How to make a polished standard mount
by Cathleen D. Brown and Timothy Gooding

Step 1: Look over vials of standards. Separate standard vials into two groups: 1-larger chips and 2-tiny shards.

Step 2: Press a < 3mm thick bakelite (or phenolic based compound) mount onto sticky side of a 1” x 1” piece of Scotch® Restickable Tab (Catalog # R100).

Step 3: Using a pencil, name mount and number holes to make a key for the mount. Then fill holes with standards that have larger chips of material by pressing them gently against the restickable tab.

Step 4: Set hot plate to 150° F. Put mount plus sticky tab onto hot plate.

Step 5: Drip epoxy (for example: EPO-TEK® 301) down the edge of the hole and down the wall of the hole. In this manner, the hole will gradually fill with epoxy avoiding air bubbles.

Step 6: Let cure (harden) for 24 hours.

Step 7: Remove tab and grind on 600-1200 grit paper to expose grains.
Step 8: Press ground side of mount onto a 1” x 1” square of Scotch® Restickable Tab.

Step 9: Fill each unfilled hole with standard shards pressing them gently against the restickable tab.  * It is useful to cover all but target hole with a paper or metal cover to avoid dropping chips into other holes.

Step 10: Place the mount plus sticky tab onto a hotplate set at 150° F.

Step 11: Drip down the edge of the hole and down the wall of the hole. In this manner, the hole will gradually fill with epoxy avoiding air bubbles.

Step 12: After all holes are filled with epoxy, continue to cover entire top of mount.

Step 13: Let cure (harden) for 24 hours.

Step 14: Slowly remove tab from mount.

Step 15: Cautiously, grind mount on 600-1200 grit paper to expose shard (tiny grain) surfaces. Be careful not to grind away all the shards.

Step 16: Put final polish on mount.