

Table 1. Sample reference, composition, unit cell parameters and fractional atomic coordinates of atoms used in calculation (trioctahedral true micas-1*M*, space group *C2/m*). Available on request.

Reference	Species, locality	Composition	<i>a</i> (Å)	<i>b</i> (Å)	<i>c</i> (Å)	$\beta$ (°)	<i>R</i> (%)	<i>x</i> (O1)	<i>y</i> (O1)	<i>y</i> (O2)	<i>x</i> (O3)	<i>y</i> (O3)	<i>x</i> (O4)	<i>y</i> (M2)
Alietti et al. 1995 (n # 1a)	Phlogopite, Mt. Monzoni (Italy)	(K <sub>0.93</sub> Na <sub>0.04</sub> ) (Al <sub>0.24</sub> Fe <sup>3+</sup> <sub>0.09</sub> Fe <sup>2+</sup> <sub>0.12</sub> Mg <sub>2.48</sub> Mn <sub>0.01</sub> Ti <sub>0.02</sub> ) (Si <sub>2.74</sub> Al <sub>1.26</sub> ) O <sub>9.99</sub> F <sub>0.06</sub> (OH) <sub>1.95</sub>	5.306(1)	9.195(3)	10.272(3)	100.01(2)	2.9	0.3333(4)	0.2240(3)	0.0049(7)	0.1308(4)	0.1670(3)	0.1328(6)	0.3317(2)
Alietti et al. 1995 (n # 1b)	Phlogopite, Mt. Monzoni (Italy)	(K <sub>0.93</sub> Na <sub>0.04</sub> ) (Al <sub>0.24</sub> Fe <sup>3+</sup> <sub>0.07</sub> Fe <sup>2+</sup> <sub>0.11</sub> Mg <sub>2.55</sub> Mn <sub>0.01</sub> Ti <sub>0.02</sub> ) (Si <sub>2.65</sub> Al <sub>1.35</sub> ) O <sub>9.96</sub> F <sub>0.09</sub> (OH) <sub>1.95</sub>	5.309(2)	9.180(5)	10.291(4)	100.00(4)	2.8	0.3340(4)	0.2228(3)	0.0029(6)	0.1305(3)	0.1669(2)	0.1326(5)	0.3316(2)
Alietti et al. 1995 (n # 2a)	Phlogopite, Mt. Monzoni (Italy)	(K <sub>0.95</sub> Na <sub>0.02</sub> Ba <sub>0.01</sub> ) (Al <sub>0.18</sub> Fe <sup>3+</sup> <sub>0.15</sub> Fe <sup>2+</sup> <sub>0.03</sub> Mg <sub>2.63</sub> Ti <sub>0.01</sub> ) (Si <sub>2.60</sub> Al <sub>1.40</sub> ) O <sub>9.93</sub> F <sub>0.11</sub> (OH) <sub>1.96</sub>	5.305(2)	9.189(3)	10.286(3)	99.96(2)	2.9	0.3358(3)	0.2214(2)	0.0013(5)	0.1313(3)	0.1666(2)	0.1318(4)	0.3308(1)
Alietti et al. 1995 (n # 3a)	Aluminian phlogopite Mt. Monzoni (Italy)	(K <sub>0.95</sub> Na <sub>0.02</sub> Ba <sub>0.01</sub> ) (Al <sub>0.47</sub> Fe <sup>3+</sup> <sub>0.15</sub> Fe <sup>2+</sup> <sub>0.07</sub> Mg <sub>2.23</sub> Mn <sub>0.04</sub> Ti <sub>0.01</sub> ) (Si <sub>2.50</sub> Al <sub>1.50</sub> ) O <sub>10.02</sub> F <sub>0.04</sub> (OH) <sub>1.94</sub>	5.299(1)	9.179(2)	10.279(3)	99.90(2)	3.0	0.3395(5)	0.2182(3)	-0.0064(7)	0.1322(5)	0.1673(3)	0.1306(7)	0.3309(2)
Alietti et al. 1995 (n # 4a)	Phlogopite, Mt. Monzoni (Italy)	(K <sub>0.90</sub> Na <sub>0.02</sub> Ba <sub>0.02</sub> Ca <sub>0.02</sub> ) (Al <sub>0.20</sub> Fe <sup>3+</sup> <sub>0.11</sub> Fe <sup>2+</sup> <sub>0.04</sub> Mg <sub>2.64</sub> Mn <sub>0.01</sub> ) (Si <sub>2.60</sub> Al <sub>1.40</sub> ) O <sub>9.92</sub> F <sub>0.06</sub> (OH) <sub>2.02</sub>	5.307(2)	9.199(2)	10.291(2)	99.89(2)	2.5	0.3340(4)	0.2225(3)	0.0031(6)	0.1295(3)	0.1670(2)	0.1319(5)	0.3310(2)
Alietti et al. 1997 (n # cli5a)	Clintonite, Valle di Stabio (Italy)	(Na <sub>0.01</sub> Ca <sub>0.99</sub> ) (Al <sub>0.68</sub> Fe <sup>3+</sup> <sub>0.04</sub> Fe <sup>2+</sup> <sub>0.11</sub> Mg <sub>2.21</sub> ) (Si <sub>1.20</sub> Al <sub>2.76</sub> ) O <sub>9.88</sub> F <sub>0.14</sub> (OH) <sub>1.98</sub>	5.200(1)	9.005(2)	9.795(2)	100.24(2)	3.5	0.3630(4)	0.1876(3)	-0.0750(6)	0.1308(4)	0.1678(3)	0.1300(6)	0.3299(1)
Alietti et al. 1997 (n # cli8a)	Clintonite, Mt. Monzoni (Italy)	(Na <sub>0.02</sub> Ca <sub>0.96</sub> ) (Al <sub>0.76</sub> Fe <sup>2+</sup> <sub>0.15</sub> Mg <sub>2.09</sub> ) (Si <sub>1.25</sub> Al <sub>2.75</sub> ) O <sub>9.94</sub> F <sub>0.09</sub> (OH) <sub>1.97</sub>	5.194(1)	8.995(2)	9.788(2)	100.23(3)	3.1	0.3641(4)	0.1857(3)	-0.0772(6)	0.1302(3)	0.1678(2)	0.1310(5)	0.3301(2)
Alietti et al. 1997 (n # cli8d)	Clintonite, Mt. Monzoni (Italy)	(Na <sub>0.02</sub> Ca <sub>0.97</sub> ) (Al <sub>0.65</sub> Fe <sup>2+</sup> <sub>0.13</sub> Mg <sub>2.22</sub> ) (Si <sub>1.24</sub> Al <sub>2.76</sub> ) O <sub>9.86</sub> F <sub>0.17</sub> (OH) <sub>1.97</sub>	5.203(1)	9.026(2)	9.811(1)	100.27(1)	3.2	0.3626(4)	0.1879(3)	-0.0752(6)	0.1309(4)	0.1678(3)	0.1294(6)	0.3298(2)
Alietti et al. 1997 (n # cli9a)	Clintonite, Mt. Monzoni (Italy)	Ca <sub>0.98</sub> (Al <sub>0.67</sub> Fe <sup>2+</sup> <sub>0.16</sub> Mg <sub>2.17</sub> Ti <sub>0.01</sub> ) (Si <sub>1.19</sub> Al <sub>2.78</sub> Fe <sup>3+</sup> <sub>0.03</sub> ) O <sub>9.83</sub> F <sub>0.19</sub> (OH) <sub>1.98</sub>	5.192(2)	9.003(2)	9.794(2)	100.17(2)	3.3	0.3647(5)	0.1829(3)	-0.0849(8)	0.1319(4)	0.1678(3)	0.1322(7)	0.3315(2)
