

OFFRETITE WITH GLYCOL

4.8Na₂O:1.0K₂O:1.0Al₂O₃:15.8SiO₂:249.5H₂O:1.0TMACl:15.8glycol

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1 BATCH COMPOSITION CALCULATION

COMPOSITION MATRIX [C]

Compound	Na ₂ O	K ₂ O	Al ₂ O ₃	SiO ₂	H ₂ O	TMACl	glycol
Mole ratio	4.800	1.000	1.000	15.800	249.500	1.000	15.800
Weight [g]	297.499	94.196	101.961	949.332	4494.792	109.599	980.678
Mol. wt. [g/mol]	61.979	94.196	101.961	60.084	18.015	109.599	62.068

BATCH MATRIX [B]

Compound	Na ₂ O	K ₂ O	Al ₂ O ₃	SiO ₂	H ₂ O	TMACl	glycol
NaOH (98.0%)	0.7593	0.0000	0.0000	0.0000	0.2407	0.0000	0.0000
KOH (85.0%)	0.0000	0.7135	0.0000	0.0000	0.2865	0.0000	0.0000
Al(iPrO) ₃ (98.0%)	0.0000	0.0000	0.2496	0.0000	-0.1323	0.0000	0.0000
SiO ₂ (100.0%)	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000
H ₂ O (100.0%)	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000
TMACl (98.0%)	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000
glycol (100.0%)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

RESULT MATRIX [X] = [B]⁻¹·[C] (SF=100.0000)

Substance	Mass [g]	Scaled Mass [g] (100.000)	Weighted mass [g]
NaOH (98.0%)	391.8080	3.9181	
KOH (85.0%)	132.0132	1.3201	
Al(iPrO) ₃ (98.0%)	416.8258	4.1683	
SiO ₂ (100.0%)	949.3319	9.4933	
H ₂ O (100.0%)	4416.7117	44.1671	
TMACl (98.0%)	111.8352	1.1184	
glycol (100.0%)	980.6776	9.8068	
Sum	7399.2034	73.9920	

RESULT MATRIX [X] = [B]⁻¹·[C] (SF=1283.7052)

Substance	Mass [g]	Scaled Mass [g] (1283.705)	Weighted mass [g]
NaOH (98.0%)	391.8080	0.3052	
KOH (85.0%)	132.0132	0.1028	
Al(iPrO) ₃ (98.0%)	416.8258	0.3247	
SiO ₂ (100.0%)	949.3319	0.7395	
H ₂ O (100.0%)	4416.7117	3.4406	
TMACl (98.0%)	111.8352	0.0871	
Sum	7399.2034	5.7639	
glycol (100.0%)	980.6776	0.7639	

2 SYNTHESIS

Sample name	
Time	
Date	
Temperature	
Oven	
Liner	
Autoclave	
Drying	
Comment	

CALCINATION I

Date:

Mass [g]	Before calcination	After calcination
Weighing boat		
Weighing boat + sample		
Sample		

ION EXCHANGE

Date:

Notes

CALCINATION II

Date:

Mass [g]	Before calcination	After calcination
Weighing boat		
Weighing boat + sample		
Sample		

3 ANALYSIS

XRD

Date:

Sample name	Result	Comment

SEM

Date:

Sample name	Aspect ratio	Si/Al	Comment