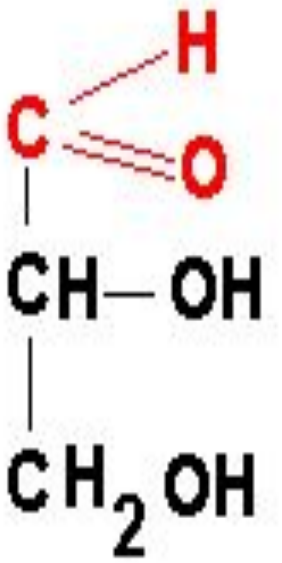
Углеводы

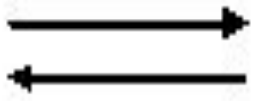
План

- Общие представления об углеводах
- Аномалии линейной структуры
- Химические свойства
- Дисахариды
- Полисахариды

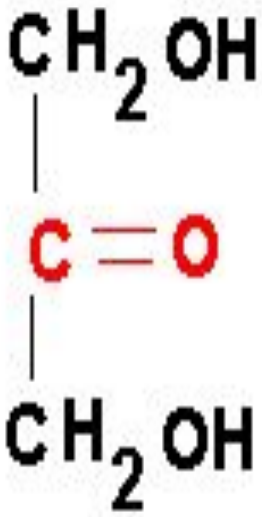
