

Old Orange- Δ 10

Lab 5b-Color Wheel 2-Individual



Ceramic
Materials
Workshop

ceramicmaterialsworkshop.com

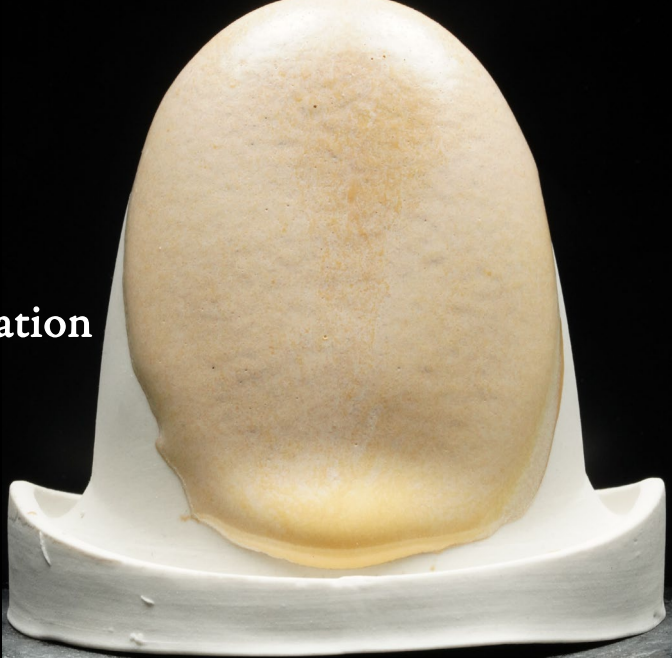
Old Orange

Original
062822-1

Neph Sy	37.51
Whiting	18.67
EPK	9.55
Flint	34.26
Light Rutile	11.11
Water	60



1-3 Second Dip



2-3 Second Dips



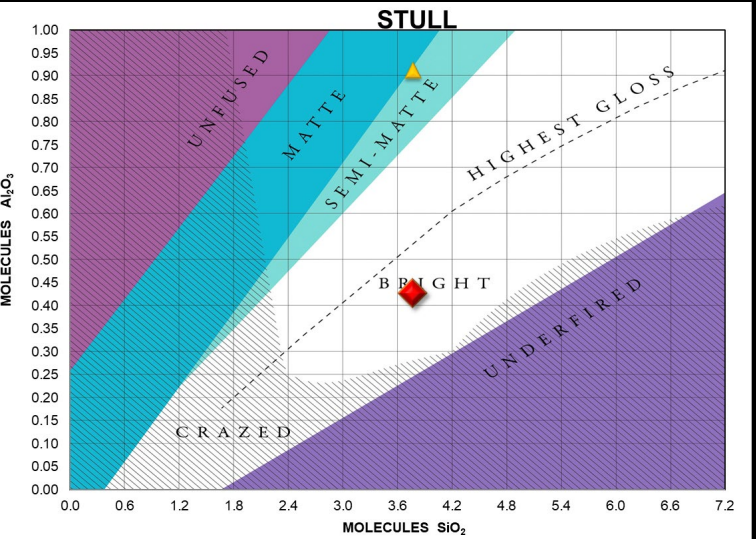
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.81 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.77	Collective "Al ₂ O ₃ " 0.43	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	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 4.13 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.77	Collective "Al ₂ O ₃ " 0.91	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.49	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
Materials
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Old Orange

Neph Sy	33.17
Whiting	16.50
EPK	8.45
Flint	30.29
Light Rutile	9.83
Cobalt Carbonate	0.88
Chrome Oxide	0.88
Water	60



1-3 Second Dip



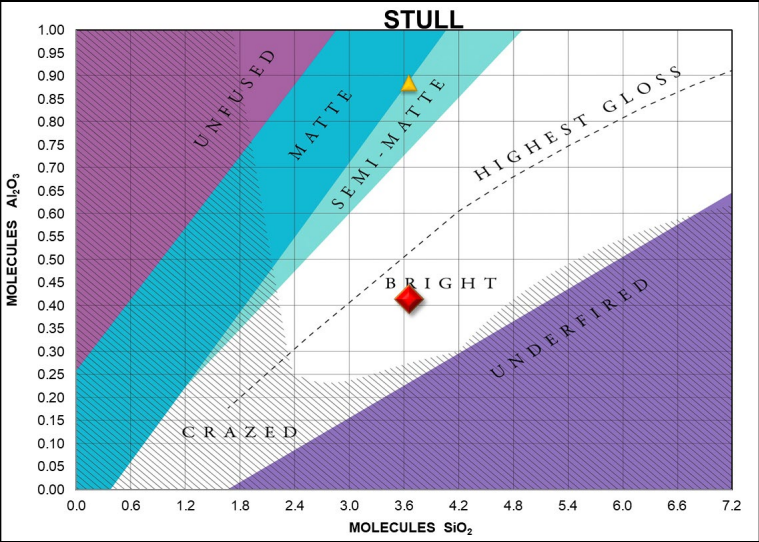
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.13 :1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.89	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.47	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



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Old Orange

Neph Sy	32.59
Whiting	16.22
EPK	8.30
Flint	29.76
Light Rutile	9.66
Cobalt Carbonate	0.87
Copper Carbonate	2.61
Water	60



1-3 Second Dip



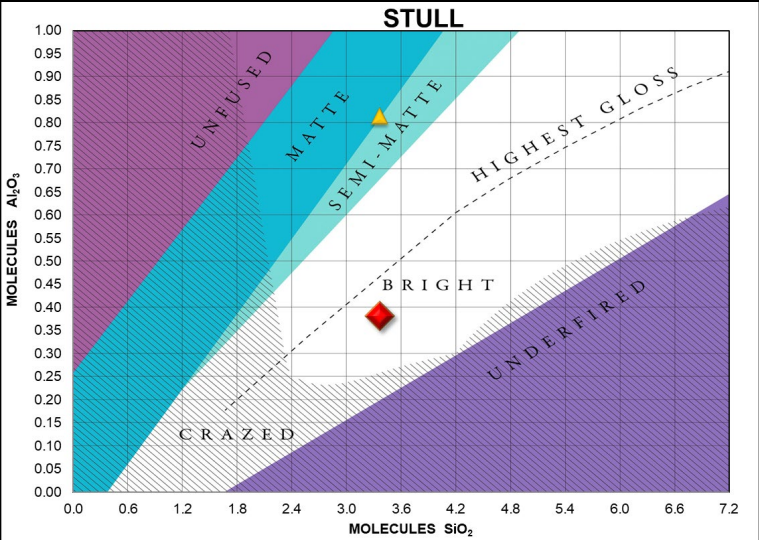
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.13 :1		Alkali Metals 0.34		Alkaline Earths 0.66	
SiO ₂ 3.37	Collective "Al ₂ O ₃ " 0.82	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO 0.08	SrO	BaO
TiO ₂ 0.43	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



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Old Orange

Neph Sy	31.76
Whiting	15.81
EPK	8.09
Flint	29.01
Light Rutile	9.41
Cobalt Carbonate	0.85
Red Iron Oxide	5.08
Water	60



1-3 Second Dip



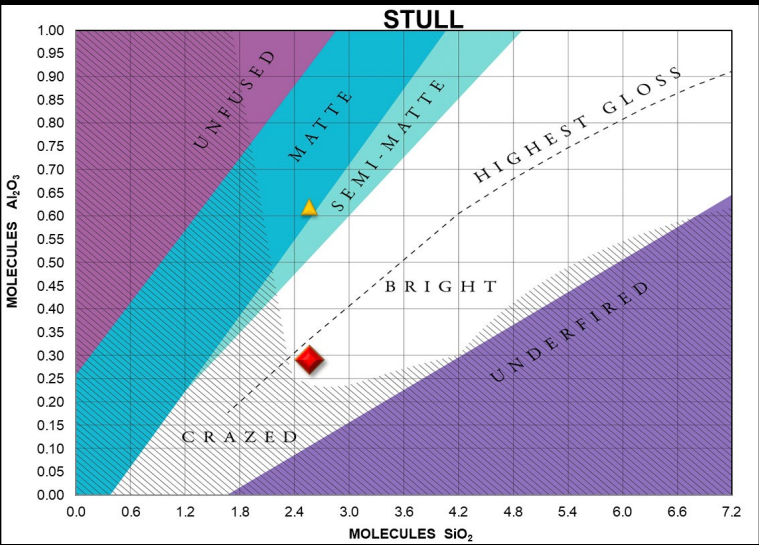
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.56	Collective "Al ₂ O ₃ " 0.62	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.47
B ₂ O ₃	Al ₂ O ₃ 0.29	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.33	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.31
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.02



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Old Orange

Neph Sy	32.59
Whiting	16.22
EPK	8.30
Flint	29.76
Light Rutile	9.66
Cobalt Carbonate	0.87
Manganese Dioxide	2.61
Water	60



1-3 Second Dip



2-3 Second Dips

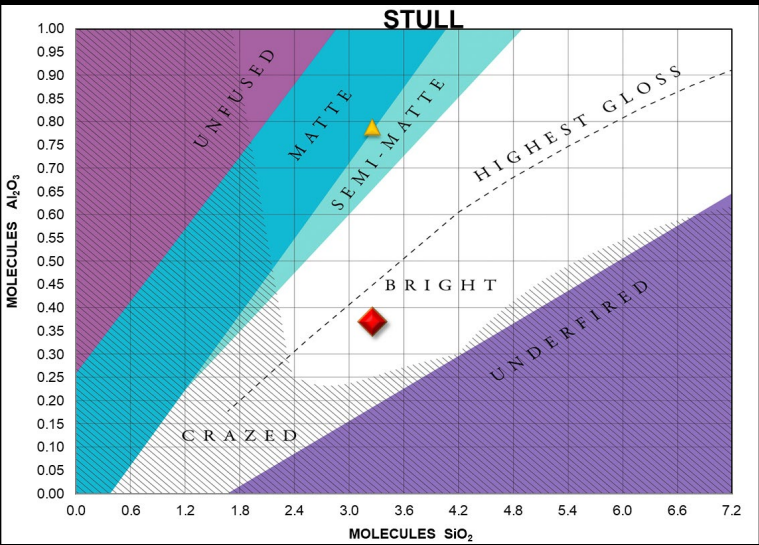


Reduction



Oxidation

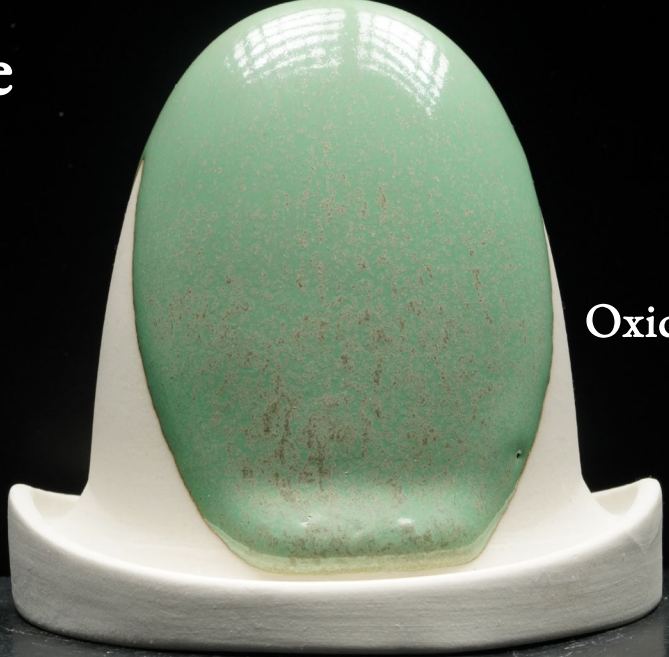
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 3.26	Collective "Al ₂ O ₃ " 0.79	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.60
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.42	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.11	CoO 0.03



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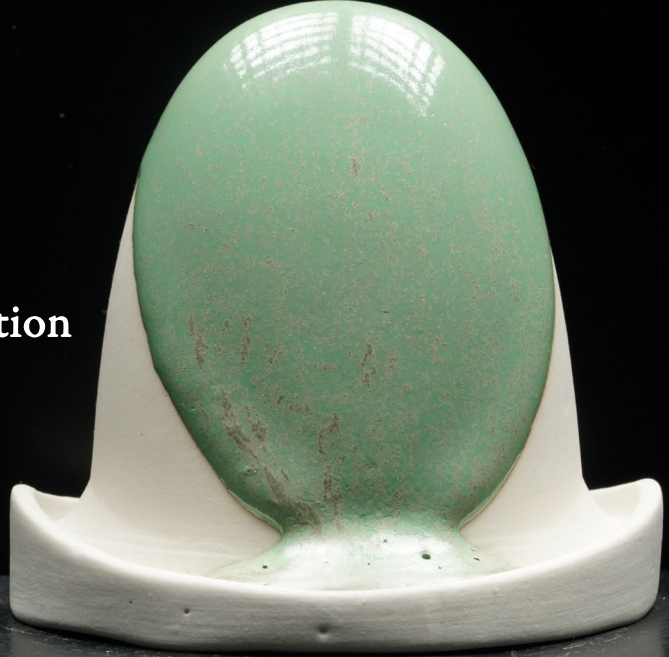
Old Orange

