

Unity Formulae

		Proportions	Molecular Weight	Molecular Ratio		Alumina Al ₂ O ₃	Silica SiO ₂	Potassium Oxide K ₂ O	Sodium Oxide Na ₂ O	Calcium Oxide CaO	Magnesium Oxide MgO
1	<u>Sven Bayer Shino</u>										
	AT Ball Clay	20.00	309.77	0.0646	Mineral ratio	1.0000	1.8600				
					Oxide ratio	0.0646	0.1201				
	Potassium Feldspar	40.00	556.70	0.0719	Mineral ratio	1.0000	6.0000	1.0000			
					Oxide ratio	0.0719	0.4311	0.0719			
	Nepheline Syenite	40.00	404.30	0.0989	Mineral ratio	1.0000	4.0000		1.0000		
					Oxide ratio	0.0989	0.3957		0.0989		
					Total Oxide	0.2354	0.9469	0.0719	0.0989	0.0000	0.0000
					Total Flux			0.1708			
					Unity Ratio	1.3780	5.5446	0.4207	0.5793	0.0000	0.0000
					Flux Total			1.0000			
					Silica/Alumina ratio		4.0235				
2	<u>Ruthane Tudball Red Shino</u>										
	AT Ball Clay	33.33	309.77	0.1076	Mineral ratio	1.0000	1.8600				
					Oxide ratio	0.1076	0.2001				
	Potassium Feldspar	33.33	556.70	0.0599	Mineral ratio	1.0000	6.0000	1.0000			
					Oxide ratio	0.0599	0.3592	0.0599			
	Nepheline Syenite	33.33	404.30	0.0824	Mineral ratio	1.0000	4.0000		1.0000		
					Oxide ratio	0.0824	0.3298		0.0824		
					Total Oxide	0.2499	0.8891	0.0599	0.0824	0.0000	0.0000
					Total Flux			0.1423			
					Unity Ratio	1.7561	6.2477	0.4207	0.5793	0.0000	0.0000
					Flux Total			1.0000			
					Silica/Alumina ratio		3.5578				
3	<u>DCEPG Recipe</u>										
	AT Ball Clay	50.00	309.77	0.1614	Mineral ratio	1.0000	1.8600				
					Oxide ratio	0.1614	0.3002				
	Potassium Feldspar	50.00	556.70	0.0898	Mineral ratio	1.0000	6.0000	1.0000			
					Oxide ratio	0.0898	0.5389	0.0898			
					Total Oxide	0.2512	0.8391	0.0898			
					Total Flux			0.0898			
					Unity Ratio	2.7971	9.3427	1.0000	0.0000	0.0000	0.0000
					Flux Total			1.0000			
					Silica/Alumina ratio		3.3401				
4	Replace Potassium Feldspar with Nepheline Syenite										
	AT Ball Clay	50.00	309.77	0.1614	Mineral ratio	1.0000	1.8600				
					Oxide ratio	0.1614	0.3002				
	Nepheline Syenite	50.00	404.30	0.1237	Mineral ratio	1.0000	4.0000		1.0000		
					Oxide ratio	0.1237	0.4947		0.1237		
					Total Oxide	0.2851	0.7949		0.1237		
					Total Flux			0.1237			
					Unity Ratio	2.3052	6.4276		1.0000		
					Flux Total			1.0000			
					Silica/Alumina ratio		2.7884				
5	<u>DCEPG Celadon</u>										
	AT Ball Clay	20.00	309.77	0.0646	Mineral ratio	1.0000	1.8600				
					Oxide ratio	0.0646	0.1201				
	Potassium Feldspar	20.00	556.70	0.0359	Mineral ratio	1.0000	6.0000	1.0000			
					Oxide ratio	0.0359	0.2156	0.0359			
	Nepheline Syenite	20.00	404.30	0.0495	Mineral ratio	1.0000	4.0000		1.0000		
					Oxide ratio	0.0495	0.1979		0.0495		
	Whiting	20.00	100.09	0.1998	Mineral ratio					1.0000	
					Oxide ratio					0.1998	
	Quartz	10.00	60.09	0.1664	Mineral ratio		1.0000				
					Oxide ratio		0.1664				
	Talc	10.00	397.33	0.0252	Mineral ratio	0.3200	1.5600				1.0000
					Oxide ratio	0.0081	0.0393				0.0252
	(Iron Oxide)	1.50									

Glaze Tests

Number		AT Ball Clay	Potassium Feldspar	Nepheline Syenite	Whiting	Quartz	(Iron Oxide)	China Clay	Judi Tribe Wood Ash
	Shino 1300deg C								
S1			10	50	40				
S2			10	40	50				
S3			20	30	50				
S4	Sven		20	40	40				
S5			20	50	30				
S6			30	20	50				
S7			30	30	40				
S8			30	40	30				
S9			30	50	20				
S10			40	10	50				
S11			40	20	40				
S12			40	30	30				
S13			40	40	20				
S14			40	50	10				
S15	Alternative DCPG		50	0	50				
S16			50	10	40				
S17			50	20	30				
S18			50	30	20				
S19			50	40	10				
S20	DCPG		50	50	0				
S21	Ruthane Tudball	33.3	33.3	33.3					
S22	Patrick Sargent	40	0	60					
S23		30	10	60					
	Celadon/Tenmoku 1300deg C								
C1	Leach 4/3/2/1		40		20	30	1.5	10	
C2			40		20	30	10	10	
C3			35		20	30	1.5	10	
C4			35		20	30	10	10	
C5			30		20	30	1.5	10	
C6			30		20	30	10	10	
C7			35		17	35	1.5	15	
C8			35		17	35	10	15	
C9			30		15	35	1.5	20	
C10			30		15	35	10	20	
C11			25		15	35	1.5	25	
C12			25		15	35	10	25	
C13			20		15	40	1.5	25	
C14			20		15	40	10	25	
C15	Approx Alternative Leach		15		15	40	1.5	30	
C16			15		15	40	10	30	

Glaze Tests

C17			15		10	40	1.5	35	
C18			15		10	40	10	35	
C19			10		10	45	1.5	35	
C20			10		10	45	10	35	
C21	David Green page103		9		15	44	1.5	32	
C22	David Green page104		9		15	44	10	32	
C23	C R 188 Supplement		30		25	25	1.5	20	
C24	C R 188 Supplement		30		25	25	10	20	
	Ash Glaze 1300deg C								
A1	David Frith		33.3			33.3			33.3
A2	Southern Ceramic group			33.3		33.3			33.3
A3	Bernard Leach page 163	20	40						40
A4	Standard Ash glaze	10	40						50
A5		10	50						40
A6		20	30						50
A7		20	50						30
A8		30	40						30
A9		30	30						40
A10	Variations on David Frith		40			20			40
A11			40			30			30
A12			30			30			40
A13			20			40			40
A14			30			40			30
A15			40			40			20
A16			30			50			20
A17			20			50			30
A18	Variations on standard glaze	10		30		10			50
A19		10		40		10			40
A20		20		20		10			50
A21		20		40		10			30
A22		30		30		10			30
A23		30		20		10			40
A24									