

7. Anhang

7.1 Synthesen im System $\text{Na}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{SO}_3$: Phasenbestand bei 700°C, 800°C und 900°C

Phasenbestand im System $\text{Na}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{SO}_3$ nach dem Sintern bei 700°C

Stöchiometrie der Synthese (10 Mol% CaSO_4)	Phasenbestand nach dem Sintern
80 Mol% $\text{A}_1\text{C}_0\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (Probe N 1)	C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Na_2SO_4 Al_2O_3 CaO
80 Mol% $\text{A}_{0,5}\text{C}_{0,5}\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 2)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO
80 Mol% $\text{A}_0\text{C}_1\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 3)	Na_2SO_4 CaO
80 Mol% $\text{A}_{4/6}\text{C}_{1/6}\text{S}_{1/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 4)	C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{1/6}\text{C}_{4/6}\text{S}_{1/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 5)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{1/3}\text{C}_{1/3}\text{S}_{1/3}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 6)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{0,5}\text{C}_0\text{S}_{0,5}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 7)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_0\text{C}_{0,5}\text{S}_{0,5}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 8)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaO SiO_2
80 Mol% $\text{A}_{1/6}\text{C}_{1/6}\text{S}_{4/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 9)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_0\text{C}_0\text{S}_1$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 10)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaO SiO_2

Stöchiometrie der Synthese (20 Mol% CaSO ₄)	Phasenbestand nach dem Sintern
70 Mol% A ₁ C ₀ S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 11)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO
70 Mol% A _{0,5} C _{0,5} S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 12)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ CaO
70 Mol% A ₀ C ₁ S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 13)	(Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO
70 Mol% A _{4/6} C _{1/6} S _{1/6} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 14)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
70 Mol% A _{1/6} C _{4/6} S _{1/6} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 15)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
70 Mol% A _{1/3} C _{1/3} S _{1/3} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 16)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
70 Mol% A _{0,5} C ₀ S _{0,5} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 17)	(Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂

70 Mol% $A_0C_{0,5}S_{0,5}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 18)	C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ CaO SiO_2
70 Mol% $A_{1/6}C_{1/6}S_{4/6}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 19)	C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 CaO SiO_2
70 Mol% $A_0C_0S_1$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 20)	$(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ SiO_2

Stöchiometrie der Synthese (30 Mol% $CaSO_4$)	Phasenbestand nach dem Sintern
60 Mol% $A_1C_0S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 21)	$C_{12}A_7$ $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 CaO
60 Mol% $A_{0,5}C_{0,5}S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 22)	$C_{12}A_7$ $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 CaO
60 Mol% $A_0C_1S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 23)	$(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ CaO
60 Mol% $A_{4/6}C_{1/6}S_{1/6}$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 24)	$C_{12}A_7$ $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 SiO_2 CaO
60 Mol% $A_{1/6}C_{4/6}S_{1/6}$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O	$(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$

(N 25)	CaSO ₄ Al ₂ O ₃ SiO ₂ CaO
60 Mol% A _{1/3} C _{1/3} S _{1/3} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 26)	C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ SiO ₂ CaO
60 Mol% A _{0,5} C ₀ S _{0,5} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 27)	(Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ SiO ₂ CaO
60 Mol% A ₀ C _{0,5} S _{0,5} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 28)	C ₂ S (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ SiO ₂ CaO
60 Mol% A _{1/6} C _{1/6} S _{4/6} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 29)	C ₂ S (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ SiO ₂ CaO
60 Mol% A ₀ C ₀ S ₁ + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 30)	(Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ SiO ₂ CaO

Phasenbestand im System $\text{Na}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{SO}_3$ nach dem Sintern bei 800°C

