THE AMERICAN CHEMICAL SOCIETY

(*Continued*)

ORGANIC DIVISION

E. Emmet Reid, *chairman*
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The oxidation of propylene glycol by means of alkaline potassium permanganate: W. L. EVANS, J. E. DAY and W. R. STEMEN.

The oxidation of isopropyl alcohol and acetone by means of alkaline potassium permanganate: W. L. EVANS and LILY BELL SEFTON.

The influence of alkali on the formation of vinyl alcohol from acetaldehyde: W. L. EVANS and C. D. LOOKER.

The solubility of dichloro-diethyl-sulfide in petroleum hydrocarbons and its purification by extraction with these solvents: THOMAS G. THOMPSON and HENRY O'DEEN.

Rearrangement of unsaturated acids: OLIVER KAMM and M. E. DREYFUS.

The reaction velocity of dealkylation of tertiary amines with acyl halides: OLIVER KAMM and W. F. DAY.

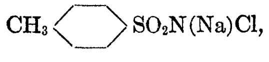
The alcoholysis of esters with amino alcohols: RUFUS M. KAMM.

Reactions of the arsines. Condensation of primary arsines with aldehydes: ROGER ADAMS and CHARLES SHATTUCK PALMER. Aromatic aldehydes and aliphatic aldehydes readily condense with phenyl arsine, when a few drops of hydrochloric acid are present, to give products consisting of two molecules of aldehyde and one of phenyl arsine. These substances are stable to water, dilute alkali and acid, and are probably represented by the structural formula given in the following equation:

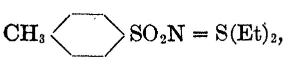
$$2\,RCHO + RAsH_2 \rightarrow RAs(CHOHR)_2.$$

On the non-identity of α-eleosteric acid from tung oil with ordinary linolic acid: BEN. H. NICOLET. α-eleostearic acid is readily prepared from tung oil (China wood oil). On bromination in glacial acetic acid it is known to form a tetrabromide m. 115° which Lenkowitsch ("Oils, Fats and Waxes," Vol. I.) suggests is identical with linolic acid tetrabromide, m. 114°. A mixed melting point showed a lowering of 15°, so that the two are obviously different. Bromination of the eleostearic acid in ligroin leads to the formation of a dibromide, with altogether different properties.

A new type of nitrogen-sulfur compounds; the action of chloramine-T on organic sulfides: BEN. H. NICOLET and IMOGENE D. WILLARD. On boiling together in alcoholic solutions diethylsulfide $(C_2H_5)_2S$ and chloramine-T,



give NaCl and a compound which is probably



since it is hydrolyzed to give p-toluenesulfonamide, and a product which on reduction gives diethylsulfide and which is presumed to be diethylsulfoxide. The reaction is believed to be rather general. Compounds containing N and S linked by a double bond, have been practically unknown.

Report on the progress of the manufacture of research organic chemicals: HANS T. CLARKE. The present report covers the work of this department of the Eastman Kodak Company during its second year of activity. As was to be anticipated, the progress made has been very much greater than during the first year as regards both the number of chemicals available and quantities distributed. At the present time nearly 800 different chemicals are available, almost all of these being organic, the balance consisting of certain inorganic chemicals employed principally in organic work. Of these 800 substances, about 600 have been prepared in our laboratory, some by purification of materials technically available, but the majority by synthesis. Over 600 different preparations have been undertaken, almost all of which have ultimately been successful. In a certain number of instances more than one product is obtained, either as a byproduct or as an intermediate stage. A good deal of time is naturally now being spent upon the renewal of depleted stocks by methods which have already been developed in the laboratory, but the preparation of new compounds is still regarded as being a most important part of our work. Between 10 and 20 new chemicals are added to the list every month, and these are announced in the advertising columns of certain of the scientific periodicals. A file is kept of the names of materials for which inquiry is made, and this is constantly before us in the selection of new preparations. As soon as any chemical for which such inquiry has been made is available, the fact is made known to the party from whom the inquiry was received. It is in many cases difficult to decide whether or not a specific chemical should or should not be prepared. A large number of inquiries are received for chemicals which we could never hope to furnish; in some instances, the preparations could be undertaken, but it is questionable whether the time devoted to working out the method and preparing a stock might not be better applied to some problem for which there is greater urgency. Our desire is to serve the research chemists of the United States, but to do this to best advantage it is necessary to consider the interest of the greatest number. We acknowledge with gratitude the continued support of the chemical manufacturers, who have supplied us not only with their regular products, but often with those which are available in quantities too small to place on the open market. The amount of chemicals sold continues to increase slowly but steadily, and the department is now almost self-supporting. It is at present being transferred to new laboratories especially designed and erected for the work, and it is expected that greater efficiency will be possible than in the improvised laboratory where the work was begun.

The production of benzoic acid and benzophenone from benzene and phosgene: Robert E. Wilson and Everett W. Fuller.

The nature of the reactions of anilines upon nitrosophenol: Carleton E. Curran and C. E. Boord. Experimental evidence shows that the first reaction product between aniline and nitrosophenol is quinone phenylhydrazone. Dilution or neutralization of the reaction mixture converts this substance into its tantomer phenyl-azophenol. Subsequent action of aniline upon the quinone-phenylhydrazone converts it into mono-anilino quinonephenylhydrazone, dianilino quinone and azophenine, in turn. The theory is proposed that the formation of indamines by the action of anilines upon nitrosophenol is due to the semidine rearrangement of quinone-phenylhydrazones.

Reduction of polynitrophenols by hydrogen sulphide in the presence of ammonia: L. Chas. Raiford. In the preparation of starting material with which to test further the migration of acyl noted in a previous paper (*Jour. Am. Chem. Soc.*, 41, 2068 (1919)), with a view to determining the effect of acid-forming substituents in the aminophenol 2, 4-dinitrophenol was reduced by hydrogen sulphide in the presence of ammonia in the usual way. Contrary to what has heretofore been reported, isomeric substances were obtained. Work is in progress to determine the effect of other substituents (compare Anschutz und Heusler, *Ber.*, 19, 2161 (1886)).

The action of ammonia and substituted amines on allophanic ester: F. B. Dains and E. Wertheim.

Hydrazoisopropane: H. L. Lochte and J. R. Bailey.

A convenient method for preparing certain bromohydrins: J. B. Conant and E. L. Jackson.

Addition reactions involving an increase in vaence of a single atom: J. B. Conant.

New derivations of thymol and carvacrol: D. S. L. Sherk and Edward Kremers. The quinhydrone hypothesis of plant pigments, as it grew out of the biochemistry of the Monardas, necessitated a revision of the underlying compounds. This study has been continued, especially along the line of intramolecular changes such as manifest themselves in connection with the nitroso compounds of the above mentioned phenols and their isonitroso rearrangement products.

The action of amines upon thymoquinone: Nellie A. Wakeman and Harlan G. Groffman. Dimethylamidothymoquinone, prepared according to Zincke, yields a platinic chloride double salt containing 41 per cent. of platinum, corresponding to the union of one molecule of the base with two of acid platinic chloride. Thymoquinone treated with benzylamine, in alcoholic solution, yields dibenzylaminothymoquinone, with some mono-benzylaminothymoquinone. Thymoquinone with aniline, also with p-toluidine, under the same conditions, yields the di- derivative. No mono- derivatives have been isolated here. Thymoquinone with piperidine, under the same conditions, yields a pale purple crystalline derivative, the constitution of which has not yet been determined.

Organic mercury compounds of phenol: Frank C. Whitmore and E. B. Middleton.

Charles L. Parsons,
Secretary

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