



TI5016

Revised 3-04

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KODAK X-OMAT BT Film / 4530 / XBT

1) Description

KODAK X-OMAT BT Film / 4530 is a full-speed, blue-sensitive medical x-ray screen film that is intended for general radiography. This film is coated on blue, 7-mil ESTAR Base with a base density of approximately 0.18. X-OMAT BT Film features T-GRAIN emulsion technology that reduces the amount of screen-light crossover, resulting in improved image sharpness. It is designed for standard cycle machine processing.

2) Safelight

Use a KODAK GBX-2 Safelight Filter with a frosted 15-watt bulb or a KODAK LED Safelight located at least 4 feet from the film.

3) Storage and Handling

Handling -

Hands must be clean, dry and free of lotions, etc. Film should be handled carefully by the edges to avoid physical strains such as pressure, creasing, or buckling.

Storage -

Store unexposed film at 50 to 70°F (10 to 20°C), at 30 to 50 percent RH, and properly shielded from x-rays, gamma rays, or other penetrating radiation. Keep exposed film in a cool, dry place that is properly shielded from penetrating radiation. Process as soon as possible after exposure. Processed film should be stored at 60 to 80°F (16 to 27°C), at 30 to 50 percent RH.

4) Sensitometric Parameters

Relative Speed:	Measured at a density of 1.00 above gross fog.
Contrast:	Measured as slope of the line between densities of 0.25 and 2.00 above gross fog.
Gross Fog:	Density of film base plus processing fog.
Net Fog:	Processing fog.

5) Process Variations

Changes to speed, contrast, and fog as a result of temperature variation from normal are included in GRAPHS Section. Variations from bromide and iodide ions in KODAK RP X-OMAT Developer cause sensitometric speed effects that are significantly different for T-MAT Films than for conventional films.

6) Intermix

This film can be processed with intermixes of common medical x-ray films.

7) Automated Processing

Processors -

See Service Bulletin 30 for processing recommendations.

8) Emergency Manual Processing

(Not recommended for regular use, but can be used when automated processor fails)

Solution/Step	Temperature	Time	Agitation
KODAK RP X-OMAT Developer working solution plus KODAK RP X-OMAT Developer Starter (3 fl oz/gal)	80°F (26.5°C)	2 min	No agitation. Tap hanger immediately after immersion to remove film surface air bubbles.
KODAK Indicator Stop Bath OR Running Water Rinse	80°F (26.5°C)	20 sec	Continuous, moderate
KODAK RP X-OMAT LO Fixer and Replenisher	80°F (26.5°C)	1 min	Vigorous at start
Running water wash ^[1] (8 volume changes/hour)	80°F (26.5°C)	5 min	—
Dry	120°F (49°C)	—	—

^[1]KODAK PHOTO-FLO Solution may be used after washing to minimize water spots and drying marks.

Notice: Observe precautionary information on product labels and on the Material Safety Data Sheets.

9) Manual Processing

Rack and Tank

Solution/Step	Temperature	Time	Agitation
KODAK GBX Developer and Replenisher	72°F (22°C)	4 min	Tap sheet film hangers lightly on side of tank immediately after immersion to dislodge air bubbles.
NOTE: DO NOT agitate films during remainder of development step. Remove film and hanger 5 seconds before end of development. DO NOT allow films to drain excess developer back into the developer tank.			
KODAK Indicator Stop Bath OR Running Water Rinse	60 to 85°F (16 to 30°C)	30 sec	Immerse hanger rapidly; agitate continuously.
KODAK GBX Fixer and Replenisher OR KODAK RP X-OMAT LO Fixer and Replenisher	60 to 85°F (16 to 30°C)	2 to 4 min	Intermittent, 5 sec every 30 sec.
Running Water Wash ^[1] (about 8 volume changes/hour)	60 to 85°F (16 to 30°C)	5 min	—
Dry in a dust-free area at room temperature or a suitable drying cabinet. Temperature not to exceed 120°F (49°C).			

^[1]KODAK PHOTO-FLO Solution may be used after washing to minimize water spots and drying marks.

