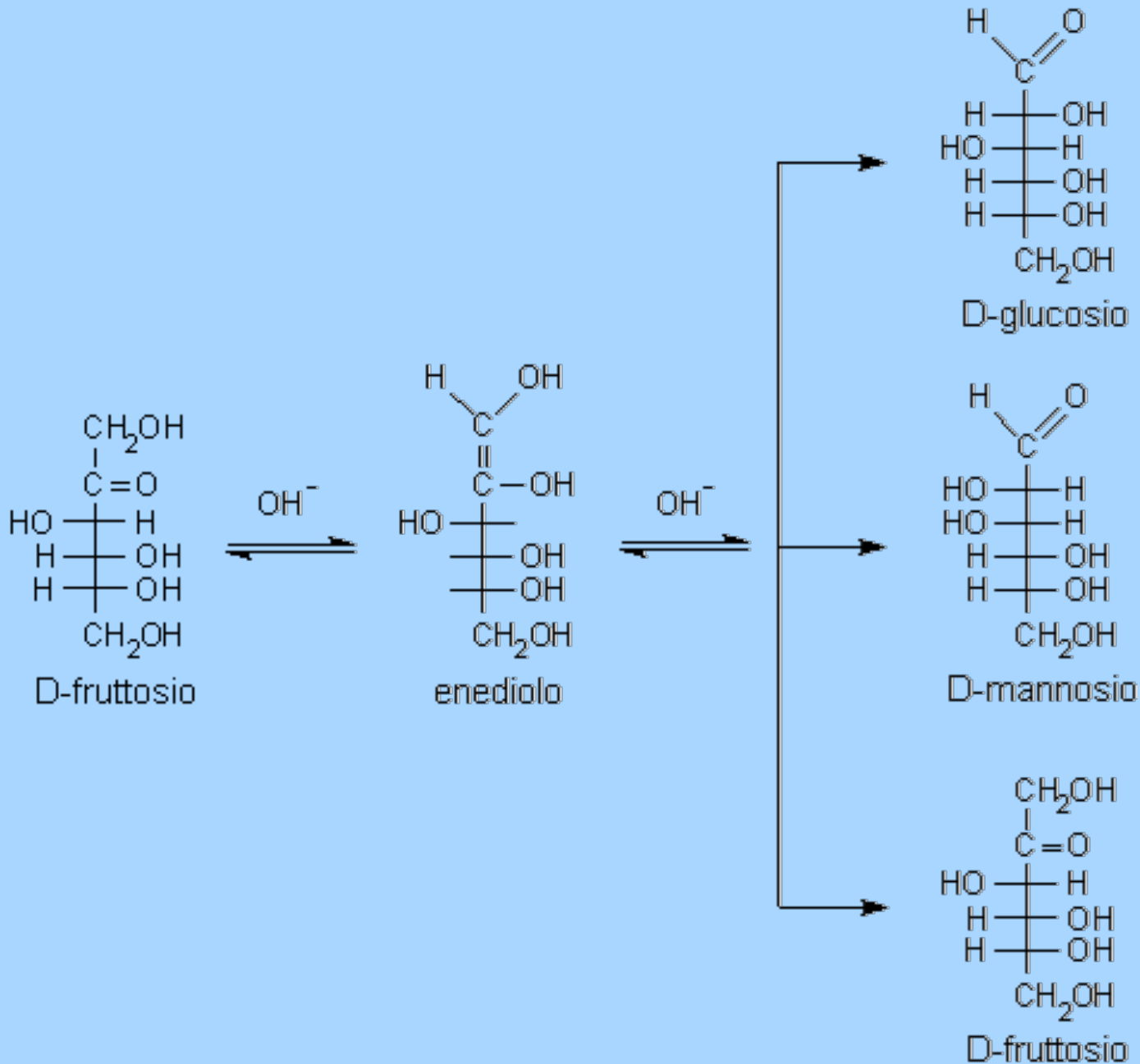
Isomerizzazione Alcalina del Glucosio



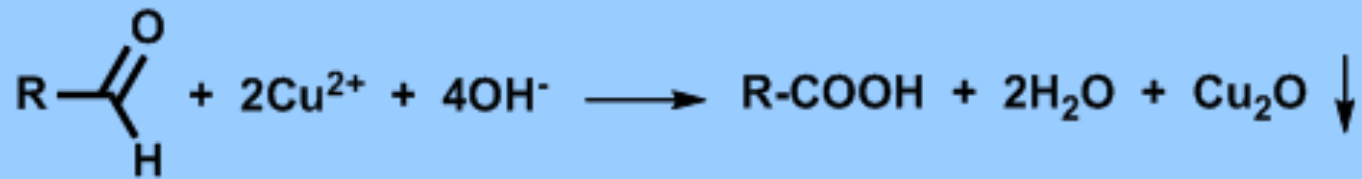
Isomerizzazione Alcalina del Glucosio



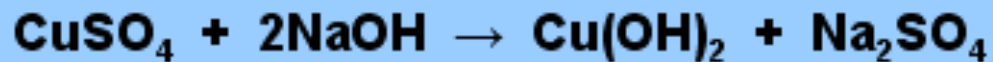