Stöchiometrie der Synthese (10 Mol% CaSO_4)	Phasenbestand nach dem Sintern
80 Mol% $\text{A}_1\text{C}_0\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (Probe N 1)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3
80 Mol% $\text{A}_{0,5}\text{C}_{0,5}\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 2)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO
80 Mol% $\text{A}_0\text{C}_1\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 3)	Na_2SO_4 CaO
80 Mol% $\text{A}_{4/6}\text{C}_{1/6}\text{S}_{1/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 4)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{1/6}\text{C}_{4/6}\text{S}_{1/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 5)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{1/3}\text{C}_{1/3}\text{S}_{1/3}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 6)	CA C_{12}A_7 C_2S $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2
80 Mol% $\text{A}_{0,5}\text{C}_0\text{S}_{0,5}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 7)	CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ Al_2O_3 SiO_2
80 Mol% $\text{A}_0\text{C}_{0,5}\text{S}_{0,5}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 8)	C_2S $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaO SiO_2
80 Mol% $\text{A}_{1/6}\text{C}_{1/6}\text{S}_{4/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O	$\text{C}_4\text{A}_3\bar{\text{S}}$ C_2S

(N 9)	CS (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Al ₂ O ₃ CaO SiO ₂
80 Mol% A ₀ C ₀ S ₁ + 10 Mol% CaSO ₄ + 10 Mol% Na ₂ O	CS (Na _{0,8} Ca _{0,1}) ₂ SO ₄
(N 10)	SiO ₂

Stöchiometrie der Synthese (20 Mol% CaSO ₄)	Phasenbestand nach dem Sintern
70 Mol% A ₁ C ₀ S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 11)	C ₄ A ₃ \bar{S} CA (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃
70 Mol% A _{0,5} C _{0,5} S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 12)	C ₄ A ₃ \bar{S} C ₁₂ A ₇ CA (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO
70 Mol% A ₀ C ₁ S ₀ + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 13)	(Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ CaO
70 Mol% A _{4/6} C _{1/6} S _{1/6} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 14)	C ₄ A ₃ \bar{S} CA (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
70 Mol% A _{1/6} C _{4/6} S _{1/6} + 20 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 15)	C ₄ A ₃ \bar{S} C ₁₂ A ₇ CA Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂

<p>70 Mol% $A_{1/3}C_{1/3}S_{1/3}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O</p> <p>(N 16)</p>	<p>$C_4A_3\bar{S}$ CA C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 CaO SiO_2</p>
<p>70 Mol% $A_{0,5}C_0S_{0,5}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O</p> <p>(N 17)</p>	<p>$Na_8[(SO_4)/(AlSiO_4)_6]$ $C_4A_3\bar{S}$ CA $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 SiO_2</p>
<p>70 Mol% $A_0C_{0,5}S_{0,5}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O</p> <p>(N 18)</p>	<p>C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ CaO SiO_2</p>
<p>70 Mol% $A_{1/6}C_{1/6}S_{4/6}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O</p> <p>(N 19)</p>	<p>$Na_8[(SO_4)/(AlSiO_4)_6]$ $C_4A_3\bar{S}$ C_2S CS $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 SiO_2</p>
<p>70 Mol% $A_0C_0S_1$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O</p> <p>(N 20)</p>	<p>CS $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ SiO_2</p>

Stöchiometrie der Synthese (30 Mol% CaSO ₄)	Phasenbestand nach dem Sintern
60 Mol% A ₁ C ₀ S ₀ + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 21)	C ₄ A ₃ \bar{S} CA (Na _{0,8} Ca _{0,1}) ₂ SO ₄ CaSO ₄ Al ₂ O ₃
60 Mol% A _{0,5} C _{0,5} S ₀ + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 22)	C ₄ A ₃ \bar{S} C ₁₂ A ₇ (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO
60 Mol% A ₀ C ₁ S ₀ + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 23)	Na ₄ Ca(SO ₄) ₃ CaSO ₄ CaO
60 Mol% A _{4/6} C _{1/6} S _{1/6} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 24)	C ₄ A ₃ \bar{S} CA (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
60 Mol% A _{1/6} C _{4/6} S _{1/6} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 25)	C ₄ A ₃ \bar{S} C ₁₂ A ₇ C ₂ S (Na _{0,8} Ca _{0,1}) ₂ SO ₄ Na ₄ Ca(SO ₄) ₃ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
60 Mol% A _{1/3} C _{1/3} S _{1/3} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 26)	C ₄ A ₃ \bar{S} CA C ₂ S (Na _{0,8} Ca _{0,1}) ₂ SO ₄ CaSO ₄ Al ₂ O ₃ CaO SiO ₂
60 Mol% A _{0,5} C ₀ S _{0,5} + 30 Mol% CaSO ₄ + 10 Mol% Na ₂ O (N 27)	Na ₈ [(SO ₄)/(AlSiO ₄) ₆] C ₄ A ₃ \bar{S}

