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Phosphate mineralization of Sapucaia (Pará, Brazil) and its genetic relationship with peraluminous pegmatites of the Gurupi Belt

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APPENDIX

Appendix 1

Structural formulae of minerals identified by X-ray diffraction

ankerite	$Ca(Fe^{2+},Mg,Mn^{2+})(CO_3)_2$
amblygonite	$LiAl(PO_4)F$
berlinite	$AlPO_4$
beraunite	$Fe^{3+}_6(PO_4)_4O(OH)_4\,6H_2O$
biotite	$K(Mg,Fe^{2+})_3[AlSi_3O_{10}](OH,F)_2$
chloritoid	$Fe^{2+}Al_2O(SiO_4)(OH)_2$
crandallite	$(Ca,Sr)Al_3H(PO_4)_2(OH)_6$
dufrenite	$Ca_{0,5}Fe^{2+}Fe^{3+}_5(PO_4)_4(OH)_6\,2H_2O$
euclase	$BeAl(SiO_4)(OH)$
goerceixite	$BaAl_3(PO_4)(PO_3OH)(OH)_6$
goyazite	$SrAl_3(PO_4)_2(OH)_5(H_2O)$
ilmenite	$Fe^{2+}TiO_3$
kingsmontite	$Ca_3MnFeAl_4(PO_4)_6(OH)_412H_2O$
lithiowodginite	$LiTa_3O_8$
millisite	$(Na,K)CaAl_6(PO_4)_4(OH)_9nH_2O$
mitridatite	$Ca_2Fe^{3+}_3(PO_4)_3O_23H_2O$

continue

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Appendix 1 - continued

montmorillonite	$(Na,Ca)_{0,33}(Al,Mg)_2(Si_4O_{10})(OH)_2 \cdot nH_2O$
montebrasite	$LiAlPO_4(OH)$
muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
pyromorphite	$Pb_5(PO_4)_3Cl$
quartz	SiO_2
rutile	TiO_2
smectite	$A_{0,3}D_{2-3}[T_4O_{10}]Z_2 \cdot nH_2O$
spodumene	$LiAlSi_2O_6$
svanbergite	$SrAl_3(PO_4)(SO_4)(OH)_6$
triphylite	$LiFePO_4$
uvite	$(Ca,Na)(Mg, Fe)_3Al_5Mg(BO_3)_3Si_6O_{18}(OH, F)_4$
variscite	$AlPO_4\ 2H_2O$
wardite	$NaAl_3(PO_4)_2(OH)_4 \cdot 2(H_2O)$
wavellite	$Al_3(PO_4)_2(OH,F)_3 \cdot 5(H_2O)$
woodhouseite	$CaAl_3(PO_4)(SO_4)(OH)_6$
zircon	Zr(SiO 4)
zippeite	$K_3(UO_2)_4(SO_4)_2O_3(OH)_3 \cdot H_2O$