we have never noticed in any mixture of active tissue-juice and oxyhæmoglohin. Again the acids in question—for instance lactic —are soluble, the reducing agent in press-juice is comparatively insoluble. It might be noted that in dealing with liver juice and oxyhæmoglobin, we have eliminated both hile and dextrose as factors in the reduction of the pigment. It may be remarked that the so-called reducing power of colloids is exerted only against certain pigmentary substances and not at all against oxyhæmoglohin. In other words, the "Creighton effects" have no analogies in connexion with the reduction of oxyhæmoglohin; for one thing, it is impossihle to heat blood to 100°C. without its being decomposed.

If the substance responsihle for reduction in tissue-juices is an enzyme, it ought to be injuriously affected hy contact with poisons, substances known to destroy or retard the action of catalysts in general. A considerahle number of such suhstances were examined hy allowing fresh liver juice (cat) to remain in contact with solutions of the poison for ten minutes, and then comparing the time required by the poisoned juice to reduce oxyhæmoglohin with that required hy the same quantity of unpoisoned juice. Two strengths of poison were employed; 0·1 molar and 0·01 molar, a strong and a weak respectively. All the following were investigated: formaldehyde, mercuric chloride, potassium cyanide, gold chloride, osmic acid, manganous chloride, ammonium hromide, arsenious acid, ammonium chloride and sodium arsenite. Unfortunately, certain toxic suhstances could not be used at all on account of the way in which they caused the hlood solution to fade when added to it; among such were acids, copper sulphate, etc. In a particular series of experiments, ten minutes was the time found to he necessary for the complete reduction of oxyhæmoglohin hy unpoisoned juice, whereas the times for poisoned juice were with the weaker solutions as follow: arsenious acid 33′, potassium cyanide 30′, mercuric chloride and sodium arsenite 17′, gold chloride 15′, osmic acid 13′ and formaldehyde 10′. When the stronger solutions were employed, the times were lengthened, for instance, for formaldehyde 48′, potassium cyanide 34′, manganous chloride 25′ and osmic acid 19′. Ammonium chloride alone of all thc suhstances tried had no poisonous effect at either concentration; this is in accordance with what we know of it therapeutically.

One substance highly poisonous to animals, carhon monoxide, is of particular interest spectroscopically. It is a poison, hecause it unites so firmly with hæmoglohin that it prevents the formation in the lungs of the much less firm comhination, oxygen and hæmo-