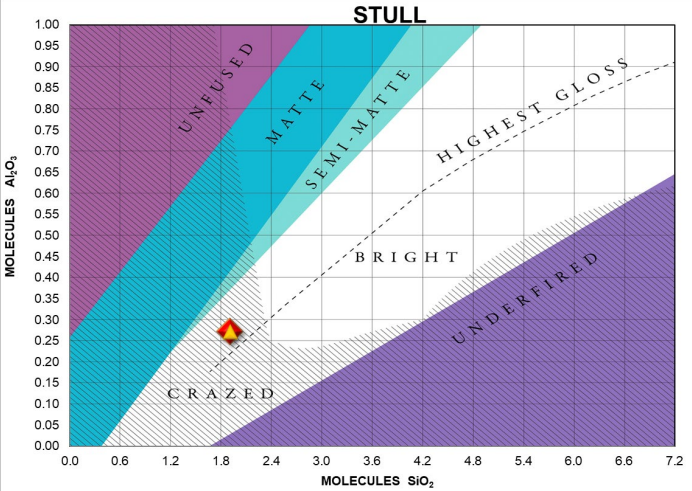


Tangerine- Δ 6

Lab 1-Pick-A-Part

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.09	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.34	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.39
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.32	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

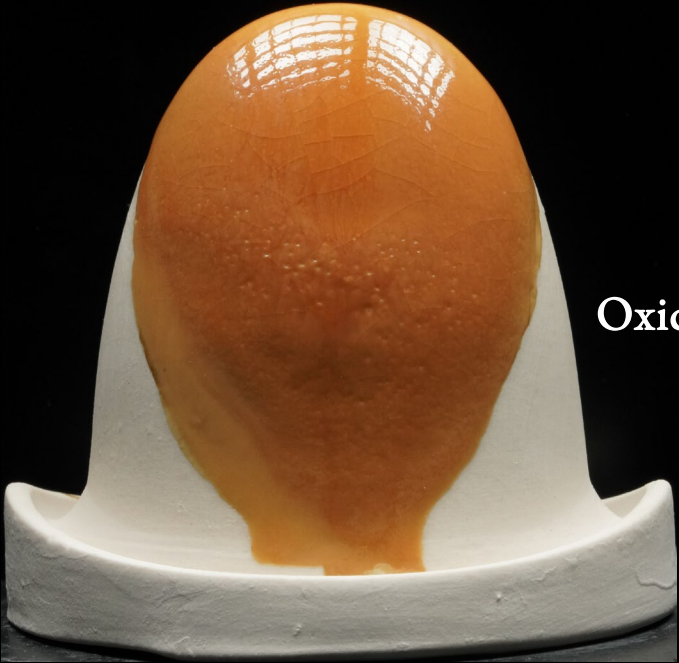


Tangerine

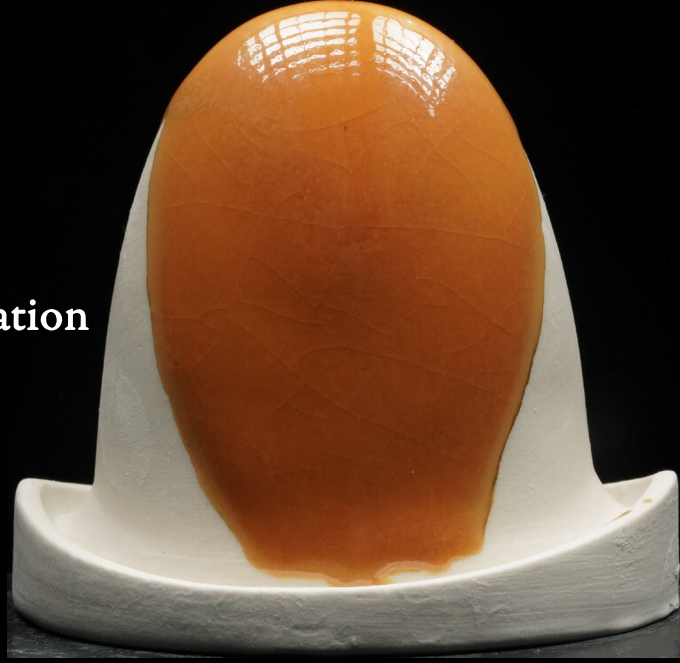
Original

071122-1

Neph Sy	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60

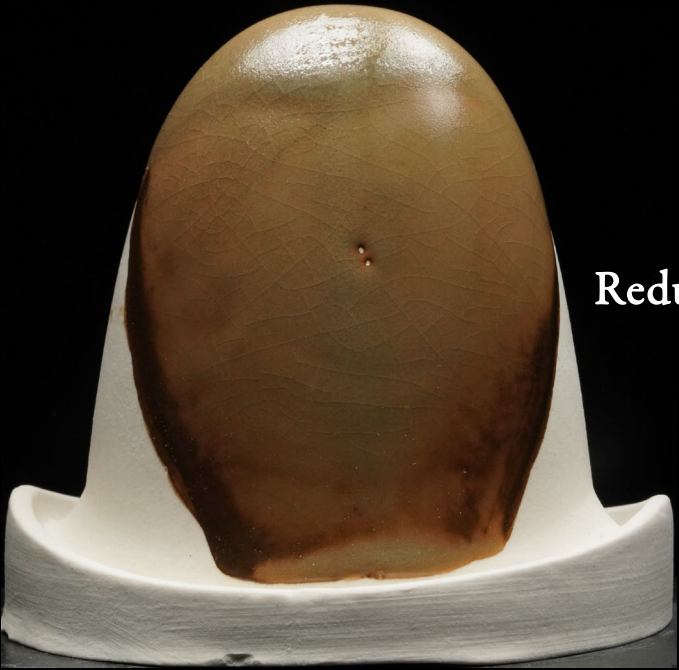


1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction



Ceramic Materials Workshop

Lab 1-Oxidation



071122-1



071122-2



071122-7

1-3 Second Dip



071122-51



071122-3



071122-6



Original



w/o Neph Sy



w/o Whiting

2-3 Second Dips



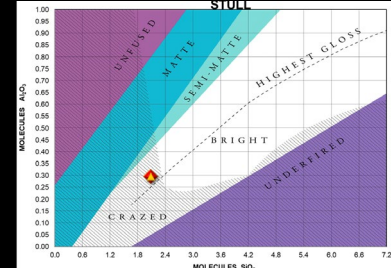
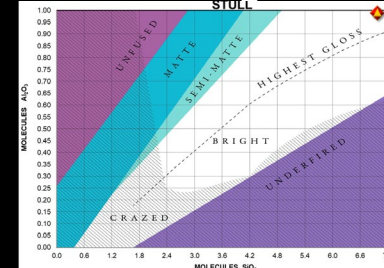
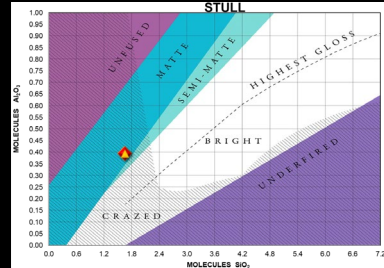
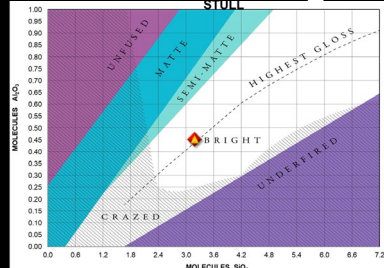