	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaSO_4 Al_2O_3 SiO_2
60 Mol% $\text{A}_0\text{C}_{0,5}\text{S}_{0,5}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 28)	C_2S $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaSO_4 SiO_2
60 Mol% $\text{A}_{1/6}\text{C}_{1/6}\text{S}_{4/6}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 29)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ $\text{C}_4\text{A}_3\bar{\text{S}}$ CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 CaO SiO_2
60 Mol% $\text{A}_0\text{C}_0\text{S}_1$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 30)	CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 SiO_2

Phasenbestand im System $\text{Na}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3-\text{SiO}_2-\text{SO}_3$ nach dem Sintern bei 900°C

Stöchiometrie der Synthese (10 Mol% CaSO_4)	Phasenbestand nach dem Sintern
80 Mol% $\text{A}_1\text{C}_0\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (Probe N 1)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3
80 Mol% $\text{A}_{0,5}\text{C}_{0,5}\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 2)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO
80 Mol% $\text{A}_0\text{C}_1\text{S}_0$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 3)	Na_2SO_4 CaO
80 Mol% $\text{A}_{4/6}\text{C}_{1/6}\text{S}_{1/6}$ + 10 Mol% CaSO_4 + 10 Mol% Na_2O (N 4)	CA C_{12}A_7 $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ Al_2O_3 CaO SiO_2

80 Mol% $A_{1/6}C_{4/6}S_{1/6}$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 5)	CA $C_{12}A_7$ C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ Al_2O_3 CaO SiO_2
80 Mol% $A_{1/3}C_{1/3}S_{1/3}$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 6)	CA $C_{12}A_7$ C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ Al_2O_3 CaO SiO_2
80 Mol% $A_{0,5}C_0S_{0,5}$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 7)	CS $NaAlSiO_4$ $(Na_{0,8}Ca_{0,1})_2SO_4$ Al_2O_3 SiO_2
80 Mol% $A_0C_{0,5}S_{0,5}$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 8)	C_2S CS $(Na_{0,8}Ca_{0,1})_2SO_4$ CaO SiO_2
80 Mol% $A_{1/6}C_{1/6}S_{4/6}$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 9)	C_2S CS $(Na_{0,8}Ca_{0,1})_2SO_4$ Al_2O_3 SiO_2
80 Mol% $A_0C_0S_1$ + 10 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 10)	CS $(Na_{0,8}Ca_{0,1})_2SO_4$ SiO_2

Stöchiometrie der Synthese (20 Mol% $CaSO_4$)	Phasenbestand nach dem Sintern
70 Mol% $A_1C_0S_0$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 11)	$C_4A_3\bar{S}$ CA $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3
70 Mol% $A_{0,5}C_{0,5}S_0$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 12)	$C_4A_3\bar{S}$ $C_{12}A_7$

	CA $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ Al_2O_3 CaO
70 Mol% $\text{A}_0\text{C}_1\text{S}_0$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 13)	$(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 CaO
70 Mol% $\text{A}_{4/6}\text{C}_{1/6}\text{S}_{1/6}$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 14)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ $\text{C}_4\text{A}_3\bar{\text{S}}$ CA $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 CaO SiO_2
70 Mol% $\text{A}_{1/6}\text{C}_{4/6}\text{S}_{1/6}$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 15)	$\text{C}_4\text{A}_3\bar{\text{S}}$ CA C_2S $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 CaO
70 Mol% $\text{A}_{1/3}\text{C}_{1/3}\text{S}_{1/3}$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 16)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ $\text{C}_4\text{A}_3\bar{\text{S}}$ CA C_2S $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaSO_4 Al_2O_3 CaO SiO_2
70 Mol% $\text{A}_{0,5}\text{C}_0\text{S}_{0,5}$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 17)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ CA $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 SiO_2
70 Mol% $\text{A}_0\text{C}_{0,5}\text{S}_{0,5}$ + 20 Mol% CaSO_4 + 10 Mol% Na_2O (N 18)	C_2S CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaSO_4 CaO SiO_2

