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## The Alkaline Decomposition of Wool Keratin

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acted with sodium cyanide. The chemicals required and the operations involved lend themselves to the preparation of appreciable quantities.

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## THE ALKALINE DECOMPOSITION OF WOOL KERATIN

MILDRED BARR AND RACHEL EDGAR

The alkaline hydrolysis of wool keratin effected in ten hours at 25°, 40°, and 55°C. has been followed by determination of the weight, nitrogen, sulfur, and wet breaking strength of the residual wool fabric.

The decrease in weight, nitrogen, sulfur, and wet breaking strength and the ratio of the sulfur of the hydrolysate to that of the residual wool have been shown to be greater, the greater the concentration of alkali or the greater the temperature. The weight of the residual wool has been shown to be a linear function of the alkali concentration, the nitrogen and sulfur to be functions of the form,  $y = ax^b$ . The ratio of sulfur to nitrogen decreased with increasing concentration of alkali or increasing temperature.

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## HYDROLYSIS VELOCITY OF KETIMINES — STERIC HINDRANCE EFFECT

J. B. CULBERTSON, WILLIAM REYNOLDS AND CLARENCE MAIN

Additional work has been carried on to gain further information concerning the significance of ortho-substituted groups upon the rate of which diphenyl ketimine hydrochlorides hydrolyze to ketones. In this particular study the following isomeric ketimines have been prepared and their hydrolysis velocities determined: 2, 6-dimethyl-, 2, 5-dimethyl-, 2, 4-dimethyl-, and 3, 5-dimethyl-diphenyl ketimines hydrochlorides. The first of these with the two ortho-substituted methyl groups is hydrolyzed appreciably only after prolonged boiling with water. The last with no ortho-substi-