

**Actinolite (020) 140 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 0 0 ]	( 0 2 0 )	( 0 0 1 )	9.086	5.126	1.77	90.0	75.4
[ 1 0 1 ]	( 0 2 0 )	( 1 -1 -1 )	9.086	4.895	1.86	74.4	73.7
[ 1 0 0 ]	( 0 2 0 )	( 0 -2 -1 )	9.086	4.464	2.04	60.6	75.4
[ 1 0 2 ]	( 0 2 0 )	( 2 0 -1 )	9.086	4.042	2.25	90.0	49.7
[ 1 0 -1 ]	( 0 2 0 )	( 1 -1 1 )	9.086	4.006	2.27	77.3	50.8
[ 1 0 1 ]	( 0 2 0 )	( -1 3 1 )	9.086	3.894	2.33	50.0	73.7
[ 1 0 2 ]	( 0 2 0 )	( 2 2 -1 )	9.086	3.693	2.46	66.0	49.7
[ 1 0 -1 ]	( 0 2 0 )	( -1 3 -1 )	9.086	3.399	2.67	55.9	50.8
[ 1 0 2 ]	( 0 2 0 )	( 2 4 -1 )	9.086	3.020	3.01	48.3	49.7
[ 1 0 1 ]	( 0 2 0 )	( -1 -5 1 )	9.086	2.956	3.07	35.6	73.7
[ 1 0 -1 ]	( 0 2 0 )	( 1 5 1 )	9.086	2.722	3.34	41.5	50.8
[ 2 0 1 ]	( 0 2 0 )	( -1 -1 2 )	9.086	2.620	3.47	81.7	89.1
[ 1 0 0 ]	( 0 2 0 )	( 0 6 -1 )	9.086	2.607	3.48	30.6	75.4
[ 1 0 1 ]	( 0 2 0 )	( 2 0 -2 )	9.086	2.542	3.57	90.0	73.7
[ 1 0 0 ]	( 0 2 0 )	( 0 -2 2 )	9.086	2.467	3.68	74.2	75.4
[ 1 0 2 ]	( 0 2 0 )	( -2 -6 1 )	9.086	2.424	3.75	36.8	49.7
[ 2 0 -1 ]	( 0 2 0 )	( 1 1 2 )	9.086	2.314	3.93	82.7	61.7
[ 1 0 1 ]	( 0 2 0 )	( -1 -7 1 )	9.086	2.312	3.93	27.1	73.7
[ 2 0 3 ]	( 0 2 0 )	( 3 1 -2 )	9.086	2.283	3.98	82.8	60.3
[ 1 0 1 ]	( 0 2 0 )	( 2 4 -2 )	9.086	2.218	4.10	60.8	73.7
[ 1 0 -1 ]	( 0 2 0 )	( 1 7 1 )	9.086	2.194	4.14	32.3	50.8
[ 2 0 -1 ]	( 0 2 0 )	( -1 -3 -2 )	9.086	2.177	4.17	68.9	61.7
[ 2 0 3 ]	( 0 2 0 )	( 3 3 -2 )	9.086	2.151	4.22	69.2	60.3
[ 2 0 1 ]	( 0 2 0 )	( -1 -5 2 )	9.086	2.140	4.25	53.9	89.1
[ 1 0 0 ]	( 0 2 0 )	( 0 8 -1 )	9.086	2.077	4.38	23.9	75.4
[ 1 0 -1 ]	( 0 2 0 )	( -2 0 -2 )	9.086	2.054	4.42	90.0	50.8
[ 1 0 2 ]	( 0 2 0 )	( -2 8 1 )	9.086	1.980	4.59	29.3	49.7
[ 1 0 2 ]	( 0 2 0 )	( 4 2 -2 )	9.086	1.973	4.60	77.5	49.7
[ 2 0 -1 ]	( 0 2 0 )	( -1 -5 -2 )	9.086	1.963	4.63	57.3	61.7
[ 1 0 0 ]	( 0 2 0 )	( 0 6 2 )	9.086	1.956	4.64	49.8	75.4
[ 2 0 3 ]	( 0 2 0 )	( 3 5 -2 )	9.086	1.944	4.67	57.7	60.3
[ 1 0 1 ]	( 0 2 0 )	( -1 -9 1 )	9.086	1.876	4.84	21.7	73.7
[ 1 0 -1 ]	( 0 2 0 )	( 2 4 2 )	9.086	1.871	4.86	65.7	50.8
[ 2 0 1 ]	( 0 2 0 )	( -1 -7 2 )	9.086	1.854	4.90	44.4	89.1
[ 1 0 -1 ]	( 0 2 0 )	( -1 -9 -1 )	9.086	1.812	5.01	26.2	50.8
[ 3 0 2 ]	( 0 2 0 )	( 2 0 -3 )	9.086	1.755	5.18	90.0	83.8
[ 3 0 1 ]	( 0 2 0 )	( 1 -1 -3 )	9.086	1.752	5.18	84.5	85.6
[ 2 0 -1 ]	( 0 2 0 )	( -1 7 -2 )	9.086	1.735	5.24	48.1	61.7
[ 3 0 2 ]	( 0 2 0 )	( 2 2 -3 )	9.086	1.723	5.27	79.1	83.8
[ 2 0 3 ]	( 0 2 0 )	( -3 -7 2 )	9.086	1.722	5.28	48.4	60.3
[ 3 0 1 ]	( 0 2 0 )	( -1 -3 3 )	9.086	1.691	5.37	73.8	85.6
[ 1 0 1 ]	( 0 2 0 )	( 3 1 -3 )	9.086	1.687	5.39	84.7	73.7
[ 1 0 2 ]	( 0 2 0 )	( -4 -6 2 )	9.086	1.681	5.40	56.3	49.7
[ 1 0 0 ]	( 0 2 0 )	( 0 2 3 )	9.086	1.679	5.41	79.3	75.4
[ 3 0 2 ]	( 0 2 0 )	( -2 -4 3 )	9.086	1.637	5.55	68.9	83.8
[ 3 0 -1 ]	( 0 2 0 )	( -1 -1 -3 )	9.086	1.607	5.65	84.9	66.0
[ 2 0 1 ]	( 0 2 0 )	( 1 9 -2 )	9.086	1.606	5.66	37.3	89.1
[ 1 0 0 ]	( 0 2 0 )	( 0 4 3 )	9.086	1.599	5.68	69.4	75.4

**Actinolite (020) 140 Zone Axes*****a* 9.886Å *b* 18.171Å *c* 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	<i>d</i> (hk0)	<i>d</i> (hkl)	<i>d</i> Ratio	$\theta^\circ$	ZA $^\circ$
[ 3 0 1 ]	( 0 2 0 )	( 1 -5 -3 )	9.086	1.584	5.73	64.2	85.6
[ 3 0 4 ]	( 0 2 0 )	( -4 2 3 )	9.086	1.569	5.79	80.1	64.5
[ 3 0 -1 ]	( 0 2 0 )	( 1 3 3 )	9.086	1.559	5.83	75.1	66.0
[ 1 0 1 ]	( 0 2 0 )	( -3 -5 3 )	9.086	1.536	5.92	65.0	73.7
[ 2 0 -1 ]	( 0 2 0 )	( 1 9 2 )	9.086	1.527	5.95	40.9	61.7
[ 1 0 -1 ]	( 0 2 0 )	( -2 -8 -2 )	9.086	1.523	5.96	47.9	50.8
[ 3 0 2 ]	( 0 2 0 )	( 2 6 -3 )	9.086	1.519	5.98	59.9	83.8
[ 2 0 3 ]	( 0 2 0 )	( -3 -9 2 )	9.086	1.518	5.99	41.3	60.3
[ 3 0 4 ]	( 0 2 0 )	( -4 -4 3 )	9.086	1.503	6.04	70.7	64.5
[ 3 0 -2 ]	( 0 2 0 )	( 2 0 3 )	9.086	1.494	6.08	90.0	57.8
[ 3 0 -1 ]	( 0 2 0 )	( -1 5 -3 )	9.086	1.474	6.16	66.1	66.0
[ 3 0 -2 ]	( 0 2 0 )	( 2 2 3 )	9.086	1.474	6.16	80.7	57.8
[ 3 0 5 ]	( 0 2 0 )	( -5 -1 3 )	9.086	1.467	6.19	85.4	56.5
[ 3 0 1 ]	( 0 2 0 )	( 1 7 -3 )	9.086	1.457	6.24	55.9	85.6
[ 3 0 5 ]	( 0 2 0 )	( -5 -3 3 )	9.086	1.431	6.35	76.3	56.5
[ 3 0 -2 ]	( 0 2 0 )	( 2 4 3 )	9.086	1.419	6.40	71.8	57.8
[ 1 0 1 ]	( 0 2 0 )	( -3 -7 3 )	9.086	1.419	6.40	56.9	73.7
[ 3 0 4 ]	( 0 2 0 )	( 4 6 -3 )	9.086	1.410	6.44	62.3	64.5
[ 3 0 2 ]	( 0 2 0 )	( 2 8 -3 )	9.086	1.389	6.54	52.3	83.8
[ 3 0 -1 ]	( 0 2 0 )	( -1 -7 -3 )	9.086	1.370	6.63	58.1	66.0
[ 1 0 0 ]	( 0 2 0 )	( 0 8 3 )	9.086	1.365	6.65	53.0	75.4
[ 1 0 -1 ]	( 0 2 0 )	( -3 -1 -3 )	9.086	1.365	6.65	85.7	50.8
[ 3 0 5 ]	( 0 2 0 )	( 5 5 -3 )	9.086	1.364	6.66	67.9	56.5
[ 3 0 -2 ]	( 0 2 0 )	( 2 -6 3 )	9.086	1.340	6.78	63.7	57.8
[ 1 0 2 ]	( 0 2 0 )	( 6 2 -3 )	9.086	1.333	6.82	81.6	49.7
[ 3 0 1 ]	( 0 2 0 )	( -1 -9 3 )	9.086	1.327	6.85	48.9	85.6
[ 2 0 1 ]	( 0 2 0 )	( 2 0 -4 )	9.086	1.324	6.86	90.0	89.1
[ 4 0 1 ]	( 0 2 0 )	( 1 -1 -4 )	9.086	1.311	6.93	85.9	83.0
[ 4 0 3 ]	( 0 2 0 )	( 3 1 -4 )	9.086	1.305	6.96	85.9	81.2
[ 3 0 4 ]	( 0 2 0 )	( -4 -8 3 )	9.086	1.304	6.97	55.0	64.5
[ 1 0 2 ]	( 0 2 0 )	( 6 4 -3 )	9.086	1.292	7.03	73.5	49.7
[ 4 0 1 ]	( 0 2 0 )	( -1 -3 4 )	9.086	1.285	7.07	77.8	83.0
[ 1 0 -1 ]	( 0 2 0 )	( 3 -5 3 )	9.086	1.281	7.09	69.4	50.8
[ 3 0 5 ]	( 0 2 0 )	( -5 7 3 )	9.086	1.281	7.09	60.4	56.5
[ 4 0 3 ]	( 0 2 0 )	( 3 3 -4 )	9.086	1.279	7.10	77.8	81.2
[ 2 0 1 ]	( 0 2 0 )	( -2 -4 4 )	9.086	1.271	7.15	73.8	89.1
[ 3 0 -1 ]	( 0 2 0 )	( -1 9 -3 )	9.086	1.260	7.21	51.4	66.0
[ 1 0 1 ]	( 0 2 0 )	( 4 2 -4 )	9.086	1.259	7.22	82.0	73.7
[ 3 0 -4 ]	( 0 2 0 )	( 4 0 3 )	9.086	1.249	7.27	90.0	45.0
[ 3 0 -2 ]	( 0 2 0 )	( 2 -8 3 )	9.086	1.248	7.28	56.7	57.8
[ 3 0 -4 ]	( 0 2 0 )	( -4 2 -3 )	9.086	1.238	7.34	82.2	45.0
[ 4 0 1 ]	( 0 2 0 )	( 1 5 -4 )	9.086	1.236	7.35	70.1	83.0
[ 4 0 -1 ]	( 0 2 0 )	( 1 1 4 )	9.086	1.227	7.40	86.1	68.2
[ 4 0 5 ]	( 0 2 0 )	( -5 -1 4 )	9.086	1.213	7.49	86.2	66.7
[ 1 0 -1 ]	( 0 2 0 )	( 3 7 3 )	9.086	1.211	7.50	62.2	50.8
[ 4 0 -1 ]	( 0 2 0 )	( -1 -3 -4 )	9.086	1.205	7.54	78.5	68.2
[ 3 0 -4 ]	( 0 2 0 )	( 4 4 3 )	9.086	1.204	7.54	74.6	45.0
[ 4 0 5 ]	( 0 2 0 )	( -5 -3 4 )	9.086	1.192	7.62	78.6	66.7

**Actinolite (020) 140 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 3 0 5 ]	( 0 2 0 )	( 5 9 -3 )	9.086	1.190	7.64	53.9	56.5
[ 1 0 0 ]	( 0 2 0 )	( 0 -6 -4 )	9.086	1.180	7.70	67.1	75.4
[ 4 0 1 ]	( 0 2 0 )	( 1 7 -4 )	9.086	1.173	7.75	63.1	83.0
[ 1 0 1 ]	( 0 2 0 )	( -4 -6 4 )	9.086	1.172	7.75	67.2	73.7
[ 4 0 3 ]	( 0 2 0 )	( 3 7 -4 )	9.086	1.169	7.77	63.2	81.2
[ 4 0 -1 ]	( 0 2 0 )	( 1 -5 4 )	9.086	1.165	7.80	71.3	68.2
[ 1 0 2 ]	( 0 2 0 )	( -6 8 3 )	9.086	1.159	7.84	59.3	49.7
[ 3 0 -4 ]	( 0 2 0 )	( -4 -6 -3 )	9.086	1.155	7.87	67.6	45.0
[ 4 0 5 ]	( 0 2 0 )	( 5 5 -4 )	9.086	1.153	7.88	71.5	66.7
[ 2 0 1 ]	( 0 2 0 )	( 2 -8 -4 )	9.086	1.144	7.94	59.8	89.1
[ 2 0 -1 ]	( 0 2 0 )	( 2 4 4 )	9.086	1.130	8.04	75.6	61.7
[ 2 0 3 ]	( 0 2 0 )	( -6 -4 4 )	9.086	1.115	8.15	75.8	60.3
[ 4 0 -1 ]	( 0 2 0 )	( 1 7 4 )	9.086	1.111	8.17	64.6	68.2
[ 4 0 1 ]	( 0 2 0 )	( 1 9 -4 )	9.086	1.102	8.25	56.9	83.0
[ 4 0 5 ]	( 0 2 0 )	( -5 -7 4 )	9.086	1.101	8.25	64.9	66.7
[ 4 0 3 ]	( 0 2 0 )	( 3 9 -4 )	9.086	1.098	8.27	57.0	81.2
[ 4 0 -3 ]	( 0 2 0 )	( -3 -1 -4 )	9.086	1.095	8.30	86.5	55.9
[ 3 0 -4 ]	( 0 2 0 )	( 4 8 3 )	9.086	1.095	8.30	61.2	45.0
[ 4 0 -3 ]	( 0 2 0 )	( 3 3 4 )	9.086	1.080	8.42	79.7	55.9
[ 4 0 7 ]	( 0 2 0 )	( -7 -1 4 )	9.086	1.079	8.42	86.6	54.7
[ 4 0 7 ]	( 0 2 0 )	( -7 -3 4 )	9.086	1.064	8.54	79.9	54.7
[ 5 0 2 ]	( 0 2 0 )	( 2 0 -5 )	9.086	1.059	8.58	90.0	87.8
[ 5 0 3 ]	( 0 2 0 )	( 3 -1 -5 )	9.086	1.055	8.61	86.7	85.9
[ 5 0 2 ]	( 0 2 0 )	( -2 2 5 )	9.086	1.051	8.64	83.4	87.8
[ 4 0 -1 ]	( 0 2 0 )	( 1 9 4 )	9.086	1.050	8.65	58.7	68.2
[ 4 0 -3 ]	( 0 2 0 )	( -3 -5 -4 )	9.086	1.050	8.65	73.2	55.9
[ 5 0 1 ]	( 0 2 0 )	( 1 1 -5 )	9.086	1.046	8.69	86.7	81.5
[ 4 0 5 ]	( 0 2 0 )	( 5 -9 -4 )	9.086	1.042	8.72	58.9	66.7
[ 5 0 3 ]	( 0 2 0 )	( -3 3 5 )	9.086	1.041	8.73	80.1	85.9
[ 2 0 -1 ]	( 0 2 0 )	( 2 8 4 )	9.086	1.038	8.76	62.8	61.7
[ 4 0 7 ]	( 0 2 0 )	( -7 -5 4 )	9.086	1.036	8.77	73.4	54.7
[ 5 0 4 ]	( 0 2 0 )	( 4 2 -5 )	9.086	1.035	8.77	83.5	79.7
[ 5 0 1 ]	( 0 2 0 )	( -1 -3 5 )	9.086	1.032	8.80	80.2	81.5
[ 5 0 2 ]	( 0 2 0 )	( 2 4 -5 )	9.086	1.031	8.81	76.9	87.8
[ 2 0 3 ]	( 0 2 0 )	( 6 -8 -4 )	9.086	1.026	8.85	63.1	60.3
[ 1 0 -1 ]	( 0 2 0 )	( 4 2 4 )	9.086	1.020	8.90	83.6	50.8
[ 1 0 0 ]	( 0 2 0 )	( 0 -2 -5 )	9.086	1.019	8.92	83.6	75.4
[ 5 0 4 ]	( 0 2 0 )	( 4 4 -5 )	9.086	1.016	8.94	77.1	79.7
[ 1 0 1 ]	( 0 2 0 )	( 5 1 -5 )	9.086	1.015	8.95	86.8	73.7
[ 5 0 3 ]	( 0 2 0 )	( -3 -5 5 )	9.086	1.015	8.95	73.8	85.9
[ 4 0 -3 ]	( 0 2 0 )	( 3 -7 4 )	9.086	1.011	8.99	67.1	55.9
[ 5 0 1 ]	( 0 2 0 )	( -1 5 5 )	9.086	1.007	9.03	73.9	81.5
[ 1 0 2 ]	( 0 2 0 )	( 8 2 -4 )	9.086	1.004	9.05	83.7	49.7
[ 1 0 1 ]	( 0 2 0 )	( -5 -3 5 )	9.086	1.003	9.06	80.5	73.7

**Actinolite (110) 365 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 1 -1 0 ]	( 1 1 0 )	( 0 0 1 )	8.465	5.126	1.65	77.1	83.1
[ 1 -1 2 ]	( 1 1 0 )	( -1 1 1 )	8.465	4.895	1.73	83.4	68.5
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 -1 )	8.465	4.895	1.73	68.6	83.1
[ 1 -1 -2 ]	( 1 1 0 )	( 0 2 -1 )	8.465	4.464	1.90	88.0	57.5
[ 1 -1 2 ]	( 1 1 0 )	( 0 2 1 )	8.465	4.464	1.90	65.0	68.5
[ 1 -1 2 ]	( 1 1 0 )	( -2 0 1 )	8.465	4.042	2.09	55.1	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 1 -1 1 )	8.465	4.006	2.11	63.7	57.5
[ 1 -1 4 ]	( 1 1 0 )	( -1 3 1 )	8.465	3.894	2.17	83.8	47.7
[ 1 -1 -2 ]	( 1 1 0 )	( 1 3 -1 )	8.465	3.894	2.17	60.7	57.5
[ 1 -1 4 ]	( 1 1 0 )	( -2 2 1 )	8.465	3.693	2.29	70.5	47.7
[ 1 -1 0 ]	( 1 1 0 )	( 2 2 -1 )	8.465	3.693	2.29	44.6	83.1
[ 1 -1 4 ]	( 1 1 0 )	( 0 4 1 )	8.465	3.400	2.49	60.2	47.7
[ 1 -1 2 ]	( 1 1 0 )	( -1 -3 -1 )	8.465	3.399	2.49	43.6	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 2 0 1 )	8.465	3.126	2.71	44.4	57.5
[ 1 -1 4 ]	( 1 1 0 )	( -3 1 1 )	8.465	3.035	2.79	50.8	47.7
[ 1 -1 2 ]	( 1 1 0 )	( 3 1 -1 )	8.465	3.035	2.79	38.0	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( -2 -4 1 )	8.465	3.020	2.80	42.5	57.5
[ 1 -1 0 ]	( 1 1 0 )	( -2 -2 -1 )	8.465	2.956	2.86	34.2	83.1
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 -1 )	8.465	2.744	3.08	31.5	83.1
[ 1 -1 4 ]	( 1 1 0 )	( -1 -5 -1 )	8.465	2.722	3.11	44.0	47.7
[ 1 -1 1 ]	( 1 1 0 )	( -1 1 2 )	8.465	2.620	3.23	87.0	82.2
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 -2 )	8.465	2.620	3.23	85.3	83.1
[ 1 -1 2 ]	( 1 1 0 )	( 2 4 1 )	8.465	2.575	3.29	31.5	68.5
[ 1 -1 1 ]	( 1 1 0 )	( -2 0 2 )	8.465	2.542	3.33	75.6	82.2
[ 1 -1 -1 ]	( 1 1 0 )	( 0 -2 2 )	8.465	2.467	3.43	84.9	69.2
[ 1 -1 1 ]	( 1 1 0 )	( 0 -2 -2 )	8.465	2.467	3.43	70.0	82.2
[ 1 -1 -2 ]	( 1 1 0 )	( 3 1 1 )	8.465	2.423	3.49	32.9	57.5
[ 1 -1 4 ]	( 1 1 0 )	( 4 0 -1 )	8.465	2.413	3.51	38.0	47.7
[ 1 -1 -2 ]	( 1 1 0 )	( -3 -5 1 )	8.465	2.349	3.60	31.7	57.5
[ 1 -1 2 ]	( 1 1 0 )	( 4 2 -1 )	8.465	2.332	3.63	28.2	68.5
[ 1 -1 -1 ]	( 1 1 0 )	( -1 1 -2 )	8.465	2.314	3.66	69.1	69.2
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 2 )	8.465	2.314	3.66	61.7	83.1
[ 1 -1 2 ]	( 1 1 0 )	( -3 1 2 )	8.465	2.283	3.71	67.9	68.5
[ 1 -1 1 ]	( 1 1 0 )	( 3 1 -2 )	8.465	2.283	3.71	60.4	82.2
[ 1 -1 0 ]	( 1 1 0 )	( -3 -3 -1 )	8.465	2.267	3.73	25.5	83.1
[ 1 -1 3 ]	( 1 1 0 )	( 2 -4 -2 )	8.465	2.218	3.82	89.4	56.9
[ 1 -1 -1 ]	( 1 1 0 )	( 2 4 -2 )	8.465	2.218	3.82	63.6	69.2
[ 1 -1 -2 ]	( 1 1 0 )	( -1 3 -2 )	8.465	2.177	3.89	77.1	57.5
[ 1 -1 1 ]	( 1 1 0 )	( 1 3 2 )	8.465	2.177	3.89	56.1	82.2
[ 1 -1 4 ]	( 1 1 0 )	( -2 -6 -1 )	8.465	2.175	3.89	33.7	47.7
[ 1 -1 3 ]	( 1 1 0 )	( 3 -3 -2 )	8.465	2.151	3.94	75.9	56.9
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 -2 )	8.465	2.151	3.94	54.9	83.1
[ 1 -1 3 ]	( 1 1 0 )	( 1 -5 -2 )	8.465	2.140	3.96	74.8	56.9
[ 1 -1 -2 ]	( 1 1 0 )	( 1 5 -2 )	8.465	2.140	3.96	73.4	57.5
[ 1 -1 -1 ]	( 1 1 0 )	( 2 0 2 )	8.465	2.054	4.12	56.0	69.2
[ 1 -1 2 ]	( 1 1 0 )	( 3 5 1 )	8.465	2.029	4.17	24.3	68.5
[ 1 -1 3 ]	( 1 1 0 )	( 4 -2 -2 )	8.465	1.973	4.29	62.8	56.9
[ 1 -1 1 ]	( 1 1 0 )	( -4 -2 2 )	8.465	1.973	4.29	48.8	82.2

**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -1 -3 ]	( 1 1 0 )	( 1 -5 2 )	8.465	1.963	4.31	84.2	48.2
[ 1 -1 2 ]	( 1 1 0 )	( -1 -5 -2 )	8.465	1.963	4.31	52.8	68.5
[ 1 -1 -3 ]	( 1 1 0 )	( 0 6 -2 )	8.465	1.956	4.33	82.5	48.2
[ 1 -1 3 ]	( 1 1 0 )	( 0 6 2 )	8.465	1.956	4.33	61.9	56.9
[ 1 -1 4 ]	( 1 1 0 )	( -5 -1 1 )	8.465	1.951	4.34	29.9	47.7
[ 1 -1 4 ]	( 1 1 0 )	( -3 5 2 )	8.465	1.944	4.35	83.1	47.7
[ 1 -1 -1 ]	( 1 1 0 )	( 3 5 -2 )	8.465	1.944	4.35	51.7	69.2
[ 1 -1 -2 ]	( 1 1 0 )	( 4 2 1 )	8.465	1.938	4.37	25.7	57.5
[ 1 -1 -2 ]	( 1 1 0 )	( -4 -6 1 )	8.465	1.887	4.49	25.0	57.5
[ 1 -1 -3 ]	( 1 1 0 )	( 2 -4 2 )	8.465	1.871	4.52	71.5	48.2
[ 1 -1 1 ]	( 1 1 0 )	( -2 -4 -2 )	8.465	1.871	4.52	45.5	82.2
[ 1 -1 2 ]	( 1 1 0 )	( 5 3 -1 )	8.465	1.866	4.54	22.3	68.5
[ 1 -1 4 ]	( 1 1 0 )	( 1 -7 -2 )	8.465	1.854	4.57	71.2	47.7
[ 1 -1 -3 ]	( 1 1 0 )	( 1 7 -2 )	8.465	1.854	4.57	70.0	48.2
[ 1 -1 -2 ]	( 1 1 0 )	( 3 -1 2 )	8.465	1.781	4.75	52.9	57.5
[ 1 -1 -1 ]	( 1 1 0 )	( -3 -1 -2 )	8.465	1.781	4.75	46.0	69.2
[ 1 -1 4 ]	( 1 1 0 )	( 3 7 1 )	8.465	1.780	4.76	27.0	47.7
[ 3 -3 2 ]	( 1 1 0 )	( 2 0 -3 )	8.465	1.755	4.82	84.5	87.1
[ 1 -1 3 ]	( 1 1 0 )	( -5 1 2 )	8.465	1.753	4.83	52.2	56.9
[ 1 -1 2 ]	( 1 1 0 )	( 5 1 -2 )	8.465	1.753	4.83	45.3	68.5
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 -3 )	8.465	1.752	4.83	88.7	83.1
[ 3 -3 2 ]	( 1 1 0 )	( -1 1 3 )	8.465	1.752	4.83	83.6	87.1
[ 1 -1 3 ]	( 1 1 0 )	( -1 -7 -2 )	8.465	1.735	4.88	51.5	56.9
[ 1 -1 0 ]	( 1 1 0 )	( 5 5 -1 )	8.465	1.726	4.90	19.2	83.1
[ 3 -3 4 ]	( 1 1 0 )	( 2 -2 -3 )	8.465	1.723	4.91	89.7	77.5
[ 1 -1 0 ]	( 1 1 0 )	( -2 -2 3 )	8.465	1.723	4.91	79.5	83.1
[ 1 -1 -2 ]	( 1 1 0 )	( 3 7 -2 )	8.465	1.722	4.92	50.4	57.5
[ 1 -1 -3 ]	( 1 1 0 )	( -3 3 -2 )	8.465	1.716	4.93	60.4	48.2
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 2 )	8.465	1.716	4.93	40.7	83.1
[ 1 -1 4 ]	( 1 1 0 )	( -5 3 2 )	8.465	1.691	5.01	59.7	47.7
[ 1 -1 1 ]	( 1 1 0 )	( 5 3 -2 )	8.465	1.691	5.01	40.1	82.2
[ 3 -3 -2 ]	( 1 1 0 )	( -1 -3 3 )	8.465	1.691	5.01	86.2	73.6
[ 3 -3 4 ]	( 1 1 0 )	( -1 3 3 )	8.465	1.691	5.01	78.8	77.5
[ 3 -3 4 ]	( 1 1 0 )	( -3 1 3 )	8.465	1.687	5.02	78.2	77.5
[ 3 -3 2 ]	( 1 1 0 )	( 3 1 -3 )	8.465	1.687	5.02	73.1	87.1
[ 1 -1 -1 ]	( 1 1 0 )	( -4 -6 2 )	8.465	1.681	5.04	42.8	69.2
[ 3 -3 -2 ]	( 1 1 0 )	( 0 -2 3 )	8.465	1.679	5.04	82.3	73.6
[ 3 -3 2 ]	( 1 1 0 )	( 0 -2 -3 )	8.465	1.679	5.04	72.2	87.1
[ 1 -1 2 ]	( 1 1 0 )	( 4 6 1 )	8.465	1.660	5.10	19.7	68.5
[ 1 -1 2 ]	( 1 1 0 )	( 2 -4 -3 )	8.465	1.637	5.17	85.5	68.5
[ 3 -3 -2 ]	( 1 1 0 )	( 2 4 -3 )	8.465	1.637	5.17	75.1	73.6
[ 1 -1 4 ]	( 1 1 0 )	( 6 2 -1 )	8.465	1.618	5.23	24.4	47.7
[ 3 -3 -2 ]	( 1 1 0 )	( -1 1 -3 )	8.465	1.607	5.27	71.5	73.6
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 3 )	8.465	1.607	5.27	66.4	83.1
[ 1 -1 1 ]	( 1 1 0 )	( -3 -5 -2 )	8.465	1.605	5.27	37.7	82.2
[ 1 -1 -2 ]	( 1 1 0 )	( 5 3 1 )	8.465	1.601	5.29	21.0	57.5
[ 3 -3 -4 ]	( 1 1 0 )	( 0 4 -3 )	8.465	1.599	5.29	87.4	65.0
[ 3 -3 4 ]	( 1 1 0 )	( 0 4 3 )	8.465	1.599	5.29	68.1	77.5

**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -3 4 ]	( 1 1 0 )	( -4 0 3 )	8.465	1.593	5.31	67.6	77.5
[ 1 -1 0 ]	( 1 1 0 )	( 5 5 -2 )	8.465	1.585	5.34	37.1	83.1
[ 3 -3 -4 ]	( 1 1 0 )	( -1 -5 3 )	8.465	1.584	5.34	81.8	65.0
[ 1 -1 2 ]	( 1 1 0 )	( -1 5 3 )	8.465	1.584	5.34	74.7	68.5
[ 1 -1 2 ]	( 1 1 0 )	( -4 2 3 )	8.465	1.569	5.39	72.8	68.5
[ 3 -3 2 ]	( 1 1 0 )	( 4 2 -3 )	8.465	1.569	5.39	62.9	87.1
[ 1 -1 -2 ]	( 1 1 0 )	( -5 -7 1 )	8.465	1.565	5.41	20.5	57.5
[ 3 -3 -4 ]	( 1 1 0 )	( -1 3 -3 )	8.465	1.559	5.43	76.8	65.0
[ 3 -3 2 ]	( 1 1 0 )	( 1 3 3 )	8.465	1.559	5.43	62.1	87.1
[ 1 -1 2 ]	( 1 1 0 )	( -6 -4 1 )	8.465	1.546	5.47	18.3	68.5
[ 1 -1 -3 ]	( 1 1 0 )	( 4 -2 2 )	8.465	1.540	5.50	51.3	48.2
[ 1 -1 -1 ]	( 1 1 0 )	( -4 -2 -2 )	8.465	1.540	5.50	38.5	69.2
[ 1 -1 3 ]	( 1 1 0 )	( 6 0 -2 )	8.465	1.539	5.50	43.9	56.9
[ 3 -3 8 ]	( 1 1 0 )	( -3 5 3 )	8.465	1.536	5.51	88.4	60.5
[ 3 -3 -2 ]	( 1 1 0 )	( 3 5 -3 )	8.465	1.536	5.51	65.0	73.6
[ 1 -1 4 ]	( 1 1 0 )	( -1 -9 -2 )	8.465	1.527	5.54	51.2	47.7
[ 1 -1 3 ]	( 1 1 0 )	( 2 8 2 )	8.465	1.523	5.56	43.4	56.9
[ 3 -3 8 ]	( 1 1 0 )	( 2 -6 -3 )	8.465	1.519	5.57	81.3	60.5
[ 3 -3 -4 ]	( 1 1 0 )	( 2 6 -3 )	8.465	1.519	5.57	71.6	65.0
[ 1 -1 -3 ]	( 1 1 0 )	( -3 -9 2 )	8.465	1.518	5.58	50.3	48.2
[ 1 -1 0 ]	( 1 1 0 )	( -5 -5 -1 )	8.465	1.510	5.60	16.7	83.1
[ 3 -3 8 ]	( 1 1 0 )	( -4 4 3 )	8.465	1.503	5.63	78.1	60.5
[ 1 -1 0 ]	( 1 1 0 )	( 4 4 -3 )	8.465	1.503	5.63	59.1	83.1
[ 1 -1 4 ]	( 1 1 0 )	( -4 -8 -1 )	8.465	1.494	5.67	22.4	47.7
[ 3 -3 -2 ]	( 1 1 0 )	( 2 0 3 )	8.465	1.494	5.67	61.9	73.6
[ 1 -1 -2 ]	( 1 1 0 )	( 1 -5 3 )	8.465	1.474	5.74	82.0	57.5
[ 3 -3 4 ]	( 1 1 0 )	( -1 -5 -3 )	8.465	1.474	5.74	58.8	77.5
[ 3 -3 -4 ]	( 1 1 0 )	( 2 -2 3 )	8.465	1.474	5.74	67.1	65.0
[ 1 -1 0 ]	( 1 1 0 )	( -2 -2 -3 )	8.465	1.474	5.74	57.3	83.1
[ 1 -1 2 ]	( 1 1 0 )	( 3 7 2 )	8.465	1.473	5.75	36.7	68.5
[ 1 -1 2 ]	( 1 1 0 )	( -5 1 3 )	8.465	1.467	5.77	63.3	68.5
[ 3 -3 4 ]	( 1 1 0 )	( 5 1 -3 )	8.465	1.467	5.77	58.4	77.5
[ 1 -1 1 ]	( 1 1 0 )	( -6 -4 2 )	8.465	1.458	5.81	33.7	82.2
[ 1 -1 -1 ]	( 1 1 0 )	( 5 7 -2 )	8.465	1.457	5.81	36.0	69.2
[ 1 -1 -2 ]	( 1 1 0 )	( -1 -7 3 )	8.465	1.457	5.81	78.1	57.5
[ 3 -3 8 ]	( 1 1 0 )	( -1 7 3 )	8.465	1.457	5.81	71.5	60.5
[ 1 -1 0 ]	( 1 1 0 )	( 6 6 -1 )	8.465	1.445	5.86	16.0	83.1
[ 3 -3 8 ]	( 1 1 0 )	( -5 3 3 )	8.465	1.431	5.92	68.6	60.5
[ 3 -3 2 ]	( 1 1 0 )	( 5 3 -3 )	8.465	1.431	5.92	54.2	87.1
[ 1 -1 -2 ]	( 1 1 0 )	( -2 4 -3 )	8.465	1.419	5.96	72.4	57.5
[ 3 -3 2 ]	( 1 1 0 )	( 2 4 3 )	8.465	1.419	5.96	53.6	87.1
[ 3 -3 10 ]	( 1 1 0 )	( 3 -7 -3 )	8.465	1.419	5.97	87.3	53.6
[ 3 -3 -4 ]	( 1 1 0 )	( 3 7 -3 )	8.465	1.419	5.97	62.4	65.0
[ 3 -3 10 ]	( 1 1 0 )	( 4 -6 -3 )	8.465	1.410	6.00	83.1	53.6
[ 3 -3 -2 ]	( 1 1 0 )	( -4 -6 3 )	8.465	1.410	6.00	56.3	73.6
[ 1 -1 2 ]	( 1 1 0 )	( 5 7 1 )	8.465	1.399	6.05	16.5	68.5
[ 3 -3 10 ]	( 1 1 0 )	( -2 8 3 )	8.465	1.389	6.09	77.9	53.6
[ 1 -1 -2 ]	( 1 1 0 )	( -2 -8 3 )	8.465	1.389	6.09	68.9	57.5



**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -1 1 ]	( 1 1 0 )	( 4 6 2 )	8.465	1.389	6.09	32.0	82.2
[ 1 -1 4 ]	( 1 1 0 )	( 7 3 -1 )	8.465	1.375	6.16	20.6	47.7
[ 1 -1 -3 ]	( 1 1 0 )	( 5 -1 2 )	8.465	1.372	6.17	44.0	48.2
[ 1 -1 -2 ]	( 1 1 0 )	( -5 -1 -2 )	8.465	1.372	6.17	37.9	57.5
[ 3 -3 -8 ]	( 1 1 0 )	( 1 -7 3 )	8.465	1.370	6.18	86.6	51.0
[ 1 -1 2 ]	( 1 1 0 )	( -1 -7 -3 )	8.465	1.370	6.18	56.5	68.5
[ 3 -3 -8 ]	( 1 1 0 )	( 0 8 -3 )	8.465	1.365	6.20	84.2	51.0
[ 3 -3 8 ]	( 1 1 0 )	( 0 -8 -3 )	8.465	1.365	6.20	62.7	60.5
[ 3 -3 -4 ]	( 1 1 0 )	( 3 -1 3 )	8.465	1.365	6.20	58.5	65.0
[ 3 -3 -2 ]	( 1 1 0 )	( -3 -1 -3 )	8.465	1.365	6.20	53.7	73.6
[ 3 -3 10 ]	( 1 1 0 )	( 5 -5 -3 )	8.465	1.364	6.20	73.9	53.6
[ 1 -1 0 ]	( 1 1 0 )	( -5 -5 3 )	8.465	1.364	6.20	51.1	83.1
[ 1 -1 -2 ]	( 1 1 0 )	( 6 4 1 )	8.465	1.359	6.23	17.7	57.5
[ 1 -1 4 ]	( 1 1 0 )	( -7 1 2 )	8.465	1.352	6.26	43.7	47.7
[ 1 -1 3 ]	( 1 1 0 )	( 7 1 -2 )	8.465	1.352	6.26	37.6	56.9
[ 1 -1 -1 ]	( 1 1 0 )	( 5 3 2 )	8.465	1.342	6.31	32.8	69.2
[ 3 -3 -8 ]	( 1 1 0 )	( 2 -6 3 )	8.465	1.340	6.32	77.5	51.0
[ 3 -3 4 ]	( 1 1 0 )	( -2 -6 -3 )	8.465	1.340	6.32	51.0	77.5
[ 1 -1 3 ]	( 1 1 0 )	( 3 9 2 )	8.465	1.339	6.32	37.1	56.9
[ 3 -3 8 ]	( 1 1 0 )	( -6 2 3 )	8.465	1.333	6.35	60.2	60.5
[ 3 -3 4 ]	( 1 1 0 )	( 6 2 -3 )	8.465	1.333	6.35	50.7	77.5
[ 1 -1 -2 ]	( 1 1 0 )	( -6 -8 1 )	8.465	1.332	6.35	17.4	57.5
[ 1 -1 -2 ]	( 1 1 0 )	( 5 9 -2 )	8.465	1.327	6.38	36.5	57.5
[ 3 -3 -8 ]	( 1 1 0 )	( -1 -9 3 )	8.465	1.327	6.38	75.2	51.0
[ 3 -3 10 ]	( 1 1 0 )	( -1 9 3 )	8.465	1.327	6.38	69.1	53.6
[ 2 -2 1 ]	( 1 1 0 )	( -2 0 4 )	8.465	1.324	6.39	89.2	89.6
[ 1 -1 2 ]	( 1 1 0 )	( 7 3 -2 )	8.465	1.323	6.40	32.5	68.5
[ 1 -1 2 ]	( 1 1 0 )	( -7 -5 1 )	8.465	1.316	6.43	15.5	68.5
[ 1 -1 0 ]	( 1 1 0 )	( -1 -1 4 )	8.465	1.311	6.46	85.8	83.1
[ 2 -2 1 ]	( 1 1 0 )	( 1 -1 -4 )	8.465	1.311	6.46	81.9	89.6
[ 1 -1 1 ]	( 1 1 0 )	( 3 -1 -4 )	8.465	1.305	6.48	84.2	82.2
[ 2 -2 1 ]	( 1 1 0 )	( 3 1 -4 )	8.465	1.305	6.48	80.3	89.6
[ 1 -1 4 ]	( 1 1 0 )	( -4 8 3 )	8.465	1.304	6.49	87.4	47.7
[ 3 -3 -4 ]	( 1 1 0 )	( 4 8 -3 )	8.465	1.304	6.49	54.6	65.0
[ 3 -3 10 ]	( 1 1 0 )	( -6 4 3 )	8.465	1.292	6.55	65.4	53.6
[ 3 -3 2 ]	( 1 1 0 )	( 6 4 -3 )	8.465	1.292	6.55	47.1	87.1
[ 1 -1 0 ]	( 1 1 0 )	( -6 -6 -1 )	8.465	1.289	6.57	14.2	83.1
[ 1 -1 0 ]	( 1 1 0 )	( 5 5 2 )	8.465	1.287	6.58	29.3	83.1
[ 2 -2 -1 ]	( 1 1 0 )	( 1 3 -4 )	8.465	1.285	6.59	89.6	75.9
[ 1 -1 1 ]	( 1 1 0 )	( -1 3 4 )	8.465	1.285	6.59	78.2	82.2
[ 1 -1 4 ]	( 1 1 0 )	( -5 -9 -1 )	8.465	1.282	6.60	19.1	47.7
[ 3 -3 -8 ]	( 1 1 0 )	( -3 5 -3 )	8.465	1.281	6.61	69.0	51.0
[ 3 -3 2 ]	( 1 1 0 )	( 3 5 3 )	8.465	1.281	6.61	46.6	87.1
[ 1 -1 4 ]	( 1 1 0 )	( -5 7 3 )	8.465	1.281	6.61	78.7	47.7
[ 3 -3 -2 ]	( 1 1 0 )	( 5 7 -3 )	8.465	1.281	6.61	49.1	73.6
[ 2 -2 3 ]	( 1 1 0 )	( -3 3 4 )	8.465	1.279	6.62	88.1	75.1
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 -4 )	8.465	1.279	6.62	76.7	83.1
[ 1 -1 -1 ]	( 1 1 0 )	( -6 -8 2 )	8.465	1.274	6.64	31.0	69.2

**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 2 -2 3 ]	( 1 1 0 )	( -2 4 4 )	8.465	1.271	6.66	83.3	75.1
[ 2 -2 -1 ]	( 1 1 0 )	( -2 -4 4 )	8.465	1.271	6.66	81.7	75.9
[ 1 -1 1 ]	( 1 1 0 )	( -7 -5 2 )	8.465	1.271	6.66	29.0	82.2
[ 2 -2 -1 ]	( 1 1 0 )	( 0 -2 4 )	8.465	1.269	6.67	81.0	75.9
[ 2 -2 1 ]	( 1 1 0 )	( 0 -2 -4 )	8.465	1.269	6.67	73.4	89.6
[ 3 -3 -10 ]	( 1 1 0 )	( -1 9 -3 )	8.465	1.260	6.72	89.5	45.5
[ 3 -3 8 ]	( 1 1 0 )	( -1 -9 -3 )	8.465	1.260	6.72	55.1	60.5
[ 2 -2 3 ]	( 1 1 0 )	( 4 -2 -4 )	8.465	1.259	6.73	79.5	75.1
[ 2 -2 1 ]	( 1 1 0 )	( -4 -2 4 )	8.465	1.259	6.73	71.9	89.6
[ 3 -3 -4 ]	( 1 1 0 )	( 4 0 3 )	8.465	1.249	6.78	51.3	65.0
[ 3 -3 -10 ]	( 1 1 0 )	( -2 8 -3 )	8.465	1.248	6.78	82.1	45.5
[ 1 -1 2 ]	( 1 1 0 )	( 2 8 3 )	8.465	1.248	6.78	49.5	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 4 -2 3 )	8.465	1.238	6.84	56.2	57.5
[ 3 -3 -2 ]	( 1 1 0 )	( 4 2 3 )	8.465	1.238	6.84	46.9	73.6
[ 1 -1 -1 ]	( 1 1 0 )	( -1 -5 4 )	8.465	1.236	6.85	86.7	69.2
[ 2 -2 3 ]	( 1 1 0 )	( -1 5 4 )	8.465	1.236	6.85	75.0	75.1
[ 1 -1 2 ]	( 1 1 0 )	( 3 -5 -4 )	8.465	1.231	6.87	88.2	68.5
[ 2 -2 -1 ]	( 1 1 0 )	( 3 5 -4 )	8.465	1.231	6.87	73.4	75.9
[ 2 -2 -1 ]	( 1 1 0 )	( -1 1 -4 )	8.465	1.227	6.90	72.8	75.9
[ 1 -1 0 ]	( 1 1 0 )	( 1 1 4 )	8.465	1.227	6.90	69.0	83.1
[ 3 -3 8 ]	( 1 1 0 )	( -7 1 3 )	8.465	1.226	6.90	53.0	60.5
[ 1 -1 2 ]	( 1 1 0 )	( 7 1 -3 )	8.465	1.226	6.90	48.3	68.5
[ 1 -1 -3 ]	( 1 1 0 )	( -6 0 -2 )	8.465	1.223	6.92	38.3	48.2
[ 1 -1 1 ]	( 1 1 0 )	( 5 7 2 )	8.465	1.216	6.96	27.6	82.2
[ 2 -2 3 ]	( 1 1 0 )	( 5 -1 -4 )	8.465	1.213	6.98	71.4	75.1
[ 1 -1 1 ]	( 1 1 0 )	( -5 -1 4 )	8.465	1.213	6.98	67.6	82.2
[ 3 -3 -10 ]	( 1 1 0 )	( 3 -7 3 )	8.465	1.211	6.99	73.9	45.5
[ 3 -3 4 ]	( 1 1 0 )	( -3 -7 -3 )	8.465	1.211	6.99	44.6	77.5
[ 1 -1 2 ]	( 1 1 0 )	( -6 -8 -1 )	8.465	1.206	7.02	14.2	68.5
[ 1 -1 -1 ]	( 1 1 0 )	( 1 -3 4 )	8.465	1.205	7.02	76.8	69.2
[ 2 -2 1 ]	( 1 1 0 )	( -1 -3 -4 )	8.465	1.205	7.02	65.5	89.6
[ 3 -3 10 ]	( 1 1 0 )	( 7 -3 -3 )	8.465	1.205	7.03	58.0	53.6
[ 3 -3 4 ]	( 1 1 0 )	( -7 -3 3 )	8.465	1.205	7.03	44.3	77.5
[ 3 -3 -8 ]	( 1 1 0 )	( 4 -4 3 )	8.465	1.204	7.03	61.3	51.0
[ 1 -1 0 ]	( 1 1 0 )	( -4 -4 -3 )	8.465	1.204	7.03	43.4	83.1
[ 1 -1 0 ]	( 1 1 0 )	( 7 7 -2 )	8.465	1.202	7.04	27.2	83.1
[ 1 -1 3 ]	( 1 1 0 )	( -8 -2 2 )	8.465	1.196	7.08	32.6	56.9
[ 1 -1 4 ]	( 1 1 0 )	( 8 4 -1 )	8.465	1.192	7.10	17.7	47.7
[ 1 -1 2 ]	( 1 1 0 )	( -5 3 4 )	8.465	1.192	7.10	75.4	68.5
[ 2 -2 1 ]	( 1 1 0 )	( 5 3 -4 )	8.465	1.192	7.10	64.2	89.6
[ 3 -3 -4 ]	( 1 1 0 )	( -5 -9 3 )	8.465	1.190	7.12	48.0	65.0
[ 1 -1 -1 ]	( 1 1 0 )	( 6 4 2 )	8.465	1.181	7.17	28.5	69.2
[ 2 -2 -3 ]	( 1 1 0 )	( 0 6 -4 )	8.465	1.180	7.17	88.6	63.1
[ 2 -2 3 ]	( 1 1 0 )	( 0 6 4 )	8.465	1.180	7.17	67.2	75.1
[ 1 -1 -2 ]	( 1 1 0 )	( -7 -5 -1 )	8.465	1.178	7.19	15.3	57.5
[ 2 -2 -3 ]	( 1 1 0 )	( 1 7 -4 )	8.465	1.173	7.22	83.4	63.1
[ 1 -1 2 ]	( 1 1 0 )	( 1 -7 -4 )	8.465	1.173	7.22	72.2	68.5
[ 2 -2 5 ]	( 1 1 0 )	( 4 -6 -4 )	8.465	1.172	7.22	87.2	62.4



**Actinolite (110) 365 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 2 -2 -1 ]	( 1 1 0 )	( 4 6 -4 )	8.465	1.172	7.22	65.8	75.9
[ 2 -2 5 ]	( 1 1 0 )	( 3 -7 -4 )	8.465	1.169	7.24	84.9	62.4
[ 1 -1 -1 ]	( 1 1 0 )	( 3 7 -4 )	8.465	1.169	7.24	70.7	69.2
[ 2 -2 -1 ]	( 1 1 0 )	( -2 0 -4 )	8.465	1.166	7.26	65.2	75.9
[ 2 -2 -3 ]	( 1 1 0 )	( -1 5 -4 )	8.465	1.165	7.27	80.7	63.1
[ 1 -1 1 ]	( 1 1 0 )	( 1 5 4 )	8.465	1.165	7.27	62.6	82.2
[ 1 -1 4 ]	( 1 1 0 )	( -7 5 3 )	8.465	1.164	7.27	63.1	47.7
[ 3 -3 2 ]	( 1 1 0 )	( 7 5 -3 )	8.465	1.164	7.27	41.3	87.1
[ 3 -3 -2 ]	( 1 1 0 )	( -6 -8 3 )	8.465	1.159	7.30	43.2	73.6
[ 1 -1 -2 ]	( 1 1 0 )	( 7 9 -1 )	8.465	1.157	7.32	15.0	57.5
[ 3 -3 -10 ]	( 1 1 0 )	( -4 6 -3 )	8.465	1.155	7.33	66.4	45.5
[ 3 -3 2 ]	( 1 1 0 )	( 4 6 3 )	8.465	1.155	7.33	40.9	87.1
[ 2 -2 5 ]	( 1 1 0 )	( -5 5 4 )	8.465	1.153	7.34	79.4	62.4
[ 1 -1 0 ]	( 1 1 0 )	( 5 5 -4 )	8.465	1.153	7.34	61.3	83.1
[ 2 -2 3 ]	( 1 1 0 )	( -6 0 4 )	8.465	1.151	7.36	64.0	75.1
[ 1 -1 2 ]	( 1 1 0 )	( 8 6 -1 )	8.465	1.144	7.40	13.4	68.5
[ 2 -2 5 ]	( 1 1 0 )	( 2 -8 -4 )	8.465	1.144	7.40	77.2	62.4
[ 2 -2 -3 ]	( 1 1 0 )	( 2 8 -4 )	8.465	1.144	7.40	75.7	63.1
[ 1 -1 -2 ]	( 1 1 0 )	( -5 1 -3 )	8.465	1.137	7.44	49.8	57.5
[ 3 -3 -4 ]	( 1 1 0 )	( 5 1 3 )	8.465	1.137	7.44	45.3	65.0
[ 1 -1 2 ]	( 1 1 0 )	( -5 -9 -2 )	8.465	1.137	7.45	27.5	68.5
[ 2 -2 -3 ]	( 1 1 0 )	( 2 -4 4 )	8.465	1.130	7.49	73.1	63.1
[ 2 -2 1 ]	( 1 1 0 )	( -2 -4 -4 )	8.465	1.130	7.49	58.6	89.6
[ 1 -1 -1 ]	( 1 1 0 )	( 7 9 -2 )	8.465	1.126	7.52	27.0	69.2
[ 3 -3 8 ]	( 1 1 0 )	( 8 0 -3 )	8.465	1.122	7.55	46.9	60.5
[ 1 -1 1 ]	( 1 1 0 )	( 8 6 -2 )	8.465	1.121	7.55	25.3	82.2
[ 3 -3 -8 ]	( 1 1 0 )	( -5 3 -3 )	8.465	1.120	7.56	54.7	51.0
[ 3 -3 -2 ]	( 1 1 0 )	( 5 3 3 )	8.465	1.120	7.56	41.4	73.6
[ 2 -2 5 ]	( 1 1 0 )	( -6 4 4 )	8.465	1.115	7.59	71.9	62.4
[ 2 -2 1 ]	( 1 1 0 )	( 6 4 -4 )	8.465	1.115	7.59	57.4	89.6
[ 3 -3 10 ]	( 1 1 0 )	( -8 2 3 )	8.465	1.113	7.60	51.6	53.6
[ 1 -1 2 ]	( 1 1 0 )	( 8 2 -3 )	8.465	1.113	7.60	42.7	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 1 -7 4 )	8.465	1.111	7.62	84.4	57.5
[ 2 -2 3 ]	( 1 1 0 )	( -1 -7 -4 )	8.465	1.111	7.62	60.3	75.1
[ 1 -1 0 ]	( 1 1 0 )	( 7 7 -3 )	8.465	1.111	7.62	39.3	83.1
[ 1 -1 -2 ]	( 1 1 0 )	( -1 -9 4 )	8.465	1.102	7.68	80.5	57.5
[ 2 -2 5 ]	( 1 1 0 )	( -1 9 4 )	8.465	1.102	7.68	69.9	62.4
[ 1 -1 3 ]	( 1 1 0 )	( -5 7 4 )	8.465	1.101	7.69	83.1	56.9
[ 2 -2 -1 ]	( 1 1 0 )	( 5 7 -4 )	8.465	1.101	7.69	59.0	75.9
[ 1 -1 3 ]	( 1 1 0 )	( 3 -9 -4 )	8.465	1.098	7.71	82.0	56.9
[ 2 -2 -3 ]	( 1 1 0 )	( 3 9 -4 )	8.465	1.098	7.71	68.5	63.1
[ 1 -1 -1 ]	( 1 1 0 )	( -3 1 -4 )	8.465	1.095	7.73	62.2	69.2
[ 2 -2 -1 ]	( 1 1 0 )	( 3 1 4 )	8.465	1.095	7.73	58.5	75.9
[ 3 -3 4 ]	( 1 1 0 )	( -4 -8 -3 )	8.465	1.095	7.73	39.4	77.5
[ 1 -1 -3 ]	( 1 1 0 )	( 7 1 2 )	8.465	1.095	7.73	33.7	48.2
[ 1 -1 4 ]	( 1 1 0 )	( 8 -4 -3 )	8.465	1.089	7.77	56.5	47.7
[ 3 -3 4 ]	( 1 1 0 )	( -8 -4 3 )	8.465	1.089	7.77	39.2	77.5
[ 3 -3 -10 ]	( 1 1 0 )	( 5 -5 3 )	8.465	1.087	7.78	59.6	45.5

