	Including Water. (R_2O+CaO) : (Mg, Mn, Fe)O.			Excluding Water. (R_2O+CaO) : (Mg, Mn, Fe)O.		
Jan Mayen	3	:	3·87	3	:	4·17
Bohemia	3	:	4·10	3	:	4·10
Stenzelberg	3	:	4·02	3	:	4·38
Dungannon	3	:	3·84	3	:	4·11

Scharizer adopts the foregoing ratios (3 : 1 : 3 and 3 : 4) as those of syntagmatite in calculating the composition of hornblendes intermediate between $(\overset{I}{R_2}\overset{II}{R})_3\ \overset{III}{R_2}Si_3O_{12}$ and actinolite. He assumes in the first place that all the alumina and ferric oxide belong to the syntagmatite molecule (Σ). The sum of the Al_2O_3 and Fe_2O_3 molecules (from the molecular ratio) multipled by *three*, gives $(SiO_2)\Sigma$ on the one hand and $(R_2O+RO)\Sigma$ on the other. The sum of $(R_2O+RO)\Sigma$ divided in the proportion of 3 : 4 gives $(R_2O+CaO)\Sigma$ and $MgO+FeO)\Sigma$. Subtracting $(MgO+FeO)\Sigma$ from the sum of the correspondin molecules deduced from the analysis gives $(MgO+FeO)_A$—that is the number of molecules of magnesia and ferrous oxide belonging to the actinolite molecule (A)—and $(MgO+FeO)_A$ divided by three (see actinolite formula) gives the lime molecules of the actinolite $(CaO)_A$. This value subtracted from the total number of lime molecules gives $(CaO)\Sigma$, and $(CaO)\Sigma$ subtracted from $(R_2O+CaO)\Sigma$ gives the alkali molecules (in some cases inc'uding H_2O). Finally $(MgO+CaO)_A$ gives $(SiO_2)_A$. These statements will be made clearer by the following example, one of those selected by Scharizer.

HORNBLENDE FROM EDENVILLE, ANALYZED BY RAMMELSBERG.

Original analysis.		Molec. R. deduced from analysis.	Syntagmatite.		Actinolite.	Calculated composition.	Original analysis calc. to 100.
SiO_2	51·67	861	222		609	51·97	52·66
Al_2O_3	5·75	56	56	74	---	5·99	5·86
Fe_2O_3	2·86	18	18		---	3·00	2·91
MgO	23·37	584	127		457	24·35	23·82
CaO	12·42	222	70		152	12·96	12·66
Na_2O	0·75	12	12	222	- -	0·78	0·78
K_2O	0·84	9	9		---	0·88	9·86
H_2O	0·46	25	4		---	0·07	0·47
	98·12					100·00	100·00