Neph Sy	32.73
Whiting	16.29
EPK	8.34
Flint	29.89
Light Rutile	9.70
Cobalt Carbonate	0.87
Nickel Carb (Green)	2.18
Water	60



Oxidation

1-3 Second Dip



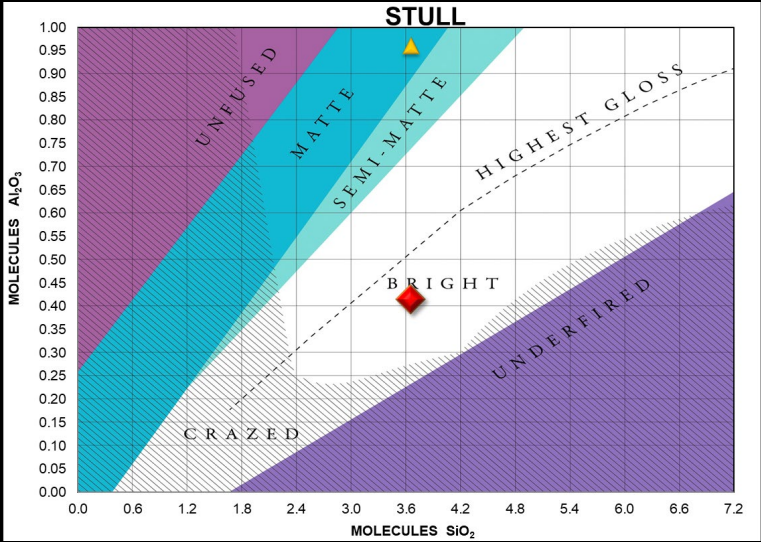
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 3.81 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 0.96	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.47	NiO 0.07	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



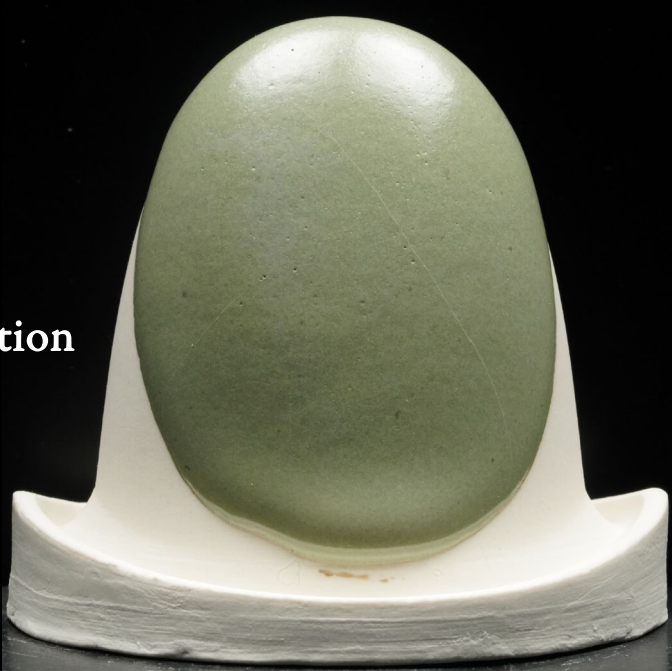
Ceramic
Materials
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Old Orange

Neph Sy	31.76
Whiting	15.81
EPK	8.09
Flint	29.01
Light Rutile	9.41
Cobalt Carbonate	0.85
Titanium Dioxide	5.08
Water	60



1-3 Second Dip



2-3 Second Dips



1-3 Second Dip

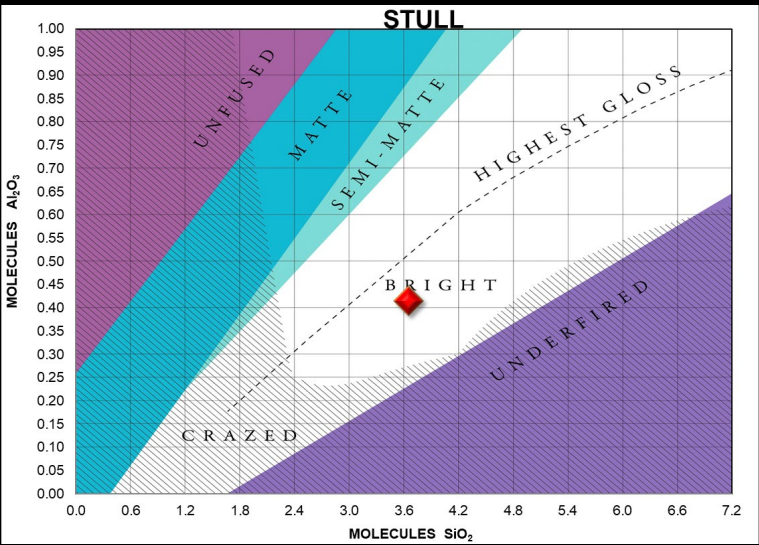


2-3 Second Dips

Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 3.18 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.66	Collective "Al ₂ O ₃ " 1.15	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.74	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



Ceramic
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Old Orange

Neph Sy	32.03
Whiting	15.94
EPK	8.16
Flint	29.26
Light Rutile	9.49
Cobalt Carbonate	0.85
Tin Oxide	4.27
Water	60



1-3 Second Dip



2-3 Second Dips

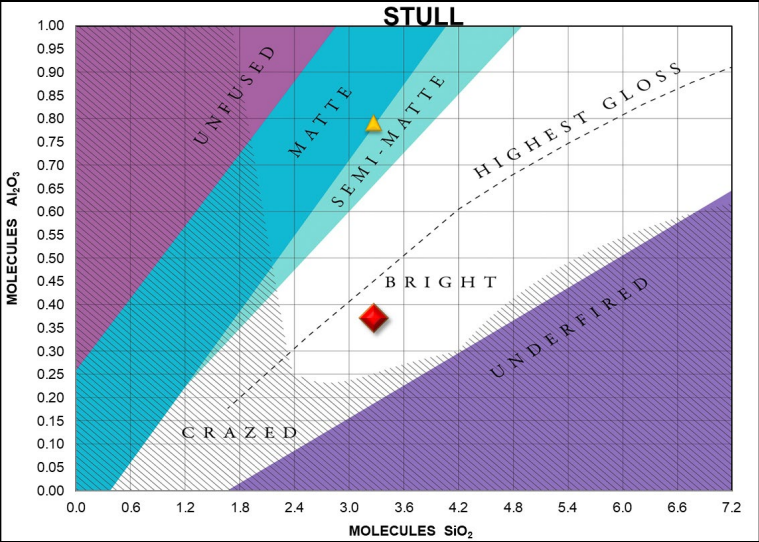


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.36		Alkaline Earths 0.64	
SiO ₂ 3.27	Collective "Al ₂ O ₃ " 0.79	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.60
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.42	NiO	Bi ₂ O ₃	SnO ₂ 0.11	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.03



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Old Orange

Neph Sy	30.72
Whiting	15.29
EPK	7.82
Flint	28.06
Light Rutile	9.10
Cobalt Carbonate	0.82
Ultrox (Zircopax)	8.19
Water	60



1-3 Second Dip



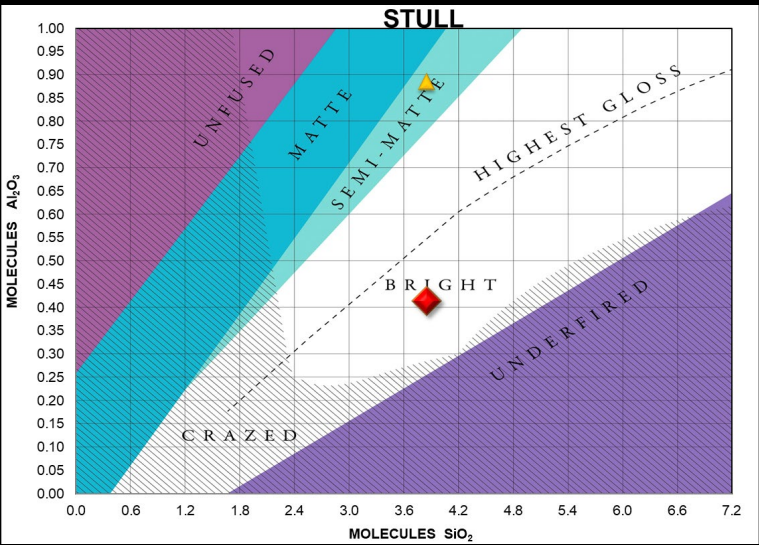
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.35 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.85	Collective "Al ₂ O ₃ " 0.89	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.67
B ₂ O ₃	Al ₂ O ₃ 0.41	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.47	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



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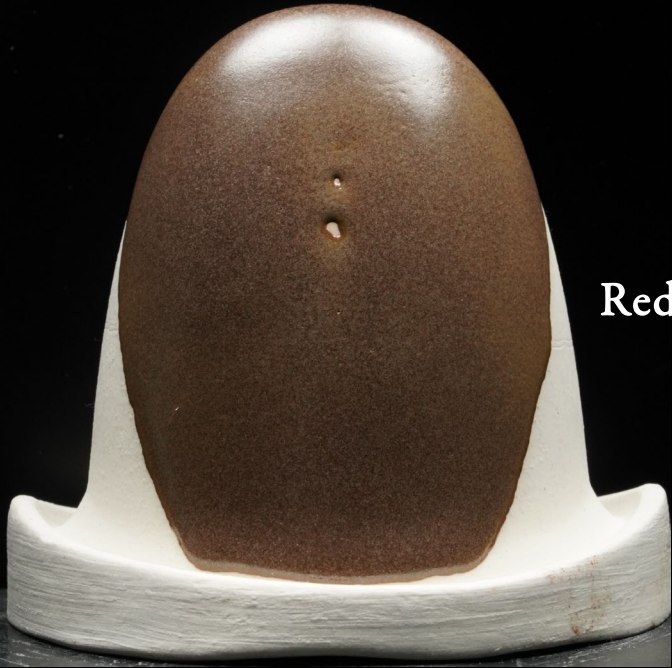
Neph Sy	32.59
Whiting	16.22
EPK	8.30
Flint	29.76
Light Rutile	9.66
Chrome Oxide	0.87
Copper Carbonate	2.61
Water	60



1-3 Second Dip



2-3 Second Dips

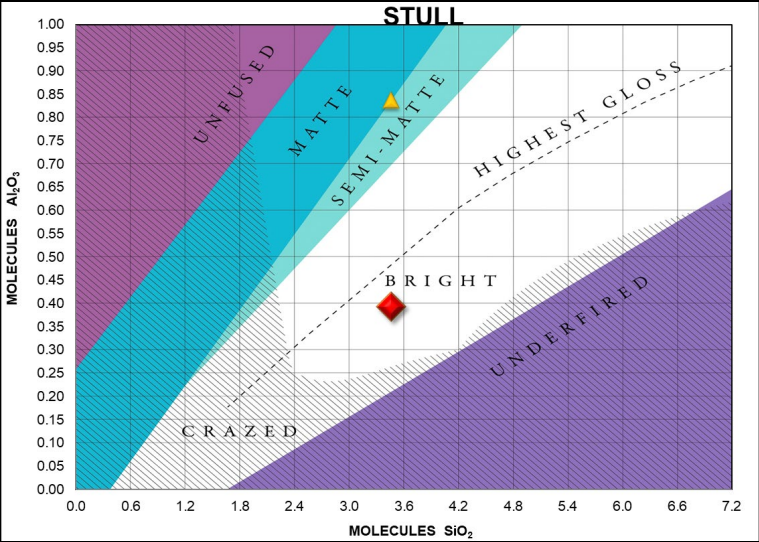


Reduction



Oxidation

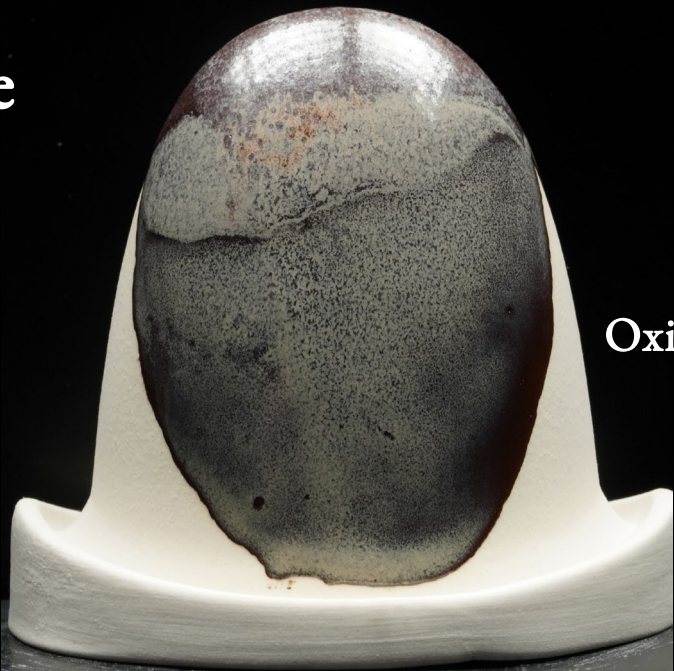
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 3.46	Collective "Al ₂ O ₃ " 0.84	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO 0.08	SrO	BaO
TiO ₂ 0.45	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Old Orange

