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Formation of Heterocyclic Compounds From Haloamines

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FORMATION OF HETEROCYCLIC COMPOUNDS FROM HALOAMINES

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N-chloro-N-methyl-n-butylamine has been prepared and found to be a relatively stable substance. Ring closure was effected by heating this compound with concentrated sulfuric acid, N-methylpyrrolidine being formed in 45 per cent yields.

The corresponding bromoamine was prepared by the method of Loffler [1] and ring closure effected by heating with concentrated sulfuric acid. The yield of N-methylpyrrolidine was, however, considerably less than with the chloroamine.

Several reagents other than sulfuric acid were tried in an attempt to bring about the same ring closure. However, positive results were obtained only with 85 per cent phosphoric acid.

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HIGH MOLECULAR WEIGHT FATTY ACID DERIVATIVES

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A series of derivatives for identifying lauric, myristic, palmitic, stearic and oleic acids have been prepared.

The ten best series of derivatives may be listed in the following order of decreasing importance: (1) N-acylcarbazole derivatives; (2) N-acyl-*p*-toluenesulfonamides; (3) *p*-phenyl-phenacyl esters; (4) N-acylphenothiazine derivatives; (5) N-acyl-2-nitro-*p*-toluidine derivatives; (6) N-acylsaccharin derivatives; (7) 2, 4-dinitrophenylhydrazides; (8) *p*-nitro-anilides; ((9) phenylmercuric salts; (10) *p*-xenylamides.

The N-acylcarbazole derivatives show a difference in melting points of adjacent members of from 3-5°, and a depression of

1 Loffler, Ber., 42: 3427 (1909).