

plied. Ergosterol is known in its enolic form but as yet there is no evidence of its existence in the keto form.

If it is true that the activation of ergosterol by ultraviolet light depends upon a chemical isomerization, and if ergosterol could be made to form a keto isomer, such rearrangement should result in a substance possessing anti-rachitic activity, or capable of being activated. The simplest reagent which reacts specifically with ketones is hydroxylamine, and this substance was therefore used in an attempt to form the oxime of ergosterol. We realized, of course, that a possible keto-enol isomerization might not be the explanation of the activation of ergosterol, but in view of Dr. Bills' conclusion that activation is due to chemical isomerization, and in view of the fact that keto-enol isomerism is here theoretically possible, it was of sufficient interest to warrant investigation.

In carrying out the actual experiment we subjected ergosterol to a reaction with hydroxylamine under conditions which were known to give an almost quantitative yield in the formation of the oxime of cyclohexanone. Ergosterol, however, failed to react and was recovered unchanged from the reaction mixture.

#### EXPERIMENTAL.

*First*, we repeated the work of Bayer (1) in the preparation of the oxime of cyclohexanone, in order to make certain that the conditions of the work were such as to insure a nearly quantitative yield of the oxime. We then proceeded to react ergosterol with hydroxylamine, under the same conditions, as follows:

1.152 Gm. of pure ergosterol, m. p.  $158^{\circ}$  C., were dissolved in 40 cc. of boiling absolute alcohol under reflux. To this solution was added 0.4 Gm. (2 mols.) of hydroxylamine hydrochloride, and 0.6 Gm. (slightly more than 2 mols.) of sodium bicarbonate. The mixture was refluxed for 3 hours. It was then evaporated to dryness and extracted with ether. The ether extract was evaporated to dryness, yielding 0.8 Gm. of a white substance having a melting point of  $157^{\circ}$  C. We had thus recovered most of our ergosterol in an unchanged condition.

#### REFERENCE.

- (1) Bayer, *Ann.*, 102, 102 (1894).

#### OPENING OF THE LEXINGTON FEDERAL NARCOTIC FARM.

The first United States Narcotic Farm, near Lexington, Ky., will open for the reception for admissions on or about May 1st. According to the *Journal A. M. A.*, of February 16th, it will accommodate a maximum of 1000 persons and is designed to accommodate males only. Its object and purposes are to rehabilitate, restore to health and train to be self-supporting and self-reliant those who are admitted thereto. The control, management and discipline are to be maintained for the safe-

keeping of the individual and the protection of the community. Experiments are to be carried on to determine the best methods of treatment and research in this field, and the results disseminated to the medical profession and the general public to the end that states may make some provision for establishing a similar policy for helping to solve the problem of drug addiction. The function of the institution at Lexington therefore assumes the character of a treatment and research center and of an educational and rehabilitation center with certain custodial features superimposed.