70 Mol% $A_{1/6}C_{1/6}S_{4/6}$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 19)	$Na_8[(SO_4)/(AlSiO_4)_6]$ CS $(Na_{0,8}Ca_{0,1})_2SO_4$ $CaSO_4$ Al_2O_3 SiO_2
70 Mol% $A_0C_0S_1$ + 20 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 20)	CS $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ SiO_2

Stöchiometrie der Synthese (30 Mol% $CaSO_4$)	Phasenbestand nach dem Sintern
60 Mol% $A_1C_0S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 21)	$C_4A_3\bar{S}$ CA $(Na_{0,8}Ca_{0,1})_2SO_4$ $CaSO_4$ Al_2O_3 CaO
60 Mol% $A_{0,5}C_{0,5}S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 22)	$C_4A_3\bar{S}$ CA $(Na_{0,8}Ca_{0,1})_2SO_4$ $CaSO_4$ Al_2O_3 CaO
60 Mol% $A_0C_1S_0$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 23)	$Na_4Ca(SO_4)_3$ $CaSO_4$ CaO
60 Mol% $A_{4/6}C_{1/6}S_{1/6}$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 24)	$Na_8[(SO_4)/(AlSiO_4)_6]$ $C_4A_3\bar{S}$ CA $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$ Al_2O_3 CaO SiO_2
60 Mol% $A_{1/6}C_{4/6}S_{1/6}$ + 30 Mol% $CaSO_4$ + 10 Mol% Na_2O (N 25)	$C_4A_3\bar{S}$ CA C_2S $(Na_{0,8}Ca_{0,1})_2SO_4$ $Na_4Ca(SO_4)_3$ $CaSO_4$

	Al_2O_3 CaO
60 Mol% $\text{A}_{1/3}\text{C}_{1/3}\text{S}_{1/3}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 26)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ $\text{C}_4\text{A}_3\bar{\text{S}}$ CA $\text{C}_5\text{S}_2\bar{\text{S}}$ C_2S $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 SiO_2
60 Mol% $\text{A}_{0,5}\text{C}_0\text{S}_{0,5}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 27)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ CA $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 Al_2O_3 SiO_2
60 Mol% $\text{A}_0\text{C}_{0,5}\text{S}_{0,5}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 28)	$\text{C}_5\text{S}_2\bar{\text{S}}$ CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 CaO SiO_2
60 Mol% $\text{A}_{1/6}\text{C}_{1/6}\text{S}_{4/6}$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 29)	$\text{Na}_8[(\text{SO}_4)/(\text{AlSiO}_4)_6]$ CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ CaSO_4 Al_2O_3 SiO_2
60 Mol% $\text{A}_0\text{C}_0\text{S}_1$ + 30 Mol% CaSO_4 + 10 Mol% Na_2O (N 30)	CS $(\text{Na}_{0,8}\text{Ca}_{0,1})_2\text{SO}_4$ $\text{Na}_4\text{Ca}(\text{SO}_4)_3$ CaSO_4 SiO_2

10.00000	0.0000	0.0000					
41.00	0.00	0.00					
3	0	0.0000	0.0000	1.1900	0.0000	0.0000	
			0.00	321.00	0.00	0.00	
	0.00000	0.00000	0.00500				
	0.00	0.00	271.00				
4.21700	4.21700	4.21700	90.0000	90.0000	90.0000		
181.00	181.00	181.00	0.00	0.00	0.00		
2	0	1.0000	1.0000	1.0000	1.0000	0.0000	
				230.00	0.00		

Control File „Innere Barriere“

Berücksichtigte Phasen: Ellestadit, Mayenit, Anhydrit, Quarz, Halit, Brownmillerit, Gehlenit, Calcit, Calciumoxid

1	9	0	0	0	0	0	0						
	0	0	1	0	1	0	0	0	0	1	0	0	
	2	5	10	16	22	27	40	63					
	3	3	3	5	5	5	5	5					
1.54056	1.54439	0.5000	20.0000	1.0000	9.0000	0.0200	65.0000						
0.3300	1.0000	1.0000	1.0000	1.0000	1.0000								
0	-0.01620	0.00000											
	121.00	0.00											
5.0000E+001	0.0000E+000	0.0000E+000	0.0000E+000	0.0000E+000	0.0000E+000	0.0000E+000	0.0000E+000						
11.00	111.00	171.00	191.00	231.00	0.00								
1	1	1	1	1	1								

ELLESTADIT

P 1 1 21/B

monoclinic

21	0	0	0										
CA1	CA+2	0		0.33899	0.57662	0.03604	1.05713	1.08635					
				250.00	260.00	270.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
CA2	CA+2	0		0.33352	0.57514	0.49405	1.71891	1.08868					
				280.00	290.00	300.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
CA3	CA+2	0		0.25019	0.23512	0.23712	0.77607	1.06747					
				310.00	320.00	330.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
CA4	CA+2	0		-0.00068	0.61079	0.74711	0.46124	0.94568					
				340.00	350.00	360.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
CA5	CA+2	0		0.26144	0.36859	0.74185	1.85179	1.28258					
				370.00	380.00	390.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
SI1	SI+4	0		0.38844	0.44411	0.25056	0.50908	1.37025					
				400.00	410.00	420.00	0.00	0.00					
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
S2	S	0		0.60708	0.27635	0.24359	0.74018	0.94812					
				430.00	440.00	450.00	0.00	0.00					

				0.00	0.00	0.00	0.00	0.00	0.00
25.82360	0.0000	0.0000							
21.00	0.00	0.00							
3	0	0.0000	0.0000	0.2887	0.0289	-0.0003			
			0.00	551.00	0.00	0.00			
	0.06689	-0.03700	0.02261						
	0.00	0.00	461.00						
9.5948319	.16082	6.89383	90.0000	90.0000	120.0378				
131.00	141.00	151.00	0.00	0.00	161.00				
2	0	0.0000	0.0000	1.0000	1.0067	0.0000			
					371.00	0.00			

C11A7.CaF2

I -4 3 D

Cubic

7	0	0	0						
CA	CA+2	0		0.11484	0.00000	0.25000	0.57000	0.37184	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
CA	CA+2	0		0.07035	0.00000	0.25000	0.35000	0.11997	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.37500	0.00000	0.25000	0.19000	0.25000	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.22883	0.22883	0.22883	0.27000	0.33333	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.19340	0.28755	0.09547	0.80000	1.00000	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.31128	0.31128	0.31128	0.80000	0.33333	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.87500	0.00000	0.25000	0.80000	0.03334	
				0.00	0.00	0.00	0.00	0.00	
0				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
3.000000	0.0000	0.0000							
31.00	0.00	0.00							
3	0	0.0000	0.0000	1.3000	0.0000	0.0000			
			0.00	560.00	0.00	0.00			
	0.00000	0.00000	0.06000						
	0.00	00.00	470.00						
12.0550012	.0550012	.05500	90.0000	90.0000	90.0000				
180.00	180.00	180.00	0.00	0.00	0.00				
0	0	0.0000	0.0000	0.0000	0.0000	0.0000			
					380.00	0.00			

