

Name and formula

Reference code: 00-035-0433
 PDF index name: Zinc Oxide Borate Hydrate
 Empirical formula: $B_6H_7O_{15.5}Zn_3$
 Chemical formula: $Zn_3B_6O_{12} \cdot 3.5H_2O$
 Second chemical formula: $3ZnO \cdot 3B_2O_3 \cdot 3.5H_2O$

Crystallographic parameters

Crystal system: Monoclinic
 Space group: P21/n
 Space group number: 14

a (Å): 7,6950
 b (Å): 9,8028
 c (Å): 6,8378
 Alpha (°): 90,0000
 Beta (°): 107,0300
 Gamma (°): 90,0000

Calculated density (g/cm³): 2,93
 Measured density (g/cm³): 2,69
 Volume of cell (10⁶ pm³): 493,18
 Z: 2,00

RIR: -

Subfiles and Quality

Subfiles: Inorganic
 Corrosion
 Quality: Star (S)

Comments

Temperature: Pattern taken at 293 K.

References

Primary reference: Andrews, S. et al., *Private Communication*

Peak list

No.	h	k	l	d [Å]	2Theta[deg]	I [%]
1	1	1	0	5,88434	15,044	6,0
2	1	0	-1	5,80342	15,255	1,0
3	0	1	1	5,43925	16,283	9,0
4	1	1	-1	4,99396	17,746	86,0
5	0	2	0	4,90137	18,084	90,0
6	1	0	1	4,30164	20,631	81,0
7	1	2	0	4,07907	21,770	96,0
8	1	1	1	3,93901	22,554	37,0
9	0	2	1	3,92168	22,655	8,0
10	1	2	-1	3,74452	23,743	100,0
11	2	0	0	3,67872	24,174	69,0
12	2	1	-1	3,46403	25,697	34,0

13	2	1	0	3,44426	25,847	96,0
14	0	0	2	3,26896	27,259	1,0
15	1	2	1	3,23301	27,568	45,0
16	1	1	-2	3,19271	27,923	1,0
17	0	1	2	3,10113	28,765	93,0
18	1	3	0	2,98633	29,896	7,0
19	2	2	-1	2,95457	30,225	86,0
20	2	2	0	2,94221	30,355	40,0
21	0	3	1	2,92284	30,561	52,0
22	2	0	-2	2,90171	30,789	65,0
23	1	3	-1	2,84733	31,392	20,0
24	2	1	-2	2,78241	32,144	4,0
25	1	2	-2	2,78073	32,164	4,0
26	2	1	1	2,75191	32,510	22,0
27	0	2	2	2,71961	32,907	61,0
28	1	1	2	2,60984	34,333	2,0
29	1	3	1	2,60198	34,440	15,0
30	3	0	-1	2,55553	35,086	21,0
31	2	2	-2	2,49694	35,937	44,0
32	2	2	1	2,47484	36,269	17,0
33	3	1	-1	2,47293	36,298	17,0
34	0	4	0	2,45069	36,639	30,0
35	2	3	-1	2,45005	36,649	30,0
36	2	3	0	2,44303	36,758	80,0
37	3	1	0	2,37919	37,782	1,0
38	1	2	2	2,37001	37,934	1,0
39	1	3	-2	2,34820	38,300	1,0
40	1	4	0	2,32507	38,696	1,0
41	0	3	2	2,31100	38,941	11,0
42	0	4	1	2,29475	39,228	1,0
43	1	0	-3	2,27924	39,506	6,0
44	3	2	-1	2,26603	39,746	5,0
45	1	4	-1	2,25764	39,900	6,0
46	3	1	-2	2,25201	40,004	12,0
47	1	1	-3	2,22000	40,606	1,0
48	3	2	0	2,19327	41,123	8,0
49	2	3	-2	2,16971	41,590	1,0
50	2	3	1	2,15516	41,884	1,0
51	2	0	2	2,15079	41,973	8,0
52	1	4	1	2,12935	42,416	4,0
53	0	1	3	2,12739	42,457	3,0
54	2	1	-3	2,12338	42,541	7,0
55	3	0	1	2,10266	42,981	19,0
56	2	1	2	2,10079	43,021	42,0
57	3	2	-2	2,09245	43,201	25,0
58	1	3	2	2,08487	43,366	13,0
59	1	2	-3	2,06670	43,767	15,0
60	3	1	1	2,05589	44,009	22,0
61	2	4	-1	2,04363	44,287	15,0
62	2	4	0	2,03956	44,380	24,0
63	3	3	-1	2,01302	44,997	1,0
64	0	2	3	1,99134	45,514	1,0
65	2	2	-3	1,98807	45,593	3,0
66	1	4	-2	1,98338	45,707	21,0
67	2	2	2	1,96948	46,048	42,0
68	3	3	0	1,96147	46,247	13,0
69	0	4	2	1,96087	46,262	23,0
70	1	0	3	1,94055	46,775	7,0
71	3	0	-3	1,93450	46,930	2,0
72	3	2	1	1,93236	46,985	13,0
73	1	1	3	1,90359	47,739	3,0
74	3	1	-3	1,89790	47,891	12,0
75	1	5	0	1,89444	47,984	10,0
76	3	3	-2	1,88837	48,148	1,0