Neph Sy	31.76
Whiting	15.81
EPK	8.09
Flint	29.01
Light Rutile	9.41
Chrome Oxide	0.85
Red Iron Oxide	5.08
Water	60



1-3 Second Dip



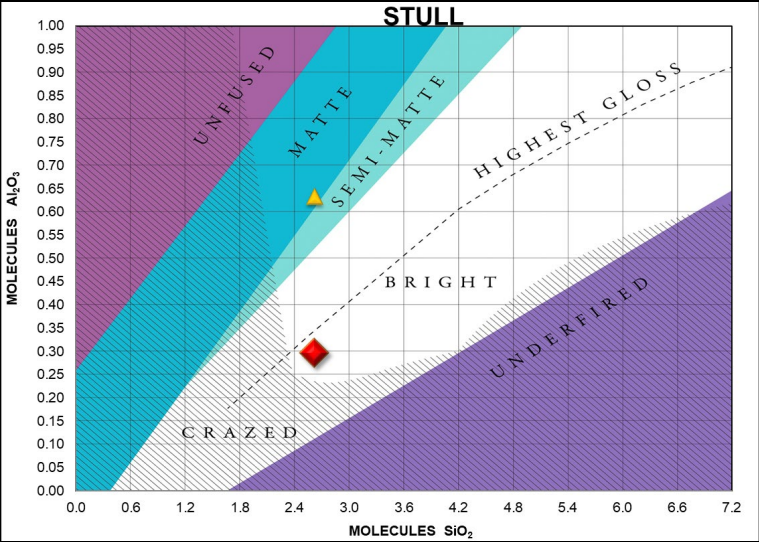
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.62	Collective "Al ₂ O ₃ " 0.63	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.48
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.34	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.31
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Old Orange

Neph Sy	32.59
Whiting	16.22
EPK	8.30
Flint	29.76
Light Rutile	9.66
Chrome Oxide	0.87
Manganese Dioxide	2.61
Water	60



Oxidation

1-3 Second Dip



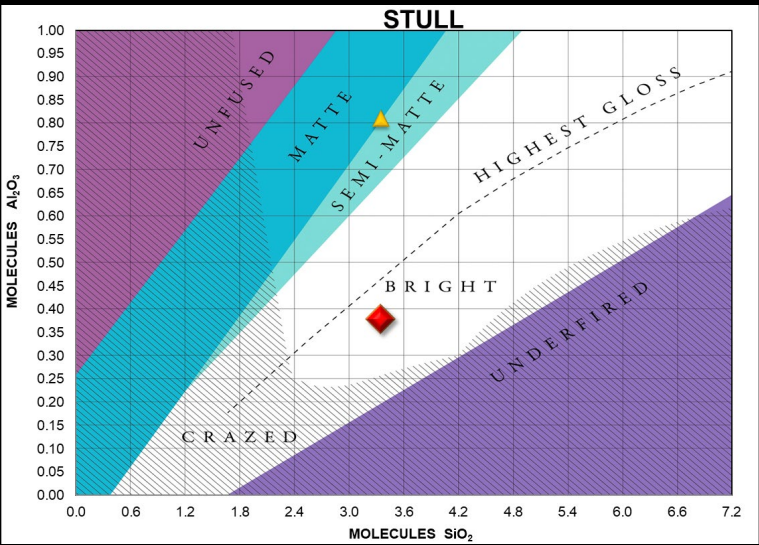
2-3 Second Dips



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.35	Collective "Al ₂ O ₃ " 0.81	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂ 0.11	CoO



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Old Orange

Neph Sy	32.73
Whiting	16.29
EPK	8.34
Flint	29.89
Light Rutile	9.70
Chrome Oxide	0.87
Nickel Carb (Green)	2.18
Water	60



1-3 Second Dip



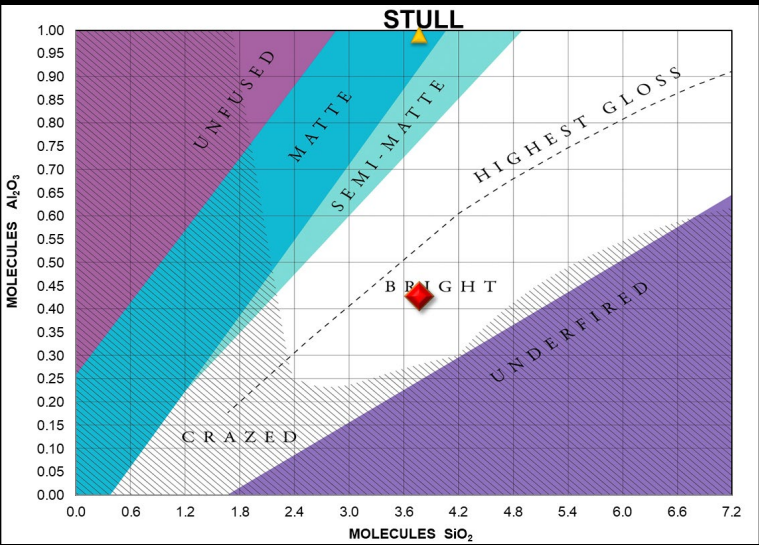
2-3 Second Dips



Reduction

Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.81 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.77	Collective "Al ₂ O ₃ " 0.99	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.49	NiO 0.08	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Old Orange

Neph Sy	31.76
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Flint	29.01
Light Rutile	9.41
Chrome Oxide	0.85
Titanium Dioxide	5.08
Water	60



1-3 Second Dip



2-3 Second Dips



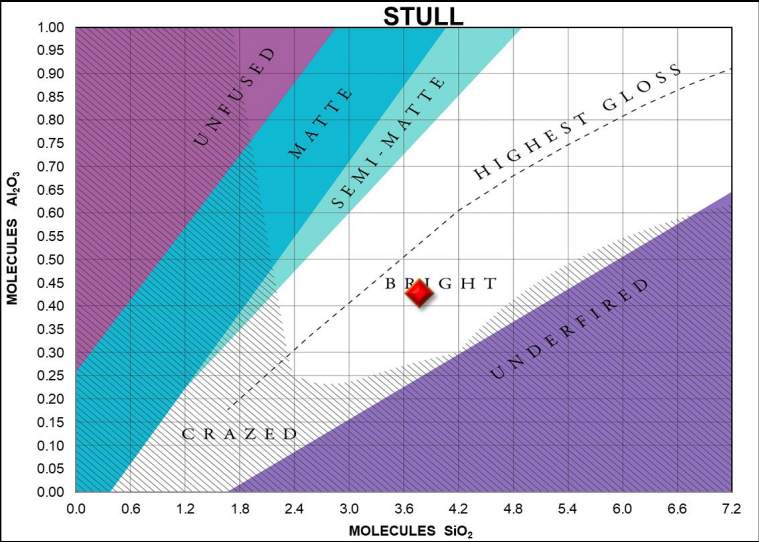
Reduction



Reduction

Oxidation

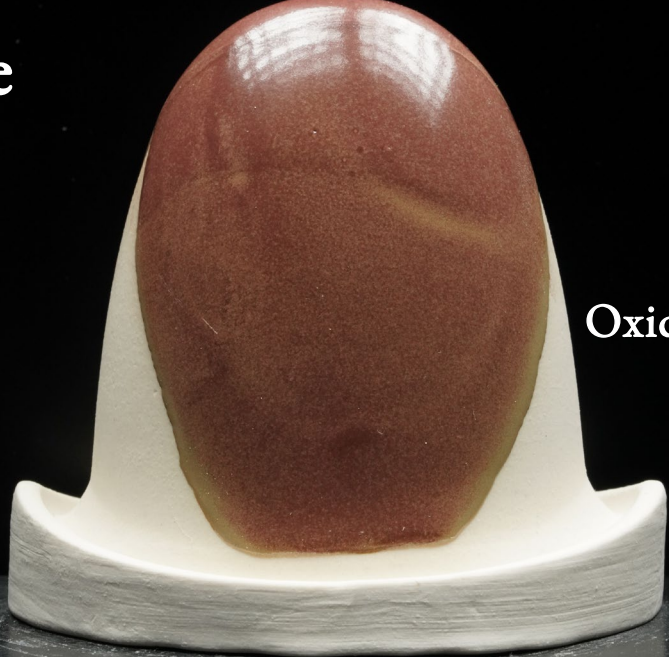
SiO ₂ :Al ₂ O ₃ Ratio 3.18 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.77	Collective "Al ₂ O ₃ " 1.18	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.76	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
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Old Orange

Neph Sy	32.03
Whiting	15.94
EPK	8.16
Flint	29.26
Light Rutile	9.49
Chrome Oxide	0.85
Tin Oxide	4.27
Water	60



1-3 Second Dip



2-3 Second Dips

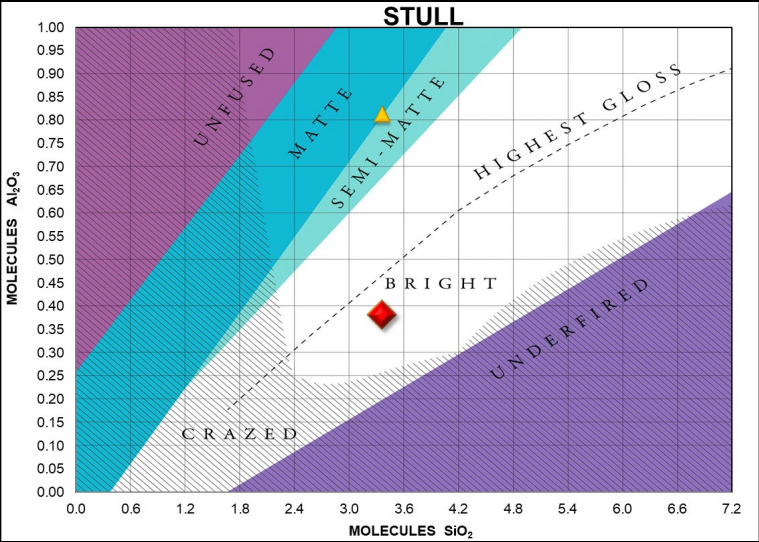


Reduction



Oxidation

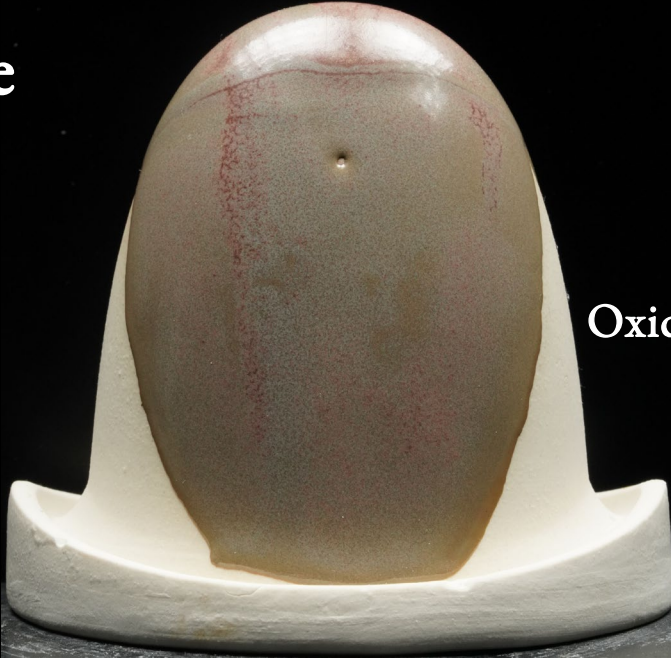
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.37		Alkaline Earths 0.63	
SiO ₂ 3.36	Collective "Al ₂ O ₃ " 0.81	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO	Bi ₂ O ₃	SnO ₂ 0.11	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Old Orange

Neph Sy	30.72
Whiting	15.29
EPK	7.82
Flint	28.06
Light Rutile	9.10
Chrome Oxide	0.82
Ultrox (Zircopax)	8.19
Water	60