10) Image Structure

Diffuse rms Granularity -

GRAPH included; read at net diffuse visual densities from 0.5 to 2.0, 48-micrometer aperture.

11) Graphs¹

Characteristic:

- A) RP X-OMAT Chemicals (8-03)
- B) RP X-OMAT Developer Temperature Series (8-03)
- C) X-OMAT EX II Chemicals (8-03)
- D) X-OMAT EX II Chemicals Developer Temperature Series (8-03)
- E) KODAK Medical X-ray Chemicals (8-03)

Process Variations from Normal Processing Temperature:

- F) Speed (8-03)
- G) Contrast (8-03)
- H) Fog (8-03)

Safelight Sensitivity:

- J) (8-03)

¹NOTICE: The data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Eastman Kodak Company. The company reserves the right to change and improve product characteristics at any time.

Spectral Sensitivity:
K) (8-03)

Note: The Kodak materials described in this publication for use with KODAK X-OMAT BT Film / 4530 are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

The contents of this publication are subject to change without notice.

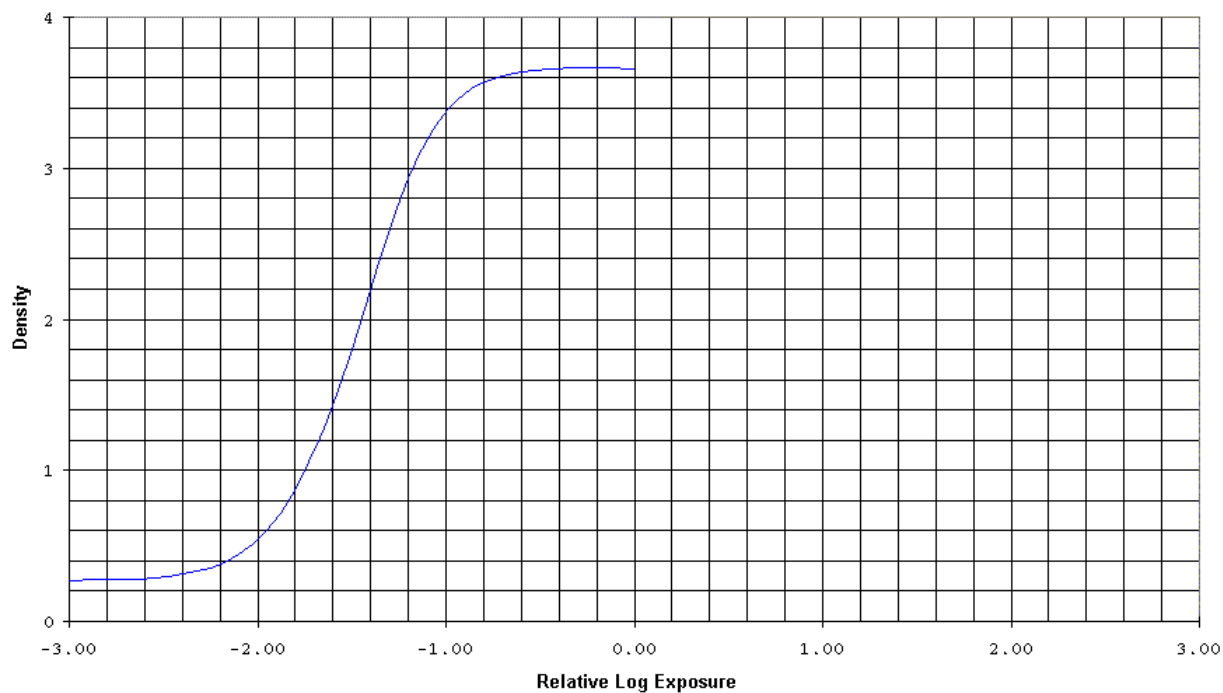
Kodak, X-Omat, Photo-Flo, and Estar are trademarks.