Isomerizzazione Alcalina del Fruttosio



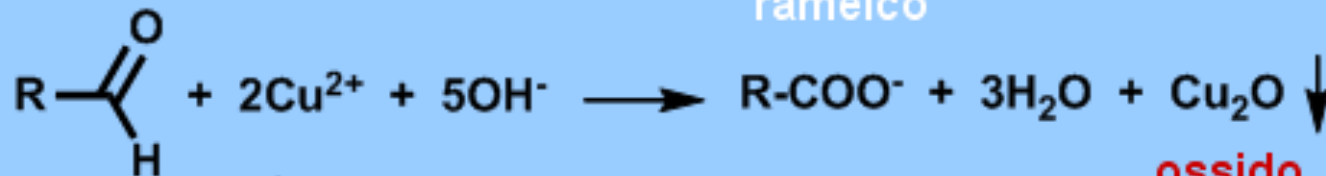
Reazione di Fehling



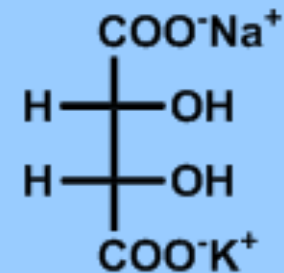
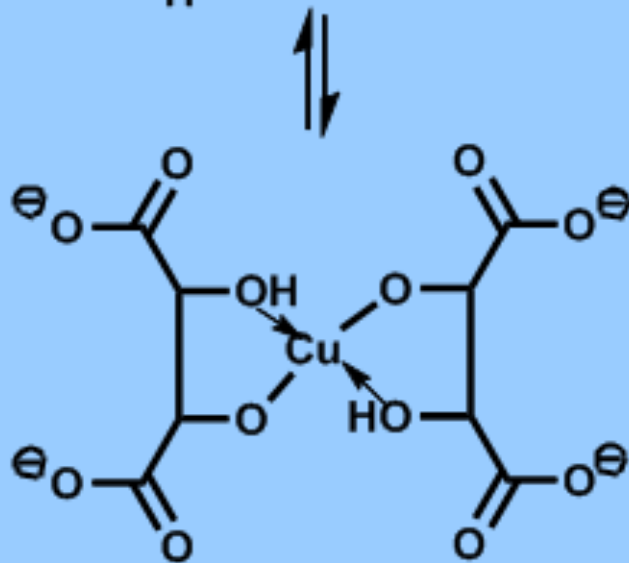
ossido rameoso



idrossido
rameico

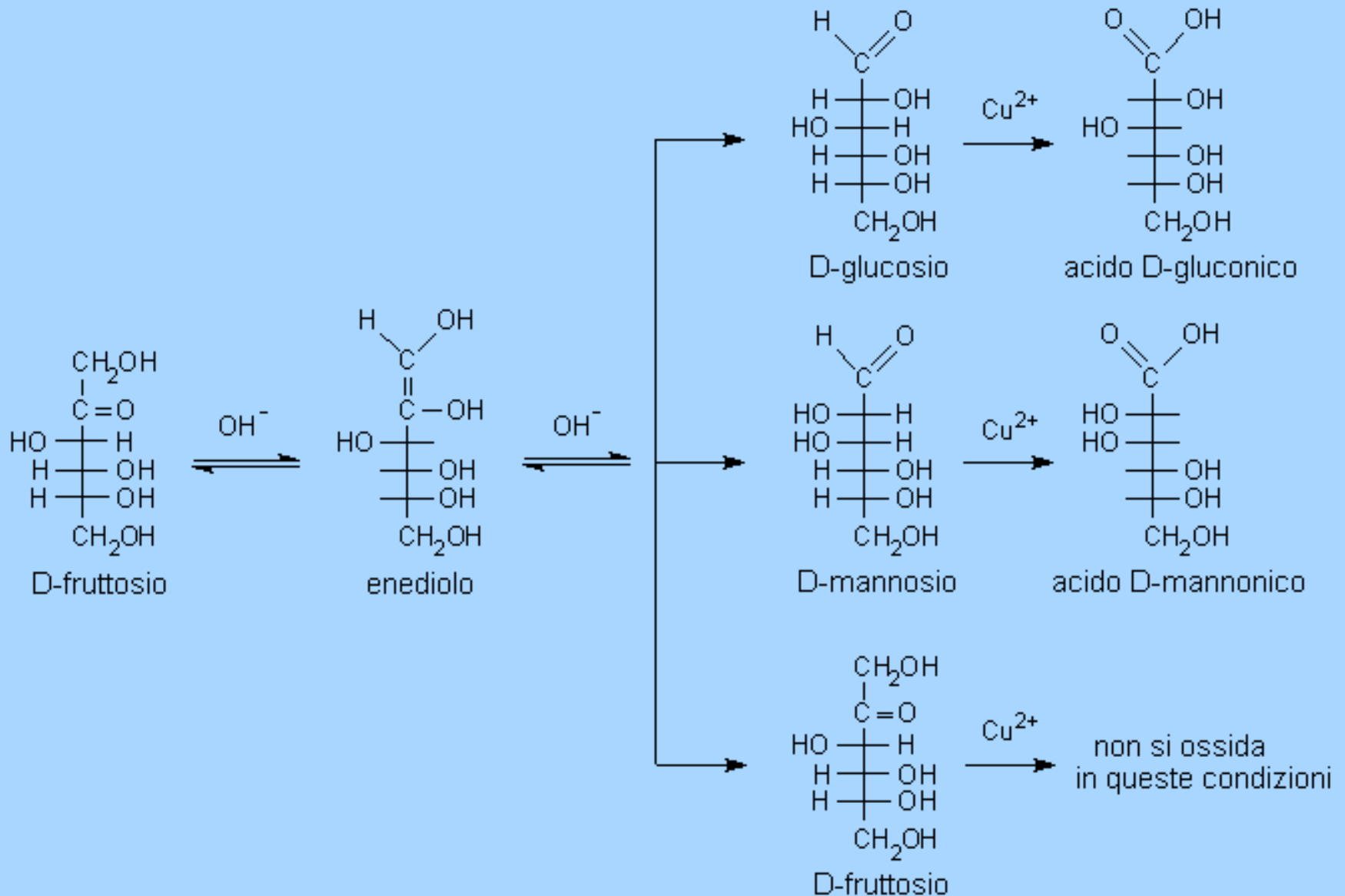


ossido
rameoso



tartrato sodico potassico

Reazione di Fehling



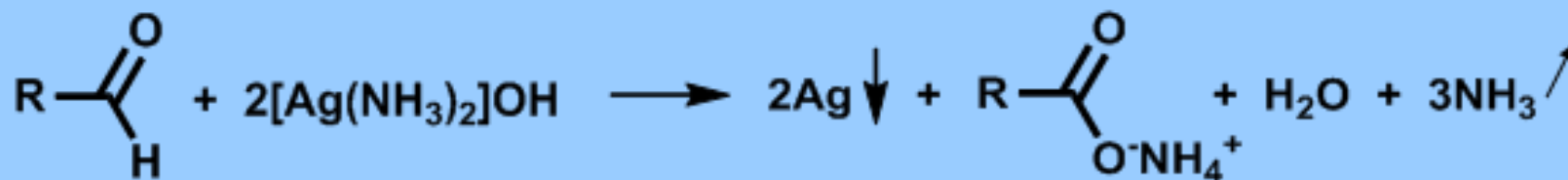
Reazione di Tollens



ossido
d'argento



