

Zinc Pinc- Δ 10

Lab 4-Back to the Flux Capacity



Ceramic
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Zinc Pinc

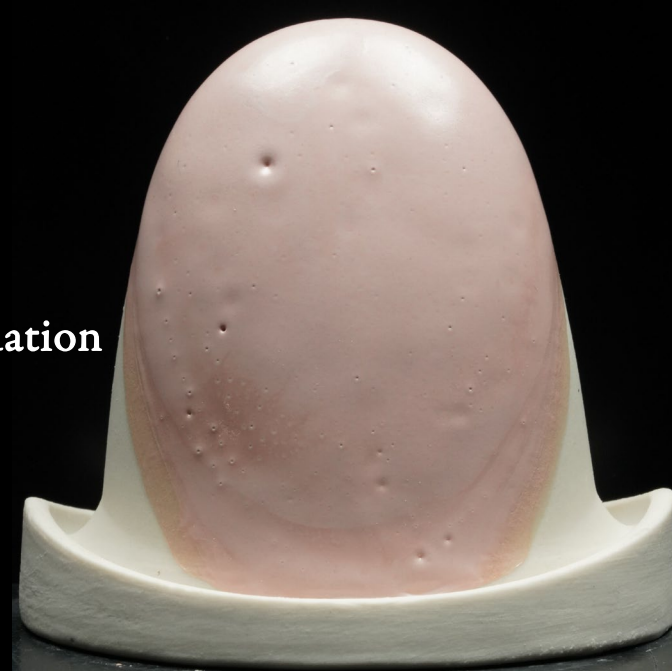
Original

030823-1

Neph Sy	40.00
Zinc Oxide	20.00
EPK	10.00
Flint	30.00
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



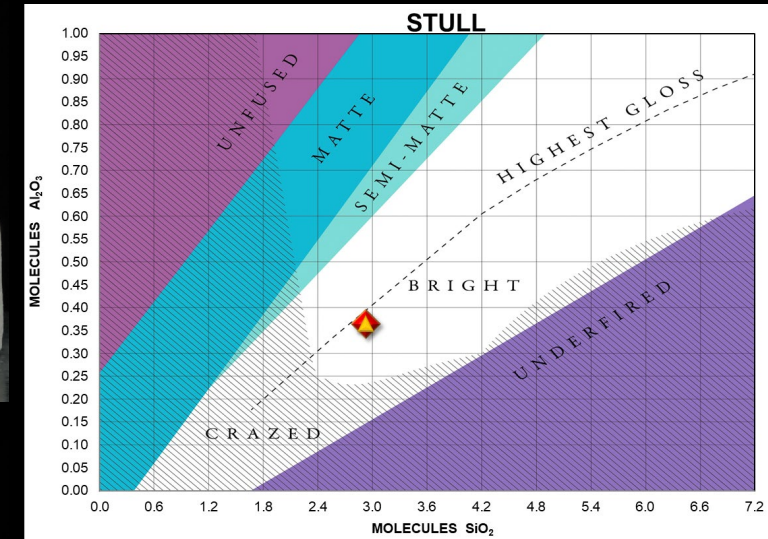
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.00 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.00 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Lab 4-Alkali Metals-Oxidation



030823-1

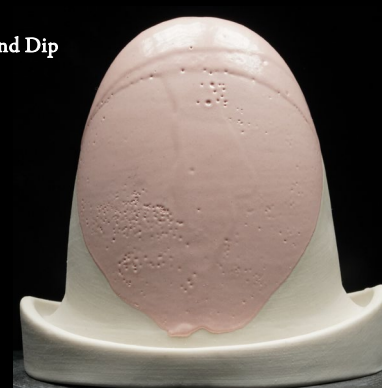


030823-35



030823-36

1-3 Second Dip



030823-37

Second Dips



030823-X1



030823-38



Original (NS)



w/Mahavir



w/Custer



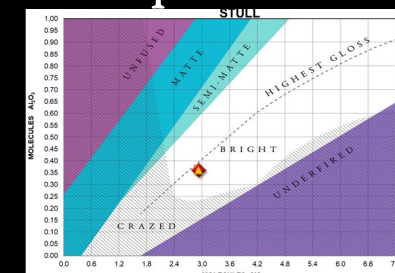
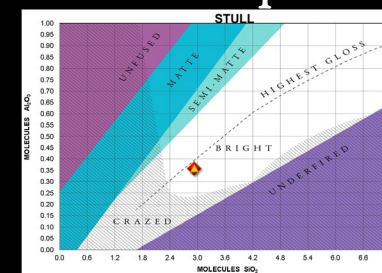
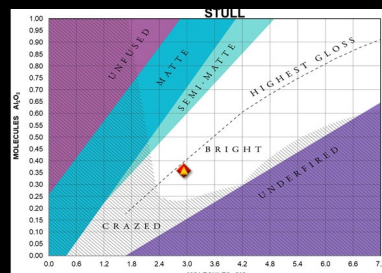
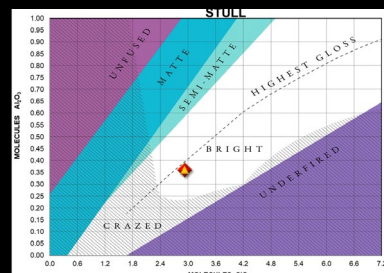
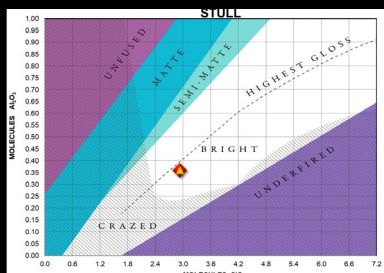
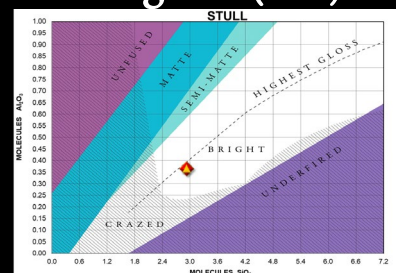
w/G200EU



w/Minspar



w/Spodumene



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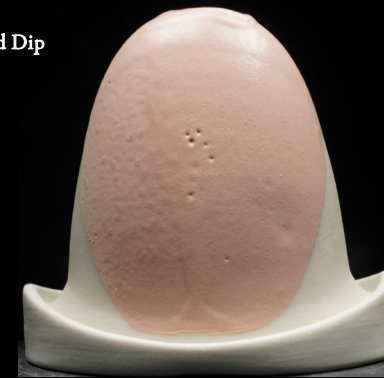
Lab 4-Alkali Metals-Oxidation



030823-1



030823-40



030823-42

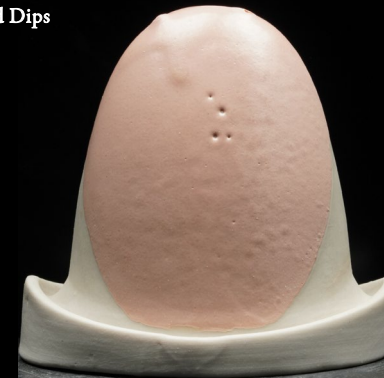
1-3 Second Dip



Original (NS)

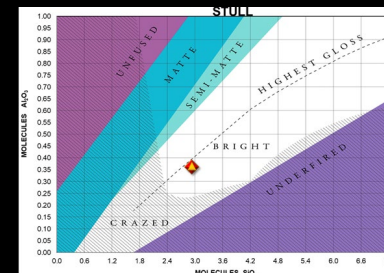
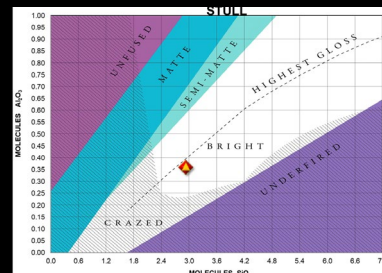
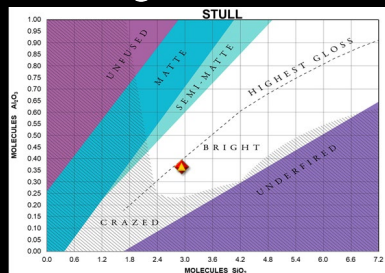


w/Frit 3110



w/Lithium Carbonate

2-3 Second Dips



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Lab 4-Alkali Metals-Reduction



030823-1



030823-35



030823-36



030823-37



030823-X1



030823-38

1-3 Second Dip

2-3 Second Dips



Original (NS)



w/Mahavir



w/Custer



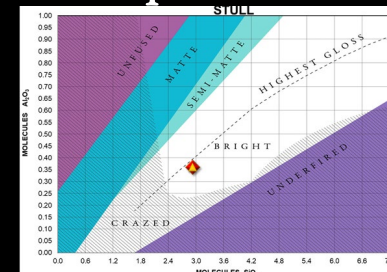
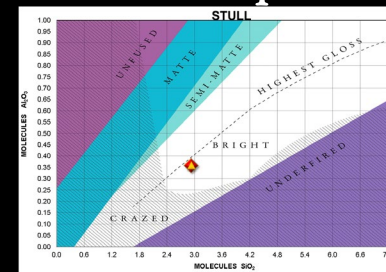
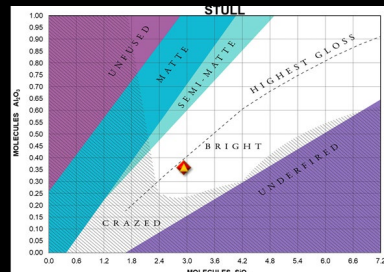
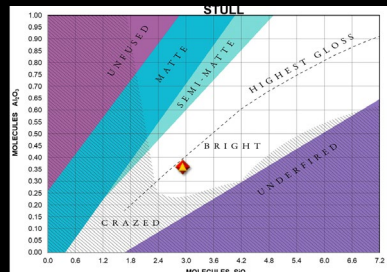
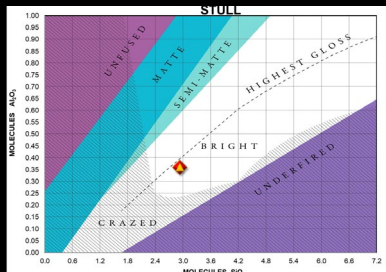
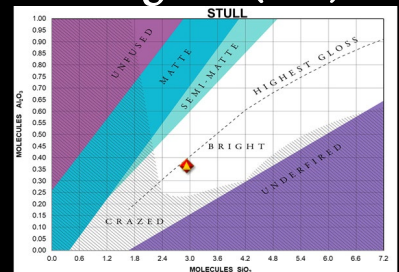
w/G200EU



w/Minspar



w/Spodumene



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Lab 4-Alkali Metals-Reduction