Триозы

глицеральдегид

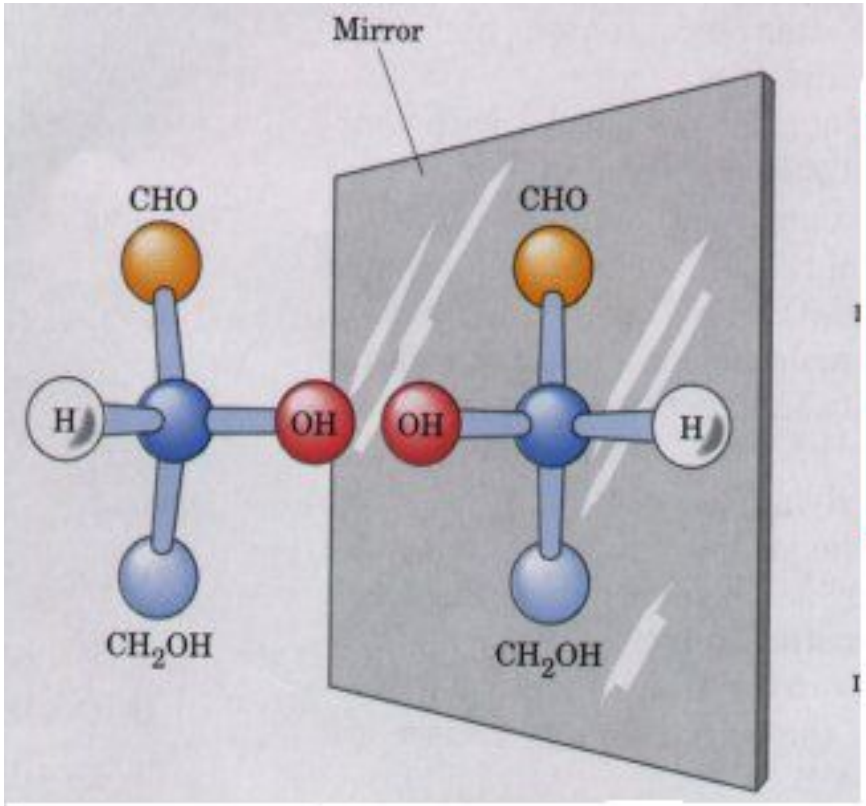


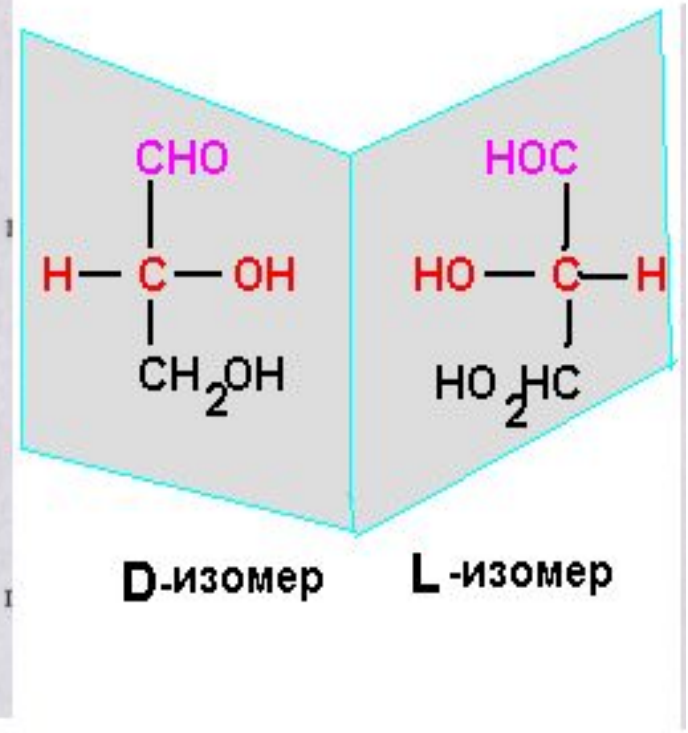


диоксиацетон

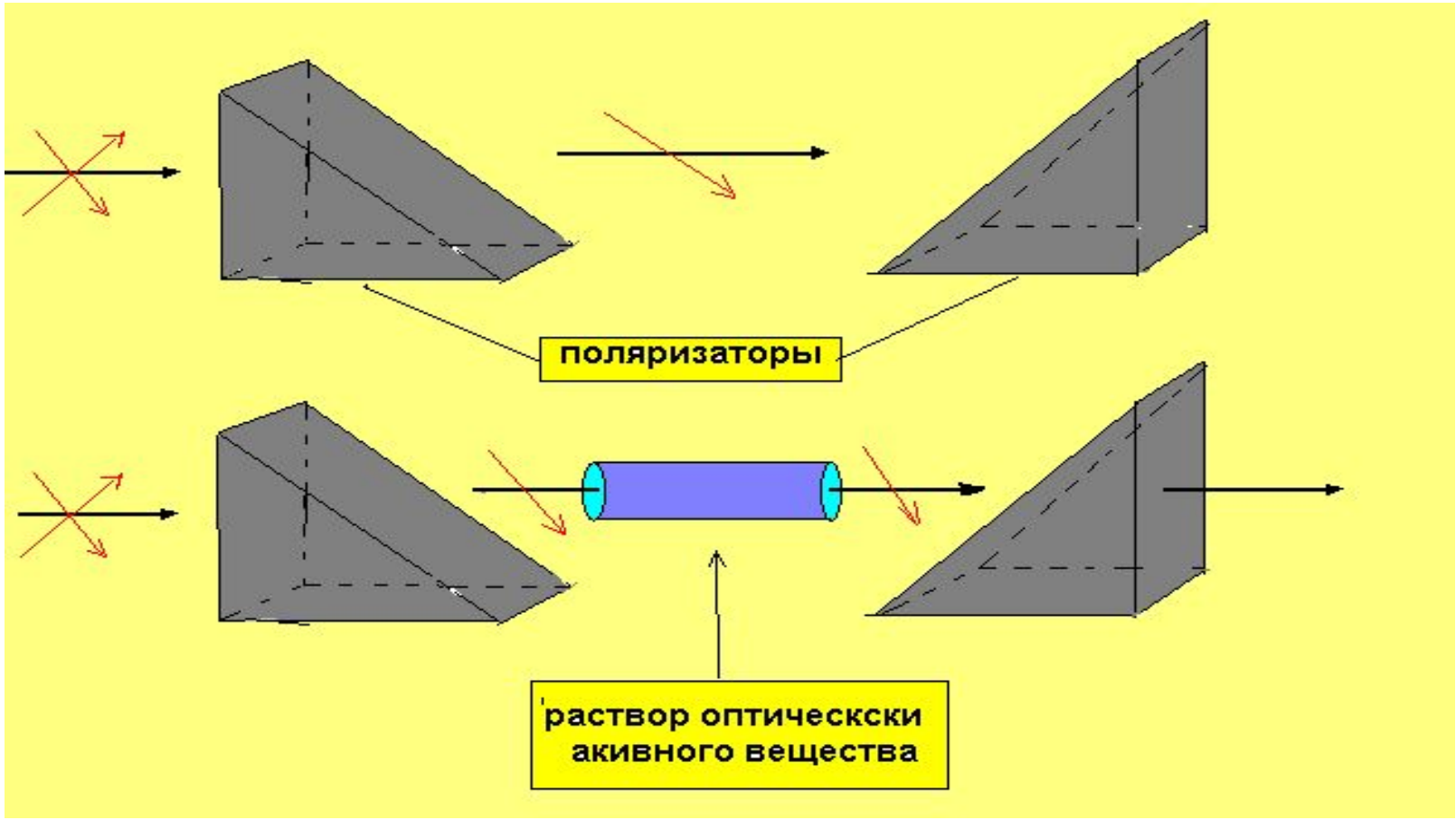


Зеркальная изомерия

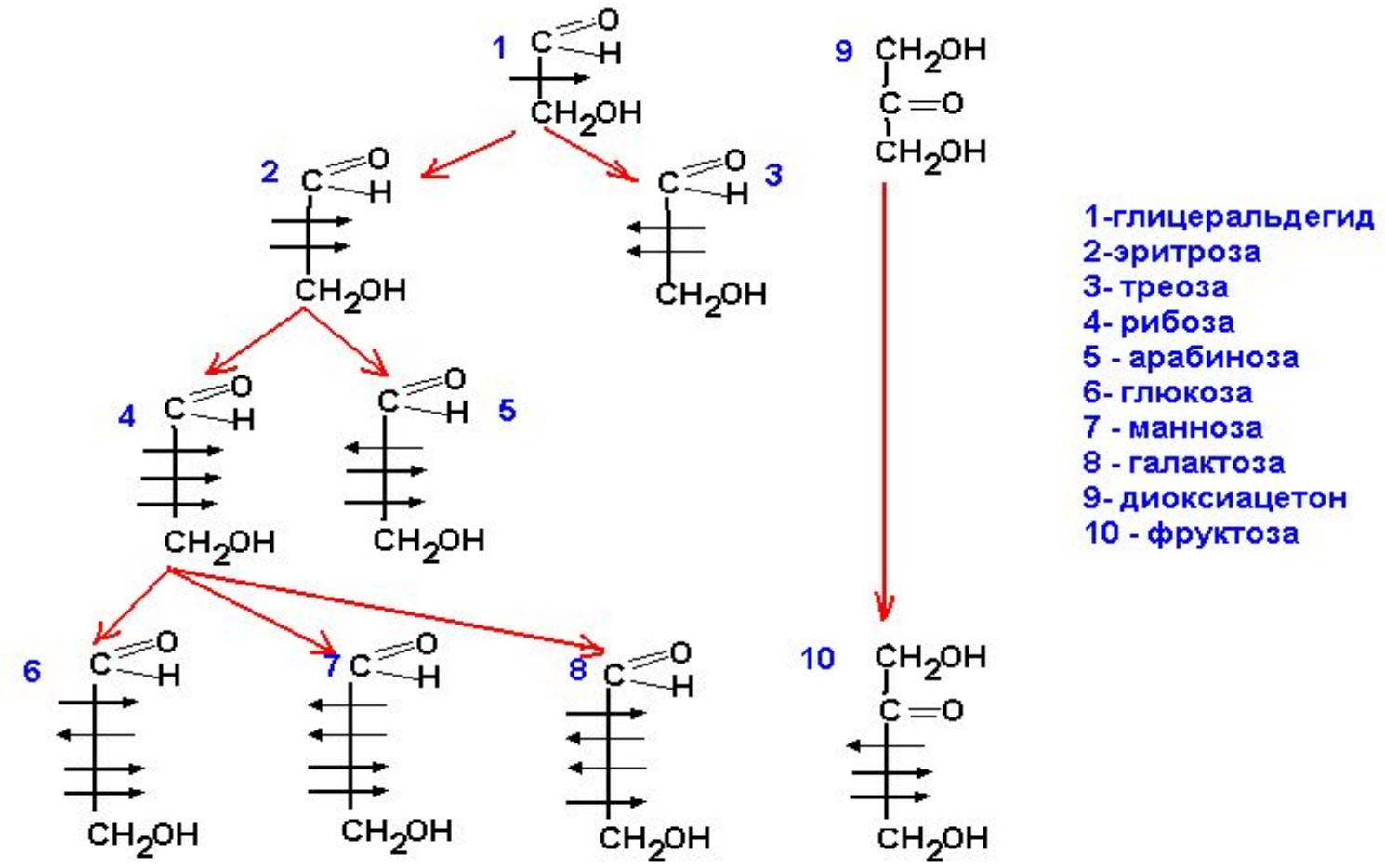




Оптическая активность

