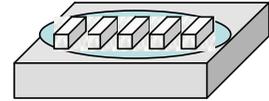


Precision Sectioning of LiF Doped Crystals using the Model 850 Wire Saw

Best Process Outline:

1. Mounting

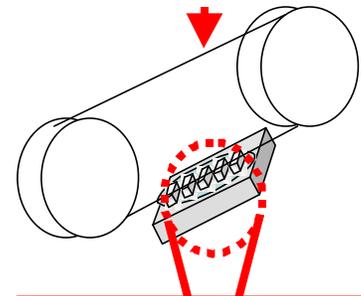
The 1mm x 1mm x 6mm LiF doped specimens were mounted on a mounting block using Quickstick 135 thermal wax and a hot plate temperature setting of 150°C.



2. Sectioning

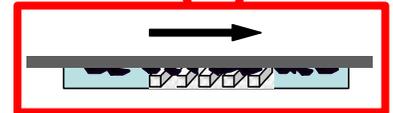
The mounted specimens are sectioned using the Model 850 Wire Saw to a thickness of 0.4mm and 0.5mm. Wire Saw parameters utilized are listed below:

Abrasive	Speed Setting	Time (min)
8um Boron Carbide powder + H ₂ O	3-4	2-3 per cut



3. Removal

After sectioning, the specimens are removed from the thermal wax by heating the mounting block on a hot plate at 150°C. Specimen are delicately removed with tweezers.



4. Cleaning

Once removed from the mounting block a short rinse cleaning with acetone was performed, follow by soaking in IPA with ultra-sonication for five minutes.



5. Other Findings

Some initial sectioning was attempted without using thermal wax as an adhesive, but rather molding clay. Unfortunately as the slicing progressed the mounting clay had a tendency to not hold the tiny part. As a result the final cut would be wavy.



Left is cut specimen from clay. **Right** is cut specimen from thermal wax