030823-1



030823-40



030823-42

1-3 Second Dip



Original (NS)

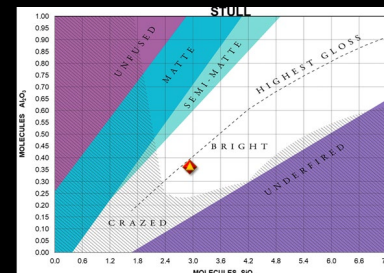
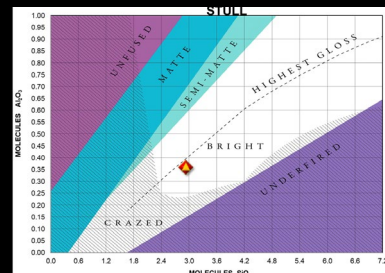
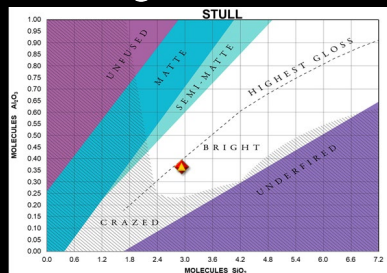


w/Frit 3110



w/Lithium Carbonate

2-3 Second Dips

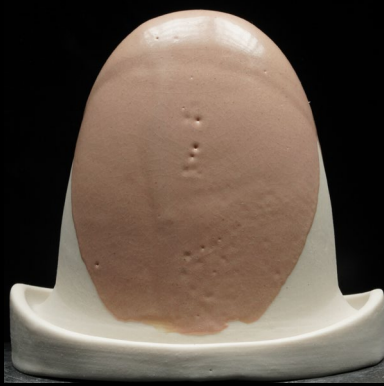


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Lab 4-Alkaline Earths-Oxidation



030823-1



030823-43

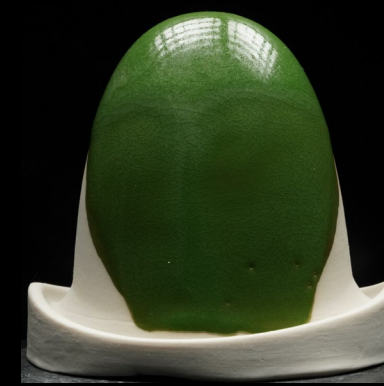


030823-44

1-3 Second Dip



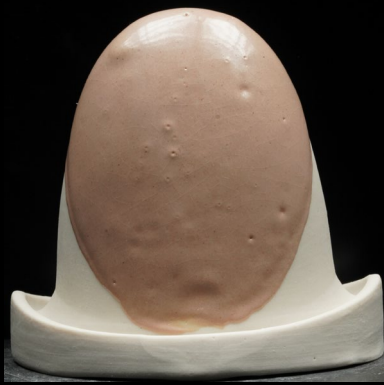
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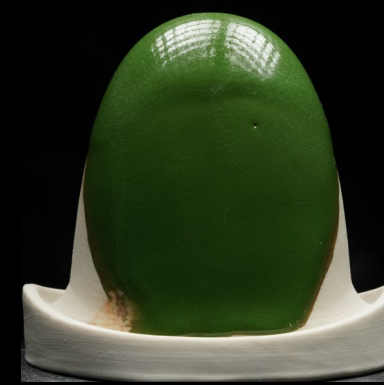
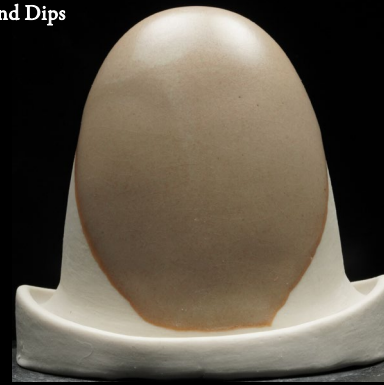
030823-46



030823-47



2-3 Second Dips



Original (ZO)

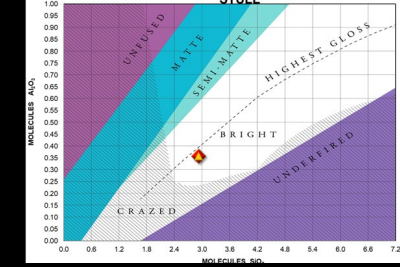
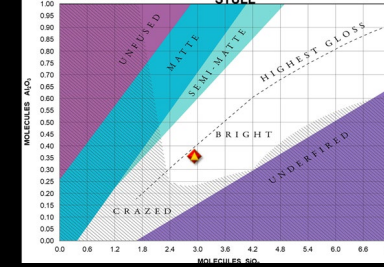
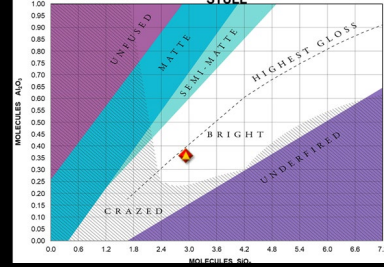
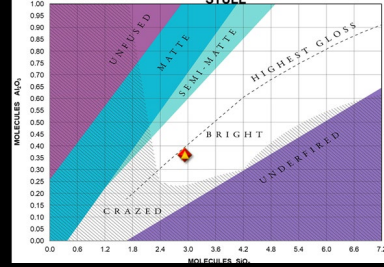
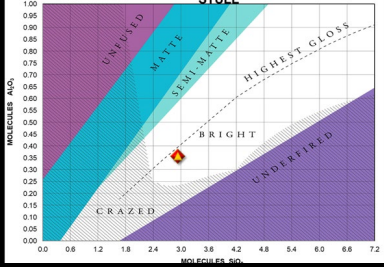
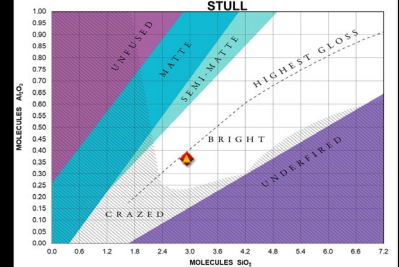
w/Talc

w/Mag Carb

w/Dolomite

w/Wollastonite

w/Strontium Carb



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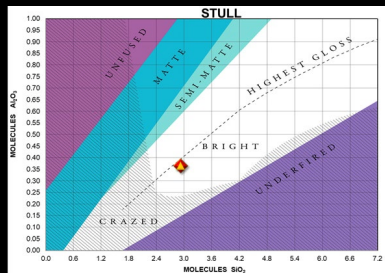
Lab 4-Alkaline Earths-Oxidation



030823-1



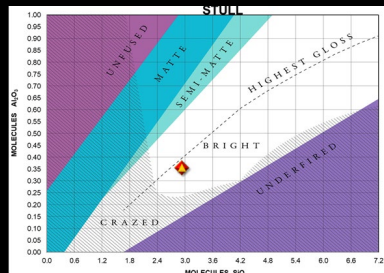
Original (ZO)



030823-48



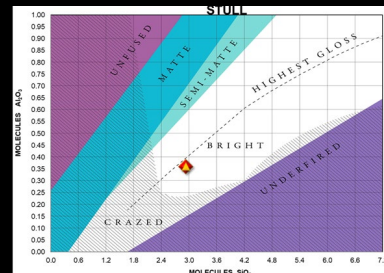
w/Barium Carb



030823-49



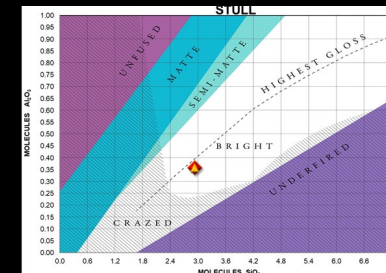
w/Whiting



030823-50



w/Bone Ash



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Lab 4-Alkaline Earths-Reduction



030823-1



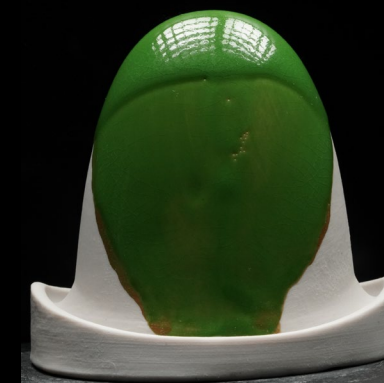
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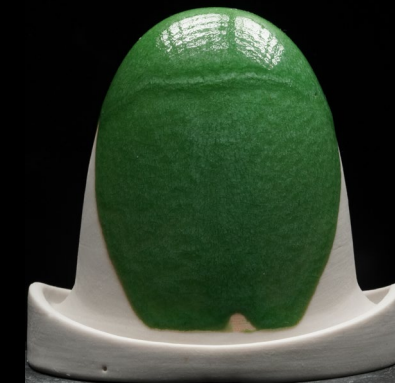
030823-44



030823-45



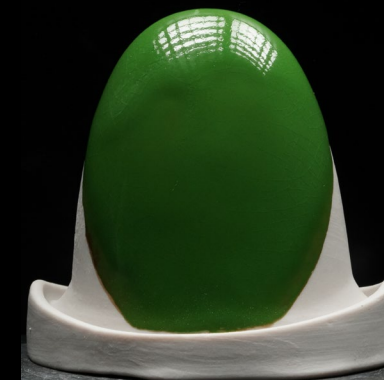
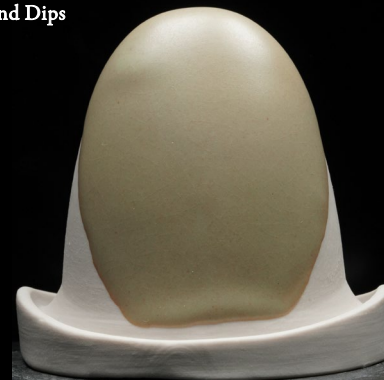
030823-46



