

Birdie's Nest- $\Delta 6$

Lab 1-Pick-A-Part

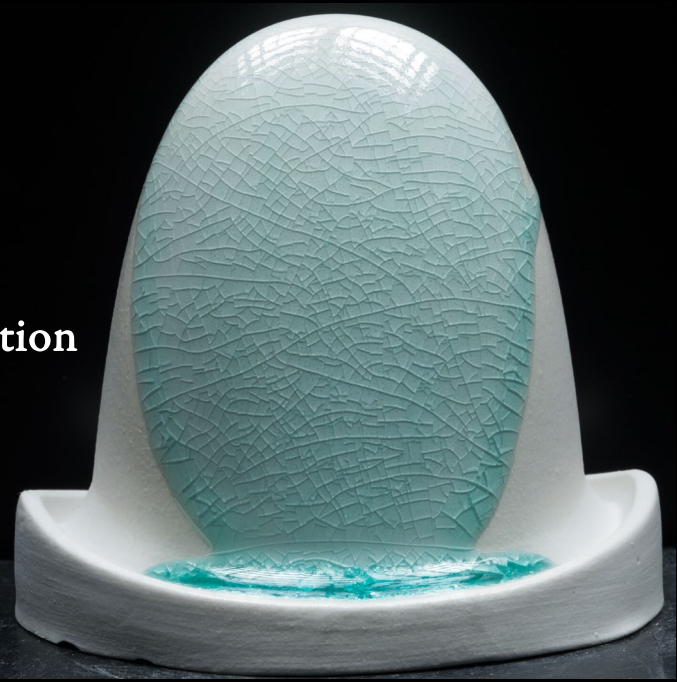
Birdie's Nest

Original
070722-1

Neph Sy	24.36
Dolomite	20.28
EPK	5.92
Flint	17.84
3134	29.59
Bentonite	2.01
Copper Carbonate	0.50
Water	60



1-3 Second Dip



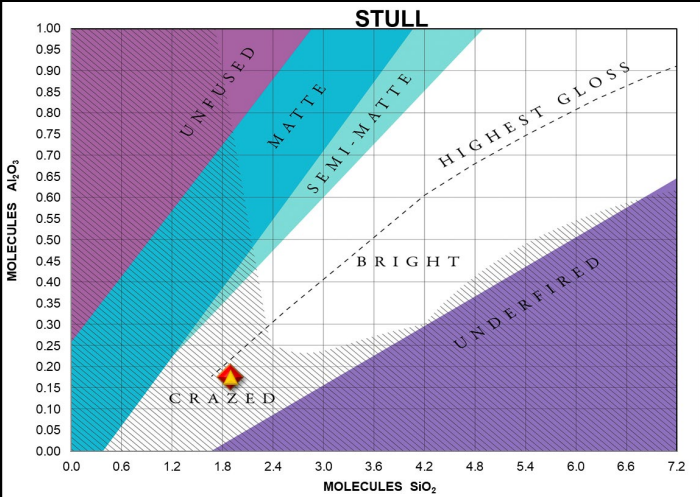
2-3 Second Dips



Reduction

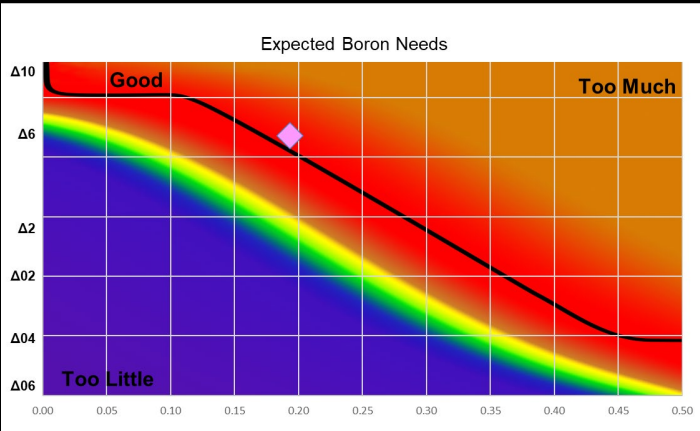
UMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.18	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 1.90	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.19	Al ₂ O ₃ 0.18	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Temperature Variation-Oxidation-Natural Cool

1-3 Second Dip



2-3 Second Dips



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$\Delta 6$

$\Delta 5$

070722-1

$\Delta 4$

$\Delta 3$

Temperature Variation-Oxidation-Natural Cool



$\Delta 4$
1-3 Second Dip

070722-1



$\Delta 4$
2-3 Second Dips



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Temperature Variation-Oxidation-Natural Cool



$\Delta 5$
1-3 Second Dip

070722-1



$\Delta 5$
2-3 Second Dips



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Temperature Variation-Oxidation-Natural Cool



$\Delta 5$
1-3 Second Dip

070722-1



$\Delta 4$
2-3 Second Dips



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Cooling Variation-Oxidation

$\Delta 6$

1-3 Second Dip



2-3 Second Dips



Normal Cool

Slow Cool



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Temperature Variation-Oxidation-Slow Cool