Anhydrite

C M C M

Orthorhombic

4 0 0 0

Ca	CA+2	0	0.00000	0.65220	0.25000	0.70000	0.25000		
			0.00	0.00	0.00	0.00	0.00		
N/A			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	S	0	0.00000	0.15560	0.25000	0.70000	0.25000		
			0.00	0.00	0.00	0.00	0.00		
N/A			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0	0.17000	0.01570	0.25000	0.90000	0.50000		
			0.00	0.00	0.00	0.00	0.00		
N/A			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0	0.00000	0.29720	0.08140	0.90000	0.50000		
			0.00	0.00	0.00	0.00	0.00		
N/A			0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.000000	0.0000	0.0000							
41.00	0.00	0.00							
3	0	0.0000	0.0000	1.5000	0.0000	0.0000			
			0.00	570.00	0.00	0.00			
	0.00000	0.00000	0.01000						
	0.00	0.00	480.00						
6.99812	6.22780	6.98614	90.0000	90.0000	90.0000				
201.00	211.00	221.00	0.00	0.00	0.00				
0	0	0.0000	0.0000	0.0000	0.0000	0.0000			
				390.00	0.00				

QUARTZ

P	32	2	1						
	2	0	0	0					
SI	SI+4	0			0.48078	0.48078	0.00000	0.50000	0.50000
					0.00	0.00	0.00	0.00	0.00
N/A					0.00000	0.00000	0.00000	0.00000	0.00000
					0.00	0.00	0.00	0.00	0.00
O	O-1	0			0.15018	0.41459	0.11665	1.20000	1.00000
					0.00	0.00	0.00	0.00	0.00
N/A					0.00000	0.00000	0.00000	0.00000	0.00000
					0.00	0.00	0.00	0.00	0.00
2.857644	0.0000	0.0000							
51.00	0.00	0.00							
3	0	0.0000	0.0000	1.7000	0.0000	0.0000			
			0.00	580.00	0.00	0.00			
	0.00000	0.00000	0.00500						
	0.00	0.00	490.00						
4.91683	4.91683	5.40359	90.0000	90.0000	120.0000				
241.00	251.00	261.00	0.00	0.00	271.00				
0	0	0.0000	0.0000	0.0000	0.0000	0.0000			
				400.00	0.00				

HALIT

F	M	3	M						
	2	0	0	0					
NA	NA+1	0			0.00000	0.00000	0.00000	0.00000	0.02083
					0.00	0.00	0.00	0.00	0.00
N/A					0.00000	0.00000	0.00000	0.00000	0.00000
					0.00	0.00	0.00	0.00	0.00
CL	CL-1	0			0.50000	0.50000	0.50000	0.00000	0.02083

				0.00	0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
2.000000	0.0000	0.0000							
61.00	0.00	0.00							
3	0	0.0000	0.0000	1.5440	0.0000	0.0000			
				0.00	590.00	0.00	0.00		
	0.00000	0.00000	0.00531						
	0.00	0.00	500.00						
5.64192	5.64192	5.64192	90.0000	90.0000	90.0000				
281.00	281.00	281.00	0.00	0.00	0.00				
0	0	0.0000	0.0000	0.0000	0.0000	0.0000			
					400.00	0.00			
Brownmillerite									
I B M 2				Orthorhombic					
8	0	0	0						
CA	CA+2	0		0.02730	0.10870	0.49200	1.00000	1.00000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
FE	FE+3	0		0.00000	0.00000	0.00000	1.00000	0.45000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.00000	0.00000	0.00000	1.00000	0.05000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
FE	FE+3	0		0.92830	0.25000	0.95330	1.00000	0.21000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.92830	0.25000	0.95330	1.00000	0.29000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.25230	0.98610	0.24910	1.00000	1.00000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.06800	0.14390	0.02460	1.00000	1.00000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.86070	0.25000	0.61930	1.00000	0.50000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
2.475250	0.0000	0.0000							
71.00	0.00	0.00							
2	0	0.0000	0.0000	1.2000	0.0000	0.0000			
				0.00	600.00	0.00	0.00		
	0.00000	0.00000	0.04000						
	0.00	0.00	510.00						
5.4453214	9.98447	5.39063	90.0000	90.0000	90.0000				
291.00	301.00	311.00	0.00	0.00	0.00				

