

## Preparing Your Scrap For Refining

by Gary Dawson

*Whether your facility is a volume producer or one-off custom shop, you need a well-organized plan for recovering as much precious metal as possible from your operation. And a big part of that is preparing your scrap for refining. In this Tech Sheet, Gary Dawson of Goldworks in Eugene, Oregon, offers a few tips for how you can prepare your scrap for optimal precious metal recovery.*

### Track Your Weights

Keep a record of tare (incoming weight of raw metals) and finished weights at each step in the manufacturing process [1]. This will allow a close tracking of your expected refining outcome and help to discover any unexpected shortfall loss.



### Segregate Your Metal Scrap

Everything used in the manufacturing process can be turned in to a refiner for recovery—but rather than mixing it all together, separate your metal by the type of scrap generated. At the bench, keep individual catch trays for each type of metal you use [2]. This will help you to segregate your lots into categories—for example, gold, silver, platinum, palladium, gold-filled, and low-yield [floor sweeps, polishings, buffs, brushes, sludge, filters, and sandpaper].



### Keep Your Refining Lot Dry

Keep the refining lot as dry as possible—if you can, dry the lot in a kiln prior to final processing [3]. This will help the refiner to process the material efficiently. Be aware, though, that drying some sweeps in a kiln may emit toxic

fumes, so do this only in a well-ventilated, contained area.

### Remove Iron, Steel, and Gems

Ferric content may lower your return, since iron has a high melting temperature and is more difficult to melt and assay. That means broken saw blades, burs, and even the little steel springs in old worn-out clasps can contaminate

your lot—and impact your bottom line. Before shipping a lot, draw a magnet through each scrap pile several times. I like to cover the magnet with a sheet of copy paper, so that it doesn't get too cluttered with iron or steel shavings [4]. Also, while some refiners do offer the service of gemstone separation and return, it's normally best to remove all gem material from the lot, as well.



### Communicate with Your Refiner

Because of environmental concerns, some refiners may avoid certain metal products, such as crucibles or plating materials. Prior to shipping solutions or other potentially hazardous substances, contact your refiner to ensure the shipment can be accepted.



### Ship Wisely

For optimal return, package the dry scrap in clean containers, then double-bag with tied plastic bags [5]. This way, if your scrap container ruptures during shipping, it won't become a catastrophe. Don't send scrap in a plastic baggie, or wrap bags with adhesive tape: Scrap dust could get caught in the lip of the baggie or adhere to the tape, slightly reducing the yield of your return. Also, be sure to include your name, address, contact information, and refining instructions, and to insure your shipment for the total of your estimated return.

### Keep Witness Samples

Before shipping off your lots, keep small samples of each; in case of a dispute over your return, these samples can be used to verify the contents with referee labs. However, make sure that the sample consistency is the same; any variance between the sample lot and the larger lot will skew a verification test. Some goldsmiths I know do this by pre-melting their lots into ingots, then drilling the bars [6] to provide shavings for comparison.



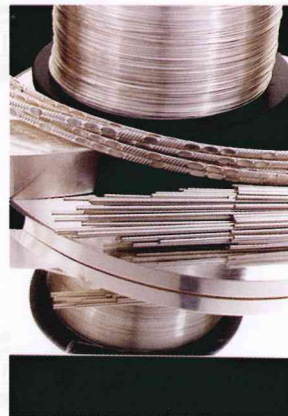


### **Casting Grain Products:**

- Sterling Silver
- RWS1 - De-oxidized sterling silver
- Indy 100 - De-oxidized sterling silver
- Karat gold - 10kt, 14kt, 18kt
- Master Alloys

### **Sheet, Wire, and Strip Products:**

- Sterling Silver
- Fine Silver
- Karat Gold
- Patterns and shapes



### **Analytical Services And Refining:**

- Assaying and testing
- Refining