$\Delta 10$



$\Delta 9$



$\Delta 8$



1-3 Second Dip

$\Delta 7$



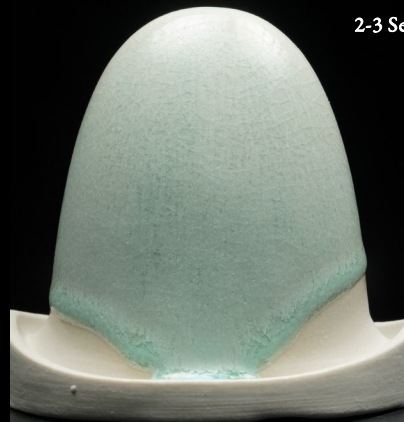
$\Delta 6$



$\Delta 4$



2-3 Secon

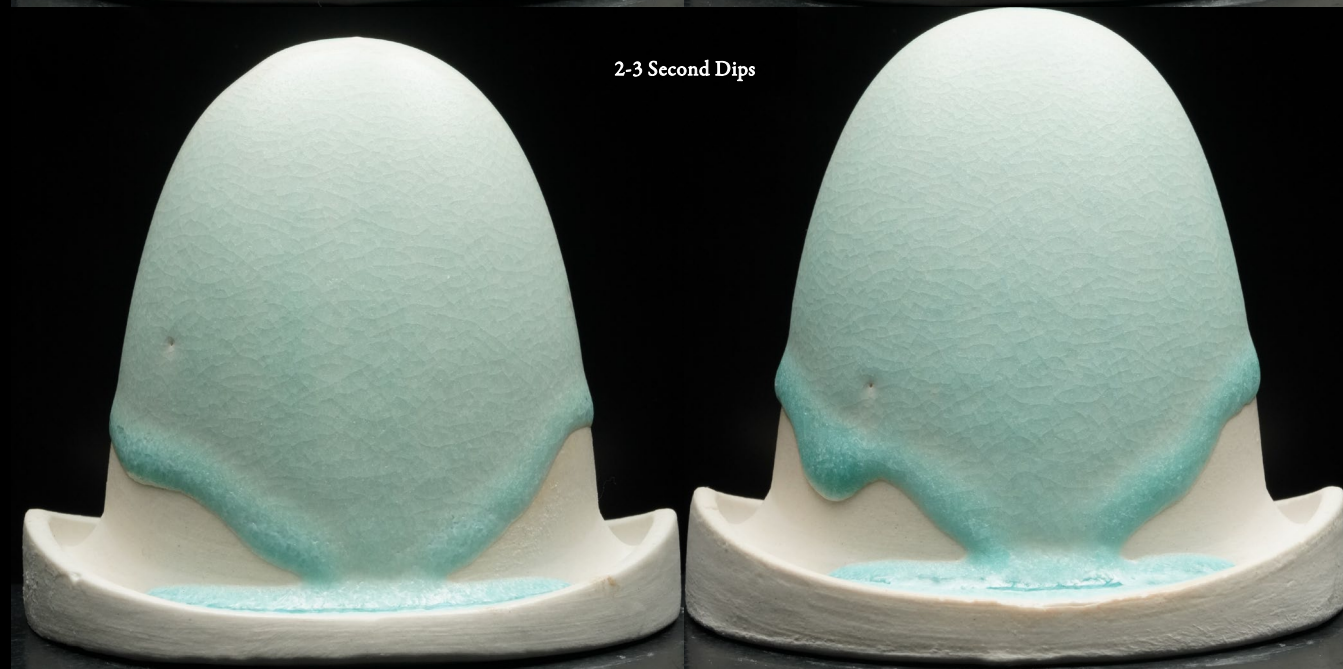
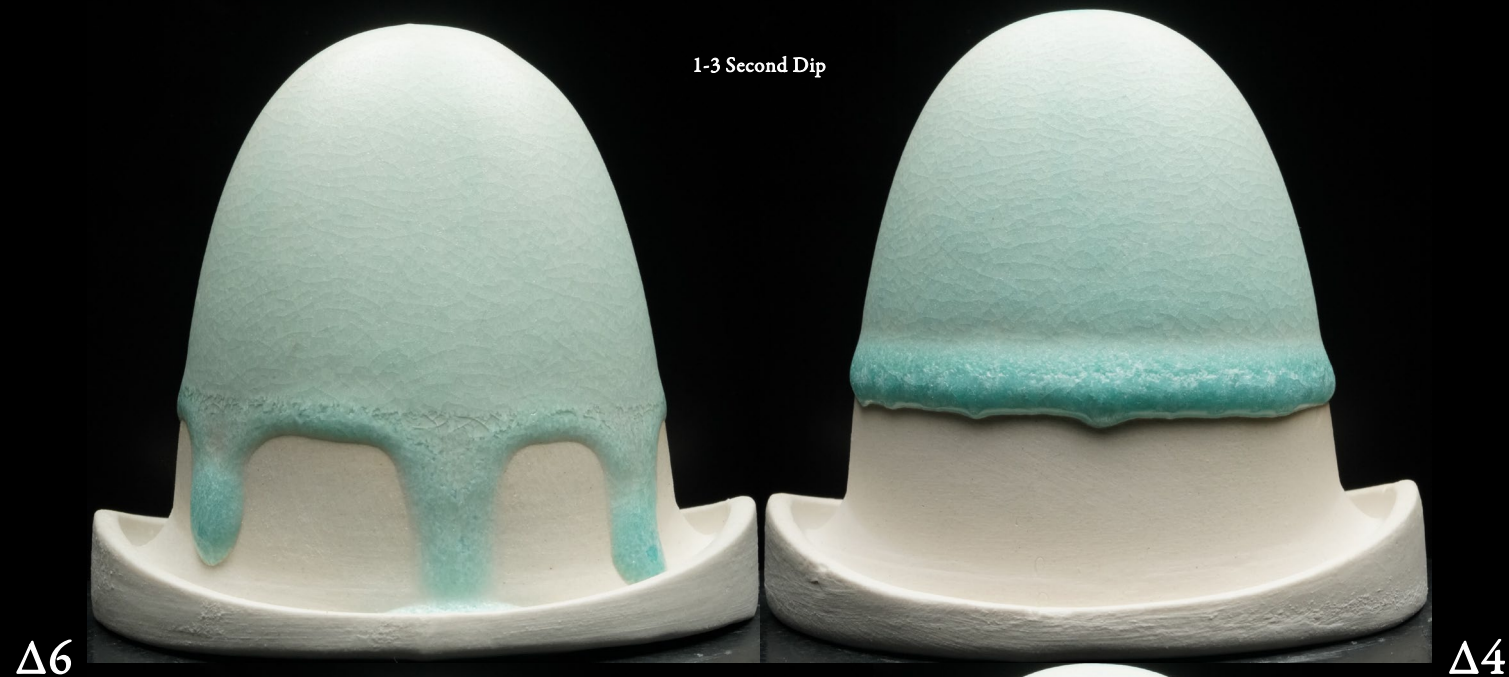


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Temperature Variation-Oxidation-Slow Cool



