is of minimal percentage. As the proportions of monoepoxy increase, the block becomes softer, and more flexible. If the percentage of propylene oxide in the embedding mixture is great enough, the block is so flexible that it can be bent sideways in the chuck of the microtome (unpublished observations).

Inclusion of propylene oxide in the final embedment intensifies the adhesive properties of epoxy formulations. This concept is of crucial importance when embedding sections which adhere to microscope slides[5]. If any propylene oxide is left on the slide when the epon filled capsule is inverted over the section, the tissue will not detach properly with either liquid nitrogen or heat, because the area around the section has become too adhesive and too elastic. Thus understanding the differing chemical and mechanical properties of alcohol, acetone, and propylene oxide will allow the microscopist to make informed, and sometimes, critical, choices correctly. ■

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Examining Ferromagnetic Samples In The SEM/EDX

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While the presence of any magnetic material in the chamber of the SEM will distort the image to some degree, it is possible to take pictures and do EDX of such samples if a little care is used.

1) Make the sample as small as possible. If it is a powder use only a few grains. If it is a chunk cut it down as small as possible. Stick the samples down well so they can't fly off the stub and stick to the SEM polepiece. I use carbon conductive sticky tabs because they are conductive, so no other treatment of a metal sample is needed, and because they have quite a strong glue. Mounting the sample in epoxy and polishing will also help keep it in place.

2) Keep the working distance as long as possible. If you are doing EDX this distance is fixed, but if you're just imaging, use as long a distance as you can and still get the photo you want. The magnetic interference falls away as the square of the distance from the lens.

3) You will have to correct the astigmatism of the image just before you take the photo. Each time you move the sample the magnetic distortion will change and the resulting astigmatism will change.

4) It is possible to get an EDX analysis from a sample, even if the image is distorted. I once analyzed a super-magnet and got a fine EDX analysis of it, even though the image was just a mad swirl.

With most normal nickel and steel alloys there is really very little problem. We image them all the time. ■