0	0	0.0000	0.0000	0.0000	0.0000	0.0000	420.00	0.00
Gehlenit								
P -4 21 M			Tetragonal					
10	0	0	0					
AL	AL+3	0		0.00000	0.00000	0.00000	1.00000	0.20000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
FE	FE+3	0		0.00000	0.00000	0.00000	1.00000	0.05000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.35780	0.85780	0.95770	1.00000	0.20000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
FE	FE+3	0		0.35780	0.85780	0.95770	1.00000	0.05000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
SI	SI+4	0		0.35780	0.85780	0.95770	1.00000	0.25000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
CA	CA+2	0		0.16140	0.66140	0.51090	1.00000	0.45000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
AL	AL+3	0		0.16140	0.66140	0.51090	1.00000	0.05000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.00000	0.50000	0.18310	1.00000	0.25000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.35670	0.85670	0.27070	1.00000	0.50000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.09060	0.16590	0.18610	1.00000	1.00000
				0.00	0.00	0.00	0.00	0.00
N/A				0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00
0.000001	0.0000	0.0000						
80.00	0.00	0.00						
2	0	0.0000	0.0000	2.0115	0.0000	0.0000		
				0.00	610.00	0.00	0.00	
	0.00000	0.00000	0.00400					
	0.00	0.00	520.00					
7.74524	7.74524	5.04490	90.0000	90.0000	90.0000			
320.00	320.00	330.00	0.00	00.00	0.00			
0	0	0.0000	0.0000	0.0000	0.0000	0.0000		
				430.00	0.00			

CALCITE

R 3BAR C

Trigonal on Hexag.

3	0	0	0						
Ca	CA+2	0		0.00000	0.00000	0.00000	0.50000	0.16660	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
C	C	0		0.00000	0.00000	0.25000	1.00000	0.16660	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.25680	0.00000	0.25000	1.20000	0.50000	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
2.000001	0.0000	0.0000							
91.00	0.00	0.00							
3	0	0.0000	0.0000	0.59200	0.00000	0.00000			
				0.00	620.00	0.00	0.00		
	0.00000	0.00000	0.00633						
	0.00	0.00	530.00						
4.98960	4.98960	17.06100	90.0000	90.0000	120.0000				
340.00	340.00	350.00	0.00	0.00	0.00				
2	0	1.0000	0.0000	1.0000	0.8787	0.0000			
					440.00	0.00			

Lime

F M 3BAR M

cubic

2	0	0	0						
Ca	CA+2	0		0.00000	0.00000	0.00000	0.50000	0.02083	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
O	O-1	0		0.50000	0.00000	0.00000	2.30000	0.02083	
				0.00	0.00	0.00	0.00	0.00	
N/A				0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
				0.00	0.00	0.00	0.00	0.00	0.00
2.000020	0.0000	0.0000							
101.00	0.00	0.00							
3	0	0.0000	0.0000	1.30000	0.00000	0.00000			
				0.00	630.00	0.00	0.00		
	0.00000	0.00000	0.00852						
	0.00	0.00	540.00						
4.80500	4.80500	4.80500	90.0000	90.0000	90.0000				
360.00	360.00	360.00	0.00	0.00	0.00				
2	0	1.0000	0.0000	1.0000	0.9650	0.0000			
					450.00	0.00			

7.3 Gitterkonstanten der Phase $\text{Ca}_4 ((\text{Al}_{0,95}\text{Fe}_{0,05})_6 \text{O}_{12}) (\text{SO}_4)$ (Calciumsulfaluminatferrit)

SG: orthorhombic A ba2

 $a_0 = 26.0698 \text{ \AA}$ $b_0 = 13.0368 \text{ \AA}$ $c_0 = 9.1784 \text{ \AA}$ $V = 3119.43 \text{ \AA}^3$ $F_{30} = 384.0 (0.000, 199)$

