

Atomic Absorption Analyses of Minor Elements in Carbonates
(values in ppm; replicate determinations shown individually)

Analyst: Robert R. Loucks

	Mg ₄₃₁₅	Mn ₇₅₁	Zn ₂₅₅₂	Ca ₄₃₅₉	Fe	C	O
Siderite	2625	5820	2080	3115	-	-	-
HMI 96217	2580		2020				

st Just, Cornwall Assuming MCO_3 stoichiometry, this corresponds to
 $(Fe_{.963} Mg_{.0123} Mn_{.0122} Ca_{.0089} Zn_{.0036})CO_3$, with
 $Fe = 46.625$ wt%; $C = 10.413$ wt%; $O = 41.610$ wt%
 $(\Sigma = 100.000$ wt%) 38.16

	Mg	Mn	Zn	Ca	Fe	C	O
Rhodochrosite	1700.2 ⁸¹⁹	-	17	2660	299	-	-
HM 117108	1700		18		296		

Pasto Bueno,
Peru

Assuming MCO_3 stoichiometry, this corresponds to
 $(Mn_{.9838} Mg_{.0080} Ca_{.0076} Fe_{.0006} Zn_{.00003})CO_3$, with
 $Mn = 60.90$
 $Mn = 47.166$ wt%; $C = 10.482$ wt%; $O = 41.886$ wt%
 $(\Sigma = 100.001$ wt%) 38.41

	Mg	Mn	Zn	Ca	Fe	C	O
Calcite	12.5 ^{0.0021}	45 ^{0.0066}	15 ^{0.0019}	-	17 ^{0.0023}	-	-
HMI 97189		55	17		19		
		52					

Iceland
(Garrels, 1960)

Assuming MCO_3 stoichiometry, this corresponds to
 $Ca \approx 40.03$ wt%, $C = 12.00$ wt%; $O \approx 47.95$ wt%
56.01 43.97

Calcite

el.	wt % oxide <small>ideal</small>	wt % el. <small>ideal</small>	β <small>ideal</small>	α_{Ca}
CaO	56.030	40.044	1.000	1.0
MgO				
MnO				
FeO				
CO ₂	43.972	C 12.000	1.001	.54262 50.107
		O ₃ 47.955		.54.029 49.992
				.000 .000
			β 1.0008	.001 .001
CaO	56.08			
CO ₂	44.011			

Dolomite, #105064, Styria

el.	wt % oxide <small>ideal</small>	wt % oxide	wt % el.	β	α_{Mg}
CaO	30.4125	30.43	21.819	1.054	1.22
MgO	21.861	21.78	13.178	1.129	1.0
MnO		0.02	0.015	1.180	1.59
FeO		0.08	0.062	1.154	1.67
CO ₂	47.734	47.37	47.522		1.18
insol.		.44	0		
	100.12		100.00		β 1.15

mole %

CaO	56.08	30.412	50.107	CaCO ₃
MgO	40.912	21.861	49.892	MgCO ₃
CO ₂	44.011	47.734	.001	FeCO ₃