MinIdent-Win - crocoite

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Formula: $PbCrO_4$
Status: Mineral name is IMA approved or traditional
Level: Species
Parents: chromates
Symmetry: Monoclinic
Mean Atomic Number: 57.7
Diffraction Values: 3.280, 3.030, 3.480, 3.000, 4.960

Kretz abbreviation: Crl
First Described in 1766
Space Group: P2(1)/c
ICDD (TM) Number: 8-209

	Minimum	Maximum	Average	Std. Dev.
a (A)	7.100	7.170	7.135	
b (A)	7.400	7.490	7.445	
c (A)	6.785	6.830	6.808	
Alpha	90.000	90.000	90.000	
Beta	102.400	103.632	103.016	
Gamma	90.000	90.000	90.000	
Volume	348.168	356.461	352.326	

	Minimum	Maximum	Average	Std. Dev.
n(Alpha)	2.290	2.310	2.300	
n(Beta)	2.360	2.370	2.365	
n(Gamma)	2.660	2.660	2.660	
Max. birefrin	0.350	0.370	0.370	
2V Gamma	55	57	56	

Optical Sign: +ve **OAP Orientation:** Parallel (010)

C(Alpha)	Orange Red
C(Beta)	Orange Red
C(Gamma)	Red
Dispersion	R>V

	Minimum	Maximum	Average	Std. Dev.
Mohs	2.5	3.0	*3.0*	
Vickers	*65*	*116*	*116*	
Density	5.92	6.11	5.92	

	Total Min Wt (%)	Anal. Min Wt (%)	Average Wt (%)	Anal. Max Wt (%)	Total Max Wt (%)	Average Atomic	Coordination
O	14.8945	14.8945	19.1831	20.1556	20.1556	4.0000	
P	0.0000	0.0000	0.0437	0.1746	0.1746	0.0047	
S	0.0000	0.0000	0.0063	0.0250	0.0250	0.0007	
Ca	0.0000	0.0000	0.0357	0.1429	0.1429	0.0030	
Cr	15.7817	15.7817	16.8619	20.8339	20.8339	1.0818	4
Fe	0.0000	0.0000	0.1442	0.7134	0.7134	0.0086	
Cu	0.0000	0.0000	0.0060	0.0240	0.0240	0.0003	
Pb	62.0671	62.0671	63.4874	64.2672	64.7489	1.0223	8
Total			99.7684			6.1214	

Atomic proportions calculated for O = 4.0

Compilation based on 4 general and 7 sample records
Values in italics are calculated from the minimum and maximum values. Other data are from the sample and general records.

Lustre Adamantine, Subadamantine, Greasy, Vitreous

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Aggregation	Massive, Granular, Columnar
Habit	Prismatic, Acicular, Octahedral, Rhombohedral
Tenacity	Brittle, Fragile, Sectile
Fracture	Conchoidal, Subconchoidal, Uneven
Cleavage	{110} Distinct, {001} Indistinct, {100} Indistinct
Surface Colour	Orange, Reddish Orange, Orangeish Red, Dark Orangeish Red, Yellow
Streak	Orangeish Yellow
Fluor. Short	Dark Brown
Fluor. Long	Dark Brown

Notes on hand specimen data: Crystals may be cavernous or hollow and prisms are sometimes vertically striated. The colour is often very similar to potassium bichromate.

Synonyms: crocoisite

Remarks: Transparent to translucent orange to reddish orange, slender prismatic crystals that give an orange-yellow streak and have a vitreous to adamantine lustre. These are very brittle with a conchoidal fracture and rather poor cleavages. Occasionally massive.

Occurrences: A secondary mineral that forms in the oxidation zone of ore deposits which contain Pb and Cr. Commonly associated with mineral such as cerussite pyromorphite, wulfenite and vanadinite.

Localities of samples used in compilation: Dundas, Tasmania, Australia. Berezov mines, central Urals, Russia. Argent lead-silver mine, Transvaal, South Africa. Nontron, central France.

References: Min. Mag. v.50, p.728-730. B. M. (Nat. Hist.) Bull.: Mineralogy v.2, p.403. Dana (7th) v.2, p.647. Roberts et al. (1974, 1990) Encycl. Mins. Phillips & Griffen (1981) Opt. Min. USGS Bull. 1627.