**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 1 -1 0 ]	( 1 1 0 )	( -5 -5 -3 )	8.465	1.087	7.78	38.3	83.1
[ 1 -1 0 ]	( 1 1 0 )	( 8 8 -1 )	8.465	1.085	7.80	11.9	83.1
[ 1 -1 4 ]	( 1 1 0 )	( 9 1 -2 )	8.465	1.081	7.83	33.5	47.7
[ 2 -2 -3 ]	( 1 1 0 )	( 3 -3 4 )	8.465	1.080	7.84	66.1	63.1
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 4 )	8.465	1.080	7.84	55.2	83.1
[ 1 -1 -2 ]	( 1 1 0 )	( -7 -3 -2 )	8.465	1.079	7.85	28.9	57.5
[ 1 -1 2 ]	( 1 1 0 )	( 7 -1 -4 )	8.465	1.079	7.85	61.1	68.5
[ 2 -2 3 ]	( 1 1 0 )	( 7 1 -4 )	8.465	1.079	7.85	57.4	75.1
[ 1 -1 1 ]	( 1 1 0 )	( 6 8 2 )	8.465	1.077	7.86	24.2	82.2
[ 1 -1 3 ]	( 1 1 0 )	( -9 -3 2 )	8.465	1.066	7.94	28.7	56.9
[ 2 -2 5 ]	( 1 1 0 )	( -7 3 4 )	8.465	1.064	7.96	65.1	62.4
[ 1 -1 1 ]	( 1 1 0 )	( 7 3 -4 )	8.465	1.064	7.96	54.2	82.2
[ 1 -1 2 ]	( 1 1 0 )	( -7 -9 -1 )	8.465	1.060	7.99	12.4	68.5
[ 5 -5 2 ]	( 1 1 0 )	( -2 0 5 )	8.465	1.059	8.00	88.0	89.0
[ 5 -5 4 ]	( 1 1 0 )	( -3 1 5 )	8.465	1.055	8.02	87.9	85.1
[ 5 -5 2 ]	( 1 1 0 )	( 3 1 -5 )	8.465	1.055	8.02	84.8	89.0
[ 3 -3 2 ]	( 1 1 0 )	( -8 -6 3 )	8.465	1.052	8.05	36.6	87.1
[ 1 -1 0 ]	( 1 1 0 )	( 2 2 -5 )	8.465	1.051	8.05	88.9	83.1
[ 5 -5 4 ]	( 1 1 0 )	( -2 2 5 )	8.465	1.051	8.05	84.9	85.1
[ 1 -1 4 ]	( 1 1 0 )	( -9 -5 1 )	8.465	1.050	8.06	15.6	47.7
[ 2 -2 -5 ]	( 1 1 0 )	( 1 -9 4 )	8.465	1.050	8.06	87.8	52.5
[ 1 -1 2 ]	( 1 1 0 )	( -1 -9 -4 )	8.465	1.050	8.06	58.5	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 3 -5 4 )	8.465	1.050	8.06	70.1	57.5
[ 2 -2 1 ]	( 1 1 0 )	( -3 -5 -4 )	8.465	1.050	8.06	52.5	89.6
[ 3 -3 -2 ]	( 1 1 0 )	( 7 9 -3 )	8.465	1.050	8.06	38.3	73.6
[ 1 -1 -1 ]	( 1 1 0 )	( -7 -5 -2 )	8.465	1.050	8.06	25.1	69.2
[ 1 -1 0 ]	( 1 1 0 )	( -1 -1 5 )	8.465	1.046	8.09	84.0	83.1
[ 5 -5 2 ]	( 1 1 0 )	( 1 -1 -5 )	8.465	1.046	8.09	80.9	89.0
[ 3 -3 2 ]	( 1 1 0 )	( 5 7 3 )	8.465	1.043	8.11	36.3	87.1
[ 5 -5 4 ]	( 1 1 0 )	( -4 0 5 )	8.465	1.042	8.12	80.9	85.1
[ 2 -2 7 ]	( 1 1 0 )	( -5 9 4 )	8.465	1.042	8.13	86.6	52.0
[ 1 -1 -1 ]	( 1 1 0 )	( 5 9 -4 )	8.465	1.042	8.13	57.3	69.2
[ 5 -5 6 ]	( 1 1 0 )	( 3 -3 -5 )	8.465	1.041	8.13	89.0	79.3
[ 1 -1 0 ]	( 1 1 0 )	( 3 3 -5 )	8.465	1.041	8.13	81.8	83.1
[ 1 -1 2 ]	( 1 1 0 )	( -9 -5 2 )	8.465	1.038	8.15	24.9	68.5
[ 1 -1 -2 ]	( 1 1 0 )	( 8 6 1 )	8.465	1.038	8.16	13.4	57.5
[ 2 -2 -5 ]	( 1 1 0 )	( -2 8 -4 )	8.465	1.038	8.16	80.8	52.5
[ 2 -2 3 ]	( 1 1 0 )	( 2 8 4 )	8.465	1.038	8.16	54.2	75.1
[ 1 -1 3 ]	( 1 1 0 )	( -7 5 4 )	8.465	1.036	8.17	69.1	56.9
[ 2 -2 1 ]	( 1 1 0 )	( 7 5 -4 )	8.465	1.036	8.17	51.5	89.6
[ 5 -5 6 ]	( 1 1 0 )	( -4 2 5 )	8.465	1.035	8.18	84.0	79.3
[ 5 -5 2 ]	( 1 1 0 )	( 4 2 -5 )	8.465	1.035	8.18	77.8	89.0
[ 3 -3 -8 ]	( 1 1 0 )	( -6 2 -3 )	8.465	1.035	8.18	49.0	51.0
[ 3 -3 -4 ]	( 1 1 0 )	( 6 2 3 )	8.465	1.035	8.18	40.3	65.0
[ 5 -5 -2 ]	( 1 1 0 )	( 1 3 -5 )	8.465	1.032	8.20	87.1	77.3
[ 5 -5 4 ]	( 1 1 0 )	( -1 3 5 )	8.465	1.032	8.20	78.0	85.1
[ 5 -5 -2 ]	( 1 1 0 )	( -2 -4 5 )	8.465	1.031	8.21	85.9	77.3
[ 5 -5 6 ]	( 1 1 0 )	( -2 4 5 )	8.465	1.031	8.21	82.0	79.3

**Actinolite (110) 365 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 2 -2 7 ]	( 1 1 0 )	( 6 -8 -4 )	8.465	1.026	8.25	79.6	52.0
[ 2 -2 -1 ]	( 1 1 0 )	( -6 -8 4 )	8.465	1.026	8.25	53.0	75.9
[ 3 -3 10 ]	( 1 1 0 )	( -9 1 3 )	8.465	1.024	8.26	46.2	53.6
[ 3 -3 8 ]	( 1 1 0 )	( 9 1 -3 )	8.465	1.024	8.26	41.8	60.5
[ 2 -2 -3 ]	( 1 1 0 )	( -4 2 -4 )	8.465	1.020	8.30	59.8	63.1
[ 2 -2 -1 ]	( 1 1 0 )	( 4 2 4 )	8.465	1.020	8.30	52.6	75.9
[ 5 -5 -2 ]	( 1 1 0 )	( 0 2 -5 )	8.465	1.019	8.31	80.2	77.3
[ 5 -5 2 ]	( 1 1 0 )	( 0 2 5 )	8.465	1.019	8.31	74.1	89.0
[ 5 -5 8 ]	( 1 1 0 )	( -4 4 5 )	8.465	1.016	8.33	87.1	73.8
[ 1 -1 0 ]	( 1 1 0 )	( 4 4 -5 )	8.465	1.016	8.33	75.0	83.1
[ 3 -3 -10 ]	( 1 1 0 )	( -6 4 -3 )	8.465	1.016	8.34	53.7	45.5
[ 3 -3 -2 ]	( 1 1 0 )	( 6 4 3 )	8.465	1.016	8.34	36.8	73.6
[ 5 -5 6 ]	( 1 1 0 )	( -5 1 5 )	8.465	1.015	8.34	77.1	79.3
[ 5 -5 4 ]	( 1 1 0 )	( 5 1 -5 )	8.465	1.015	8.34	74.1	85.1
[ 5 -5 8 ]	( 1 1 0 )	( 3 -5 -5 )	8.465	1.015	8.34	86.0	73.8
[ 5 -5 -2 ]	( 1 1 0 )	( 3 5 -5 )	8.465	1.015	8.34	79.0	77.3
[ 1 -1 4 ]	( 1 1 0 )	( 9 -3 -3 )	8.465	1.012	8.37	50.8	47.7
[ 1 -1 2 ]	( 1 1 0 )	( -9 -3 3 )	8.465	1.012	8.37	38.0	68.5
[ 1 -1 2 ]	( 1 1 0 )	( 9 7 -1 )	8.465	1.011	8.38	11.8	68.5
[ 2 -2 -5 ]	( 1 1 0 )	( 3 -7 4 )	8.465	1.011	8.38	74.0	52.5
[ 1 -1 1 ]	( 1 1 0 )	( -3 -7 -4 )	8.465	1.011	8.38	50.4	82.2
[ 1 -1 0 ]	( 1 1 0 )	( 7 7 2 )	8.465	1.010	8.38	22.6	83.1
[ 5 -5 -4 ]	( 1 1 0 )	( -1 -5 5 )	8.465	1.007	8.41	89.8	71.9
[ 5 -5 6 ]	( 1 1 0 )	( -1 5 5 )	8.465	1.007	8.41	75.2	79.3
[ 1 -1 0 ]	( 1 1 0 )	( -8 -8 3 )	8.465	1.006	8.42	35.0	83.1
[ 2 -2 5 ]	( 1 1 0 )	( 8 -2 -4 )	8.465	1.004	8.43	58.9	62.4
[ 2 -2 3 ]	( 1 1 0 )	( -8 -2 4 )	8.465	1.004	8.43	51.7	75.1
[ 5 -5 8 ]	( 1 1 0 )	( 5 -3 -5 )	8.465	1.003	8.44	80.3	73.8
[ 5 -5 2 ]	( 1 1 0 )	( -5 -3 5 )	8.465	1.003	8.44	71.2	89.0

**Actinolite (130) 285 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -1 0 ]	( 1 3 0 )	( 0 0 1 )	5.117	5.126	1.00	82.2	77.6
[ 3 -1 4 ]	( 1 3 0 )	( 1 -1 -1 )	5.117	4.895	1.05	85.3	68.0
[ 3 -1 2 ]	( 1 3 0 )	( 1 1 -1 )	5.117	4.895	1.05	68.1	84.8
[ 3 -1 -2 ]	( 1 3 0 )	( 0 -2 1 )	5.117	4.464	1.15	72.7	62.0
[ 3 -1 2 ]	( 1 3 0 )	( 0 2 1 )	5.117	4.464	1.15	57.8	84.8
[ 3 -1 6 ]	( 1 3 0 )	( -2 0 1 )	5.117	4.042	1.27	69.8	54.4
[ 3 -1 -4 ]	( 1 3 0 )	( 1 -1 1 )	5.117	4.006	1.28	81.8	49.8
[ 3 -1 -2 ]	( 1 3 0 )	( -1 -1 -1 )	5.117	4.006	1.28	59.0	62.0
[ 3 -1 6 ]	( 1 3 0 )	( -1 3 1 )	5.117	3.894	1.31	64.7	54.4
[ 3 -1 4 ]	( 1 3 0 )	( 2 2 -1 )	5.117	3.693	1.39	48.8	68.0
[ 3 -1 -4 ]	( 1 3 0 )	( 0 -4 1 )	5.117	3.400	1.51	57.1	49.8
[ 3 -1 4 ]	( 1 3 0 )	( 0 4 1 )	5.117	3.400	1.51	43.8	68.0
[ 3 -1 2 ]	( 1 3 0 )	( 2 4 -1 )	5.117	3.020	1.69	34.9	84.8
[ 3 -1 -2 ]	( 1 3 0 )	( -1 -5 1 )	5.117	2.956	1.73	39.2	62.0
[ 3 -1 -4 ]	( 1 3 0 )	( 2 2 1 )	5.117	2.956	1.73	46.9	49.8
[ 3 -1 6 ]	( 1 3 0 )	( -3 -3 1 )	5.117	2.744	1.86	39.6	54.4
[ 3 -1 2 ]	( 1 3 0 )	( 1 5 1 )	5.117	2.722	1.88	31.1	84.8
[ 3 -1 2 ]	( 1 3 0 )	( 1 -1 -2 )	5.117	2.620	1.95	83.5	84.8
[ 3 -1 1 ]	( 1 3 0 )	( 1 1 -2 )	5.117	2.620	1.95	82.5	86.3
[ 3 -1 6 ]	( 1 3 0 )	( 0 -6 -1 )	5.117	2.607	1.96	37.2	54.4
[ 3 -1 -2 ]	( 1 3 0 )	( 2 4 1 )	5.117	2.575	1.99	33.4	62.0
[ 3 -1 3 ]	( 1 3 0 )	( 2 0 -2 )	5.117	2.542	2.01	81.3	76.1
[ 3 -1 -1 ]	( 1 3 0 )	( 0 -2 2 )	5.117	2.467	2.07	84.3	69.4
[ 3 -1 1 ]	( 1 3 0 )	( 0 2 2 )	5.117	2.467	2.07	68.9	86.3
[ 3 -1 4 ]	( 1 3 0 )	( 3 5 -1 )	5.117	2.349	2.18	28.6	68.0
[ 3 -1 -2 ]	( 1 3 0 )	( -1 1 -2 )	5.117	2.314	2.21	81.7	62.0
[ 3 -1 -1 ]	( 1 3 0 )	( 1 1 2 )	5.117	2.314	2.21	69.0	69.4
[ 3 -1 -4 ]	( 1 3 0 )	( 1 7 -1 )	5.117	2.312	2.21	34.8	49.8
[ 3 -1 5 ]	( 1 3 0 )	( -3 1 2 )	5.117	2.283	2.24	81.0	60.8
[ 3 -1 4 ]	( 1 3 0 )	( 3 1 -2 )	5.117	2.283	2.24	68.4	68.0
[ 3 -1 5 ]	( 1 3 0 )	( 2 -4 -2 )	5.117	2.218	2.31	73.7	60.8
[ 3 -1 1 ]	( 1 3 0 )	( 2 4 -2 )	5.117	2.218	2.31	57.1	86.3
[ 3 -1 4 ]	( 1 3 0 )	( -1 -7 -1 )	5.117	2.194	2.33	26.5	68.0
[ 3 -1 -3 ]	( 1 3 0 )	( -1 3 -2 )	5.117	2.177	2.35	86.1	55.5
[ 3 -1 0 ]	( 1 3 0 )	( 1 3 2 )	5.117	2.177	2.35	57.3	77.6
[ 3 -1 0 ]	( 1 3 0 )	( -2 -6 -1 )	5.117	2.175	2.35	24.9	77.6
[ 3 -1 6 ]	( 1 3 0 )	( -3 3 2 )	5.117	2.151	2.38	87.0	54.4
[ 3 -1 3 ]	( 1 3 0 )	( -3 -3 2 )	5.117	2.151	2.38	56.8	76.1
[ 3 -1 4 ]	( 1 3 0 )	( -1 5 2 )	5.117	2.140	2.39	60.6	68.0
[ 3 -1 -1 ]	( 1 3 0 )	( -1 -5 2 )	5.117	2.140	2.39	59.7	69.4
[ 3 -1 -3 ]	( 1 3 0 )	( 2 0 2 )	5.117	2.054	2.49	70.3	55.5
[ 3 -1 -4 ]	( 1 3 0 )	( -3 -5 -1 )	5.117	2.029	2.52	30.1	49.8
[ 3 -1 5 ]	( 1 3 0 )	( -4 -2 2 )	5.117	1.973	2.59	58.6	60.8
[ 3 -1 -4 ]	( 1 3 0 )	( -1 5 -2 )	5.117	1.963	2.61	75.9	49.8
[ 3 -1 1 ]	( 1 3 0 )	( -1 -5 -2 )	5.117	1.963	2.61	48.0	86.3
[ 3 -1 -3 ]	( 1 3 0 )	( 0 6 -2 )	5.117	1.956	2.62	63.7	55.5
[ 3 -1 3 ]	( 1 3 0 )	( 0 6 2 )	5.117	1.956	2.62	49.5	76.1
[ 3 -1 7 ]	( 1 3 0 )	( -3 5 2 )	5.117	1.944	2.63	76.8	48.9

**Actinolite (130) 285 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 3 -1 2 ]	( 1 3 0 )	( -3 -5 2 )	5.117	1.944	2.63	47.5	84.8
[ 3 -1 6 ]	( 1 3 0 )	( 4 6 -1 )	5.117	1.887	2.71	26.0	54.4
[ 3 -1 -5 ]	( 1 3 0 )	( 2 -4 2 )	5.117	1.871	2.73	87.7	45.0
[ 3 -1 -1 ]	( 1 3 0 )	( 2 4 2 )	5.117	1.871	2.73	49.0	69.4
[ 3 -1 5 ]	( 1 3 0 )	( 1 -7 -2 )	5.117	1.854	2.76	53.3	60.8
[ 3 -1 -2 ]	( 1 3 0 )	( 1 7 -2 )	5.117	1.854	2.76	52.5	62.0
[ 3 -1 2 ]	( 1 3 0 )	( 2 8 1 )	5.117	1.837	2.79	20.4	84.8
[ 3 -1 6 ]	( 1 3 0 )	( -1 -9 -1 )	5.117	1.812	2.82	24.9	54.4
[ 3 -1 -5 ]	( 1 3 0 )	( 3 -1 2 )	5.117	1.781	2.87	72.0	45.0
[ 3 -1 -4 ]	( 1 3 0 )	( -3 -1 -2 )	5.117	1.781	2.87	61.6	49.8
[ 3 -1 -2 ]	( 1 3 0 )	( 3 7 1 )	5.117	1.780	2.88	22.4	62.0
[ 3 -1 2 ]	( 1 3 0 )	( -2 0 3 )	5.117	1.755	2.92	86.7	84.8
[ 3 -1 7 ]	( 1 3 0 )	( 5 1 -2 )	5.117	1.753	2.92	61.4	48.9
[ 9 -3 2 ]	( 1 3 0 )	( -1 -1 3 )	5.117	1.752	2.92	87.6	83.4
[ 9 -3 4 ]	( 1 3 0 )	( -1 1 3 )	5.117	1.752	2.92	83.0	89.3
[ 3 -1 -5 ]	( 1 3 0 )	( 1 -7 2 )	5.117	1.735	2.95	67.9	45.0
[ 3 -1 2 ]	( 1 3 0 )	( 1 7 2 )	5.117	1.735	2.95	41.1	84.8
[ 9 -3 8 ]	( 1 3 0 )	( -2 2 3 )	5.117	1.723	2.97	84.1	78.9
[ 9 -3 4 ]	( 1 3 0 )	( -2 -2 3 )	5.117	1.723	2.97	77.5	89.3
[ 3 -1 1 ]	( 1 3 0 )	( 3 7 -2 )	5.117	1.722	2.97	40.7	86.3
[ 3 -1 -3 ]	( 1 3 0 )	( -3 -3 -2 )	5.117	1.716	2.98	51.9	55.5
[ 3 -1 6 ]	( 1 3 0 )	( 5 3 -2 )	5.117	1.691	3.03	51.7	54.4
[ 3 -1 0 ]	( 1 3 0 )	( -1 -3 3 )	5.117	1.691	3.03	78.6	77.6
[ 3 -1 2 ]	( 1 3 0 )	( -1 3 3 )	5.117	1.691	3.03	74.1	84.8
[ 9 -3 10 ]	( 1 3 0 )	( 3 -1 -3 )	5.117	1.687	3.03	85.9	73.3
[ 9 -3 8 ]	( 1 3 0 )	( -3 -1 3 )	5.117	1.687	3.03	76.8	78.9
[ 3 -1 3 ]	( 1 3 0 )	( 4 6 -2 )	5.117	1.681	3.04	40.8	76.1
[ 9 -3 -2 ]	( 1 3 0 )	( 0 -2 3 )	5.117	1.679	3.05	88.7	72.0
[ 9 -3 2 ]	( 1 3 0 )	( 0 2 3 )	5.117	1.679	3.05	73.2	83.4
[ 3 -1 4 ]	( 1 3 0 )	( -4 -8 1 )	5.117	1.654	3.09	19.7	68.0
[ 9 -3 10 ]	( 1 3 0 )	( -2 4 3 )	5.117	1.637	3.13	75.5	73.3
[ 9 -3 2 ]	( 1 3 0 )	( -2 -4 3 )	5.117	1.637	3.13	69.0	83.4
[ 9 -3 -4 ]	( 1 3 0 )	( 1 -1 3 )	5.117	1.607	3.19	81.8	66.8
[ 9 -3 -2 ]	( 1 3 0 )	( -1 -1 -3 )	5.117	1.607	3.19	73.1	72.0
[ 3 -1 6 ]	( 1 3 0 )	( -1 9 2 )	5.117	1.606	3.19	48.2	54.4
[ 3 -1 -3 ]	( 1 3 0 )	( -1 -9 2 )	5.117	1.606	3.19	47.4	55.5
[ 3 -1 -2 ]	( 1 3 0 )	( 3 5 2 )	5.117	1.605	3.19	43.4	62.0
[ 9 -3 -4 ]	( 1 3 0 )	( 0 -4 3 )	5.117	1.599	3.20	80.1	66.8
[ 9 -3 4 ]	( 1 3 0 )	( 0 4 3 )	5.117	1.599	3.20	64.9	89.3
[ 3 -1 4 ]	( 1 3 0 )	( -4 0 3 )	5.117	1.593	3.21	76.7	68.0
[ 3 -1 5 ]	( 1 3 0 )	( 5 5 -2 )	5.117	1.585	3.23	43.3	60.8
[ 9 -3 -2 ]	( 1 3 0 )	( -1 -5 3 )	5.117	1.584	3.23	70.6	72.0
[ 9 -3 8 ]	( 1 3 0 )	( -1 5 3 )	5.117	1.584	3.23	66.1	78.9
[ 9 -3 14 ]	( 1 3 0 )	( -4 2 3 )	5.117	1.569	3.26	85.3	63.1
[ 9 -3 10 ]	( 1 3 0 )	( 4 2 -3 )	5.117	1.569	3.26	68.1	73.3
[ 3 -1 -2 ]	( 1 3 0 )	( 1 -3 3 )	5.117	1.559	3.28	89.6	62.0
[ 3 -1 0 ]	( 1 3 0 )	( 1 3 3 )	5.117	1.559	3.28	64.7	77.6
[ 3 -1 -5 ]	( 1 3 0 )	( 4 2 2 )	5.117	1.540	3.32	55.3	45.0

**Actinolite (130) 285 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 9 -3 14 ]	( 1 3 0 )	( 3 -5 -3 )	5.117	1.536	3.33	77.3	63.1
[ 9 -3 4 ]	( 1 3 0 )	( 3 5 -3 )	5.117	1.536	3.33	60.4	89.3
[ 3 -1 3 ]	( 1 3 0 )	( -1 -9 -2 )	5.117	1.527	3.35	36.4	76.1
[ 3 -1 1 ]	( 1 3 0 )	( 2 8 2 )	5.117	1.523	3.36	35.2	86.3
[ 3 -1 4 ]	( 1 3 0 )	( 2 -6 -3 )	5.117	1.519	3.37	68.1	68.0
[ 3 -1 0 ]	( 1 3 0 )	( 2 6 -3 )	5.117	1.519	3.37	61.7	77.6
[ 3 -1 0 ]	( 1 3 0 )	( -3 -9 2 )	5.117	1.518	3.37	35.9	77.6
[ 9 -3 16 ]	( 1 3 0 )	( 4 -4 -3 )	5.117	1.503	3.40	86.4	58.6
[ 9 -3 8 ]	( 1 3 0 )	( 4 4 -3 )	5.117	1.503	3.40	60.2	78.9
[ 3 -1 -4 ]	( 1 3 0 )	( -4 -8 -1 )	5.117	1.494	3.42	21.7	49.8
[ 3 -1 -2 ]	( 1 3 0 )	( 2 0 3 )	5.117	1.494	3.43	73.4	62.0
[ 9 -3 -8 ]	( 1 3 0 )	( -1 5 -3 )	5.117	1.474	3.47	81.7	57.5
[ 9 -3 2 ]	( 1 3 0 )	( -1 -5 -3 )	5.117	1.474	3.47	57.2	83.4
[ 9 -3 -8 ]	( 1 3 0 )	( 2 -2 3 )	5.117	1.474	3.47	81.7	57.5
[ 9 -3 -4 ]	( 1 3 0 )	( -2 -2 -3 )	5.117	1.474	3.47	65.3	66.8
[ 3 -1 -1 ]	( 1 3 0 )	( 3 7 2 )	5.117	1.473	3.47	36.5	69.4
[ 9 -3 16 ]	( 1 3 0 )	( -5 1 3 )	5.117	1.467	3.49	76.9	58.6
[ 9 -3 14 ]	( 1 3 0 )	( 5 1 -3 )	5.117	1.467	3.49	68.7	63.1
[ 3 -1 7 ]	( 1 3 0 )	( -6 -4 2 )	5.117	1.458	3.51	46.9	48.9
[ 3 -1 4 ]	( 1 3 0 )	( 5 7 -2 )	5.117	1.457	3.51	36.4	68.0
[ 9 -3 -4 ]	( 1 3 0 )	( 1 7 -3 )	5.117	1.457	3.51	63.9	66.8
[ 9 -3 10 ]	( 1 3 0 )	( 1 -7 -3 )	5.117	1.457	3.51	59.5	73.3
[ 3 -1 6 ]	( 1 3 0 )	( 5 -3 -3 )	5.117	1.431	3.58	85.0	54.4
[ 3 -1 4 ]	( 1 3 0 )	( -5 -3 3 )	5.117	1.431	3.58	60.9	68.0
[ 9 -3 -10 ]	( 1 3 0 )	( 2 -4 3 )	5.117	1.419	3.61	89.6	53.5
[ 9 -3 -2 ]	( 1 3 0 )	( -2 -4 -3 )	5.117	1.419	3.61	57.7	72.0
[ 9 -3 16 ]	( 1 3 0 )	( -3 7 3 )	5.117	1.419	3.61	70.4	58.6
[ 9 -3 2 ]	( 1 3 0 )	( 3 7 -3 )	5.117	1.419	3.61	54.0	83.4
[ 3 -1 6 ]	( 1 3 0 )	( 4 -6 -3 )	5.117	1.410	3.63	79.1	54.4
[ 3 -1 2 ]	( 1 3 0 )	( 4 6 -3 )	5.117	1.410	3.63	53.3	84.8
[ 3 -1 6 ]	( 1 3 0 )	( -5 -9 1 )	5.117	1.407	3.64	19.1	54.4
[ 9 -3 14 ]	( 1 3 0 )	( -2 8 3 )	5.117	1.389	3.68	61.9	63.1
[ 9 -3 -2 ]	( 1 3 0 )	( -2 -8 3 )	5.117	1.389	3.68	55.8	72.0
[ 3 -1 -3 ]	( 1 3 0 )	( 4 6 2 )	5.117	1.389	3.68	39.5	55.5
[ 9 -3 4 ]	( 1 3 0 )	( -1 -7 -3 )	5.117	1.370	3.74	50.9	89.3
[ 9 -3 -8 ]	( 1 3 0 )	( 0 8 -3 )	5.117	1.365	3.75	66.4	57.5
[ 9 -3 8 ]	( 1 3 0 )	( 0 -8 -3 )	5.117	1.365	3.75	52.0	78.9
[ 9 -3 -10 ]	( 1 3 0 )	( 3 -1 3 )	5.117	1.365	3.75	74.1	53.5
[ 9 -3 -8 ]	( 1 3 0 )	( -3 -1 -3 )	5.117	1.365	3.75	66.4	57.5
[ 9 -3 20 ]	( 1 3 0 )	( -5 5 3 )	5.117	1.364	3.75	87.5	50.7
[ 9 -3 10 ]	( 1 3 0 )	( -5 -5 3 )	5.117	1.364	3.75	53.8	73.3
[ 3 -1 0 ]	( 1 3 0 )	( 2 6 3 )	5.117	1.340	3.82	51.0	77.6
[ 3 -1 0 ]	( 1 3 0 )	( -3 -9 -2 )	5.117	1.339	3.82	31.2	77.6
[ 9 -3 20 ]	( 1 3 0 )	( 6 -2 -3 )	5.117	1.333	3.84	77.4	50.7
[ 9 -3 16 ]	( 1 3 0 )	( 6 2 -3 )	5.117	1.333	3.84	62.2	58.6
[ 3 -1 3 ]	( 1 3 0 )	( -5 -9 2 )	5.117	1.327	3.86	31.1	76.1
[ 3 -1 -2 ]	( 1 3 0 )	( 1 9 -3 )	5.117	1.327	3.86	58.4	62.0
[ 3 -1 4 ]	( 1 3 0 )	( 1 -9 -3 )	5.117	1.327	3.86	54.1	68.0



**Actinolite (130) 285 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 6 -2 3 ]	( 1 3 0 )	( 2 0 -4 )	5.117	1.324	3.86	89.5	89.2
[ 6 -2 1 ]	( 1 3 0 )	( 1 1 -4 )	5.117	1.311	3.90	89.8	81.9
[ 3 -1 1 ]	( 1 3 0 )	( -1 1 4 )	5.117	1.311	3.90	82.8	86.3
[ 6 -2 5 ]	( 1 3 0 )	( -3 1 4 )	5.117	1.305	3.92	88.8	80.4
[ 3 -1 2 ]	( 1 3 0 )	( 3 1 -4 )	5.117	1.305	3.92	81.8	84.8
[ 9 -3 20 ]	( 1 3 0 )	( -4 8 3 )	5.117	1.304	3.92	72.8	50.7
[ 9 -3 4 ]	( 1 3 0 )	( -4 -8 3 )	5.117	1.304	3.92	47.6	89.3
[ 9 -3 22 ]	( 1 3 0 )	( 6 -4 -3 )	5.117	1.292	3.96	84.8	47.3
[ 9 -3 14 ]	( 1 3 0 )	( -6 -4 3 )	5.117	1.292	3.96	55.1	63.1
[ 3 -1 -5 ]	( 1 3 0 )	( -5 -5 -2 )	5.117	1.287	3.98	43.4	45.0
[ 3 -1 0 ]	( 1 3 0 )	( 1 3 -4 )	5.117	1.285	3.98	83.4	77.6
[ 6 -2 3 ]	( 1 3 0 )	( 1 -3 -4 )	5.117	1.285	3.98	76.0	89.2
[ 9 -3 -14 ]	( 1 3 0 )	( -3 5 -3 )	5.117	1.281	3.99	89.0	46.5
[ 9 -3 -4 ]	( 1 3 0 )	( 3 5 3 )	5.117	1.281	3.99	52.1	66.8
[ 9 -3 22 ]	( 1 3 0 )	( 5 -7 -3 )	5.117	1.281	4.00	80.8	47.3
[ 9 -3 8 ]	( 1 3 0 )	( 5 7 -3 )	5.117	1.281	4.00	47.6	78.9
[ 3 -1 3 ]	( 1 3 0 )	( -3 3 4 )	5.117	1.279	4.00	84.3	76.1
[ 6 -2 3 ]	( 1 3 0 )	( -3 -3 4 )	5.117	1.279	4.00	75.0	89.2
[ 3 -1 5 ]	( 1 3 0 )	( 6 8 -2 )	5.117	1.274	4.02	33.5	60.8
[ 6 -2 5 ]	( 1 3 0 )	( 2 -4 -4 )	5.117	1.271	4.03	76.8	80.4
[ 6 -2 1 ]	( 1 3 0 )	( 2 4 -4 )	5.117	1.271	4.03	75.8	81.9
[ 6 -2 1 ]	( 1 3 0 )	( 0 -2 -4 )	5.117	1.269	4.03	75.4	81.9
[ 3 -1 -4 ]	( 1 3 0 )	( -1 9 -3 )	5.117	1.260	4.06	69.1	49.8
[ 3 -1 2 ]	( 1 3 0 )	( -1 -9 -3 )	5.117	1.260	4.06	45.8	84.8
[ 6 -2 7 ]	( 1 3 0 )	( 4 -2 -4 )	5.117	1.259	4.07	88.2	72.0
[ 6 -2 5 ]	( 1 3 0 )	( -4 -2 4 )	5.117	1.259	4.07	74.6	80.4
[ 3 -1 -4 ]	( 1 3 0 )	( 4 0 3 )	5.117	1.249	4.10	67.8	49.8
[ 9 -3 -14 ]	( 1 3 0 )	( 2 -8 3 )	5.117	1.248	4.10	76.9	46.5
[ 9 -3 2 ]	( 1 3 0 )	( 2 8 3 )	5.117	1.248	4.10	45.4	83.4
[ 9 -3 -14 ]	( 1 3 0 )	( -4 2 -3 )	5.117	1.238	4.14	75.0	46.5
[ 9 -3 -10 ]	( 1 3 0 )	( 4 2 3 )	5.117	1.238	4.14	60.7	53.5
[ 6 -2 -1 ]	( 1 3 0 )	( -1 -5 4 )	5.117	1.236	4.14	76.9	73.4
[ 3 -1 2 ]	( 1 3 0 )	( -1 5 4 )	5.117	1.236	4.14	69.6	84.8
[ 6 -2 -1 ]	( 1 3 0 )	( 1 1 4 )	5.117	1.227	4.17	75.2	73.4
[ 9 -3 22 ]	( 1 3 0 )	( -7 1 3 )	5.117	1.226	4.17	71.0	47.3
[ 9 -3 20 ]	( 1 3 0 )	( 7 1 -3 )	5.117	1.226	4.17	63.9	50.7
[ 3 -1 -4 ]	( 1 3 0 )	( -5 -7 -2 )	5.117	1.216	4.21	36.9	49.8
[ 9 -3 -2 ]	( 1 3 0 )	( -3 -7 -3 )	5.117	1.211	4.23	46.1	72.0
[ 6 -2 -3 ]	( 1 3 0 )	( 1 -3 4 )	5.117	1.205	4.25	88.5	65.6
[ 3 -1 0 ]	( 1 3 0 )	( -1 -3 -4 )	5.117	1.205	4.25	68.7	77.6
[ 3 -1 6 ]	( 1 3 0 )	( 7 3 -3 )	5.117	1.205	4.25	57.0	54.4
[ 9 -3 -8 ]	( 1 3 0 )	( -4 -4 -3 )	5.117	1.204	4.25	53.9	57.5
[ 3 -1 7 ]	( 1 3 0 )	( 7 7 -2 )	5.117	1.202	4.26	37.0	48.9
[ 6 -2 9 ]	( 1 3 0 )	( -5 3 4 )	5.117	1.192	4.29	87.6	64.3
[ 3 -1 3 ]	( 1 3 0 )	( 5 3 -4 )	5.117	1.192	4.29	68.0	76.1
[ 3 -1 2 ]	( 1 3 0 )	( -5 -9 3 )	5.117	1.190	4.30	42.6	84.8
[ 6 -2 -3 ]	( 1 3 0 )	( 0 6 -4 )	5.117	1.180	4.34	78.2	65.6
[ 6 -2 3 ]	( 1 3 0 )	( 0 6 4 )	5.117	1.180	4.34	63.0	89.2

**Actinolite (130) 285 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -1 -1 ]	( 1 3 0 )	( 1 7 -4 )	5.117	1.173	4.36	71.1	69.4
[ 6 -2 5 ]	( 1 3 0 )	( 1 -7 -4 )	5.117	1.173	4.36	63.9	80.4
[ 6 -2 9 ]	( 1 3 0 )	( -4 6 4 )	5.117	1.172	4.37	79.2	64.3
[ 6 -2 3 ]	( 1 3 0 )	( -4 -6 4 )	5.117	1.172	4.37	62.2	89.2
[ 3 -1 4 ]	( 1 3 0 )	( -3 7 4 )	5.117	1.169	4.38	72.1	68.0
[ 6 -2 1 ]	( 1 3 0 )	( -3 -7 4 )	5.117	1.169	4.38	63.0	81.9
[ 6 -2 -3 ]	( 1 3 0 )	( 2 0 4 )	5.117	1.166	4.39	75.3	65.6
[ 3 -1 -2 ]	( 1 3 0 )	( 1 -5 4 )	5.117	1.165	4.39	85.2	62.0
[ 6 -2 1 ]	( 1 3 0 )	( 1 5 4 )	5.117	1.165	4.39	62.7	81.9
[ 9 -3 16 ]	( 1 3 0 )	( -7 -5 3 )	5.117	1.164	4.40	50.6	58.6
[ 9 -3 10 ]	( 1 3 0 )	( 6 8 -3 )	5.117	1.159	4.42	43.2	73.3
[ 3 -1 -2 ]	( 1 3 0 )	( 4 6 3 )	5.117	1.155	4.43	47.8	62.0
[ 3 -1 5 ]	( 1 3 0 )	( 5 -5 -4 )	5.117	1.153	4.44	86.2	60.8
[ 6 -2 5 ]	( 1 3 0 )	( 5 5 -4 )	5.117	1.153	4.44	62.0	80.4
[ 6 -2 9 ]	( 1 3 0 )	( 6 0 -4 )	5.117	1.151	4.45	74.6	64.3
[ 6 -2 7 ]	( 1 3 0 )	( 2 -8 -4 )	5.117	1.144	4.47	65.3	72.0
[ 6 -2 -1 ]	( 1 3 0 )	( 2 8 -4 )	5.117	1.144	4.47	64.3	73.4
[ 9 -3 -14 ]	( 1 3 0 )	( -5 -1 -3 )	5.117	1.137	4.50	62.6	46.5
[ 3 -1 -3 ]	( 1 3 0 )	( 5 9 2 )	5.117	1.137	4.50	31.4	55.5
[ 6 -2 -5 ]	( 1 3 0 )	( 2 -4 4 )	5.117	1.130	4.53	88.0	58.6
[ 6 -2 -1 ]	( 1 3 0 )	( -2 -4 -4 )	5.117	1.130	4.53	62.9	73.4
[ 3 -1 6 ]	( 1 3 0 )	( 7 9 -2 )	5.117	1.126	4.55	31.5	54.4
[ 3 -1 -4 ]	( 1 3 0 )	( -5 -3 -3 )	5.117	1.120	4.57	56.1	49.8
[ 9 -3 22 ]	( 1 3 0 )	( 8 2 -3 )	5.117	1.113	4.60	59.1	47.3
[ 6 -2 -5 ]	( 1 3 0 )	( 1 -7 4 )	5.117	1.111	4.60	79.5	58.6
[ 3 -1 1 ]	( 1 3 0 )	( 1 7 4 )	5.117	1.111	4.60	57.3	86.3
[ 9 -3 14 ]	( 1 3 0 )	( -7 -7 3 )	5.117	1.111	4.61	44.9	63.1
[ 6 -2 -3 ]	( 1 3 0 )	( 1 9 -4 )	5.117	1.102	4.65	66.0	65.6
[ 3 -1 3 ]	( 1 3 0 )	( 1 -9 -4 )	5.117	1.102	4.65	59.0	76.1
[ 6 -2 11 ]	( 1 3 0 )	( -5 7 4 )	5.117	1.101	4.65	80.4	57.5
[ 3 -1 2 ]	( 1 3 0 )	( -5 -7 4 )	5.117	1.101	4.65	56.6	84.8
[ 6 -2 9 ]	( 1 3 0 )	( -3 9 4 )	5.117	1.098	4.66	67.0	64.3
[ 3 -1 0 ]	( 1 3 0 )	( -3 -9 4 )	5.117	1.098	4.66	58.1	77.6
[ 6 -2 -5 ]	( 1 3 0 )	( 3 -1 4 )	5.117	1.095	4.67	75.6	58.6
[ 3 -1 -2 ]	( 1 3 0 )	( -3 -1 -4 )	5.117	1.095	4.67	69.5	62.0
[ 9 -3 -4 ]	( 1 3 0 )	( 4 8 3 )	5.117	1.095	4.68	42.4	66.8
[ 9 -3 20 ]	( 1 3 0 )	( -8 -4 3 )	5.117	1.089	4.70	52.9	50.7
[ 6 -2 -3 ]	( 1 3 0 )	( 3 3 4 )	5.117	1.080	4.74	63.6	65.6
[ 6 -2 11 ]	( 1 3 0 )	( -7 1 4 )	5.117	1.079	4.74	75.0	57.5
[ 3 -1 5 ]	( 1 3 0 )	( 7 1 -4 )	5.117	1.079	4.74	69.0	60.8
[ 3 -1 -5 ]	( 1 3 0 )	( -6 -8 -2 )	5.117	1.077	4.75	35.1	45.0
[ 3 -1 6 ]	( 1 3 0 )	( 7 -3 -4 )	5.117	1.064	4.81	81.0	54.4
[ 6 -2 9 ]	( 1 3 0 )	( -7 -3 4 )	5.117	1.064	4.81	63.1	64.3
[ 15 -5 6 ]	( 1 3 0 )	( -2 0 5 )	5.117	1.059	4.83	88.8	88.1
[ 3 -1 2 ]	( 1 3 0 )	( 3 -1 -5 )	5.117	1.055	4.85	89.4	84.8
[ 15 -5 8 ]	( 1 3 0 )	( 3 1 -5 )	5.117	1.055	4.85	85.0	88.3
[ 3 -1 6 ]	( 1 3 0 )	( -8 -6 3 )	5.117	1.052	4.87	47.1	54.4
[ 15 -5 4 ]	( 1 3 0 )	( 2 2 -5 )	5.117	1.051	4.87	85.6	84.5

**Actinolite (130) 285 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 15 -5 8 ]	( 1 3 0 )	( 2 -2 -5 )	5.117	1.051	4.87	83.2	88.3
[ 3 -1 -3 ]	( 1 3 0 )	( -1 9 -4 )	5.117	1.050	4.87	74.3	55.5
[ 6 -2 3 ]	( 1 3 0 )	( -1 -9 -4 )	5.117	1.050	4.87	52.5	89.2
[ 6 -2 -7 ]	( 1 3 0 )	( 3 -5 4 )	5.117	1.050	4.87	87.6	52.5
[ 3 -1 -1 ]	( 1 3 0 )	( 3 5 4 )	5.117	1.050	4.87	57.9	69.4
[ 3 -1 4 ]	( 1 3 0 )	( -7 -9 3 )	5.117	1.050	4.87	39.9	68.0
[ 15 -5 2 ]	( 1 3 0 )	( -1 -1 5 )	5.117	1.046	4.89	88.2	81.0
[ 15 -5 4 ]	( 1 3 0 )	( 1 -1 -5 )	5.117	1.046	4.89	82.7	84.5
[ 9 -3 -8 ]	( 1 3 0 )	( 5 7 3 )	5.117	1.043	4.90	44.5	57.5
[ 15 -5 12 ]	( 1 3 0 )	( -4 0 5 )	5.117	1.042	4.91	84.5	81.2
[ 3 -1 6 ]	( 1 3 0 )	( -5 9 4 )	5.117	1.042	4.91	75.3	54.4
[ 6 -2 3 ]	( 1 3 0 )	( -5 -9 4 )	5.117	1.042	4.91	51.9	89.2
[ 15 -5 12 ]	( 1 3 0 )	( -3 3 5 )	5.117	1.041	4.92	83.8	81.2
[ 15 -5 6 ]	( 1 3 0 )	( -3 -3 5 )	5.117	1.041	4.92	79.5	88.1
[ 6 -2 -7 ]	( 1 3 0 )	( -2 8 -4 )	5.117	1.038	4.93	80.8	52.5
[ 6 -2 1 ]	( 1 3 0 )	( -2 -8 -4 )	5.117	1.038	4.93	52.3	81.9
[ 6 -2 13 ]	( 1 3 0 )	( 7 -5 -4 )	5.117	1.036	4.94	86.8	51.6
[ 3 -1 4 ]	( 1 3 0 )	( -7 -5 4 )	5.117	1.036	4.94	57.5	68.0
[ 15 -5 14 ]	( 1 3 0 )	( -4 2 5 )	5.117	1.035	4.94	89.9	77.8
[ 3 -1 2 ]	( 1 3 0 )	( -4 -2 5 )	5.117	1.035	4.94	79.0	84.8
[ 3 -1 0 ]	( 1 3 0 )	( 1 3 -5 )	5.117	1.032	4.96	86.2	77.6
[ 15 -5 6 ]	( 1 3 0 )	( 1 -3 -5 )	5.117	1.032	4.96	77.2	88.1
[ 15 -5 2 ]	( 1 3 0 )	( 2 4 -5 )	5.117	1.031	4.96	80.1	81.0
[ 3 -1 2 ]	( 1 3 0 )	( 2 -4 -5 )	5.117	1.031	4.96	77.8	84.8
[ 6 -2 5 ]	( 1 3 0 )	( 6 8 -4 )	5.117	1.026	4.99	51.8	80.4
[ 6 -2 -7 ]	( 1 3 0 )	( 4 -2 4 )	5.117	1.020	5.02	76.1	52.5
[ 6 -2 -5 ]	( 1 3 0 )	( -4 -2 -4 )	5.117	1.020	5.02	64.5	58.6
[ 15 -5 -2 ]	( 1 3 0 )	( 0 -2 5 )	5.117	1.019	5.02	87.7	74.2
[ 15 -5 2 ]	( 1 3 0 )	( 0 -2 -5 )	5.117	1.019	5.02	76.8	81.0
[ 15 -5 16 ]	( 1 3 0 )	( -4 4 5 )	5.117	1.016	5.04	84.5	74.4
[ 15 -5 8 ]	( 1 3 0 )	( -4 -4 5 )	5.117	1.016	5.04	73.6	88.3
[ 9 -3 -14 ]	( 1 3 0 )	( 6 4 3 )	5.117	1.016	5.04	52.4	46.5
[ 15 -5 16 ]	( 1 3 0 )	( -5 1 5 )	5.117	1.015	5.04	84.1	74.4
[ 15 -5 14 ]	( 1 3 0 )	( 5 1 -5 )	5.117	1.015	5.04	78.6	77.8
[ 15 -5 14 ]	( 1 3 0 )	( 3 -5 -5 )	5.117	1.015	5.04	78.5	77.8
[ 15 -5 4 ]	( 1 3 0 )	( 3 5 -5 )	5.117	1.015	5.04	74.2	84.5
[ 3 -1 -4 ]	( 1 3 0 )	( -3 7 -4 )	5.117	1.011	5.06	87.0	49.8
[ 6 -2 -1 ]	( 1 3 0 )	( -3 -7 -4 )	5.117	1.011	5.06	52.8	73.4
[ 15 -5 -2 ]	( 1 3 0 )	( 1 5 -5 )	5.117	1.007	5.08	80.9	74.2
[ 15 -5 8 ]	( 1 3 0 )	( 1 -5 -5 )	5.117	1.007	5.08	71.9	88.3
[ 9 -3 16 ]	( 1 3 0 )	( 8 8 -3 )	5.117	1.006	5.09	41.9	58.6
[ 6 -2 13 ]	( 1 3 0 )	( -8 2 4 )	5.117	1.004	5.09	75.5	51.6
[ 6 -2 11 ]	( 1 3 0 )	( 8 2 -4 )	5.117	1.004	5.09	64.1	57.5
[ 15 -5 18 ]	( 1 3 0 )	( -5 3 5 )	5.117	1.003	5.10	89.5	71.2
[ 15 -5 12 ]	( 1 3 0 )	( 5 3 -5 )	5.117	1.003	5.10	73.2	81.2

**Actinolite (200) 182 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 0 1 0 ]	( 2 0 0 )	( 0 0 1 )	4.783	5.126	0.93	75.4	90.0
[ 0 -1 1 ]	( 2 0 0 )	( -1 1 1 )	4.783	4.895	0.98	74.3	73.7
[ 0 -1 -2 ]	( 2 0 0 )	( 0 -2 1 )	4.783	4.464	1.07	77.3	59.8
[ 0 1 0 ]	( 2 0 0 )	( 2 0 -1 )	4.783	4.042	1.18	49.7	90.0
[ 0 -1 -1 ]	( 2 0 0 )	( 1 -1 1 )	4.783	4.006	1.19	52.0	73.7
[ 0 1 3 ]	( 2 0 0 )	( 1 3 -1 )	4.783	3.894	1.23	77.6	48.8
[ 0 -1 -2 ]	( 2 0 0 )	( -2 -2 1 )	4.783	3.693	1.30	53.8	59.8
[ 0 -1 3 ]	( 2 0 0 )	( 1 3 1 )	4.783	3.399	1.41	58.5	48.8
[ 0 1 0 ]	( 2 0 0 )	( 2 0 1 )	4.783	3.126	1.53	36.2	90.0
[ 0 -1 1 ]	( 2 0 0 )	( -3 1 1 )	4.783	3.035	1.58	36.6	73.7
[ 0 -1 -2 ]	( 2 0 0 )	( 2 -2 1 )	4.783	2.956	1.62	40.2	59.8
[ 0 1 -3 ]	( 2 0 0 )	( 3 -3 -1 )	4.783	2.744	1.74	43.5	48.8
[ 0 2 1 ]	( 2 0 0 )	( 1 1 -2 )	4.783	2.620	1.83	89.1	81.7
[ 0 -1 1 ]	( 2 0 0 )	( 0 2 2 )	4.783	2.467	1.94	76.0	73.7
[ 0 1 -1 ]	( 2 0 0 )	( -3 -1 -1 )	4.783	2.423	1.97	28.5	73.7
[ 0 1 0 ]	( 2 0 0 )	( 4 0 -1 )	4.783	2.413	1.98	27.1	90.0
[ 0 -1 2 ]	( 2 0 0 )	( -4 2 1 )	4.783	2.332	2.05	30.6	59.8
[ 0 -2 1 ]	( 2 0 0 )	( 1 1 2 )	4.783	2.314	2.07	62.0	81.7
[ 0 2 1 ]	( 2 0 0 )	( 3 1 -2 )	4.783	2.283	2.10	60.6	81.7
[ 0 -1 3 ]	( 2 0 0 )	( 3 3 1 )	4.783	2.267	2.11	34.7	48.8
[ 0 1 2 ]	( 2 0 0 )	( 2 4 -2 )	4.783	2.218	2.16	75.8	59.8
[ 0 2 -3 ]	( 2 0 0 )	( -1 -3 -2 )	4.783	2.177	2.20	63.8	66.4
[ 0 2 3 ]	( 2 0 0 )	( 3 3 -2 )	4.783	2.151	2.22	62.4	66.4
[ 0 -2 5 ]	( 2 0 0 )	( -1 5 2 )	4.783	2.140	2.23	89.3	53.9
[ 0 1 0 ]	( 2 0 0 )	( 2 0 2 )	4.783	2.054	2.33	50.8	90.0
[ 0 -2 5 ]	( 2 0 0 )	( 1 5 2 )	4.783	1.963	2.44	66.5	53.9
[ 0 1 3 ]	( 2 0 0 )	( 0 6 -2 )	4.783	1.956	2.44	78.9	48.8
[ 0 1 1 ]	( 2 0 0 )	( 5 1 -1 )	4.783	1.951	2.45	22.6	73.7
[ 0 2 5 ]	( 2 0 0 )	( 3 5 -2 )	4.783	1.944	2.46	65.3	53.9
[ 0 -1 2 ]	( 2 0 0 )	( 4 2 1 )	4.783	1.938	2.47	25.1	59.8
[ 0 1 -2 ]	( 2 0 0 )	( -2 -4 -2 )	4.783	1.871	2.56	54.9	59.8
[ 0 1 3 ]	( 2 0 0 )	( 5 3 -1 )	4.783	1.866	2.56	27.9	48.8
[ 0 2 -1 ]	( 2 0 0 )	( -3 -1 -2 )	4.783	1.781	2.69	42.8	81.7
[ 0 1 0 ]	( 2 0 0 )	( 2 0 -3 )	4.783	1.755	2.72	83.8	90.0
[ 0 -2 1 ]	( 2 0 0 )	( -5 1 2 )	4.783	1.753	2.73	42.0	81.7
[ 0 -3 -1 ]	( 2 0 0 )	( -1 -1 3 )	4.783	1.752	2.73	85.7	84.4
[ 0 3 2 ]	( 2 0 0 )	( 2 2 -3 )	4.783	1.723	2.78	83.9	79.0
[ 0 2 -3 ]	( 2 0 0 )	( -3 -3 -2 )	4.783	1.716	2.79	45.0	66.4
[ 0 2 -3 ]	( 2 0 0 )	( 5 -3 -2 )	4.783	1.691	2.83	44.2	66.4
[ 0 1 -1 ]	( 2 0 0 )	( 1 -3 -3 )	4.783	1.691	2.83	85.8	73.7
[ 0 3 -1 ]	( 2 0 0 )	( 3 -1 -3 )	4.783	1.687	2.84	73.7	84.4
[ 0 1 -3 ]	( 2 0 0 )	( 4 -6 -2 )	4.783	1.681	2.85	57.5	48.8
[ 0 -3 2 ]	( 2 0 0 )	( 0 2 3 )	4.783	1.679	2.85	75.6	79.0
[ 0 1 -1 ]	( 2 0 0 )	( -5 -1 -1 )	4.783	1.654	2.89	19.0	73.7
[ 0 1 0 ]	( 2 0 0 )	( 6 0 -1 )	4.783	1.645	2.91	18.1	90.0
[ 0 -3 4 ]	( 2 0 0 )	( -2 4 3 )	4.783	1.637	2.92	84.2	68.8
[ 0 1 2 ]	( 2 0 0 )	( 6 2 -1 )	4.783	1.618	2.96	20.7	59.8
[ 0 3 -1 ]	( 2 0 0 )	( -1 -1 -3 )	4.783	1.607	2.98	66.1	84.4

**Actinolite (200) 182 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 0 -2 -5 ]	( 2 0 0 )	( 3 -5 2 )	4.783	1.605	2.98	48.6	53.9
[ 0 -1 3 ]	( 2 0 0 )	( 5 3 1 )	4.783	1.601	2.99	23.7	48.8
[ 0 3 -4 ]	( 2 0 0 )	( 0 -4 -3 )	4.783	1.599	2.99	76.3	68.8
[ 0 1 0 ]	( 2 0 0 )	( 4 0 -3 )	4.783	1.593	3.00	64.5	90.0
[ 0 -2 5 ]	( 2 0 0 )	( -5 5 2 )	4.783	1.585	3.02	47.8	53.9
[ 0 -3 5 ]	( 2 0 0 )	( -1 5 3 )	4.783	1.584	3.02	86.1	64.1
[ 0 3 2 ]	( 2 0 0 )	( 4 2 -3 )	4.783	1.569	3.05	64.9	79.0
[ 0 1 1 ]	( 2 0 0 )	( -1 3 -3 )	4.783	1.559	3.07	66.9	73.7
[ 0 -1 1 ]	( 2 0 0 )	( 4 2 2 )	4.783	1.540	3.11	37.3	73.7
[ 0 1 0 ]	( 2 0 0 )	( 6 0 -2 )	4.783	1.539	3.11	35.5	90.0
[ 0 3 -5 ]	( 2 0 0 )	( 3 -5 -3 )	4.783	1.536	3.11	75.2	64.1
[ 0 1 2 ]	( 2 0 0 )	( 2 6 -3 )	4.783	1.519	3.15	84.6	59.8
[ 0 3 4 ]	( 2 0 0 )	( 4 4 -3 )	4.783	1.503	3.18	66.0	68.8
[ 0 -3 5 ]	( 2 0 0 )	( 1 5 3 )	4.783	1.474	3.24	68.2	64.1
[ 0 3 -2 ]	( 2 0 0 )	( -2 -2 -3 )	4.783	1.474	3.24	58.3	79.0
[ 0 3 1 ]	( 2 0 0 )	( 5 1 -3 )	4.783	1.467	3.26	56.6	84.5
[ 0 -1 -2 ]	( 2 0 0 )	( -6 -4 2 )	4.783	1.458	3.28	39.6	59.8
[ 0 -3 7 ]	( 2 0 0 )	( -1 7 3 )	4.783	1.457	3.28	86.4	55.8
[ 0 -1 -1 ]	( 2 0 0 )	( -5 -3 3 )	4.783	1.431	3.34	57.6	73.7
[ 0 1 0 ]	( 2 0 0 )	( 6 0 1 )	4.783	1.424	3.36	15.6	90.0
[ 0 3 4 ]	( 2 0 0 )	( -2 4 -3 )	4.783	1.419	3.37	59.6	68.8
[ 0 3 7 ]	( 2 0 0 )	( 3 7 -3 )	4.783	1.419	3.37	76.4	55.8
[ 0 1 -2 ]	( 2 0 0 )	( 4 -6 -3 )	4.783	1.410	3.39	67.6	59.8
[ 0 -1 -1 ]	( 2 0 0 )	( -7 -1 1 )	4.783	1.408	3.40	16.1	73.7
[ 0 -1 2 ]	( 2 0 0 )	( 6 2 1 )	4.783	1.407	3.40	17.9	59.8
[ 0 -3 -8 ]	( 2 0 0 )	( -2 -8 3 )	4.783	1.389	3.44	85.1	52.1
[ 0 -1 -3 ]	( 2 0 0 )	( 4 -6 2 )	4.783	1.389	3.44	44.2	48.8
[ 0 1 3 ]	( 2 0 0 )	( 7 3 -1 )	4.783	1.375	3.48	20.2	48.8
[ 0 3 -7 ]	( 2 0 0 )	( -1 -7 -3 )	4.783	1.370	3.49	69.8	55.8
[ 0 -3 8 ]	( 2 0 0 )	( 0 8 3 )	4.783	1.365	3.50	78.4	52.1
[ 0 3 -1 ]	( 2 0 0 )	( -3 -1 -3 )	4.783	1.365	3.50	51.0	84.4
[ 0 3 5 ]	( 2 0 0 )	( 5 5 -3 )	4.783	1.364	3.51	59.2	64.1
[ 0 2 1 ]	( 2 0 0 )	( 7 1 -2 )	4.783	1.352	3.54	31.1	81.7
[ 0 -2 -3 ]	( 2 0 0 )	( 5 -3 2 )	4.783	1.342	3.57	33.6	66.4
[ 0 -1 2 ]	( 2 0 0 )	( 2 6 3 )	4.783	1.340	3.57	61.4	59.8
[ 0 3 2 ]	( 2 0 0 )	( 6 2 -3 )	4.783	1.333	3.59	50.3	79.0
[ 0 1 3 ]	( 2 0 0 )	( 1 9 -3 )	4.783	1.327	3.60	86.7	48.8
[ 0 1 0 ]	( 2 0 0 )	( 2 0 -4 )	4.783	1.324	3.61	89.1	90.0
[ 0 2 -3 ]	( 2 0 0 )	( 7 -3 -2 )	4.783	1.323	3.61	33.1	66.4
[ 0 -4 1 ]	( 2 0 0 )	( -1 1 4 )	4.783	1.311	3.65	83.0	85.8
[ 0 4 1 ]	( 2 0 0 )	( 3 1 -4 )	4.783	1.305	3.66	81.2	85.8
[ 0 3 8 ]	( 2 0 0 )	( 4 8 -3 )	4.783	1.304	3.67	69.3	52.1
[ 0 3 4 ]	( 2 0 0 )	( 6 4 -3 )	4.783	1.292	3.70	51.7	68.8
[ 0 2 5 ]	( 2 0 0 )	( -5 5 -2 )	4.783	1.287	3.72	37.0	53.9
[ 0 -4 3 ]	( 2 0 0 )	( -1 3 4 )	4.783	1.285	3.72	83.2	77.7
[ 0 3 5 ]	( 2 0 0 )	( -3 5 -3 )	4.783	1.281	3.73	53.8	64.1
[ 0 3 -7 ]	( 2 0 0 )	( 5 -7 -3 )	4.783	1.281	3.74	61.3	55.8
[ 0 4 3 ]	( 2 0 0 )	( 3 3 -4 )	4.783	1.279	3.74	81.4	77.7

