LETTERS TO THE EDITOR

A PRELIMINARY X-RAY CRYSTALLOGRAPHIC STUDY OF p-NITRO-BENZYLIMINO METHYL ETHER

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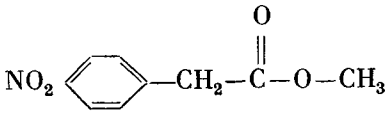
The crystal of p-nitro-benzylimino methyl ether were colorless needles elongated parallel to a-axis. The symmetry, space group and unit cell has been determined by X-ray diffraction. The monodinic unit cell contains 4 molecules and has the dimensions $a = 4.31$, $b = 22.71$, $c = 9.40$ Å, $\beta = 100°45'$. The space group is $C_{2h}^5 - P2_1/c$.

P-nitro-benzylimino methyl ether was prepared by Grochowski [1] and kindly given o our Institute. Ultimated analysis and method of synthesis indicated the molecular formula:



Colorless needle-like crystals with melting point of 74°C were grown by slowly evaporating a concentrated hexane solution. Although most of crystals were multiply twinned, or poorly formed a few suitable for single crystal X-ray photographs were found. These were small needles alongated along [100] direction.

Oscillation, retigraph rotation and equi-inclination Weissenberg photographs were taken about a-axis with nickel filtered Cu$K\alpha$ radiation. These photographs showed that the examined crystals belong to the monoclinic system. The reduced unit cell dimensions were found to be:

$$a = 4.310 \pm 0.005 \text{ Å}$$
$$b = 22.71 \pm 0.02 \text{ Å} \qquad \beta = 100°46' \pm 6'$$
$$c = 9.40 \pm 0.01 \text{ Å}$$

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The indexed photographs showed no systematic absences for hkl. Absences were noted in $h0l$ for $l = 2n+1$ and $0k0$ for $k = 2n+1$. These absences uniquely indicated the $C_{2h}^5-P2_1/c$ space group. There are four molecules per unit cell, all in general position. The volume of the unit cell is 904 Å^3 and the total number of electron per unit cell is $408 = F(000)$. The comparatively short identity period along a-axis indicate that molecules form a layered structure. A complete structure
determination is in progress. Method of synthesis and chemical structure determination will be published later [1].

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REFERENCES

[1] E. Grochowski, in press.