Health Imaging
EASTMAN KODAK COMPANY - Rochester, NY 14650

End of Data Sheet

TI5016A 8-03
CHARACTERISTIC, For Publication

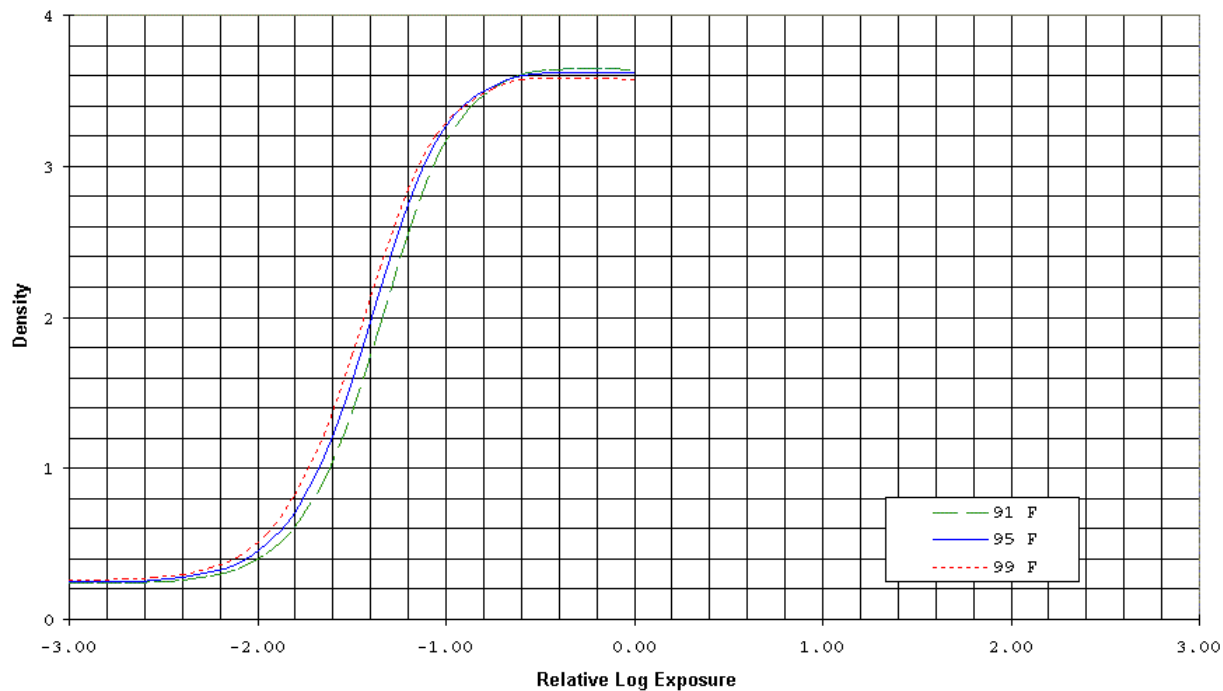
KODAK X-OMAT BT Film / 4530
1/50 sec. Simulated Blue Screen; KODAK X-OMAT 5000 RA Processor;
Fresh KODAK RP X-OMAT Chemicals;
Diffuse Visual



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TI5016B 8-03
CHARACTERISTIC, For Publication

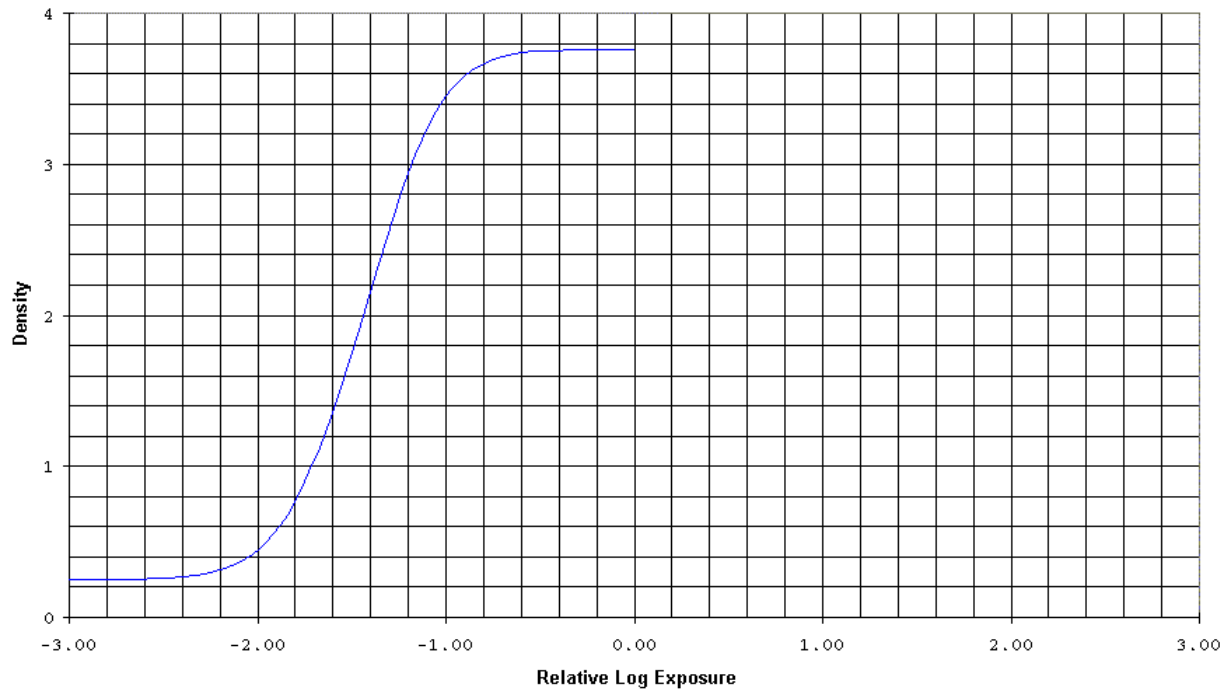
KODAK X-OMAT BT Film / 4530
1/50 simulated Blue Screen; seasoned KODAK RP X-OMAT Chemicals,
KODAK X-OMAT 5000 RA Processor, Temperature Series;
Diffuse visual



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TI5016C 8-03
CHARACTERISTIC, For Publication

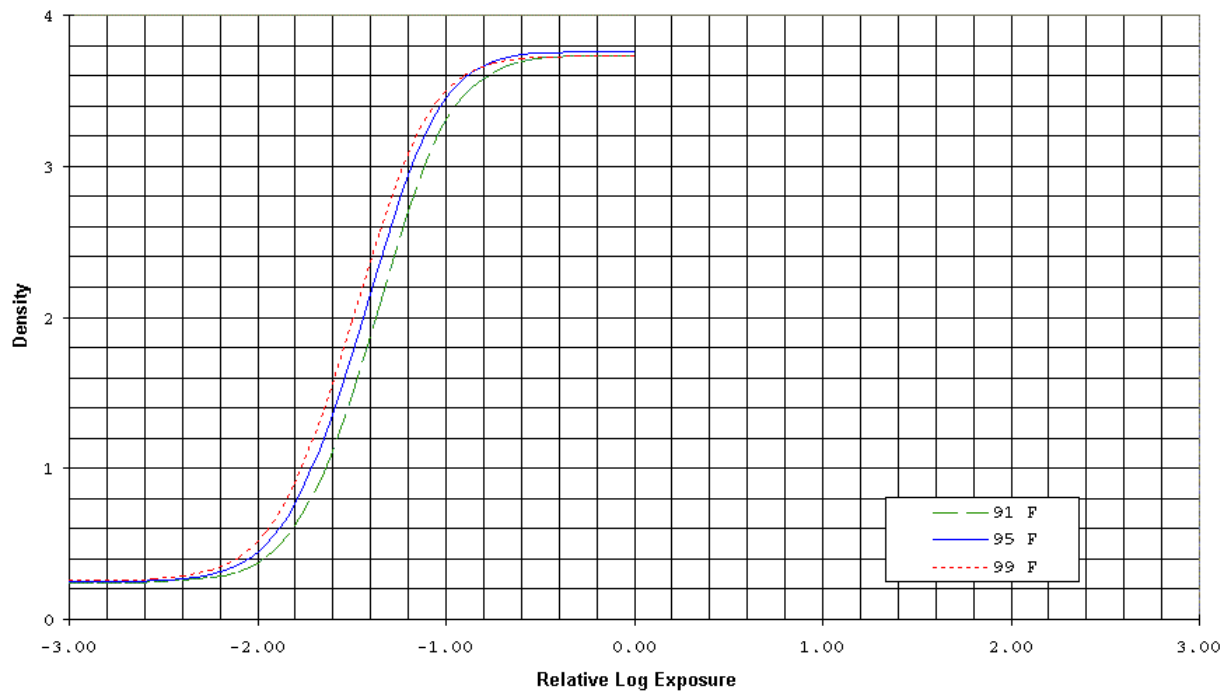
KODAK X-OMAT BT Film / 4530
1/50 sec. Simulated Blue Screen; KODAK X-OMAT 5000 RA Processor;
Seasoned KODAK X-OMAT EX II Chemicals;
Diffuse Visual



