ω-Alkylalkoxyaminopropiophenones.—It has been shown by Mannich that condensation takes place between ketones, formaldehyde or trioxymethylene and amine hydrochlorides with the formation of β-keto bases.[1] Later he found that the β-keto bases which were formed by the condensation of alkyl aryl ketones with formaldehyde and primary or secondary amines possessed local anesthetic action.[2]

It has been shown that substituted O-alkylhydroxylamines, in general, have the physiological properties of the amines to which they are related.[3] It therefore seemed probable that ω-alkylalkoxyaminopropiophenones would be local anesthetics. It has been found, however, that these compounds exhibit only very slight anesthetic action, at least when they are applied to the mucous membrane of the tongue. They were synthesized by the method of Mannich.

One molecular equivalent each of acetophenone and O,N-dialkylhydroxylammonium chloride, two molecular equivalents of trioxymethylene and ten molecular equivalents of absolute alcohol were refluxed for twenty-four hours. The solution was cooled and dry ether was added. The precipitate which formed was dissolved in water and the aqueous solution was extracted with ether in order to remove any trace of acetophenone. Caustic alkali was then added to the solution of the hydrochloride in water. The oil which separated was extracted with ether and the ether solution dried with sodium sulfate. After the ether had been distilled off an oil remained which was distilled *in vacuo*.

ω-Methylmethoxyaminopropiophenone was a colorless oil, b. p. (23 mm.) 159°; yield, 50%

Anal. Calcd. for $C_{11}H_{15}O_2N$: N, 7.25. Found: N, 6.95.

ω-Ethylethoxyaminopropiophenone was a colorless oil, b. p. (9 mm.) 151–153°; yield, 18%.

Anal. $C_{13}H_{19}O_2N$: N, 6.34. Found: N, 6.61.

In order to prepare the hydrochloride of ω-methylmethoxyaminopropiophenone, dry hydrogen chloride was passed into a solution of the base in dry ether. A white precipitate formed which was dissolved in warm chloroform and reprecipitated with ether in order to completely purify it; m. p. 155°.

Anal. Calcd. for $C_{11}H_{15}O_2NCl$: Cl, 15.44. Found: Cl, 15.19.

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[1] Mannich, *Arch. Pharm.*, **255**, 261 (1917); Mannich and Braun, *Ber.*, **53**, 1874 (1920).

[2] German Patent 379,950; *Friedländer*, **14**, 1246.

[3] Jones and Major, THIS JOURNAL, **49**, 1527 (1927).