

Tangerine- Δ 6

Lab 2-Flux Capacity



Ceramic
Materials
Workshop

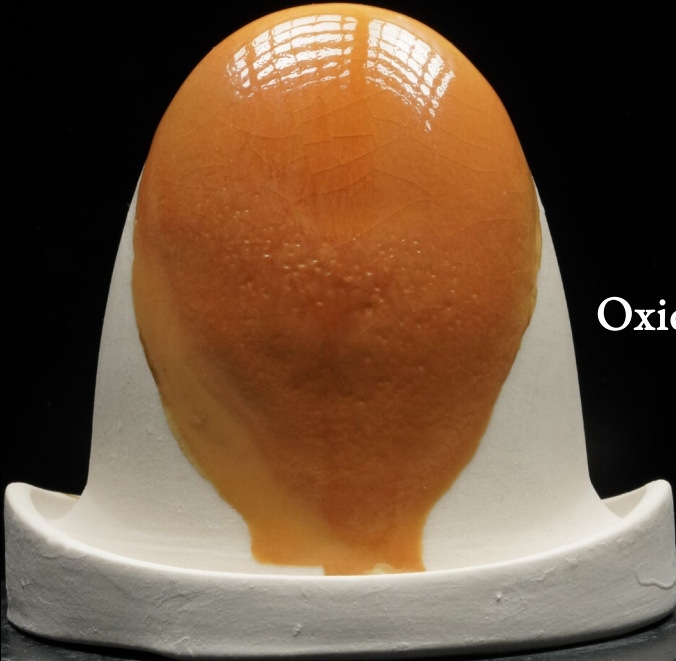
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Tangerine

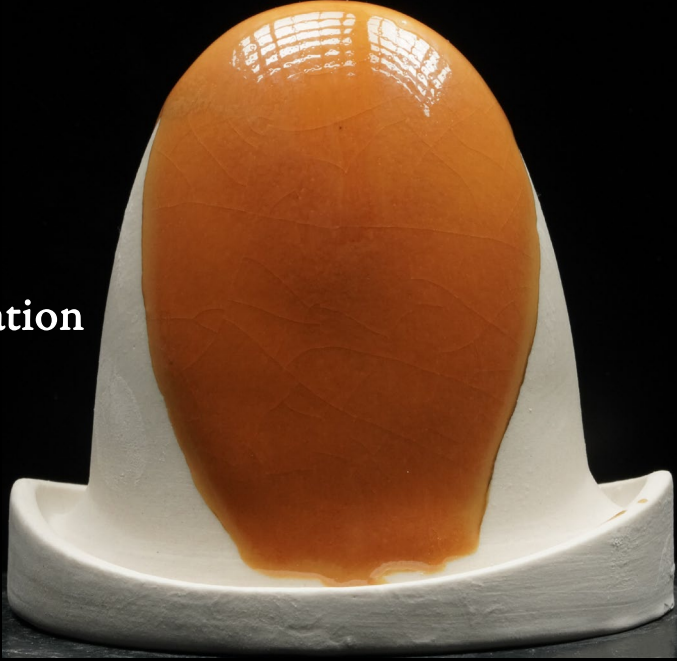
Original

071122-1

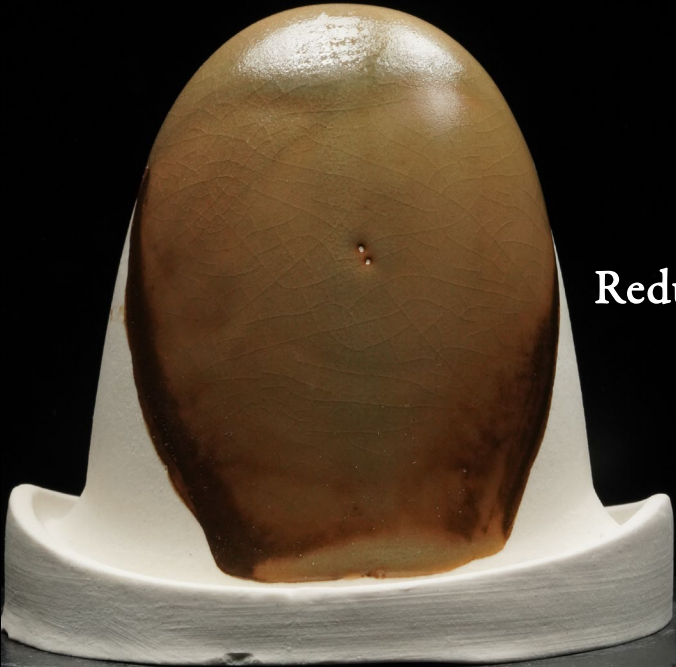
Neph Sy	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips

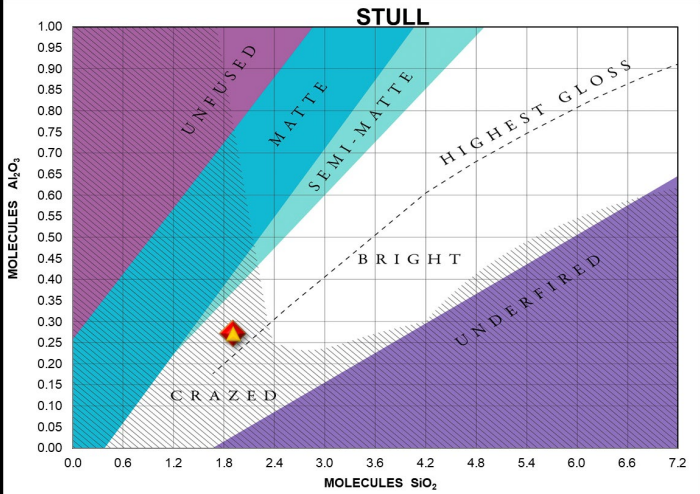


Reduction



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

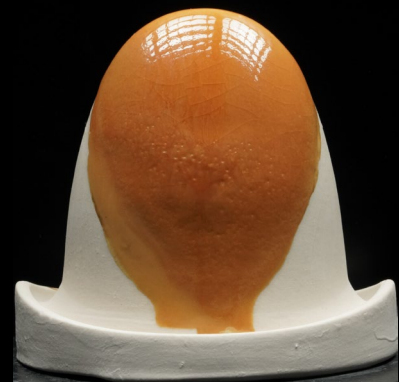


SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.16	K ₂ O 0.05	MgO 0.00	CaO 0.39
B ₂ O ₃	Al ₂ O ₃ 0.27	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.32	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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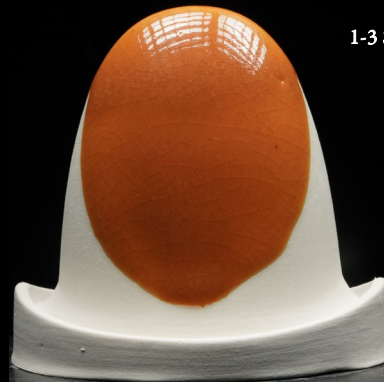
Lab 2-Alkali Metals-Oxidation



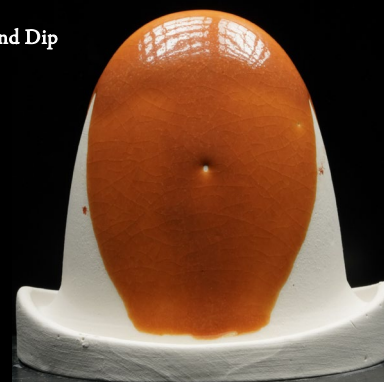
071122-1



071122-8



071122-9



071122-10



071122-11



071122-12

1-3 Second Dip



Original (NS)



w/Custer



w/Mahavir



w/G200 EU

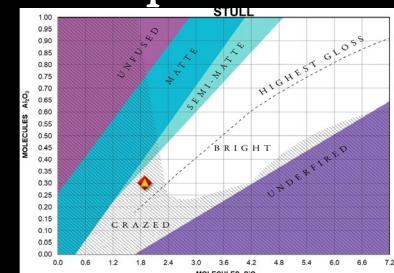
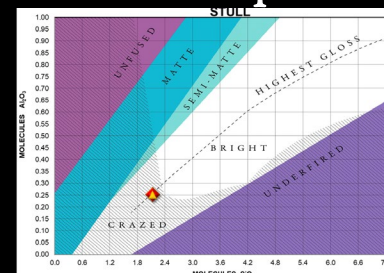
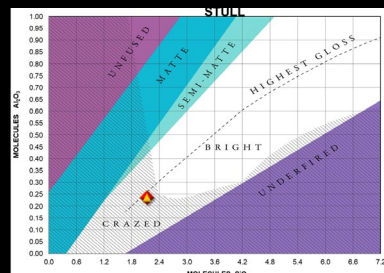
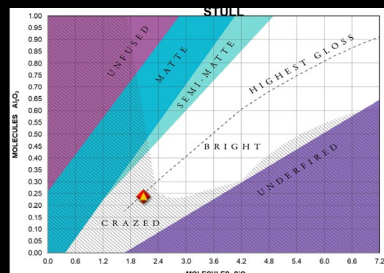
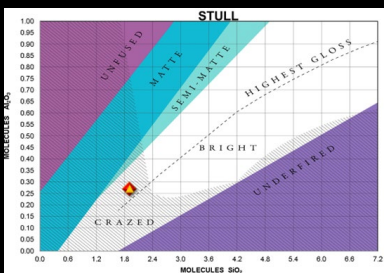
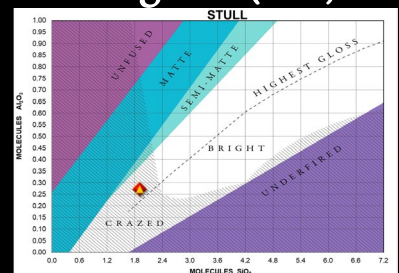


w/Minspar



w/Spodumene

2-3 Second Dips



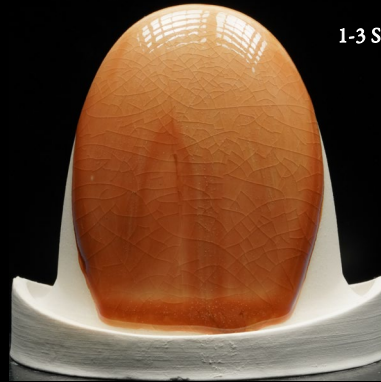
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Lab 2-Alkali Metals-Oxidation



071122-1



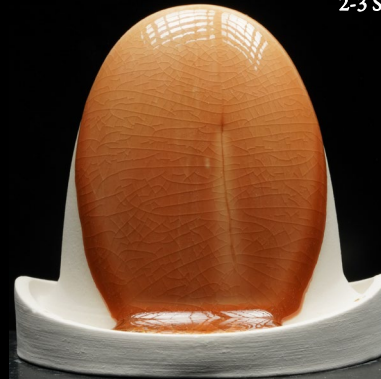
071122-14



071122-15



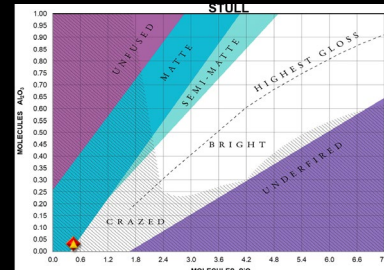
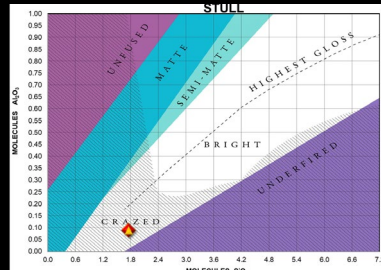
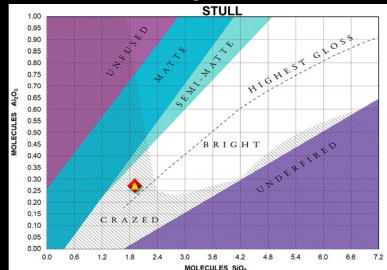
Original



w/Frit 3110



w/Lithium Carbonate



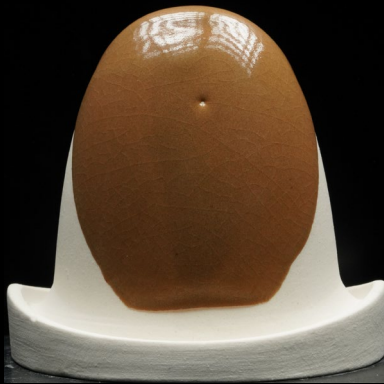
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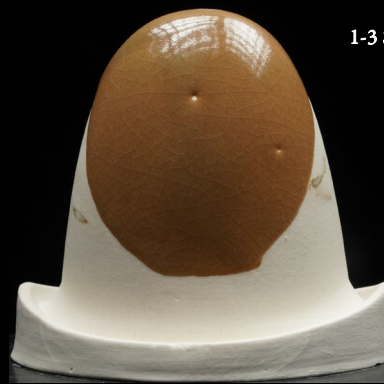
Lab 2-Alkali Metals-Reduction



071122-1



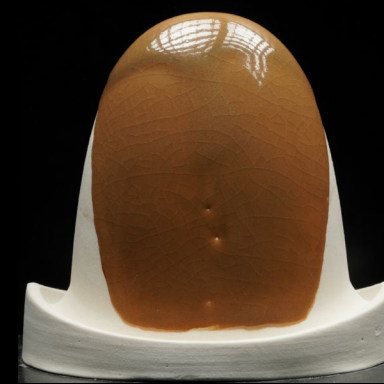
071122-8



071122-9



071122-10



071122-11



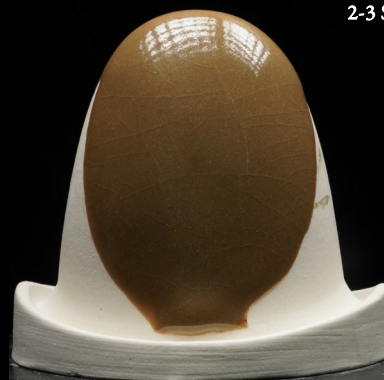
071122-12



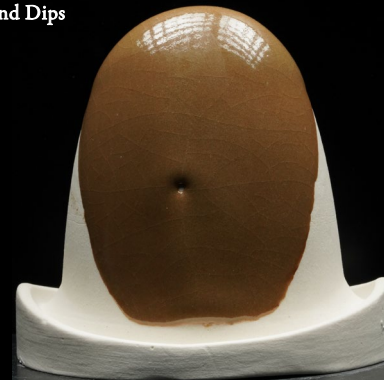
Original (NS)



w/Custer



w/Mahavir



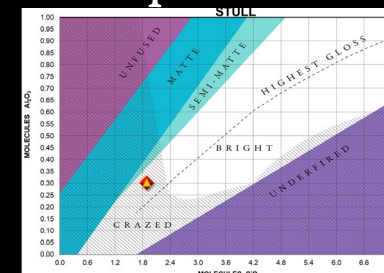
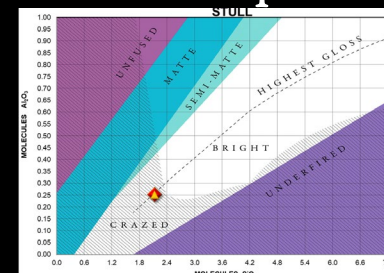
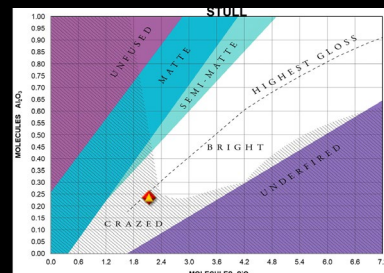
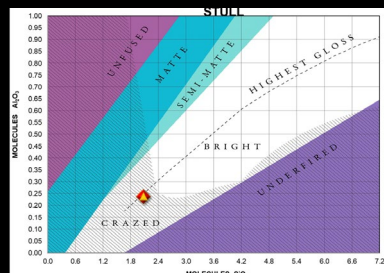
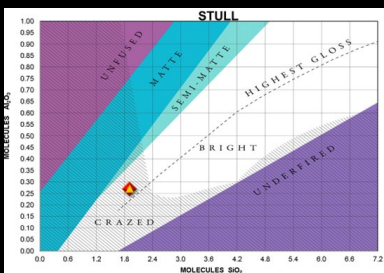
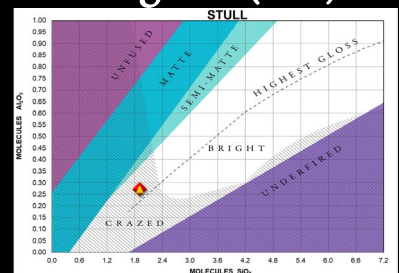
w/G200 EU



w/Minspar



w/Spodumene



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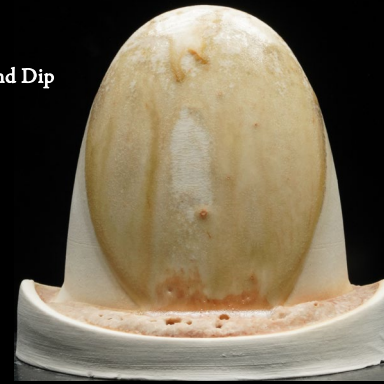
Lab 2-Alkali Metals-Reduction



