

Katz Burke Matte- Δ 6

Lab 2-Flux Capacity

KB Matte

Original

070522-1

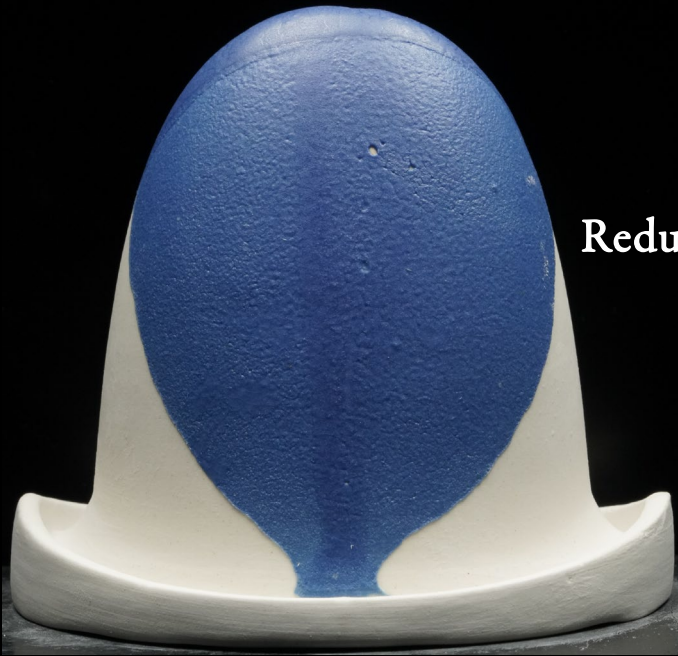
Neph Sy	19.71
Whiting	16.76
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips

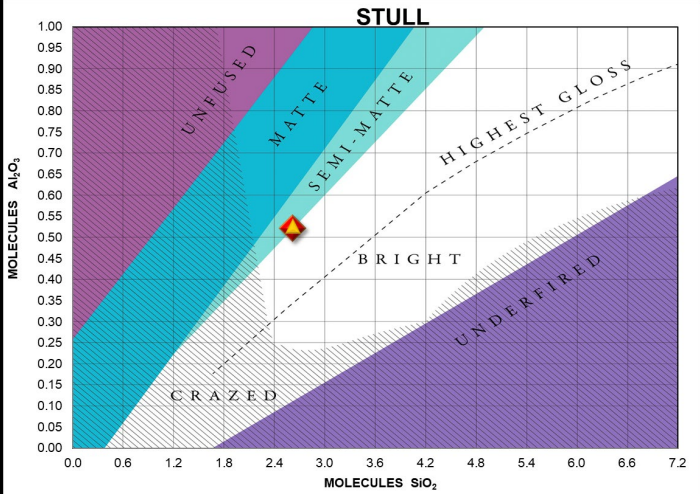


Reduction



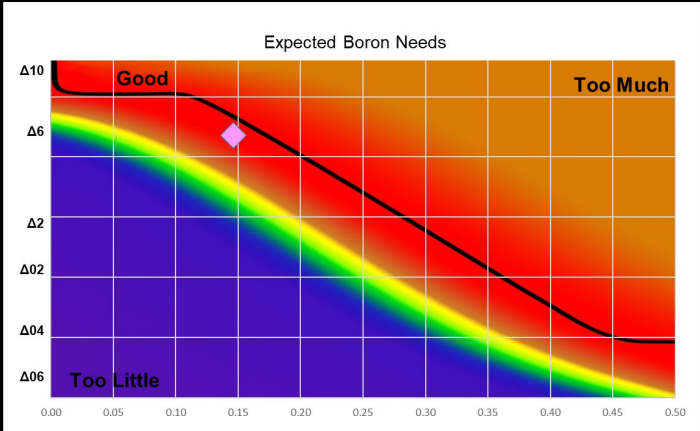
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.69	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.19	K ₂ O 0.03	MgO 0.01	CaO 0.75
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.54	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.62	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.19	K ₂ O 0.03	MgO 0.00	CaO 0.73
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



Ceramic
Materials
Workshop

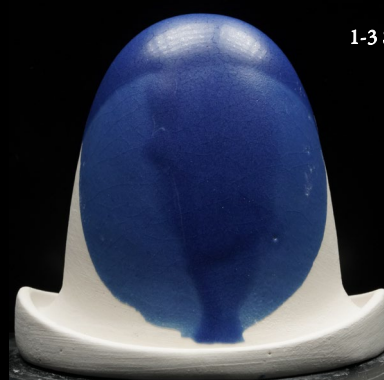
Lab 2-Alkali Metals-Oxidation



070522-1



070522-8



070522-9

1-3 Second Dip



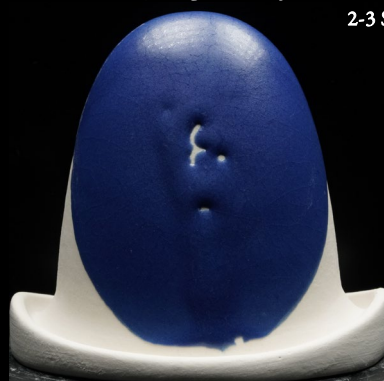
070522-10



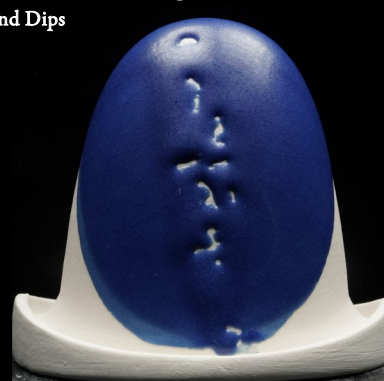
070522-11



070522-12



2-3 Second Dips



Original (Neph Sy)

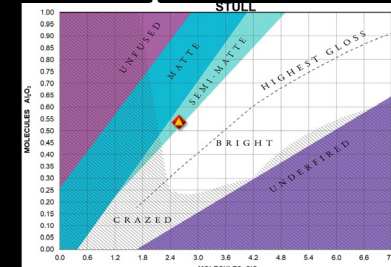
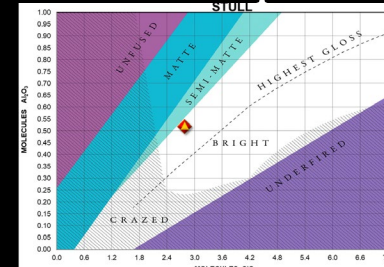
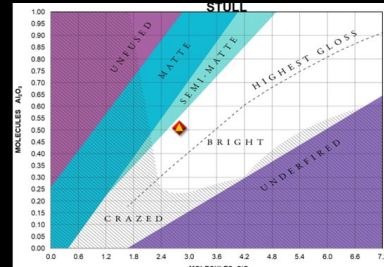
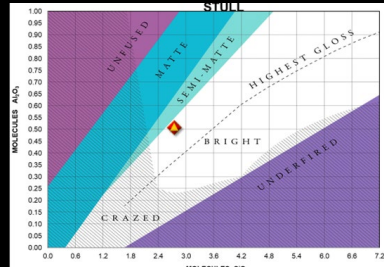
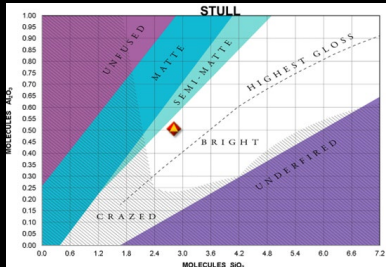
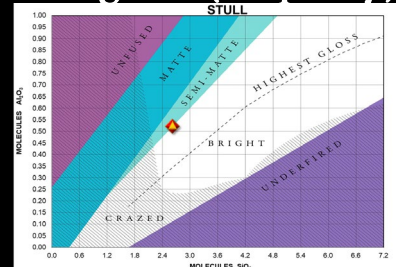
w/Custer

w/Mahavir

w/G200 EU

w/Minspar

w/Spodumene

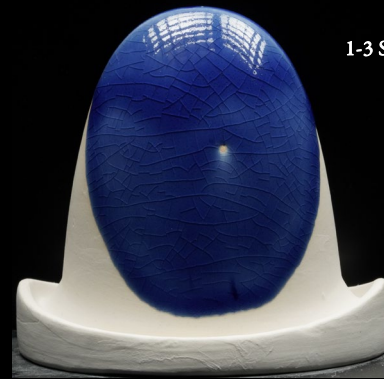


Ceramic
Materials
Workshop

Lab 2-Alkali Metals-Oxidation



070522-1

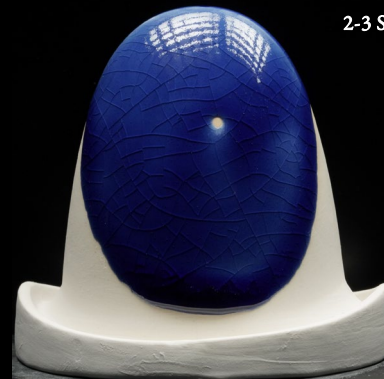


070522-14



070522-15

1-3 Second Dip

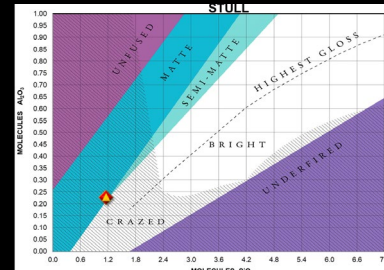
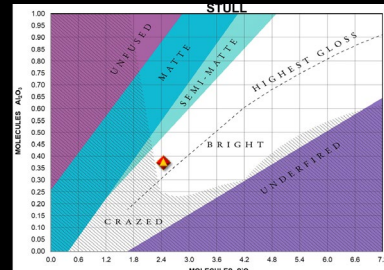
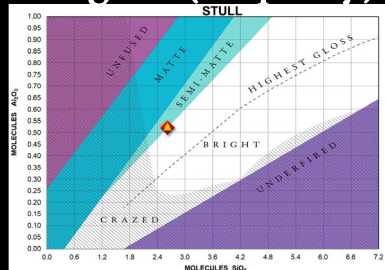


2-3 Second Dips

Original(Neph Sy)

w/Frit 3110

w/Lithium Carbonate



Ceramic
Materials
Workshop

Lab 2-Alkali Metals-Reduction



070522-1



070522-8



070522-9

1-3 Second Dip



070522-10



070522-11



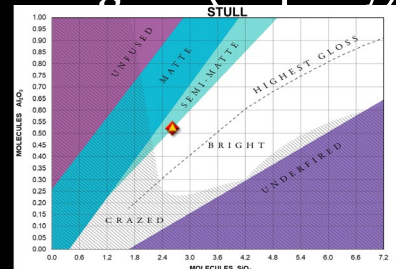
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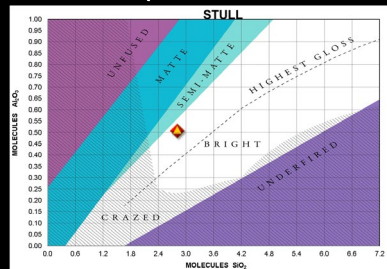
2-3 Second Dips



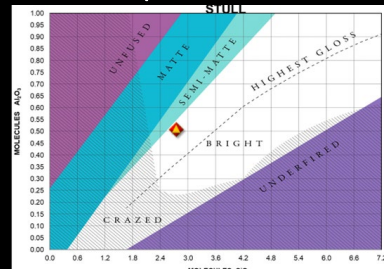
Original (Neph Sy)



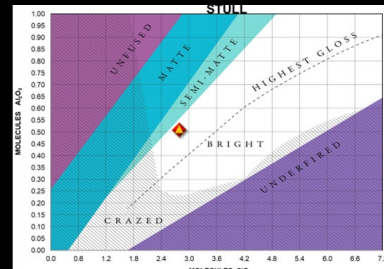
w/Custer



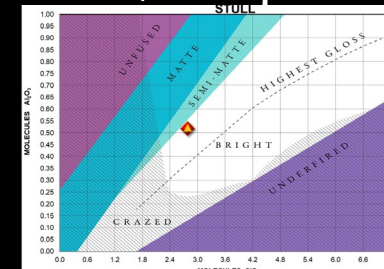
w/Mahavir



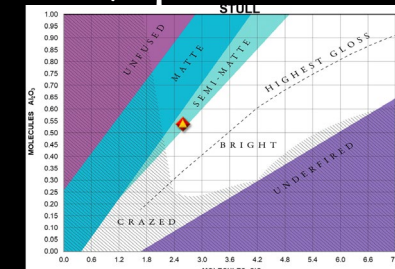
w/G200 EU



w/Minspar



w/Spodumene



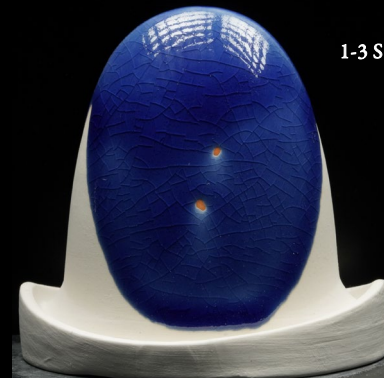
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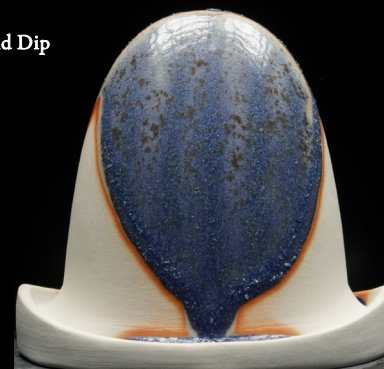
Lab 2-Alkali Metals-Reduction



070522-1

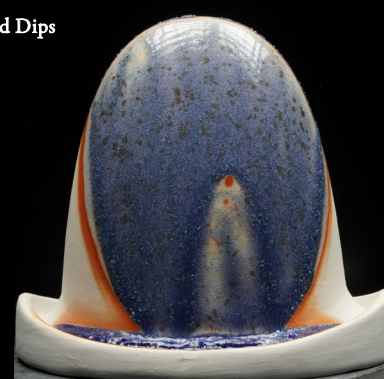
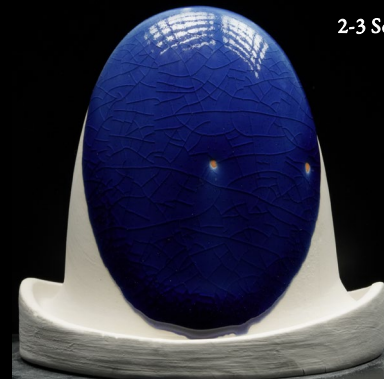


