

Sacharidy

Vizuální podpora pro výuku



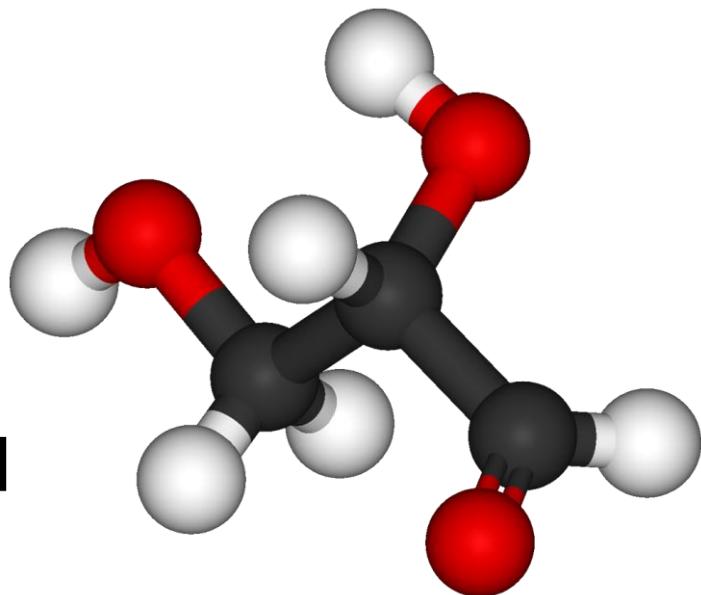
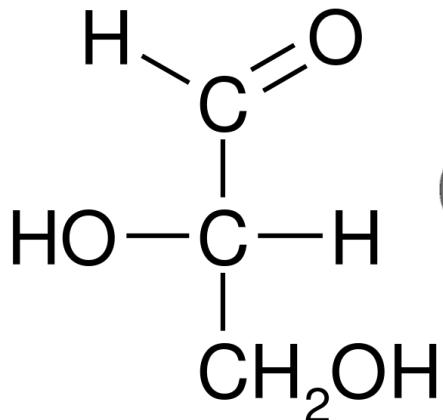
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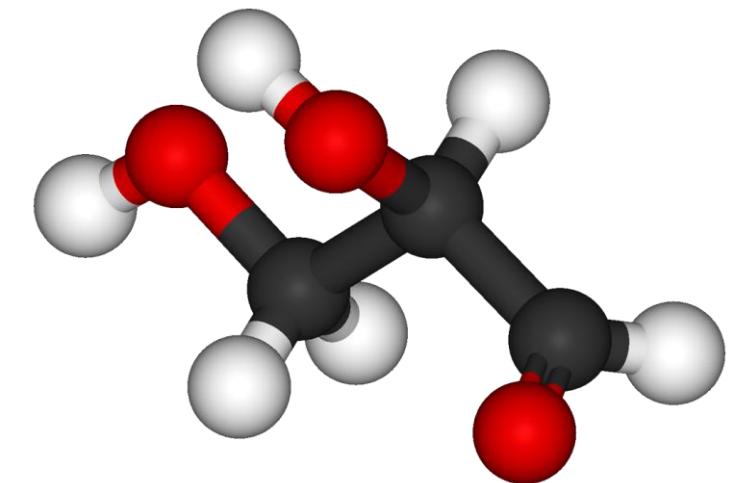
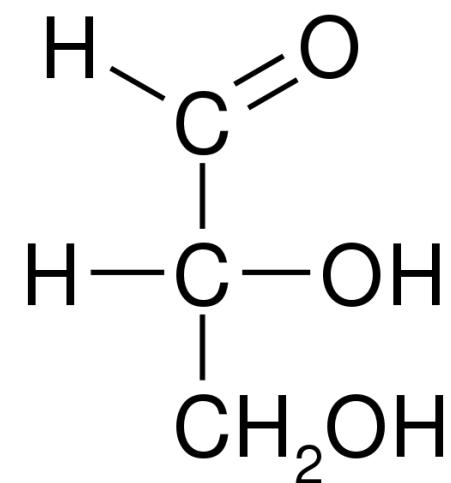
aneb „Cukry se dělí na
kostkový a práškový...“

Glyceraldehyd



https://upload.wikimedia.org/wikipedia/commons/thumb/0/05/L-Glyceraldehyde_2D_Fischer.svg/614px-L-Glyceraldehyde_2D_Fischer.svg.png

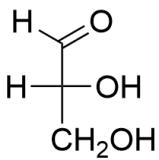
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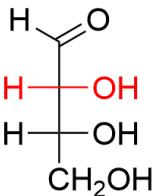
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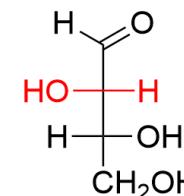
Aldózy



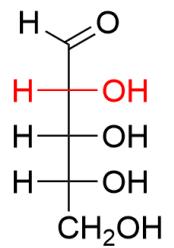
D-glyceraldehyd
D-glycero-triosa



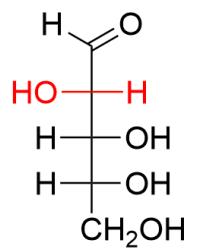
D-erythrosa
D-erythro-tetrosa



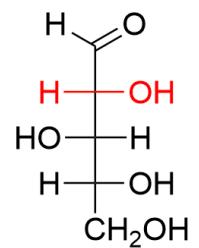
D-threosa
D-threo-tetrosa



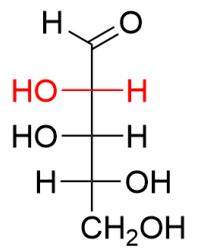
D-ribosa
D-ribo-pentosa



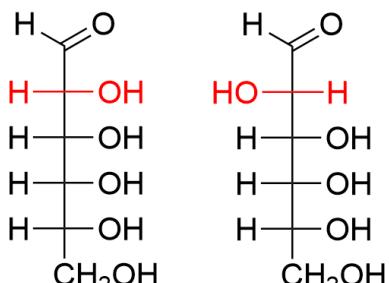
D-arabinosa
D-arabino-pentosa



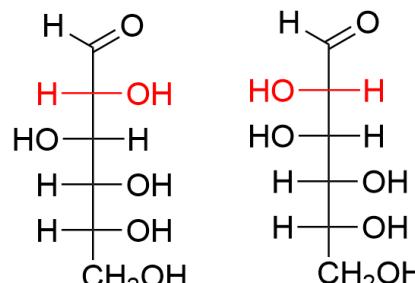
D-xylosa
D-xylo-pentosa



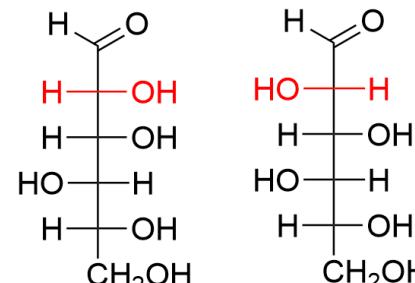
D-lyxosa
D-lyxo-pentosa



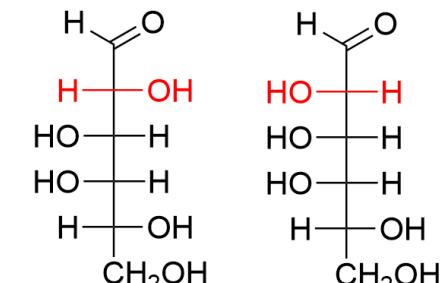
D-allosa
D-allo-hexosa



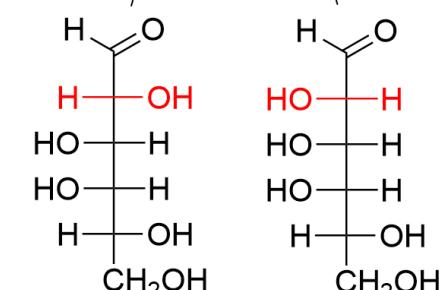
D-glukosa
D-gluko-hexosa



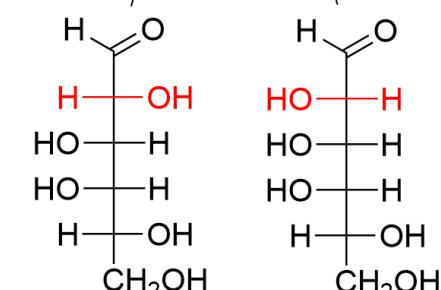
D-gulosa
D-gulo-hexosa



D-idosa
D-ido-hexosa

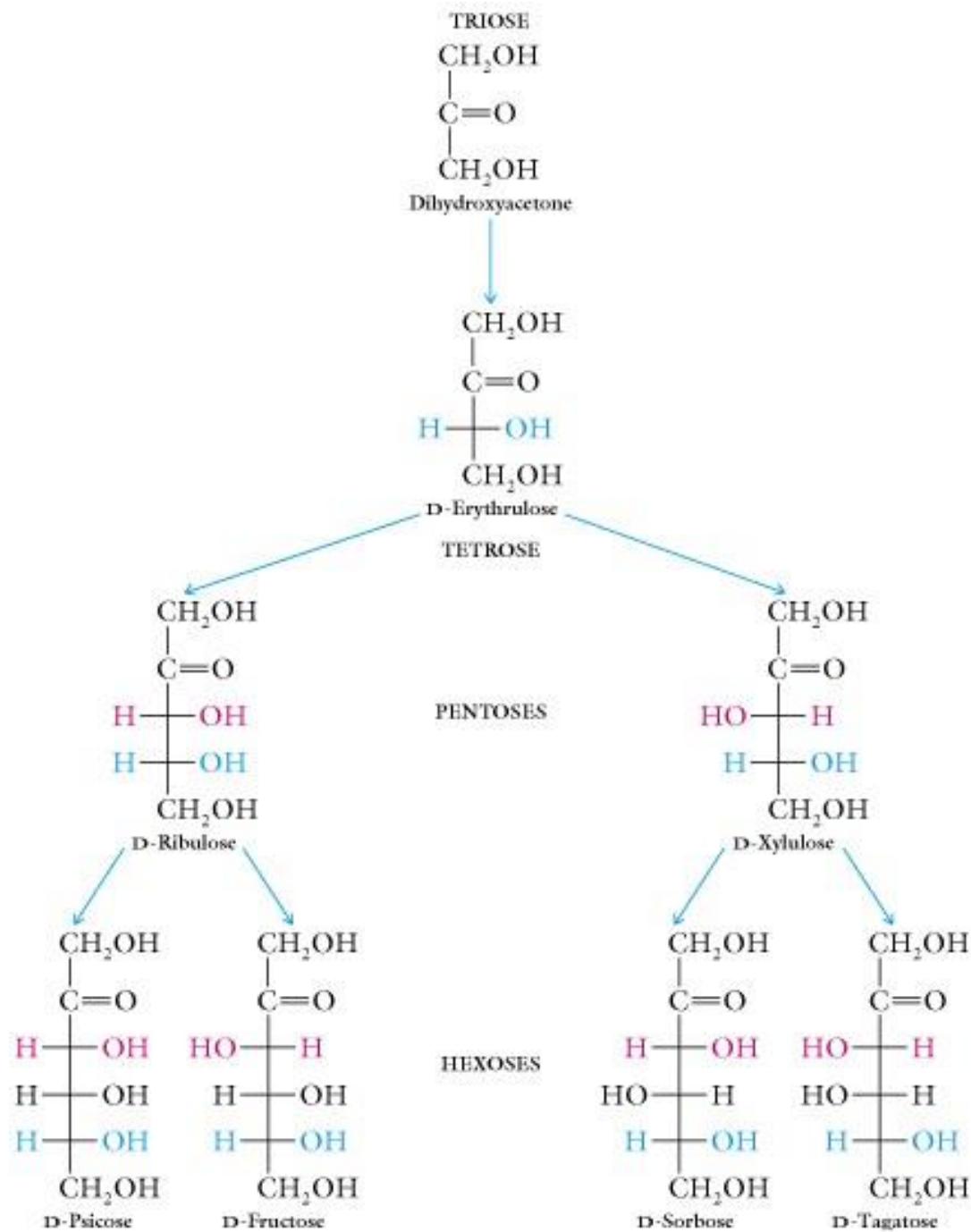


D-galaktosa
D-galakto-hexosa



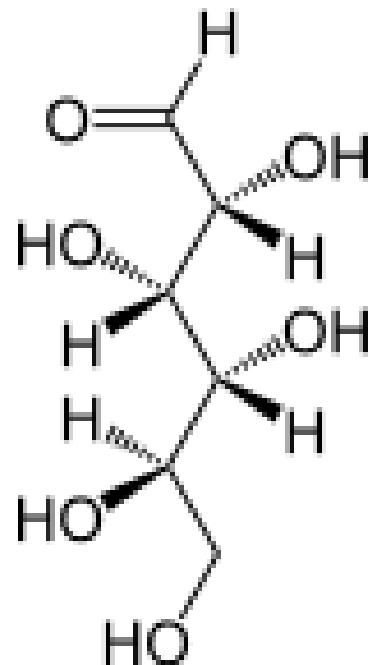
D-talosa
D-talo-hexosa

Ketózy

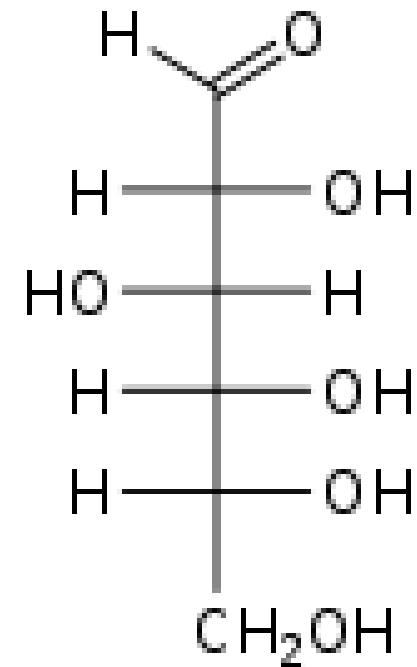


D-glukóza ($C_6H_{12}O_6$)

Nattova projekce

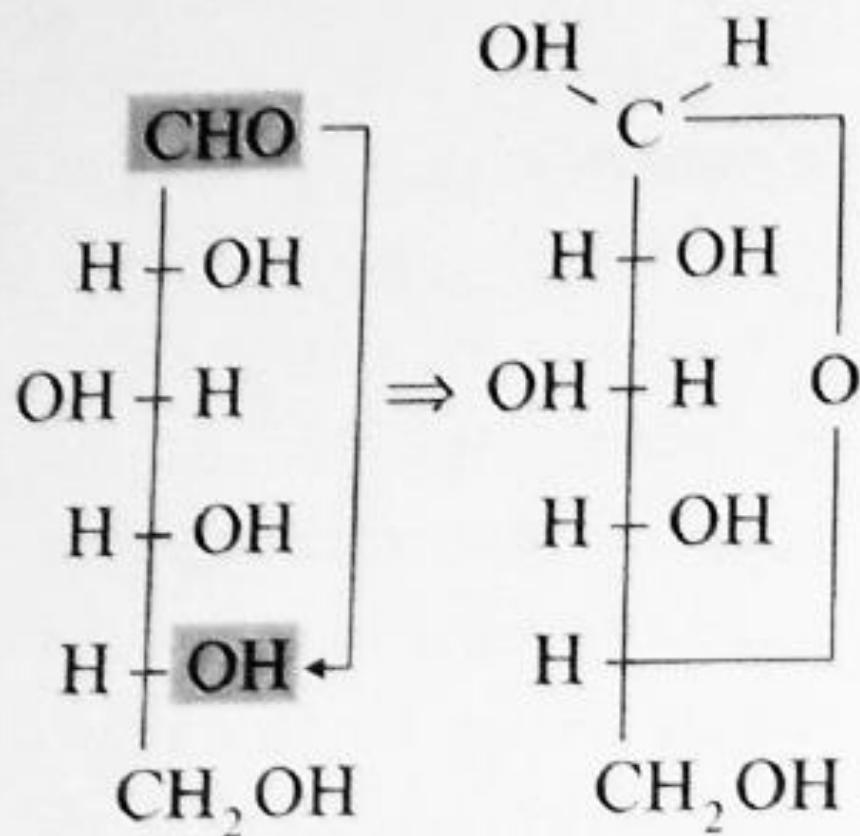


Fisherova

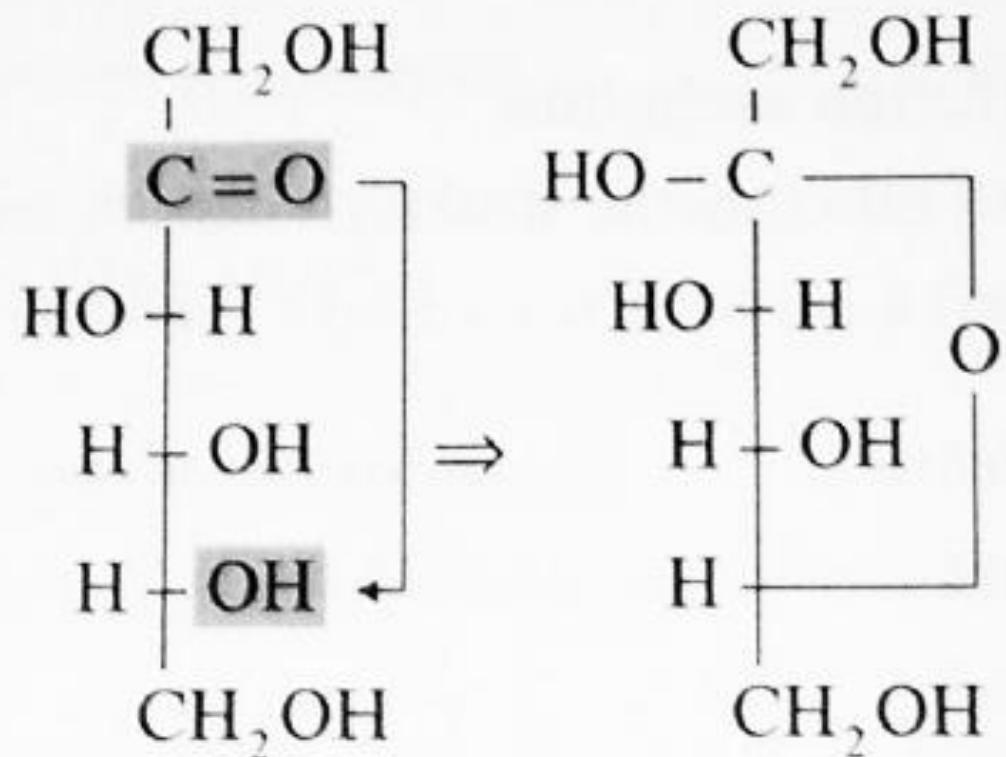


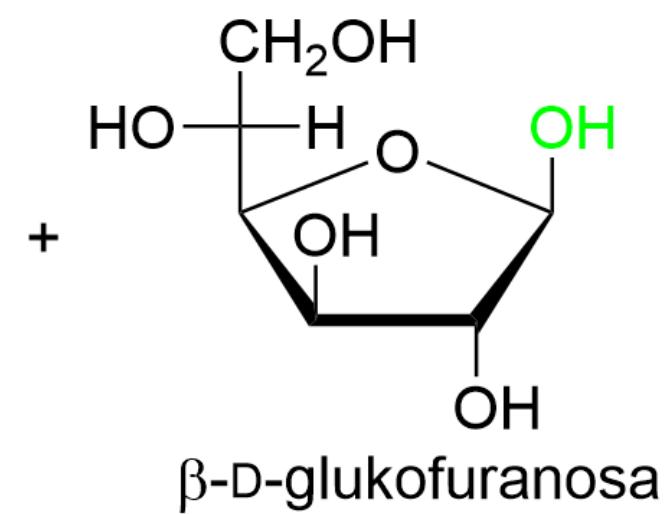
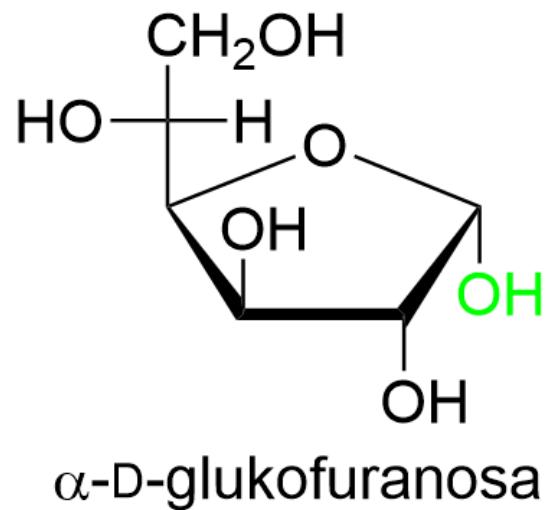
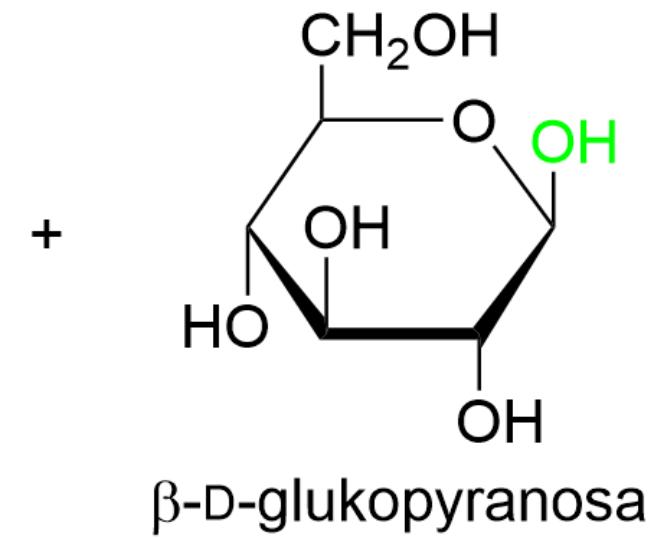
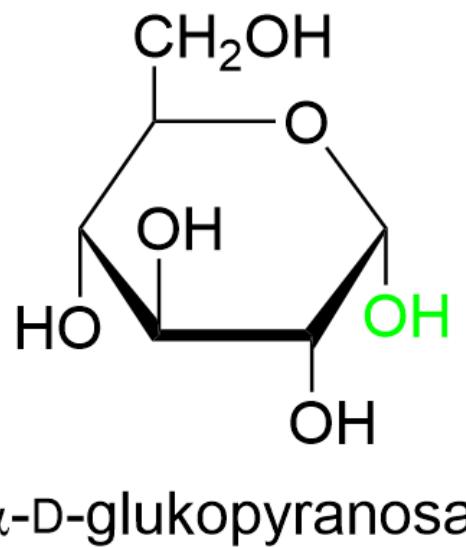
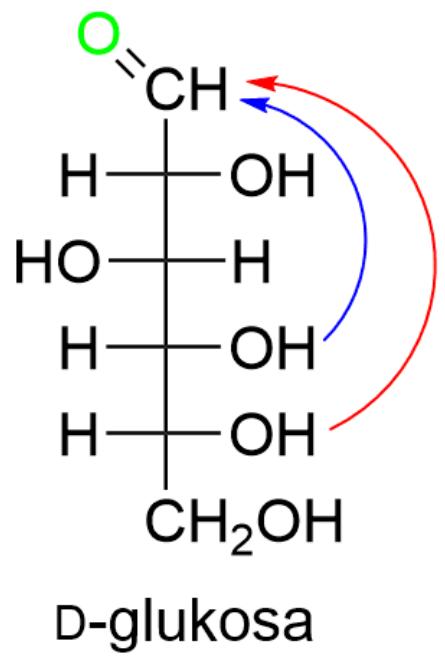
Fisherovy a Tollensovy vzorce

D-glukóza



D-fruktóza

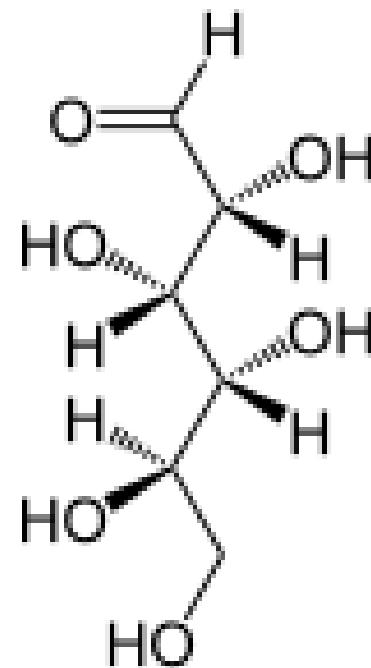




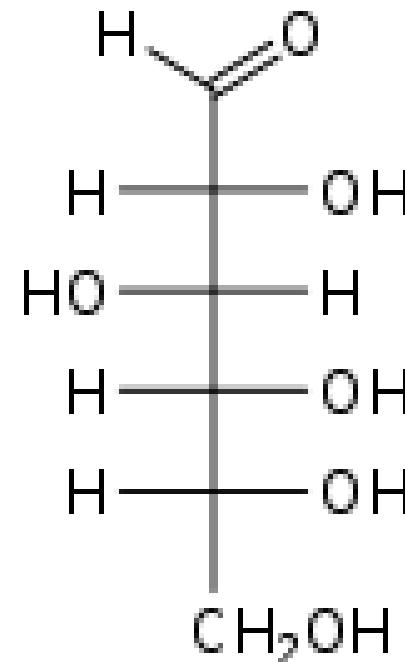
D-glukóza ($C_6H_{12}O_6$)

α -D-glukopyranosy

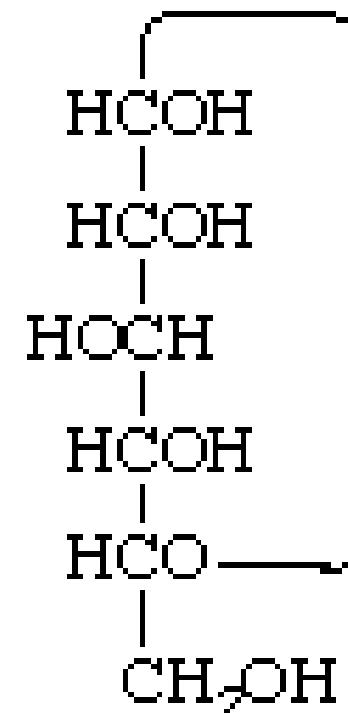
Nattova projekce



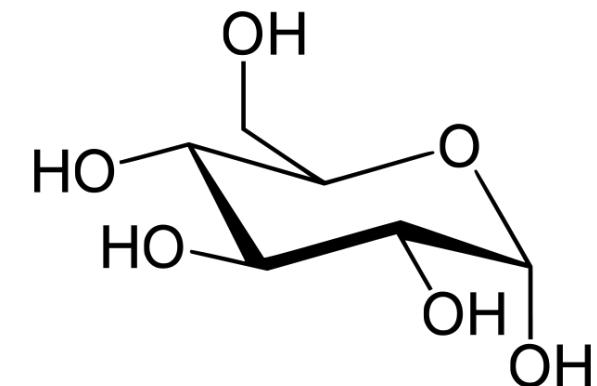
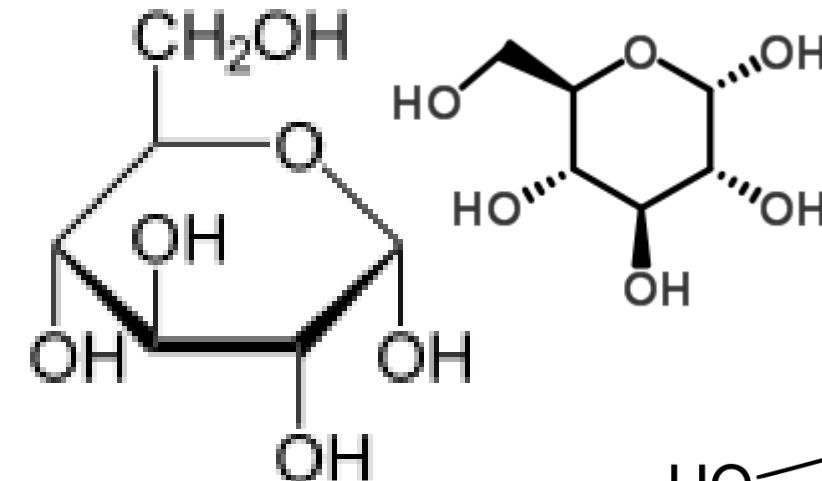
Fisherova



Tollensova



Haworthova



https://upload.wikimedia.org/wikipedia/commons/thumb/1/14/DGlucose_Fischer.svg/120px-DGlucose_Fischer.svg.png

<https://upload.wikimedia.org/wikipedia/commons/f/f1/%CE%91-D-glucopyranosa.GIF>

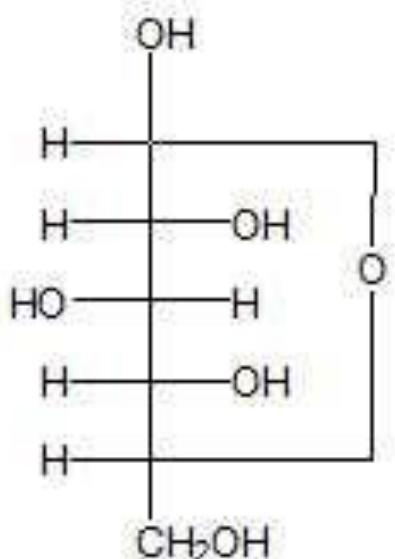
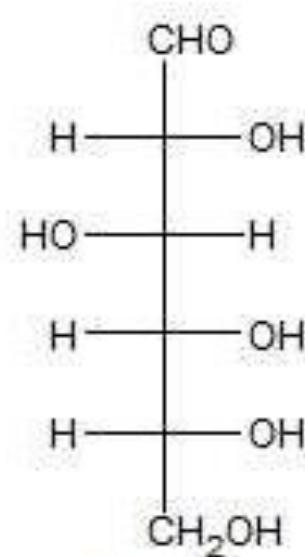
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<http://www.chemspider.com/ImagesHandler.ashx?id=71358&w=250&h=250>

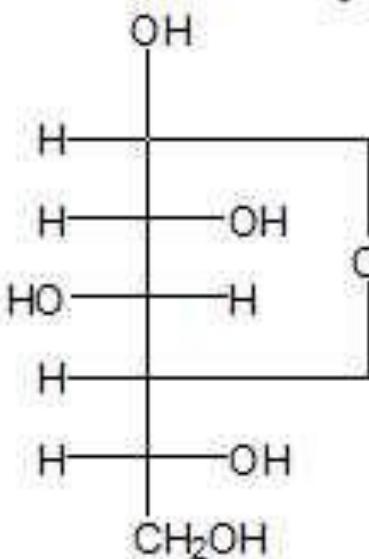
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https://commons.wikimedia.org/wiki/File:D-Glucose_Keilstrich.svg

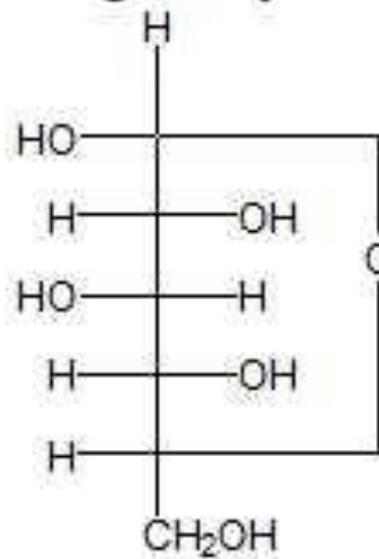
Fischerova projekce:



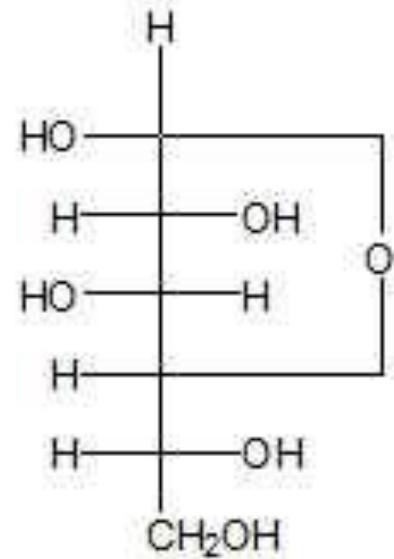
α-D-glukopyranosa



α-D-glukofuranosa

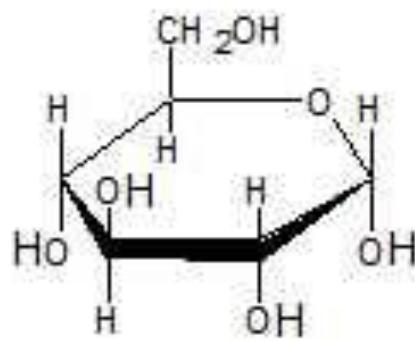


β-D-glukopyranosa

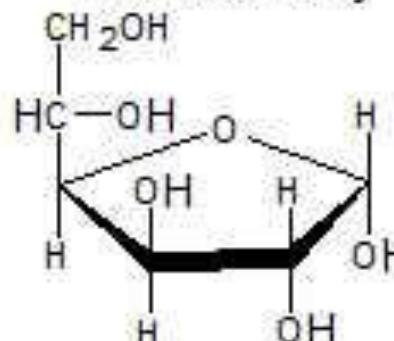


β-D-glukofuranosa

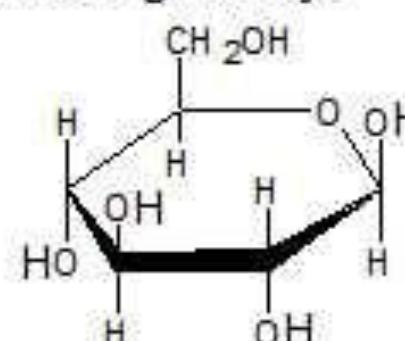
Haworthovy vzorce D-glukosy:



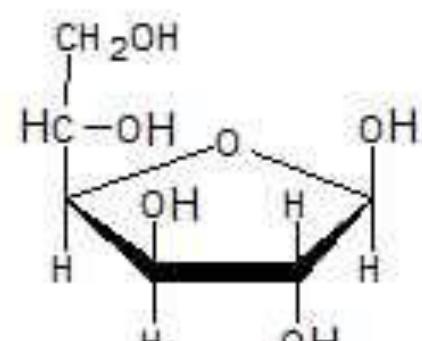
α-D-glukopyranosa



α-D-glukofuranosa

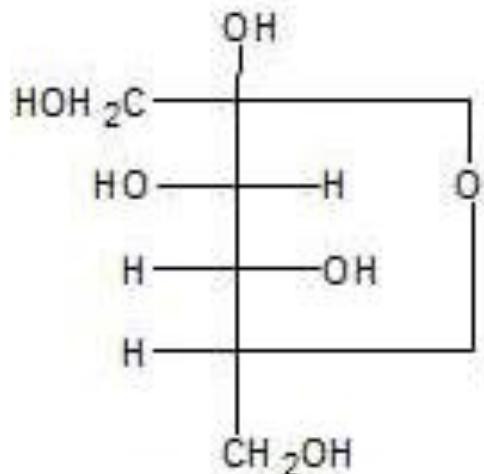


β-D-glukopyranosa

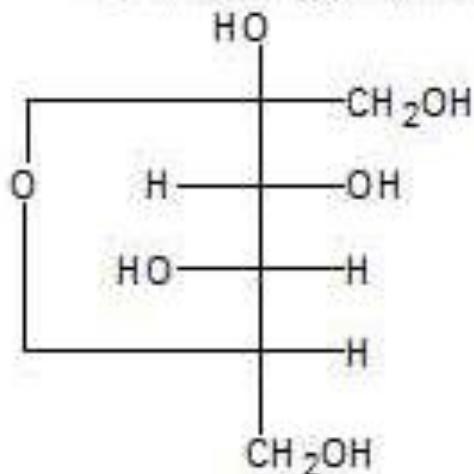


β-D-glukofuranosa

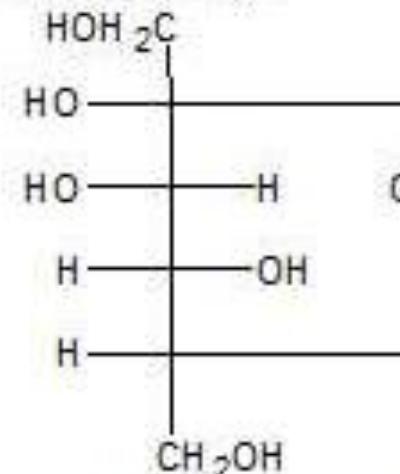
Tollensovy vzorce fruktofuranosy:



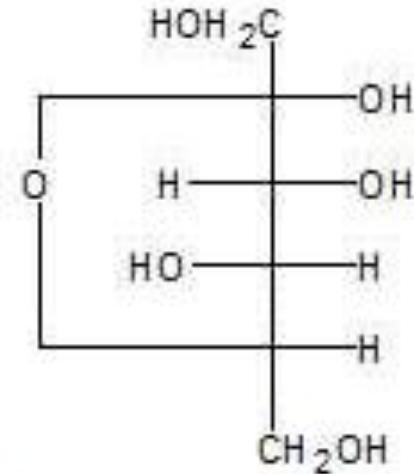
α -D-fruktofuranosa



α -L-fruktofuranosa

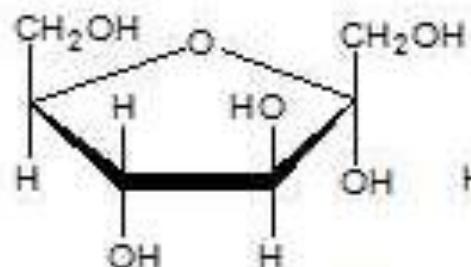


β -D-fruktofuranosa

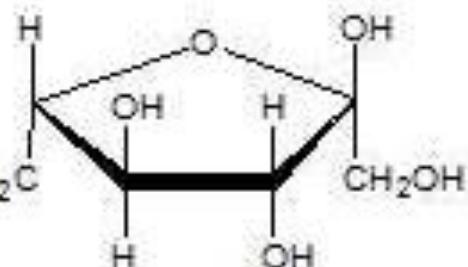


β -L-fruktofuranosa

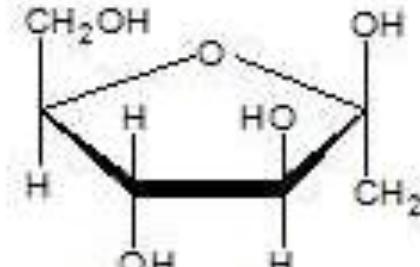
Haworthovy vzorce fruktofuranosy:



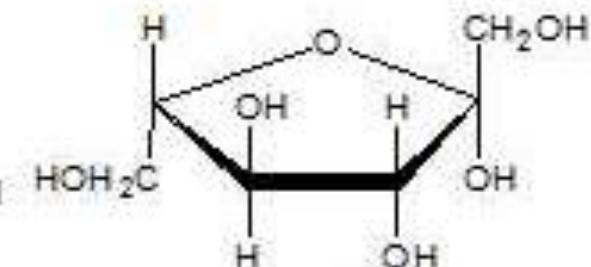
α -D-fruktofuranosa



α -L-fruktofuranosa

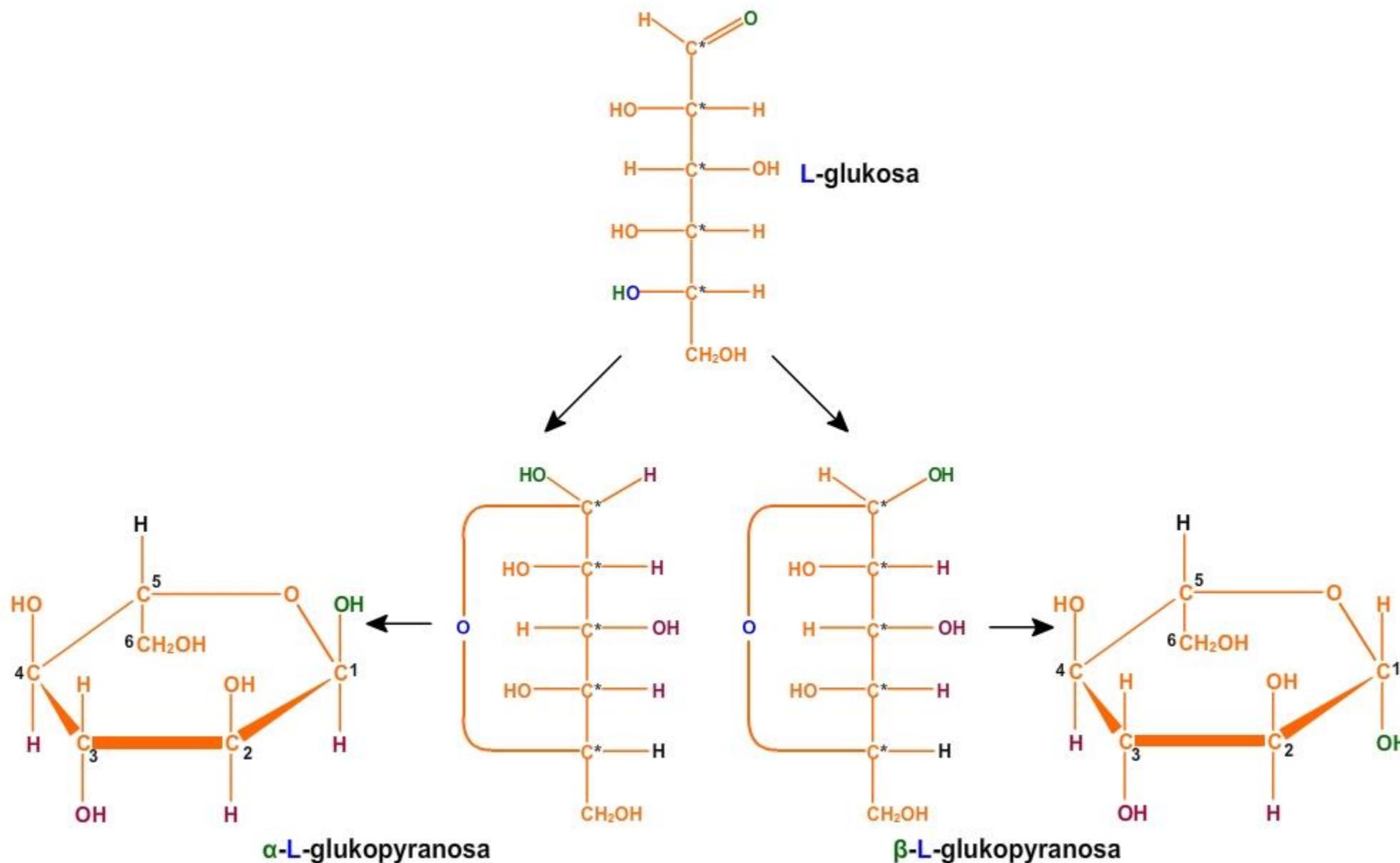


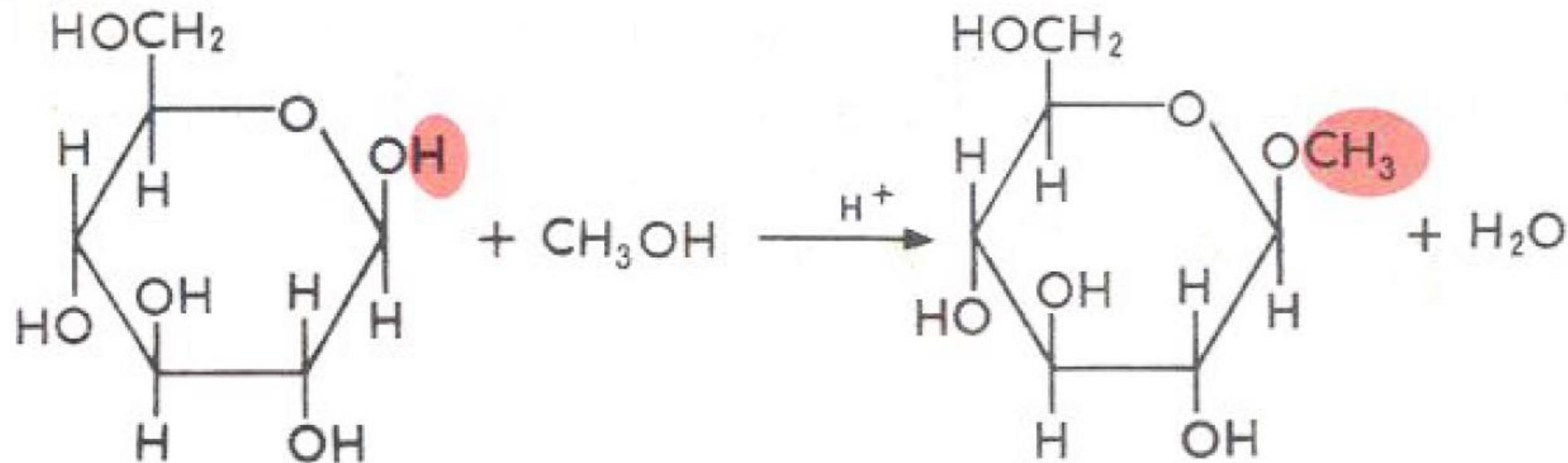
β -D-fruktofuranosa



β -L-fruktofuranosa

L-glukosa - odvození cyklické formy

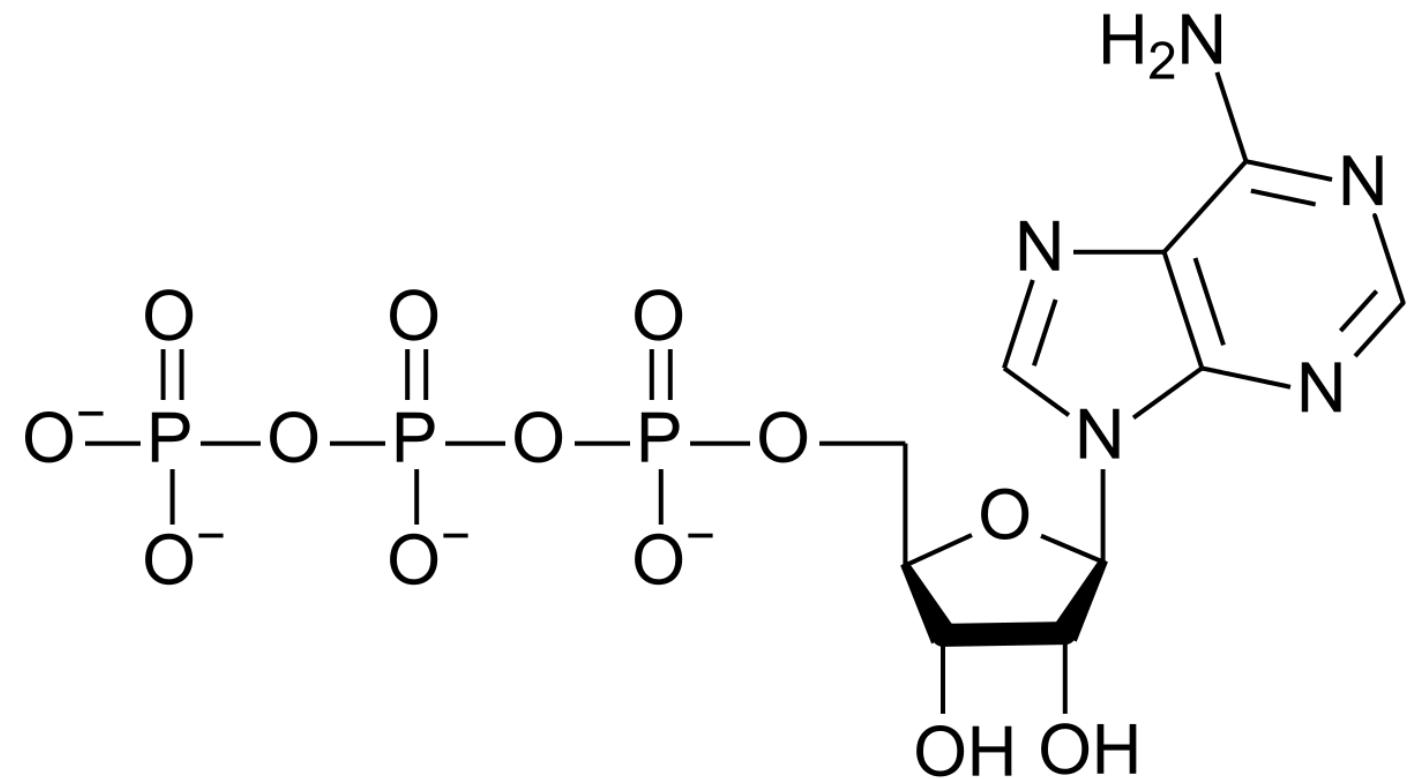
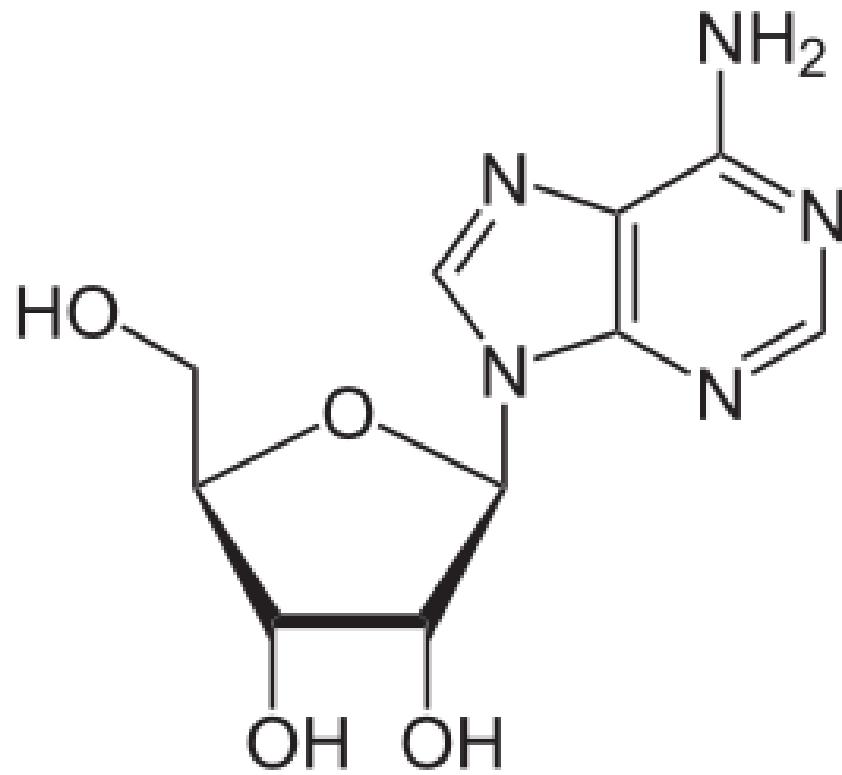




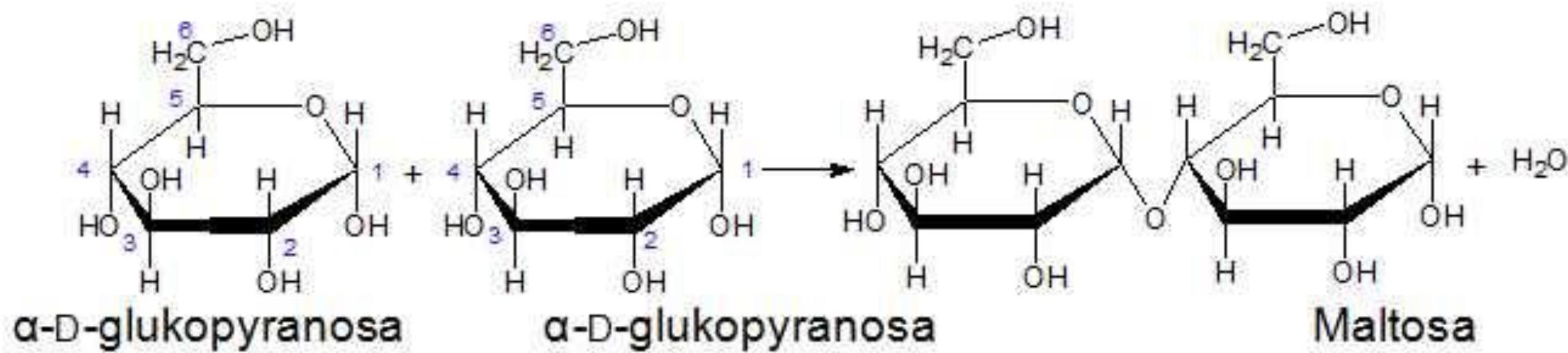
β - D - glukopyranosa
(volný cukr)

methyl - β - D - glukopyranosid
(glykosid)

Adenosin, adenosintrifosfát (ATP)

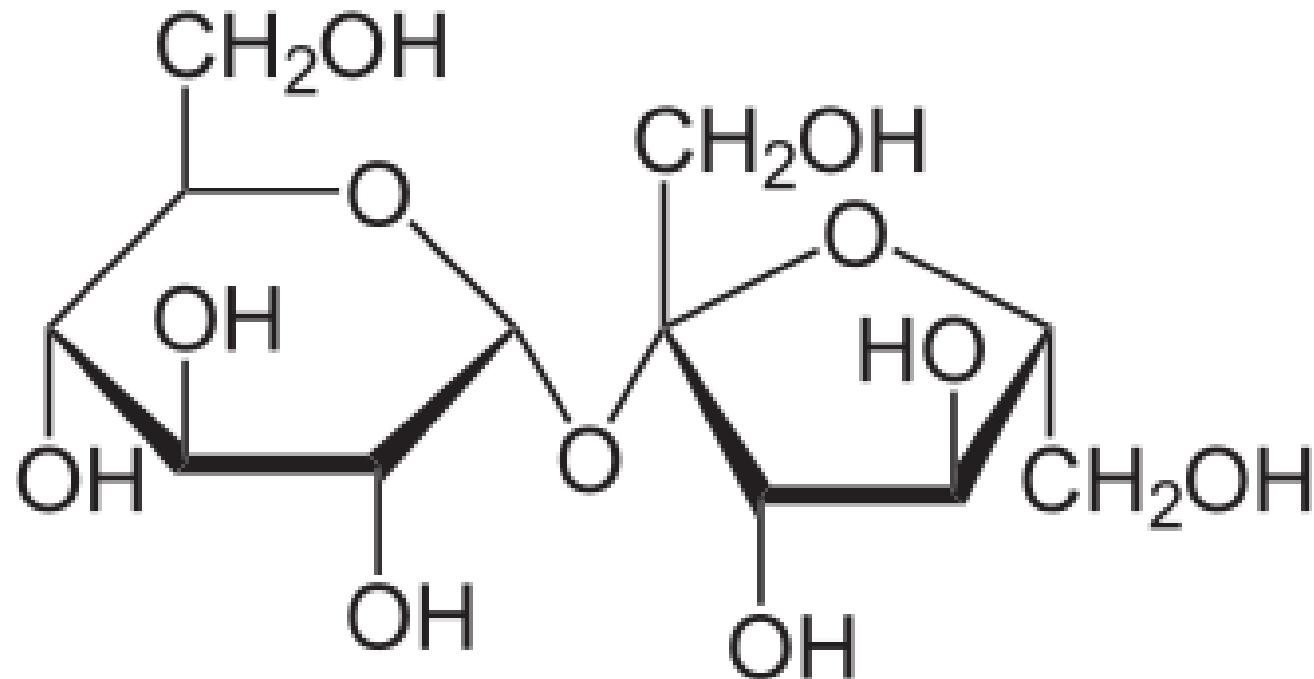


Oligosacharidy - maltosa



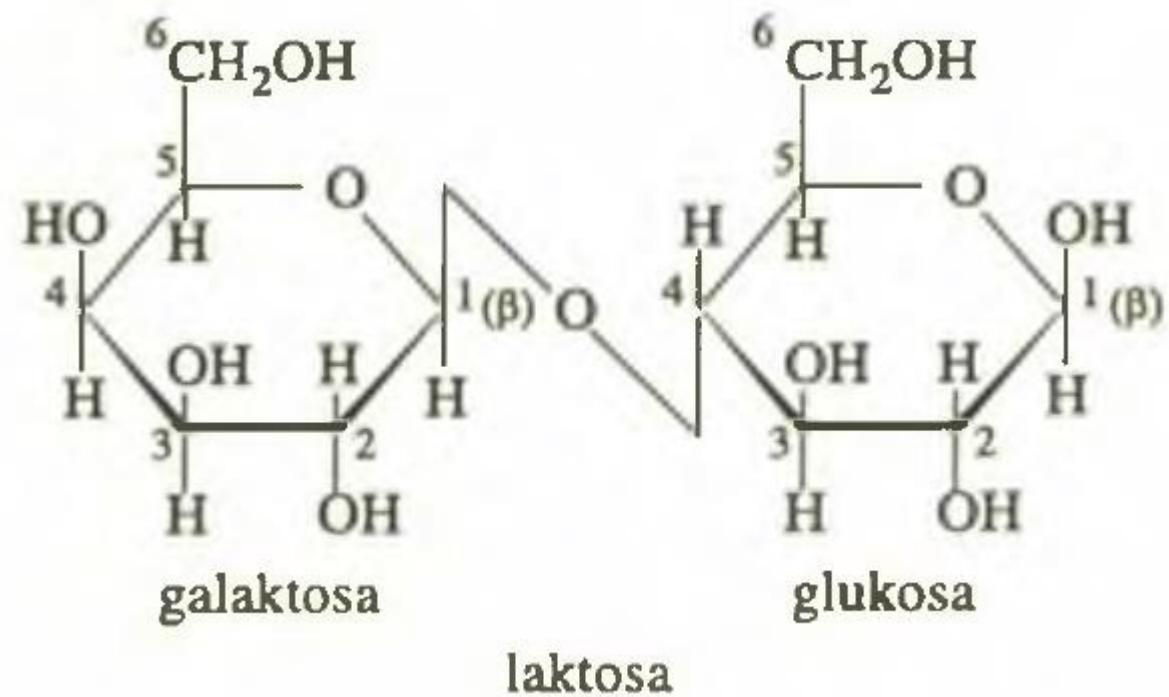
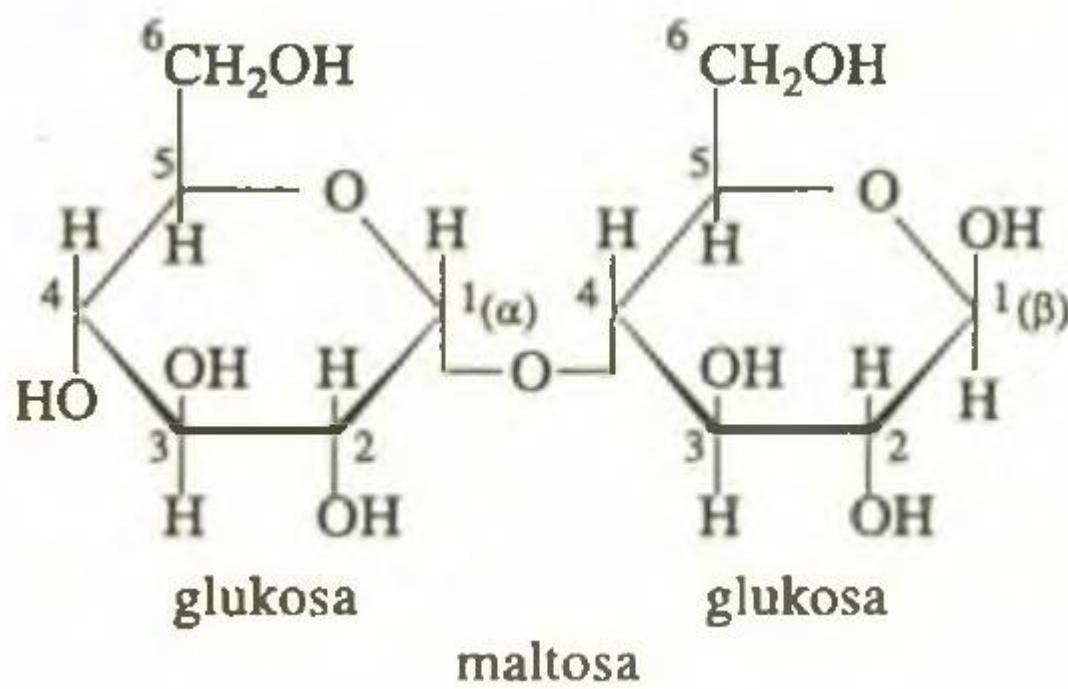
A(1→4) vazba

Oligosacharidy - sacharosa

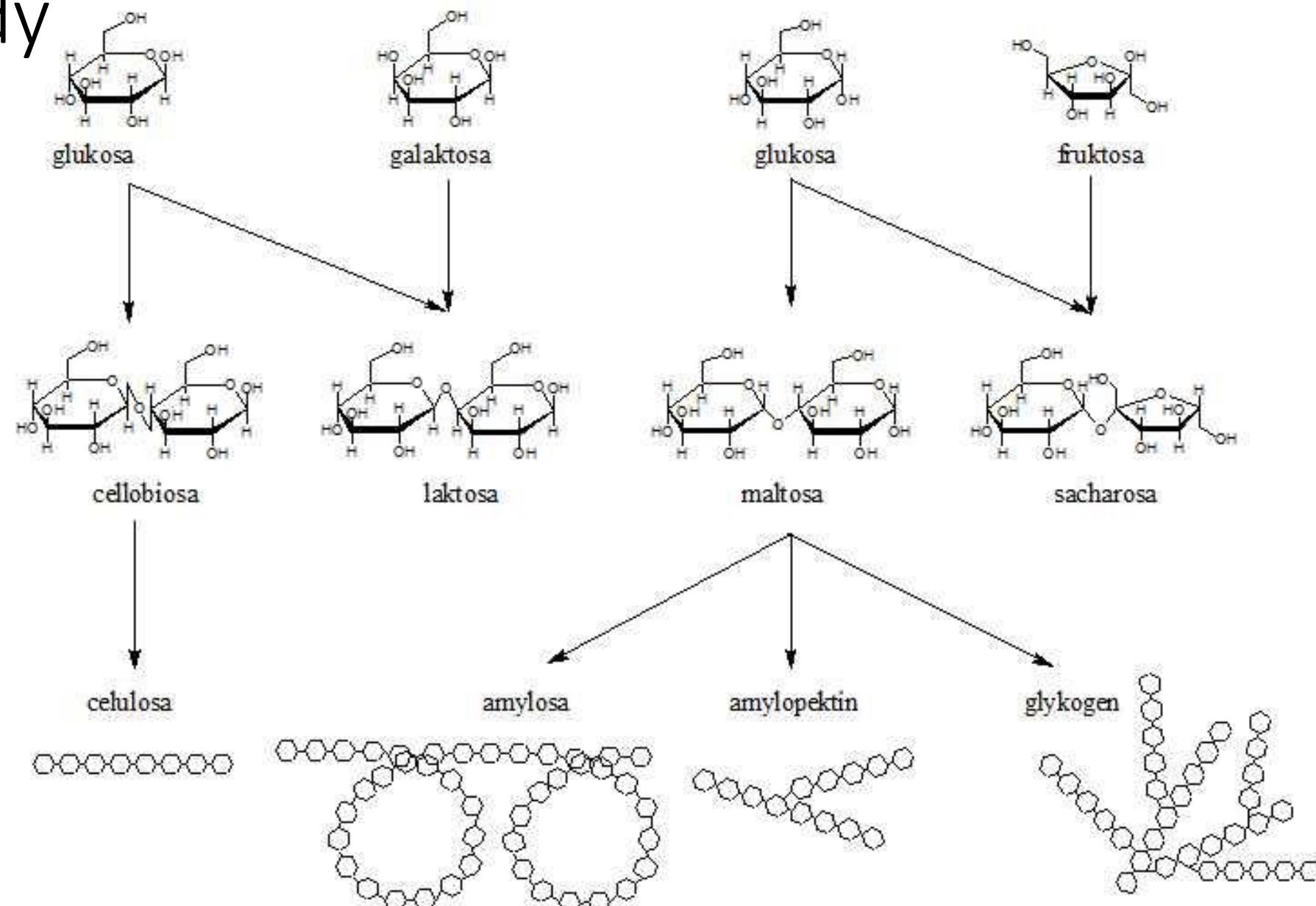


α -D-glukopyranosyl- β -D-fruktofuranosid

Oligosacharidy



Polysacharidy



Polysacharidy