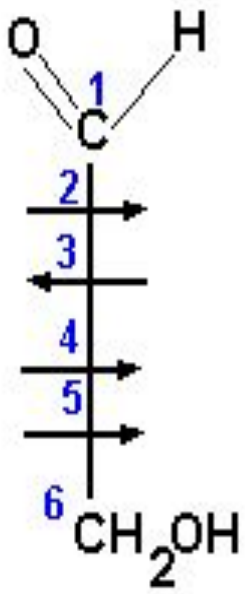


Важнейшие моносахариды

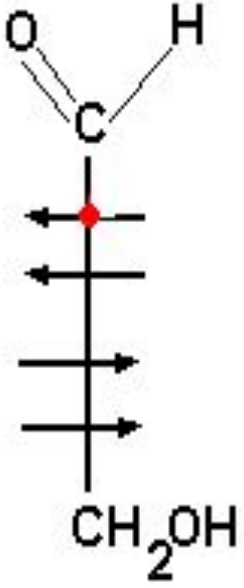


Эпимеры

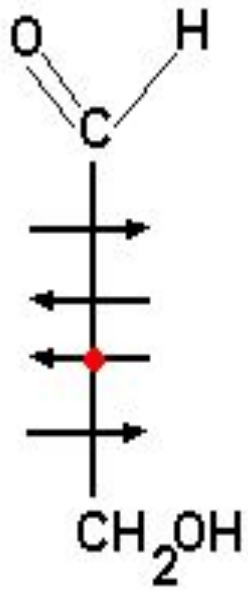
ЭПИМЕРЫ



глюкоза

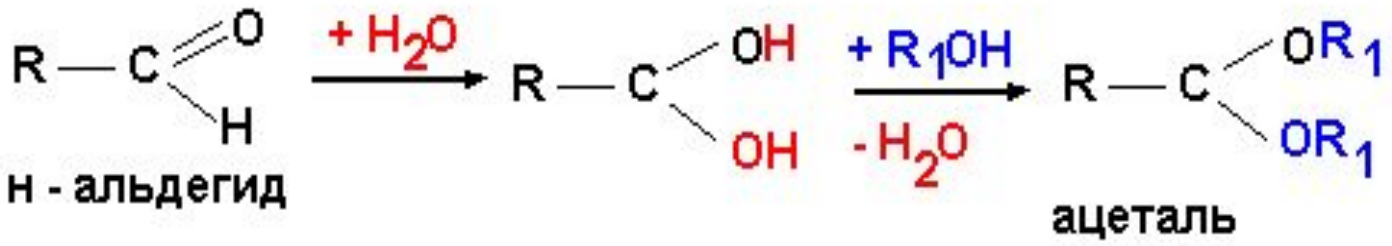


манноза



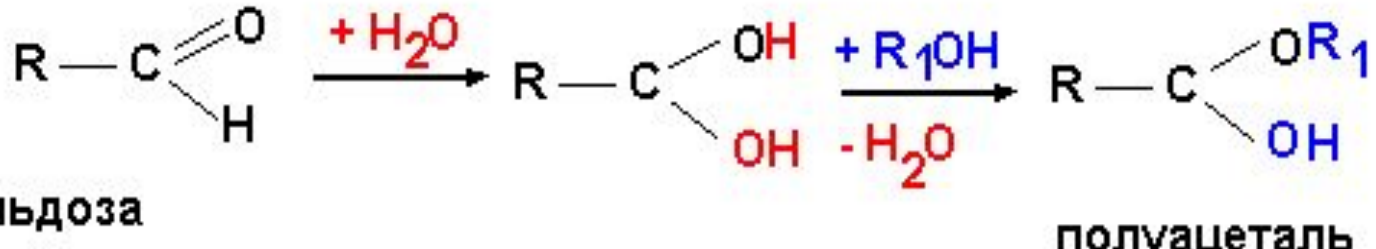