030823-47

1-3 Second Dip

2-3 Second Dips



Original (ZO)

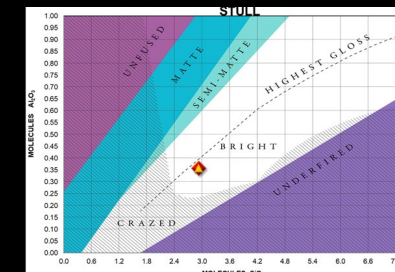
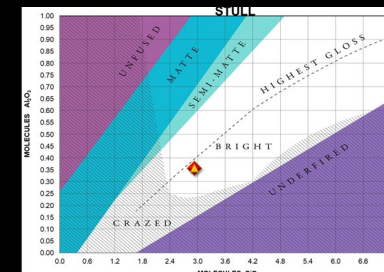
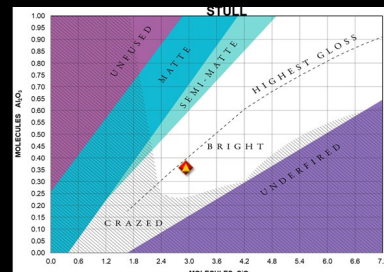
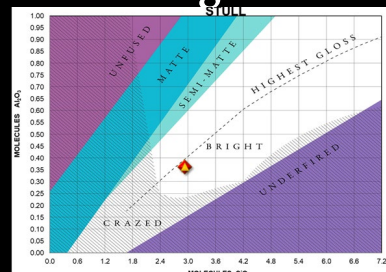
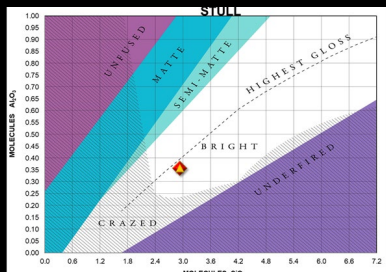
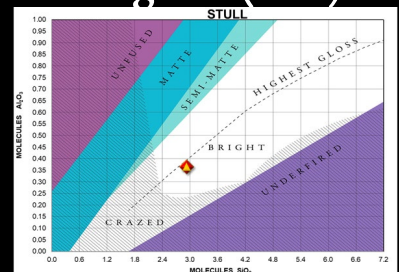
w/Talc

w/Mag Carb

w/Dolomite

w/Wollastonite

w/Strontium Carb



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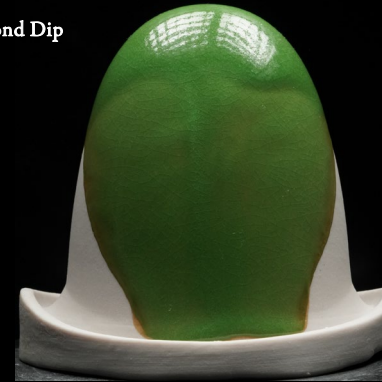
Lab 4-Alkaline Earths-Reduction



030823-1



030823-48



030823-49



030823-50

1-3 Second Dip

2-3 Second Dips



Original (ZO)



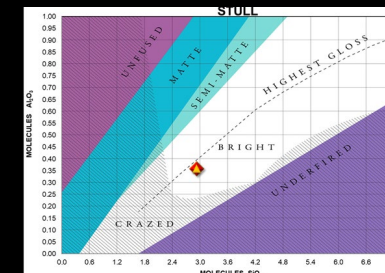
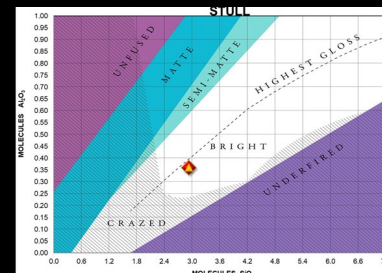
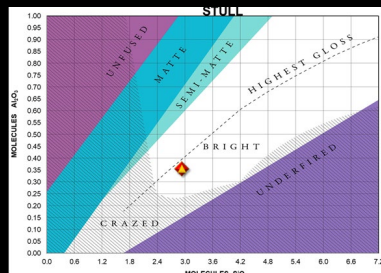
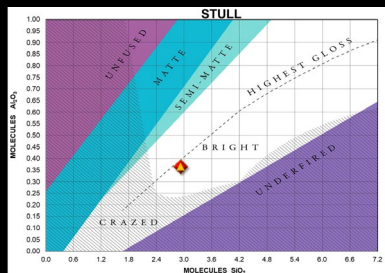
w/Barium Carb



w/Whiting



w/Bone Ash



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Zinc Pinc

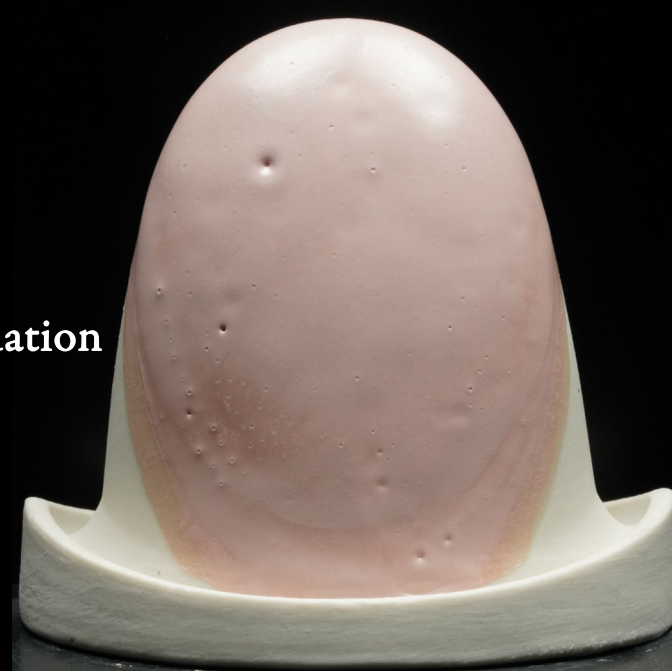
Original

030823-1

Neph Sy	40.00
Zinc Oxide	20.00
EPK	10.00
Flint	30.00
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



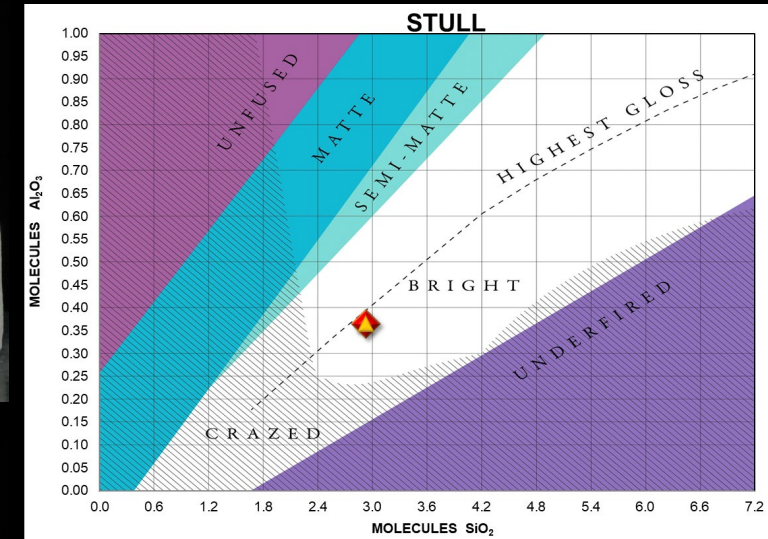
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.00 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.00 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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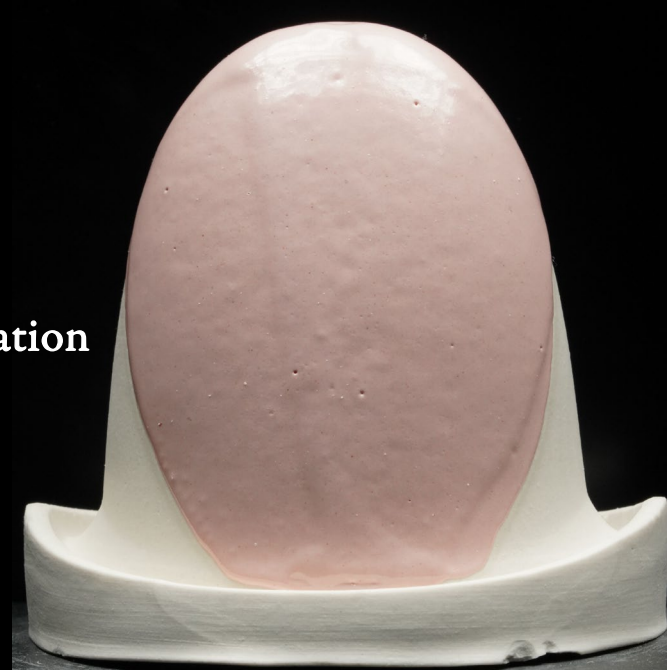
Zinc Pinc

Chemical Match
Mahavir Feldspar
030823-35

Mahavir	48.56
Zinc Oxide	19.83
EPK	10.27
Flint	21.35
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



