Hot Plate Preparation (optional but optimal)

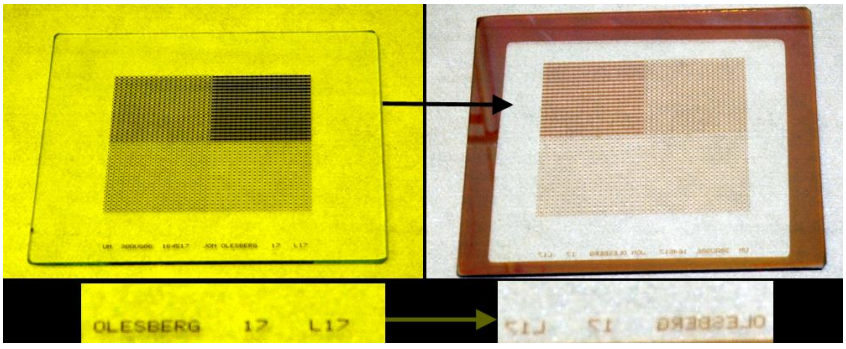
1. Clean both hot plates thoroughly with acetone using a paper towel.
2. Rinse hot plates with methanol. Rinse hot plates with isopropanol.
3. Dry hot plate surface with compressed N_2 gas.

Typical Procedure

1. Preheat first hot plate to 100ºC. (See `DataPlate® Hotplate` manual.)
2. Blow any dust from FeO plate with compressed N_2.
3. Pre-bake plate for ten (10) minutes on first hot plate at 100ºC.
4. Cool plate four (4) min on cold metal surface of second hot plate.
5. Blow any dust from FeO plate with compressed N_2.
6. Heat first hot plate to 120ºC.
7. Rinse patterned side of chrome mask with acetone; dry with compressed N_2.
8. Turn mask aligner, UV power supply and lamp `ON`.
   Note: See *`Karl Suss Mask Aligner`* manual.
9. Remove any shims from sample stage, and slide stage completely in to left.
10. Raise sample stage fully (stage lever turned to `UP` position).
11. Remove mask chuck and set aside.
12. Place chrome mask patterned-side down directly on top of photoresist-side of FeO mask.
13. Place sandwiched plates, FeO mask down, on center of sample stage.
14. Expose to UV for 30 sec.
15. Carefully remove *both* masks together from sample stage to avoid damage due to vacuum lock.
16. Immerse FeO plate in 15ml:60ml `DI-H2O:AZ developer` with agitation for 30 sec.
17. Rinse FeO plate immediately with DI H_2O, and dry thoroughly with compressed N_2.
18. Inspect FeO plate with microscope.
    Note: If necessary, further-develop in increments of 10 sec.
19. Bake FeO plate for ten (10) minutes on first hot plate at 120ºC.
20. Prepare 280ml:140ml `H20:HCl` (or stock if available) in a large glass container.
21. Etch FeO plate approximately 2 min 40 sec in etchant with constant agitation.
22. Rinse plate with DI H_2O, and dry thoroughly with compressed N_2.
23. Inspect etched regions for transparency.
24. Note: Continue etching in 15-25 sec intervals if etched areas are hazy when held up to light. *Avoid over-etching*.
25. Soak FeO plate in acetone for five (5) minutes and rinse thoroughly with DI H_2O.
26. *Optional but optimal.* Rinse with Kodak Photo-Flo and hot H_20; thoroughly dry with compressed N_2.

Final Bake (for film hardness and chemical resistance)

1. Heat FeO plate at 120ºC for 45 min on first hot plate.
2. Place FeO plate on cold plate for 4 min to cool.
3. Store plate in dust-free box.



The FeO copy (right) will have a "frame" due to size of UV window. The copied mask will be a mirror of original as noted by reversed label text in this example.