галактоза

Образование полуацеталей



н - альдегид

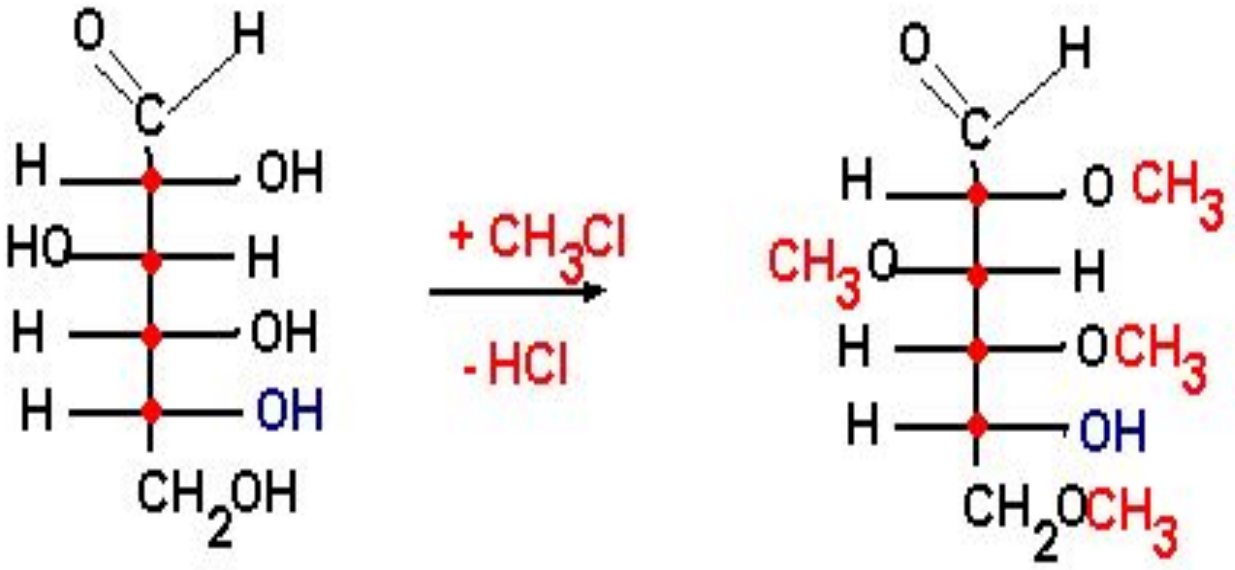
ацеталь



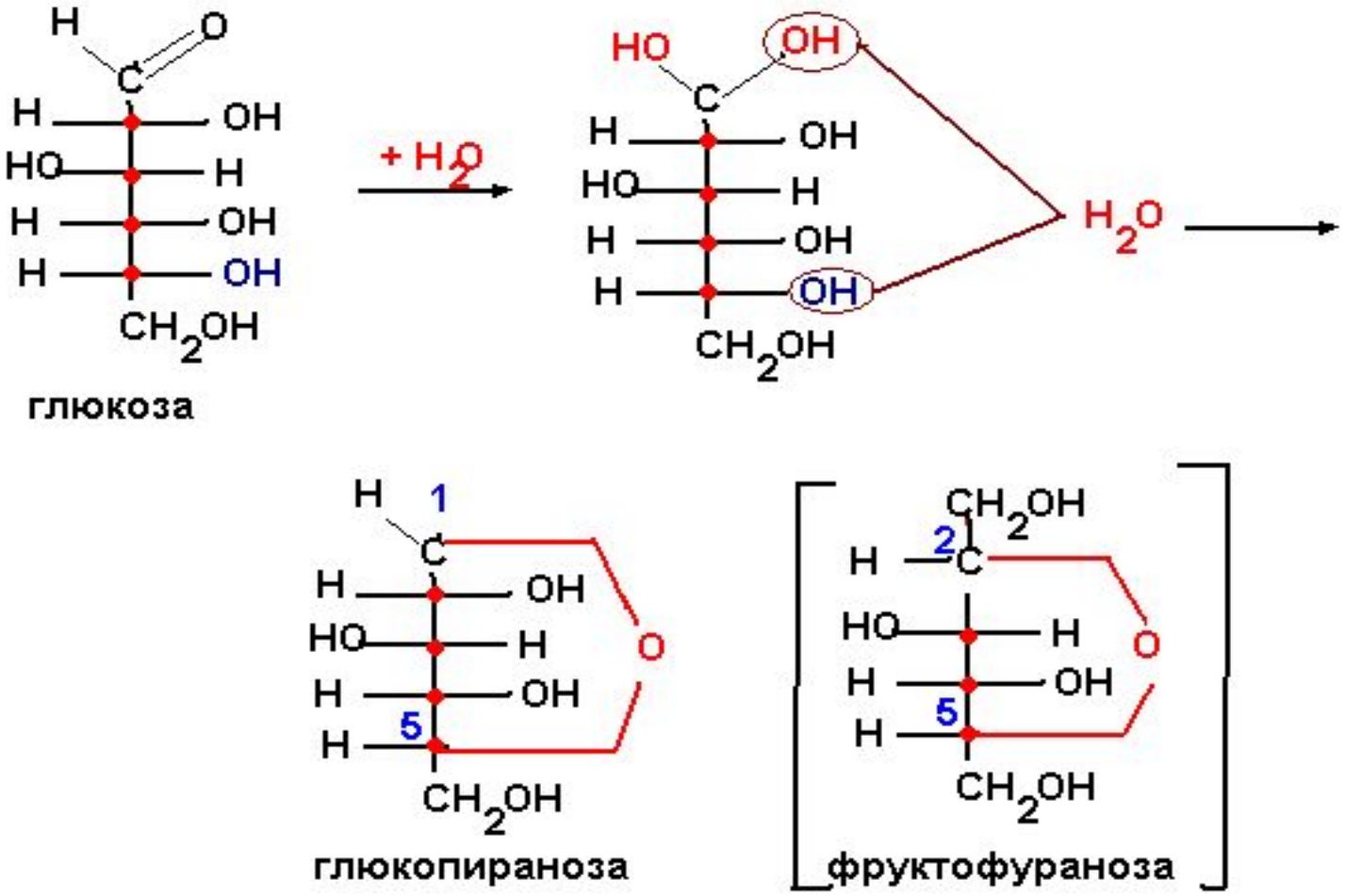
альдоза

полуацеталь

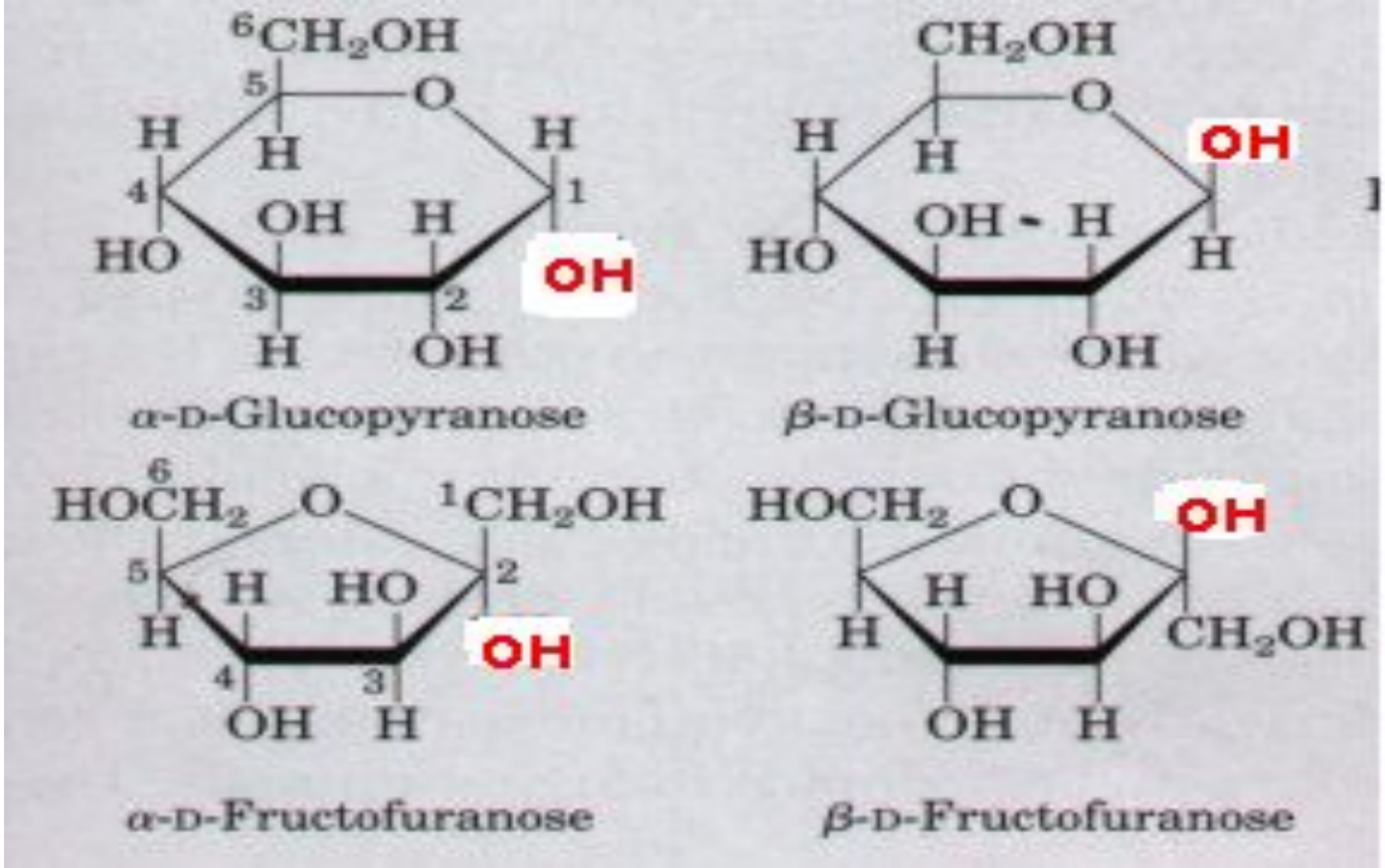
Метилирование альдоз



