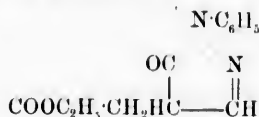


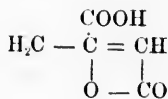
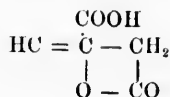
formed. One has a melting point of 110° , and gives analytical results agreeing with the pyrazolone formula



Oxymethylene succinic ester on treatment with excess of phenyl hydrazine, or treating the pyrazolone with another molecule of the same reagent, a splitting of the pyrazolone ring takes place with the formation of the hydrazone-dihydrazide of formyl succinic acid.

The compound melting at 167° was not obtained.

It is now of interest, considering that oxymethylene succinic ester is the ester corresponding to the lactonic aconic acid, to investigate the action of phenyl hydrazine on this former substance, for in this way it was that some light might be thrown upon the constitution of aconic acid, which has been variously represented by the following constitutions:



4 grams of formyl succinic ester were mixed with two grams of phenyl hydrazine freshly distilled. The mixture immediately became hot and turned deep red. It did not solidify in a freezing mixture. It was then heated for some hours on the water bath, and finally in a paraffin bath at 160° . On cooling and adding a very little ether, the mass set perfectly solid. The substance was recrystallized from low boiling petroleum ether, and then from alcohol by dissolving at 70° and placing the solution in the freezing mixture. The substance melted at 110° . It gave the following numbers on analysis:

0.1273 gram gave 0.2964 gram CO_2 and 0.0654 gram H_2O .

0.1676 gram gave 17.1 ces. moist nitrogen at 23° and 750 mm.

Calculated for $\text{C}_{13}\text{H}_{14}\text{N}_2\text{O}_3$.

C = 63.41%, H = 5.69%, N = 11.34%.

found, C = 63.41%, H = 5.70%, N = 11.39%.

It is, therefore, the pyrazolone ester of 1 phenyl pyrazolone, 4 acetic acid.

An attempt was made to obtain the acid corresponding to the pyrazolone ester by hydrolyzing the ester, but no definite compound could be isolated.

In order to ascertain whether by the treatment of the pyrazolone ester with excess of phenyl hydrazine a splitting of the ring could be