071122-1



071122-14



071122-15

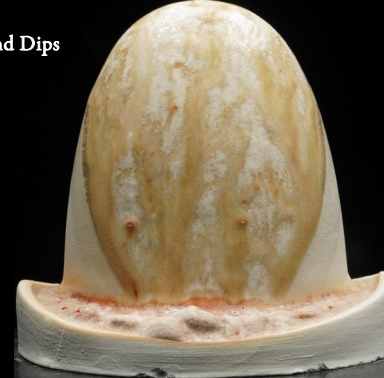
1-3 Second Dip



Original

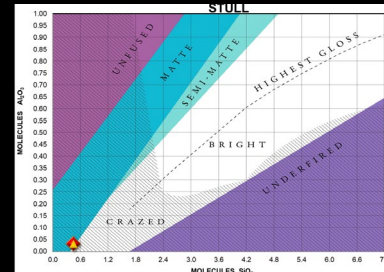
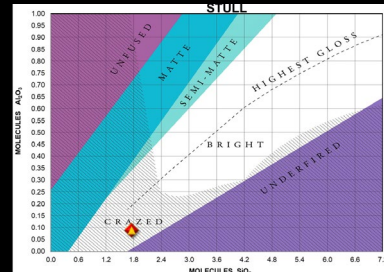
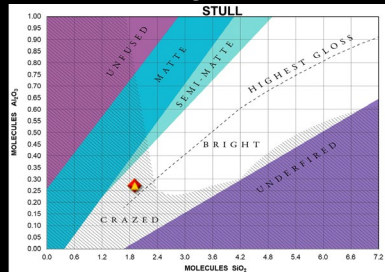


w/Frit 3110



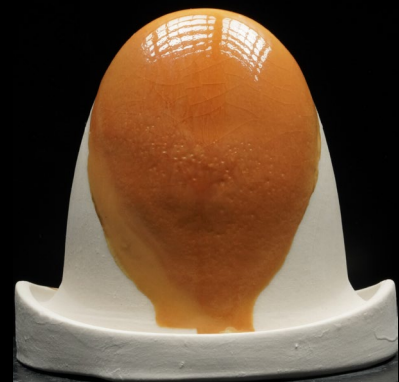
w/Lithium Carbonate

2-3 Second Dips



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Lab 2-Alkaline Earth-Oxidation



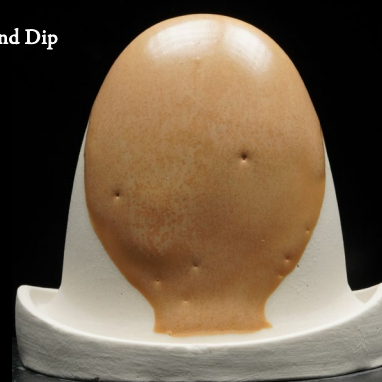
071122-1



071122-16



071122-17



071122-18



071122-19



071122-20

1-3 Second Dip

2-3 Second Dips



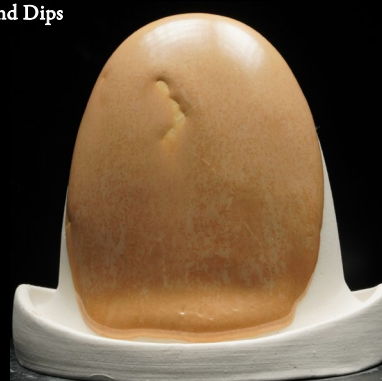
Original (W)



w/Talc



w/Mag Carb



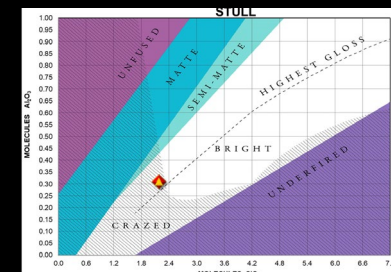
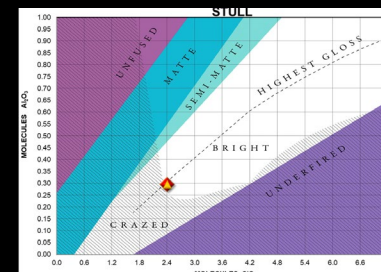
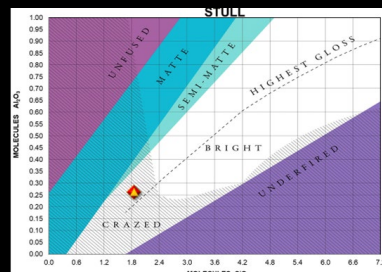
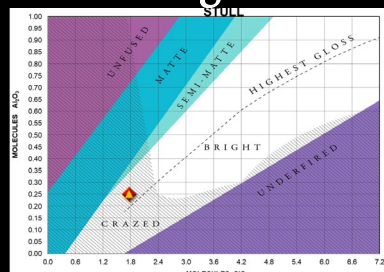
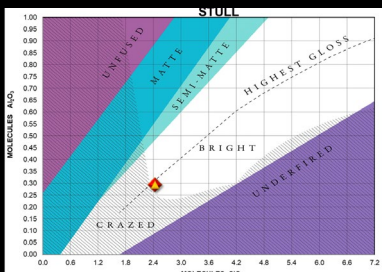
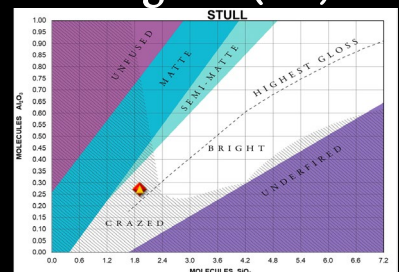
w/Dolomite



w/Wollastonite



w/Strontium Carb



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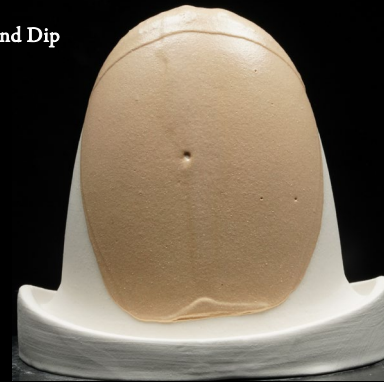
Lab 2-Alkaline Earth-Oxidation



071122-1



071122-21



071122-22



071122-23

1-3 Second Dip

2-3 Second Dips



Original (W)



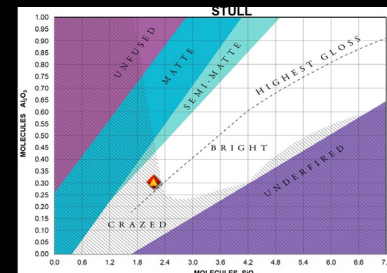
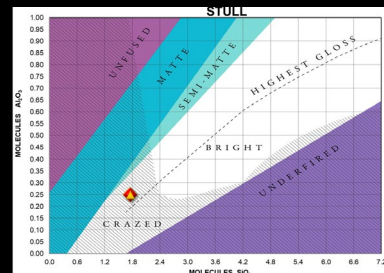
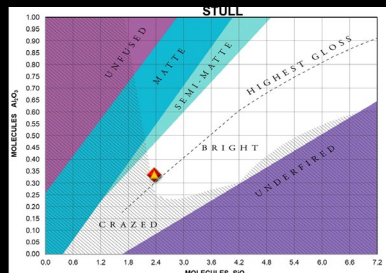
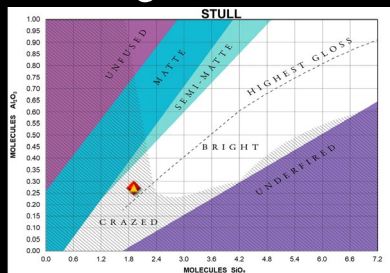
w/Barium Carb



w/Zinc Oxide



w/Bone Ash



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Lab 2-Alakline Earth-Reduction



071122-1

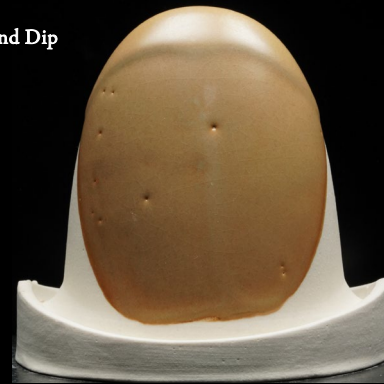


071122-16



071122-17

1-3 Second Dip



071122-18



071122-19



071122-20



Original (W)

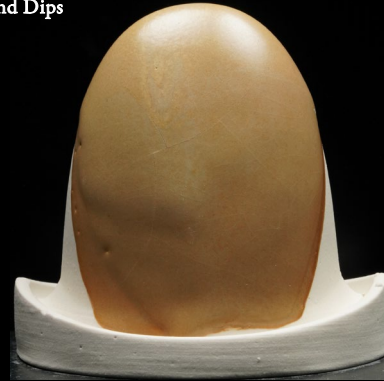


w/Talc



w/Mag Carb

2-3 Second Dips



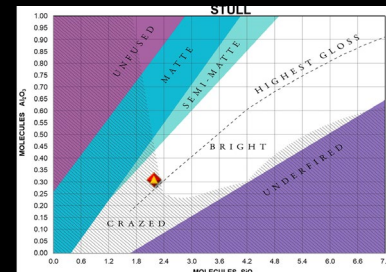
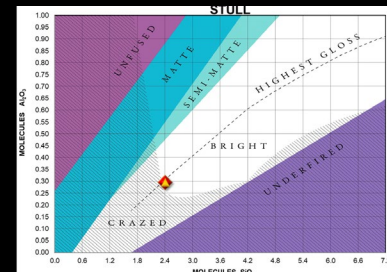
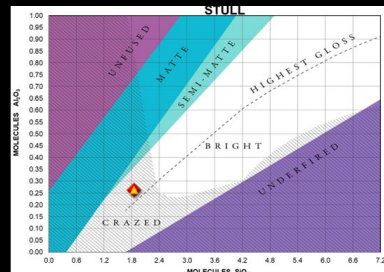
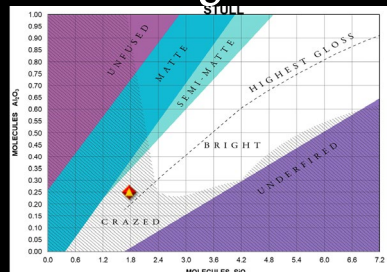
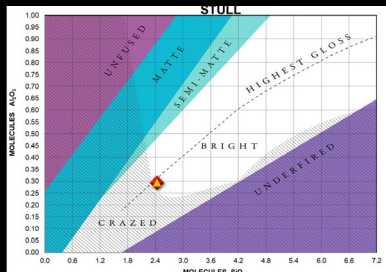
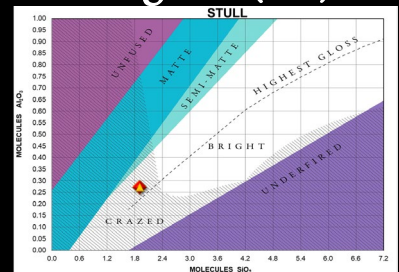
w/Dolomite



w/Wollastonite



w/Strontium Carb



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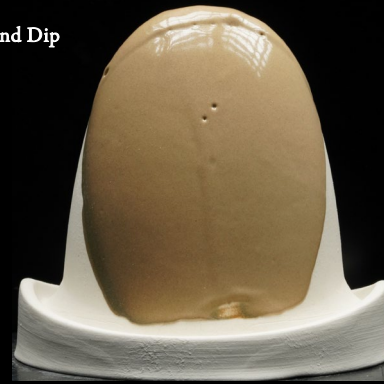
Lab 2-Alakline Earth-Reduction



071122-1



071122-21



071122-22



071122-23

1-3 Second Dip



Original (W)



w/Barium Carb

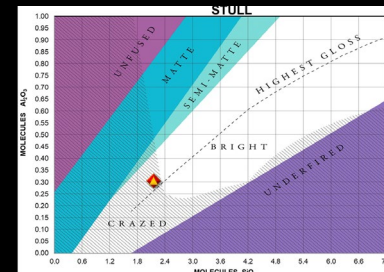
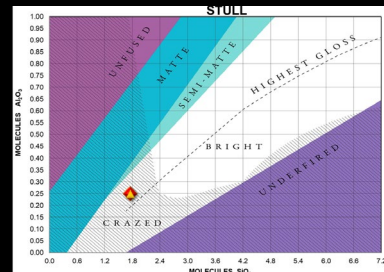
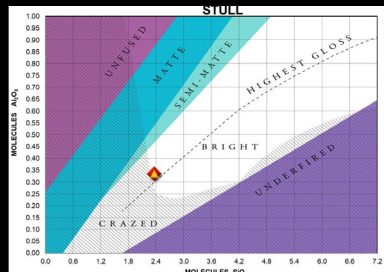
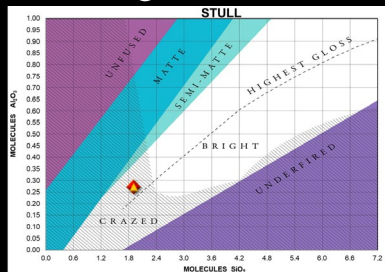


w/Zinc Oxide



w/Bone Ash

2-3 Second Dips



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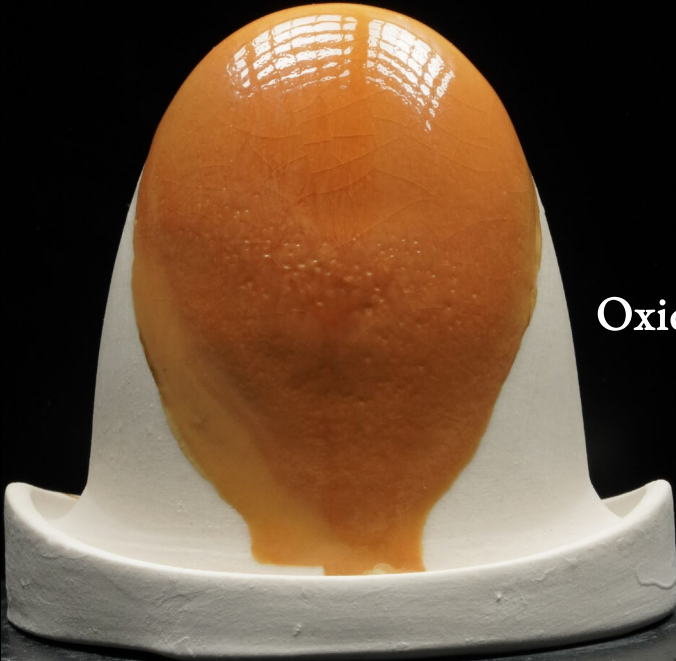
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Tangerine