Alietti et al. 1997 (n # cli9b)	Clintonite Valle di Stabio, Italy	(Na <sub>0.01</sub> Ca <sub>0.95</sub> ) (Al <sub>0.63</sub> Fe <sup>2+</sup> <sub>0.16</sub> Mg <sub>2.20</sub> Ti <sub>0.01</sub> ) (Si <sub>1.28</sub> Al <sub>2.7</sub> Fe <sup>3+</sup> <sub>0.02</sub> ) O <sub>9.84</sub> F <sub>0.18</sub> (OH) <sub>1.98</sub>	5.202(1)	9.005(2)	9.816(2)	100.30(1)	2.7	0.3619(4)	0.1882(3)	-0.0715(6)	0.1298(4)	0.1686(3)	0.1293(6)	0.3296(2)

Bigi et al. 1993 (n # MP9)	Magnesian annite, Ivrea (Italy)	$(\text{Na}_{0.02}\text{K}_{0.81}\text{Ba}_{0.10})(\text{Fe}^{2+}_{1.05}\text{Mg}_{0.92}\text{Mn}_{0.01}\text{Ti}_{0.67})(\text{Si}_{2.50}\text{Al}_{1.37}\text{Fe}_{0.13})\text{O}_{9.99}\text{F}_{0.06}(\text{OH})_{1.95}$	5.349(2)	9.244(6)	10.132(7)	100.38(4)	3.1	0.3229(7)	0.2324(5)	0.0179(9)	0.1278(5)	0.1678(4)	0.1382(9)	0.3369(1)
Brigatti & Poppi 1993 (n #27)	Potassium kinoshitalite (Alaska)	$(\text{K}_{0.41}\text{Na}_{0.04}\text{Ca}_{0.01}\text{Ba}_{0.54})(\text{Al}_{0.17}\text{Fe}^{2+}_{0.27}\text{Mg}_{2.53}\text{Ti}_{0.03})(\text{Si}_{2.17}\text{Al}_{1.83})\text{O}_{9.94}\text{F}_{0.71}(\text{OH})_{1.35}$	5.318(1)	9.214(1)	10.164(2)	100.11(1)	2.5	0.3342(3)	0.2211(2)	-0.0029(5)	0.1311(3)	0.1663(2)	0.1310(4)	0.33067(1) )
Brigatti and Davoli 1990 (n # M14)	Ferroan phlogopite, Valle Cervo (Italy)	$(\text{K}_{0.90}\text{Na}_{0.03})(\text{Fe}^{3+}_{0.45}\text{Fe}^{2+}_{0.79}\text{Mg}_{1.43}\text{Mn}_{0.01}\text{Ti}_{0.23}\text{Li}_{0.01})(\text{Si}_{2.78}\text{Al}_{1.19}\text{Fe}^{3+}_{0.03})\text{O}_{10.44}\text{Cl}_{0.04}(\text{OH})_{1.52}$	5.343(3)	9.258(1)	10.227(2)	100.26(2)	3.3	0.3192(5)	0.2357(3)	0.0268(8)	0.1312(5)	0.1678(3)	0.1286(7)	0.3348(1)
Brigatti and Davoli 1990 (n # M32)	Ferroan phlogopite, Valle Cervo (Italy)	$(\text{K}_{0.92}\text{Na}_{0.01}\text{Ca}_{0.01})(\text{Al}_{0.01}\text{Fe}^{3+}_{0.46}\text{Fe}^{2+}_{0.71}\text{Mg}_{1.50}\text{Mn}_{0.03}\text{Ti}_{0.15}\text{Li}_{0.01})(\text{Si}_{2.80}\text{Al}_{1.20})\text{O}_{10.25}\text{Cl}_{0.02}(\text{OH})_{1.73}$	5.346(2)	9.252(2)	10.238(4)	100.02(3)	2.4	0.3221(8)	0.2339(5)	0.0236(12)	0.1308(7)	0.1673(6)	0.1293(13)	0.3340(5)
Brigatti and Davoli 1990 (n # M62)	Ferroan phlogopite, Valle Cervo (Italy)	$(\text{K}_{0.94}\text{Na}_{0.02})(\text{Al}_{0.05}\text{Fe}^{3+}_{0.39}\text{Fe}^{2+}_{0.95}\text{Mg}_{1.35}\text{Mn}_{0.03}\text{Ti}_{0.20}\text{Li}_{0.01})(\text{Si}_{2.79}\text{Al}_{1.21})\text{O}_{10.55}\text{Cl}_{0.01}(\text{OH})_{1.44}$	5.337(1)	9.242(2)	10.211(2)	100.15(2)	3.5	0.3207(9)	0.2340(6)	0.0239(14)	0.1303(7)	0.1676(6)	0.1305(12)	0.3350(3)
Brigatti and Davoli 1990 (n # M73)	Ferroan phlogopite, Valle Cervo (Italy)	$(\text{K}_{0.91}\text{Na}_{0.02})(\text{Al}_{0.02}\text{Fe}^{3+}_{0.36}\text{Fe}^{2+}_{0.86}\text{Mg}_{1.39}\text{Mn}_{0.02}\text{Ti}_{0.25}\text{Li}_{0.01})(\text{Si}_{2.74}\text{Al}_{1.26})\text{O}_{10.32}\text{Cl}_{0.05}(\text{OH})_{1.63}$	5.345(1)	9.258(2)	10.222(2)	100.23(2)	2.1	0.3195(4)	0.2361(3)	0.0267(6)	0.1316(3)	0.1677(2)	0.1291(5)	0.3347(1)
Brigatti and Davoli 1990 (n # M13)	Ferroan phlogopite, Valle Cervo (Italy)	$(\text{K}_{0.99}\text{Na}_{0.01})(\text{Al}_{0.05}\text{Fe}^{3+}_{0.34}\text{Fe}^{2+}_{0.91}\text{Mg}_{1.35}\text{Mn}_{0.03}\text{Ti}_{0.23}\text{Li}_{0.02})(\text{Si}_{2.85}\text{Al}_{1.15})\text{O}_{10.54}\text{Cl}_{0.01}(\text{OH})_{1.45}$	5.355(1)	9.251(4)	10.246(4)	100.15(3)	6.2	0.3203(11)	0.2355(7)	0.0241(18)	0.1330(9)	0.1676(6)	0.1304(14)	0.3342(3)
Brigatti and Poppi 1993 (n # 18)	Titanian phlogopite, Jumilla (Spain)	$(\text{K}_{0.93}\text{Na}_{0.06}\text{Ba}_{0.01})(\text{Al}_{0.01}\text{Fe}^{3+}_{0.18}\text{Fe}^{2+}_{0.06}\text{Mg}_{2.33}\text{Mn}_{0.01}\text{Ti}_{0.41})(\text{Si}_{2.94}\text{Al}_{1.06})\text{O}_{10.96}\text{F}_{0.79}(\text{OH})_{0.25}$	5.320(2)	9.207(3)	10.100(2)	100.24(2)	2.0	0.3190(3)	0.2352(2)	0.0252(4)	0.1316(2)	0.1685(1)	0.1305(3)	0.3415(1)
Brigatti and Poppi 1993 (n # 20)	Aluminian phlogopite, Grotta dei Cervi (Italy)	$(\text{K}_{0.88}\text{Na}_{0.07}\text{Ca}_{0.03}\text{Ba}_{0.03})(\text{Al}_{0.93}\text{Fe}^{3+}_{0.41}\text{Fe}^{2+}_{0.39}\text{Mg}_{1.10}\text{Mn}_{0.03}\text{Ti}_{0.14})(\text{Si}_{2.68}\text{Al}_{1.32})\text{O}_{11.36}\text{F}_{0.14}(\text{OH})_{0.50}$	5.323(1)	9.219(1)	10.219(4)	100.03(2)	2.7	0.3294(3)	0.2267(2)	0.0107(5)	0.1302(3)	0.1675(2)	0.1312(4)	0.3350(1)
