

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

| Reference | Species, locality | Composition | <i>a</i> (Å) | <i>b</i> (Å) | <i>c</i> (Å) | β (°) | <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 _{0.93} Na _{0.04}) (Al _{0.24} Fe ³⁺ _{0.09} Fe ²⁺ _{0.12} Mg _{2.48} Mn _{0.01} Ti _{0.02}) (Si _{2.74} Al _{1.26}) O _{9.99} F _{0.06} (OH) _{1.95} | 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 _{0.93} Na _{0.04}) (Al _{0.24} Fe ³⁺ _{0.07} Fe ²⁺ _{0.11} Mg _{2.55} Mn _{0.01} Ti _{0.02}) (Si _{2.65} Al _{1.35}) O _{9.96} F _{0.09} (OH) _{1.95} | 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 _{0.95} Na _{0.02} Ba _{0.01}) (Al _{0.18} Fe ³⁺ _{0.15} Fe ²⁺ _{0.03} Mg _{2.63} Ti _{0.01}) (Si _{2.60} Al _{1.40}) O _{9.93} F _{0.11} (OH) _{1.96} | 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 _{0.95} Na _{0.02} Ba _{0.01}) (Al _{0.47} Fe ³⁺ _{0.15} Fe ²⁺ _{0.07} Mg _{2.23} Mn _{0.04} Ti _{0.01}) (Si _{2.50} Al _{1.50}) O _{10.02} F _{0.04} (OH) _{1.94} | 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 _{0.90} Na _{0.02} Ba _{0.02} Ca _{0.02}) (Al _{0.20} Fe ³⁺ _{0.11} Fe ²⁺ _{0.04} Mg _{2.64} Mn _{0.01}) (Si _{2.60} Al _{1.40}) O _{9.92} F _{0.06} (OH) _{2.02} | 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 _{0.01} Ca _{0.99}) (Al _{0.68} Fe ³⁺ _{0.04} Fe ²⁺ _{0.11} Mg _{2.21}) (Si _{1.20} Al _{2.76}) O _{9.88} F _{0.14} (OH) _{1.98} | 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 _{0.02} Ca _{0.96}) (Al _{0.76} Fe ²⁺ _{0.15} Mg _{2.09}) (Si _{1.25} Al _{2.75}) O _{9.94} F _{0.09} (OH) _{1.97} | 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 _{0.02} Ca _{0.97}) (Al _{0.65} Fe ²⁺ _{0.13} Mg _{2.22}) (Si _{1.24} Al _{2.76}) O _{9.86} F _{0.17} (OH) _{1.97} | 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 _{0.98} (Al _{0.67} Fe ²⁺ _{0.16} Mg _{2.17} Ti _{0.01}) (Si _{1.19} Al _{2.78} Fe ³⁺ _{0.03}) O _{9.83} F _{0.19} (OH) _{1.98} | 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 _{0.01} Ca _{0.95}) (Al _{0.63} Fe ²⁺ _{0.16} Mg _{2.20} Ti _{0.01}) (Si _{1.28} Al _{2.7} Fe ³⁺ _{0.02}) O _{9.84} F _{0.18} (OH) _{1.98} | 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) |

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|--|--|---|----------|----------|-----------|-----------|------|------------|-----------|------------|-----------|-----------|------------|------------|
| 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) | 11.4 | 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) |

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|---------------------------------------|--|--|----------|----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Brigatti and Poppi 1993 (n # 23) | Ferrian phlogopite, Alto Adige (Italy) | $(K_{0.88}Na_{0.08}Ba_{0.04})(Al_{0.12}Fe^{3+}_{0.47}Fe^{2+}_{0.42}Mg_{1.83}Mn_{0.01}Ti_{0.14})(Si_{2.65}Al_{1.35}O_{10.56}F_{0.01}(OH)_{1.43})$ | 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) |

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|--|---|---|----------|----------|-----------|-----------|-----|-----------|-----------|------------|-----------|-----------|-----------|------------|
| 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) |

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|--|--|--|----------|----------|-----------|-----------|-----|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 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) | $(K_{0.93}Na_{0.03}Ca_{0.01})(Al_{0.54}Fe^{3+}_{0.01}$ $Fe^{2+}_{1.41}Mg_{0.83}Mn_{0.03}Ti_{0.17})(Si_{2.62}$ $Al_{1.38})O_{10.46}(OH)_{1.54}$ | 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) |

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|--|--|--|-----------|-----------|------------|-----------|-----|-----------|-----------|------------|-----------|-----------|------------|-----------|
| 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) | Manganooan 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, manganooan, 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) |

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|---|--|---|-----------|-----------|------------|-----------|-----|------------|-----------|------------|------------|-----------|------------|-----------|
| 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) | Manganooan 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) |

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|--|---|--|-----------|-----------|-----------|------------|-----|-----------|-----------|------------|------------|-----------|------------|-----------|
| 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-ferriannite | $CS_{0.89}(Fe^{3+}_{0.03}Fe^{2+}_{2.97})(Si_{3.07}Fe^{3+}_{0.90}Al_{0.03}O_{10}(OH)_2)$ | 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) |

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|---------------------------|---|---|-----------|----------|-----------|-----------|-----|-----------|-----------|------------|-----------|-----------|------------|-----------|
| 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 fluoroannite, 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) | 0.2466(2) | 0.0487(5) | 0.1321(3) | 0.1668(1) | 0.1245(4) | 0.3307(1) |

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