Cooling Variation-Oxidation Slow Cool

1-3 Second Dip

$\Delta 10$



$\Delta 9$

2-3 Second Dips



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Lab 1-Oxidation



070722-1



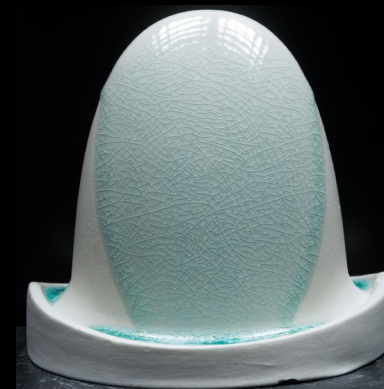
070722-2



070722-3



070722-4



070722-5



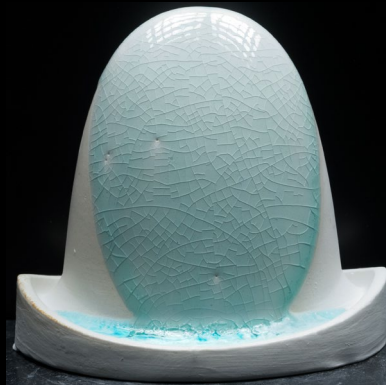
070722-6

1-3 Second Dip

2-3 Second Dips



Original



w/o Nephry Sy



w/o Dolomite



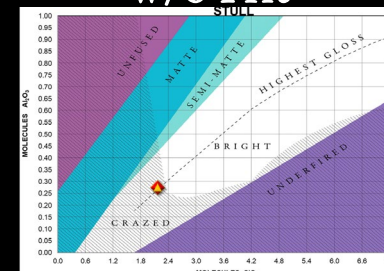
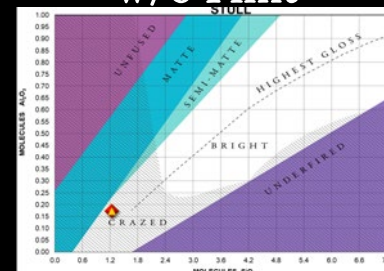
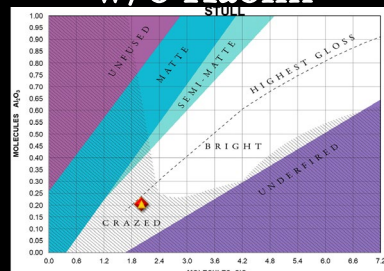
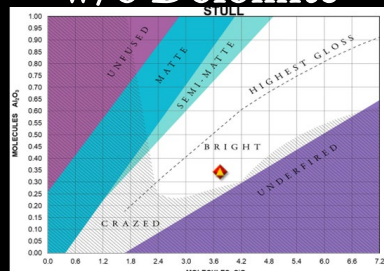
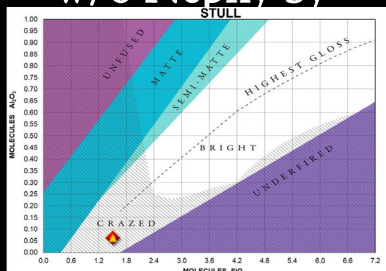
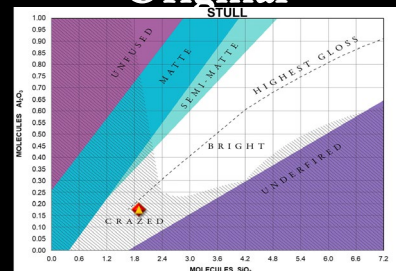
w/o Kaolin



w/o Flint



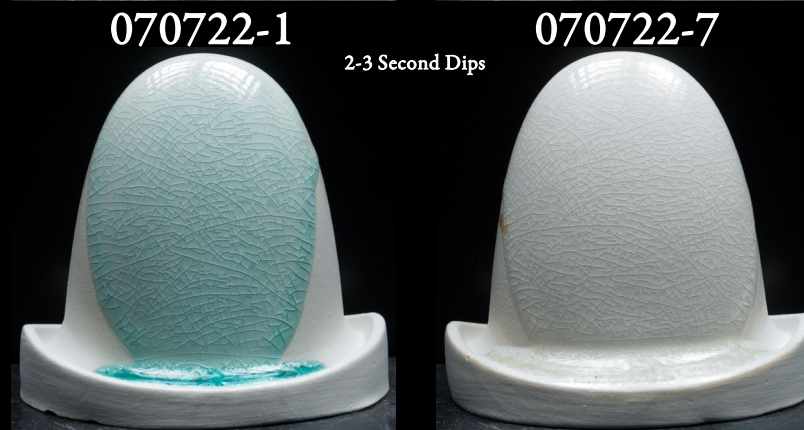
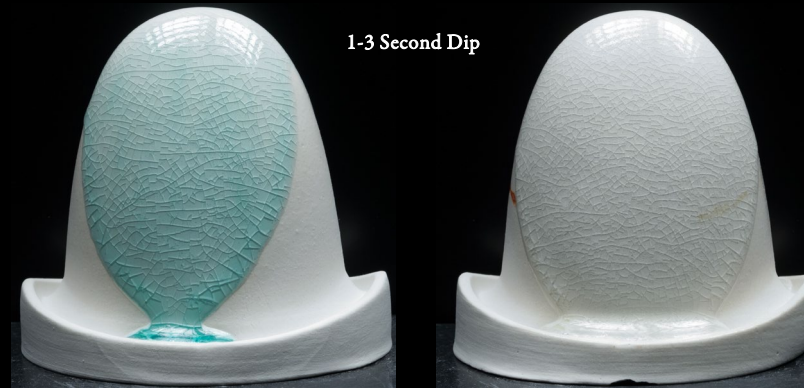
w/o Frit



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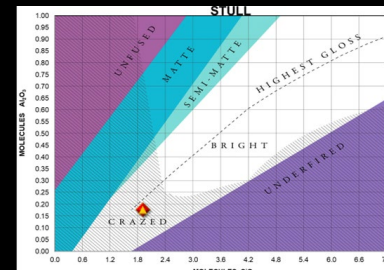
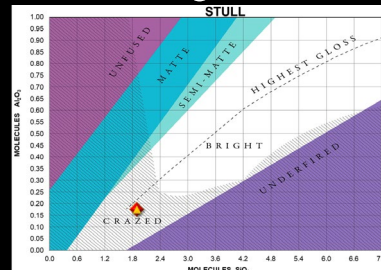
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Lab 1-Oxidation



Original

w/o Colorant



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Lab 2-Reduction



070422-1



070422-2



070422-3

1-3 Second Dip



070422-4



070422-5



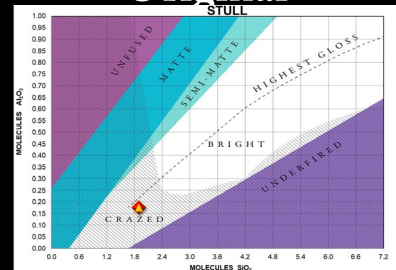
070422-6



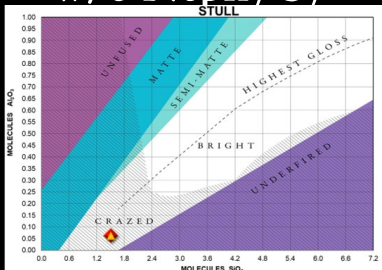
2-3 Second Dips



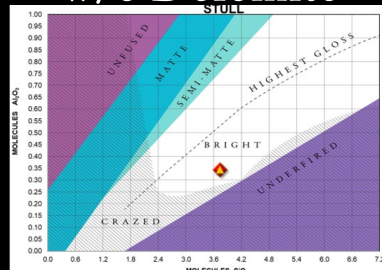
Original



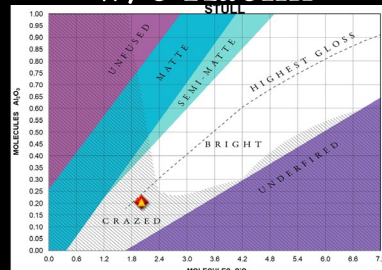
w/o Nephry Sy



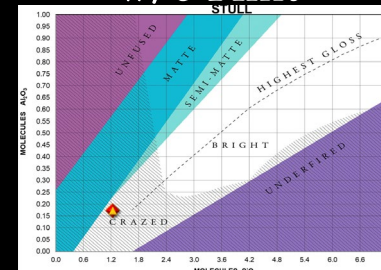
w/o Dolomite



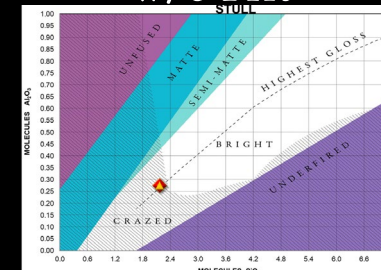
w/o Kaolin



w/o Flint



w/o Frit



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Lab 2-Reduction



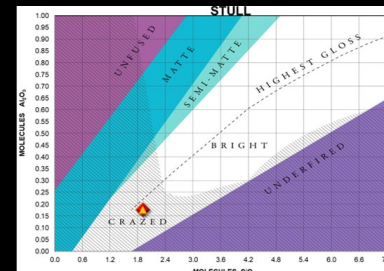
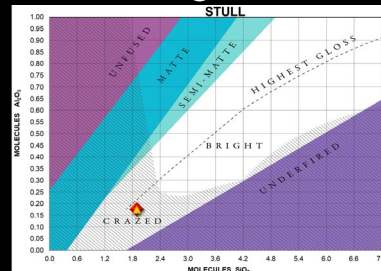
070722-1

070722-7



Original

w/o Colorant

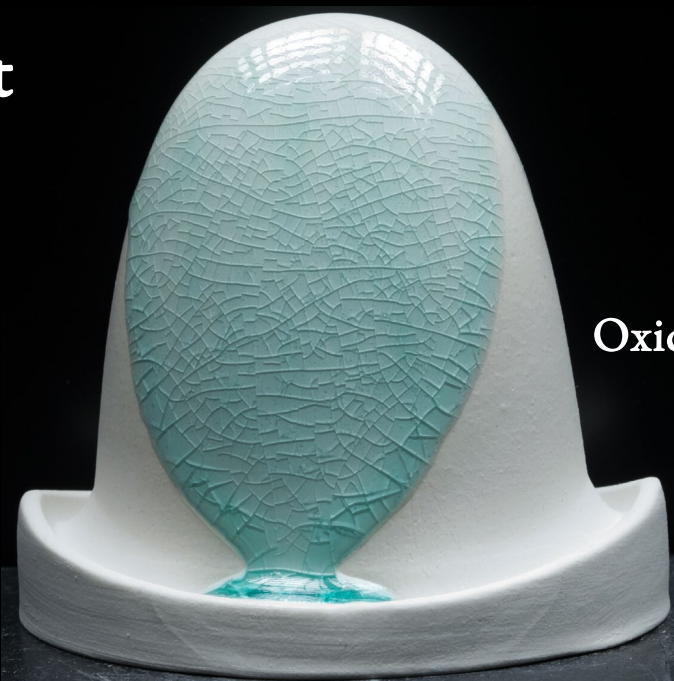


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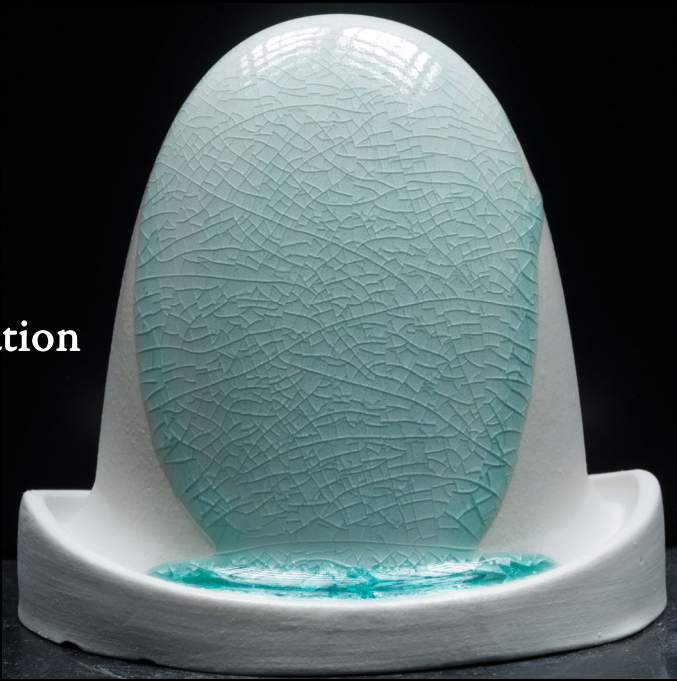
Birdie's Nest

Original
070722-1

Neph Sy	24.36
Dolomite	20.28
EPK	5.92
Flint	17.84
3134	29.59
Bentonite	2.01
Copper Carbonate	0.50
Water	60



