

tions of this reaction to all the non-polar inorganic halides and will be reported as rapidly as possible.

MORLEY CHEMICAL LABORATORY
WESTERN RESERVE UNIVERSITY
CLEVELAND, OHIO

HAROLD SIMMONS BOOTH
CARL F. SWINEHART

RECEIVED OCTOBER 22, 1932
PUBLISHED DECEMBER 13, 1932

THE ACTION OF NITROUS ACID ON PHENYL- α -(β -NAPHTHOL)-AMINO-METHANE. A CORRECTION

Sir:

In a recent paper [Ray, THIS JOURNAL, 54, 295 (1932)] it was reported that phenyl- α -(β -naphthol)-aminomethane on treatment with nitrous acid gave an aliphatic diazo compound. Subsequent work, the details of which are soon to appear, has shown that the reaction is much more complex than was originally supposed. The compound in question is not an aliphatic diazo compound but an N-nitroso derivative of a heterocyclic compound.

CHEMICAL LABORATORY
UNIVERSITY OF CINCINNATI
CINCINNATI, OHIO
RECEIVED OCTOBER 31, 1932
PUBLISHED DECEMBER 13, 1932

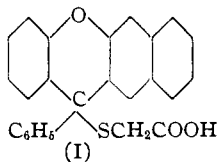
FRANCIS EARL RAY

THE ACTION OF SODIUM IN LIQUID AMMONIA ON DERIVATIVES OF OPTICALLY ACTIVE TRIARYLMETHANES

Sir:

In view of a recent publication by Ashley and Shriner [THIS JOURNAL, 54, 4410 (1932)] on an attempt to prepare an optically active salt of the type $\left[\begin{array}{c} R_2 \\ R_1 : \overset{\ominus}{C} : R_3 \end{array} \right] Na^+$ it seems advisable to place on record certain experiments which have been conducted in this Laboratory, and which were reported to the Society at its meeting in New Orleans, March 28-April 1, 1932.

In recent publications from this Laboratory a method has been described for preparing certain derivatives of optically active triarylmethanes. Investigations of such optically active compounds led us to believe that a study of their behavior toward sodium in liquid ammonia should be of special interest. For this purpose 12-phenyl-12- β -benzoxanthene-thioglycolic acid (I), m. p., 187-188°, has been prepared. The pure *levo* modification of this compound (m. p. 184-185°) prepared by repeated crystallization of its brucine salt gave $[\alpha]_D^{20}$ in acetone -48.5°. This material in liquid ammonia was treated with metallic sodium in the absence of oxygen. The deep orange-brown sodium triarylmethyl so formed was allowed to react with a slight excess



of dry solid ammonium bromide. When these reactions were carried out under suitable conditions, the corresponding colorless trisubstituted methane was found to be optically active. In one experiment a specific rotation $[\alpha]_D^{20}$ in acetone -11.7° was obtained. Since this methane derivation was obtained in an optically active condition it follows that the colored sodium triarylmethyl must have been active. Hence the three groups and the central carbon atom of the ion could not have been in a plane.

The optical stability of such an ion is being investigated further and a discussion of these results will be published at a later date.

FRICK CHEMICAL LABORATORY
PRINCETON UNIVERSITY
PRINCETON, NEW JERSEY

RECEIVED NOVEMBER 10, 1932
PUBLISHED DECEMBER 13, 1932

FREDERIC H. ADAMS
EVERETT S. WALLIS

OXIDATION COLORS DERIVED FROM 5,6-DIAMINOURLACIL

Sir:

Ortho-, meta- and para-diamines differ in their behavior toward oxidizing agents, such as hydrogen peroxide, as follows. With ortho-diamines two molecules react to form a diaminophenazine. With para-diamines two or more molecules react to form a quinone-anil of the type of Bandrowski's base. Meta-diamines, however, do not react. Nevertheless, in the presence of an ortho- or para-diamine (which is capable of forming an ortho- or para-quinoid derivative on oxidation), meta-diamines do react to form deeply colored substances which have found application in fur and hair dyeing.

We find that 5,6-diaminouracil (an ortho-diaminopyrimidine) is also capable of reacting with meta-diamines, aminophenols and diphenols, in the presence of hydrogen peroxide, to form colored substances which dye animal fibers. Thus, for example, the following colors have been obtained from this pyrimidine: with *m*-phenylenediamine, purple; with *m*-aminophenol, old rose; with resorcinol, salmon.

CHEMICAL LABORATORIES
COLUMBIA UNIVERSITY
NEW YORK, N. Y.

RECEIVED NOVEMBER 11, 1932
PUBLISHED DECEMBER 13, 1932

MARSTON TAYLOR BOBERT
DAVID DAVIDSON

THE CONCENTRATION AT WHICH HEATS OF DILUTION ARE MEASURED IN THE CALORIMETRIC METHOD: A CORRECTION

Sir:

In a recent letter [THIS JOURNAL 54, 4114 (1932)] we objected to certain of the claims made by E. Lange and A. L. Robinson based upon the extrapolation of their calorimetric data for intermediate heats of dilution