

Subfile name: Inorganic, Mineral, Alloy&Metal, Common Phase, Forensic, Pharmaceutical, Pigment&Dye, ICSD Pattern

Chemical formula: Fe₂ O₃

Name: Hematite, syn

I/I_c (RIR) = 3.250

Crystal system: Hexagonal

Space group: 167 : R-3c

Obs.density, g/cm³: 0.00000

Lattice parameters: a = 5.02060

b = 5.02060

c = 13.71960

α , ° = 90.000

β , ° = 90.000

γ , ° = 120.000

Volume = 299.491

Z = 6.000

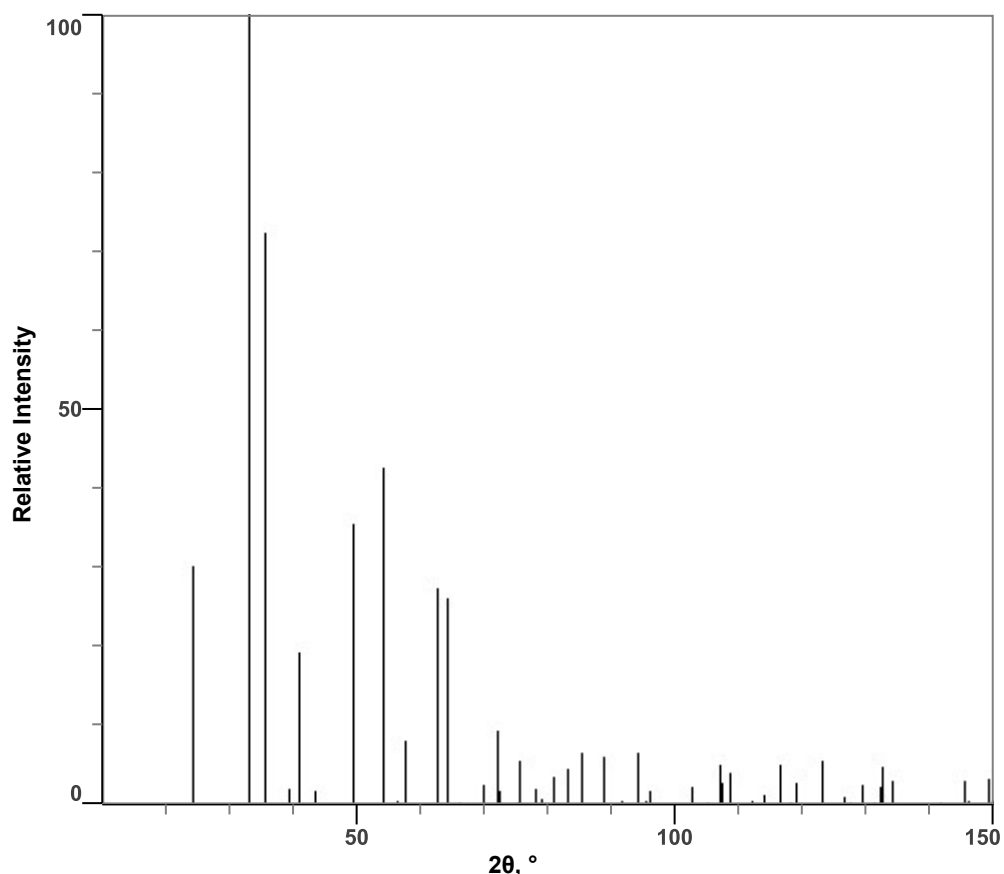
Reference : Yu, S.-C., Lee, J.-S., Tung, S.-F., Lan, C.-L. J. Geol. Soc. China42(1999)349.

Radiation: CuK α 1

Wavelength = 1.54060

2 θ range: 10.00000 - 150.00000

Database comments: ANX: A2X3. Analysis: Fe₂ O₃. Formula from original source: Fe₂ O₃. ICSD Collection Code: 88417. Calculated Pattern Original Remarks: Stable above 773 K (2nd ref., Tomaszewski), below 1a3-, m.p. 1523 K. Wyckoff Sequence: e c(R3-CH). Unit Cell Data Source: Single Crystal.



No.	2 θ , °	d-value	Norm. I.	h k l	No.	2 θ , °	d-value	Norm. I.	h k l
1	24.22	3.672	30.20	0 1 2	33	101.48	0.995	0.10	3 2 1
2	33.24	2.693	100.00	1 0 4	34	101.67	0.994	0.10	1 2 11
3	35.74	2.510	72.40	1 1 0	35	102.68	0.986	2.40	3 1 8
4	39.37	2.287	2.00	0 0 6	36	105.30	0.969	0.30	2 2 9
5	40.98	2.201	19.50	1 1 3	37	107.07	0.958	5.20	3 2 4
6	43.64	2.072	1.80	2 0 2	38	107.37	0.956	2.90	0 1 14
7	49.61	1.836	35.60	0 2 4	39	108.56	0.949	4.10	4 1 0
8	54.22	1.690	42.80	1 1 6	40	110.51	0.937	0.10	2 3 5

No.	2 θ , °	d-value	Norm. I.	h k l	No.	2 θ , °	d-value	Norm. I.	h k l
9	56.34	1.632	0.60	2 1 1	41	112.02	0.929	0.50	4 1 3
10	57.63	1.598	2.90	1 2 2	42	114.07	0.918	1.20	0 4 8
11	57.74	1.595	8.20	0 1 8	43	116.52	0.906	5.20	1 3 10
12	62.63	1.482	27.50	2 1 4	44	118.22	0.898	0.20	3 0 12
13	64.21	1.449	26.10	3 0 0	45	119.13	0.893	2.80	2 0 14
14	66.24	1.410	0.30	1 2 5	46	120.11	0.889	0.10	3 2 7
15	69.79	1.346	2.60	2 0 8	47	120.32	0.888	0.10	2 1 13
16	72.14	1.308	9.60	1 0 10	48	123.04	0.876	5.70	4 1 6
17	72.48	1.303	1.80	1 1 9	49	125.37	0.867	0.10	3 1 11
18	75.42	1.259	0.30	2 1 7	50	126.60	0.862	1.00	2 3 8
19	75.72	1.255	5.60	2 2 0	51	127.36	0.859	0.30	1 1 15
20	77.99	1.224	2.10	0 3 6	52	129.41	0.852	2.70	4 0 10
21	79.05	1.210	0.90	2 2 3	53	131.39	0.845	0.30	2 2 12
22	79.77	1.201	0.10	1 3 1	54	132.08	0.843	2.20	0 5 4
23	80.96	1.187	3.70	1 2 8	55	132.46	0.842	4.90	1 2 14
24	83.20	1.160	4.60	0 2 10	56	134.02	0.837	3.10	3 3 0
25	84.71	1.143	0.20	0 0 12	57	138.73	0.823	0.10	3 3 3
26	85.23	1.138	6.60	1 3 4	58	139.81	0.820	0.10	2 4 1
27	88.87	1.100	6.10	2 2 6	59	141.52	0.816	0.20	4 2 2
28	91.70	1.074	0.60	0 4 2	60	145.40	0.807	3.20	3 2 10
29	94.01	1.053	6.60	2 1 10	61	145.99	0.806	0.50	4 1 9
30	95.52	1.040	0.50	1 1 12	62	149.15	0.799	3.30	2 4 4
31	96.04	1.036	1.90	4 0 4	63	149.89	0.798	0.60	0 2 16
32	97.18	1.027	0.10	1 3 7					

2 θ are calculated with wavelength=1.54059Å