CIPW Weight Norm Calculation Form

Sample # _____ **Petrographer** _____

Oxide	Wt. %	Mol.Wt.	Mol.No.[1]	Subtractions
SiO_2		60		
TiO_2		80		
Al_2O_3		102		
Fe_2O_3		160		
FeO		72		
MnO		71		
MgO		40		
CaO		56		
Na_2O		62		
K_2O		94		
P_2O_5		142		
LOI				
Total				

Calculations

Mg:Fe

hy, ol

2S= **M=**

x= **y=**

ab, ne

2N= **x=**

S= **y=**

I. Normative Minerals			II. SiO_2 used	III. Mol. Wt./100		IV. Weight Norm [2]
ap (P + [Ca=3.33P])				0.336		**ap**
mt (Fe^{+3} + Fe^{+2})				0.232		**mt**
il (Ti + Fe^{+2})				0.152		**il**
or (K + Al)		(6K)		0.556		**or**
ab (Na + Al)		(6Na)		0.524		**ab**
an (Al + Ca)		(2Ca)		0.278		**an**
∑ MgO + FeO left =		**%MgO =**			**Total feldspar =**	
					an/(an + ab+ or) =	
di (Ca + MgFe)	**wo**	(2Ca)		0.116		
	en		(for∑ di)	0.100		
	fs			0.132		**di**
		∑ SiO_2=				
hy (Mg + Fe)	**en**	(1 Mg)		0.100		
	fs	(1 Mg)		0.132		**hy**
ol (Mg + Fe)	**fo**	(0.5 Mg)		0.140*		
	fa	(0.5 Mg)		0.204*		**ol**
ne (Na + Al)		(2Na)		0.284		**ne**
q (Si)		(1Si)		0.060		**q**
		∑ SiO_2=				**LOI**
						Total

Notes: (1) 10^3 Wt% / Mol.Wt.; (2) Mol. No. of first oxide in col. I x col. III; (*) use 0.5 Mg, Fe.