Brigatti and Poppi 1993 (n # 21)	Ferrian phlogopite, Grotta dei Cervi (Italy)	$(\text{K}_{0.92}\text{Na}_{0.05}\text{Ba}_{0.03})(\text{Al}_{0.14}\text{Fe}^{3+}_{0.38}\text{Fe}^{2+}_{0.31}\text{Mg}_{2.00}\text{Mn}_{0.01}\text{Ti}_{0.17})(\text{Si}_{2.68}\text{Al}_{1.32})\text{O}_{10.57}\text{F}_{0.16}(\text{OH})_{1.27}$	5.326(1)	9.222(1)	10.223(2)	100.04(1)	2.3	0.3300(2)	0.2264(2)	0.0090(4)	0.1304(2)	0.1675(1)	0.1326(3)	0.3354(1)
Brigatti and Poppi 1993 (n # 22)	Ferroan phlogopite (Antartica)	$(\text{K}_{0.85}\text{Na}_{0.11}\text{Ba}_{0.04})(\text{Fe}^{2+}_{0.74}\text{Mg}_{1.70}\text{Mn}_{0.01}\text{Ti}_{0.49})(\text{Si}_{3.25}\text{Al}_{0.75})\text{O}_{11.14}\text{F}_{0.31}(\text{OH})_{0.55}$	5.330(3)	9.245(2)	10.192(9)	100.35(6)	3.4	0.3142(6)	0.2376(4)	0.0357(9)	0.1339(5)	0.1687(3)	0.1328(8)	0.3408(2)
Brigatti and Poppi 1993 (n # 19)	Ferroan phlogopite, Colli Euganei (Italy)	$(\text{K}_{0.90}\text{Na}_{0.07}\text{Ba}_{0.03})(\text{Al}_{0.02}\text{Fe}^{3+}_{0.39}\text{Fe}^{2+}_{0.60}\text{Mg}_{1.61}\text{Mn}_{0.01}\text{Ti}_{0.37})(\text{Si}_{2.75}\text{Al}_{1.25})\text{O}_{11.93}\text{F}_{0.23}(\text{OH})_{0.84}$	5.331(1)	9.230(2)	10.160(2)	100.19(1)	3.2	0.3238(5)	0.2305(3)	0.0165(7)	0.1316(4)	0.1679(3)	0.1298(6)	0.3377(1)

Brigatti and Poppi 1993 (n # 23)	Ferrian phlogopite, Alto Adige (Italy)	$(K_{0.88}Na_{0.08}Ba_{0.04})(Al_{0.12}Fe^{3+}_{0.47}Fe^{2+}_{0.42}Mg_{1.85}Mn_{0.01}Ti_{0.14})(Si_{2.65}Al_{1.35})O_{10.56}F_{0.01}(OH)_{1.43}$	5.328(3)	9.219(2)	10.233(3)	99.88(3)	3.4	0.3303(4)	0.2265(3)	0.0094(6)	0.1295(4)	0.1673(2)	0.1299(6)	0.3338(1)
Brigatti and Poppi 1993 (n # 24)	Ferrian phlogopite, Alto Adige (Italy)	$(K_{0.91}Na_{0.06}Ba_{0.04})(Al_{0.13}Fe^{3+}_{0.72}Fe^{2+}_{0.30}Mg_{1.67}Mn_{0.01}Ti_{0.18})(Si_{2.62}Al_{1.38})O_{10.87}F_{0.04}(OH)_{1.09}$	5.328(1)	9.224(2)	10.247(3)	100.01(2)	2.7	0.3289(3)	0.2270(2)	0.0092(5)	0.1307(3)	0.1676(2)	0.1306(4)	0.3338(1)
Brigatti and Poppi 1993 (n # 25)	Ferroan phlogopite, Grotta dei Cervi (Italy)	$(K_{0.89}Ba_{0.12})(Al_{0.24}Fe^{3+}_{0.23}Fe^{2+}_{0.76}Mg_{1.58}Ti_{0.17})(Si_{2.59}Al_{1.41})O_{10.52}F_{0.26}(OH)_{1.22}$	5.333(1)	9.241(1)	10.180(1)	100.10(1)	2.2	0.3272(2)	0.2282(2)	0.0119(4)	0.1308(2)	0.1675(1)	0.1317(3)	0.3356(1)
Brigatti et al. 1991 (n # 8)	Ferroan phlogopite, Puebla de Mula (Spain)	$(K_{0.96}Na_{0.02}Ca_{0.03})(Al_{0.22}Cr_{0.05}Fe^{3+}_{0.39}Mg_{2.17}Mn_{0.02}Ti_{0.14})(Si_{2.86}Al_{1.14})O_{10.43}F_{0.20}(OH)_{1.37}$	5.317(1)	9.207(1)	10.232(2)	99.98(2)	2.5	0.3256(4)	0.2311(3)	0.0171(7)	0.1313(4)	0.1673(3)	0.1311(6)	0.3347(2)
Brigatti et al. 1991 (n # 9)	Phlogopite, Cancarix (Spain)	$(K_{0.95}Na_{0.02}Ca_{0.01})(Cr_{0.03}Fe^{2+}_{0.28}Mg_{2.42}Mn_{0.01}Ti_{0.18})(Si_{2.91}Al_{1.09})O_{10.12}F_{0.72}(OH)_{1.16}$	5.306(1)	9.190(1)	10.163(1)	100.11(1)	2.2	0.3222(3)	0.2334(2)	0.0220(5)	0.1309(3)	0.1672(2)	0.1317(4)	0.3353(1)
Brigatti et al. 1991 (n # 10)	Ferroan phlogopite, Fortuna (Spain)	$(K_{0.96}Na_{0.02})(Al_{0.09}Cr_{0.05}Fe^{2+}_{0.59}Mg_{1.60}Mn_{0.03}Ti_{0.52})(Si_{2.93}Al_{1.07})O_{10.88}F_{0.57}(OH)_{0.55}$	5.322(1)	9.228(3)	10.102(1)	100.25(1)	2.2	0.3187(5)	0.2368(3)	0.0291(8)	0.1321(4)	0.1687(3)	0.1308(7)	0.3398(2)
Brigatti et al. 1991 (n # 12)	Ferroan phlogopite, Jumilla (Spain)	$(K_{0.95}Na_{0.03})(Al_{0.04}Cr_{0.05}Fe^{2+}_{0.50}Mg_{2.09}Mn_{0.02}Ti_{0.27})(Si_{2.90}Al_{1.10})O_{10.43}F_{0.44}(OH)_{1.13}$	5.314(1)	9.190(1)	10.160(3)	100.18(2)	2.1	0.3225(3)	0.2330(2)	0.0214(5)	0.1307(3)	0.1674(2)	0.1311(4)	0.3357(1)
Brigatti et al. 1991 (n # 15)	Ferroan phlogopite, St. Hilaire (Canada)	$(K_{0.92}Na_{0.01}Ca_{0.01})(Al_{0.01}Cr_{0.01}Fe^{3+}_{0.94}Mg_{1.48}Mn_{0.02}Ti_{0.39})(Si_{2.73}Al_{1.27})O_{10.15}F_{0.07}(OH)_{1.78}$	5.329(1)	9.235(2)	10.190(3)	100.20(2)	2.3	0.3243(4)	0.2311(3)	0.0174(7)	0.1307(4)	0.1683(3)	0.1293(6)	0.336(8)
Brigatti et al. 1991 (n # 16)	Ferroan phlogopite, Sande (Norway)	$(K_{0.97}Na_{0.02}Ca_{0.01})(Al_{0.08}Cr_{0.01}Fe^{3+}_{1.24}Mg_{1.40}Mn_{0.02}Ti_{0.23})(Si_{2.81}Al_{1.19})O_{10.32}F_{0.31}(OH)_{1.37}$	5.333(1)	9.256(6)	10.186(4)	100.17(3)	3.0	0.3201(5)	0.2368(3)	0.0297(8)	0.1310(4)	0.1679(3)	0.1291(6)	0.3355(1)
Brigatti et al. 1991 (n # 17)	Magnesian annite, Capo Vaticano (Italy)	$(K_{0.91}Na_{0.02})(Al_{0.19}Cr_{0.01}Fe^{2+}_{1.30}Mg_{1.24}Mn_{0.01}Ti_{0.20})(Si_{2.76}Al_{1.24})O_{10.18}F_{0.02}(OH)_{1.80}$	5.323(1)	9.215(2)	10.210(2)	100.14(2)	2.6	0.3249(5)	0.2298(3)	0.0145(8)	0.1302(4)	0.1671(3)	0.1293(7)	0.3327(1)
Brigatti et al. 1996a (n # Tae 23-1a)	Phlogopite, Tapira (Brazil)	$(K_{0.93}Na_{0.05}Ba_{0.02})(Fe^{3+}_{0.16}Fe^{2+}_{0.09}Mg_{2.65}Ti_{0.08})(Si_{2.84}Al_{1.04}Fe^{3+}_{0.12})O_{10.17}F_{0.01}(OH)_{1.82}$	5.321(1)	9.211(2)	10.287(1)	99.93(1)	2.7	0.3296(4)	0.2276(2)	0.0108(6)	0.1302(3)	0.1666(2)	0.1320(5)	0.3320(1)
Brigatti et al. 1996a (n # Tae 23-1b)	Phlogopite, Tapira (Brazil)	$(K_{0.88}Na_{0.05}Ba_{0.01})(Fe^{3+}_{0.22}Fe^{2+}_{0.09}Mg_{2.60}Ti_{0.09})(Si_{2.82}Al_{1.13}Fe^{3+}_{0.05})O_{10.18}F_{0.01}(OH)_{1.81}$	5.330(2)	9.230(3)	10.256(4)	99.92(3)	2.7	0.3296(3)	0.2274(2)	0.0111(4)	0.1300(2)	0.1668(2)	0.1323(4)	0.3326(1)

Brigatti et al. 1996a (n # Tae 23-1c)	Phlogopite, Tapira (Brazil)	$(K_{0.87}Na_{0.05}Ba_{0.02})(Fe^{3+}_{0.23}Fe^{2+}_{0.09}Mg_{2.57}Ti_{0.10})(Si_{2.81}Al_{1.14}Fe^{3+}_{0.05})O_{10.18}F_{0.01}(OH)_{1.81}$	5.318(1)	9.219(3)	10.274(4)	99.88(3)	3.0	0.3286(4)	0.2275(2)	0.0105(7)	0.1318(4)	0.1670(2)	0.1329(5)	0.3320(1)
Brigatti et al. 1996a (n # Tpg 63-2B)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.98}Ba_{0.02})(Fe^{3+}_{0.24}Fe^{2+}_{0.62}Mg_{1.90}Mn_{0.02}Ti_{0.18})(Si_{2.71}Al_{1.20}Fe^{3+}_{0.09})O_{10.25}F_{0.02}(OH)_{1.73}$	5.341(1)	9.244(2)	10.253(3)	100.09(2)	2.3	0.3271(3)	0.2293(2)	0.0160(5)	0.1311(3)	0.1671(3)	0.1309(4)	0.3335(3)
Brigatti et al. 1996a (n # Tas 22-1a)	Tetra- ferriphlogopite, Tapira (Brazil)	$(K_{0.99}Na_{0.01})(Fe^{3+}_{0.05}Fe^{2+}_{0.17}Mg_{2.70}Ti_{0.01})(Si_{3.11}Fe^{3+}_{0.89})O_{10.08}F_{0.14}(OH)_{1.78}$	5.357(2)	9.270(4)	10.319(4)	99.96(3)	3.2	0.3317(7)	0.2220(4)	0.0004(9)	0.1281(5)	0.1677(3)	0.1338(8)	0.3325(2)
Brigatti et al. 1996a (n # Tas 22-1b)	Tetra- ferriphlogopite, Tapira (Brazil)	$(K_{0.98}Na_{0.02})(Fe^{3+}_{0.06}Fe^{2+}_{0.17}Mg_{2.75}Mn_{0.01}Ti_{0.01})(Si_{3.07}Fe^{3+}_{0.93})O_{10.17}F_{0.05}(OH)_{1.78}$	5.358(2)	9.277(3)	10.308(2)	99.99(4)	3.3	0.3342(5)	0.2221(3)	0.0012(8)	0.1309(3)	0.1670(2)	0.1330(5)	0.3328(1)
Brigatti et al. 1996a (n # Tpt 17-1)	Phlogopite, Tapira (Brazil)	$(K_{0.98}Na_{0.01}Ba_{0.02})(Fe^{3+}_{0.15}Fe^{2+}_{0.08}Mg_{2.68}Mn_{0.01}Ti_{0.08})(Si_{2.82}Al_{1.11}Fe^{3+}_{0.07})O_{10.16}F_{0.11}(OH)_{1.73}$	5.332(1)	9.239(2)	10.291(2)	99.94(2)	2.8	0.3291(3)	0.2278(2)	0.0112(4)	0.1304(2)	0.1668(2)	0.1324(3)	0.3326(1)
Brigatti et al. 1996a (n # Tas 27-2Ba)	Phlogopite, Tapira (Brazil)	$(K_{0.96}Na_{0.03}Ba_{0.01})(Fe^{3+}_{0.19}Fe^{2+}_{0.07}Mg_{2.68}Ti_{0.05})(Si_{2.85}Al_{1.07}Fe^{3+}_{0.08})O_{10.16}F_{0.03}(OH)_{1.81}$	5.318(2)	9.214(1)	10.279(2)	100.01(2)	2.8	0.3285(4)	0.2286(3)	0.0138(6)	0.1302(3)	0.1668(2)	0.1322(5)	0.3323(1)
Brigatti et al. 1996a (n # Tas 27-2Bb)	Phlogopite, Tapira, (Brazil)	$(K_{0.96}Na_{0.03}Ba_{0.01})(Fe^{3+}_{0.21}Fe^{2+}_{0.07}Mg_{2.64}Mn_{0.01}Ti_{0.06})(Si_{2.85}Al_{1.10}Fe^{3+}_{0.05})O_{10.13}F_{0.06}(OH)_{1.81}$	5.330(1)	9.235(1)	10.301(1)	99.92(1)	2.5	0.3281(3)	0.2284(2)	0.0134(4)	0.1300(2)	0.1667(1)	0.1327(3)	0.33222(1)
Brigatti et al. 1996a (n # Tag 15-4)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.92}Ba_{0.04})(Fe^{3+}_{0.30}Fe^{2+}_{0.38}Mg_{2.17}Mn_{0.01}Ti_{0.13})(Si_{2.76}Al_{1.19}Fe^{3+}_{0.05})O_{10.26}F_{0.06}(OH)_{1.68}$	5.333(1)	9.238(2)	10.267(2)	99.96(2)	2.8	0.3285(4)	0.2281(3)	0.0135(7)	0.1304(4)	0.1670(3)	0.1314(6)	0.3334(2)
Brigatti et al. 1996a (n # Tag 15-3)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.92}Ba_{0.02})(Fe^{3+}_{0.25}Fe^{2+}_{0.34}Mg_{2.19}Mn_{0.01}Ti_{0.13})(Si_{2.74}Al_{1.15}Fe^{3+}_{0.11})O_{10.04}F_{0.05}(OH)_{1.91}$	5.329(2)	9.228(2)	10.258(3)	100.03(3)	39.	0.3283(7)	0.2278(4)	0.0149(9)	0.1295(6)	0.1674(3)	0.1308(9)	0.3335(2)
Brigatti et al. 1996a (n # Tpq 16-4A)	Tetra- ferriphlogopite, Tapira (Brazil)	$K_{0.99}(Fe^{3+}_{0.10}Fe^{2+}_{0.22}Mg_{2.64}Mn_{0.01}Ti_{0.03})(Si_{2.91}Al_{0.71}Fe^{3+}_{0.38})O_{10.06}F_{0.08}(OH)_{1.86}$	5.338(2)	9.247(1)	10.300(2)	99.96(2)	2.8	0.3301(3)	0.2268(2)	0.0106(5)	0.1300(3)	0.1670(2)	0.1327(4)	0.3325(1)
Brigatti et al. 1996a (n # Tpq 16-6B)	Tetra- ferriphlogopite, Tapira (Brazil)	$(K_{0.95}Na_{0.02})(Fe^{3+}_{0.23}Fe^{2+}_{0.20}Mg_{2.54}Ti_{0.02})(Si_{3.15}Al_{0.04}Fe^{3+}_{0.81})O_{10.34}F_{0.10}(OH)_{1.56}$	5.356(1)	9.284(2)	10.309(3)	100.03(2)	3.1	0.3320(4)	0.2238(2)	0.0046(6)	0.1302(3)	0.1671(2)	0.1327(4)	0.3329(1)
Brigatti et al. 1996b (n # S1))	Tetra- ferriphlogopite, Tapira (Brazil)	$(K_{0.99}Na_{0.01})(Fe^{3+}_{0.08}Fe^{2+}_{0.17}Mg_{2.73}Ti_{0.01})(Si_{3.05}Fe^{3+}_{0.95})O_{10.17}F_{0.04}(OH)_{1.79}$	5.362(1)	9.288(1)	10.321(2)	99.99(1)	3.1	0.3360(3)	0.2206(2)	-0.0024(5)	0.1305(2)	0.1669(1)	0.1335(3)	0.3328(1)

Brigatti et al. 1996b (n # S2)	Tetra- ferriphlogopite, Tapira (Brazil)	$K_{1.02}(Fe^{3+}_{0.11}Fe^{2+}_{0.20}Mg_{2.68}Mn_{0.01})$ $(Si_{3.05}Fe^{3+}_{0.95}O_{10.18}F_{0.07}(OH)_{1.75})$	5.365(1)	9.292(1)	10.326(1)	99.99(1)	2.5	0.3357(3)	0.2203(2)	-0.0020(4)	0.1304(2)	0.1671(1)	0.1331(3)	0.3328(9)
Brigatti et al. 1998 (n # wa3H)	Ferroan phlogopite, Warburton (Australia)	$(K_{0.92}Na_{0.03}Ca_{0.02}Ba_{0.04})(Al_{0.18}$ $Fe^{3+}_{0.18}Fe^{2+}_{1.01}Mg_{1.26}Mn_{0.02}Ti_{0.28})$ $(Si_{2.77}Al_{1.23}O_{10.58}F_{0.08}Cl_{0.02})$ $(OH)_{1.32}$	5.341(1)	9.252(1)	10.229(2)	100.17(2)	2.9	0.3232(4)	0.2320(2)	0.0209(6)	0.1317(3)	0.1679(2)	0.1296(5)	0.3337(1)
Brigatti et al. 1998 (n # wa8E)	Magnesian annite, Warburton (Australia)	$(K_{0.93}Na_{0.03}Ca_{0.02}Ba_{0.01})(Al_{0.21}$ $Fe^{3+}_{1.37}Mg_{1.15}Mn_{0.03}Ti_{0.25})(Si_{2.85}$ $Al_{1.15}O_{10.61}F_{0.16}Cl_{0.06}(OH)_{1.17})$	5.345(1)	9.263(4)	10.234(6)	100.11(2)	3.9	0.3240(6)	0.2336(4)	0.0237(8)	0.1298(4)	0.1671(3)	0.1310(7)	0.3335(1)
Brigatti et al. 1998 (n # wa8H)	Magnesian annite, Warburton, (Australia)	$(K_{0.89}Na_{0.03}Ca_{0.03}Ba_{0.02})(Al_{0.18}$ $Fe^{3+}_{0.13}Fe^{2+}_{1.20}Mg_{1.19}Mn_{0.02}Ti_{0.29})$ $(Si_{2.82}Al_{1.18}O_{10.76}F_{0.14}Cl_{0.05})$ $(OH)_{1.05})$	5.344(1)	9.258(1)	10.232(1)	100.15(1)	3.3	0.3238(4)	0.2322(2)	0.0204(5)	0.1308(3)	0.1679(2)	0.1298(5)	0.3343(1)
Brigatti et al. 1998 (n # wa23e)	Ferroan phlogopite, Warburton (Australia)	$(K_{0.92}Na_{0.03}Ca_{0.04}Ba_{0.01})(Al_{0.31}$ $Fe^{3+}_{0.16}Fe^{2+}_{1.10}Mg_{1.23}Mn_{0.01}Ti_{0.19})$ $(Si_{2.77}Al_{1.23}O_{10.67}F_{0.12}Cl_{0.02})$ $(OH)_{1.19})$	5.347(1)	9.260(2)	10.229(3)	100.07(3)	2.8	0.3226(3)	0.2329(2)	0.0212(5)	0.1307(3)	0.1679(2)	0.1301(4)	0.3359(1)
Brigatti et al. 1999 (n # TAG15-4b)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.95}Na_{0.02}Ba_{0.03})(Fe^{3+}_{0.23}Fe^{2+}_{0.38}$ $Mg_{2.25}Mn_{0.01}Ti_{0.13})(Si_{2.76}Al_{1.17}$ $Fe_{0.07}O_{10.28}F_{0.05}(OH)_{1.68})$	5.332(1)	9.230(2)	10.267(1)	99.99(1)	2.8	0.3284(6)	0.2270(3)	0.0093(9)	0.1314(5)	0.1666(2)	0.1322(7)	0.3331(1)
Brigatti et al. 1999 (n # TpQ16-4Ab)	Phlogopite, Tapira (Brazil)	$(K_{0.97}Na_{0.01}Ba_{0.02})(Fe^{3+}_{0.20}Fe^{2+}_{0.11}$ $Mg_{2.59}Mn_{0.01}Ti_{0.05})(Si_{2.90}Al_{1.06}$ $Fe_{0.04}O_{10.12}F_{0.06}(OH)_{1.82})$	5.323(1)	9.219(1)	10.282(1)	99.93(1)	2.4	0.3290(3)	0.2278(2)	0.0119(4)	0.1300(2)	0.1667(1)	0.1321(3)	0.3322(1)
Brigatti et al. 1999 (n #TPQ16-4Ac)	Ferroan tetra- ferriphlogopite, Tapira (Brazil)	$(K_{0.99}Na_{0.01})(Fe^{3+}_{0.30}Fe^{2+}_{0.54}Mg_{1.99}$ $Mn_{0.02}Ti_{0.01})(Si_{3.01}Al_{0.13}Fe_{0.86})$ $O_{10.04}(OH)_{1.96})$	5.370(1)	9.306(1)	10.319(1)	100.00(1)	3.0	0.3351(5)	0.2226(4)	0.0018(8)	0.1303(4)	0.1671(3)	0.1317(6)	0.3328(1)
Brigatti et al. 2000a (n # a4)	Magnesian annite, Sos Canales pluton, Sardinia (Italy)	$(K_{0.95}Na_{0.04})(Al_{0.35}Fe^{3+}_{0.01}Fe^{2+}_{1.45}$ $Mg_{0.77}Mn_{0.04}Ti_{0.21})(Si_{2.71}Al_{1.29})$ $O_{10.15}F_{0.05}(OH)_{1.80})$	5.352(1)	9.268(3)	10.255(3)	100.27(2)	3.2	0.3272(5)	0.2283(3)	0.0131(7)	0.1315(4)	0.1690(3)	0.1281(6)	0.3332(1)
Brigatti et al. 2000a (n # b1)	Magnesian annite, Tinker Glacier (Antarctica)	$(K_{0.93}Na_{0.03}Ca_{0.01})(Al_{0.54}Fe^{3+}_{0.01}$ $Fe^{3+}_{1.41}Mg_{0.83}Mn_{0.03}Ti_{0.17})(Si_{2.62}$ $Al_{1.38}O_{10.46}(OH)_{1.54})$	5.336(1)	9.239(2)	10.200(2)	100.29(2)	2.7	0.3256(3)	0.2313(2)	0.0169(5)	0.1326(3)	0.1687(2)	0.1268(4)	0.3332(6)
Brigatti et al. 2000a (n # c3- 31)	Magnesian annite, Tinker Glacier (Antarctica)	$(K_{0.96}Na_{0.03}Ca_{0.01}Ba_{0.01})(Al_{0.48}$ $Fe^{3+}_{1.48}Mg_{0.70}Mn_{0.06}Ti_{0.20})(Si_{2.63}$ $Al_{1.37}O_{10.38}F_{0.01}(OH)_{1.61})$	5.347(2)	9.257(1)	10.211(1)	100.27(2)	3.1	0.3252(4)	0.2307(3)	0.0181(6)	0.1322(4)	0.1686(2)	0.1280(6)	0.3333(1)
Brigatti et al. 2000a (n # cc1)	Magnesian annite, Tinker Glacier (Antarctica)	$(K_{0.96}Na_{0.01})(Al_{0.64}Fe^{3+}_{1.33}Mg_{0.73}$ $Mn_{0.04}Ti_{0.17})(Si_{2.68}Al_{1.32}O_{10.44}$ $(OH)_{1.32})$	5.328(1)	9.222(2)	10.197(2)	100.26(1)	3.2	0.3271(4)	0.2296(3)	0.0155(7)	0.1326(4)	0.1693(3)	0.1269(6)	0.3334(1)

Brigatti et al. 2000a (n # Gfs15a)	Magnesian annite, Sos Canales pluton, Sardinia (Italy)	$(K_{0.96}Na_{0.02}Ca_{0.03}Ba_{0.01})(Al_{0.60}Fe^{2+}_{1.36}Mg_{0.73}Mn_{0.02}Ti_{0.14})(Si_{2.69}Al_{1.31}O_{10.31}F_{0.12}(OH)_{1.57})$	5.339(1)	9.232(2)	10.208(2)	100.30(2)	3.6	0.3264(4)	0.2314(3)	0.0161(7)	0.1323(4)	0.1685(3)	0.1285(6)	0.3331(1)
Brigatti et al. 2000a (n # H87)	Magnesian annite, Riu Morunzu, Sardinia (Italy)	$(K_{0.98}Na_{0.02})(Al_{0.50}Fe^{2+}_{1.46}Mg_{0.70}Mn_{0.03}Ti_{0.16})(Si_{2.72}Al_{1.28}O_{10.25}F_{0.15}Cl_{0.03}(OH)_{1.57})$	5.344(2)	9.256(3)	10.237(2)	100.27(2)	3.2	0.3270(4)	0.2296(2)	0.0160(6)	0.1330(3)	0.1690(2)	0.1263(5)	0.3331(1)
Brigatti et al. 2000b (n # 120)	Annite, Pikes Peak, Colorado	$(K_{0.99}Na_{0.01})(Al_{0.13}Fe^{3+}_{0.21}Fe^{2+}_{2.29}Mg_{0.10}Mn_{0.01}Ti_{0.25})(Si_{3.14}Al_{0.86}F_{0.26}O_{10.95}(OH)_{0.79})$	5.384(1)	9.324(1)	10.254(1)	100.86(1)	2.6	0.3026(3)	0.2463(2)	0.0410(5)	0.1280(3)	0.1678(2)	0.1245(5)	0.3338(1)
Brigatti et al. 2000b (n # 26 )	Siderophyllite, Pikes Peak, Colorado	$(K_{0.95}Rb_{0.02}Na_{0.05})(Al_{0.84}Fe^{3+}_{0.24}Fe^{2+}_{1.63}Mg_{0.10}Zn_{0.01}Li_{0.17}Ti_{0.02})(Si_{2.94}Al_{1.06}O_{10.93}F_{0.90}(OH)_{0.17})$	5.358(2)	9.280(3)	10.151(2)	100.10(1)	3.3	0.3190(5)	0.2376(3)	0.0305(7)	0.1300(5)	0.1636(4)	0.1299(5)	0.3334(1)
Brigatti et al. 2000b (n # 33 )	Aluminian annite, Pikes Peak, Colorado	$(K_{1.00}Na_{0.01})(Al_{0.35}Fe^{3+}_{0.16}Fe^{2+}_{2.22}Mn_{0.08}Ti_{0.11}Li_{0.08})(Si_{3.09}Al_{0.91}O_{10.95}F_{0.26}(OH)_{0.79})$	5.372(1)	9.313(1)	10.204(1)	100.52(1)	3.6	0.3101(4)	0.2455(2)	0.0441(6)	0.1293(3)	0.1659(2)	0.1235(5)	0.3308(1)
Gnos and Armbruster 2000	Kinoshitalite	$(Ba_{0.99}K_{0.06}Na_{0.01})(Al_{0.04}Mg_{2.64}Mn_{0.31})(Si_{2.03}Al_{1.97}O_{10}F_{0.37}Cl_{0.02}(OH)_{1.61})$	5.316(1)	9.230(2)	10.197(2)	100.06(1)	3.4	0.3344(3)	0.2193(2)	0.0081(5)	0.1302(3)	0.1663(2)	0.1315(4)	0.3306(1)
Guggenheim 1981	Trilithionite, Radkovice, Jihlava, Moravia (Czech Republic)	$(K_{0.79}Rb_{0.07}Cs_{0.03}Na_{0.03}Ca_{0.01})(Li_{1.48}Fe^{2+}_{0.02}Fe^{3+}_{0.008}Mg_{0.05}Mn_{0.03}Al_{1.30})(Si_{3.49}Al_{0.51}O_{10}(OH,F)_2)$	5.209(2)	9.011(5)	10.149(5)	100.77(4)	3.5	0.3252(2)	0.2319(2)	0.0218(4)	0.1418(3)	0.1768(1)	0.1076(3)	0.3289(1)
Guggenheim & Frimmel 1999	Ferrokinoshitalite, Brooken Hill (South Africa)	$(Ba_{0.47}K_{0.33}Na_{0.04})(Fe^{2+}_{1.72}Fe^{3+}_{0.15}Mg_{0.74}Mn_{0.08}Ti_{0.17})(Si_{2.44}Al_{1.56}O_{10}F_{0.65}(OH)_{1.35})$	5.389(1)	9.337(2)	10.054(2)	100.53(2)	3.2	0.3134(6)	0.2400(4)	0.0333(9)	0.1319(5)	0.1659(3)	0.1229(7)	0.3331(1)
Guggenheim and Kato 1984 (n # 1)	Manganoan phlogopite, Nodatamagawa, Iwate Prefecture	$(K_{0.85}Na_{0.19}Ba_{0.06})(Fe^{3+}_{0.06}Mg_{1.74}Mn^{2+}_{0.95}Mn^{3+}_{0.18})(Si_{2.75}Al_{1.15}Ti_{0.03}Fe^{3+}_{0.07}O_{10.01}F_{0.09}(OH)_{1.90})$	5.380(2)	9.295(2)	10.318(4)	99.96(2)	5.4	0.322(1)	0.2329(8)	0.021(2)	0.128(1)	0.1676(7)	0.128(2)	0.3320(3)
Guggenheim and Kato 1984 (n # 5)	Barian, manganoan, phlogopite, Nodatamagawa, Iwate Prefecture	$(K_{0.58}Na_{0.09}Ba_{0.35})(Fe^{3+}_{0.04}Al_{0.35}Mg_{2.10}Mn^{2+}_{0.52}Mn^{3+}_{0.22})(Si_{2.33}Al_{1.65}Ti_{0.01}O_{10.75}F_{0.07}(OH)_{1.18})$	5.330(2)	9.245(3)	10.240(3)	99.92(2)	3.8	0.3336(6)	0.2219(3)	0.0002(8)	0.1303(5)	0.1670(3)	0.1302(7)	0.3308(1)
Hawthorne et al. 1999	Rubidian, cesian, phlogopite, Red Cross Lake, Manitoba (Canada)	$K_{0.46}Cs_{0.23}Rb_{0.28}(Al_{0.38}Fe^{2+}_{1.00}Mn_{0.04}Ti_{0.04}Mg_{1.20}Li_{0.34})(Si_{2.91}Al_{1.09}O_{10}F_{0.45}(OH)_{1.55})$	5.343(1)	9.247(2)	10.397(3)	100.04(2)	4.5	0.3171(8)	0.2411(6)	0.0419(12)	0.1335(8)	0.1684(5)	0.1288(11)	0.3331(1)
Hazen and Burnham 1973	Annite, Pikes Peak, Colorado	$(K_{0.88}Na_{0.07}Ca_{0.03})(Al_{0.09}Fe^{3+}_{0.19}Fe^{2+}_{2.22}Mg_{0.12}Mn_{0.05}Ti_{0.22})(Si_{2.81}Al_{1.19}O_{10.35}F_{0.22}Cl_{0.05}(OH)_{1.38})$	5.3860(9)	9.3241(7)	10.2683(9)	100.63(1)	4.5	0.3031(4)	0.2457(3)	0.0427(6)	0.1291(4)	0.1674(3)	0.1239(6)	0.3332(1)

Hazen and Burnham 1973	Phlogopite, Franklin, New Jersey	$(K_{0.77}Na_{0.16}Ba_{0.05})Mg_{3.00}(Si_{2.95}Al_{1.05})O_{10}F_{1.30}(OH)_{0.70}$	5.3078(4)	9.1901(5)	10.1547(8)	100.08(1)	4.1	0.3248(3)	0.2307(2)	0.0180(4)	0.1297(2)	0.1664(1)	0.1330(3)	0.3315(1)
Hazen et al. 1981 (n # Y253)	Tetra-ferriphlogopite, Cupaello (Italy)	$(K_{0.97}Na_{0.01}Ba_{0.02})(Fe^{2+}_{0.03}Mg_{2.46}Ti^{3+}_{0.09}Li_{0.23}Na_{0.11})(Si_{3.31}Al_{0.04}Fe^{3+}_{0.65})O_{10}F_{2.00}$	5.329(1)	9.230(2)	10.219(1)	99.98(1)	3.0	0.3198(3)	0.2355(2)	0.0264(6)	0.1298(3)	0.1670(2)	0.133(4)0	0.3337(1)
Joswig 1972	Phlogopite (Madagascar)	$(K_{0.90}Na_{0.02})(Al_{0.07}Fe^{2+}_{0.16}Mg_{2.70}Ti_{0.03})(Si_{2.91}Al_{1.09})O_{9.90}F_{1.13}(OH)_{0.97}$	5.314(1)	9.2024(5)	10.1645(7)	100.05(1)	2.0	0.3255(1)	0.2305(1)	0.0171(2)	0.1307(1)	0.1666(1)	0.1323(2)	0.3312(1)
Joswig et al. 1986	Clintonite, Lago della Vacca, Adamello (Italy)	$(Ca_{1.00}Na_{0.007})(Mg_{2.29}Al_{0.70}Fe^{2+}_{0.05}Ti_{0.006})(Si_{1.20}Al_{2.69}Fe^{3+}_{0.11})O_{10}(OH)_2$	5.2037(9)	9.0126(5)	9.8145(9)	100.26(1)	2.0	0.3616(1)	0.1885(6)	-0.0723(2)	0.1309(1)	0.1686(6)	0.1283(1)	0.3298(1)
Kato et al. 1979 (n# 6)	Manganian kinoshitalite, Nodatamagawa, Iwate Prefecture	$(K_{0.35}Na_{0.11}Ba_{0.58})(Fe^{3+}_{0.05}Al_{0.22}Mg_{2.07}Mn^{2+}_{0.52}Mn^{3+}_{0.21})(Si_{2.05}Al_{1.94}Ti_{0.01})O_{10.33}F_{0.05}(OH)_{1.62}$	5.345(3)	9.250(4)	10.256(8)	99.99(5)	7.8	0.3364(15)	0.2177(8)	0.0070(23)	0.1299(14)	0.1674(7)	0.1308(21)	0.3306(3)
MacKinney et al. 1988 (n # 2U.W.1782/5)	Clintonite, Ertzberg (Jaya)	$Ca_{1.00}(Mg_{2.08}Al_{0.74}Fe^{2+}_{0.18})(Si_{1.10}Al_{2.90})O_{10}(OH)_2$	5.199(2)	9.005(3)	9.812(3)	100.30(2)	2.2	0.3631(3)	0.1876(2)	-0.0740(5)	0.1311(3)	0.1685(2)	0.1281(5)	0.3292(1)
MacKinney et al. 1988 (n # 3USNM94594)	Clintonite, Edenville (New York)	$Ca_{0.97}(Mg_{2.18}Al_{0.70}Fe^{2+}_{0.11}Ti_{0.01})(Si_{1.32}Al_{2.68})O_{10}(OH)_2$	5.200(1)	9.005(2)	9.779(2)	100.30(2)	4.0	0.3609(4)	0.1895(3)	-0.0705(6)	0.1306(4)	0.1681(2)	0.1291(6)	0.3302(1)
MacKinney et al. 1988 (n# 1USNM 105455)	Clintonite, Chichibu mine (Japan)	$Ca_{1.00}(Mg_{2.11}Al_{0.82}Fe^{2+}_{0.07})(Si_{1.08}Al_{2.92})O_{10}(OH)_2$	5.197(1)	9.002(2)	9.812(2)	100.32(2)	2.2	0.3627(3)	0.1878(2)	-0.0735(5)	0.1316(5)	0.1689(2)	0.1277(5)	0.3292(1)
Medici 1996 (n # TPP16-6a)	Phlogopite, Tapira (Brazil)	$(K_{0.98}Na_{0.01})(Fe^{3+}_{0.08}Fe^{2+}_{0.13}Mg_{2.73}Ti_{0.06})(Si_{2.82}Al_{1.04}Fe^{3+}_{0.14})O_{10.01}F_{0.11}(OH)_{1.88}$	5.330(1)	9.239(1)	10.305(1)	99.89(1)	3.3	0.3280(5)	0.2277(3)	0.0143(7)	0.1299(4)	0.1674(2)	0.1330(6)	0.3322(2)
Medici 1996 (n # TPP16-6b)	Octa-ferroan tetra-ferriphlogopite, Tapira (Brazil)	$(K_{1.00}Ba_{0.01})(Fe^{3+}_{0.01}Fe^{2+}_{0.60}Mg_{2.36}Mn_{0.01}Ti_{0.01})(Si_{3.03}Al_{0.07}Fe^{3+}_{0.90})O_{10.08}F_{0.01}(OH)_{1.91}$	5.360(1)	9.293(1)	10.314(2)	100.01(1)	2.8	0.3336(5)	0.2234(3)	0.0030(7)	0.1304(3)	0.1668(2)	0.1327(5)	0.3327(1)
Medici 1996 (n # TPP16-6c)	Octa-ferroan tetra-ferriphlogopite, Tapira (Brazil)	$(K_{1.97}Ca_{0.03}Ba_{0.01})(Fe^{2+}_{0.60}Mg_{2.38}Mn_{0.01}Ti_{0.01})(Si_{3.02}Al_{0.06}Fe^{3+}_{0.92})O_{10.05}F_{0.04}(OH)_{1.91}$	5.3637(5)	9.2908(8)	10.321(1)	99.995(9)	2.5	0.3334(3)	0.2236(2)	0.0043(5)	0.1300(2)	0.1669(1)	0.1327(3)	0.3327(1)
Medici 1996 (n # TAX27-1)	Ferroan phlogopite, Tapira, Brazil	$(K_{0.95}Na_{0.03})(Fe^{3+}_{0.04}Fe^{2+}_{0.43}Mg_{2.39}Mn_{0.01}Ti_{0.08})(Si_{2.94}Al_{0.78}Fe^{3+}_{0.28})O_{10.00}F_{0.05}(OH)_{1.95}$	5.351(1)	9.267(2)	10.311(1)	99.99(1)	2.6	0.3265(4)	0.2300(2)	0.0158(5)	0.1303(3)	0.1669(2)	0.1324(4)	0.3331(1)

Medici 1996 (n # TAI17-1)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.98}Na_{0.02}Ba_{0.01})(Fe^{3+}_{0.10}Fe^{2+}_{0.44}Mg_{2.36}Mn_{0.01}Ti_{0.09})(Si_{2.82}Al_{1.10}Fe^{3+}_{0.08}O_{10.12}(OH)_{1.88})$	5.3355(8)	9.2457(7)	10.294(2)	99.94(1)	2.5	0.3290(3)	0.2271(2)	0.0109(5)	0.1307(3)	0.1669(1)	0.1322(4)	0.3325(1)
Medici 1996 (n # TAA11-1a)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.98}Na_{0.02})(Fe^{3+}_{0.06}Fe^{2+}_{0.60}Mg_{2.23}Mn_{0.01}Ti_{0.10})(Si_{2.84}Al_{1.14}Fe^{3+}_{0.02}O_{10.11}F_{0.05}(OH)_{1.84})$	5.329(2)	9.244(2)	10.271(3)	99.97(2)	3.6	0.3290(4)	0.2285(3)	0.0134(7)	0.1303(3)	0.1667(2)	0.1309(5)	0.3327(1)
Medici 1996 (n # TA9)	Ferroan phlogopite, Tapira (Brazil)	$(K_{0.98}Ba_{0.02})(Fe^{2+}_{1.14}Mg_{1.73}Mn_{0.04}Ti_{0.09})(Si_{3.00}Al_{0.90}Fe^{3+}_{0.10}O_{10.17}F_{0.01}(OH)_{1.82})$	5.344(1)	9.259(2)	10.280(2)	100.01(1)	2.8	0.3232(4)	0.2330(3)	0.0219(7)	0.1307(4)	0.1672(2)	0.1318(6)	0.3331(1)
Medici 1996 (n # LI12a)	Ferroan phlogopite, Limeira, Brazil	$(K_{0.95}Na_{0.04})(Fe^{2+}_{0.44}Mg_{2.51}Ti_{0.05})(Si_{3.01}Al_{0.92}Fe^{3+}_{0.07}O_{10.11}F_{0.18}(OH)_{1.71})$	5.331(1)	9.227(1)	10.275(2)	99.96(2)	3.9	0.3237(4)	0.2331(3)	0.0226(7)	0.1295(3)	0.1670(2)	0.1323(5)	0.3334(1)
Medici 1996 (n # MA-1)	Phlogopite, Malaquias (Brazil)	$(K_{0.97}Na_{0.02}Ba_{0.02})(Fe^{3+}_{0.03}Fe^{2+}_{0.35}Mg_{2.07}Ti_{0.33})(Si_{2.94}Al_{1.06}O_{10.21}F_{0.93}(OH)_{0.86})$	5.317(1)	9.208(2)	10.118(2)	100.15(1)	2.9	0.3164(3)	0.2389(2)	0.0322(5)	0.1305(3)	0.1680(2)	0.1309(4)	0.3396(1)
Mellini et al. 1996	Cesian tetra-ferri-annite	$Cs_{0.89}(Fe^{3+}_{0.03}Fe^{2+}_{2.97})(Si_{3.07}Fe^{3+}_{0.90}Al_{0.03}O_{10}(OH)_2)$	5.487(1)	9.506(2)	10.826(6)	99.83(3)	5.5	0.3120(9)	0.2495(6)	0.0595(14)	0.1340(6)	0.1667(3)	0.1327(8)	0.3322(1)
Oberti et al. 1993 (n # KP9)	Preiswerkite, Geisspfad (Switzerland)	$(K_{0.02}Na_{0.83})(Al_{0.93}Fe_{0.17}Mg_{1.90}Cr_{0.01})(Si_{2.12}Al_{1.88}O_{9.99}(OH)_{2.01})$ mean composition	5.225(4)	9.050(8)	9.791(9)	100.27(6)	3.8	0.3546(5)	0.1971(3)	-0.0513(5)	0.1285(8)	0.1685(2)	0.1335(10)	0.3291(1)
Oberti et al. 1993 (n # KP17)	Preiswerkite, Geisspfad (Switzerland)	$(K_{0.02}Na_{0.83})(Al_{0.93}Fe_{0.17}Mg_{1.90}Cr_{0.01})(Si_{2.12}Al_{1.88}O_{9.99}(OH)_{2.01})$ mean composition	5.228(7)	9.049(10)	9.819(12)	100.41(13)	4.6	0.3559(5)	0.1989(3)	-0.0470(7)	0.1348(5)	0.1703(3)	0.1252(7)	0.3302(2)
Otha et al. 1982	Ferrian phlogopite, Ruiz Peak, Valles Mountains, New Mexico	$(K_{0.77}Na_{0.16}Ba_{0.02})(Al_{0.16}Fe^{3+}_{0.86}Fe^{2+}_{0.01}Mg_{1.67}Mn_{0.01}Ti_{0.34})(Si_{2.84}Al_{1.16}O_{11.62}F_{0.17}(OH)_{0.21})$	5.320(4)	9.210(1)	10.104(1)	100.10(1)	5.0	0.3217(4)	0.2315(2)	0.0177(6)	0.1298(3)	0.1697(2)	0.1335(5)	0.3454(1)
Russell and Guggenheim 1999 (room temperature)	Ferroan phlogopite Silver Crater Mine, Bancroft (Ontario)	$(K_{0.93}Na_{0.08})(Mg_{1.57}Fe^{2+}_{1.07}Fe^{3+}_{0.10}Ti_{0.10}Mn_{0.06})(Si_{2.97}Al_{1.00}Ti_{0.03}O_{10}F_{0.94}Cl_{0.01}(OH)_{1.05})$	5.3346(7)	9.2417(8)	10.182(2)	100.26(1)	3.9	0.3154(5)	0.2391(3)	0.0330(8)	0.1307(5)	0.1668(3)	0.1299(6)	0.3333(1)
Sartori 1976	Trilithionite, Elba Island (Italy)	$(K_{0.88}Na_{0.06}Rb_{0.05}Ca_{0.01})(Al_{1.13}Li_{1.31})(Si_{3.36}Al_{0.64}O_{10}F_{1.53}(OH)_{0.47})$	5.20(2)	9.01(1)	10.09(1)	99.3(3)	6.7	0.3251(9)	0.2310(5)	0.0214(15)	0.1421(11)	0.1768(5)	0.1107(14)	0.3283(4)
Semenova et al. 1977	Tetra-ferriphlogopite, Kovdor massif	$(K_{1.03}Na_{0.09}Ca_{0.04})(Mg_{2.89}Fe^{2+}_{0.16}Mn_{0.01})(Al_{0.08}Fe^{3+}_{0.85}Ti_{0.03}Si_{2.98}O_{10}(OH)_2)$	5.358(3)	9.297(3)	10.318(2)	100.02(5)	4.2	0.3358(4)	0.2207(3)	-0.0016(6)	0.1310(3)	0.1670(2)	0.1340(4)	0.3327(1)



Takeda and Burnham 1969	Polyolithionite	$K_{1.00}(Li_{2.00}Al_{1.00})Si_{4.00}O_{10.00}F_{2.00}$	5.188(4)	8.968(3)	10.029(5)	100.45(1)	5.1	0.3126(8)	0.2404(5)	0.0473(11)	0.1317(8)	0.1779(5)	0.1107(14)	0.3286(7)
Takeda and Donnay 1966	Lithium-containing phlogopite	$(K_{0.95})(Mg_{2.80}Li_{0.20})(Si_{3.25}Al_{0.75})O_{10}F_2$	5.31	9.21	10.13	100.02	7.5	0.3218(4)	0.2346(3)	0.0235(7)	0.1305(4)	0.1665(3)	0.1329(5)	0.3308(2)
Takeda and Morosin 1975	Fluoro phlogopite (room temperature)	$(K_{0.98}Na_{0.04})Mg_{2.97}(Si_{2.98}Al_{1.02})O_{9.90}(OH_{0.16},F_{1.94})$	5.3074(6)	9.195(2)	10.134(1)	100.08(1)	4.3	0.3228(4)	0.2335(3)	0.0234(7)	0.1299(4)	0.1663(2)	0.1332(4)	0.3309(1)
Takeda and Ross 1975	Ferroan phlogopite, Ruiz Peak, Valles Mountains, New Mexico	$(K_{0.78}Na_{0.16}Ba_{0.02})(Al_{0.19}Fe^{3+}_{0.19}Fe^{2+}_{0.71}Mg_{1.68}Mn_{0.01}Ti_{0.34})(Si_{2.86}Al_{1.14})O_{11.12}F_{0.17}(OH)_{0.71}$	5.331(2)	9.231(4)	10.173(4)	100.16(3)	4.4	0.3240(5)	0.2310(3)	0.0165(7)	0.1310(4)	0.1684(3)	0.1312(6)	0.3392(1)
Tyrna and Guggenheim 1991	Norrishite, Grenfell New South Wales (Australia)	$K(LiMn^{3+}_2)Si_4O_{12}$	5.289(3)	8.914(3)	10.062(7)	98.22(5)	7.8	0.297(1)	0.2486(8)	0.045(2)	0.108(1)	0.1787(7)	0.109(2)	0.3472(3)
Weiss et al. 1993	Aluminian fluoro annite, Brooks Mountain, Seward (Alaska)	$(K_{0.92}Na_{0.09}Ca_{0.01}Rb_{0.01})(Fe^{2+}_{2.02}Al_{0.47}Li_{0.33}Mn_{0.07}Mg_{0.03})(Si_{2.98}Al_{1.02})O_{10}F_{0.99}Cl_{0.03}(OH)_{0.98}$	5.3655(6)	9.293(1)	10.198(2)	100.47(1)	3.8	0.3085(3)0	0.2466(2)	0.0487(5)	0.1321(3)	0.1668(1)	0.1245(4)	0.3307(1)

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