

Test 16: Darkroom fog Quarterly Safelight test!

OBJECTIVE:

To determine and minimize the amount of darkroom fog.

SUGGESTED PERFORMANCE CRITERIA:

An optical density increase of 0.05 or less.

FREQUENCY:

1. Semi-annually, with each type of film used clinically.
2. After bulb or filter replacement.
3. After changing or adding types of film

REQUIRED EQUIPMENT:

- Opaque material (manila folder)
- Watch or timer
- 3. Attenuation block (aluminium step wedge, phantom, acrylic block) to create a medium optical density of about 1.0 on the film.
- Densitometer

PROCEDURE:

1. Load a cassette with film and place on a flat surface.
2. Center the attenuation block and expose the film using an x-ray technique that will result in an optical density of about 1.0 after the film is processed.
3. With the safelights on, place the exposed film on the work area in the darkroom. Cover half the film with opaque material, bisecting the latent image parallel to the long axis of the film.
4. Leave exposed film on the counter for 2 minutes, then process as usual.
5. While waiting 2 minutes for darkroom fog test, look for any sources of extraneous light. Any light leaks identified should be repaired as soon as possible.
6. Inspect the processed film. If there is no discernible delineation between the shielded and unshielded sides of the film, there is no fog problem.
7. If a line is evident, measure the optical densities of both sides of the line with the densitometer. If the density difference is greater than 0.05, corrective action should be taken.
8. Record results on the Checklist.

CORRECTIVE ACTION:

Repeat the test with the safelight off. If the results remain the same, the problem may be caused by a light leak or extraneous light. If the fog level disappears, the fog was due to the safelight and remedial action must be taken to correct the problem.

POSSIBLE SOURCES OF DARKROOM FOG:

Safelight filters (old or compromised)

Safelight housing

Safelight too close to work area

Light bulb of incorrect wattage or type

Ancillary indicator lights on processor

Timers

Radios

Fluorescent light afterglow

Light leaks

Suspended ceilings

Any place there is a hole cut in the wall

Excessive ambient light through the tinted viewing windows of daylight loading systems