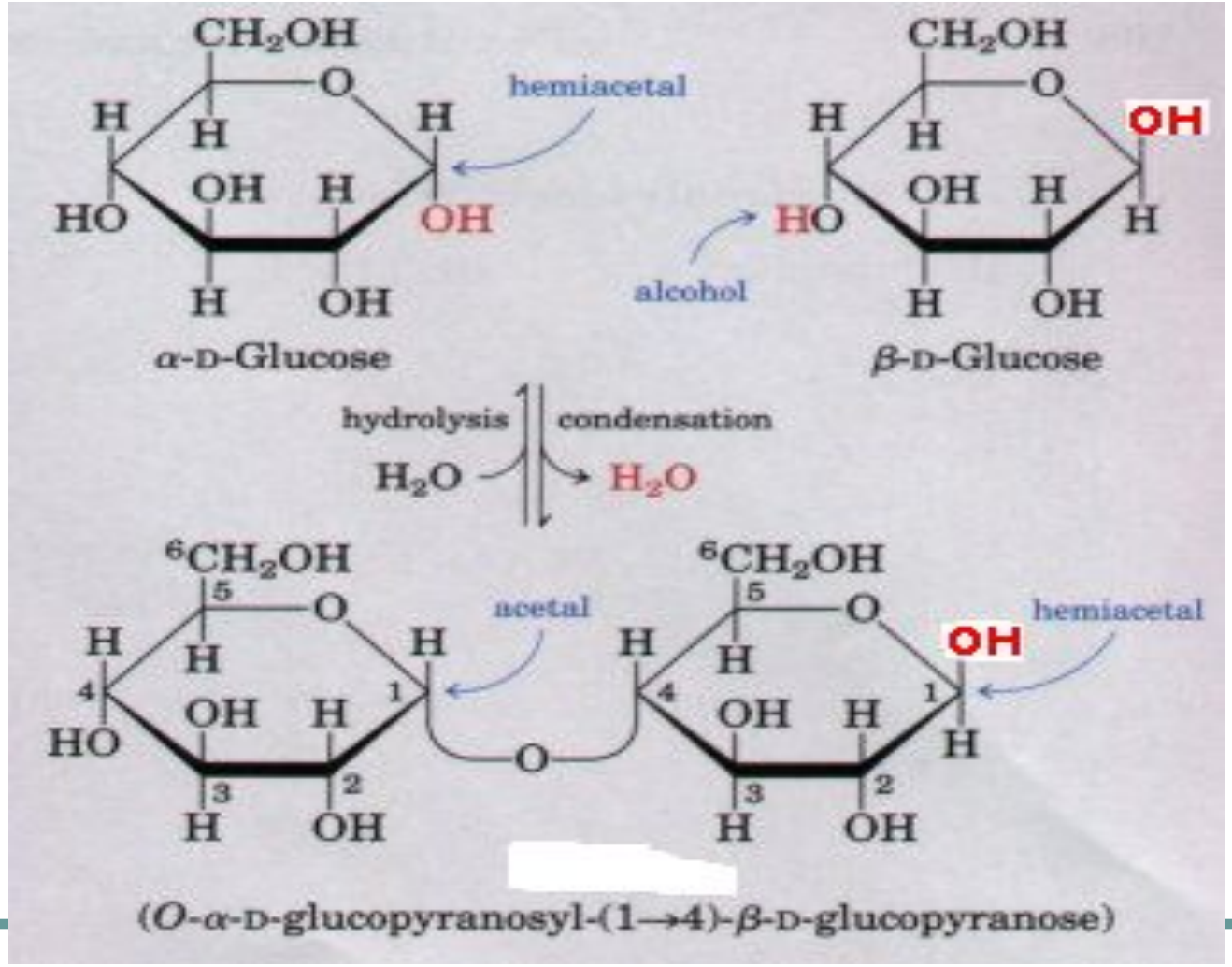
Формулы Толленса



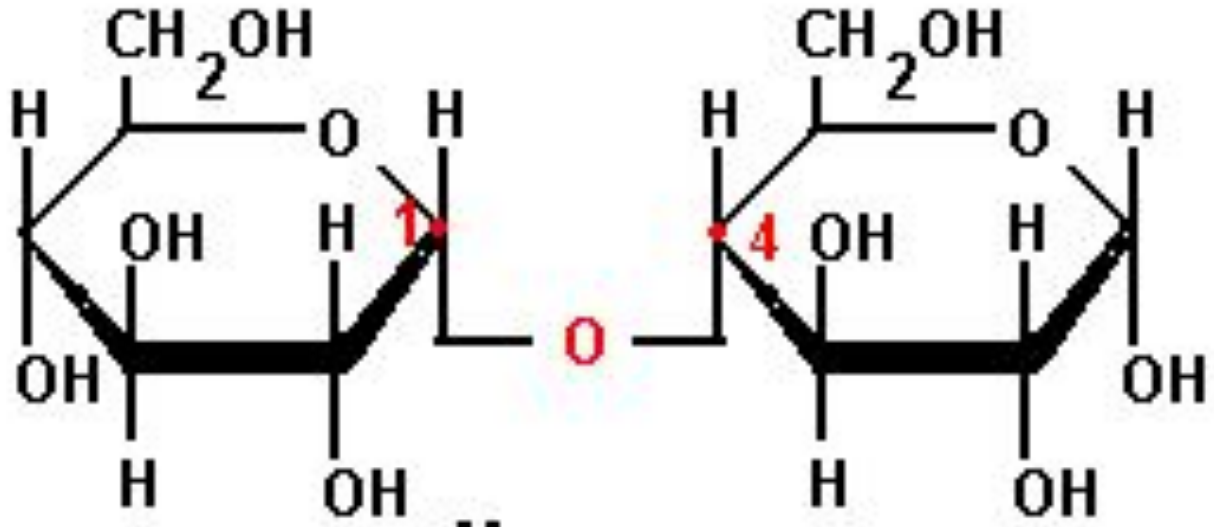
Циклы Хеорса



Дисахариды


hemiacetal
alcohol
α-D-Glucose
β-D-Glucose
hydrolysis
condensation
acetal
hemiacetal
(O-α-D-glucopyranosyl-(1→4)-β-D-glucopyranose)

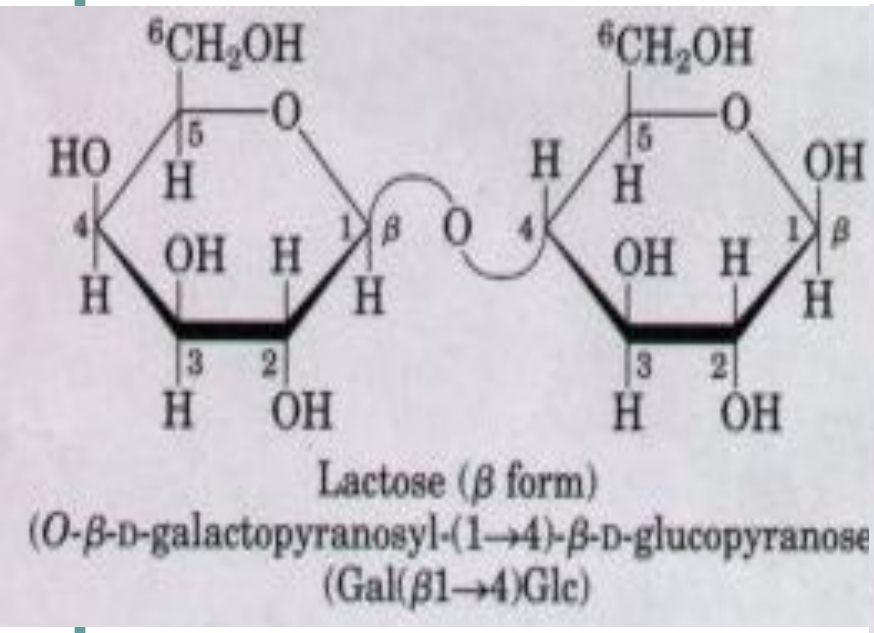
Мальтоза

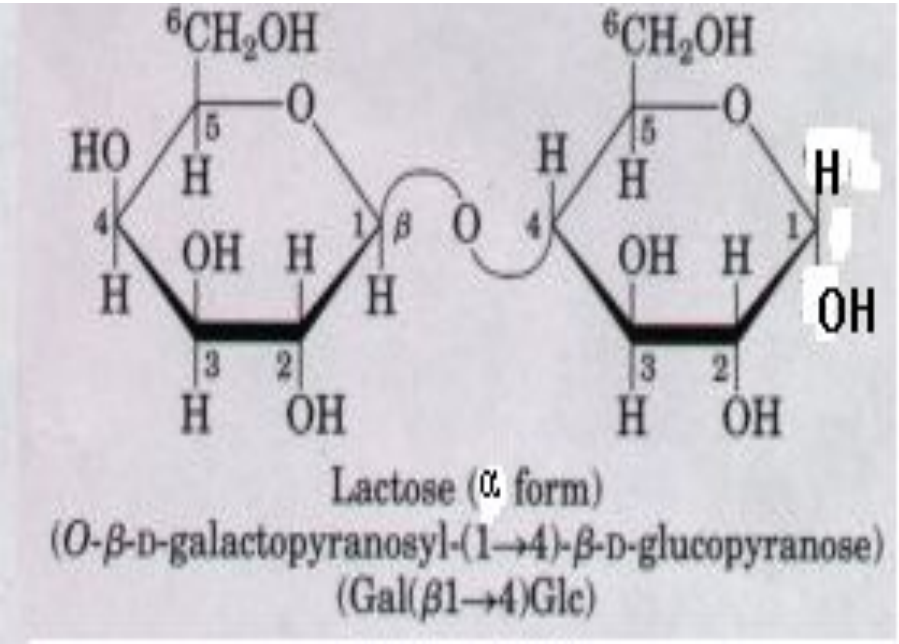


Мальтоза

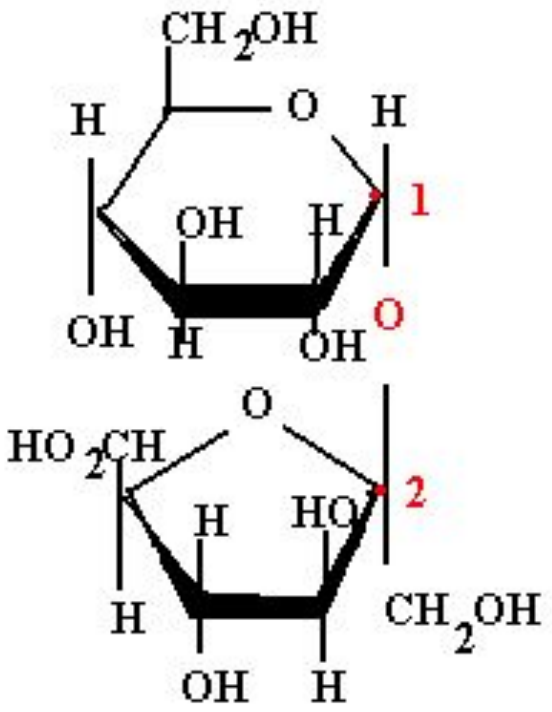
α D-глюкопиранозил(1-4) α D-глюкопираноза

Лактоза


Lactose (β form)
(O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranose
(Gal(β1→4)Glc)


Lactose (α form)
(O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranose)
(Gal(β1→4)Glc)

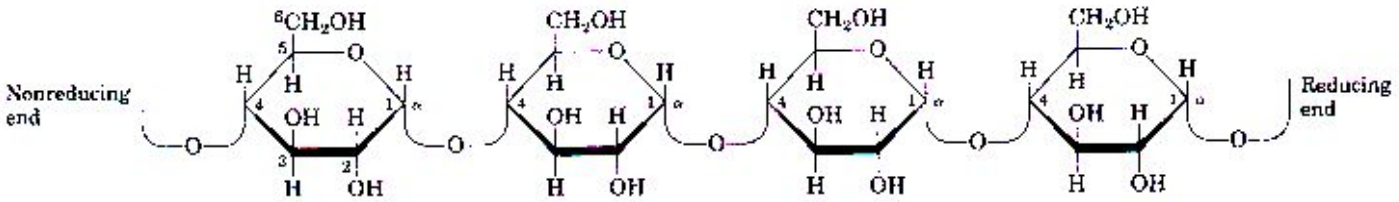
Сахароза



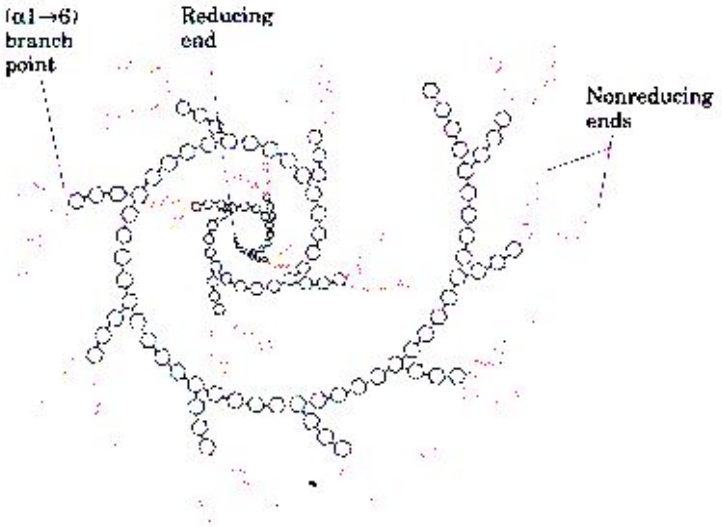
САХАРОЗА

α D-глюкопиранозил(1-2)β D-фруктофураноза

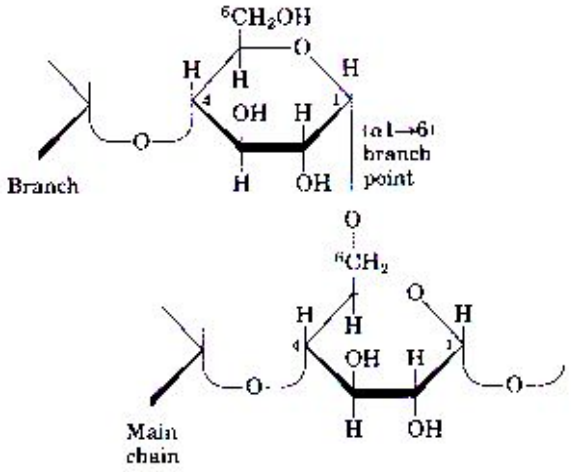
Крахмал



(a) амилоза

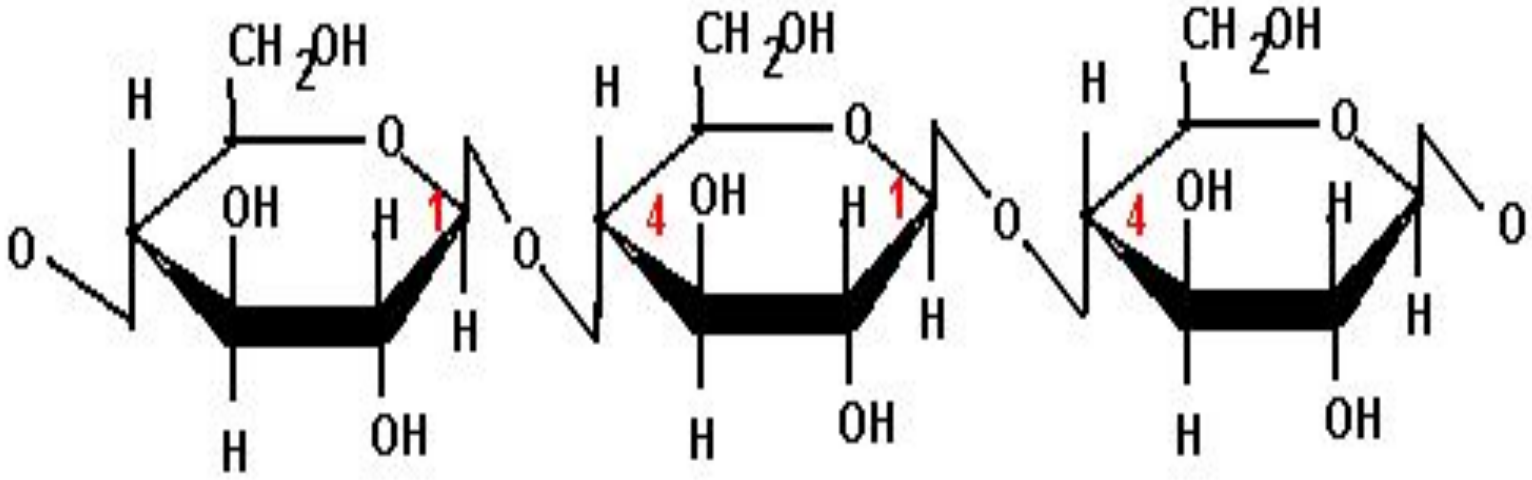


(b) амилопектин

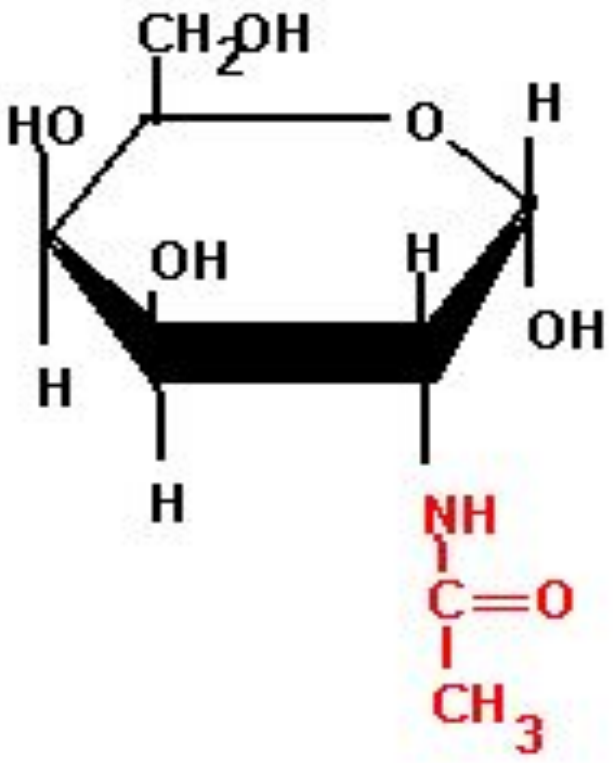


(c)

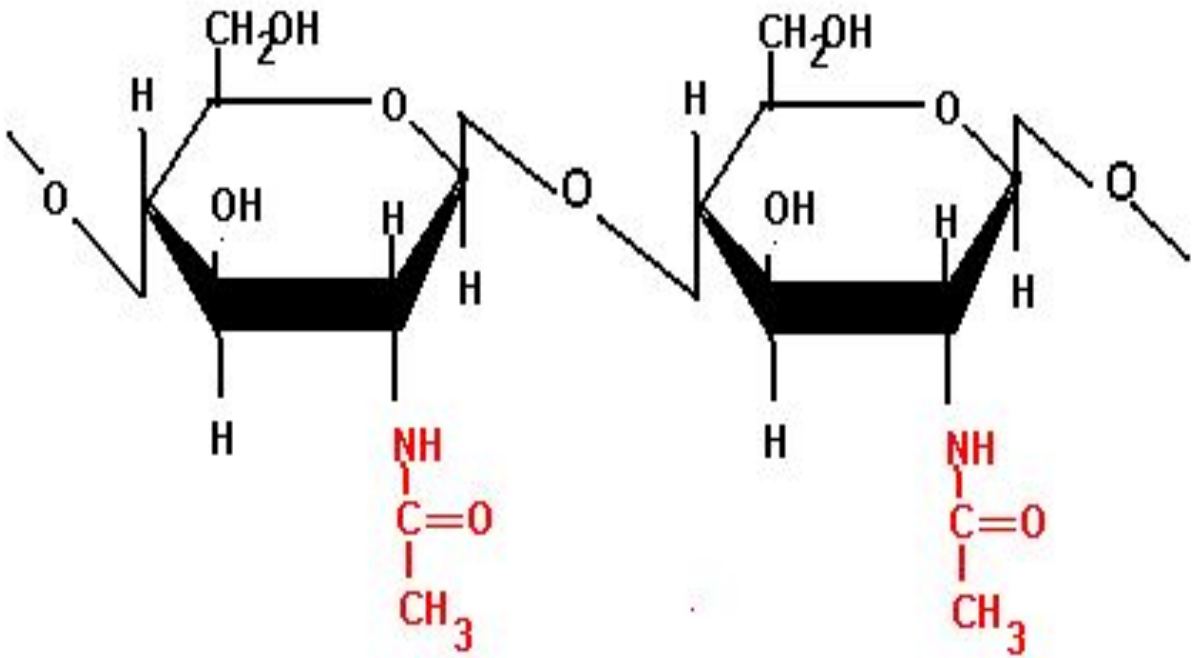
Целлюлоза



N-ацетил-D-галактозоамин



N-ацетил –D-глюкозоамин



β - 1-4 гликозидная связь