1-3 Second Dip



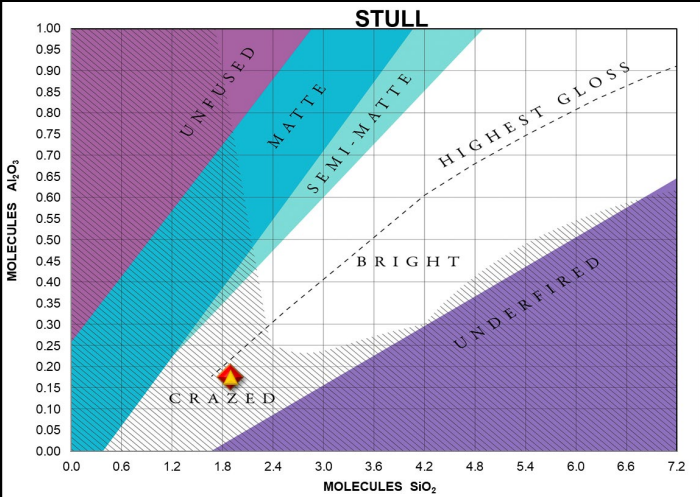
2-3 Second Dips



Reduction

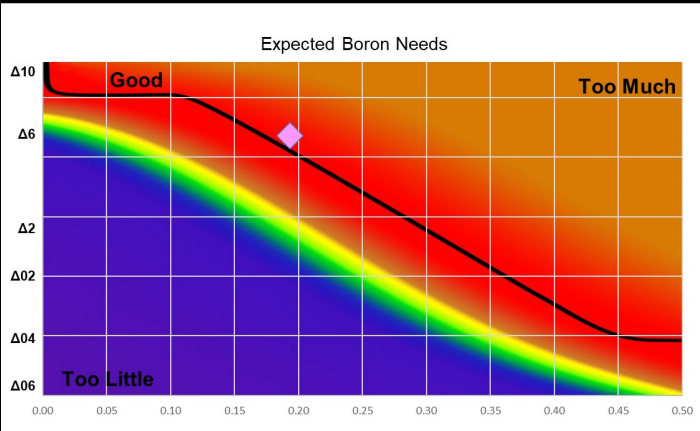
UMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.18	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 1.90	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.19	Al ₂ O ₃ 0.18	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



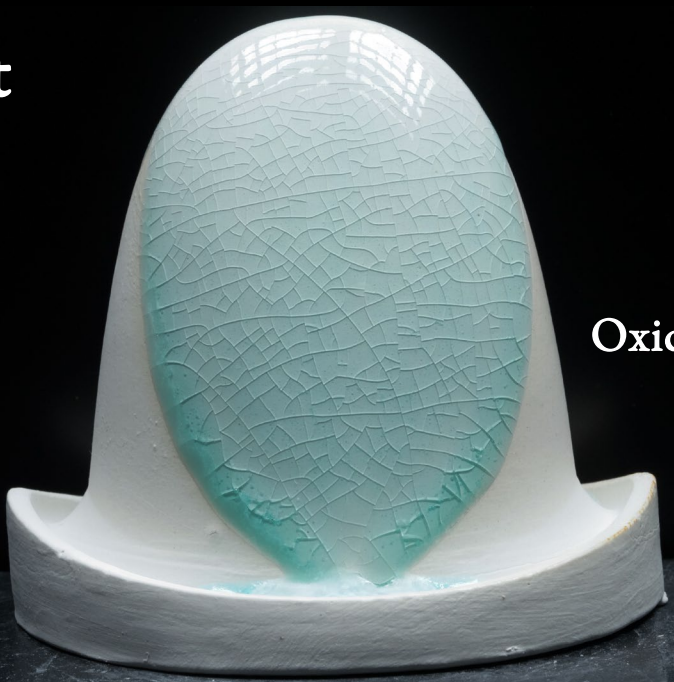
Ceramic
Materials
Workshop

Birdie's Nest

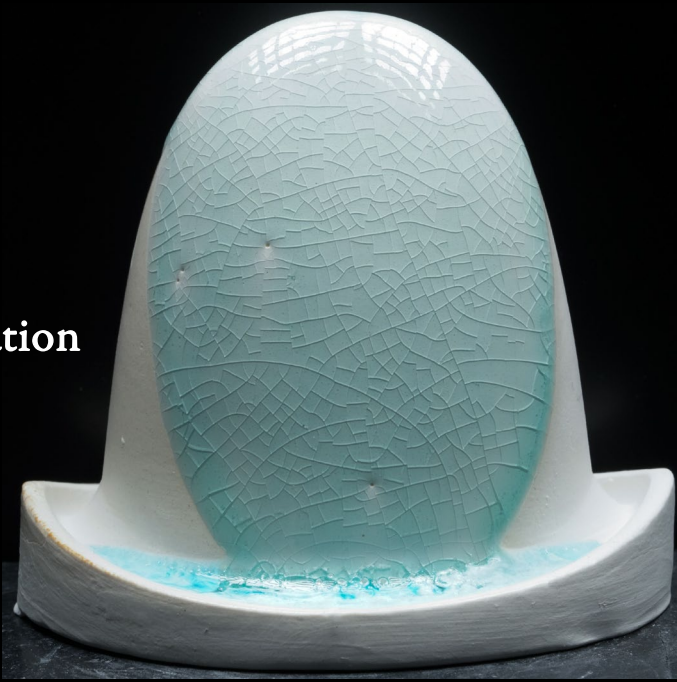
w/o Alkali Metal

070722-2

Neph Sy	
Dolomite	27.00
EPK	7.88
Flint	23.74
3134	39.37
Bentonite	2.01
Copper Carbonate	0.50
Water	60



1-3 Second Dip



2-3 Second Dips

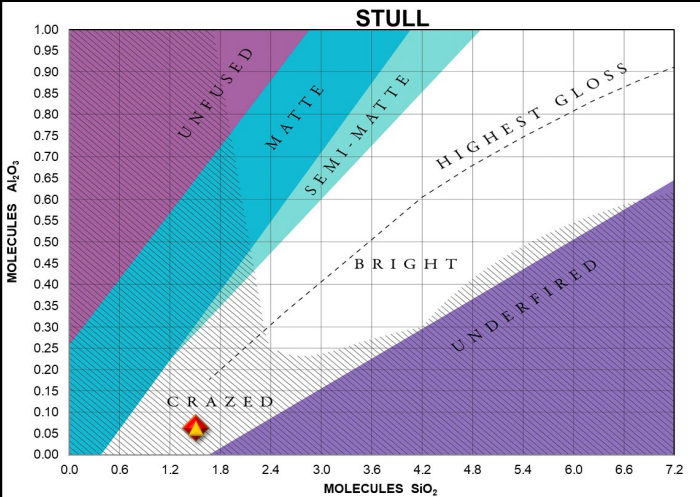


Reduction

Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 23.84 : 1		Alkali Metals 0.13		Alkaline Earths 0.87	
SiO ₂ 1.52	Collective "Al ₂ O ₃ " 0.06	Na ₂ O 0.13	K ₂ O 0.00	MgO 0.29	CaO 0.58
B ₂ O ₃ 0.22	Al ₂ O ₃ 0.06	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 23.84 : 1		Alkali Metals 0.14		Alkaline Earths 0.86	
SiO ₂ 1.51	Collective "Al ₂ O ₃ " 0.06	Na ₂ O 0.13	K ₂ O 0.00	MgO 0.28	CaO 0.58
B ₂ O ₃ 0.22	Al ₂ O ₃ 0.06	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
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Birdie's Nest

w/o Alkaline Earth

070722-3

Neph Sy	30.72
Dolomite	
EPK	7.46
Flint	22.49
3134	37.31
Bentonite	2.01
Copper Carbonate	0.51
Water	70



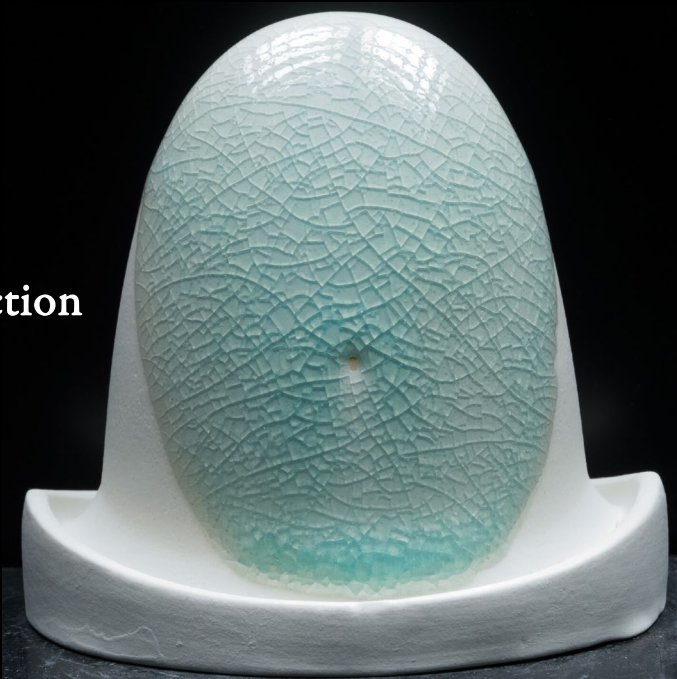
1-3 Second Dip



2-3 Second Dips

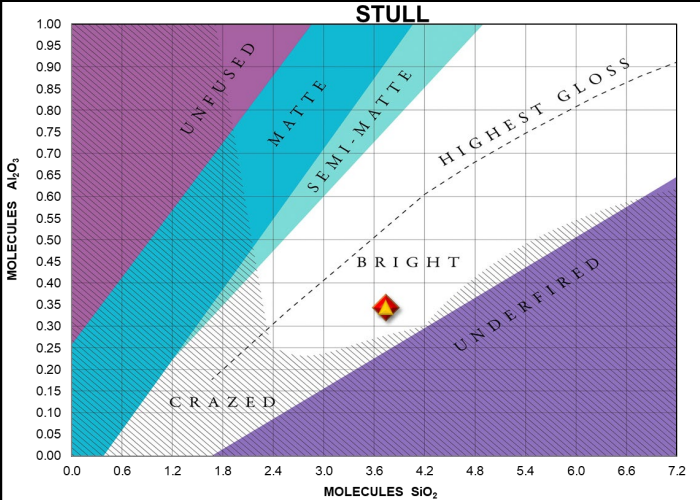


Reduction



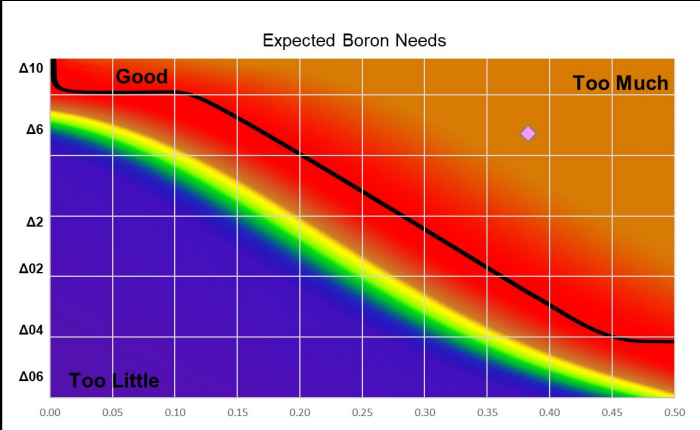
UMF

SiO ₂ :Al ₂ O ₃ Ratio 10.84 : 1		Alkali Metals 0.46		Alkaline Earths 0.54	
SiO ₂ 3.79	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.41	K ₂ O 0.05	MgO 0.01	CaO 0.53
B ₂ O ₃ 0.39	Al ₂ O ₃ 0.35	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 10.84 : 1		Alkali Metals 0.47		Alkaline Earths 0.53	
SiO ₂ 3.74	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.40	K ₂ O 0.05	MgO 0.01	CaO 0.52
B ₂ O ₃ 0.38	Al ₂ O ₃ 0.34	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



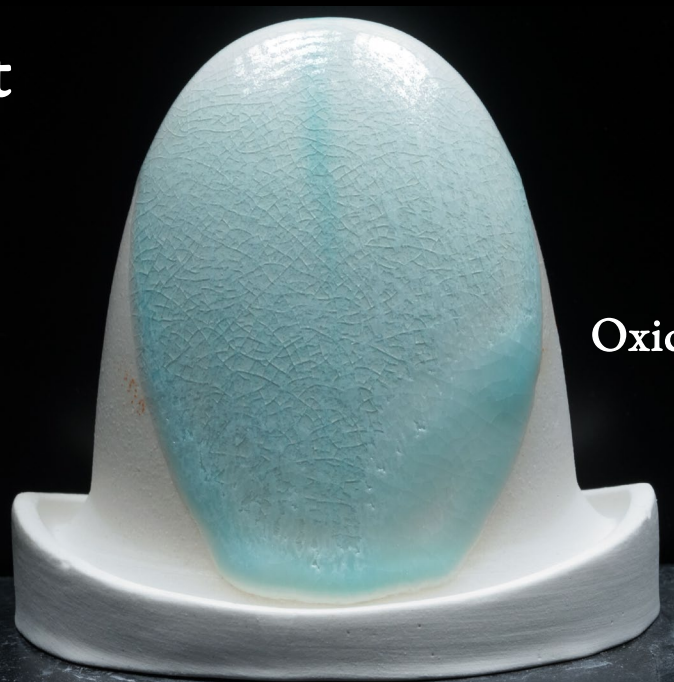
Ceramic
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Birdie's Nest

w/o Kaolin

070722-4

Neph Sy	25.93
Dolomite	21.59
EPK	
Flint	18.98
3134 (Frit)	31.49
Bentonite	2.01
Copper Carbonate	0.50
Water	70



