News

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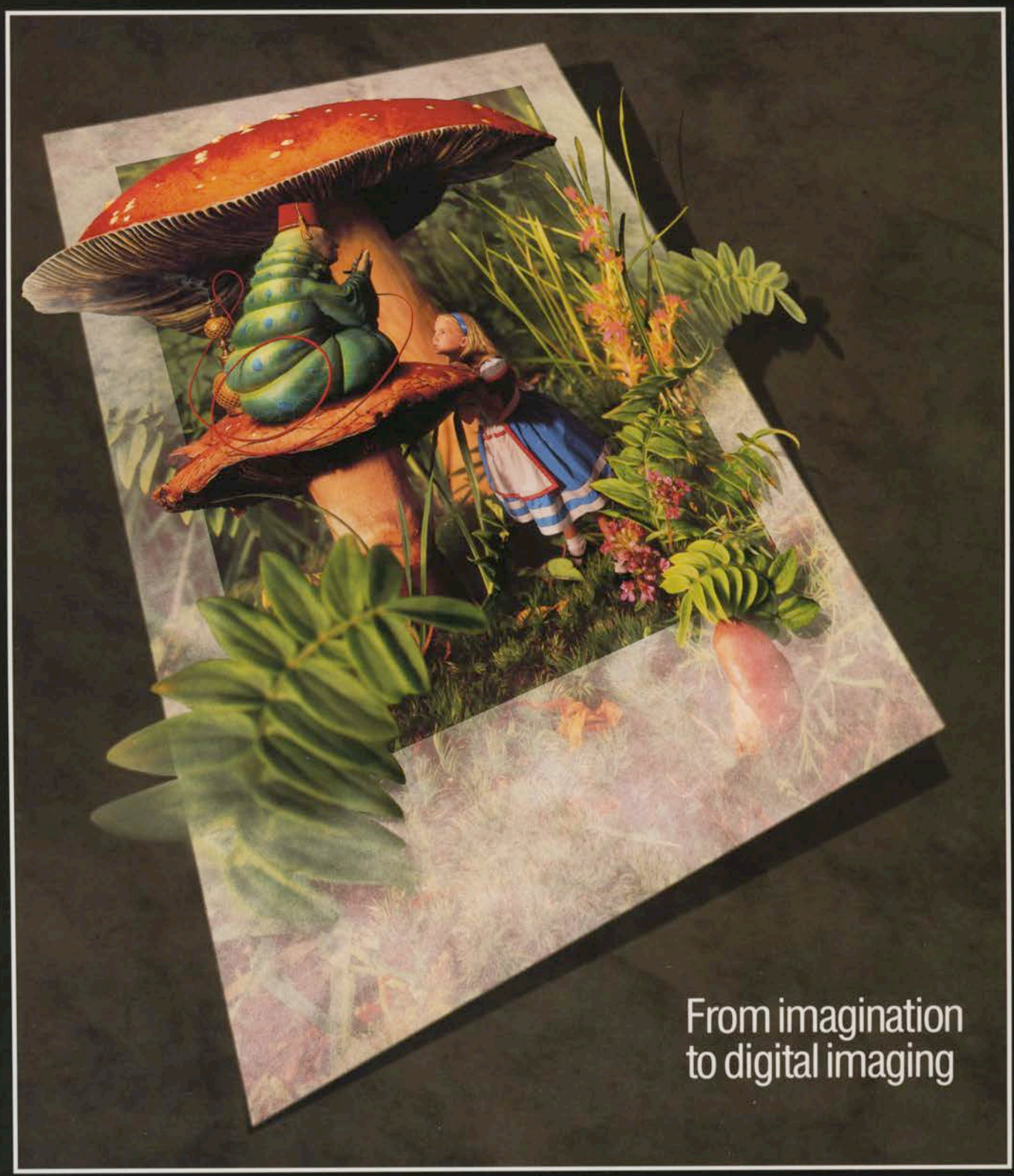

320T

a new opportunity for very THIN sections

by Michael R. Peres, MSc, RBP

I was recently contacted to shoot a new emulsion of KODAK EKTACHROME Film through the microscope. I had tested KODAK EKTACHROME 64T Professional Film before it was released, so I was curious about the new film. When I found out that the film was EKTACHROME 320T Professional Film, I was a bit surprised that it was being considered for photomicrography. Contemporary bright-field microscopes using EKTACHROME 64T Film as the preferred emulsion typically have shutter speeds of 1/250 second possibly down through 1/15 second, so higher sensitivity is not a requirement for this type of work. On impulse, it did not seem to be a good match for bright-field photomicrography, but I was nonetheless curious.

When shooting biological tissues of average thickness (4 to 8 micrometres) and stain, EKTACHROME 64T Film is the obvious choice. It has a fine grain structure that results in very good resolution, high color saturation, good spectral response, and cleaner whites with tungsten balance.

The emulsion of EKTACHROME 320T Film has higher sensitivity, increased color saturation, higher contrast, and better separation of highlight detail than KODAK EKTACHROME 64T Professional Film. EKTACHROME 320T Film requires more neutral density to bring exposures into the typical range required by automatic photomicrographic camera systems.

Tissues that are thin (2 to 4 micrometres) are very low in contrast and may present special problems when you need quality color transparencies. The problems are the result of the lack of thickness of the tissue and also the density of the stain as a function of the thickness. For tissues that are thin, EKTACHROME 320T Film with its increased color saturation and higher contrast is an improved choice over EKTACHROME 64T Film.

EKTACHROME 320T Film produced images with increased grain. In some cases, this may compete with fine detail rendering. However, the emulsion also produced images with increased color saturation where EKTACHROME 64T Film produced results that were a bit washed out. Consider this new emulsion for unusual stains or for tissues that are very thin or have low inherent contrast.

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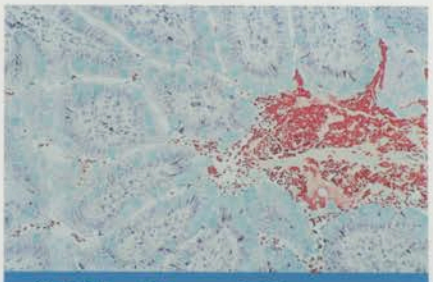
Intestine, Movat stain, 2 micrometres, 25X magnification, KODAK EKTACHROME 320T Professional Film



Intestine, Movat stain, 2 micrometres, 25X magnification, KODAK EKTACHROME 64T Professional Film

Rabbit Skin, Sirus Red stain, thickness unknown, 5X magnification, KODAK EKTACHROME 320T Professional Film