12 VISUAL TROUBLESHOOTING OF PROCESS E-6

Once you have eliminated improper film storage and incorrect exposure as causes of poor-quality transparencies on KODAK EKTACHROME Film, check for processing problems. These problems include errors in chemical mixing, order of processing steps, processing temperature, agitation, washing, replenishment, and solution contamination.

A visual check of the processed film is one way to make an initial diagnosis. You can make a more thorough determination of the cause of processing problems and the corrective action to take by plotting and evaluating your control-strip densities; see section 13, "Process Monitoring."

Table 12-1
Troubleshooting from the Appearance of Processed Film

Appearance of Film		Possible Cause
Very High Maximum Density (very dark no apparent image)	No Edgeprint Visible	First develop omitted
	Edgeprint Visible	First developer and color developer reversed Film not exposed
Dark Overall		Inadequate time or low temperature in first developer First or color developer diluted or exhausted Color developer starter added to first developer Too much first developer starter used First developer or first and color developers underreplenished
Very Dark (overall or in random areas)		Bleach or fixer (or both) omitted, reversed, diluted, exhausted, or underreplenished
LIght Overall		Too much time or high temperature in first developer Film fogged by light before processing First or color developer (or both) too concentrated First or color developer (or both) overreplenished First developer starter omitted First developer contaminated with reversal bath or color developer First developer contaminated with fixer
Image Very Faint or No Image (film may show colored streaks)		First developer used twice or color developer omitted Severe light fog
Overall Density Variation from Batch to Batch		Inconsistent first-developer time, temperature, agitation, or replenishment
Blue		Color-developer alkalinity (pH) too low Reversal bath overconcentrated Too much color developer starter used Color-developer temperature too high Inadequate agitation in color developer or both developers Color developer mixed with Part B only or with too much Part B Too little first developer starter used Agitation used in reversal bath Color developer or first and color developers underreplenished
Cyan		First and color developers underreplenished First-wash temperature too low
Yellow		Color-developer alkalinity (pH) too high Color developer starter added to first developer Color-developer temperature too low Color developer mixed with too much Part A Color developer starter omitted or too little added Reversal bath slightly oxidized and/or underreplenished Too much first developer starter used Color developer overreplenished Inadequate bleaching or fixing

Appearance of Film	Possible Cause
Low Densities Blue-Green; High Densities Yellow	Color developer contaminated with first developer Color developer contaminated with fixer
Magenta with High Maximum Density	Color developer replenisher too dilute
Green	Reversal bath exhausted, diluted, or underreplenished Film fogged by green safelight Wash used between color developer and reversal bath Color developer overconcentrated Color-developer alkalinity (pH) too high
Red	Inadequate aeration of bleach Pre-bleach concentration too high Inadequate aeration of fixer First-wash temperature too high Severely oxidized color developer
Cross-Width Bar Marks (with stainless-steel reels)	Gaseous-burst agitation used in first developer Incorrect or inadequate manual agitation
Scum and Dirt*	Bio-growth (slime) in final rinse (drain and replace) Air filters in dryer need changing Dirt in solutions; use floating covers on processor and replenisher solution tanks Final rinse overconcentrated Precipitate in pre-bleach Dirt from dryer Fixer sulfurized Defoamer added directly to any solution or too much defoamer used
Surface Spots (appear dark by transmitted light)	Dirt from final rinse Water spotting. Final rinse too dilute Dirt from dryer Fixer sulfurized Dryer temperature too high
Streaks—Nonuniformity	Bleach or fixer time too short, temperature too low, or replenisher too dilute Uneven or insufficient agitation, particularly in first and color developers Nonuniform agitation in first and color developers Low first-wash flow rate Foam rundown
Scratches and Abrasions	Dirty squeegee blades Jammed, misaligned, or dirty rollers Cinch marks due to excessive take-up tension Dirt from loading area Dirt from camera
Light Density Spots, Streaks, or Patterns	Static Fog
Stain	Loss of bleach, fixer, or pre-bleach activity Fixer sulfurized by excessive aeration Bleach not sufficiently aerated Color-developer time too long or temperature too high Inadequate first-developer agitation

* A buildup of fungus or algae in processing solutions or wash tanks can cause dirt. To minimize buildup, drain wash tanks when they are not in use. When you expect the processor to be out of use for more than six weeks, drain and rinse the reversal-bath processor tank and replenisher storage tanks. To remove fungus or algae, scrub the tank with a stiff-bristle brush, using a 30 to 50 mL/L sodium hypochlorite solution (household bleach). Rinse the tank **thoroughly** with water to remove all traces of the hypochlorite solution. **Do not** use a sodium hypochlorite solution in the wash tank that follows the fixer. Use a 5- to 25-micrometre (or finer) filter for your water supply.