

Table 7.7. Calcium- and magnesium-bearing minerals in rocks used for the leaching study. Formulas are simple basic formulas. Minerals are those identified by Hammarstrom (Chapter 5).

<u>Mineral</u>	<u>Composition</u>	<u>Comments</u>
Ankerite	$\text{Ca}(\text{Mg},\text{Fe})(\text{CO}_3)_2$	Present in all samples
Anorthite	$\text{CaAl}_2\text{Si}_2\text{O}_8$	<1% in all samples except MKSS
Apatite	$\text{Ca}_5(\text{F},\text{Cl},\text{OH})(\text{PO}_4)_3$	Less than 2% except in HCS-IN (>3%)
Biotite	$\text{K}(\text{Mg},\text{Fe})_3(\text{AlSi}_3\text{O}_{10})(\text{OH})_2$	Only identified in KBF-WV & <1%
Calcite	$\text{CaCO}_3$	Present in all samples
Chlorite	$\text{Mg}_3(\text{Si}_4\text{O}_{10})(\text{OH})_2\text{-Mg}_3(\text{OH})_6$	Present in all samples (see Table 7.6)
Phengite	$\text{K}(\text{AlMg})_2(\text{OH})_2(\text{SiAl})_4\text{O}_{10}$	Present in all samples

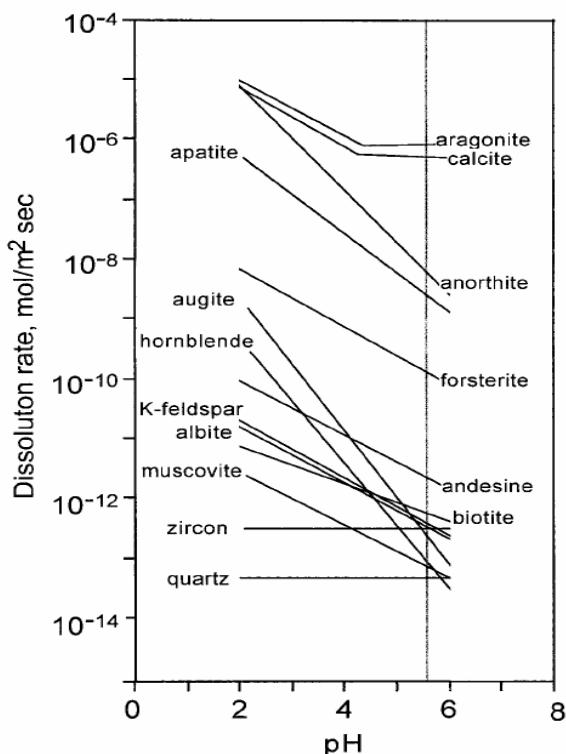


Figure 7.33. Relative dissolution rates of minerals. From Kowalewski & Rimstidt (2003).

Table 7.8. Elements and minerals relevant to Ca and Mg concentrations.

Rock Type	%Ca	%Mg	%CO <sub>2</sub>	%Calcite	%Ankerite	%Chlorite
HCS-IN	2.25	1.61	1.06	0.60	2.40	4.60
LKFC-PA	0.87	1.88	3.13	0.35	0.70	9.45
KBF-WV	1.03	1.81	1.94	0.65	1.15	7.55
MKSS-PA	1.81	0.89	1.93	3.45	1.55	5.15
BCS-PA	2.25	2.41	2.03	2.45	1.20	11.15
BCS-PA2				2.13	1.10	10.10
BCS Weighted Ave.				2.26	1.14	10.52