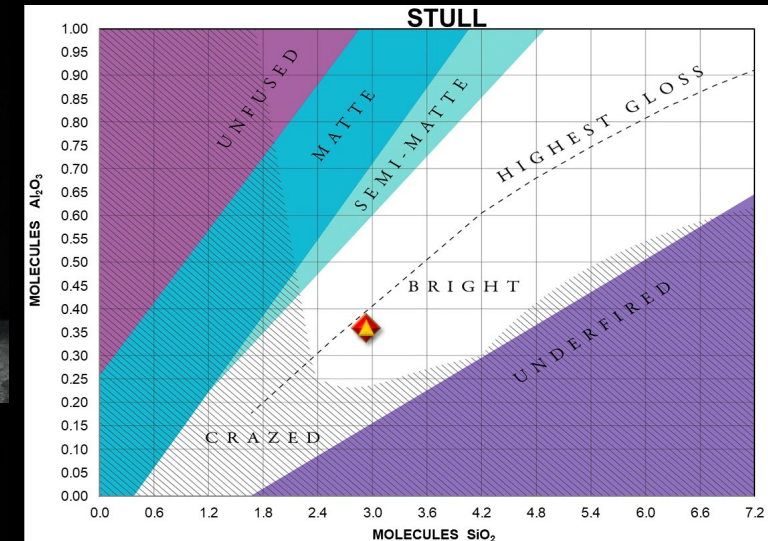
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.10 :1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.07	K ₂ O 0.18	MgO 0.01	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.10 :1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.07	K ₂ O 0.18	MgO 0.01	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

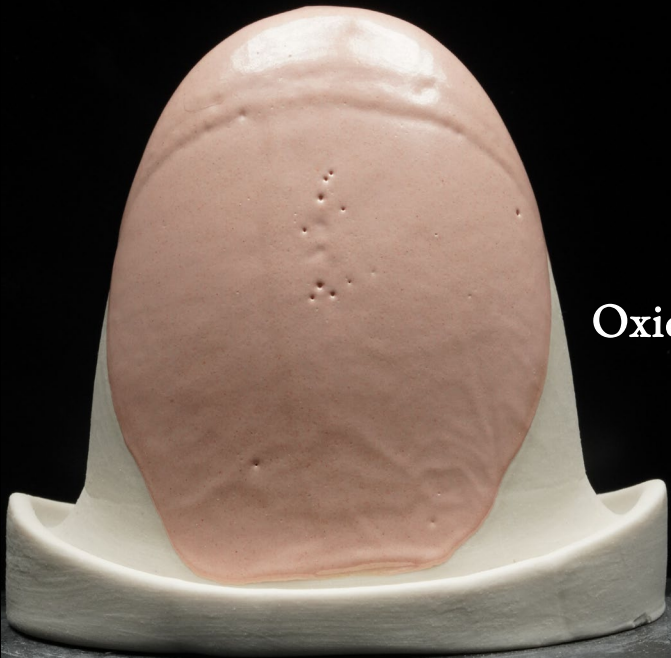


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Zinc Pinc

Chemical Match
Custer Feldspar
030823-36

Custer	57.78
Zinc Oxide	19.55
EPK	7.88
Flint	14.80
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips

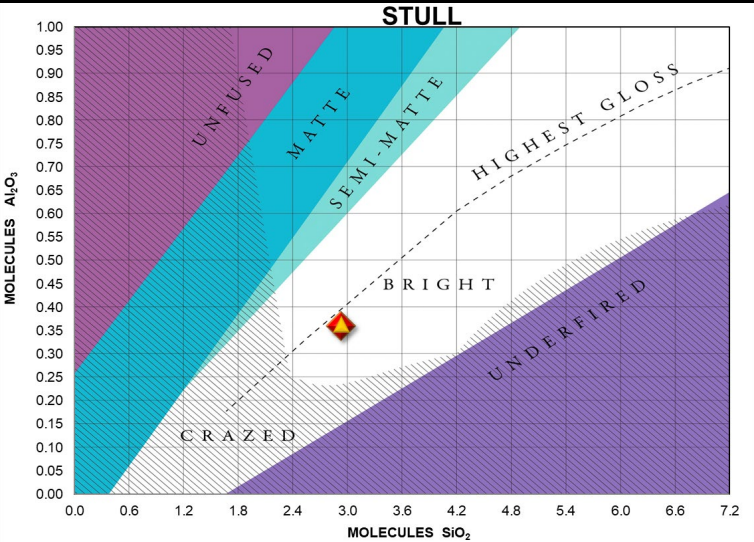


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.05 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.19	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.72	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.05 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.19	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.72	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Zinc Pinc

Chemical Match
G200 EU Feldspar
030823-37

G200 EU	55.11
Zinc Oxide	19.66
EPK	7.83
Flint	17.40
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



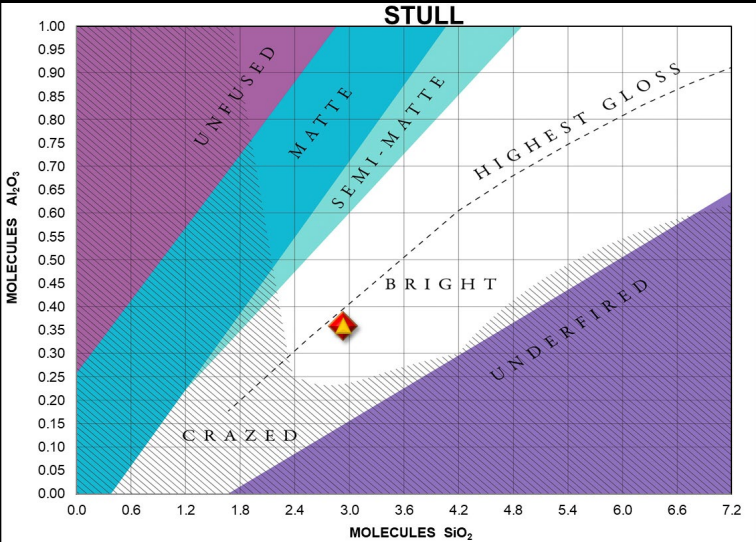
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.13 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.19	MgO 0.00	CaO 0.02
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.72	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 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.06	K ₂ O 0.19	MgO 0.00	CaO 0.02
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.72	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Materials
Workshop

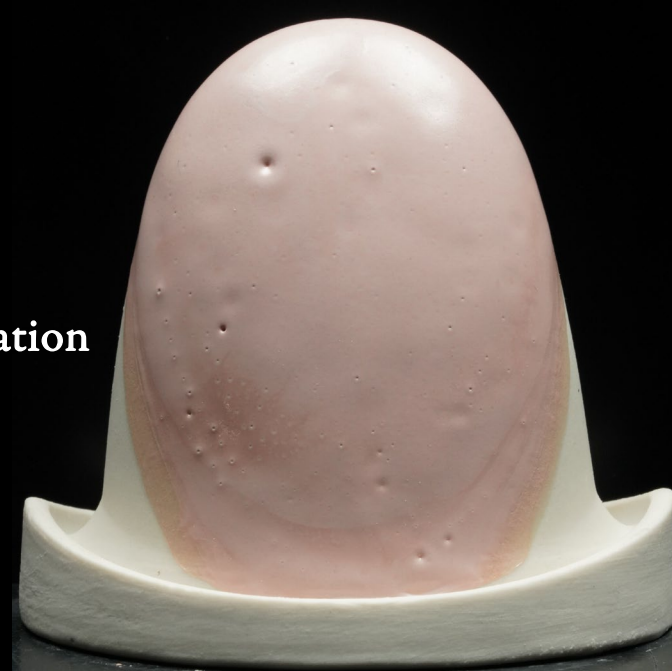
Zinc Pinc

Chemical Match
Minspar
030823-X1

Minspar	59.34
Zinc Oxide	19.48
EPK	3.76
Flint	17.43
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



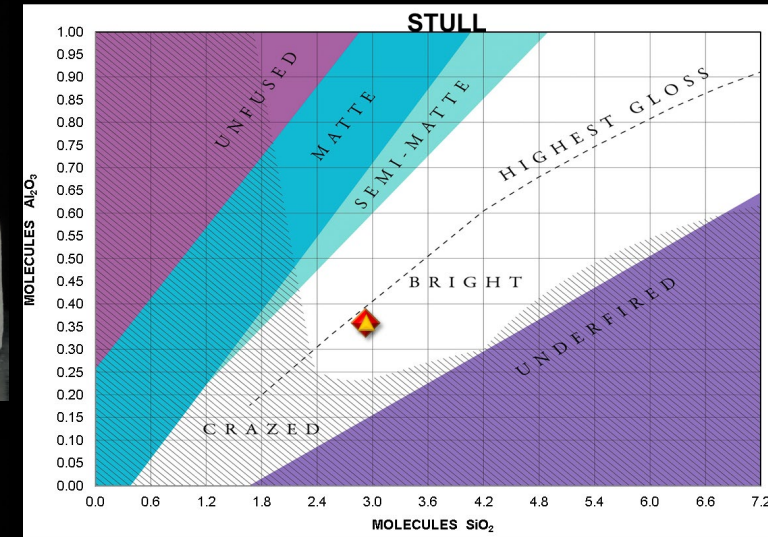
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.15 :1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.18	K ₂ O 0.08	MgO 0.00	CaO 0.04
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.70	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.15 :1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.18	K ₂ O 0.08	MgO 0.00	CaO 0.04
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO 0.00	BaO 0.00
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.70	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



Ceramic
Materials
Workshop

Zinc Pinc

Chemical Match
Spodumene
030823-38

Spodumene	33.47
Zinc Oxide	21.02
EPK	10.51
Flint	35.00
Chrome Oxide	1.05
Water	80