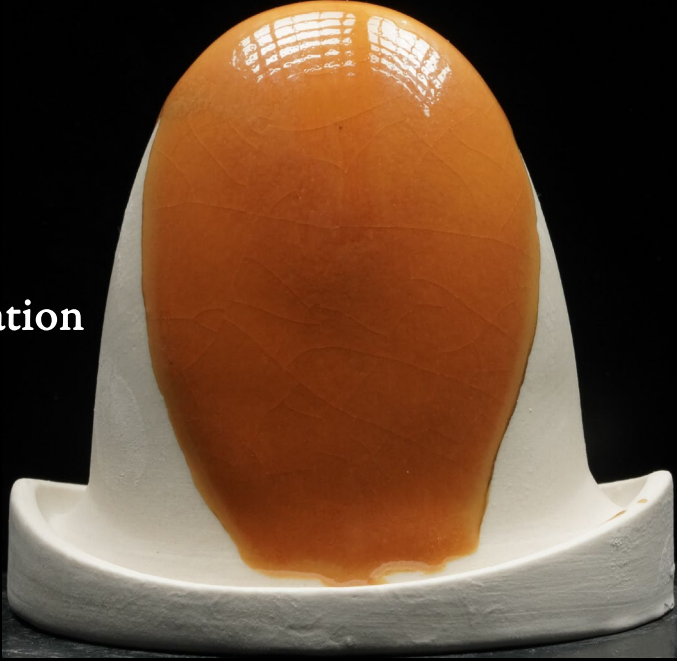
Original

071122-1

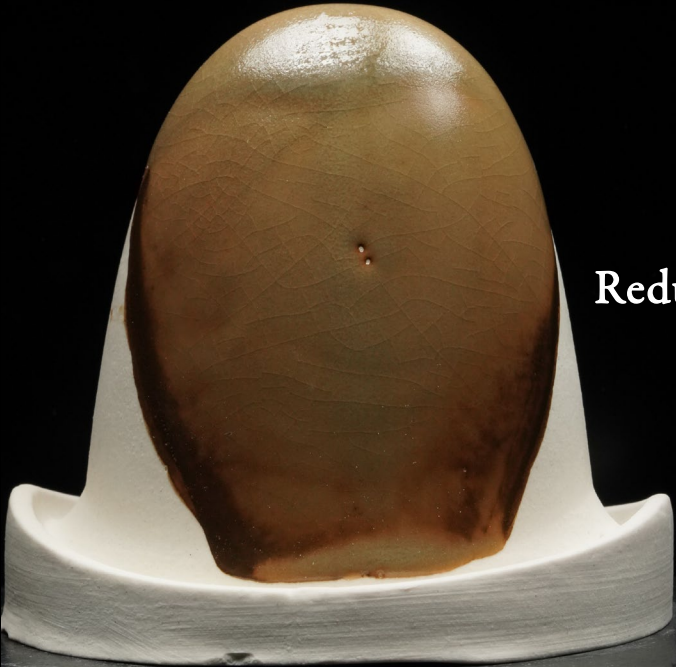
Neph Sy	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips

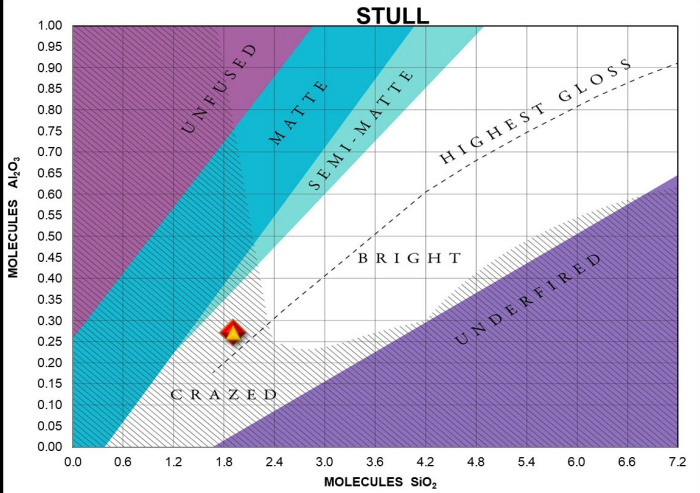


Reduction

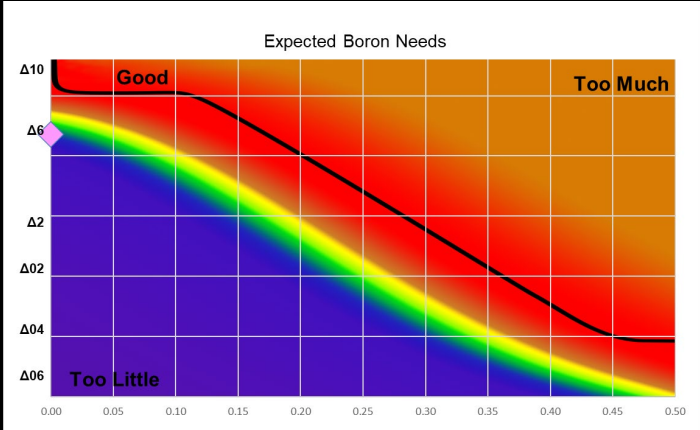


Oxidation

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



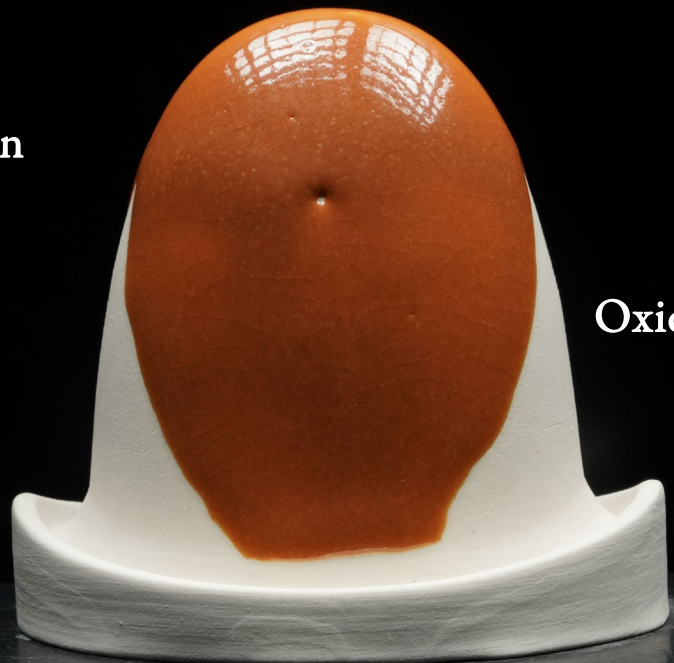
Ceramic
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Tangerine

Weight Substitution
Custer Feldspar

071122-8

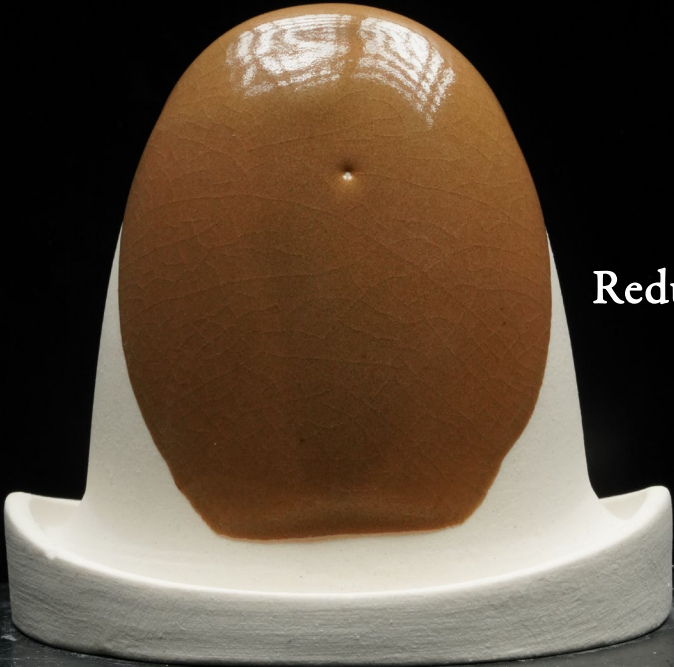
Custer	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



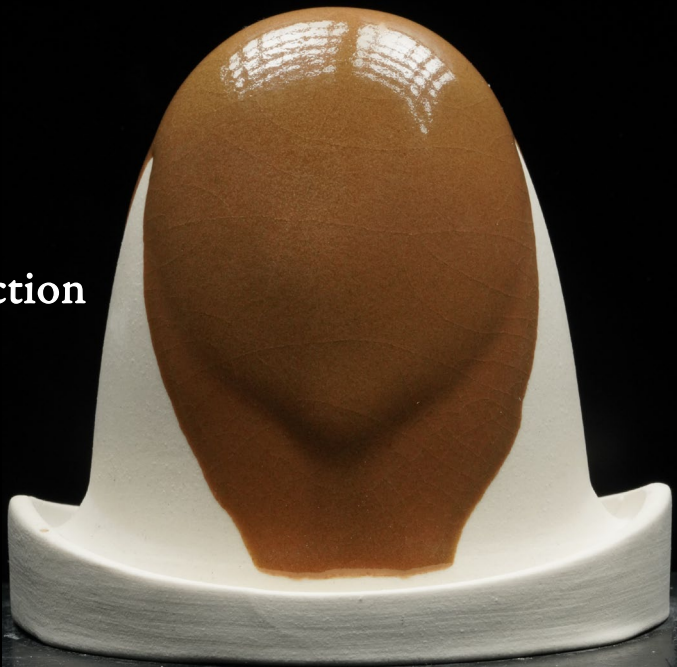
1-3 Second Dip



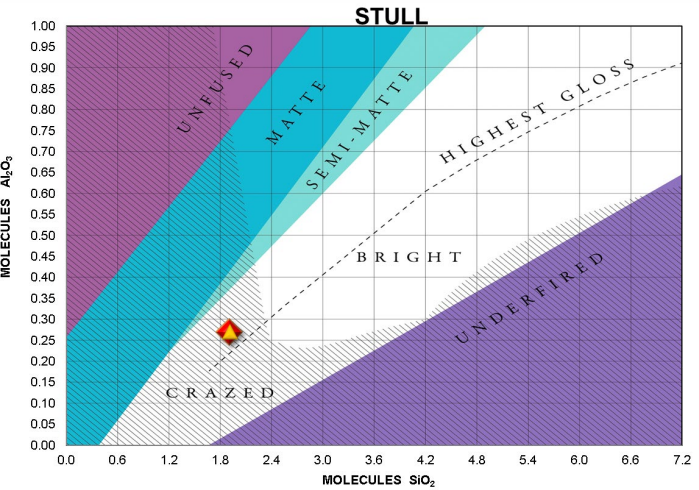
2-3 Second Dips



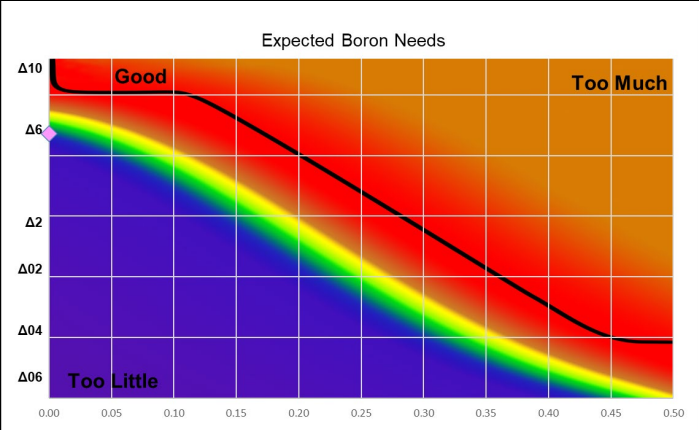
Reduction



SiO ₂ :Al ₂ O ₃ Ratio 7.02 :1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.08	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.05	K ₂ O 0.16	MgO 0.01	CaO 0.42
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 0.34	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 7.02 :1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.91	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.05	K ₂ O 0.15	MgO 0.01	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

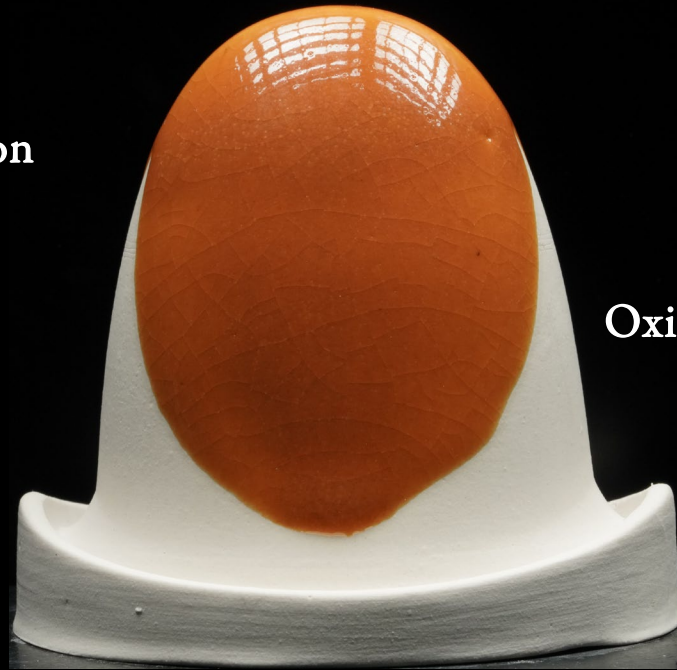


Tangerine

Weight Substitution
Mahavir Feldspar

071122-9

Mahavir	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	65

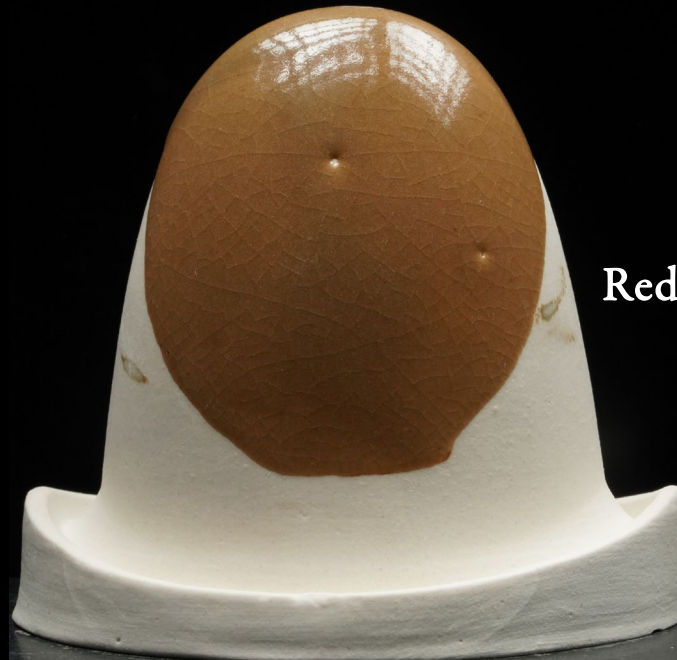


1-3 Second Dip

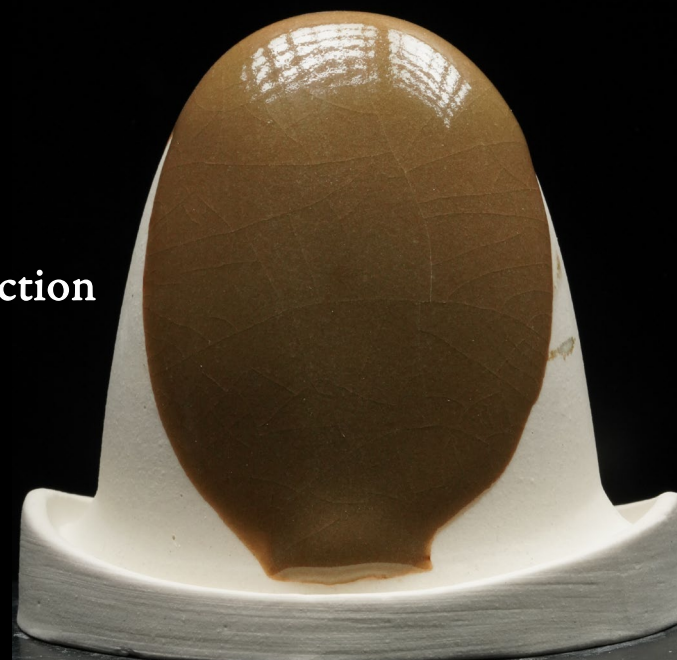


2-3 Second Dips

Oxidation



1-3 Second Dip



2-3 Second Dips

Reduction

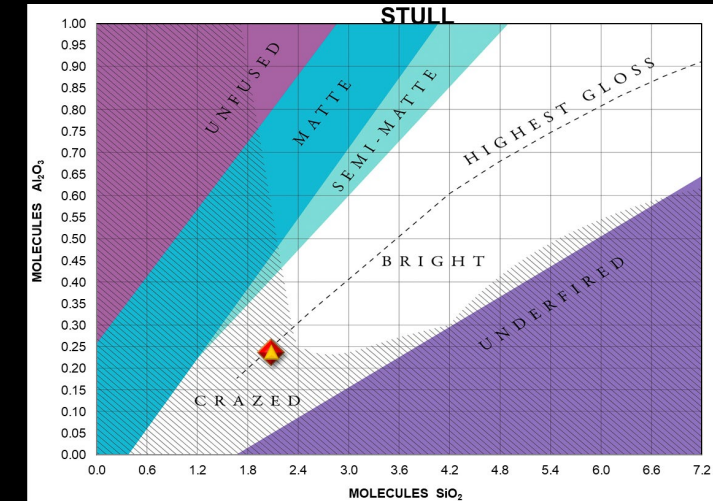


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UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.69 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 2.27	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.05	K ₂ O 0.13	MgO 0.00	CaO 0.44
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO	SrO	BaO
TiO ₂	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.36	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.69 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 2.08	Collective "Al ₂ O ₃ " 0.24	Na ₂ O 0.05	K ₂ O 0.12	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.33	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

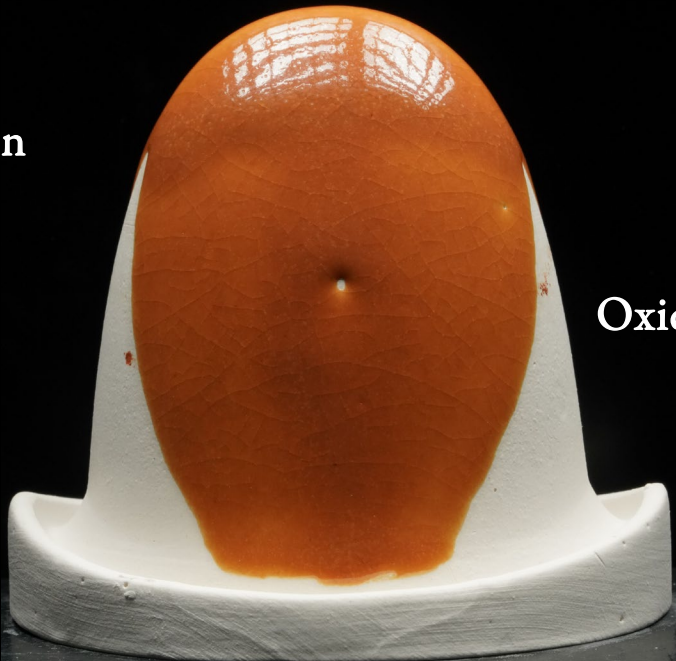


Tangerine

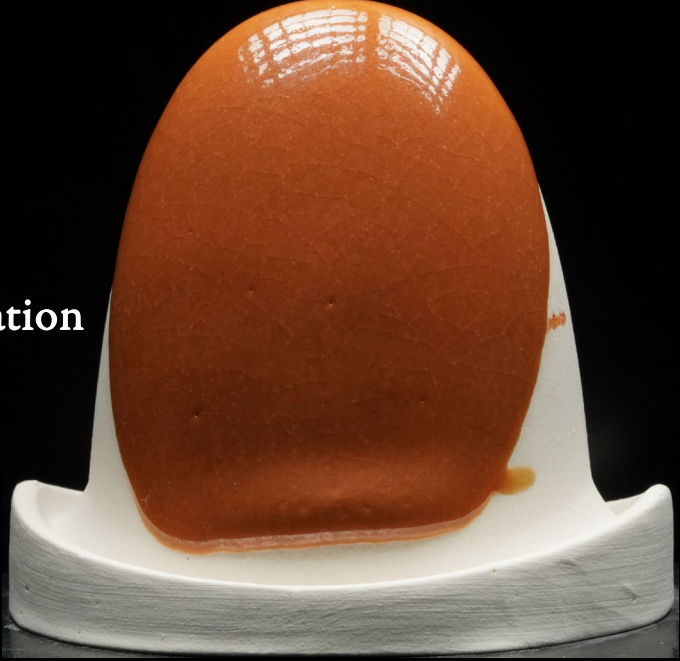
Weight Substitution
G200 EU Feldspar

071122-10

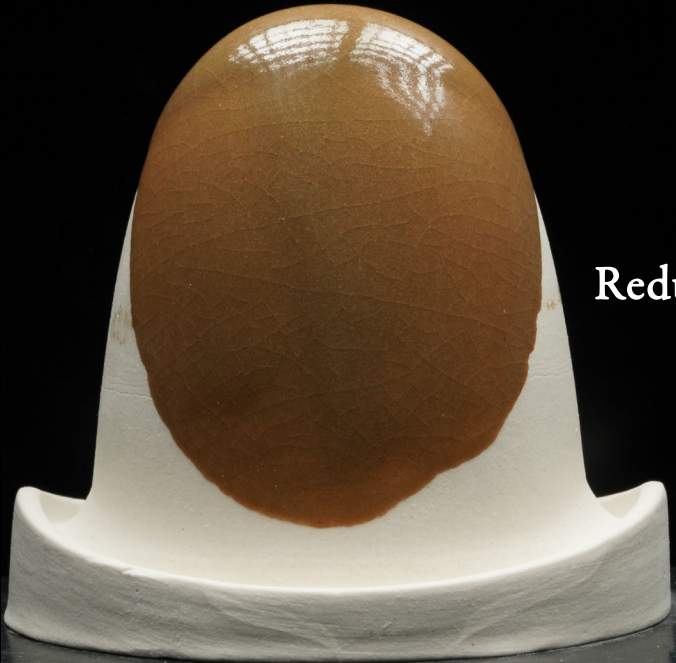
G200 EU	42.25
Whiting	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	65



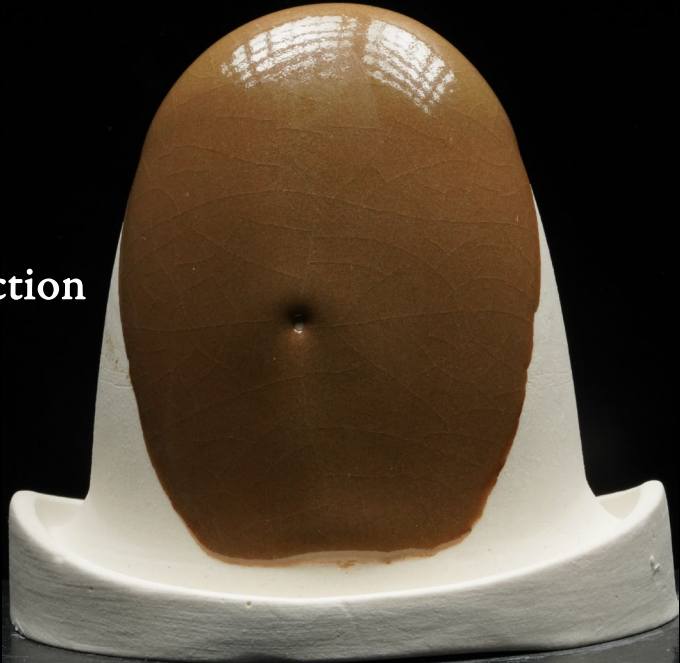
1-3 Second Dip



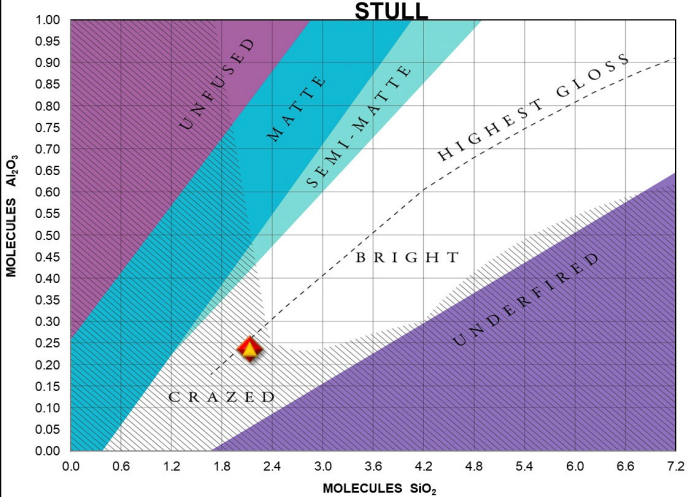
2-3 Second Dips



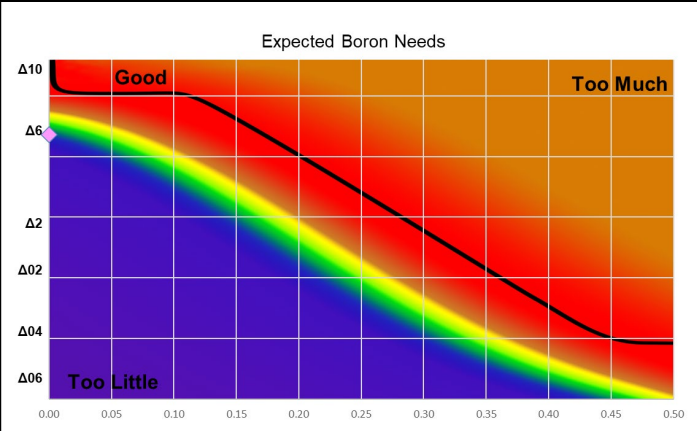
Reduction



SiO ₂ :Al ₂ O ₃ Ratio 8.99 : 1		Alkali Metals 0.17		Alkaline Earths 0.83	
SiO ₂ 2.34	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.04	K ₂ O 0.13	MgO 0.00	CaO 0.46
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.37	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

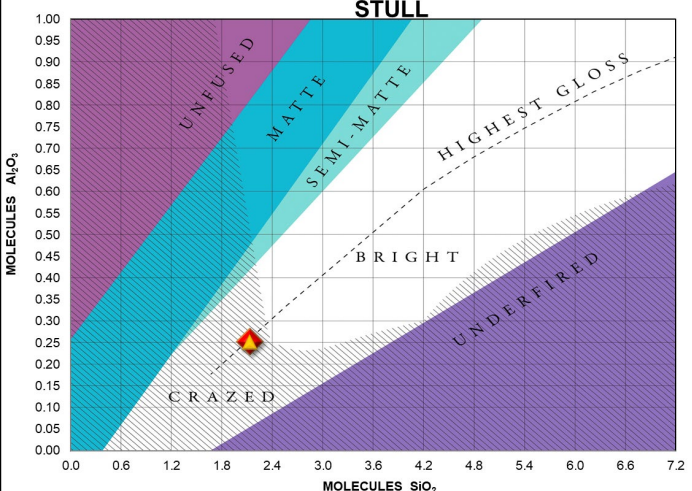


SiO ₂ :Al ₂ O ₃ Ratio 8.99 : 1		Alkali Metals 0.15		Alkaline Earths 0.85	
SiO ₂ 2.13	Collective "Al ₂ O ₃ " 0.24	Na ₂ O 0.03	K ₂ O 0.12	MgO 0.00	CaO 0.42
B ₂ O ₃	Al ₂ O ₃ 0.24	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.33	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



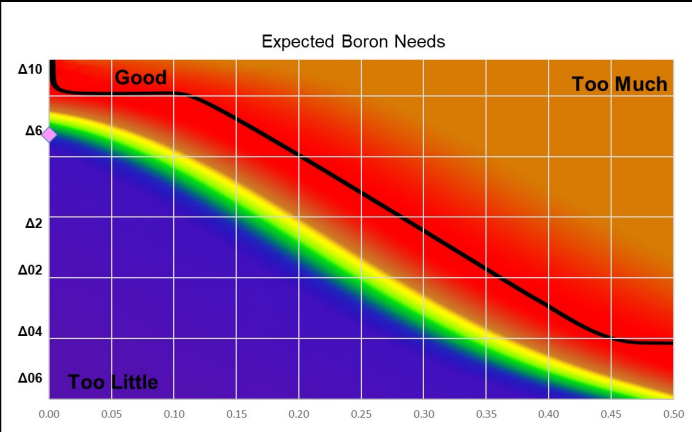
UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.44 : 1		Alkali Metals 0.16		Alkaline Earths 0.84	
SiO ₂ 2.33	Collective "Al ₂ O ₃ " 0.28	Na ₂ O 0.11	K ₂ O 0.05	MgO 0.00	CaO 0.47
B ₂ O ₃	Al ₂ O ₃ 0.28	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.36	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.44 : 1		Alkali Metals 0.14		Alkaline Earths 0.86	
SiO ₂ 2.13	Collective "Al ₂ O ₃ " 0.25	Na ₂ O 0.10	K ₂ O 0.04	MgO 0.00	CaO 0.43
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.33	FeO 0.09
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

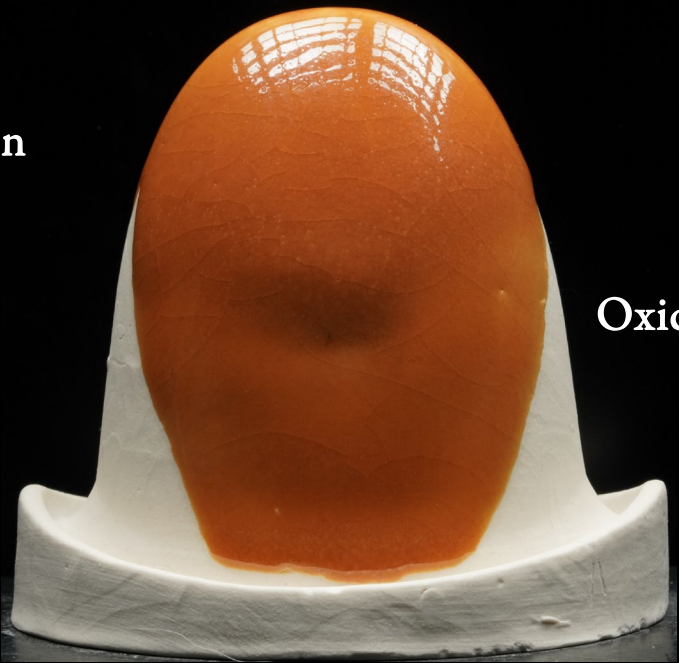


Tangerine

Weight Substitution
Minspar Feldspar

071122-11

Minspar	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

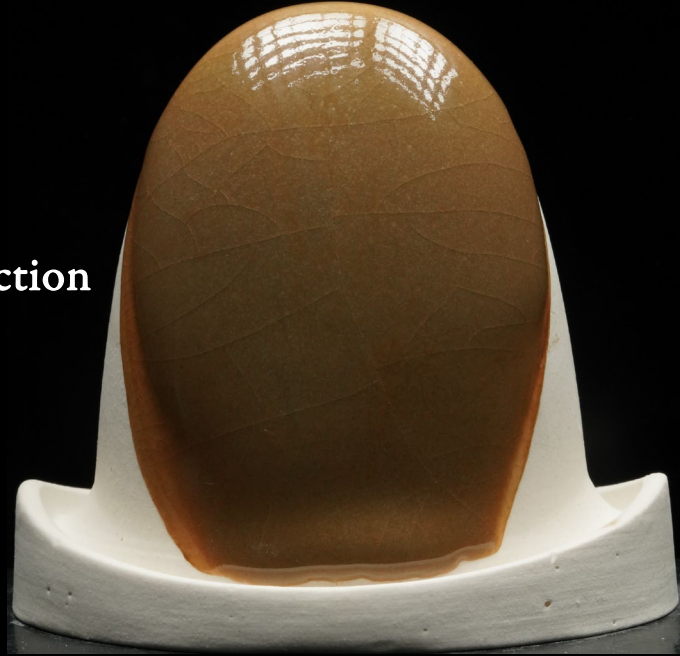
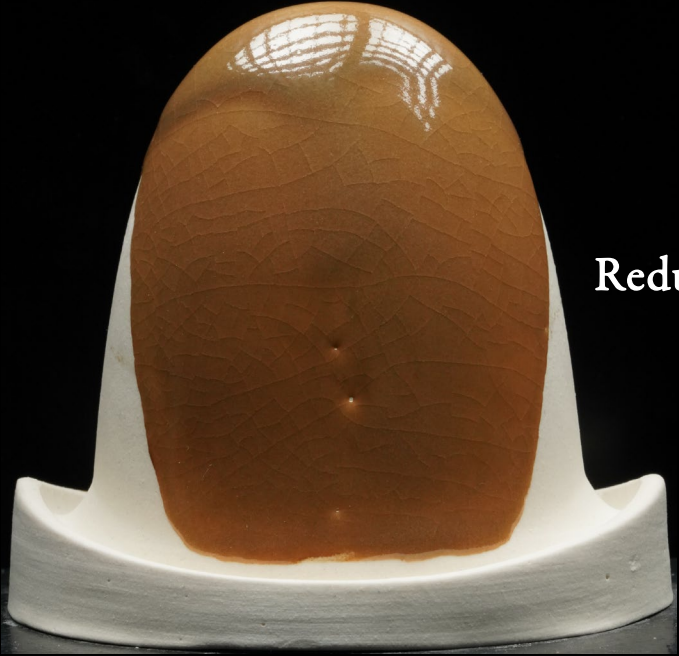


1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction



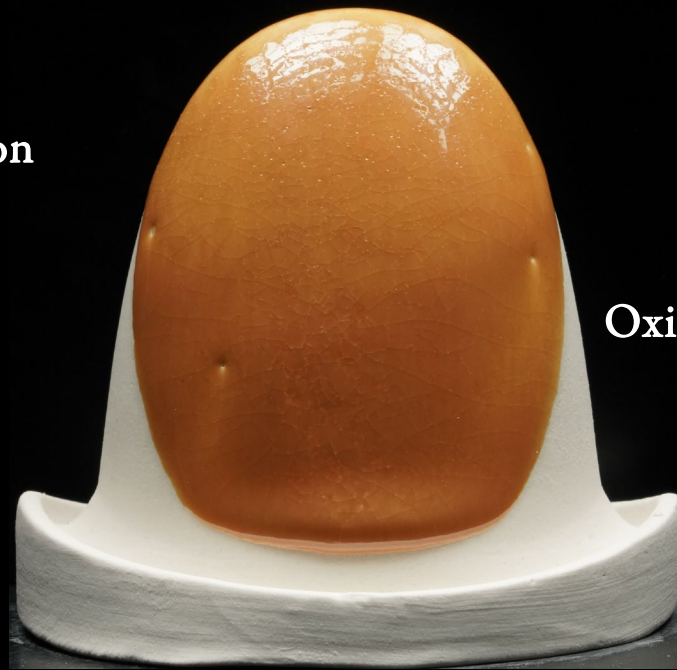
Ceramic
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Workshop

Tangerine

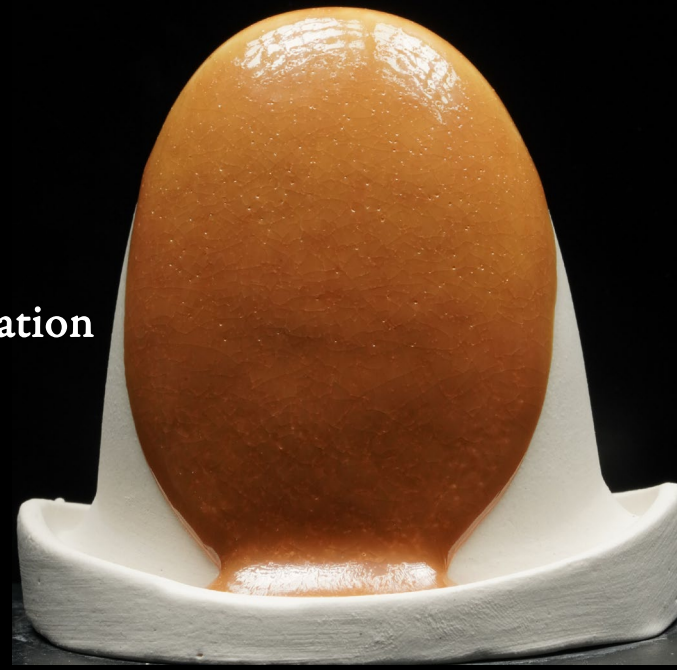
Weight Substitution
Spodumene

071122-12

Spodumene	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



1-3 Second Dip



2-3 Second Dips

Reduction

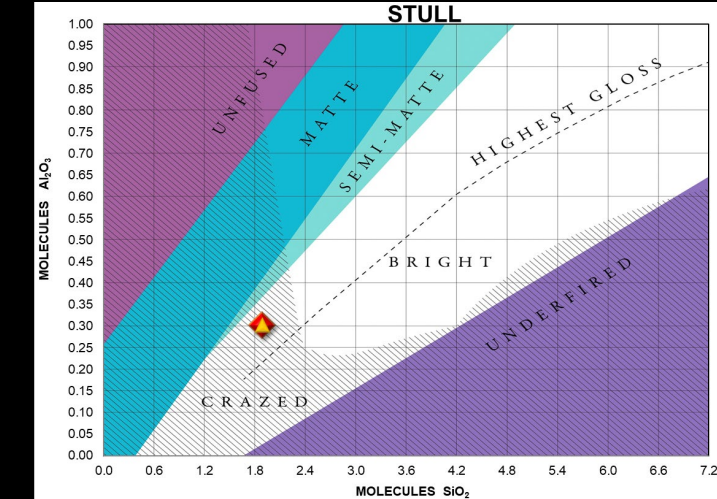


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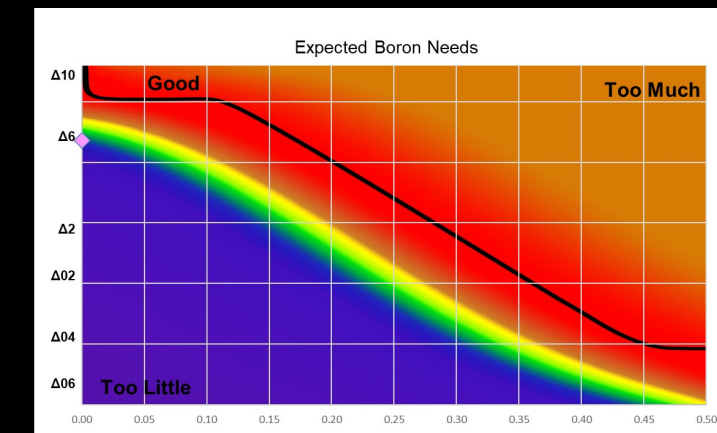
UMF

SiO ₂ :Al ₂ O ₃ Ratio 6.23 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.05	Collective "Al ₂ O ₃ " 0.33	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.40
B ₂ O ₃	Al ₂ O ₃ 0.33	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.33	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 6.23 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 1.89	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.37
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 0.30	FeO 0.08
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

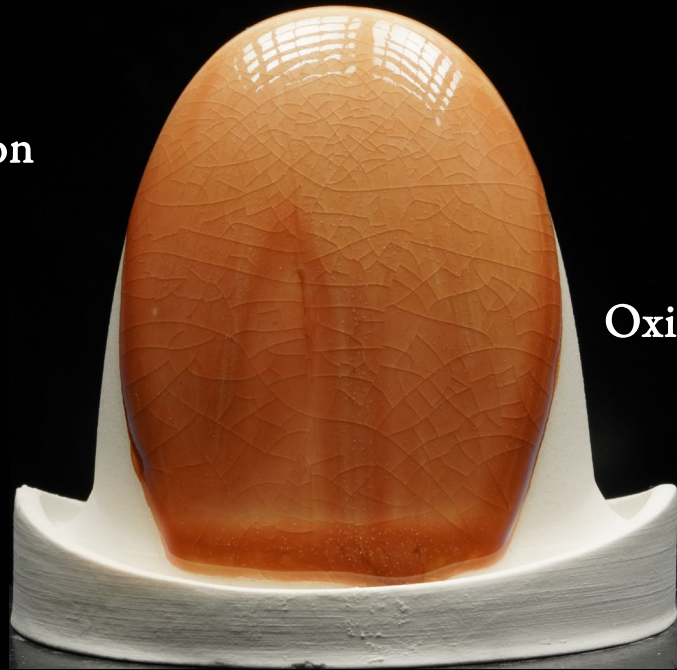


Tangerine

Weight Substitution
Frit 3110

071122-14

3110	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



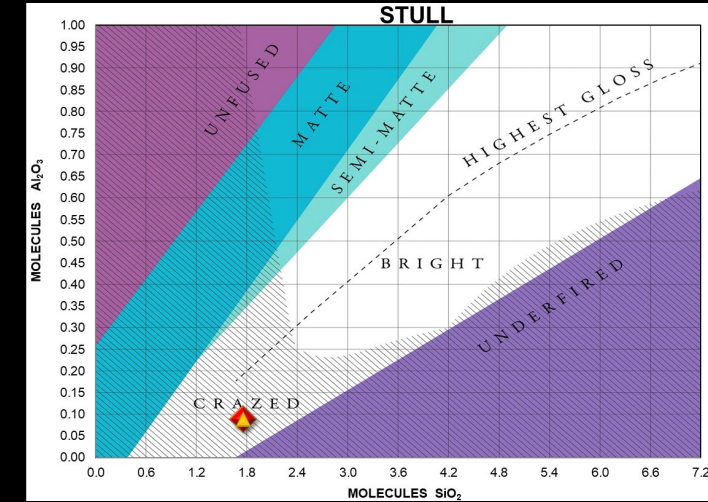
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 19.82 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 1.89	Collective "Al ₂ O ₃ " 0.10	Na ₂ O 0.22	K ₂ O 0.02	MgO 0.00	CaO 0.46
B ₂ O ₃ 0.03	Al ₂ O ₃ 0.09	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.29	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 19.82 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 1.76	Collective "Al ₂ O ₃ " 0.09	Na ₂ O 0.21	K ₂ O 0.02	MgO 0.00	CaO 0.43
B ₂ O ₃ 0.03	Al ₂ O ₃ 0.09	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.27	FeO 0.07
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



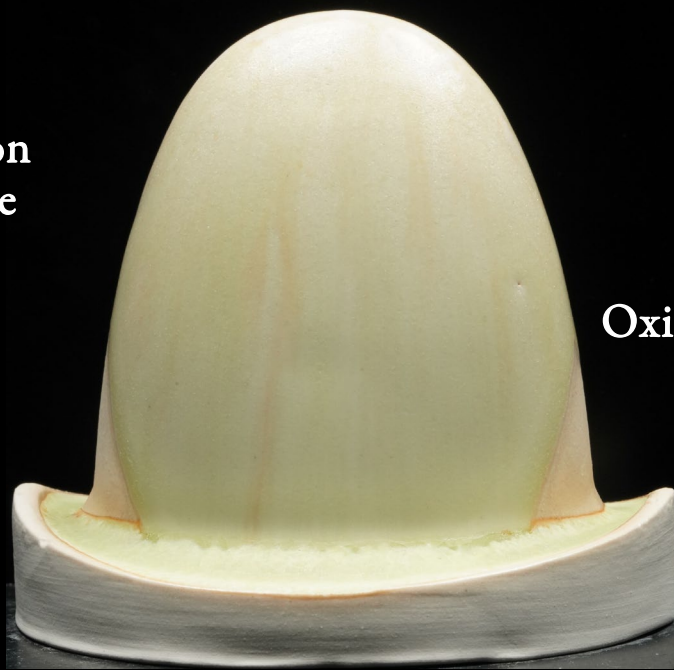
Ceramic
Materials
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Tangerine

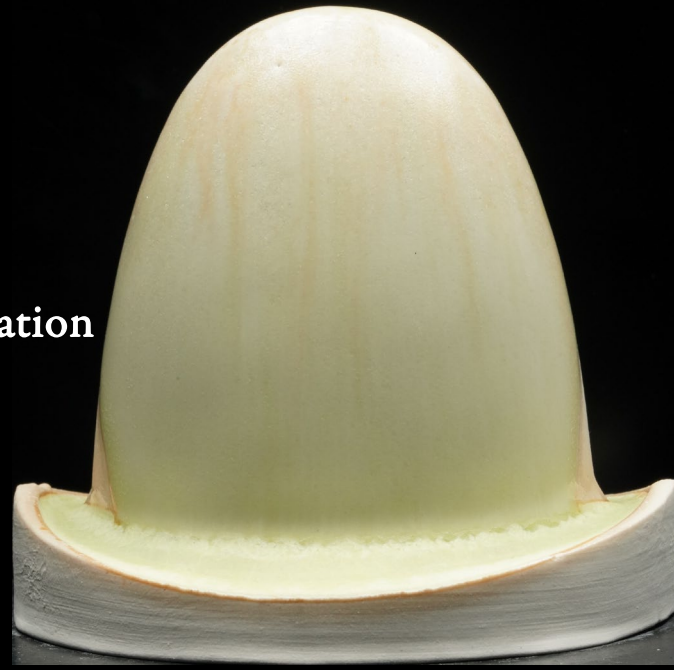
Weight Substitution
Lithium Carbonate

071122-15

Lithium Carb	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



1-3 Second Dip

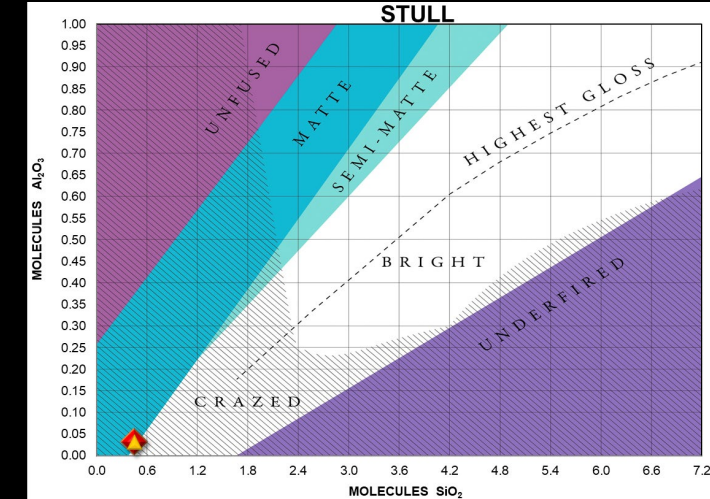


2-3 Second Dips

Reduction

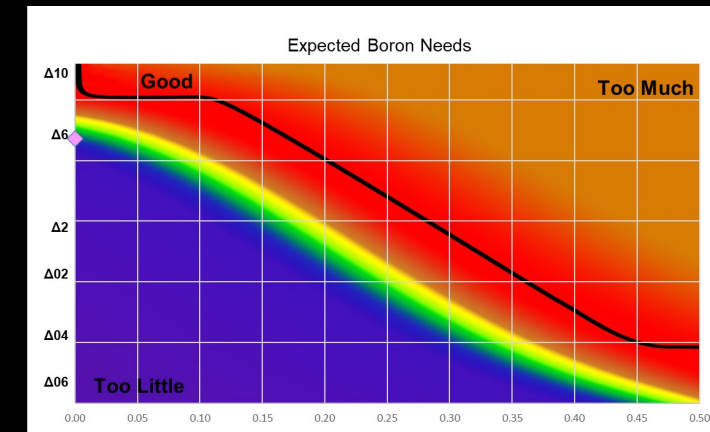
UMF

SiO ₂ :Al ₂ O ₃ Ratio 14.13 : 1		Alkali Metals 0.65		Alkaline Earths 0.35	
SiO ₂ 0.47	Collective "Al ₂ O ₃ " 0.03	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.19
B ₂ O ₃	Al ₂ O ₃ 0.03	Li ₂ O 0.65	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.16	FeO 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 14.13 : 1		Alkali Metals 0.62		Alkaline Earths 0.38	
SiO ₂ 0.45	Collective "Al ₂ O ₃ " 0.03	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.19
B ₂ O ₃	Al ₂ O ₃ 0.03	Li ₂ O 0.62	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.15	FeO 0.04
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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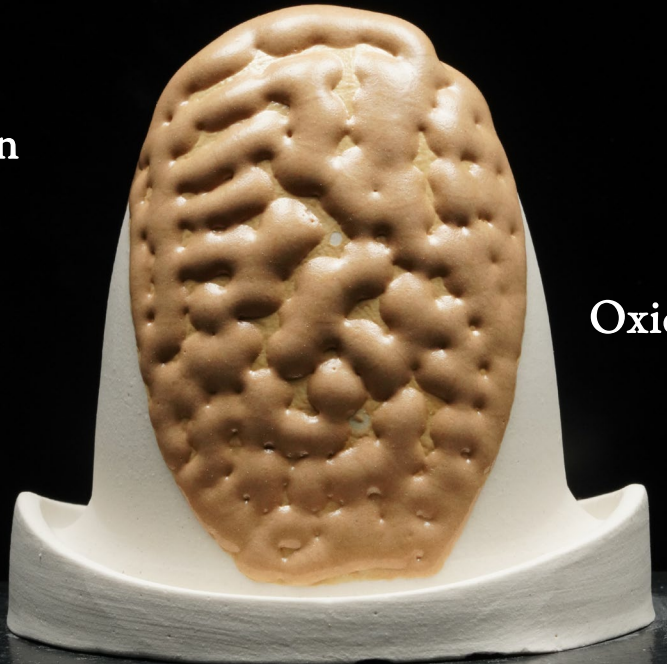
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Tangerine

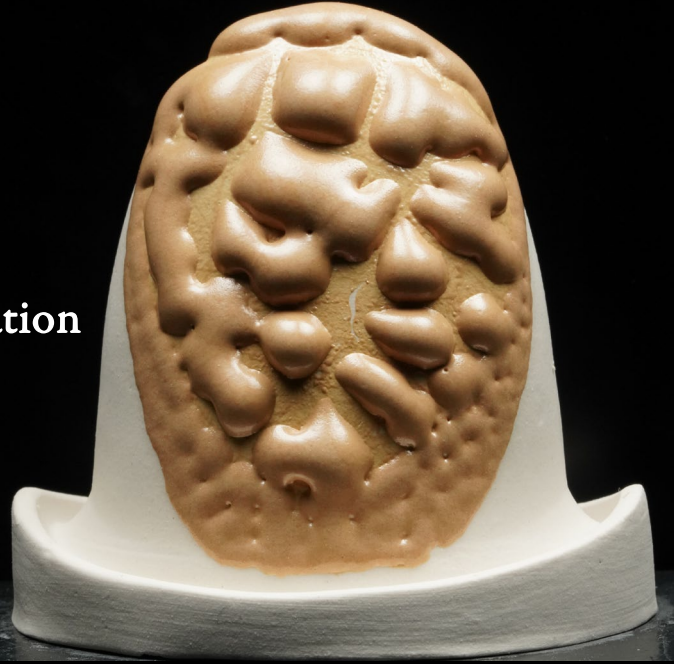
Weight Substitution
Talc

071122-16

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

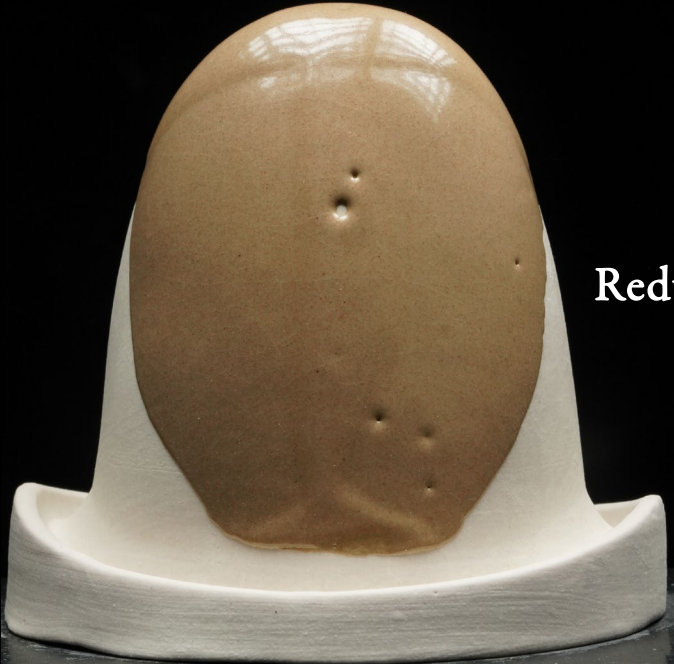


1-3 Second Dip



2-3 Second Dips

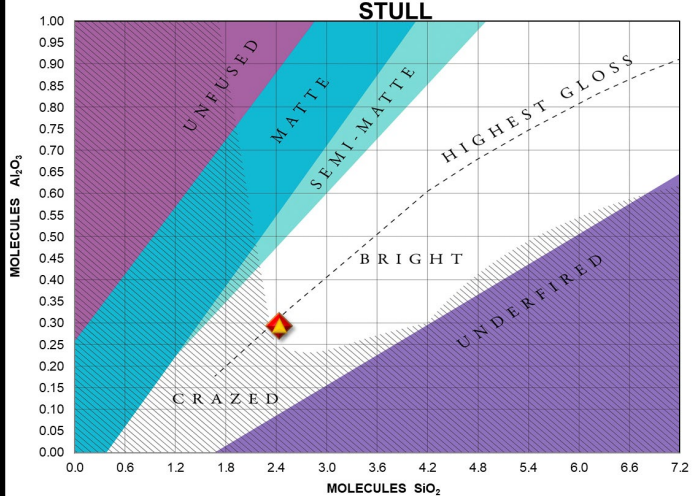
Oxidation



Reduction

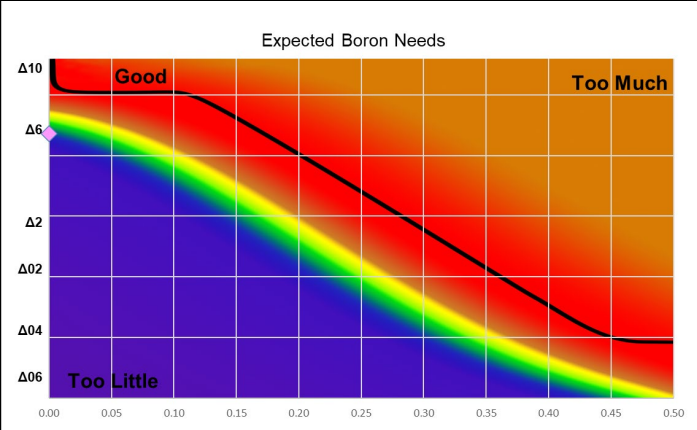


SiO ₂ :Al ₂ O ₃ Ratio 8.25 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.67	Collective "Al ₂ O ₃ " 0.32	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.34	CaO 0.04
B ₂ O ₃	Al ₂ O ₃ 0.32	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.37	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.25 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.43	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.31	CaO 0.03
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 0.34	FeO 0.10
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



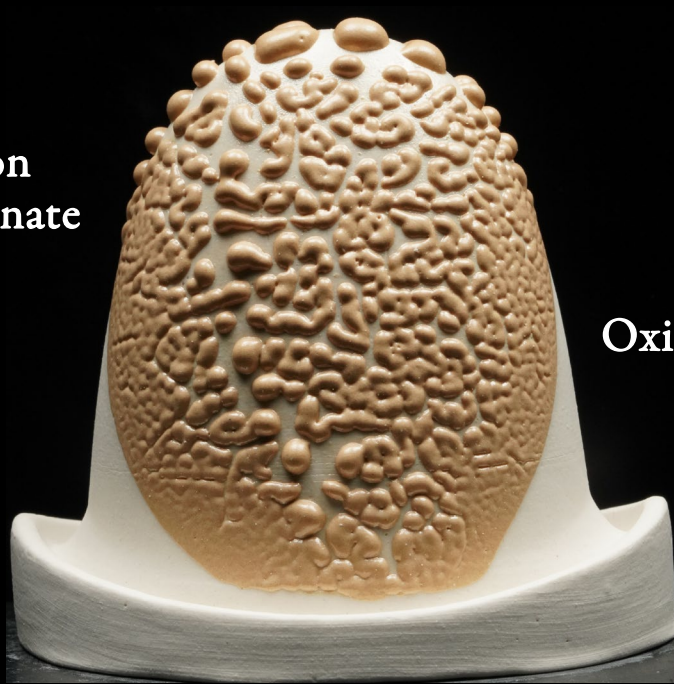
Ceramic
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Tangerine

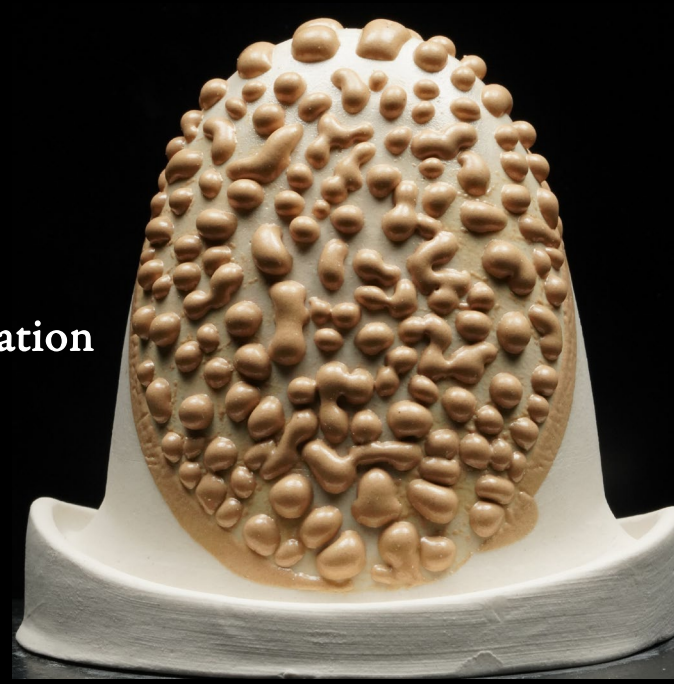
Weight Substitution
Magnesium Carbonate

071122-17

Neph Sy	42.25
Mag Carbonate	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	120



1-3 Second Dip



2-3 Second Dips

Oxidation



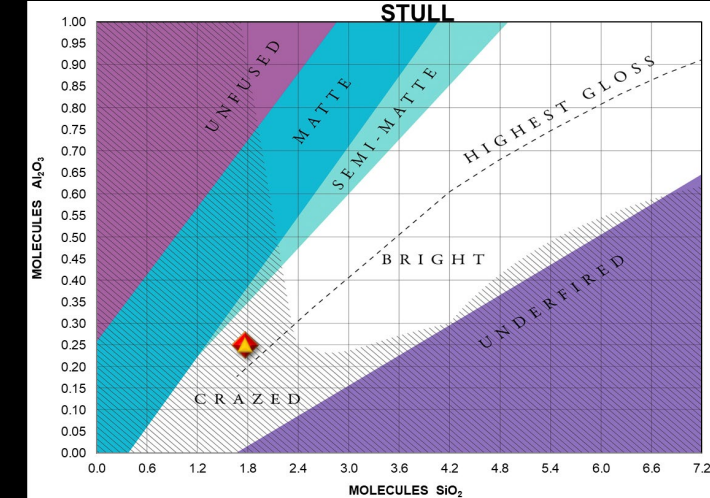
Reduction



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UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.02 : 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 0.47	CaO 0.01
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 0.00
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.02 : 1		Alkali Metals 0.19		Alkaline Earths 0.81	
SiO ₂ 1.77	Collective "Al ₂ O ₃ " 0.25	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.43	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.29	FeO 0.08
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



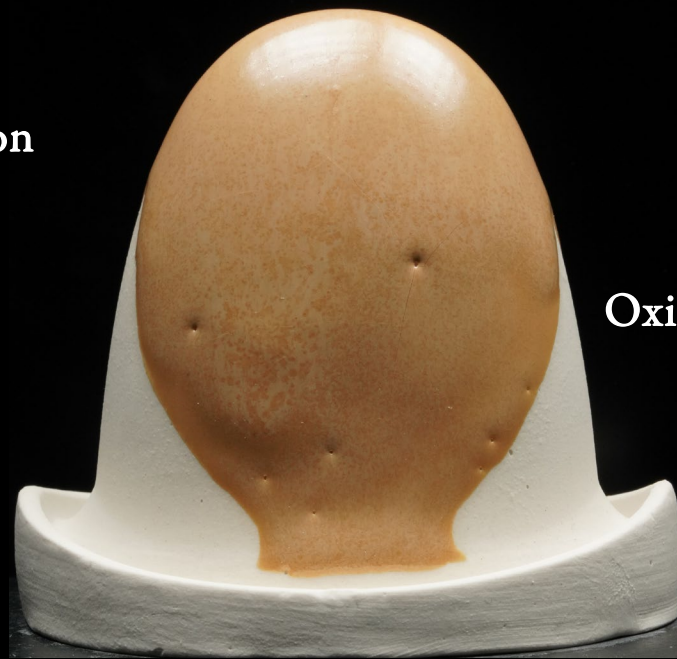
Ceramic
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Tangerine

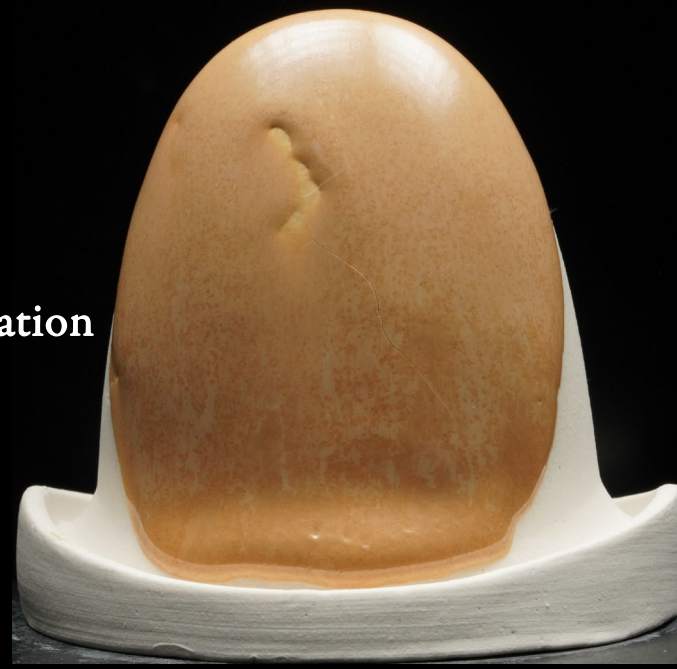
Weight Substitution
Dolomite

071122-18

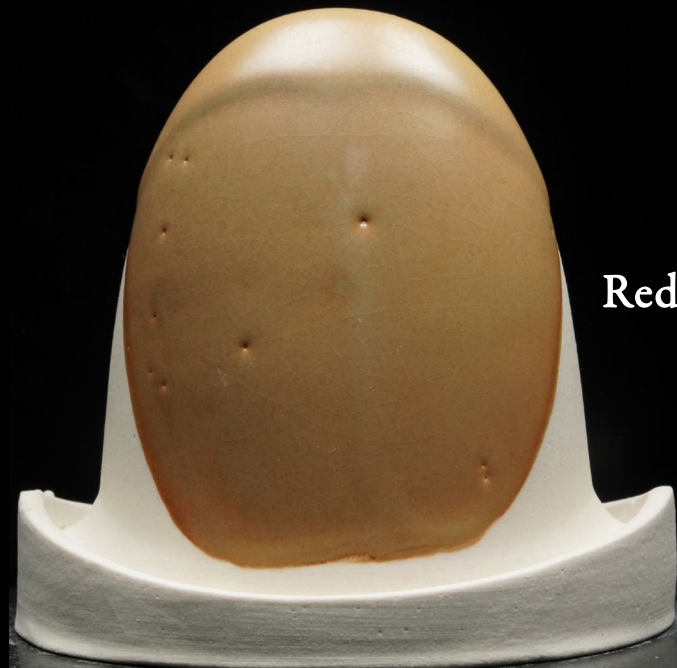
Neph Sy	42.25
Dolomite	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips



Reduction



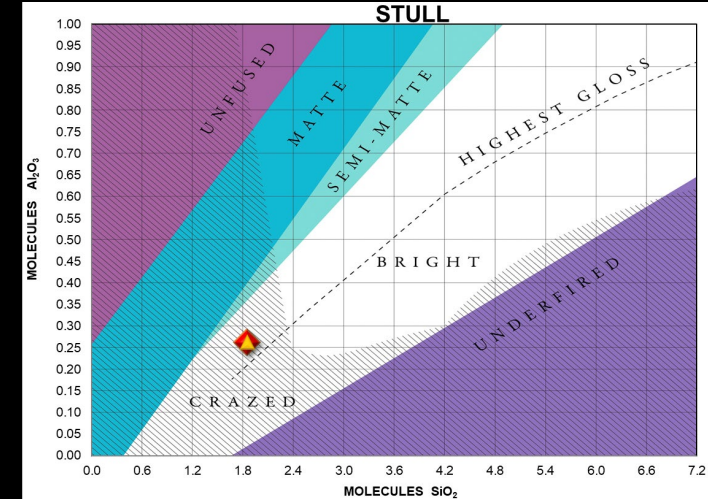
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Oxidation

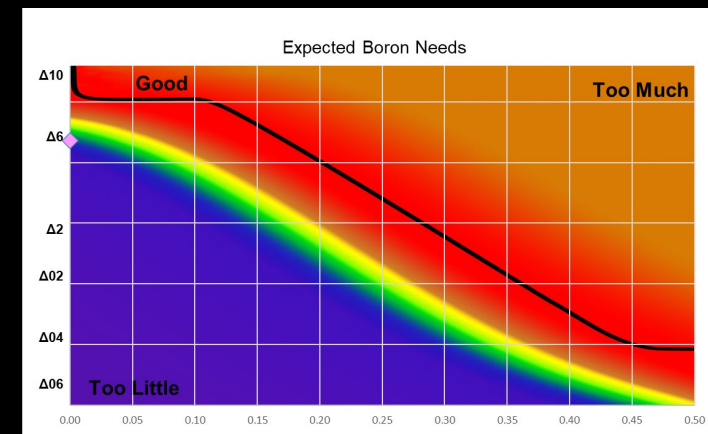
UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.21		Alkaline Earths 0.79	
SiO ₂ 2.01	Collective "Al ₂ O ₃ " 0.29	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.22	CaO 0.23
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 0.33	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 1.85	Collective "Al ₂ O ₃ " 0.26	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.20	CaO 0.21
B ₂ O ₃	Al ₂ O ₃ 0.26	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.31	FeO 0.08
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

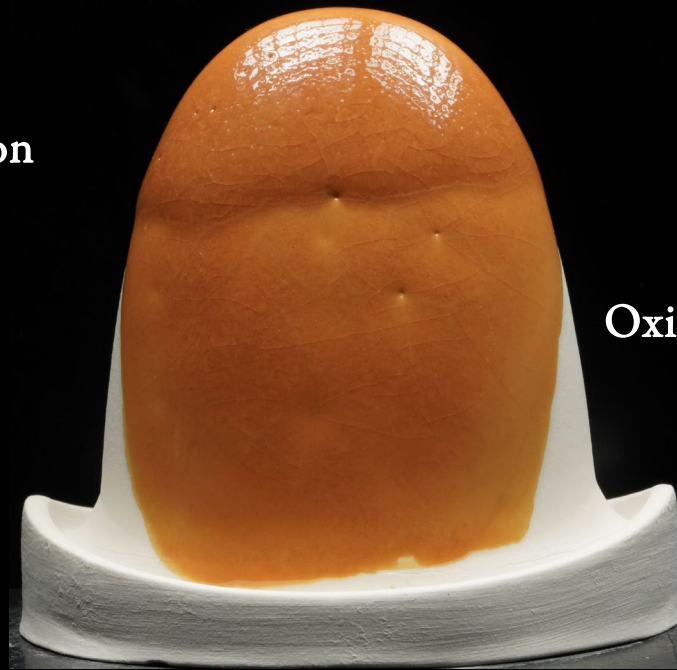


Tangerine

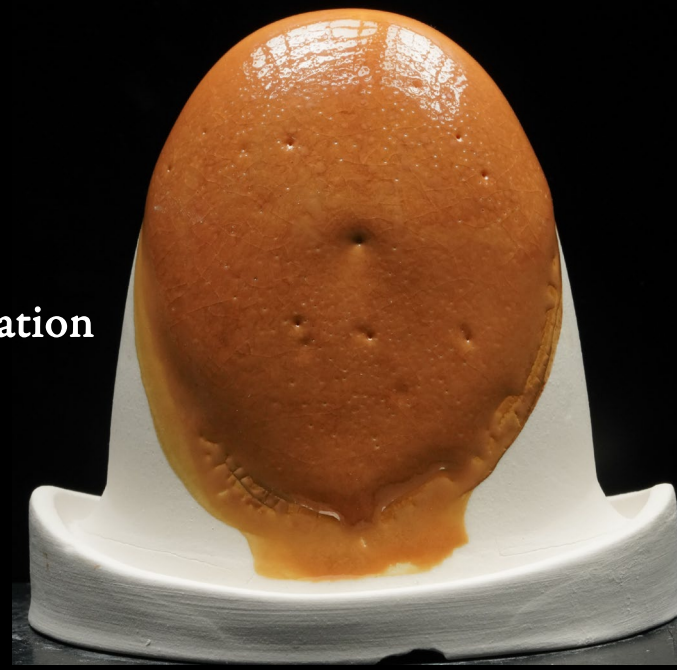
Weight Substitution
Wollastonite

071122-19

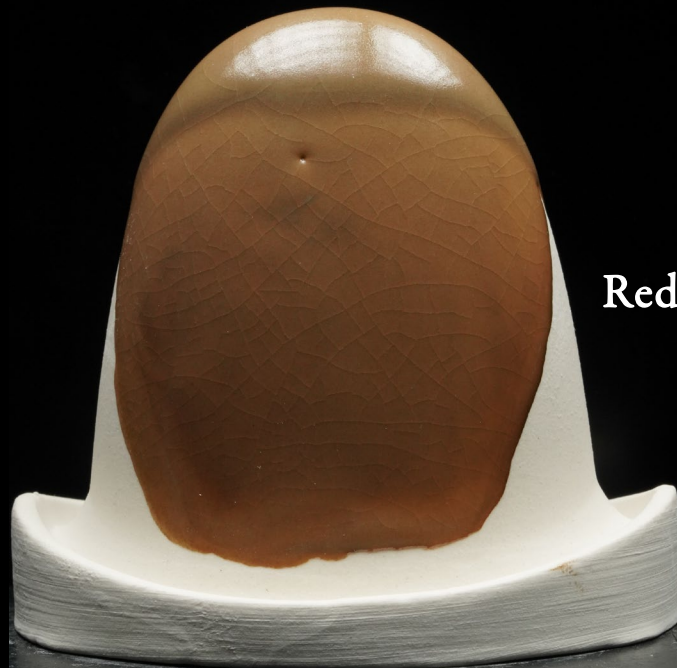
Neph Sy	42.25
Wollastonite	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	60



1-3 Second Dip



2-3 Second Dips



Reduction

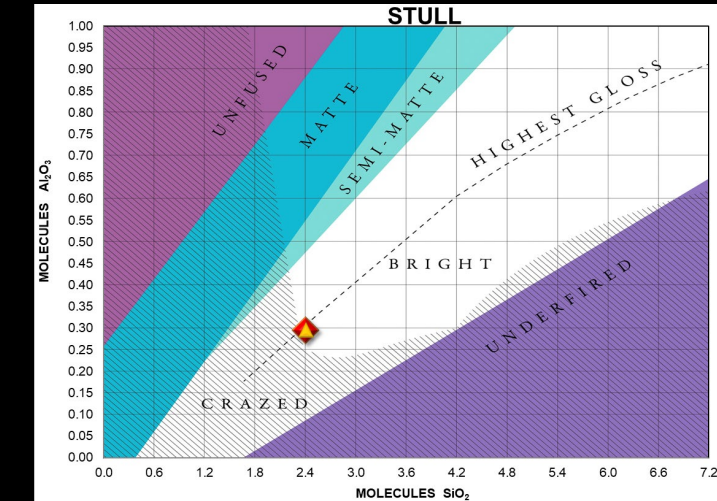


Reduction

Oxidation

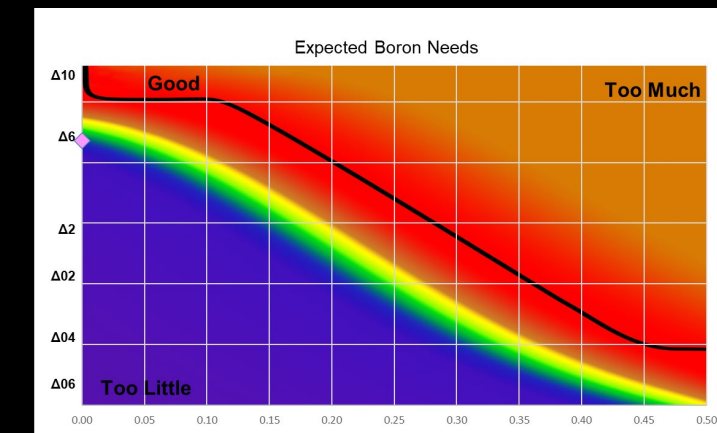
UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.13 : 1		Alkali Metals 0.24		Alkaline Earths 0.76	
SiO ₂ 2.64	Collective "Al ₂ O ₃ " 0.32	Na ₂ O 0.19	K ₂ O 0.05	MgO 0.01	CaO 0.36
B ₂ O ₃	Al ₂ O ₃ 0.32	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.37	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.13 : 1		Alkali Metals 0.22		Alkaline Earths 0.78	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.30	Na ₂ O 0.17	K ₂ O 0.05	MgO 0.01	CaO 0.33
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 0.34	FeO 0.10
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Tangerine

Weight Substitution
Strontium Carbonate
071122-20

Neph Sy	42.25
Strontium Carb	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

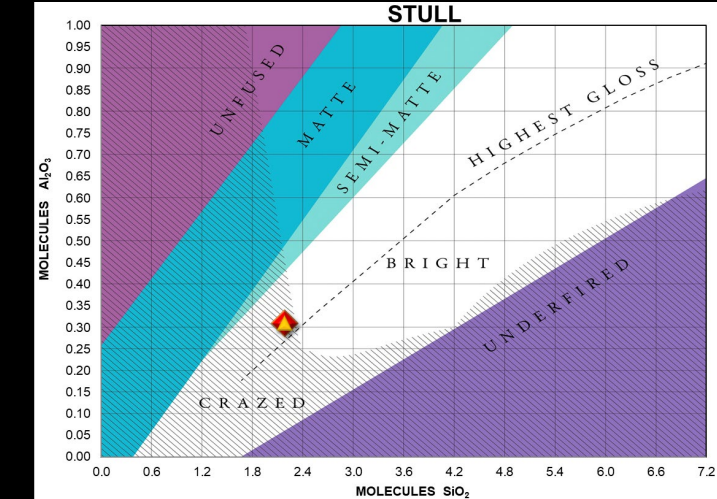


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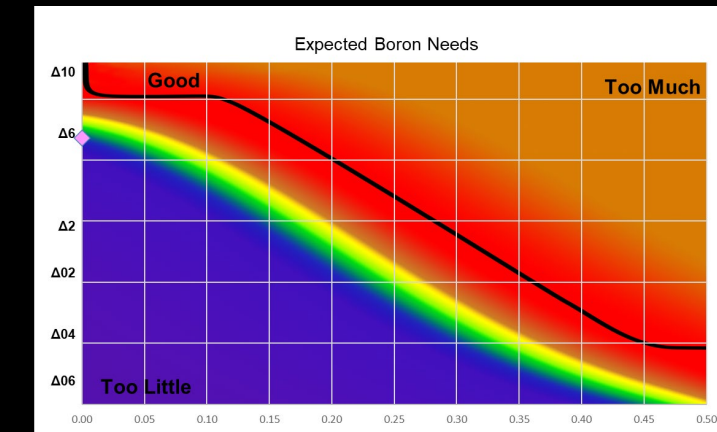
UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.26		Alkaline Earths 0.74	
SiO ₂ 2.41	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.34	Li ₂ O	CuO	SrO 0.33	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.40	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 0.23		Alkaline Earths 0.77	
SiO ₂ 2.18	Collective "Al ₂ O ₃ " 0.31	Na ₂ O 0.18	K ₂ O 0.05	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.31	Li ₂ O	CuO	SrO 0.30	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.36	FeO 0.10
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

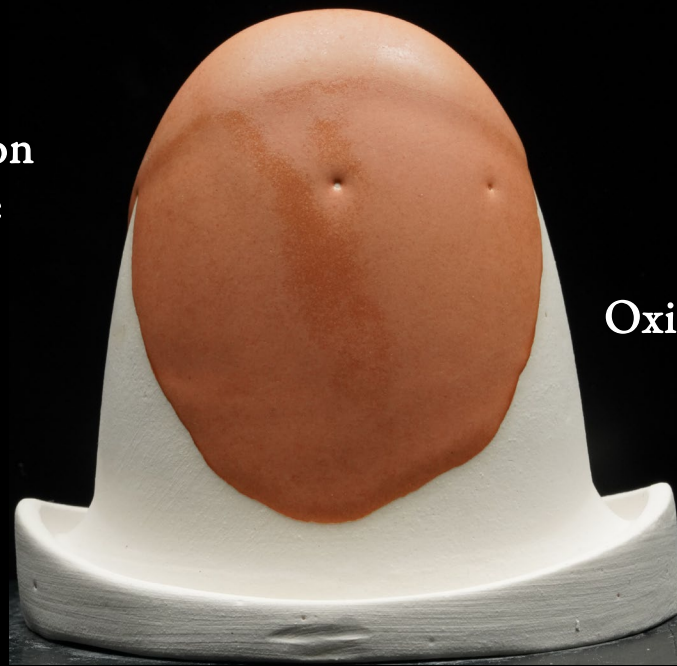


Tangerine

Weight Substitution
Barium Carbonate

071122-21

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

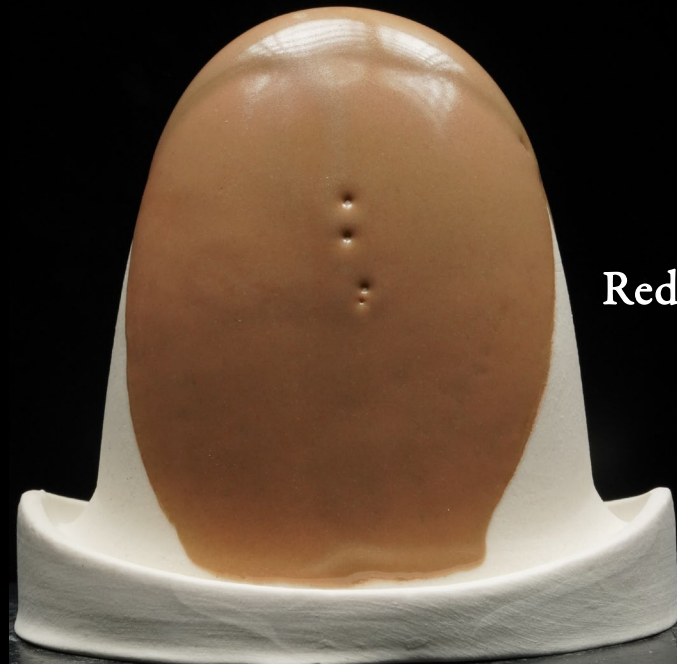


1-3 Second Dip



2-3 Second Dips

Oxidation



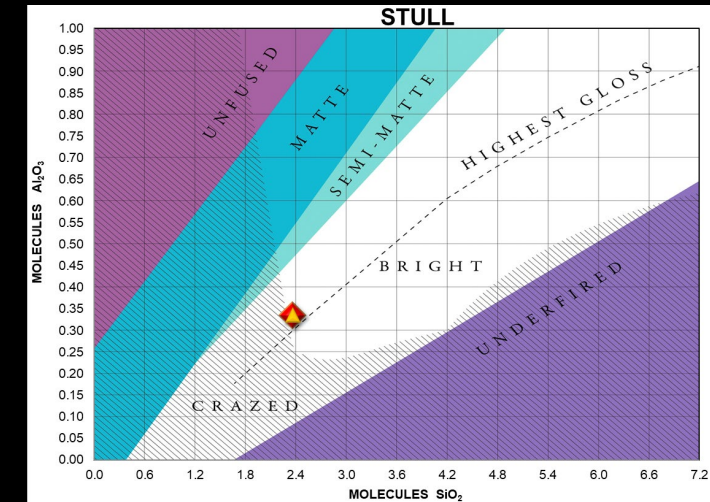
Reduction



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UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.28		Alkaline Earths 0.72	
SiO ₂ 2.63	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.22	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.37	Li ₂ O	CuO	SrO	BaO 0.27
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.43	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 0.25		Alkaline Earths 0.75	
SiO ₂ 2.36	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.33	Li ₂ O	CuO	SrO	BaO 0.24
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.39	FeO 0.11
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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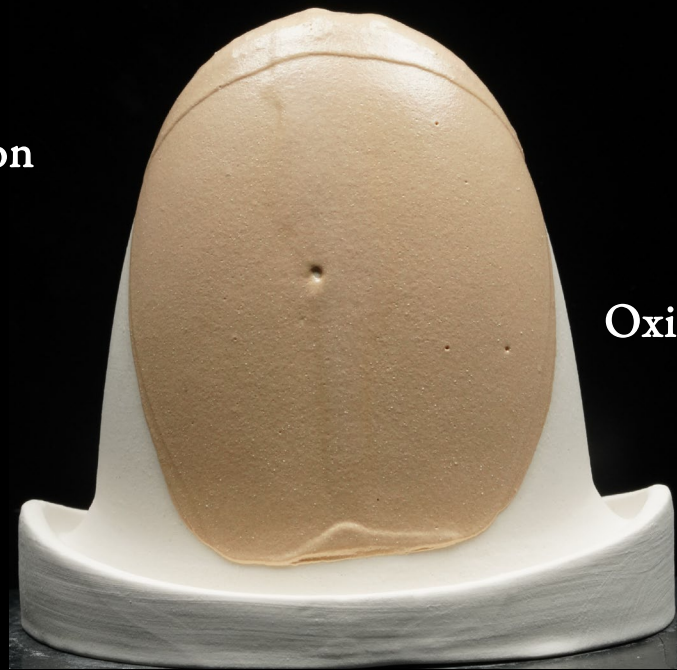
Tangerine

Weight Substitution

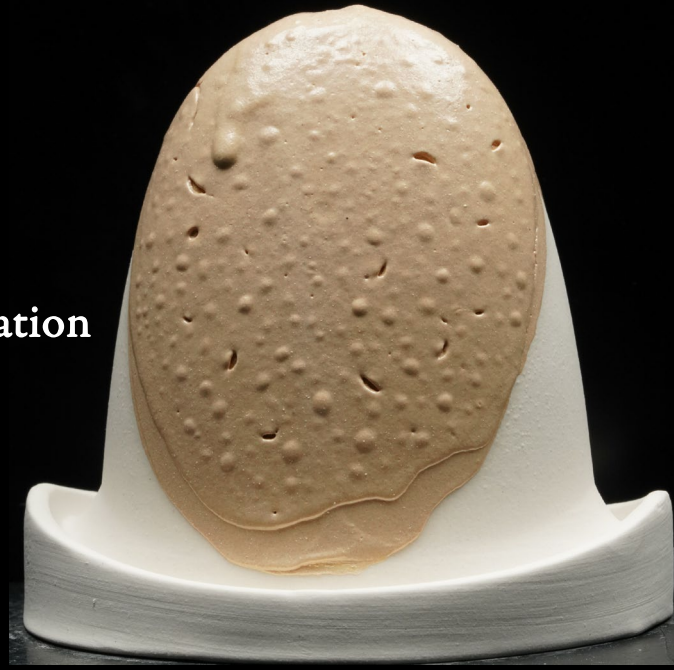
Zinc Oxide

071122-22

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

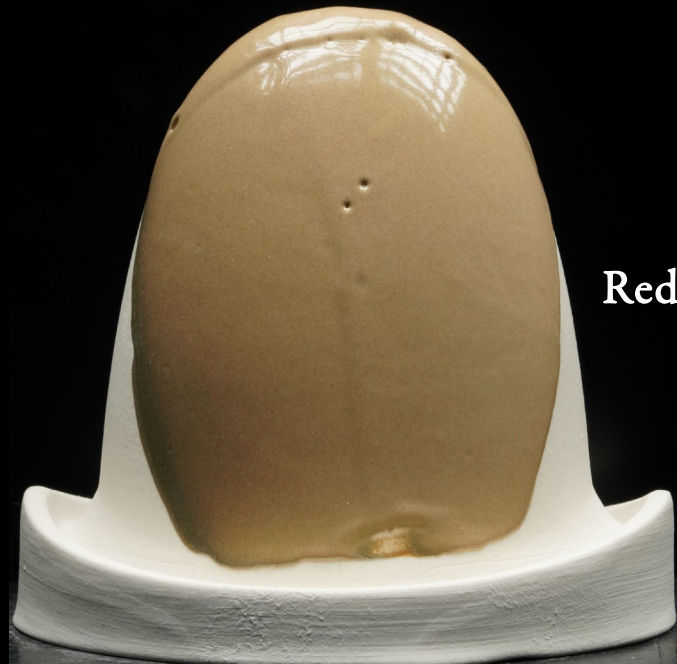


1-3 Second Dip

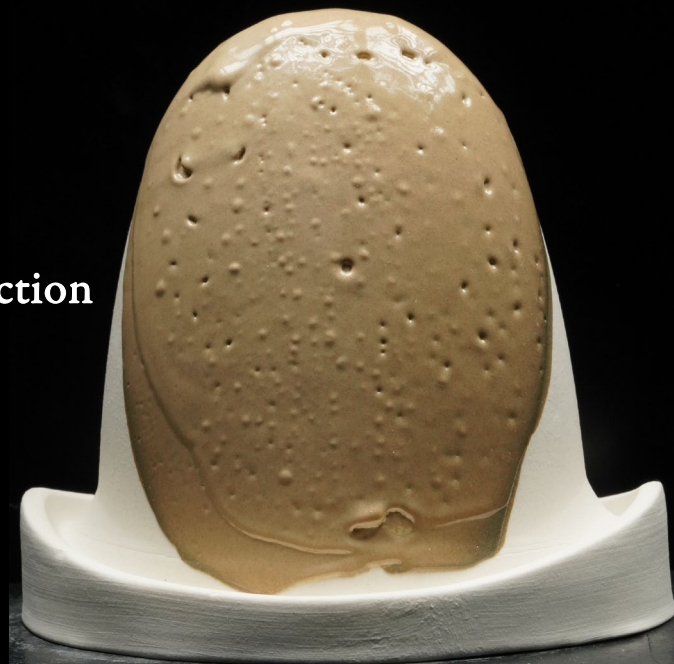


2-3 Second Dips

Oxidation



1-3 Second Dip

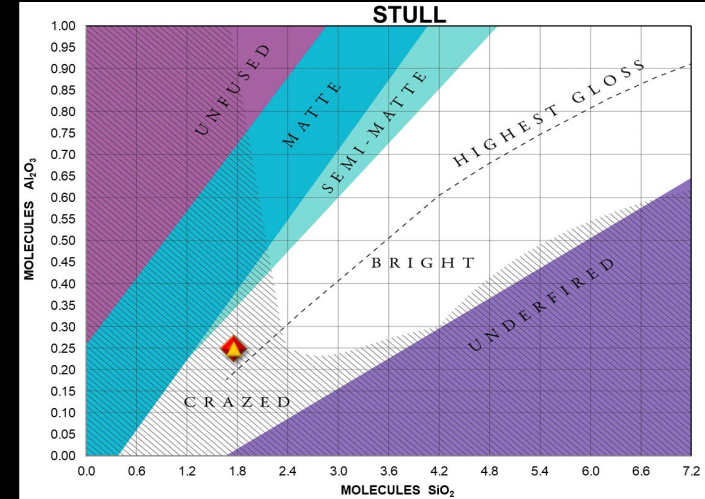


2-3 Second Dips

Reduction

UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.03 : 1		Alkali Metals 0.20		Alkaline Earths 0.80	
SiO ₂ 1.90	Collective "Al ₂ O ₃ " 0.27	Na ₂ O 0.16	K ₂ O 0.04	MgO 0.00	CaO 0.01
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 0.79	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 0.19		Alkaline Earths 0.81	
SiO ₂ 1.76	Collective "Al ₂ O ₃ " 0.25	Na ₂ O 0.15	K ₂ O 0.04	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.25	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.08
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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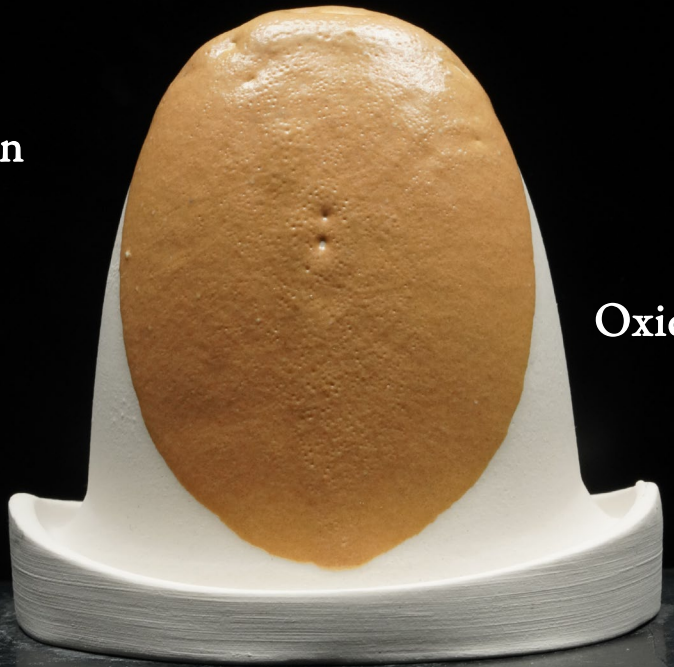
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Tangerine

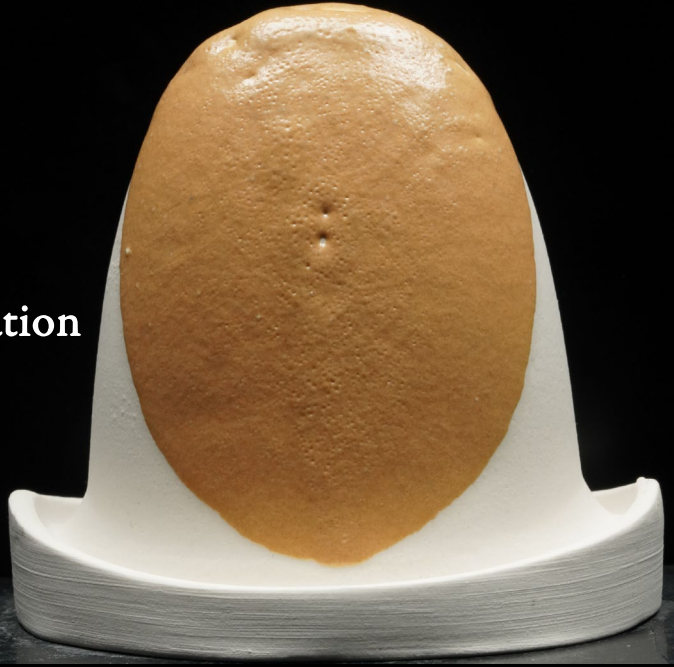
Weight Substitution
Bone Ash

071122-23

Neph Sy	42.25
Bone Ash	17.13
Zinc Oxide	11.42
EPK	7.99
Flint	21.20
Chrome Oxide	0.20
Red Iron Oxide	1.84
Water	70



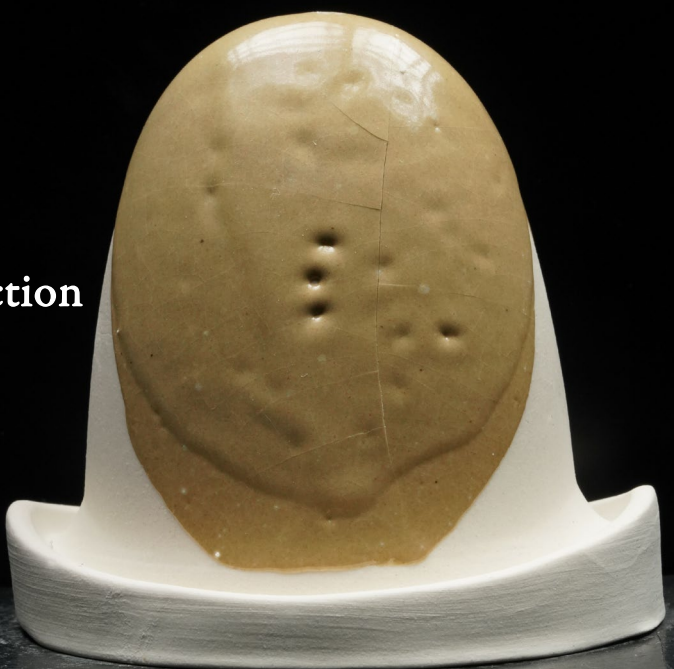
1-3 Second Dip



2-3 Second Dips

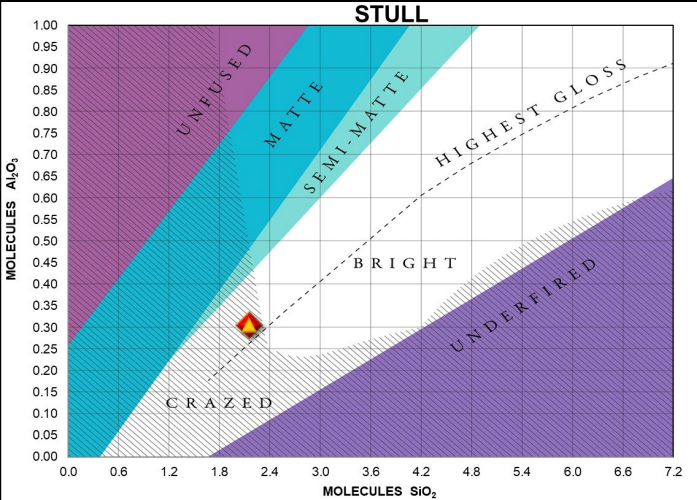


Reduction

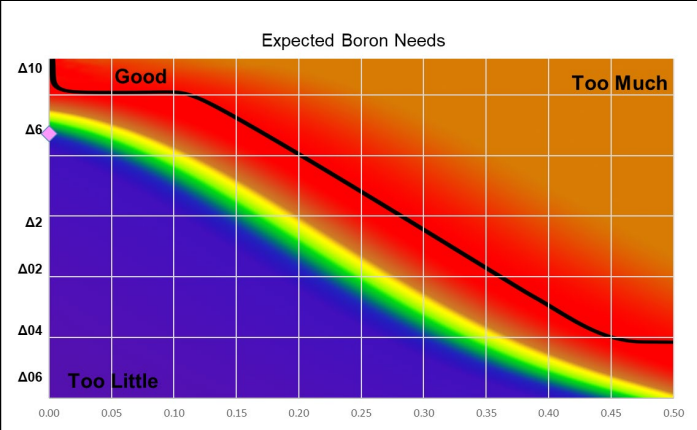


Oxidation

SiO ₂ :Al ₂ O ₃ Ratio 7.04 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.37	Collective "Al ₂ O ₃ " 0.34	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.35
B ₂ O ₃	Al ₂ O ₃ 0.34	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.39	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅ 0.19		MnO ₂	CoO



SiO ₂ :Al ₂ O ₃ Ratio 7.04 : 1		Alkali Metals 0.23		Alkaline Earths 0.77	
SiO ₂ 2.15	Collective "Al ₂ O ₃ " 0.31	Na ₂ O 0.18	K ₂ O 0.05	MgO 0.00	CaO 0.32
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 0.36	FeO 0.10
Cr ₂ O ₃ 0.00	ZrO ₂	P ₂ O ₅ 0.17		MnO ₂	CoO



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