

MinIdent-Win - pollucite

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Formula: (Cs,Na)₂[Al₂Si₄O₁₂]·H₂O

Status: Mineral name is IMA approved or traditional

Level: Species

Parents: analcime-pollucite-series

Symmetry: Cubic

Mean Atomic Number: 24.9

Diffraction Values: 3.420, 2.910, 3.650, 2.420, 1.740

Kretz abbreviation: PI

First Described in 1846

Space Group: Ia-3d

ICDD (TM) Number: 25-194

	Minimum	Maximum	Average	Std. Dev.
a (A)	13.682	13.682	13.682	
b (A)	13.682	13.682	13.682	
c (A)	13.682	13.682	13.682	
Alpha	90.000	90.000	90.000	
Beta	90.000	90.000	90.000	
Gamma	90.000	90.000	90.000	
Volume	561.231	561.231	561.237	

	Minimum	Maximum	Average	Std. Dev.
n	1.507	1.525	1.516	

Colour Colourless

	Minimum	Maximum	Average	Std. Dev.
Mohs	6.5	7.0	7.0	
Vickers	943	1133	1133	
Density	2.85	2.94	2.90	

	Total Min Wt (%)	Anal. Min Wt (%)	Average Wt (%)	Anal. Max Wt (%)	Total Max Wt (%)	Average Atomic	Coordination
H	0.0000	0.0000	0.1919	0.4017	0.4017	1.0578	
Li	0.0000	0.0000	0.0250	0.1997	0.1997	0.0201	
O	30.0907	30.0907	35.9386	40.8069	40.8069	12.5052	
F	0.0000	0.0000	0.0015	0.0300	0.0300	0.0004	
Na	0.0000	0.2522	1.3326	2.6855	4.3195	0.3227	12
Mg	0.0000	0.0000	0.0262	0.3800	0.3800	0.0060	
Al	8.2771	8.2771	8.9253	9.8493	10.1383	1.8418	4
Si	17.4972	18.2779	20.9803	23.0120	23.0120	4.1582	4
P	0.0000	0.0000	0.0454	0.2051	0.2051	0.0082	4
K	0.0000	0.0000	0.0835	0.8302	0.8302	0.0119	12
Ca	0.0000	0.0000	0.0540	0.4074	0.4074	0.0075	12
Ti	0.0000	0.0000	0.0013	0.0240	0.0240	0.0002	
Mn	0.0000	0.0000	0.0276	0.3330	0.3330	0.0028	
Fe	0.0000	0.0000	0.0351	0.3147	0.3147	0.0035	
Rb	0.0000	0.0000	0.1957	1.4631	1.4631	0.0127	12
Cs	21.5055	21.5055	32.1622	41.0492	41.3947	1.3472	12
Total			100.0262			21.3062	

Atomic proportions calculated for Si+Al = 6.0

Compilation based on 3 general and 32 sample records

Values in italics are calculated from the minimum and maximum values. Other data are from the sample and general records.

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Synonyms: pollux

Remarks: Cubic or dodecahedral crystals are usually colourless, white or grey but may show pale pink, blue or violet tints. Lustre is vitreous to slightly greasy. Brittle with no cleavage and a conchoidal fracture.

Occurrences: In granite pegmatites, associated with microcline, quartz, cleavelandite, amblygonite, spodumene, lepidolite, polyolithionite, trilithionite, etc.

Localities of samples used in compilation: Karibib, Namibia. Kazakhstan. Siberia; Russian Far East. Varuträsk, Sweden. Southeast of Nanchang, Jiangxi Province, southern China. Koktokay, near Fujun, Xinjiang Province, northwestern China.

References: Can. Min. v.35, p.1571-1606; v.42, p.883-896. Amer. Min. v.29, p.445; v.91, p.729-739. Roberts et al. (1974) Encycl. Mins. USGS Bull. 1627.