

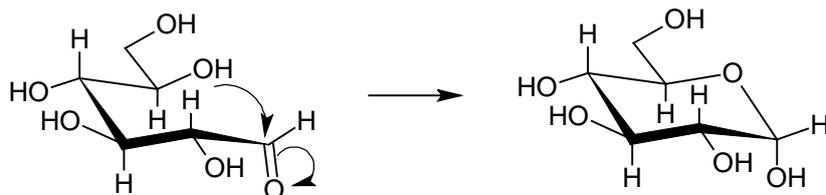
Answer on Question #43694 - Chemistry - Organic Chemistry

Question:

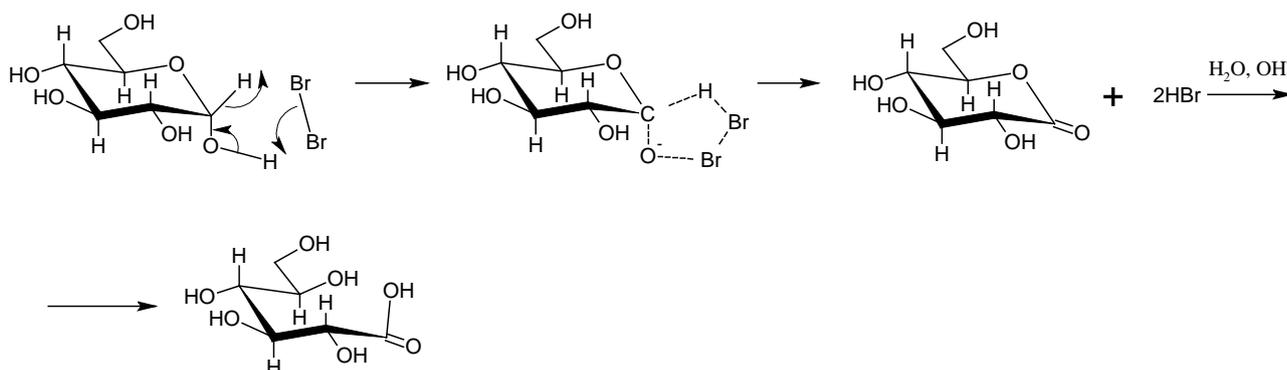
What is the mechanism of oxidation reaction of D-glucose with bromine water?

Answer:

The oxidation with bromine water undergoes as oxidation of cyclic form that is formed spontaneously according to the equation:



Next the elimination of HBr occurs. In addition, during this process lactone is formed. Lactone opens in the presence of water and OH⁻.



Also β -D-glucopyranose undergoes oxidation faster than α -form due to the lower activation energy for the intermediate state.