Oxidation



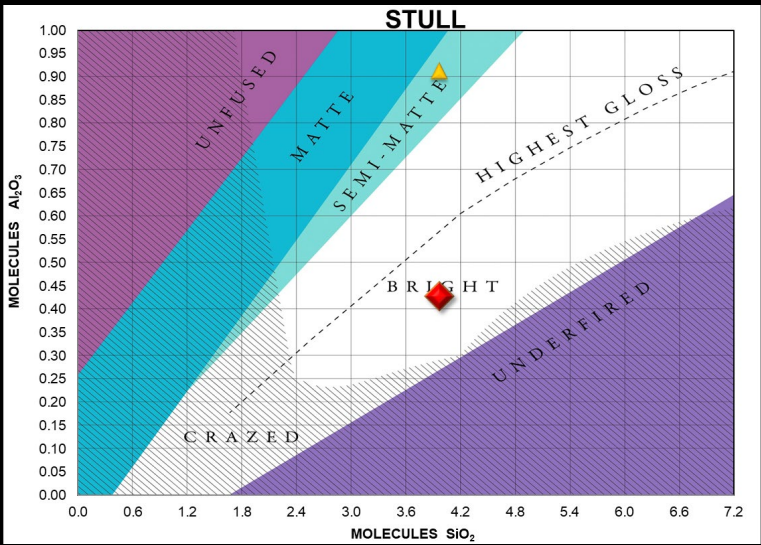
2-3 Second Dips



Reduction



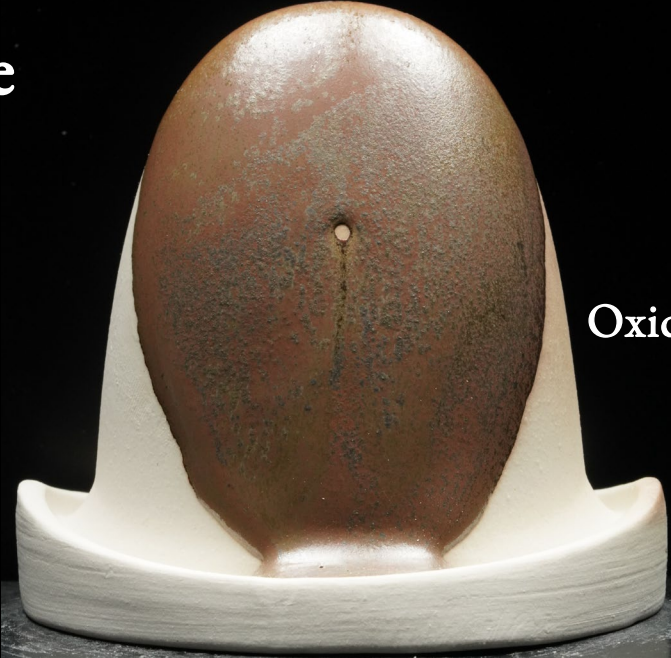
SiO ₂ :Al ₂ O ₃ Ratio 4.35 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.97	Collective "Al ₂ O ₃ " 0.91	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.49	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
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Old Orange

Neph Sy	31.23
Whiting	15.54
EPK	7.95
Flint	28.53
Light Rutile	9.25
Copper Carbonate	2.50
Red Iron Oxide	5.00
Water	60



1-3 Second Dip



2-3 Second Dips

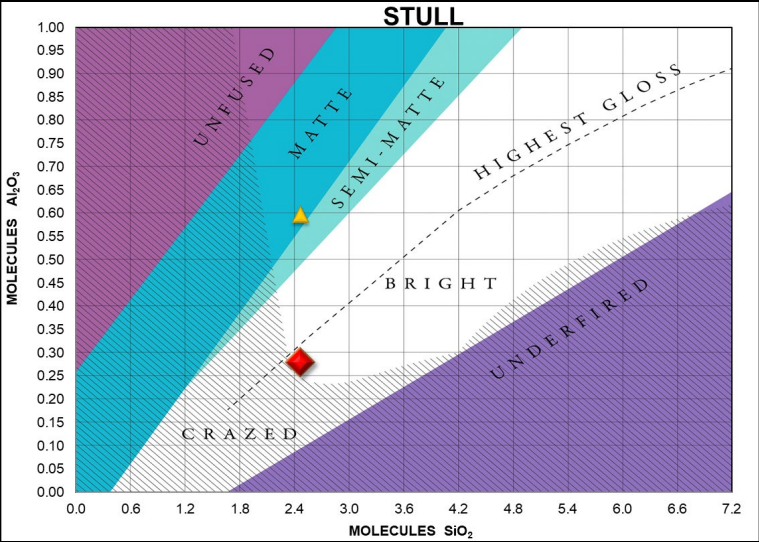


Reduction



Oxidation

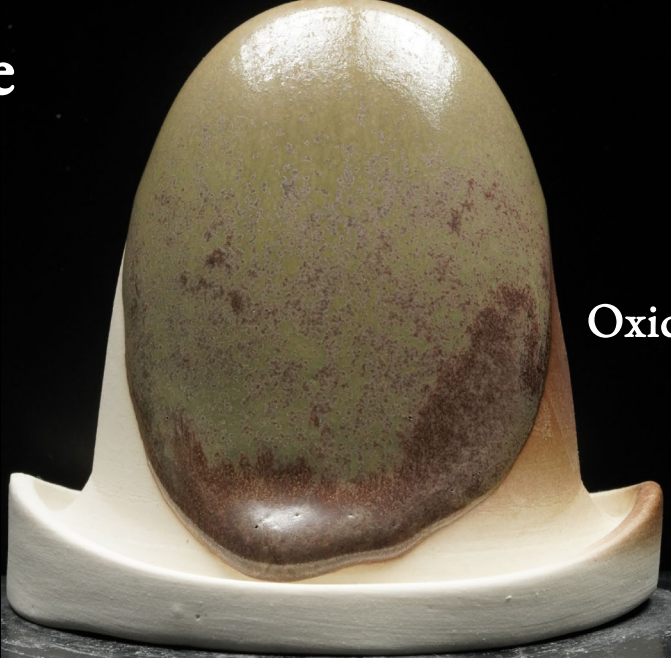
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.47	Collective "Al ₂ O ₃ " 0.60	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.45
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO 0.06	SrO	BaO
TiO ₂ 0.32	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.29
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



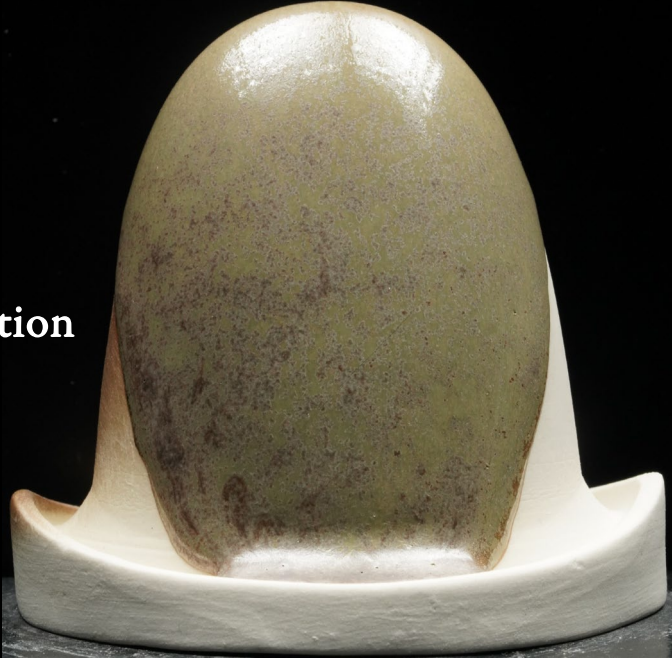
Ceramic
Materials
Workshop

Old Orange

Neph Sy	32.03
Whiting	15.94
EPK	8.16
Flint	29.26
Light Rutile	9.49
Copper Carbonate	2.56
Manganese Dioxide	2.56
Water	60



1-3 Second Dip



2-3 Second Dips

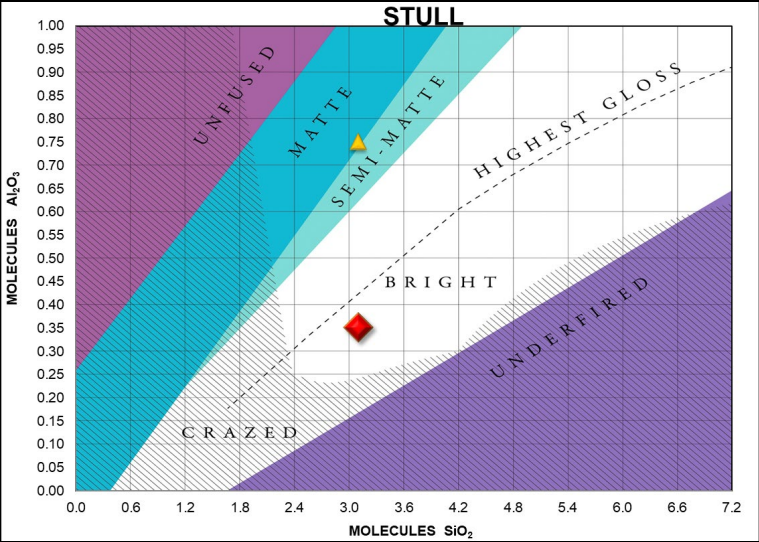


Reduction



Oxidation

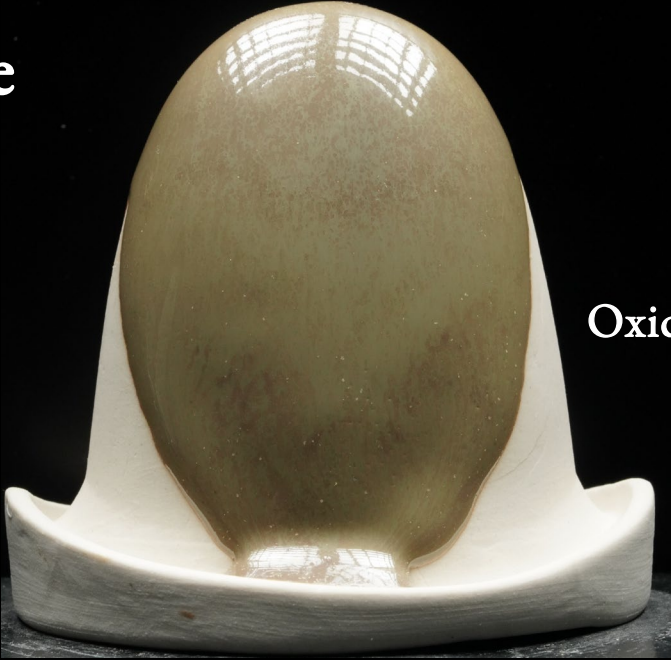
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.32		Alkaline Earths 0.68	
SiO ₂ 3.10	Collective "Al ₂ O ₃ " 0.75	Na ₂ O 0.19	K ₂ O 0.05	MgO 0.00	CaO 0.57
B ₂ O ₃	Al ₂ O ₃ 0.35	Li ₂ O	CuO 0.07	SrO	BaO
TiO ₂ 0.40	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.10	CoO



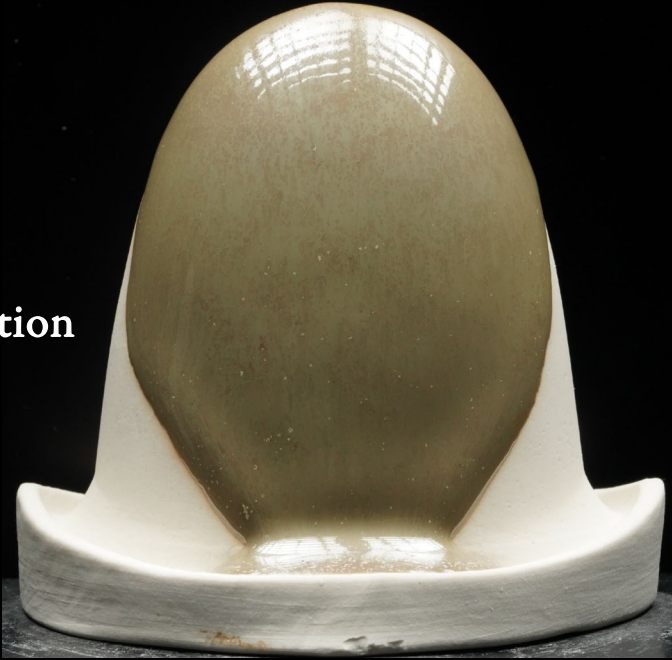
Ceramic
Materials
Workshop

Old Orange

Neph Sy	32.17
Whiting	16.01
EPK	8.19
Flint	29.38
Light Rutile	9.53
Copper Carbonate	2.57
Nickel Carb (Green)	2.14
Water	60



1-3 Second Dip



2-3 Second Dips

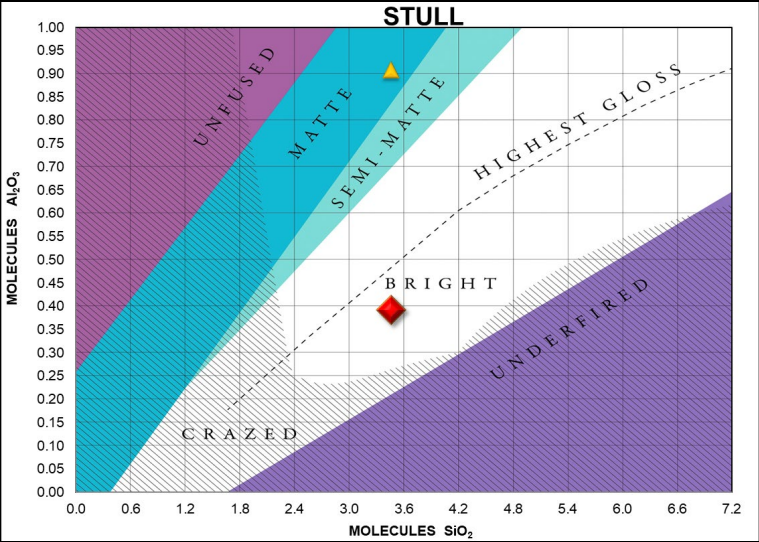


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.81 : 1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 3.46	Collective "Al ₂ O ₃ " 0.91	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO 0.08	SrO	BaO
TiO ₂ 0.45	NiO 0.07	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



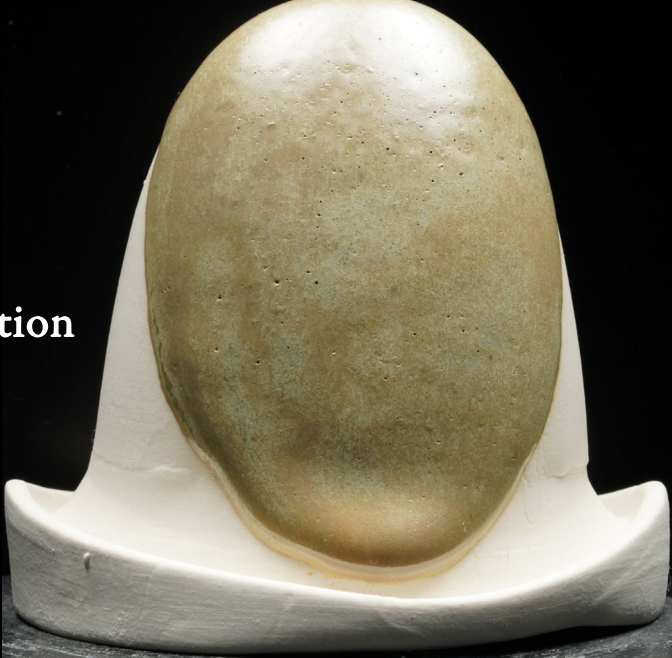
Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.23
Whiting	15.54
EPK	7.95
Flint	28.53
Light Rutile	9.25
Copper Carbonate	2.50
Titanium Dioxide	5.00
Water	60



1-3 Second Dip



2-3 Second Dips

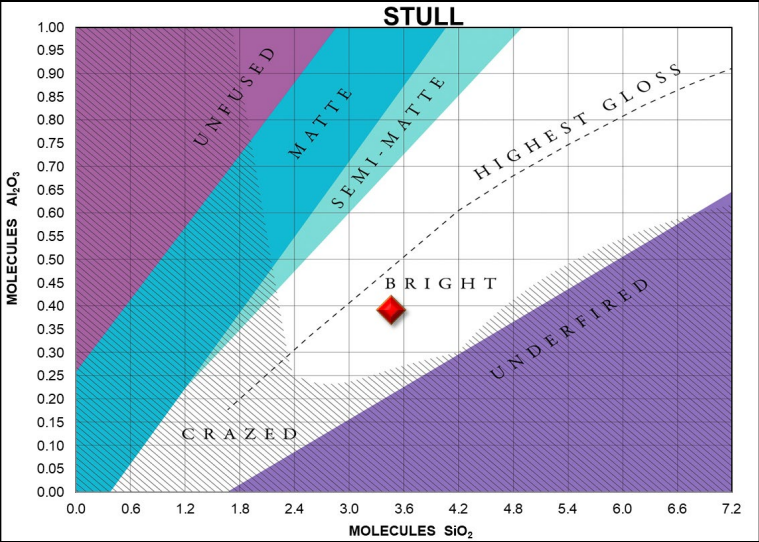


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.18 : 1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 3.46	Collective "Al ₂ O ₃ " 1.09	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO 0.08	SrO	BaO
TiO ₂ 0.70	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
Materials
Workshop

Old Orange

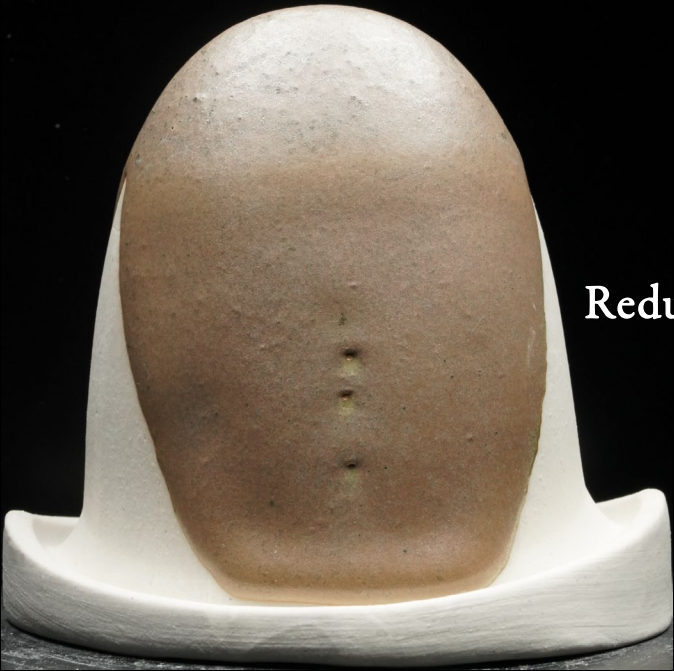
Neph Sy	31.49
Whiting	15.67
EPK	8.02
Flint	28.76
Light Rutile	9.33
Copper Carbonate	2.52
Tin Oxide	4.20
Water	60



1-3 Second Dip



2-3 Second Dips

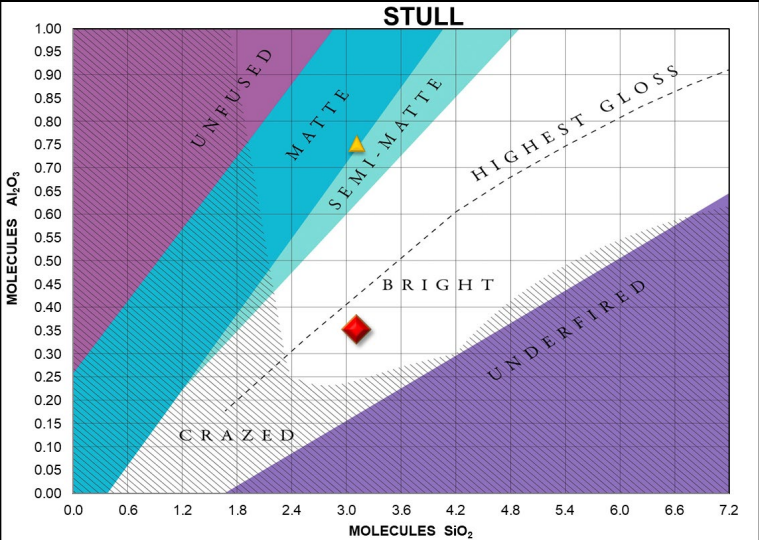


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.42		Alkaline Earths 0.58	
SiO ₂ 3.11	Collective "Al ₂ O ₃ " 0.75	Na ₂ O 0.19	K ₂ O 0.05	MgO 0.00	CaO 0.57
B ₂ O ₃	Al ₂ O ₃ 0.35	Li ₂ O	CuO 0.07	SrO	BaO
TiO ₂ 0.40	NiO	Bi ₂ O ₃	SnO ₂ 0.10	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.23
Whiting	15.04
EPK	7.70
Flint	27.61
Light Rutile	8.96
Copper Carbonate	2.42
Ultrox (Zircopax)	8.06
Water	60



1-3 Second Dip



2-3 Second Dips

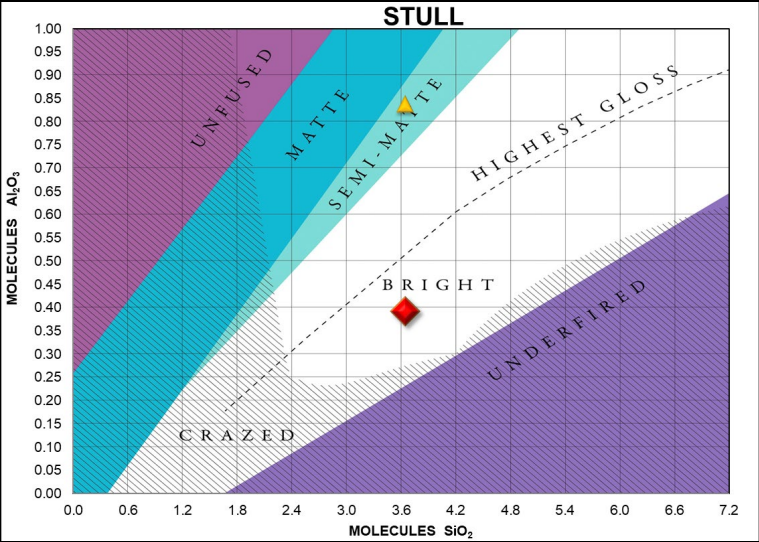


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.35 : 1		Alkali Metals 0.35		Alkaline Earths 0.65	
SiO ₂ 3.64	Collective "Al ₂ O ₃ " 0.84	Na ₂ O 0.21	K ₂ O 0.06	MgO 0.00	CaO 0.64
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO 0.08	SrO	BaO
TiO ₂ 0.45	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
Materials
Workshop

Old Orange

Neph Sy	31.23
Whiting	15.54
EPK	7.95
Flint	28.53
Light Rutile	9.25
Red Iron Oxide	5.00
Manganese Dioxide	2.50
Water	60



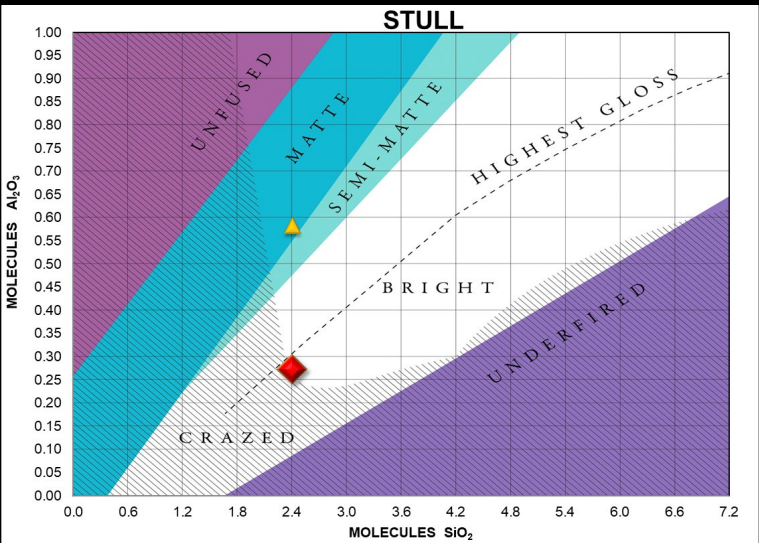
Oxidation



Reduction



SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.58	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.44
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	FeO 0.29
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.08	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.36
Whiting	15.61
EPK	7.99
Flint	28.64
Light Rutile	9.29
Red Iron Oxide	5.02
Nickel Carb (Green)	2.09
Water	60



1-3 Second Dip



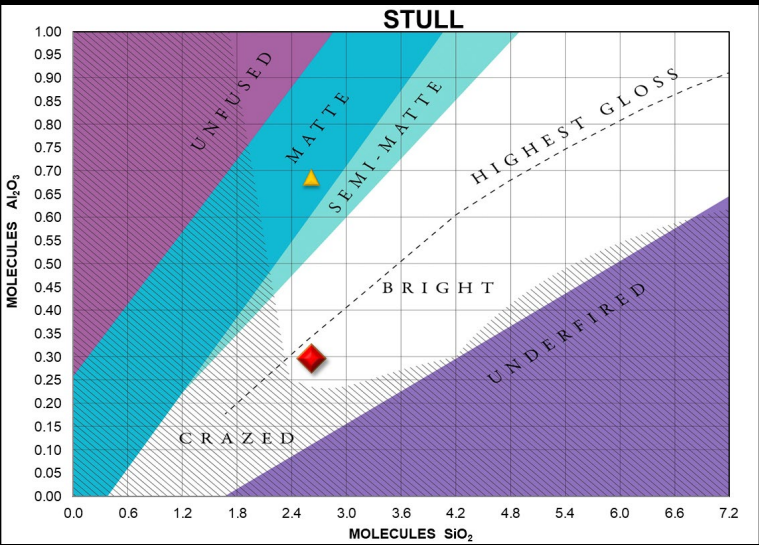
2-3 Second Dips

Oxidation



Reduction

SiO ₂ :Al ₂ O ₃ Ratio 3.81 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.62	Collective "Al ₂ O ₃ " 0.69	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.48
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.34	NiO 0.05	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.31
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.47
Whiting	15.16
EPK	7.76
Flint	27.83
Light Rutile	9.03
Red Iron Oxide	4.87
Titanium Dioxide	4.87
Water	60



1-3 Second Dip



2-3 Second Dips

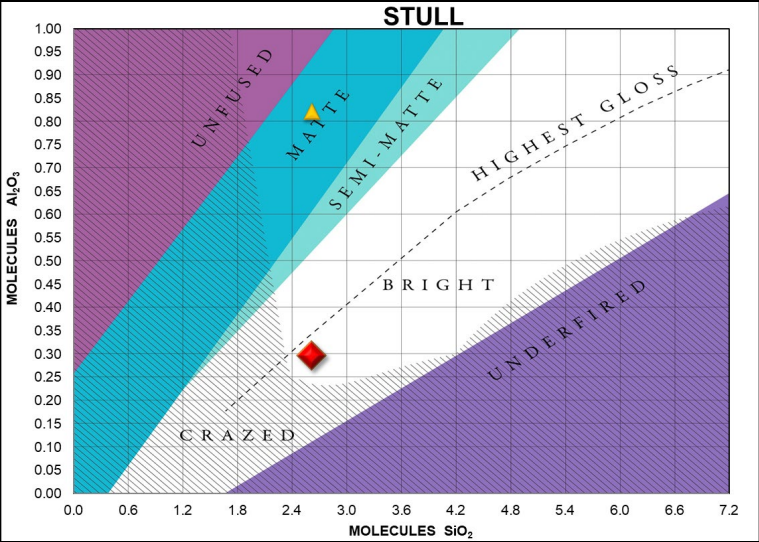


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.18 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 2.62	Collective "Al ₂ O ₃ " 0.82	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.48
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.53	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.31
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.72
Whiting	15.29
EPK	7.82
Flint	28.06
Light Rutile	9.10
Red Iron Oxide	4.91
Tin Oxide	4.09
Water	60



1-3 Second Dip



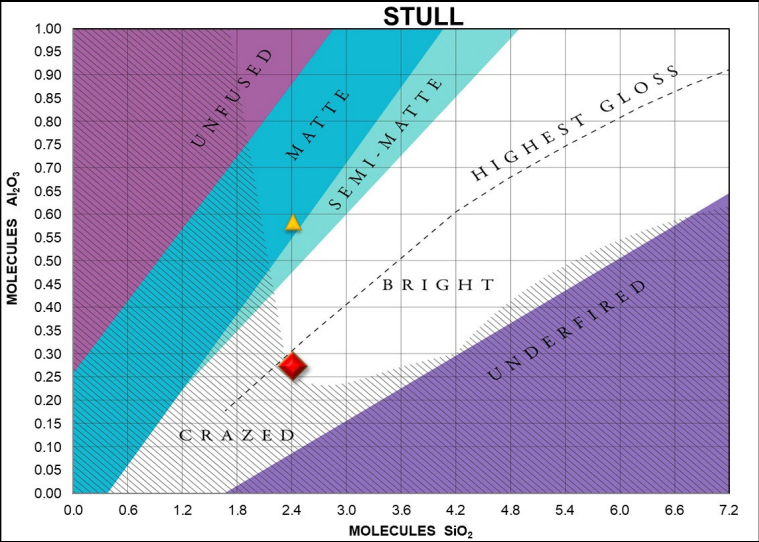
2-3 Second Dips



Reduction

Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.27		Alkaline Earths 0.73	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.58	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.44
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 0.08	ZnO	FeO 0.29
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



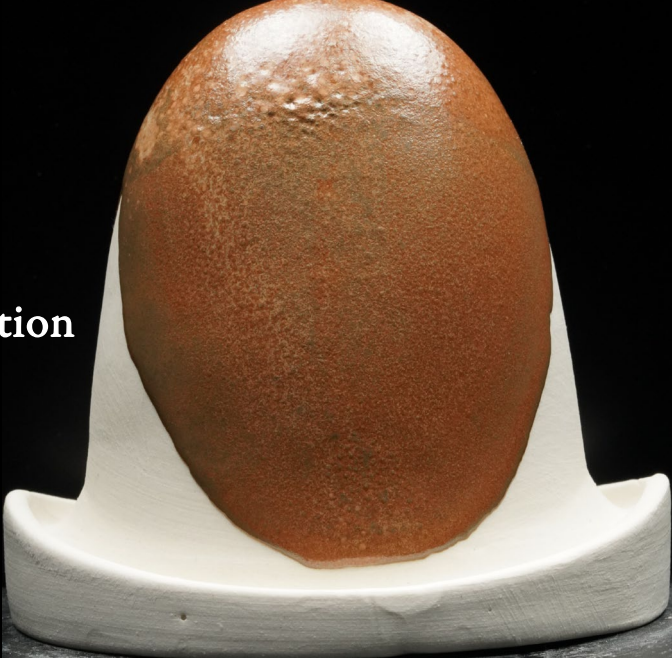
Ceramic
Materials
Workshop

Old Orange

Neph Sy	29.51
Whiting	14.69
EPK	7.52
Flint	26.95
Light Rutile	8.74
Red Iron Oxide	4.72
Ultrox (Zircopax)	7.87
Water	60



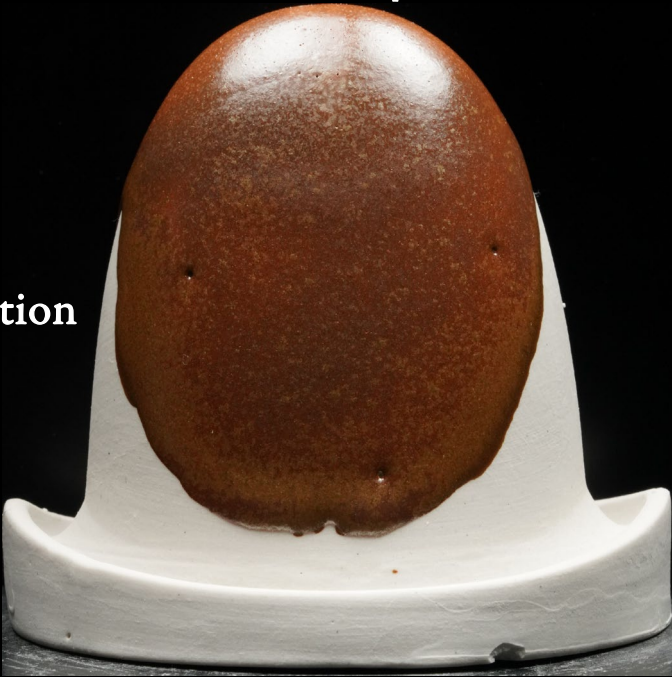
1-3 Second Dip



2-3 Second Dips

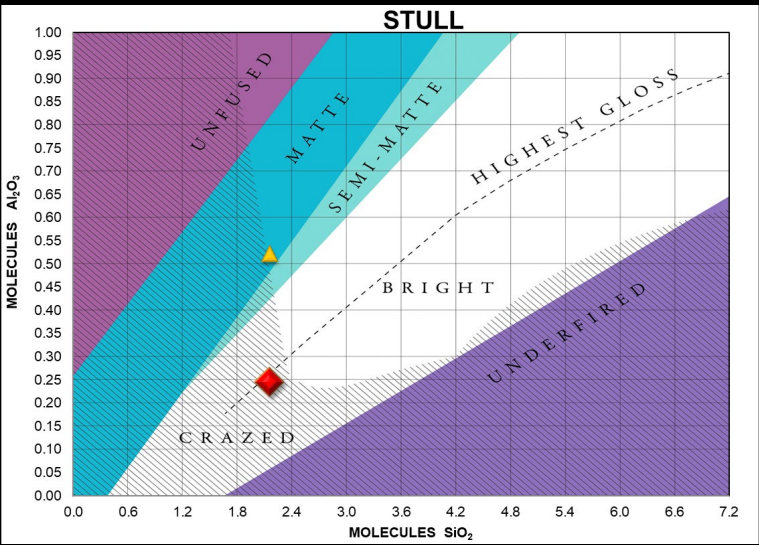


Reduction



Oxidation

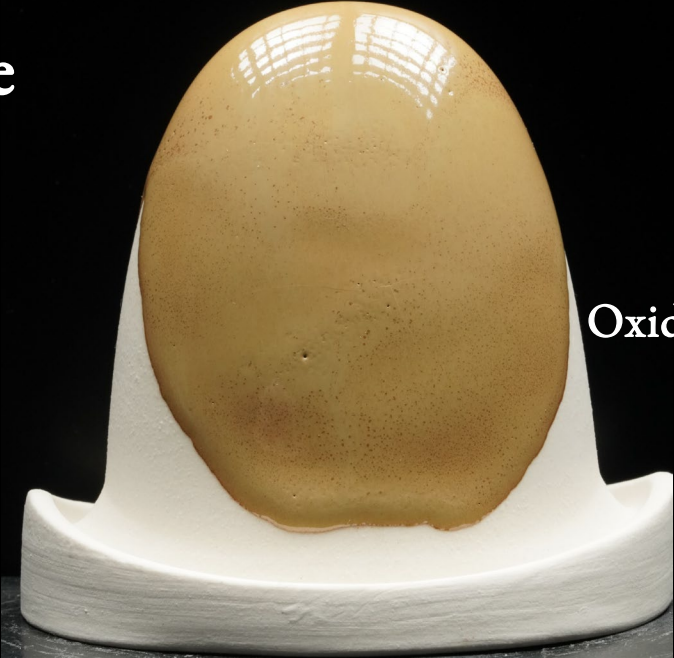
SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 2.16	Collective "Al ₂ O ₃ " 0.52	Na ₂ O 0.13	K ₂ O 0.04	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.28	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.26
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO 0.18



Ceramic
Materials
Workshop

Old Orange

Neph Sy	32.17
Whiting	16.01
EPK	8.19
Flint	29.38
Light Rutile	9.53
Manganese Dioxide	2.57
Nickel Carb (Green)	2.14
Water	60



1-3 Second Dip



2-3 Second Dips

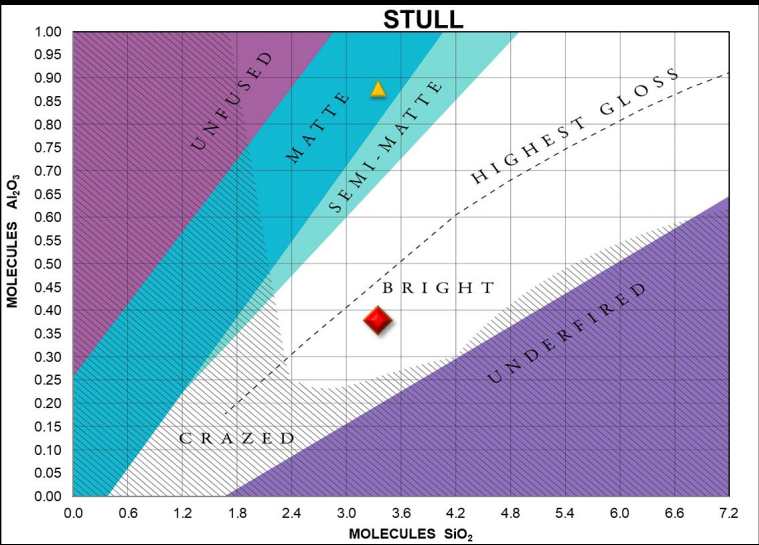


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.81 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.35	Collective "Al ₂ O ₃ " 0.88	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO 0.07	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.11	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.23
Whiting	15.54
EPK	7.95
Flint	28.53
Light Rutile	9.25
Manganese Dioxide	2.50
Titanium Dioxide	5.00
Water	60



1-3 Second Dip



2-3 Second Dips

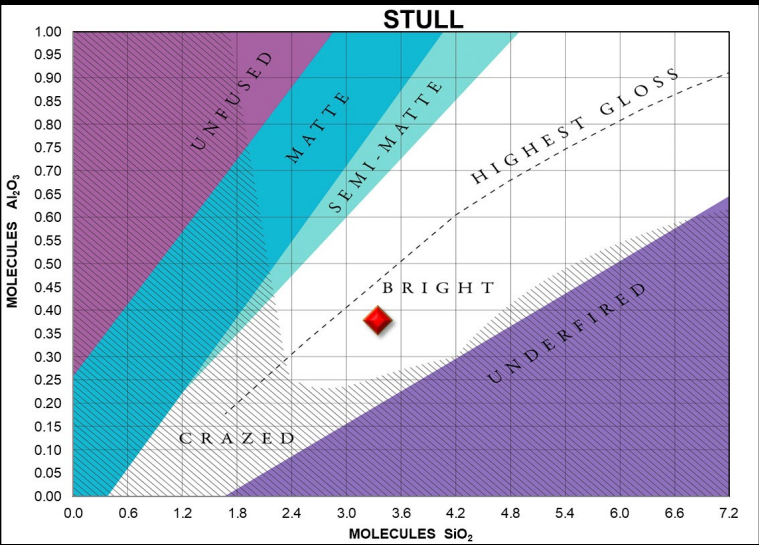


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 3.18 :1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.35	Collective "Al ₂ O ₃ " 1.05	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.67	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.11	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.49
Whiting	15.67
EPK	8.02
Flint	28.76
Light Rutile	9.33
Manganese Dioxide	2.52
Tin Oxide	4.20
Water	60



1-3 Second Dip



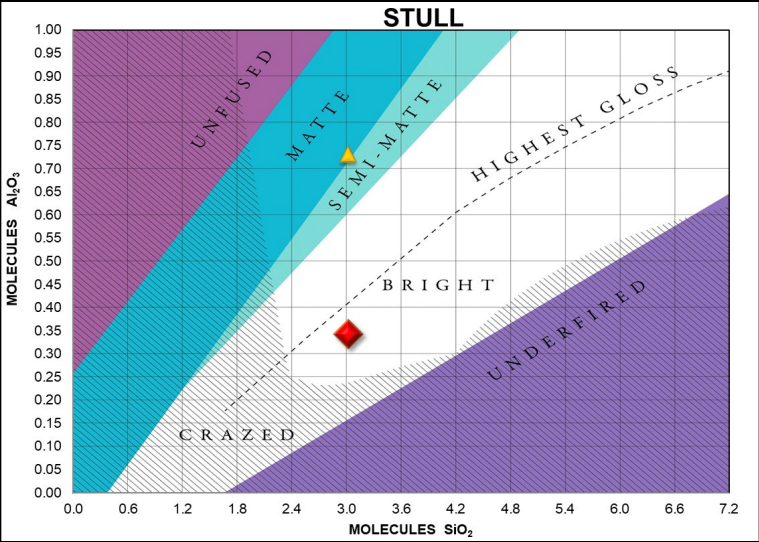
2-3 Second Dips



Reduction

Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.13 : 1		Alkali Metals 0.33		Alkaline Earths 0.67	
SiO ₂ 3.02	Collective "Al ₂ O ₃ " 0.73	Na ₂ O 0.18	K ₂ O 0.05	MgO 0.00	CaO 0.56
B ₂ O ₃	Al ₂ O ₃ 0.34	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.39	NiO	Bi ₂ O ₃	SnO ₂ 0.10	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.10	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.23
Whiting	15.04
EPK	7.70
Flint	27.61
Light Rutile	8.96
Manganese Dioxide	2.42
Ultrox (Zircopax)	8.06
Water	60



1-3 Second Dip



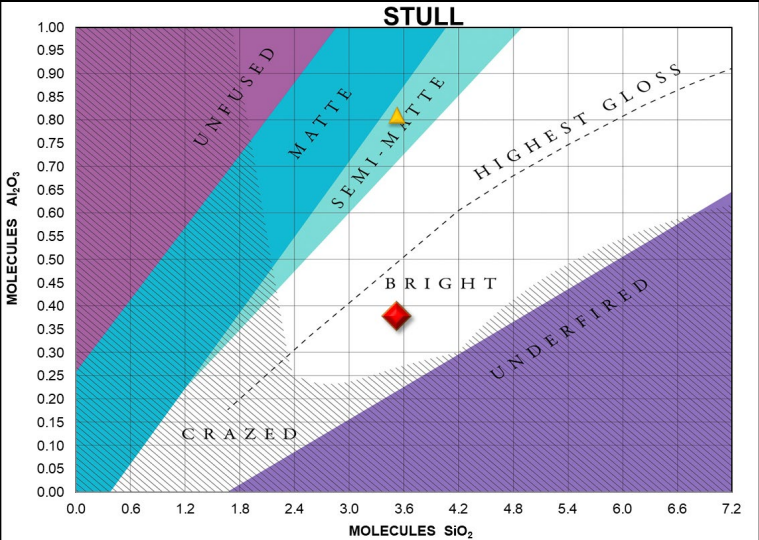
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.35 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 3.52	Collective "Al ₂ O ₃ " 0.81	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂ 0.11	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.36
Whiting	15.61
EPK	7.99
Flint	28.64
Light Rutile	9.29
Nickel Carb (Green)	2.09
Titanium Dioxide	5.02
Water	60



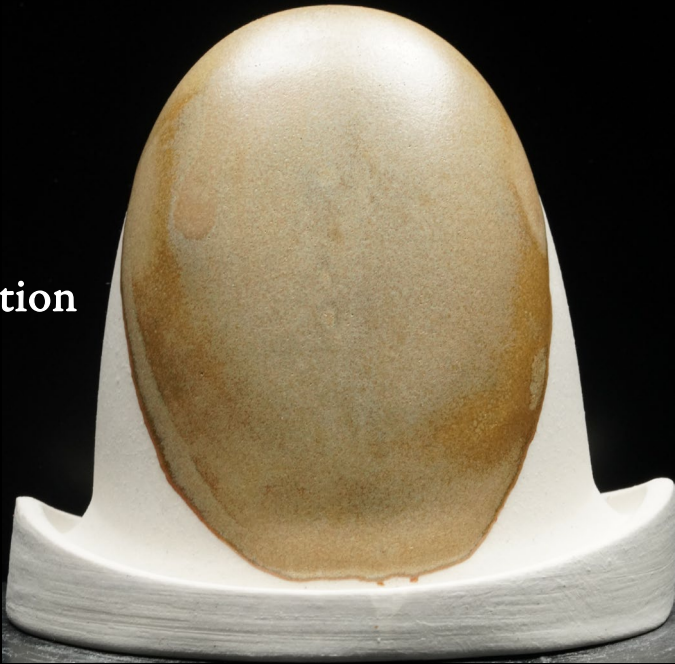
1-3 Second Dip



2-3 Second Dips



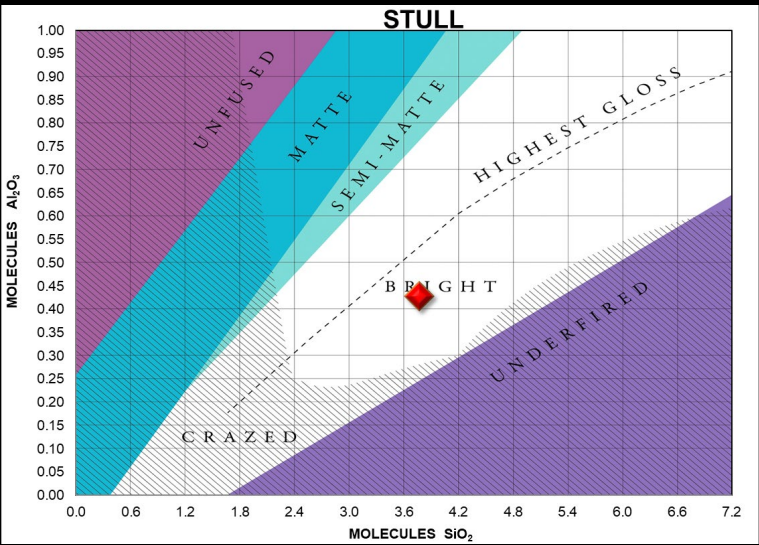
Reduction



Reduction

Oxidation

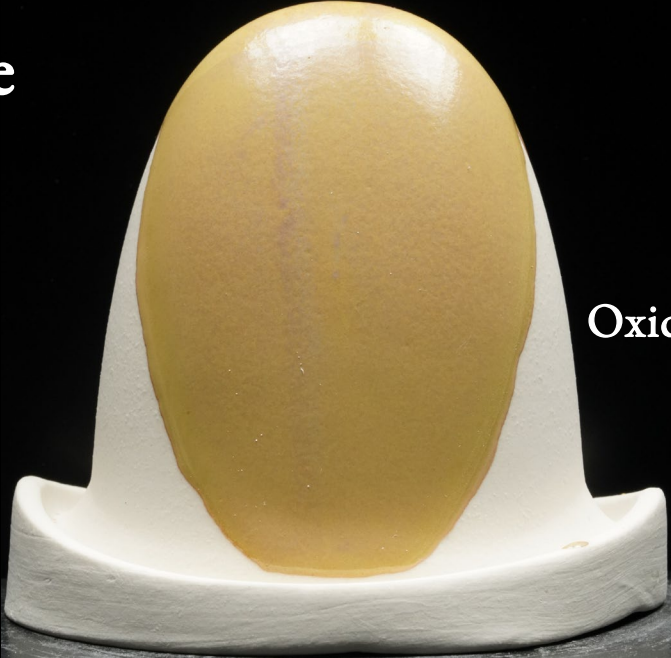
SiO ₂ :Al ₂ O ₃ Ratio 2.99 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.77	Collective "Al ₂ O ₃ " 1.26	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.76	NiO 0.08	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



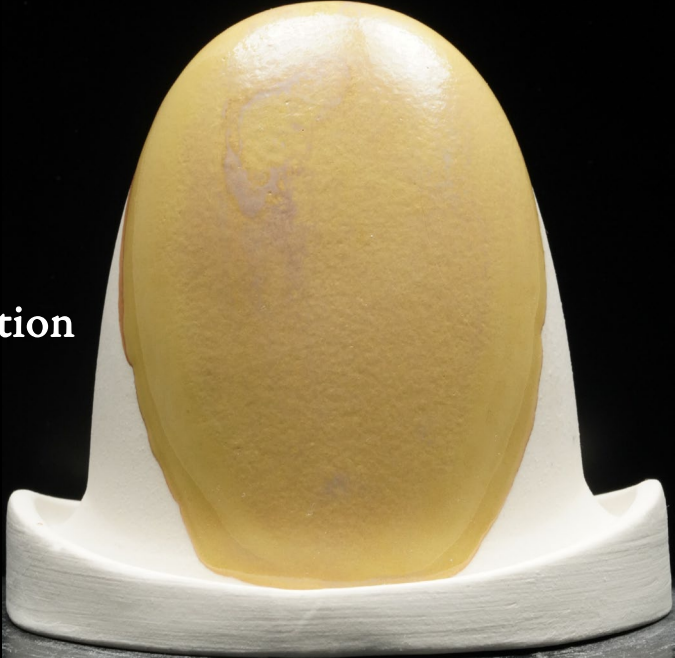
Ceramic
Materials
Workshop

Old Orange

Neph Sy	31.63
Whiting	15.74
EPK	8.05
Flint	28.89
Light Rutile	9.37
Nickel Carb (Green)	2.11
Tin Oxide	4.22
Water	60



1-3 Second Dip



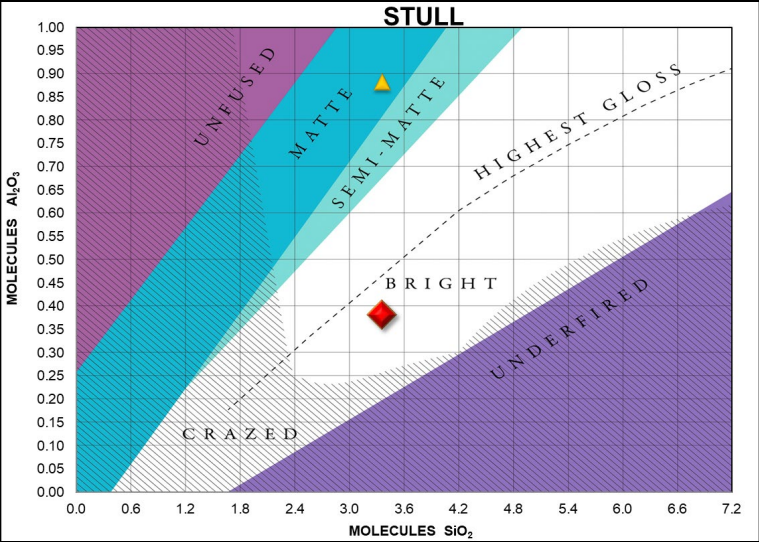
2-3 Second Dips



Reduction



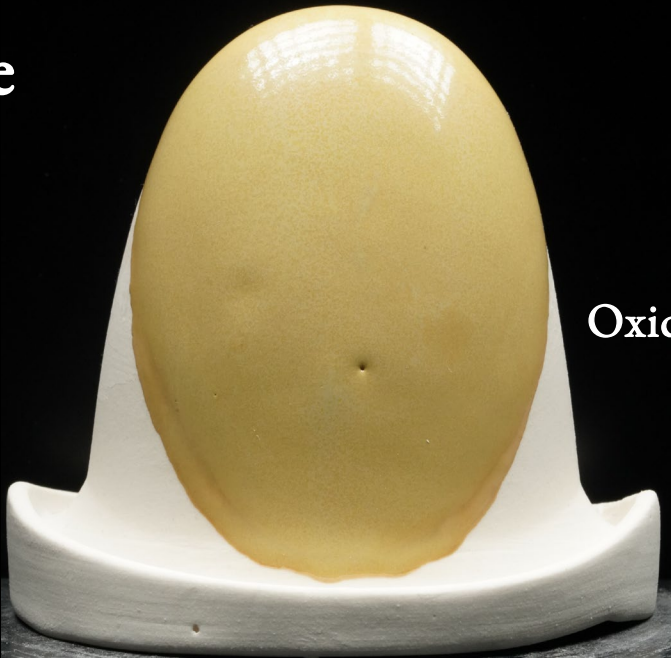
SiO ₂ :Al ₂ O ₃ Ratio 3.81 :1		Alkali Metals 0.37		Alkaline Earths 0.63	
SiO ₂ 3.36	Collective "Al ₂ O ₃ " 0.88	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO 0.07	Bi ₂ O ₃	SnO ₂ 0.11	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.35
Whiting	15.10
EPK	7.73
Flint	27.72
Light Rutile	8.99
Nickel Carb (Green)	2.02
Ultrox (Zircopax)	8.09
Water	60



1-3 Second Dip



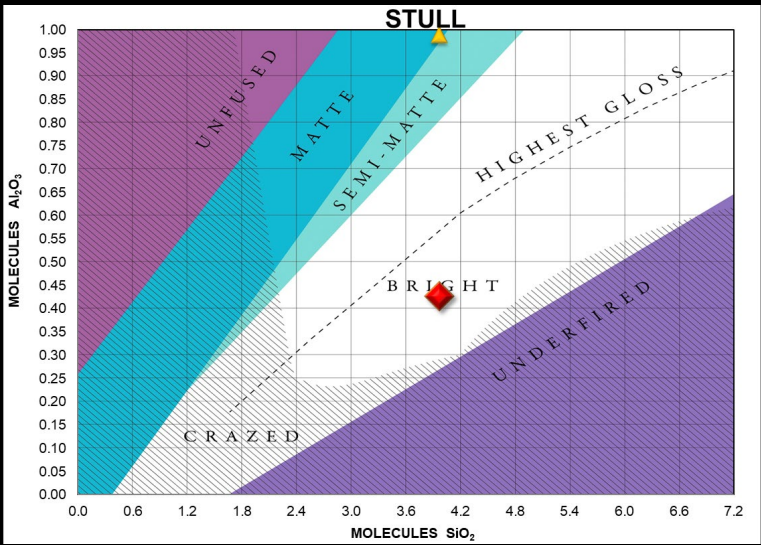
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 4.01 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.97	Collective "Al ₂ O ₃ " 0.99	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.49	NiO 0.08	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

Neph Sy	30.72
Whiting	15.29
EPK	7.82
Flint	28.06
Light Rutile	9.10
Titanium Dioxide	4.91
Tin Oxide	4.09
Water	60



1-3 Second Dip



2-3 Second Dips

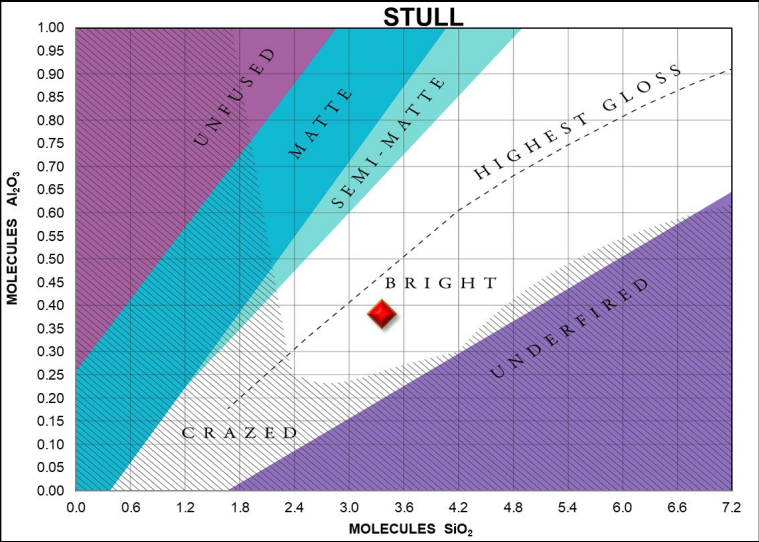


Reduction



Oxidation

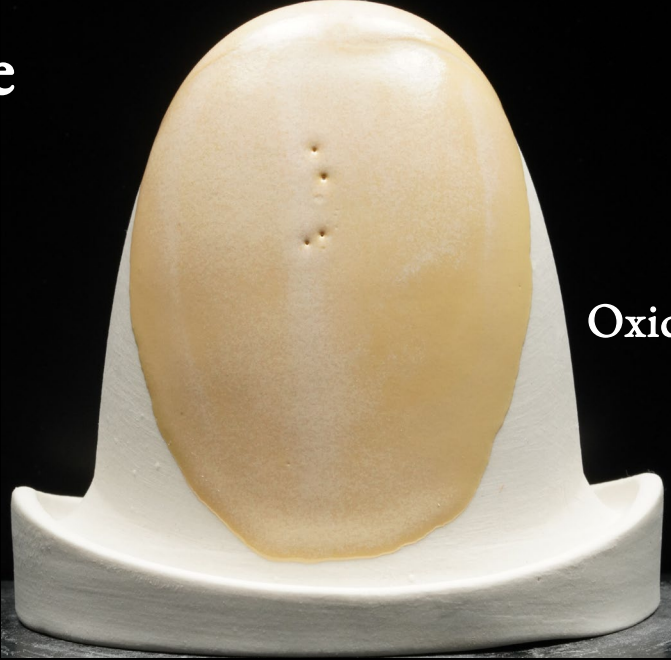
SiO ₂ :Al ₂ O ₃ Ratio 3.18 :1		Alkali Metals 0.37		Alkaline Earths 0.63	
SiO ₂ 3.36	Collective "Al ₂ O ₃ " 1.06	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.68	NiO	Bi ₂ O ₃	SnO ₂ 0.11	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Old Orange

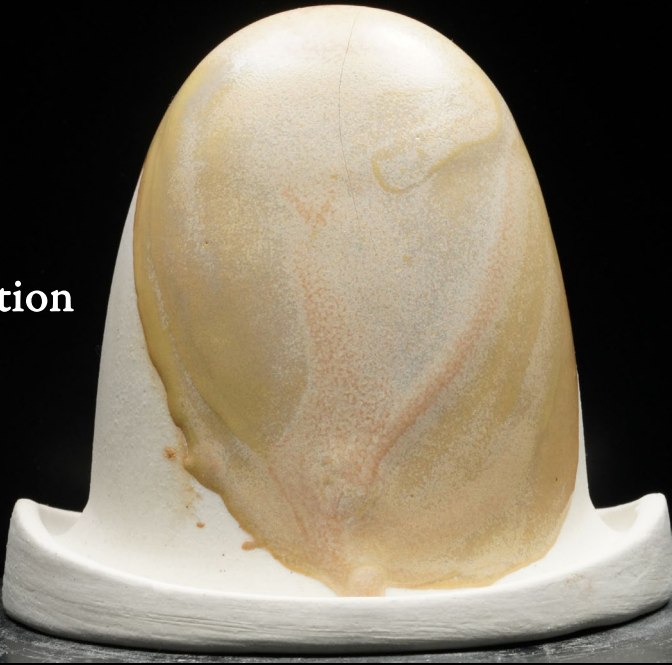
Neph Sy	29.51
Whiting	14.69
EPK	7.52
Flint	26.95
Light Rutile	8.74
Titanium Dioxide	4.72
Ultrox (Zircopax)	7.87
Water	60



1-3 Second Dip



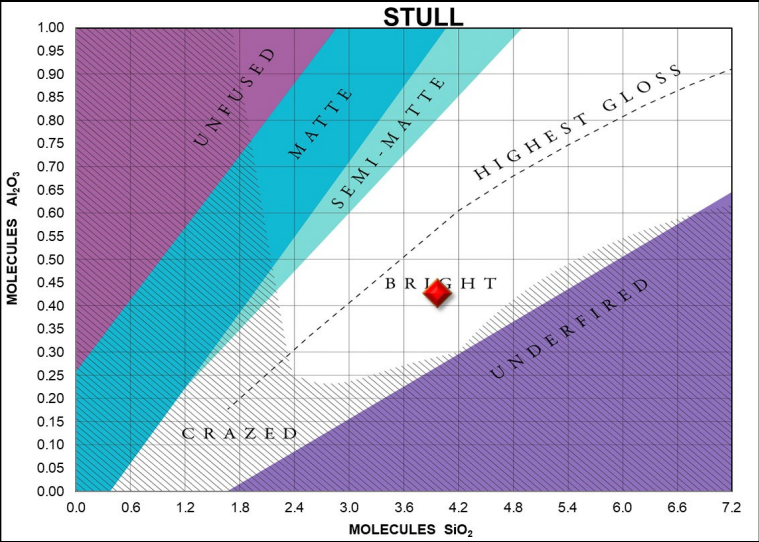
2-3 Second Dips



Oxidation

Reduction

SiO ₂ :Al ₂ O ₃ Ratio 3.35 : 1		Alkali Metals 0.29		Alkaline Earths 0.71	
SiO ₂ 3.97	Collective "Al ₂ O ₃ " 1.18	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.69
B ₂ O ₃	Al ₂ O ₃ 0.43	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.76	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
Materials
Workshop

Old Orange

Neph Sy	29.75
Whiting	14.80
EPK	7.58
Flint	27.17
Light Rutile	8.81
Tin Oxide	3.96
Ultrox (Zircopax)	7.93
Water	60



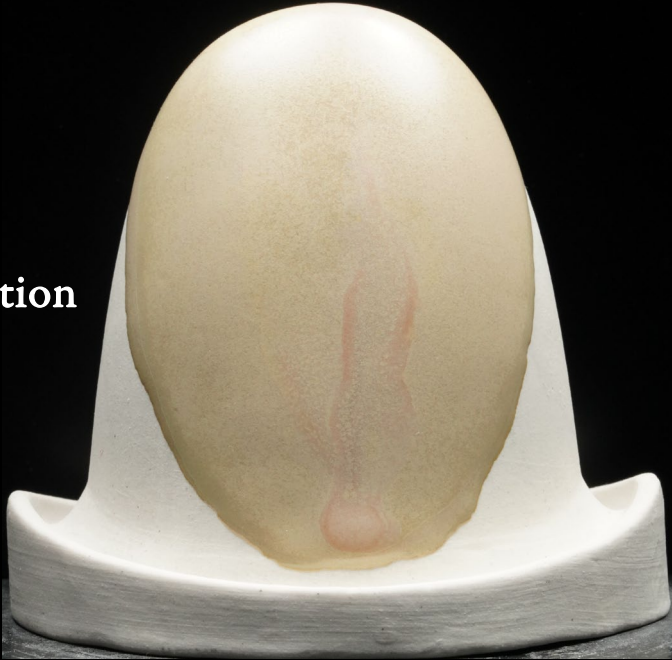
1-3 Second Dip



2-3 Second Dips

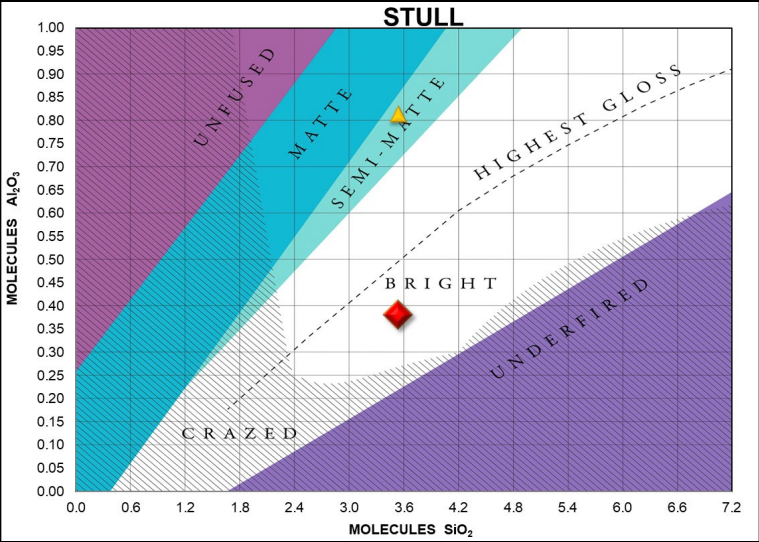


Reduction



Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 4.35 : 1		Alkali Metals 0.37		Alkaline Earths 0.63	
SiO ₂ 3.54	Collective "Al ₂ O ₃ " 0.81	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.62
B ₂ O ₃	Al ₂ O ₃ 0.38	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.43	NiO	Bi ₂ O ₃	SnO ₂ 0.11	ZnO	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop