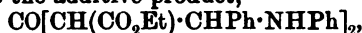


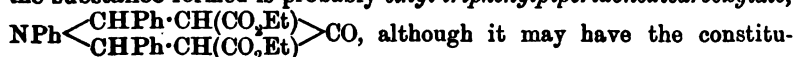
per cent. of the less fusible and 55.8 of the more fusible isomeride. The modification melting at 112° crystallises in long, thin, white, glistening needles, is slightly soluble in cold light petroleum, but easily so in other organic solvents, has $[\alpha]_D$ less than $+0.105^{\circ}$, and, when boiled for 37 hours or heated in a sealed tube at 110 — 132° for 21 hours, with hydrochloric acid of sp. gr. 1.093, is hydrolysed to the extent of 41 or 63 per cent. respectively, yielding benzylolethylacetic acid, but only little α -phenylethylamine. The racemic modification melting at 87 — 88° crystallises in sheaves of slender, white, silky needles, is more easily soluble in light petroleum than is its isomeride, and is hydrolysed to the extent of 21 per cent. when boiled for 28 hours with hydrochloric acid of sp. gr. 1.093, or to 82 per cent. when heated with hydrochloric acid of sp. gr. 1.110 at 110 — 150° for 20.5 hours in a sealed tube.

G. Y.

Condensation of Benzyldeneaniline with Ethylacetonedicarboxylate. CHARLES MAYER (*Bull. Soc. chim.*, 1905, [iii], 33, 498—500. Compare Abstr., 1904, i, 832).—Schiff (Abstr., 1898, i, 237) has found that when ethyl acetonedicarboxylate is treated with benzyldeneaniline the additive product,



is formed. The author has repeated this work, and finds that, when the reaction takes place in benzene solution, Schiff's additive product (m. p. 134°) is obtained, but that when alcohol is employed as a solvent the substance formed is probably *ethyl triphenylpiperidonedicarboxylate*,



although it may have the constitution $\text{NHPh}\cdot\text{CHPh}\cdot\text{CH}(\text{CO}_2\text{Et})\cdot\text{CO}\cdot\text{C}(\text{CO}_2\text{Et})\cdot\text{CHPh}$. This crystallises in large, colourless lamellæ, melts at 124° , and is very soluble in benzene or ether, less so in alcohol. This substance may also be obtained by boiling Schiff's additive product with alcohol. The author considers that Schiff's opinion that the additive product exists in three forms is not justified, and he points out that the same question has arisen with regard to the similar product formed with benzyldeneaniline and ethyl acetoacetate (Rabe, Abstr., 1903, i, 62).

T. A. H.

Condensation of Phenol with Formaldehyde. FRITZ HENSCHKE (D.R.-P. 157553 and 157554).—When an alkaline solution of phenol is heated with formaldehyde at 100° in an autoclave, a solution is obtained which has strong antiseptic properties and is free from the odour of phenol. Acids precipitate a bulky, pale-yellow powder, insoluble in water or chloroform, soluble in alcohol, acetone, dilute sodium hydroxide, or ammonia. It decomposes on heating or on boiling its alkaline solution.

When iodine is added to the above alkaline solution, followed by an acid, a compound is obtained in which the iodine is combined organically.

C. H. D.

Picric Acid and 4:6-Dinitro-2-aminophenol (Picramic Acid). JULES ALOY and A. FRÉBAULT (*Bull. Soc. chim.*, 1905, [iii], 33, 495—498. Compare Abstr., 1904, i, 870).—Methods for the prepara-

- tion of picramic acid from picric acid by the use of (1) zinc and ammonia solution and (2) sodium hyposulphite as reducing agents are described.

2-Chloro-4 : 6-dinitrophenol, prepared by Prud'homme and Rabaut's method (Abstr., 1892, 705), melts at 109°; it usually contains a small quantity of a crystalline substance which sublimes at 115—120°.

The first product of the diazotisation of picramic acid decomposes giving rise to a yellow, crystalline substance, which melts at 168—169° and is highly inflammable and explosive.

Picric acid may be detected in solutions containing only one part of the acid in 100,000 by the coloration produced on addition of sodium hyposulphite in presence of ammonia.

T. A. H.

Dinitro-derivatives of *p*-Aminophenol. FRÉDÉRIC REVERDIN and AUGUSTE DRESEL (*Ber.*, 1905, 38, 1593—1599. Compare this vol., i, 51).—*Dinitro-p-acetylaminophenyl acetate*, formed by nitration of *p*-acetylaminophenyl acetate with nitric acid of sp. gr. 1.52 at -10°, crystallises in slender, white needles, melts at 223—224°, and is hydrolysed by acids to 3 : 5-dinitro-4-aminophenol, melting at 230—231°, by sodium carbonate in aqueous solution to 3 : 5-dinitro-4-acetylaminophenol melting at 182°.

3 : 2' : 4'-*Trinitro-4-hydroxydiphenylamine*, formed by heating 2-nitro-4-aminophenol with 1-chloro-2 : 4-dinitrobenzene in alcoholic solution, crystallises in orange leaflets, melts at 232—233°, and forms a yellow, crystalline sodium salt and an acetyl derivative which crystallises in lemon-yellow prisms and melts at 167—168°.

2 : 4-Dinitrophenyl 3-nitro-4-aminophenyl ether is formed by the action of 1-chloro-2 : 4-dinitrobenzene on 3-nitro-4-aminophenol in alcoholic solution; it crystallises in yellow leaflets and melts at 188°.

3 : 5-Dinitro-4-aminophenol crystallises in glistening leaflets or long, red needles, depending on the concentration of the solution, sublimes at 150°, and dissolves in aqueous alkali hydroxides or carbonates to a violet solution which becomes red and finally brown. With 1-chloro-2 : 4-dinitrobenzene it yields the ether, $C_6H_3(NO_2)_2 \cdot O \cdot C_6H_3(NO_2)_2 \cdot NH_2$, which crystallises in lemon-yellow needles, melts at 225—226°, and forms an acetyl derivative, $C_{14}H_9O_{10}N_5$, crystallising in needles and melting and decomposing at 238°. When stirred for some hours with sodium nitrite in cooled concentrated sulphuric acid solution, 3 : 5-dinitro-4-aminophenol forms the yellow, crystalline diazonium salt, which explodes when heated, and, when dried and boiled with absolute alcohol, yields 3 : 5-dinitrophenol (m. p. 122°).

2 : 5-Dinitro-4-acetylaminophenoxyacetic acid (Howard, Abstr., 1898, i, 29) is hydrolysed by sulphuric acid to 2 : 5-dinitro-4-aminophenoxyacetic acid, which crystallises in hexagonal, prismatic needles, or small, red prisms, commences to decompose at 190°, melts at 204—205°, does not react with chlorodinitrobenzene, and is converted into the acetyl derivative (m. p. 204—205°) when warmed with acetic anhydride and sulphuric acid; the sodium salt crystallises in red, glistening leaflets.

When diazotised in the same manner as 3 : 5-dinitro-4-aminophenol, isopicramic acid (Dabney, Abstr., 1884, 308; Meldola, Trans., 1902, 81, 988) forms explosive diazonium salts, which, when boiled with