CONE 5-6 CLAY BODIES

Cone 5 Cream/Gray Throwing Body ST-3 *	
KY ball clay	28.3
TN ball clay	20.4
EPK	31.0
Potash spar	3.1
Grog 60-80 mesh	10.0
Total	**92.8**
Shrinkage 10.8%, plasticity 9.5. Cream in oxidation, cool tan-grey in reduction.	

Revised Steve's White c6	
EPK	19.4
Tile 6 clay	19.4
GoldArt	14.6
XX Sagger	9.7
A.P. Green	9.7
Custer feldspar	14.6
Talc	2.9
Flint	9.7
Total	**100**

Pete Pinnell Porcelain Cone 6	
Tenn Ball Clay	25
#6 Tile Clay	25
Silica	25
Custer Spar	25
Total	**100**
+Bentonite	1%
Soak Bentonite before adding to clay	

Black-Brown Throwing Cone 6	
Red earthenware	40
Kaolin	18
KY OM 4 ball	15
RIO (Red Iron Ox.)	16
Manganese diox.	6
Neph sy	2
Bentonite	3
Total	**100**
Black-brown in oxidation, metallic brown-black with iron spots in reduction. Wear gloves to use this clay due to Mn. DO NOT ingest or inhale Mn dust. Mn also fumes in firing – TOXIC! ☠	

Brown Stoneware Throwing Cone 5-6 ST-4 *	
red clay	38
EPK	24
Feldspar	13.5
Cornwall Stone	10
Silica	12.5
Bentonite	2
Total	**100**
+Grog (60-80 mesh)	10
Shrinkage 10.5%, Plasticity 10.3. Light brown w/darker specks in oxidation. Rich dark brown in reduction.	

Off-White Throwing Body Cone 6-8 *	
EPK	35
Neph Sy	25
Silica	20
Kaolin (GA)	15
Ball clay	10
Spar	5
Total	**110**
Shrinkage 12.5%, plasticity 9.3. Off-white in oxidation. Light gray in reduction. *We tested this at UF. The neph sy deflocculates the body and caused serious handling and cracking problems. Not recommended as is.*	

Throwing Body Cone 5-6	
Goldart	14
Hawthorne (50 mesh)	26
KY Old Mine 4	20
RedArt	10
Flint	10
Spar	15
Pyrophyllite	5
Total	**100**

Orange Throwing Cone 6	
Lizella	20
A.P. Green FireClay	15
RedArt	10
Ball	20
Neph Sy	20
Flint	15
Total	**100**
Grog to taste	

Orange Throwing Cone 7-9 ST-27*	
Jordan	28
Monmouth fireclay	30
Silica	28
RedArt	28
Total	**114**
+ Barium carb	0.5
Grog (60 - 80 mesh)	<10%

Rust Red cone 5	
RedArt	50
Fire clay	50
Total	**100**
From Dale A. Neese d.neese@WORLDNET.ATT.NET	

Casting White Paul Rozman c 2-4	
Talc	5
Nepheline syenite	30
EPK	23
Kentucky OM #4	22
Flint	20
Total	**100**
+Barium carbonate	0.03
Sodium silicate	0.03
Soda ash	0.25
Start 38% water, then add more if required. From Paul Rozman in CM.	

EPK Porcelain Cone 6	
Nepheline Syenite	33
EPK kaolin	24
Silica	30
OM#4 Ball Clay	14
Wollastonite	3
Total	**104**
Bentonite	3
From: Dale A. d.neese@WORLDNET.ATT.NET	

Cone 6 White Casting	
Flint	23
Velvacast kaolin	15
OM4 ballclay	26
Neph. Syenite	21
Custer feldspar	15
Total	**100**
Add this to about 37% water (% of dry weight material) and up to 0.45% Darvan 7. Specific gravity of around 1.78 works well for us. From: Dan / Joanne Taylor dataylor@memlane.com	

Adapted Michael Corney's White Casting cone 6 10,000 gm batch	
water	3,500
soda ash	10
sodium silicate	58
keep mixing:	
OM4 ball clay	2500
nepheline syenite	1250
Custer feldspar	2500
flint	1750
EPK	2000
Mix slowly, sieve after mixing. Grey-white in green state, slightly off-white fired to temperature. Bob Bruch rsb8@po.cwru.edu	

Cone 6 Porcelain Casting	
OM4 Ball	12
EPK	20
Tile 6	24
Custer Spar	16
Frit 3110	9
Flint	16
Total	**97**
To deflocculate:	
Sodiun Silicate	0.20
Calgon	0.10
NOTE: Calgon is no longer made w/soda ash and does not deflocculate. Test soda ash.	

*Recipes from James Chappell"s book The Potter's Complete Book of Clay and Glazes

Subject: Re: cone 6 clay
Date: Fri, 23 Jan 98 10:51:44 +0100
From: Peter Pinnell <ppinnell@unlinfo.unl.edu>

Fire clay	20
ball clay	20
tile #6 kaolin	25
flint	10
Kona f-4 spar	25
bentonite	1

I don't know a distinct recipe, just some general guidelines. For a cone 6 light body you need about 20-25% flux with the rest being clay or a clay/filler combination. Neph sy can work but it will tend to deflocculate the clay unless it is counteracted with either Epsom salts or calcium chloride. Soda spar or G-200 will also work, but are not as active so the clay will tend to be a bit more porous. You can also add just a small amount of talc and that will really tighten up the clay, but at a slightly heightened risk of cristobalite. The strongest spar/talc eutectic is at a ratio of five or six parts spar to one part talc.

As for clay, it can be "to taste". It will stand up a lot better and crack a lot less if there is some fireclay, though very much will push the color to buff. Similarly, a little ball clay goes a long way to promote plasticity. Kaolin will give the whiteness, but you can't use it alone unless you also add some other filler such as flint or pyrophyllite.

If it were me I would start with the following:
This will be pretty off-white (cream to buff), so if they want whiter they will have to accept the lower workability of a high- kaolin body. They may want to add grog, in which case you could use something like Ione Grain if they want whiteness without the cost of Molochite. Kona can also cause deflocculation, so a little flocculent (one quarter percent) might be a good idea. Have them dissolve it first in hot water.

This is just a starting point- they can adjust any of the components to fit their needs.