77	4	1	-1	1,88759	48,169	31,0
78	0	5	1	1,87792	48,433	15,0
79	2	4	-2	1,87229	48,588	21,0
80	1	3	-3	1,86940	48,668	38,0
81	2	4	1	1,86293	48,848	27,0
82	1	5	-1	1,85743	49,002	16,0
83	4	0	-2	1,85144	49,171	6,0
84	4	0	0	1,83938	49,515	1,0
85	4	1	-2	1,81927	50,100	25,0
86	1	4	2	1,81696	50,168	24,0
87	0	3	3	1,81307	50,284	18,0
88	2	3	-3	1,81058	50,358	8,0
89	4	1	0	1,80783	50,439	31,0
90	1	2	3	1,80429	50,545	39,0
91	3	2	-3	1,79940	50,692	20,0
92	2	3	2	1,79652	50,779	25,0
93	4	2	-1	1,79063	50,958	19,0
94	1	5	1	1,78400	51,161	7,0
95	3	4	-1	1,76879	51,634	1,0
96	3	3	1	1,76822	51,652	2,0
97	3	4	0	1,73354	52,764	4,0
98	2	5	-1	1,73268	52,792	4,0
99	4	2	-2	1,73198	52,815	2,0
100	2	5	0	1,73019	52,874	16,0
101	4	2	0	1,72212	53,141	12,0
102	3	1	2	1,70671	53,659	1,0
103	1	5	-2	1,69549	54,043	1,0
104	2	0	-4	1,68839	54,289	5,0
105	3	4	-2	1,68246	54,496	9,0
106	0	5	2	1,68135	54,535	1,0
107	1	1	-4	1,67959	54,597	15,0
108	1	4	-3	1,66898	54,973	1,0
109	1	3	3	1,66848	54,991	15,0
110	3	3	-3	1,66466	55,128	2,0
111	2	1	-4	1,66391	55,155	25,0
112	4	3	-1	1,65768	55,380	5,0
113	2	1	3	1,64866	55,709	3,0
114	4	1	-3	1,64310	55,914	5,0
115	0	0	4	1,63448	56,235	2,0
116	3	2	2	1,63403	56,252	2,0
117	0	6	0	1,63379	56,261	3,0
118	0	4	3	1,62853	56,459	20,0
119	2	4	-3	1,62675	56,526	7,0
120	4	1	1	1,62633	56,542	7,0
121	2	5	-2	1,62451	56,611	15,0
122	2	5	1	1,61838	56,845	2,0
123	2	4	2	1,61653	56,916	8,0
124	0	1	4	1,61222	57,082	15,0
125	4	3	-2	1,61083	57,136	1,0
126	1	2	-4	1,61016	57,162	29,0
127	4	3	0	1,60287	57,446	8,0
128	2	2	-4	1,59634	57,703	2,0
129	3	4	1	1,59581	57,724	4,0
130	1	6	0	1,59495	57,758	2,0
131	1	5	2	1,58797	58,036	16,0
132	0	6	1	1,58505	58,153	4,0
133	2	2	3	1,58287	58,241	23,0
134	4	2	-3	1,57795	58,440	7,0
135	1	6	-1	1,57265	58,656	1,0
136	3	1	-4	1,57163	58,698	1,0
137	4	2	1	1,56309	59,050	1,0
138	3	5	-1	1,55552	59,366	1,0
139	0	2	4	1,55054	59,576	2,0
140	5	0	-1	1,53514	60,235	1,0

