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## The Alkaline Mercerization of Wool

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## THE ALKALINE MERCERIZATION OF WOOL

MILDRED BARR AND RACHEL EDGAR

The mercerization of a plain-woven wool fabric by treatment with 16, 29, 38, and 44 per cent sodium hydroxide for five minutes at 15°C. has been followed by determination of the weight, nitrogen, sulfur, and breaking strength of the residual fabric.

The loss in weight, nitrogen, and sulfur has been shown to decrease with increasing concentration of alkali from 16 to 38 per cent sodium hydroxide and to be greater at 44 per cent sodium hydroxide. The loss of wet and dry breaking strength was less the greater the concentration of alkali although the dry breaking strength of the fabric mercerized with 44 per cent sodium hydroxide was no greater than that of the original wool fabric and its wet strength was but 40 per cent of the wet strength of the original wool fabric.

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OXIDATION OF PYRAZOLINES OBTAINED FROM  
UNSYMMETRICAL DIBENZALACETONES

RALPH H. MANLEY AND L. CHAS. RAIFORD

When the hydrazone of an unsymmetrical dibenzalacetone rearranges to the isomeric pyrazoline two products are theoretically possible. The identification of these products is somewhat difficult. In previous work in this Laboratory<sup>1</sup> the pyrazolines have been oxidized by aqueous alkaline permanganate solution and the substituted pyrazole and benzoic acids, respectively, separated and identified. The yields are small due to the fact that the permanganate is known to degrade some members of both these groups further.<sup>2</sup> In the present work the ketones used contained substituted vanillal residues, and the oxidation was done in pyridine solution. The yields were much higher than those previously obtained.

<sup>1</sup> J. Am. Chem. Soc., 55, 1125 (1933); 56, 174 (1934).

<sup>2</sup> Zimmerman, Unpublished reports of work done in this Laboratory (1929).

IOWA CITY AND BURLINGTON, IOWA.