

E. Fischer, it is known that in distinctly alkaline solutions formaldehyde spontaneously goes over into a mixture of sugars which resemble glucose. Moreover, such a solution is unquestionably made up of much the same variety of substances as a glucose solution which has been subjected to the action of alkali in the same concentration.

As stated above, it is evident that if anything is to be done chemically with a mixture of carbon dioxide and water, oxygen must be split off from both carbon and hydrogen so that they may enter into the same molecule. If this chemical change, which, to be sure, is no easy one in the laboratory, be accomplished, formaldehyde among other things results; and in alkaline solution formaldehyde produces carbohydrates and leads to that amazing tangle of substances and reactions, whose nature has been briefly indicated above. In short, *the one chemical process which is open, if any transformations whatever are to be accomplished with carbonic acid and water, leads directly and to all appearances necessarily to the greatest complexity that has been found in any one chemical process; to a system made up of possibly two hundred substances or more, most of which possess very great chemical activity.*