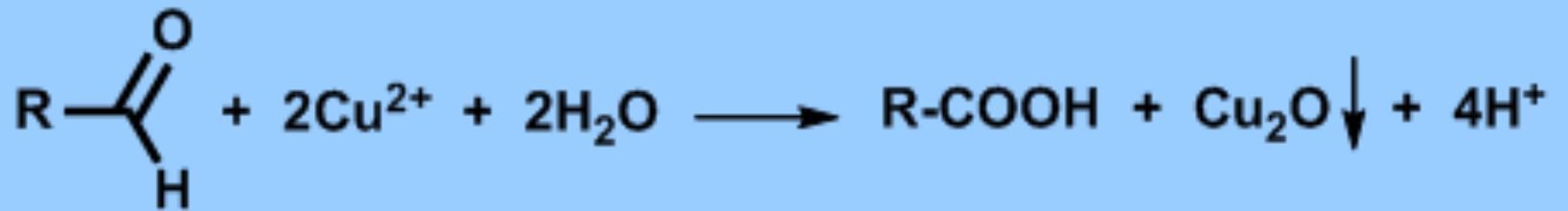
argento
ammoniacale



argento
ammoniacale

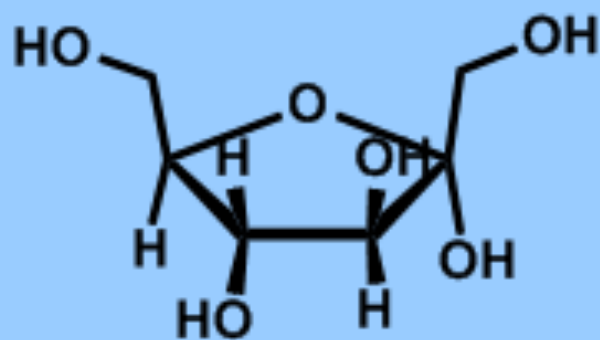
specchio
metallico

Saggio di Barfoed

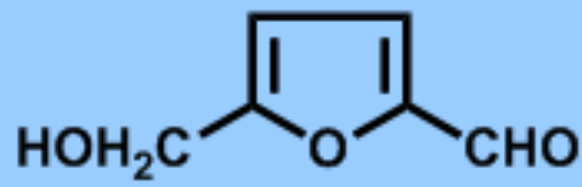
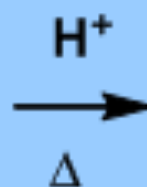