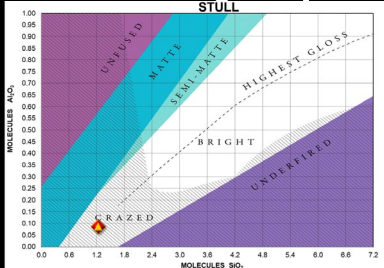
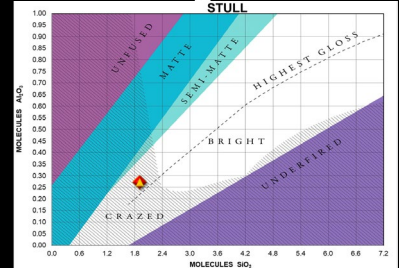
w/o Zinc Ox



w/o Whiting & Zinc



w/o Colorants



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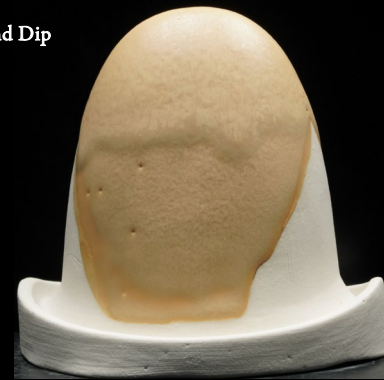
Lab 1-Oxidation



071122-1



071122-4



071122-5

1-3 Second Dip



Original

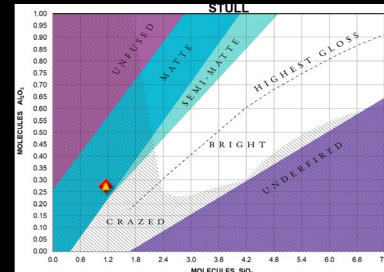
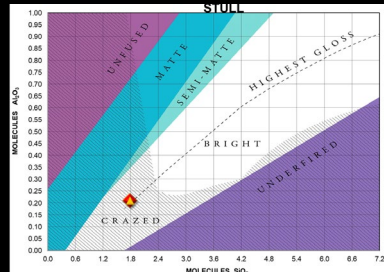
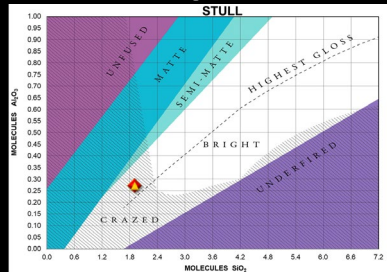


w/o Kaolin



w/o Silica

2-3 Second Dips



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Lab 1-Reduction



071122-1

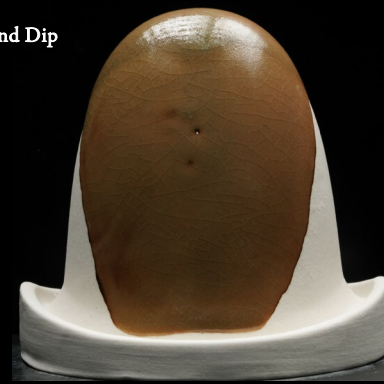


071122-2



071122-7

1-3 Second Dip



071122-51



071122-3



071122-6



Original



w/o Neph Sy



w/o Whiting

2-3 Second Dips



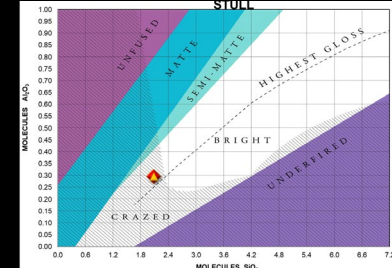
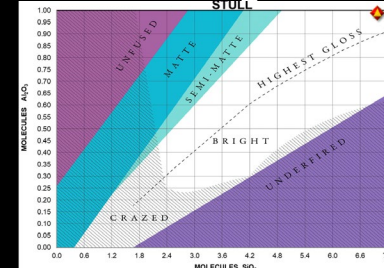
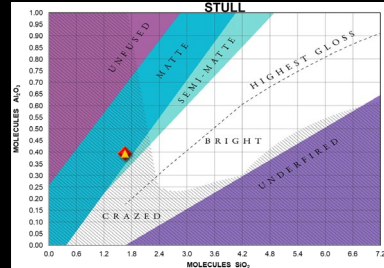
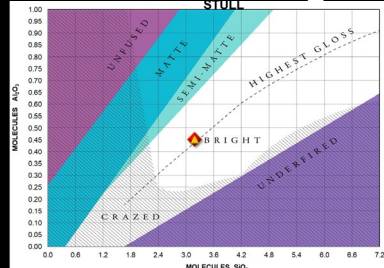
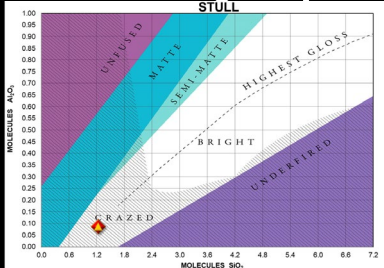
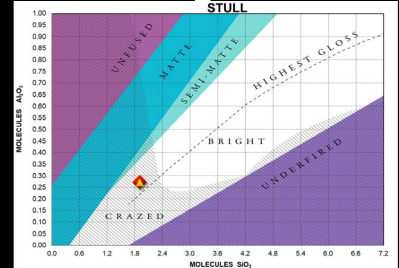
w/o Zinc Ox



w/o Whiting & Zinc



w/o Colorants



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Lab 1-Reduction

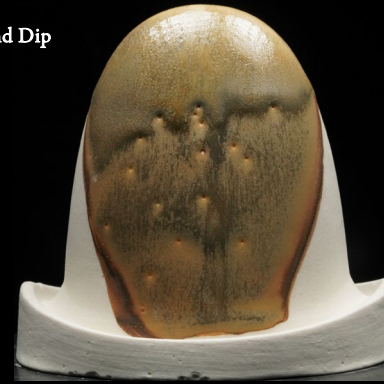


071122-1



071122-4

1-3 Second Dip



071122-5



Original

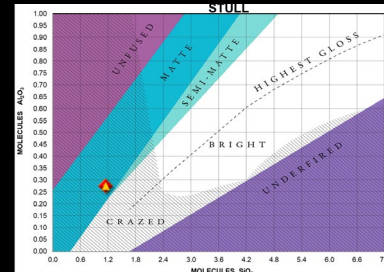
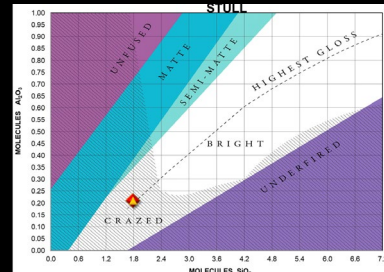
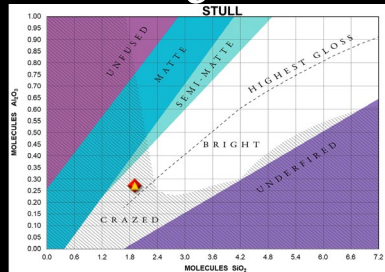


w/o Kaolin

2-3 Second Dips



w/o Silica

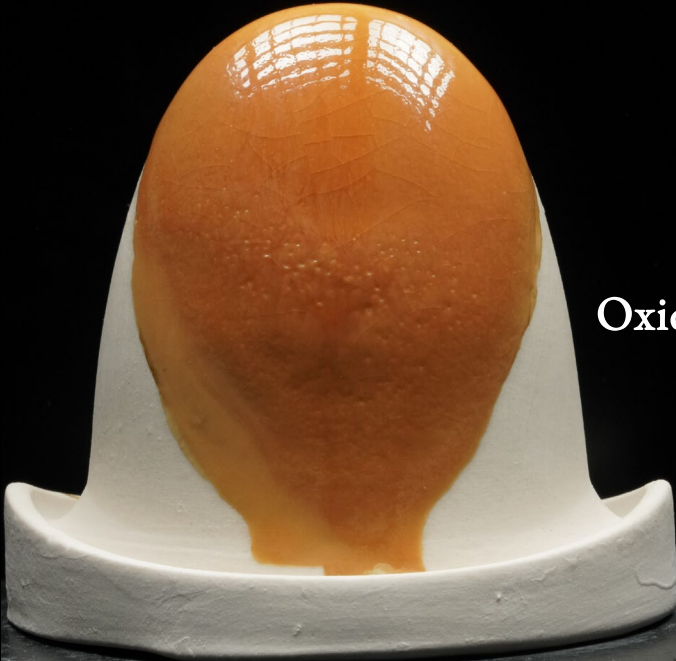


Tangerine

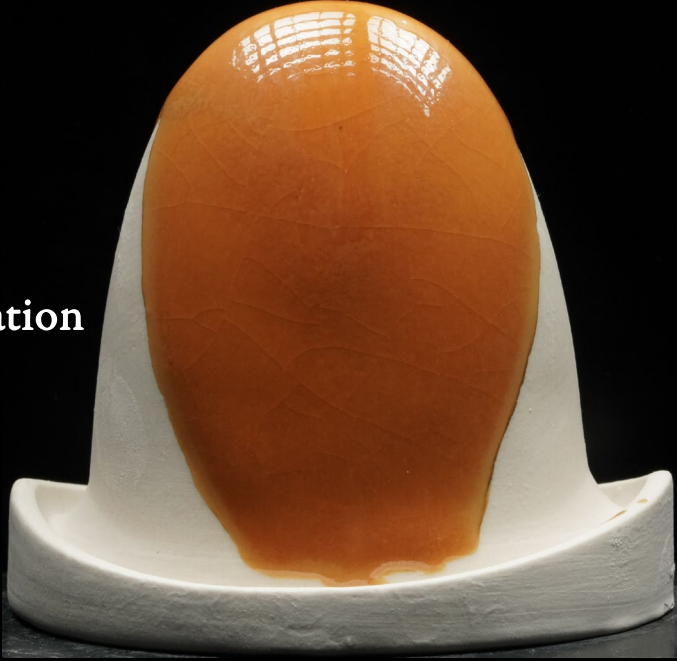
Original

071122-1

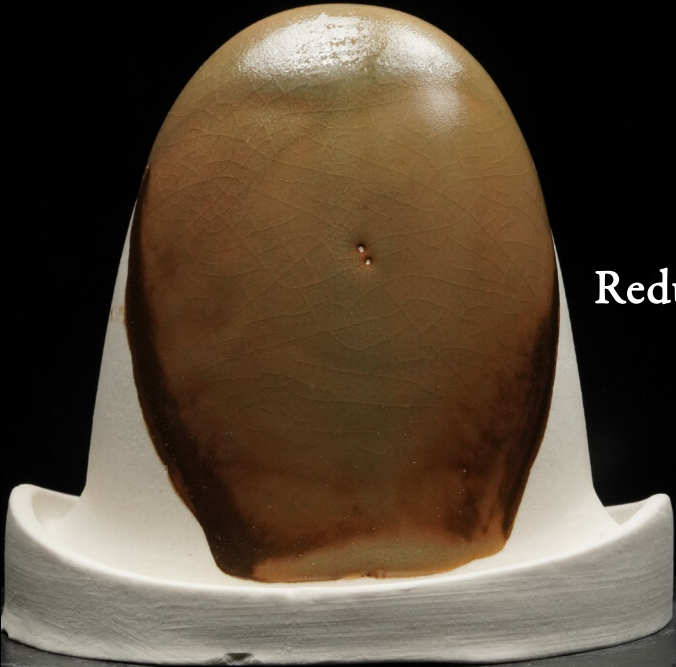
Neph Sy	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips

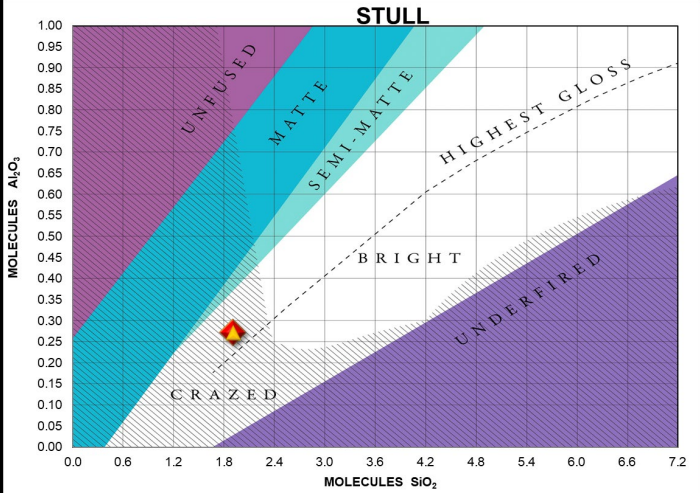


Reduction

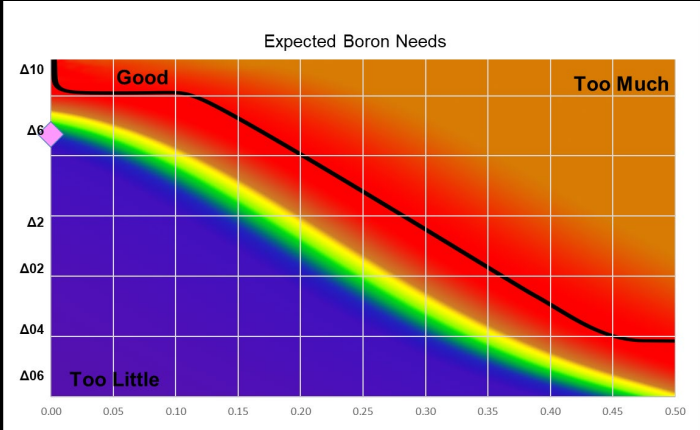


Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.09	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.34	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.39
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.32	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Tangerine

w/o Alkali Metal

071122-2

Neph Sy	
Whiting	29.67
Zinc Oxide	19.78
EPK	13.84
Flint	36.71
Chrome Oxide	0.21
Red Iron Oxide	1.84
Water	60

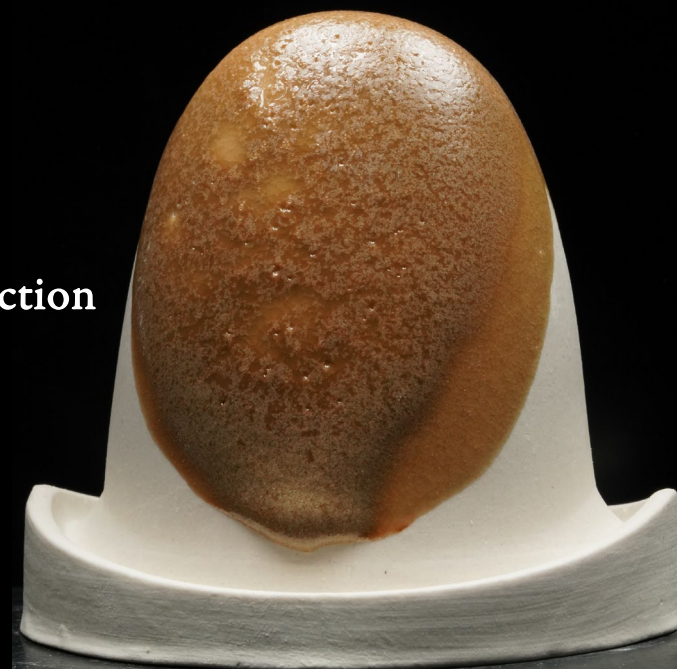
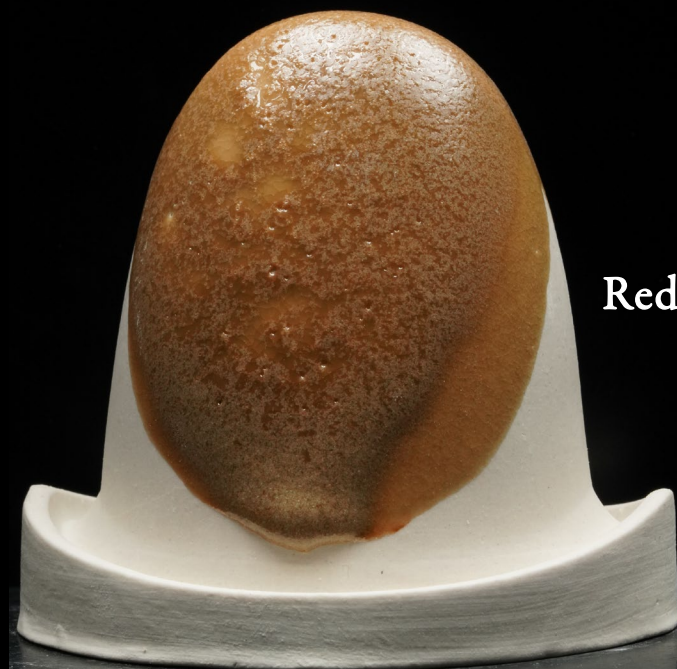


1-3 Second Dip



2-3 Second Dips

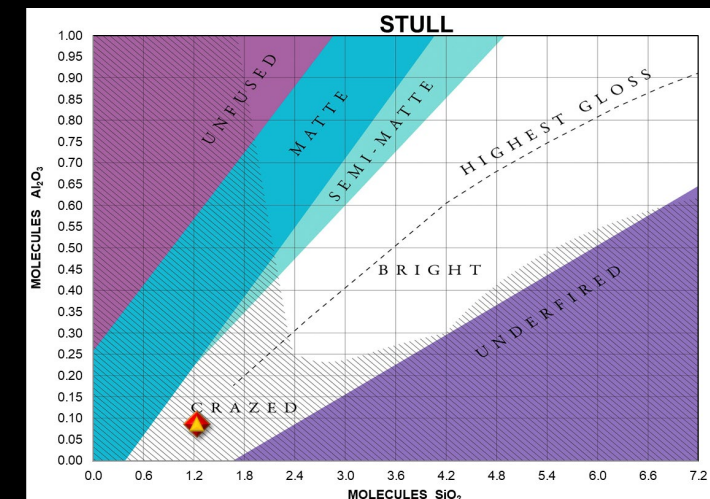
Oxidation



Reduction

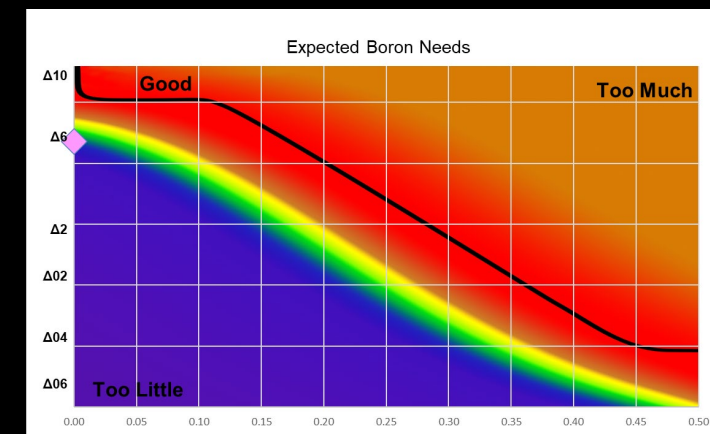
UMF

SiO ₂ :Al ₂ O ₃ Ratio 14.15 : 1		Alkali Metals 0.00		Alkaline Earths 1.00	
SiO ₂ 1.32	Collective "Al ₂ O ₃ " 0.09	Na ₂ O	K ₂ O 0.00	MgO 0.00	CaO 0.55
B ₂ O ₃	Al ₂ O ₃ 0.09	Li ₂ O	CuO	SrO	BaO
TiO ₂	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.45	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 14.15 : 1		Alkali Metals 0.00		Alkaline Earths 1.00	
SiO ₂ 1.23	Collective "Al ₂ O ₃ " 0.09	Na ₂ O	K ₂ O 0.00	MgO 0.00	CaO 0.51
B ₂ O ₃	Al ₂ O ₃ 0.09	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.42	FeO 0.07
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

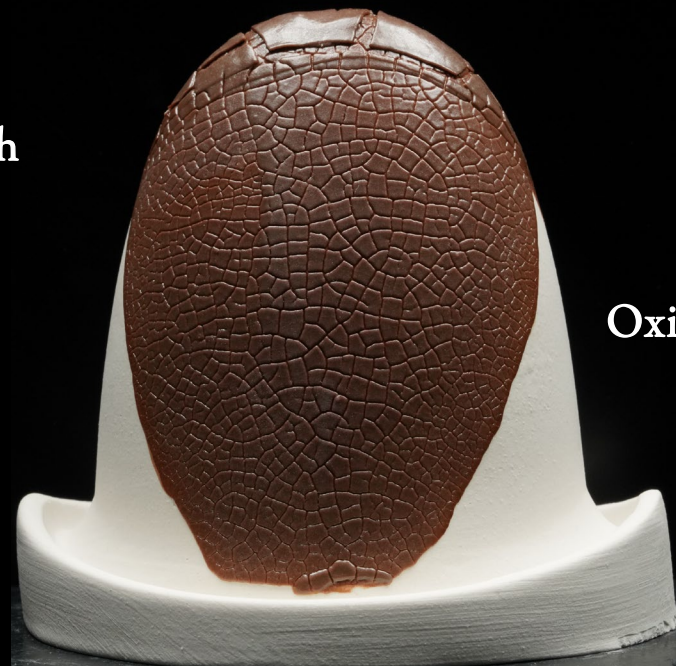


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Tangerine

w/o Alkaline Earth
071122-3

Neph Sy	59.14
Whiting	
Zinc Oxide	
EPK	11.19
Flint	29.67
Chrome Oxide	0.21
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction

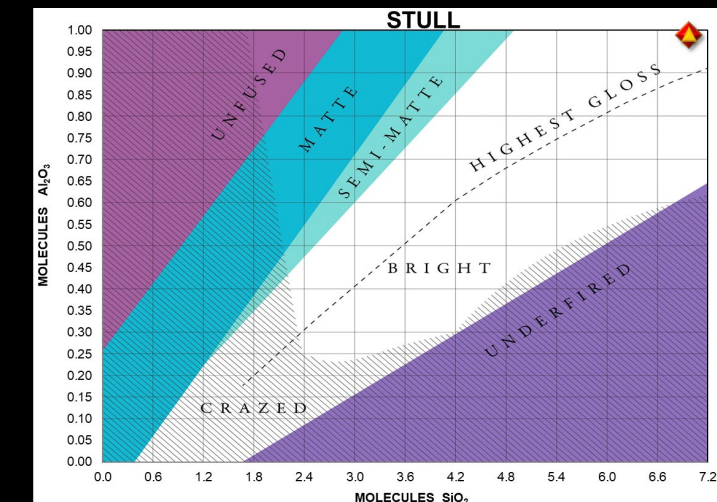


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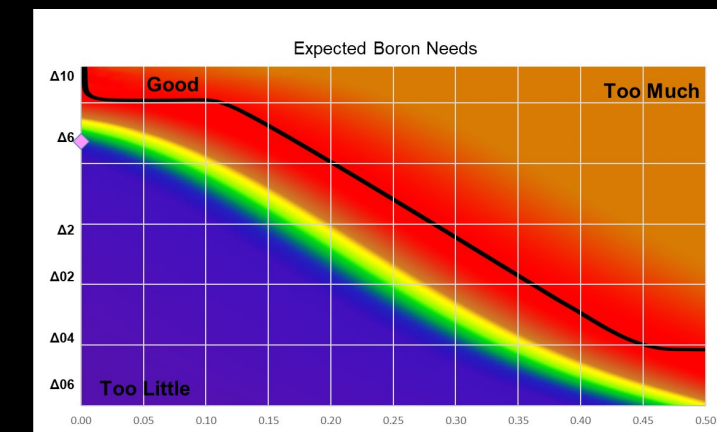
UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.94		Alkaline Earths 0.06	
SiO ₂ 8.89	Collective "Al ₂ O ₃ " 1.26	Na ₂ O 0.73	K ₂ O 0.21	MgO 0.01	CaO 0.03
B ₂ O ₃	Al ₂ O ₃ 1.26	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 7.03 : 1		Alkali Metals 0.74		Alkaline Earths 0.26	
SiO ₂ 6.97	Collective "Al ₂ O ₃ " 0.99	Na ₂ O 0.58	K ₂ O 0.16	MgO 0.01	CaO 0.02
B ₂ O ₃	Al ₂ O ₃ 0.99	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.23
Cr ₂ O ₃ 0.01	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Tangerine

w/o Kaolin

071122-4

Neph Sy	45.93
Whiting	18.62
Zinc Oxide	12.41
EPK	
Flint	23.04
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	65



1-3 Second Dip



2-3 Second Dips

Oxidation



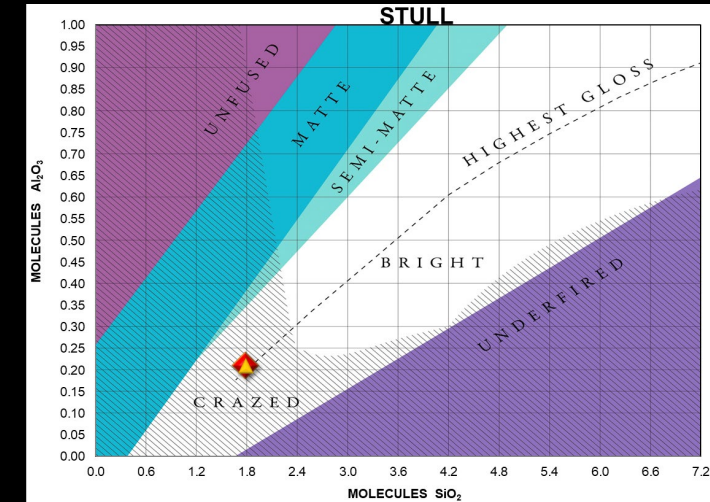
Reduction



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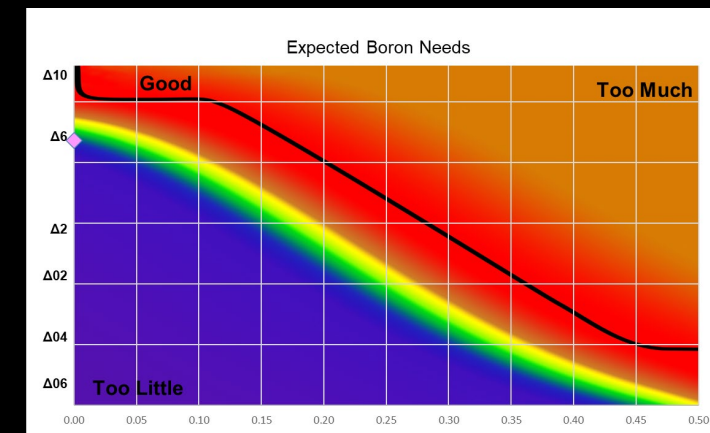
UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.45 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 1.93	Collective "Al ₂ O ₃ " 0.23	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.23	Li ₂ O	CuO	SrO	BaO
TiO ₂	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.35	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.45 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.78	Collective "Al ₂ O ₃ " 0.21	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.21	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.32	FeO 0.08
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



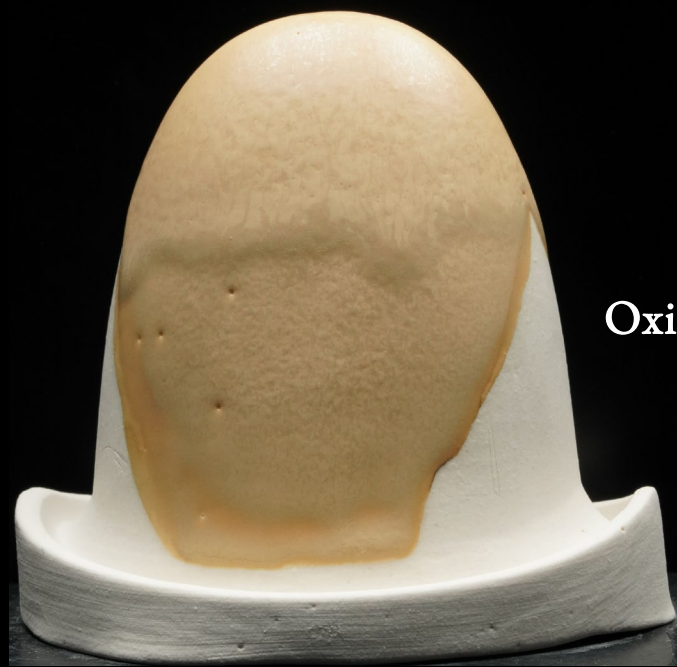
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Tangerine

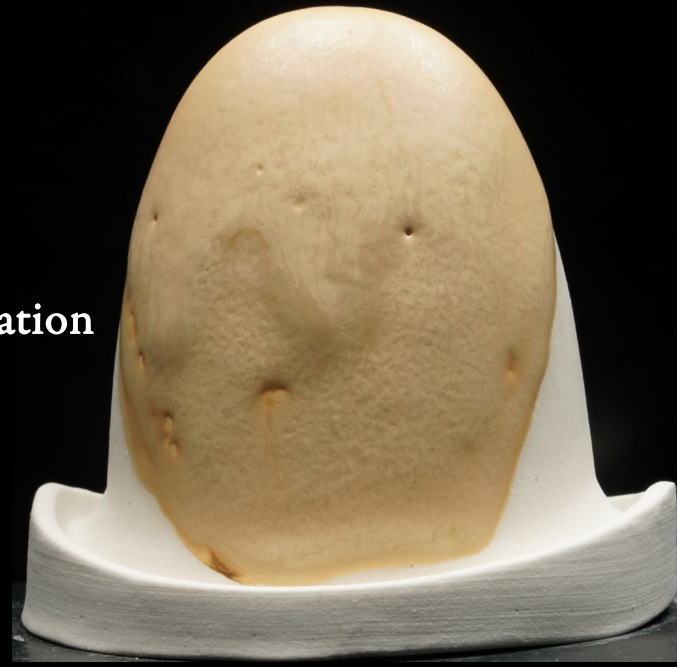
w/o Silica

071122-5

Neph Sy	53.62
Whiting	21.74
Zinc Oxide	14.49
EPK	10.14
Flint	
Chrome Oxide	0.21
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips

Oxidation

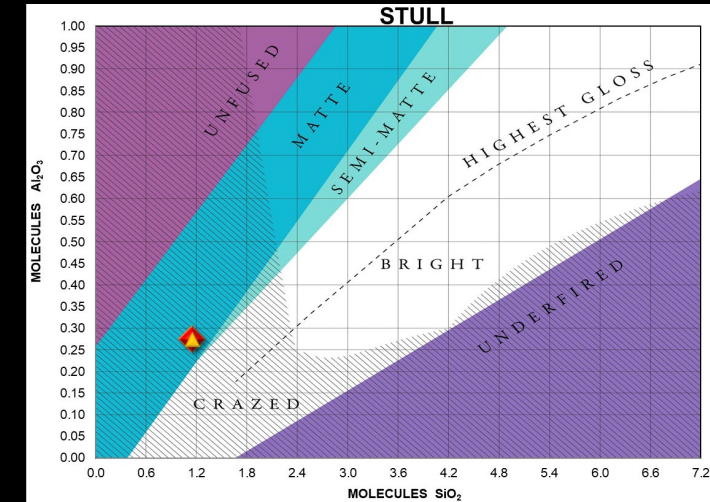


Reduction



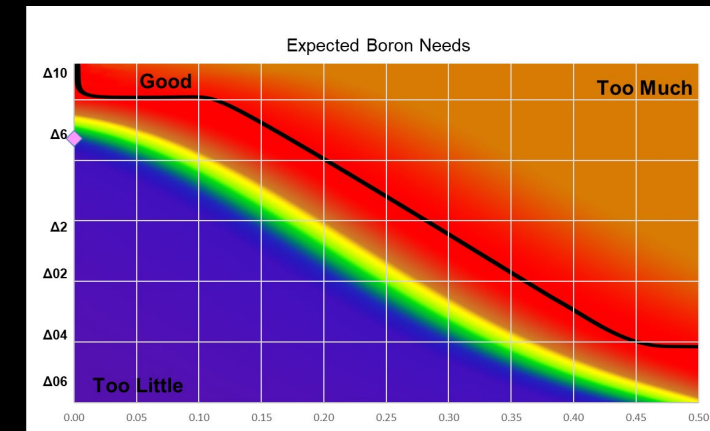
UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.19 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 1.23	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.29	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.35	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 4.19 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 1.15	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.32	FeO 0.07
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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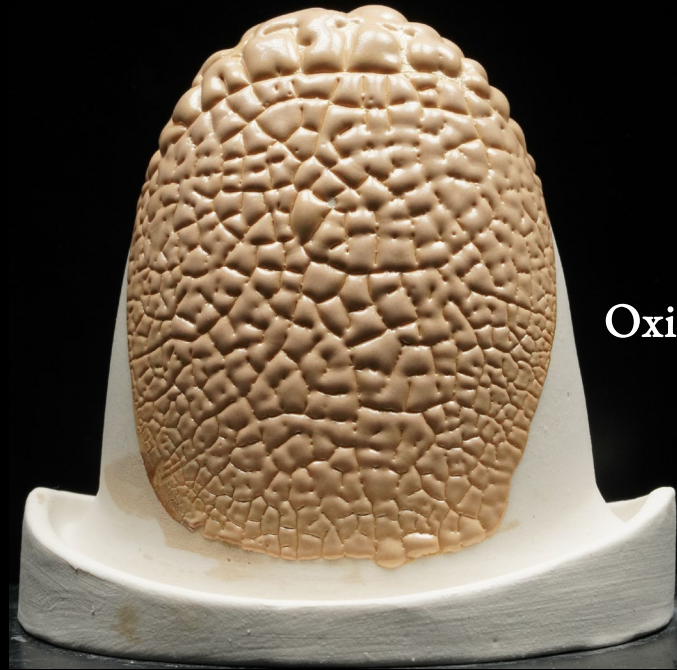
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Tangerine

w/o Whiting

071122-7

Neph Sy	50.99
Whiting	
Zinc Oxide	13.78
EPK	9.65
Flint	25.58
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip

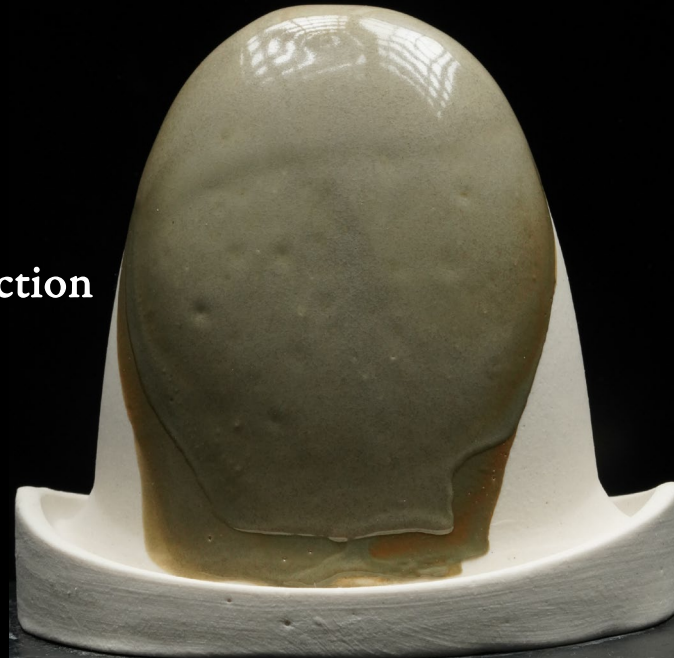


2-3 Second Dips

Oxidation



1-3 Second Dip

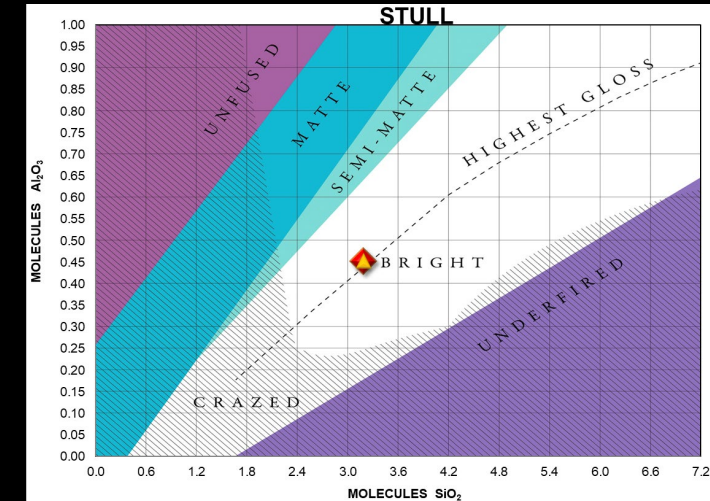


2-3 Second Dips

Reduction

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.38		Alkaline Earths 0.62	
SiO ₂ 3.60	Collective "Al ₂ O ₃ " 0.51	Na ₂ O 0.30	K ₂ O 0.09	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.51	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 7.03 : 1		Alkali Metals 0.34		Alkaline Earths 0.66	
SiO ₂ 3.19	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.26	K ₂ O 0.08	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.45	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.53	FeO 0.12
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Tangerine

w/o Zinc Oxide

071122-51

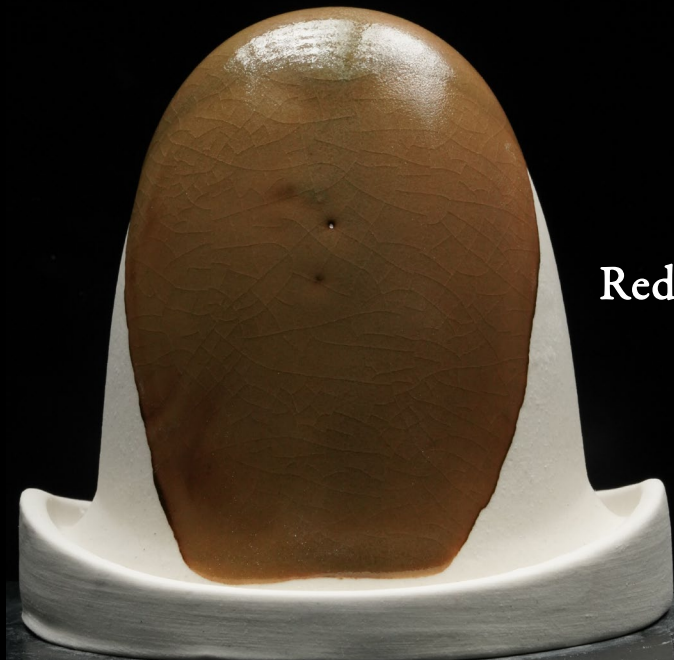
Neph Sy	47.09
Whiting	19.09
Zinc Oxide	
EPK	8.91
Flint	23.63
Chrome Oxide	0.23
Red Iron Oxide	2.05
Water	60



1-3 Second Dip



2-3 Second Dips



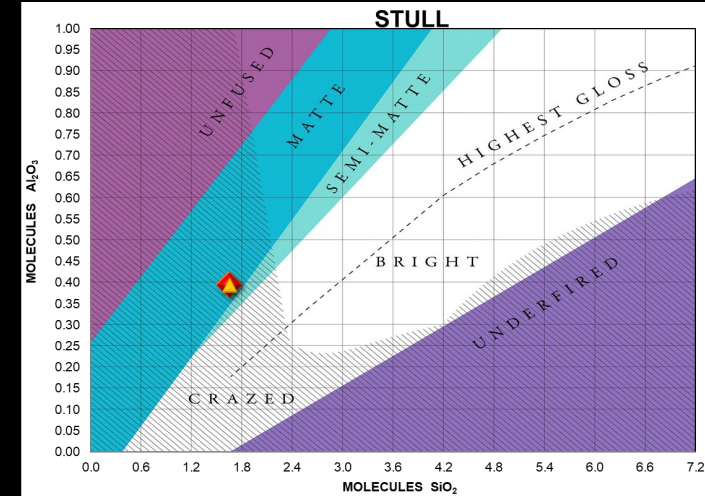
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 4.19 : 1		Alkali Metals 0.34		Alkaline Earths 0.66	
SiO ₂ 1.88	Collective "Al ₂ O ₃ " 0.45	Na ₂ O 0.26	K ₂ O 0.08	MgO 0.00	CaO 0.65
B ₂ O ₃	Al ₂ O ₃ 0.45	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 4.19 : 1		Alkali Metals 0.30		Alkaline Earths 0.70	
SiO ₂ 1.65	Collective "Al ₂ O ₃ " 0.40	Na ₂ O 0.23	K ₂ O 0.07	MgO 0.00	CaO 0.57
B ₂ O ₃	Al ₂ O ₃ 0.39	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.13
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
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Tangerine

w/o Colorants

071122-6

Neph Sy	42.26
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	
Red Iron Oxide	
Water	60



1-3 Second Dip

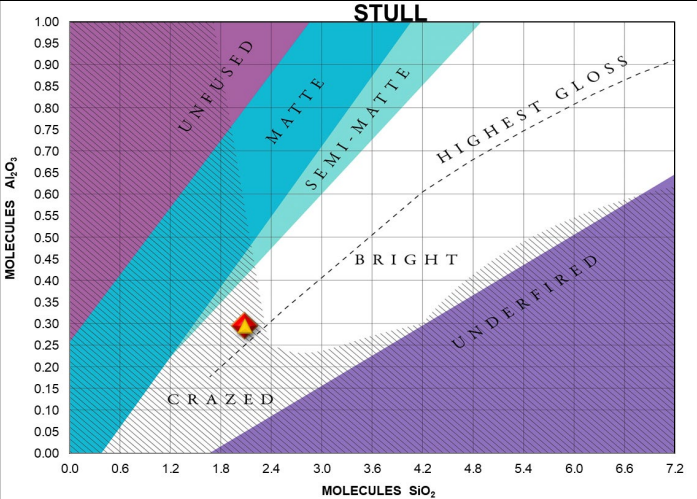


2-3 Second Dips



Reduction

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.09	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.30	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.34	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂	Collective "Al ₂ O ₃ "	Na ₂ O	K ₂ O	MgO	CaO
B ₂ O ₃	Al ₂ O ₃	Li ₂ O	CuO	SrO	BaO
TiO ₂	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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