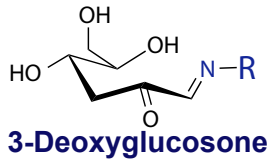
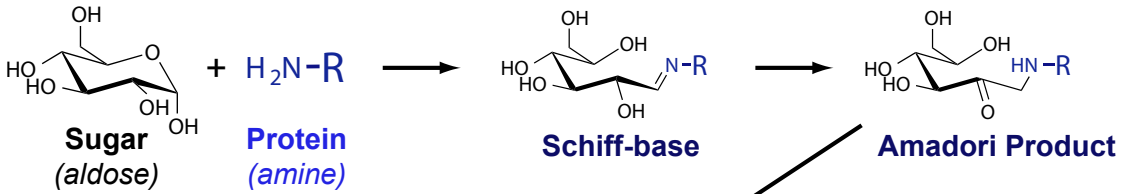


Bread-Browning (Maillard) Reactions: sugar/protein polymerization

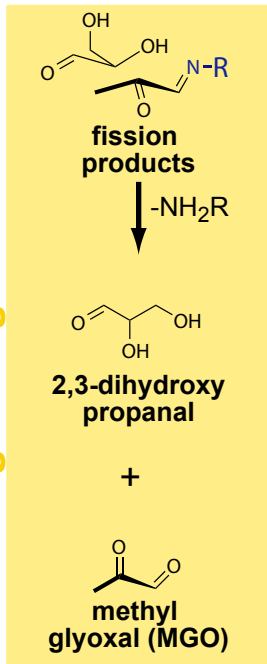


retro-aldol

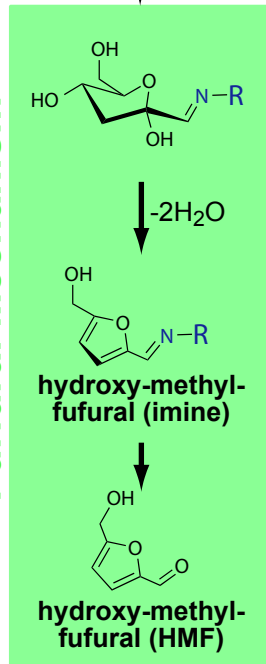
cyclization

-2H₂O

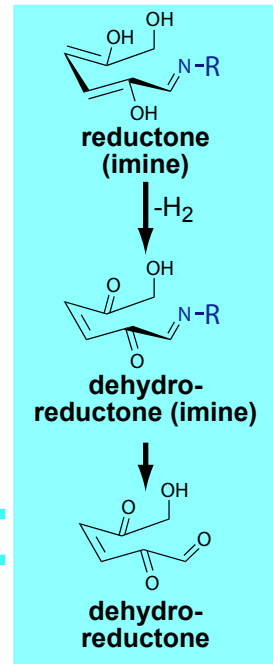
Sugar Fragmentation



Furfural Mechanism



[O] Reductone Mechanism



aldol polymer products

nitrogenous polymers