1-3 Second Dip



2-3 Second Dips



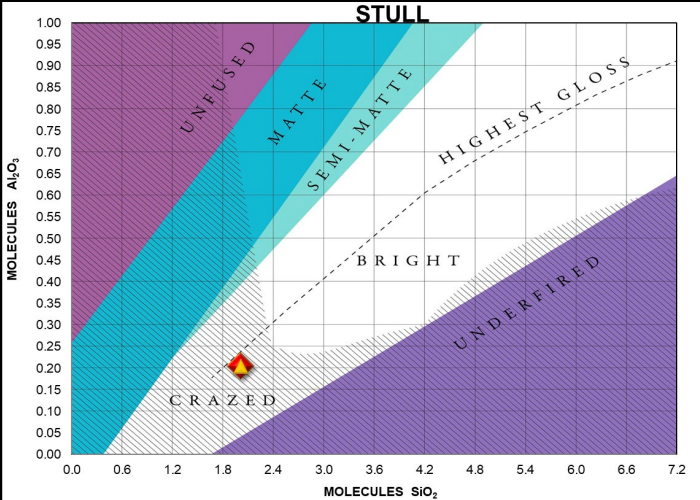
Reduction



Oxidation

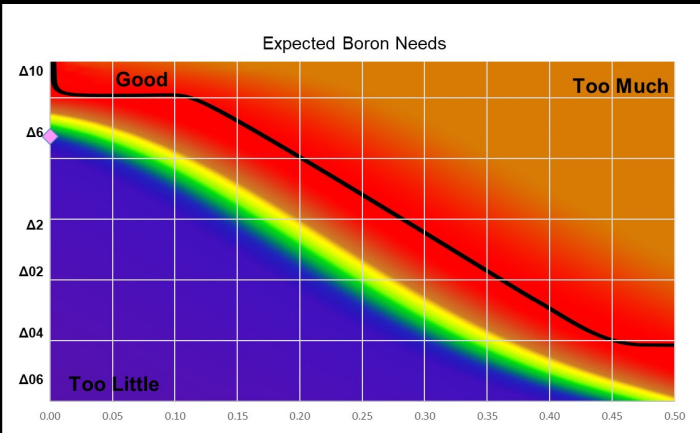
UMF

SiO ₂ :Al ₂ O ₃ Ratio 9.81 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.04	Collective "Al ₂ O ₃ " 0.21	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.40	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 9.81 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.01	Collective "Al ₂ O ₃ " 0.21	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.40	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.20	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



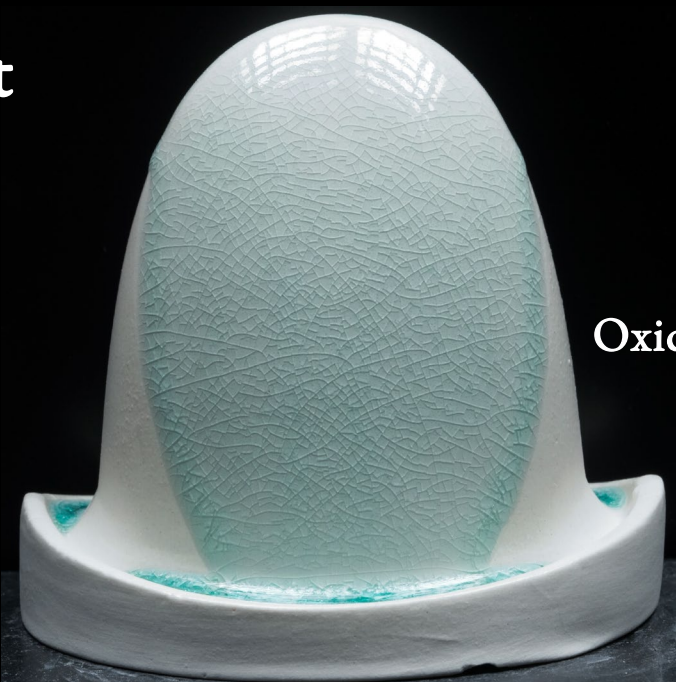
Ceramic
Materials
Workshop

Birdie's Nest

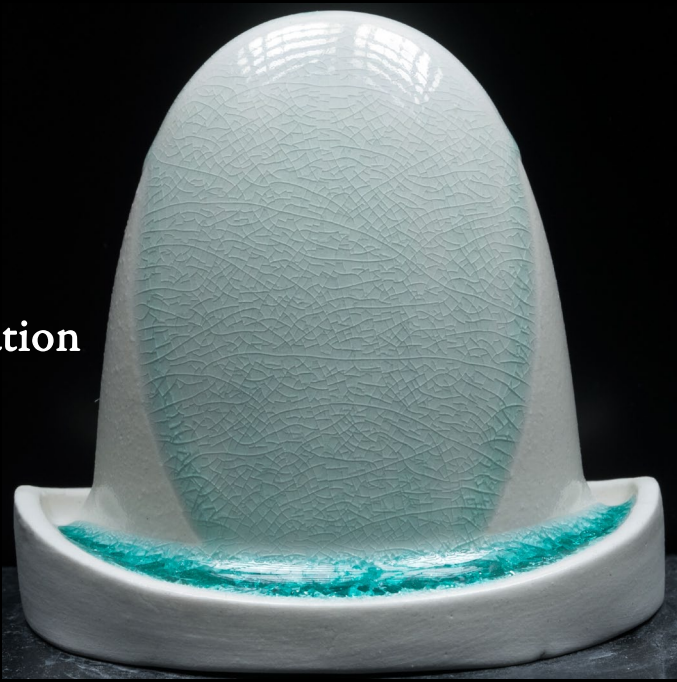
w/o Silica

070722-5

Neph Sy	29.78
Dolomite	24.80
EPK	7.24
Flint	
3134	36.17
Bentonite	2.01
Copper Carbonate	0.50
Water	65



