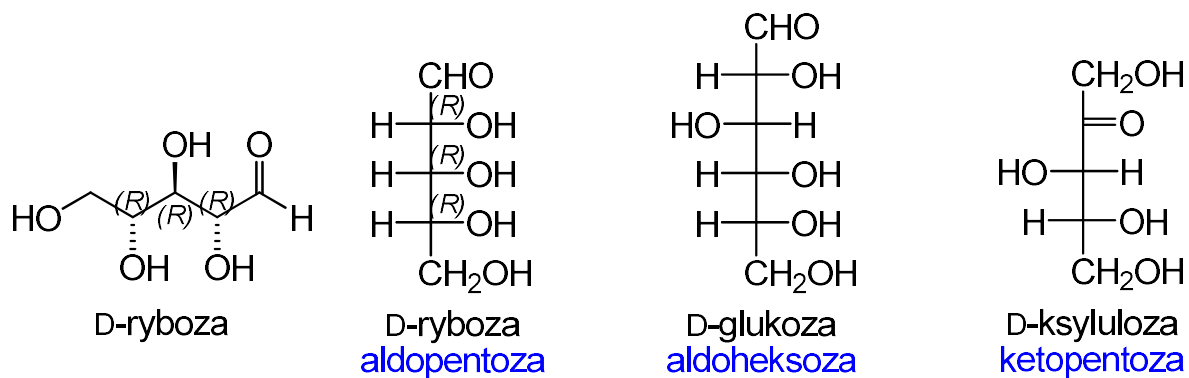
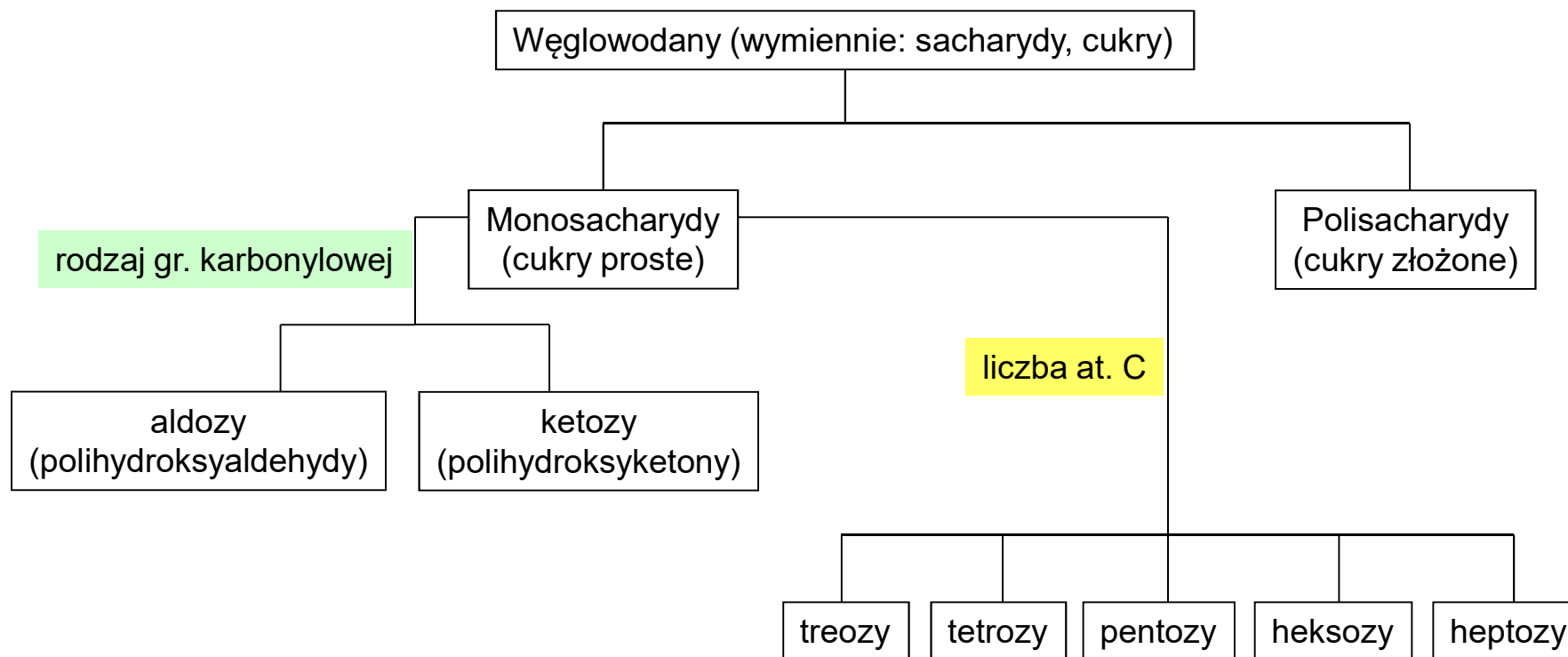
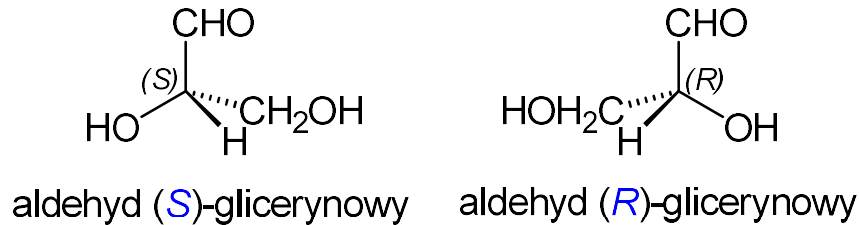
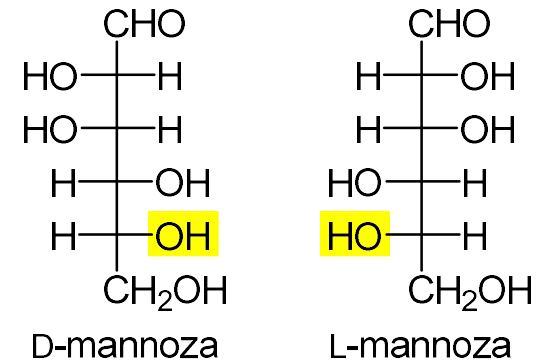
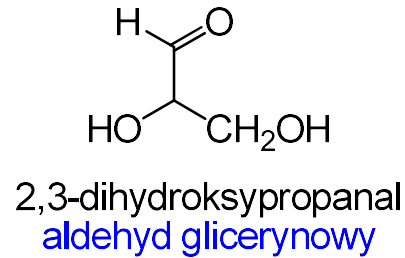


