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Observations on the unit-cell dimensions, H_2O contents, and _D values of natural and synthetic alunite

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For deposit: Table 2

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Table 2. Unit cell data for natural alunites

Sample	X_{Na} aa*	X_{Na} xrd**	a(Å)	c (Å)	V (Å^3)	type#
1. Summitville, Colorado	0.40	0.23	6.983(2)	17.188(5)	725.8(4)	diss.
		0.68	6.987(5)	16.90(2)	714(1)	
2. Marysvale, Utah	0.03	0.00	6.983(1)	17.332(2)	731.9(2)	c.v.
3. La Escondida, Chile	0.33	0.25	6.980(1)	17.172(4)	724.5(2)	c.v.
4. Mantos Blancos, Chile	0.89	0.94	6.990(1)	16.737(3)	708.2(2)	p.v.
5. Round Mountain, Nevada	0.01	0.02	6.990(1)	17.319(3)	732.8(2)	p.v.
6. Death Valley, California	0.87	0.99	6.985(1)	16.702(3)	705.7(2)	f.g.
7. Noarlunga, Australia	0.08	0.06	6.990(1)	17.291(3)	731.7(2)	f.g.
8. Sadler, Texas	0.82	0.93	6.991(1)	16.740(4)	708.5(2)	f.g.
9. Antelope Valley, Calif.	0.41	0.36	6.980(1)	17.103(4)	721.6(2)	diss.
10. Colquijirca, Peru	0.14	0.11	6.977(1)	17.259(4)	727.6(2)	diss.
11. Goldfield, Nevada	0.39	0.41	6.979(3)	17.07(1)	720.0(6)	diss.
12. Salta, Argentina	0.28	0.06	6.978(1)	17.291(4)	729.1(2)	diss.
13. La Coipa, Chile	0.25	0.17	6.982(1)	17.222(4)	727.1(2)	diss.
14. El Guanaco, Chile	0.27	0.21	6.981(1)	17.196(3)	725.8(2)	c.v.
15. Komatsuga, Japan	0.63	0.62	6.975(2)	16.937(6)	713.6(4)	c.v.
16. La Tolfa, Italy	0.03	0.03	6.984(1)	17.314(4)	731.4(2)	c.v.
17. Paradise Peak, Nevada	0.12	0.09	6.977(1)	17.273(2)	728.2(2)	c.v.
18. Pofadder, South Africa	0.95	1.00	6.978(1)	16.697(2)	704.1(2)	p.v.
19. Waiotapu, New Zealand	0.08	0.05	6.980(2)	17.302(7)	730.0(4)	p.v.
20. Chuqicamata, Chile	0.10	0.00	7.006(2)	17.333(6)	736.8(4)	f.g.
21. El Hueso, Chile	0.08	0.07	6.992(2)	17.289(8)	732.0(4)	f.g.
22. Rabbit Creek, Nevada	0.25	0.29	6.993(1)	17.145(6)	726.1(3)	f.g.

23. Sierra Gorda, Chile	0.24	0.10	6.995(1)	17.270(5)	731.8(3)	f.g.
24. Tyrone, Arizona	0.21	0.02	6.989(1)	17.317(3)	732.5(2)	f.g.
25. H74-N52	0.04	0.00	6.986(1)	17.337(3)	732.8(2)	n.c.
26. M30	0.04	0.01	6.984(1)	17.326(2)	731.9(2)	n.c.
27. M47B	0.07	0.00	6.978(2)	17.362(6)	732.1(4)	n.c.
28. M53	0.10	0.00	6.980(2)	17.352(6)	732.1(4)	n.c.
29. H74-N63A	0.13	0.01	6.982(1)	17.327(2)	731.5(2)	n.c.
30. M51	0.15	0.07	6.981(2)	17.286(4)	729.6(3)	n.c.
31. H74-N50A	0.26	0.30	6.994(3)	17.14(1)	726.1(6)	n.c.
32. M51A	0.36	0.27	6.978(5)	17.16(1)	723.6(8)	n.c.
33. H75-SL102A	0.42	0.32	6.982(1)	17.125(2)	723.0(2)	n.c.
34. H75-MX14	0.46	0.10	6.971(4)	17.27(1)	726.8(7)	n.c.
		1.00	6.971(3)	16.695(9)	702.6(6)	
35. H75-MX13	0.46	0.08	6.973(4)	17.277(9)	727.5(7)	n.c.
		1.00	6.976(3)	16.697(6)	703.7(5)	
36. H75-SL104A	0.67	0.00	6.979(5)	17.33(1)	731.0(9)	n.c.
		0.97	6.982(2)	16.713(4)	705.6(3)	
37. H74-N64A	0.73	0.95	6.979(1)	16.726(2)	705.5(2)	n.c.
38. H75-SL103A	0.80	0.97	6.982(1)	16.715(2)	705.7(2)	n.c.

Note: Additional information on sample locations is available from the authors.

* Bulk X_{Na} from chemical analysis: data are from this paper except for #18 from Schoch et al. (1989) and #25-38 from Cunningham and Hall (1976).

** X_{Na} from c based on Equation (1).

Diss=disseminated; c.v.=coarse vein; p.v.=porcelaneous vein; f.g.=fine grained; n.c. = not classified.