

Care of Claisse crucibles and molds

Crucibles

Do not heat non-fully-oxidized materials in platinum-gold crucibles unless an efficient oxidant is mixed with the material and heating is at a low temperature until the non-oxidized material has been completely oxidized. The most frequently used non-oxidized materials are sulfide minerals, sub-oxides such as FeO, MnO, Cu₂O (rather than Fe₂O₃ MnO₂ CuO), metallics and organic materials. When sulfides are present in low concentrations, add 1 g of Li or Na nitrate to the flux and start heating at very low temperatures one minute before proceeding to normal fusion. When metallic particles are present, proceed as for sulfides, but remember that oxidation is slower and more difficult. Organic materials are simply heated at very low temperatures; they burn easily.

Do not use hard tools such as screwdrivers to scrape residue. Scratches in the crucible will retain more residue in subsequent fusions.

A simple way to clean crucibles is to put 2 g of pure flux and 0.2 g of LiBr in the crucible, heat until fused, then cast (blank fusion). An alternative way is to boil the crucible in 50% hydrochloric acid or 20% sulfuric acid. If residue is still present after both attempts at cleaning, it is likely that a reaction has taken place between the platinum and a sample and that the crucible is permanently damaged. Do not try to remove the residue by mechanical means. Instead, continue using the crucible as though there were no residue since it will probably not contaminate subsequent fusions. The other alternative is to scrap the crucible and sell it for its precious metal content.

When a crucible has lost its luster and more residue sticks to the surface, it can be polished again. Use a fine abrasive paper (800 grit if possible) and the tip of your finger. Make sure the crucible is clean before polishing.

Molds

Never tap hard on a mold to release a stuck glass disk. In the event of sticking, heat the mold over a flame for a few seconds so that the mold expands without overheating the glass disk, then turn the mold over and let the disk fall out. If that does not work, put some KI on the disk, heat the mold until the KI and the disk melt, then pour the molten glass out. Clean the mold as for crucibles.

The surface of the glass disk is an exact replica of the surface of the mold, so keep the mold well polished, as for crucibles.

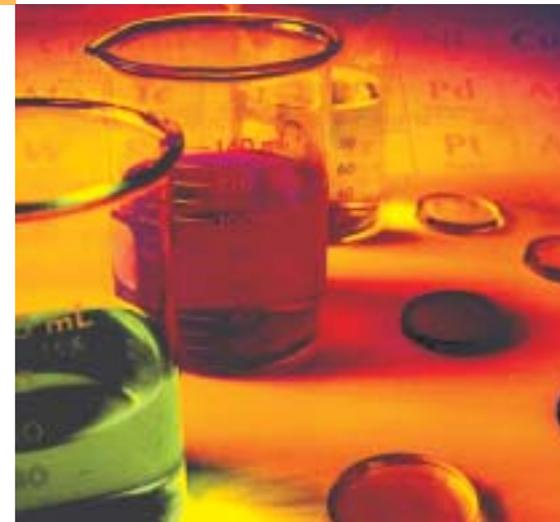
Platinum labware... at your disposal



- Available in a variety of sizes and thicknesses, Claisse molds and crucibles are made of 95% platinum, alloyed with 5% gold and are of exceptional quality
- Claisse offers any precious metal accessory you may need in your laboratory (dishes, electrodes, tongs, tweezers ...)
- Claisse Bis! Crucible has a small indentation in the bottom, which considerably increases agitation efficiency, thus increasing the speed of sample dissolution. The Bis! Crucible has been patented
- Claisse accepts used molds and crucibles as partial payment for new platinum Labware. This scrap policy applies to all other platinum, rhodium, gold and precious metal accessories your laboratory would like to dispose of

 **CLAISSE**

The First and Finest in Fusion





Scrap metal



Look to Claisse for:

- further information on Claisse fluxes
- worldwide sales addresses
- free flux samples
- free consultation on sample preparation techniques

**Please call or write
the fusion experts:**

350, rue Franquet, Suite 45
Sainte-Foy (Quebec)
CANADA G1P 4P3
Telephone: (418) 656-6453
Fax: (418) 656-1169
E-mail: support@claisse.com

www.claisse.com

CRUCIBLES 95% Pt - 5% Au

CAT. NUMBER	DESCRIPTION
P-0120-00	Claisse round bottom crucible, 20 ml, 21 g
P-0125-00	Claisse flat bottom crucible, 25 ml, 23 g
P-0325-00	Claisse Bis! Crucible, 25 ml, 26 g
P-0330-01	Claisse heavy Bis! Crucible, 25 ml, 30 g

*All weights are nominal.

MOLDS 95% Pt - 5% Au

DESIGNED FOR ALL CLAISSSE FLUXERS

CAT. NUMBER	DESCRIPTION
P-0230-00	Claisse mold, 30 mm, 18 g
P-0230-01	Claisse heavy mold, 30 mm, 30 g
P-0231-00	Claisse mold, 31 mm, 22 g
P-0232-00	Claisse mold, 32 mm, 21 g
P-0232-01	Claisse heavy mold, 32 mm, 36 g
P-0235-00	Claisse mold, 35 mm, 25 g
P-0235-01	Claisse heavy mold, 35 mm, 48 g
P-0237-00	Claisse mold, 37 mm, 28 g
P-0238-00	Claisse mold, 38 mm, 29 g
P-0240-00	Claisse mold, 40 mm, 34 g
P-0240-01	Claisse heavy mold, 40 mm, 48 g

*All weights are nominal.

STAINLESS STEEL MOLD RESHAPER

CAT. NUMBER	DESCRIPTION
P-0530-00	Stainless steel 30 mm mold reshaper
P-0530-01	Stainless steel 30 mm heavy mold reshaper
P-0532-00	Stainless steel 32 mm mold reshaper
P-0532-01	Stainless steel 32 mm heavy mold reshaper
P-0535-00	Stainless steel 35 mm mold reshaper
P-0535-01	Stainless steel 35 mm heavy mold reshaper
P-0537-00	Stainless steel 37 mm mold reshaper
P-0538-00	Stainless steel 38 mm mold reshaper
P-0540-00	Stainless steel 40 mm mold reshaper
P-0540-01	Stainless steel 40 mm heavy mold reshaper
P-0550-00	Wooden Bis! Crucible reshaper
P-0550-01	Wooden heavy Bis! Crucible reshaper

OTHER

CAT. NUMBER	DESCRIPTION
P-0430-00	ZIRCONIUM CRUCIBLE

NEW

Claisse offers you a polishing service for your molds to increase their life and to maintain the high quality of your analytical analysis.

Mold reshaper

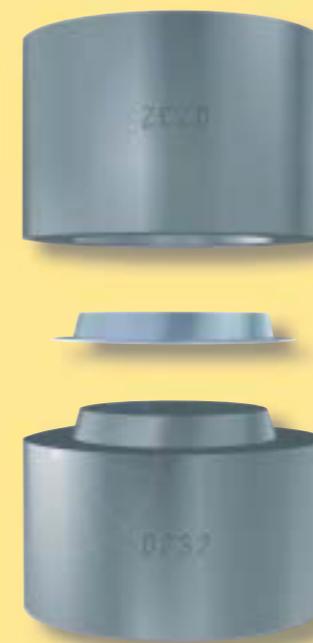
Using the mold reshaper

Since XRF analysis results can be affected if the bead bottom is not flat, it is important to periodically check the mold bottom for flatness.

A simple visual check is usually enough to determine whether a mold needs to be reshaped or not.

As the name implies, the mold reshaper is used to true the mold, especially the bottom. The reshaper is comprised of two parts, one male and one female. Both are identified with a 4 digit number corresponding to the type of mold. The last two digits represent the mold size in millimeters. For example, a reshaper marked 0232 is to be used with 32 mm Claisse molds only.

Directions



1. Make sure that the reshaper is free of hard particles.
2. Insert the mold between the two parts as shown in the figure on the right. Once inserted and the reshaper closed, you will obtain a cylinder.
3. Keeping the reshaper closed, insert it between the jaws of a bench vise so that the jaws press on the circular (plane) faces of the cylinder.
4. Clamp the vise tightly.
5. Wait a few seconds, then remove the reshaper from the vise. The mold should no longer be warped.

Remember that a given mold reshaper is designed for only one mold size.