

Acta Cryst. (1959). **12**, 417

The structure of benzamide. By C. C. F. BLAKE and R. W. H. SMALL, *Chemistry Department, The University, Birmingham, 15, England*

(Received 17 March 1959)

The structure of benzamide has been determined using both two- and three-dimensional photographic intensity data. A note submitted earlier, giving details of the results of the two-dimensional analyses about the $[b]$ and $[c]$ axes, was withdrawn at the suggestion of the Editor pending the publication of the results of the analysis of the three-dimensional data. The results reported were in general agreement with those published later by Penfold & White (1959) which probably represent the practical limit of refinement using two-dimensional photographic data. The atomic co-ordinates

from the three-dimensional photographic data Blake (1959) show some interesting differences compared with the two-dimensional work; these results together with others derived from three-dimensional proportional counter intensity measurements will be published later.

References

- PENFOLD, B. R. & WHITE, J. C. B. (1959). *Acta Cryst.* **12**, 130.
BLAKE, C. C. F. (1959). Ph.D. Thesis. University of Birmingham.

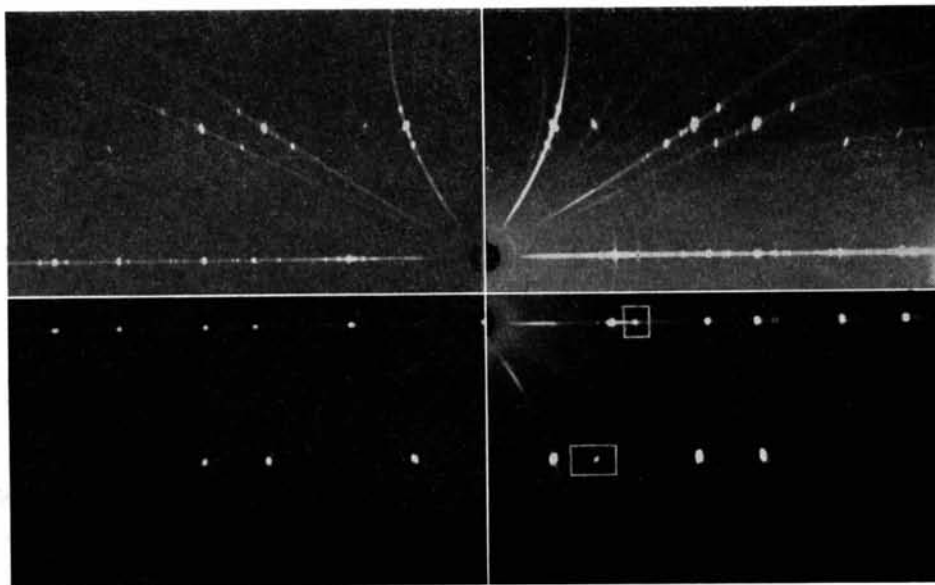
Acta Cryst. (1959). **12**, 417

New use for old X-ray tubes. By K. LONSDALE and H. J. MILLEDGE (née GRENVILLE-WELLS), *Department of Chemistry, University College, London W.C. 1, England*

(Received 9 February 1959)

We have recently found a new use for a heavily contaminated sealed-off X-ray tube which was giving, in

addition to $\text{Cu } K\alpha$ and β , considerable amounts of NiK and WL radiations.



A. Top right

Diamond matrix containing Ni-rich inclusions with parallel f.c.c. structure. Rotation about $[011]$ with radiation from Cu target contaminated with Ni and W. Weak powder pattern from unknown impurity with larger spacings also visible. Attention is particularly drawn to the Ni $K\alpha$ and Cu $K\beta$ spots on opposite sides of Cu $K\alpha$. The differential absorption of Ni $K\alpha$ and Cu $K\beta$ by diamond and the inclusion respectively proves that the inclusion contains Ni.

B. Top left

A similar pattern with the same crystal and tube but with less exposure. The powder lines are not seen.

C. Bottom right

The same crystal used with a clean tube and filtered Cu $K\alpha$ radiation. The 200, (020, 002) spots from the inclusion are marked. Faint powder lines.

D. Bottom left

The same with less exposure. No powder lines; and inclusion spots very weak. Almost all the information given by A would be missed in D.