

TECHNICOLOR

(Bill Brent)

The dye transfer imbibition (IB) film process

The original three color dye transfer process was a way to produce color movies unlike any of the methods that followed.

A unique camera exposed three film strips simultaneously using mirrors and prisms. The mechanism that 'printed' the color dyes onto the positive print was not a photo-chemical process. It was more physical, like lithographic printing. Three metallic color dyes were added one at a time to clear film: The term 'imbibition' comes from the fact that a blank film 'drinks' or imbibes the color from three dye soaked strips. Each master printing strip or "Matrix" contained a gelatin relief contour surface derived from the amount of color light shot in the original scene.

It didn't even rely on color film, but used three separate black and white strips to record the color information. A way to picture this is how a plain rubber stamp that has no color of its own, prints in whatever color stamp pad is used. Since there was no actual color in the original negatives, there was no color to fade with time. The ability to restore the film to its original color fidelity would be limited only by the longevity of the original black and white negatives. That's why it's possible to see a restored color version of 'The Wizard of Oz' or 'Gone With the Wind'.*

In 1973 Technicolor abandoned the I.B. process. The equipment was sold and moved to China. The company continued using a single film strip process similar to Eastman.

For more information on Technicolor go to Technicolor site. A magnificent history and explanation of Technicolor is presented here as part of the American Widescreen Museum.