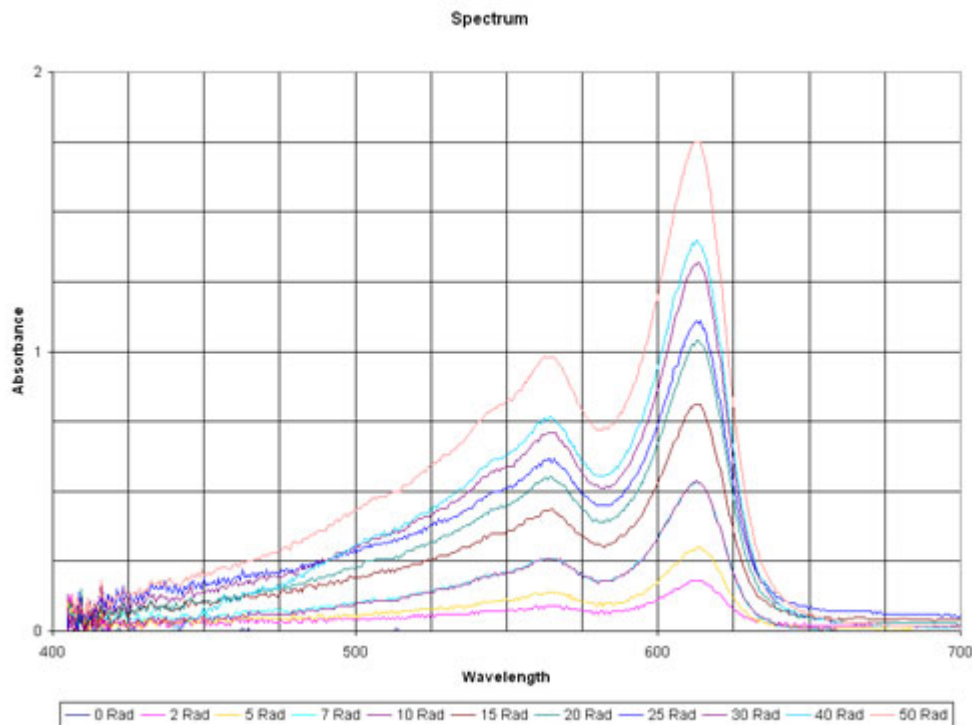


RADIATION IMAGING FILM

JP Laboratories, Inc. has also developed a diacetylene-based radiation imaging film. It has unique imaging characteristics that differentiate it from silver halide films, the traditional imaging media for X-rays, laser imaging and the graphic arts. This film would be similar to GAFCHROMIC film of ISP. Visible spectra of film irradiated up to 50 rads of 10 MeV X-ray are shown below:



Visible spectra of JP Labs film irradiated with 10 MeV X-ray.

In considering these non-photographic uses, diacetylene film has several distinct competitive advantages:

The film is not sensitive to ambient (white) light and therefore can be handled in ordinary room light, eliminating the need for darkrooms and related equipment.

The film develops instantaneously and can be fixed permanently in seconds by heating at a low temperature (e.g., 80°C by passing through heated rollers), eliminating the need for film processing equipment and chemicals, and also eliminating the generation of hazardous wastes.

The diacetylenes used in the film are non-toxic and contain no heavy metals. It is environmentally safe.

The film is made from inexpensive materials and the manufacturing processes are very straightforward viz. one step of making the emulsion followed by the coating.

The diacetylene film is particularly sensitive to certain levels of high energy radiation including short wavelength UV light. It has unique color imaging and contrast characteristics; and its resolution is excellent.

Applications: Because of its ability to image with high energy radiation, the film appears to be particularly well suited for imaging radiation sources, industrial radiography and radiation therapy imaging. The sensitivity and excellent resolution of the film make it suitable for imaging with a UV laser.

See our publication on the film on this website under “Studies/Reports”