141	3	5	0	1,53137	60,399	1,0
142	3	3	2	1,53114	60,409	12,0
143	1	6	1	1,52734	60,575	9,0
144	1	4	3	1,52134	60,839	2,0
145	3	4	-3	1,51843	60,968	1,0
146	5	1	-1	1,51665	61,048	6,0
147	3	2	-4	1,51432	61,152	3,0
148	4	4	-1	1,51314	61,204	3,0
149	1	3	-4	1,51144	61,281	9,0
150	5	1	-2	1,50069	61,767	1,0
151	2	3	-4	1,49999	61,799	7,0
152	3	5	-2	1,49580	61,992	11,0
153	2	6	-1	1,49476	62,040	1,0
154	2	6	0	1,49316	62,113	5,0
155	2	3	3	1,48878	62,316	6,0
156	1	1	4	1,48758	62,372	2,0
157	1	5	-3	1,48633	62,431	2,0
158	4	3	-3	1,48469	62,507	2,0
159	4	4	-2	1,47726	62,858	1,0
160	4	3	1	1,47230	63,094	2,0
161	4	4	0	1,47111	63,151	2,0
162	1	6	-2	1,47069	63,171	2,0
163	5	2	-1	1,46496	63,446	9,0
164	0	3	4	1,46180	63,600	7,0
165	0	6	2	1,46143	63,618	1,0
166	0	5	3	1,45754	63,807	7,0
167	2	5	-3	1,45625	63,871	1,0
168	5	1	0	1,45521	63,922	8,0
169	4	0	-4	1,45087	64,136	2,0
170	5	2	-2	1,45055	64,151	2,0
171	2	5	2	1,44891	64,233	1,0
172	1	2	4	1,43871	64,743	1,0
173	4	1	-4	1,43523	64,920	3,0
174	3	5	1	1,43393	64,986	1,0
175	3	0	3	1,43384	64,990	4,0
176	4	0	2	1,43362	65,002	4,0
177	3	3	-4	1,43134	65,118	2,0
178	5	0	-3	1,42898	65,239	3,0
179	2	6	-2	1,42365	65,514	1,0
180	2	6	1	1,41951	65,729	1,0
181	3	1	3	1,41874	65,769	6,0
182	4	1	2	1,41853	65,780	6,0
183	3	4	2	1,41506	65,962	15,0
184	5	1	-3	1,41403	66,016	5,0
185	5	2	0	1,40936	66,263	3,0
186	1	4	-4	1,39947	66,792	1,0
187	1	6	2	1,39886	66,825	1,0
188	4	2	-4	1,39120	67,242	4,0
189	2	4	-4	1,39037	67,287	1,0
190	5	3	-1	1,38945	67,338	10,0
191	2	4	3	1,38144	67,781	2,0
192	1	5	3	1,37918	67,907	1,0
193	4	4	-3	1,37816	67,964	5,0
194	5	3	-2	1,37713	68,022	1,0
195	3	5	-3	1,37700	68,029	1,0
196	3	6	-1	1,37652	68,056	1,0
197	3	2	3	1,37617	68,076	17,0
198	4	2	2	1,37595	68,088	17,0
199	1	7	0	1,37569	68,103	1,0

Stick Pattern