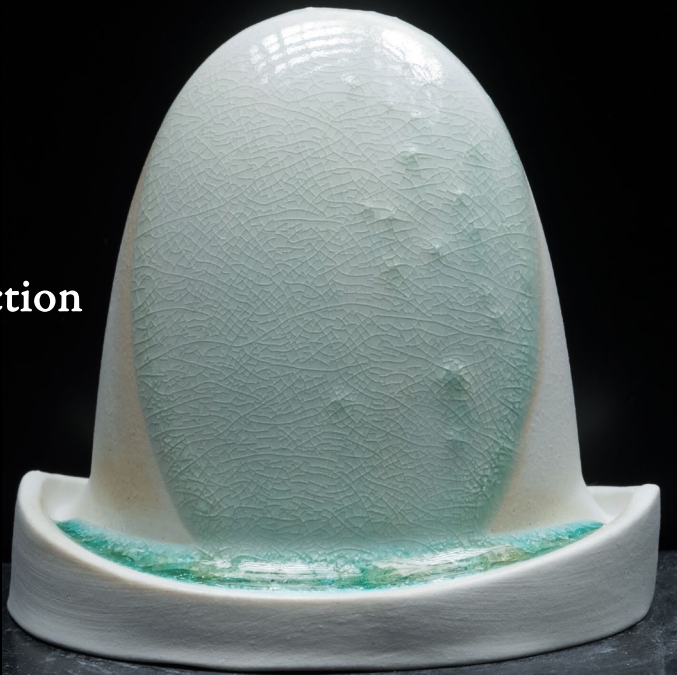
1-3 Second Dip



2-3 Second Dips



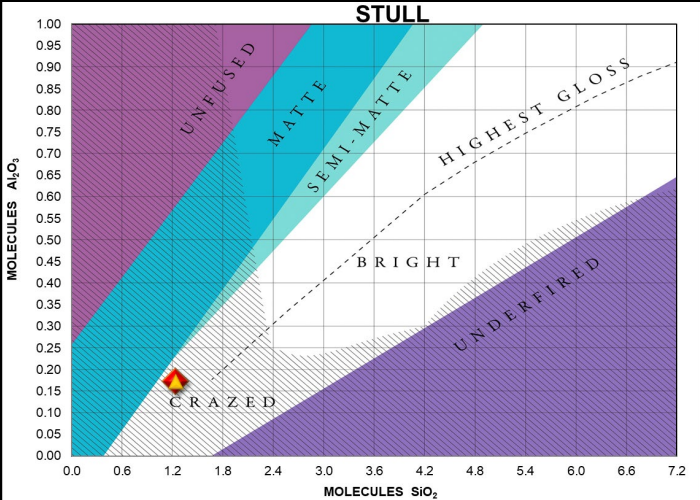
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.16 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.25	Collective "Al ₂ O ₃ " 0.17	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.17	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.16 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 1.24	Collective "Al ₂ O ₃ " 0.17	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.19	Al ₂ O ₃ 0.17	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Birdie's Nest

w/o Frit

070722-6

Neph Sy	34.90
Dolomite	29.06
EPK	8.48
Flint	25.55
3134	
Bentonite	2.01
Copper Carbonate	0.50
Water	65



1-3 Second Dip



2-3 Second Dips

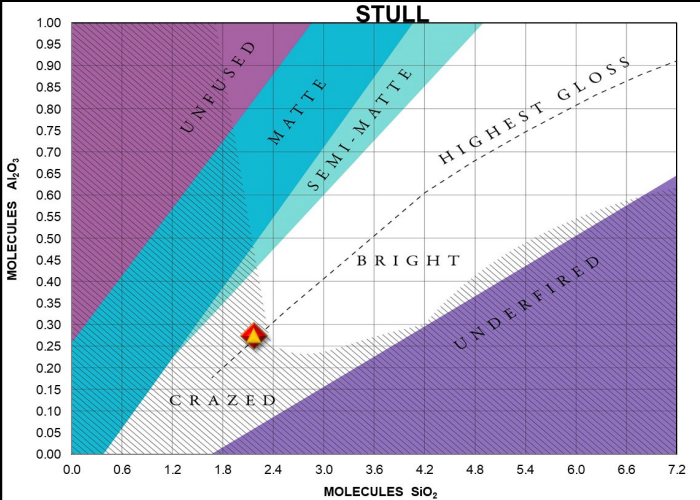


Reduction

Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.85 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.40	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.85 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.17	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.40	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO 0.01	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Birdie's Nest

w/o Colorant

070722-7

Neph Sy	24.36
Dolomite	20.28
EPK	5.92
Flint	17.84
3134	29.59
Bentonite	2.01
Copper Carbonate	
Water	65



1-3 Second Dip



2-3 Second Dips



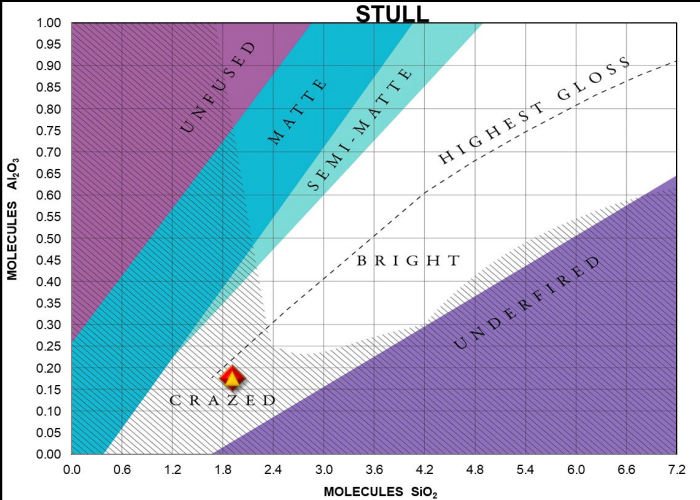
Reduction



Oxidation

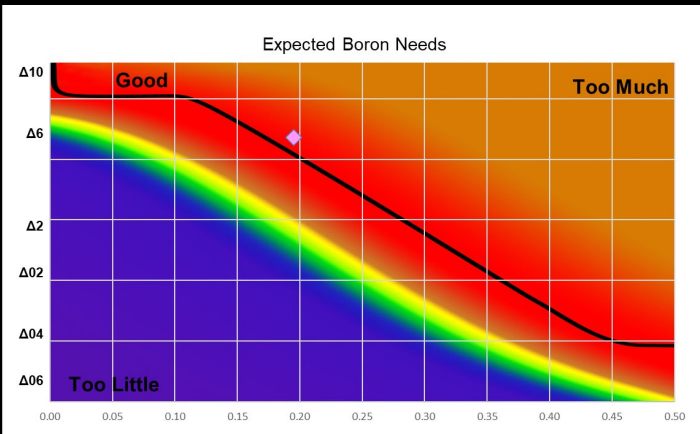
UMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.18	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 10.78 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.18	Na ₂ O 0.20	K ₂ O 0.03	MgO 0.25	CaO 0.51
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.18	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop