

Freckles- Δ 6

Lab 5b-Color Wheel 2-Individual

Freckles

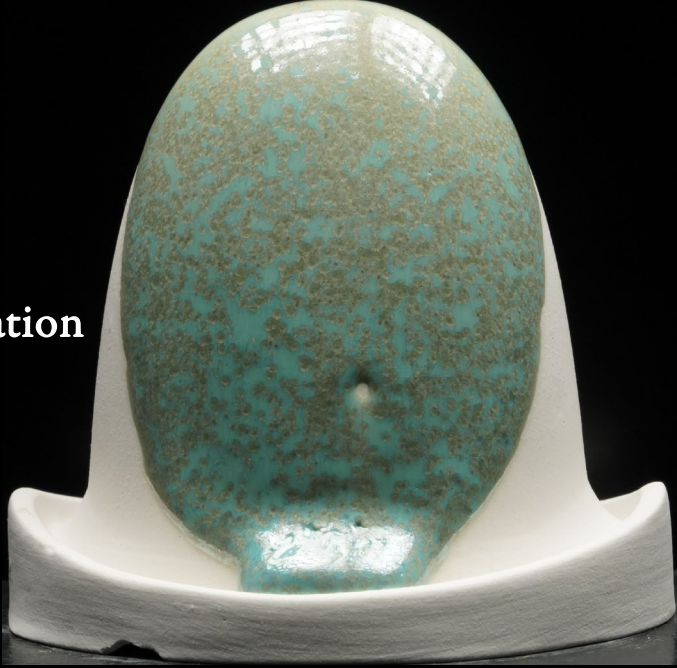
Original

071022-1

Neph Sy	38.96
Whiting	8.99
Zinc Oxide	16.98
EPK	4.99
Flint	27.97
Bentonite	2.11
Copper Carbonate	1.48
Light Rutile	4.00
Water	60



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip



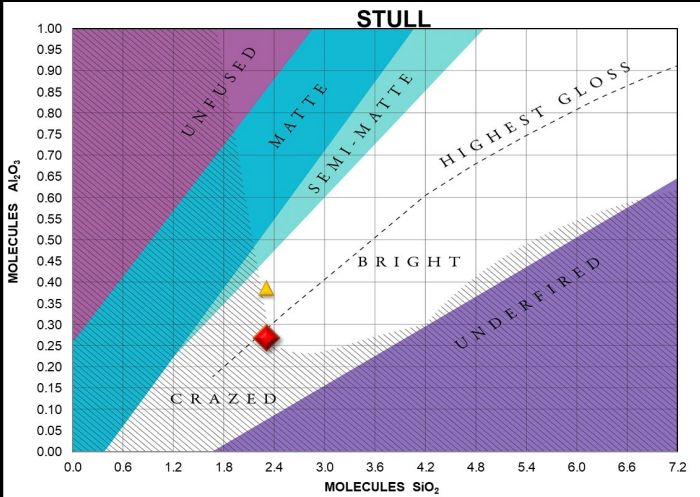
2-3 Second Dips

Oxidation

Reduction

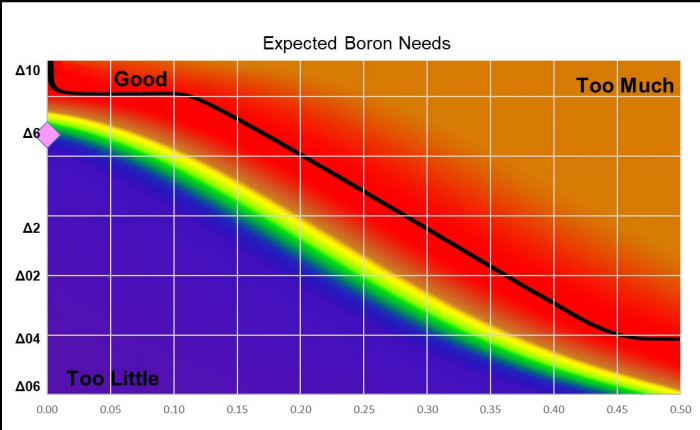
UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.58 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.38	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
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 0.54	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.31	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.23
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO 0.03	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.52	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	36.75
Whiting	8.48
Zinc Oxide	16.02
EPK	4.71
Flint	26.38
Bentonite	1.99
Light Rutile	3.78
Cobalt Carbonate	0.94
Chrome Oxide	0.94
Water	105



1-3 Second Dip

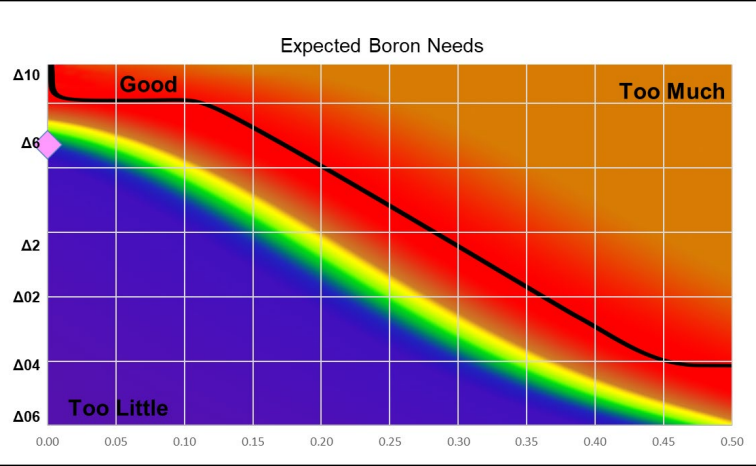
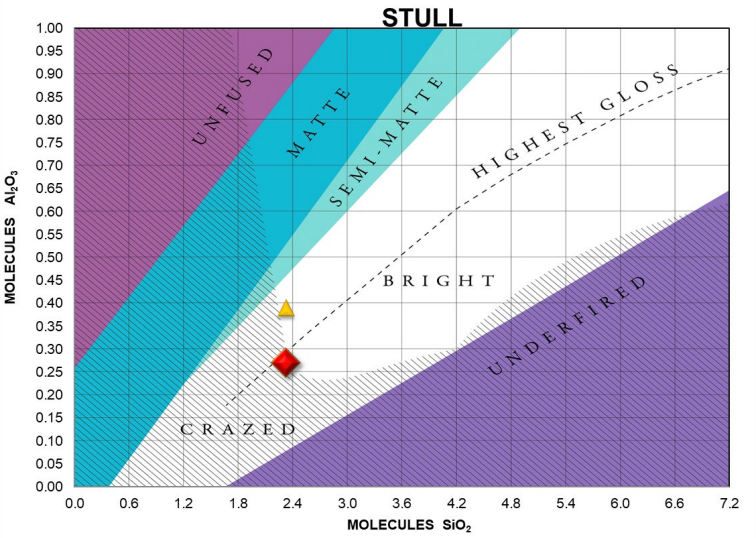


2-3 Second Dips



Reduction

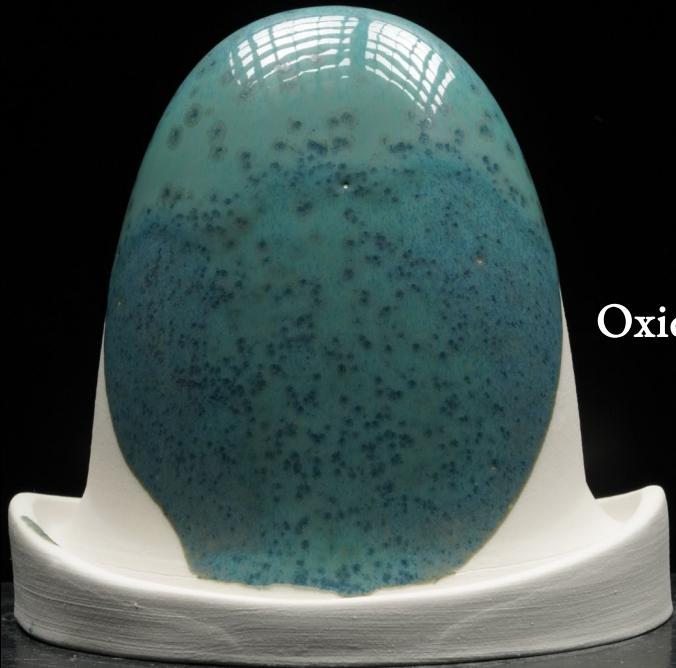
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.33	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.23
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.53	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



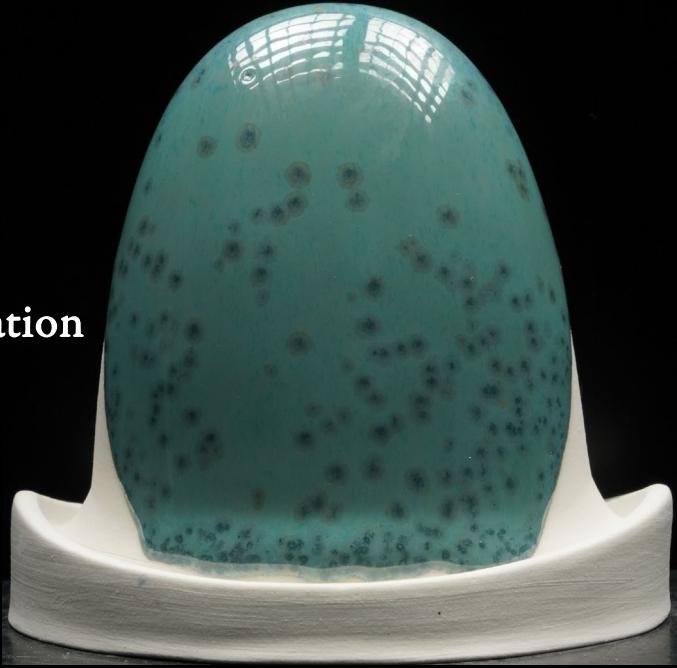
Ceramic
Materials
Workshop

Freckles

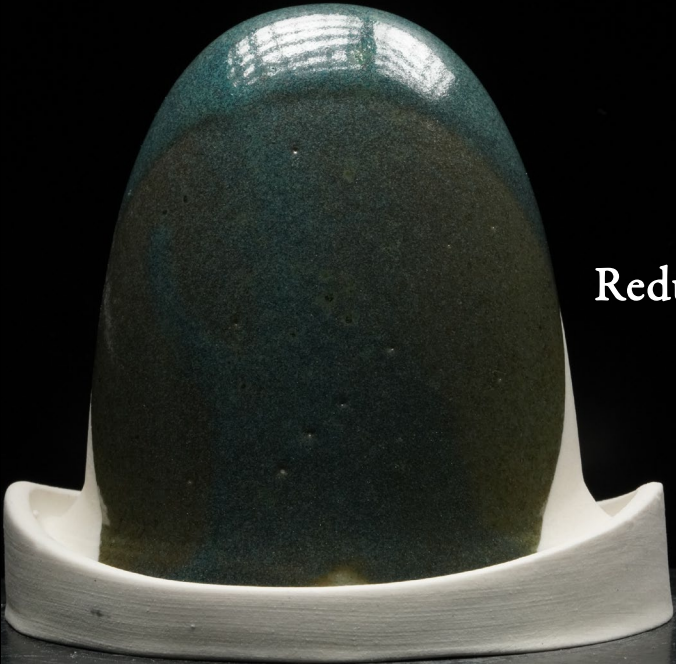
Neph Sy	36.07
Whiting	8.32
Zinc Oxide	15.72
EPK	4.62
Flint	25.90
Bentonite	1.95
Light Rutile	3.71
Cobalt Carbonate	0.93
Copper Carbonate	2.78
Water	105



1-3 Second Dip



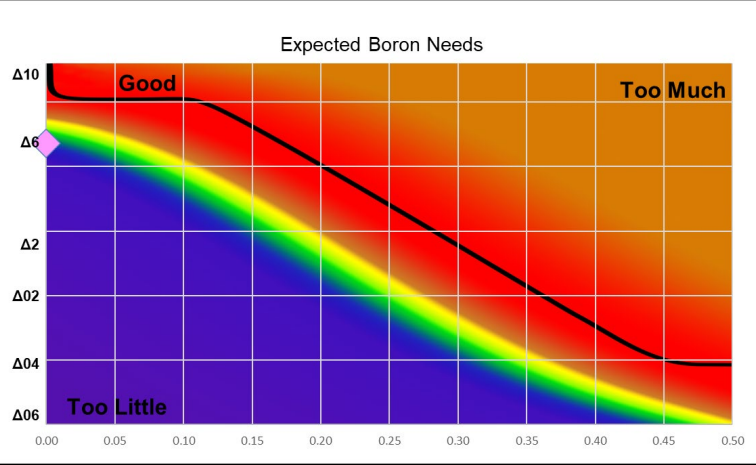
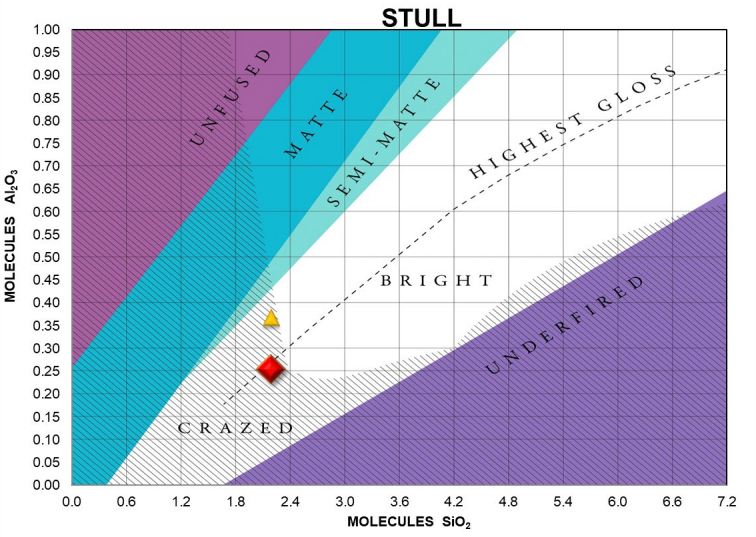
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



Ceramic
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Freckles

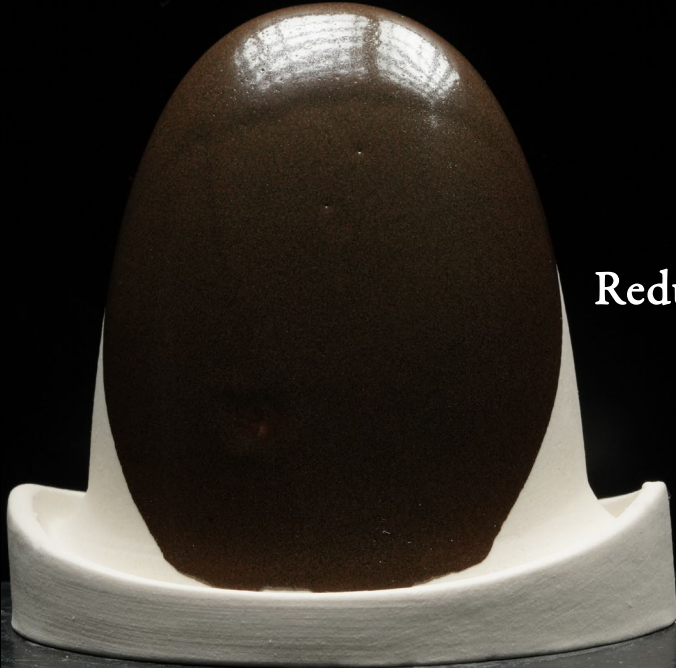
Neph Sy	35.09
Whiting	8.10
Zinc Oxide	15.30
EPK	4.50
Flint	25.20
Bentonite	1.90
Light Rutile	3.61
Cobalt Carbonate	0.90
Red Iron Oxide	5.41
Water	100



1-3 Second Dip



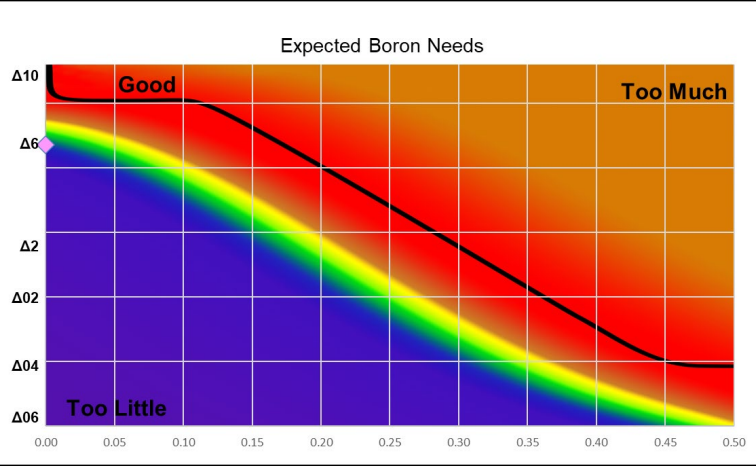
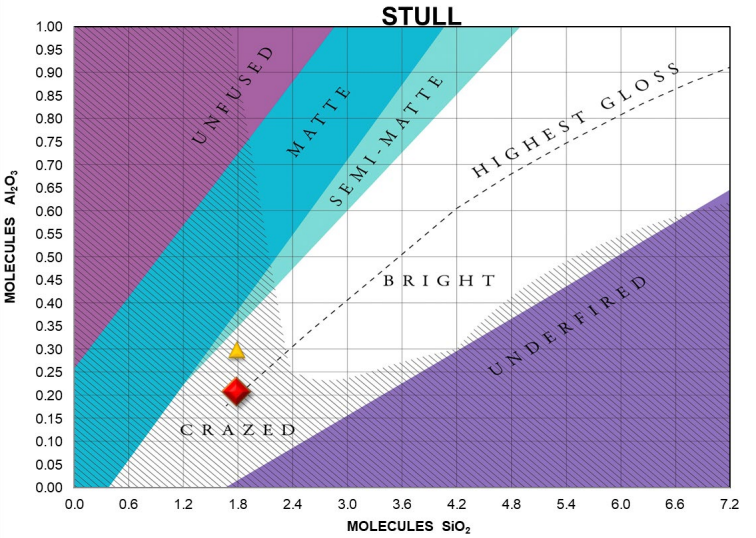
2-3 Second Dips



Reduction



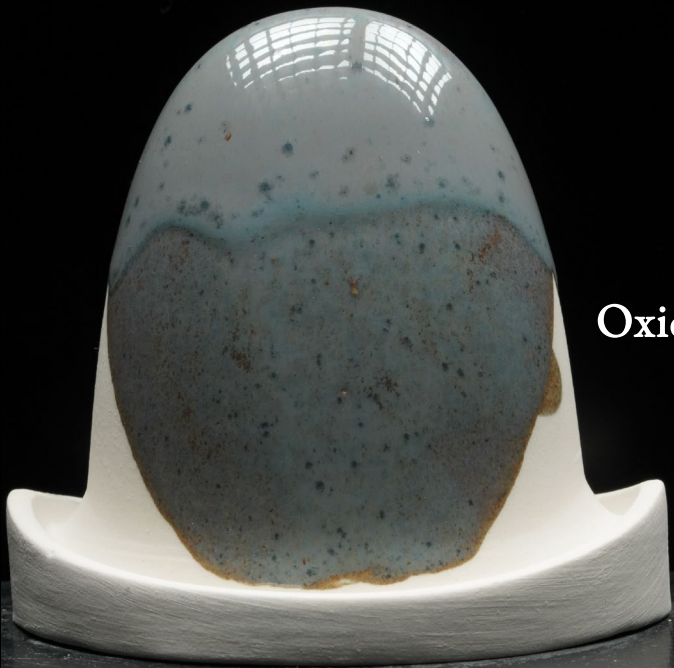
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.16		Alkaline Earths 0.84	
SiO ₂ 1.79	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.18
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.09	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.40	FeO 0.24
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



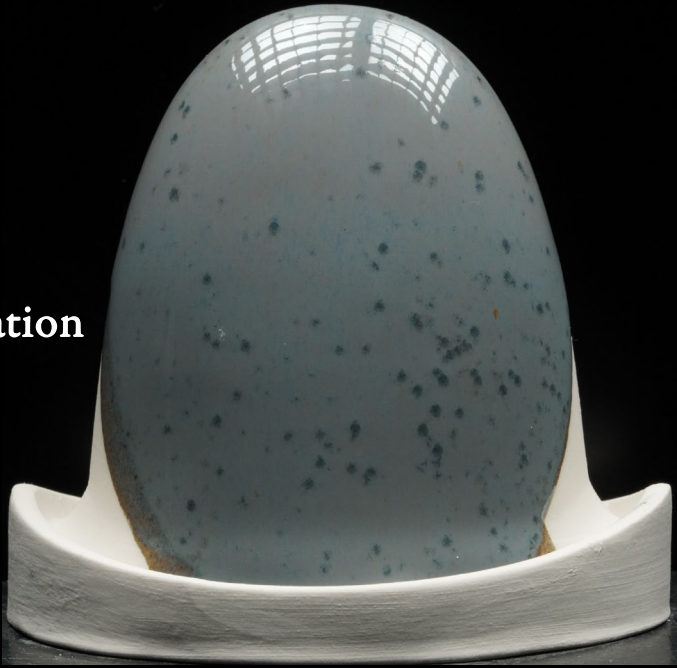
Ceramic
Materials
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Freckles

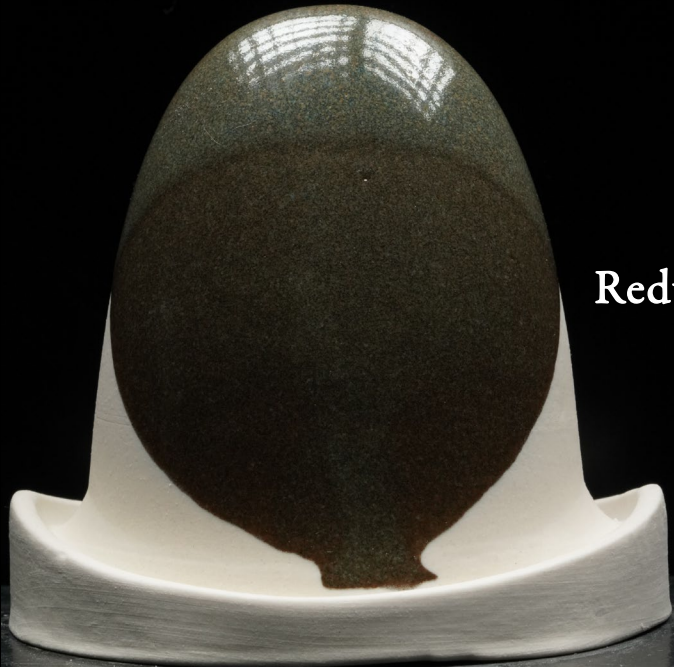
Neph Sy	36.07
Whiting	8.32
Zinc Oxide	15.72
EPK	4.62
Flint	25.90
Bentonite	1.95
Light Rutile	3.71
Cobalt Carbonate	0.93
Manganese Dioxide	2.78
Water	105



1-3 Second Dip



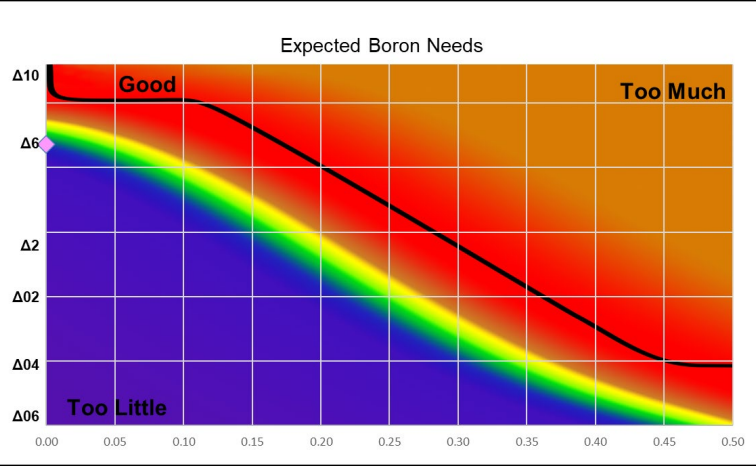
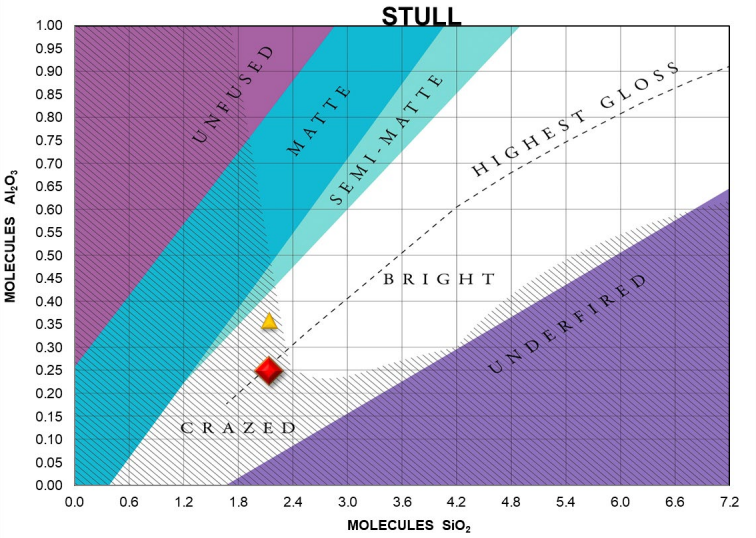
2-3 Second Dips



Reduction



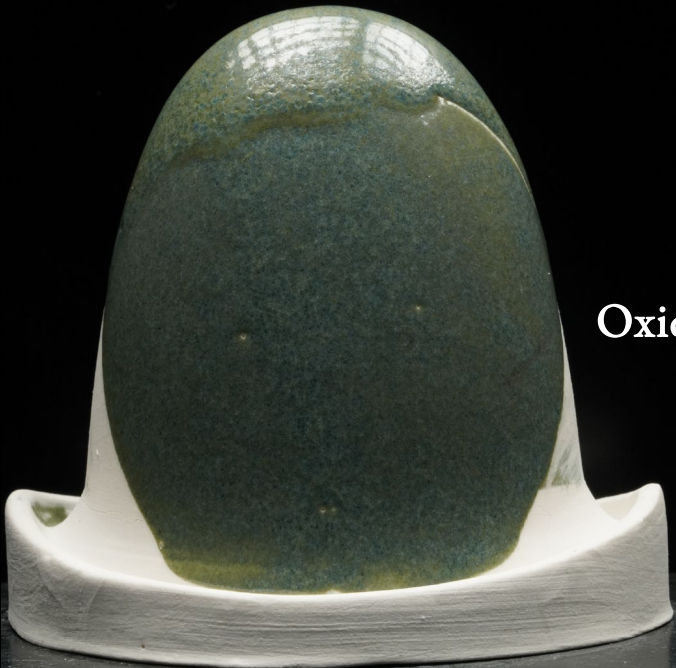
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.14	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.21
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.48	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO 0.02



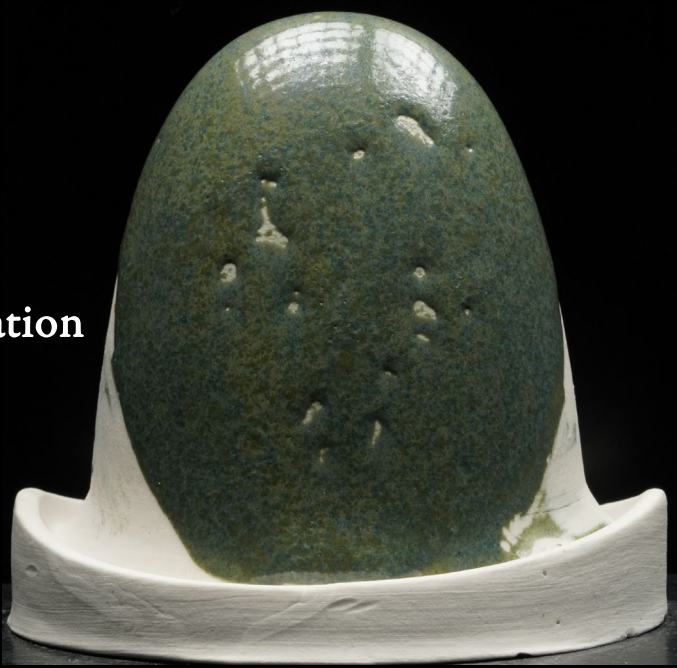
Ceramic
Materials
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Freckles

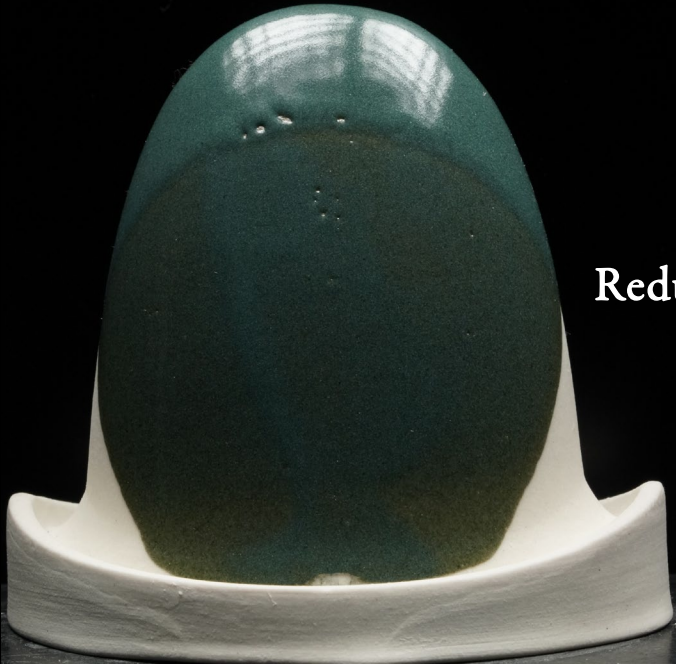
Neph Sy	36.24
Whiting	8.36
Zinc Oxide	15.80
EPK	4.65
Flint	26.02
Bentonite	1.96
Light Rutile	3.72
Cobalt Carbonate	0.93
Nickel Carb (Green)	2.33
Water	105



1-3 Second Dip



2-3 Second Dips

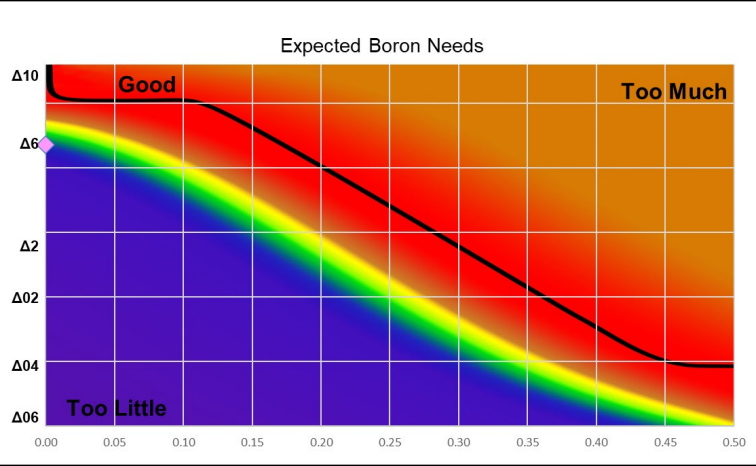
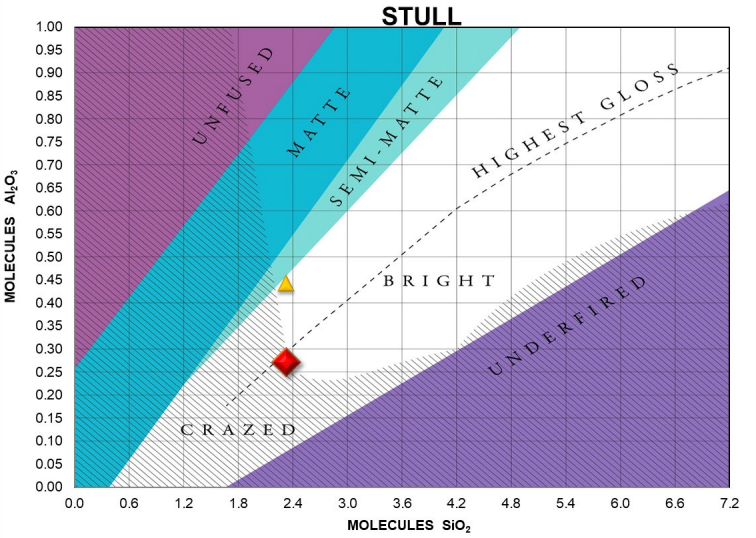


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.33	Collective "Al ₂ O ₃ " 0.44	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.23
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.53	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



Ceramic
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Freckles

Neph Sy	35.09
Whiting	8.10
Zinc Oxide	15.30
EPK	4.50
Flint	25.20
Bentonite	1.90
Light Rutile	3.61
Cobalt Carbonate	0.90
Titanium Dioxide	5.41
Water	110



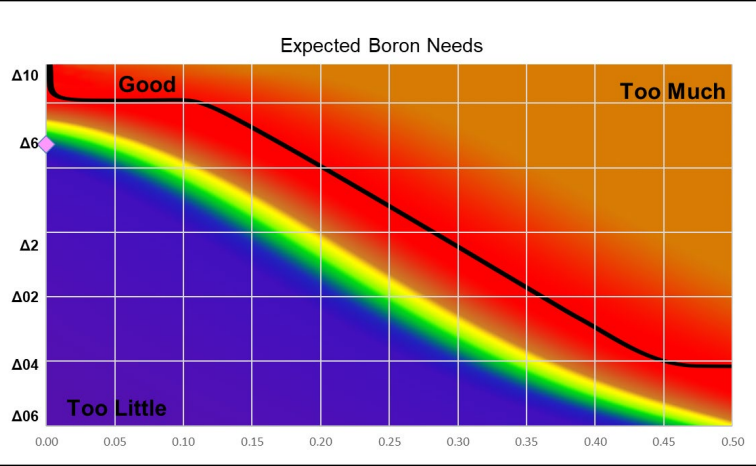
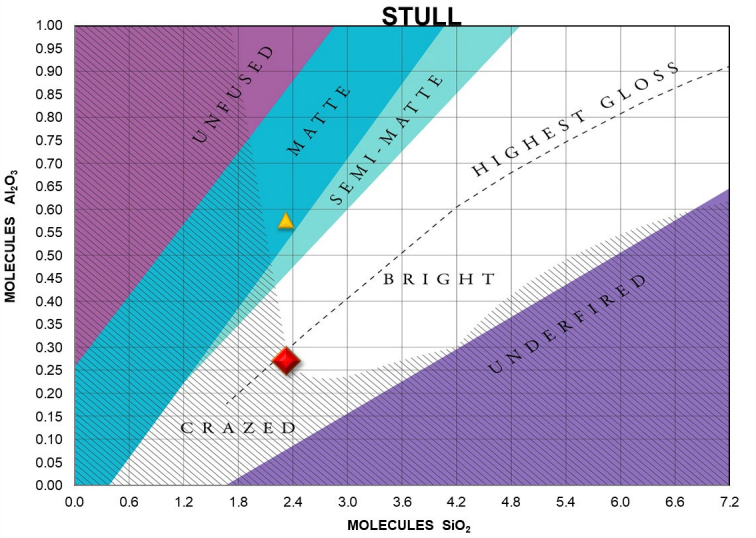
1-3 Second Dip



2-3 Second Dips



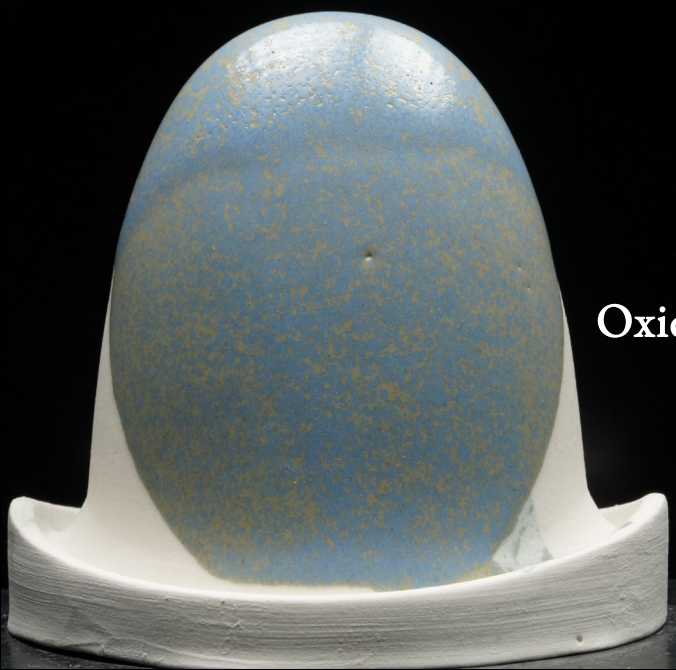
SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.33	Collective "Al ₂ O ₃ " 0.58	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.23
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.31	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.53	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



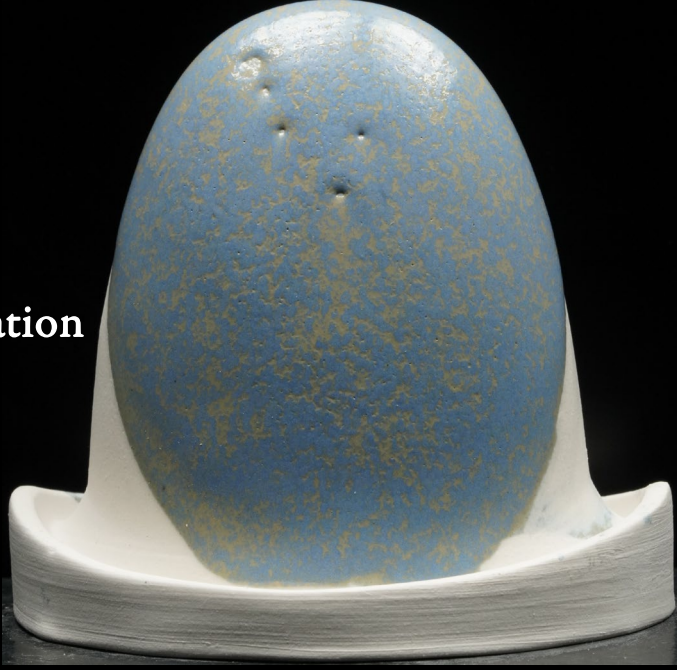
Ceramic
Materials
Workshop

Freckles

Neph Sy	35.41
Whiting	8.17
Zinc Oxide	15.44
EPK	4.54
Flint	25.43
Bentonite	1.92
Light Rutile	3.64
Cobalt Carbonate	0.91
Tin Oxide	4.55
Water	110



1-3 Second Dip



2-3 Second Dips

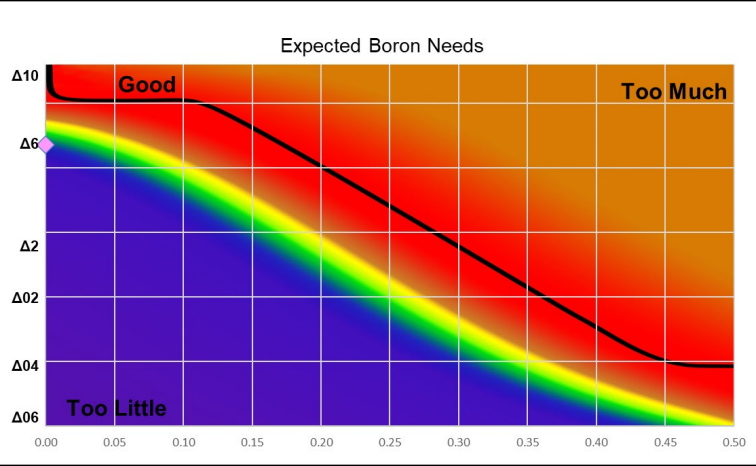
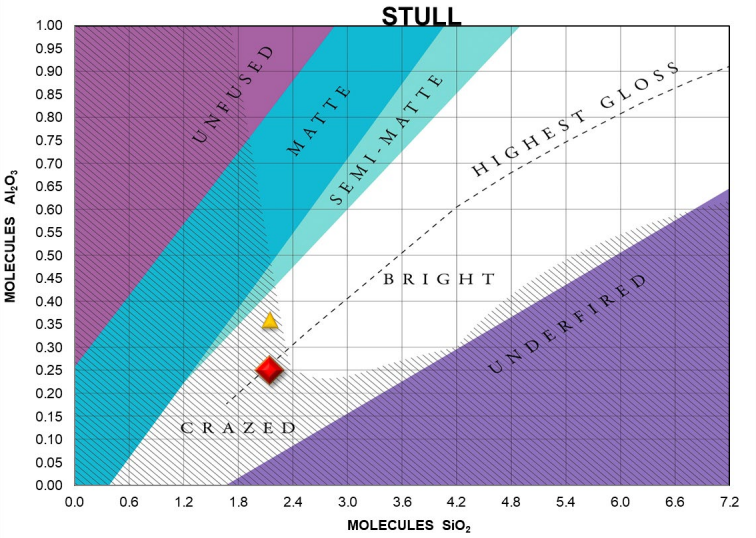


Reduction



Oxidation

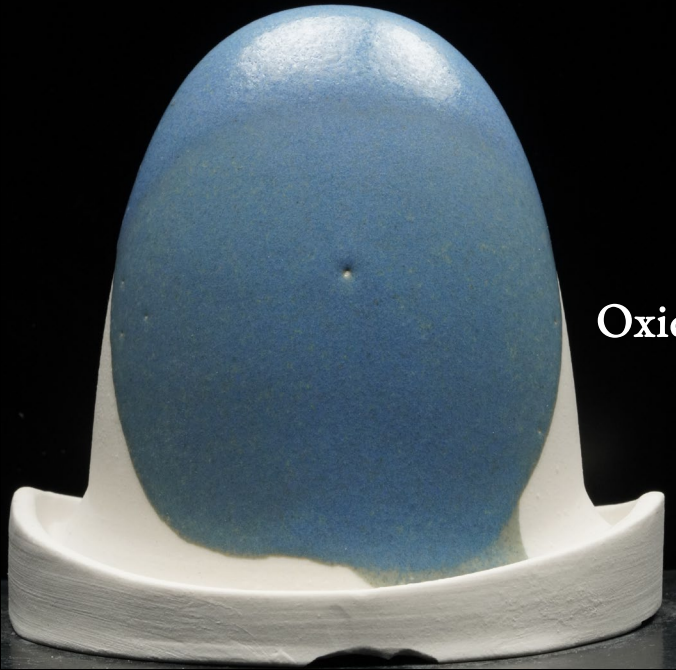
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 2.15	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂ 0.08	ZnO 0.48	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



Ceramic
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Freckles

Neph Sy	33.87
Whiting	7.82
Zinc Oxide	14.77
EPK	4.34
Flint	24.32
Bentonite	1.83
Light Rutile	3.48
Cobalt Carbonate	0.87
Ultrax (Zircopax)	8.70
Water	105



1-3 Second Dip



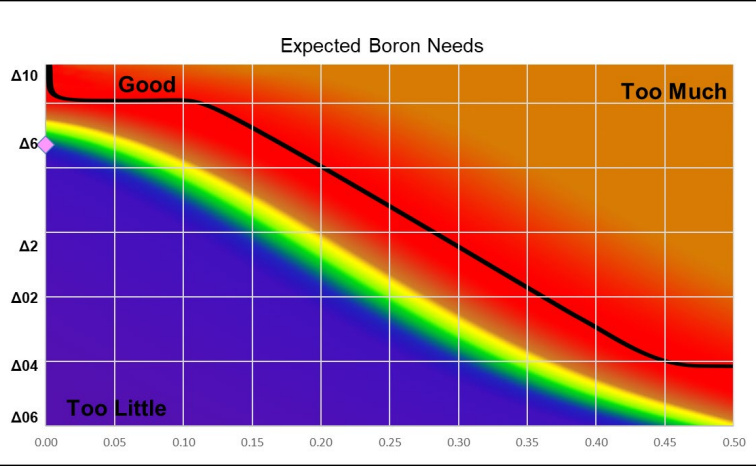
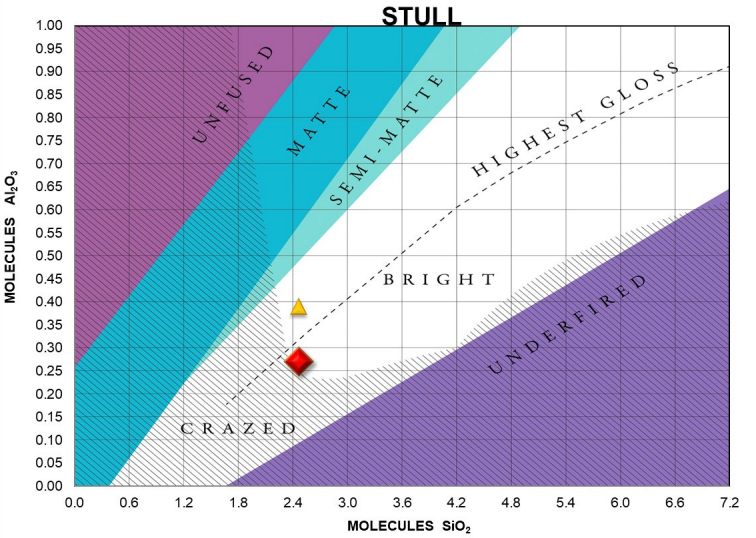
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 6.30 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.46	Collective "Al ₂ O ₃ " 0.39	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.23
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.53	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



Ceramic
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Freckles

Neph Sy	36.07
Whiting	8.32
Zinc Oxide	15.72
EPK	4.62
Flint	25.90
Bentonite	1.95
Light Rutile	3.71
Chrome Oxide	0.93
Copper Carbonate	2.78
Water	60



1-3 Second Dip



2-3 Second Dips

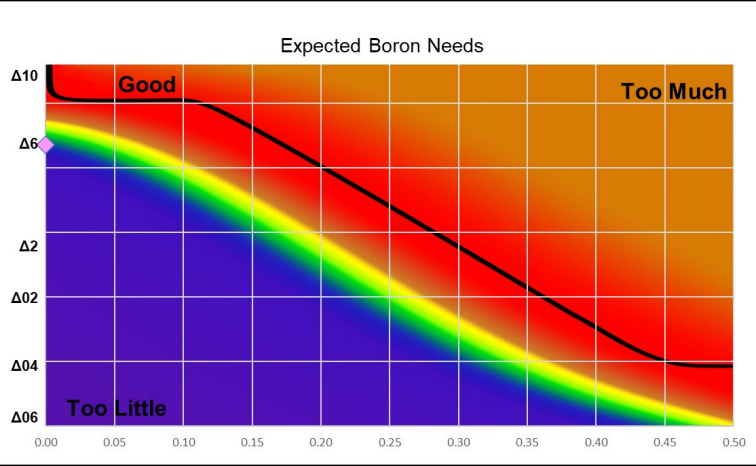
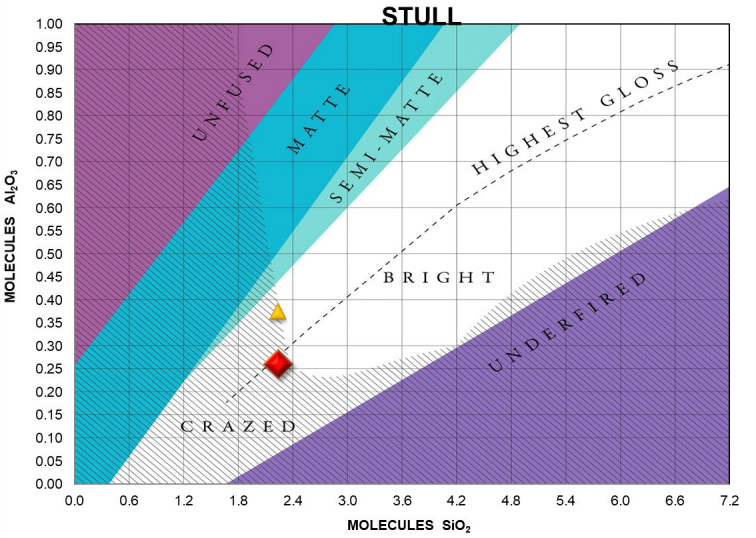


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.24	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.50	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



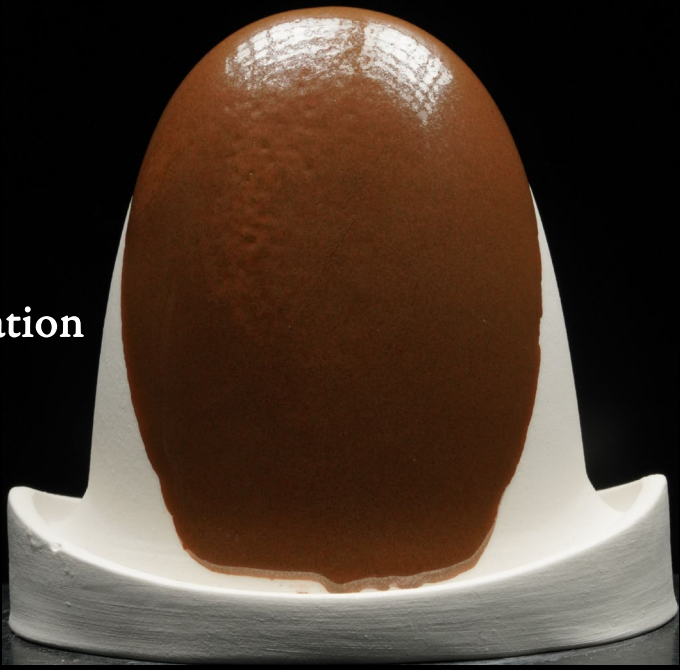
Ceramic
Materials
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Freckles

Neph Sy	35.09
Whiting	8.10
Zinc Oxide	15.30
EPK	4.50
Flint	25.20
Bentonite	1.90
Light Rutile	3.61
Chrome Oxide	0.90
Red Iron Oxide	5.41
Water	60



1-3 Second Dip



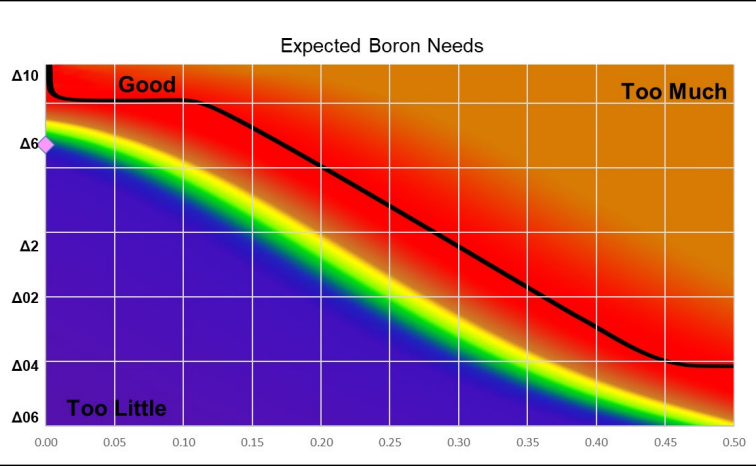
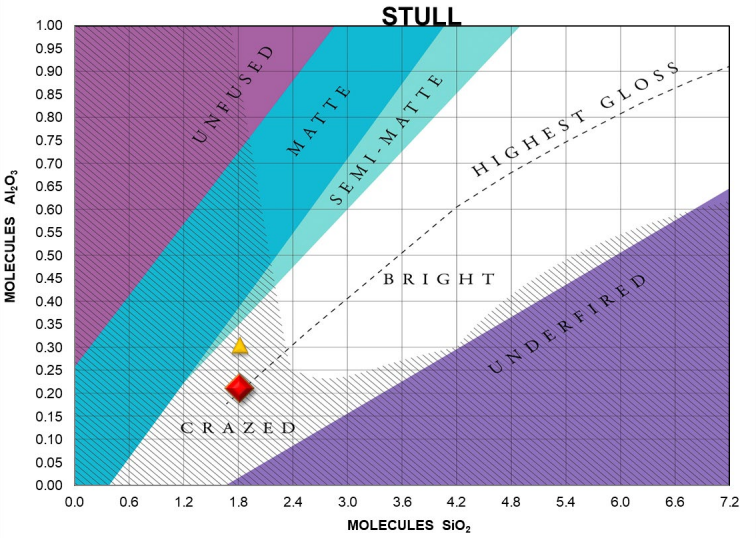
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 1.82	Collective "Al ₂ O ₃ " 0.31	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.18
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.09	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.41	FeO 0.24
Cr ₂ O ₃ 0.01	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
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Freckles

Neph Sy	36.07
Whiting	8.32
Zinc Oxide	15.72
EPK	4.62
Flint	25.90
Bentonite	1.95
Light Rutile	3.71
Chrome Oxide	0.93
Manganese Dioxide	2.78
Water	



1-3 Second Dip



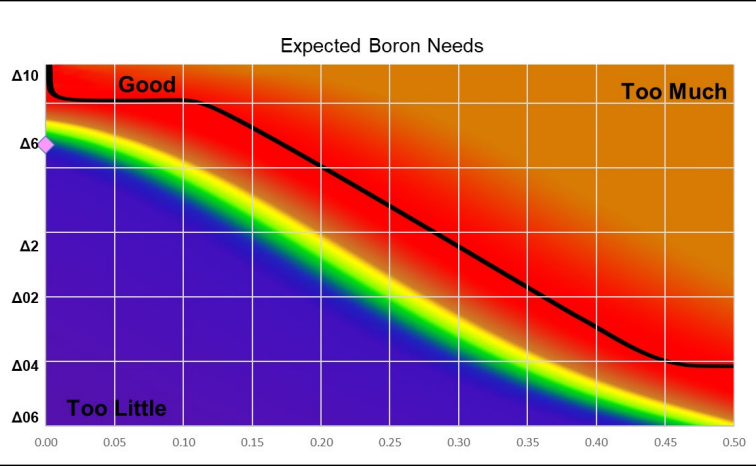
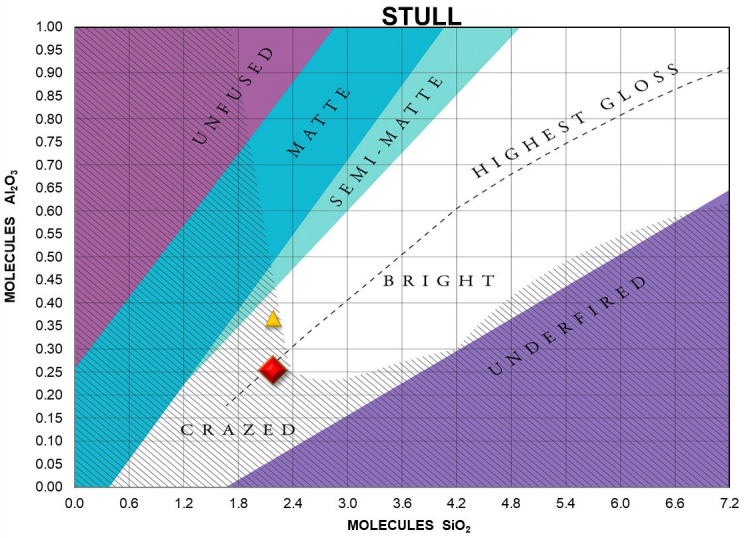
2-3 Second Dips



Reduction



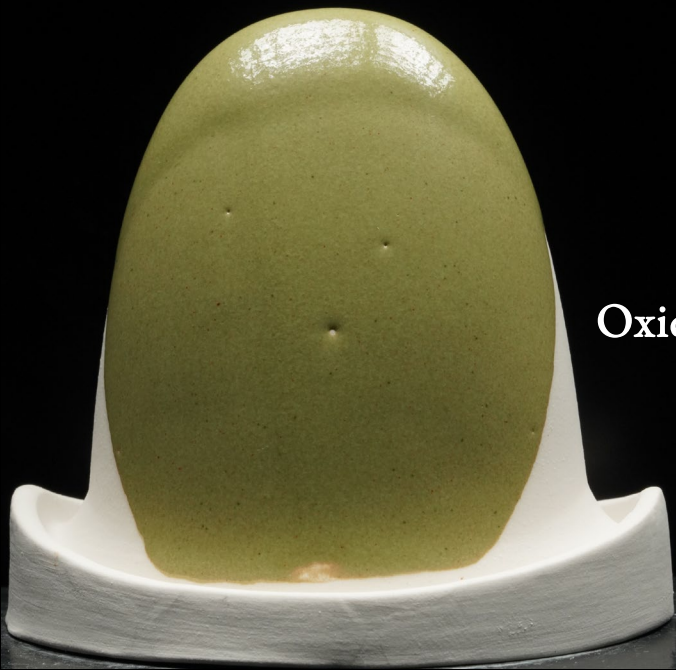
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.18	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.49	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



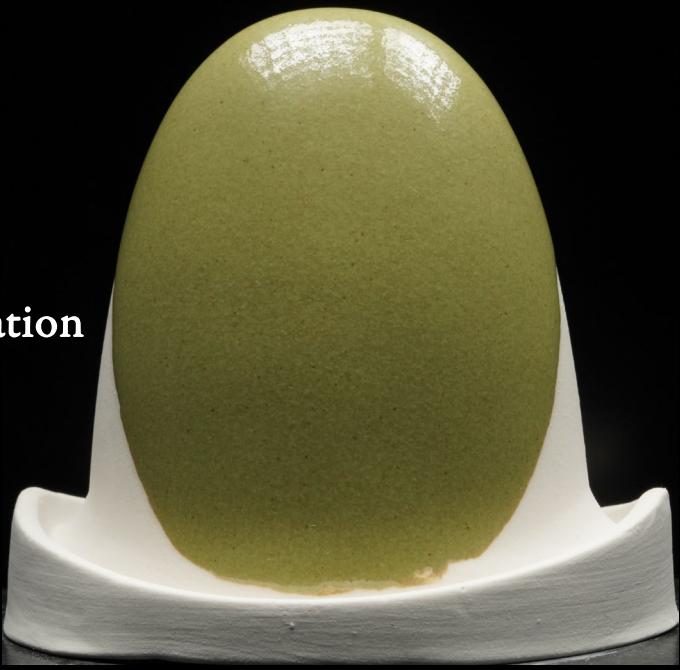
Ceramic
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Freckles

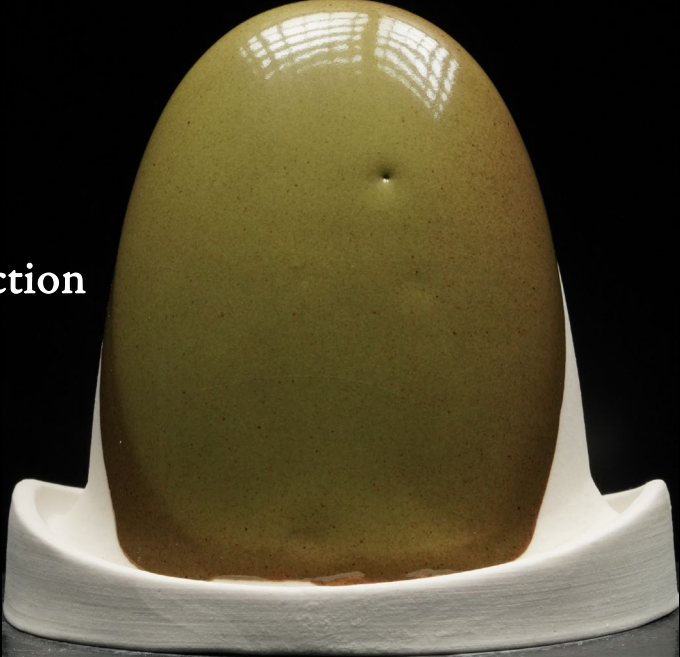
Neph Sy	36.24
Whiting	8.36
Zinc Oxide	15.80
EPK	4.65
Flint	26.02
Bentonite	1.96
Light Rutile	3.72
Chrome Oxide	0.93
Nickel Carb (Green)	2.33
Water	90



1-3 Second Dip

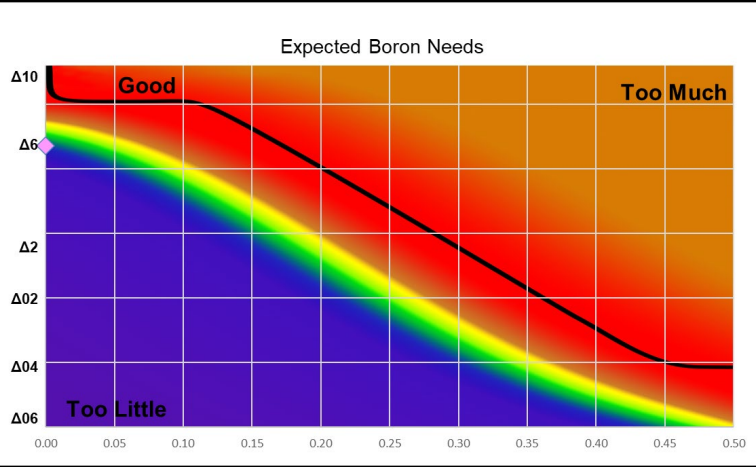
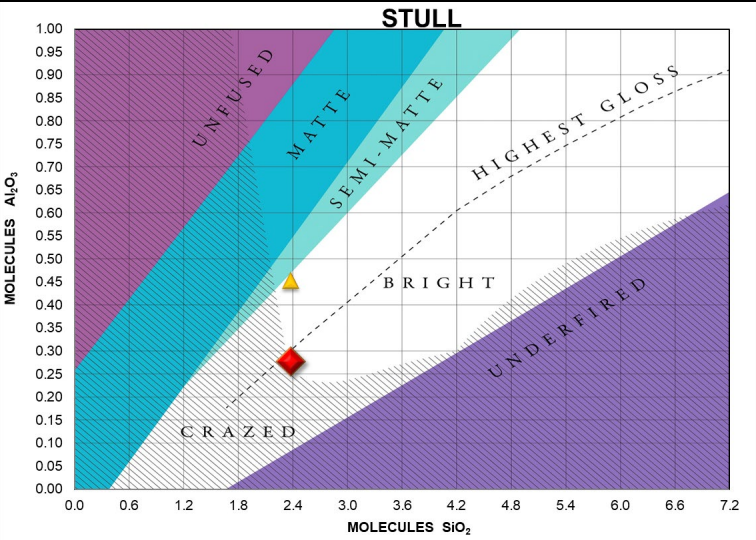


2-3 Second Dips



Reduction

SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.38	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



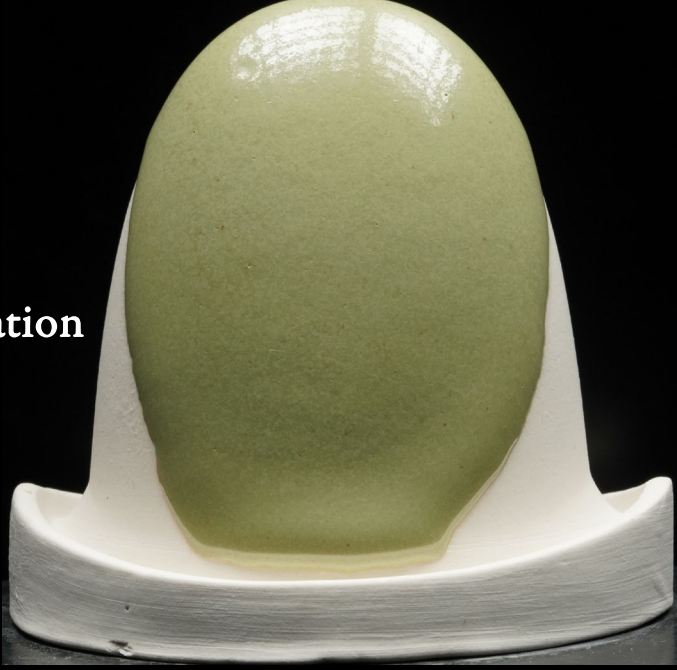
Ceramic
Materials
Workshop

Freckles

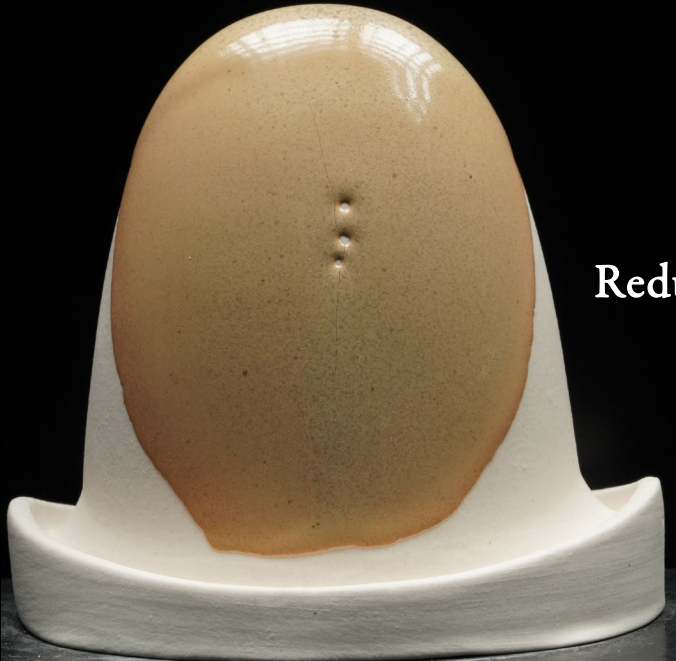
Neph Sy	35.09
Whiting	8.10
Zinc Oxide	15.30
EPK	4.50
Flint	25.20
Bentonite	1.90
Light Rutile	3.61
Chrome Oxide	0.90
Titanium Dioxide	5.41
Water	60



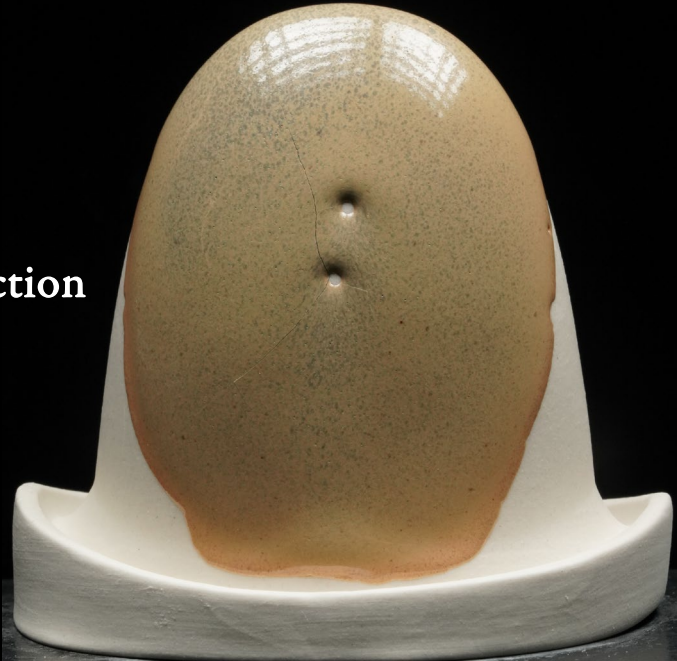
1-3 Second Dip



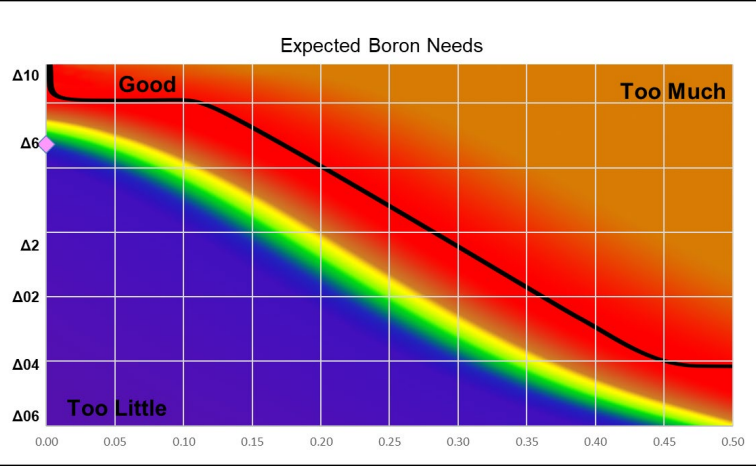
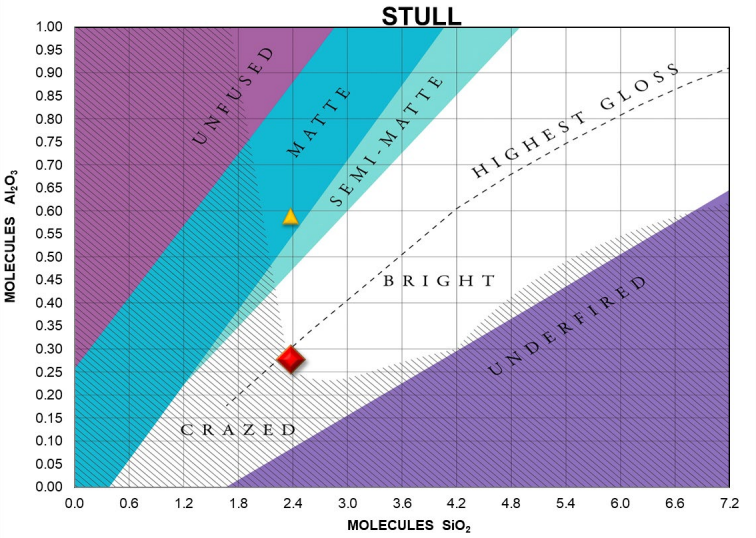
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.38	Collective "Al ₂ O ₃ " 0.59	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.31	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



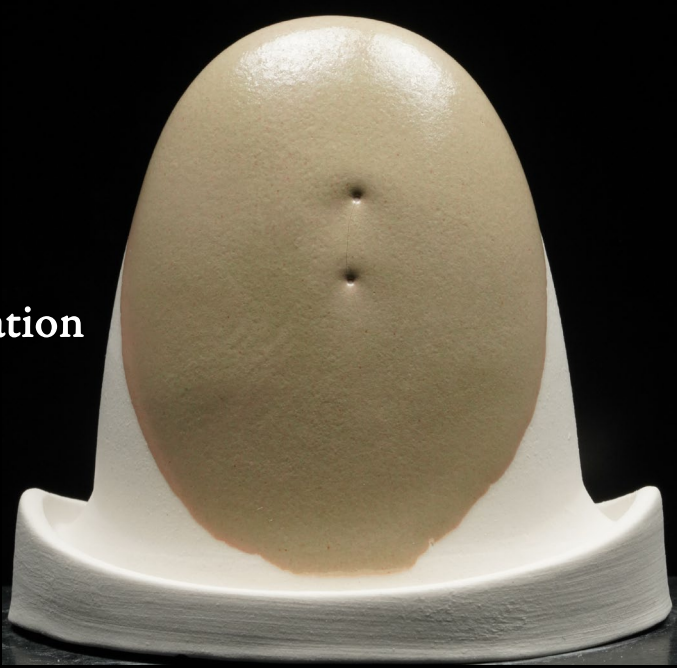
Ceramic
Materials
Workshop

Freckles

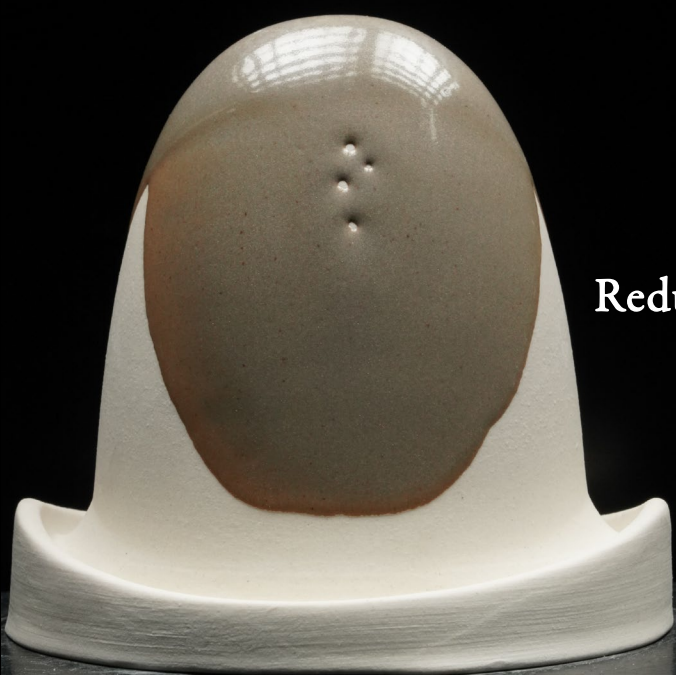
Neph Sy	35.41
Whiting	8.17
Zinc Oxide	15.44
EPK	4.54
Flint	25.43
Bentonite	1.92
Light Rutile	3.64
Chrome Oxide	0.91
Tin Oxide	4.55
Water	60



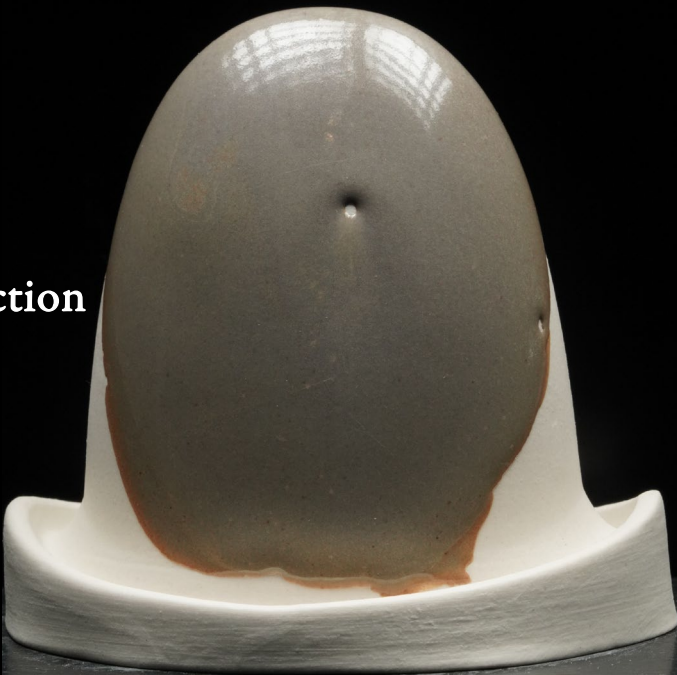
1-3 Second Dip



2-3 Second Dips

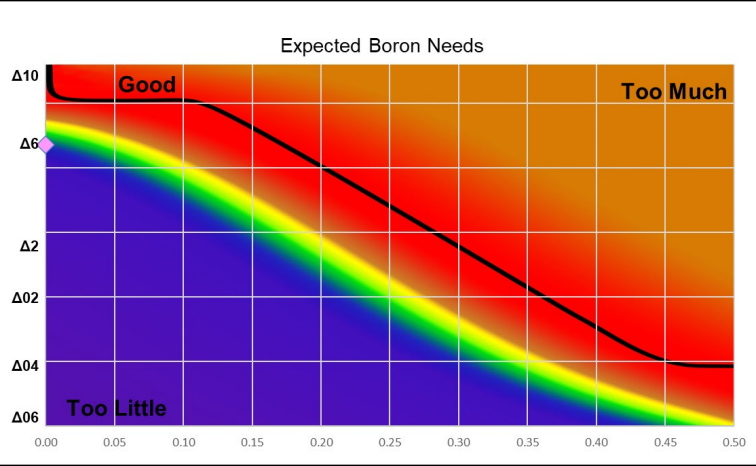
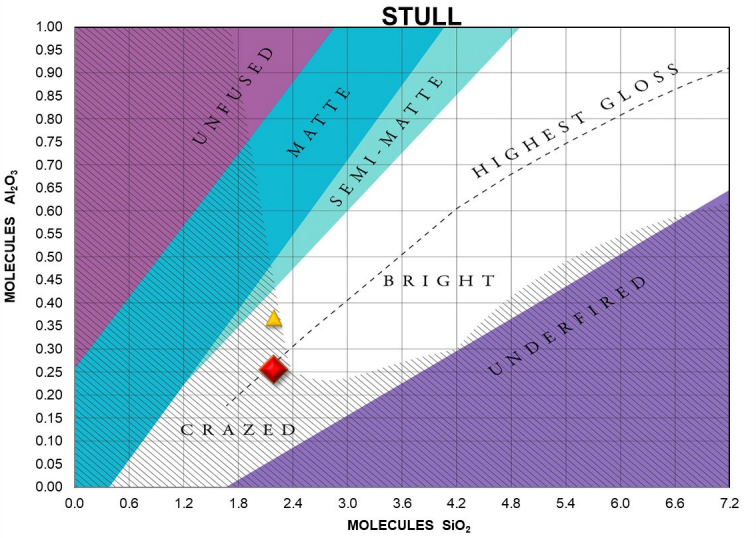


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂ 0.08	ZnO 0.49	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



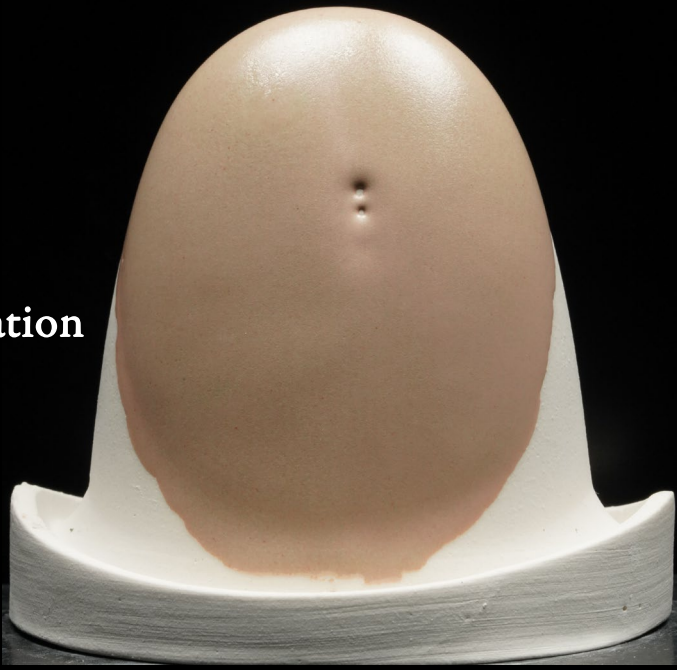
Ceramic
Materials
Workshop

Freckles

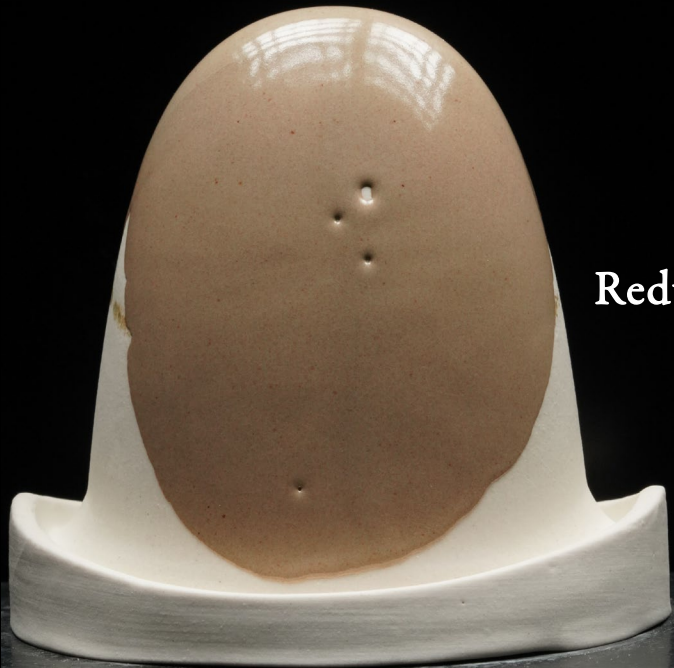
Neph Sy	33.87
Whiting	7.82
Zinc Oxide	14.77
EPK	4.34
Flint	24.32
Bentonite	1.83
Light Rutile	3.48
Chrome Oxide	0.87
Ultrax (Zircopax)	8.70
Water	60



1-3 Second Dip



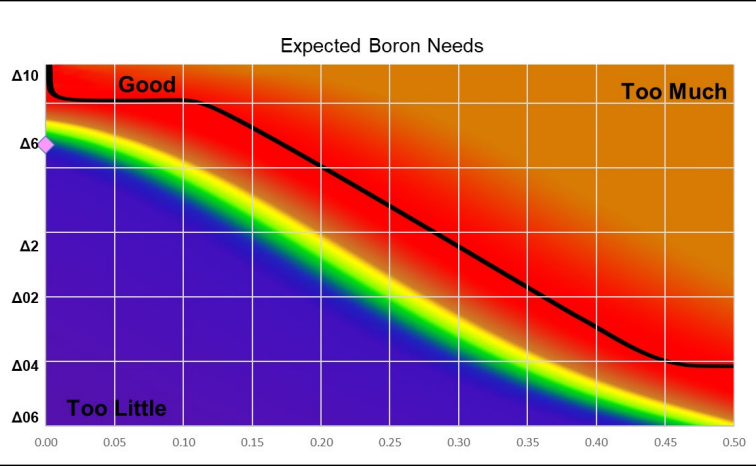
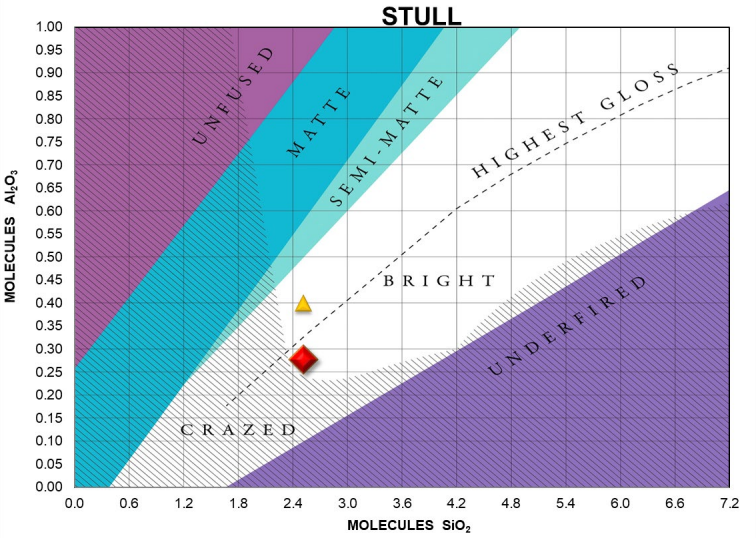
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 6.30 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.52	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



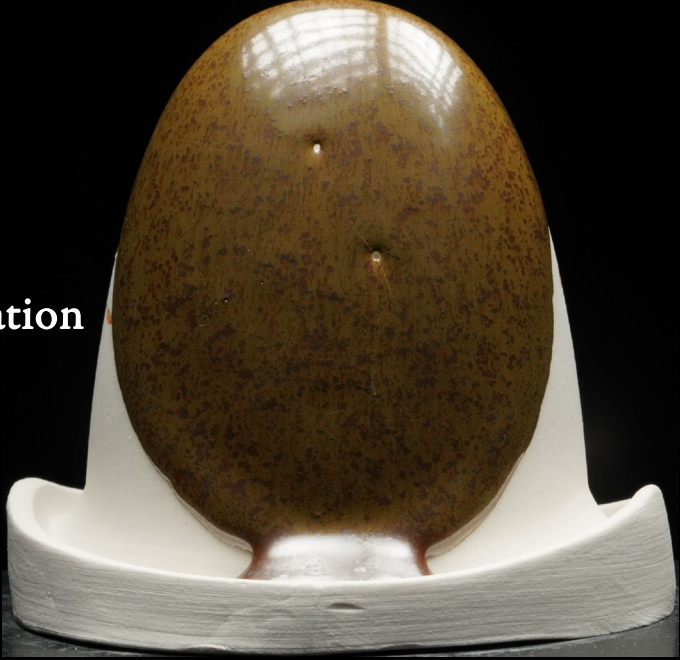
Ceramic
Materials
Workshop

Freckles

Neph Sy	34.47
Whiting	7.96
Zinc Oxide	15.03
EPK	4.42
Flint	24.75
Bentonite	1.87
Light Rutile	3.54
Copper Carbonate	2.65
Red Iron Oxide	5.31
Water	60



1-3 Second Dip



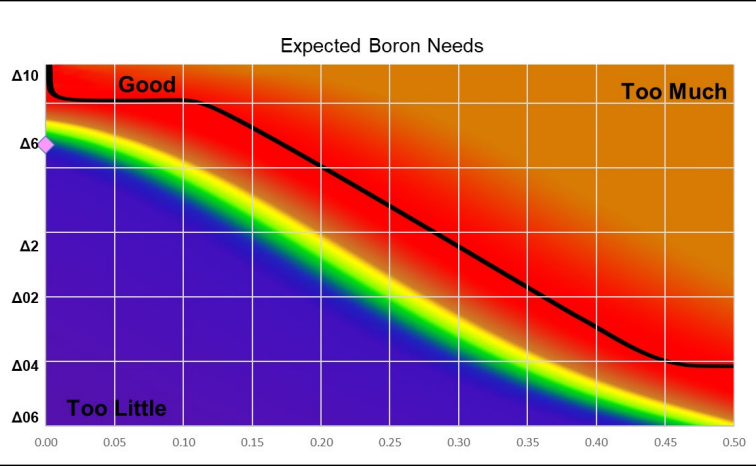
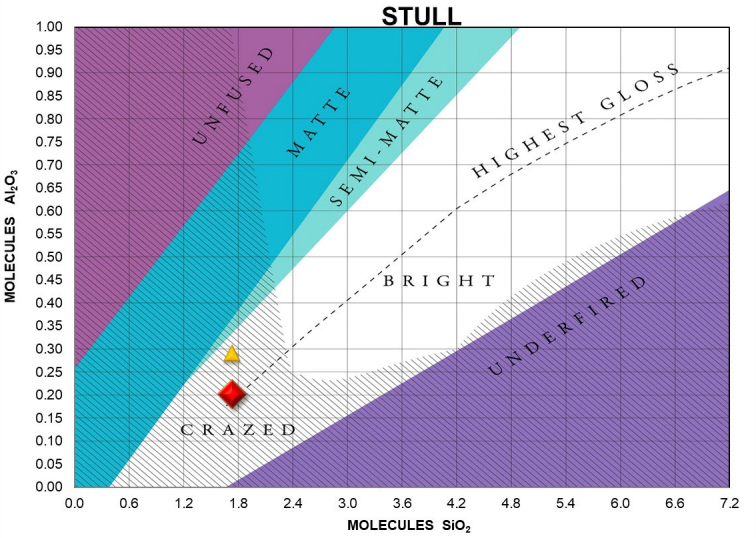
2-3 Second Dips



Reduction



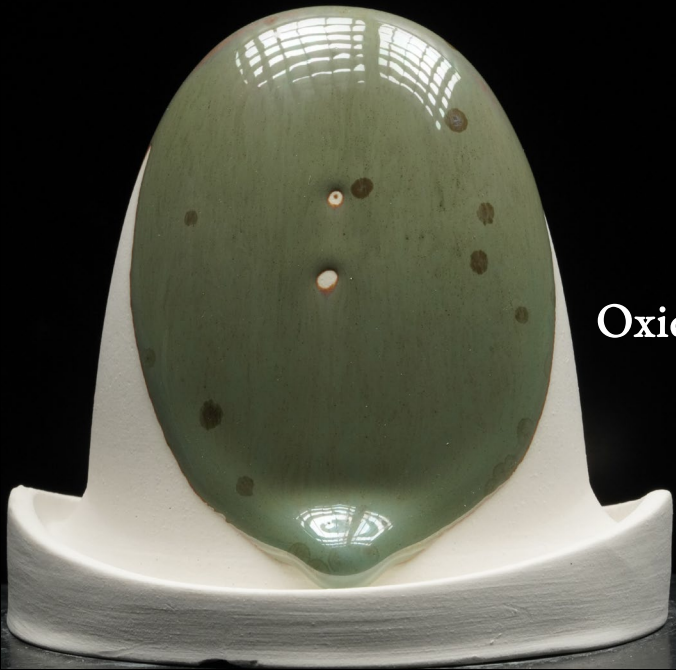
SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.73	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.12	K ₂ O 0.03	MgO 0.00	CaO 0.17
B ₂ O ₃	Al ₂ O ₃ 0.20	Li ₂ O	CuO 0.05	SrO	BaO
TiO ₂ 0.09	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.39	FeO 0.23
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



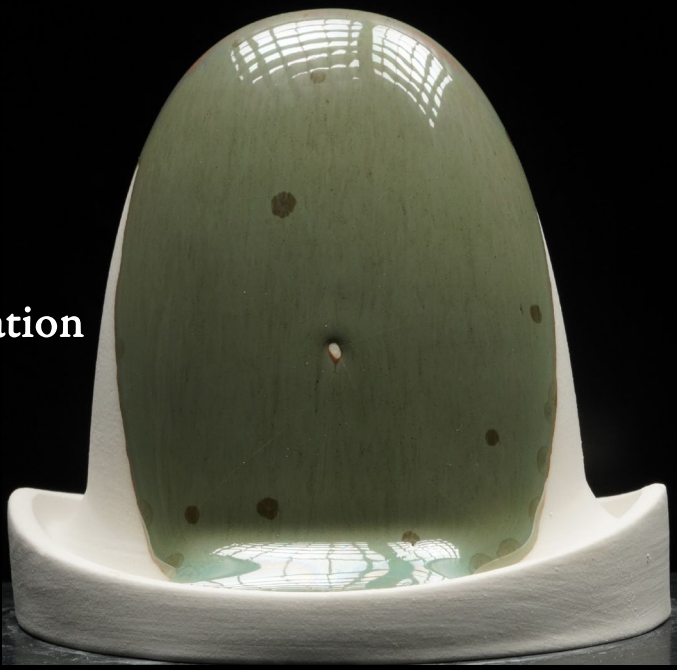
Ceramic
Materials
Workshop

Freckles

Neph Sy	35.41
Whiting	8.17
Zinc Oxide	15.44
EPK	4.54
Flint	25.43
Bentonite	1.92
Light Rutile	3.64
Copper Carbonate	2.73
Manganese Dioxide	2.73
Water	60



1-3 Second Dip



2-3 Second Dips

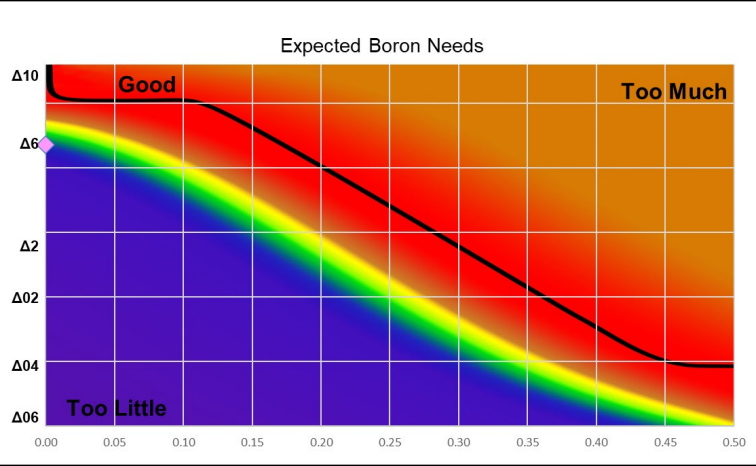
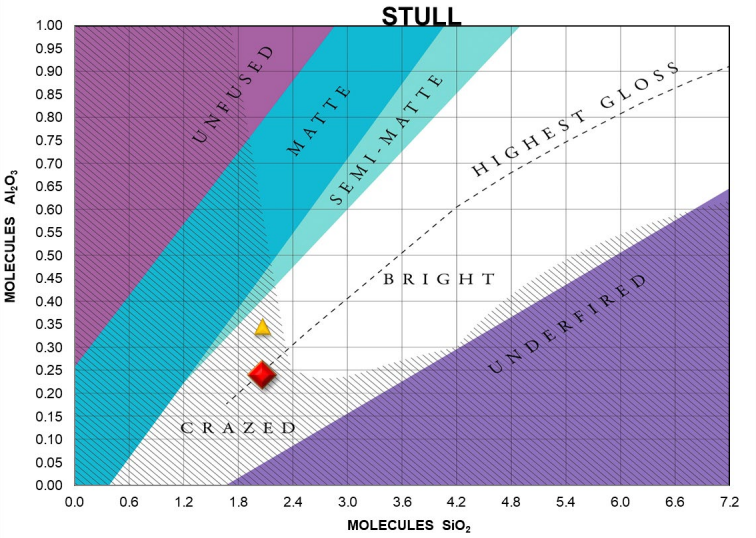


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.07	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.21
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO 0.05	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.47	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



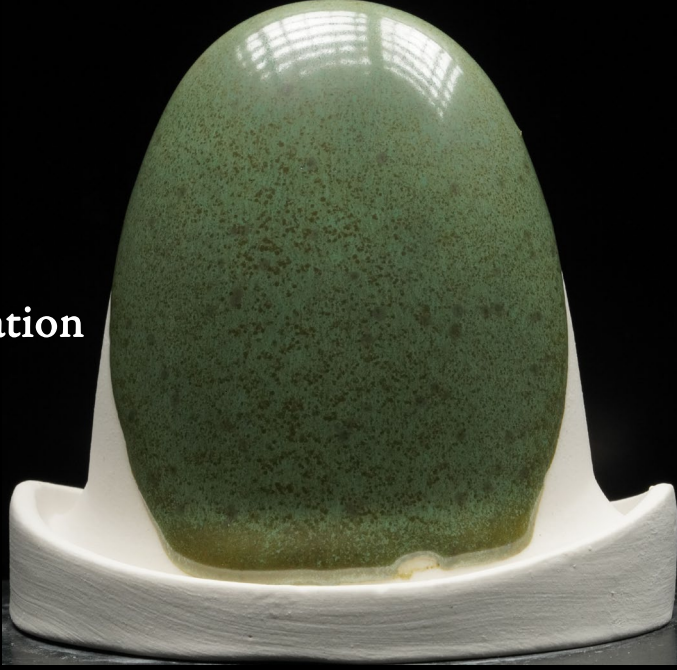
Ceramic
Materials
Workshop

Freckles

Neph Sy	35.58
Whiting	8.21
Zinc Oxide	15.51
EPK	4.56
Flint	25.54
Bentonite	1.93
Light Rutile	3.66
Copper Carbonate	2.74
Nickel Carb (Green)	2.28
Water	90



1-3 Second Dip



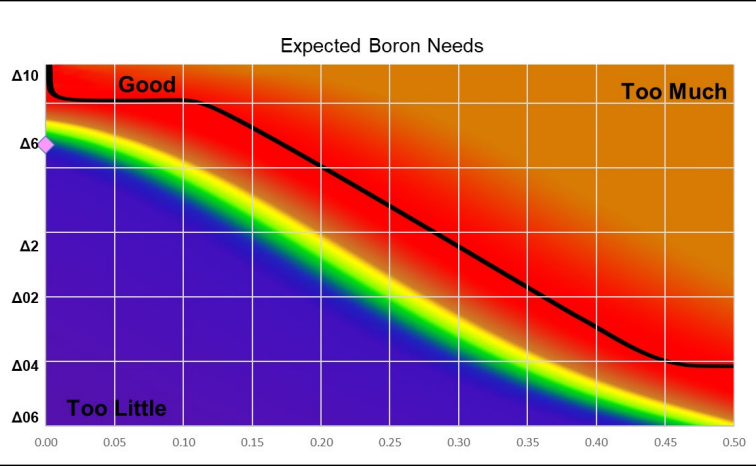
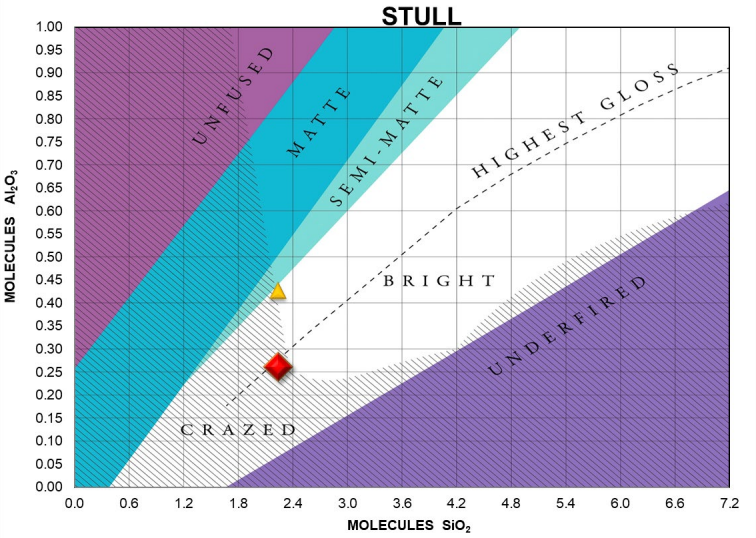
2-3 Second Dips



Reduction



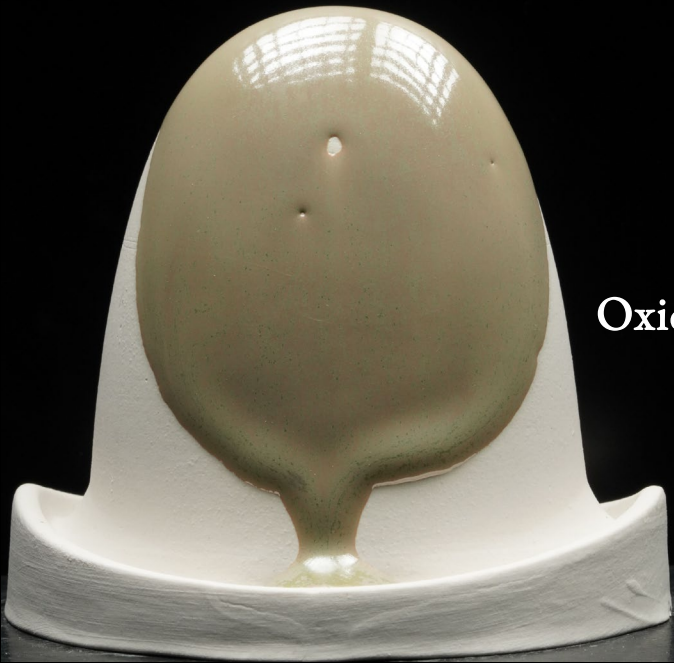
SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.24	Collective "Al ₂ O ₃ " 0.43	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.12	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.50	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	34.47
Whiting	7.96
Zinc Oxide	15.03
EPK	4.42
Flint	24.75
Bentonite	1.87
Light Rutile	3.54
Copper Carbonate	2.65
Titanium Dioxide	5.31
Water	60



1-3 Second Dip



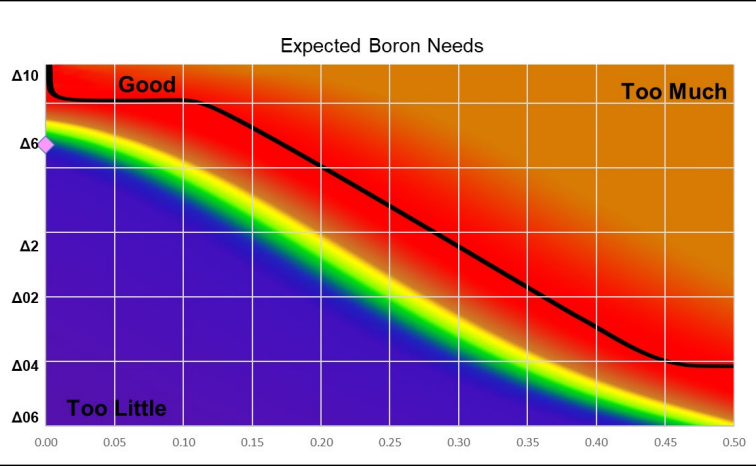
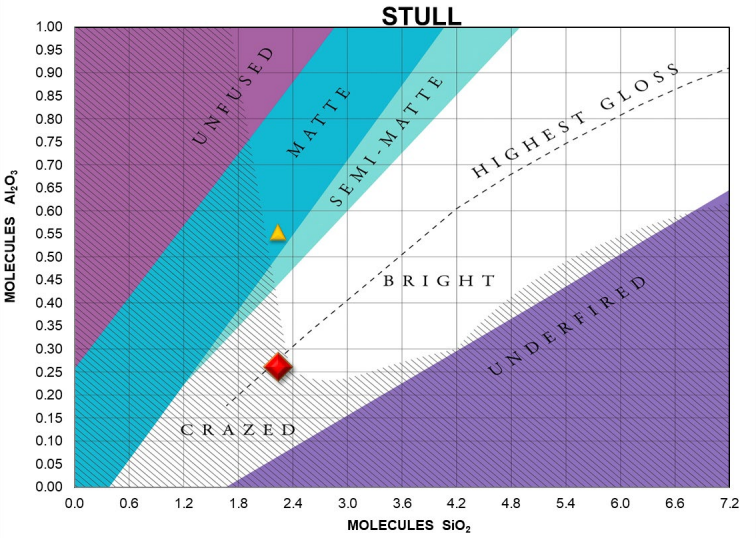
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.24	Collective "Al ₂ O ₃ " 0.56	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.30	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.50	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	34.78
Whiting	8.03
Zinc Oxide	15.16
EPK	4.46
Flint	24.97
Bentonite	1.88
Light Rutile	3.57
Copper Carbonate	2.68
Tin Oxide	4.46
Water	60



1-3 Second Dip



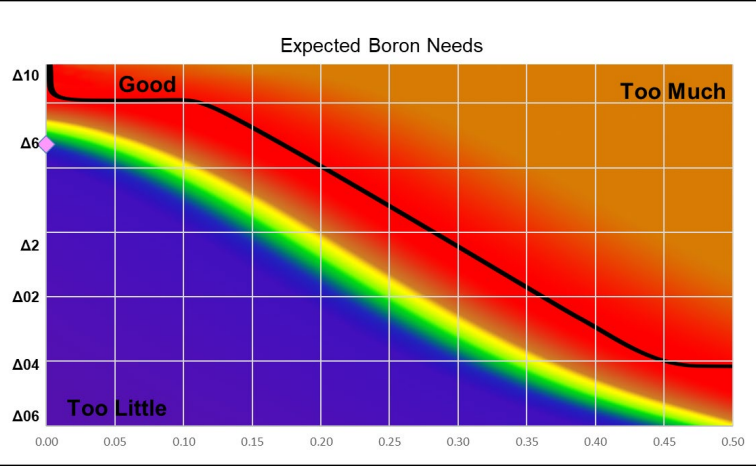
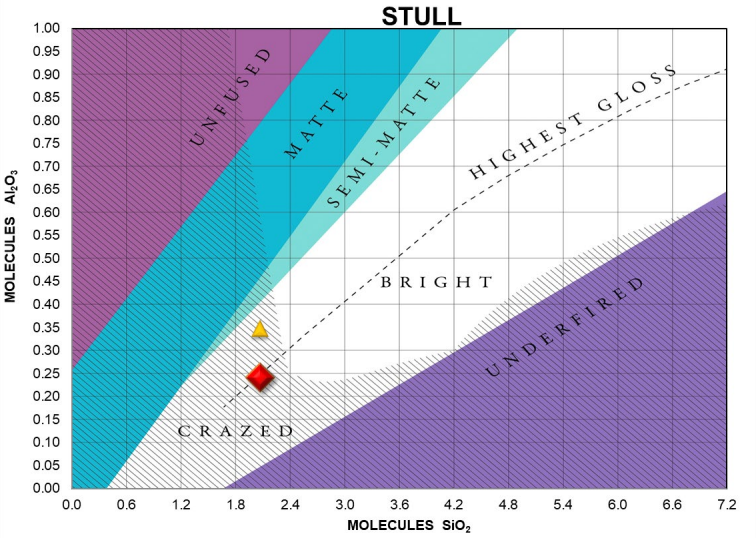
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 2.07	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.21
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO 0.05	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂ 0.07	ZnO 0.47	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	33.29
Whiting	7.68
Zinc Oxide	14.51
EPK	4.27
Flint	23.90
Bentonite	1.80
Light Rutile	3.42
Copper Carbonate	2.56
Ultrox (Zircopax)	8.55
Water	60



1-3 Second Dip



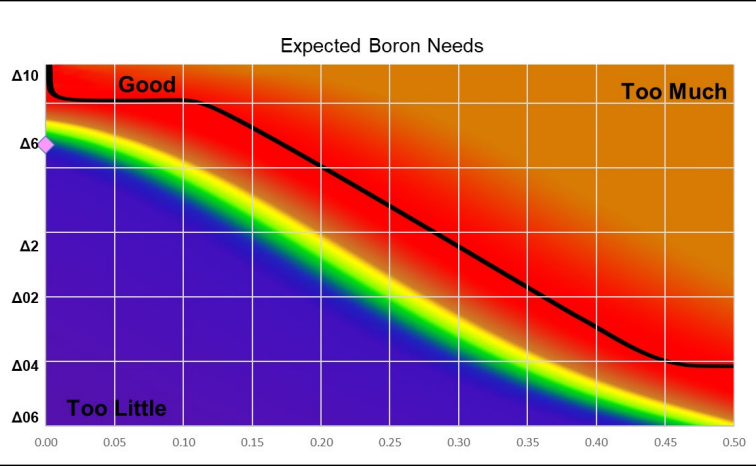
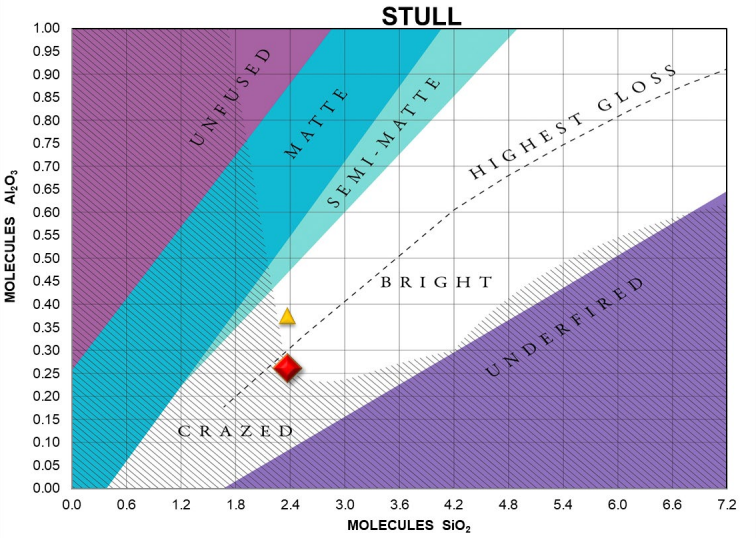
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 6.30 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.37	Collective "Al ₂ O ₃ " 0.38	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.12	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.50	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	34.47
Whiting	7.96
Zinc Oxide	15.03
EPK	4.42
Flint	24.75
Bentonite	1.87
Light Rutile	3.54
Red Iron Oxide	5.31
Manganese Dioxide	2.65
Water	60



1-3 Second Dip



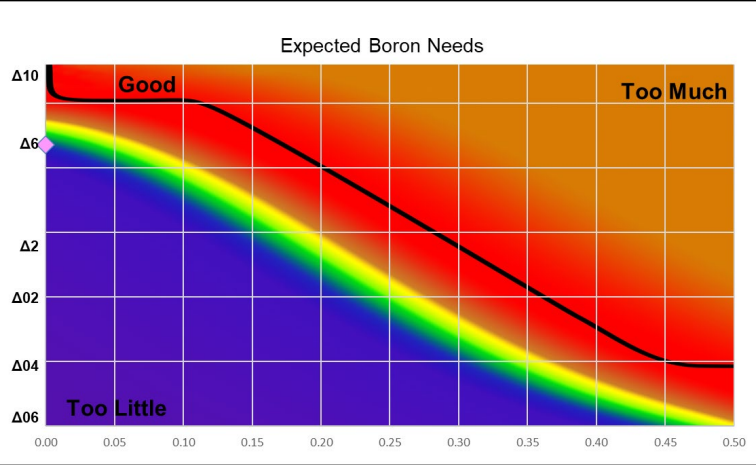
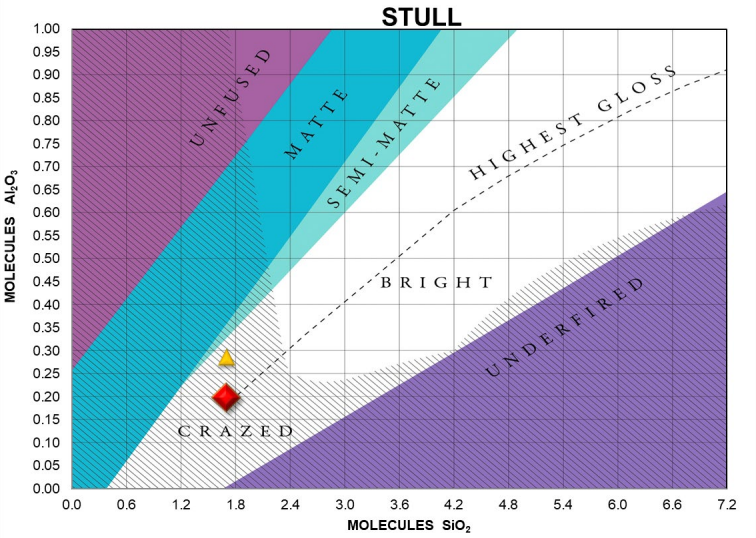
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.15		Alkaline Earths 0.85	
SiO ₂ 1.70	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.12	K ₂ O 0.03	MgO 0.00	CaO 0.17
B ₂ O ₃	Al ₂ O ₃ 0.20	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.09	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.38	FeO 0.22
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.06	CoO



Ceramic
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Freckles

Neph Sy	34.63
Whiting	7.99
Zinc Oxide	15.09
EPK	4.44
Flint	24.86
Bentonite	1.88
Light Rutile	3.56
Red Iron Oxide	5.33
Nickel Carb (Green)	2.22
Water	90



1-3 Second Dip



2-3 Second Dips

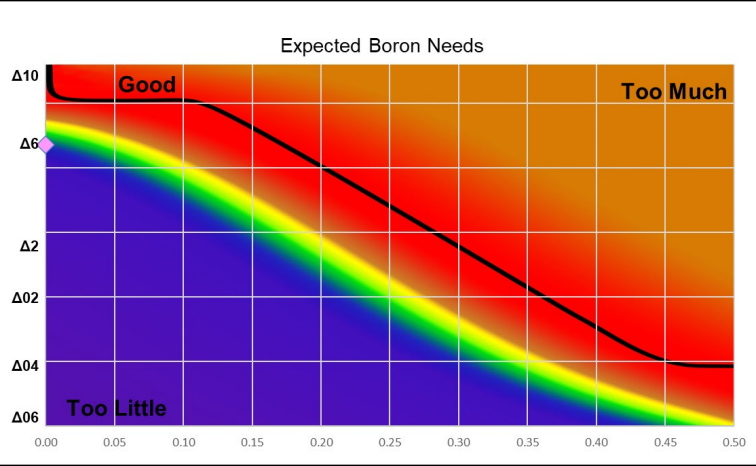
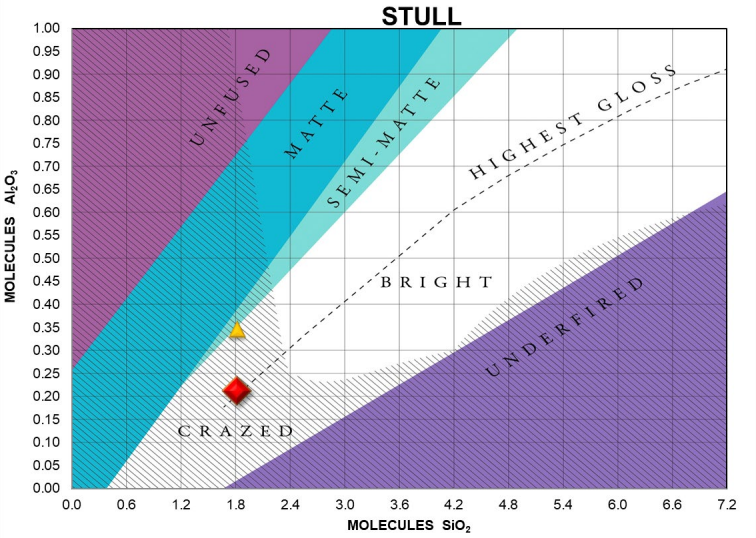


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 1.82	Collective "Al ₂ O ₃ " 0.35	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.18
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.09	NiO 0.04	Bi ₂ O ₃	SnO ₂	ZnO 0.41	FeO 0.24
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

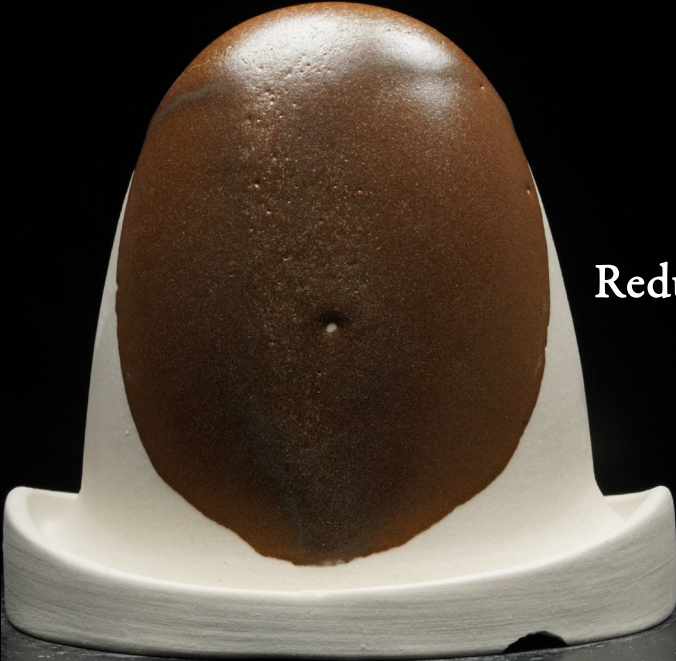
Neph Sy	33.58
Whiting	7.75
Zinc Oxide	14.64
EPK	4.31
Flint	24.11
Bentonite	1.82
Light Rutile	3.45
Red Iron Oxide	5.17
Titanium Dioxide	5.17
Water	60



1-3 Second Dip



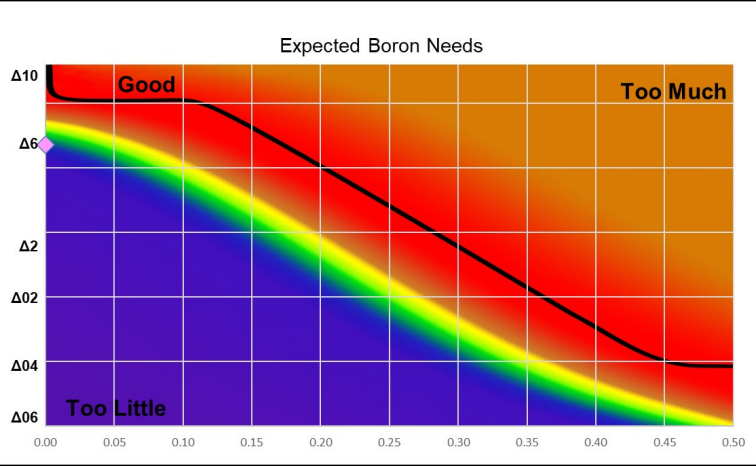
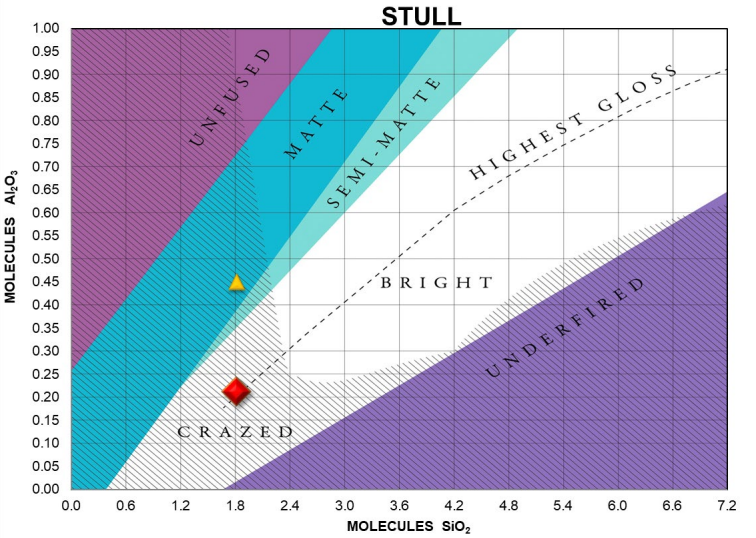
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 1.82	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.18
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.24	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.41	FeO 0.24
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



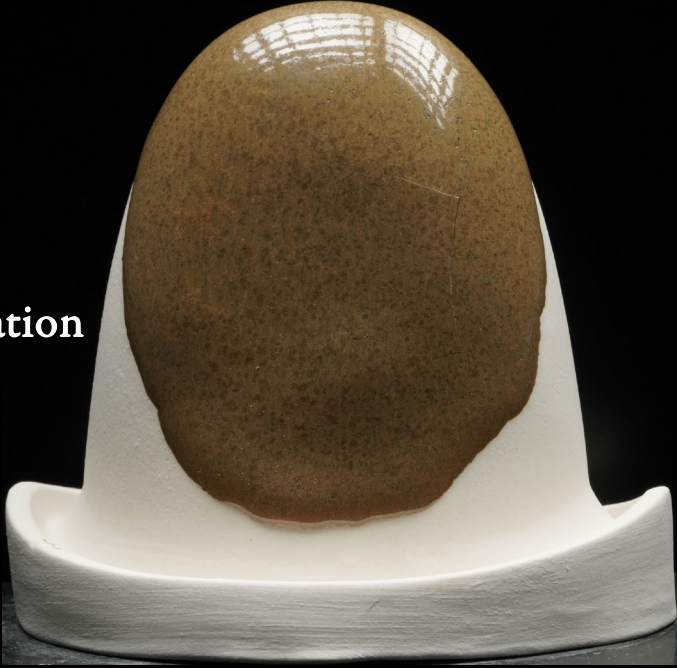
Ceramic
Materials
Workshop

Freckles

Neph Sy	33.87
Whiting	7.82
Zinc Oxide	14.77
EPK	4.34
Flint	24.32
Bentonite	1.83
Light Rutile	3.48
Red Iron Oxide	5.22
Tin Oxide	4.35
Water	60



1-3 Second Dip



2-3 Second Dips

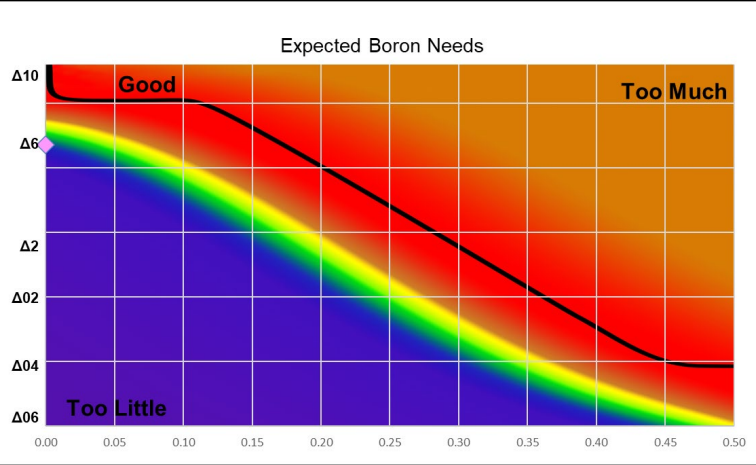
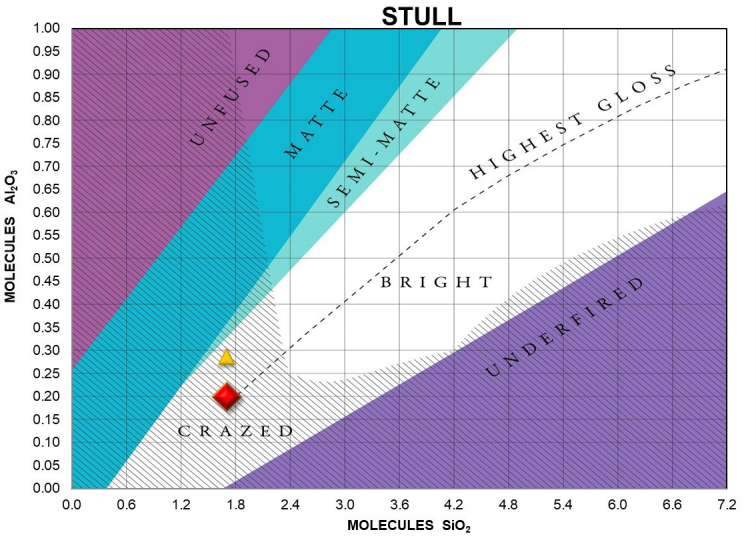


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.95 :1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 1.71	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.12	K ₂ O 0.03	MgO 0.00	CaO 0.17
B ₂ O ₃	Al ₂ O ₃ 0.20	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.09	NiO	Bi ₂ O ₃	SnO ₂ 0.06	ZnO 0.38	FeO 0.22
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	32.46
Whiting	7.49
Zinc Oxide	14.15
EPK	4.16
Flint	23.31
Bentonite	1.76
Light Rutile	3.34
Red Iron Oxide	5.00
Ultrox (Zircopax)	8.33
Water	60



1-3 Second Dip



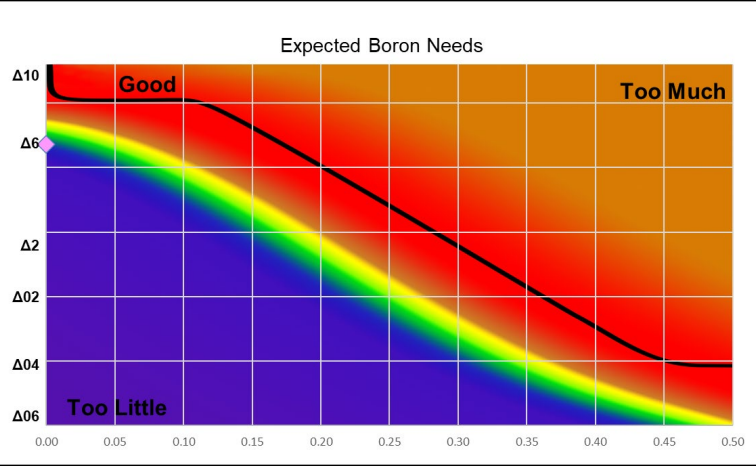
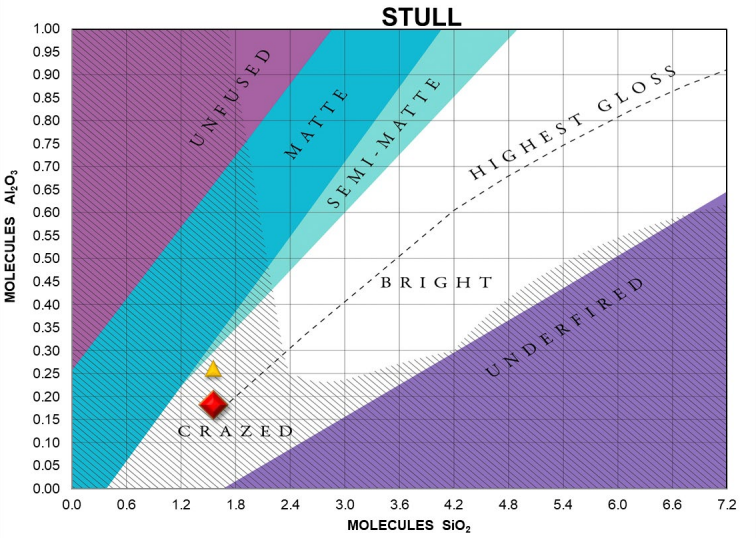
2-3 Second Dips



Reduction

Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.14		Alkaline Earths 0.86	
SiO ₂ 1.56	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.11	K ₂ O 0.03	MgO 0.00	CaO 0.16
B ₂ O ₃	Al ₂ O ₃ 0.18	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.08	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.35	FeO 0.21
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.14



Ceramic
Materials
Workshop

Freckles

Neph Sy	35.58
Whiting	8.21
Zinc Oxide	15.51
EPK	4.56
Flint	25.54
Bentonite	1.93
Light Rutile	3.66
Manganese Dioxide	2.74
Nickel Carb (Green)	2.28
Water	90



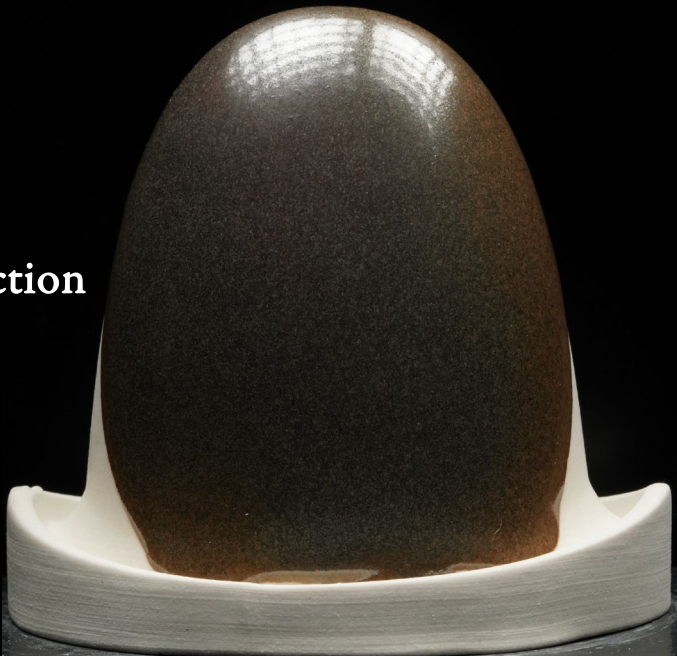
1-3 Second Dip



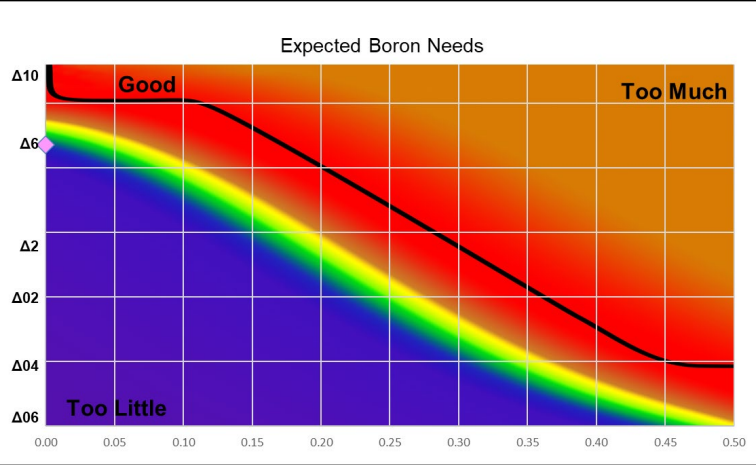
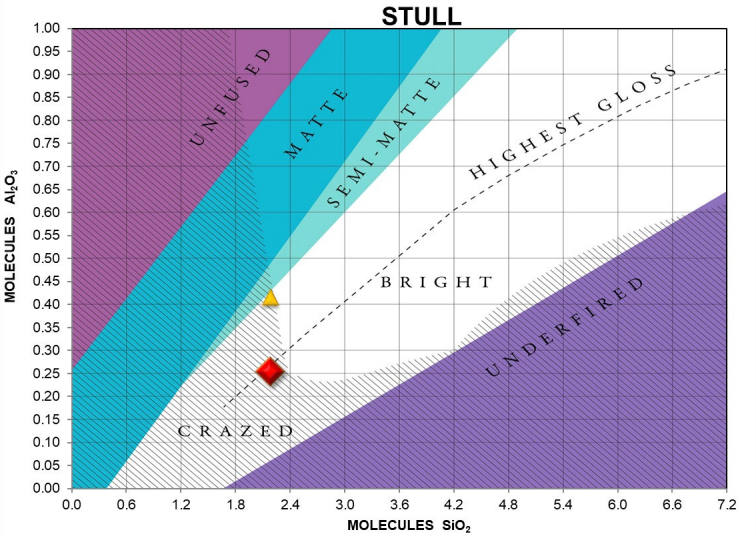
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.18	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



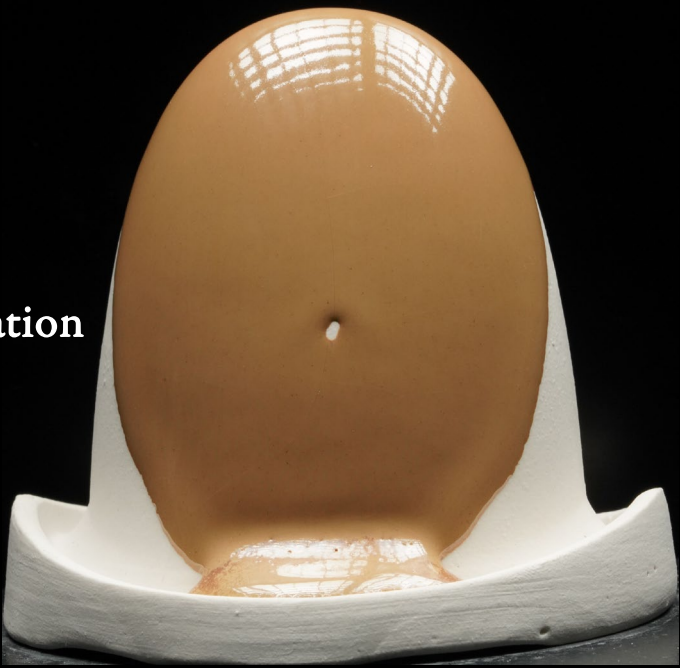
Ceramic
Materials
Workshop

Freckles

Neph Sy	34.47
Whiting	7.96
Zinc Oxide	15.03
EPK	4.42
Flint	24.75
Bentonite	1.87
Light Rutile	3.54
Manganese Dioxide	2.65
Titanium Dioxide	5.31
Water	60



1-3 Second Dip



2-3 Second Dips

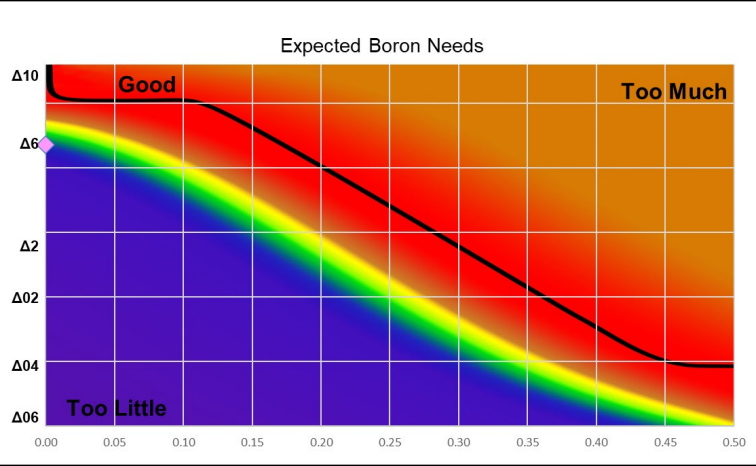
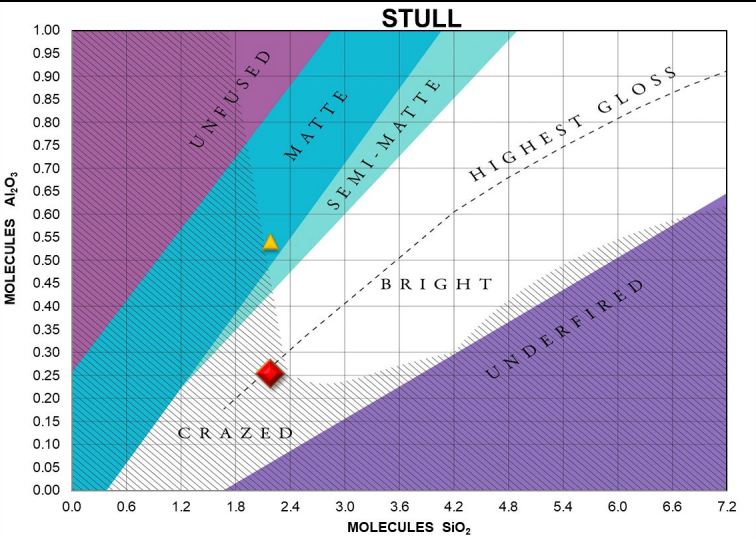


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.18	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.29	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



Ceramic
Materials
Workshop

Freckles

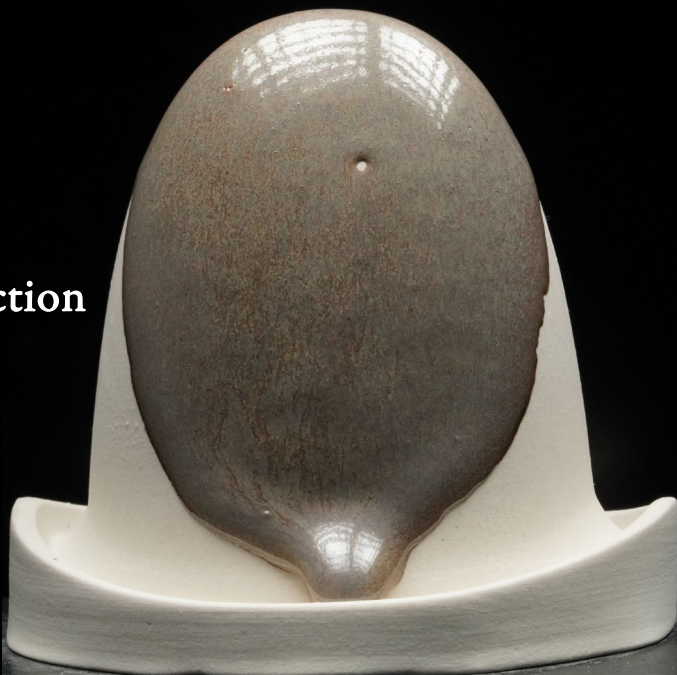
Neph Sy	34.78
Whiting	8.03
Zinc Oxide	15.16
EPK	4.46
Flint	24.97
Bentonite	1.88
Light Rutile	3.57
Manganese Dioxide	2.68
Tin Oxide	4.46
Water	60



1-3 Second Dip



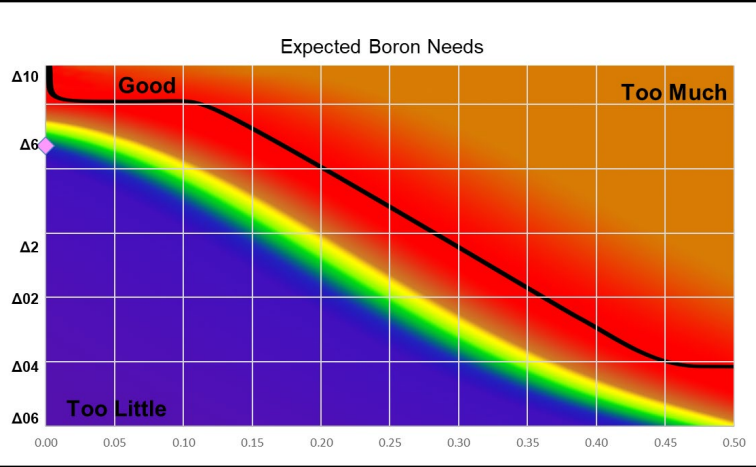
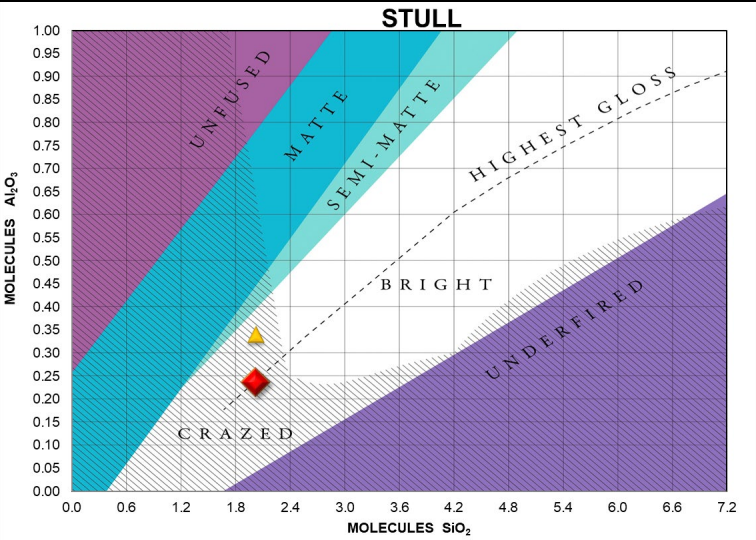
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 5.95 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.03	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.14	K ₂ O 0.04	MgO 0.00	CaO 0.20
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂ 0.07	ZnO 0.46	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	33.29
Whiting	7.68
Zinc Oxide	14.51
EPK	4.27
Flint	23.90
Bentonite	1.80
Light Rutile	3.42
Manganese Dioxide	2.56
Ultrox (Zircopax)	8.55
Water	60



1-3 Second Dip



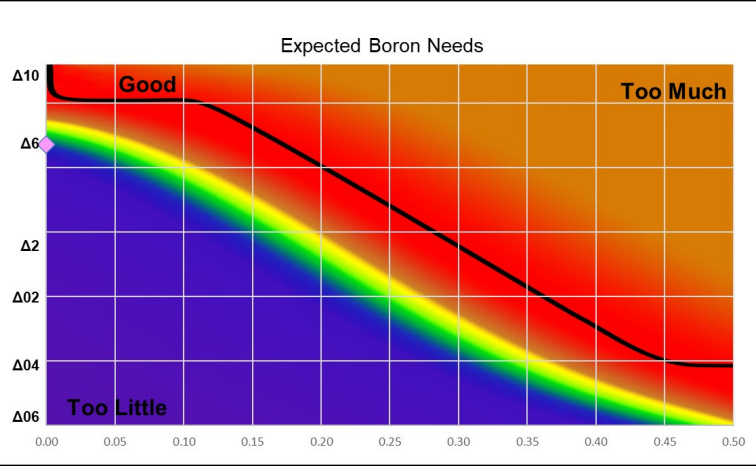
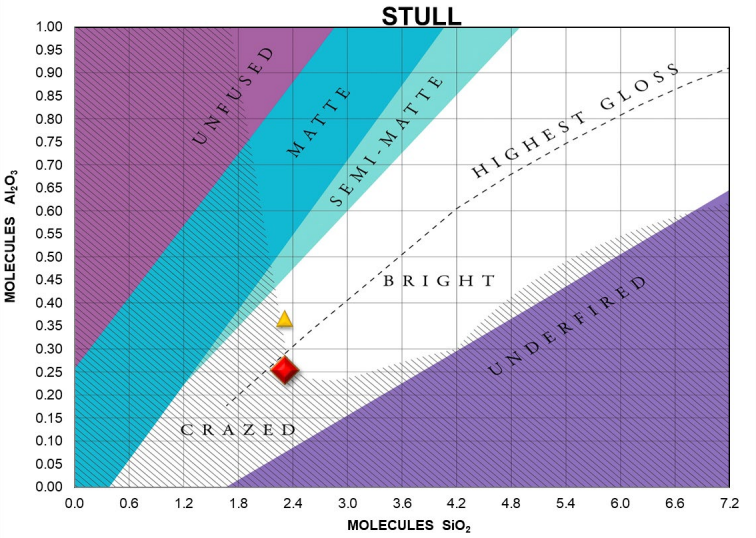
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 6.30 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.31	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	34.63
Whiting	7.99
Zinc Oxide	15.09
EPK	4.44
Flint	24.86
Bentonite	1.88
Light Rutile	3.56
Nickel Carb (Green)	2.22
Titanium Dioxide	5.33
Water	100



Oxidation

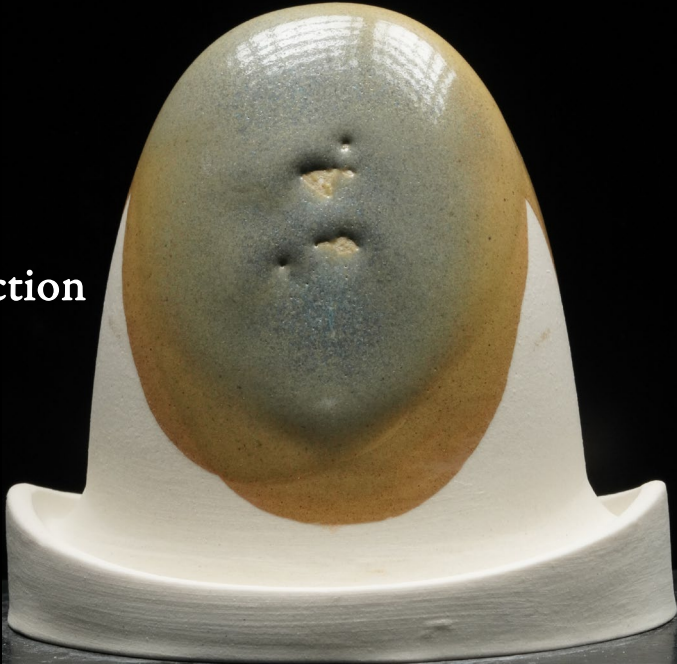


1-3 Second Dip

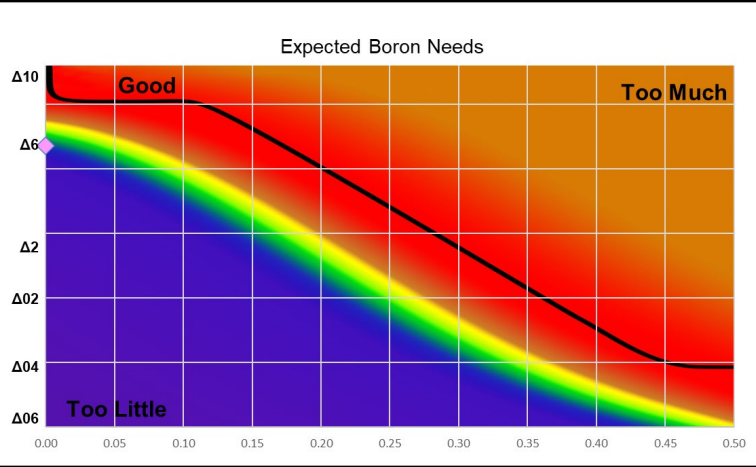
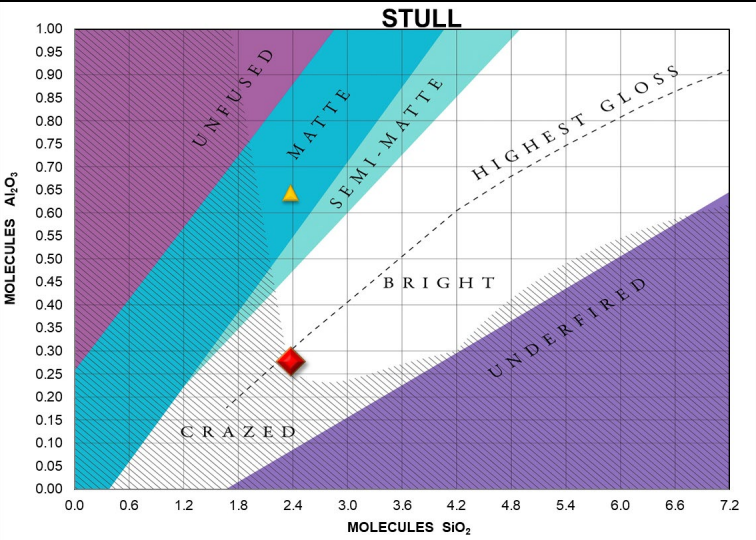
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 3.69 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.38	Collective "Al ₂ O ₃ " 0.64	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.31	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	34.94
Whiting	8.06
Zinc Oxide	15.23
EPK	4.48
Flint	25.08
Bentonite	1.89
Light Rutile	3.59
Nickel Carb (Green)	2.24
Tin Oxide	4.48
Water	100



1-3 Second Dip



2-3 Second Dips

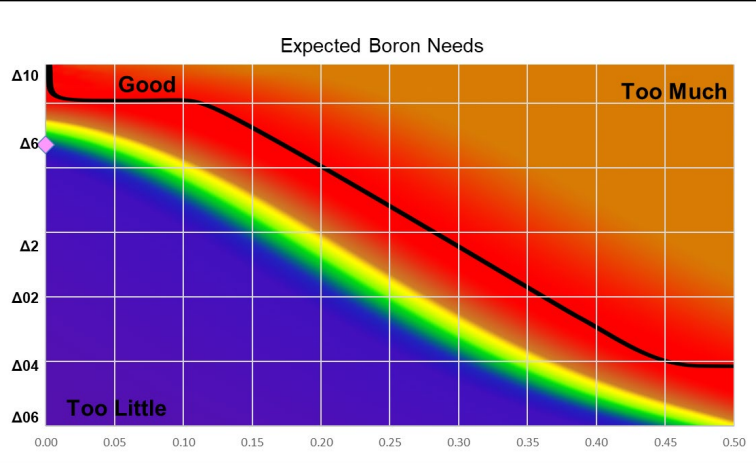
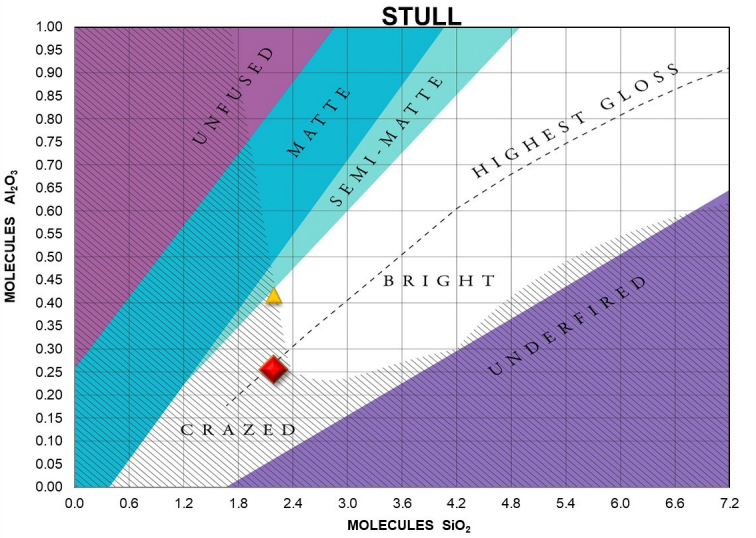


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.24 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.42	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO 0.05	Bi ₂ O ₃	SnO ₂ 0.08	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



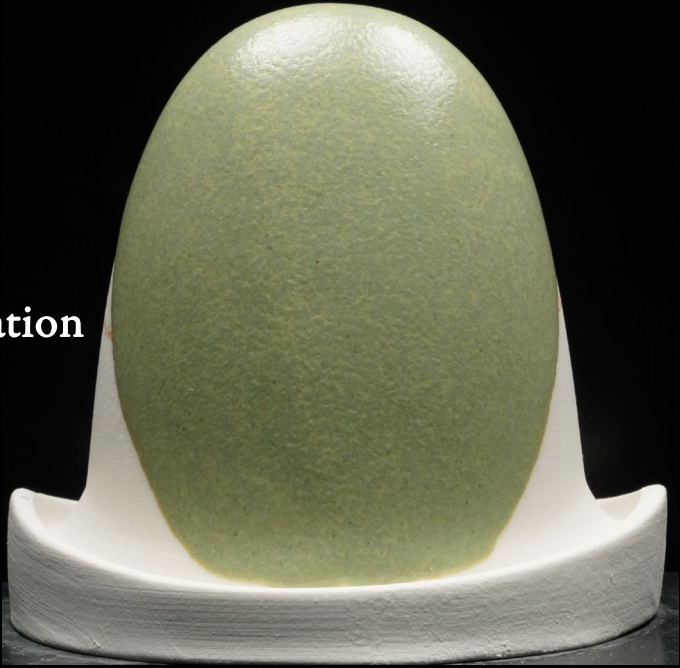
Ceramic
Materials
Workshop

Freckles

Neph Sy	33.44
Whiting	7.72
Zinc Oxide	14.58
EPK	4.29
Flint	24.01
Bentonite	1.81
Light Rutile	3.44
Nickel Carb (Green)	2.15
Ultrax (Zircopax)	8.58
Water	100



1-3 Second Dip



2-3 Second Dips

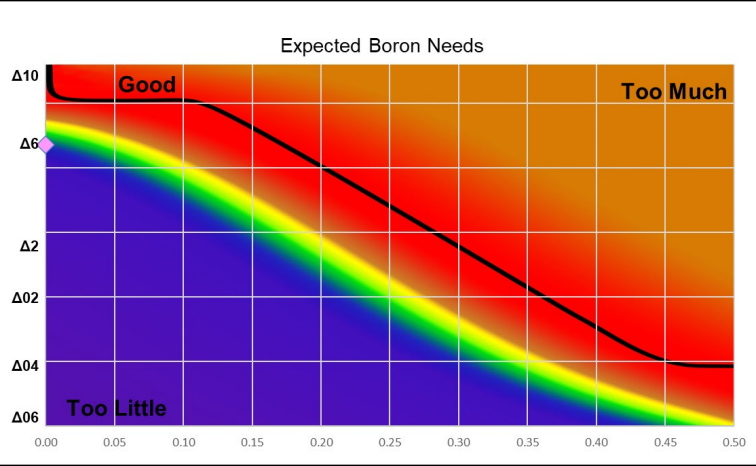
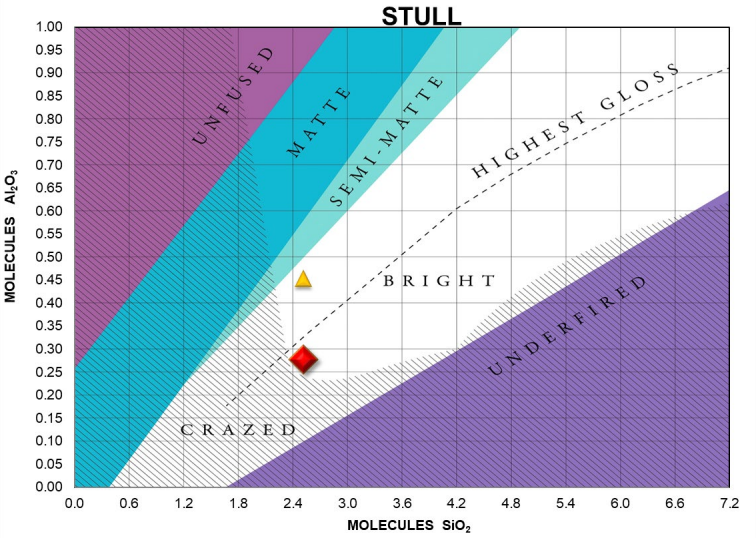


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 5.55 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.52	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.12	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

Neph Sy	33.87
Whiting	7.82
Zinc Oxide	14.77
EPK	4.34
Flint	24.32
Bentonite	1.83
Light Rutile	3.48
Titanium Dioxide	5.22
Tin Oxide	4.35
Water	60



1-3 Second Dip



2-3 Second Dips

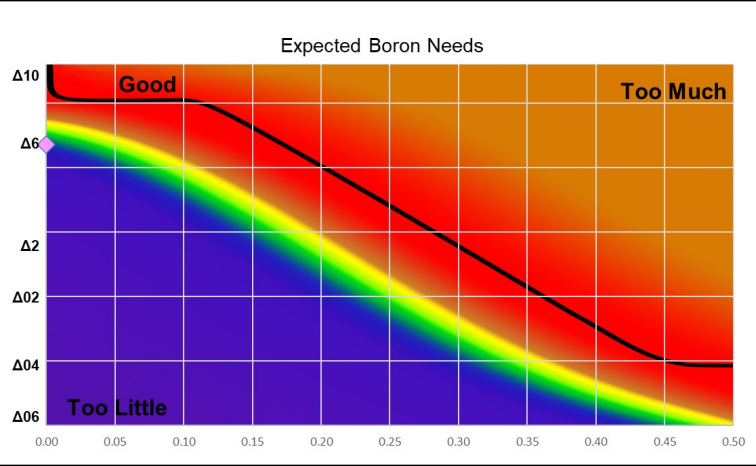
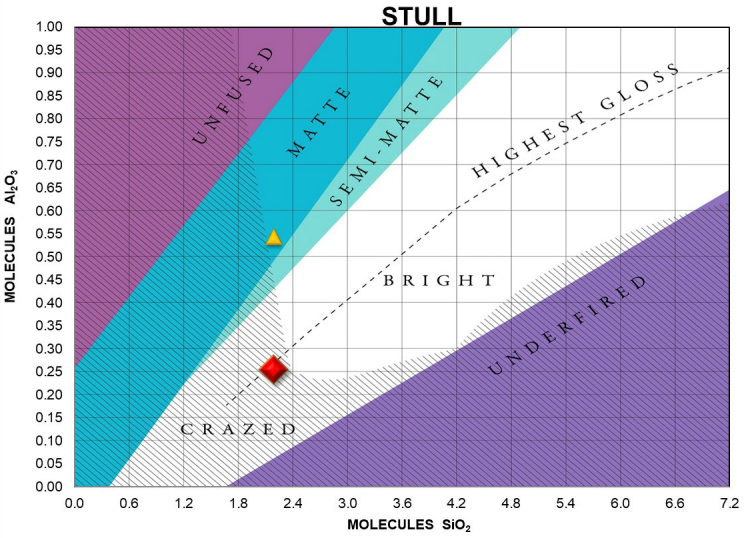


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.03 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 2.19	Collective "Al ₂ O ₃ " 0.54	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.29	NiO	Bi ₂ O ₃	SnO ₂ 0.08	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



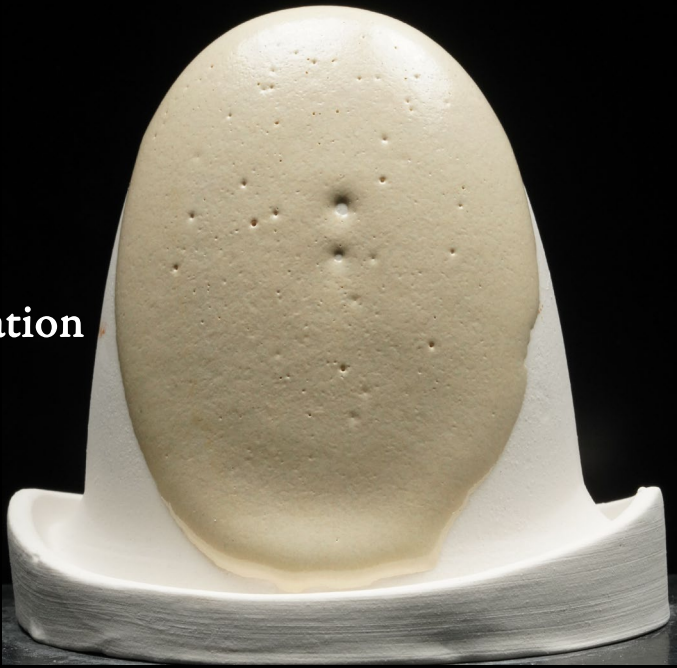
Ceramic
Materials
Workshop

Freckles

Neph Sy	32.46
Whiting	7.49
Zinc Oxide	14.15
EPK	4.16
Flint	23.31
Bentonite	1.76
Light Rutile	3.34
Titanium Dioxide	5.00
Ultrox (Zircopax)	8.33
Water	60



1-3 Second Dip



2-3 Second Dips

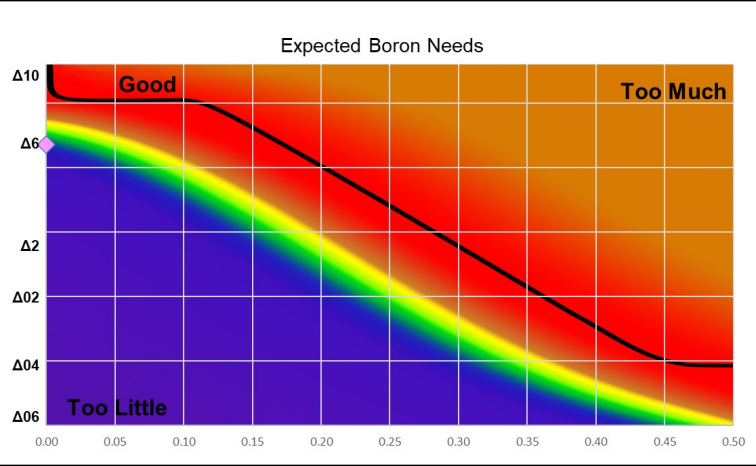
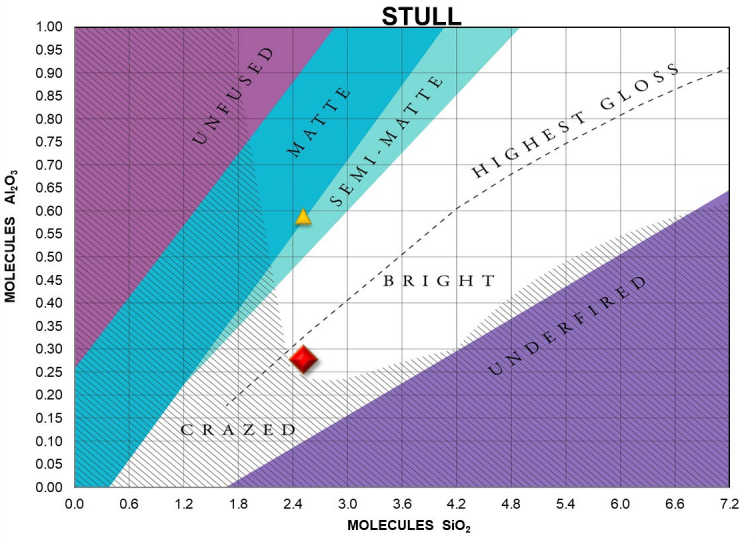


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.26 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.52	Collective "Al ₂ O ₃ " 0.59	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.24
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.31	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.54	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Freckles

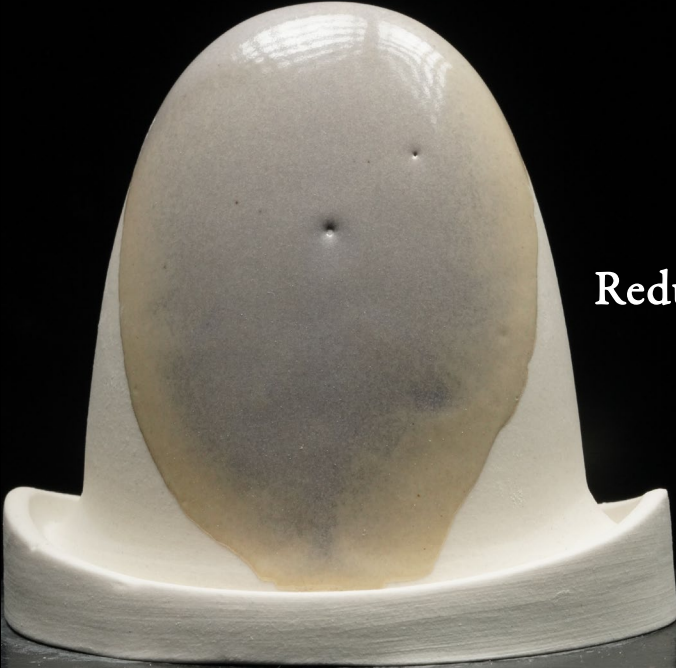
Neph Sy	32.74
Whiting	7.55
Zinc Oxide	14.27
EPK	4.20
Flint	23.50
Bentonite	1.77
Light Rutile	3.36
Tin Oxide	4.20
Ultrox (Zircopax)	8.40
Water	60



1-3 Second Dip



2-3 Second Dips

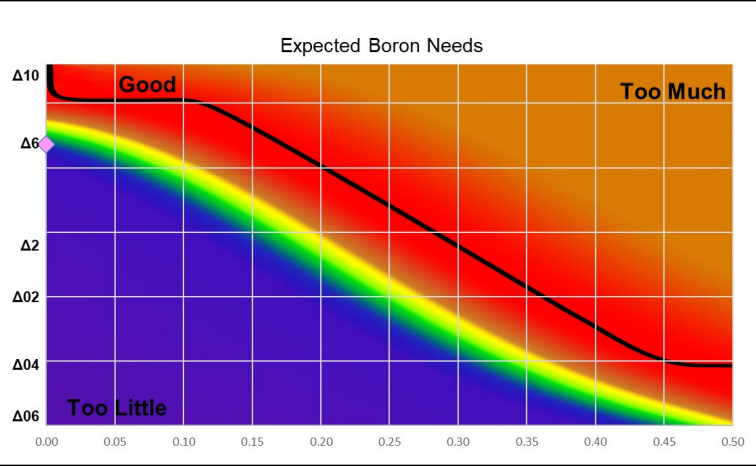
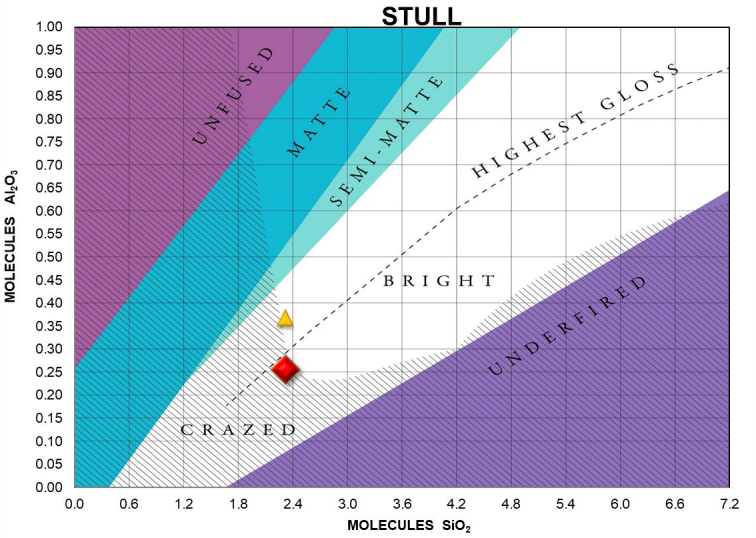


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 6.30 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 2.32	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.22
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.11	NiO	Bi ₂ O ₃	SnO ₂ 0.08	ZnO 0.49	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop