nitrogen. The mixture was evaporated at 60° (20–30 mm.) under nitrogen, and a semisolid was obtained after cooling. This was taken up in 30 ml. of absolute ethanol and cooled, and the solution was saturated with anhydrous hydrogen chloride. A white solid precipitated and after extraction with absolute ethanol, 0.5 Gm. remained which melted at 240–250°, with decomposition beginning at about 210°. The compound contained 11.52% sulfur. From the chilled extract was obtained 0.65 Gm. of solid which melted at 205–207°. This contained 11.55% sulfur. Neither product formed an addition compound with carbon disulfide, and both reduced iodine T.S.

Anal.—Calcd. for $C_8H_{20}Cl_2N_2S$: C, 38.86; H, 8.09; S, 12.95. Found: C, 38.57; H, 8.34; S, 11.52.

1-(2′-Aminoethyl)-4-(2′-mercaptoethyl)-piperazine Trihydrochloride.—A solution of 4.6 Gm. (0.036 mole) of 1-(2′-aminoethyl)piperazine in 30 ml. of chloroform was cooled in an ice bath and treated with ethylene sulfide (4.3 Gm., 0.072 mole) slowly, with shaking, during 30 minutes. The mixture was allowed to stand for 3 days at room temperature under nitrogen, and was then distilled under nitrogen at 40° (20–30 mm.). The residual oil was extracted with two 50-ml. portions of ether, and 125 ml. of absolute ethanol was added to the ether-insoluble material. The alcohol solution was chilled and saturated with anhydrous hydrogen chloride; a solid was obtained which was extracted with 100 ml. of hot acetone in two portions and quickly transferred to a desiccator. About 2.5 Gm. (24%) of ivory-colored product was obtained which melted at 165–170°.

Anal.—Calcd. for $C_8H_{22}Cl_3N_3S$: C, 32.15; H, 7.42; S, 10.71. Found: C, 32.52; H, 7.72; S, 10.94.

1-(2′-Mercaptoethyl)piperazine Dihydrochloride.—The same reaction sequence was used as in the preparation of the corresponding dihydrobromide. A very small yield of hygroscopic product was obtained which melted in the range of 145–150°.

Anal.—Calcd. for $C_6H_{16}Cl_2N_2S_2 \cdot H_2O$: C, 30.37; H, 7.65; N, 11.81. Found: C, 30.15; H, 7.51; N, 10.49.

1-Piperazinoethyl Disulfide Tetrahydrochloride.—The previous product, 1.0 Gm., was dissolved in 5 ml. of 50% aqueous ethanol containing 5 ml. of 3% hydrogen peroxide solution. The solution was heated on a water bath for 30 minutes and allowed to stand overnight. The solution was evaporated *in vacuo* to a gum, treated with absolute ethanol, and again concentrated *in vacuo*. This process was repeated. The semicrystalline material was removed from the flask and triturated in absolute ethanol; an extremely hygroscopic product was isolated which did not decolorize iodine T.S. without remaining in solution for some time. The product, 0.7 Gm., melted at 95–100°.

Anal.—Calcd. for $C_{12}H_{30}Cl_4N_4S_2 \cdot 2H_2O$: C, 30.51; H, 7.25; N, 11.86. Found: C, 29.90; H, 7.19; N, 10.20.

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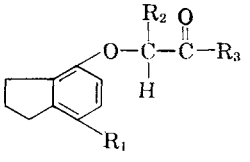
ERRATUM

In the paper titled "The Pharmacologic Effects of a New Analgesic α-4-dimethylamino-1,2-diphenyl-3-methyl-4-propionyloxybutane" (1), the analgesic should have been identified as α-4-dimethylamino-1,2-diphenyl-3-methyl-2-propionyloxybutane.

(1) Robbins, E. B., THIS JOURNAL, **44**, 497(1955).

ERRATUM

In the paper titled "Indanols V. Indanoxyacetic Acid Derivatives" (1), Table I should have included the structure heading



between compounds 41 and 42 to indicate that the second part of the Table referred to 7-substituted-4-indanols.

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