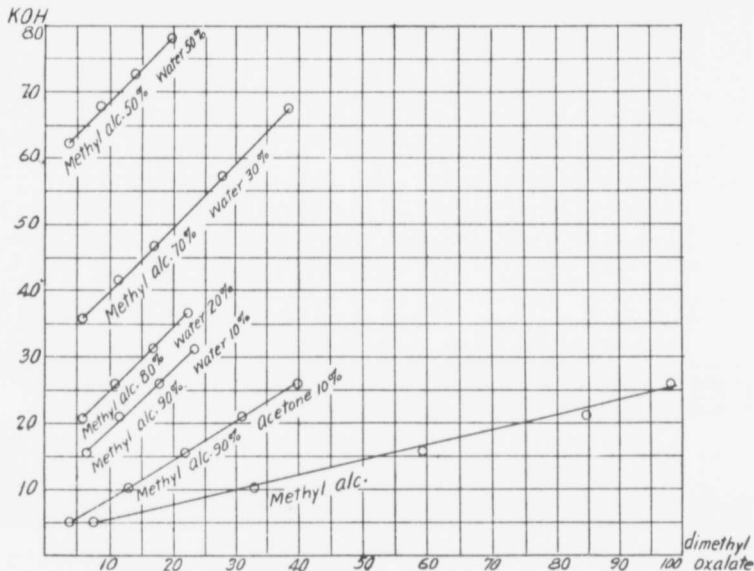The results of these experiments have been represented graphically, using as one axis the amount of potassium hydroxide solution used (expressed as the percentage of the amount necessary to completely convert the diethyl oxalate to potassium methyl oxalate) and, as the other axis the percentage of dimethyl oxalate found in the residual dialkyl ester.

Saloman's representation of this reaction need not be seriously considered. It would be better to assume the formation of an addition compound of the ester with the potassium alcoholate, but, with the information at present available, it is not thought that this would help in the study of the reaction.

Summary.

1. Dialkyl oxalates, when treated with slightly less than the calculated amount of potassium hydroxide in alcoholic solution, give a practically pure potassium alkyl oxalate in which the alkyl corresponds to the alcohol used as solvent.

2. A few solubility determinations were made which indicate that the results obtained in these experiments do not depend on the relative insolubility of the possible potassium alkyl salts.

3. If much less than the calculated amount of the methyl alcohol solution of potassium hydroxide is used with diethyl oxalate the residual dialkyl ester contains an amount of dimethyl oxalate which depends on the amount of potassium hydroxide solution used.