**Actinolite (200) 182 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 0 1 1 ]	( 2 0 0 )	( 2 4 -4 )	4.783	1.271	3.76	89.1	73.7
[ 0 -2 1 ]	( 2 0 0 )	( 0 2 4 )	4.783	1.269	3.77	75.5	81.7
[ 0 1 3 ]	( 2 0 0 )	( -1 9 -3 )	4.783	1.260	3.80	71.5	48.8
[ 0 2 1 ]	( 2 0 0 )	( 4 2 -4 )	4.783	1.259	3.80	73.8	81.7
[ 0 3 8 ]	( 2 0 0 )	( -2 8 -3 )	4.783	1.248	3.83	63.6	52.1
[ 0 -1 -1 ]	( 2 0 0 )	( 7 -1 1 )	4.783	1.242	3.85	14.1	73.7
[ 0 -3 2 ]	( 2 0 0 )	( 4 2 3 )	4.783	1.238	3.87	45.6	79.0
[ 0 4 -5 ]	( 2 0 0 )	( 1 -5 -4 )	4.783	1.236	3.87	83.4	70.0
[ 0 1 0 ]	( 2 0 0 )	( 8 0 -1 )	4.783	1.236	3.87	13.5	90.0
[ 0 3 1 ]	( 2 0 0 )	( 7 1 -3 )	4.783	1.226	3.90	44.3	84.5
[ 0 -1 -2 ]	( 2 0 0 )	( -8 -2 1 )	4.783	1.224	3.91	15.5	59.8
[ 0 1 3 ]	( 2 0 0 )	( -7 3 -1 )	4.783	1.219	3.92	17.8	48.8
[ 0 3 -7 ]	( 2 0 0 )	( -3 -7 -3 )	4.783	1.211	3.95	56.0	55.8
[ 0 4 3 ]	( 2 0 0 )	( -1 3 -4 )	4.783	1.205	3.97	68.7	77.7
[ 0 1 -1 ]	( 2 0 0 )	( 7 -3 -3 )	4.783	1.205	3.97	45.3	73.7
[ 0 -3 4 ]	( 2 0 0 )	( 4 4 3 )	4.783	1.204	3.97	47.0	68.8
[ 0 -1 -1 ]	( 2 0 0 )	( -8 -2 2 )	4.783	1.196	4.00	28.1	73.7
[ 0 4 3 ]	( 2 0 0 )	( 5 3 -4 )	4.783	1.192	4.01	67.1	77.7
[ 0 -1 3 ]	( 2 0 0 )	( -5 9 3 )	4.783	1.190	4.02	63.5	48.8
[ 0 -1 2 ]	( 2 0 0 )	( 6 4 2 )	4.783	1.181	4.05	31.1	59.8
[ 0 2 -3 ]	( 2 0 0 )	( 0 -6 -4 )	4.783	1.180	4.05	76.6	66.4
[ 0 -4 7 ]	( 2 0 0 )	( -1 7 4 )	4.783	1.173	4.08	83.8	63.0
[ 0 -2 -3 ]	( 2 0 0 )	( -4 -6 4 )	4.783	1.172	4.08	75.0	66.4
[ 0 4 7 ]	( 2 0 0 )	( 3 7 -4 )	4.783	1.169	4.09	82.2	63.0
[ 0 -1 2 ]	( 2 0 0 )	( -8 4 2 )	4.783	1.166	4.10	30.6	59.8
[ 0 -4 -5 ]	( 2 0 0 )	( 1 -5 4 )	4.783	1.165	4.11	69.4	70.0
[ 0 3 5 ]	( 2 0 0 )	( 7 5 -3 )	4.783	1.164	4.11	47.1	64.1
[ 0 -3 -8 ]	( 2 0 0 )	( -6 -8 3 )	4.783	1.159	4.13	56.2	52.1
[ 0 1 -2 ]	( 2 0 0 )	( -4 -6 -3 )	4.783	1.155	4.14	49.2	59.8
[ 0 4 5 ]	( 2 0 0 )	( 5 5 -4 )	4.783	1.153	4.15	67.9	70.0
[ 0 1 0 ]	( 2 0 0 )	( 6 0 -4 )	4.783	1.151	4.16	60.3	90.0
[ 0 -1 2 ]	( 2 0 0 )	( -2 8 4 )	4.783	1.144	4.18	89.2	59.8
[ 0 -3 1 ]	( 2 0 0 )	( 5 1 3 )	4.783	1.137	4.21	40.3	84.5
[ 0 -1 3 ]	( 2 0 0 )	( -8 6 2 )	4.783	1.121	4.27	34.2	48.8
[ 0 -1 1 ]	( 2 0 0 )	( 5 3 3 )	4.783	1.120	4.27	41.4	73.7
[ 0 -3 -2 ]	( 2 0 0 )	( -8 -2 3 )	4.783	1.113	4.30	40.0	79.0
[ 0 -4 7 ]	( 2 0 0 )	( 1 7 4 )	4.783	1.111	4.30	70.4	63.0
[ 0 -3 -7 ]	( 2 0 0 )	( -7 -7 3 )	4.783	1.111	4.31	49.5	55.8
[ 0 4 9 ]	( 2 0 0 )	( 1 9 -4 )	4.783	1.102	4.34	84.2	56.7
[ 0 4 -7 ]	( 2 0 0 )	( 5 -7 -4 )	4.783	1.101	4.34	69.0	63.0
[ 0 4 9 ]	( 2 0 0 )	( 3 9 -4 )	4.783	1.098	4.36	82.6	56.7
[ 0 1 -2 ]	( 2 0 0 )	( -8 -2 -1 )	4.783	1.096	4.36	13.9	59.8
[ 0 1 1 ]	( 2 0 0 )	( 9 1 -1 )	4.783	1.095	4.37	12.4	73.7
[ 0 4 -1 ]	( 2 0 0 )	( -3 -1 -4 )	4.783	1.095	4.37	56.0	85.8
[ 0 -3 8 ]	( 2 0 0 )	( 4 8 3 )	4.783	1.095	4.37	51.7	52.1
[ 0 2 -1 ]	( 2 0 0 )	( -7 -1 -2 )	4.783	1.095	4.37	24.7	81.7
[ 0 3 4 ]	( 2 0 0 )	( 8 4 -3 )	4.783	1.089	4.39	41.4	68.8
[ 0 -2 -1 ]	( 2 0 0 )	( -9 -1 2 )	4.783	1.081	4.42	24.4	81.7



**Actinolite (200) 182 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 0 1 3 ]	( 2 0 0 )	( 9 3 -1 )	4.783	1.080	4.43	15.7	48.8
[ 0 4 -3 ]	( 2 0 0 )	( -3 -3 -4 )	4.783	1.080	4.43	56.6	77.7
[ 0 -2 3 ]	( 2 0 0 )	( 7 3 2 )	4.783	1.079	4.43	26.4	66.4
[ 0 -4 -1 ]	( 2 0 0 )	( -7 -1 4 )	4.783	1.079	4.43	54.8	85.8
[ 0 -2 -3 ]	( 2 0 0 )	( -9 -3 2 )	4.783	1.066	4.49	26.1	66.4
[ 0 4 3 ]	( 2 0 0 )	( 7 3 -4 )	4.783	1.064	4.50	55.3	77.7
[ 0 -5 1 ]	( 2 0 0 )	( -3 1 5 )	4.783	1.055	4.53	85.9	86.7
[ 0 1 -2 ]	( 2 0 0 )	( 8 -6 -3 )	4.783	1.052	4.55	43.6	59.8
[ 0 -5 2 ]	( 2 0 0 )	( -2 2 5 )	4.783	1.051	4.55	87.8	83.3
[ 0 4 -9 ]	( 2 0 0 )	( -1 -9 -4 )	4.783	1.050	4.55	71.5	56.7
[ 0 -4 5 ]	( 2 0 0 )	( 3 5 4 )	4.783	1.050	4.55	57.6	70.0
[ 0 -1 3 ]	( 2 0 0 )	( -7 9 3 )	4.783	1.050	4.56	52.2	48.8
[ 0 -2 5 ]	( 2 0 0 )	( 7 5 2 )	4.783	1.050	4.56	29.4	53.9
[ 0 5 -1 ]	( 2 0 0 )	( 1 -1 -5 )	4.783	1.046	4.57	81.5	86.7
[ 0 -3 7 ]	( 2 0 0 )	( 5 7 3 )	4.783	1.043	4.58	45.6	55.8
[ 0 4 9 ]	( 2 0 0 )	( 5 9 -4 )	4.783	1.042	4.59	70.2	56.7
[ 0 -5 -3 ]	( 2 0 0 )	( -3 -3 5 )	4.783	1.041	4.59	86.0	80.1
[ 0 2 5 ]	( 2 0 0 )	( 9 5 -2 )	4.783	1.038	4.61	29.0	53.9
[ 0 1 -2 ]	( 2 0 0 )	( -2 -8 -4 )	4.783	1.038	4.61	65.1	59.8
[ 0 4 5 ]	( 2 0 0 )	( 7 5 -4 )	4.783	1.036	4.62	56.4	70.0
[ 0 -5 -2 ]	( 2 0 0 )	( -4 -2 5 )	4.783	1.035	4.62	79.7	83.3
[ 0 -3 2 ]	( 2 0 0 )	( 6 2 3 )	4.783	1.035	4.62	36.7	79.0
[ 0 5 -3 ]	( 2 0 0 )	( 1 -3 -5 )	4.783	1.032	4.63	81.6	80.1
[ 0 -5 4 ]	( 2 0 0 )	( -2 4 5 )	4.783	1.031	4.64	87.8	76.9
[ 0 -1 2 ]	( 2 0 0 )	( -6 8 4 )	4.783	1.026	4.66	63.8	59.8
[ 0 3 1 ]	( 2 0 0 )	( 9 1 -3 )	4.783	1.024	4.67	35.7	84.5
[ 0 2 -1 ]	( 2 0 0 )	( -4 -2 -4 )	4.783	1.020	4.69	51.1	81.7
[ 0 -5 2 ]	( 2 0 0 )	( 0 2 5 )	4.783	1.019	4.70	75.5	83.3
[ 0 -5 -4 ]	( 2 0 0 )	( -4 -4 5 )	4.783	1.016	4.71	79.9	76.9
[ 0 -3 4 ]	( 2 0 0 )	( 6 4 3 )	4.783	1.016	4.71	38.1	68.8
[ 0 -5 -1 ]	( 2 0 0 )	( -5 -1 5 )	4.783	1.015	4.71	73.7	86.7
[ 0 1 1 ]	( 2 0 0 )	( 3 5 -5 )	4.783	1.015	4.71	86.1	73.7
[ 0 -1 -1 ]	( 2 0 0 )	( -9 -3 3 )	4.783	1.012	4.73	36.6	73.7
[ 0 -4 -7 ]	( 2 0 0 )	( 3 -7 4 )	4.783	1.011	4.73	58.9	63.0
[ 0 -1 1 ]	( 2 0 0 )	( -1 5 5 )	4.783	1.007	4.75	81.8	73.7
[ 0 3 8 ]	( 2 0 0 )	( 8 8 -3 )	4.783	1.006	4.76	46.2	52.1
[ 0 -2 -1 ]	( 2 0 0 )	( -8 -2 4 )	4.783	1.004	4.76	50.0	81.7
[ 0 5 3 ]	( 2 0 0 )	( 5 3 -5 )	4.783	1.003	4.77	73.9	80.1

**Actinolite (150) 279 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 5 -1 0 ]	( 1 5 0 )	( 0 0 1 )	3.397	5.126	0.66	84.9	76.3
[ 5 -1 6 ]	( 1 5 0 )	( 1 -1 -1 )	3.397	4.895	0.69	81.0	69.3
[ 5 -1 4 ]	( 1 5 0 )	( 1 1 -1 )	3.397	4.895	0.69	69.6	80.3
[ 5 -1 -2 ]	( 1 5 0 )	( 0 -2 1 )	3.397	4.464	0.76	67.6	65.7
[ 5 -1 2 ]	( 1 5 0 )	( 0 2 1 )	3.397	4.464	0.76	57.5	87.9
[ 5 -1 10 ]	( 1 5 0 )	( -2 0 1 )	3.397	4.042	0.84	76.7	51.6
[ 5 -1 -6 ]	( 1 5 0 )	( 1 -1 1 )	3.397	4.006	0.85	89.3	49.1
[ 5 -1 -4 ]	( 1 5 0 )	( -1 -1 -1 )	3.397	4.006	0.85	64.9	56.7
[ 5 -1 8 ]	( 1 5 0 )	( -1 3 1 )	3.397	3.894	0.87	58.4	59.7
[ 5 -1 2 ]	( 1 5 0 )	( -1 -3 1 )	3.397	3.894	0.87	47.4	87.9
[ 5 -1 12 ]	( 1 5 0 )	( -2 2 1 )	3.397	3.693	0.92	80.2	45.0
[ 5 -1 8 ]	( 1 5 0 )	( -2 -2 1 )	3.397	3.693	0.92	53.9	59.7
[ 5 -1 -4 ]	( 1 5 0 )	( 0 4 -1 )	3.397	3.400	1.00	50.2	56.7
[ 5 -1 4 ]	( 1 5 0 )	( 0 -4 -1 )	3.397	3.400	1.00	40.6	80.3
[ 5 -1 -2 ]	( 1 5 0 )	( 1 3 1 )	3.397	3.399	1.00	44.7	65.7
[ 5 -1 6 ]	( 1 5 0 )	( -2 -4 1 )	3.397	3.020	1.12	37.5	69.3
[ 5 -1 10 ]	( 1 5 0 )	( -1 5 1 )	3.397	2.956	1.15	45.4	51.6
[ 5 -1 0 ]	( 1 5 0 )	( -1 -5 1 )	3.397	2.956	1.15	35.1	76.3
[ 5 -1 12 ]	( 1 5 0 )	( 3 3 -1 )	3.397	2.744	1.24	47.1	45.0
[ 5 -1 0 ]	( 1 5 0 )	( -1 -5 -1 )	3.397	2.722	1.25	31.9	76.3
[ 5 -1 3 ]	( 1 5 0 )	( -1 1 2 )	3.397	2.620	1.30	82.6	86.2
[ 5 -1 2 ]	( 1 5 0 )	( -1 -1 2 )	3.397	2.620	1.30	81.9	87.9
[ 5 -1 -6 ]	( 1 5 0 )	( 0 6 -1 )	3.397	2.607	1.30	40.6	49.1
[ 5 -1 6 ]	( 1 5 0 )	( 0 -6 -1 )	3.397	2.607	1.30	31.7	69.3
[ 5 -1 -6 ]	( 1 5 0 )	( 2 4 1 )	3.397	2.575	1.32	40.0	49.1
[ 5 -1 5 ]	( 1 5 0 )	( 2 0 -2 )	3.397	2.542	1.34	84.3	74.7
[ 5 -1 -1 ]	( 1 5 0 )	( 0 -2 2 )	3.397	2.467	1.38	80.4	70.9
[ 5 -1 1 ]	( 1 5 0 )	( 0 2 2 )	3.397	2.467	1.38	70.1	82.0
[ 5 -1 4 ]	( 1 5 0 )	( -2 -6 1 )	3.397	2.424	1.40	27.7	80.3
[ 5 -1 10 ]	( 1 5 0 )	( 3 5 -1 )	3.397	2.349	1.45	34.4	51.6
[ 5 -1 -3 ]	( 1 5 0 )	( -1 1 -2 )	3.397	2.314	1.47	87.3	61.0
[ 5 -1 -2 ]	( 1 5 0 )	( 1 1 2 )	3.397	2.314	1.47	73.4	65.7
[ 5 -1 12 ]	( 1 5 0 )	( 1 -7 -1 )	3.397	2.312	1.47	38.1	45.0
[ 5 -1 -2 ]	( 1 5 0 )	( 1 7 -1 )	3.397	2.312	1.47	28.6	65.7
[ 5 -1 8 ]	( 1 5 0 )	( 3 -1 -2 )	3.397	2.283	1.49	86.7	59.7
[ 5 -1 7 ]	( 1 5 0 )	( -3 -1 2 )	3.397	2.283	1.49	73.0	64.3
[ 5 -1 7 ]	( 1 5 0 )	( -2 4 2 )	3.397	2.218	1.53	68.3	64.3
[ 5 -1 3 ]	( 1 5 0 )	( -2 -4 2 )	3.397	2.218	1.53	57.1	86.2
[ 5 -1 2 ]	( 1 5 0 )	( 1 7 1 )	3.397	2.194	1.55	24.5	87.9
[ 5 -1 -4 ]	( 1 5 0 )	( 1 -3 2 )	3.397	2.177	1.56	79.7	56.7
[ 5 -1 -1 ]	( 1 5 0 )	( 1 3 2 )	3.397	2.177	1.56	60.5	70.9
[ 5 -1 -4 ]	( 1 5 0 )	( -2 -6 -1 )	3.397	2.175	1.56	29.4	56.7
[ 5 -1 9 ]	( 1 5 0 )	( -3 3 2 )	3.397	2.151	1.58	80.4	55.5
[ 5 -1 6 ]	( 1 5 0 )	( -3 -3 2 )	3.397	2.151	1.58	60.2	69.3
[ 5 -1 5 ]	( 1 5 0 )	( -1 5 2 )	3.397	2.140	1.59	56.9	74.7
[ 5 -1 0 ]	( 1 5 0 )	( -1 -5 2 )	3.397	2.140	1.59	56.3	76.3
[ 5 -1 8 ]	( 1 5 0 )	( 0 8 1 )	3.397	2.077	1.64	27.0	59.7
[ 5 -1 -5 ]	( 1 5 0 )	( -2 0 -2 )	3.397	2.054	1.65	77.0	52.7

**Actinolite (150) 279 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 5 -1 9 ]	( 1 5 0 )	( -4 -2 2 )	3.397	1.973	1.72	64.7	55.5
[ 5 -1 -5 ]	( 1 5 0 )	( -1 5 -2 )	3.397	1.963	1.73	68.7	52.7
[ 5 -1 0 ]	( 1 5 0 )	( 1 5 2 )	3.397	1.963	1.73	49.7	76.3
[ 5 -1 -3 ]	( 1 5 0 )	( 0 -6 2 )	3.397	1.956	1.74	57.6	61.0
[ 5 -1 3 ]	( 1 5 0 )	( 0 6 2 )	3.397	1.956	1.74	47.8	86.2
[ 5 -1 10 ]	( 1 5 0 )	( -3 5 2 )	3.397	1.944	1.75	69.4	51.6
[ 5 -1 5 ]	( 1 5 0 )	( -3 -5 2 )	3.397	1.944	1.75	49.6	74.7
[ 5 -1 -4 ]	( 1 5 0 )	( 1 9 -1 )	3.397	1.876	1.81	25.1	56.7
[ 5 -1 -7 ]	( 1 5 0 )	( -2 4 -2 )	3.397	1.871	1.82	79.6	45.9
[ 5 -1 -3 ]	( 1 5 0 )	( -2 -4 -2 )	3.397	1.871	1.82	53.9	61.0
[ 5 -1 6 ]	( 1 5 0 )	( -1 7 2 )	3.397	1.854	1.83	48.4	69.3
[ 5 -1 -1 ]	( 1 5 0 )	( -1 -7 2 )	3.397	1.854	1.83	47.8	70.9
[ 5 -1 -2 ]	( 1 5 0 )	( 2 8 1 )	3.397	1.837	1.85	22.4	65.7
[ 5 -1 4 ]	( 1 5 0 )	( -1 -9 -1 )	3.397	1.812	1.87	20.3	80.3
[ 5 -1 -7 ]	( 1 5 0 )	( 3 1 2 )	3.397	1.781	1.91	69.4	45.9
[ 15 -3 10 ]	( 1 5 0 )	( -2 0 3 )	3.397	1.755	1.94	87.8	84.2
[ 5 -1 12 ]	( 1 5 0 )	( 5 1 -2 )	3.397	1.753	1.94	69.3	45.0
[ 15 -3 4 ]	( 1 5 0 )	( -1 -1 3 )	3.397	1.752	1.94	86.4	84.0
[ 5 -1 2 ]	( 1 5 0 )	( -1 1 3 )	3.397	1.752	1.94	83.3	87.9
[ 5 -1 -6 ]	( 1 5 0 )	( 1 -7 2 )	3.397	1.735	1.96	60.0	49.1
[ 5 -1 1 ]	( 1 5 0 )	( 1 7 2 )	3.397	1.735	1.96	41.4	82.0
[ 5 -1 4 ]	( 1 5 0 )	( 2 -2 -3 )	3.397	1.723	1.97	82.0	80.3
[ 15 -3 8 ]	( 1 5 0 )	( 2 2 -3 )	3.397	1.723	1.97	77.6	88.1
[ 5 -1 11 ]	( 1 5 0 )	( 3 -7 -2 )	3.397	1.722	1.97	60.8	48.2
[ 5 -1 4 ]	( 1 5 0 )	( 3 7 -2 )	3.397	1.722	1.97	41.3	80.3
[ 5 -1 -6 ]	( 1 5 0 )	( -3 -3 -2 )	3.397	1.716	1.98	58.9	49.1
[ 5 -1 11 ]	( 1 5 0 )	( -5 -3 2 )	3.397	1.691	2.01	59.0	48.2
[ 15 -3 2 ]	( 1 5 0 )	( 1 3 -3 )	3.397	1.691	2.01	76.4	80.1
[ 15 -3 8 ]	( 1 5 0 )	( 1 -3 -3 )	3.397	1.691	2.01	73.3	88.1
[ 5 -1 6 ]	( 1 5 0 )	( 3 9 -1 )	3.397	1.688	2.01	19.9	69.3
[ 15 -3 16 ]	( 1 5 0 )	( -3 1 3 )	3.397	1.687	2.01	89.3	72.9
[ 15 -3 14 ]	( 1 5 0 )	( 3 1 -3 )	3.397	1.687	2.01	79.3	76.5
[ 5 -1 7 ]	( 1 5 0 )	( -4 -6 2 )	3.397	1.681	2.02	44.8	64.3
[ 15 -3 -2 ]	( 1 5 0 )	( 0 2 -3 )	3.397	1.679	2.02	85.1	72.6
[ 15 -3 2 ]	( 1 5 0 )	( 0 -2 -3 )	3.397	1.679	2.02	74.9	80.1
[ 5 -1 12 ]	( 1 5 0 )	( 4 8 -1 )	3.397	1.654	2.05	26.2	45.0
[ 15 -3 14 ]	( 1 5 0 )	( 2 -4 -3 )	3.397	1.637	2.07	72.5	76.5
[ 5 -1 2 ]	( 1 5 0 )	( 2 4 -3 )	3.397	1.637	2.07	68.1	87.9
[ 5 -1 -2 ]	( 1 5 0 )	( -1 1 -3 )	3.397	1.607	2.11	86.5	65.7
[ 15 -3 -4 ]	( 1 5 0 )	( 1 1 3 )	3.397	1.607	2.11	76.9	69.1
[ 5 -1 7 ]	( 1 5 0 )	( 1 -9 -2 )	3.397	1.606	2.12	42.3	64.3
[ 5 -1 -2 ]	( 1 5 0 )	( 1 9 -2 )	3.397	1.606	2.12	41.7	65.7
[ 5 -1 -5 ]	( 1 5 0 )	( -3 -5 -2 )	3.397	1.605	2.12	49.6	52.7
[ 15 -3 -4 ]	( 1 5 0 )	( 0 4 -3 )	3.397	1.599	2.12	75.8	69.1
[ 15 -3 4 ]	( 1 5 0 )	( 0 -4 -3 )	3.397	1.599	2.12	65.6	84.0
[ 15 -3 20 ]	( 1 5 0 )	( 4 0 -3 )	3.397	1.593	2.13	81.2	65.9
[ 5 -1 10 ]	( 1 5 0 )	( -5 -5 2 )	3.397	1.585	2.14	49.7	51.6
[ 5 -1 0 ]	( 1 5 0 )	( 1 5 -3 )	3.397	1.584	2.14	67.5	76.3

**Actinolite (150) 279 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 15 -3 10 ]	( 1 5 0 )	( 1 -5 -3 )	3.397	1.584	2.14	64.4	84.2
[ 15 -3 22 ]	( 1 5 0 )	( -4 2 3 )	3.397	1.569	2.16	89.4	62.7
[ 5 -1 6 ]	( 1 5 0 )	( -4 -2 3 )	3.397	1.569	2.16	71.8	69.3
[ 15 -3 -8 ]	( 1 5 0 )	( -1 3 -3 )	3.397	1.559	2.18	84.2	62.5
[ 15 -3 -2 ]	( 1 5 0 )	( -1 -3 -3 )	3.397	1.559	2.18	67.7	72.6
[ 5 -1 -6 ]	( 1 5 0 )	( 3 9 1 )	3.397	1.557	2.18	22.9	49.1
[ 15 -3 20 ]	( 1 5 0 )	( 3 -5 -3 )	3.397	1.536	2.21	72.3	65.9
[ 15 -3 10 ]	( 1 5 0 )	( 3 5 -3 )	3.397	1.536	2.21	61.0	84.2
[ 5 -1 -7 ]	( 1 5 0 )	( 1 -9 2 )	3.397	1.527	2.23	53.4	45.9
[ 5 -1 2 ]	( 1 5 0 )	( 1 9 2 )	3.397	1.527	2.23	35.2	87.9
[ 5 -1 -1 ]	( 1 5 0 )	( -2 -8 -2 )	3.397	1.523	2.23	37.5	70.9
[ 15 -3 16 ]	( 1 5 0 )	( -2 6 3 )	3.397	1.519	2.24	64.2	72.9
[ 15 -3 4 ]	( 1 5 0 )	( 2 6 -3 )	3.397	1.519	2.24	59.9	84.0
[ 5 -1 12 ]	( 1 5 0 )	( 3 -9 -2 )	3.397	1.518	2.24	54.1	45.0
[ 5 -1 3 ]	( 1 5 0 )	( 3 9 -2 )	3.397	1.518	2.24	35.1	86.2
[ 5 -1 8 ]	( 1 5 0 )	( -4 4 3 )	3.397	1.503	2.26	80.5	59.7
[ 15 -3 16 ]	( 1 5 0 )	( -4 -4 3 )	3.397	1.503	2.26	63.0	72.9
[ 15 -3 -10 ]	( 1 5 0 )	( 2 0 3 )	3.397	1.494	2.27	79.1	59.5
[ 15 -3 -10 ]	( 1 5 0 )	( -1 5 -3 )	3.397	1.474	2.30	75.7	59.5
[ 5 -1 0 ]	( 1 5 0 )	( -1 -5 -3 )	3.397	1.474	2.30	59.3	76.3
[ 5 -1 -4 ]	( 1 5 0 )	( 2 -2 3 )	3.397	1.474	2.30	88.0	56.7
[ 15 -3 -8 ]	( 1 5 0 )	( -2 -2 -3 )	3.397	1.474	2.30	70.2	62.5
[ 5 -1 -4 ]	( 1 5 0 )	( 3 7 2 )	3.397	1.473	2.31	41.7	56.7
[ 15 -3 26 ]	( 1 5 0 )	( -5 1 3 )	3.397	1.467	2.32	83.1	56.8
[ 5 -1 8 ]	( 1 5 0 )	( 5 1 -3 )	3.397	1.467	2.32	74.3	59.7
[ 5 -1 9 ]	( 1 5 0 )	( -5 -7 2 )	3.397	1.457	2.33	41.9	55.5
[ 15 -3 -2 ]	( 1 5 0 )	( 1 7 -3 )	3.397	1.457	2.33	59.8	72.6
[ 5 -1 4 ]	( 1 5 0 )	( 1 -7 -3 )	3.397	1.457	2.33	56.8	80.3
[ 15 -3 28 ]	( 1 5 0 )	( -5 3 3 )	3.397	1.431	2.37	88.3	54.2
[ 15 -3 22 ]	( 1 5 0 )	( -5 -3 3 )	3.397	1.431	2.37	65.7	62.7
[ 15 -3 -14 ]	( 1 5 0 )	( -2 4 -3 )	3.397	1.419	2.39	83.6	54.0
[ 5 -1 -2 ]	( 1 5 0 )	( 2 4 3 )	3.397	1.419	2.39	61.8	65.7
[ 15 -3 22 ]	( 1 5 0 )	( 3 -7 -3 )	3.397	1.419	2.39	64.7	62.7
[ 15 -3 8 ]	( 1 5 0 )	( 3 7 -3 )	3.397	1.419	2.39	53.5	88.1
[ 15 -3 26 ]	( 1 5 0 )	( 4 -6 -3 )	3.397	1.410	2.41	72.6	56.8
[ 15 -3 14 ]	( 1 5 0 )	( 4 6 -3 )	3.397	1.410	2.41	55.2	76.5
[ 5 -1 6 ]	( 1 5 0 )	( 2 -8 -3 )	3.397	1.389	2.45	57.2	69.3
[ 15 -3 2 ]	( 1 5 0 )	( 2 8 -3 )	3.397	1.389	2.45	53.0	80.1
[ 5 -1 -7 ]	( 1 5 0 )	( -4 -6 -2 )	3.397	1.389	2.45	46.9	45.9
[ 15 -3 2 ]	( 1 5 0 )	( 1 7 3 )	3.397	1.370	2.48	52.0	80.1
[ 15 -3 -8 ]	( 1 5 0 )	( 0 -8 3 )	3.397	1.365	2.49	60.6	62.5
[ 15 -3 8 ]	( 1 5 0 )	( 0 8 3 )	3.397	1.365	2.49	50.7	88.1
[ 15 -3 -16 ]	( 1 5 0 )	( 3 -1 3 )	3.397	1.365	2.49	81.2	51.5
[ 15 -3 -14 ]	( 1 5 0 )	( -3 -1 -3 )	3.397	1.365	2.49	72.9	54.0
[ 5 -1 10 ]	( 1 5 0 )	( -5 5 3 )	3.397	1.364	2.49	80.3	51.6
[ 15 -3 20 ]	( 1 5 0 )	( -5 -5 3 )	3.397	1.364	2.49	57.8	65.9
[ 15 -3 -4 ]	( 1 5 0 )	( 2 6 3 )	3.397	1.340	2.54	54.3	69.1
[ 5 -1 -3 ]	( 1 5 0 )	( -3 -9 -2 )	3.397	1.339	2.54	35.3	61.0

**Actinolite (150) 279 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 15 -3 32 ]	( 1 5 0 )	( 6 -2 -3 )	3.397	1.333	2.55	84.8	49.3
[ 15 -3 28 ]	( 1 5 0 )	( -6 -2 3 )	3.397	1.333	2.55	68.6	54.2
[ 5 -1 8 ]	( 1 5 0 )	( 5 9 -2 )	3.397	1.327	2.56	35.5	59.7
[ 15 -3 -4 ]	( 1 5 0 )	( -1 -9 3 )	3.397	1.327	2.56	53.6	69.1
[ 15 -3 14 ]	( 1 5 0 )	( -1 9 3 )	3.397	1.327	2.56	50.6	76.5
[ 10 -2 5 ]	( 1 5 0 )	( -2 0 4 )	3.397	1.324	2.57	89.7	89.1
[ 5 -1 1 ]	( 1 5 0 )	( 1 1 -4 )	3.397	1.311	2.59	88.6	82.0
[ 10 -2 3 ]	( 1 5 0 )	( 1 -1 -4 )	3.397	1.311	2.59	83.7	84.9
[ 5 -1 4 ]	( 1 5 0 )	( -3 1 4 )	3.397	1.305	2.60	89.3	80.3
[ 10 -2 7 ]	( 1 5 0 )	( 3 1 -4 )	3.397	1.305	2.60	83.0	83.2
[ 15 -3 28 ]	( 1 5 0 )	( 4 -8 -3 )	3.397	1.304	2.60	65.7	54.2
[ 5 -1 4 ]	( 1 5 0 )	( 4 8 -3 )	3.397	1.304	2.60	48.5	80.3
[ 15 -3 34 ]	( 1 5 0 )	( 6 -4 -3 )	3.397	1.292	2.63	87.4	47.1
[ 15 -3 26 ]	( 1 5 0 )	( 6 4 -3 )	3.397	1.292	2.63	60.9	56.8
[ 10 -2 1 ]	( 1 5 0 )	( -1 -3 4 )	3.397	1.285	2.64	81.0	79.1
[ 5 -1 2 ]	( 1 5 0 )	( -1 3 4 )	3.397	1.285	2.64	76.1	87.9
[ 15 -3 -20 ]	( 1 5 0 )	( -3 5 -3 )	3.397	1.281	2.65	83.1	47.0
[ 15 -3 -10 ]	( 1 5 0 )	( -3 -5 -3 )	3.397	1.281	2.65	57.4	59.5
[ 15 -3 32 ]	( 1 5 0 )	( -5 7 3 )	3.397	1.281	2.65	73.1	49.3
[ 5 -1 6 ]	( 1 5 0 )	( -5 -7 3 )	3.397	1.281	2.65	50.8	69.3
[ 10 -2 9 ]	( 1 5 0 )	( -3 3 4 )	3.397	1.279	2.66	81.7	77.5
[ 5 -1 3 ]	( 1 5 0 )	( -3 -3 4 )	3.397	1.279	2.66	75.5	86.2
[ 5 -1 11 ]	( 1 5 0 )	( 6 8 -2 )	3.397	1.274	2.67	40.2	48.2
[ 10 -2 7 ]	( 1 5 0 )	( -2 4 4 )	3.397	1.271	2.67	75.2	83.2
[ 10 -2 3 ]	( 1 5 0 )	( -2 -4 4 )	3.397	1.271	2.67	74.5	84.9
[ 10 -2 1 ]	( 1 5 0 )	( 0 2 4 )	3.397	1.269	2.68	77.3	79.1
[ 15 -3 -14 ]	( 1 5 0 )	( 1 -9 3 )	3.397	1.260	2.70	61.9	54.0
[ 15 -3 4 ]	( 1 5 0 )	( 1 9 3 )	3.397	1.260	2.70	45.9	84.0
[ 10 -2 11 ]	( 1 5 0 )	( 4 -2 -4 )	3.397	1.259	2.70	88.2	72.0
[ 10 -2 9 ]	( 1 5 0 )	( 4 2 -4 )	3.397	1.259	2.70	76.8	77.5
[ 15 -3 -20 ]	( 1 5 0 )	( -4 0 -3 )	3.397	1.249	2.72	75.5	47.0
[ 5 -1 -6 ]	( 1 5 0 )	( -2 8 -3 )	3.397	1.248	2.72	69.2	49.1
[ 15 -3 -2 ]	( 1 5 0 )	( 2 8 3 )	3.397	1.248	2.72	47.8	72.6
[ 5 -1 -6 ]	( 1 5 0 )	( -4 -2 -3 )	3.397	1.238	2.75	67.9	49.1
[ 5 -1 0 ]	( 1 5 0 )	( 1 5 -4 )	3.397	1.236	2.75	73.9	76.3
[ 10 -2 5 ]	( 1 5 0 )	( 1 -5 -4 )	3.397	1.236	2.75	69.0	89.1
[ 5 -1 12 ]	( 1 5 0 )	( 7 -1 -3 )	3.397	1.226	2.77	79.0	45.0
[ 15 -3 34 ]	( 1 5 0 )	( -7 -1 3 )	3.397	1.226	2.77	71.5	47.1
[ 15 -3 -8 ]	( 1 5 0 )	( 3 7 3 )	3.397	1.211	2.81	50.6	62.5
[ 5 -1 -2 ]	( 1 5 0 )	( 1 -3 4 )	3.397	1.205	2.82	86.7	65.7
[ 10 -2 -1 ]	( 1 5 0 )	( 1 3 4 )	3.397	1.205	2.82	71.6	73.5
[ 15 -3 32 ]	( 1 5 0 )	( 7 3 -3 )	3.397	1.205	2.82	64.2	49.3
[ 15 -3 -16 ]	( 1 5 0 )	( 4 4 3 )	3.397	1.204	2.82	60.7	51.5
[ 5 -1 7 ]	( 1 5 0 )	( 5 -3 -4 )	3.397	1.192	2.85	87.4	64.3
[ 10 -2 11 ]	( 1 5 0 )	( 5 3 -4 )	3.397	1.192	2.85	71.2	72.0
[ 15 -3 34 ]	( 1 5 0 )	( -5 9 3 )	3.397	1.190	2.86	66.9	47.1
[ 15 -3 16 ]	( 1 5 0 )	( -5 -9 3 )	3.397	1.190	2.86	44.8	72.9
[ 10 -2 -3 ]	( 1 5 0 )	( 0 6 -4 )	3.397	1.180	2.88	73.6	68.2

**Actinolite (150) 279 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 10 -2 3 ]	( 1 5 0 )	( 0 6 4 )	3.397	1.180	2.88	63.5	84.9
[ 10 -2 -1 ]	( 1 5 0 )	( -1 -7 4 )	3.397	1.173	2.90	67.4	73.5
[ 5 -1 3 ]	( 1 5 0 )	( -1 7 4 )	3.397	1.173	2.90	62.6	86.2
[ 10 -2 13 ]	( 1 5 0 )	( -4 6 4 )	3.397	1.172	2.90	74.4	66.8
[ 10 -2 7 ]	( 1 5 0 )	( -4 -6 4 )	3.397	1.172	2.90	63.0	83.2
[ 10 -2 11 ]	( 1 5 0 )	( -3 7 4 )	3.397	1.169	2.91	68.1	72.0
[ 5 -1 2 ]	( 1 5 0 )	( -3 -7 4 )	3.397	1.169	2.91	62.0	87.9
[ 10 -2 -5 ]	( 1 5 0 )	( 2 0 4 )	3.397	1.166	2.91	80.3	63.3
[ 10 -2 -5 ]	( 1 5 0 )	( 1 -5 4 )	3.397	1.165	2.92	79.9	63.3
[ 5 -1 0 ]	( 1 5 0 )	( 1 5 4 )	3.397	1.165	2.92	64.9	76.3
[ 5 -1 10 ]	( 1 5 0 )	( -7 -5 3 )	3.397	1.164	2.92	57.2	51.6
[ 15 -3 22 ]	( 1 5 0 )	( 6 8 -3 )	3.397	1.159	2.93	47.6	62.7
[ 15 -3 -14 ]	( 1 5 0 )	( -4 -6 -3 )	3.397	1.155	2.94	54.0	54.0
[ 10 -2 15 ]	( 1 5 0 )	( -5 5 4 )	3.397	1.153	2.95	80.6	62.0
[ 5 -1 5 ]	( 1 5 0 )	( 5 5 -4 )	3.397	1.153	2.95	64.5	74.7
[ 10 -2 15 ]	( 1 5 0 )	( -6 0 4 )	3.397	1.151	2.95	79.9	62.0
[ 10 -2 9 ]	( 1 5 0 )	( -2 8 4 )	3.397	1.144	2.97	62.2	77.5
[ 10 -2 1 ]	( 1 5 0 )	( 2 8 -4 )	3.397	1.144	2.97	61.6	79.1
[ 10 -2 -7 ]	( 1 5 0 )	( -2 4 -4 )	3.397	1.130	3.01	86.0	58.8
[ 10 -2 -3 ]	( 1 5 0 )	( -2 -4 -4 )	3.397	1.130	3.01	66.7	68.2
[ 5 -1 -3 ]	( 1 5 0 )	( 1 -7 4 )	3.397	1.111	3.06	73.7	61.0
[ 10 -2 1 ]	( 1 5 0 )	( 1 7 4 )	3.397	1.111	3.06	58.7	79.1
[ 15 -3 28 ]	( 1 5 0 )	( -7 -7 3 )	3.397	1.111	3.06	50.9	54.2
[ 5 -1 -1 ]	( 1 5 0 )	( 1 9 -4 )	3.397	1.102	3.08	61.7	70.9
[ 10 -2 7 ]	( 1 5 0 )	( 1 -9 -4 )	3.397	1.102	3.08	56.9	83.2
[ 5 -1 8 ]	( 1 5 0 )	( -5 7 4 )	3.397	1.101	3.09	74.4	59.7
[ 10 -2 9 ]	( 1 5 0 )	( -5 -7 4 )	3.397	1.101	3.09	58.4	77.5
[ 5 -1 6 ]	( 1 5 0 )	( -3 9 4 )	3.397	1.098	3.09	62.4	69.3
[ 10 -2 3 ]	( 1 5 0 )	( -3 -9 4 )	3.397	1.098	3.09	56.4	84.9
[ 5 -1 -4 ]	( 1 5 0 )	( 3 -1 4 )	3.397	1.095	3.10	81.8	56.7
[ 10 -2 -7 ]	( 1 5 0 )	( -3 -1 -4 )	3.397	1.095	3.10	75.2	58.8
[ 5 -1 -4 ]	( 1 5 0 )	( 4 8 3 )	3.397	1.095	3.10	47.9	56.7
[ 5 -1 12 ]	( 1 5 0 )	( -8 -4 3 )	3.397	1.089	3.12	60.6	45.0
[ 5 -1 -3 ]	( 1 5 0 )	( 3 3 4 )	3.397	1.080	3.15	68.8	61.0
[ 5 -1 9 ]	( 1 5 0 )	( -7 1 4 )	3.397	1.079	3.15	81.4	55.5
[ 10 -2 17 ]	( 1 5 0 )	( 7 1 -4 )	3.397	1.079	3.15	74.9	57.5
[ 10 -2 19 ]	( 1 5 0 )	( -7 3 4 )	3.397	1.064	3.19	87.8	53.5
[ 5 -1 8 ]	( 1 5 0 )	( 7 3 -4 )	3.397	1.064	3.19	68.5	59.7
[ 5 -1 2 ]	( 1 5 0 )	( 2 0 -5 )	3.397	1.059	3.21	89.2	87.9
[ 25 -5 16 ]	( 1 5 0 )	( -3 1 5 )	3.397	1.055	3.22	88.3	85.0
[ 25 -5 14 ]	( 1 5 0 )	( -3 -1 5 )	3.397	1.055	3.22	85.4	87.4
[ 15 -3 34 ]	( 1 5 0 )	( 8 6 -3 )	3.397	1.052	3.23	54.4	47.1
[ 25 -5 8 ]	( 1 5 0 )	( 2 2 -5 )	3.397	1.051	3.23	84.6	85.5
[ 25 -5 12 ]	( 1 5 0 )	( -2 2 5 )	3.397	1.051	3.23	83.0	89.7
[ 10 -2 -7 ]	( 1 5 0 )	( -1 9 -4 )	3.397	1.050	3.23	68.0	58.8
[ 5 -1 1 ]	( 1 5 0 )	( -1 -9 -4 )	3.397	1.050	3.23	53.2	82.0
[ 5 -1 -5 ]	( 1 5 0 )	( -3 5 -4 )	3.397	1.050	3.23	85.4	52.7
[ 10 -2 -5 ]	( 1 5 0 )	( -3 -5 -4 )	3.397	1.050	3.23	62.6	63.3



**Actinolite (150) 279 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 15 -3 26 ]	( 1 5 0 )	( 7 9 -3 )	3.397	1.050	3.24	45.3	56.8
[ 25 -5 4 ]	( 1 5 0 )	( -1 -1 5 )	3.397	1.046	3.25	89.9	80.9
[ 25 -5 6 ]	( 1 5 0 )	( -1 1 5 )	3.397	1.046	3.25	83.9	83.2
[ 5 -1 -6 ]	( 1 5 0 )	( 5 7 3 )	3.397	1.043	3.26	51.4	49.1
[ 5 -1 4 ]	( 1 5 0 )	( -4 0 5 )	3.397	1.042	3.26	86.3	80.3
[ 10 -2 17 ]	( 1 5 0 )	( -5 9 4 )	3.397	1.042	3.26	68.8	57.5
[ 5 -1 4 ]	( 1 5 0 )	( 5 9 -4 )	3.397	1.042	3.26	52.9	80.3
[ 25 -5 18 ]	( 1 5 0 )	( 3 -3 -5 )	3.397	1.041	3.26	82.2	82.6
[ 25 -5 12 ]	( 1 5 0 )	( 3 3 -5 )	3.397	1.041	3.26	79.3	89.7
[ 10 -2 -9 ]	( 1 5 0 )	( 2 -8 4 )	3.397	1.038	3.27	73.9	54.6
[ 10 -2 -1 ]	( 1 5 0 )	( 2 8 4 )	3.397	1.038	3.27	54.8	73.5
[ 5 -1 10 ]	( 1 5 0 )	( -7 5 4 )	3.397	1.036	3.28	86.0	51.6
[ 10 -2 15 ]	( 1 5 0 )	( 7 5 -4 )	3.397	1.036	3.28	62.4	62.0
[ 25 -5 22 ]	( 1 5 0 )	( -4 2 5 )	3.397	1.035	3.28	87.5	78.0
[ 25 -5 18 ]	( 1 5 0 )	( -4 -2 5 )	3.397	1.035	3.28	80.2	82.6
[ 25 -5 2 ]	( 1 5 0 )	( 1 3 -5 )	3.397	1.032	3.29	83.8	78.6
[ 25 -5 8 ]	( 1 5 0 )	( 1 -3 -5 )	3.397	1.032	3.29	77.8	85.5
[ 25 -5 6 ]	( 1 5 0 )	( 2 4 -5 )	3.397	1.031	3.30	78.5	83.2
[ 25 -5 14 ]	( 1 5 0 )	( 2 -4 -5 )	3.397	1.031	3.30	77.0	87.4
[ 10 -2 11 ]	( 1 5 0 )	( 6 8 -4 )	3.397	1.026	3.31	54.6	72.0
[ 10 -2 -11 ]	( 1 5 0 )	( 4 -2 4 )	3.397	1.020	3.33	83.2	50.9
[ 10 -2 -9 ]	( 1 5 0 )	( -4 -2 -4 )	3.397	1.020	3.33	70.9	54.6
[ 25 -5 -2 ]	( 1 5 0 )	( 0 2 -5 )	3.397	1.019	3.34	89.1	74.1
[ 25 -5 2 ]	( 1 5 0 )	( 0 -2 -5 )	3.397	1.019	3.34	78.8	78.6
[ 25 -5 24 ]	( 1 5 0 )	( -4 4 5 )	3.397	1.016	3.34	81.5	75.8
[ 25 -5 16 ]	( 1 5 0 )	( -4 -4 5 )	3.397	1.016	3.34	74.3	85.0
[ 25 -5 26 ]	( 1 5 0 )	( 5 -1 -5 )	3.397	1.015	3.35	87.3	73.6
[ 25 -5 24 ]	( 1 5 0 )	( -5 -1 5 )	3.397	1.015	3.35	81.3	75.8
[ 5 -1 4 ]	( 1 5 0 )	( -3 5 5 )	3.397	1.015	3.35	76.3	80.3
[ 5 -1 2 ]	( 1 5 0 )	( -3 -5 5 )	3.397	1.015	3.35	73.4	87.9
[ 10 -2 -11 ]	( 1 5 0 )	( 3 -7 4 )	3.397	1.011	3.36	79.6	50.9
[ 5 -1 -2 ]	( 1 5 0 )	( 3 7 4 )	3.397	1.011	3.36	56.8	65.7
[ 5 -1 0 ]	( 1 5 0 )	( -1 -5 5 )	3.397	1.007	3.37	78.0	76.3
[ 5 -1 2 ]	( 1 5 0 )	( -1 5 5 )	3.397	1.007	3.37	72.0	87.9
[ 15 -3 32 ]	( 1 5 0 )	( -8 -8 3 )	3.397	1.006	3.38	48.7	49.3
[ 10 -2 21 ]	( 1 5 0 )	( 8 -2 -4 )	3.397	1.004	3.38	82.8	49.9
[ 10 -2 19 ]	( 1 5 0 )	( -8 -2 4 )	3.397	1.004	3.38	70.6	53.5
[ 25 -5 28 ]	( 1 5 0 )	( -5 3 5 )	3.397	1.003	3.39	86.8	71.4
[ 25 -5 22 ]	( 1 5 0 )	( 5 3 -5 )	3.397	1.003	3.39	75.3	78.0

**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 2 -1 0 ]	( 2 4 0 )	( 0 0 1 )	3.294	5.126	0.64	80.0	79.3
[ 2 -1 3 ]	( 2 4 0 )	( 1 -1 -1 )	3.294	4.895	0.67	89.5	67.5
[ 2 -1 1 ]	( 2 4 0 )	( 1 1 -1 )	3.294	4.895	0.67	67.6	89.3
[ 2 -1 -2 ]	( 2 4 0 )	( 0 -2 1 )	3.294	4.464	0.74	78.2	59.4
[ 2 -1 2 ]	( 2 4 0 )	( 0 2 1 )	3.294	4.464	0.74	59.5	78.0
[ 2 -1 4 ]	( 2 4 0 )	( -2 0 1 )	3.294	4.042	0.81	63.6	58.5
[ 2 -1 -3 ]	( 2 4 0 )	( 1 -1 1 )	3.294	4.006	0.82	74.7	51.6
[ 2 -1 -1 ]	( 2 4 0 )	( -1 -1 -1 )	3.294	4.006	0.82	54.3	68.7
[ 2 -1 5 ]	( 2 4 0 )	( -1 3 1 )	3.294	3.894	0.85	71.5	50.8
[ 2 -1 -1 ]	( 2 4 0 )	( -1 -3 1 )	3.294	3.894	0.85	52.1	68.7
[ 2 -1 2 ]	( 2 4 0 )	( 2 2 -1 )	3.294	3.693	0.89	45.5	78.0
[ 2 -1 -4 ]	( 2 4 0 )	( 0 -4 1 )	3.294	3.400	0.97	64.7	45.2
[ 2 -1 4 ]	( 2 4 0 )	( 0 4 1 )	3.294	3.400	0.97	48.9	58.5
[ 2 -1 1 ]	( 2 4 0 )	( -1 -3 -1 )	3.294	3.399	0.97	39.9	89.3
[ 2 -1 -4 ]	( 2 4 0 )	( 2 0 1 )	3.294	3.126	1.05	56.2	45.2
[ 2 -1 5 ]	( 2 4 0 )	( -3 -1 1 )	3.294	3.035	1.09	47.6	50.8
[ 2 -1 0 ]	( 2 4 0 )	( 2 4 -1 )	3.294	3.020	1.09	35.5	79.3
[ 2 -1 -3 ]	( 2 4 0 )	( 1 5 -1 )	3.294	2.956	1.11	45.4	51.6
[ 2 -1 -2 ]	( 2 4 0 )	( -2 -2 -1 )	3.294	2.956	1.11	40.4	59.4
[ 2 -1 3 ]	( 2 4 0 )	( 3 3 -1 )	3.294	2.744	1.20	34.1	67.5
[ 2 -1 3 ]	( 2 4 0 )	( -1 -5 -1 )	3.294	2.722	1.21	33.8	67.5
[ 4 -2 3 ]	( 2 4 0 )	( -1 1 2 )	3.294	2.620	1.26	84.6	83.6
[ 4 -2 1 ]	( 2 4 0 )	( -1 -1 2 )	3.294	2.620	1.26	83.4	84.9
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 -1 )	3.294	2.575	1.28	29.7	79.3
[ 2 -1 2 ]	( 2 4 0 )	( -2 0 2 )	3.294	2.542	1.30	78.8	78.0
[ 2 -1 -1 ]	( 2 4 0 )	( 0 2 -2 )	3.294	2.467	1.34	88.3	68.7
[ 2 -1 1 ]	( 2 4 0 )	( 0 2 2 )	3.294	2.467	1.34	68.7	89.3
[ 2 -1 -2 ]	( 2 4 0 )	( 2 6 -1 )	3.294	2.424	1.36	32.1	59.4
[ 2 -1 1 ]	( 2 4 0 )	( -3 -5 1 )	3.294	2.349	1.40	26.3	89.3
[ 4 -2 -3 ]	( 2 4 0 )	( 1 -1 2 )	3.294	2.314	1.42	76.6	63.9
[ 4 -2 -1 ]	( 2 4 0 )	( 1 1 2 )	3.294	2.314	1.42	65.4	73.9
[ 4 -2 7 ]	( 2 4 0 )	( -3 1 2 )	3.294	2.283	1.44	75.7	62.8
[ 4 -2 5 ]	( 2 4 0 )	( 3 1 -2 )	3.294	2.283	1.44	64.6	72.6
[ 2 -1 -3 ]	( 2 4 0 )	( 3 3 1 )	3.294	2.267	1.45	33.1	51.6
[ 2 -1 4 ]	( 2 4 0 )	( 2 -4 -2 )	3.294	2.218	1.49	79.3	58.5
[ 2 -1 0 ]	( 2 4 0 )	( 2 4 -2 )	3.294	2.218	1.49	58.5	79.3
[ 2 -1 5 ]	( 2 4 0 )	( -1 -7 -1 )	3.294	2.194	1.50	32.3	50.8
[ 4 -2 -5 ]	( 2 4 0 )	( 1 -3 2 )	3.294	2.177	1.51	87.5	55.4
[ 4 -2 1 ]	( 2 4 0 )	( -1 -3 -2 )	3.294	2.177	1.51	55.6	84.9
[ 2 -1 2 ]	( 2 4 0 )	( 2 6 1 )	3.294	2.175	1.51	24.8	78.0
[ 4 -2 9 ]	( 2 4 0 )	( -3 3 2 )	3.294	2.151	1.53	86.5	54.5
[ 4 -2 3 ]	( 2 4 0 )	( 3 3 -2 )	3.294	2.151	1.53	54.8	83.6
[ 4 -2 7 ]	( 2 4 0 )	( 1 -5 -2 )	3.294	2.140	1.54	65.3	62.8
[ 4 -2 -3 ]	( 2 4 0 )	( 1 5 -2 )	3.294	2.140	1.54	64.1	63.9
[ 2 -1 4 ]	( 2 4 0 )	( -4 -4 1 )	3.294	2.131	1.55	28.2	58.5
[ 2 -1 -2 ]	( 2 4 0 )	( 2 0 2 )	3.294	2.054	1.60	64.2	59.4
[ 2 -1 -1 ]	( 2 4 0 )	( 3 5 1 )	3.294	2.029	1.62	24.3	68.7
[ 2 -1 3 ]	( 2 4 0 )	( -4 -2 2 )	3.294	1.973	1.67	53.7	67.5