1-3 Second Dip



2-3 Second Dips

Oxidation



1-3 Second Dip

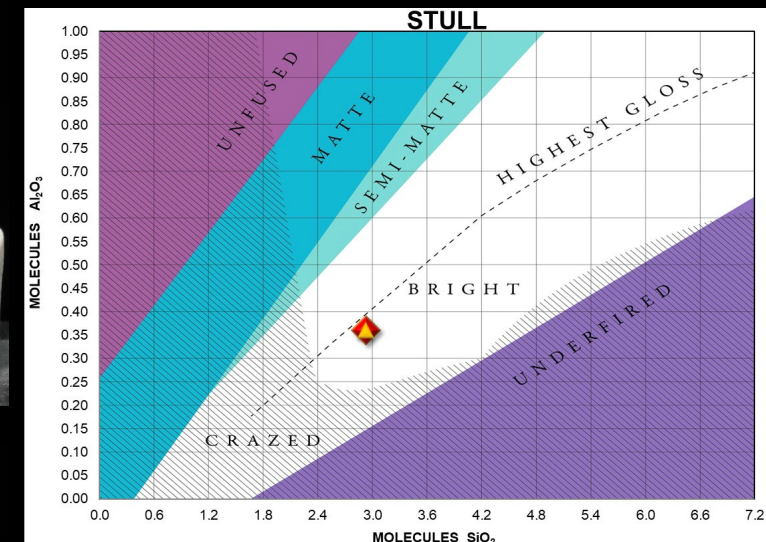


2-3 Second Dips

Reduction

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.09 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O 0.25	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.74	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.09 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.00	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O 0.25	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.74	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Zinc Pinc

Chemical Match

Frit 3110

030823-40

3110	29.60
Zinc Oxide	17.02
EPK	30.60
Flint	22.79
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips

Oxidation

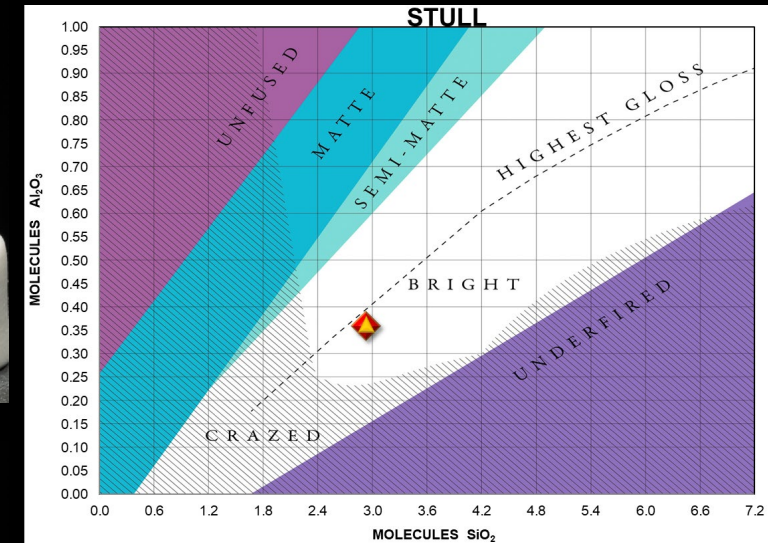


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.04 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.22	K ₂ O 0.02	MgO 0.00	CaO 0.10
B ₂ O ₃ 0.03	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.63	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.04 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.22	K ₂ O 0.02	MgO 0.00	CaO 0.10
B ₂ O ₃ 0.03	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.63	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



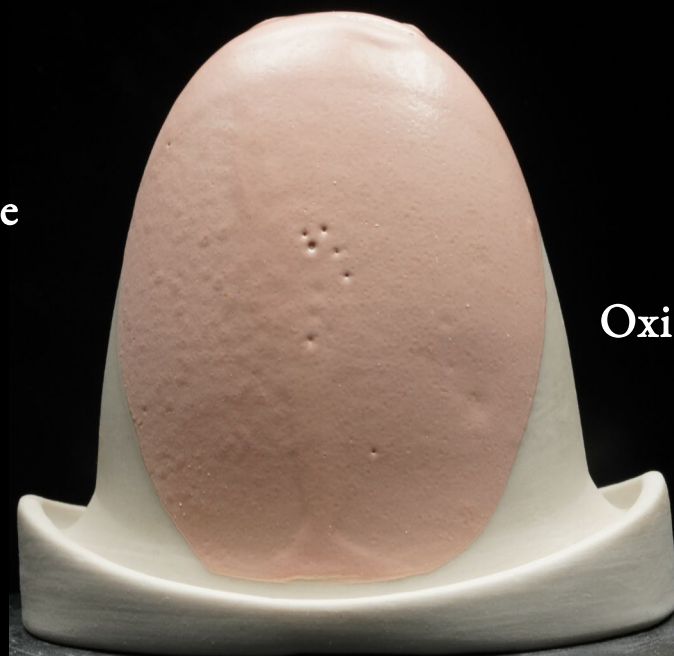
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Zinc Pinc

Chemical Match
Lithium Carbonate
030823-42

Lithium Carb	5.89
Zinc Oxide	19.36
EPK	33.32
Flint	41.43
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips

Oxidation

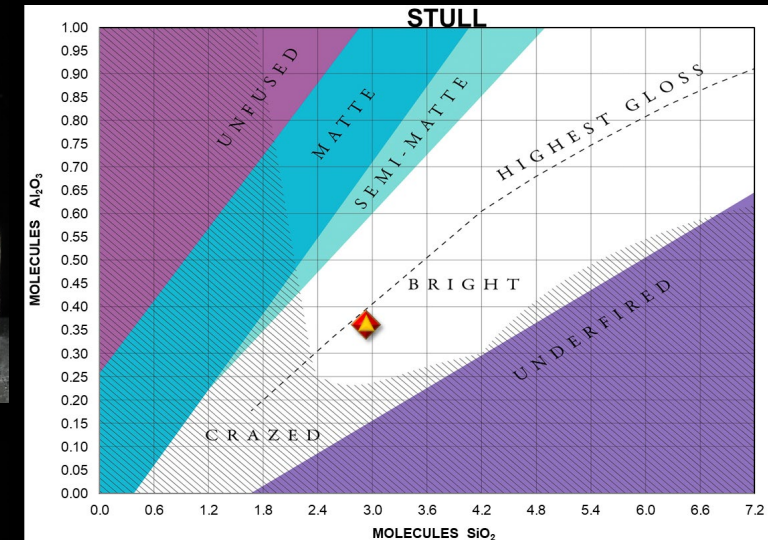


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O 0.24	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 7.99 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.37	Na ₂ O	K ₂ O 0.00	MgO 0.00	CaO 0.00
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O 0.24	CuO	SrO	BaO
TiO ₂ 0.01	NiO	Bi ₂ O ₃	SnO ₂	ZnO 0.73	FeO 0.01
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Zinc Pinc

Chemical Match
Talc

030823-43

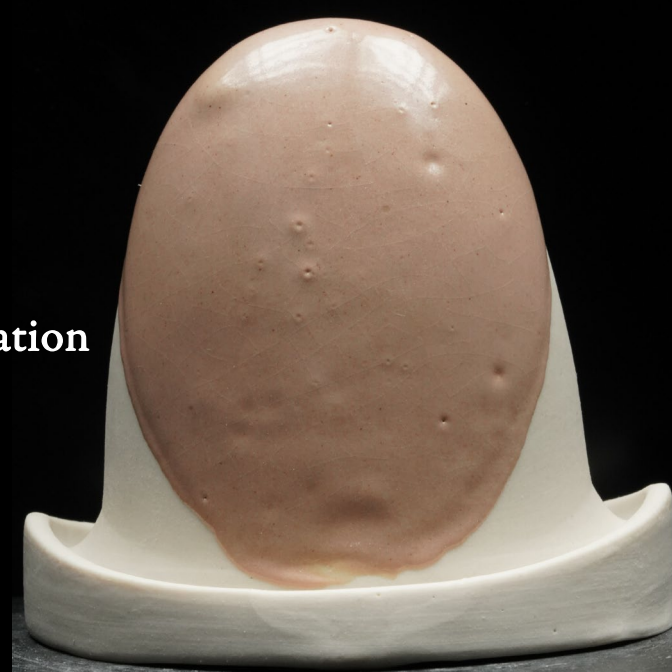
Neph Sy	41.72
Talc	32.75
EPK	10.47
Flint	15.06
Chrome Oxide	1.00
Water	80



Ceramic
Materials
Workshop



1-3 Second Dip



2-3 Second Dips



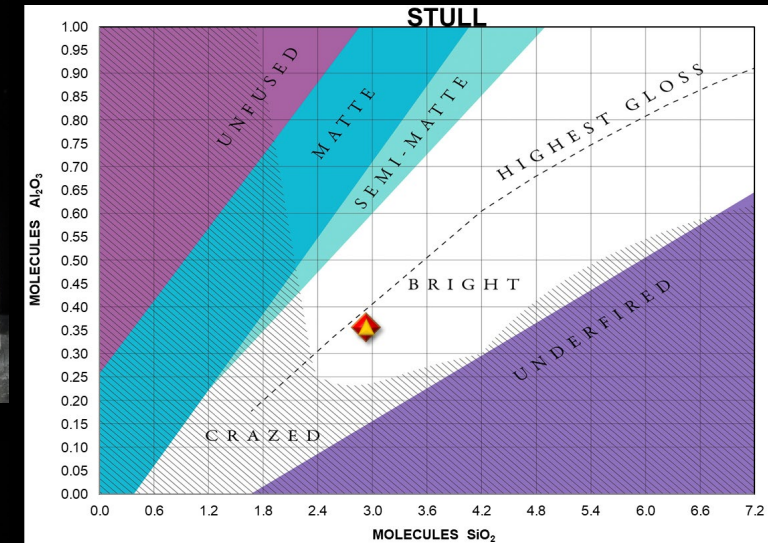
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.16 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.67	CaO 0.06
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



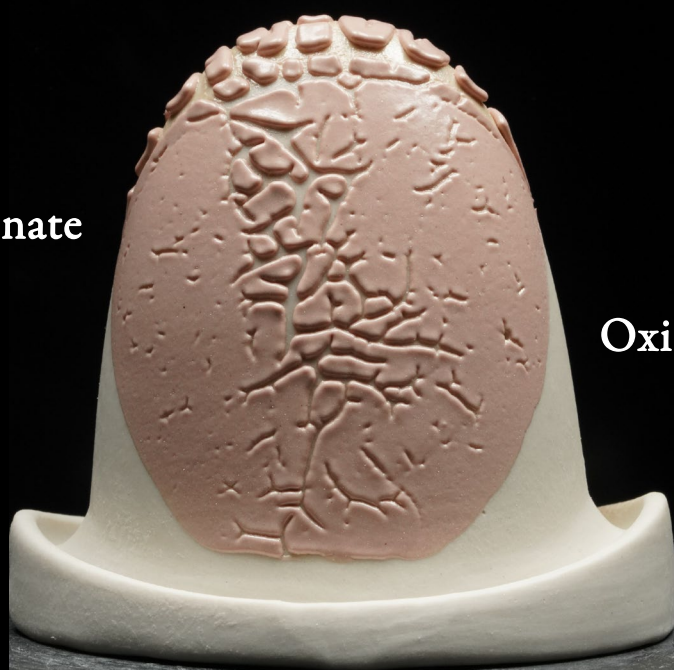
EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.16 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.67	CaO 0.06
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

Zinc Pinc

Chemical Match
Magnesium Carbonate
030823-44

Neph Sy	39.30
Mag Carbonate	20.29
EPK	10.14
Flint	30.27
Chrome Oxide	1.00
Water	120



1-3 Second Dip



2-3 Second Dips



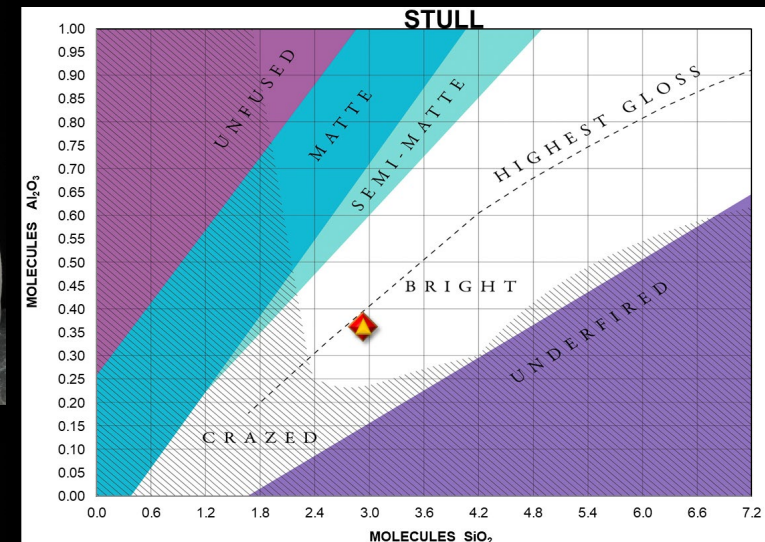
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.03 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.74	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	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 8.03 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.74	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	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 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Zinc Pinc

Chemical Match
Dolomite
030823-45

Neph Sy	38.40
Dolomite	22.23
EPK	9.69
Flint	29.69
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips

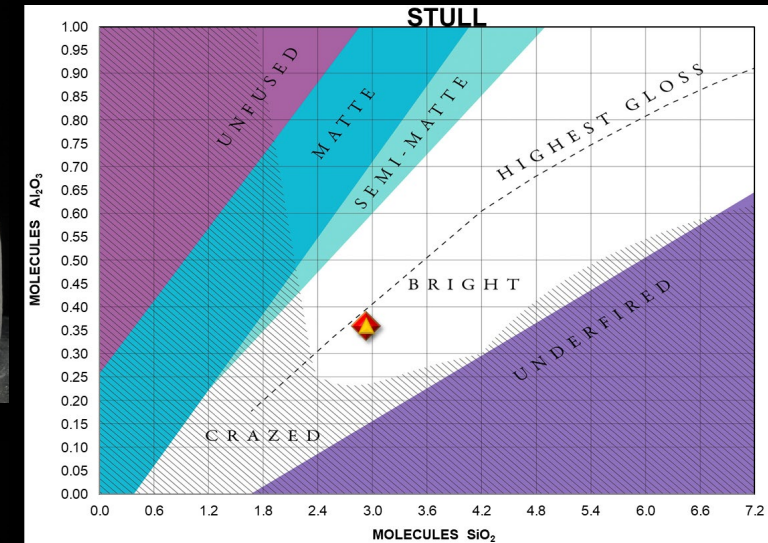


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.10 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.37	CaO 0.37
B ₂ O ₃	Al ₂ O ₃ 0.36	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 8.10 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.37	CaO 0.37
B ₂ O ₃	Al ₂ O ₃ 0.36	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 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO

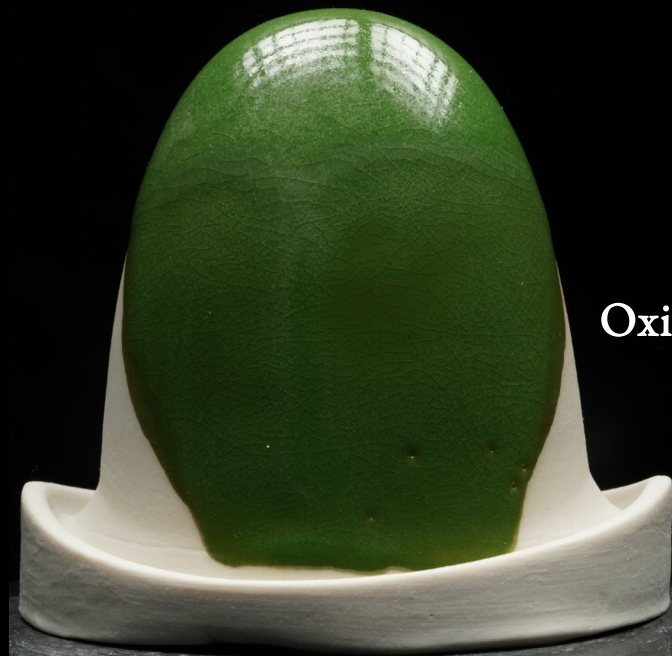


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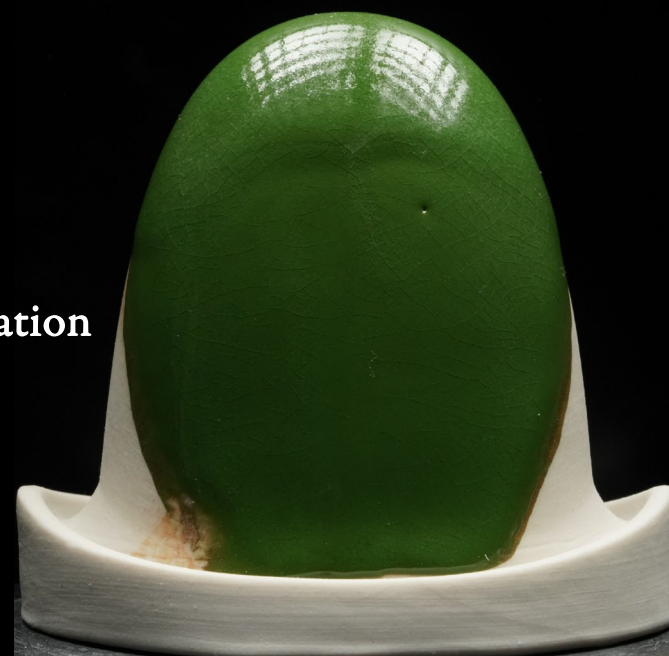
Zinc Pinc

Chemical Match
Wollastonite
030823-46

Neph Sy	41.53
Wollastonite	32.21
EPK	9.90
Flint	16.36
Chrome Oxide	1.00
Water	80

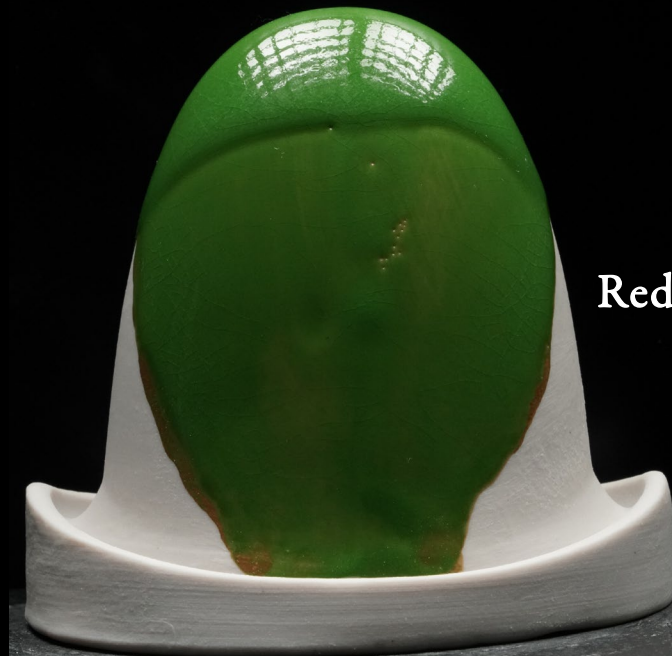


Oxidation

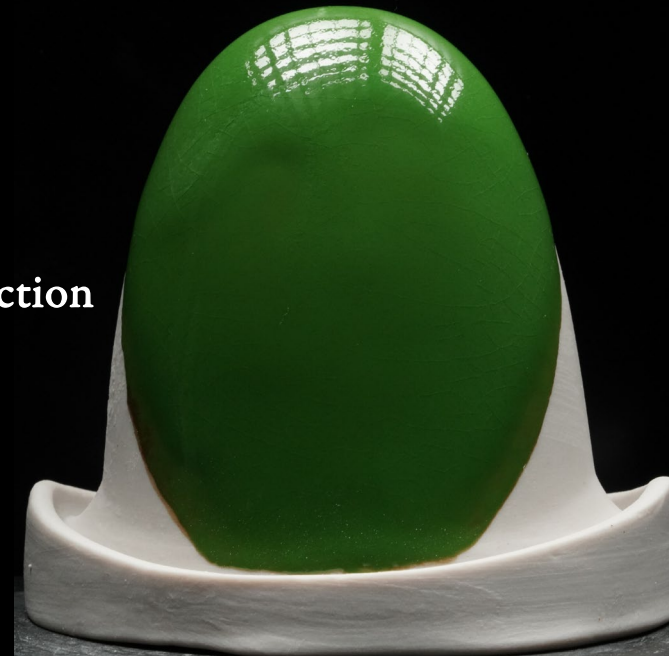


1-3 Second Dip

2-3 Second Dips

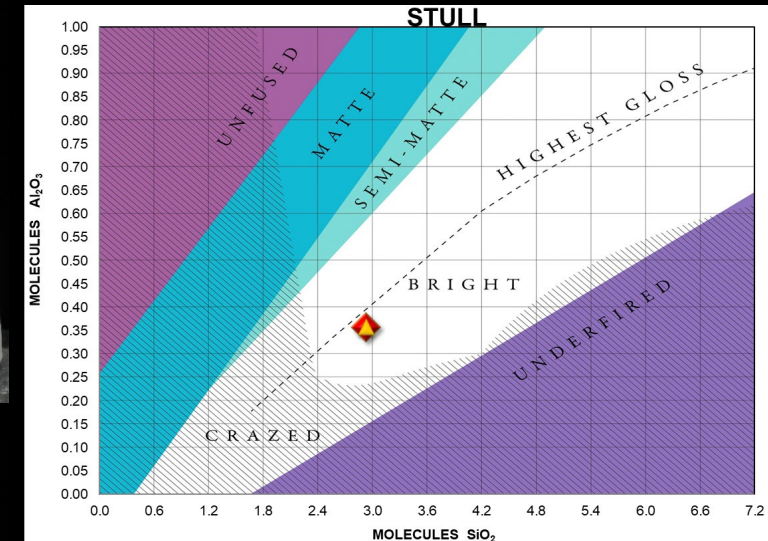


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.17 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.03	CaO 0.71
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	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 8.17 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.03	CaO 0.71
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.02
Cr ₂ O ₃ 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



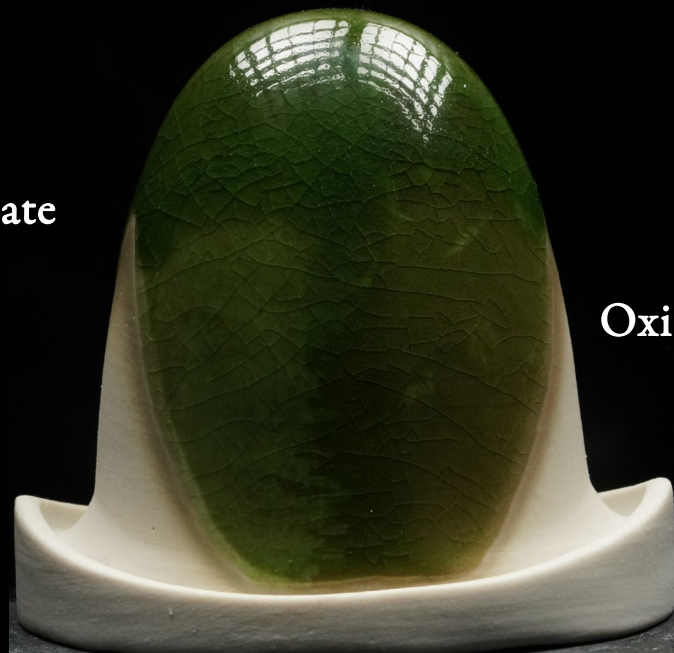
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Zinc Pinc

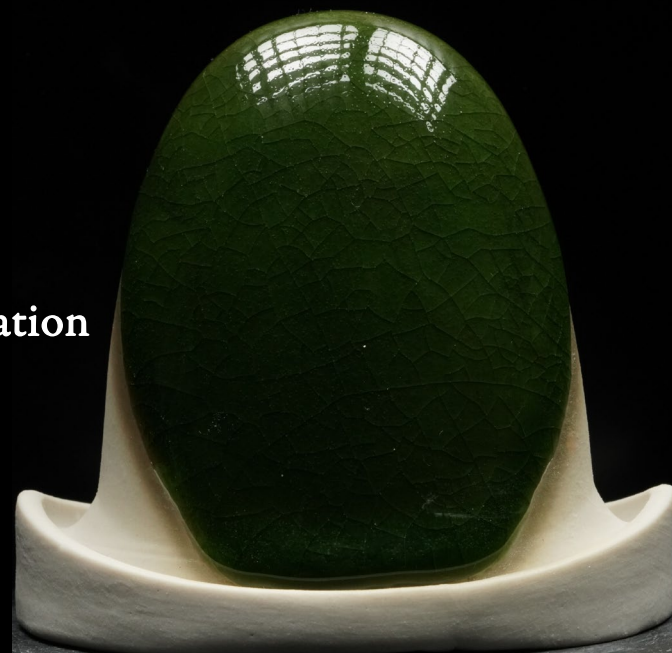
Chemical Match
Strontium Carbonate
030823-47

Neph Sy	34.11
Strontium Carb	31.38
EPK	8.25
Flint	26.26
Chrome Oxide	1.00
Water	80

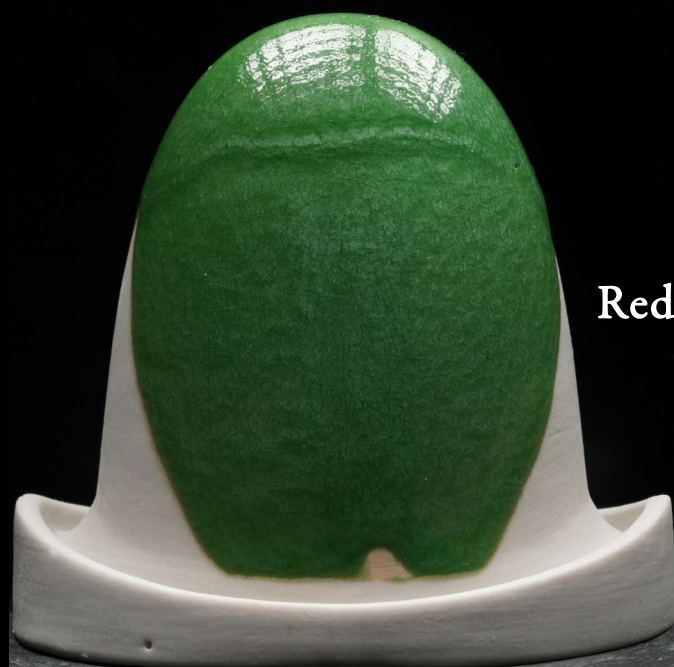


Oxidation

1-3 Second Dip



2-3 Second Dips

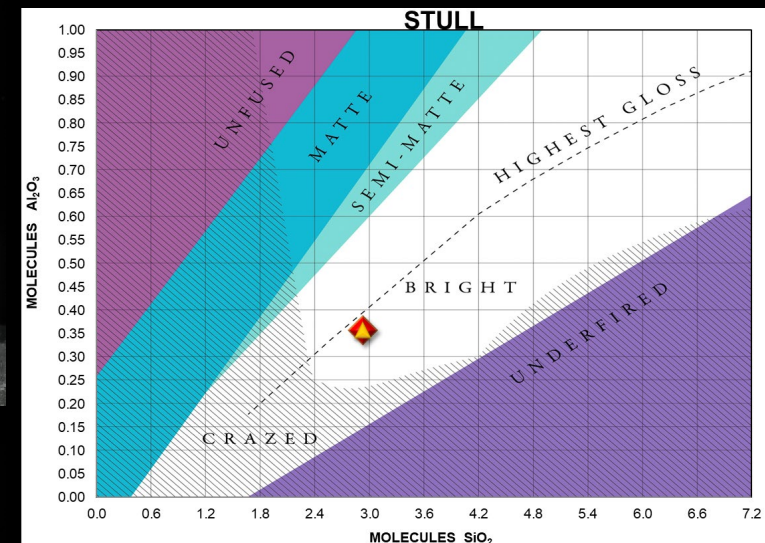


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.15 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO 0.73	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 8.15 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO 0.73	BaO
TiO ₂ 0.00	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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Zinc Pinc

Chemical Match
Barium Carbonate
030823-48

Neph Sy	30.91
Barium Carb	37.95
EPK	7.31
Flint	23.83
Chrome Oxide	1.00
Water	80



Oxidation



2-3 Second Dips

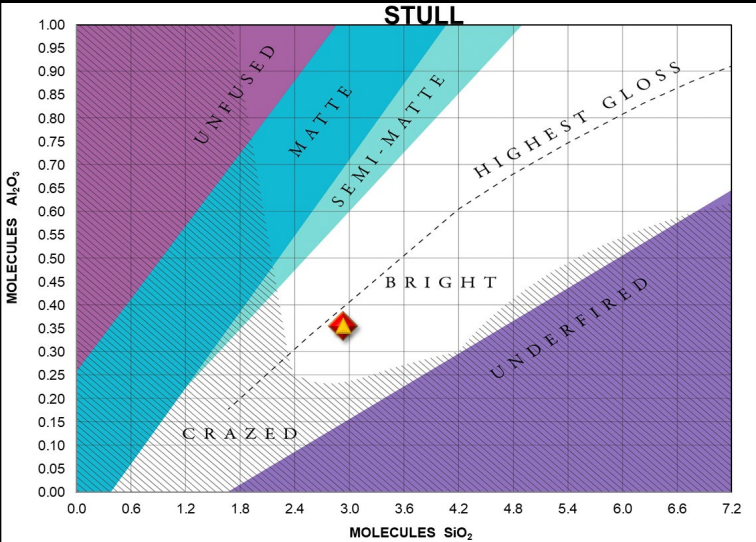


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.20 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO 0.73
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 8.20 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.20	K ₂ O 0.06	MgO 0.00	CaO 0.01
B ₂ O ₃	Al ₂ O ₃ 0.36	Li ₂ O	CuO	SrO	BaO 0.73
TiO ₂ 0.00	NiO	Bi ₂ O ₃	SnO ₂	ZnO	FeO 0.01
Cr ₂ O ₃ 0.03	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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Zinc Pinc

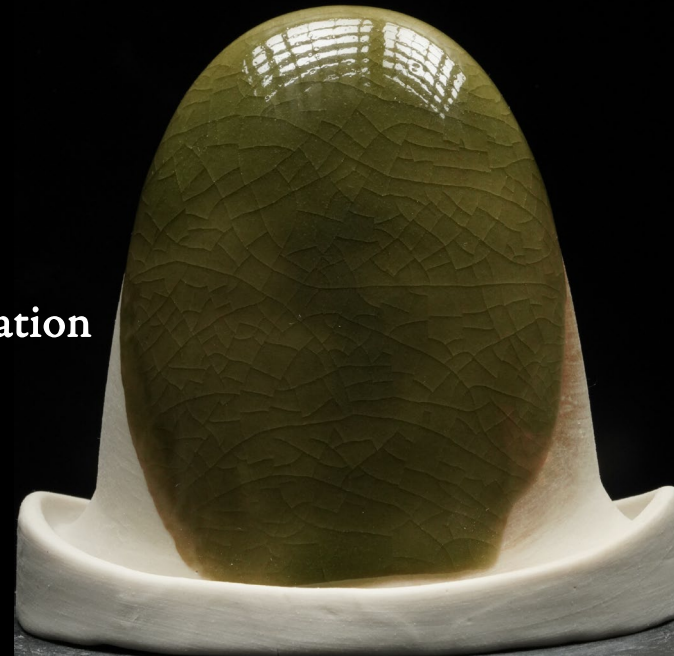
Chemical Match
Whiting
030823-49

Neph Sy	37.74
Whiting	23.67
EPK	9.45
Flint	29.15
Chrome Oxide	1.00
Water	80

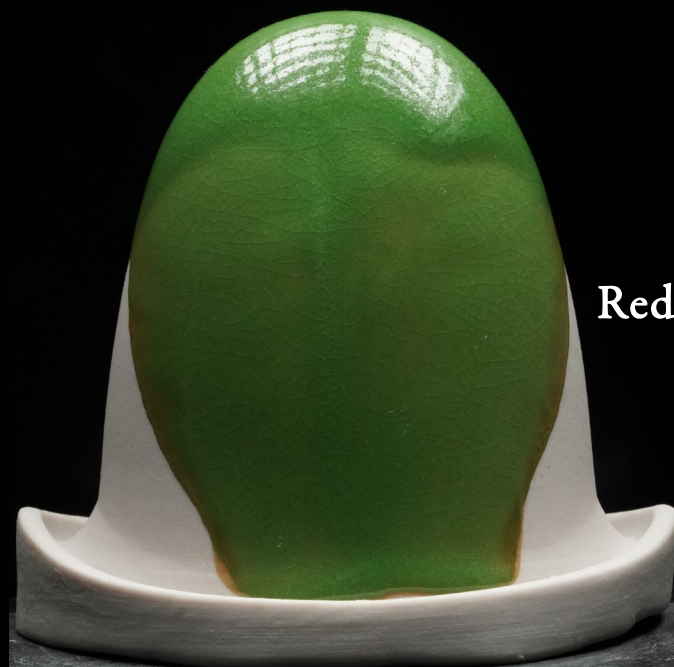


Oxidation

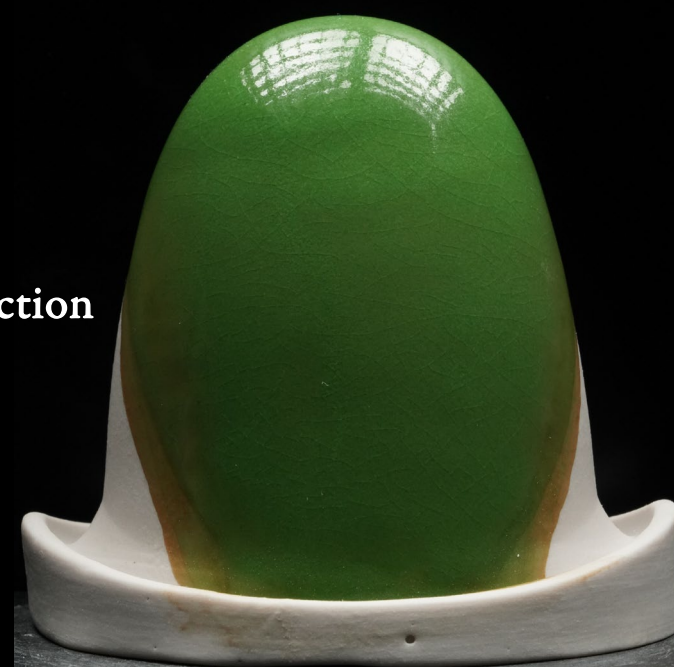
1-3 Second Dip



2-3 Second Dips

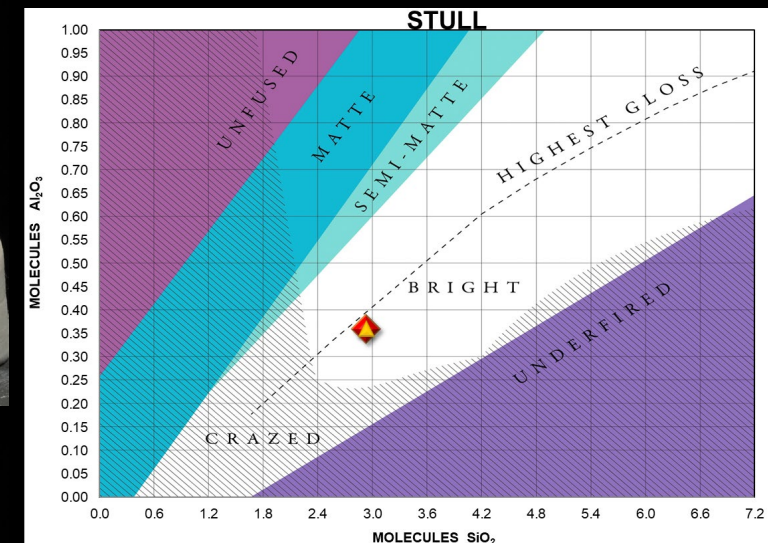


Reduction



UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.11 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.74
B ₂ O ₃	Al ₂ O ₃ 0.36	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 8.11 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.74
B ₂ O ₃	Al ₂ O ₃ 0.36	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 0.02	ZrO ₂	P ₂ O ₅		MnO ₂	CoO



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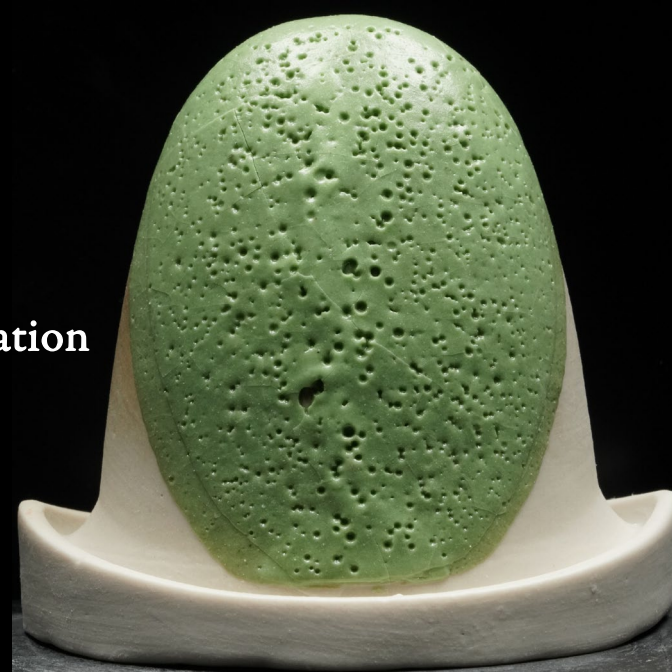
Zinc Pinc

Chemical Match
Bone Ash
030823-50

Neph Sy	34.47
Bone Ash	30.36
EPK	8.52
Flint	26.65
Chrome Oxide	1.00
Water	80



1-3 Second Dip



2-3 Second Dips



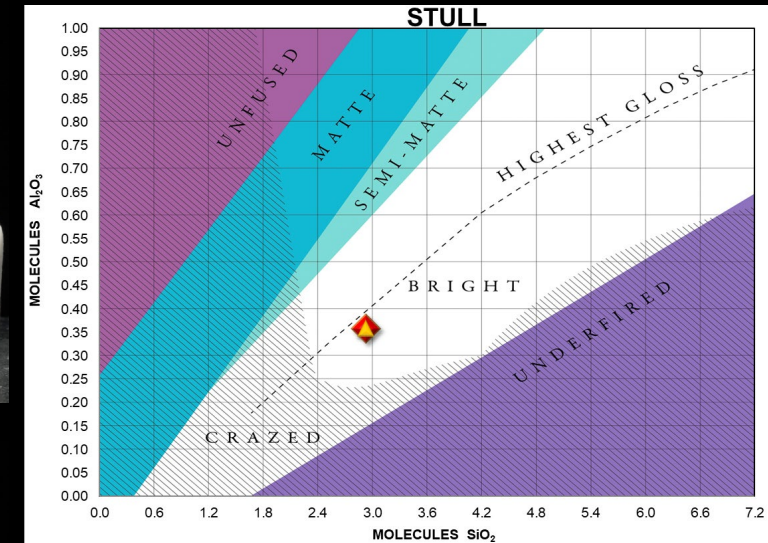
Reduction



Oxidation

UMF

SiO ₂ :Al ₂ O ₃ Ratio 8.15 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.74
B ₂ O ₃	Al ₂ O ₃ 0.36	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 0.40		MnO ₂	CoO



EUMF

SiO ₂ :Al ₂ O ₃ Ratio 8.15 : 1		Alkali Metals 0.25		Alkaline Earths 0.75	
SiO ₂ 2.93	Collective "Al ₂ O ₃ " 0.36	Na ₂ O 0.19	K ₂ O 0.06	MgO 0.00	CaO 0.74
B ₂ O ₃	Al ₂ O ₃ 0.36	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 0.02	ZrO ₂	P ₂ O ₅ 0.40		MnO ₂	CoO



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