| | | Cationic p | SiO2 | TiO2 | Al2O3 | Fe2O3 | FeO | MnO | MgO | | CaO | Na2O | K2O | P2O5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Bulk analysis*** | | | | | | | | | | | | | |
| | ***Mol. Weight*** | | 60.09 | 79.9 | 101.94 | 159.7 | 71.85 | 70.94 | 40.32 | | 56.08 | 61.982 | 94.2 | 141.95 |
| | ***millications*** | | | | | | | | | | | | | |
| | | | | | | | ***corr. FeO*** | | | | | | | |
| | | | | | | | | | | | | | | |
| $3\ P_2O_5\ .\ 10\ CaO$ | ***Apatite*** | | | | | | | | | | | | | |
| $FeO\ .\ TiO_2$ | ***Ilmenite*** | | | | | | | | | | | | | |
| $0.5\ K_2O\ .\ 0.5\ Al_2O_3\ .\ 3\ SiO_2$ | ***P*Orthoclase*** | | | | | | | | | | | | | |
| $0.5\ Na_2O\ .\ 0.5\ Al_2O_3\ .\ 3\ SiO_2$ | ***P*Albite*** | | | | | | | | | | | | | |
| $CaO\ .\ Al_2O_3\ .\ 2\ SiO_2$ | ***Anorthite*** | | | | | | | | | | | | | |
| $0.5\ Na_2O\ .\ 0.5\ Fe_2O_3\ .\ 2\ SiO_2$ | ***Aegyrine*** | | | | | | | | | | | | | |
| $Al_2O_3$ | ***Corundum*** | | | | | | | | | | | | | |
| $FeO\ .\ Fe_2O_3$ | ***Magnetite*** | | | | | | | | | | | | | |
| $Fe_2O_3$ | ***Hematite*** | | | | | | | | | | | | | |
| | | | | | | | | | | ***(FeO+MgO)*** | | | | |
| | | | | | | | | | | | | | | |
| $0.5\ CaO\ .\ 0.5\ (Fe,Mg)O\ .\ SiO_2$ | ***Diopside*** | | | | | | | | | | | | | |
| $(Fe,Mg)O\ .\ SiO_2$ | ***P*Hypersthene*** | | | | | | | | | | | | | |
| $CaO\ .\ SiO_2$ | ***Wollastonite*** | | | | | | | | | | | | | |
| $SiO_2$ | ***Quartz or Silica deficit*** | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

**Silica undersaturation**

| | | |
|---|---|---|
| $2(Fe,Mg)O\ .\ SiO_2$ | ***Olivine*** | |
| Gives 0.5 $SiO_2$ per Hy | *Used Hy* | |
| | *Residual D* | |
| | ***Hypersthene*** | |
| $0.5\ Na_2O\ .\ 0.5\ Al_2O_3\ .\ SiO_2$ | ***Nepheline*** | |
| Gives 2 $SiO_2$ per Ab | *Used Ab* | |
| | *residual D* | |
| | ***Albite*** | |
| $0.5\ K_2O\ .\ 0.5\ Al_2O_3\ .\ 2\ SiO_2$ | ***Leucite*** | |
| Gives 1 $SiO_2$ per Or | *Used Or* | |
| | *residual D* | |
| | ***Orthoclase*** | |

**Final proportions**

| ***Minerals*** | ***milli-moles*** | ***Mol. Weig*** | ***Mass*** | ***wt%*** |
|---|---|---|---|---|
| ***Quartz*** | | 60 | | |
| ***Orthoclase*** | | 278 | | |
| ***Albite*** | | 262 | | |
| ***Anorthite*** | | 278 | | |
| ***Diopside*** | | | | |
| *Wollastonite* | | 116 | | |
| *Enstatite* | | 100 | | |
| *Ferrosilite* | | 132 | | |
| ***Hypersthene*** | | | | |
| *Enstatite* | | 100 | | |
| *Ferrosilite* | | 132 | | |
| ***Wollastonite*** | | 116 | | |
| ***Olivine*** | | | | |
| *Forsterite* | | 140 | | |
| *Fayalite* | | 204 | | |
| ***Nepheline*** | | 142 | | |
| ***Leucite*** | | 218 | | |
| ***Aegyrine*** | | 231 | | |
| ***Corundum*** | | 102 | | |
| ***Apatite*** | | 930 | | |
| ***Ilmenite*** | | 152 | | |
| ***Magnetite*** | | 232 | | |
| ***Hematite*** | | 160 | | |
| **Sum** | | | | |

| Mg# |
|---|
| |