

# Lost Wax Casting

## Class One

### Design and Preparing Investment

Create a design using wax or choose a ring design already created.

**Note:** Designs can be purchased online through Etsy, Amazon or individuals, search lost wax molds

1. Attach your design to a large wax sprue and insert into rubber flask bottom, use smaller sprues if needed to insure your silver gets to all parts of your design.
2. Weigh your wax design, minus the flask bottom.  
Use a 1 to 10 ratio for your silver
3. Incorporate a few pieces of wax mesh to the inside of the flask.
4. Place in metal flask

Use the table below for measurements of plaster and water. Wear a mask

5. Mix for 4 minutes on slow speed
6. Set mixing bowl on vacuum and cover
7. Turn on the power switch
8. Set far right toggle to Investment
9. Turn on the pump
10. Run for 1 minute until plaster starts to bubble
11. Pour plaster into flask along the side until the plaster is up to 1/4th by top edge.
12. Place tape along the top and move to the vacuum, cover and turn it on running for 90 seconds
13. Fill the remaining space with left over plaster
14. Plaster set up in 9 minutes so work on individual pieces one at a time. Let this sit until hardened.

Remove the rubber bottom and scribe your initials into the bottom

Cylinder Size (height – diameter inches)	Powder grams	water grams or ml	Volume cubic inches
2 ½ by 2 ½	285	114	
3 ½ by 2 ½	370	148	18
4 by 2 ½	400	160	20
3 by 3	455	182	22
4 by 3	550	220	29
5 by 4	1300	520	63
6 by 5	2435	974	118
7 by 5	2850	1140	138

Regular Mix 100 gm powder and 40 ml water    Heavy Mix 100 gm powder 38 ml water



Steps 3 & 4



Step 5



Step 11



## Class Two

### Burn out Wax

Set Kiln 300 degrees, there is program set up for this.

Place flasks in Kiln, sprue end down for 1 hour with metal tray under flasks

Remove flasks and metal tray

Put flasks back in with the sprue opening end up

The heat will increase to 700 degrees for another hour, more time (30

min.) may be needed for 5 flasks (burning out any remaining wax) the kiln

will increase to 1250 for 2 - 12 hours depending on size and volume of

investments in kiln, This sets the investment. Turn on the furnace.

### Melt sterling

Measure out sterling and test old cast sterling with magnet

Use 50% new silver to insure quality pieces

Plug in Small Melting Furnace

Gently add sterling to graphite crucible.

Turn on furnace. It takes around 20 minutes to warm up and melt the first

set of sterling

Fill bucket with water.

Wear goggles. Pouring melted sterling into invested flask

Get out Casting Flux (borax), Carbon Stir Rod, Spatula and big gloves.

Turn on gas for big torch. Get out sparker.

Check Melting furnace for program should be to 1070 C.

Watch temperature.

When temperature is about 1060 C, add casting flux, (a small pile about 1"

at end of spatula), and stir with carbon rod.

Close lid and watch temperature to 1070 C.

Light big torch.

Take investment flask out of kiln, carefully hold flask with tongs horizontally.

Place flask on vacuum.

Turn pump on.

Keep torch over top of flask to keep top hot.

Pour molten sterling into flask.

Let cool until coin on top is no longer red,

When no longer red hot, carefully take flask to bucket with tongs, gently

immerse but don't drop while investment

dissolves and cylinder cools.

Remove metal, clean up with tooth brush,

scrub with brass brush.

Scrape investment out of flask into trash can.

Let investment settle, pour off clear water.

Let remaining investment dry and dispose

in trash.