20. Wstęp do chemii węglowodanów

20.1. Klasyfikacja węglowodanów



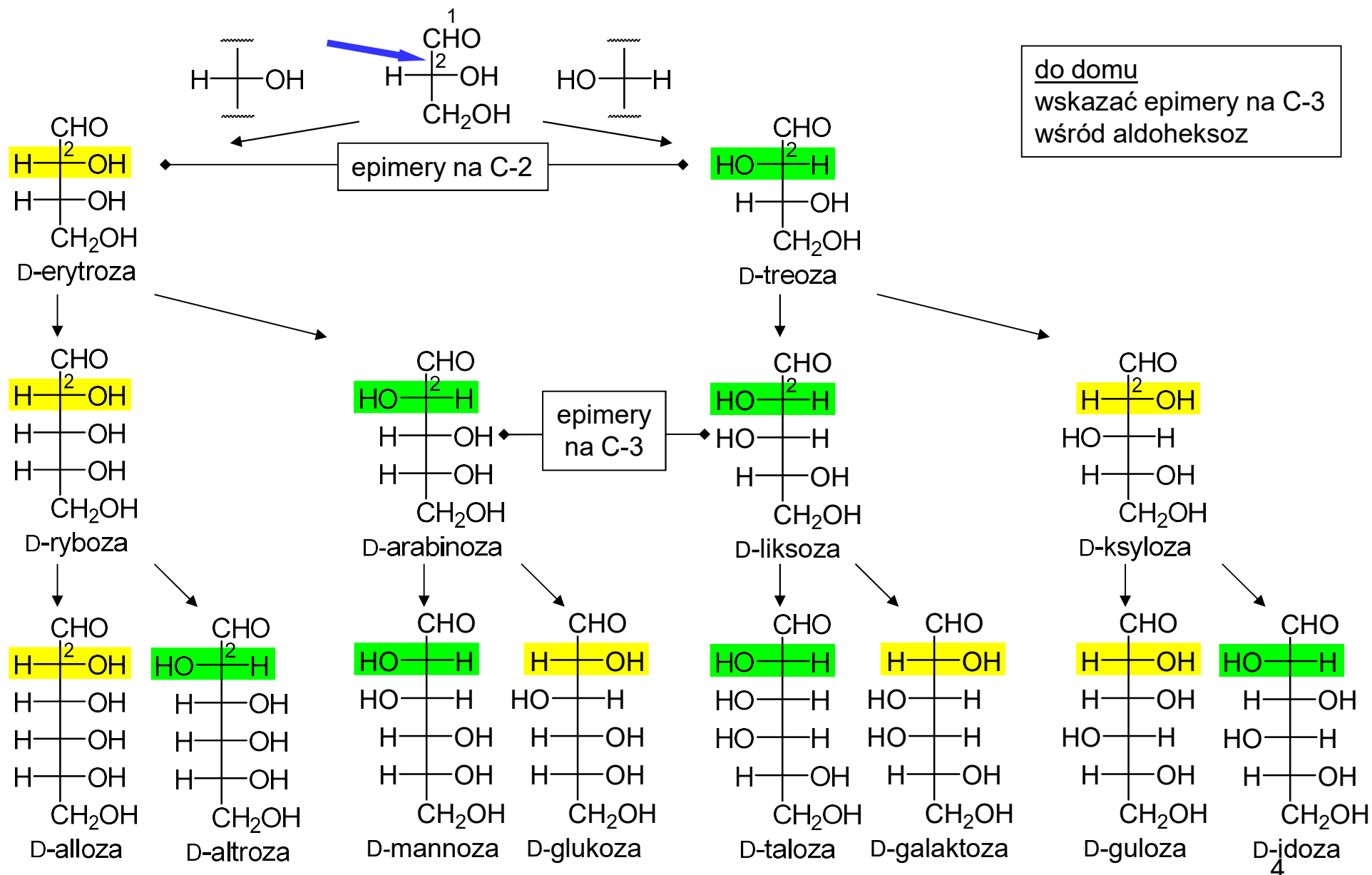
20.2. Notacja D/L



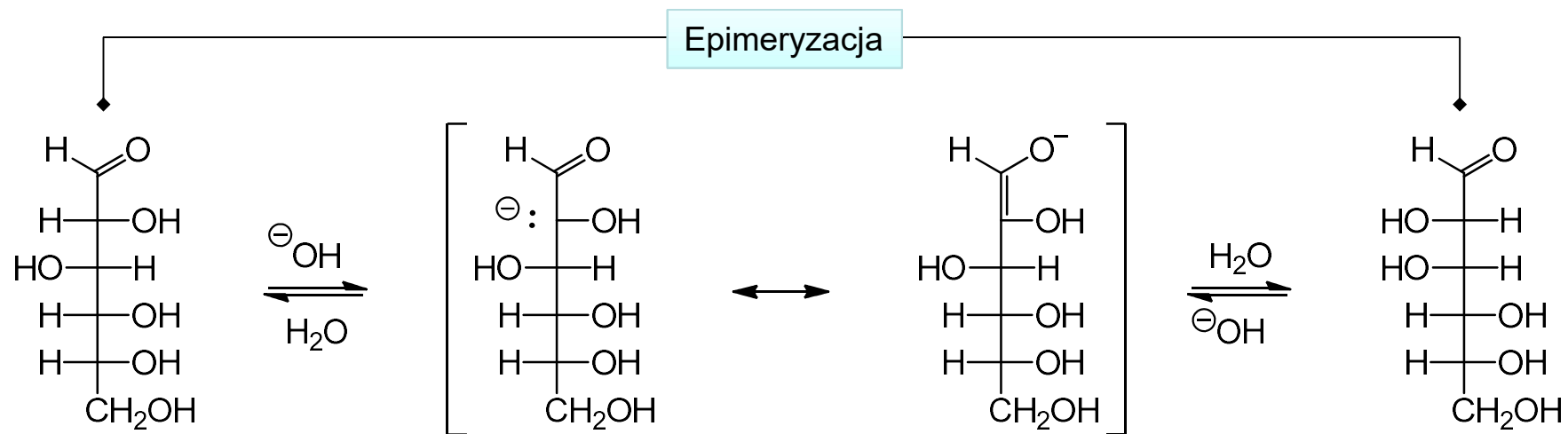
cukry szeregu D- i L-, to enancjomery

- We wzorze Fischera:
- łańcuch węglowy w pionie
 - gr. C=O na górze (aldozy) lub jak najwyżej (ketozy)
 - gr. OH na najniższym centrum asymetrii
 - po lewo → L-cukier
 - po prawo → D-cukier

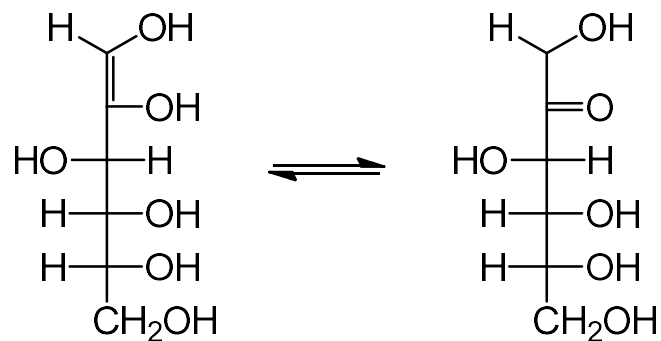
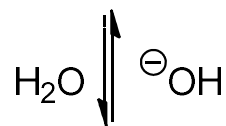
20.3. Konfiguracja aldoz przez formalne wyprowadzanie epimerów na C-2



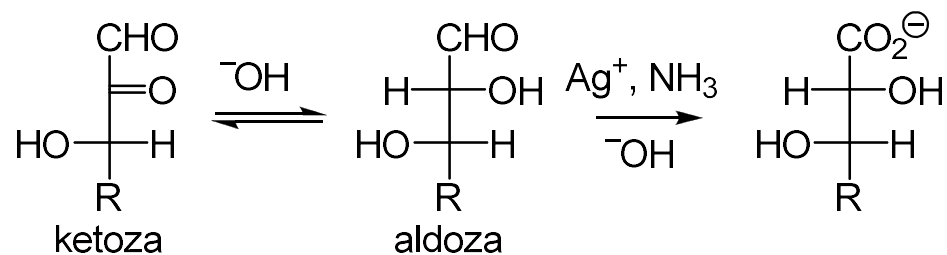
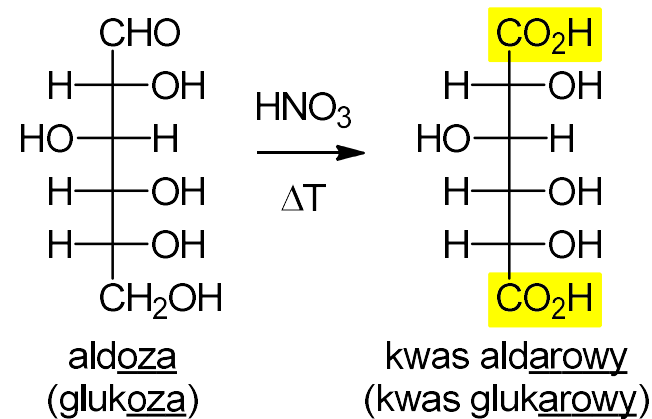
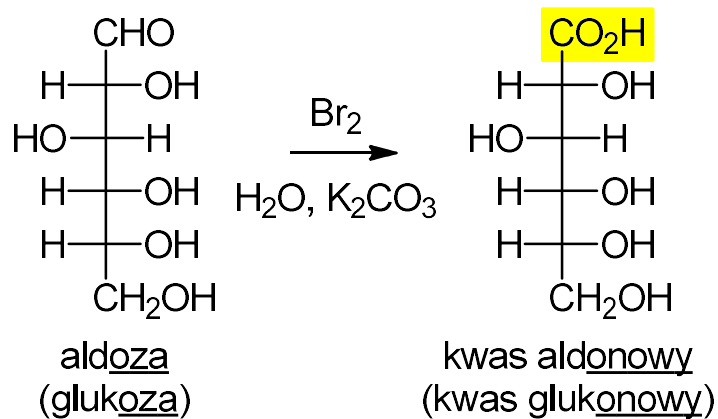
20.4. Reakcje monocukrów w środowisku zasadowym



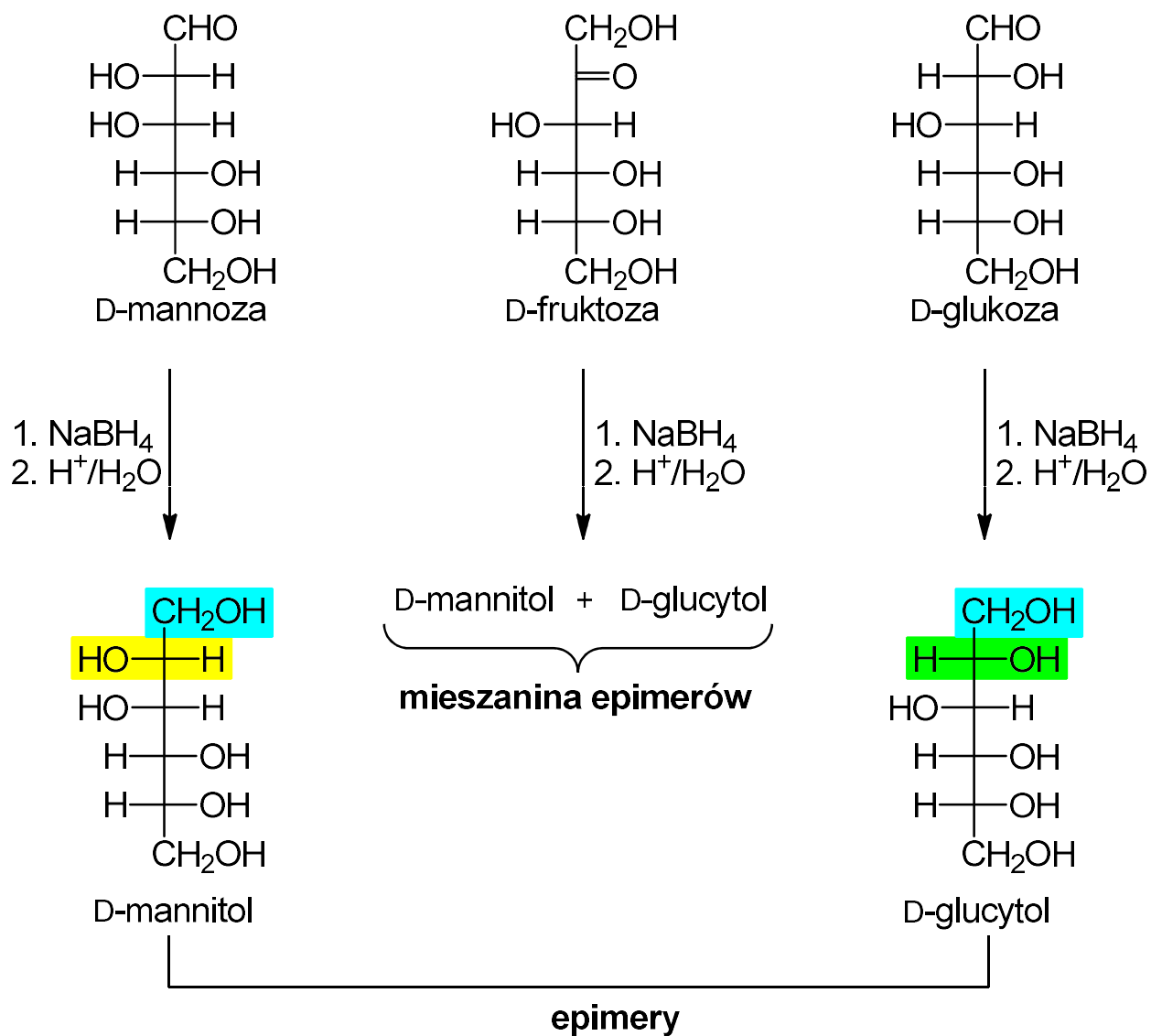
Przegrupowanie aldoza-ketoza
(reakcja konkurencyjna do r. epimeryzacji)



20.5. Utlenianie monosacharydów

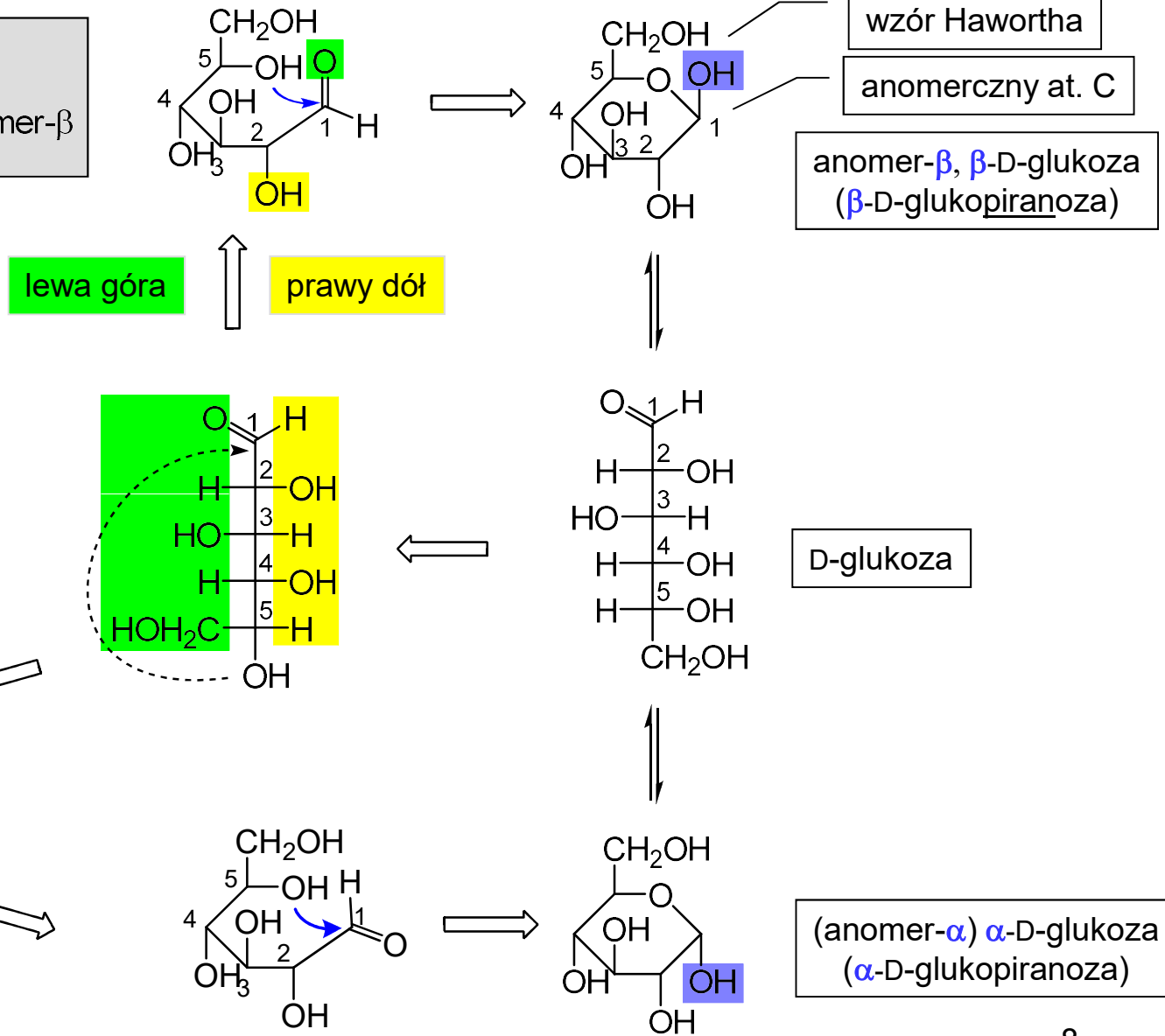


20.6. Redukcja monosacharydów

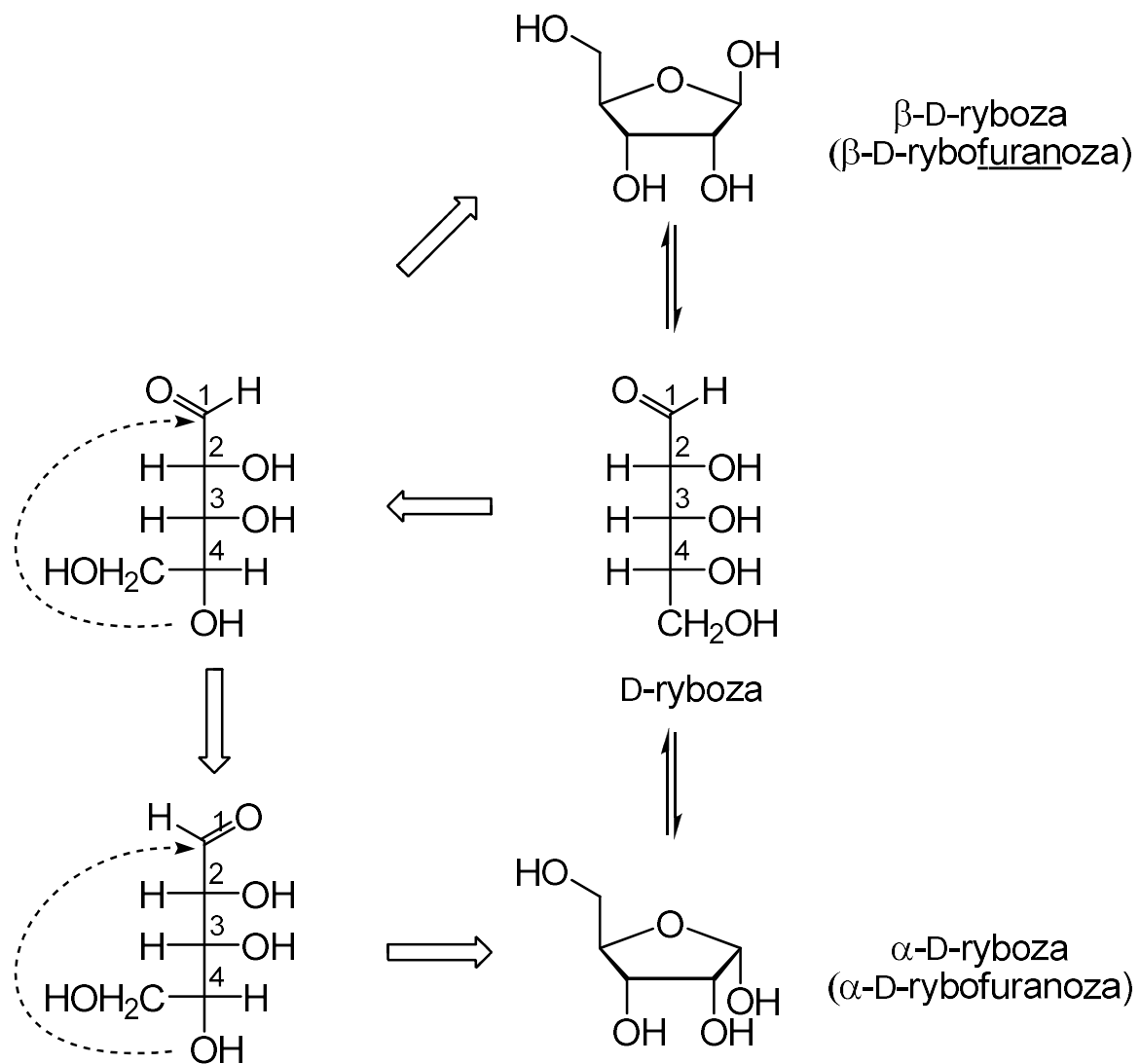


20.7. Cykliczne hemiacetale monosacharydów, piranozy

Mutarotacja - równowaga:
 anomer- α \rightleftharpoons forma otwarta \rightleftharpoons anomer- β

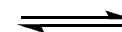
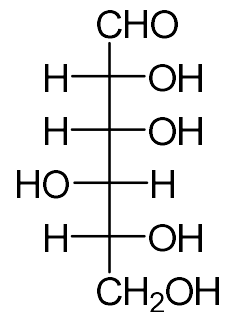
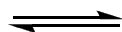
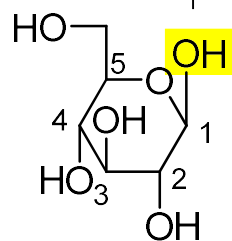


20.8. Cykliczne hemiacetale monosacharydów, furanozy

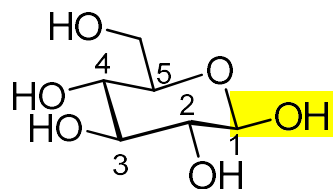
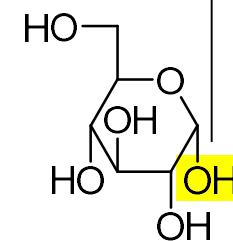


20.9. Względna trwałość anomerów aldoheksoz

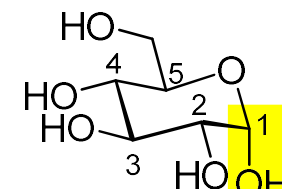
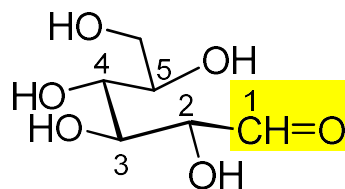
reguła:
β, pozycja ekwatorialna



reguła:
α, pozycja aksjalna

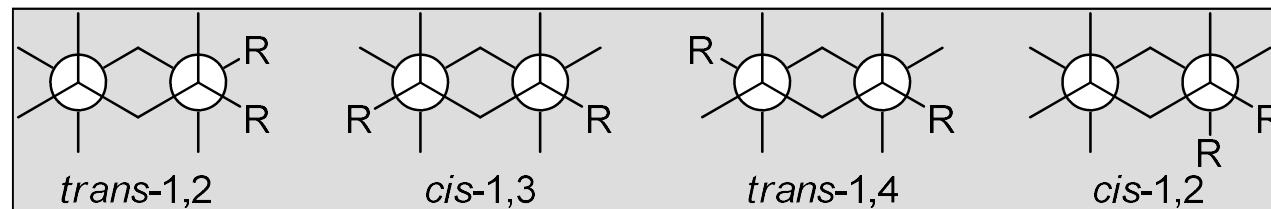


64%

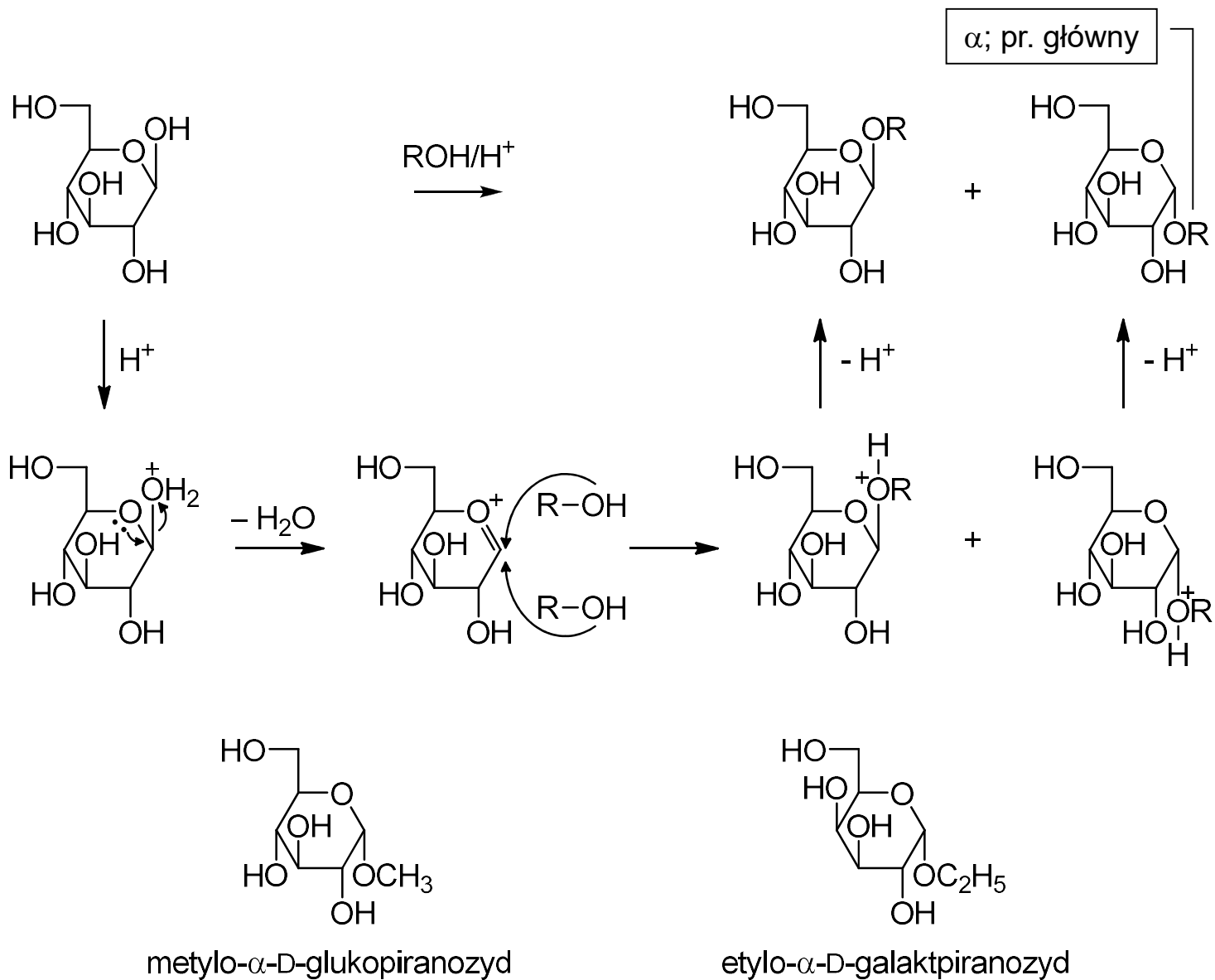


36%

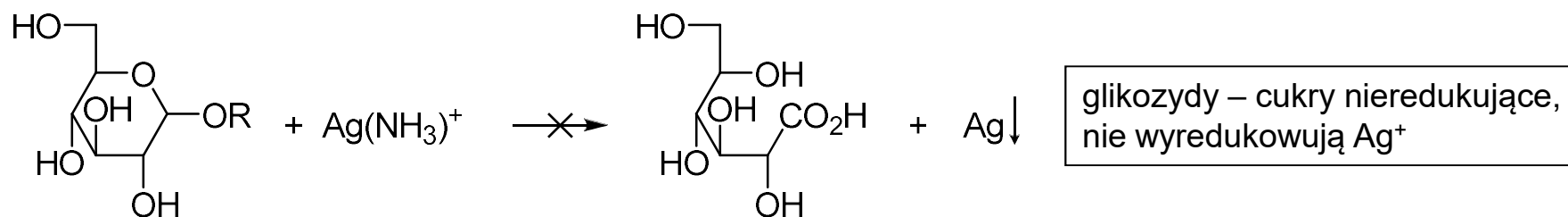
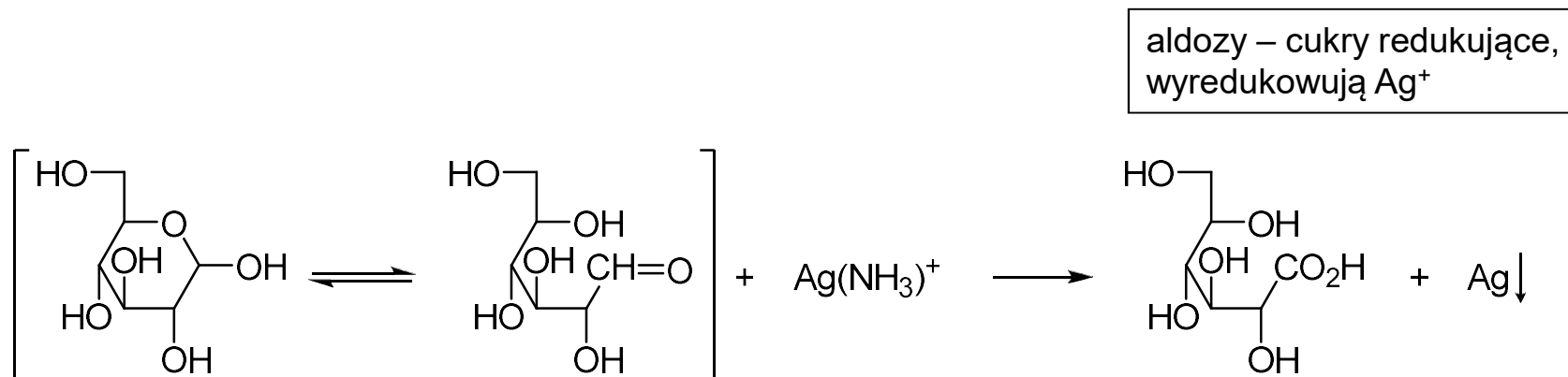
przypomnienie:
rodzaje podstawienia
w cykloheksanie



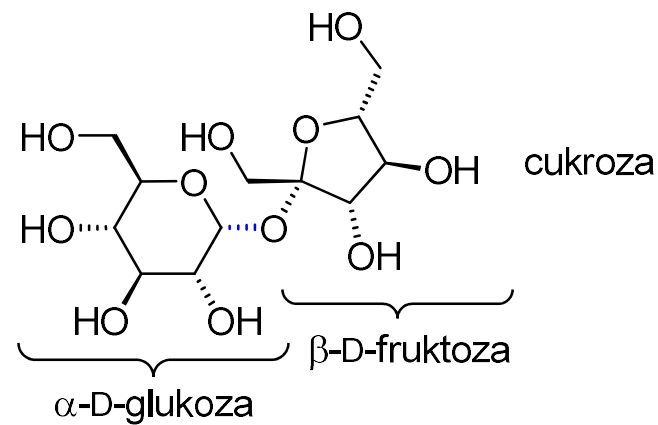
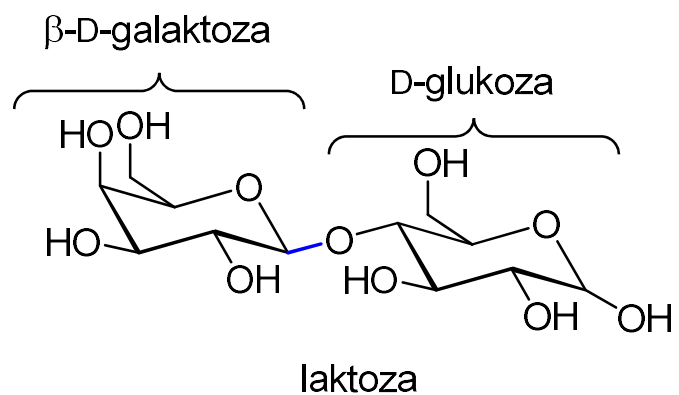
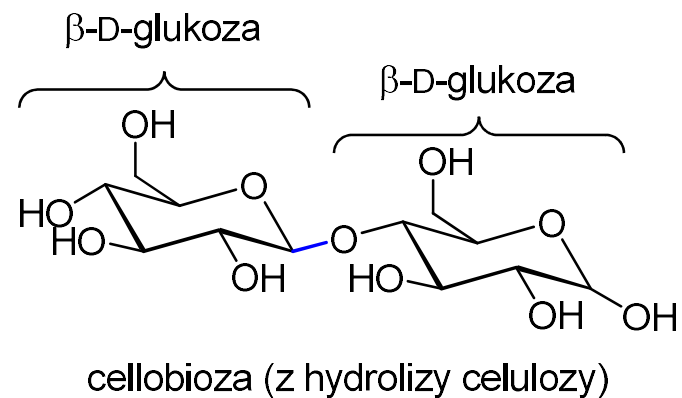
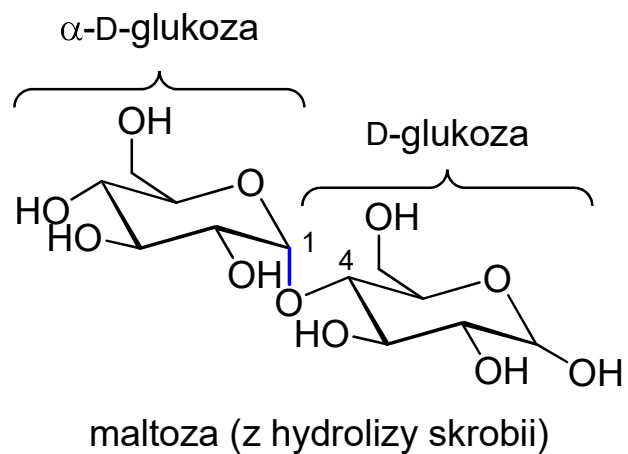
20.10. Tworzenie glikozydów



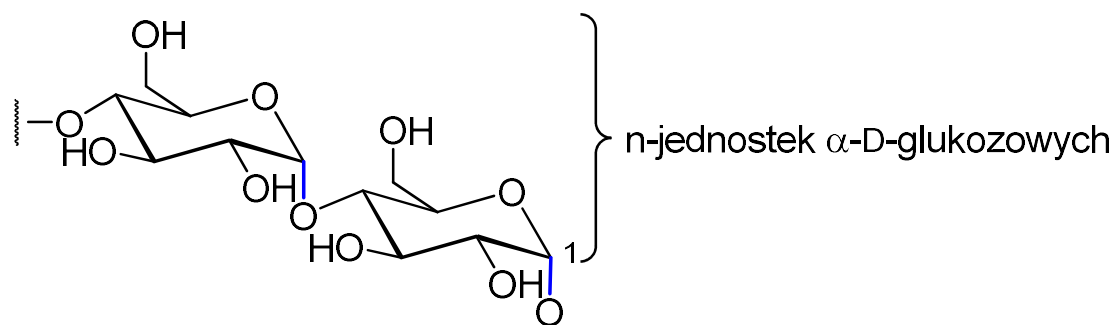
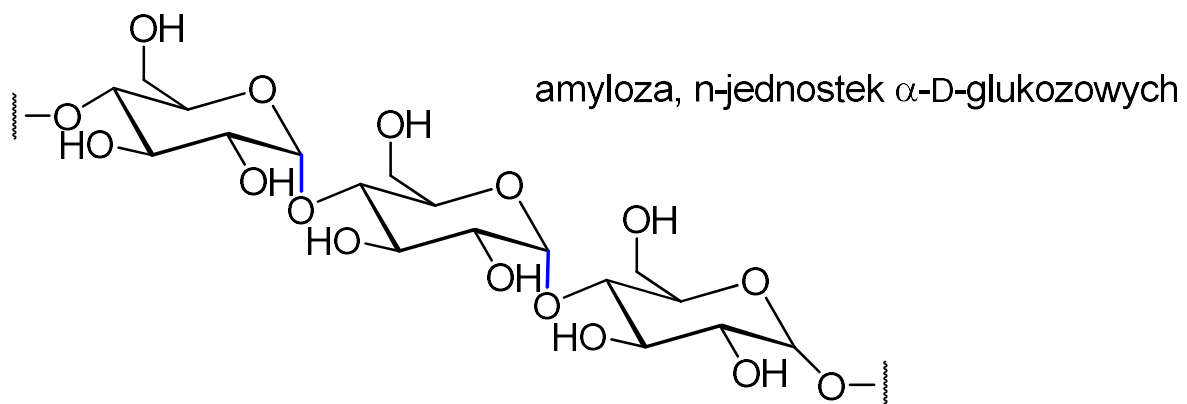
20.11. Podział na cukry redukujące i nieredukujące



20.12. Disacharydy



20.13. Polisacharydy



amylopektyna

