SOME OBSERVATIONS ON PHARMACOLITE

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During an identification of specimens in the Royal Ontario Museum collection by x-ray diffraction, a number of powder patterns were taken of material labelled as pharmacolite (CaHAsO₄₂H₂O). Some of the patterns, however, showed no similarity to the data given by Traill & Sabina (1960), but several were similar to that of brushite (CaHPO₄₂H₂O), which is isostructural to pharmacolite. Qualitative x-ray spectrographic analysis of one such sample gave calcium and arsenic as the major constituents. The analysis and similarity of the powder pattern with brushite therefore indicated the material to be pharmacolite.

Towards the end of this investigation, a paper by Pierrot (1964) on natural and artificial calcium arsenates was received. This paper gives x-ray powder data for pharmacolite which are identical to those obtained in this study. Comparison of the data given by Traill & Sabina (1960) with other arsenates shows that their data agree with the more complete data published by Pierrot (1961, 1964) for picropharmacolite.

A study of other calcium and magnesium arsenate specimens in the Royal Ontario Museum collection disclosed several discrepancies in the original labels. Table 1 summarizes the results of this study. It is interesting to note that the new minerals sainfeldite (Pierrot, 1964) and weilite (Herpin & Pierrot, 1963) were identified on a specimen which had been obtained by the Royal Ontario Museum in 1913.

Two other specimens labelled "pharmacolite" (M 13206, M 23572) from Neurode, Glatz, Silesia obtained in 1923 and 1960 respectively, gave identical powder patterns which, as yet, have not been identified.

The result of this study has shown that it is possible other collections may also profit from an x-ray examination of similar specimens.

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REFERENCES

The Muskox intrusion is a layered mafic-ultramafic complex which occurs in the northwestern part of the Canadian Shield (Smith, 1962). A