2Thetaexp CuKα1 [Grad]	Int. I/I₁₀₀	d [Å]	h	k	l	Δ2Theta [Grad]
13.60	4	6.5040	2	1	1	0.000
20.50	2	4.3287	2	0	2	0.000
22.88	2	3.8838	1	3	1	0.000
23.64	100	3.7606	2	3	1	0.000
23.69	50	3.7525	0	2	2	0.000
27.34	5	3.2592	0	4	0	0.000
27.40	7	3.2520	4	2	2	0.000
30.65	9	2.9148	8	2	0	0.000
30.77	3	2.9037	2	1	3	0.000
33.70	35	2.6573	0	4	2	-0.001
33.88	3	2.6436	1	4	2	-0.001
36.45	7	2.4629	2	5	1	0.001
36.49	6	2.4604	8	2	2	0.001
36.54	6	2.4567	6	1	3	0.000
37.11	2	2.4206	10	2	0	0.000
39.05	6	2.3044	8	4	0	0.001
39.23	3	2.2946	0	0	4	0.000
41.54	20	2.1722	6	5	1	0.000
41.62	12	2.1680	6	3	3	0.000
41.69	7	2.1644	0	2	4	0.000
46.19	2	1.9638	0	6	2	0.000
46.23	2	1.9619	2	5	3	-0.001
48.37	3	1.8803	4	6	2	0.000
48.48	2	1.8761	8	0	4	0.001
50.44	3	1.8076	2	7	1	-0.001
50.52	3	1.8050	10	3	3	0.001
50.58	2	1.8030	4	4	4	0.000
50.66	2	1.8003	2	1	5	0.001
54.51	2	1.6820	8	6	2	0.000

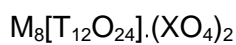
54.69	2	1.6769	6	1	5	0.000
56.41	5	1.6296	0	8	0	0.000
56.55	8	1.6260	8	4	4	0.000
58.32	3	1.5807	16	2	0	0.001
58.39	4	1.5790	10	5	3	0.001
58.45	3	1.5777	0	6	4	0.000
58.52	3	1.5759	6	3	5	-0.002
60.18	3	1.5363	12	6	0	0.000
60.21	3	1.5357	0	8	2	-0.002
60.31	3	1.5333	12	2	4	0.001
60.47	2	1.5297	0	0	6	0.002
62.04	5	1.4946	16	2	2	-0.002
62.20	4	1.4911	10	1	5	-0.001
62.29	2	1.4893	0	2	6	0.002

7.4 Definition der allgemeinen Formeln

7.4.1. Metall-Metall-Hydroxy-Salze $\text{Me}_4[\text{M}_2(\text{OH})_{12}] \cdot [\text{X} \cdot n \text{H}_2\text{O}]$ - $\text{Me}_6[\text{M}_2(\text{OH})_{16}] \cdot [\text{X} \cdot n \text{H}_2\text{O}]$

Me	M	X
Cu^{2+} , Ni^{2+} , Zn^{2+} , Ca^{2+} , Cd^{2+} , Mg^{2+} , Fe^{2+} , Co^{2+} , Mn^{2+}	Ga^{3+} , Cr^{3+} , Al^{3+} , Fe^{3+} , In^{3+}	CrO_4^{2-} , SeO_4^{2-} , SeO_3^{2-} , SiO_4^{4-} , ClO_3^- , $\text{B}(\text{OH})_4^-$, OH^- , NO_2^- , Cl^- , JO_3^- , SCN^- , SO_4^{2-} , $\text{Al}(\text{OH})_4^-$, BrO_3^- , Br^- , CO_3^{2-} , ClO_4^- , SO_3^{2-} , NO_3^- , J^- , MnO_4^- , CN^- , HCOO^- , OCN^-

7.4.2 Sodalithe



M	T	X
Ca^{2+} , Sr^{2+} , Na^+ , Zn^{2+} , Fe^{2+} , Li^+ , K^+ , Rb^+ , Ag^+ , Tl^+ , Mn^{2+}	Al^{3+} , Ga^{3+} , Si^{4+} , Ge^{4+} , Be^{2+} , B^{3+}	SO_4^{2-} , CrO_4^{2-} , SeO_4^{2-} , WO_4^{2-} , Cl^- , SiO_4^{4-} , $\text{B}(\text{OH})_4^-$, OH^- , S^{2-} , NO_2^- , TeO_4^{2-} ,