070522-14



070522-15

1-3 Second Dip

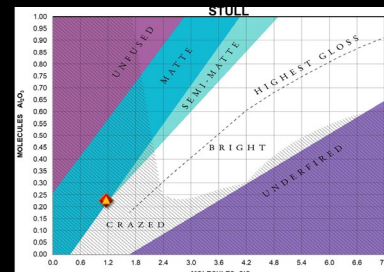
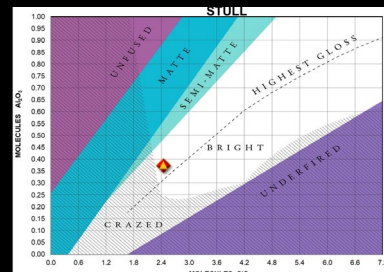
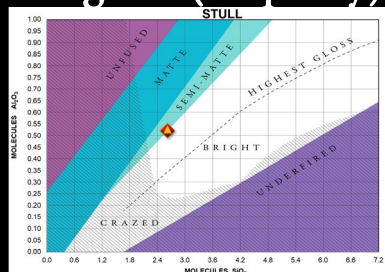


2-3 Second Dips

Original (Neph Sy)

w/Frit 3110

w/Lithium Carbonate



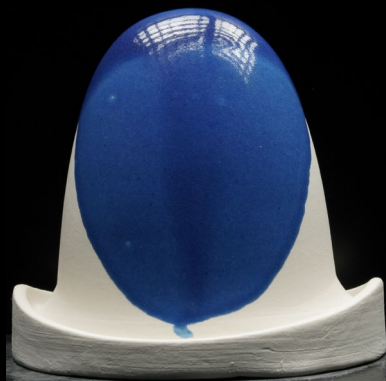
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Lab 2-Alkaline Earth-Oxidation



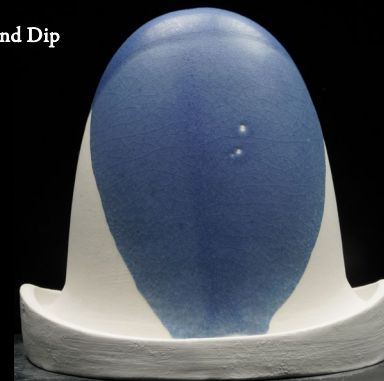
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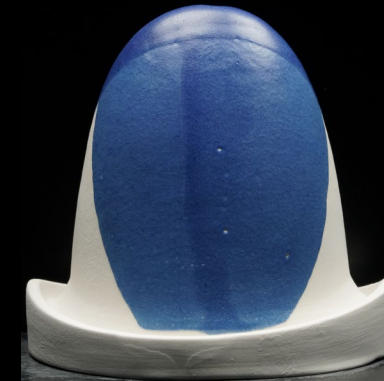
070522-16



070522-17



070522-18



070522-19



070522-20

1-3 Second Dip

2-3 Second Dips



Original (W)



w/Talc



w/Mag Carb



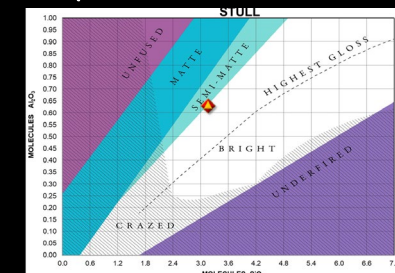
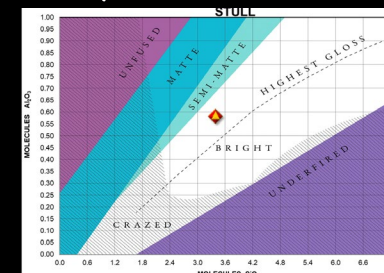
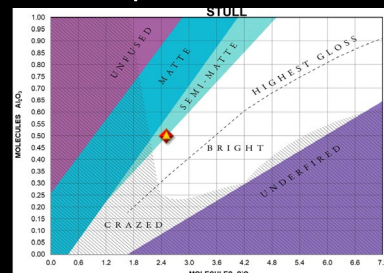
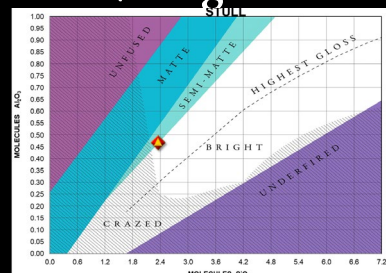
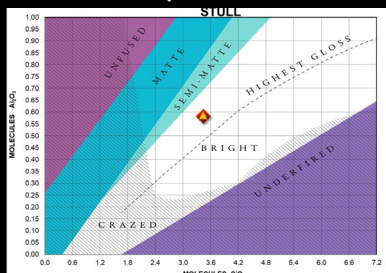
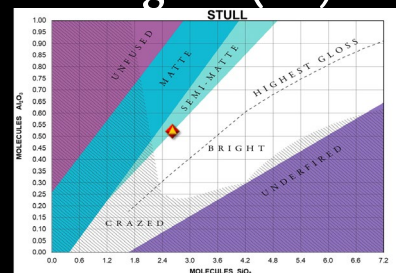
w/Dolomite



w/Wollastonite



w/Strontium Carb



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Lab 2-Alkaline Earth-Oxidation



070522-1



070522-21



070522-22



070522-23

1-3 Second Dip

2-3 Second Dips



Original (W)



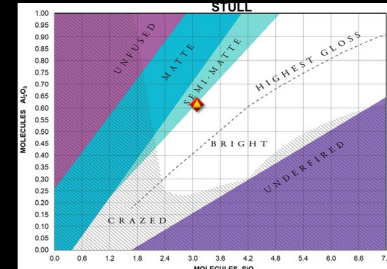
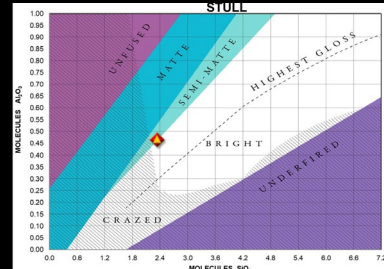
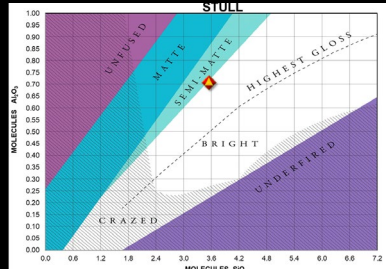
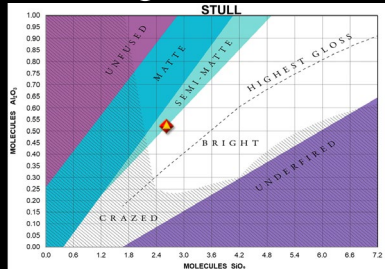
w/Barium Carb



w/Zinc Oxide



w/Bone Ash



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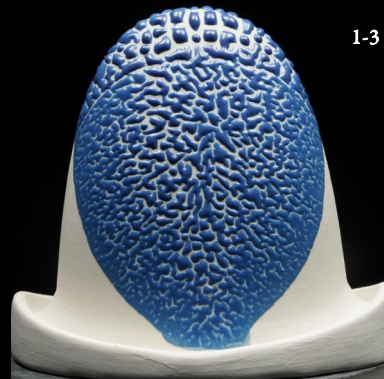
Lab 2-Alkaline Earth-Reduction



070522-1



070522-16



070522-17

1-3 Second Dip



070522-18



070522-19



070522-20



Original (W)



w/Talc



w/Mag Carb

2-3 Second Dips



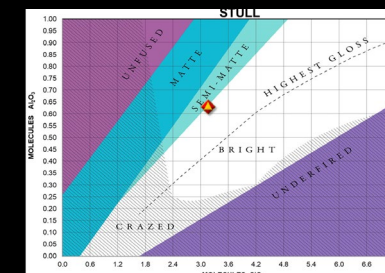
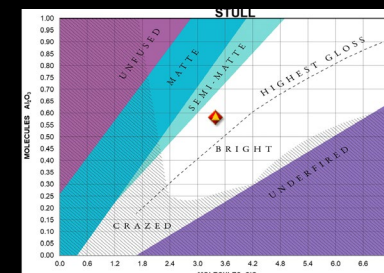
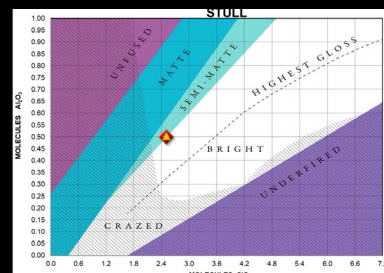
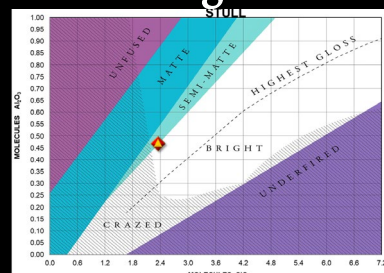
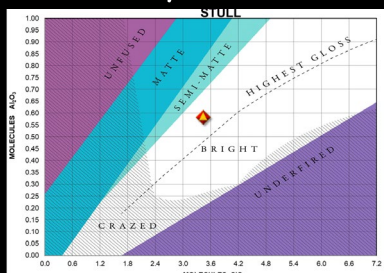
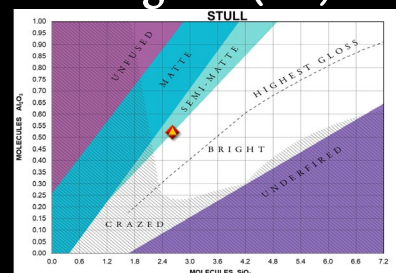
w/Dolomite



w/Wollastonite



w/Strontium Carb



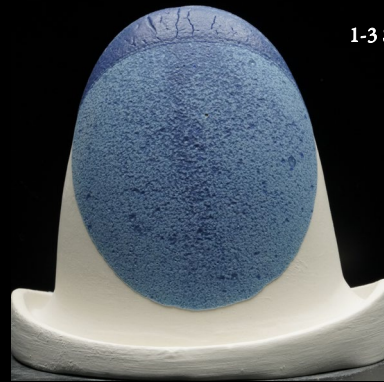
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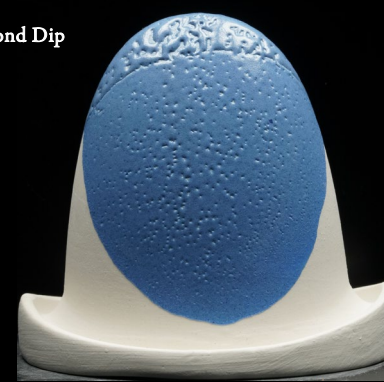
Lab 2-Alkaline Earth-Reduction



070522-1



070522-21



070522-22



070522-23

1-3 Second Dip

2-3 Second Dips



Original (W)



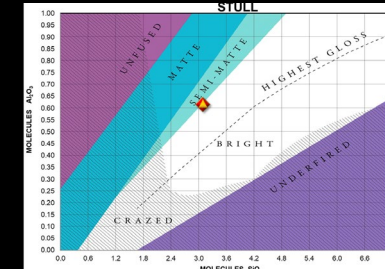
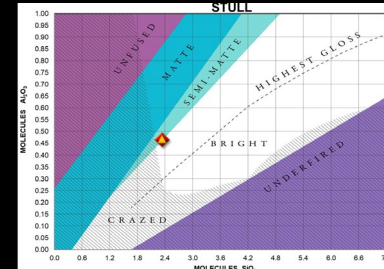
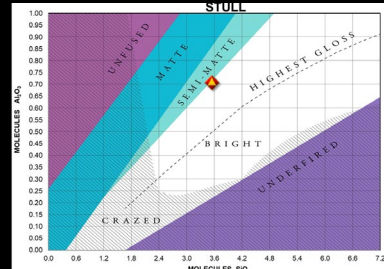
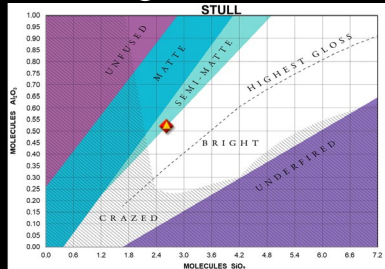
w/Barium Carb



w/Zinc Oxide



w/Bone Ash



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KB Matte

Original
070522-1

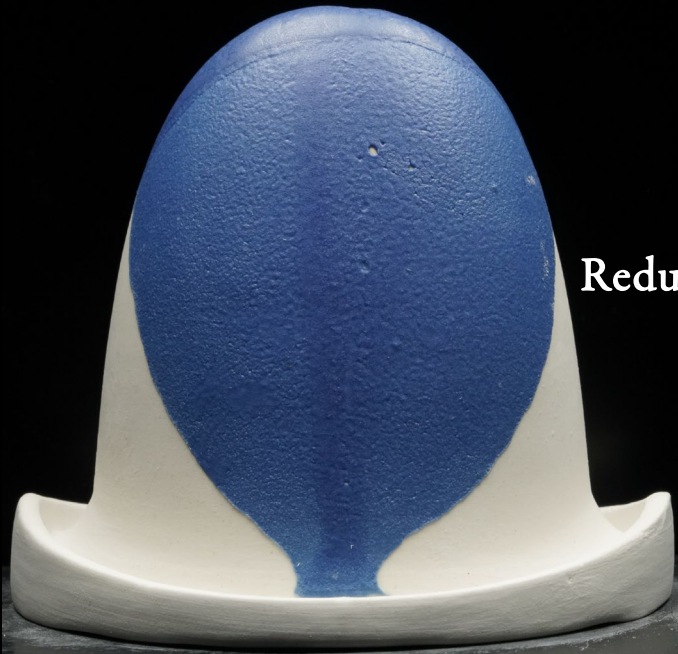
Neph Sy	19.71
Whiting	16.76
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips



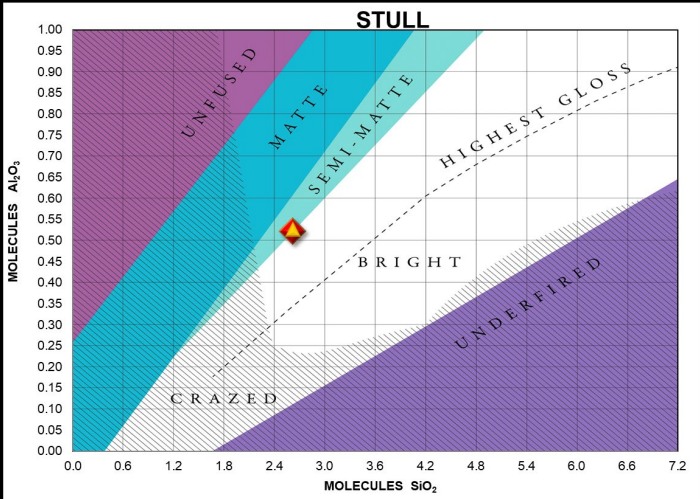
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.69	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.19	K ₂ O 0.03	MgO 0.01	CaO 0.75
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.54	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
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B ₂ O ₃ 0.15	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



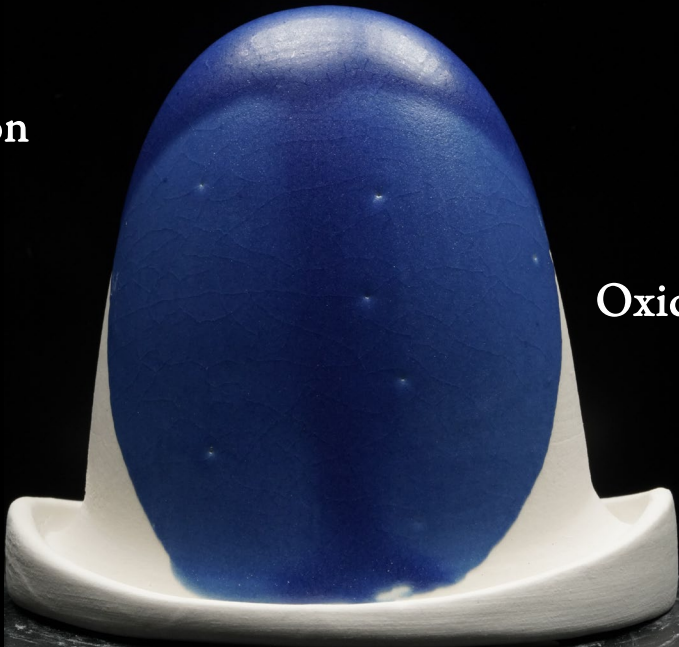
Ceramic
Materials
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KB Matte

Weight Substitution
Custer Feldspar

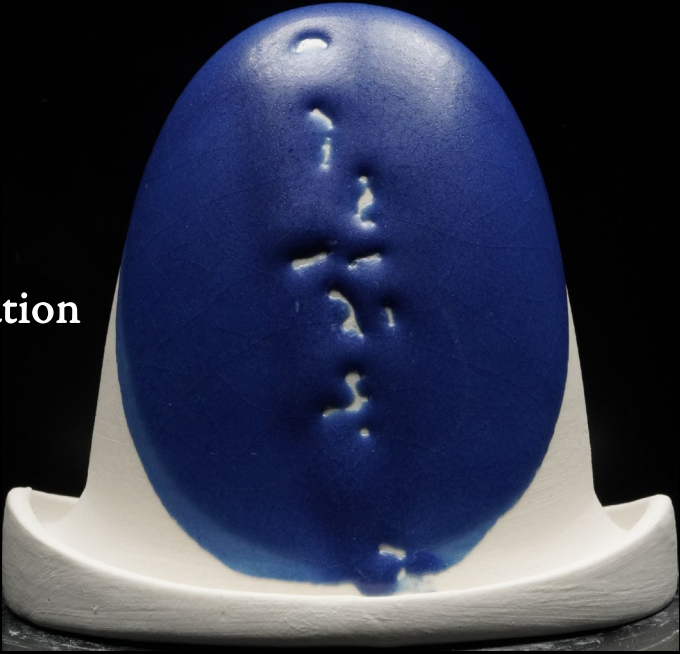
070522-8

Custer	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	130



Oxidation

1-3 Second Dip



2-3 Second Dips

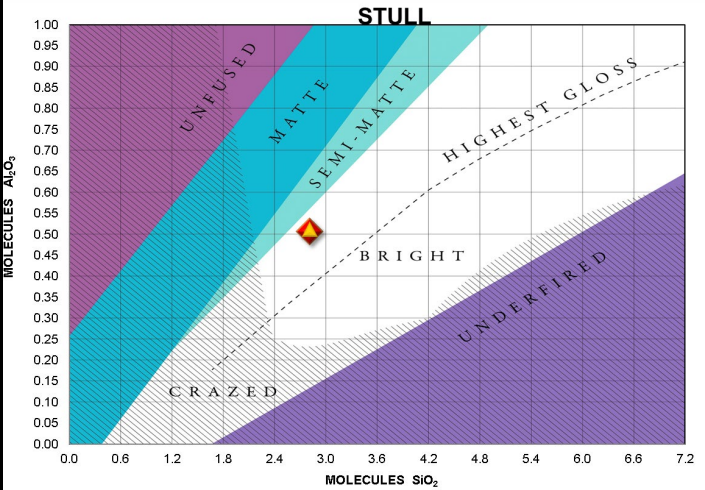


Reduction



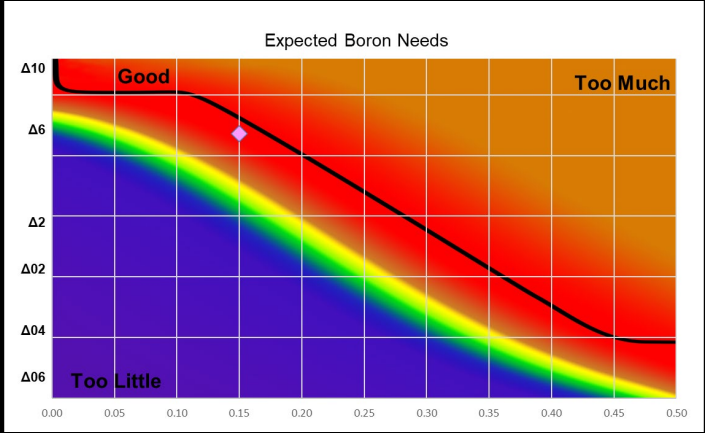
UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.49 :1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.89	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.11	K ₂ O 0.08	MgO 0.01	CaO 0.78
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.49 :1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.81	Collective "Al ₂ O ₃ " 0.51	Na ₂ O 0.11	K ₂ O 0.08	MgO 0.01	CaO 0.76
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.51	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



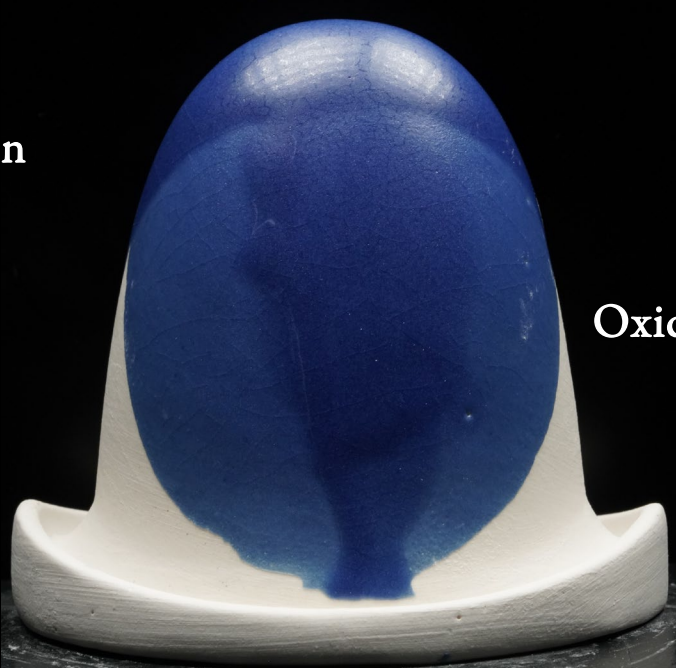
Ceramic
Materials
Workshop

KB Matte

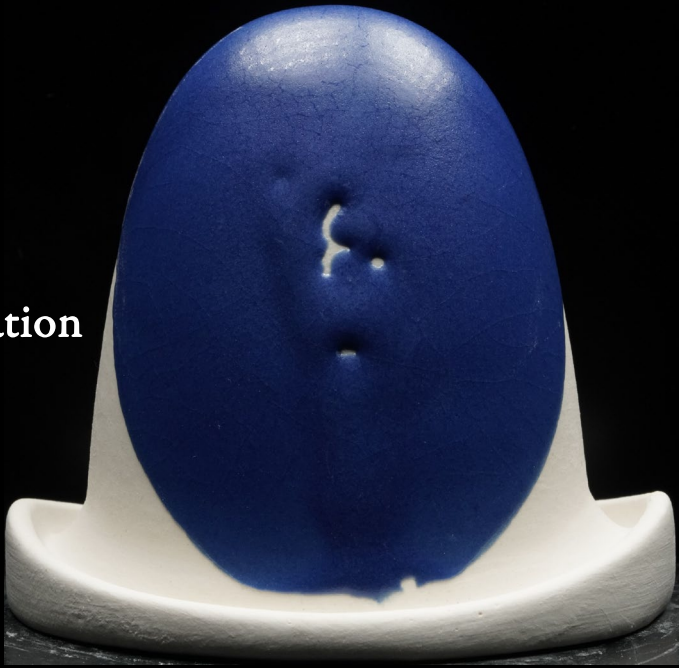
Weight Substitution
Mahavir Feldspar

070522-9

Mahavir	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	130



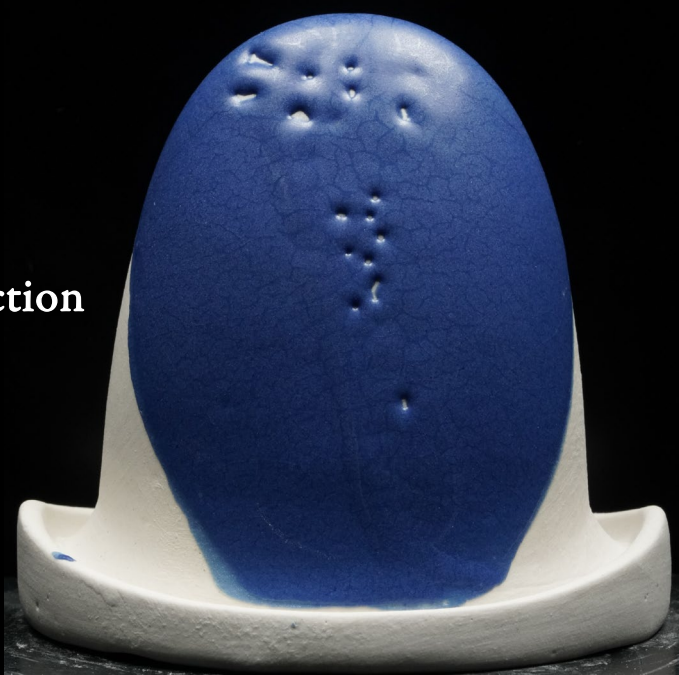
1-3 Second Dip



2-3 Second Dips



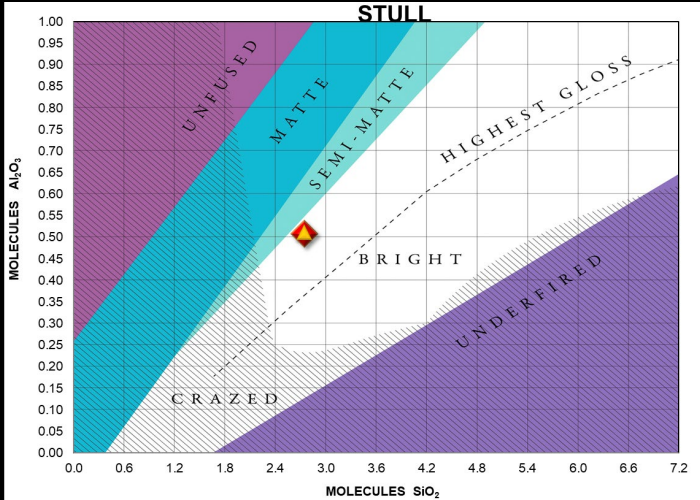
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.36 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.82	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.12	K ₂ O 0.09	MgO 0.01	CaO 0.77
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.36 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.75	Collective "Al ₂ O ₃ " 0.51	Na ₂ O 0.12	K ₂ O 0.08	MgO 0.01	CaO 0.75
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.51	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



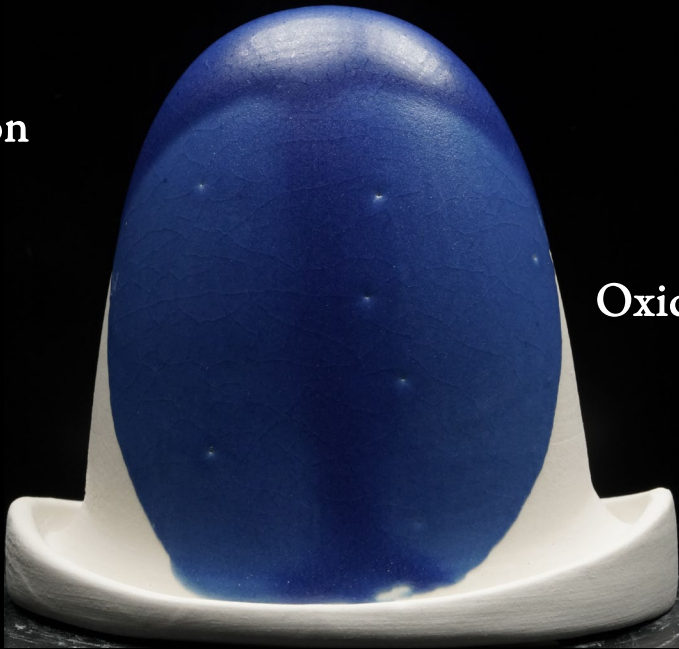
Ceramic
Materials
Workshop

KB Matte

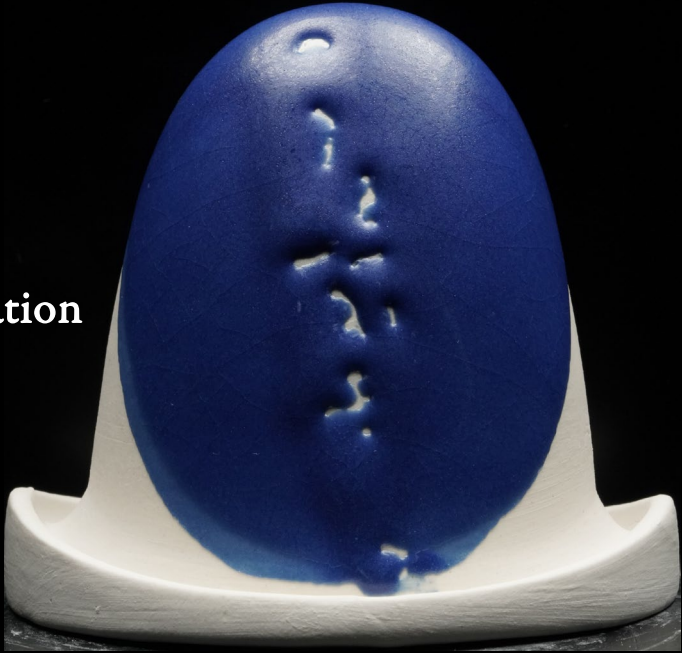
Weight Substitution
G200 EU

070522-10

G200 EU	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	130

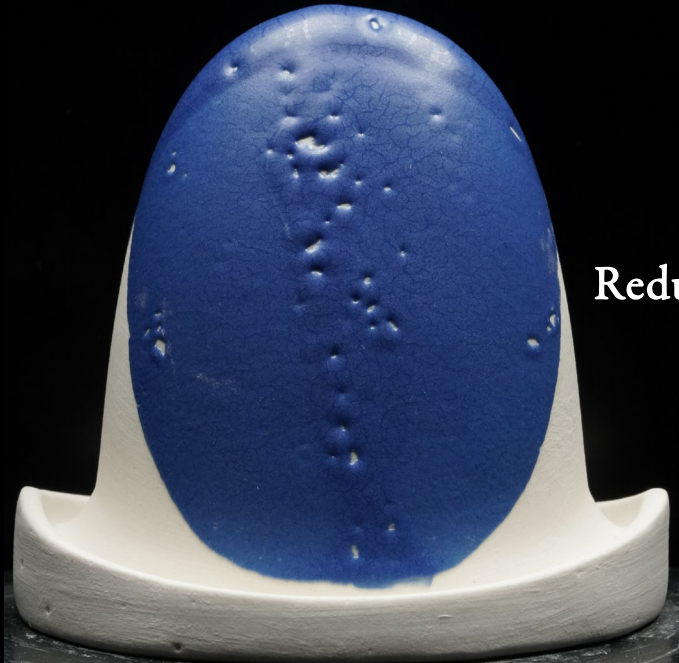


1-3 Second Dip



2-3 Second Dips

Oxidation



1-3 Second Dip

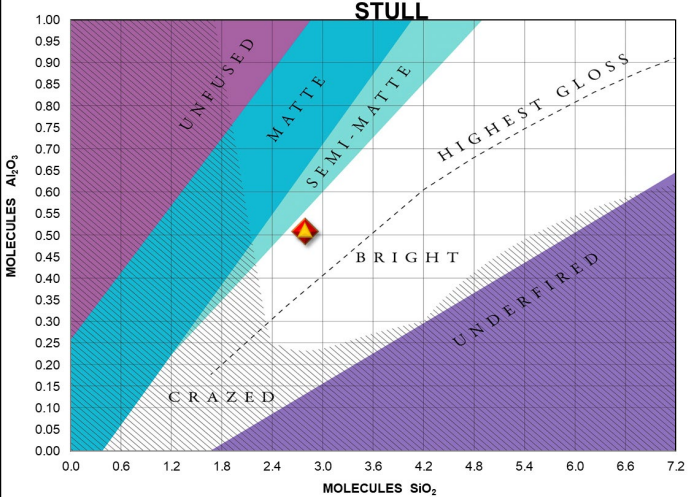


2-3 Second Dips

Reduction

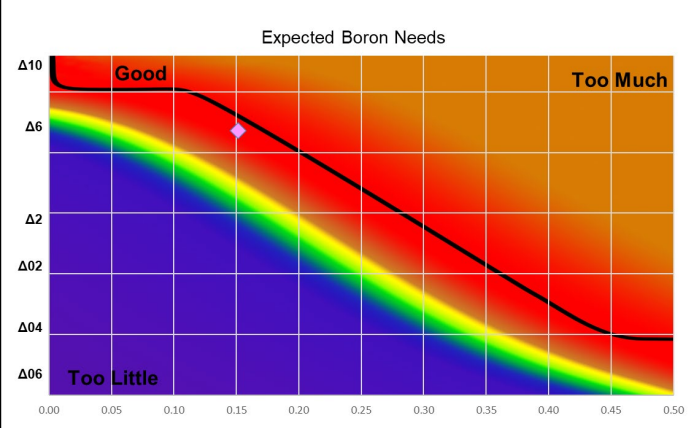
UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.43 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.87	Collective "Al ₂ O ₃ " 0.53	Na ₂ O 0.11	K ₂ O 0.08	MgO 0.01	CaO 0.78
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

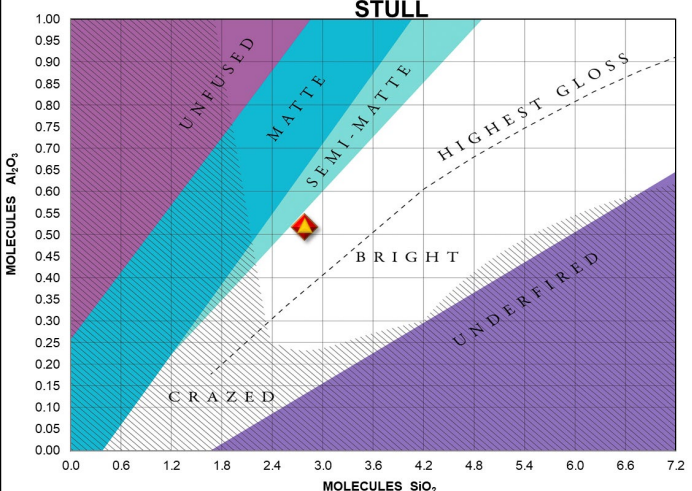
SiO ₂ :Al ₂ O ₃ Ratio 5.43 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.79	Collective "Al ₂ O ₃ " 0.51	Na ₂ O 0.11	K ₂ O 0.08	MgO 0.01	CaO 0.76
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.51	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



Ceramic
Materials
Workshop

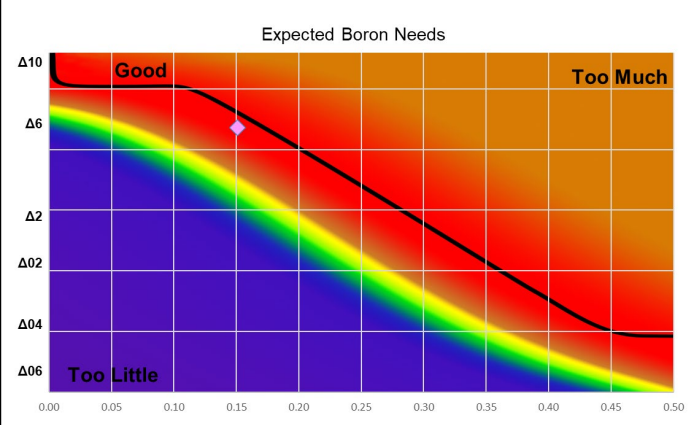
UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.33 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.86	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.16	K ₂ O 0.03	MgO 0.00	CaO 0.79
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.53	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.33 : 1		Alkali Metals 0.18		Alkaline Earths 0.82	
SiO ₂ 2.78	Collective "Al ₂ O ₃ " 0.52	Na ₂ O 0.15	K ₂ O 0.03	MgO 0.00	CaO 0.77
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.52	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03

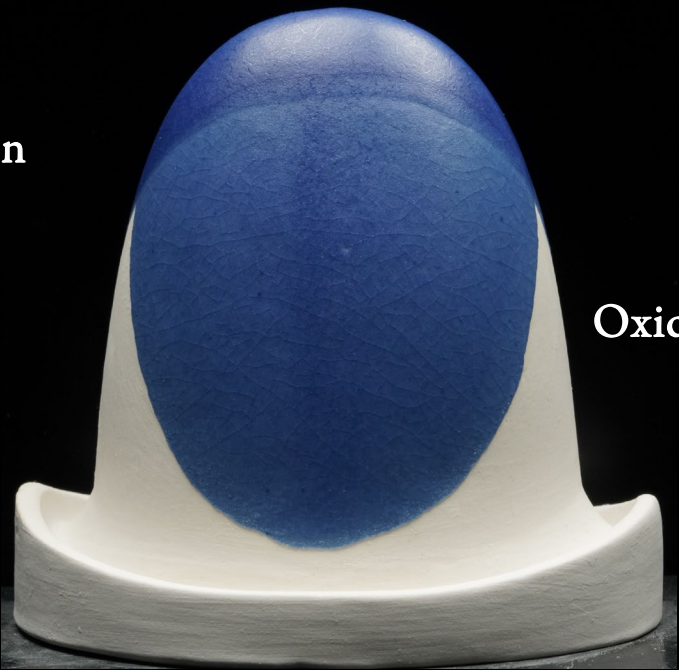


KB Matte

Weight Substitution
Minspar Feldspar

070522-11

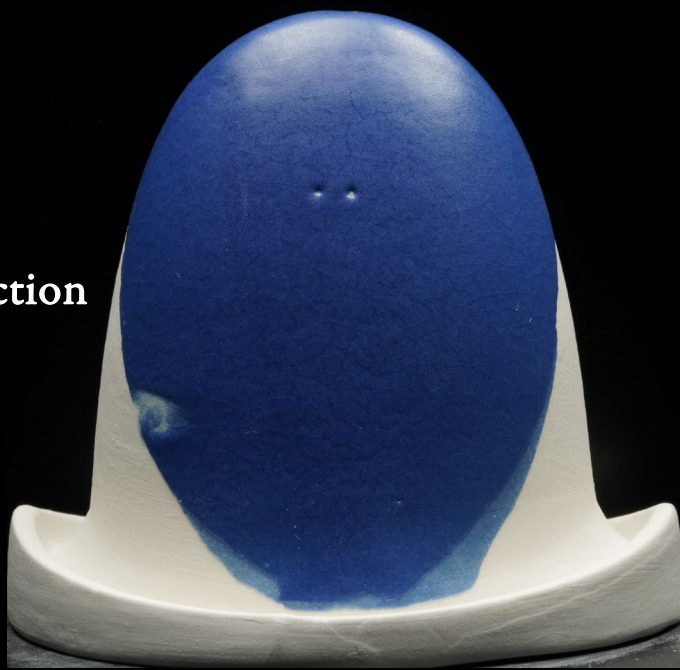
Minspar	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips



Reduction



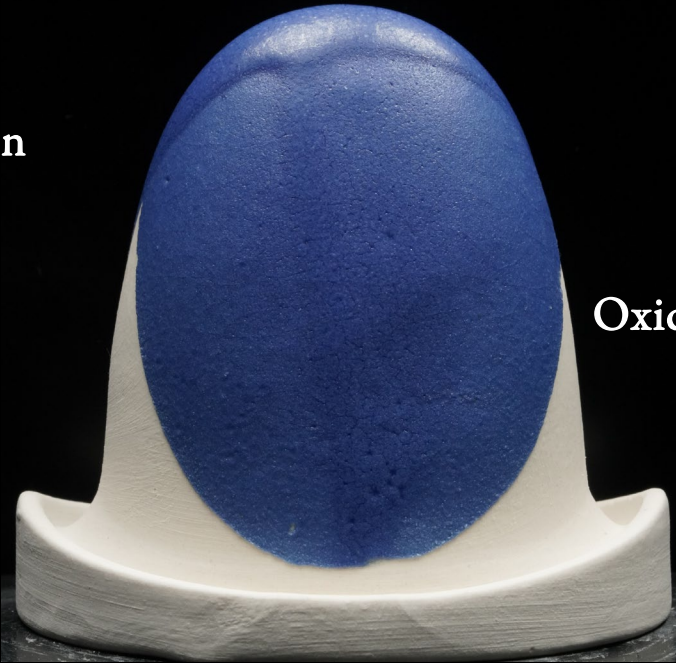
Ceramic
Materials
Workshop

KB Matte

Weight Substitution
Spodumene

070522-12

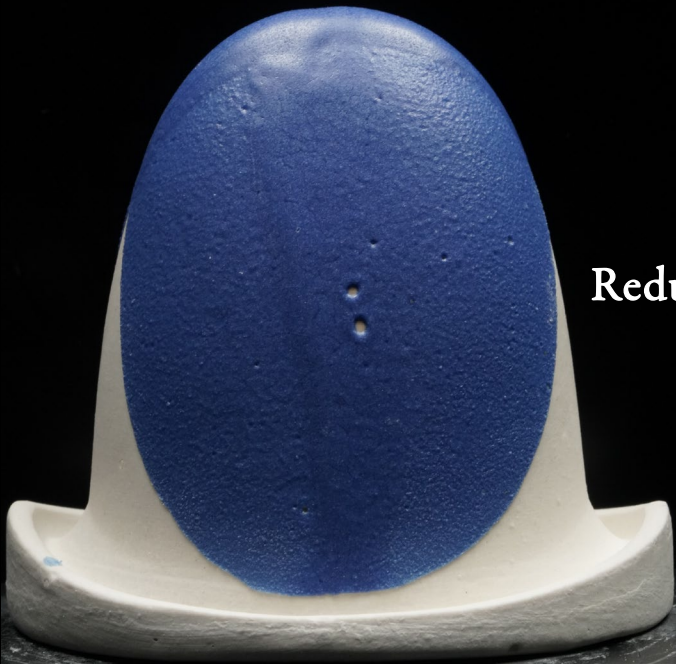
Spodumene	19.91
Whiting	16.92
EPK	35.20
Flint	13.04
3134	15.93
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips

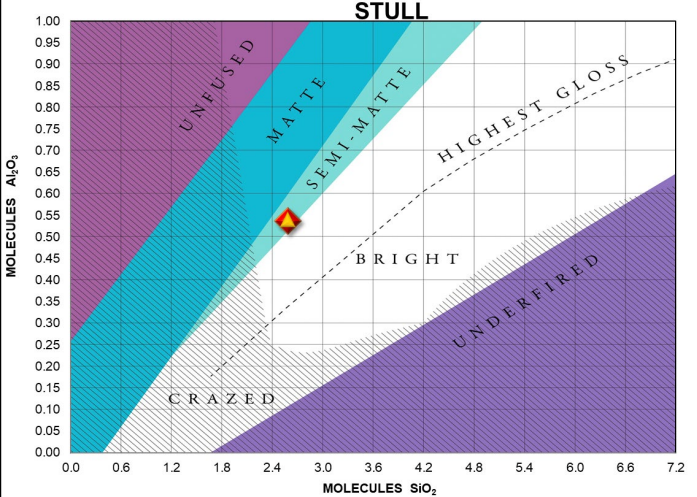


Reduction

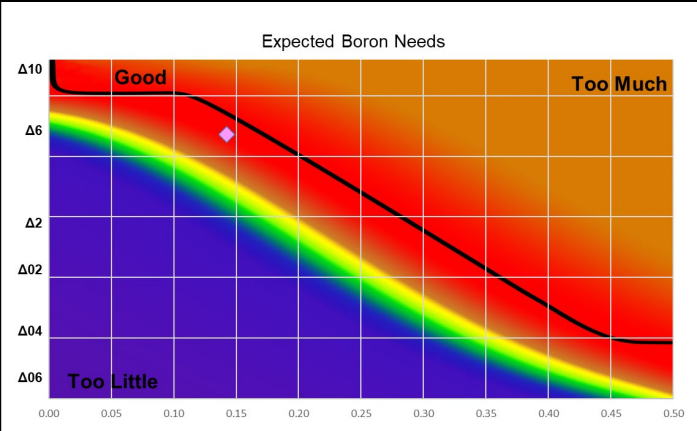


Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.78 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.59	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.08	K ₂ O 0.01	MgO 0.00	CaO 0.71
B ₂ O ₃ 0.14	Al ₂ O ₃ 0.54	Li ₂ O 0.16	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



SiO ₂ :Al ₂ O ₃ Ratio 4.78 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.59	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.08	K ₂ O 0.01	MgO 0.00	CaO 0.71
B ₂ O ₃ 0.14	Al ₂ O ₃ 0.54	Li ₂ O 0.16	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



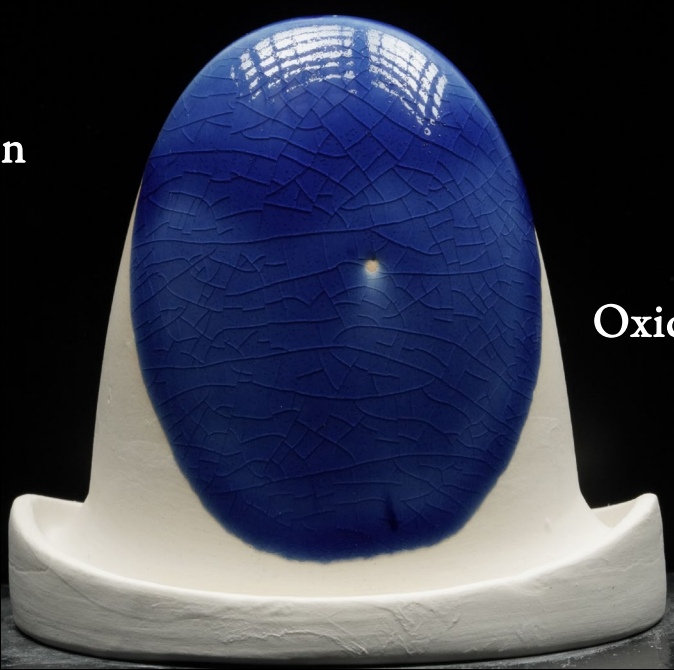
Ceramic
Materials
Workshop

KB Matte

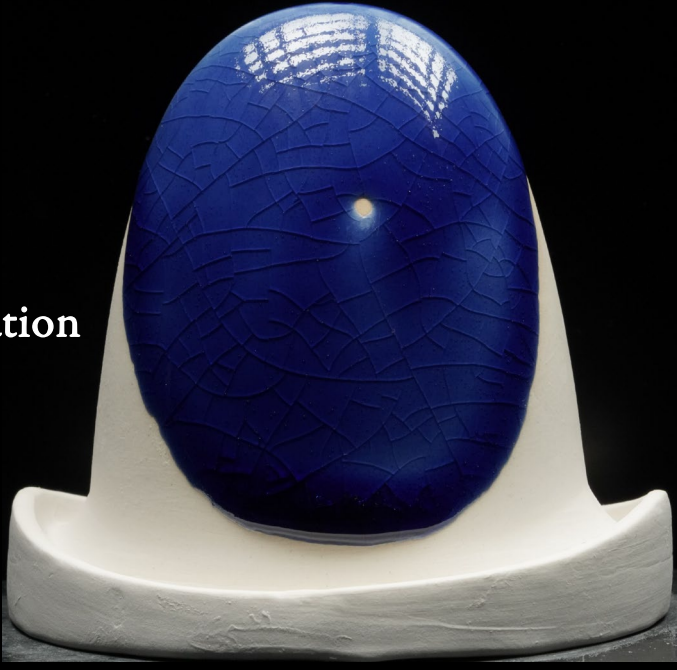
Weight Substitution
Frit 3110

070522-14

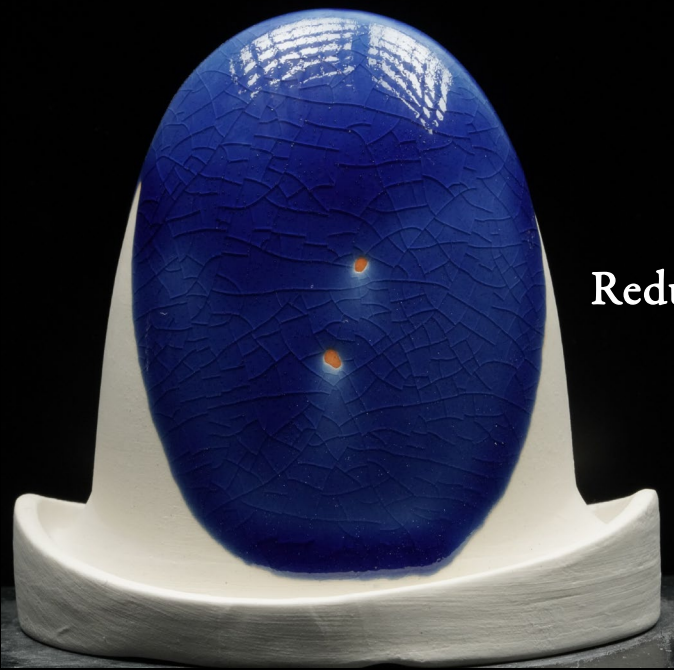
3110	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	70



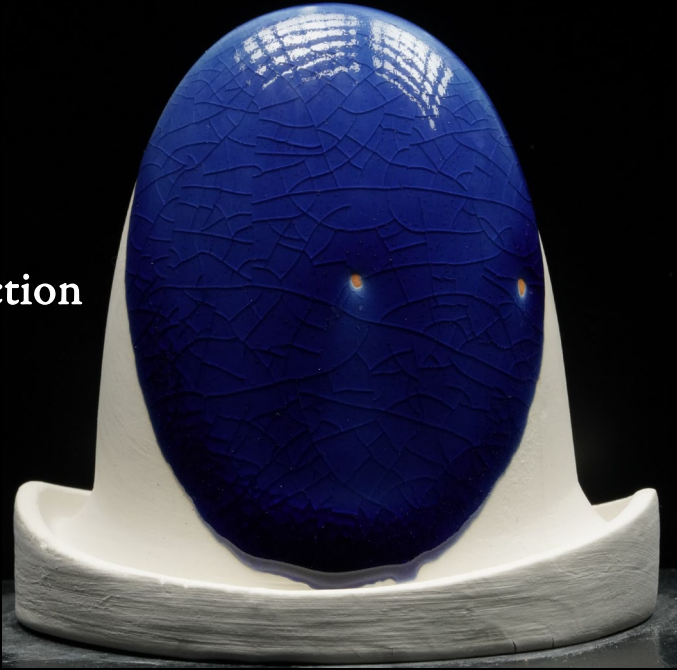
1-3 Second Dip



2-3 Second Dips



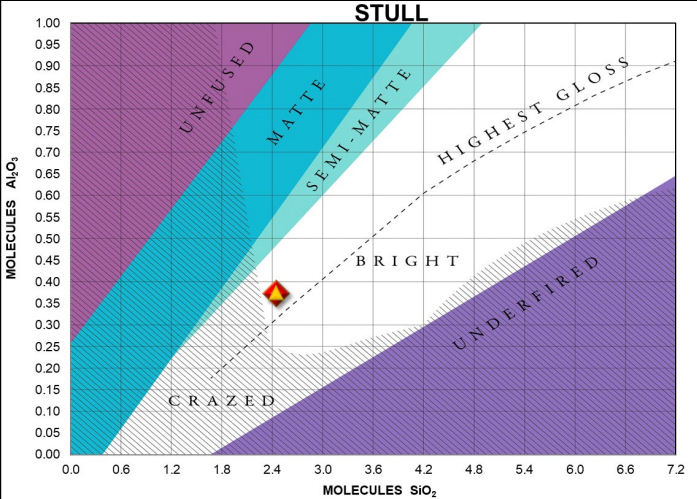
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.49 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.51	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.22	K ₂ O 0.02	MgO 0.00	CaO 0.74
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.38	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 6.49 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.45	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.22	K ₂ O 0.02	MgO 0.00	CaO 0.72
B ₂ O ₃ 0.15	Al ₂ O ₃ 0.37	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 0.02



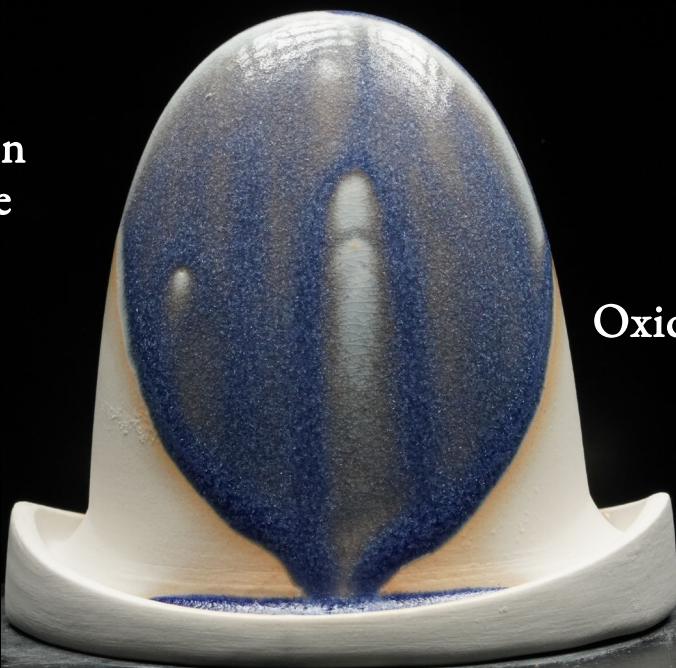
Ceramic
Materials
Workshop

KB Matte

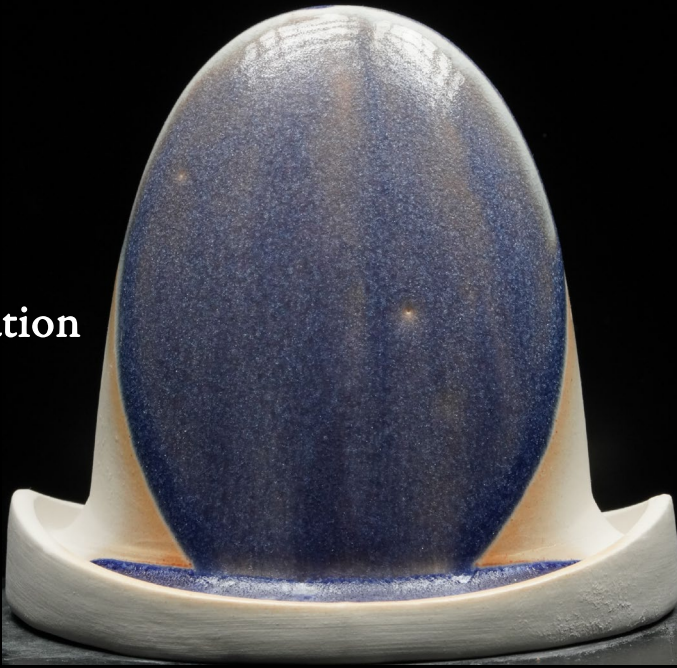
Weight Substitution
Lithium Carbonate

070522-15

Lithium Carb	19.71
Whiting	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	80



1-3 Second Dip



2-3 Second Dips



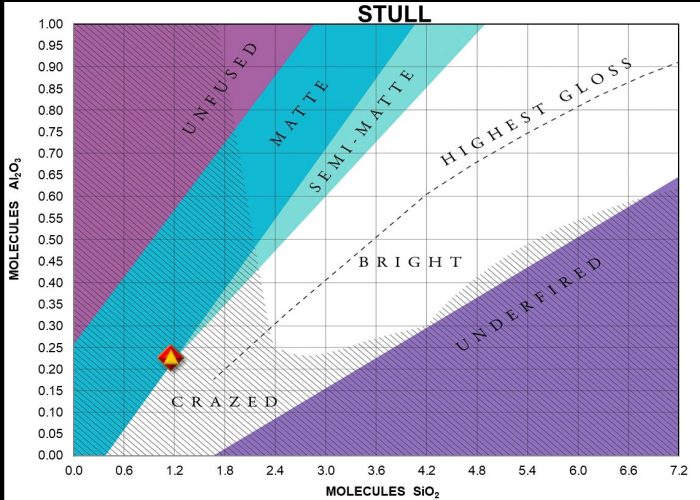
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.05 : 1		Alkali Metals 0.56		Alkaline Earths 0.44	
SiO ₂ 1.18	Collective "Al ₂ O ₃ " 0.23	Na ₂ O 0.05	K ₂ O 0.00	MgO 0.00	CaO 0.43
B ₂ O ₃ 0.09	Al ₂ O ₃ 0.23	Li ₂ O 0.50	CuO 0.00	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO 0.00	Bi ₂ O ₃ 0.00	SnO ₂ 0.00	ZnO 0.00	FeO 0.01
Cr ₂ O ₃ 0.00	ZrO ₂ 0.00	P ₂ O ₅ 0.00		MnO ₂ 0.00	CoO 0.00



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.05 : 1		Alkali Metals 0.55		Alkaline Earths 0.45	
SiO ₂ 1.16	Collective "Al ₂ O ₃ " 0.23	Na ₂ O 0.05	K ₂ O 0.00	MgO 0.00	CaO 0.43
B ₂ O ₃ 0.09	Al ₂ O ₃ 0.23	Li ₂ O 0.49	CuO 0.00	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO 0.00	Bi ₂ O ₃ 0.00	SnO ₂ 0.00	ZnO 0.00	FeO 0.01
Cr ₂ O ₃ 0.00	ZrO ₂ 0.00	P ₂ O ₅ 0.00		MnO ₂ 0.00	CoO 0.02



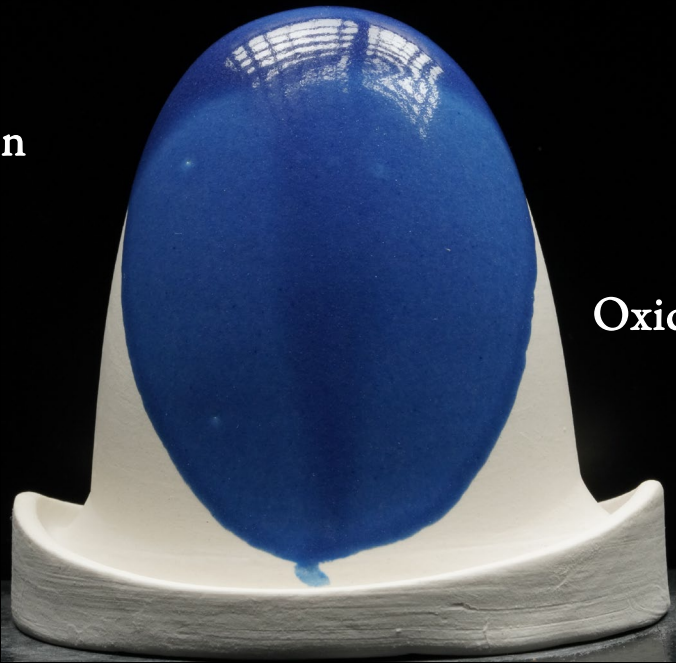
Ceramic
Materials
Workshop

KB Matte

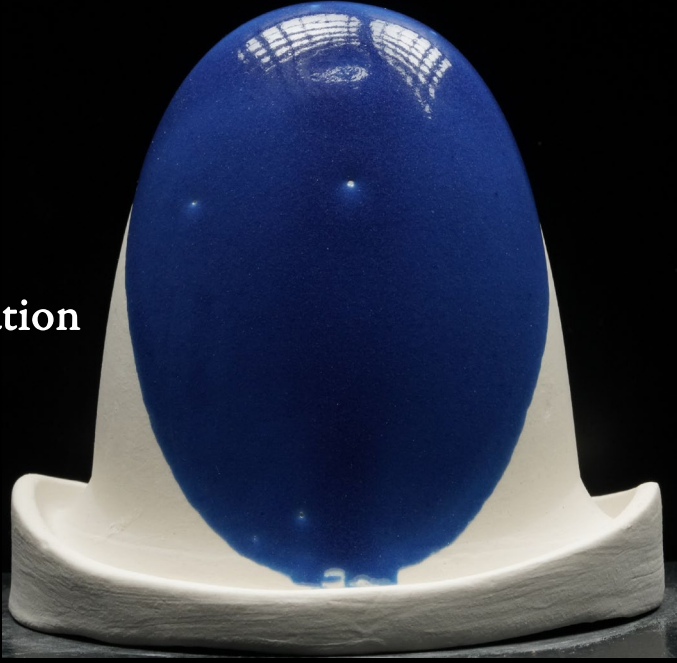
Weight Substitution
Talc

070522-16

Neph Sy	19.71
Talc	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	110



1-3 Second Dip



2-3 Second Dips



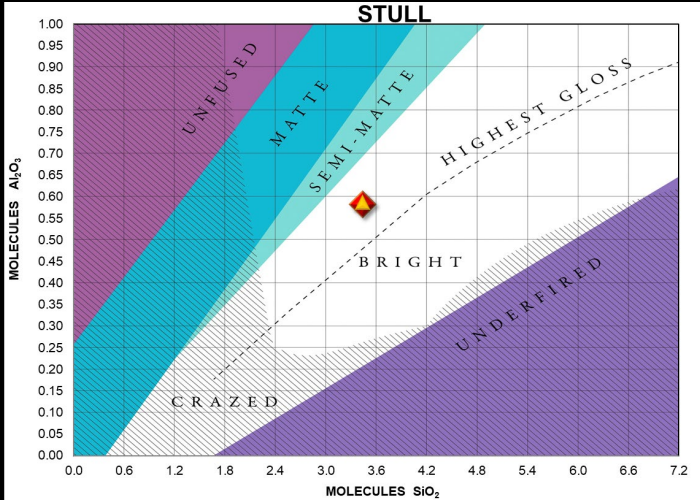
Reduction



Oxidation

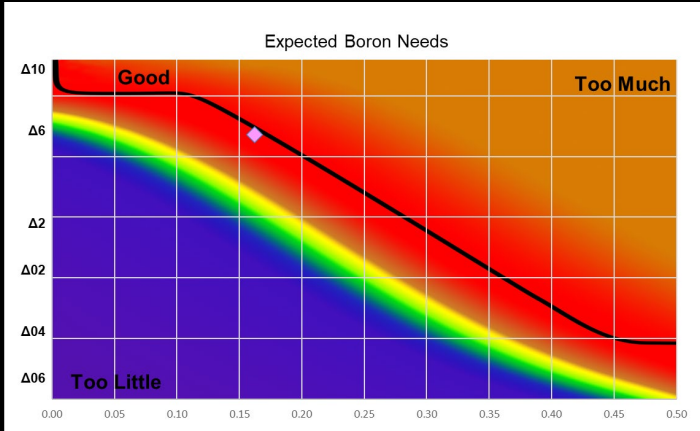
UMF

SiO ₂ :Al ₂ O ₃ Ratio 5.85 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.55	Collective "Al ₂ O ₃ " 0.61	Na ₂ O 0.21	K ₂ O 0.04	MgO 0.45	CaO 0.27
B ₂ O ₃ 0.17	Al ₂ O ₃ 0.60	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.03
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.85 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 3.44	Collective "Al ₂ O ₃ " 0.59	Na ₂ O 0.21	K ₂ O 0.04	MgO 0.44	CaO 0.26
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.58	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



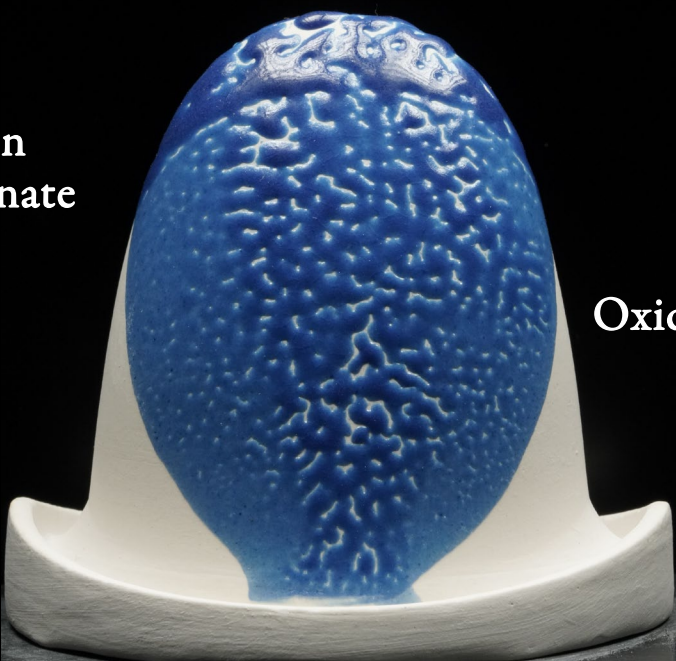
Ceramic
Materials
Workshop

KB Matte

Weight Substitution
Magnesium Carbonate

070522-17

Neph Sy	19.71
Mag Carbonate	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	170



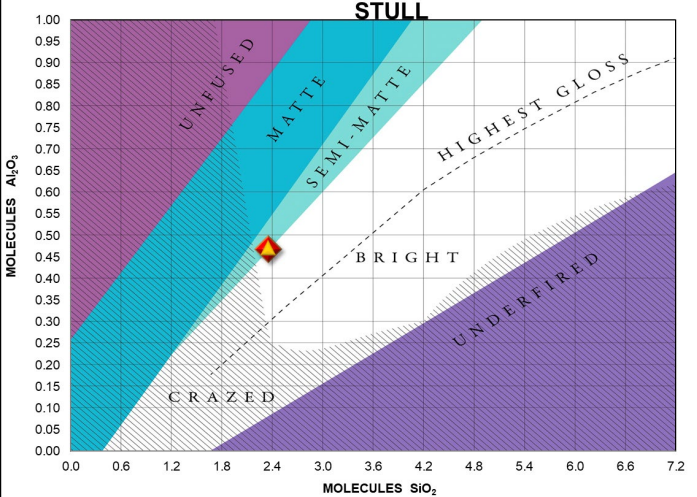
Oxidation



Reduction

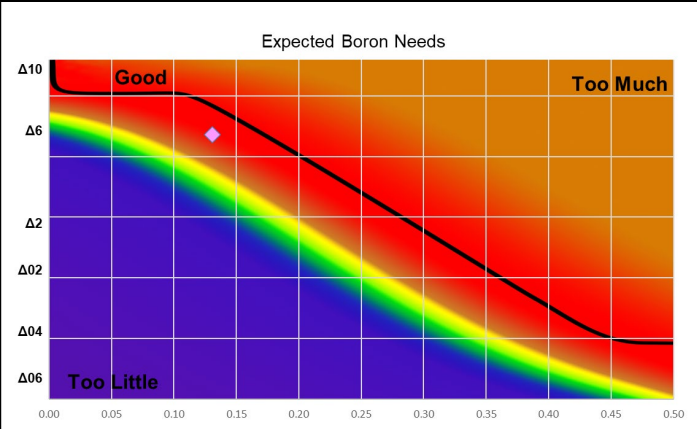


SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.48	Na ₂ O 0.17	K ₂ O 0.03	MgO 0.60	CaO 0.18
B ₂ O ₃ 0.13	Al ₂ O ₃ 0.48	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.35	Collective "Al ₂ O ₃ " 0.47	Na ₂ O 0.17	K ₂ O 0.03	MgO 0.58	CaO 0.18
B ₂ O ₃ 0.13	Al ₂ O ₃ 0.47	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



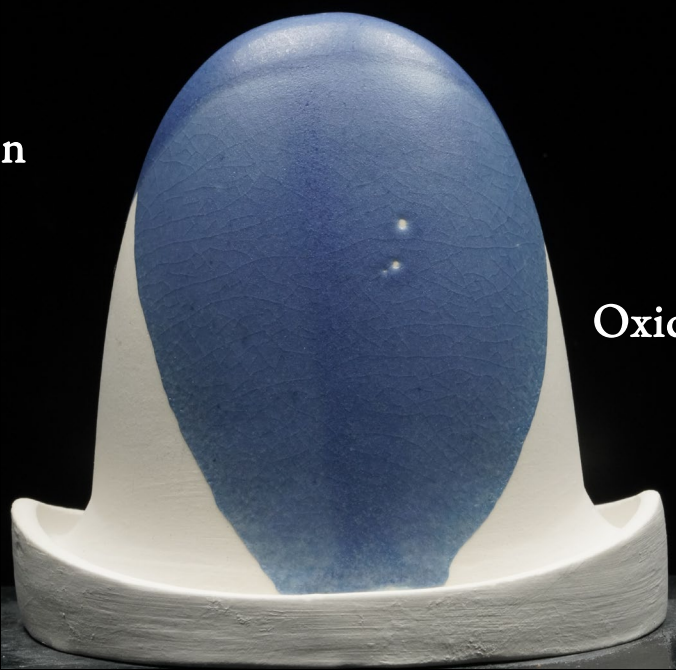
Ceramic
Materials
Workshop

KB Matte

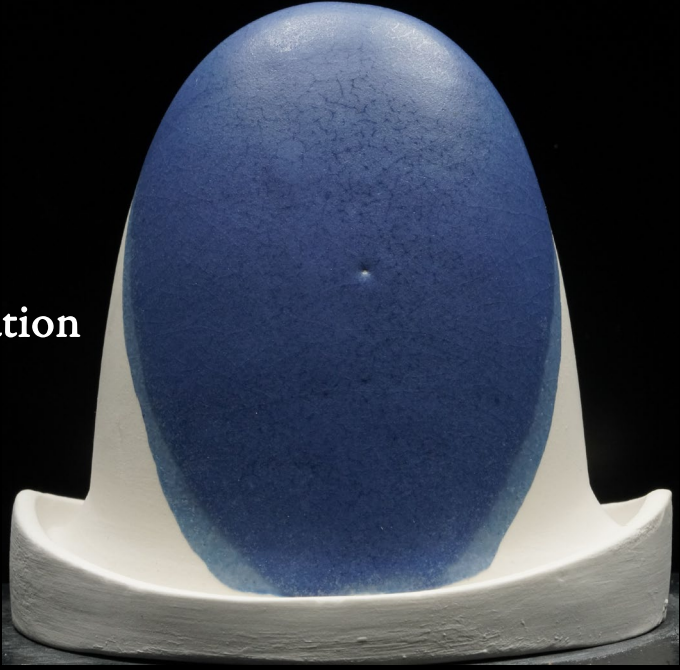
Weight Substitution
Dolomite

070522-18

Neph Sy	19.71
Dolomite	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips

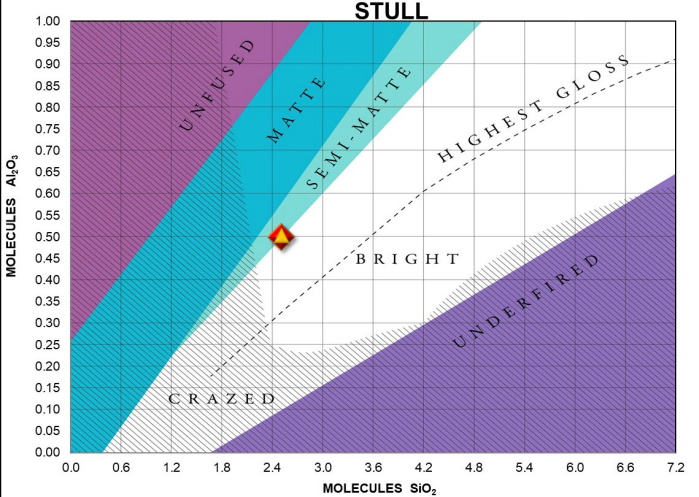


Reduction



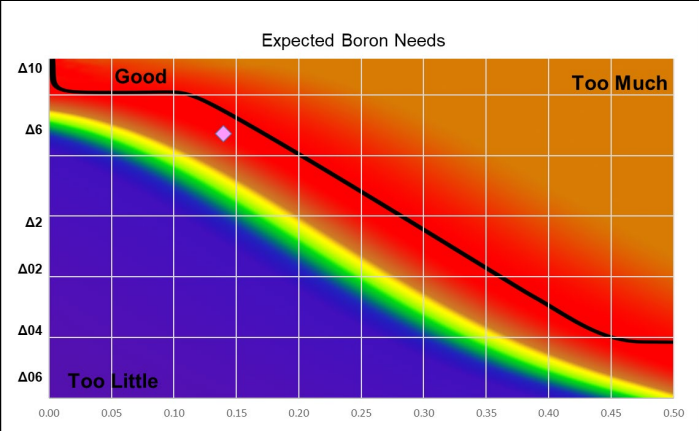
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.57	Collective "Al ₂ O ₃ " 0.52	Na ₂ O 0.18	K ₂ O 0.03	MgO 0.29	CaO 0.48
B ₂ O ₃ 0.14	Al ₂ O ₃ 0.51	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.51	Collective "Al ₂ O ₃ " 0.50	Na ₂ O 0.18	K ₂ O 0.03	MgO 0.28	CaO 0.47
B ₂ O ₃ 0.14	Al ₂ O ₃ 0.50	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 0.03

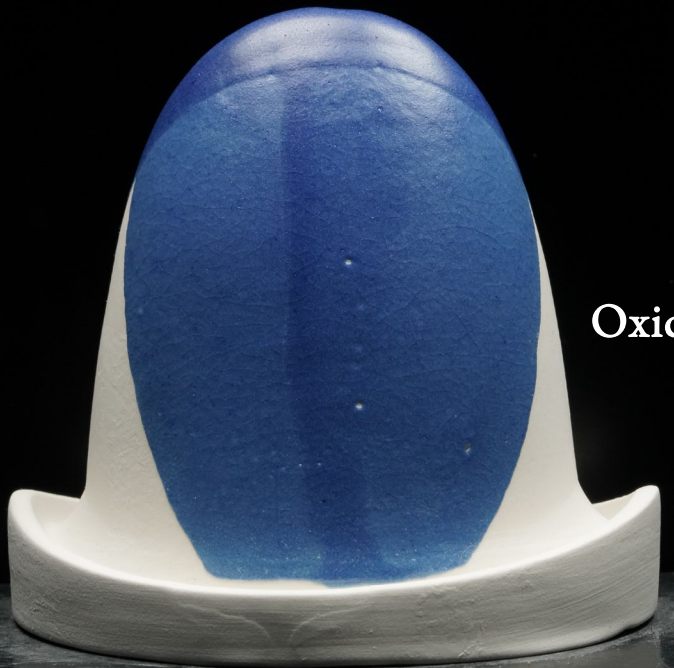


KB Matte

Weight Substitutio
Wollastonite

070522-19

Neph Sy	19.71
Wollastonite	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	100



1-3 Second Dip



2-3 Second Dips

Oxidation



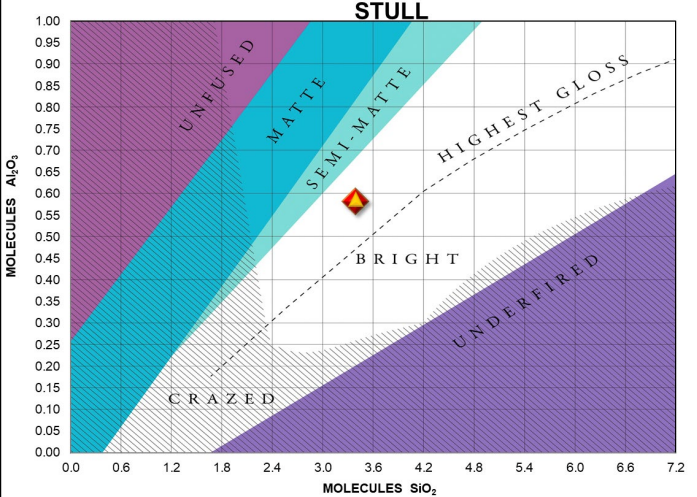
1-3 Second Dip



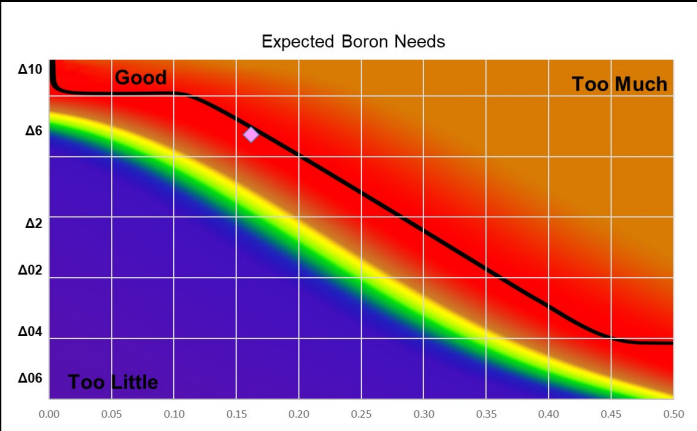
2-3 Second Dips

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 5.77 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 3.50	Collective "Al ₂ O ₃ " 0.61	Na ₂ O 0.21	K ₂ O 0.04	MgO 0.02	CaO 0.70
B ₂ O ₃ 0.17	Al ₂ O ₃ 0.60	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 5.77 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 3.39	Collective "Al ₂ O ₃ " 0.59	Na ₂ O 0.21	K ₂ O 0.04	MgO 0.02	CaO 0.68
B ₂ O ₃ 0.16	Al ₂ O ₃ 0.58	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



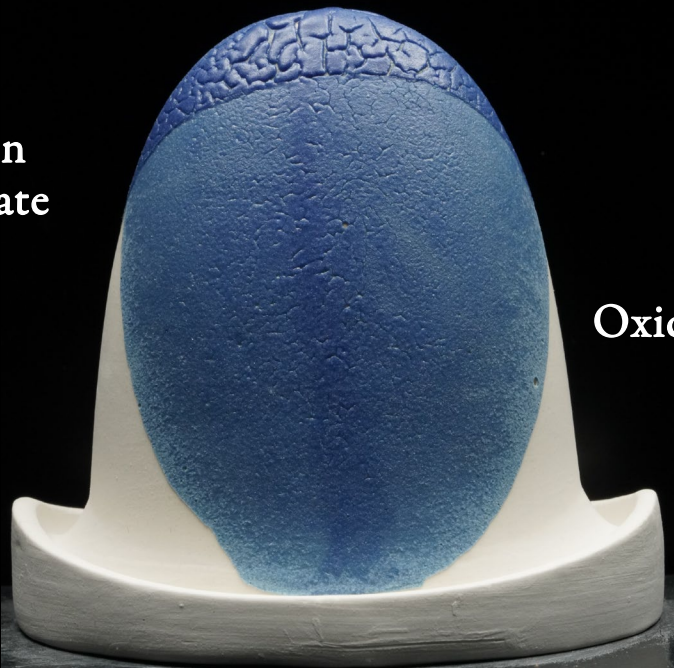
Ceramic
Materials
Workshop

KB Matte

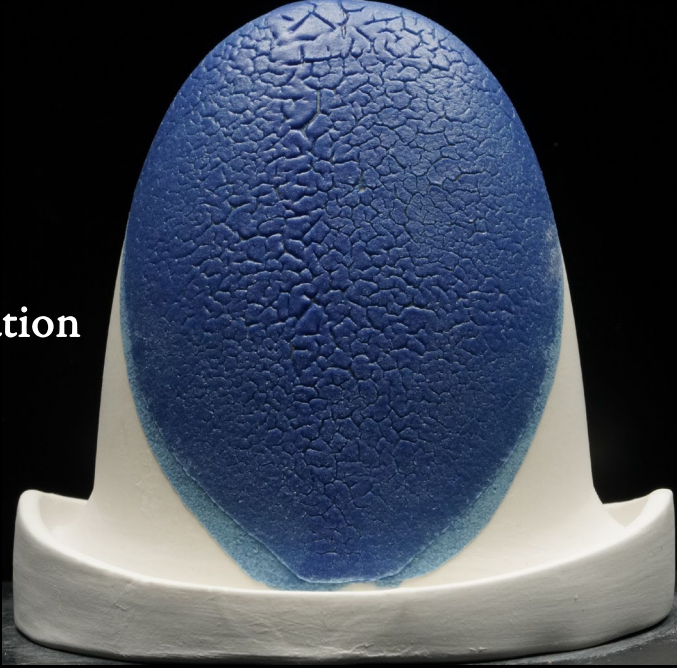
Weight Substitution
Strontium Carbonate

070522-20

Neph Sy	19.61
Strontium Carb	16.67
EPK	34.67
Flint	12.85
3134	15.69
Cobalt Carbonate	1.00
Water	100



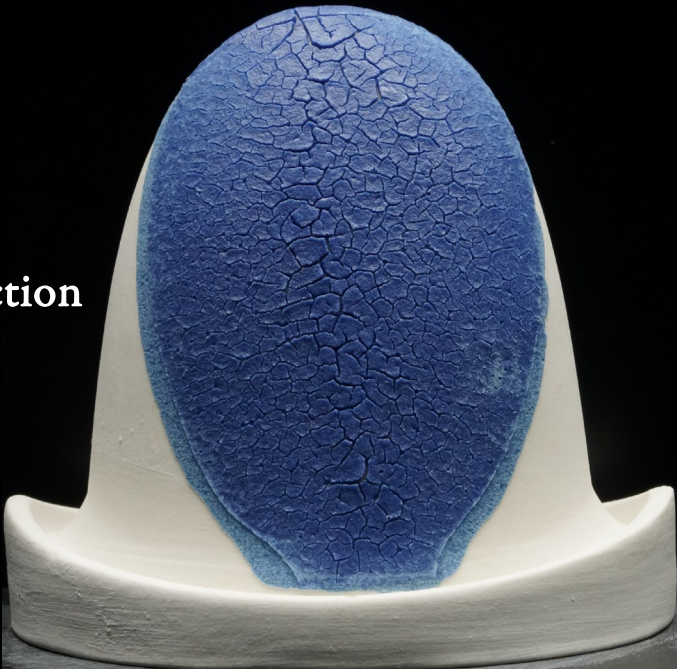
1-3 Second Dip



2-3 Second Dips

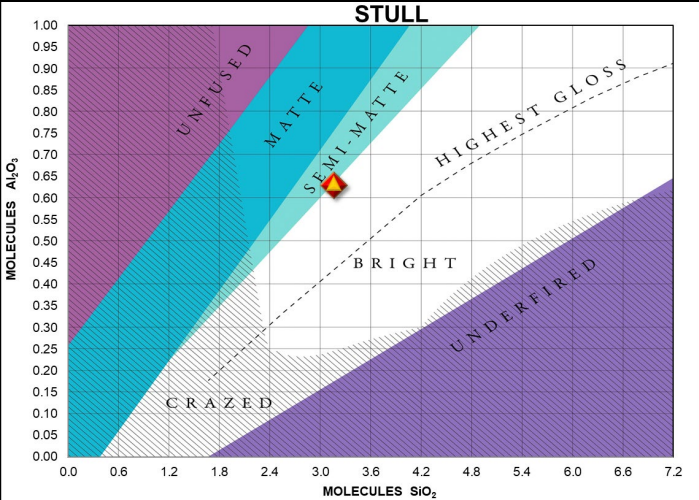


Reduction



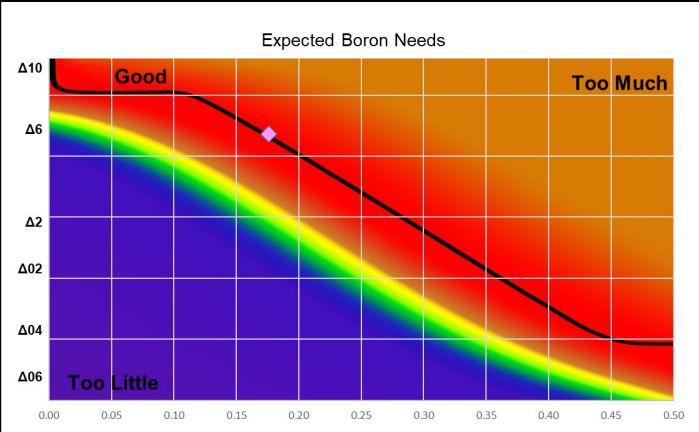
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 3.27	Collective "Al ₂ O ₃ " 0.66	Na ₂ O 0.23	K ₂ O 0.04	MgO 0.01	CaO 0.25
B ₂ O ₃ 0.18	Al ₂ O ₃ 0.65	Li ₂ O	CuO	SrO 0.45	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 3.16	Collective "Al ₂ O ₃ " 0.64	Na ₂ O 0.23	K ₂ O 0.04	MgO 0.01	CaO 0.24
B ₂ O ₃ 0.18	Al ₂ O ₃ 0.63	Li ₂ O	CuO	SrO 0.43	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



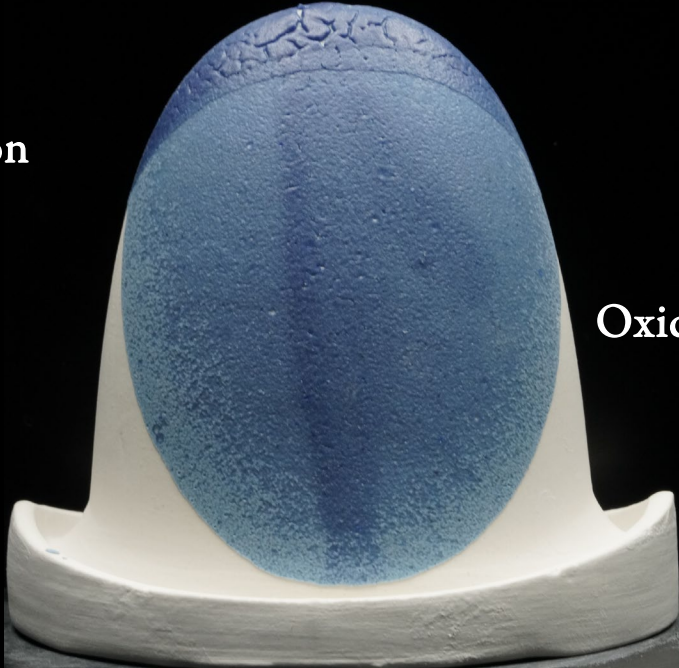
Ceramic
Materials
Workshop

KB Matte

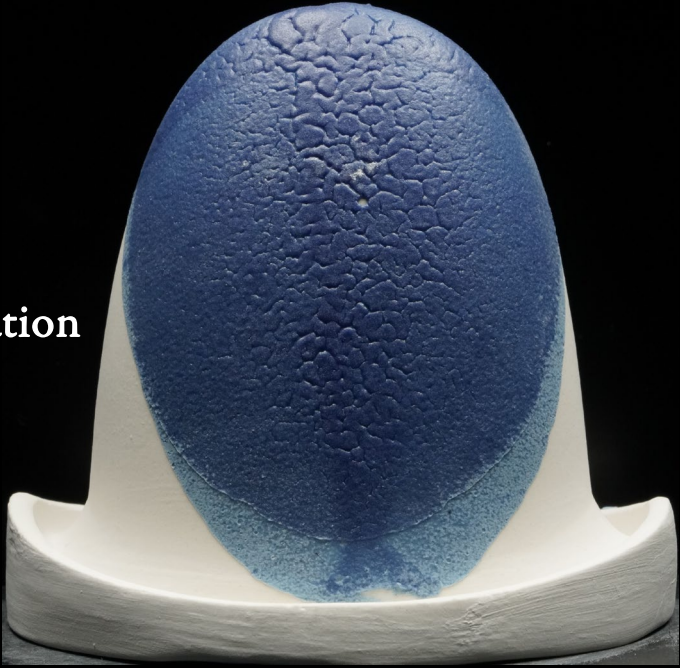
Weight Substitution
Barium Carb

070522-21

Neph Sy	19.71
Barium Carb	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	160



1-3 Second Dip



2-3 Second Dips

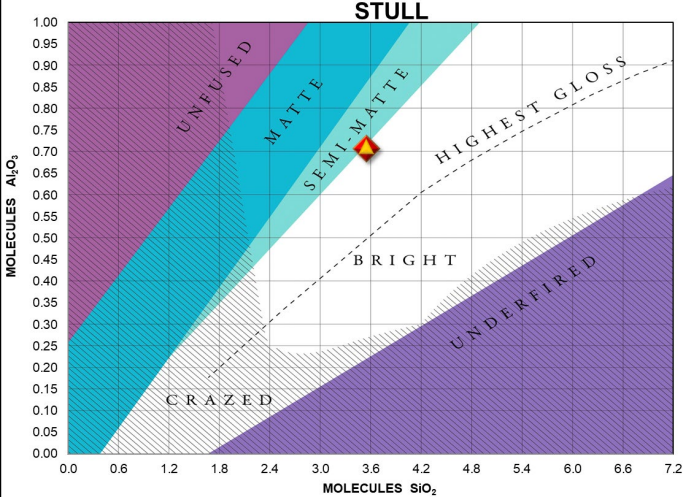


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.31		Alkaline Earths 0.69	
SiO ₂ 3.68	Collective "Al ₂ O ₃ " 0.74	Na ₂ O 0.26	K ₂ O 0.05	MgO 0.01	CaO 0.28
B ₂ O ₃ 0.21	Al ₂ O ₃ 0.73	Li ₂ O	CuO	SrO	BaO 0.38
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.30		Alkaline Earths 0.70	
SiO ₂ 3.55	Collective "Al ₂ O ₃ " 0.71	Na ₂ O 0.25	K ₂ O 0.05	MgO 0.01	CaO 0.27
B ₂ O ₃ 0.20	Al ₂ O ₃ 0.71	Li ₂ O	CuO	SrO	BaO 0.36
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.04



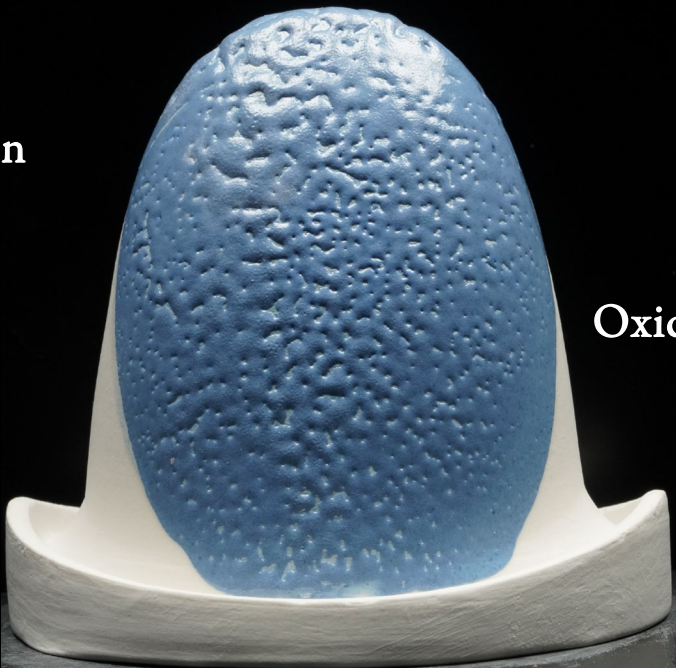
Ceramic
Materials
Workshop

KB Matte

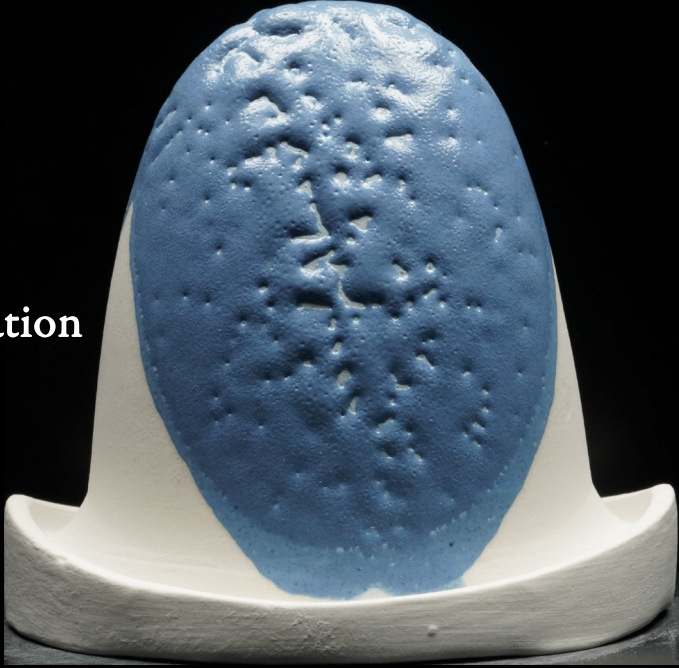
Weight Substitution
Zinc Oxide

070522-22

Neph Sy	19.71
Zinc Oxide	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	115



1-3 Second Dip



2-3 Second Dips

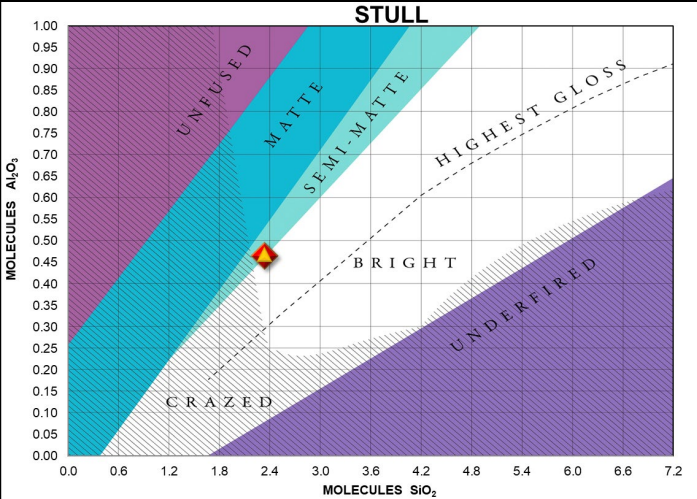


Reduction



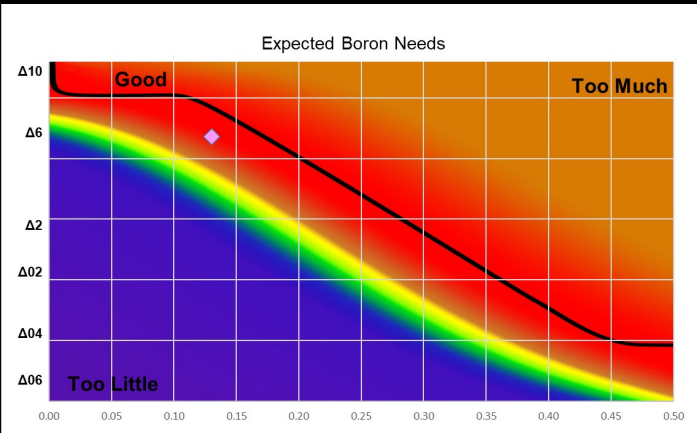
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.39	Collective "Al ₂ O ₃ " 0.48	Na ₂ O 0.17	K ₂ O 0.03	MgO 0.00	CaO 0.18
B ₂ O ₃ 0.13	Al ₂ O ₃ 0.48	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.60	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.97 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.34	Collective "Al ₂ O ₃ " 0.47	Na ₂ O 0.17	K ₂ O 0.03	MgO 0.00	CaO 0.18
B ₂ O ₃ 0.13	Al ₂ O ₃ 0.46	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.58	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO 0.02	CoO 0.02



Ceramic
Materials
Workshop

KB Matte

Weight Substitution
Bone Ash

070522-23

Neph Sy	19.71
Bone Ash	16.75
EPK	34.85
Flint	12.91
3134	15.77
Cobalt Carbonate	1.01
Water	130



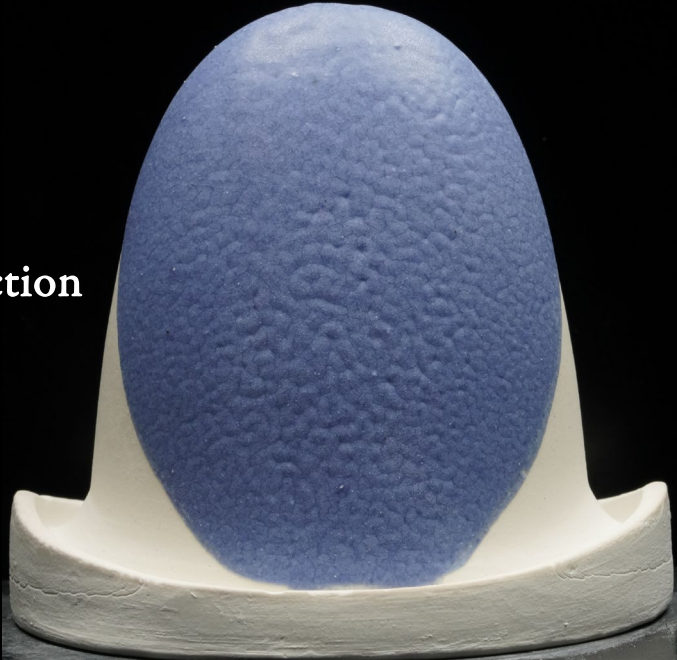
1-3 Second Dip



2-3 Second Dips



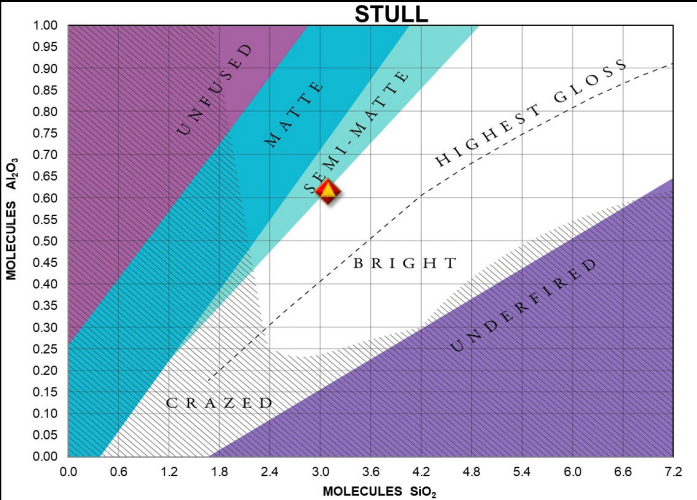
Reduction



Oxidation

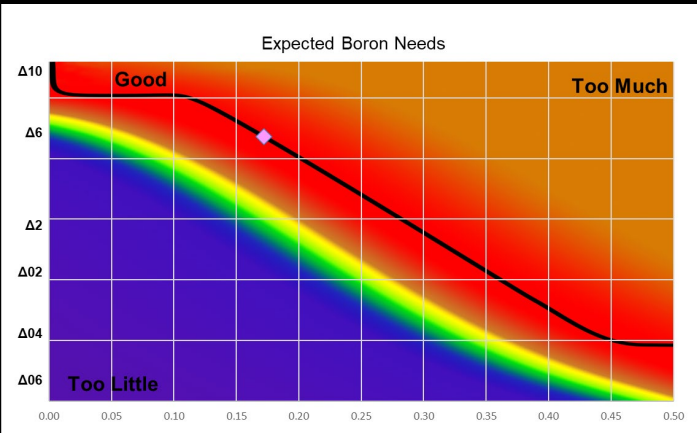
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.98 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 3.20	Collective "Al ₂ O ₃ " 0.64	Na ₂ O 0.23	K ₂ O 0.04	MgO 0.01	CaO 0.70
B ₂ O ₃ 0.18	Al ₂ O ₃ 0.64	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅ 0.25		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.98 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.09	Collective "Al ₂ O ₃ " 0.62	Na ₂ O 0.22	K ₂ O 0.04	MgO 0.01	CaO 0.68
B ₂ O ₃ 0.17	Al ₂ O ₃ 0.62	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅ 0.25		MnO ₂	CoO 0.03



Ceramic
Materials
Workshop