**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 4 -2 -7 ]	( 2 4 0 )	( -1 5 -2 )	3.294	1.963	1.68	83.3	48.3
[ 4 -2 3 ]	( 2 4 0 )	( -1 -5 -2 )	3.294	1.963	1.68	48.2	83.6
[ 2 -1 -3 ]	( 2 4 0 )	( 0 6 -2 )	3.294	1.956	1.68	70.4	51.6
[ 2 -1 3 ]	( 2 4 0 )	( 0 -6 -2 )	3.294	1.956	1.68	53.1	67.5
[ 4 -2 11 ]	( 2 4 0 )	( -3 5 2 )	3.294	1.944	1.69	84.3	47.5
[ 4 -2 1 ]	( 2 4 0 )	( -3 -5 2 )	3.294	1.944	1.69	47.5	84.9
[ 2 -1 2 ]	( 2 4 0 )	( 4 6 -1 )	3.294	1.887	1.75	21.4	78.0
[ 2 -1 -4 ]	( 2 4 0 )	( 2 -4 2 )	3.294	1.871	1.76	84.4	45.2
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 -2 )	3.294	1.871	1.76	46.0	79.3
[ 4 -2 9 ]	( 2 4 0 )	( -1 7 2 )	3.294	1.854	1.78	59.3	54.5
[ 4 -2 -5 ]	( 2 4 0 )	( -1 -7 2 )	3.294	1.854	1.78	58.3	55.4
[ 2 -1 4 ]	( 2 4 0 )	( -2 -8 -1 )	3.294	1.837	1.79	24.0	58.5
[ 2 -1 -4 ]	( 2 4 0 )	( 4 4 1 )	3.294	1.818	1.81	28.9	45.2
[ 4 -2 -7 ]	( 2 4 0 )	( -3 1 -2 )	3.294	1.781	1.85	64.3	48.3
[ 4 -2 -5 ]	( 2 4 0 )	( 3 1 2 )	3.294	1.781	1.85	54.8	55.4
[ 2 -1 1 ]	( 2 4 0 )	( 3 7 1 )	3.294	1.780	1.85	19.6	89.3
[ 6 -3 4 ]	( 2 4 0 )	( -2 0 3 )	3.294	1.755	1.88	85.7	85.5
[ 4 -2 11 ]	( 2 4 0 )	( 5 -1 -2 )	3.294	1.753	1.88	63.8	47.5
[ 4 -2 9 ]	( 2 4 0 )	( -5 -1 2 )	3.294	1.753	1.88	54.4	54.5
[ 6 -3 1 ]	( 2 4 0 )	( 1 1 -3 )	3.294	1.752	1.88	89.0	83.0
[ 2 -1 1 ]	( 2 4 0 )	( 1 -1 -3 )	3.294	1.752	1.88	83.0	89.3
[ 4 -2 5 ]	( 2 4 0 )	( 1 7 2 )	3.294	1.735	1.90	43.3	72.6
[ 2 -1 5 ]	( 2 4 0 )	( -5 -5 1 )	3.294	1.726	1.91	24.9	50.8
[ 2 -1 2 ]	( 2 4 0 )	( -2 2 3 )	3.294	1.723	1.91	86.3	78.0
[ 6 -3 2 ]	( 2 4 0 )	( -2 -2 3 )	3.294	1.723	1.91	77.9	86.8
[ 4 -2 -1 ]	( 2 4 0 )	( 3 7 -2 )	3.294	1.722	1.91	42.6	73.9
[ 4 -2 -3 ]	( 2 4 0 )	( -3 -3 -2 )	3.294	1.716	1.92	46.2	63.9
[ 6 -3 -1 ]	( 2 4 0 )	( 1 3 -3 )	3.294	1.691	1.95	81.2	75.6
[ 6 -3 5 ]	( 2 4 0 )	( 1 -3 -3 )	3.294	1.691	1.95	75.4	81.7
[ 2 -1 -3 ]	( 2 4 0 )	( 3 9 -1 )	3.294	1.688	1.95	24.0	51.6
[ 6 -3 7 ]	( 2 4 0 )	( -3 1 3 )	3.294	1.687	1.95	82.8	74.4
[ 6 -3 5 ]	( 2 4 0 )	( 3 1 -3 )	3.294	1.687	1.95	74.9	81.7
[ 2 -1 1 ]	( 2 4 0 )	( -4 -6 2 )	3.294	1.681	1.96	39.4	89.3
[ 6 -3 -2 ]	( 2 4 0 )	( 0 -2 3 )	3.294	1.679	1.96	87.9	72.1
[ 6 -3 2 ]	( 2 4 0 )	( 0 -2 -3 )	3.294	1.679	1.96	72.3	86.8
[ 2 -1 -2 ]	( 2 4 0 )	( 4 6 1 )	3.294	1.660	1.98	21.3	59.4
[ 6 -3 8 ]	( 2 4 0 )	( -2 4 3 )	3.294	1.637	2.01	78.9	70.9
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 3 )	3.294	1.637	2.01	70.7	79.3
[ 2 -1 -1 ]	( 2 4 0 )	( -1 1 -3 )	3.294	1.607	2.05	77.6	68.7
[ 6 -3 -1 ]	( 2 4 0 )	( 1 1 3 )	3.294	1.607	2.05	69.9	75.6
[ 4 -2 11 ]	( 2 4 0 )	( 1 -9 -2 )	3.294	1.606	2.05	55.3	47.5
[ 4 -2 -7 ]	( 2 4 0 )	( 1 9 -2 )	3.294	1.606	2.05	54.3	48.3
[ 4 -2 -1 ]	( 2 4 0 )	( -3 -5 -2 )	3.294	1.605	2.05	39.1	73.9
[ 6 -3 -4 ]	( 2 4 0 )	( 0 4 -3 )	3.294	1.599	2.06	84.7	65.5
[ 6 -3 4 ]	( 2 4 0 )	( 0 4 3 )	3.294	1.599	2.06	65.3	85.5
[ 6 -3 8 ]	( 2 4 0 )	( 4 0 -3 )	3.294	1.593	2.07	72.7	70.9
[ 4 -2 5 ]	( 2 4 0 )	( -5 -5 2 )	3.294	1.585	2.08	38.8	72.6
[ 2 -1 -1 ]	( 2 4 0 )	( 1 5 -3 )	3.294	1.584	2.08	74.4	68.7

**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 6 -3 7 ]	( 2 4 0 )	( 1 -5 -3 )	3.294	1.584	2.08	68.7	74.4
[ 6 -3 10 ]	( 2 4 0 )	( 4 -2 -3 )	3.294	1.569	2.10	80.4	64.4
[ 2 -1 2 ]	( 2 4 0 )	( -4 -2 3 )	3.294	1.569	2.10	65.3	78.0
[ 2 -1 3 ]	( 2 4 0 )	( 5 7 -1 )	3.294	1.565	2.10	18.6	67.5
[ 6 -3 1 ]	( 2 4 0 )	( -1 -3 -3 )	3.294	1.559	2.11	62.8	83.0
[ 2 -1 3 ]	( 2 4 0 )	( 3 9 1 )	3.294	1.557	2.12	18.5	67.5
[ 2 -1 -3 ]	( 2 4 0 )	( -4 -2 -2 )	3.294	1.540	2.14	47.9	51.6
[ 6 -3 11 ]	( 2 4 0 )	( -3 5 3 )	3.294	1.536	2.14	82.5	61.3
[ 6 -3 1 ]	( 2 4 0 )	( 3 5 -3 )	3.294	1.536	2.14	61.2	83.0
[ 4 -2 7 ]	( 2 4 0 )	( -1 -9 -2 )	3.294	1.527	2.16	40.4	62.8
[ 2 -1 2 ]	( 2 4 0 )	( 2 8 2 )	3.294	1.523	2.16	36.0	78.0
[ 6 -3 10 ]	( 2 4 0 )	( -2 6 3 )	3.294	1.519	2.17	72.6	64.4
[ 6 -3 -2 ]	( 2 4 0 )	( -2 -6 3 )	3.294	1.519	2.17	64.7	72.1
[ 4 -2 -3 ]	( 2 4 0 )	( 3 9 -2 )	3.294	1.518	2.17	39.7	63.9
[ 2 -1 4 ]	( 2 4 0 )	( -4 4 3 )	3.294	1.503	2.19	87.7	58.5
[ 6 -3 4 ]	( 2 4 0 )	( 4 4 -3 )	3.294	1.503	2.19	58.7	85.5
[ 2 -1 0 ]	( 2 4 0 )	( -4 -8 -1 )	3.294	1.494	2.20	16.7	79.3
[ 6 -3 -4 ]	( 2 4 0 )	( 2 0 3 )	3.294	1.494	2.20	68.5	65.5
[ 6 -3 -7 ]	( 2 4 0 )	( 1 -5 3 )	3.294	1.474	2.23	87.8	56.7
[ 2 -1 1 ]	( 2 4 0 )	( 1 5 3 )	3.294	1.474	2.23	56.6	89.3
[ 2 -1 -2 ]	( 2 4 0 )	( -2 2 -3 )	3.294	1.474	2.23	75.8	59.4
[ 6 -3 -2 ]	( 2 4 0 )	( 2 2 3 )	3.294	1.474	2.23	61.3	72.1
[ 4 -2 1 ]	( 2 4 0 )	( -3 -7 -2 )	3.294	1.473	2.24	33.9	84.9
[ 6 -3 11 ]	( 2 4 0 )	( 5 -1 -3 )	3.294	1.467	2.24	71.3	61.3
[ 2 -1 3 ]	( 2 4 0 )	( -5 -1 3 )	3.294	1.467	2.24	64.1	67.5
[ 2 -1 4 ]	( 2 4 0 )	( 6 4 -2 )	3.294	1.458	2.26	40.2	58.5
[ 4 -2 3 ]	( 2 4 0 )	( -5 -7 2 )	3.294	1.457	2.26	33.6	83.6
[ 6 -3 -5 ]	( 2 4 0 )	( 1 7 -3 )	3.294	1.457	2.26	68.7	62.4
[ 2 -1 3 ]	( 2 4 0 )	( 1 -7 -3 )	3.294	1.457	2.26	63.2	67.5
[ 6 -3 13 ]	( 2 4 0 )	( 5 -3 -3 )	3.294	1.431	2.30	78.6	55.7
[ 6 -3 7 ]	( 2 4 0 )	( -5 -3 3 )	3.294	1.431	2.30	57.3	74.4
[ 6 -3 -8 ]	( 2 4 0 )	( 2 -4 3 )	3.294	1.419	2.32	83.0	54.1
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 -3 )	3.294	1.419	2.32	54.9	79.3
[ 6 -3 13 ]	( 2 4 0 )	( -3 7 3 )	3.294	1.419	2.32	76.5	55.7
[ 6 -3 -1 ]	( 2 4 0 )	( -3 -7 3 )	3.294	1.419	2.32	56.0	75.6
[ 6 -3 14 ]	( 2 4 0 )	( -4 6 3 )	3.294	1.410	2.34	85.7	53.2
[ 6 -3 2 ]	( 2 4 0 )	( -4 -6 3 )	3.294	1.410	2.34	53.1	86.8
[ 2 -1 1 ]	( 2 4 0 )	( 5 9 -1 )	3.294	1.407	2.34	15.4	89.3
[ 2 -1 -3 ]	( 2 4 0 )	( -5 -7 -1 )	3.294	1.399	2.35	19.7	51.6
[ 2 -1 4 ]	( 2 4 0 )	( -2 8 3 )	3.294	1.389	2.37	67.4	58.5
[ 6 -3 -4 ]	( 2 4 0 )	( -2 -8 3 )	3.294	1.389	2.37	59.9	65.5
[ 2 -1 -1 ]	( 2 4 0 )	( 4 6 2 )	3.294	1.389	2.37	34.3	68.7
[ 6 -3 5 ]	( 2 4 0 )	( -1 -7 -3 )	3.294	1.370	2.40	51.6	81.7
[ 6 -3 -8 ]	( 2 4 0 )	( 0 8 -3 )	3.294	1.365	2.41	72.7	54.1
[ 6 -3 8 ]	( 2 4 0 )	( 0 8 3 )	3.294	1.365	2.41	54.9	70.9
[ 6 -3 -7 ]	( 2 4 0 )	( -3 1 -3 )	3.294	1.365	2.41	67.7	56.7
[ 6 -3 -5 ]	( 2 4 0 )	( 3 1 3 )	3.294	1.365	2.41	60.8	62.4
[ 2 -1 5 ]	( 2 4 0 )	( 5 -5 -3 )	3.294	1.364	2.41	85.4	50.8

**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 6 -3 5 ]	( 2 4 0 )	( -5 -5 3 )	3.294	1.364	2.41	51.3	81.7
[ 6 -3 -10]	( 2 4 0 )	( 2 -6 3 )	3.294	1.340	2.46	89.5	49.4
[ 6 -3 2 ]	( 2 4 0 )	( -2 -6 -3 )	3.294	1.340	2.46	49.5	86.8
[ 4 -2 3 ]	( 2 4 0 )	( 3 9 2 )	3.294	1.339	2.46	30.6	83.6
[ 6 -3 14 ]	( 2 4 0 )	( -6 2 3 )	3.294	1.333	2.47	70.5	53.2
[ 6 -3 10 ]	( 2 4 0 )	( 6 2 -3 )	3.294	1.333	2.47	56.9	64.4
[ 2 -1 4 ]	( 2 4 0 )	( -6 -8 1 )	3.294	1.332	2.47	17.2	58.5
[ 4 -2 1 ]	( 2 4 0 )	( 5 9 -2 )	3.294	1.327	2.48	30.2	84.9
[ 6 -3 -7 ]	( 2 4 0 )	( -1 -9 3 )	3.294	1.327	2.48	64.1	56.7
[ 6 -3 11 ]	( 2 4 0 )	( -1 9 3 )	3.294	1.327	2.48	58.9	61.3
[ 2 -1 1 ]	( 2 4 0 )	( -2 0 4 )	3.294	1.324	2.49	89.4	89.3
[ 4 -2 11 ]	( 2 4 0 )	( 7 3 -2 )	3.294	1.323	2.49	42.6	47.5
[ 8 -4 1 ]	( 2 4 0 )	( 1 1 -4 )	3.294	1.311	2.51	88.2	82.1
[ 8 -4 3 ]	( 2 4 0 )	( -1 1 4 )	3.294	1.311	2.51	82.2	87.8
[ 8 -4 7 ]	( 2 4 0 )	( 3 -1 -4 )	3.294	1.305	2.52	87.0	80.8
[ 8 -4 5 ]	( 2 4 0 )	( 3 1 -4 )	3.294	1.305	2.52	81.0	86.5
[ 6 -3 16 ]	( 2 4 0 )	( 4 -8 -3 )	3.294	1.304	2.53	80.0	48.6
[ 2 -1 0 ]	( 2 4 0 )	( 4 8 -3 )	3.294	1.304	2.53	48.7	79.3
[ 6 -3 16 ]	( 2 4 0 )	( -6 4 3 )	3.294	1.292	2.55	77.3	48.6
[ 6 -3 8 ]	( 2 4 0 )	( 6 4 -3 )	3.294	1.292	2.55	50.7	70.9
[ 4 -2 -5 ]	( 2 4 0 )	( 5 5 2 )	3.294	1.287	2.56	36.2	55.4
[ 8 -4 -1 ]	( 2 4 0 )	( -1 -3 4 )	3.294	1.285	2.56	85.9	76.5
[ 8 -4 5 ]	( 2 4 0 )	( -1 3 4 )	3.294	1.285	2.56	76.4	86.5
[ 2 -1 -1 ]	( 2 4 0 )	( -5 -9 -1 )	3.294	1.282	2.57	15.1	68.7
[ 6 -3 -11 ]	( 2 4 0 )	( -3 5 -3 )	3.294	1.281	2.57	81.3	47.2
[ 6 -3 -1 ]	( 2 4 0 )	( 3 5 3 )	3.294	1.281	2.57	48.5	75.6
[ 6 -3 17 ]	( 2 4 0 )	( 5 -7 -3 )	3.294	1.281	2.57	88.5	46.5
[ 2 -1 1 ]	( 2 4 0 )	( 5 7 -3 )	3.294	1.281	2.57	46.5	89.3
[ 8 -4 9 ]	( 2 4 0 )	( 3 -3 -4 )	3.294	1.279	2.58	87.1	75.3
[ 8 -4 3 ]	( 2 4 0 )	( 3 3 -4 )	3.294	1.279	2.58	75.2	87.8
[ 2 -1 2 ]	( 2 4 0 )	( -6 -8 2 )	3.294	1.274	2.59	29.5	78.0
[ 2 -1 2 ]	( 2 4 0 )	( -2 4 4 )	3.294	1.271	2.59	78.9	78.0
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 4 )	3.294	1.271	2.59	77.7	79.3
[ 4 -2 -1 ]	( 2 4 0 )	( 0 2 -4 )	3.294	1.269	2.60	85.9	73.9
[ 4 -2 1 ]	( 2 4 0 )	( 0 2 4 )	3.294	1.269	2.60	74.1	84.9
[ 6 -3 -11 ]	( 2 4 0 )	( 1 -9 3 )	3.294	1.260	2.61	76.5	47.2
[ 6 -3 7 ]	( 2 4 0 )	( 1 9 3 )	3.294	1.260	2.61	47.8	74.4
[ 4 -2 5 ]	( 2 4 0 )	( 4 -2 -4 )	3.294	1.259	2.62	84.8	72.6
[ 4 -2 3 ]	( 2 4 0 )	( -4 -2 4 )	3.294	1.259	2.62	73.0	83.6
[ 6 -3 -8 ]	( 2 4 0 )	( 4 0 3 )	3.294	1.249	2.64	60.9	54.1
[ 2 -1 -4 ]	( 2 4 0 )	( -2 8 -3 )	3.294	1.248	2.64	84.7	45.2
[ 6 -3 4 ]	( 2 4 0 )	( -2 -8 -3 )	3.294	1.248	2.64	45.2	85.5
[ 6 -3 -10 ]	( 2 4 0 )	( 4 -2 3 )	3.294	1.238	2.66	67.5	49.4
[ 2 -1 -2 ]	( 2 4 0 )	( -4 -2 -3 )	3.294	1.238	2.66	54.5	59.4
[ 8 -4 -3 ]	( 2 4 0 )	( 1 5 -4 )	3.294	1.236	2.66	80.3	71.2
[ 8 -4 7 ]	( 2 4 0 )	( -1 5 4 )	3.294	1.236	2.66	71.0	80.8
[ 8 -4 -1 ]	( 2 4 0 )	( -1 -1 -4 )	3.294	1.227	2.68	72.3	76.5
[ 2 -1 5 ]	( 2 4 0 )	( 7 -1 -3 )	3.294	1.226	2.69	63.6	50.8

**Actinolite (240) 308 Zone Axes**a 9.886Å b 18.171Å c 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	d(hk0)	d(hkl)	d Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 6 -3 13 ]	( 2 4 0 )	( -7 -1 3 )	3.294	1.226	2.69	57.2	55.7
[ 4 -2 -3 ]	( 2 4 0 )	( -5 -7 -2 )	3.294	1.216	2.71	30.7	63.9
[ 6 -3 1 ]	( 2 4 0 )	( -3 -7 -3 )	3.294	1.211	2.72	43.7	83.0
[ 2 -1 -4 ]	( 2 4 0 )	( 6 8 1 )	3.294	1.206	2.73	18.7	45.2
[ 8 -4 -5 ]	( 2 4 0 )	( -1 3 -4 )	3.294	1.205	2.73	83.9	66.3
[ 8 -4 1 ]	( 2 4 0 )	( 1 3 4 )	3.294	1.205	2.73	66.8	82.1
[ 6 -3 17 ]	( 2 4 0 )	( -7 3 3 )	3.294	1.205	2.73	70.1	46.5
[ 6 -3 11 ]	( 2 4 0 )	( 7 3 -3 )	3.294	1.205	2.73	51.0	61.3
[ 2 -1 -4 ]	( 2 4 0 )	( -4 4 -3 )	3.294	1.204	2.73	73.9	45.2
[ 6 -3 -4 ]	( 2 4 0 )	( 4 4 3 )	3.294	1.204	2.73	48.6	65.5
[ 4 -2 7 ]	( 2 4 0 )	( -7 -7 2 )	3.294	1.202	2.74	30.7	62.8
[ 8 -4 13 ]	( 2 4 0 )	( 5 -3 -4 )	3.294	1.192	2.76	82.8	65.1
[ 8 -4 7 ]	( 2 4 0 )	( -5 -3 4 )	3.294	1.192	2.76	65.8	80.8
[ 6 -3 1 ]	( 2 4 0 )	( 5 9 -3 )	3.294	1.190	2.77	42.7	83.0
[ 2 -1 -4 ]	( 2 4 0 )	( -6 -4 -2 )	3.294	1.181	2.79	38.9	45.2
[ 4 -2 -3 ]	( 2 4 0 )	( 0 6 -4 )	3.294	1.180	2.79	83.0	63.9
[ 4 -2 3 ]	( 2 4 0 )	( 0 -6 -4 )	3.294	1.180	2.79	63.7	83.6
[ 8 -4 -5 ]	( 2 4 0 )	( 1 7 -4 )	3.294	1.173	2.81	75.3	66.3
[ 8 -4 9 ]	( 2 4 0 )	( 1 -7 -4 )	3.294	1.173	2.81	66.3	75.3
[ 4 -2 7 ]	( 2 4 0 )	( -4 6 4 )	3.294	1.172	2.81	84.1	62.8
[ 4 -2 1 ]	( 2 4 0 )	( 4 6 -4 )	3.294	1.172	2.81	62.7	84.9
[ 8 -4 13 ]	( 2 4 0 )	( 3 -7 -4 )	3.294	1.169	2.82	76.6	65.1
[ 8 -4 -1 ]	( 2 4 0 )	( 3 7 -4 )	3.294	1.169	2.82	65.1	76.5
[ 2 -1 -1 ]	( 2 4 0 )	( -2 0 -4 )	3.294	1.166	2.82	71.0	68.7
[ 8 -4 -7 ]	( 2 4 0 )	( 1 -5 4 )	3.294	1.165	2.83	89.5	61.6
[ 8 -4 3 ]	( 2 4 0 )	( 1 5 4 )	3.294	1.165	2.83	61.7	87.8
[ 2 -1 3 ]	( 2 4 0 )	( -7 -5 3 )	3.294	1.164	2.83	45.5	67.5
[ 6 -3 4 ]	( 2 4 0 )	( 6 8 -3 )	3.294	1.159	2.84	41.2	85.5
[ 2 -1 5 ]	( 2 4 0 )	( -7 -9 1 )	3.294	1.157	2.85	16.4	50.8
[ 6 -3 -2 ]	( 2 4 0 )	( -4 -6 -3 )	3.294	1.155	2.85	43.4	72.1
[ 8 -4 15 ]	( 2 4 0 )	( 5 -5 -4 )	3.294	1.153	2.86	88.4	60.6
[ 8 -4 5 ]	( 2 4 0 )	( -5 -5 4 )	3.294	1.153	2.86	60.7	86.5
[ 2 -1 3 ]	( 2 4 0 )	( 6 0 -4 )	3.294	1.151	2.86	70.1	67.5
[ 2 -1 3 ]	( 2 4 0 )	( 2 -8 -4 )	3.294	1.144	2.88	69.2	67.5
[ 2 -1 -1 ]	( 2 4 0 )	( 2 8 -4 )	3.294	1.144	2.88	68.0	68.7
[ 6 -3 -11 ]	( 2 4 0 )	( 5 -1 3 )	3.294	1.137	2.90	61.3	47.2
[ 2 -1 -3 ]	( 2 4 0 )	( -5 -1 -3 )	3.294	1.137	2.90	55.2	51.6
[ 4 -2 -1 ]	( 2 4 0 )	( 5 9 2 )	3.294	1.137	2.90	26.5	73.9
[ 2 -1 0 ]	( 2 4 0 )	( 2 4 4 )	3.294	1.130	2.92	60.3	79.3
[ 4 -2 5 ]	( 2 4 0 )	( 7 9 -2 )	3.294	1.126	2.93	26.4	72.6
[ 6 -3 16 ]	( 2 4 0 )	( -8 0 3 )	3.294	1.122	2.94	57.9	48.6
[ 2 -1 5 ]	( 2 4 0 )	( 8 6 -2 )	3.294	1.121	2.94	33.1	50.8
[ 6 -3 -7 ]	( 2 4 0 )	( -5 -3 -3 )	3.294	1.120	2.94	49.4	56.7
[ 6 -3 14 ]	( 2 4 0 )	( 8 2 -3 )	3.294	1.113	2.96	51.9	53.2
[ 8 -4 -9 ]	( 2 4 0 )	( 1 -7 4 )	3.294	1.111	2.96	85.4	57.4
[ 8 -4 5 ]	( 2 4 0 )	( 1 7 4 )	3.294	1.111	2.96	57.2	86.5
[ 6 -3 7 ]	( 2 4 0 )	( 7 7 -3 )	3.294	1.111	2.97	40.8	74.4
[ 8 -4 -7 ]	( 2 4 0 )	( -1 -9 4 )	3.294	1.102	2.99	71.0	61.6



**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 8 -4 11 ]	( 2 4 0 )	( -1 9 4 )	3.294	1.102	2.99	62.2	70.0
[ 8 -4 17 ]	( 2 4 0 )	( 5 -7 -4 )	3.294	1.101	2.99	86.5	56.4
[ 8 -4 3 ]	( 2 4 0 )	( 5 7 -4 )	3.294	1.101	2.99	56.3	87.8
[ 8 -4 15 ]	( 2 4 0 )	( 3 -9 -4 )	3.294	1.098	3.00	72.2	60.6
[ 8 -4 -3 ]	( 2 4 0 )	( 3 9 -4 )	3.294	1.098	3.00	61.1	71.2
[ 8 -4 -7 ]	( 2 4 0 )	( 3 -1 4 )	3.294	1.095	3.01	70.0	61.6
[ 8 -4 -5 ]	( 2 4 0 )	( -3 -1 -4 )	3.294	1.095	3.01	64.6	66.3
[ 2 -1 0 ]	( 2 4 0 )	( 4 8 3 )	3.294	1.095	3.01	39.1	79.3
[ 2 -1 4 ]	( 2 4 0 )	( -8 -4 3 )	3.294	1.089	3.03	46.4	58.5
[ 8 -4 -3 ]	( 2 4 0 )	( -3 -3 -4 )	3.294	1.080	3.05	59.4	71.2
[ 8 -4 15 ]	( 2 4 0 )	( 7 -1 -4 )	3.294	1.079	3.05	69.2	60.6
[ 8 -4 13 ]	( 2 4 0 )	( -7 -1 4 )	3.294	1.079	3.05	63.9	65.1
[ 2 -1 -2 ]	( 2 4 0 )	( 6 8 2 )	3.294	1.077	3.06	28.2	59.4
[ 8 -4 17 ]	( 2 4 0 )	( 7 -3 -4 )	3.294	1.064	3.10	74.7	56.4
[ 8 -4 11 ]	( 2 4 0 )	( -7 -3 4 )	3.294	1.064	3.10	58.7	70.0
[ 10 -5 4 ]	( 2 4 0 )	( -2 0 5 )	3.294	1.059	3.11	88.5	88.4
[ 10 -5 7 ]	( 2 4 0 )	( -3 1 5 )	3.294	1.055	3.12	89.6	84.7
[ 2 -1 1 ]	( 2 4 0 )	( 3 1 -5 )	3.294	1.055	3.12	84.8	89.3
[ 6 -3 10 ]	( 2 4 0 )	( -8 -6 3 )	3.294	1.052	3.13	41.4	64.4
[ 10 -5 2 ]	( 2 4 0 )	( 2 2 -5 )	3.294	1.051	3.13	86.7	83.8
[ 10 -5 6 ]	( 2 4 0 )	( 2 -2 -5 )	3.294	1.051	3.13	83.6	87.0
[ 8 -4 -11 ]	( 2 4 0 )	( -1 9 -4 )	3.294	1.050	3.14	80.8	53.5
[ 8 -4 7 ]	( 2 4 0 )	( -1 -9 -4 )	3.294	1.050	3.14	53.5	80.8
[ 8 -4 -11 ]	( 2 4 0 )	( 3 -5 4 )	3.294	1.050	3.14	80.8	53.5
[ 8 -4 -1 ]	( 2 4 0 )	( -3 -5 -4 )	3.294	1.050	3.14	54.6	76.5
[ 6 -3 5 ]	( 2 4 0 )	( 7 9 -3 )	3.294	1.050	3.14	36.9	81.7
[ 10 -5 1 ]	( 2 4 0 )	( 1 1 -5 )	3.294	1.046	3.15	86.5	81.5
[ 10 -5 3 ]	( 2 4 0 )	( -1 1 5 )	3.294	1.046	3.15	81.7	86.1
[ 2 -1 -1 ]	( 2 4 0 )	( 5 7 3 )	3.294	1.043	3.16	39.4	68.7
[ 10 -5 8 ]	( 2 4 0 )	( -4 0 5 )	3.294	1.042	3.16	82.9	82.5
[ 8 -4 1 ]	( 2 4 0 )	( 5 9 -4 )	3.294	1.042	3.16	52.6	82.1
[ 10 -5 9 ]	( 2 4 0 )	( 3 -3 -5 )	3.294	1.041	3.16	85.6	80.2
[ 10 -5 3 ]	( 2 4 0 )	( 3 3 -5 )	3.294	1.041	3.16	80.0	86.1
[ 2 -1 -3 ]	( 2 4 0 )	( 2 -8 4 )	3.294	1.038	3.17	87.6	51.6
[ 2 -1 1 ]	( 2 4 0 )	( 2 8 4 )	3.294	1.038	3.17	51.6	89.3
[ 8 -4 19 ]	( 2 4 0 )	( -7 5 4 )	3.294	1.036	3.18	79.9	52.6
[ 8 -4 9 ]	( 2 4 0 )	( 7 5 -4 )	3.294	1.036	3.18	54.0	75.3
[ 2 -1 2 ]	( 2 4 0 )	( -4 2 5 )	3.294	1.035	3.18	87.7	78.0
[ 10 -5 6 ]	( 2 4 0 )	( 4 2 -5 )	3.294	1.035	3.18	78.2	87.0
[ 6 -3 -10 ]	( 2 4 0 )	( -6 -2 -3 )	3.294	1.035	3.18	50.6	49.4
[ 10 -5 -1 ]	( 2 4 0 )	( 1 3 -5 )	3.294	1.032	3.19	88.7	77.1
[ 2 -1 1 ]	( 2 4 0 )	( -1 3 5 )	3.294	1.032	3.19	77.0	89.3
[ 2 -1 0 ]	( 2 4 0 )	( -2 -4 5 )	3.294	1.031	3.19	82.1	79.3
[ 10 -5 8 ]	( 2 4 0 )	( -2 4 5 )	3.294	1.031	3.19	79.0	82.5
[ 2 -1 1 ]	( 2 4 0 )	( -6 -8 4 )	3.294	1.026	3.21	50.8	89.3
[ 6 -3 17 ]	( 2 4 0 )	( -9 -1 3 )	3.294	1.024	3.22	53.1	46.5
[ 4 -2 -5 ]	( 2 4 0 )	( 4 -2 4 )	3.294	1.020	3.23	69.5	55.4
[ 4 -2 -3 ]	( 2 4 0 )	( -4 -2 -4 )	3.294	1.020	3.23	59.1	63.9

**Actinolite (240) 308 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 10 -5 -2 ]	( 2 4 0 )	( 0 -2 5 )	3.294	1.019	3.23	84.8	74.9
[ 10 -5 2 ]	( 2 4 0 )	( 0 -2 -5 )	3.294	1.019	3.23	75.3	83.8
[ 10 -5 12 ]	( 2 4 0 )	( -4 4 5 )	3.294	1.016	3.24	87.6	73.7
[ 10 -5 4 ]	( 2 4 0 )	( 4 4 -5 )	3.294	1.016	3.24	73.6	88.4
[ 6 -3 -8 ]	( 2 4 0 )	( -6 -4 -3 )	3.294	1.016	3.24	45.3	54.1
[ 10 -5 11 ]	( 2 4 0 )	( 5 -1 -5 )	3.294	1.015	3.25	81.2	75.8
[ 10 -5 9 ]	( 2 4 0 )	( -5 -1 5 )	3.294	1.015	3.25	76.5	80.2
[ 10 -5 11 ]	( 2 4 0 )	( -3 5 5 )	3.294	1.015	3.25	81.1	75.8
[ 10 -5 1 ]	( 2 4 0 )	( -3 -5 5 )	3.294	1.015	3.25	75.5	81.5
[ 2 -1 5 ]	( 2 4 0 )	( 9 3 -3 )	3.294	1.012	3.26	47.6	50.8
[ 8 -4 -13 ]	( 2 4 0 )	( 3 -7 4 )	3.294	1.011	3.26	85.8	49.9
[ 8 -4 1 ]	( 2 4 0 )	( 3 7 4 )	3.294	1.011	3.26	50.4	82.1
[ 4 -2 -7 ]	( 2 4 0 )	( -7 -7 -2 )	3.294	1.010	3.26	30.7	48.3
[ 10 -5 -3 ]	( 2 4 0 )	( 1 5 -5 )	3.294	1.007	3.27	84.1	72.8
[ 10 -5 7 ]	( 2 4 0 )	( 1 -5 -5 )	3.294	1.007	3.27	72.6	84.7
[ 6 -3 8 ]	( 2 4 0 )	( 8 8 -3 )	3.294	1.006	3.28	37.1	70.9
[ 4 -2 9 ]	( 2 4 0 )	( 8 -2 -4 )	3.294	1.004	3.28	68.8	54.5
[ 4 -2 7 ]	( 2 4 0 )	( -8 -2 4 )	3.294	1.004	3.28	58.5	62.8
[ 10 -5 13 ]	( 2 4 0 )	( 5 -3 -5 )	3.294	1.003	3.29	85.9	71.6
[ 10 -5 7 ]	( 2 4 0 )	( -5 -3 5 )	3.294	1.003	3.29	71.9	84.7

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -3 0 ]	( 3 1 0 )	( 0 0 1 )	3.141	5.126	0.61	75.6	87.4
[ 1 -3 4 ]	( 3 1 0 )	( -1 1 1 )	3.141	4.895	0.64	77.3	71.3
[ 1 -3 -2 ]	( 3 1 0 )	( 1 1 -1 )	3.141	4.895	0.64	71.7	76.7
[ 1 -3 -6 ]	( 3 1 0 )	( 0 2 -1 )	3.141	4.464	0.70	82.4	58.2
[ 1 -3 6 ]	( 3 1 0 )	( 0 2 1 )	3.141	4.464	0.70	72.5	62.1
[ 1 -3 2 ]	( 3 1 0 )	( -2 0 1 )	3.141	4.042	0.78	50.5	81.7
[ 1 -3 -4 ]	( 3 1 0 )	( 1 -1 1 )	3.141	4.006	0.78	55.4	66.8
[ 1 -3 2 ]	( 3 1 0 )	( -1 -1 -1 )	3.141	4.006	0.78	49.9	81.7
[ 1 -3 10 ]	( 3 1 0 )	( 1 -3 -1 )	3.141	3.894	0.81	84.2	47.6
[ 1 -3 -8 ]	( 3 1 0 )	( -1 -3 1 )	3.141	3.894	0.81	71.1	51.0
[ 1 -3 8 ]	( 3 1 0 )	( 2 -2 -1 )	3.141	3.693	0.85	59.3	54.2
[ 1 -3 -4 ]	( 3 1 0 )	( -2 -2 1 )	3.141	3.693	0.85	49.3	66.8
[ 1 -3 8 ]	( 3 1 0 )	( 1 3 1 )	3.141	3.399	0.92	52.3	54.2
[ 1 -3 -2 ]	( 3 1 0 )	( -2 0 -1 )	3.141	3.126	1.00	37.3	76.7
[ 1 -3 6 ]	( 3 1 0 )	( 3 -1 -1 )	3.141	3.035	1.03	40.4	62.1
[ 1 -3 0 ]	( 3 1 0 )	( -3 -1 1 )	3.141	3.035	1.03	35.0	87.4
[ 1 -3 -8 ]	( 3 1 0 )	( 2 -2 1 )	3.141	2.956	1.06	45.9	51.0
[ 1 -3 4 ]	( 3 1 0 )	( -2 -2 -1 )	3.141	2.956	1.06	36.1	71.3
[ 1 -3 -6 ]	( 3 1 0 )	( 3 3 -1 )	3.141	2.744	1.14	37.5	58.2
[ 1 -3 2 ]	( 3 1 0 )	( 1 -1 -2 )	3.141	2.620	1.20	89.5	81.7
[ 1 -3 -1 ]	( 3 1 0 )	( 1 1 -2 )	3.141	2.620	1.20	87.7	82.0
[ 1 -3 10 ]	( 3 1 0 )	( -2 -4 -1 )	3.141	2.575	1.22	41.1	47.6
[ 1 -3 1 ]	( 3 1 0 )	( -2 0 2 )	3.141	2.542	1.24	73.9	87.1
[ 1 -3 -3 ]	( 3 1 0 )	( 0 -2 2 )	3.141	2.467	1.27	78.9	71.6
[ 1 -3 3 ]	( 3 1 0 )	( 0 -2 -2 )	3.141	2.467	1.27	73.4	76.4
[ 1 -3 -6 ]	( 3 1 0 )	( 3 -1 1 )	3.141	2.423	1.30	32.6	58.2
[ 1 -3 0 ]	( 3 1 0 )	( -3 -1 -1 )	3.141	2.423	1.30	27.3	87.4
[ 1 -3 4 ]	( 3 1 0 )	( 4 0 -1 )	3.141	2.413	1.30	28.7	71.3
[ 1 -3 10 ]	( 3 1 0 )	( -4 2 1 )	3.141	2.332	1.35	36.6	47.6
[ 1 -3 -2 ]	( 3 1 0 )	( 4 2 -1 )	3.141	2.332	1.35	26.9	76.7
[ 1 -3 -2 ]	( 3 1 0 )	( -1 1 -2 )	3.141	2.314	1.36	63.9	76.7
[ 1 -3 1 ]	( 3 1 0 )	( 1 1 2 )	3.141	2.314	1.36	61.0	87.1
[ 1 -3 3 ]	( 3 1 0 )	( -3 1 2 )	3.141	2.283	1.38	62.5	76.4
[ 1 -3 0 ]	( 3 1 0 )	( 3 1 -2 )	3.141	2.283	1.38	59.6	87.4
[ 1 -3 6 ]	( 3 1 0 )	( -3 -3 -1 )	3.141	2.267	1.39	29.0	62.1
[ 1 -3 7 ]	( 3 1 0 )	( -2 4 2 )	3.141	2.218	1.42	80.9	58.0
[ 1 -3 -5 ]	( 3 1 0 )	( 2 4 -2 )	3.141	2.218	1.42	71.0	62.4
[ 1 -3 -5 ]	( 3 1 0 )	( 1 -3 2 )	3.141	2.177	1.44	68.1	62.4
[ 1 -3 4 ]	( 3 1 0 )	( -1 -3 -2 )	3.141	2.177	1.44	60.2	71.3
[ 1 -3 6 ]	( 3 1 0 )	( 3 -3 -2 )	3.141	2.151	1.46	66.8	62.1
[ 1 -3 -3 ]	( 3 1 0 )	( -3 -3 2 )	3.141	2.151	1.46	58.8	71.6
[ 1 -3 8 ]	( 3 1 0 )	( -1 5 2 )	3.141	2.140	1.47	84.9	54.2
[ 1 -3 -7 ]	( 3 1 0 )	( -1 -5 2 )	3.141	2.140	1.47	83.4	54.4
[ 1 -3 -8 ]	( 3 1 0 )	( 4 4 -1 )	3.141	2.131	1.47	31.2	51.0
[ 1 -3 -1 ]	( 3 1 0 )	( -2 0 -2 )	3.141	2.054	1.53	51.5	82.0
[ 1 -3 -8 ]	( 3 1 0 )	( -1 5 -2 )	3.141	1.963	1.60	72.6	51.0
[ 1 -3 7 ]	( 3 1 0 )	( 1 5 2 )	3.141	1.963	1.60	60.9	58.0
[ 1 -3 -9 ]	( 3 1 0 )	( 0 -6 2 )	3.141	1.956	1.61	85.5	47.8

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 1 -3 9 ]	( 3 1 0 )	( 0 -6 -2 )	3.141	1.956	1.61	72.5	50.8
[ 1 -3 8 ]	( 3 1 0 )	( 5 -1 -1 )	3.141	1.951	1.61	27.0	54.2
[ 1 -3 2 ]	( 3 1 0 )	( 5 1 -1 )	3.141	1.951	1.61	21.8	81.7
[ 1 -3 9 ]	( 3 1 0 )	( -3 5 2 )	3.141	1.944	1.62	71.4	50.8
[ 1 -3 -6 ]	( 3 1 0 )	( 3 5 -2 )	3.141	1.944	1.62	59.7	58.2
[ 1 -3 2 ]	( 3 1 0 )	( -4 -2 -1 )	3.141	1.938	1.62	21.7	81.7
[ 1 -3 -7 ]	( 3 1 0 )	( 2 -4 2 )	3.141	1.871	1.68	60.3	54.4
[ 1 -3 5 ]	( 3 1 0 )	( 2 4 2 )	3.141	1.871	1.68	50.4	66.6
[ 1 -3 -4 ]	( 3 1 0 )	( -5 -3 1 )	3.141	1.866	1.68	22.5	66.8
[ 1 -3 8 ]	( 3 1 0 )	( 4 4 1 )	3.141	1.818	1.73	25.0	54.2
[ 1 -3 -3 ]	( 3 1 0 )	( -3 1 -2 )	3.141	1.781	1.76	45.1	71.6
[ 1 -3 0 ]	( 3 1 0 )	( 3 1 2 )	3.141	1.781	1.76	42.3	87.4
[ 3 -9 2 ]	( 3 1 0 )	( 2 0 -3 )	3.141	1.755	1.79	83.9	88.9
[ 1 -3 4 ]	( 3 1 0 )	( -5 1 2 )	3.141	1.753	1.79	44.3	71.3
[ 1 -3 1 ]	( 3 1 0 )	( 5 1 -2 )	3.141	1.753	1.79	41.5	87.1
[ 3 -9 -2 ]	( 3 1 0 )	( 1 1 -3 )	3.141	1.752	1.79	86.7	83.8
[ 3 -9 4 ]	( 3 1 0 )	( -1 1 3 )	3.141	1.752	1.79	84.8	85.3
[ 1 -3 10 ]	( 3 1 0 )	( -1 -7 -2 )	3.141	1.735	1.81	62.5	47.6
[ 3 -9 8 ]	( 3 1 0 )	( 2 -2 -3 )	3.141	1.723	1.82	85.9	78.1
[ 3 -9 -4 ]	( 3 1 0 )	( -2 -2 3 )	3.141	1.723	1.82	82.1	80.2
[ 1 -3 -9 ]	( 3 1 0 )	( 3 7 -2 )	3.141	1.722	1.82	61.3	47.8
[ 1 -3 -6 ]	( 3 1 0 )	( -3 3 -2 )	3.141	1.716	1.83	49.7	58.2
[ 1 -3 3 ]	( 3 1 0 )	( 3 3 2 )	3.141	1.716	1.83	41.8	76.4
[ 1 -3 7 ]	( 3 1 0 )	( -5 3 2 )	3.141	1.691	1.86	48.8	58.0
[ 1 -3 -2 ]	( 3 1 0 )	( 5 3 -2 )	3.141	1.691	1.86	41.0	76.7
[ 3 -9 -8 ]	( 3 1 0 )	( -1 -3 3 )	3.141	1.691	1.86	88.7	73.3
[ 3 -9 10 ]	( 3 1 0 )	( 1 -3 -3 )	3.141	1.691	1.86	83.1	74.7
[ 1 -3 2 ]	( 3 1 0 )	( 3 -1 -3 )	3.141	1.687	1.86	74.9	81.7
[ 1 -3 0 ]	( 3 1 0 )	( -3 -1 3 )	3.141	1.687	1.86	73.0	87.4
[ 1 -3 -7 ]	( 3 1 0 )	( 4 6 -2 )	3.141	1.681	1.87	51.3	54.4
[ 1 -3 -2 ]	( 3 1 0 )	( 0 -2 3 )	3.141	1.679	1.87	77.7	76.7
[ 1 -3 2 ]	( 3 1 0 )	( 0 -2 -3 )	3.141	1.679	1.87	74.0	81.7
[ 1 -3 -8 ]	( 3 1 0 )	( 5 -1 1 )	3.141	1.654	1.90	23.7	51.0
[ 1 -3 -2 ]	( 3 1 0 )	( -5 -1 -1 )	3.141	1.654	1.90	18.7	76.7
[ 1 -3 6 ]	( 3 1 0 )	( 6 0 -1 )	3.141	1.645	1.91	20.6	62.1
[ 3 -9 14 ]	( 3 1 0 )	( -2 4 3 )	3.141	1.637	1.92	87.9	68.1
[ 3 -9 -10 ]	( 3 1 0 )	( 2 4 -3 )	3.141	1.637	1.92	80.7	70.0
[ 1 -3 0 ]	( 3 1 0 )	( -6 -2 1 )	3.141	1.618	1.94	17.8	87.4
[ 3 -9 -4 ]	( 3 1 0 )	( 1 -1 3 )	3.141	1.607	1.95	67.4	80.2
[ 3 -9 2 ]	( 3 1 0 )	( -1 -1 -3 )	3.141	1.607	1.95	65.5	88.9
[ 1 -3 -9 ]	( 3 1 0 )	( 3 -5 2 )	3.141	1.605	1.96	54.9	47.8
[ 1 -3 6 ]	( 3 1 0 )	( -3 -5 -2 )	3.141	1.605	1.96	43.3	62.1
[ 1 -3 4 ]	( 3 1 0 )	( 5 3 1 )	3.141	1.601	1.96	18.6	71.3
[ 1 -3 -4 ]	( 3 1 0 )	( 0 4 -3 )	3.141	1.599	1.96	80.1	66.8
[ 1 -3 4 ]	( 3 1 0 )	( 0 4 3 )	3.141	1.599	1.96	72.9	71.3
[ 3 -9 4 ]	( 3 1 0 )	( -4 0 3 )	3.141	1.593	1.97	64.9	85.3
[ 1 -3 10 ]	( 3 1 0 )	( 5 -5 -2 )	3.141	1.585	1.98	54.1	47.6
[ 1 -3 -5 ]	( 3 1 0 )	( -5 -5 2 )	3.141	1.585	1.98	42.5	62.4

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -9 -14 ]	( 3 1 0 )	( 1 5 -3 )	3.141	1.584	1.98	89.5	63.8
[ 3 -9 16 ]	( 3 1 0 )	( 1 -5 -3 )	3.141	1.584	1.98	81.8	65.0
[ 3 -9 10 ]	( 3 1 0 )	( 4 -2 -3 )	3.141	1.569	2.00	67.2	74.7
[ 3 -9 -2 ]	( 3 1 0 )	( -4 -2 3 )	3.141	1.569	2.00	63.4	83.8
[ 3 -9 8 ]	( 3 1 0 )	( -1 -3 -3 )	3.141	1.559	2.02	64.4	78.1
[ 1 -3 -6 ]	( 3 1 0 )	( 6 4 -1 )	3.141	1.546	2.03	20.1	58.2
[ 1 -3 -5 ]	( 3 1 0 )	( 4 -2 2 )	3.141	1.540	2.04	41.0	62.4
[ 1 -3 1 ]	( 3 1 0 )	( 4 2 2 )	3.141	1.540	2.04	35.6	87.1
[ 1 -3 3 ]	( 3 1 0 )	( -6 0 2 )	3.141	1.539	2.04	36.7	76.4
[ 1 -3 6 ]	( 3 1 0 )	( 3 -5 -3 )	3.141	1.536	2.05	79.7	62.1
[ 1 -3 -4 ]	( 3 1 0 )	( 3 5 -3 )	3.141	1.536	2.05	71.1	66.8
[ 3 -9 20 ]	( 3 1 0 )	( -2 6 3 )	3.141	1.519	2.07	89.7	59.3
[ 3 -9 -16 ]	( 3 1 0 )	( 2 6 -3 )	3.141	1.519	2.07	79.7	60.9
[ 1 -3 10 ]	( 3 1 0 )	( 5 5 1 )	3.141	1.510	2.08	22.7	47.6
[ 3 -9 16 ]	( 3 1 0 )	( -4 4 3 )	3.141	1.503	2.09	69.9	65.0
[ 3 -9 -8 ]	( 3 1 0 )	( 4 4 -3 )	3.141	1.503	2.09	62.8	73.3
[ 3 -9 -2 ]	( 3 1 0 )	( -2 0 -3 )	3.141	1.494	2.10	58.3	83.8
[ 3 -9 -16 ]	( 3 1 0 )	( -1 5 -3 )	3.141	1.474	2.13	72.8	60.9
[ 3 -9 14 ]	( 3 1 0 )	( 1 5 3 )	3.141	1.474	2.13	64.1	68.1
[ 3 -9 -8 ]	( 3 1 0 )	( -2 2 -3 )	3.141	1.474	2.13	60.7	73.3
[ 3 -9 4 ]	( 3 1 0 )	( 2 2 3 )	3.141	1.474	2.13	56.9	85.3
[ 1 -3 9 ]	( 3 1 0 )	( 3 7 2 )	3.141	1.473	2.13	45.9	50.8
[ 3 -9 8 ]	( 3 1 0 )	( -5 1 3 )	3.141	1.467	2.14	58.1	78.1
[ 3 -9 2 ]	( 3 1 0 )	( 5 1 -3 )	3.141	1.467	2.14	56.2	88.9
[ 1 -3 9 ]	( 3 1 0 )	( 6 -4 -2 )	3.141	1.458	2.15	45.3	50.8
[ 1 -3 -3 ]	( 3 1 0 )	( -6 -4 2 )	3.141	1.458	2.15	35.4	71.6
[ 1 -3 -8 ]	( 3 1 0 )	( 5 7 -2 )	3.141	1.457	2.16	45.1	51.0
[ 3 -9 -20 ]	( 3 1 0 )	( 1 7 -3 )	3.141	1.457	2.16	88.0	55.7
[ 3 -9 22 ]	( 3 1 0 )	( 1 -7 -3 )	3.141	1.457	2.16	80.9	56.7
[ 3 -9 14 ]	( 3 1 0 )	( 5 -3 -3 )	3.141	1.431	2.20	60.8	68.1
[ 3 -9 -4 ]	( 3 1 0 )	( -5 -3 3 )	3.141	1.431	2.20	55.3	80.2
[ 1 -3 -6 ]	( 3 1 0 )	( 6 0 1 )	3.141	1.424	2.21	18.4	58.2
[ 3 -9 -14 ]	( 3 1 0 )	( -2 4 -3 )	3.141	1.419	2.21	63.6	63.8
[ 3 -9 10 ]	( 3 1 0 )	( 2 4 3 )	3.141	1.419	2.21	56.5	74.7
[ 1 -3 8 ]	( 3 1 0 )	( 3 -7 -3 )	3.141	1.419	2.21	82.1	54.2
[ 1 -3 -6 ]	( 3 1 0 )	( 3 7 -3 )	3.141	1.419	2.21	70.9	58.2
[ 3 -9 22 ]	( 3 1 0 )	( -4 6 3 )	3.141	1.410	2.23	72.8	56.7
[ 3 -9 -14 ]	( 3 1 0 )	( 4 6 -3 )	3.141	1.410	2.23	62.9	63.8
[ 1 -3 10 ]	( 3 1 0 )	( -7 1 1 )	3.141	1.408	2.23	21.1	47.6
[ 1 -3 4 ]	( 3 1 0 )	( 7 1 -1 )	3.141	1.408	2.23	16.3	71.3
[ 1 -3 0 ]	( 3 1 0 )	( 6 2 1 )	3.141	1.407	2.23	15.4	87.4
[ 3 -9 26 ]	( 3 1 0 )	( 2 -8 -3 )	3.141	1.389	2.26	88.8	51.9
[ 3 -9 -22 ]	( 3 1 0 )	( 2 8 -3 )	3.141	1.389	2.26	79.1	53.2
[ 1 -3 7 ]	( 3 1 0 )	( -4 -6 -2 )	3.141	1.389	2.26	38.2	58.0
[ 1 -3 -2 ]	( 3 1 0 )	( 7 3 -1 )	3.141	1.375	2.28	15.5	76.7
[ 1 -3 -1 ]	( 3 1 0 )	( -5 -1 -2 )	3.141	1.372	2.29	31.5	82.0
[ 3 -9 -22 ]	( 3 1 0 )	( 1 -7 3 )	3.141	1.370	2.29	75.6	53.2
[ 3 -9 20 ]	( 3 1 0 )	( 1 7 3 )	3.141	1.370	2.29	64.4	59.3

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -3 -8 ]	( 3 1 0 )	( 0 8 -3 )	3.141	1.365	2.30	84.6	51.0
[ 1 -3 8 ]	( 3 1 0 )	( 0 8 3 )	3.141	1.365	2.30	72.4	54.2
[ 1 -3 -2 ]	( 3 1 0 )	( 3 -1 3 )	3.141	1.365	2.30	52.6	76.7
[ 1 -3 0 ]	( 3 1 0 )	( -3 -1 -3 )	3.141	1.365	2.30	50.7	87.4
[ 3 -9 20 ]	( 3 1 0 )	( 5 -5 -3 )	3.141	1.364	2.30	64.0	59.3
[ 3 -9 -10 ]	( 3 1 0 )	( -5 -5 3 )	3.141	1.364	2.30	55.3	70.0
[ 1 -3 6 ]	( 3 1 0 )	( 6 4 1 )	3.141	1.359	2.31	16.9	62.1
[ 1 -3 5 ]	( 3 1 0 )	( -7 1 2 )	3.141	1.352	2.32	33.8	66.6
[ 1 -3 2 ]	( 3 1 0 )	( 7 1 -2 )	3.141	1.352	2.32	31.1	81.7
[ 1 -3 2 ]	( 3 1 0 )	( 5 3 2 )	3.141	1.342	2.34	30.8	81.7
[ 3 -9 -20 ]	( 3 1 0 )	( -2 6 -3 )	3.141	1.340	2.34	66.8	55.7
[ 3 -9 16 ]	( 3 1 0 )	( 2 6 3 )	3.141	1.340	2.34	56.8	65.0
[ 1 -3 4 ]	( 3 1 0 )	( 6 -2 -3 )	3.141	1.333	2.36	52.8	71.3
[ 1 -3 0 ]	( 3 1 0 )	( -6 -2 3 )	3.141	1.333	2.36	49.1	87.4
[ 3 -9 -26 ]	( 3 1 0 )	( 1 9 -3 )	3.141	1.327	2.37	86.7	48.8
[ 3 -9 28 ]	( 3 1 0 )	( 1 -9 -3 )	3.141	1.327	2.37	80.2	49.7
[ 2 -6 1 ]	( 3 1 0 )	( 2 0 -4 )	3.141	1.324	2.37	89.1	89.8
[ 1 -3 8 ]	( 3 1 0 )	( 7 -3 -2 )	3.141	1.323	2.37	38.0	54.2
[ 1 -3 -1 ]	( 3 1 0 )	( -7 -3 2 )	3.141	1.323	2.37	30.3	82.0
[ 1 -3 -8 ]	( 3 1 0 )	( 7 5 -1 )	3.141	1.316	2.39	18.7	51.0
[ 2 -6 -1 ]	( 3 1 0 )	( 1 1 -4 )	3.141	1.311	2.40	83.9	84.7
[ 1 -3 1 ]	( 3 1 0 )	( -1 1 4 )	3.141	1.311	2.40	82.4	87.1
[ 2 -6 3 ]	( 3 1 0 )	( -3 1 4 )	3.141	1.305	2.41	82.1	84.4
[ 1 -3 0 ]	( 3 1 0 )	( 3 1 -4 )	3.141	1.305	2.41	80.6	87.4
[ 3 -9 28 ]	( 3 1 0 )	( -4 8 3 )	3.141	1.304	2.41	75.6	49.7
[ 3 -9 -20 ]	( 3 1 0 )	( 4 8 -3 )	3.141	1.304	2.41	63.5	55.7
[ 1 -3 6 ]	( 3 1 0 )	( -6 4 3 )	3.141	1.292	2.43	55.9	62.1
[ 1 -3 -2 ]	( 3 1 0 )	( 6 4 -3 )	3.141	1.292	2.43	48.7	76.7
[ 1 -3 5 ]	( 3 1 0 )	( 5 5 2 )	3.141	1.287	2.44	32.0	66.6
[ 1 -3 -2 ]	( 3 1 0 )	( -1 -3 4 )	3.141	1.285	2.45	85.4	76.7
[ 2 -6 5 ]	( 3 1 0 )	( 1 -3 -4 )	3.141	1.285	2.45	81.2	79.0
[ 1 -3 -6 ]	( 3 1 0 )	( -3 5 -3 )	3.141	1.281	2.45	58.6	58.2
[ 1 -3 4 ]	( 3 1 0 )	( 3 5 3 )	3.141	1.281	2.45	50.0	71.3
[ 3 -9 26 ]	( 3 1 0 )	( 5 -7 -3 )	3.141	1.281	2.45	67.2	51.9
[ 3 -9 -16 ]	( 3 1 0 )	( -5 -7 3 )	3.141	1.281	2.45	56.1	60.9
[ 1 -3 3 ]	( 3 1 0 )	( 3 -3 -4 )	3.141	1.279	2.46	83.6	76.4
[ 2 -6 -3 ]	( 3 1 0 )	( -3 -3 4 )	3.141	1.279	2.46	79.4	79.3
[ 1 -3 -9 ]	( 3 1 0 )	( 6 8 -2 )	3.141	1.274	2.47	40.5	47.8
[ 2 -6 7 ]	( 3 1 0 )	( 2 -4 -4 )	3.141	1.271	2.47	88.1	73.8
[ 2 -6 -5 ]	( 3 1 0 )	( 2 4 -4 )	3.141	1.271	2.47	86.3	74.1
[ 2 -6 -3 ]	( 3 1 0 )	( 0 2 -4 )	3.141	1.269	2.48	77.2	79.3
[ 2 -6 3 ]	( 3 1 0 )	( 0 2 4 )	3.141	1.269	2.48	74.3	84.4
[ 3 -9 -28 ]	( 3 1 0 )	( -1 9 -3 )	3.141	1.260	2.49	78.2	46.8
[ 3 -9 26 ]	( 3 1 0 )	( 1 9 3 )	3.141	1.260	2.49	65.1	51.9
[ 2 -6 5 ]	( 3 1 0 )	( 4 -2 -4 )	3.141	1.259	2.50	75.5	79.0
[ 2 -6 -1 ]	( 3 1 0 )	( -4 -2 4 )	3.141	1.259	2.50	72.6	84.7
[ 3 -9 -4 ]	( 3 1 0 )	( 4 0 3 )	3.141	1.249	2.51	45.9	80.2
[ 3 -9 -26 ]	( 3 1 0 )	( -2 8 -3 )	3.141	1.248	2.52	69.9	48.8



**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -9 22 ]	( 3 1 0 )	( 2 8 3 )	3.141	1.248	2.52	57.8	56.7
[ 1 -3 -4 ]	( 3 1 0 )	( -7 -1 -1 )	3.141	1.242	2.53	14.8	66.8
[ 3 -9 -10 ]	( 3 1 0 )	( 4 -2 3 )	3.141	1.238	2.54	48.2	70.0
[ 3 -9 2 ]	( 3 1 0 )	( -4 -2 -3 )	3.141	1.238	2.54	44.5	88.9
[ 2 -6 -7 ]	( 3 1 0 )	( -1 -5 4 )	3.141	1.236	2.54	86.9	69.2
[ 1 -3 4 ]	( 3 1 0 )	( 1 -5 -4 )	3.141	1.236	2.54	80.1	71.3
[ 1 -3 8 ]	( 3 1 0 )	( 8 0 -1 )	3.141	1.236	2.54	16.7	54.2
[ 3 -9 10 ]	( 3 1 0 )	( 7 -1 -3 )	3.141	1.226	2.56	46.1	74.7
[ 3 -9 4 ]	( 3 1 0 )	( -7 -1 3 )	3.141	1.226	2.56	44.2	85.3
[ 1 -3 2 ]	( 3 1 0 )	( 8 2 -1 )	3.141	1.224	2.57	13.5	81.7
[ 1 -3 -3 ]	( 3 1 0 )	( -6 0 -2 )	3.141	1.223	2.57	29.1	71.6
[ 1 -3 2 ]	( 3 1 0 )	( 7 3 1 )	3.141	1.219	2.58	13.5	81.7
[ 1 -3 8 ]	( 3 1 0 )	( -5 -7 -2 )	3.141	1.216	2.58	34.5	54.2
[ 1 -3 -8 ]	( 3 1 0 )	( 3 -7 3 )	3.141	1.211	2.59	62.0	51.0
[ 1 -3 6 ]	( 3 1 0 )	( -3 -7 -3 )	3.141	1.211	2.59	50.9	62.1
[ 2 -6 -5 ]	( 3 1 0 )	( -1 3 -4 )	3.141	1.205	2.61	71.1	74.1
[ 1 -3 2 ]	( 3 1 0 )	( 1 3 4 )	3.141	1.205	2.61	66.9	81.7
[ 3 -9 16 ]	( 3 1 0 )	( -7 3 3 )	3.141	1.205	2.61	48.8	65.0
[ 3 -9 -2 ]	( 3 1 0 )	( 7 3 -3 )	3.141	1.205	2.61	43.3	83.8
[ 3 -9 -16 ]	( 3 1 0 )	( 4 -4 3 )	3.141	1.204	2.61	51.3	60.9
[ 3 -9 8 ]	( 3 1 0 )	( -4 -4 -3 )	3.141	1.204	2.61	44.2	78.1
[ 1 -3 -7 ]	( 3 1 0 )	( 7 7 -2 )	3.141	1.202	2.61	33.9	54.4
[ 1 -3 7 ]	( 3 1 0 )	( -8 2 2 )	3.141	1.196	2.63	32.2	58.0
[ 1 -3 1 ]	( 3 1 0 )	( 8 2 -2 )	3.141	1.196	2.63	26.9	87.1
[ 1 -3 -4 ]	( 3 1 0 )	( -8 -4 1 )	3.141	1.192	2.63	14.2	66.8
[ 2 -6 7 ]	( 3 1 0 )	( 5 -3 -4 )	3.141	1.192	2.63	69.6	73.8
[ 1 -3 -1 ]	( 3 1 0 )	( -5 -3 4 )	3.141	1.192	2.63	65.4	82.0
[ 3 -9 32 ]	( 3 1 0 )	( 5 -9 -3 )	3.141	1.190	2.64	70.3	45.7
[ 3 -9 -22 ]	( 3 1 0 )	( 5 9 -3 )	3.141	1.190	2.64	57.2	53.2
[ 1 -3 -9 ]	( 3 1 0 )	( -6 4 -2 )	3.141	1.181	2.66	37.0	47.8
[ 1 -3 3 ]	( 3 1 0 )	( 6 4 2 )	3.141	1.181	2.66	27.3	76.4
[ 2 -6 -9 ]	( 3 1 0 )	( 0 6 -4 )	3.141	1.180	2.66	80.7	64.6
[ 2 -6 9 ]	( 3 1 0 )	( 0 6 4 )	3.141	1.180	2.66	72.8	68.9
[ 1 -3 8 ]	( 3 1 0 )	( -7 -5 -1 )	3.141	1.178	2.67	15.9	54.2
[ 1 -3 -5 ]	( 3 1 0 )	( -1 -7 4 )	3.141	1.173	2.68	88.4	62.4
[ 2 -6 11 ]	( 3 1 0 )	( 1 -7 -4 )	3.141	1.173	2.68	79.4	64.3
[ 2 -6 11 ]	( 3 1 0 )	( 4 -6 -4 )	3.141	1.172	2.68	79.1	64.3
[ 2 -6 -7 ]	( 3 1 0 )	( -4 -6 4 )	3.141	1.172	2.68	71.2	69.2
[ 1 -3 6 ]	( 3 1 0 )	( 3 -7 -4 )	3.141	1.169	2.69	86.8	62.1
[ 2 -6 -9 ]	( 3 1 0 )	( 3 7 -4 )	3.141	1.169	2.69	77.7	64.6
[ 2 -6 -1 ]	( 3 1 0 )	( -2 0 -4 )	3.141	1.166	2.69	62.2	84.7
[ 1 -3 10 ]	( 3 1 0 )	( 8 -4 -2 )	3.141	1.166	2.69	36.6	47.6
[ 1 -3 -2 ]	( 3 1 0 )	( -8 -4 2 )	3.141	1.166	2.69	26.9	76.7
[ 1 -3 -4 ]	( 3 1 0 )	( 1 -5 4 )	3.141	1.165	2.70	73.1	66.8
[ 2 -6 7 ]	( 3 1 0 )	( 1 5 4 )	3.141	1.165	2.70	66.3	73.8
[ 3 -9 22 ]	( 3 1 0 )	( -7 5 3 )	3.141	1.164	2.70	52.1	56.7
[ 3 -9 -8 ]	( 3 1 0 )	( 7 5 -3 )	3.141	1.164	2.70	43.5	73.3
[ 1 -3 10 ]	( 3 1 0 )	( -6 8 3 )	3.141	1.159	2.71	62.7	47.6

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 1 -3 -6 ]	( 3 1 0 )	( 6 8 -3 )	3.141	1.159	2.71	50.5	58.2
[ 3 -9 -22 ]	( 3 1 0 )	( -4 6 -3 )	3.141	1.155	2.72	54.7	53.2
[ 3 -9 14 ]	( 3 1 0 )	( 4 6 3 )	3.141	1.155	2.72	44.8	68.1
[ 1 -3 5 ]	( 3 1 0 )	( -5 5 4 )	3.141	1.153	2.72	71.6	66.6
[ 2 -6 -5 ]	( 3 1 0 )	( 5 5 -4 )	3.141	1.153	2.72	64.9	74.1
[ 2 -6 3 ]	( 3 1 0 )	( 6 0 -4 )	3.141	1.151	2.73	60.8	84.4
[ 2 -6 13 ]	( 3 1 0 )	( 2 -8 -4 )	3.141	1.144	2.75	85.8	60.0
[ 2 -6 -11 ]	( 3 1 0 )	( 2 8 -4 )	3.141	1.144	2.75	84.2	60.3
[ 3 -9 -8 ]	( 3 1 0 )	( 5 -1 3 )	3.141	1.137	2.76	42.3	73.3
[ 3 -9 -2 ]	( 3 1 0 )	( -5 -1 -3 )	3.141	1.137	2.76	40.4	83.8
[ 2 -6 5 ]	( 3 1 0 )	( -2 -4 -4 )	3.141	1.130	2.78	60.4	79.0
[ 3 -9 8 ]	( 3 1 0 )	( 8 0 -3 )	3.141	1.122	2.80	40.5	78.1
[ 1 -3 -5 ]	( 3 1 0 )	( -8 -6 2 )	3.141	1.121	2.80	28.5	62.4
[ 3 -9 -14 ]	( 3 1 0 )	( 5 -3 3 )	3.141	1.120	2.80	45.0	63.8
[ 3 -9 4 ]	( 3 1 0 )	( -5 -3 -3 )	3.141	1.120	2.80	39.5	85.3
[ 3 -9 14 ]	( 3 1 0 )	( 8 -2 -3 )	3.141	1.113	2.82	42.8	68.1
[ 3 -9 2 ]	( 3 1 0 )	( -8 -2 3 )	3.141	1.113	2.82	39.1	88.9
[ 2 -6 -11 ]	( 3 1 0 )	( 1 -7 4 )	3.141	1.111	2.83	75.2	60.3
[ 1 -3 5 ]	( 3 1 0 )	( -1 -7 -4 )	3.141	1.111	2.83	66.2	66.6
[ 3 -9 28 ]	( 3 1 0 )	( 7 -7 -3 )	3.141	1.111	2.83	55.6	49.7
[ 3 -9 -14 ]	( 3 1 0 )	( 7 7 -3 )	3.141	1.111	2.83	44.5	63.8
[ 1 -3 -8 ]	( 3 1 0 )	( 8 0 1 )	3.141	1.105	2.84	15.6	51.0
[ 2 -6 -13 ]	( 3 1 0 )	( 1 9 -4 )	3.141	1.102	2.85	89.7	56.3
[ 1 -3 7 ]	( 3 1 0 )	( -1 9 4 )	3.141	1.102	2.85	78.8	58.0
[ 2 -6 13 ]	( 3 1 0 )	( -5 7 4 )	3.141	1.101	2.85	73.7	60.0
[ 1 -3 -4 ]	( 3 1 0 )	( 5 7 -4 )	3.141	1.101	2.85	64.7	66.8
[ 2 -6 15 ]	( 3 1 0 )	( -3 9 4 )	3.141	1.098	2.86	88.2	56.1
[ 1 -3 -6 ]	( 3 1 0 )	( 3 9 -4 )	3.141	1.098	2.86	77.3	58.2
[ 1 -3 -2 ]	( 3 1 0 )	( -8 -2 -1 )	3.141	1.096	2.86	12.3	76.7
[ 1 -3 6 ]	( 3 1 0 )	( 9 1 -1 )	3.141	1.095	2.87	13.5	62.1
[ 2 -6 -3 ]	( 3 1 0 )	( -3 1 -4 )	3.141	1.095	2.87	57.3	79.3
[ 1 -3 0 ]	( 3 1 0 )	( 3 1 4 )	3.141	1.095	2.87	55.9	87.4
[ 3 -9 -28 ]	( 3 1 0 )	( -4 8 -3 )	3.141	1.095	2.87	58.2	46.8
[ 3 -9 20 ]	( 3 1 0 )	( 4 8 3 )	3.141	1.095	2.87	46.1	59.3
[ 1 -3 -5 ]	( 3 1 0 )	( -7 1 -2 )	3.141	1.095	2.87	27.8	62.4
[ 1 -3 -2 ]	( 3 1 0 )	( 7 1 2 )	3.141	1.095	2.87	25.1	76.7
[ 3 -9 20 ]	( 3 1 0 )	( -8 4 3 )	3.141	1.089	2.88	45.8	59.3
[ 3 -9 -4 ]	( 3 1 0 )	( 8 4 -3 )	3.141	1.089	2.88	38.7	80.2
[ 1 -3 6 ]	( 3 1 0 )	( -9 1 2 )	3.141	1.081	2.90	27.5	62.1
[ 1 -3 3 ]	( 3 1 0 )	( 9 1 -2 )	3.141	1.081	2.90	24.8	76.4
[ 1 -3 -3 ]	( 3 1 0 )	( 3 -3 4 )	3.141	1.080	2.91	59.2	71.6
[ 2 -6 3 ]	( 3 1 0 )	( -3 -3 -4 )	3.141	1.080	2.91	55.0	84.4
[ 1 -3 -8 ]	( 3 1 0 )	( 7 -3 2 )	3.141	1.079	2.91	31.6	51.0
[ 1 -3 1 ]	( 3 1 0 )	( -7 -3 -2 )	3.141	1.079	2.91	24.1	87.1
[ 2 -6 5 ]	( 3 1 0 )	( 7 -1 -4 )	3.141	1.079	2.91	56.1	79.0
[ 1 -3 1 ]	( 3 1 0 )	( -7 -1 4 )	3.141	1.079	2.91	54.6	87.1
[ 1 -3 9 ]	( 3 1 0 )	( 6 8 2 )	3.141	1.077	2.92	31.6	50.8
[ 1 -3 4 ]	( 3 1 0 )	( -8 -4 -1 )	3.141	1.073	2.93	12.3	71.3

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 1 -3 9 ]	( 3 1 0 )	( 9 -3 -2 )	3.141	1.066	2.95	31.3	50.8
[ 1 -3 0 ]	( 3 1 0 )	( -9 -3 2 )	3.141	1.066	2.95	23.8	87.4
[ 1 -3 4 ]	( 3 1 0 )	( -7 3 4 )	3.141	1.064	2.95	58.0	71.3
[ 2 -6 -1 ]	( 3 1 0 )	( 7 3 -4 )	3.141	1.064	2.95	53.8	84.7
[ 5 -15 2 ]	( 3 1 0 )	( -2 0 5 )	3.141	1.059	2.97	87.8	89.6
[ 5 -15 6 ]	( 3 1 0 )	( -3 1 5 )	3.141	1.055	2.98	86.6	86.0
[ 1 -3 0 ]	( 3 1 0 )	( 3 1 -5 )	3.141	1.055	2.98	85.4	87.4
[ 3 -9 26 ]	( 3 1 0 )	( -8 6 3 )	3.141	1.052	2.99	49.2	51.9
[ 3 -9 -10 ]	( 3 1 0 )	( 8 6 -3 )	3.141	1.052	2.99	39.3	70.0
[ 5 -15 -4 ]	( 3 1 0 )	( 2 2 -5 )	3.141	1.051	2.99	89.0	83.1
[ 5 -15 8 ]	( 3 1 0 )	( -2 2 5 )	3.141	1.051	2.99	86.7	83.8
[ 1 -3 -6 ]	( 3 1 0 )	( -9 -5 1 )	3.141	1.050	2.99	13.5	58.2
[ 1 -3 -7 ]	( 3 1 0 )	( 1 -9 4 )	3.141	1.050	2.99	77.2	54.4
[ 2 -6 13 ]	( 3 1 0 )	( -1 -9 -4 )	3.141	1.050	2.99	66.3	60.0
[ 2 -6 -9 ]	( 3 1 0 )	( 3 -5 4 )	3.141	1.050	2.99	61.4	64.6
[ 1 -3 3 ]	( 3 1 0 )	( -3 -5 -4 )	3.141	1.050	2.99	54.7	76.4
[ 3 -9 -20 ]	( 3 1 0 )	( 7 9 -3 )	3.141	1.050	2.99	46.1	55.7
[ 1 -3 4 ]	( 3 1 0 )	( -7 -5 -2 )	3.141	1.050	2.99	24.7	71.3
[ 5 -15 -2 ]	( 3 1 0 )	( -1 -1 5 )	3.141	1.046	3.00	82.2	85.2
[ 5 -15 4 ]	( 3 1 0 )	( -1 1 5 )	3.141	1.046	3.00	81.0	88.2
[ 3 -9 -26 ]	( 3 1 0 )	( -5 7 -3 )	3.141	1.043	3.01	51.7	48.8
[ 3 -9 16 ]	( 3 1 0 )	( 5 7 3 )	3.141	1.043	3.01	40.7	65.0
[ 5 -15 4 ]	( 3 1 0 )	( -4 0 5 )	3.141	1.042	3.01	79.8	88.2
[ 2 -6 -11 ]	( 3 1 0 )	( -5 -9 4 )	3.141	1.042	3.02	64.9	60.3
[ 5 -15 12 ]	( 3 1 0 )	( 3 -3 -5 )	3.141	1.041	3.02	87.7	79.5
[ 5 -15 -6 ]	( 3 1 0 )	( -3 -3 5 )	3.141	1.041	3.02	84.3	80.9
[ 1 -3 -3 ]	( 3 1 0 )	( 9 5 -2 )	3.141	1.038	3.03	24.4	71.6
[ 1 -3 10 ]	( 3 1 0 )	( -8 -6 -1 )	3.141	1.038	3.03	15.4	47.6
[ 2 -6 -13 ]	( 3 1 0 )	( 2 -8 4 )	3.141	1.038	3.03	70.4	56.3
[ 2 -6 11 ]	( 3 1 0 )	( -2 -8 -4 )	3.141	1.038	3.03	60.4	64.3
[ 2 -6 11 ]	( 3 1 0 )	( 7 -5 -4 )	3.141	1.036	3.03	60.2	64.3
[ 1 -3 -2 ]	( 3 1 0 )	( -7 -5 4 )	3.141	1.036	3.03	53.5	76.7
[ 1 -3 2 ]	( 3 1 0 )	( 4 -2 -5 )	3.141	1.035	3.03	81.0	81.7
[ 5 -15 -2 ]	( 3 1 0 )	( -4 -2 5 )	3.141	1.035	3.03	78.7	85.2
[ 1 -3 -4 ]	( 3 1 0 )	( 6 -2 3 )	3.141	1.035	3.03	39.6	66.8
[ 1 -3 0 ]	( 3 1 0 )	( -6 -2 -3 )	3.141	1.035	3.03	35.9	87.4
[ 5 -15 -8 ]	( 3 1 0 )	( -1 -3 5 )	3.141	1.032	3.04	83.4	78.8
[ 1 -3 2 ]	( 3 1 0 )	( 1 -3 -5 )	3.141	1.032	3.04	80.0	81.7
[ 1 -3 -2 ]	( 3 1 0 )	( 2 4 -5 )	3.141	1.031	3.05	89.9	76.7
[ 5 -15 14 ]	( 3 1 0 )	( 2 -4 -5 )	3.141	1.031	3.05	85.6	77.4
[ 2 -6 -9 ]	( 3 1 0 )	( 6 8 -4 )	3.141	1.026	3.06	59.1	64.6
[ 1 -3 4 ]	( 3 1 0 )	( 9 -1 -3 )	3.141	1.024	3.07	37.8	71.3
[ 1 -3 2 ]	( 3 1 0 )	( -9 -1 3 )	3.141	1.024	3.07	35.9	81.7
[ 2 -6 -5 ]	( 3 1 0 )	( 4 -2 4 )	3.141	1.020	3.08	53.2	74.1
[ 2 -6 1 ]	( 3 1 0 )	( -4 -2 -4 )	3.141	1.020	3.08	50.4	89.8
[ 5 -15 -6 ]	( 3 1 0 )	( 0 -2 5 )	3.141	1.019	3.08	76.9	80.9
[ 5 -15 6 ]	( 3 1 0 )	( 0 -2 -5 )	3.141	1.019	3.08	74.6	86.0
[ 5 -15 16 ]	( 3 1 0 )	( 4 -4 -5 )	3.141	1.016	3.09	82.3	75.4

**Actinolite (310) 356 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 5 -15 -8 ]	( 3 1 0 )	( -4 -4 5 )	3.141	1.016	3.09	77.8	78.8
[ 1 -3 -6 ]	( 3 1 0 )	( 6 -4 3 )	3.141	1.016	3.09	42.6	58.2
[ 1 -3 2 ]	( 3 1 0 )	( -6 -4 -3 )	3.141	1.016	3.09	35.5	81.7
[ 5 -15 8 ]	( 3 1 0 )	( 5 -1 -5 )	3.141	1.015	3.09	74.5	83.8
[ 5 -15 2 ]	( 3 1 0 )	( -5 -1 5 )	3.141	1.015	3.09	73.4	89.6
[ 5 -15 18 ]	( 3 1 0 )	( 3 -5 -5 )	3.141	1.015	3.10	88.9	73.3
[ 5 -15 -12 ]	( 3 1 0 )	( -3 -5 5 )	3.141	1.015	3.10	83.4	74.6
[ 1 -3 6 ]	( 3 1 0 )	( 9 -3 -3 )	3.141	1.012	3.10	40.4	62.1
[ 1 -3 0 ]	( 3 1 0 )	( -9 -3 3 )	3.141	1.012	3.10	35.0	87.4
[ 1 -3 -6 ]	( 3 1 0 )	( -3 7 -4 )	3.141	1.011	3.11	63.8	58.2
[ 2 -6 9 ]	( 3 1 0 )	( 3 7 4 )	3.141	1.011	3.11	54.9	68.9
[ 1 -3 7 ]	( 3 1 0 )	( -7 -7 -2 )	3.141	1.010	3.11	26.7	58.0
[ 5 -15 -14 ]	( 3 1 0 )	( -1 -5 5 )	3.141	1.007	3.12	84.7	72.6
[ 5 -15 16 ]	( 3 1 0 )	( 1 -5 -5 )	3.141	1.007	3.12	79.2	75.4
[ 3 -9 32 ]	( 3 1 0 )	( 8 -8 -3 )	3.141	1.006	3.12	52.7	45.7
[ 3 -9 -16 ]	( 3 1 0 )	( -8 -8 3 )	3.141	1.006	3.12	40.7	60.9
[ 2 -6 7 ]	( 3 1 0 )	( 8 -2 -4 )	3.141	1.004	3.13	52.2	73.8
[ 2 -6 1 ]	( 3 1 0 )	( -8 -2 4 )	3.141	1.004	3.13	49.3	89.8
[ 5 -15 14 ]	( 3 1 0 )	( 5 -3 -5 )	3.141	1.003	3.13	75.8	77.4
[ 5 -15 -4 ]	( 3 1 0 )	( 5 3 -5 )	3.141	1.003	3.13	72.4	83.1

**Actinolite (170) 270 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 7 -1 0 ]	( 1 7 0 )	( 0 0 1 )	2.505	5.126	0.49	86.2	75.9
[ 7 -1 8 ]	( 1 7 0 )	( -1 1 1 )	2.505	4.895	0.51	79.1	70.2
[ 7 -1 6 ]	( 1 7 0 )	( -1 -1 1 )	2.505	4.895	0.51	70.7	78.3
[ 7 -1 -2 ]	( 1 7 0 )	( 0 2 -1 )	2.505	4.464	0.56	65.4	68.0
[ 7 -1 2 ]	( 1 7 0 )	( 0 -2 -1 )	2.505	4.464	0.56	57.9	84.4
[ 7 -1 14 ]	( 1 7 0 )	( 2 0 -1 )	2.505	4.042	0.62	80.3	50.7
[ 7 -1 -8 ]	( 1 7 0 )	( 1 -1 1 )	2.505	4.006	0.63	87.0	49.2
[ 7 -1 -6 ]	( 1 7 0 )	( 1 1 1 )	2.505	4.006	0.63	68.0	54.6
[ 7 -1 10 ]	( 1 7 0 )	( -1 3 1 )	2.505	3.894	0.64	55.7	62.9
[ 7 -1 4 ]	( 1 7 0 )	( -1 -3 1 )	2.505	3.894	0.64	47.4	86.9
[ 7 -1 16 ]	( 1 7 0 )	( -2 2 1 )	2.505	3.693	0.68	76.2	45.9
[ 7 -1 12 ]	( 1 7 0 )	( -2 -2 1 )	2.505	3.693	0.68	56.8	56.4
[ 7 -1 -4 ]	( 1 7 0 )	( 0 4 -1 )	2.505	3.400	0.74	47.3	60.9
[ 7 -1 4 ]	( 1 7 0 )	( 0 -4 -1 )	2.505	3.400	0.74	40.0	86.9
[ 7 -1 -4 ]	( 1 7 0 )	( 1 3 1 )	2.505	3.399	0.74	47.3	60.9
[ 7 -1 10 ]	( 1 7 0 )	( -2 -4 1 )	2.505	3.020	0.83	39.8	62.9
[ 7 -1 12 ]	( 1 7 0 )	( -1 5 1 )	2.505	2.956	0.85	42.1	56.4
[ 7 -1 2 ]	( 1 7 0 )	( -1 -5 1 )	2.505	2.956	0.85	34.1	84.4
[ 7 -1 -2 ]	( 1 7 0 )	( 1 5 1 )	2.505	2.722	0.92	33.7	68.0
[ 7 -1 4 ]	( 1 7 0 )	( 1 -1 -2 )	2.505	2.620	0.96	82.2	86.9
[ 7 -1 3 ]	( 1 7 0 )	( 1 1 -2 )	2.505	2.620	0.96	81.8	88.7
[ 7 -1 -6 ]	( 1 7 0 )	( 0 -6 1 )	2.505	2.607	0.96	37.1	54.6
[ 7 -1 6 ]	( 1 7 0 )	( 0 6 1 )	2.505	2.607	0.96	30.2	78.3
[ 7 -1 7 ]	( 1 7 0 )	( 2 0 -2 )	2.505	2.542	0.99	85.8	74.2
[ 7 -1 -1 ]	( 1 7 0 )	( 0 2 -2 )	2.505	2.467	1.02	78.6	71.8
[ 7 -1 1 ]	( 1 7 0 )	( 0 -2 -2 )	2.505	2.467	1.02	71.0	80.1
[ 7 -1 8 ]	( 1 7 0 )	( 2 6 -1 )	2.505	2.424	1.03	29.1	70.2
[ 7 -1 16 ]	( 1 7 0 )	( -3 -5 1 )	2.505	2.349	1.07	38.2	45.9
[ 7 -1 -4 ]	( 1 7 0 )	( 1 -1 2 )	2.505	2.314	1.08	90.0	60.9
[ 7 -1 -3 ]	( 1 7 0 )	( -1 -1 -2 )	2.505	2.314	1.08	75.8	64.3
[ 7 -1 14 ]	( 1 7 0 )	( -1 7 1 )	2.505	2.312	1.08	34.3	50.7
[ 7 -1 11 ]	( 1 7 0 )	( 3 -1 -2 )	2.505	2.283	1.10	89.6	59.5
[ 7 -1 10 ]	( 1 7 0 )	( -3 -1 2 )	2.505	2.283	1.10	75.5	62.9
[ 7 -1 9 ]	( 1 7 0 )	( -2 4 2 )	2.505	2.218	1.13	66.0	66.5
[ 7 -1 5 ]	( 1 7 0 )	( 2 4 -2 )	2.505	2.218	1.13	57.6	82.6
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 -1 )	2.505	2.194	1.14	25.3	75.9
[ 7 -1 -5 ]	( 1 7 0 )	( -1 3 -2 )	2.505	2.177	1.15	76.6	57.7
[ 7 -1 -2 ]	( 1 7 0 )	( 1 3 2 )	2.505	2.177	1.15	62.4	68.0
[ 7 -1 -8 ]	( 1 7 0 )	( -2 -6 -1 )	2.505	2.175	1.15	32.8	49.2
[ 7 -1 12 ]	( 1 7 0 )	( -3 3 2 )	2.505	2.151	1.16	77.2	56.4
[ 7 -1 9 ]	( 1 7 0 )	( -3 -3 2 )	2.505	2.151	1.16	62.4	66.5
[ 7 -1 6 ]	( 1 7 0 )	( -1 5 2 )	2.505	2.140	1.17	55.6	78.3
[ 7 -1 1 ]	( 1 7 0 )	( -1 -5 2 )	2.505	2.140	1.17	55.1	80.1
[ 7 -1 -8 ]	( 1 7 0 )	( 0 8 -1 )	2.505	2.077	1.21	31.2	49.2
[ 7 -1 8 ]	( 1 7 0 )	( 0 -8 -1 )	2.505	2.077	1.21	24.6	70.2
[ 7 -1 -7 ]	( 1 7 0 )	( 2 0 2 )	2.505	2.054	1.22	80.5	51.8
[ 7 -1 13 ]	( 1 7 0 )	( -4 -2 2 )	2.505	1.973	1.27	68.0	53.5
[ 7 -1 -6 ]	( 1 7 0 )	( -1 5 -2 )	2.505	1.963	1.28	65.4	54.6

**Actinolite (170) 270 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 7 -1 -1 ]	( 1 7 0 )	( -1 -5 -2 )	2.505	1.963	1.28	51.3	71.8
[ 7 -1 -3 ]	( 1 7 0 )	( 0 6 -2 )	2.505	1.956	1.28	55.0	64.3
[ 7 -1 3 ]	( 1 7 0 )	( 0 -6 -2 )	2.505	1.956	1.28	47.6	88.7
[ 7 -1 13 ]	( 1 7 0 )	( -3 5 2 )	2.505	1.944	1.29	66.0	53.5
[ 7 -1 8 ]	( 1 7 0 )	( -3 -5 2 )	2.505	1.944	1.29	51.3	70.2
[ 7 -1 16 ]	( 1 7 0 )	( -1 9 1 )	2.505	1.876	1.34	29.6	45.9
[ 7 -1 -2 ]	( 1 7 0 )	( -1 -9 1 )	2.505	1.876	1.34	22.5	68.0
[ 7 -1 -9 ]	( 1 7 0 )	( -2 4 -2 )	2.505	1.871	1.34	75.7	46.8
[ 7 -1 -5 ]	( 1 7 0 )	( -2 -4 -2 )	2.505	1.871	1.34	56.8	57.7
[ 7 -1 7 ]	( 1 7 0 )	( -1 7 2 )	2.505	1.854	1.35	46.7	74.2
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 2 )	2.505	1.854	1.35	46.2	75.9
[ 7 -1 -6 ]	( 1 7 0 )	( 2 8 1 )	2.505	1.837	1.36	25.2	54.6
[ 7 -1 2 ]	( 1 7 0 )	( -1 -9 -1 )	2.505	1.812	1.38	20.1	84.4
[ 21 -3 14 ]	( 1 7 0 )	( 2 0 -3 )	2.505	1.755	1.43	88.4	84.0
[ 7 -1 2 ]	( 1 7 0 )	( -1 -1 3 )	2.505	1.752	1.43	85.8	84.4
[ 21 -3 8 ]	( 1 7 0 )	( -1 1 3 )	2.505	1.752	1.43	83.5	87.3
[ 7 -1 -7 ]	( 1 7 0 )	( 1 -7 2 )	2.505	1.735	1.44	56.4	51.8
[ 7 -1 0 ]	( 1 7 0 )	( 1 7 2 )	2.505	1.735	1.44	42.5	75.9
[ 21 -3 16 ]	( 1 7 0 )	( 2 -2 -3 )	2.505	1.723	1.45	81.1	81.2
[ 7 -1 4 ]	( 1 7 0 )	( 2 2 -3 )	2.505	1.723	1.45	77.8	86.9
[ 7 -1 14 ]	( 1 7 0 )	( 3 -7 -2 )	2.505	1.722	1.45	57.1	50.7
[ 7 -1 7 ]	( 1 7 0 )	( 3 7 -2 )	2.505	1.722	1.45	42.5	74.2
[ 7 -1 -9 ]	( 1 7 0 )	( -3 -3 -2 )	2.505	1.716	1.46	62.7	46.8
[ 7 -1 16 ]	( 1 7 0 )	( -5 -3 2 )	2.505	1.691	1.48	62.8	45.9
[ 21 -3 4 ]	( 1 7 0 )	( 1 3 -3 )	2.505	1.691	1.48	75.5	81.5
[ 21 -3 10 ]	( 1 7 0 )	( 1 -3 -3 )	2.505	1.691	1.48	73.2	89.8
[ 7 -1 12 ]	( 1 7 0 )	( 3 9 -1 )	2.505	1.688	1.48	22.5	56.4
[ 21 -3 22 ]	( 1 7 0 )	( 3 -1 -3 )	2.505	1.687	1.48	89.1	72.9
[ 21 -3 20 ]	( 1 7 0 )	( 3 1 -3 )	2.505	1.687	1.48	80.6	75.6
[ 7 -1 11 ]	( 1 7 0 )	( -4 -6 2 )	2.505	1.681	1.49	47.4	59.5
[ 21 -3 -2 ]	( 1 7 0 )	( 0 2 -3 )	2.505	1.679	1.49	83.5	73.2
[ 21 -3 2 ]	( 1 7 0 )	( 0 -2 -3 )	2.505	1.679	1.49	75.9	78.7
[ 7 -1 6 ]	( 1 7 0 )	( -2 4 3 )	2.505	1.637	1.53	71.2	78.3
[ 21 -3 10 ]	( 1 7 0 )	( 2 4 -3 )	2.505	1.637	1.53	68.0	89.8
[ 21 -3 -8 ]	( 1 7 0 )	( -1 1 -3 )	2.505	1.607	1.56	88.8	65.5
[ 7 -1 -2 ]	( 1 7 0 )	( 1 1 3 )	2.505	1.607	1.56	79.0	68.0
[ 7 -1 8 ]	( 1 7 0 )	( 1 -9 -2 )	2.505	1.606	1.56	40.1	70.2
[ 7 -1 -1 ]	( 1 7 0 )	( 1 9 -2 )	2.505	1.606	1.56	39.6	71.8
[ 7 -1 -8 ]	( 1 7 0 )	( 3 5 2 )	2.505	1.605	1.56	53.2	49.2
[ 21 -3 -4 ]	( 1 7 0 )	( 0 -4 3 )	2.505	1.599	1.57	73.9	70.5
[ 21 -3 4 ]	( 1 7 0 )	( 0 4 3 )	2.505	1.599	1.57	66.3	81.5
[ 21 -3 28 ]	( 1 7 0 )	( -4 0 3 )	2.505	1.593	1.57	83.5	65.3
[ 7 -1 15 ]	( 1 7 0 )	( 5 5 -2 )	2.505	1.585	1.58	53.4	48.2
[ 21 -3 2 ]	( 1 7 0 )	( -1 -5 3 )	2.505	1.584	1.58	66.2	78.7
[ 7 -1 4 ]	( 1 7 0 )	( -1 5 3 )	2.505	1.584	1.58	64.0	86.9
[ 7 -1 10 ]	( 1 7 0 )	( 4 -2 -3 )	2.505	1.569	1.60	86.8	62.9
[ 21 -3 26 ]	( 1 7 0 )	( 4 2 -3 )	2.505	1.569	1.60	73.9	67.7
[ 21 -3 -10 ]	( 1 7 0 )	( 1 -3 3 )	2.505	1.559	1.61	81.6	63.2



**Actinolite (170) 270 Zone Axes**a 9.886Å b 18.171Å c 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	d(hk0)	d(hkl)	d Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 21 -3 -4 ]	( 1 7 0 )	( 1 3 3 )	2.505	1.559	1.61	69.4	70.5
[ 21 -3 26 ]	( 1 7 0 )	( 3 -5 -3 )	2.505	1.536	1.63	70.1	67.7
[ 21 -3 16 ]	( 1 7 0 )	( 3 5 -3 )	2.505	1.536	1.63	61.7	81.2
[ 7 -1 -8 ]	( 1 7 0 )	( 1 -9 2 )	2.505	1.527	1.64	49.6	49.2
[ 7 -1 1 ]	( 1 7 0 )	( 1 9 2 )	2.505	1.527	1.64	35.8	80.1
[ 7 -1 -3 ]	( 1 7 0 )	( -2 -8 -2 )	2.505	1.523	1.64	39.7	64.3
[ 21 -3 20 ]	( 1 7 0 )	( -2 6 3 )	2.505	1.519	1.65	62.6	75.6
[ 21 -3 8 ]	( 1 7 0 )	( -2 -6 3 )	2.505	1.519	1.65	59.4	87.3
[ 7 -1 15 ]	( 1 7 0 )	( -3 9 2 )	2.505	1.518	1.65	50.2	48.2
[ 7 -1 6 ]	( 1 7 0 )	( -3 -9 2 )	2.505	1.518	1.65	35.8	78.3
[ 21 -3 32 ]	( 1 7 0 )	( 4 -4 -3 )	2.505	1.503	1.67	77.7	60.6
[ 7 -1 8 ]	( 1 7 0 )	( 4 4 -3 )	2.505	1.503	1.67	64.8	70.2
[ 21 -3 -14 ]	( 1 7 0 )	( -2 0 -3 )	2.505	1.494	1.68	82.0	58.7
[ 7 -1 -4 ]	( 1 7 0 )	( -1 5 -3 )	2.505	1.474	1.70	72.9	60.9
[ 21 -3 -2 ]	( 1 7 0 )	( -1 -5 -3 )	2.505	1.474	1.70	60.7	73.2
[ 21 -3 -16 ]	( 1 7 0 )	( -2 2 -3 )	2.505	1.474	1.70	88.9	56.6
[ 7 -1 -4 ]	( 1 7 0 )	( -2 -2 -3 )	2.505	1.474	1.70	72.9	60.9
[ 7 -1 -7 ]	( 1 7 0 )	( 3 7 2 )	2.505	1.473	1.70	45.0	51.8
[ 7 -1 12 ]	( 1 7 0 )	( -5 1 3 )	2.505	1.467	1.71	86.2	56.4
[ 21 -3 34 ]	( 1 7 0 )	( 5 1 -3 )	2.505	1.467	1.71	77.2	58.5
[ 7 -1 14 ]	( 1 7 0 )	( 5 7 -2 )	2.505	1.457	1.72	45.3	50.7
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 3 )	2.505	1.457	1.72	58.3	75.9
[ 21 -3 14 ]	( 1 7 0 )	( -1 7 3 )	2.505	1.457	1.72	56.1	84.0
[ 21 -3 38 ]	( 1 7 0 )	( 5 -3 -3 )	2.505	1.431	1.75	85.0	54.4
[ 21 -3 32 ]	( 1 7 0 )	( 5 3 -3 )	2.505	1.431	1.75	68.4	60.6
[ 7 -1 -6 ]	( 1 7 0 )	( 2 -4 3 )	2.505	1.419	1.77	80.3	54.6
[ 21 -3 -10 ]	( 1 7 0 )	( 2 4 3 )	2.505	1.419	1.77	64.3	63.2
[ 21 -3 28 ]	( 1 7 0 )	( 3 -7 -3 )	2.505	1.419	1.77	62.2	65.3
[ 21 -3 14 ]	( 1 7 0 )	( 3 7 -3 )	2.505	1.419	1.77	53.9	84.0
[ 21 -3 34 ]	( 1 7 0 )	( 4 -6 -3 )	2.505	1.410	1.78	69.5	58.5
[ 21 -3 22 ]	( 1 7 0 )	( 4 6 -3 )	2.505	1.410	1.78	56.7	72.9
[ 21 -3 22 ]	( 1 7 0 )	( 2 -8 -3 )	2.505	1.389	1.80	55.4	72.9
[ 7 -1 2 ]	( 1 7 0 )	( 2 8 -3 )	2.505	1.389	1.80	52.2	84.4
[ 21 -3 -14 ]	( 1 7 0 )	( -1 7 -3 )	2.505	1.370	1.83	65.2	58.7
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 -3 )	2.505	1.370	1.83	53.1	75.9
[ 21 -3 -8 ]	( 1 7 0 )	( 0 8 -3 )	2.505	1.365	1.83	58.2	65.5
[ 21 -3 8 ]	( 1 7 0 )	( 0 -8 -3 )	2.505	1.365	1.83	50.7	87.3
[ 21 -3 -22 ]	( 1 7 0 )	( 3 -1 3 )	2.505	1.365	1.84	84.7	50.9
[ 21 -3 -20 ]	( 1 7 0 )	( -3 -1 -3 )	2.505	1.365	1.84	76.3	52.7
[ 21 -3 40 ]	( 1 7 0 )	( -5 5 3 )	2.505	1.364	1.84	76.8	52.5
[ 7 -1 10 ]	( 1 7 0 )	( -5 -5 3 )	2.505	1.364	1.84	60.2	62.9
[ 21 -3 -8 ]	( 1 7 0 )	( 2 6 3 )	2.505	1.340	1.87	56.5	65.5
[ 7 -1 -6 ]	( 1 7 0 )	( -3 -9 -2 )	2.505	1.339	1.87	38.3	54.6
[ 21 -3 44 ]	( 1 7 0 )	( 6 -2 -3 )	2.505	1.333	1.88	88.5	49.0
[ 21 -3 40 ]	( 1 7 0 )	( -6 -2 3 )	2.505	1.333	1.88	72.0	52.5
[ 7 -1 13 ]	( 1 7 0 )	( 5 9 -2 )	2.505	1.327	1.89	38.6	53.5
[ 21 -3 -2 ]	( 1 7 0 )	( 1 9 -3 )	2.505	1.327	1.89	51.7	73.2
[ 21 -3 16 ]	( 1 7 0 )	( 1 -9 -3 )	2.505	1.327	1.89	49.5	81.2

**Actinolite (170) 270 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 14 -2 7 ]	( 1 7 0 )	( 2 0 -4 )	2.505	1.324	1.89	89.8	89.1
[ 14 -2 3 ]	( 1 7 0 )	( -1 -1 4 )	2.505	1.311	1.91	87.8	82.2
[ 7 -1 2 ]	( 1 7 0 )	( -1 1 4 )	2.505	1.311	1.91	84.2	84.4
[ 14 -2 11 ]	( 1 7 0 )	( -3 1 4 )	2.505	1.305	1.92	88.3	80.4
[ 7 -1 5 ]	( 1 7 0 )	( -3 -1 4 )	2.505	1.305	1.92	83.7	82.6
[ 7 -1 12 ]	( 1 7 0 )	( -4 8 3 )	2.505	1.304	1.92	62.5	56.4
[ 21 -3 20 ]	( 1 7 0 )	( 4 8 -3 )	2.505	1.304	1.92	49.7	75.6
[ 21 -3 46 ]	( 1 7 0 )	( 6 -4 -3 )	2.505	1.292	1.94	83.6	47.4
[ 21 -3 38 ]	( 1 7 0 )	( 6 4 -3 )	2.505	1.292	1.94	64.1	54.4
[ 7 -1 1 ]	( 1 7 0 )	( -1 -3 4 )	2.505	1.285	1.95	80.0	80.1
[ 14 -2 5 ]	( 1 7 0 )	( -1 3 4 )	2.505	1.285	1.95	76.4	86.5
[ 21 -3 -26 ]	( 1 7 0 )	( -3 5 -3 )	2.505	1.281	1.96	79.3	47.6
[ 21 -3 -16 ]	( 1 7 0 )	( -3 -5 -3 )	2.505	1.281	1.96	60.3	56.6
[ 7 -1 14 ]	( 1 7 0 )	( -5 7 3 )	2.505	1.281	1.96	69.5	50.7
[ 21 -3 28 ]	( 1 7 0 )	( -5 -7 3 )	2.505	1.281	1.96	53.0	65.3
[ 7 -1 6 ]	( 1 7 0 )	( -3 3 4 )	2.505	1.279	1.96	80.5	78.3
[ 14 -2 9 ]	( 1 7 0 )	( -3 -3 4 )	2.505	1.279	1.96	75.9	84.7
[ 14 -2 9 ]	( 1 7 0 )	( -2 4 4 )	2.505	1.271	1.97	74.6	84.7
[ 14 -2 5 ]	( 1 7 0 )	( -2 -4 4 )	2.505	1.271	1.97	74.1	86.5
[ 14 -2 1 ]	( 1 7 0 )	( 0 -2 -4 )	2.505	1.269	1.97	78.5	78.0
[ 21 -3 -16 ]	( 1 7 0 )	( -1 9 -3 )	2.505	1.260	1.99	58.7	56.6
[ 21 -3 2 ]	( 1 7 0 )	( -1 -9 -3 )	2.505	1.260	1.99	46.7	78.7
[ 14 -2 15 ]	( 1 7 0 )	( -4 2 4 )	2.505	1.259	1.99	86.5	72.2
[ 14 -2 13 ]	( 1 7 0 )	( -4 -2 4 )	2.505	1.259	1.99	78.1	76.3
[ 21 -3 -28 ]	( 1 7 0 )	( 4 0 3 )	2.505	1.249	2.01	79.3	46.0
[ 21 -3 -22 ]	( 1 7 0 )	( 2 -8 3 )	2.505	1.248	2.01	65.6	50.9
[ 7 -1 -2 ]	( 1 7 0 )	( 2 8 3 )	2.505	1.248	2.01	49.7	68.0
[ 21 -3 -26 ]	( 1 7 0 )	( -4 -2 -3 )	2.505	1.238	2.02	71.7	47.6
[ 14 -2 1 ]	( 1 7 0 )	( 1 5 -4 )	2.505	1.236	2.03	72.6	78.0
[ 7 -1 3 ]	( 1 7 0 )	( 1 -5 -4 )	2.505	1.236	2.03	69.0	88.7
[ 7 -1 16 ]	( 1 7 0 )	( 7 1 -3 )	2.505	1.226	2.04	75.4	45.9
[ 21 -3 -28 ]	( 1 7 0 )	( 3 -7 3 )	2.505	1.211	2.07	72.3	46.0
[ 21 -3 -14 ]	( 1 7 0 )	( 3 7 3 )	2.505	1.211	2.07	53.4	58.7
[ 14 -2 -5 ]	( 1 7 0 )	( 1 -3 4 )	2.505	1.205	2.08	84.4	66.1
[ 7 -1 -1 ]	( 1 7 0 )	( 1 3 4 )	2.505	1.205	2.08	73.3	71.8
[ 21 -3 46 ]	( 1 7 0 )	( -7 -3 3 )	2.505	1.205	2.08	67.9	47.4
[ 7 -1 -8 ]	( 1 7 0 )	( 4 4 3 )	2.505	1.204	2.08	64.3	49.2
[ 14 -2 19 ]	( 1 7 0 )	( 5 -3 -4 )	2.505	1.192	2.10	84.9	64.7
[ 7 -1 8 ]	( 1 7 0 )	( 5 3 -4 )	2.505	1.192	2.10	73.0	70.2
[ 21 -3 44 ]	( 1 7 0 )	( 5 -9 -3 )	2.505	1.190	2.11	63.1	49.0
[ 21 -3 26 ]	( 1 7 0 )	( 5 9 -3 )	2.505	1.190	2.11	46.7	67.7
[ 14 -2 -3 ]	( 1 7 0 )	( 0 -6 4 )	2.505	1.180	2.12	71.6	69.9
[ 14 -2 3 ]	( 1 7 0 )	( 0 6 4 )	2.505	1.180	2.12	64.1	82.2
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 4 )	2.505	1.173	2.14	65.9	75.9
[ 14 -2 7 ]	( 1 7 0 )	( -1 7 4 )	2.505	1.173	2.14	62.3	89.1
[ 14 -2 17 ]	( 1 7 0 )	( 4 -6 -4 )	2.505	1.172	2.14	72.2	68.3
[ 14 -2 11 ]	( 1 7 0 )	( 4 6 -4 )	2.505	1.172	2.14	63.8	80.4
[ 7 -1 7 ]	( 1 7 0 )	( 3 -7 -4 )	2.505	1.169	2.14	66.5	74.2

**Actinolite (170) 270 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 14 -2 7 ]	( 1 7 0 )	( 3 7 -4 )	2.505	1.169	2.14	62.0	89.1
[ 14 -2 -7 ]	( 1 7 0 )	( -2 0 -4 )	2.505	1.166	2.15	82.9	62.6
[ 7 -1 -3 ]	( 1 7 0 )	( -1 5 -4 )	2.505	1.165	2.15	77.4	64.3
[ 14 -2 -1 ]	( 1 7 0 )	( -1 -5 -4 )	2.505	1.165	2.15	66.3	73.8
[ 21 -3 44 ]	( 1 7 0 )	( 7 5 -3 )	2.505	1.164	2.15	60.8	49.0
[ 21 -3 34 ]	( 1 7 0 )	( -6 -8 3 )	2.505	1.159	2.16	50.4	58.5
[ 21 -3 -22 ]	( 1 7 0 )	( 4 6 3 )	2.505	1.155	2.17	57.4	50.9
[ 7 -1 10 ]	( 1 7 0 )	( 5 -5 -4 )	2.505	1.153	2.17	78.0	62.9
[ 14 -2 15 ]	( 1 7 0 )	( 5 5 -4 )	2.505	1.153	2.17	66.1	72.2
[ 14 -2 21 ]	( 1 7 0 )	( -6 0 4 )	2.505	1.151	2.18	82.5	61.2
[ 14 -2 11 ]	( 1 7 0 )	( -2 8 4 )	2.505	1.144	2.19	61.2	80.4
[ 14 -2 3 ]	( 1 7 0 )	( -2 -8 4 )	2.505	1.144	2.19	60.7	82.2
[ 14 -2 -9 ]	( 1 7 0 )	( 2 -4 4 )	2.505	1.130	2.22	83.1	59.2
[ 14 -2 -5 ]	( 1 7 0 )	( 2 4 4 )	2.505	1.130	2.22	68.9	66.1
[ 14 -2 -7 ]	( 1 7 0 )	( -1 7 -4 )	2.505	1.111	2.25	71.0	62.6
[ 7 -1 0 ]	( 1 7 0 )	( -1 -7 -4 )	2.505	1.111	2.25	59.9	75.9
[ 7 -1 14 ]	( 1 7 0 )	( 7 7 -3 )	2.505	1.111	2.26	54.3	50.7
[ 14 -2 -1 ]	( 1 7 0 )	( 1 9 -4 )	2.505	1.102	2.27	60.0	73.8
[ 7 -1 4 ]	( 1 7 0 )	( 1 -9 -4 )	2.505	1.102	2.27	56.4	86.9
[ 14 -2 21 ]	( 1 7 0 )	( -5 7 4 )	2.505	1.101	2.28	71.6	61.2
[ 7 -1 7 ]	( 1 7 0 )	( -5 -7 4 )	2.505	1.101	2.28	59.8	74.2
[ 14 -2 15 ]	( 1 7 0 )	( -3 9 4 )	2.505	1.098	2.28	60.6	72.2
[ 7 -1 3 ]	( 1 7 0 )	( -3 -9 4 )	2.505	1.098	2.28	56.0	88.7
[ 14 -2 -11 ]	( 1 7 0 )	( 3 -1 4 )	2.505	1.095	2.29	84.9	56.1
[ 7 -1 -5 ]	( 1 7 0 )	( -3 -1 -4 )	2.505	1.095	2.29	78.2	57.7
[ 21 -3 -20 ]	( 1 7 0 )	( 4 8 3 )	2.505	1.095	2.29	51.2	52.7
[ 14 -2 25 ]	( 1 7 0 )	( -7 1 4 )	2.505	1.079	2.32	84.6	54.9
[ 7 -1 12 ]	( 1 7 0 )	( 7 1 -4 )	2.505	1.079	2.32	78.0	56.4
[ 7 -1 13 ]	( 1 7 0 )	( -7 3 4 )	2.505	1.064	2.35	88.8	53.5
[ 14 -2 23 ]	( 1 7 0 )	( -7 -3 4 )	2.505	1.064	2.35	71.4	57.9
[ 35 -5 14 ]	( 1 7 0 )	( -2 0 5 )	2.505	1.059	2.37	89.4	87.8
[ 35 -5 22 ]	( 1 7 0 )	( -3 1 5 )	2.505	1.055	2.37	87.9	85.2
[ 7 -1 4 ]	( 1 7 0 )	( 3 1 -5 )	2.505	1.055	2.37	85.7	86.9
[ 35 -5 12 ]	( 1 7 0 )	( -2 -2 5 )	2.505	1.051	2.38	84.2	86.1
[ 35 -5 16 ]	( 1 7 0 )	( -2 2 5 )	2.505	1.051	2.38	83.0	89.6
[ 7 -1 -4 ]	( 1 7 0 )	( 1 -9 4 )	2.505	1.050	2.39	65.2	60.9
[ 14 -2 1 ]	( 1 7 0 )	( 1 9 4 )	2.505	1.050	2.39	54.2	78.0
[ 14 -2 -13 ]	( 1 7 0 )	( 3 -5 4 )	2.505	1.050	2.39	82.0	53.2
[ 7 -1 -4 ]	( 1 7 0 )	( 3 5 4 )	2.505	1.050	2.39	65.2	60.9
[ 21 -3 40 ]	( 1 7 0 )	( -7 -9 3 )	2.505	1.050	2.39	48.5	52.5
[ 35 -5 6 ]	( 1 7 0 )	( 1 1 -5 )	2.505	1.046	2.40	89.0	80.9
[ 35 -5 8 ]	( 1 7 0 )	( 1 -1 -5 )	2.505	1.046	2.40	84.6	82.6
[ 21 -3 -28 ]	( 1 7 0 )	( 5 7 3 )	2.505	1.043	2.40	55.2	46.0
[ 35 -5 28 ]	( 1 7 0 )	( -4 0 5 )	2.505	1.042	2.40	87.3	80.0
[ 7 -1 11 ]	( 1 7 0 )	( -5 9 4 )	2.505	1.042	2.41	65.9	59.5
[ 14 -2 13 ]	( 1 7 0 )	( -5 -9 4 )	2.505	1.042	2.41	54.1	76.3
[ 35 -5 24 ]	( 1 7 0 )	( -3 3 5 )	2.505	1.041	2.41	81.5	83.4
[ 35 -5 18 ]	( 1 7 0 )	( -3 -3 5 )	2.505	1.041	2.41	79.4	88.7

**Actinolite (170) 270 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 14 -2 -11 ]	( 1 7 0 )	( -2 8 -4 )	2.505	1.038	2.41	70.7	56.1
[ 14 -2 -3 ]	( 1 7 0 )	( -2 -8 -4 )	2.505	1.038	2.41	56.6	69.9
[ 14 -2 27 ]	( 1 7 0 )	( -7 5 4 )	2.505	1.036	2.42	82.5	52.1
[ 7 -1 11 ]	( 1 7 0 )	( -7 -5 4 )	2.505	1.036	2.42	65.2	59.5
[ 7 -1 6 ]	( 1 7 0 )	( -4 2 5 )	2.505	1.035	2.42	86.4	78.3
[ 35 -5 26 ]	( 1 7 0 )	( -4 -2 5 )	2.505	1.035	2.42	81.0	81.7
[ 35 -5 4 ]	( 1 7 0 )	( 1 3 -5 )	2.505	1.032	2.43	82.7	79.2
[ 7 -1 2 ]	( 1 7 0 )	( 1 -3 -5 )	2.505	1.032	2.43	78.3	84.4
[ 7 -1 2 ]	( 1 7 0 )	( 2 4 -5 )	2.505	1.031	2.43	77.9	84.4
[ 35 -5 18 ]	( 1 7 0 )	( 2 -4 -5 )	2.505	1.031	2.43	76.8	88.7
[ 14 -2 17 ]	( 1 7 0 )	( 6 8 -4 )	2.505	1.026	2.44	56.5	68.3
[ 14 -2 -15 ]	( 1 7 0 )	( 4 -2 4 )	2.505	1.020	2.46	86.8	50.5
[ 14 -2 -13 ]	( 1 7 0 )	( -4 -2 -4 )	2.505	1.020	2.46	74.2	53.2
[ 35 -5 -2 ]	( 1 7 0 )	( 0 2 -5 )	2.505	1.019	2.46	87.6	74.2
[ 35 -5 2 ]	( 1 7 0 )	( 0 -2 -5 )	2.505	1.019	2.46	80.0	77.5
[ 35 -5 32 ]	( 1 7 0 )	( -4 4 5 )	2.505	1.016	2.47	80.2	76.7
[ 35 -5 24 ]	( 1 7 0 )	( -4 -4 5 )	2.505	1.016	2.47	74.8	83.4
[ 35 -5 36 ]	( 1 7 0 )	( 5 -1 -5 )	2.505	1.015	2.47	88.9	73.4
[ 35 -5 34 ]	( 1 7 0 )	( -5 -1 5 )	2.505	1.015	2.47	82.7	75.0
[ 35 -5 26 ]	( 1 7 0 )	( -3 5 5 )	2.505	1.015	2.47	75.4	81.7
[ 35 -5 16 ]	( 1 7 0 )	( -3 -5 5 )	2.505	1.015	2.47	73.3	89.6
[ 7 -1 -7 ]	( 1 7 0 )	( 3 -7 4 )	2.505	1.011	2.48	76.1	51.8
[ 14 -2 -7 ]	( 1 7 0 )	( 3 7 4 )	2.505	1.011	2.48	59.3	62.6
[ 35 -5 2 ]	( 1 7 0 )	( -1 -5 5 )	2.505	1.007	2.49	76.7	77.5
[ 35 -5 12 ]	( 1 7 0 )	( -1 5 5 )	2.505	1.007	2.49	72.3	86.1
[ 7 -1 16 ]	( 1 7 0 )	( -8 -8 3 )	2.505	1.006	2.49	52.5	45.9
[ 14 -2 29 ]	( 1 7 0 )	( 8 -2 -4 )	2.505	1.004	2.49	86.5	49.5
[ 14 -2 27 ]	( 1 7 0 )	( -8 -2 4 )	2.505	1.004	2.49	74.0	52.1
[ 35 -5 38 ]	( 1 7 0 )	( -5 3 5 )	2.505	1.003	2.50	85.0	71.8
[ 35 -5 32 ]	( 1 7 0 )	( -5 -3 5 )	2.505	1.003	2.50	76.6	76.7

**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 5 -3 0 ]	( 3 5 0 )	( 0 0 1 )	2.397	5.126	0.47	79.1	80.2
[ 5 -3 8 ]	( 3 5 0 )	( 1 -1 -1 )	2.397	4.895	0.49	88.5	67.6
[ 5 -3 2 ]	( 3 5 0 )	( -1 -1 1 )	2.397	4.895	0.49	67.6	88.5
[ 5 -3 -6 ]	( 3 5 0 )	( 0 2 -1 )	2.397	4.464	0.54	80.9	58.6
[ 5 -3 6 ]	( 3 5 0 )	( 0 2 1 )	2.397	4.464	0.54	60.7	75.1
[ 5 -3 10 ]	( 3 5 0 )	( 2 0 -1 )	2.397	4.042	0.59	60.9	60.8
[ 5 -3 -8 ]	( 3 5 0 )	( -1 1 -1 )	2.397	4.006	0.60	71.5	52.9
[ 5 -3 -2 ]	( 3 5 0 )	( 1 1 1 )	2.397	4.006	0.60	52.5	72.4
[ 5 -3 14 ]	( 3 5 0 )	( 1 -3 -1 )	2.397	3.894	0.62	74.8	49.6
[ 5 -3 -4 ]	( 3 5 0 )	( 1 3 -1 )	2.397	3.894	0.62	54.1	65.1
[ 5 -3 16 ]	( 3 5 0 )	( -2 2 1 )	2.397	3.693	0.65	79.9	45.1
[ 5 -3 4 ]	( 3 5 0 )	( 2 2 -1 )	2.397	3.693	0.65	44.6	83.1
[ 5 -3 12 ]	( 3 5 0 )	( 0 -4 -1 )	2.397	3.400	0.71	51.7	54.8
[ 5 -3 4 ]	( 3 5 0 )	( 1 3 1 )	2.397	3.399	0.71	40.3	83.1
[ 5 -3 -10 ]	( 3 5 0 )	( -2 0 -1 )	2.397	3.126	0.77	52.6	47.9
[ 5 -3 12 ]	( 3 5 0 )	( 3 1 -1 )	2.397	3.035	0.79	44.5	54.8
[ 5 -3 -2 ]	( 3 5 0 )	( -2 -4 1 )	2.397	3.020	0.79	36.7	72.4
[ 5 -3 -10 ]	( 3 5 0 )	( 1 5 -1 )	2.397	2.956	0.81	48.7	47.9
[ 5 -3 -4 ]	( 3 5 0 )	( -2 -2 -1 )	2.397	2.956	0.81	38.0	65.1
[ 5 -3 6 ]	( 3 5 0 )	( 3 3 -1 )	2.397	2.744	0.87	32.4	75.1
[ 5 -3 10 ]	( 3 5 0 )	( -1 -5 -1 )	2.397	2.722	0.88	36.1	60.8
[ 5 -3 4 ]	( 3 5 0 )	( -1 1 2 )	2.397	2.620	0.91	85.2	83.1
[ 5 -3 1 ]	( 3 5 0 )	( -1 -1 2 )	2.397	2.620	0.91	83.8	84.4
[ 5 -3 2 ]	( 3 5 0 )	( 2 4 1 )	2.397	2.575	0.93	29.1	88.5
[ 5 -3 5 ]	( 3 5 0 )	( 2 0 -2 )	2.397	2.542	0.94	77.8	79.1
[ 5 -3 -3 ]	( 3 5 0 )	( 0 -2 2 )	2.397	2.467	0.97	89.8	68.6
[ 5 -3 3 ]	( 3 5 0 )	( 0 -2 -2 )	2.397	2.467	0.97	68.8	87.3
[ 5 -3 -8 ]	( 3 5 0 )	( 2 6 -1 )	2.397	2.424	0.99	35.0	52.9
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 1 )	2.397	2.349	1.02	26.7	80.2
[ 5 -3 14 ]	( 3 5 0 )	( 4 2 -1 )	2.397	2.332	1.03	35.3	49.6
[ 5 -3 -4 ]	( 3 5 0 )	( -1 1 -2 )	2.397	2.314	1.04	74.4	65.1
[ 5 -3 -1 ]	( 3 5 0 )	( 1 1 2 )	2.397	2.314	1.04	64.1	76.2
[ 5 -3 9 ]	( 3 5 0 )	( -3 1 2 )	2.397	2.283	1.05	73.4	64.1
[ 5 -3 6 ]	( 3 5 0 )	( 3 1 -2 )	2.397	2.283	1.05	63.1	75.1
[ 5 -3 -6 ]	( 3 5 0 )	( -3 -3 -1 )	2.397	2.267	1.06	30.1	58.6
[ 5 -3 11 ]	( 3 5 0 )	( -2 4 2 )	2.397	2.218	1.08	82.1	57.7
[ 5 -3 -1 ]	( 3 5 0 )	( 2 4 -2 )	2.397	2.218	1.08	59.6	76.2
[ 5 -3 16 ]	( 3 5 0 )	( -1 -7 -1 )	2.397	2.194	1.09	35.8	45.1
[ 5 -3 -7 ]	( 3 5 0 )	( 1 -3 2 )	2.397	2.177	1.10	84.5	55.7
[ 5 -3 2 ]	( 3 5 0 )	( 1 3 2 )	2.397	2.177	1.10	55.3	88.5
[ 5 -3 8 ]	( 3 5 0 )	( -2 -6 -1 )	2.397	2.175	1.10	26.4	67.6
[ 5 -3 12 ]	( 3 5 0 )	( 3 -3 -2 )	2.397	2.151	1.11	83.5	54.8
[ 5 -3 3 ]	( 3 5 0 )	( -3 -3 2 )	2.397	2.151	1.11	54.4	87.3
[ 5 -3 10 ]	( 3 5 0 )	( -1 5 2 )	2.397	2.140	1.12	67.8	60.8
[ 5 -3 -5 ]	( 3 5 0 )	( -1 -5 2 )	2.397	2.140	1.12	66.5	61.8
[ 5 -3 8 ]	( 3 5 0 )	( 4 4 -1 )	2.397	2.131	1.12	25.8	67.6
[ 5 -3 -5 ]	( 3 5 0 )	( 2 0 2 )	2.397	2.054	1.17	61.7	61.8
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 -1 )	2.397	2.029	1.18	22.9	80.2

**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 5 -3 -10 ]	( 3 5 0 )	( -1 5 -2 )	2.397	1.963	1.22	86.7	47.9
[ 5 -3 5 ]	( 3 5 0 )	( -1 -5 -2 )	2.397	1.963	1.22	49.0	79.1
[ 5 -3 -9 ]	( 3 5 0 )	( 0 6 -2 )	2.397	1.956	1.23	73.7	50.3
[ 5 -3 9 ]	( 3 5 0 )	( 0 -6 -2 )	2.397	1.956	1.23	55.2	64.1
[ 5 -3 15 ]	( 3 5 0 )	( -3 5 2 )	2.397	1.944	1.23	87.8	47.3
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 2 )	2.397	1.944	1.23	48.1	80.2
[ 5 -3 2 ]	( 3 5 0 )	( 4 6 -1 )	2.397	1.887	1.27	20.9	88.5
[ 5 -3 -11 ]	( 3 5 0 )	( -2 4 -2 )	2.397	1.871	1.28	80.7	45.7
[ 5 -3 1 ]	( 3 5 0 )	( 2 4 2 )	2.397	1.871	1.28	45.2	84.4
[ 5 -3 16 ]	( 3 5 0 )	( -5 -3 1 )	2.397	1.866	1.28	29.8	45.1
[ 5 -3 13 ]	( 3 5 0 )	( -1 7 2 )	2.397	1.854	1.29	62.5	52.1
[ 5 -3 -8 ]	( 3 5 0 )	( -1 -7 2 )	2.397	1.854	1.29	61.3	52.9
[ 5 -3 14 ]	( 3 5 0 )	( 2 8 1 )	2.397	1.837	1.30	27.1	49.6
[ 5 -3 -8 ]	( 3 5 0 )	( -4 -4 -1 )	2.397	1.818	1.32	25.5	52.9
[ 5 -3 -9 ]	( 3 5 0 )	( 3 -1 2 )	2.397	1.781	1.35	60.9	50.3
[ 5 -3 -6 ]	( 3 5 0 )	( -3 -1 -2 )	2.397	1.781	1.35	52.0	58.6
[ 5 -3 6 ]	( 3 5 0 )	( 3 7 1 )	2.397	1.780	1.35	20.3	75.1
[ 15 -9 10 ]	( 3 5 0 )	( -2 0 3 )	2.397	1.755	1.37	85.4	85.9
[ 5 -3 14 ]	( 3 5 0 )	( 5 -1 -2 )	2.397	1.753	1.37	60.3	49.6
[ 5 -3 11 ]	( 3 5 0 )	( 5 1 -2 )	2.397	1.753	1.37	51.5	57.7
[ 15 -9 2 ]	( 3 5 0 )	( -1 -1 3 )	2.397	1.752	1.37	89.6	83.0
[ 15 -9 8 ]	( 3 5 0 )	( -1 1 3 )	2.397	1.752	1.37	83.1	88.7
[ 5 -3 8 ]	( 3 5 0 )	( -1 -7 -2 )	2.397	1.735	1.38	45.1	67.6
[ 5 -3 10 ]	( 3 5 0 )	( 5 5 -1 )	2.397	1.726	1.39	21.9	60.8
[ 15 -9 16 ]	( 3 5 0 )	( -2 2 3 )	2.397	1.723	1.39	87.4	77.7
[ 15 -9 4 ]	( 3 5 0 )	( -2 -2 3 )	2.397	1.723	1.39	78.2	85.7
[ 5 -3 -3 ]	( 3 5 0 )	( 3 7 -2 )	2.397	1.722	1.39	44.3	68.6
[ 5 -3 -3 ]	( 3 5 0 )	( -3 -3 -2 )	2.397	1.716	1.40	44.1	68.6
[ 5 -3 8 ]	( 3 5 0 )	( -5 -3 2 )	2.397	1.691	1.42	43.7	67.6
[ 15 -9 -4 ]	( 3 5 0 )	( 1 3 -3 )	2.397	1.691	1.42	82.6	74.9
[ 15 -9 14 ]	( 3 5 0 )	( 1 -3 -3 )	2.397	1.691	1.42	76.2	80.4
[ 5 -3 6 ]	( 3 5 0 )	( 3 -1 -3 )	2.397	1.687	1.42	81.4	75.1
[ 5 -3 4 ]	( 3 5 0 )	( -3 -1 3 )	2.397	1.687	1.42	74.2	83.1
[ 5 -3 1 ]	( 3 5 0 )	( 4 6 -2 )	2.397	1.681	1.43	39.6	84.4
[ 5 -3 -2 ]	( 3 5 0 )	( 0 2 -3 )	2.397	1.679	1.43	86.3	72.4
[ 5 -3 2 ]	( 3 5 0 )	( 0 2 3 )	2.397	1.679	1.43	72.0	88.5
[ 5 -3 -2 ]	( 3 5 0 )	( -4 -6 -1 )	2.397	1.660	1.44	19.2	72.4
[ 5 -3 -4 ]	( 3 5 0 )	( 4 8 -1 )	2.397	1.654	1.45	20.1	65.1
[ 15 -9 22 ]	( 3 5 0 )	( 2 -4 -3 )	2.397	1.637	1.46	80.7	70.0
[ 15 -9 -2 ]	( 3 5 0 )	( 2 4 -3 )	2.397	1.637	1.46	71.7	77.6
[ 15 -9 -8 ]	( 3 5 0 )	( 1 -1 3 )	2.397	1.607	1.49	75.7	69.9
[ 15 -9 -2 ]	( 3 5 0 )	( -1 -1 -3 )	2.397	1.607	1.49	68.7	77.6
[ 5 -3 16 ]	( 3 5 0 )	( -1 9 2 )	2.397	1.606	1.49	58.9	45.1
[ 5 -3 -11 ]	( 3 5 0 )	( -1 -9 2 )	2.397	1.606	1.49	57.9	45.7
[ 5 -3 0 ]	( 3 5 0 )	( 3 5 2 )	2.397	1.605	1.49	38.0	80.2
[ 5 -3 -4 ]	( 3 5 0 )	( 0 -4 3 )	2.397	1.599	1.50	86.9	65.1
[ 5 -3 4 ]	( 3 5 0 )	( 0 4 3 )	2.397	1.599	1.50	65.8	83.1
[ 15 -9 20 ]	( 3 5 0 )	( 4 0 -3 )	2.397	1.593	1.50	71.1	72.5



**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 5 -3 5 ]	( 3 5 0 )	( -5 -5 2 )	2.397	1.585	1.51	37.5	79.1
[ 15 -9 -10 ]	( 3 5 0 )	( 1 5 -3 )	2.397	1.584	1.51	76.3	67.4
[ 15 -9 20 ]	( 3 5 0 )	( -1 5 3 )	2.397	1.584	1.51	70.2	72.5
[ 15 -9 26 ]	( 3 5 0 )	( -4 2 3 )	2.397	1.569	1.53	78.2	65.2
[ 15 -9 14 ]	( 3 5 0 )	( 4 2 -3 )	2.397	1.569	1.53	64.3	80.4
[ 5 -3 4 ]	( 3 5 0 )	( -5 -7 1 )	2.397	1.565	1.53	17.3	83.1
[ 15 -9 4 ]	( 3 5 0 )	( 1 3 3 )	2.397	1.559	1.54	62.3	85.7
[ 5 -3 12 ]	( 3 5 0 )	( -3 -9 -1 )	2.397	1.557	1.54	21.1	54.8
[ 5 -3 -7 ]	( 3 5 0 )	( 4 2 2 )	2.397	1.540	1.56	44.8	55.7
[ 5 -3 15 ]	( 3 5 0 )	( -6 0 2 )	2.397	1.539	1.56	52.3	47.3
[ 5 -3 10 ]	( 3 5 0 )	( -3 5 3 )	2.397	1.536	1.56	85.0	60.8
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 3 )	2.397	1.536	1.56	61.9	80.2
[ 5 -3 11 ]	( 3 5 0 )	( 1 9 2 )	2.397	1.527	1.57	43.0	57.7
[ 5 -3 7 ]	( 3 5 0 )	( -2 -8 -2 )	2.397	1.523	1.57	37.4	71.3
[ 15 -9 28 ]	( 3 5 0 )	( -2 6 3 )	2.397	1.519	1.58	74.9	63.0
[ 15 -9 -8 ]	( 3 5 0 )	( -2 -6 3 )	2.397	1.519	1.58	66.4	69.9
[ 5 -3 -6 ]	( 3 5 0 )	( 3 9 -2 )	2.397	1.518	1.58	42.2	58.6
[ 5 -3 -10 ]	( 3 5 0 )	( 5 5 1 )	2.397	1.510	1.59	22.6	47.9
[ 15 -9 32 ]	( 3 5 0 )	( 4 -4 -3 )	2.397	1.503	1.59	85.0	58.7
[ 15 -9 8 ]	( 3 5 0 )	( -4 -4 3 )	2.397	1.503	1.59	58.4	88.7
[ 5 -3 4 ]	( 3 5 0 )	( 4 8 1 )	2.397	1.494	1.60	16.5	83.1
[ 15 -9 -10 ]	( 3 5 0 )	( -2 0 -3 )	2.397	1.494	1.60	66.4	67.4
[ 15 -9 -20 ]	( 3 5 0 )	( -1 5 -3 )	2.397	1.474	1.63	89.3	56.6
[ 15 -9 10 ]	( 3 5 0 )	( 1 5 3 )	2.397	1.474	1.63	56.8	85.9
[ 15 -9 -16 ]	( 3 5 0 )	( -2 2 -3 )	2.397	1.474	1.63	73.2	60.7
[ 15 -9 -4 ]	( 3 5 0 )	( 2 2 3 )	2.397	1.474	1.63	59.8	74.9
[ 5 -3 3 ]	( 3 5 0 )	( -3 -7 -2 )	2.397	1.473	1.63	33.8	87.3
[ 15 -9 28 ]	( 3 5 0 )	( 5 -1 -3 )	2.397	1.467	1.63	68.9	63.0
[ 15 -9 22 ]	( 3 5 0 )	( -5 -1 3 )	2.397	1.467	1.63	62.2	70.0
[ 5 -3 9 ]	( 3 5 0 )	( 6 4 -2 )	2.397	1.458	1.64	37.7	64.1
[ 5 -3 2 ]	( 3 5 0 )	( -5 -7 2 )	2.397	1.457	1.64	33.4	88.5
[ 15 -9 -16 ]	( 3 5 0 )	( 1 7 -3 )	2.397	1.457	1.65	71.2	60.7
[ 15 -9 26 ]	( 3 5 0 )	( 1 -7 -3 )	2.397	1.457	1.65	65.3	65.2
[ 5 -3 12 ]	( 3 5 0 )	( 6 6 -1 )	2.397	1.445	1.66	19.5	54.8
[ 15 -9 34 ]	( 3 5 0 )	( 5 -3 -3 )	2.397	1.431	1.68	75.7	56.7
[ 15 -9 16 ]	( 3 5 0 )	( 5 3 -3 )	2.397	1.431	1.68	56.0	77.7
[ 15 -9 -22 ]	( 3 5 0 )	( -2 4 -3 )	2.397	1.419	1.69	80.0	54.7
[ 15 -9 2 ]	( 3 5 0 )	( 2 4 3 )	2.397	1.419	1.69	54.1	83.0
[ 5 -3 12 ]	( 3 5 0 )	( 3 -7 -3 )	2.397	1.419	1.69	79.4	54.8
[ 5 -3 -2 ]	( 3 5 0 )	( 3 7 -3 )	2.397	1.419	1.69	57.5	72.4
[ 15 -9 38 ]	( 3 5 0 )	( 4 -6 -3 )	2.397	1.410	1.70	88.8	53.0
[ 15 -9 2 ]	( 3 5 0 )	( 4 6 -3 )	2.397	1.410	1.70	53.6	83.0
[ 5 -3 -2 ]	( 3 5 0 )	( 5 9 -1 )	2.397	1.407	1.70	16.2	72.4
[ 5 -3 -4 ]	( 3 5 0 )	( -5 -7 -1 )	2.397	1.399	1.71	16.9	65.1
[ 15 -9 34 ]	( 3 5 0 )	( -2 8 3 )	2.397	1.389	1.73	70.2	56.7
[ 15 -9 -14 ]	( 3 5 0 )	( -2 -8 3 )	2.397	1.389	1.73	62.1	62.9
[ 5 -3 -1 ]	( 3 5 0 )	( 4 6 2 )	2.397	1.389	1.73	32.7	76.2
[ 15 -9 -26 ]	( 3 5 0 )	( 1 -7 3 )	2.397	1.370	1.75	84.9	51.2

**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 15 -9 16 ]	( 3 5 0 )	( 1 7 3 )	2.397	1.370	1.75	52.6	77.7
[ 5 -3 -8 ]	( 3 5 0 )	( 0 -8 3 )	2.397	1.365	1.76	75.8	52.9
[ 5 -3 8 ]	( 3 5 0 )	( 0 8 3 )	2.397	1.365	1.76	56.8	67.6
[ 5 -3 -6 ]	( 3 5 0 )	( -3 1 -3 )	2.397	1.365	1.76	64.9	58.6
[ 5 -3 -4 ]	( 3 5 0 )	( 3 1 3 )	2.397	1.365	1.76	58.5	65.1
[ 15 -9 40 ]	( 3 5 0 )	( -5 5 3 )	2.397	1.364	1.76	82.1	51.3
[ 15 -9 10 ]	( 3 5 0 )	( 5 5 -3 )	2.397	1.364	1.76	50.8	85.9
[ 5 -3 16 ]	( 3 5 0 )	( -7 -1 2 )	2.397	1.352	1.77	46.1	45.1
[ 15 -9 -28 ]	( 3 5 0 )	( 2 -6 3 )	2.397	1.340	1.79	86.1	49.5
[ 15 -9 8 ]	( 3 5 0 )	( 2 6 3 )	2.397	1.340	1.79	49.4	88.7
[ 5 -3 6 ]	( 3 5 0 )	( -3 -9 -2 )	2.397	1.339	1.79	31.5	75.1
[ 5 -3 12 ]	( 3 5 0 )	( 6 -2 -3 )	2.397	1.333	1.80	67.4	54.8
[ 5 -3 8 ]	( 3 5 0 )	( -6 -2 3 )	2.397	1.333	1.80	54.7	67.6
[ 5 -3 6 ]	( 3 5 0 )	( 6 8 -1 )	2.397	1.332	1.80	15.1	75.1
[ 5 -3 -1 ]	( 3 5 0 )	( -5 -9 2 )	2.397	1.327	1.81	31.1	76.2
[ 15 -9 -22 ]	( 3 5 0 )	( 1 9 -3 )	2.397	1.327	1.81	67.0	54.7
[ 15 -9 32 ]	( 3 5 0 )	( -1 9 3 )	2.397	1.327	1.81	61.5	58.7
[ 10 -6 5 ]	( 3 5 0 )	( -2 0 4 )	2.397	1.324	1.81	89.3	89.4
[ 5 -3 13 ]	( 3 5 0 )	( 7 3 -2 )	2.397	1.323	1.81	39.3	52.1
[ 10 -6 1 ]	( 3 5 0 )	( 1 1 -4 )	2.397	1.311	1.83	87.5	82.3
[ 5 -3 2 ]	( 3 5 0 )	( -1 1 4 )	2.397	1.311	1.83	82.0	88.5
[ 10 -6 9 ]	( 3 5 0 )	( -3 1 4 )	2.397	1.305	1.84	86.1	81.1
[ 5 -3 3 ]	( 3 5 0 )	( 3 1 -4 )	2.397	1.305	1.84	80.7	87.3
[ 15 -9 44 ]	( 3 5 0 )	( 4 -8 -3 )	2.397	1.304	1.84	83.5	48.0
[ 15 -9 -4 ]	( 3 5 0 )	( 4 8 -3 )	2.397	1.304	1.84	49.9	74.9
[ 5 -3 14 ]	( 3 5 0 )	( -6 4 3 )	2.397	1.292	1.86	73.9	49.6
[ 5 -3 6 ]	( 3 5 0 )	( 6 4 -3 )	2.397	1.292	1.86	49.2	75.1
[ 5 -3 -5 ]	( 3 5 0 )	( 5 5 2 )	2.397	1.287	1.86	33.5	61.8
[ 5 -3 -1 ]	( 3 5 0 )	( -1 -3 4 )	2.397	1.285	1.87	87.1	76.2
[ 10 -6 7 ]	( 3 5 0 )	( -1 3 4 )	2.397	1.285	1.87	76.8	85.2
[ 5 -3 2 ]	( 3 5 0 )	( 5 9 1 )	2.397	1.282	1.87	14.0	88.5
[ 5 -3 -10 ]	( 3 5 0 )	( 3 -5 3 )	2.397	1.281	1.87	77.8	47.9
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 -3 )	2.397	1.281	1.87	47.4	80.2
[ 15 -9 46 ]	( 3 5 0 )	( 5 -7 -3 )	2.397	1.281	1.87	88.0	46.5
[ 15 -9 4 ]	( 3 5 0 )	( -5 -7 3 )	2.397	1.281	1.87	46.7	85.7
[ 5 -3 6 ]	( 3 5 0 )	( -3 3 4 )	2.397	1.279	1.87	88.5	75.1
[ 10 -6 3 ]	( 3 5 0 )	( 3 3 -4 )	2.397	1.279	1.87	75.4	86.4
[ 5 -3 3 ]	( 3 5 0 )	( 6 8 -2 )	2.397	1.274	1.88	28.8	87.3
[ 10 -6 11 ]	( 3 5 0 )	( 2 -4 -4 )	2.397	1.271	1.89	80.0	77.1
[ 10 -6 -1 ]	( 3 5 0 )	( 2 4 -4 )	2.397	1.271	1.89	78.7	78.2
[ 10 -6 -3 ]	( 3 5 0 )	( 0 -2 4 )	2.397	1.269	1.89	84.5	74.3
[ 10 -6 3 ]	( 3 5 0 )	( 0 -2 -4 )	2.397	1.269	1.89	73.7	86.4
[ 15 -9 -32 ]	( 3 5 0 )	( -1 9 -3 )	2.397	1.260	1.90	80.0	46.4
[ 15 -9 22 ]	( 3 5 0 )	( -1 -9 -3 )	2.397	1.260	1.90	49.4	70.0
[ 10 -6 13 ]	( 3 5 0 )	( 4 -2 -4 )	2.397	1.259	1.90	83.2	73.2
[ 10 -6 7 ]	( 3 5 0 )	( -4 -2 4 )	2.397	1.259	1.90	72.5	85.2
[ 15 -9 -20 ]	( 3 5 0 )	( 4 0 3 )	2.397	1.249	1.92	57.9	56.6
[ 15 -9 -34 ]	( 3 5 0 )	( 2 -8 3 )	2.397	1.248	1.92	88.4	45.0

**Actinolite (350) 323 Zone Axes*****a* 9.886Å *b* 18.171Å *c* 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	<i>d</i> (hk0)	<i>d</i> (hkl)	<i>d</i> Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 15 -9 14 ]	( 3 5 0 )	( 2 8 3 )	2.397	1.248	1.92	45.8	80.4
[ 5 -3 14 ]	( 3 5 0 )	( -7 -7 1 )	2.397	1.240	1.93	17.9	49.6
[ 15 -9 -26 ]	( 3 5 0 )	( 4 -2 3 )	2.397	1.238	1.94	64.1	51.2
[ 15 -9 -14 ]	( 3 5 0 )	( -4 -2 -3 )	2.397	1.238	1.94	52.0	62.9
[ 10 -6 -5 ]	( 3 5 0 )	( 1 5 -4 )	2.397	1.236	1.94	82.0	70.5
[ 5 -3 5 ]	( 3 5 0 )	( 1 -5 -4 )	2.397	1.236	1.94	71.9	79.1
[ 15 -9 38 ]	( 3 5 0 )	( 7 -1 -3 )	2.397	1.226	1.95	60.4	53.0
[ 15 -9 32 ]	( 3 5 0 )	( -7 -1 3 )	2.397	1.226	1.95	54.3	58.7
[ 5 -3 -2 ]	( 3 5 0 )	( 5 7 2 )	2.397	1.216	1.97	28.8	72.4
[ 5 -3 2 ]	( 3 5 0 )	( 3 7 3 )	2.397	1.211	1.98	43.3	88.5
[ 5 -3 -6 ]	( 3 5 0 )	( -6 -8 -1 )	2.397	1.206	1.99	15.5	58.6
[ 10 -6 -7 ]	( 3 5 0 )	( 1 -3 4 )	2.397	1.205	1.99	81.8	66.9
[ 5 -3 1 ]	( 3 5 0 )	( -1 -3 -4 )	2.397	1.205	1.99	66.2	84.4
[ 15 -9 44 ]	( 3 5 0 )	( 7 -3 -3 )	2.397	1.205	1.99	66.6	48.0
[ 15 -9 26 ]	( 3 5 0 )	( 7 3 -3 )	2.397	1.205	1.99	48.7	65.2
[ 15 -9 -32 ]	( 3 5 0 )	( -4 4 -3 )	2.397	1.204	1.99	70.3	46.4
[ 15 -9 -8 ]	( 3 5 0 )	( 4 4 3 )	2.397	1.204	1.99	46.6	69.9
[ 5 -3 7 ]	( 3 5 0 )	( -7 -7 2 )	2.397	1.202	1.99	28.6	71.3
[ 10 -6 17 ]	( 3 5 0 )	( 5 -3 -4 )	2.397	1.192	2.01	80.7	65.8
[ 5 -3 4 ]	( 3 5 0 )	( -5 -3 4 )	2.397	1.192	2.01	65.1	83.1
[ 15 -9 -2 ]	( 3 5 0 )	( 5 9 -3 )	2.397	1.190	2.02	43.6	77.6
[ 5 -3 -9 ]	( 3 5 0 )	( -6 -4 -2 )	2.397	1.181	2.03	35.4	50.3
[ 10 -6 -9 ]	( 3 5 0 )	( 0 6 -4 )	2.397	1.180	2.03	85.3	63.4
[ 10 -6 9 ]	( 3 5 0 )	( 0 -6 -4 )	2.397	1.180	2.03	64.4	81.1
[ 5 -3 -4 ]	( 3 5 0 )	( 1 7 -4 )	2.397	1.173	2.04	77.5	65.1
[ 10 -6 13 ]	( 3 5 0 )	( -1 7 4 )	2.397	1.173	2.04	67.7	73.2
[ 10 -6 19 ]	( 3 5 0 )	( -4 6 4 )	2.397	1.172	2.05	86.5	62.4
[ 10 -6 1 ]	( 3 5 0 )	( -4 -6 4 )	2.397	1.172	2.05	63.2	82.3
[ 5 -3 9 ]	( 3 5 0 )	( -3 7 4 )	2.397	1.169	2.05	78.8	64.1
[ 10 -6 -3 ]	( 3 5 0 )	( -3 -7 4 )	2.397	1.169	2.05	66.5	74.3
[ 10 -6 -5 ]	( 3 5 0 )	( 2 0 4 )	2.397	1.166	2.05	69.2	70.5
[ 5 -3 14 ]	( 3 5 0 )	( -8 -4 2 )	2.397	1.166	2.06	35.3	49.6
[ 5 -3 -5 ]	( 3 5 0 )	( 1 -5 4 )	2.397	1.165	2.06	87.0	61.8
[ 10 -6 5 ]	( 3 5 0 )	( -1 -5 -4 )	2.397	1.165	2.06	61.6	89.4
[ 15 -9 20 ]	( 3 5 0 )	( 7 5 -3 )	2.397	1.164	2.06	43.7	72.5
[ 5 -3 2 ]	( 3 5 0 )	( 6 8 -3 )	2.397	1.159	2.07	41.0	88.5
[ 5 -3 8 ]	( 3 5 0 )	( -7 -9 1 )	2.397	1.157	2.07	13.7	67.6
[ 15 -9 -2 ]	( 3 5 0 )	( 4 6 3 )	2.397	1.155	2.08	42.0	77.6
[ 5 -3 10 ]	( 3 5 0 )	( -5 5 4 )	2.397	1.153	2.08	85.8	60.8
[ 10 -6 5 ]	( 3 5 0 )	( 5 5 -4 )	2.397	1.153	2.08	60.6	89.4
[ 10 -6 15 ]	( 3 5 0 )	( -6 0 4 )	2.397	1.151	2.08	68.1	69.4
[ 10 -6 17 ]	( 3 5 0 )	( -2 8 4 )	2.397	1.144	2.10	71.2	65.8
[ 10 -6 -7 ]	( 3 5 0 )	( 2 8 -4 )	2.397	1.144	2.10	70.0	66.9
[ 15 -9 -28 ]	( 3 5 0 )	( 5 -1 3 )	2.397	1.137	2.11	57.9	49.5
[ 15 -9 -22 ]	( 3 5 0 )	( -5 -1 -3 )	2.397	1.137	2.11	52.1	54.7
[ 5 -3 1 ]	( 3 5 0 )	( 5 9 2 )	2.397	1.137	2.11	25.6	84.4
[ 10 -6 1 ]	( 3 5 0 )	( 2 4 4 )	2.397	1.130	2.12	59.4	82.3
[ 5 -3 4 ]	( 3 5 0 )	( -7 -9 2 )	2.397	1.126	2.13	25.3	83.1

**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 15 -9 40 ]	( 3 5 0 )	( 8 0 -3 )	2.397	1.122	2.14	54.5	51.3
[ 5 -3 11 ]	( 3 5 0 )	( -8 -6 2 )	2.397	1.121	2.14	30.0	57.7
[ 15 -9 -34 ]	( 3 5 0 )	( 5 -3 3 )	2.397	1.120	2.14	63.7	45.0
[ 15 -9 -16 ]	( 3 5 0 )	( 5 3 3 )	2.397	1.120	2.14	46.7	60.7
[ 15 -9 46 ]	( 3 5 0 )	( 8 -2 -3 )	2.397	1.113	2.15	60.3	46.5
[ 15 -9 34 ]	( 3 5 0 )	( -8 -2 3 )	2.397	1.113	2.15	48.9	56.7
[ 10 -6 -13 ]	( 3 5 0 )	( -1 7 -4 )	2.397	1.111	2.16	88.2	57.1
[ 5 -3 4 ]	( 3 5 0 )	( -1 -7 -4 )	2.397	1.111	2.16	57.7	83.1
[ 15 -9 14 ]	( 3 5 0 )	( 7 7 -3 )	2.397	1.111	2.16	39.6	80.4
[ 10 -6 -11 ]	( 3 5 0 )	( -1 -9 4 )	2.397	1.102	2.18	73.5	60.2
[ 5 -3 8 ]	( 3 5 0 )	( -1 9 4 )	2.397	1.102	2.18	64.1	67.6
[ 10 -6 23 ]	( 3 5 0 )	( 5 -7 -4 )	2.397	1.101	2.18	89.4	56.3
[ 5 -3 1 ]	( 3 5 0 )	( 5 7 -4 )	2.397	1.101	2.18	56.7	84.4
[ 10 -6 21 ]	( 3 5 0 )	( 3 -9 -4 )	2.397	1.098	2.18	74.8	59.2
[ 5 -3 -3 ]	( 3 5 0 )	( 3 9 -4 )	2.397	1.098	2.18	62.9	68.6
[ 10 -6 -9 ]	( 3 5 0 )	( -3 1 -4 )	2.397	1.095	2.19	67.6	63.4
[ 5 -3 -3 ]	( 3 5 0 )	( 3 1 4 )	2.397	1.095	2.19	62.6	68.6
[ 15 -9 4 ]	( 3 5 0 )	( 4 8 3 )	2.397	1.095	2.19	38.4	85.7
[ 15 -9 28 ]	( 3 5 0 )	( 8 4 -3 )	2.397	1.089	2.20	43.8	63.0
[ 5 -3 -6 ]	( 3 5 0 )	( 3 -3 4 )	2.397	1.080	2.22	72.7	58.6
[ 10 -6 -3 ]	( 3 5 0 )	( -3 -3 -4 )	2.397	1.080	2.22	57.9	74.3
[ 10 -6 19 ]	( 3 5 0 )	( 7 -1 -4 )	2.397	1.079	2.22	66.8	62.4
[ 5 -3 8 ]	( 3 5 0 )	( -7 -1 4 )	2.397	1.079	2.22	61.8	67.6
[ 5 -3 -3 ]	( 3 5 0 )	( 6 8 2 )	2.397	1.077	2.23	25.9	68.6
[ 5 -3 11 ]	( 3 5 0 )	( 7 -3 -4 )	2.397	1.064	2.25	71.8	57.7
[ 10 -6 13 ]	( 3 5 0 )	( -7 -3 4 )	2.397	1.064	2.25	57.1	73.2
[ 5 -3 -8 ]	( 3 5 0 )	( 7 9 1 )	2.397	1.060	2.26	14.5	52.9
[ 5 -3 2 ]	( 3 5 0 )	( 2 0 -5 )	2.397	1.059	2.26	88.3	88.5
[ 25 -15 18 ]	( 3 5 0 )	( 3 -1 -5 )	2.397	1.055	2.27	89.1	84.8
[ 25 -15 12 ]	( 3 5 0 )	( -3 -1 5 )	2.397	1.055	2.27	84.7	89.8
[ 15 -9 22 ]	( 3 5 0 )	( 8 6 -3 )	2.397	1.052	2.28	39.3	70.0
[ 25 -15 4 ]	( 3 5 0 )	( -2 -2 5 )	2.397	1.051	2.28	87.3	83.5
[ 25 -15 16 ]	( 3 5 0 )	( -2 2 5 )	2.397	1.051	2.28	83.9	86.5
[ 5 -3 -8 ]	( 3 5 0 )	( -1 9 -4 )	2.397	1.050	2.28	84.0	52.9
[ 10 -6 11 ]	( 3 5 0 )	( -1 -9 -4 )	2.397	1.050	2.28	54.5	77.1
[ 10 -6 -15 ]	( 3 5 0 )	( 3 -5 4 )	2.397	1.050	2.28	77.7	54.3
[ 5 -3 0 ]	( 3 5 0 )	( -3 -5 -4 )	2.397	1.050	2.28	53.6	80.2
[ 15 -9 8 ]	( 3 5 0 )	( 7 9 -3 )	2.397	1.050	2.28	36.5	88.7
[ 5 -3 -10 ]	( 3 5 0 )	( -7 -5 -2 )	2.397	1.050	2.28	32.3	47.9
[ 25 -15 2 ]	( 3 5 0 )	( -1 -1 5 )	2.397	1.046	2.29	85.8	81.9
[ 25 -15 8 ]	( 3 5 0 )	( -1 1 5 )	2.397	1.046	2.29	81.4	86.8
[ 15 -9 -4 ]	( 3 5 0 )	( -5 -7 -3 )	2.397	1.043	2.30	37.7	74.9
[ 5 -3 4 ]	( 3 5 0 )	( 4 0 -5 )	2.397	1.042	2.30	82.3	83.1
[ 10 -6 -1 ]	( 3 5 0 )	( -5 -9 4 )	2.397	1.042	2.30	53.5	78.2
[ 25 -15 24 ]	( 3 5 0 )	( -3 3 5 )	2.397	1.041	2.30	86.5	79.9
[ 25 -15 6 ]	( 3 5 0 )	( -3 -3 5 )	2.397	1.041	2.30	80.4	85.2
[ 5 -3 15 ]	( 3 5 0 )	( 9 5 -2 )	2.397	1.038	2.31	32.2	47.3
[ 10 -6 -17 ]	( 3 5 0 )	( -2 8 -4 )	2.397	1.038	2.31	89.1	51.6

**Actinolite (350) 323 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 10 -6 7 ]	( 3 5 0 )	( 2 8 4 )	2.397	1.038	2.31	51.8	85.2
[ 10 -6 25 ]	( 3 5 0 )	( -7 5 4 )	2.397	1.036	2.31	76.8	53.5
[ 5 -3 5 ]	( 3 5 0 )	( 7 5 -4 )	2.397	1.036	2.31	52.8	79.1
[ 25 -15 26 ]	( 3 5 0 )	( -4 2 5 )	2.397	1.035	2.31	86.6	78.3
[ 25 -15 14 ]	( 3 5 0 )	( 4 2 -5 )	2.397	1.035	2.31	77.9	88.1
[ 5 -3 -8 ]	( 3 5 0 )	( -6 -2 -3 )	2.397	1.035	2.32	47.3	52.9
[ 25 -15 -4 ]	( 3 5 0 )	( 1 3 -5 )	2.397	1.032	2.32	89.9	77.0
[ 25 -15 14 ]	( 3 5 0 )	( 1 -3 -5 )	2.397	1.032	2.32	77.2	88.1
[ 25 -15 -2 ]	( 3 5 0 )	( 2 4 -5 )	2.397	1.031	2.32	83.0	78.6
[ 25 -15 22 ]	( 3 5 0 )	( 2 -4 -5 )	2.397	1.031	2.32	79.7	81.5
[ 10 -6 3 ]	( 3 5 0 )	( 6 8 -4 )	2.397	1.026	2.34	50.9	86.4
[ 5 -3 16 ]	( 3 5 0 )	( 9 -1 -3 )	2.397	1.024	2.34	55.0	45.1
[ 5 -3 14 ]	( 3 5 0 )	( -9 -1 3 )	2.397	1.024	2.34	49.6	49.6
[ 10 -6 -13 ]	( 3 5 0 )	( 4 -2 4 )	2.397	1.020	2.35	66.6	57.1
[ 10 -6 -7 ]	( 3 5 0 )	( -4 -2 -4 )	2.397	1.020	2.35	56.9	66.9
[ 25 -15 -6 ]	( 3 5 0 )	( 0 -2 5 )	2.397	1.019	2.35	83.4	75.4
[ 25 -15 6 ]	( 3 5 0 )	( 0 -2 -5 )	2.397	1.019	2.35	74.8	85.2
[ 25 -15 32 ]	( 3 5 0 )	( -4 4 5 )	2.397	1.016	2.36	89.1	73.5
[ 25 -15 8 ]	( 3 5 0 )	( -4 -4 5 )	2.397	1.016	2.36	73.8	86.8
[ 5 -3 -6 ]	( 3 5 0 )	( 6 4 3 )	2.397	1.016	2.36	42.4	58.6
[ 25 -15 28 ]	( 3 5 0 )	( -5 1 5 )	2.397	1.015	2.36	80.0	76.7
[ 25 -15 22 ]	( 3 5 0 )	( 5 1 -5 )	2.397	1.015	2.36	75.6	81.5
[ 5 -3 6 ]	( 3 5 0 )	( 3 -5 -5 )	2.397	1.015	2.36	82.4	75.1
[ 5 -3 0 ]	( 3 5 0 )	( 3 5 -5 )	2.397	1.015	2.36	76.4	80.2
[ 5 -3 12 ]	( 3 5 0 )	( -9 -3 3 )	2.397	1.012	2.37	44.5	54.8
[ 5 -3 -9 ]	( 3 5 0 )	( -3 7 -4 )	2.397	1.011	2.37	82.5	50.3
[ 10 -6 3 ]	( 3 5 0 )	( 3 7 4 )	2.397	1.011	2.37	49.9	86.4
[ 5 -3 -7 ]	( 3 5 0 )	( -7 -7 -2 )	2.397	1.010	2.37	27.5	55.7
[ 5 -3 -2 ]	( 3 5 0 )	( 1 5 -5 )	2.397	1.007	2.38	85.7	72.4
[ 5 -3 4 ]	( 3 5 0 )	( 1 -5 -5 )	2.397	1.007	2.38	73.2	83.1
[ 15 -9 16 ]	( 3 5 0 )	( 8 8 -3 )	2.397	1.006	2.38	35.7	77.7
[ 10 -6 23 ]	( 3 5 0 )	( -8 2 4 )	2.397	1.004	2.39	65.8	56.3
[ 10 -6 17 ]	( 3 5 0 )	( 8 2 -4 )	2.397	1.004	2.39	56.2	65.8
[ 25 -15 34 ]	( 3 5 0 )	( -5 3 5 )	2.397	1.003	2.39	84.3	72.0
[ 25 -15 16 ]	( 3 5 0 )	( 5 3 -5 )	2.397	1.003	2.39	71.5	86.5

**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -2 0 ]	( 4 2 0 )	( 0 0 1 )	2.313	5.126	0.45	75.9	86.2
[ 1 -2 3 ]	( 4 2 0 )	( 1 -1 -1 )	2.313	4.895	0.47	78.9	70.4
[ 1 -2 -1 ]	( 4 2 0 )	( -1 -1 1 )	2.313	4.895	0.47	70.7	78.3
[ 1 -2 -4 ]	( 4 2 0 )	( 0 -2 1 )	2.313	4.464	0.52	85.0	57.8
[ 1 -2 4 ]	( 4 2 0 )	( 0 -2 -1 )	2.313	4.464	0.52	70.3	63.6
[ 1 -2 2 ]	( 4 2 0 )	( 2 0 -1 )	2.313	4.042	0.57	51.3	77.8
[ 1 -2 -3 ]	( 4 2 0 )	( 1 -1 1 )	2.313	4.006	0.58	57.3	63.9
[ 1 -2 1 ]	( 4 2 0 )	( -1 -1 -1 )	2.313	4.006	0.58	49.3	85.7
[ 1 -2 7 ]	( 4 2 0 )	( 1 -3 -1 )	2.313	3.894	0.59	87.4	47.4
[ 1 -2 -5 ]	( 4 2 0 )	( 1 3 -1 )	2.313	3.894	0.59	68.2	52.4
[ 1 -2 6 ]	( 4 2 0 )	( 2 -2 -1 )	2.313	3.693	0.63	62.1	52.1
[ 1 -2 -2 ]	( 4 2 0 )	( -2 -2 1 )	2.313	3.693	0.63	47.6	70.8
[ 1 -2 5 ]	( 4 2 0 )	( 1 3 1 )	2.313	3.399	0.68	49.6	57.4
[ 1 -2 -2 ]	( 4 2 0 )	( -2 0 -1 )	2.313	3.126	0.74	38.7	70.8
[ 1 -2 5 ]	( 4 2 0 )	( 3 -1 -1 )	2.313	3.035	0.76	42.8	57.4
[ 1 -2 1 ]	( 4 2 0 )	( -3 -1 1 )	2.313	3.035	0.76	35.1	85.7
[ 1 -2 -6 ]	( 4 2 0 )	( 2 4 -1 )	2.313	3.020	0.77	50.5	47.6
[ 1 -2 -6 ]	( 4 2 0 )	( 2 -2 1 )	2.313	2.956	0.78	49.0	47.6
[ 1 -2 2 ]	( 4 2 0 )	( -2 -2 -1 )	2.313	2.956	0.78	34.8	77.8
[ 1 -2 -3 ]	( 4 2 0 )	( 3 3 -1 )	2.313	2.744	0.84	35.2	63.9
[ 2 -4 3 ]	( 4 2 0 )	( 1 -1 -2 )	2.313	2.620	0.88	88.8	81.7
[ 2 -4 -1 ]	( 4 2 0 )	( 1 1 -2 )	2.313	2.620	0.88	87.0	82.2
[ 1 -2 6 ]	( 4 2 0 )	( -2 -4 -1 )	2.313	2.575	0.90	38.0	52.1
[ 1 -2 1 ]	( 4 2 0 )	( 2 0 -2 )	2.313	2.542	0.91	74.2	85.7
[ 1 -2 -2 ]	( 4 2 0 )	( 0 2 -2 )	2.313	2.467	0.94	80.5	70.8
[ 1 -2 2 ]	( 4 2 0 )	( 0 2 2 )	2.313	2.467	0.94	72.3	77.8
[ 1 -2 -5 ]	( 4 2 0 )	( -3 1 -1 )	2.313	2.423	0.95	35.3	52.4
[ 1 -2 -1 ]	( 4 2 0 )	( 3 1 1 )	2.313	2.423	0.95	27.9	78.3
[ 1 -2 4 ]	( 4 2 0 )	( 4 0 -1 )	2.313	2.413	0.96	30.6	63.6
[ 1 -2 0 ]	( 4 2 0 )	( 4 2 -1 )	2.313	2.332	0.99	26.2	86.2
[ 2 -4 -3 ]	( 4 2 0 )	( 1 -1 2 )	2.313	2.314	1.00	65.1	74.5
[ 2 -4 1 ]	( 4 2 0 )	( -1 -1 -2 )	2.313	2.314	1.00	60.9	89.8
[ 2 -4 5 ]	( 4 2 0 )	( 3 -1 -2 )	2.313	2.283	1.01	63.7	74.0
[ 2 -4 1 ]	( 4 2 0 )	( -3 -1 2 )	2.313	2.283	1.01	59.5	89.8
[ 1 -2 3 ]	( 4 2 0 )	( 3 3 1 )	2.313	2.267	1.02	27.0	70.4
[ 1 -2 5 ]	( 4 2 0 )	( -2 4 2 )	2.313	2.218	1.04	83.5	57.4
[ 1 -2 -3 ]	( 4 2 0 )	( 2 4 -2 )	2.313	2.218	1.04	68.8	63.9
[ 2 -4 -7 ]	( 4 2 0 )	( -1 3 -2 )	2.313	2.177	1.06	70.4	60.8
[ 2 -4 5 ]	( 4 2 0 )	( 1 3 2 )	2.313	2.177	1.06	58.8	74.0
[ 2 -4 9 ]	( 4 2 0 )	( -3 3 2 )	2.313	2.151	1.08	69.1	60.4
[ 2 -4 -3 ]	( 4 2 0 )	( 3 3 -2 )	2.313	2.151	1.08	57.5	74.5
[ 2 -4 11 ]	( 4 2 0 )	( 1 -5 -2 )	2.313	2.140	1.08	82.1	54.7
[ 2 -4 -9 ]	( 4 2 0 )	( 1 5 -2 )	2.313	2.140	1.08	80.6	55.0
[ 1 -2 -4 ]	( 4 2 0 )	( -4 -4 1 )	2.313	2.131	1.09	28.4	57.8
[ 1 -2 -1 ]	( 4 2 0 )	( 2 0 2 )	2.313	2.054	1.13	52.4	78.3
[ 1 -2 7 ]	( 4 2 0 )	( -3 -5 -1 )	2.313	2.029	1.14	31.4	47.4
[ 2 -4 -11 ]	( 4 2 0 )	( -1 5 -2 )	2.313	1.963	1.18	75.7	49.9
[ 2 -4 9 ]	( 4 2 0 )	( 1 5 2 )	2.313	1.963	1.18	58.5	60.4



**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -2 -6 ]	( 4 2 0 )	( 0 6 -2 )	2.313	1.956	1.18	88.8	47.6
[ 1 -2 6 ]	( 4 2 0 )	( 0 6 2 )	2.313	1.956	1.18	69.5	52.1
[ 1 -2 7 ]	( 4 2 0 )	( -5 1 1 )	2.313	1.951	1.19	30.0	47.4
[ 1 -2 3 ]	( 4 2 0 )	( 5 1 -1 )	2.313	1.951	1.19	23.0	70.4
[ 2 -4 13 ]	( 4 2 0 )	( 3 -5 -2 )	2.313	1.944	1.19	74.4	49.6
[ 2 -4 -7 ]	( 4 2 0 )	( -3 -5 2 )	2.313	1.944	1.19	57.3	60.8
[ 1 -2 0 ]	( 4 2 0 )	( -4 -2 -1 )	2.313	1.938	1.19	21.5	86.2
[ 1 -2 -5 ]	( 4 2 0 )	( 2 -4 2 )	2.313	1.871	1.24	63.2	52.4
[ 1 -2 3 ]	( 4 2 0 )	( -2 -4 -2 )	2.313	1.871	1.24	48.6	70.4
[ 1 -2 -1 ]	( 4 2 0 )	( 5 3 -1 )	2.313	1.866	1.24	21.1	78.3
[ 2 -4 15 ]	( 4 2 0 )	( 1 -7 -2 )	2.313	1.854	1.25	80.2	45.3
[ 2 -4 -13 ]	( 4 2 0 )	( 1 7 -2 )	2.313	1.854	1.25	78.9	45.5
[ 1 -2 4 ]	( 4 2 0 )	( -4 -4 -1 )	2.313	1.818	1.27	22.5	63.6
[ 2 -4 -5 ]	( 4 2 0 )	( 3 -1 2 )	2.313	1.781	1.30	46.8	67.3
[ 2 -4 -1 ]	( 4 2 0 )	( -3 -1 -2 )	2.313	1.781	1.30	42.7	82.2
[ 3 -6 2 ]	( 4 2 0 )	( 2 0 -3 )	2.313	1.755	1.32	84.0	88.4
[ 2 -4 7 ]	( 4 2 0 )	( -5 1 2 )	2.313	1.753	1.32	46.0	66.9
[ 2 -4 3 ]	( 4 2 0 )	( 5 1 -2 )	2.313	1.753	1.32	42.0	81.7
[ 3 -6 -1 ]	( 4 2 0 )	( 1 1 -3 )	2.313	1.752	1.32	87.2	83.5
[ 1 -2 1 ]	( 4 2 0 )	( -1 1 3 )	2.313	1.752	1.32	84.4	85.7
[ 2 -4 13 ]	( 4 2 0 )	( -1 -7 -2 )	2.313	1.735	1.33	59.3	49.6
[ 1 -2 -5 ]	( 4 2 0 )	( 5 5 -1 )	2.313	1.726	1.34	24.3	52.4
[ 1 -2 2 ]	( 4 2 0 )	( -2 2 3 )	2.313	1.723	1.34	86.9	77.8
[ 3 -6 -2 ]	( 4 2 0 )	( 2 2 -3 )	2.313	1.723	1.34	81.3	80.9
[ 2 -4 -11 ]	( 4 2 0 )	( -3 -7 2 )	2.313	1.722	1.34	58.2	49.9
[ 2 -4 -9 ]	( 4 2 0 )	( 3 -3 2 )	2.313	1.716	1.35	52.3	55.0
[ 2 -4 3 ]	( 4 2 0 )	( -3 -3 -2 )	2.313	1.716	1.35	40.9	81.7
[ 2 -4 11 ]	( 4 2 0 )	( -5 3 2 )	2.313	1.691	1.37	51.5	54.7
[ 2 -4 -1 ]	( 4 2 0 )	( 5 3 -2 )	2.313	1.691	1.37	40.1	82.2
[ 3 -6 -5 ]	( 4 2 0 )	( -1 -3 3 )	2.313	1.691	1.37	90.0	73.2
[ 3 -6 7 ]	( 4 2 0 )	( -1 3 3 )	2.313	1.691	1.37	81.9	75.3
[ 3 -6 5 ]	( 4 2 0 )	( -3 1 3 )	2.313	1.687	1.37	75.7	80.4
[ 3 -6 1 ]	( 4 2 0 )	( 3 1 -3 )	2.313	1.687	1.37	72.9	88.9
[ 1 -2 -4 ]	( 4 2 0 )	( 4 6 -2 )	2.313	1.681	1.38	48.6	57.8
[ 3 -6 -4 ]	( 4 2 0 )	( 0 2 -3 )	2.313	1.679	1.38	78.9	75.7
[ 3 -6 4 ]	( 4 2 0 )	( 0 2 3 )	2.313	1.679	1.38	73.3	83.1
[ 1 -2 -3 ]	( 4 2 0 )	( -5 -1 -1 )	2.313	1.654	1.40	20.3	63.9
[ 1 -2 6 ]	( 4 2 0 )	( 6 0 -1 )	2.313	1.645	1.41	23.2	52.1
[ 3 -6 10 ]	( 4 2 0 )	( -2 4 3 )	2.313	1.637	1.41	89.7	68.0
[ 1 -2 -2 ]	( 4 2 0 )	( 2 4 -3 )	2.313	1.637	1.41	79.1	70.8
[ 1 -2 2 ]	( 4 2 0 )	( -6 -2 1 )	2.313	1.618	1.43	18.2	77.8
[ 1 -2 -1 ]	( 4 2 0 )	( 1 -1 3 )	2.313	1.607	1.44	68.3	78.3
[ 3 -6 1 ]	( 4 2 0 )	( -1 -1 -3 )	2.313	1.607	1.44	65.5	88.9
[ 2 -4 -13 ]	( 4 2 0 )	( 3 -5 2 )	2.313	1.605	1.44	58.2	45.5
[ 2 -4 7 ]	( 4 2 0 )	( -3 -5 -2 )	2.313	1.605	1.44	41.2	66.9
[ 1 -2 1 ]	( 4 2 0 )	( 5 3 1 )	2.313	1.601	1.44	17.6	85.7
[ 3 -6 -8 ]	( 4 2 0 )	( 0 4 -3 )	2.313	1.599	1.45	82.0	66.1
[ 3 -6 8 ]	( 4 2 0 )	( 0 4 3 )	2.313	1.599	1.45	71.5	72.8

**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 3 -6 4 ]	( 4 2 0 )	( -4 0 3 )	2.313	1.593	1.45	65.4	83.1
[ 2 -4 15 ]	( 4 2 0 )	( 5 -5 -2 )	2.313	1.585	1.46	57.4	45.3
[ 2 -4 -5 ]	( 4 2 0 )	( 5 5 -2 )	2.313	1.585	1.46	40.4	67.3
[ 1 -2 -3 ]	( 4 2 0 )	( 1 5 -3 )	2.313	1.584	1.46	87.4	63.9
[ 3 -6 11 ]	( 4 2 0 )	( 1 -5 -3 )	2.313	1.584	1.46	79.8	65.7
[ 3 -6 8 ]	( 4 2 0 )	( 4 -2 -3 )	2.313	1.569	1.47	68.5	72.8
[ 1 -2 0 ]	( 4 2 0 )	( -4 -2 3 )	2.313	1.569	1.47	63.0	86.2
[ 3 -6 5 ]	( 4 2 0 )	( 1 3 3 )	2.313	1.559	1.48	63.5	80.4
[ 1 -2 -2 ]	( 4 2 0 )	( -6 -4 1 )	2.313	1.546	1.50	18.0	70.8
[ 1 -2 -4 ]	( 4 2 0 )	( 4 -2 2 )	2.313	1.540	1.50	43.4	57.8
[ 1 -2 0 ]	( 4 2 0 )	( -4 -2 -2 )	2.313	1.540	1.50	35.7	86.2
[ 1 -2 3 ]	( 4 2 0 )	( 6 0 -2 )	2.313	1.539	1.50	38.1	70.4
[ 3 -6 13 ]	( 4 2 0 )	( 3 -5 -3 )	2.313	1.536	1.51	82.0	61.4
[ 3 -6 -7 ]	( 4 2 0 )	( -3 -5 3 )	2.313	1.536	1.51	69.3	68.4
[ 1 -2 7 ]	( 4 2 0 )	( 2 8 2 )	2.313	1.523	1.52	51.4	47.4
[ 3 -6 14 ]	( 4 2 0 )	( -2 6 3 )	2.313	1.519	1.52	87.9	59.4
[ 3 -6 -10 ]	( 4 2 0 )	( -2 -6 3 )	2.313	1.519	1.52	77.4	61.8
[ 1 -2 5 ]	( 4 2 0 )	( 5 5 1 )	2.313	1.510	1.53	19.8	57.4
[ 1 -2 4 ]	( 4 2 0 )	( 4 -4 -3 )	2.313	1.503	1.54	72.0	63.6
[ 3 -6 -4 ]	( 4 2 0 )	( -4 -4 3 )	2.313	1.503	1.54	61.5	75.7
[ 3 -6 -2 ]	( 4 2 0 )	( 2 0 3 )	2.313	1.494	1.55	59.0	80.9
[ 3 -6 -11 ]	( 4 2 0 )	( -1 5 -3 )	2.313	1.474	1.57	75.2	59.7
[ 1 -2 3 ]	( 4 2 0 )	( 1 5 3 )	2.313	1.474	1.57	62.4	70.4
[ 1 -2 -2 ]	( 4 2 0 )	( 2 -2 3 )	2.313	1.474	1.57	62.1	70.8
[ 3 -6 2 ]	( 4 2 0 )	( -2 -2 -3 )	2.313	1.474	1.57	56.6	88.4
[ 2 -4 11 ]	( 4 2 0 )	( 3 7 2 )	2.313	1.473	1.57	43.0	54.7
[ 3 -6 7 ]	( 4 2 0 )	( 5 -1 -3 )	2.313	1.467	1.58	59.2	75.3
[ 1 -2 1 ]	( 4 2 0 )	( -5 -1 3 )	2.313	1.467	1.58	56.4	85.7
[ 1 -2 7 ]	( 4 2 0 )	( 6 -4 -2 )	2.313	1.458	1.59	48.4	47.4
[ 1 -2 -1 ]	( 4 2 0 )	( -6 -4 2 )	2.313	1.458	1.59	34.2	78.3
[ 2 -4 -9 ]	( 4 2 0 )	( 5 7 -2 )	2.313	1.457	1.59	42.2	55.0
[ 3 -6 -13 ]	( 4 2 0 )	( -1 -7 3 )	2.313	1.457	1.59	85.3	55.9
[ 1 -2 5 ]	( 4 2 0 )	( -1 7 3 )	2.313	1.457	1.59	78.3	57.4
[ 1 -2 -6 ]	( 4 2 0 )	( -6 -6 1 )	2.313	1.445	1.60	21.7	47.6
[ 3 -6 11 ]	( 4 2 0 )	( 5 -3 -3 )	2.313	1.431	1.62	62.7	65.7
[ 3 -6 -1 ]	( 4 2 0 )	( -5 -3 3 )	2.313	1.431	1.62	54.6	83.5
[ 1 -2 -6 ]	( 4 2 0 )	( 6 0 1 )	2.313	1.424	1.62	21.3	47.6
[ 3 -6 -10 ]	( 4 2 0 )	( -2 4 -3 )	2.313	1.419	1.63	65.8	61.8
[ 1 -2 2 ]	( 4 2 0 )	( 2 4 3 )	2.313	1.419	1.63	55.3	77.8
[ 3 -6 17 ]	( 4 2 0 )	( -3 7 3 )	2.313	1.419	1.63	84.9	53.8
[ 3 -6 -11 ]	( 4 2 0 )	( 3 7 -3 )	2.313	1.419	1.63	68.5	59.7
[ 3 -6 16 ]	( 4 2 0 )	( -4 6 3 )	2.313	1.410	1.64	75.5	55.6
[ 3 -6 -8 ]	( 4 2 0 )	( 4 6 -3 )	2.313	1.410	1.64	60.8	66.1
[ 1 -2 5 ]	( 4 2 0 )	( -7 -1 1 )	2.313	1.408	1.64	18.4	57.4
[ 1 -2 -2 ]	( 4 2 0 )	( 6 2 1 )	2.313	1.407	1.64	16.3	70.8
[ 1 -2 6 ]	( 4 2 0 )	( -2 8 3 )	2.313	1.389	1.67	85.8	52.1
[ 3 -6 -14 ]	( 4 2 0 )	( 2 8 -3 )	2.313	1.389	1.67	76.2	54.1
[ 1 -2 4 ]	( 4 2 0 )	( -4 -6 -2 )	2.313	1.389	1.67	35.9	63.6

**Actinolite (420) 360 Zone Axes*****a* 9.886Å *b* 18.171Å *c* 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	<i>d</i> (hk0)	<i>d</i> (hkl)	<i>d</i> Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 1 -2 1 ]	( 4 2 0 )	( 7 3 -1 )	2.313	1.375	1.68	15.1	85.7
[ 2 -4 -3 ]	( 4 2 0 )	( -5 -1 -2 )	2.313	1.372	1.69	32.5	74.5
[ 1 -2 -5 ]	( 4 2 0 )	( 1 -7 3 )	2.313	1.370	1.69	78.5	52.4
[ 3 -6 13 ]	( 4 2 0 )	( -1 -7 -3 )	2.313	1.370	1.69	62.1	61.4
[ 3 -6 -16 ]	( 4 2 0 )	( 0 -8 3 )	2.313	1.365	1.69	87.6	50.7
[ 3 -6 16 ]	( 4 2 0 )	( 0 -8 -3 )	2.313	1.365	1.69	69.6	55.6
[ 3 -6 -5 ]	( 4 2 0 )	( 3 -1 3 )	2.313	1.365	1.69	53.9	73.2
[ 3 -6 -1 ]	( 4 2 0 )	( -3 -1 -3 )	2.313	1.365	1.69	51.1	83.5
[ 1 -2 5 ]	( 4 2 0 )	( 5 -5 -3 )	2.313	1.364	1.70	66.5	57.4
[ 3 -6 -5 ]	( 4 2 0 )	( -5 -5 3 )	2.313	1.364	1.70	53.8	73.2
[ 1 -2 2 ]	( 4 2 0 )	( 6 4 1 )	2.313	1.359	1.70	15.2	77.8
[ 2 -4 9 ]	( 4 2 0 )	( -7 1 2 )	2.313	1.352	1.71	36.0	60.4
[ 2 -4 5 ]	( 4 2 0 )	( 7 1 -2 )	2.313	1.352	1.71	32.1	74.0
[ 2 -4 1 ]	( 4 2 0 )	( -5 -3 -2 )	2.313	1.342	1.72	30.4	89.8
[ 3 -6 -14 ]	( 4 2 0 )	( 2 -6 3 )	2.313	1.340	1.73	69.5	54.1
[ 3 -6 10 ]	( 4 2 0 )	( 2 6 3 )	2.313	1.340	1.73	54.9	68.0
[ 2 -4 15 ]	( 4 2 0 )	( -3 -9 -2 )	2.313	1.339	1.73	45.4	45.3
[ 3 -6 10 ]	( 4 2 0 )	( 6 -2 -3 )	2.313	1.333	1.74	54.5	68.0
[ 3 -6 2 ]	( 4 2 0 )	( -6 -2 3 )	2.313	1.333	1.74	49.0	88.4
[ 2 -4 -13 ]	( 4 2 0 )	( 5 9 -2 )	2.313	1.327	1.74	44.6	45.5
[ 3 -6 -17 ]	( 4 2 0 )	( -1 -9 3 )	2.313	1.327	1.74	83.6	49.1
[ 3 -6 19 ]	( 4 2 0 )	( -1 9 3 )	2.313	1.327	1.74	77.1	50.4
[ 2 -4 1 ]	( 4 2 0 )	( -2 0 4 )	2.313	1.324	1.75	89.1	89.8
[ 2 -4 13 ]	( 4 2 0 )	( 7 -3 -2 )	2.313	1.323	1.75	41.0	49.6
[ 2 -4 1 ]	( 4 2 0 )	( 7 3 -2 )	2.313	1.323	1.75	30.0	89.8
[ 1 -2 -3 ]	( 4 2 0 )	( -7 -5 1 )	2.313	1.316	1.76	16.1	63.9
[ 4 -8 -1 ]	( 4 2 0 )	( -1 -1 4 )	2.313	1.311	1.76	84.3	84.2
[ 4 -8 3 ]	( 4 2 0 )	( 1 -1 -4 )	2.313	1.311	1.76	82.2	87.7
[ 4 -8 5 ]	( 4 2 0 )	( 3 -1 -4 )	2.313	1.305	1.77	82.6	83.7
[ 4 -8 1 ]	( 4 2 0 )	( -3 -1 4 )	2.313	1.305	1.77	80.5	88.2
[ 3 -6 20 ]	( 4 2 0 )	( 4 -8 -3 )	2.313	1.304	1.77	78.8	48.9
[ 1 -2 -4 ]	( 4 2 0 )	( -4 -8 3 )	2.313	1.304	1.77	60.8	57.8
[ 3 -6 14 ]	( 4 2 0 )	( 6 -4 -3 )	2.313	1.292	1.79	58.2	59.4
[ 3 -6 -2 ]	( 4 2 0 )	( -6 -4 3 )	2.313	1.292	1.79	47.8	80.9
[ 1 -2 6 ]	( 4 2 0 )	( 6 6 1 )	2.313	1.289	1.79	18.0	52.1
[ 2 -4 5 ]	( 4 2 0 )	( 5 5 2 )	2.313	1.287	1.80	30.4	74.0
[ 4 -8 -5 ]	( 4 2 0 )	( 1 3 -4 )	2.313	1.285	1.80	86.5	76.4
[ 4 -8 7 ]	( 4 2 0 )	( -1 3 4 )	2.313	1.285	1.80	80.3	79.8
[ 3 -6 -13 ]	( 4 2 0 )	( 3 -5 3 )	2.313	1.281	1.81	61.2	55.9
[ 3 -6 7 ]	( 4 2 0 )	( -3 -5 -3 )	2.313	1.281	1.81	48.6	75.3
[ 3 -6 19 ]	( 4 2 0 )	( 5 -7 -3 )	2.313	1.281	1.81	70.2	50.4
[ 1 -2 -3 ]	( 4 2 0 )	( -5 -7 3 )	2.313	1.281	1.81	53.8	63.9
[ 4 -8 9 ]	( 4 2 0 )	( 3 -3 -4 )	2.313	1.279	1.81	84.8	75.9
[ 4 -8 -3 ]	( 4 2 0 )	( -3 -3 4 )	2.313	1.279	1.81	78.6	80.2
[ 1 -2 -5 ]	( 4 2 0 )	( 6 8 -2 )	2.313	1.274	1.82	37.4	52.4
[ 2 -4 5 ]	( 4 2 0 )	( 2 -4 -4 )	2.313	1.271	1.82	86.8	74.0
[ 2 -4 -3 ]	( 4 2 0 )	( 2 4 -4 )	2.313	1.271	1.82	85.1	74.5
[ 1 -2 -1 ]	( 4 2 0 )	( 0 -2 4 )	2.313	1.269	1.82	78.1	78.3

**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -2 1 ]	( 4 2 0 )	( 0 -2 -4 )	2.313	1.269	1.82	73.9	85.7
[ 3 -6 -19 ]	( 4 2 0 )	( 1 -9 3 )	2.313	1.260	1.84	81.5	46.2
[ 3 -6 17 ]	( 4 2 0 )	( 1 9 3 )	2.313	1.260	1.84	62.2	53.8
[ 1 -2 2 ]	( 4 2 0 )	( -4 2 4 )	2.313	1.259	1.84	76.5	77.8
[ 1 -2 0 ]	( 4 2 0 )	( 4 2 -4 )	2.313	1.259	1.84	72.3	86.2
[ 3 -6 -4 ]	( 4 2 0 )	( -4 0 -3 )	2.313	1.249	1.85	46.9	75.7
[ 1 -2 -6 ]	( 4 2 0 )	( 2 -8 3 )	2.313	1.248	1.85	73.1	47.6
[ 3 -6 14 ]	( 4 2 0 )	( 2 8 3 )	2.313	1.248	1.85	55.2	59.4
[ 1 -2 -5 ]	( 4 2 0 )	( 7 1 1 )	2.313	1.242	1.86	17.2	52.4
[ 3 -6 -8 ]	( 4 2 0 )	( -4 2 -3 )	2.313	1.238	1.87	50.0	66.1
[ 1 -2 0 ]	( 4 2 0 )	( 4 2 3 )	2.313	1.238	1.87	44.6	86.2
[ 4 -8 -9 ]	( 4 2 0 )	( 1 5 -4 )	2.313	1.236	1.87	88.6	69.0
[ 4 -8 11 ]	( 4 2 0 )	( -1 5 4 )	2.313	1.236	1.87	78.6	72.2
[ 1 -2 3 ]	( 4 2 0 )	( -7 1 3 )	2.313	1.226	1.89	47.5	70.4
[ 3 -6 5 ]	( 4 2 0 )	( 7 1 -3 )	2.313	1.226	1.89	44.8	80.4
[ 1 -2 4 ]	( 4 2 0 )	( -8 -2 1 )	2.313	1.224	1.89	15.0	63.6
[ 1 -2 -3 ]	( 4 2 0 )	( 6 0 2 )	2.313	1.223	1.89	30.9	63.9
[ 1 -2 -1 ]	( 4 2 0 )	( -7 -3 -1 )	2.313	1.219	1.90	13.6	78.3
[ 2 -4 9 ]	( 4 2 0 )	( 5 7 2 )	2.313	1.216	1.90	31.9	60.4
[ 3 -6 -17 ]	( 4 2 0 )	( 3 -7 3 )	2.313	1.211	1.91	65.1	49.1
[ 3 -6 11 ]	( 4 2 0 )	( 3 7 3 )	2.313	1.211	1.91	48.8	65.7
[ 4 -8 -7 ]	( 4 2 0 )	( 1 -3 4 )	2.313	1.205	1.92	72.5	72.6
[ 4 -8 5 ]	( 4 2 0 )	( 1 3 4 )	2.313	1.205	1.92	66.3	83.7
[ 3 -6 13 ]	( 4 2 0 )	( -7 3 3 )	2.313	1.205	1.92	51.0	61.4
[ 3 -6 1 ]	( 4 2 0 )	( 7 3 -3 )	2.313	1.205	1.92	43.0	88.9
[ 1 -2 -4 ]	( 4 2 0 )	( -4 4 -3 )	2.313	1.204	1.92	53.7	57.8
[ 3 -6 4 ]	( 4 2 0 )	( 4 4 3 )	2.313	1.204	1.92	43.4	83.1
[ 2 -4 -7 ]	( 4 2 0 )	( -7 -7 2 )	2.313	1.202	1.92	31.3	60.8
[ 1 -2 6 ]	( 4 2 0 )	( 8 -2 -2 )	2.313	1.196	1.93	34.9	52.1
[ 1 -2 2 ]	( 4 2 0 )	( 8 2 -2 )	2.313	1.196	1.93	27.5	77.8
[ 4 -8 11 ]	( 4 2 0 )	( 5 -3 -4 )	2.313	1.192	1.94	71.0	72.2
[ 4 -8 -1 ]	( 4 2 0 )	( -5 -3 4 )	2.313	1.192	1.94	64.8	84.2
[ 3 -6 -13 ]	( 4 2 0 )	( 5 9 -3 )	2.313	1.190	1.94	54.5	55.9
[ 1 -2 1 ]	( 4 2 0 )	( -6 -4 -2 )	2.313	1.181	1.96	26.5	85.7
[ 1 -2 -3 ]	( 4 2 0 )	( 0 -6 4 )	2.313	1.180	1.96	82.8	63.9
[ 1 -2 3 ]	( 4 2 0 )	( 0 -6 -4 )	2.313	1.180	1.96	71.1	70.4
[ 1 -2 3 ]	( 4 2 0 )	( 7 5 1 )	2.313	1.178	1.96	13.7	70.4
[ 4 -8 -13 ]	( 4 2 0 )	( 1 7 -4 )	2.313	1.173	1.97	89.4	62.3
[ 4 -8 15 ]	( 4 2 0 )	( 1 -7 -4 )	2.313	1.173	1.97	77.3	65.2
[ 1 -2 4 ]	( 4 2 0 )	( 4 -6 -4 )	2.313	1.172	1.97	81.2	63.6
[ 1 -2 -2 ]	( 4 2 0 )	( -4 -6 4 )	2.313	1.172	1.97	69.6	70.8
[ 4 -8 17 ]	( 4 2 0 )	( 3 -7 -4 )	2.313	1.169	1.98	89.0	62.0
[ 4 -8 -11 ]	( 4 2 0 )	( -3 -7 4 )	2.313	1.169	1.98	75.7	65.6
[ 2 -4 -1 ]	( 4 2 0 )	( 2 0 4 )	2.313	1.166	1.98	62.8	82.2
[ 1 -2 0 ]	( 4 2 0 )	( -8 -4 2 )	2.313	1.166	1.98	26.2	86.2
[ 4 -8 -11 ]	( 4 2 0 )	( 1 -5 4 )	2.313	1.165	1.99	75.1	65.6
[ 4 -8 9 ]	( 4 2 0 )	( 1 5 4 )	2.313	1.165	1.99	65.1	75.9
[ 3 -6 17 ]	( 4 2 0 )	( -7 5 3 )	2.313	1.164	1.99	54.8	53.8

**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -2 -1 ]	( 4 2 0 )	( 7 5 -3 )	2.313	1.164	1.99	42.3	78.3
[ 3 -6 22 ]	( 4 2 0 )	( 6 -8 -3 )	2.313	1.159	2.00	65.9	46.0
[ 3 -6 -10 ]	( 4 2 0 )	( -6 -8 3 )	2.313	1.159	2.00	48.1	61.8
[ 3 -6 -16 ]	( 4 2 0 )	( 4 -6 3 )	2.313	1.155	2.00	57.7	50.7
[ 3 -6 8 ]	( 4 2 0 )	( -4 -6 -3 )	2.313	1.155	2.00	43.2	72.8
[ 4 -8 15 ]	( 4 2 0 )	( 5 -5 -4 )	2.313	1.153	2.01	73.6	65.2
[ 4 -8 -5 ]	( 4 2 0 )	( -5 -5 4 )	2.313	1.153	2.01	63.6	76.4
[ 2 -4 3 ]	( 4 2 0 )	( 6 0 -4 )	2.313	1.151	2.01	61.4	81.7
[ 1 -2 -4 ]	( 4 2 0 )	( -8 -6 1 )	2.313	1.144	2.02	14.8	57.8
[ 2 -4 9 ]	( 4 2 0 )	( -2 8 4 )	2.313	1.144	2.02	83.4	60.4
[ 2 -4 -7 ]	( 4 2 0 )	( -2 -8 4 )	2.313	1.144	2.02	81.9	60.8
[ 3 -6 -7 ]	( 4 2 0 )	( 5 -1 3 )	2.313	1.137	2.03	43.8	68.4
[ 1 -2 -1 ]	( 4 2 0 )	( -5 -1 -3 )	2.313	1.137	2.03	41.1	78.3
[ 2 -4 13 ]	( 4 2 0 )	( 5 9 2 )	2.313	1.137	2.03	34.3	49.6
[ 2 -4 3 ]	( 4 2 0 )	( 2 4 4 )	2.313	1.130	2.05	59.6	81.7
[ 2 -4 -11 ]	( 4 2 0 )	( -7 -9 2 )	2.313	1.126	2.05	33.8	49.9
[ 1 -2 7 ]	( 4 2 0 )	( 7 7 1 )	2.313	1.122	2.06	16.7	47.4
[ 3 -6 8 ]	( 4 2 0 )	( -8 0 3 )	2.313	1.122	2.06	41.7	72.8
[ 1 -2 -2 ]	( 4 2 0 )	( 8 6 -2 )	2.313	1.121	2.06	26.6	70.8
[ 3 -6 -11 ]	( 4 2 0 )	( 5 -3 3 )	2.313	1.120	2.07	47.2	59.7
[ 3 -6 1 ]	( 4 2 0 )	( -5 -3 -3 )	2.313	1.120	2.07	39.4	88.9
[ 1 -2 4 ]	( 4 2 0 )	( 8 -2 -3 )	2.313	1.113	2.08	44.8	63.6
[ 3 -6 4 ]	( 4 2 0 )	( -8 -2 3 )	2.313	1.113	2.08	39.4	83.1
[ 4 -8 -15 ]	( 4 2 0 )	( 1 -7 4 )	2.313	1.111	2.08	77.6	59.3
[ 4 -8 13 ]	( 4 2 0 )	( -1 -7 -4 )	2.313	1.111	2.08	64.3	68.6
[ 1 -2 7 ]	( 4 2 0 )	( 7 -7 -3 )	2.313	1.111	2.08	58.8	47.4
[ 3 -6 -7 ]	( 4 2 0 )	( -7 -7 3 )	2.313	1.111	2.08	42.6	68.4
[ 4 -8 -17 ]	( 4 2 0 )	( 1 9 -4 )	2.313	1.102	2.10	87.7	56.4
[ 4 -8 19 ]	( 4 2 0 )	( 1 -9 -4 )	2.313	1.102	2.10	76.3	58.9
[ 4 -8 19 ]	( 4 2 0 )	( 5 -7 -4 )	2.313	1.101	2.10	76.2	58.9
[ 4 -8 -9 ]	( 4 2 0 )	( -5 -7 4 )	2.313	1.101	2.10	62.9	69.0
[ 4 -8 21 ]	( 4 2 0 )	( -3 9 4 )	2.313	1.098	2.11	89.2	56.0
[ 4 -8 -15 ]	( 4 2 0 )	( -3 -9 4 )	2.313	1.098	2.11	74.8	59.3
[ 1 -2 -4 ]	( 4 2 0 )	( 8 2 1 )	2.313	1.096	2.11	14.2	57.8
[ 1 -2 7 ]	( 4 2 0 )	( -9 -1 1 )	2.313	1.095	2.11	16.3	47.4
[ 4 -8 -5 ]	( 4 2 0 )	( 3 -1 4 )	2.313	1.095	2.11	58.3	76.4
[ 4 -8 -1 ]	( 4 2 0 )	( -3 -1 -4 )	2.313	1.095	2.11	56.2	84.2
[ 1 -2 4 ]	( 4 2 0 )	( 4 8 3 )	2.313	1.095	2.11	43.8	63.6
[ 2 -4 -9 ]	( 4 2 0 )	( -7 1 -2 )	2.313	1.095	2.11	30.3	55.0
[ 2 -4 -5 ]	( 4 2 0 )	( 7 1 2 )	2.313	1.095	2.11	26.6	67.3
[ 3 -6 16 ]	( 4 2 0 )	( -8 4 3 )	2.313	1.089	2.12	48.4	55.6
[ 1 -2 0 ]	( 4 2 0 )	( 8 4 -3 )	2.313	1.089	2.12	38.2	86.2
[ 2 -4 11 ]	( 4 2 0 )	( -9 1 2 )	2.313	1.081	2.14	30.0	54.7
[ 2 -4 7 ]	( 4 2 0 )	( 9 1 -2 )	2.313	1.081	2.14	26.4	66.9
[ 1 -2 3 ]	( 4 2 0 )	( -9 -3 1 )	2.313	1.080	2.14	12.5	70.4
[ 4 -8 -9 ]	( 4 2 0 )	( 3 -3 4 )	2.313	1.080	2.14	60.8	69.0
[ 4 -8 3 ]	( 4 2 0 )	( -3 -3 -4 )	2.313	1.080	2.14	54.7	87.7
[ 2 -4 -13 ]	( 4 2 0 )	( 7 -3 2 )	2.313	1.079	2.14	34.8	45.5

## Actinolite (420) 360 Zone Axes

a 9.886Å b 18.171Å c 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	d(hk0)	d(hkl)	d Ratio	$\theta^\circ$	ZA $^\circ$
[ 2 -4 -1 ]	( 4 2 0 )	( -7 -3 -2 )	2.313	1.079	2.14	24.3	82.2
[ 4 -8 9 ]	( 4 2 0 )	( 7 -1 -4 )	2.313	1.079	2.14	57.1	75.9
[ 4 -8 5 ]	( 4 2 0 )	( -7 -1 4 )	2.313	1.079	2.14	55.0	83.7
[ 1 -2 5 ]	( 4 2 0 )	( 6 8 2 )	2.313	1.077	2.15	28.8	57.4
[ 2 -4 15 ]	( 4 2 0 )	( 9 -3 -2 )	2.313	1.066	2.17	34.5	45.3
[ 2 -4 3 ]	( 4 2 0 )	( -9 -3 2 )	2.313	1.066	2.17	24.0	81.7
[ 4 -8 13 ]	( 4 2 0 )	( -7 3 4 )	2.313	1.064	2.17	59.6	68.6
[ 4 -8 1 ]	( 4 2 0 )	( 7 3 -4 )	2.313	1.064	2.17	53.5	88.2
[ 5 -10 2 ]	( 4 2 0 )	( 2 0 -5 )	2.313	1.059	2.18	87.8	89.4
[ 1 -2 1 ]	( 4 2 0 )	( 3 -1 -5 )	2.313	1.055	2.19	86.9	85.7
[ 5 -10 1 ]	( 4 2 0 )	( -3 -1 5 )	2.313	1.055	2.19	85.2	87.8
[ 3 -6 20 ]	( 4 2 0 )	( 8 -6 -3 )	2.313	1.052	2.20	52.3	48.9
[ 3 -6 -4 ]	( 4 2 0 )	( -8 -6 3 )	2.313	1.052	2.20	37.9	75.7
[ 5 -10 -2 ]	( 4 2 0 )	( -2 -2 5 )	2.313	1.051	2.20	89.5	83.0
[ 5 -10 6 ]	( 4 2 0 )	( 2 -2 -5 )	2.313	1.051	2.20	86.2	84.1
[ 1 -2 -1 ]	( 4 2 0 )	( 9 5 -1 )	2.313	1.050	2.20	11.7	78.3
[ 4 -8 -19 ]	( 4 2 0 )	( 1 -9 4 )	2.313	1.050	2.20	80.0	53.7
[ 4 -8 17 ]	( 4 2 0 )	( -1 -9 -4 )	2.313	1.050	2.20	64.0	62.0
[ 4 -8 -13 ]	( 4 2 0 )	( 3 -5 4 )	2.313	1.050	2.20	63.6	62.3
[ 4 -8 7 ]	( 4 2 0 )	( -3 -5 -4 )	2.313	1.050	2.20	53.7	79.8
[ 3 -6 -11 ]	( 4 2 0 )	( 7 9 -3 )	2.313	1.050	2.20	43.5	59.7
[ 2 -4 3 ]	( 4 2 0 )	( -7 -5 -2 )	2.313	1.050	2.20	23.6	81.7
[ 5 -10 -1 ]	( 4 2 0 )	( -1 -1 5 )	2.313	1.046	2.21	82.6	84.6
[ 5 -10 3 ]	( 4 2 0 )	( -1 1 5 )	2.313	1.046	2.21	80.9	89.0
[ 3 -6 -19 ]	( 4 2 0 )	( -5 7 -3 )	2.313	1.043	2.22	55.0	46.2
[ 1 -2 3 ]	( 4 2 0 )	( 5 7 3 )	2.313	1.043	2.22	38.9	70.4
[ 5 -10 4 ]	( 4 2 0 )	( -4 0 5 )	2.313	1.042	2.22	80.0	87.3
[ 4 -8 -13 ]	( 4 2 0 )	( 5 9 -4 )	2.313	1.042	2.22	62.6	62.3
[ 5 -10 9 ]	( 4 2 0 )	( 3 -3 -5 )	2.313	1.041	2.22	88.6	79.4
[ 5 -10 -3 ]	( 4 2 0 )	( 3 3 -5 )	2.313	1.041	2.22	83.6	81.4
[ 2 -4 -1 ]	( 4 2 0 )	( -9 -5 2 )	2.313	1.038	2.23	23.3	82.2
[ 1 -2 4 ]	( 4 2 0 )	( 8 6 1 )	2.313	1.038	2.23	12.6	63.6
[ 2 -4 -9 ]	( 4 2 0 )	( -2 8 -4 )	2.313	1.038	2.23	73.1	55.0
[ 2 -4 7 ]	( 4 2 0 )	( 2 8 4 )	2.313	1.038	2.23	58.4	66.9
[ 4 -8 17 ]	( 4 2 0 )	( -7 5 4 )	2.313	1.036	2.23	62.4	62.0
[ 4 -8 -3 ]	( 4 2 0 )	( 7 5 -4 )	2.313	1.036	2.23	52.5	80.2
[ 5 -10 8 ]	( 4 2 0 )	( -4 2 5 )	2.313	1.035	2.23	81.8	81.0
[ 1 -2 0 ]	( 4 2 0 )	( 4 2 -5 )	2.313	1.035	2.23	78.4	86.2
[ 3 -6 -10 ]	( 4 2 0 )	( -6 2 -3 )	2.313	1.035	2.23	41.7	61.8
[ 3 -6 -2 ]	( 4 2 0 )	( 6 2 3 )	2.313	1.035	2.23	36.4	80.9
[ 1 -2 -1 ]	( 4 2 0 )	( 1 3 -5 )	2.313	1.032	2.24	84.4	78.3
[ 5 -10 7 ]	( 4 2 0 )	( -1 3 5 )	2.313	1.032	2.24	79.4	82.5
[ 5 -10 -6 ]	( 4 2 0 )	( -2 -4 5 )	2.313	1.031	2.24	88.8	76.7
[ 1 -2 2 ]	( 4 2 0 )	( -2 4 5 )	2.313	1.031	2.24	84.6	77.8
[ 2 -4 -5 ]	( 4 2 0 )	( 6 8 -4 )	2.313	1.026	2.25	57.2	67.3
[ 3 -6 11 ]	( 4 2 0 )	( 9 -1 -3 )	2.313	1.024	2.26	39.5	65.7
[ 3 -6 7 ]	( 4 2 0 )	( -9 -1 3 )	2.313	1.024	2.26	36.9	75.3
[ 1 -2 -2 ]	( 4 2 0 )	( 4 -2 4 )	2.313	1.020	2.27	54.7	70.8



**Actinolite (420) 360 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 1 -2 0 ]	( 4 2 0 )	( -4 -2 -4 )	2.313	1.020	2.27	50.6	86.2
[ 5 -10 -4 ]	( 4 2 0 )	( 0 -2 5 )	2.313	1.019	2.27	77.7	79.8
[ 5 -10 4 ]	( 4 2 0 )	( 0 -2 -5 )	2.313	1.019	2.27	74.3	87.3
[ 5 -10 12 ]	( 4 2 0 )	( 4 -4 -5 )	2.313	1.016	2.28	83.6	74.8
[ 5 -10 -4 ]	( 4 2 0 )	( -4 -4 5 )	2.313	1.016	2.28	76.9	79.8
[ 3 -6 -14 ]	( 4 2 0 )	( 6 -4 3 )	2.313	1.016	2.28	45.2	54.1
[ 3 -6 2 ]	( 4 2 0 )	( -6 -4 -3 )	2.313	1.016	2.28	35.1	88.4
[ 5 -10 7 ]	( 4 2 0 )	( 5 -1 -5 )	2.313	1.015	2.28	75.1	82.5
[ 5 -10 3 ]	( 4 2 0 )	( 5 1 -5 )	2.313	1.015	2.28	73.4	89.0
[ 5 -10 13 ]	( 4 2 0 )	( 3 -5 -5 )	2.313	1.015	2.28	89.7	73.3
[ 5 -10 -7 ]	( 4 2 0 )	( 3 5 -5 )	2.313	1.015	2.28	82.1	75.2
[ 1 -2 5 ]	( 4 2 0 )	( -9 3 3 )	2.313	1.012	2.29	42.8	57.4
[ 1 -2 1 ]	( 4 2 0 )	( 9 3 -3 )	2.313	1.012	2.29	35.1	85.7
[ 1 -2 -5 ]	( 4 2 0 )	( -9 -7 1 )	2.313	1.011	2.29	13.9	52.4
[ 4 -8 -17 ]	( 4 2 0 )	( 3 -7 4 )	2.313	1.011	2.29	66.4	56.4
[ 4 -8 11 ]	( 4 2 0 )	( -3 -7 -4 )	2.313	1.011	2.29	53.3	72.2
[ 2 -4 7 ]	( 4 2 0 )	( 7 7 2 )	2.313	1.010	2.29	24.5	66.9
[ 5 -10 -9 ]	( 4 2 0 )	( 1 5 -5 )	2.313	1.007	2.30	86.1	72.3
[ 5 -10 11 ]	( 4 2 0 )	( -1 5 5 )	2.313	1.007	2.30	78.0	76.3
[ 3 -6 -8 ]	( 4 2 0 )	( -8 -8 3 )	2.313	1.006	2.30	38.5	66.1
[ 1 -2 3 ]	( 4 2 0 )	( 8 -2 -4 )	2.313	1.004	2.30	53.6	70.4
[ 1 -2 1 ]	( 4 2 0 )	( -8 -2 4 )	2.313	1.004	2.30	49.5	85.7
[ 5 -10 11 ]	( 4 2 0 )	( 5 -3 -5 )	2.313	1.003	2.31	76.9	76.3
[ 5 -10 -1 ]	( 4 2 0 )	( 5 3 -5 )	2.313	1.003	2.31	71.9	84.6

**Actinolite (280) 282 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 4 -1 0 ]	( 2 8 0 )	( 0 0 1 )	2.052	5.126	0.40	83.8	76.8
[ 4 -1 5 ]	( 2 8 0 )	( -1 1 1 )	2.052	4.895	0.42	82.7	68.7
[ 4 -1 3 ]	( 2 8 0 )	( -1 -1 1 )	2.052	4.895	0.42	68.9	82.0
[ 4 -1 -2 ]	( 2 8 0 )	( 0 2 -1 )	2.052	4.464	0.46	69.5	64.1
[ 4 -1 2 ]	( 2 8 0 )	( 0 -2 -1 )	2.052	4.464	0.46	57.4	89.2
[ 4 -1 8 ]	( 2 8 0 )	( 2 0 -1 )	2.052	4.042	0.51	73.9	52.6
[ 4 -1 -5 ]	( 2 8 0 )	( -1 1 -1 )	2.052	4.006	0.51	86.3	49.3
[ 4 -1 -3 ]	( 2 8 0 )	( 1 1 1 )	2.052	4.006	0.51	62.4	58.6
[ 4 -1 7 ]	( 2 8 0 )	( 1 -3 -1 )	2.052	3.894	0.53	60.8	57.4
[ 4 -1 1 ]	( 2 8 0 )	( 1 3 -1 )	2.052	3.894	0.53	47.7	83.7
[ 4 -1 6 ]	( 2 8 0 )	( -2 -2 1 )	2.052	3.693	0.56	51.6	62.8
[ 4 -1 -4 ]	( 2 8 0 )	( 0 4 -1 )	2.052	3.400	0.60	52.8	53.7
[ 4 -1 4 ]	( 2 8 0 )	( 0 -4 -1 )	2.052	3.400	0.60	41.6	75.2
[ 4 -1 -1 ]	( 2 8 0 )	( 1 3 1 )	2.052	3.399	0.60	43.0	70.2
[ 4 -1 4 ]	( 2 8 0 )	( -2 -4 1 )	2.052	3.020	0.68	36.1	75.2
[ 4 -1 9 ]	( 2 8 0 )	( -1 5 1 )	2.052	2.956	0.69	48.3	48.3
[ 4 -1 -1 ]	( 2 8 0 )	( -1 -5 1 )	2.052	2.956	0.69	36.4	70.2
[ 4 -1 -6 ]	( 2 8 0 )	( 2 2 1 )	2.052	2.956	0.69	51.6	45.4
[ 4 -1 9 ]	( 2 8 0 )	( -3 -3 1 )	2.052	2.744	0.75	43.9	48.3
[ 4 -1 1 ]	( 2 8 0 )	( 1 5 1 )	2.052	2.722	0.75	31.1	83.7
[ 8 -2 5 ]	( 2 8 0 )	( 1 -1 -2 )	2.052	2.620	0.78	82.9	85.6
[ 8 -2 3 ]	( 2 8 0 )	( 1 1 -2 )	2.052	2.620	0.78	82.1	87.3
[ 4 -1 -6 ]	( 2 8 0 )	( 0 6 -1 )	2.052	2.607	0.79	43.7	45.4
[ 4 -1 6 ]	( 2 8 0 )	( 0 -6 -1 )	2.052	2.607	0.79	33.6	62.8
[ 4 -1 -4 ]	( 2 8 0 )	( 2 4 1 )	2.052	2.575	0.80	37.1	53.7
[ 4 -1 4 ]	( 2 8 0 )	( 2 0 -2 )	2.052	2.542	0.81	83.1	75.2
[ 4 -1 -1 ]	( 2 8 0 )	( 0 2 -2 )	2.052	2.467	0.83	81.9	70.2
[ 4 -1 1 ]	( 2 8 0 )	( 0 -2 -2 )	2.052	2.467	0.83	69.6	83.7
[ 4 -1 2 ]	( 2 8 0 )	( 2 6 -1 )	2.052	2.424	0.85	27.2	89.2
[ 4 -1 7 ]	( 2 8 0 )	( -3 -5 1 )	2.052	2.349	0.87	31.8	57.4
[ 8 -2 -5 ]	( 2 8 0 )	( 1 -1 2 )	2.052	2.314	0.89	85.0	61.3
[ 8 -2 -3 ]	( 2 8 0 )	( -1 -1 -2 )	2.052	2.314	0.89	71.6	67.1
[ 4 -1 -3 ]	( 2 8 0 )	( 1 7 -1 )	2.052	2.312	0.89	30.8	58.6
[ 8 -2 13 ]	( 2 8 0 )	( 3 -1 -2 )	2.052	2.283	0.90	84.4	60.0
[ 8 -2 11 ]	( 2 8 0 )	( 3 1 -2 )	2.052	2.283	0.90	71.1	65.7
[ 4 -1 6 ]	( 2 8 0 )	( 2 -4 -2 )	2.052	2.218	0.93	70.4	62.8
[ 4 -1 2 ]	( 2 8 0 )	( 2 4 -2 )	2.052	2.218	0.93	56.9	89.2
[ 4 -1 3 ]	( 2 8 0 )	( -1 -7 -1 )	2.052	2.194	0.94	24.7	82.0
[ 8 -2 -7 ]	( 2 8 0 )	( -1 3 -2 )	2.052	2.177	0.94	82.2	56.1
[ 8 -2 -1 ]	( 2 8 0 )	( -1 -3 -2 )	2.052	2.177	0.94	59.1	73.4
[ 4 -1 -2 ]	( 2 8 0 )	( 2 6 1 )	2.052	2.175	0.94	27.2	64.1
[ 8 -2 15 ]	( 2 8 0 )	( 3 -3 -2 )	2.052	2.151	0.95	83.0	54.9
[ 8 -2 9 ]	( 2 8 0 )	( 3 3 -2 )	2.052	2.151	0.95	58.7	71.9
[ 8 -2 9 ]	( 2 8 0 )	( 1 -5 -2 )	2.052	2.140	0.96	58.2	71.9
[ 8 -2 -1 ]	( 2 8 0 )	( 1 5 -2 )	2.052	2.140	0.96	57.5	73.4
[ 4 -1 8 ]	( 2 8 0 )	( 0 -8 -1 )	2.052	2.077	0.99	29.6	52.6
[ 4 -1 -4 ]	( 2 8 0 )	( 2 0 2 )	2.052	2.054	1.00	74.3	53.7
[ 4 -1 7 ]	( 2 8 0 )	( -4 -2 2 )	2.052	1.973	1.04	62.2	57.4

**Actinolite (280) 282 Zone Axes**a 9.886Å b 18.171Å c 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	d(hk0)	d(hkl)	d Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 8 -2 -9 ]	( 2 8 0 )	( -1 5 -2 )	2.052	1.963	1.05	71.5	51.4
[ 8 -2 1 ]	( 2 8 0 )	( -1 -5 -2 )	2.052	1.963	1.05	48.8	80.2
[ 4 -1 -3 ]	( 2 8 0 )	( 0 6 -2 )	2.052	1.956	1.05	59.9	58.6
[ 4 -1 3 ]	( 2 8 0 )	( 0 -6 -2 )	2.052	1.956	1.05	48.2	82.0
[ 8 -2 17 ]	( 2 8 0 )	( -3 5 2 )	2.052	1.944	1.06	72.3	50.4
[ 8 -2 7 ]	( 2 8 0 )	( -3 -5 2 )	2.052	1.944	1.06	48.5	78.6
[ 4 -1 -5 ]	( 2 8 0 )	( 1 9 -1 )	2.052	1.876	1.09	27.9	49.3
[ 4 -1 -6 ]	( 2 8 0 )	( 2 -4 2 )	2.052	1.871	1.10	82.8	45.4
[ 4 -1 -2 ]	( 2 8 0 )	( 2 4 2 )	2.052	1.871	1.10	51.8	64.1
[ 8 -2 11 ]	( 2 8 0 )	( 1 -7 -2 )	2.052	1.854	1.11	50.2	65.7
[ 8 -2 -3 ]	( 2 8 0 )	( 1 7 -2 )	2.052	1.854	1.11	49.5	67.1
[ 4 -1 0 ]	( 2 8 0 )	( -2 -8 -1 )	2.052	1.837	1.12	20.9	76.8
[ 4 -1 5 ]	( 2 8 0 )	( 1 9 1 )	2.052	1.812	1.13	21.5	68.7
[ 8 -2 -11 ]	( 2 8 0 )	( -3 -1 -2 )	2.052	1.781	1.15	66.2	47.3
[ 4 -1 -5 ]	( 2 8 0 )	( 3 7 1 )	2.052	1.780	1.15	26.3	49.3
[ 12 -3 8 ]	( 2 8 0 )	( -2 0 3 )	2.052	1.755	1.17	87.3	84.4
[ 8 -2 19 ]	( 2 8 0 )	( 5 1 -2 )	2.052	1.753	1.17	66.0	46.4
[ 4 -1 1 ]	( 2 8 0 )	( -1 -1 3 )	2.052	1.752	1.17	86.9	83.7
[ 12 -3 5 ]	( 2 8 0 )	( -1 1 3 )	2.052	1.752	1.17	83.1	88.5
[ 8 -2 -11 ]	( 2 8 0 )	( 1 -7 2 )	2.052	1.735	1.18	63.1	47.3
[ 8 -2 3 ]	( 2 8 0 )	( 1 7 2 )	2.052	1.735	1.18	41.0	87.3
[ 12 -3 10 ]	( 2 8 0 )	( 2 -2 -3 )	2.052	1.723	1.19	82.8	79.7
[ 4 -1 2 ]	( 2 8 0 )	( 2 2 -3 )	2.052	1.723	1.19	77.5	89.2
[ 8 -2 19 ]	( 2 8 0 )	( 3 -7 -2 )	2.052	1.722	1.19	63.9	46.4
[ 8 -2 5 ]	( 2 8 0 )	( 3 7 -2 )	2.052	1.722	1.19	40.7	85.6
[ 8 -2 -9 ]	( 2 8 0 )	( -3 -3 -2 )	2.052	1.716	1.20	56.0	51.4
[ 8 -2 17 ]	( 2 8 0 )	( -5 -3 2 )	2.052	1.691	1.21	56.0	50.4
[ 12 -3 1 ]	( 2 8 0 )	( 1 3 -3 )	2.052	1.691	1.21	77.2	79.0
[ 12 -3 7 ]	( 2 8 0 )	( 1 -3 -3 )	2.052	1.691	1.21	73.5	86.8
[ 4 -1 3 ]	( 2 8 0 )	( 3 9 -1 )	2.052	1.688	1.22	18.8	82.0
[ 12 -3 13 ]	( 2 8 0 )	( -3 1 3 )	2.052	1.687	1.22	87.9	73.0
[ 12 -3 11 ]	( 2 8 0 )	( 3 1 -3 )	2.052	1.687	1.22	78.2	77.4
[ 4 -1 5 ]	( 2 8 0 )	( -4 -6 2 )	2.052	1.681	1.22	42.9	68.7
[ 12 -3 -2 ]	( 2 8 0 )	( 0 2 -3 )	2.052	1.679	1.22	86.5	72.3
[ 12 -3 2 ]	( 2 8 0 )	( 0 -2 -3 )	2.052	1.679	1.22	74.1	81.4
[ 4 -1 8 ]	( 2 8 0 )	( 4 8 -1 )	2.052	1.654	1.24	23.1	52.6
[ 4 -1 4 ]	( 2 8 0 )	( 2 -4 -3 )	2.052	1.637	1.25	73.6	75.2
[ 12 -3 4 ]	( 2 8 0 )	( 2 4 -3 )	2.052	1.637	1.25	68.4	86.1
[ 12 -3 -5 ]	( 2 8 0 )	( -1 1 -3 )	2.052	1.607	1.28	84.6	66.1
[ 4 -1 -1 ]	( 2 8 0 )	( 1 1 3 )	2.052	1.607	1.28	75.3	70.2
[ 8 -2 13 ]	( 2 8 0 )	( -1 9 2 )	2.052	1.606	1.28	44.4	60.0
[ 8 -2 -5 ]	( 2 8 0 )	( -1 -9 2 )	2.052	1.606	1.28	43.7	61.3
[ 8 -2 -7 ]	( 2 8 0 )	( 3 5 2 )	2.052	1.605	1.28	46.9	56.1
[ 12 -3 -4 ]	( 2 8 0 )	( 0 -4 3 )	2.052	1.599	1.28	77.5	68.1
[ 12 -3 4 ]	( 2 8 0 )	( 0 4 3 )	2.052	1.599	1.28	65.2	86.1
[ 12 -3 16 ]	( 2 8 0 )	( -4 0 3 )	2.052	1.593	1.29	79.3	66.7
[ 8 -2 15 ]	( 2 8 0 )	( 5 5 -2 )	2.052	1.585	1.29	47.0	54.9
[ 12 -3 -1 ]	( 2 8 0 )	( -1 -5 3 )	2.052	1.584	1.29	68.6	74.5

**Actinolite (280) 282 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 4 -1 3 ]	( 2 8 0 )	( -1 5 3 )	2.052	1.584	1.29	65.0	82.0
[ 4 -1 6 ]	( 2 8 0 )	( -4 2 3 )	2.052	1.569	1.31	88.5	62.8
[ 12 -3 14 ]	( 2 8 0 )	( 4 2 -3 )	2.052	1.569	1.31	70.2	70.8
[ 12 -3 -7 ]	( 2 8 0 )	( 1 -3 3 )	2.052	1.559	1.32	86.3	62.2
[ 12 -3 -1 ]	( 2 8 0 )	( 1 3 3 )	2.052	1.559	1.32	66.4	74.5
[ 4 -1 -3 ]	( 2 8 0 )	( -3 -9 -1 )	2.052	1.557	1.32	20.1	58.6
[ 12 -3 17 ]	( 2 8 0 )	( -3 5 3 )	2.052	1.536	1.34	74.2	64.7
[ 12 -3 7 ]	( 2 8 0 )	( -3 -5 3 )	2.052	1.536	1.34	60.6	86.8
[ 8 -2 5 ]	( 2 8 0 )	( 1 9 2 )	2.052	1.527	1.34	35.3	85.6
[ 4 -1 0 ]	( 2 8 0 )	( -2 -8 -2 )	2.052	1.523	1.35	36.2	76.8
[ 12 -3 14 ]	( 2 8 0 )	( -2 6 3 )	2.052	1.519	1.35	65.6	70.8
[ 12 -3 2 ]	( 2 8 0 )	( -2 -6 3 )	2.052	1.519	1.35	60.5	81.4
[ 8 -2 3 ]	( 2 8 0 )	( 3 9 -2 )	2.052	1.518	1.35	35.0	87.3
[ 12 -3 20 ]	( 2 8 0 )	( 4 -4 -3 )	2.052	1.503	1.36	82.8	59.1
[ 4 -1 4 ]	( 2 8 0 )	( 4 4 -3 )	2.052	1.503	1.36	61.7	75.2
[ 12 -3 -8 ]	( 2 8 0 )	( -2 0 -3 )	2.052	1.494	1.37	76.8	60.4
[ 4 -1 -3 ]	( 2 8 0 )	( 1 -5 3 )	2.052	1.474	1.39	78.1	58.6
[ 12 -3 1 ]	( 2 8 0 )	( 1 5 3 )	2.052	1.474	1.39	58.3	79.0
[ 12 -3 -10 ]	( 2 8 0 )	( -2 2 -3 )	2.052	1.474	1.39	85.5	56.9
[ 4 -1 -2 ]	( 2 8 0 )	( 2 2 3 )	2.052	1.474	1.39	68.2	64.1
[ 8 -2 -5 ]	( 2 8 0 )	( -3 -7 -2 )	2.052	1.473	1.39	39.4	61.3
[ 4 -1 7 ]	( 2 8 0 )	( 5 -1 -3 )	2.052	1.467	1.40	80.6	57.4
[ 12 -3 19 ]	( 2 8 0 )	( -5 -1 3 )	2.052	1.467	1.40	72.0	60.9
[ 8 -2 13 ]	( 2 8 0 )	( 5 7 -2 )	2.052	1.457	1.41	39.4	60.0
[ 4 -1 -1 ]	( 2 8 0 )	( -1 -7 3 )	2.052	1.457	1.41	61.3	70.2
[ 12 -3 11 ]	( 2 8 0 )	( -1 7 3 )	2.052	1.457	1.41	57.7	77.4
[ 12 -3 23 ]	( 2 8 0 )	( -5 3 3 )	2.052	1.431	1.43	89.0	54.1
[ 12 -3 17 ]	( 2 8 0 )	( 5 3 -3 )	2.052	1.431	1.43	63.7	64.7
[ 4 -1 -4 ]	( 2 8 0 )	( 2 -4 3 )	2.052	1.419	1.45	86.3	53.7
[ 12 -3 -4 ]	( 2 8 0 )	( 2 4 3 )	2.052	1.419	1.45	60.0	68.1
[ 12 -3 19 ]	( 2 8 0 )	( 3 -7 -3 )	2.052	1.419	1.45	66.9	60.9
[ 12 -3 5 ]	( 2 8 0 )	( 3 7 -3 )	2.052	1.419	1.45	53.5	88.5
[ 12 -3 22 ]	( 2 8 0 )	( 4 -6 -3 )	2.052	1.410	1.46	75.1	55.7
[ 12 -3 10 ]	( 2 8 0 )	( 4 6 -3 )	2.052	1.410	1.46	54.3	79.7
[ 12 -3 16 ]	( 2 8 0 )	( 2 -8 -3 )	2.052	1.389	1.48	59.0	66.7
[ 4 -1 0 ]	( 2 8 0 )	( 2 8 -3 )	2.052	1.389	1.48	53.9	76.8
[ 4 -1 -5 ]	( 2 8 0 )	( -4 -6 -2 )	2.052	1.389	1.48	43.8	49.3
[ 4 -1 1 ]	( 2 8 0 )	( 1 7 3 )	2.052	1.370	1.50	51.3	83.7
[ 12 -3 -8 ]	( 2 8 0 )	( 0 -8 3 )	2.052	1.365	1.50	62.8	60.4
[ 12 -3 8 ]	( 2 8 0 )	( 0 8 3 )	2.052	1.365	1.50	51.0	84.4
[ 12 -3 -13 ]	( 2 8 0 )	( -3 1 -3 )	2.052	1.365	1.50	78.3	52.1
[ 12 -3 -11 ]	( 2 8 0 )	( 3 1 3 )	2.052	1.365	1.50	70.2	55.2
[ 12 -3 25 ]	( 2 8 0 )	( 5 -5 -3 )	2.052	1.364	1.50	83.1	51.1
[ 4 -1 5 ]	( 2 8 0 )	( 5 5 -3 )	2.052	1.364	1.50	56.0	68.7
[ 12 -3 -2 ]	( 2 8 0 )	( 2 6 3 )	2.052	1.340	1.53	52.8	72.3
[ 8 -2 -3 ]	( 2 8 0 )	( 3 9 2 )	2.052	1.339	1.53	33.3	67.1
[ 12 -3 26 ]	( 2 8 0 )	( 6 -2 -3 )	2.052	1.333	1.54	81.9	49.7
[ 12 -3 22 ]	( 2 8 0 )	( -6 -2 3 )	2.052	1.333	1.54	66.0	55.7

