

Notes on the presence of Lead in Calcites from the Leadhills District.

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THE not unfrequent occurrence of the variety of Calcite, containing Carbonate of Lead and known as "Plumbo-calcite," at the Leadhills district, suggested that an examination of some of the ordinary Calcites from this locality, for Lead, might be of interest. The specimens for this examination were most kindly put at my disposal by Dr. Wilson. All of them were ordinary Calcites, none consisting of the recognised Plumbo-calcite.

The following is a brief description of the specimens and the result of their analysis:—

No. 1. Locality: Bay-mine, Wanlockhead. Dog-tooth-spar, opaque, milky, appeared to be water worn.

No. 2. Locality: Bay-mine, Wanlockhead. Fine transparent scalenohedrons.

No. 3. Locality: Bay-mine, Wanlockhead. Similar to No. 2, but from a different part of the workings.

No. 4. Locality: Bay-mine, Wanlockhead. Fibrous, radiating, white.

No. 5. Locality: Beltongrain-mine, Wanlockhead. This consisted of two distinct growths of crystals, the larger and older generation (No. 5a) being crystallised after +R, while the smaller and more recent crystals (5b) were $-\frac{1}{2}R$, +R, $-nR$ (probably $-5R$ or $-8R$).

No. 6. Locality: Bay-mine, Wanlockhead, Fibrous, massive, white, translucent.

No. 7. Locality: Bay-mine, Wanlockhead. Rhombohedrons, white, edges stained dark brown.

No. 8. Locality: Leadhills. Large distinct crystals $-\frac{1}{2}R$ and $\infty P2$, white, translucent.

The following table shows the specific gravity and the amount of Carbonate of Lead found in the above specimens:—

	Sp. Gr.	PbCO ₃ .
No. 1	2.696	0.22 per cent.
„ 2	2.544	trace
„ 3	2.618	trace

	Sp. Gr.	PbCO ₃ .
No. 4	2·708—2·710	0·91
„ 5a	2·758—2·766	3·51
„ 5b	2·699	0·86
„ 6	2·688—2·724	0·79
„ 7	2·683	0·20
„ 8	not taken	none

Naumann gives the specific gravity of Plumbo-calcite as 2·772 to 2·824, while the PbCO₃ ranges from 2·34 per cent. (Delesse) to 7·74 per cent. (v. Hauer), and 7·8 per cent. (Johnston). The only one of the foregoing analyses which approximates to these figures is that of No. 5a. The results generally show that Lead is not unfrequently present in the Calcites of this district, and an examination of the Calcites from similar lead mining districts for lead would be of interest.

It may be noted that a specimen of Aragonite from Wanlockhead gave no indication of lead.