the molecular weight of the dimeric formula. The substance is clearly diamagnetic and hence the monomeric IO_2 unit does not occur in the solid state.

In principle one could further elucidate the detailed molecular structure by either a theoretical calculation of the expected magnetic susceptibility for each of the various models or through a comparison with the appropriate experimental values. Actually neither method is sufficiently refined to distinguish between the various structural possibilities. Using the method of Angus[3] one can sum the appropriate values of +4 iodine and −2 oxygen to obtain a value of -96.52×10^{-6} for I_2O_4. Alternately, assuming a structure of $(IO^+)(IO_3^-)$ and using Angus' values of +3 and +5 iodine, one calculates -97.10×10^{-6}. These discrepancies are not unexpected and indeed are no larger than might be anticipated for such a calculation. Summation of Pascal's[4] experimental values leads to -107.64×10^{-6}; here again one might expect too large a value since Pascal's value for iodine is applicable to a single bonded covalent iodide atom. An experimental value[5] of IO_3^- of -51.4×10^{-6} would lead, on the assumption of the iodyl iodate model, to an experimental value of -24.88×10^{-6} for the iodyl ion.

Acknowledgment.—We are indebted to the Office of Naval Research for financial support of this work.

(3) Angus, *Proc. Roy. Soc. (London)*, **A136**, 569 (1932).

(4) Selwood, "Magnetochemistry," Interscience Publishers Inc., New York, N. Y., 1943, p. 52.

(5) V. C. G. Trew, *Trans. Faraday Soc.*, **37**, 476 (1941).

DEPT. OF CHEMISTRY
UNIVERSITY OF SOUTHERN CALIFORNIA
LOS ANGELES 7, CALIF.
RECEIVED MAY 31, 1950

NEW COMPOUND

Some Derivatives of *o*-Cresol

Some derivatives of *o*-cresol were prepared as reference compounds in other work.

1-(*o*-Toloxy)-3-chloro-2-propanone.—A 16.8-g. (0.091 mole) sample of freshly distilled *o*-toloxyacetyl chloride was converted to the diazoketone essentially according to the procedure of Newman and Beal.[1] The diazoketone, in solution in 650 ml. of ether, was not isolated but decomposed by passing dry hydrogen chloride into the solution until the evolution of nitrogen ceased. After washing with 150 ml. of cold water and two 50-ml. portions of 5% sodium carbonate, the ether solution was dried with sodium sulfate and evaporated to a red oil; yield 16.3 g. (90%). Distillation at 0.2 mm. gave 2.4-g. forerun boiling below 87° and 10.3 g. (57%) of chloroketone distilling between 87–92°. Two recrystallizations from petroleum ether gave colorless needles, m. p. 50°. The compound recrystallized immediately after melting and remelted at 54°.

Anal.[2] Calcd. for $C_{10}H_{11}O_2Cl$: C, 60.46; H, 5.58. Found: C, 60.61; H, 5.71.

β-(2-Methyl-4-nitrophenoxy)-lactic Acid.—Ten grams of β-chlorolactic acid, 24.6 g. of 2-methyl-4-nitrophenol and 85 ml. of 12% sodium hydroxide were heated two hours on the steam-bath. The cooled aqueous solution was acidified to congo red and extracted with ether. The substituted lactic acid separated on acidification of a potassium bicarbonate extract of the ether solution. Recrystallization from hot water, after treatment with Darco G-60 gave 3.27 g. (17%) of a pale yellow powder, contaminated by a few bright yellow needles which were separated manually. The major product melted at 111° after recrystallization from water.

Anal. Calcd. for $C_{10}H_{11}O_6N$: C, 49.79; H, 4.60. Found: C, 49.51; H, 4.48.

The minor product, m. p. 85°, after recrystallization from water, was not further characterized.

***o*-Toloxyacetylglycine.**—Five ml. of *o*-toloxyacetyl chloride (b. p. 108–109° (8 mm.)) was added with stirring and cooling to 13.3 g. of glycine homogenized with 13 ml. of 20% sodium hydroxide. When the reaction had subsided, alternate additions of 13 ml. of sodium hydroxide and 5 ml. of the acid chloride were made until a total of 32.7 g. of the acid chloride and 76 ml. of sodium hydroxide had been added. After standing an hour and a half, the reactants were poured into chipped ice, acidified to congo red with dilute hydrochloric acid and filtered. The crude product weighing 36.5 g., m. p. 185–186°, was recrystallized from 450 ml. of ethanol; yield 28.5 g., 70%, m. p. 190–190.5°, raised to 191–191.5° by two further recrystallizations from ethanol.

Anal. Calcd. for $C_{11}H_{13}O_4N$: C, 59.19; H, 5.87. Found: C, 59.23; H, 5.89.

Ethyl β-(*o*-Toloxy)-lactate.—Nine grams of β-(*o*-toloxy)-lactic acid[3] was converted to the ester by refluxing 3 hours with 30 ml. of absolute ethanol containing 5% hydrochloric acid. Distillation of the residue after removal of hydrochloric acid and excess alcohol gave 6.45 g. (67%) of the ester, b. p. 99–102° (0.2 mm.).

Anal. Calcd. for $C_{12}H_{16}O_4$: C, 64.27; H, 7.19. Found: C, 64.23; H, 7.38.

DIVISION OF PHARMACOLOGY AND TOXICOLOGY
UNIVERSITY OF ROCHESTER
SCHOOL OF MEDICINE AND DENTISTRY
ROCHESTER 20, NEW YORK RICHARD F. RILEY[4,5]
RECEIVED MARCH 13, 1950

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[1] Newman and Beal, THIS JOURNAL, **71**, 1506 (1949).

[2] Microanalyses by C. W. Beazley, Skokie, Illinois.

[3] Riley, THIS JOURNAL, **72**, 5712 (1950).

[4] Aided by a grant from The National Foundation for Infantile Paralysis, Inc.

[5] University of California Atomic Energy Project, Post Office Box 31, Beverly Hills, Calif.