**Actinolite (280) 282 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 8 -2 11 ]	( 2 8 0 )	( 5 9 -2 )	2.052	1.327	1.55	33.4	65.7
[ 12 -3 -5 ]	( 2 8 0 )	( -1 -9 3 )	2.052	1.327	1.55	55.3	66.1
[ 12 -3 13 ]	( 2 8 0 )	( -1 9 3 )	2.052	1.327	1.55	51.8	73.0
[ 4 -1 2 ]	( 2 8 0 )	( -2 0 4 )	2.052	1.324	1.55	89.6	89.2
[ 16 -4 3 ]	( 2 8 0 )	( 1 1 -4 )	2.052	1.311	1.57	89.2	81.9
[ 16 -4 5 ]	( 2 8 0 )	( 1 -1 -4 )	2.052	1.311	1.57	83.3	85.5
[ 16 -4 13 ]	( 2 8 0 )	( 3 -1 -4 )	2.052	1.305	1.57	90.0	80.3
[ 16 -4 11 ]	( 2 8 0 )	( -3 -1 4 )	2.052	1.305	1.57	82.5	83.8
[ 4 -1 8 ]	( 2 8 0 )	( -4 8 3 )	2.052	1.304	1.57	68.4	52.6
[ 12 -3 8 ]	( 2 8 0 )	( -4 -8 3 )	2.052	1.304	1.57	47.9	84.4
[ 12 -3 28 ]	( 2 8 0 )	( 6 -4 -3 )	2.052	1.292	1.59	89.5	47.0
[ 12 -3 20 ]	( 2 8 0 )	( -6 -4 3 )	2.052	1.292	1.59	58.5	59.1
[ 16 -4 1 ]	( 2 8 0 )	( -1 -3 4 )	2.052	1.285	1.60	81.9	78.5
[ 16 -4 7 ]	( 2 8 0 )	( -1 3 4 )	2.052	1.285	1.60	76.0	89.0
[ 12 -3 -17 ]	( 2 8 0 )	( -3 5 -3 )	2.052	1.281	1.60	86.3	46.6
[ 12 -3 -7 ]	( 2 8 0 )	( -3 -5 -3 )	2.052	1.281	1.60	55.1	62.2
[ 4 -1 9 ]	( 2 8 0 )	( -5 7 3 )	2.052	1.281	1.60	76.1	48.3
[ 12 -3 13 ]	( 2 8 0 )	( 5 7 -3 )	2.052	1.281	1.60	49.3	73.0
[ 16 -4 15 ]	( 2 8 0 )	( 3 -3 -4 )	2.052	1.279	1.60	82.7	76.9
[ 16 -4 9 ]	( 2 8 0 )	( 3 3 -4 )	2.052	1.279	1.60	75.2	87.4
[ 4 -1 8 ]	( 2 8 0 )	( -6 -8 2 )	2.052	1.274	1.61	37.3	52.6
[ 4 -1 3 ]	( 2 8 0 )	( -2 4 4 )	2.052	1.271	1.61	75.8	82.0
[ 4 -1 1 ]	( 2 8 0 )	( -2 -4 4 )	2.052	1.271	1.61	75.0	83.7
[ 8 -2 1 ]	( 2 8 0 )	( 0 -2 -4 )	2.052	1.269	1.62	76.5	80.2
[ 12 -3 -13 ]	( 2 8 0 )	( -1 9 -3 )	2.052	1.260	1.63	64.7	52.1
[ 12 -3 5 ]	( 2 8 0 )	( -1 -9 -3 )	2.052	1.260	1.63	45.6	88.5
[ 8 -2 9 ]	( 2 8 0 )	( -4 2 4 )	2.052	1.259	1.63	89.7	71.9
[ 8 -2 7 ]	( 2 8 0 )	( 4 2 -4 )	2.052	1.259	1.63	75.8	78.6
[ 12 -3 -16 ]	( 2 8 0 )	( -4 0 -3 )	2.052	1.249	1.64	72.4	47.9
[ 12 -3 -16 ]	( 2 8 0 )	( -2 8 -3 )	2.052	1.248	1.64	72.2	47.9
[ 4 -1 0 ]	( 2 8 0 )	( -2 -8 -3 )	2.052	1.248	1.64	46.6	76.8
[ 4 -1 -6 ]	( 2 8 0 )	( 4 -2 3 )	2.052	1.238	1.66	79.8	45.4
[ 12 -3 -14 ]	( 2 8 0 )	( -4 -2 -3 )	2.052	1.238	1.66	65.0	50.7
[ 16 -4 -1 ]	( 2 8 0 )	( 1 5 -4 )	2.052	1.236	1.66	75.0	75.1
[ 16 -4 9 ]	( 2 8 0 )	( 1 -5 -4 )	2.052	1.236	1.66	69.1	87.4
[ 16 -4 -3 ]	( 2 8 0 )	( -1 -1 -4 )	2.052	1.227	1.67	77.3	71.8
[ 12 -3 29 ]	( 2 8 0 )	( 7 -1 -3 )	2.052	1.226	1.67	75.7	45.8
[ 4 -1 9 ]	( 2 8 0 )	( 7 1 -3 )	2.052	1.226	1.67	68.4	48.3
[ 12 -3 -5 ]	( 2 8 0 )	( 3 7 3 )	2.052	1.211	1.69	48.6	66.1
[ 16 -4 -7 ]	( 2 8 0 )	( 1 -3 4 )	2.052	1.205	1.70	88.6	65.6
[ 16 -4 -1 ]	( 2 8 0 )	( 1 3 4 )	2.052	1.205	1.70	70.4	75.1
[ 12 -3 25 ]	( 2 8 0 )	( -7 -3 3 )	2.052	1.205	1.70	61.2	51.1
[ 4 -1 -4 ]	( 2 8 0 )	( 4 4 3 )	2.052	1.204	1.70	57.9	53.7
[ 16 -4 23 ]	( 2 8 0 )	( 5 -3 -4 )	2.052	1.192	1.72	89.4	64.2
[ 16 -4 17 ]	( 2 8 0 )	( 5 3 -4 )	2.052	1.192	1.72	69.9	73.5
[ 12 -3 29 ]	( 2 8 0 )	( -5 9 3 )	2.052	1.190	1.72	70.1	45.8
[ 12 -3 11 ]	( 2 8 0 )	( -5 -9 3 )	2.052	1.190	1.72	43.6	77.4
[ 8 -2 -3 ]	( 2 8 0 )	( 0 6 -4 )	2.052	1.180	1.74	75.4	67.1

**Actinolite (280) 282 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 8 -2 3 ]	( 2 8 0 )	( 0 -6 -4 )	2.052	1.180	1.74	63.2	87.3
[ 16 -4 -3 ]	( 2 8 0 )	( 1 7 -4 )	2.052	1.173	1.75	68.8	71.8
[ 16 -4 11 ]	( 2 8 0 )	( 1 -7 -4 )	2.052	1.173	1.75	63.0	83.8
[ 8 -2 11 ]	( 2 8 0 )	( -4 6 4 )	2.052	1.172	1.75	76.2	65.7
[ 8 -2 5 ]	( 2 8 0 )	( -4 -6 4 )	2.052	1.172	1.75	62.6	85.6
[ 16 -4 19 ]	( 2 8 0 )	( -3 7 4 )	2.052	1.169	1.76	69.6	70.3
[ 16 -4 5 ]	( 2 8 0 )	( -3 -7 4 )	2.052	1.169	1.76	62.3	85.5
[ 4 -1 -2 ]	( 2 8 0 )	( 2 0 4 )	2.052	1.166	1.76	78.3	64.1
[ 16 -4 -9 ]	( 2 8 0 )	( 1 -5 4 )	2.052	1.165	1.76	82.0	62.7
[ 16 -4 1 ]	( 2 8 0 )	( 1 5 4 )	2.052	1.165	1.76	63.9	78.5
[ 12 -3 23 ]	( 2 8 0 )	( -7 -5 3 )	2.052	1.164	1.76	54.5	54.1
[ 12 -3 16 ]	( 2 8 0 )	( 6 8 -3 )	2.052	1.159	1.77	45.6	66.7
[ 12 -3 -10 ]	( 2 8 0 )	( 4 6 3 )	2.052	1.155	1.78	51.3	56.9
[ 16 -4 25 ]	( 2 8 0 )	( 5 -5 -4 )	2.052	1.153	1.78	82.8	61.4
[ 16 -4 15 ]	( 2 8 0 )	( 5 5 -4 )	2.052	1.153	1.78	63.4	76.9
[ 4 -1 6 ]	( 2 8 0 )	( -6 0 4 )	2.052	1.151	1.78	77.7	62.8
[ 4 -1 4 ]	( 2 8 0 )	( -2 8 4 )	2.052	1.144	1.79	63.3	75.2
[ 4 -1 0 ]	( 2 8 0 )	( -2 -8 4 )	2.052	1.144	1.79	62.6	76.8
[ 8 -2 -11 ]	( 2 8 0 )	( -5 -9 -2 )	2.052	1.137	1.80	35.7	47.3
[ 4 -1 -3 ]	( 2 8 0 )	( 2 -4 4 )	2.052	1.130	1.82	88.4	58.6
[ 4 -1 -1 ]	( 2 8 0 )	( 2 4 4 )	2.052	1.130	1.82	65.1	70.2
[ 8 -2 19 ]	( 2 8 0 )	( -7 -9 2 )	2.052	1.126	1.82	35.9	46.4
[ 12 -3 -17 ]	( 2 8 0 )	( 5 3 3 )	2.052	1.120	1.83	60.7	46.6
[ 16 -4 -11 ]	( 2 8 0 )	( 1 -7 4 )	2.052	1.111	1.85	75.9	59.9
[ 16 -4 3 ]	( 2 8 0 )	( 1 7 4 )	2.052	1.111	1.85	58.0	81.9
[ 4 -1 7 ]	( 2 8 0 )	( -7 -7 3 )	2.052	1.111	1.85	48.3	57.4
[ 16 -4 -5 ]	( 2 8 0 )	( 1 9 -4 )	2.052	1.102	1.86	63.3	68.6
[ 16 -4 13 ]	( 2 8 0 )	( 1 -9 -4 )	2.052	1.102	1.86	57.6	80.3
[ 16 -4 27 ]	( 2 8 0 )	( -5 7 4 )	2.052	1.101	1.86	76.7	58.7
[ 16 -4 13 ]	( 2 8 0 )	( -5 -7 4 )	2.052	1.101	1.86	57.5	80.3
[ 16 -4 21 ]	( 2 8 0 )	( -3 9 4 )	2.052	1.098	1.87	64.1	67.2
[ 16 -4 3 ]	( 2 8 0 )	( -3 -9 4 )	2.052	1.098	1.87	56.9	81.9
[ 16 -4 -13 ]	( 2 8 0 )	( 3 -1 4 )	2.052	1.095	1.87	79.3	57.3
[ 16 -4 -11 ]	( 2 8 0 )	( -3 -1 -4 )	2.052	1.095	1.87	72.9	59.9
[ 12 -3 -8 ]	( 2 8 0 )	( 4 8 3 )	2.052	1.095	1.87	45.5	60.4
[ 12 -3 28 ]	( 2 8 0 )	( -8 -4 3 )	2.052	1.089	1.88	57.4	47.0
[ 16 -4 -9 ]	( 2 8 0 )	( -3 -3 -4 )	2.052	1.080	1.90	66.6	62.7
[ 16 -4 29 ]	( 2 8 0 )	( 7 -1 -4 )	2.052	1.079	1.90	78.8	56.1
[ 16 -4 27 ]	( 2 8 0 )	( 7 1 -4 )	2.052	1.079	1.90	72.5	58.7
[ 16 -4 31 ]	( 2 8 0 )	( -7 3 4 )	2.052	1.064	1.93	85.1	53.7
[ 16 -4 25 ]	( 2 8 0 )	( 7 3 -4 )	2.052	1.064	1.93	66.3	61.4
[ 20 -5 8 ]	( 2 8 0 )	( 2 0 -5 )	2.052	1.059	1.94	89.0	88.0
[ 20 -5 13 ]	( 2 8 0 )	( -3 1 5 )	2.052	1.055	1.94	88.7	84.9
[ 20 -5 11 ]	( 2 8 0 )	( 3 1 -5 )	2.052	1.055	1.94	85.2	87.7
[ 12 -3 26 ]	( 2 8 0 )	( 8 6 -3 )	2.052	1.052	1.95	51.4	49.7
[ 20 -5 6 ]	( 2 8 0 )	( -2 -2 5 )	2.052	1.051	1.95	85.0	85.1
[ 4 -1 2 ]	( 2 8 0 )	( -2 2 5 )	2.052	1.051	1.95	83.0	89.2
[ 16 -4 -13 ]	( 2 8 0 )	( 1 -9 4 )	2.052	1.050	1.95	70.5	57.3



**Actinolite (280) 282 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 16 -4 5 ]	( 2 8 0 )	( 1 9 4 )	2.052	1.050	1.95	52.7	85.5
[ 16 -4 -17 ]	( 2 8 0 )	( 3 -5 4 )	2.052	1.050	1.95	88.2	52.5
[ 16 -4 -7 ]	( 2 8 0 )	( 3 5 4 )	2.052	1.050	1.95	60.6	65.6
[ 12 -3 19 ]	( 2 8 0 )	( -7 -9 3 )	2.052	1.050	1.95	42.9	60.9
[ 20 -5 3 ]	( 2 8 0 )	( -1 -1 5 )	2.052	1.046	1.96	89.3	80.9
[ 4 -1 1 ]	( 2 8 0 )	( 1 -1 -5 )	2.052	1.046	1.96	83.4	83.7
[ 12 -3 -13 ]	( 2 8 0 )	( 5 7 3 )	2.052	1.043	1.97	48.5	52.1
[ 20 -5 16 ]	( 2 8 0 )	( -4 0 5 )	2.052	1.042	1.97	85.6	80.6
[ 16 -4 29 ]	( 2 8 0 )	( -5 9 4 )	2.052	1.042	1.97	71.3	56.1
[ 16 -4 11 ]	( 2 8 0 )	( -5 -9 4 )	2.052	1.042	1.97	52.3	83.8
[ 4 -1 3 ]	( 2 8 0 )	( -3 3 5 )	2.052	1.041	1.97	82.8	82.0
[ 20 -5 9 ]	( 2 8 0 )	( -3 -3 5 )	2.052	1.041	1.97	79.3	89.4
[ 4 -1 -4 ]	( 2 8 0 )	( -2 8 -4 )	2.052	1.038	1.98	76.6	53.7
[ 4 -1 0 ]	( 2 8 0 )	( -2 -8 -4 )	2.052	1.038	1.98	53.6	76.8
[ 16 -4 33 ]	( 2 8 0 )	( -7 5 4 )	2.052	1.036	1.98	88.9	51.5
[ 16 -4 23 ]	( 2 8 0 )	( 7 5 -4 )	2.052	1.036	1.98	60.3	64.2
[ 20 -5 18 ]	( 2 8 0 )	( 4 -2 -5 )	2.052	1.035	1.98	88.5	77.9
[ 20 -5 14 ]	( 2 8 0 )	( 4 2 -5 )	2.052	1.035	1.98	79.7	83.5
[ 20 -5 1 ]	( 2 8 0 )	( -1 -3 5 )	2.052	1.032	1.99	84.8	78.1
[ 20 -5 7 ]	( 2 8 0 )	( -1 3 5 )	2.052	1.032	1.99	77.5	86.5
[ 20 -5 4 ]	( 2 8 0 )	( -2 -4 5 )	2.052	1.031	1.99	79.1	82.3
[ 20 -5 12 ]	( 2 8 0 )	( -2 4 5 )	2.052	1.031	1.99	77.2	86.3
[ 4 -1 4 ]	( 2 8 0 )	( -6 -8 4 )	2.052	1.026	2.00	53.3	75.2
[ 8 -2 -9 ]	( 2 8 0 )	( 4 -2 4 )	2.052	1.020	2.01	80.3	51.4
[ 8 -2 -7 ]	( 2 8 0 )	( -4 -2 -4 )	2.052	1.020	2.01	68.2	56.1
[ 20 -5 -2 ]	( 2 8 0 )	( 0 -2 5 )	2.052	1.019	2.01	89.6	74.1
[ 20 -5 2 ]	( 2 8 0 )	( 0 -2 -5 )	2.052	1.019	2.01	77.9	79.5
[ 4 -1 4 ]	( 2 8 0 )	( -4 4 5 )	2.052	1.016	2.02	82.7	75.2
[ 20 -5 12 ]	( 2 8 0 )	( -4 -4 5 )	2.052	1.016	2.02	73.9	86.3
[ 20 -5 21 ]	( 2 8 0 )	( 5 -1 -5 )	2.052	1.015	2.02	86.0	73.8
[ 20 -5 19 ]	( 2 8 0 )	( -5 -1 5 )	2.052	1.015	2.02	80.2	76.5
[ 20 -5 17 ]	( 2 8 0 )	( -3 5 5 )	2.052	1.015	2.02	77.1	79.3
[ 20 -5 7 ]	( 2 8 0 )	( -3 -5 5 )	2.052	1.015	2.02	73.6	86.5
[ 16 -4 -19 ]	( 2 8 0 )	( 3 -7 4 )	2.052	1.011	2.03	82.5	50.3
[ 16 -4 -5 ]	( 2 8 0 )	( 3 7 4 )	2.052	1.011	2.03	55.0	68.6
[ 20 -5 -1 ]	( 2 8 0 )	( -1 -5 5 )	2.052	1.007	2.04	79.1	75.4
[ 20 -5 9 ]	( 2 8 0 )	( -1 5 5 )	2.052	1.007	2.04	71.9	89.4
[ 4 -1 8 ]	( 2 8 0 )	( -8 -8 3 )	2.052	1.006	2.04	45.8	52.6
[ 8 -2 17 ]	( 2 8 0 )	( 8 -2 -4 )	2.052	1.004	2.04	79.9	50.4
[ 8 -2 15 ]	( 2 8 0 )	( -8 -2 4 )	2.052	1.004	2.04	68.0	54.9
[ 20 -5 23 ]	( 2 8 0 )	( -5 3 5 )	2.052	1.003	2.05	88.2	71.2
[ 20 -5 17 ]	( 2 8 0 )	( -5 -3 5 )	2.052	1.003	2.05	74.4	79.3

**Actinolite (370) 301 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 7 -3 0 ]	( 3 7 0 )	( 0 0 1 )	2.013	5.126	0.39	80.8	78.6
[ 7 -3 10 ]	( 3 7 0 )	( 1 -1 -1 )	2.013	4.895	0.41	87.8	67.6
[ 7 -3 4 ]	( 3 7 0 )	( 1 1 -1 )	2.013	4.895	0.41	67.7	87.5
[ 7 -3 -6 ]	( 3 7 0 )	( 0 -2 1 )	2.013	4.464	0.45	76.0	60.3
[ 7 -3 6 ]	( 3 7 0 )	( 0 2 1 )	2.013	4.464	0.45	58.7	80.6
[ 7 -3 14 ]	( 3 7 0 )	( -2 0 1 )	2.013	4.042	0.50	65.9	56.7
[ 7 -3 -10 ]	( 3 7 0 )	( 1 -1 1 )	2.013	4.006	0.50	77.4	50.8
[ 7 -3 -4 ]	( 3 7 0 )	( -1 -1 -1 )	2.013	4.006	0.50	56.0	65.9
[ 7 -3 16 ]	( 3 7 0 )	( -1 3 1 )	2.013	3.894	0.52	68.7	52.1
[ 7 -3 -2 ]	( 3 7 0 )	( -1 -3 1 )	2.013	3.894	0.52	50.6	72.0
[ 7 -3 8 ]	( 3 7 0 )	( 2 2 -1 )	2.013	3.693	0.55	46.5	73.9
[ 7 -3 -12 ]	( 3 7 0 )	( 0 -4 1 )	2.013	3.400	0.59	61.7	46.8
[ 7 -3 12 ]	( 3 7 0 )	( 0 4 1 )	2.013	3.400	0.59	46.7	61.9
[ 7 -3 2 ]	( 3 7 0 )	( -1 -3 -1 )	2.013	3.399	0.59	40.1	85.5
[ 7 -3 18 ]	( 3 7 0 )	( 3 1 -1 )	2.013	3.035	0.66	50.5	47.9
[ 7 -3 2 ]	( 3 7 0 )	( -2 -4 1 )	2.013	3.020	0.67	34.9	85.5
[ 7 -3 -8 ]	( 3 7 0 )	( 1 5 -1 )	2.013	2.956	0.68	42.8	55.3
[ 7 -3 -8 ]	( 3 7 0 )	( -2 -2 -1 )	2.013	2.956	0.68	42.8	55.3
[ 7 -3 12 ]	( 3 7 0 )	( 3 3 -1 )	2.013	2.744	0.73	36.0	61.9
[ 7 -3 8 ]	( 3 7 0 )	( 1 5 1 )	2.013	2.722	0.74	32.3	73.9
[ 7 -3 5 ]	( 3 7 0 )	( 1 -1 -2 )	2.013	2.620	0.77	84.2	84.0
[ 7 -3 2 ]	( 3 7 0 )	( 1 1 -2 )	2.013	2.620	0.77	83.0	85.5
[ 7 -3 18 ]	( 3 7 0 )	( 0 -6 -1 )	2.013	2.607	0.77	41.5	47.9
[ 7 -3 -2 ]	( 3 7 0 )	( 2 4 1 )	2.013	2.575	0.78	30.7	72.0
[ 7 -3 7 ]	( 3 7 0 )	( 2 0 -2 )	2.013	2.542	0.79	79.8	77.2
[ 7 -3 -3 ]	( 3 7 0 )	( 0 2 -2 )	2.013	2.467	0.82	86.7	68.9
[ 7 -3 3 ]	( 3 7 0 )	( 0 -2 -2 )	2.013	2.467	0.82	68.7	89.0
[ 7 -3 -4 ]	( 3 7 0 )	( 2 6 -1 )	2.013	2.424	0.83	30.1	65.9
[ 7 -3 6 ]	( 3 7 0 )	( -3 -5 1 )	2.013	2.349	0.86	26.7	80.6
[ 7 -3 -5 ]	( 3 7 0 )	( 1 -1 2 )	2.013	2.314	0.87	78.6	63.0
[ 7 -3 -2 ]	( 3 7 0 )	( 1 1 2 )	2.013	2.314	0.87	66.7	72.0
[ 7 -3 12 ]	( 3 7 0 )	( -3 1 2 )	2.013	2.283	0.88	77.7	61.9
[ 7 -3 9 ]	( 3 7 0 )	( 3 1 -2 )	2.013	2.283	0.88	65.9	70.7
[ 7 -3 -12 ]	( 3 7 0 )	( -3 -3 -1 )	2.013	2.267	0.89	35.9	46.8
[ 7 -3 13 ]	( 3 7 0 )	( -2 4 2 )	2.013	2.218	0.91	77.1	59.2
[ 7 -3 1 ]	( 3 7 0 )	( -2 -4 2 )	2.013	2.218	0.91	57.8	82.0
[ 7 -3 14 ]	( 3 7 0 )	( 1 7 1 )	2.013	2.194	0.92	29.7	56.7
[ 7 -3 -8 ]	( 3 7 0 )	( -1 3 -2 )	2.013	2.177	0.92	90.0	55.3
[ 7 -3 1 ]	( 3 7 0 )	( 1 3 2 )	2.013	2.177	0.92	56.1	82.0
[ 7 -3 4 ]	( 3 7 0 )	( -2 -6 -1 )	2.013	2.175	0.93	24.3	87.5
[ 7 -3 15 ]	( 3 7 0 )	( 3 -3 -2 )	2.013	2.151	0.94	89.0	54.3
[ 7 -3 6 ]	( 3 7 0 )	( -3 -3 2 )	2.013	2.151	0.94	55.4	80.6
[ 7 -3 11 ]	( 3 7 0 )	( -1 5 2 )	2.013	2.140	0.94	63.4	64.7
[ 7 -3 -4 ]	( 3 7 0 )	( -1 -5 2 )	2.013	2.140	0.94	62.3	65.9
[ 7 -3 16 ]	( 3 7 0 )	( 4 4 -1 )	2.013	2.131	0.94	30.7	52.1
[ 7 -3 -7 ]	( 3 7 0 )	( -2 0 -2 )	2.013	2.054	0.98	66.5	57.7
[ 7 -3 -6 ]	( 3 7 0 )	( 3 5 1 )	2.013	2.029	0.99	26.2	60.3
[ 7 -3 -11 ]	( 3 7 0 )	( -1 5 -2 )	2.013	1.963	1.03	80.4	48.8

**Actinolite (370) 301 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 7 -3 4 ]	( 3 7 0 )	( -1 -5 -2 )	2.013	1.963	1.03	47.9	87.5
[ 7 -3 -9 ]	( 3 7 0 )	( 0 6 -2 )	2.013	1.956	1.03	67.7	53.0
[ 7 -3 9 ]	( 3 7 0 )	( 0 6 2 )	2.013	1.956	1.03	51.5	70.7
[ 7 -3 18 ]	( 3 7 0 )	( 3 -5 -2 )	2.013	1.944	1.04	81.3	47.9
[ 7 -3 3 ]	( 3 7 0 )	( 3 5 -2 )	2.013	1.944	1.04	47.2	89.0
[ 7 -3 10 ]	( 3 7 0 )	( -4 -6 1 )	2.013	1.887	1.07	22.7	67.6
[ 7 -3 -13 ]	( 3 7 0 )	( 2 -4 2 )	2.013	1.871	1.08	87.5	45.0
[ 7 -3 -1 ]	( 3 7 0 )	( 2 4 2 )	2.013	1.871	1.08	46.9	75.2
[ 7 -3 14 ]	( 3 7 0 )	( 1 -7 -2 )	2.013	1.854	1.09	56.9	56.7
[ 7 -3 -7 ]	( 3 7 0 )	( 1 7 -2 )	2.013	1.854	1.09	55.9	57.7
[ 7 -3 10 ]	( 3 7 0 )	( 2 8 1 )	2.013	1.837	1.10	22.0	67.6
[ 7 -3 -12 ]	( 3 7 0 )	( -3 1 -2 )	2.013	1.781	1.13	67.2	46.8
[ 7 -3 -9 ]	( 3 7 0 )	( 3 1 2 )	2.013	1.781	1.13	57.4	53.0
[ 7 -3 0 ]	( 3 7 0 )	( -3 -7 -1 )	2.013	1.780	1.13	20.0	78.6
[ 21 -9 14 ]	( 3 7 0 )	( 2 0 -3 )	2.013	1.755	1.15	86.1	85.2
[ 7 -3 19 ]	( 3 7 0 )	( -5 1 2 )	2.013	1.753	1.15	66.8	46.1
[ 7 -3 16 ]	( 3 7 0 )	( 5 1 -2 )	2.013	1.753	1.15	57.0	52.1
[ 21 -9 4 ]	( 3 7 0 )	( -1 -1 3 )	2.013	1.752	1.15	88.4	83.1
[ 21 -9 10 ]	( 3 7 0 )	( -1 1 3 )	2.013	1.752	1.15	83.0	89.9
[ 7 -3 7 ]	( 3 7 0 )	( -1 -7 -2 )	2.013	1.735	1.16	42.2	77.2
[ 21 -9 20 ]	( 3 7 0 )	( -2 2 3 )	2.013	1.723	1.17	85.4	78.3
[ 21 -9 8 ]	( 3 7 0 )	( -2 -2 3 )	2.013	1.723	1.17	77.6	87.8
[ 7 -3 0 ]	( 3 7 0 )	( 3 7 -2 )	2.013	1.722	1.17	41.6	78.6
[ 7 -3 -6 ]	( 3 7 0 )	( -3 -3 -2 )	2.013	1.716	1.17	48.2	60.3
[ 7 -3 13 ]	( 3 7 0 )	( 5 3 -2 )	2.013	1.691	1.19	48.0	59.2
[ 21 -9 -2 ]	( 3 7 0 )	( -1 -3 3 )	2.013	1.691	1.19	80.2	76.3
[ 21 -9 16 ]	( 3 7 0 )	( -1 3 3 )	2.013	1.691	1.19	74.8	82.9
[ 7 -3 -6 ]	( 3 7 0 )	( -3 -9 1 )	2.013	1.688	1.19	21.5	60.3
[ 7 -3 8 ]	( 3 7 0 )	( 3 -1 -3 )	2.013	1.687	1.19	84.0	73.9
[ 7 -3 6 ]	( 3 7 0 )	( -3 -1 3 )	2.013	1.687	1.19	75.6	80.6
[ 7 -3 5 ]	( 3 7 0 )	( 4 6 -2 )	2.013	1.681	1.20	39.7	84.0
[ 7 -3 -2 ]	( 3 7 0 )	( 0 2 -3 )	2.013	1.679	1.20	89.2	72.0
[ 7 -3 2 ]	( 3 7 0 )	( 0 2 3 )	2.013	1.679	1.20	72.6	85.5
[ 7 -3 -10 ]	( 3 7 0 )	( -4 -6 -1 )	2.013	1.660	1.21	23.8	50.8
[ 7 -3 4 ]	( 3 7 0 )	( 4 8 -1 )	2.013	1.654	1.22	18.2	87.5
[ 21 -9 26 ]	( 3 7 0 )	( -2 4 3 )	2.013	1.637	1.23	77.5	71.8
[ 21 -9 2 ]	( 3 7 0 )	( 2 4 -3 )	2.013	1.637	1.23	69.9	80.8
[ 21 -9 -10 ]	( 3 7 0 )	( -1 1 -3 )	2.013	1.607	1.25	79.2	67.9
[ 21 -9 -4 ]	( 3 7 0 )	( 1 1 3 )	2.013	1.607	1.25	71.1	74.1
[ 7 -3 17 ]	( 3 7 0 )	( 1 -9 -2 )	2.013	1.606	1.25	52.4	49.9
[ 7 -3 -10 ]	( 3 7 0 )	( 1 9 -2 )	2.013	1.606	1.25	51.5	50.8
[ 7 -3 -3 ]	( 3 7 0 )	( 3 5 2 )	2.013	1.605	1.25	40.5	68.9
[ 7 -3 -4 ]	( 3 7 0 )	( 0 -4 3 )	2.013	1.599	1.26	82.9	65.9
[ 7 -3 4 ]	( 3 7 0 )	( 0 4 3 )	2.013	1.599	1.26	65.0	87.5
[ 21 -9 28 ]	( 3 7 0 )	( -4 0 3 )	2.013	1.593	1.26	74.2	69.7
[ 7 -3 10 ]	( 3 7 0 )	( 5 5 -2 )	2.013	1.585	1.27	40.3	67.6
[ 21 -9 -8 ]	( 3 7 0 )	( -1 -5 3 )	2.013	1.584	1.27	72.8	69.9
[ 21 -9 22 ]	( 3 7 0 )	( -1 5 3 )	2.013	1.584	1.27	67.6	76.1

**Actinolite (370) 301 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C $^\circ$
[ 21 -9 34 ]	( 3 7 0 )	( 4 -2 -3 )	2.013	1.569	1.28	82.3	63.8
[ 21 -9 22 ]	( 3 7 0 )	( -4 -2 3 )	2.013	1.569	1.28	66.3	76.1
[ 7 -3 14 ]	( 3 7 0 )	( 5 7 -1 )	2.013	1.565	1.29	20.7	56.7
[ 21 -9 -16 ]	( 3 7 0 )	( -1 3 -3 )	2.013	1.559	1.29	87.2	62.1
[ 21 -9 2 ]	( 3 7 0 )	( 1 3 3 )	2.013	1.559	1.29	63.4	80.8
[ 7 -3 6 ]	( 3 7 0 )	( -3 -9 -1 )	2.013	1.557	1.29	17.3	80.6
[ 7 -3 -11 ]	( 3 7 0 )	( 4 2 2 )	2.013	1.540	1.31	50.7	48.8
[ 7 -3 12 ]	( 3 7 0 )	( -3 5 3 )	2.013	1.536	1.31	80.4	61.9
[ 7 -3 2 ]	( 3 7 0 )	( -3 -5 3 )	2.013	1.536	1.31	60.7	85.5
[ 7 -3 10 ]	( 3 7 0 )	( 1 9 2 )	2.013	1.527	1.32	38.6	67.6
[ 7 -3 5 ]	( 3 7 0 )	( -2 -8 -2 )	2.013	1.523	1.32	35.3	84.0
[ 21 -9 32 ]	( 3 7 0 )	( -2 6 3 )	2.013	1.519	1.33	70.7	65.7
[ 21 -9 -4 ]	( 3 7 0 )	( -2 -6 3 )	2.013	1.519	1.33	63.4	74.1
[ 7 -3 -3 ]	( 3 7 0 )	( 3 9 -2 )	2.013	1.518	1.33	37.9	68.9
[ 21 -9 40 ]	( 3 7 0 )	( -4 4 3 )	2.013	1.503	1.34	90.0	58.4
[ 21 -9 16 ]	( 3 7 0 )	( 4 4 -3 )	2.013	1.503	1.34	59.1	82.9
[ 7 -3 -4 ]	( 3 7 0 )	( -4 -8 -1 )	2.013	1.494	1.35	18.0	65.9
[ 21 -9 -14 ]	( 3 7 0 )	( 2 0 3 )	2.013	1.494	1.35	70.3	64.0
[ 21 -9 -22 ]	( 3 7 0 )	( 1 -5 3 )	2.013	1.474	1.37	85.4	56.9
[ 21 -9 8 ]	( 3 7 0 )	( 1 5 3 )	2.013	1.474	1.37	56.7	87.8
[ 21 -9 -20 ]	( 3 7 0 )	( -2 2 -3 )	2.013	1.474	1.37	78.1	58.6
[ 21 -9 -8 ]	( 3 7 0 )	( 2 2 3 )	2.013	1.474	1.37	62.8	69.9
[ 7 -3 0 ]	( 3 7 0 )	( -3 -7 -2 )	2.013	1.473	1.37	34.6	78.6
[ 21 -9 38 ]	( 3 7 0 )	( 5 -1 -3 )	2.013	1.467	1.37	73.5	60.1
[ 21 -9 32 ]	( 3 7 0 )	( -5 -1 3 )	2.013	1.467	1.37	65.8	65.7
[ 7 -3 15 ]	( 3 7 0 )	( 6 4 -2 )	2.013	1.458	1.38	42.7	54.3
[ 7 -3 7 ]	( 3 7 0 )	( -5 -7 2 )	2.013	1.457	1.38	34.3	77.2
[ 21 -9 -14 ]	( 3 7 0 )	( 1 7 -3 )	2.013	1.457	1.38	66.7	64.0
[ 21 -9 28 ]	( 3 7 0 )	( 1 -7 -3 )	2.013	1.457	1.38	61.6	69.7
[ 21 -9 44 ]	( 3 7 0 )	( 5 -3 -3 )	2.013	1.431	1.41	81.1	55.1
[ 21 -9 26 ]	( 3 7 0 )	( -5 -3 3 )	2.013	1.431	1.41	58.5	71.8
[ 21 -9 -26 ]	( 3 7 0 )	( 2 -4 3 )	2.013	1.419	1.42	85.6	53.7
[ 21 -9 -2 ]	( 3 7 0 )	( -2 -4 -3 )	2.013	1.419	1.42	55.8	76.3
[ 7 -3 14 ]	( 3 7 0 )	( -3 7 3 )	2.013	1.419	1.42	74.0	56.7
[ 7 -3 0 ]	( 3 7 0 )	( -3 -7 3 )	2.013	1.419	1.42	55.1	78.6
[ 21 -9 46 ]	( 3 7 0 )	( -4 6 3 )	2.013	1.410	1.43	83.1	53.6
[ 21 -9 10 ]	( 3 7 0 )	( -4 -6 3 )	2.013	1.410	1.43	53.0	89.9
[ 7 -3 8 ]	( 3 7 0 )	( 5 9 -1 )	2.013	1.407	1.43	16.0	73.9
[ 21 -9 38 ]	( 3 7 0 )	( -2 8 3 )	2.013	1.389	1.45	65.1	60.1
[ 21 -9 -10 ]	( 3 7 0 )	( -2 -8 3 )	2.013	1.389	1.45	58.1	67.9
[ 7 -3 -5 ]	( 3 7 0 )	( 4 6 2 )	2.013	1.389	1.45	36.0	63.0
[ 21 -9 14 ]	( 3 7 0 )	( -1 -7 -3 )	2.013	1.370	1.47	51.1	85.2
[ 7 -3 -8 ]	( 3 7 0 )	( 0 8 -3 )	2.013	1.365	1.47	70.2	55.3
[ 7 -3 8 ]	( 3 7 0 )	( 0 -8 -3 )	2.013	1.365	1.47	53.6	73.9
[ 7 -3 -8 ]	( 3 7 0 )	( 3 -1 3 )	2.013	1.365	1.47	70.2	55.3
[ 7 -3 -6 ]	( 3 7 0 )	( -3 -1 -3 )	2.013	1.365	1.47	62.9	60.3
[ 21 -9 50 ]	( 3 7 0 )	( 5 -5 -3 )	2.013	1.364	1.48	88.2	50.6
[ 21 -9 20 ]	( 3 7 0 )	( 5 5 -3 )	2.013	1.364	1.48	52.1	78.3

**Actinolite (370) 301 Zone Axes*****a* 9.886Å *b* 18.171Å *c* 5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	<i>d</i> (hk0)	<i>d</i> (hkl)	<i>d</i> Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 21 -9 -32 ]	( 3 7 0 )	( 2 -6 3 )	2.013	1.340	1.50	87.6	49.4
[ 21 -9 4 ]	( 3 7 0 )	( 2 6 3 )	2.013	1.340	1.50	49.8	83.1
[ 7 -3 3 ]	( 3 7 0 )	( -3 -9 -2 )	2.013	1.339	1.50	30.4	89.0
[ 7 -3 16 ]	( 3 7 0 )	( 6 -2 -3 )	2.013	1.333	1.51	73.2	52.1
[ 7 -3 12 ]	( 3 7 0 )	( -6 -2 3 )	2.013	1.333	1.51	58.8	61.9
[ 7 -3 18 ]	( 3 7 0 )	( 6 8 -1 )	2.013	1.332	1.51	19.8	47.9
[ 7 -3 4 ]	( 3 7 0 )	( 5 9 -2 )	2.013	1.327	1.52	30.1	87.5
[ 21 -9 -20 ]	( 3 7 0 )	( -1 -9 3 )	2.013	1.327	1.52	61.7	58.6
[ 21 -9 34 ]	( 3 7 0 )	( -1 9 3 )	2.013	1.327	1.52	56.9	63.8
[ 14 -6 7 ]	( 3 7 0 )	( -2 0 4 )	2.013	1.324	1.52	89.4	89.3
[ 7 -3 1 ]	( 3 7 0 )	( -1 -1 4 )	2.013	1.311	1.54	88.8	82.0
[ 14 -6 5 ]	( 3 7 0 )	( 1 -1 -4 )	2.013	1.311	1.54	82.4	87.2
[ 7 -3 6 ]	( 3 7 0 )	( 3 -1 -4 )	2.013	1.305	1.54	87.7	80.6
[ 14 -6 9 ]	( 3 7 0 )	( 3 1 -4 )	2.013	1.305	1.54	81.3	85.8
[ 21 -9 52 ]	( 3 7 0 )	( 4 -8 -3 )	2.013	1.304	1.54	77.1	49.3
[ 21 -9 4 ]	( 3 7 0 )	( 4 8 -3 )	2.013	1.304	1.54	48.1	83.1
[ 7 -3 18 ]	( 3 7 0 )	( -6 4 3 )	2.013	1.292	1.56	80.2	47.9
[ 7 -3 10 ]	( 3 7 0 )	( 6 4 -3 )	2.013	1.292	1.56	52.3	67.6
[ 7 -3 -10 ]	( 3 7 0 )	( 5 5 2 )	2.013	1.287	1.56	38.8	50.8
[ 14 -6 -1 ]	( 3 7 0 )	( -1 -3 4 )	2.013	1.285	1.57	84.9	76.9
[ 7 -3 4 ]	( 3 7 0 )	( -1 3 4 )	2.013	1.285	1.57	76.2	87.5
[ 7 -3 -8 ]	( 3 7 0 )	( -5 -9 -1 )	2.013	1.282	1.57	17.1	55.3
[ 7 -3 -12 ]	( 3 7 0 )	( -3 5 -3 )	2.013	1.281	1.57	84.3	46.8
[ 7 -3 -2 ]	( 3 7 0 )	( 3 5 3 )	2.013	1.281	1.57	49.7	72.0
[ 21 -9 56 ]	( 3 7 0 )	( 5 -7 -3 )	2.013	1.281	1.57	85.4	46.7
[ 21 -9 14 ]	( 3 7 0 )	( 5 7 -3 )	2.013	1.281	1.57	46.7	85.2
[ 14 -6 15 ]	( 3 7 0 )	( 3 -3 -4 )	2.013	1.279	1.57	86.0	75.5
[ 7 -3 3 ]	( 3 7 0 )	( 3 3 -4 )	2.013	1.279	1.57	75.0	89.0
[ 7 -3 9 ]	( 3 7 0 )	( -6 -8 2 )	2.013	1.274	1.58	30.6	70.7
[ 14 -6 13 ]	( 3 7 0 )	( -2 4 4 )	2.013	1.271	1.58	78.0	78.9
[ 14 -6 1 ]	( 3 7 0 )	( -2 -4 4 )	2.013	1.271	1.58	76.9	80.3
[ 14 -6 -3 ]	( 3 7 0 )	( 0 -2 4 )	2.013	1.269	1.59	87.2	73.6
[ 14 -6 3 ]	( 3 7 0 )	( 0 -2 -4 )	2.013	1.269	1.59	74.6	83.7
[ 21 -9 -34 ]	( 3 7 0 )	( -1 9 -3 )	2.013	1.260	1.60	73.5	48.1
[ 21 -9 20 ]	( 3 7 0 )	( -1 -9 -3 )	2.013	1.260	1.60	46.8	78.3
[ 14 -6 17 ]	( 3 7 0 )	( 4 -2 -4 )	2.013	1.259	1.60	86.1	72.3
[ 14 -6 11 ]	( 3 7 0 )	( -4 -2 4 )	2.013	1.259	1.60	73.5	82.3
[ 21 -9 -28 ]	( 3 7 0 )	( 4 0 3 )	2.013	1.249	1.61	63.5	52.2
[ 21 -9 -38 ]	( 3 7 0 )	( 2 -8 3 )	2.013	1.248	1.61	81.7	45.6
[ 21 -9 10 ]	( 3 7 0 )	( 2 8 3 )	2.013	1.248	1.61	45.0	89.9
[ 21 -9 -34 ]	( 3 7 0 )	( -4 2 -3 )	2.013	1.238	1.63	70.3	48.1
[ 21 -9 -22 ]	( 3 7 0 )	( 4 2 3 )	2.013	1.238	1.63	56.8	56.9
[ 7 -3 -2 ]	( 3 7 0 )	( -1 -5 4 )	2.013	1.236	1.63	78.9	72.0
[ 14 -6 11 ]	( 3 7 0 )	( -1 5 4 )	2.013	1.236	1.63	70.4	82.3
[ 7 -3 -1 ]	( 3 7 0 )	( 1 1 4 )	2.013	1.227	1.64	73.4	75.2
[ 21 -9 52 ]	( 3 7 0 )	( 7 -1 -3 )	2.013	1.226	1.64	66.4	49.3
[ 21 -9 46 ]	( 3 7 0 )	( -7 -1 3 )	2.013	1.226	1.64	59.7	53.6
[ 7 -3 -7 ]	( 3 7 0 )	( 5 7 2 )	2.013	1.216	1.66	32.9	57.7

**Actinolite (370) 301 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 7 -3 0 ]	( 3 7 0 )	( 3 7 3 )	2.013	1.211	1.66	44.4	78.6
[ 7 -3 -4 ]	( 3 7 0 )	( -1 3 -4 )	2.013	1.205	1.67	85.7	65.9
[ 14 -6 1 ]	( 3 7 0 )	( 1 3 4 )	2.013	1.205	1.67	67.4	80.3
[ 21 -9 58 ]	( 3 7 0 )	( -7 3 3 )	2.013	1.205	1.67	73.1	45.5
[ 21 -9 40 ]	( 3 7 0 )	( 7 3 -3 )	2.013	1.205	1.67	53.2	58.4
[ 21 -9 -16 ]	( 3 7 0 )	( -4 -4 -3 )	2.013	1.204	1.67	50.5	62.1
[ 7 -3 14 ]	( 3 7 0 )	( 7 7 -2 )	2.013	1.202	1.67	32.9	56.7
[ 7 -3 11 ]	( 3 7 0 )	( -5 3 4 )	2.013	1.192	1.69	84.7	64.7
[ 14 -6 13 ]	( 3 7 0 )	( 5 3 -4 )	2.013	1.192	1.69	66.6	78.9
[ 21 -9 8 ]	( 3 7 0 )	( -5 -9 3 )	2.013	1.190	1.69	42.4	87.8
[ 14 -6 -9 ]	( 3 7 0 )	( 0 6 -4 )	2.013	1.180	1.71	81.1	64.4
[ 14 -6 9 ]	( 3 7 0 )	( 0 6 4 )	2.013	1.180	1.71	63.3	85.8
[ 14 -6 -7 ]	( 3 7 0 )	( 1 7 -4 )	2.013	1.173	1.72	73.6	67.4
[ 7 -3 7 ]	( 3 7 0 )	( 1 -7 -4 )	2.013	1.173	1.72	65.2	77.2
[ 14 -6 23 ]	( 3 7 0 )	( -4 6 4 )	2.013	1.172	1.72	82.2	63.3
[ 14 -6 5 ]	( 3 7 0 )	( 4 6 -4 )	2.013	1.172	1.72	62.4	87.2
[ 14 -6 21 ]	( 3 7 0 )	( 3 -7 -4 )	2.013	1.169	1.72	74.8	66.2
[ 7 -3 0 ]	( 3 7 0 )	( 3 7 -4 )	2.013	1.169	1.72	64.2	78.6
[ 14 -6 -7 ]	( 3 7 0 )	( -2 0 -4 )	2.013	1.166	1.73	72.6	67.4
[ 14 -6 -11 ]	( 3 7 0 )	( -1 5 -4 )	2.013	1.165	1.73	88.5	61.7
[ 7 -3 2 ]	( 3 7 0 )	( -1 -5 -4 )	2.013	1.165	1.73	61.9	85.5
[ 21 -9 34 ]	( 3 7 0 )	( 7 5 -3 )	2.013	1.164	1.73	47.3	63.8
[ 7 -3 6 ]	( 3 7 0 )	( -6 -8 3 )	2.013	1.159	1.74	41.7	80.6
[ 21 -9 -10 ]	( 3 7 0 )	( -4 -6 -3 )	2.013	1.155	1.74	44.9	67.9
[ 14 -6 25 ]	( 3 7 0 )	( -5 5 4 )	2.013	1.153	1.75	89.5	60.5
[ 7 -3 5 ]	( 3 7 0 )	( -5 -5 4 )	2.013	1.153	1.75	61.1	84.0
[ 14 -6 21 ]	( 3 7 0 )	( 6 0 -4 )	2.013	1.151	1.75	71.8	66.2
[ 14 -6 19 ]	( 3 7 0 )	( -2 8 4 )	2.013	1.144	1.76	67.6	69.2
[ 14 -6 -5 ]	( 3 7 0 )	( -2 -8 4 )	2.013	1.144	1.76	66.5	70.4
[ 21 -9 -38 ]	( 3 7 0 )	( 5 -1 3 )	2.013	1.137	1.77	64.4	45.6
[ 21 -9 -32 ]	( 3 7 0 )	( -5 -1 -3 )	2.013	1.137	1.77	58.0	49.4
[ 7 -3 -4 ]	( 3 7 0 )	( 5 9 2 )	2.013	1.137	1.77	28.1	65.9
[ 14 -6 -1 ]	( 3 7 0 )	( 2 4 4 )	2.013	1.130	1.78	61.2	76.9
[ 7 -3 11 ]	( 3 7 0 )	( -7 -9 2 )	2.013	1.126	1.79	28.0	64.7
[ 21 -9 56 ]	( 3 7 0 )	( 8 0 -3 )	2.013	1.122	1.79	60.8	46.7
[ 7 -3 19 ]	( 3 7 0 )	( -8 -6 2 )	2.013	1.121	1.80	36.0	46.1
[ 21 -9 -26 ]	( 3 7 0 )	( 5 3 3 )	2.013	1.120	1.80	51.9	53.7
[ 21 -9 50 ]	( 3 7 0 )	( -8 -2 3 )	2.013	1.113	1.81	54.6	50.6
[ 7 -3 -7 ]	( 3 7 0 )	( -1 7 -4 )	2.013	1.111	1.81	83.1	57.7
[ 14 -6 7 ]	( 3 7 0 )	( -1 -7 -4 )	2.013	1.111	1.81	57.1	89.3
[ 21 -9 28 ]	( 3 7 0 )	( 7 7 -3 )	2.013	1.111	1.81	42.1	69.7
[ 7 -3 -5 ]	( 3 7 0 )	( -1 -9 4 )	2.013	1.102	1.83	69.0	63.0
[ 14 -6 17 ]	( 3 7 0 )	( -1 9 4 )	2.013	1.102	1.83	60.8	72.3
[ 7 -3 14 ]	( 3 7 0 )	( 5 -7 -4 )	2.013	1.101	1.83	84.1	56.7
[ 14 -6 7 ]	( 3 7 0 )	( 5 7 -4 )	2.013	1.101	1.83	56.3	89.3
[ 7 -3 12 ]	( 3 7 0 )	( 3 -9 -4 )	2.013	1.098	1.83	70.1	61.9
[ 14 -6 -3 ]	( 3 7 0 )	( 3 9 -4 )	2.013	1.098	1.83	59.8	73.6
[ 7 -3 -6 ]	( 3 7 0 )	( 3 -1 4 )	2.013	1.095	1.84	72.2	60.3



**Actinolite (370) 301 Zone Axes** $a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$ C
[ 14 -6 -9 ]	( 3 7 0 )	( -3 -1 -4 )	2.013	1.095	1.84	66.4	64.4
[ 21 -9 -4 ]	( 3 7 0 )	( 4 8 3 )	2.013	1.095	1.84	40.1	74.1
[ 21 -9 44 ]	( 3 7 0 )	( -8 -4 3 )	2.013	1.089	1.85	48.8	55.1
[ 7 -3 -3 ]	( 3 7 0 )	( -3 -3 -4 )	2.013	1.080	1.86	60.9	68.9
[ 7 -3 13 ]	( 3 7 0 )	( 7 -1 -4 )	2.013	1.079	1.87	71.4	59.2
[ 14 -6 23 ]	( 3 7 0 )	( -7 -1 4 )	2.013	1.079	1.87	65.8	63.3
[ 7 -3 -9 ]	( 3 7 0 )	( 6 8 2 )	2.013	1.077	1.87	30.6	53.0
[ 14 -6 29 ]	( 3 7 0 )	( 7 -3 -4 )	2.013	1.064	1.89	77.1	55.5
[ 7 -3 10 ]	( 3 7 0 )	( -7 -3 4 )	2.013	1.064	1.89	60.3	67.6
[ 35 -15 14 ]	( 3 7 0 )	( -2 0 5 )	2.013	1.059	1.90	88.6	88.3
[ 35 -15 24 ]	( 3 7 0 )	( 3 -1 -5 )	2.013	1.055	1.91	90.0	84.7
[ 35 -15 18 ]	( 3 7 0 )	( 3 1 -5 )	2.013	1.055	1.91	84.8	88.9
[ 21 -9 38 ]	( 3 7 0 )	( -8 -6 3 )	2.013	1.052	1.91	43.4	60.1
[ 35 -15 8 ]	( 3 7 0 )	( 2 2 -5 )	2.013	1.051	1.91	86.3	84.1
[ 7 -3 4 ]	( 3 7 0 )	( 2 -2 -5 )	2.013	1.051	1.91	83.4	87.5
[ 14 -6 -17 ]	( 3 7 0 )	( -1 9 -4 )	2.013	1.050	1.92	78.3	54.1
[ 7 -3 5 ]	( 3 7 0 )	( -1 -9 -4 )	2.013	1.050	1.92	52.9	84.0
[ 7 -3 -9 ]	( 3 7 0 )	( 3 -5 4 )	2.013	1.050	1.92	83.4	53.0
[ 14 -6 -3 ]	( 3 7 0 )	( -3 -5 -4 )	2.013	1.050	1.92	55.8	73.6
[ 21 -9 22 ]	( 3 7 0 )	( 7 9 -3 )	2.013	1.050	1.92	37.8	76.1
[ 35 -15 4 ]	( 3 7 0 )	( 1 1 -5 )	2.013	1.046	1.92	87.2	81.3
[ 7 -3 2 ]	( 3 7 0 )	( -1 1 5 )	2.013	1.046	1.92	82.1	85.5
[ 21 -9 -14 ]	( 3 7 0 )	( -5 -7 -3 )	2.013	1.043	1.93	41.1	64.0
[ 35 -15 28 ]	( 3 7 0 )	( 4 0 -5 )	2.013	1.042	1.93	83.5	82.0
[ 14 -6 31 ]	( 3 7 0 )	( 5 -9 -4 )	2.013	1.042	1.93	79.3	53.2
[ 7 -3 2 ]	( 3 7 0 )	( 5 9 -4 )	2.013	1.042	1.93	52.1	85.5
[ 7 -3 6 ]	( 3 7 0 )	( -3 3 5 )	2.013	1.041	1.93	84.9	80.6
[ 35 -15 12 ]	( 3 7 0 )	( -3 -3 5 )	2.013	1.041	1.93	79.8	86.9
[ 14 -6 -19 ]	( 3 7 0 )	( -2 8 -4 )	2.013	1.038	1.94	84.9	51.9
[ 14 -6 5 ]	( 3 7 0 )	( -2 -8 -4 )	2.013	1.038	1.94	51.7	87.2
[ 7 -3 16 ]	( 3 7 0 )	( 7 -5 -4 )	2.013	1.036	1.94	82.6	52.1
[ 14 -6 17 ]	( 3 7 0 )	( -7 -5 4 )	2.013	1.036	1.94	55.2	72.3
[ 35 -15 34 ]	( 3 7 0 )	( 4 -2 -5 )	2.013	1.035	1.94	88.6	77.9
[ 35 -15 22 ]	( 3 7 0 )	( -4 -2 5 )	2.013	1.035	1.94	78.4	86.1
[ 7 -3 -12 ]	( 3 7 0 )	( 6 2 3 )	2.013	1.035	1.94	53.5	46.8
[ 35 -15 -2 ]	( 3 7 0 )	( -1 -3 5 )	2.013	1.032	1.95	87.7	77.2
[ 35 -15 16 ]	( 3 7 0 )	( -1 3 5 )	2.013	1.032	1.95	77.0	89.7
[ 35 -15 2 ]	( 3 7 0 )	( 2 4 -5 )	2.013	1.031	1.95	81.3	79.9
[ 35 -15 26 ]	( 3 7 0 )	( 2 -4 -5 )	2.013	1.031	1.95	78.5	83.3
[ 14 -6 9 ]	( 3 7 0 )	( -6 -8 4 )	2.013	1.026	1.96	51.0	85.8
[ 14 -6 -17 ]	( 3 7 0 )	( -4 2 -4 )	2.013	1.020	1.97	72.0	54.1
[ 14 -6 -11 ]	( 3 7 0 )	( 4 2 4 )	2.013	1.020	1.97	61.1	61.7
[ 35 -15 -6 ]	( 3 7 0 )	( 0 2 -5 )	2.013	1.019	1.98	85.9	74.6
[ 35 -15 6 ]	( 3 7 0 )	( 0 2 5 )	2.013	1.019	1.98	75.8	82.7
[ 7 -3 8 ]	( 3 7 0 )	( 4 -4 -5 )	2.013	1.016	1.98	86.4	73.9
[ 35 -15 16 ]	( 3 7 0 )	( 4 4 -5 )	2.013	1.016	1.98	73.5	89.7
[ 7 -3 -10 ]	( 3 7 0 )	( -6 -4 -3 )	2.013	1.016	1.98	47.9	50.8
[ 35 -15 38 ]	( 3 7 0 )	( 5 -1 -5 )	2.013	1.015	1.98	82.3	75.2

**Actinolite (370) 301 Zone Axes** **$a$  9.886Å  $b$  18.171Å  $c$  5.297Å  $\alpha$  90°  $\beta$  104.6°  $\gamma$  90°**Space Group C 2/m permits only  $(h+k)=2n$ 

[ U V W ]	( h k 0 )	( h k l )	$d(hk0)$	$d(hkl)$	$d$ Ratio	$\theta^\circ$	ZA $^\circ$
[ 35 -15 32 ]	( 3 7 0 )	( -5 -1 5 )	2.013	1.015	1.98	77.3	79.2
[ 35 -15 36 ]	( 3 7 0 )	( -3 5 5 )	2.013	1.015	1.98	80.0	76.5
[ 35 -15 6 ]	( 3 7 0 )	( -3 -5 5 )	2.013	1.015	1.98	74.9	82.7
[ 7 -3 18 ]	( 3 7 0 )	( 9 3 -3 )	2.013	1.012	1.99	50.5	47.9
[ 14 -6 -21 ]	( 3 7 0 )	( 3 -7 4 )	2.013	1.011	1.99	88.6	49.8
[ 7 -3 0 ]	( 3 7 0 )	( -3 -7 -4 )	2.013	1.011	1.99	51.1	78.6
[ 35 -15 -8 ]	( 3 7 0 )	( 1 5 -5 )	2.013	1.007	2.00	82.8	73.3
[ 35 -15 22 ]	( 3 7 0 )	( 1 -5 -5 )	2.013	1.007	2.00	72.3	86.1
[ 21 -9 32 ]	( 3 7 0 )	( 8 8 -3 )	2.013	1.006	2.00	38.7	65.7
[ 14 -6 31 ]	( 3 7 0 )	( -8 2 4 )	2.013	1.004	2.00	71.4	53.2
[ 14 -6 25 ]	( 3 7 0 )	( 8 2 -4 )	2.013	1.004	2.00	60.6	60.5
[ 35 -15 44 ]	( 3 7 0 )	( -5 3 5 )	2.013	1.003	2.01	87.3	71.3
[ 35 -15 26 ]	( 3 7 0 )	( 5 3 -5 )	2.013	1.003	2.01	72.3	83.3