ossido di rame

Saggio di Seliwanoff

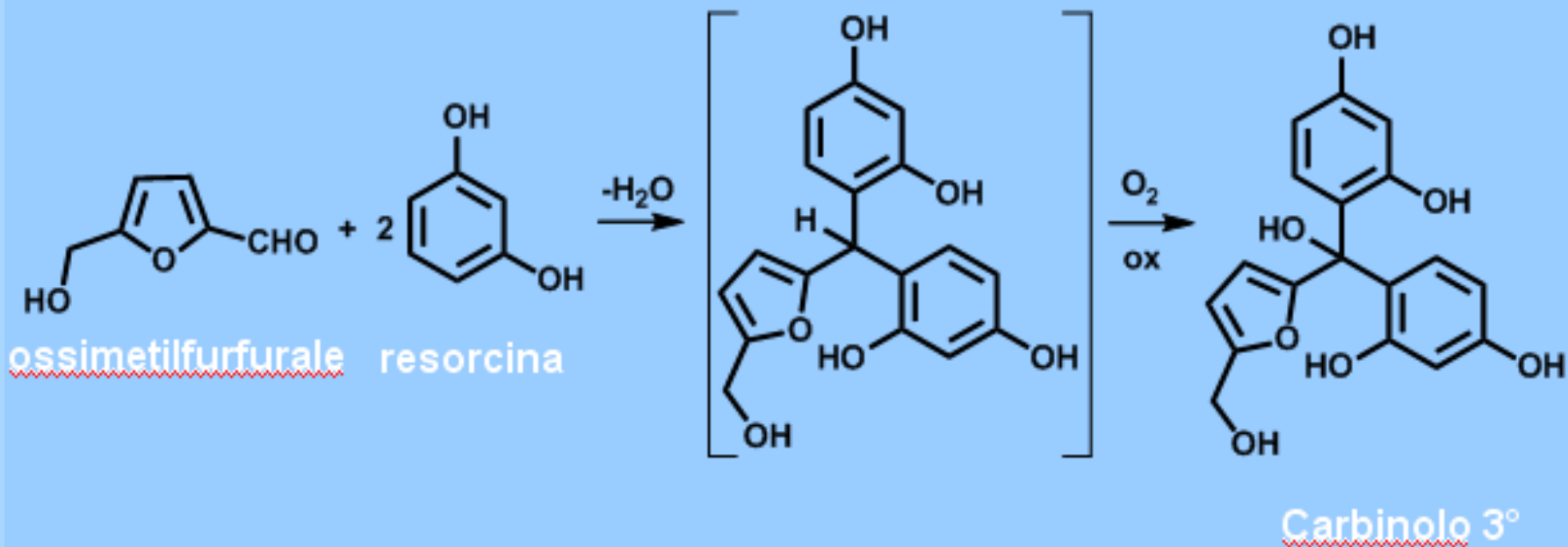


fruttosio

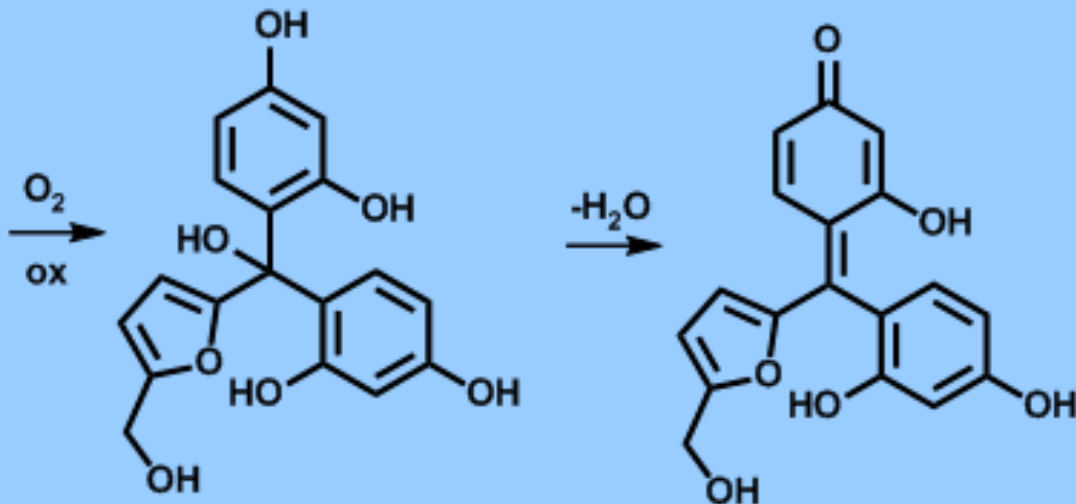


5-(idrossimetil)-furfurale

Saggio di Seliwanoff

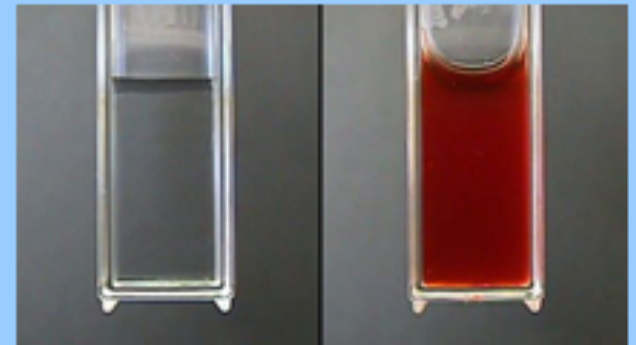


Saggio di Seliwanoff

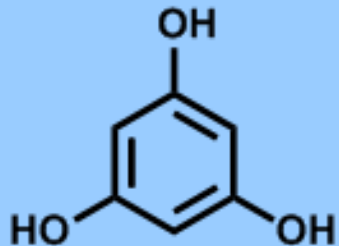


Carbinolo 3°

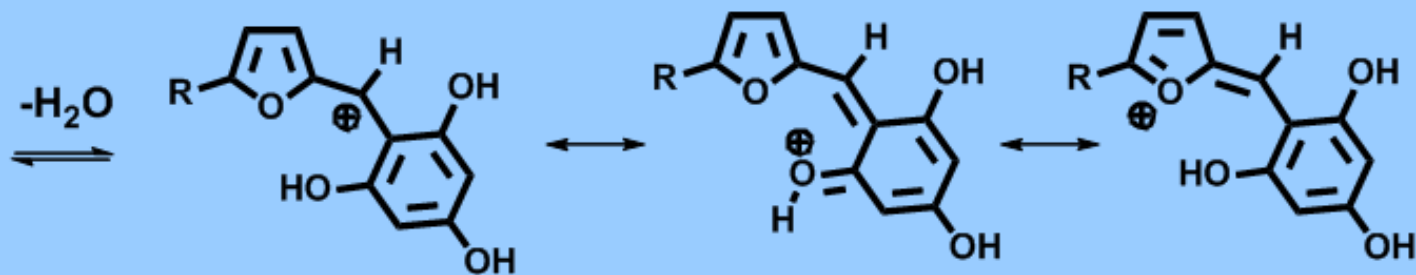
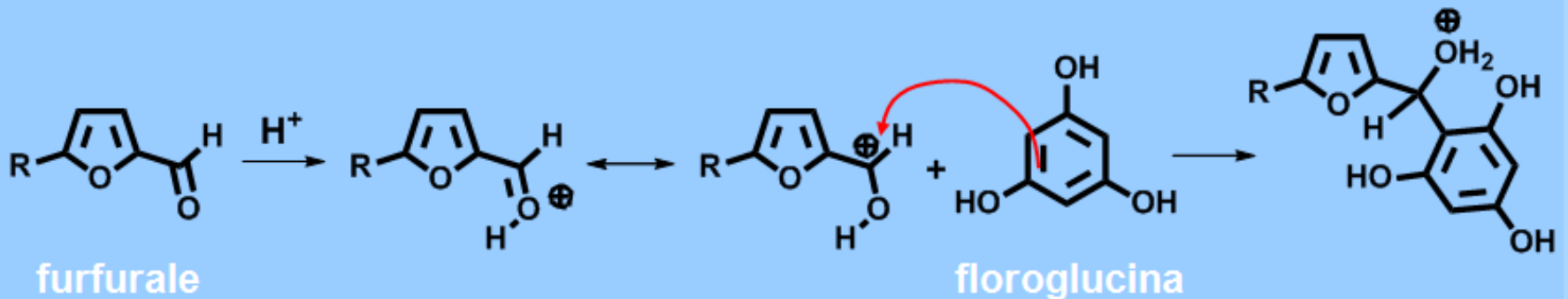
rosso



Saggio con Floroglucina



floroglucina



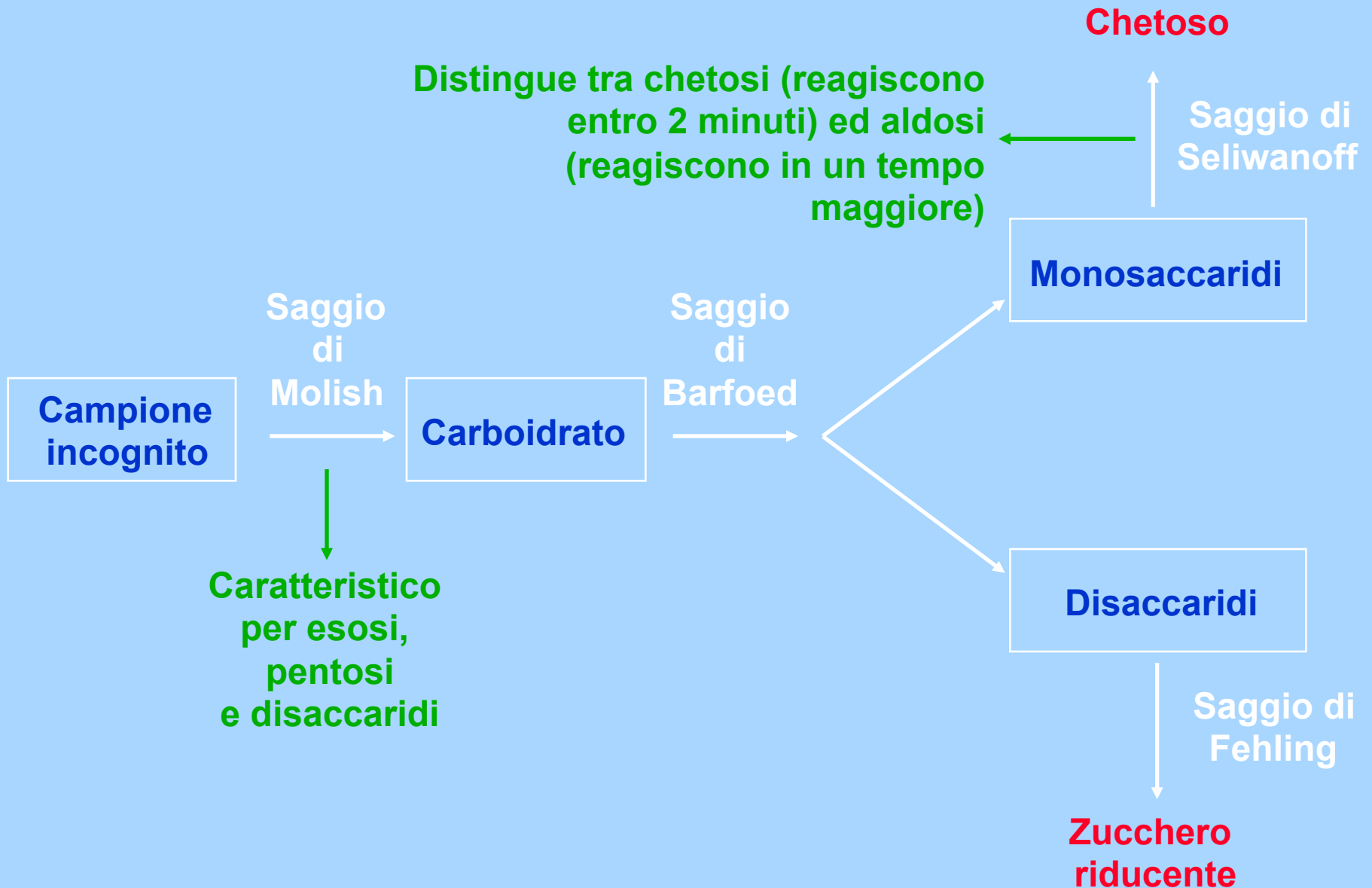
rosso-viola

Saggi Carboidrati

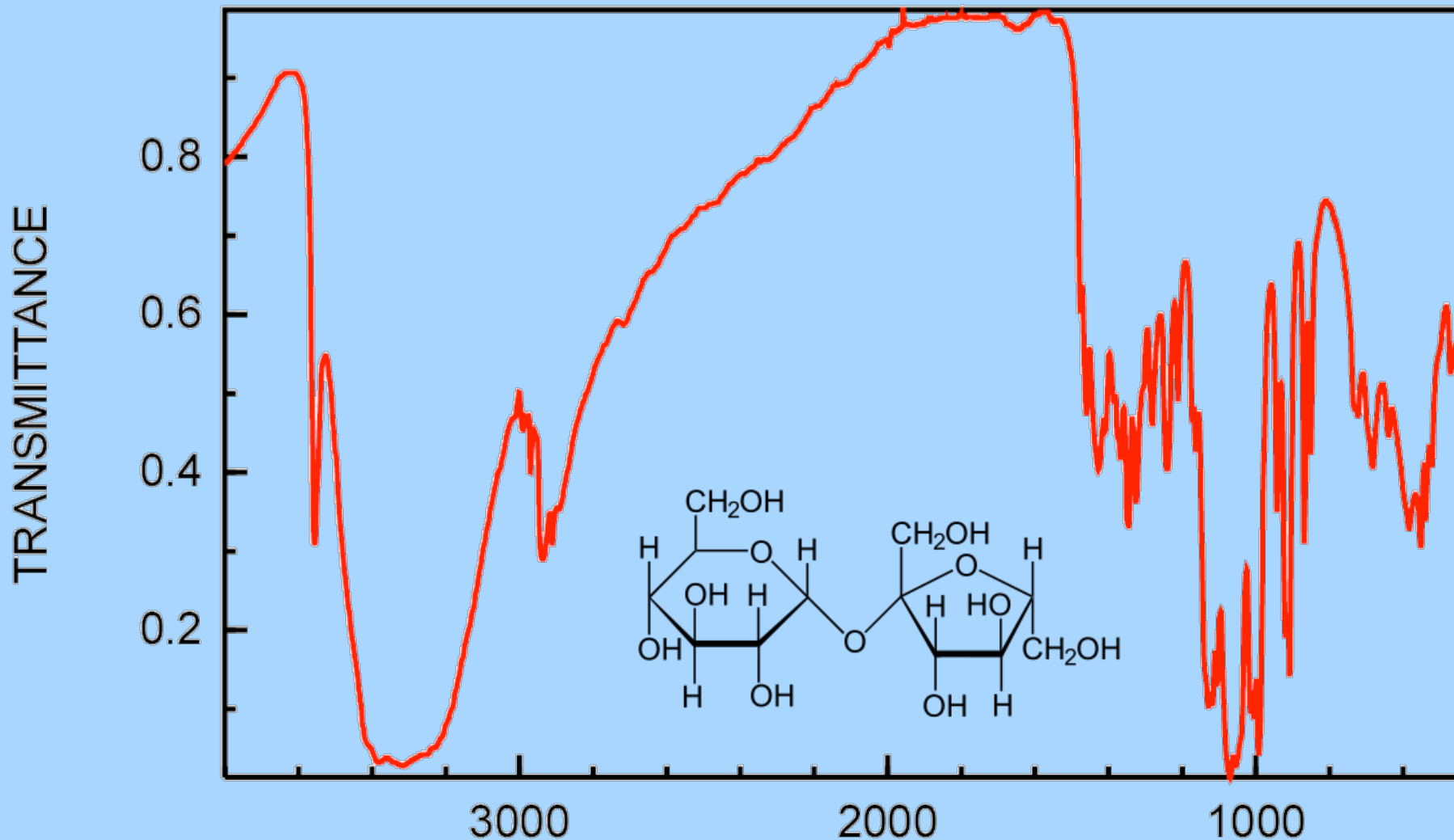
Molish Barfoed Seliwanoff Fehling

Fruttosio	+	+	+	+
Glucosio	+	+	-	+
Lattosio	+	-	-	+
Saccarosio	+	-	-	-

Saggi Carboidrati



Spettro IR del Saccarosio



Spettro IR del β -D-Fruuttosio