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TI5016D 8-03
CHARACTERISTIC, For Publication

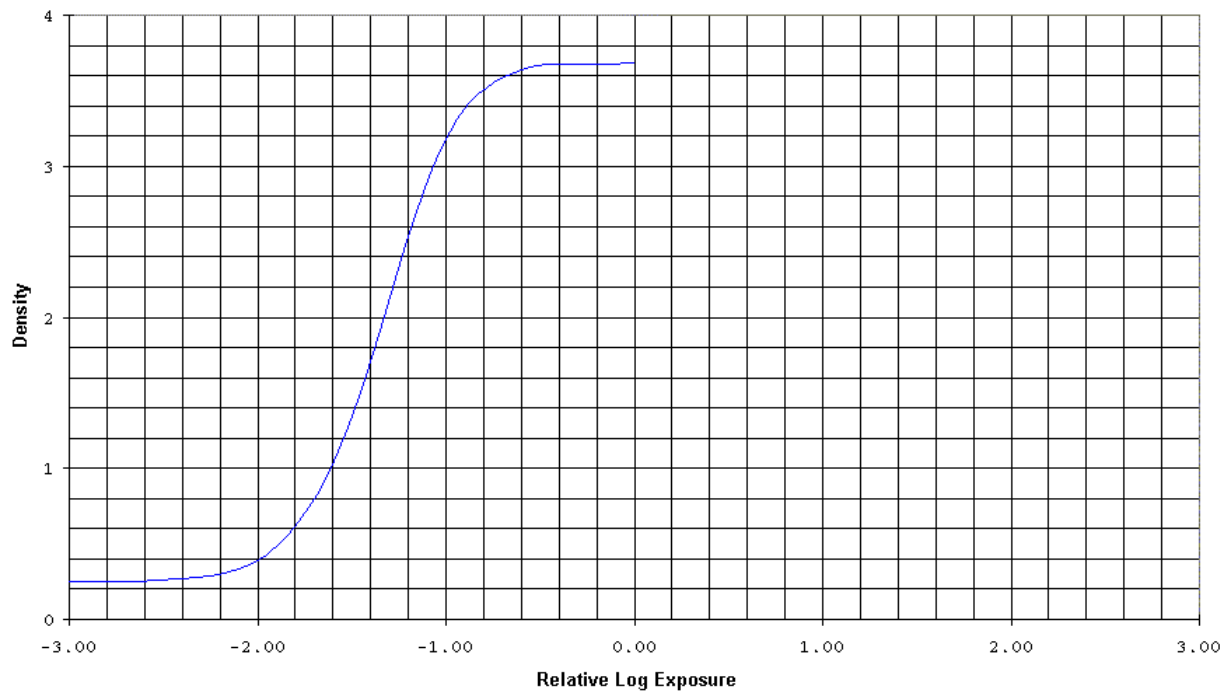
KODAK X-OMAT BT Film / 4530
1/50 simulated Blue Screen; seasoned KODAK X-OMAT EX II Chemicals,
KODAK X-OMAT 5000 RA Processor, Temperature Series;
Diffuse visual



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TI5016E 8-03
CHARACTERISTIC, For Publication

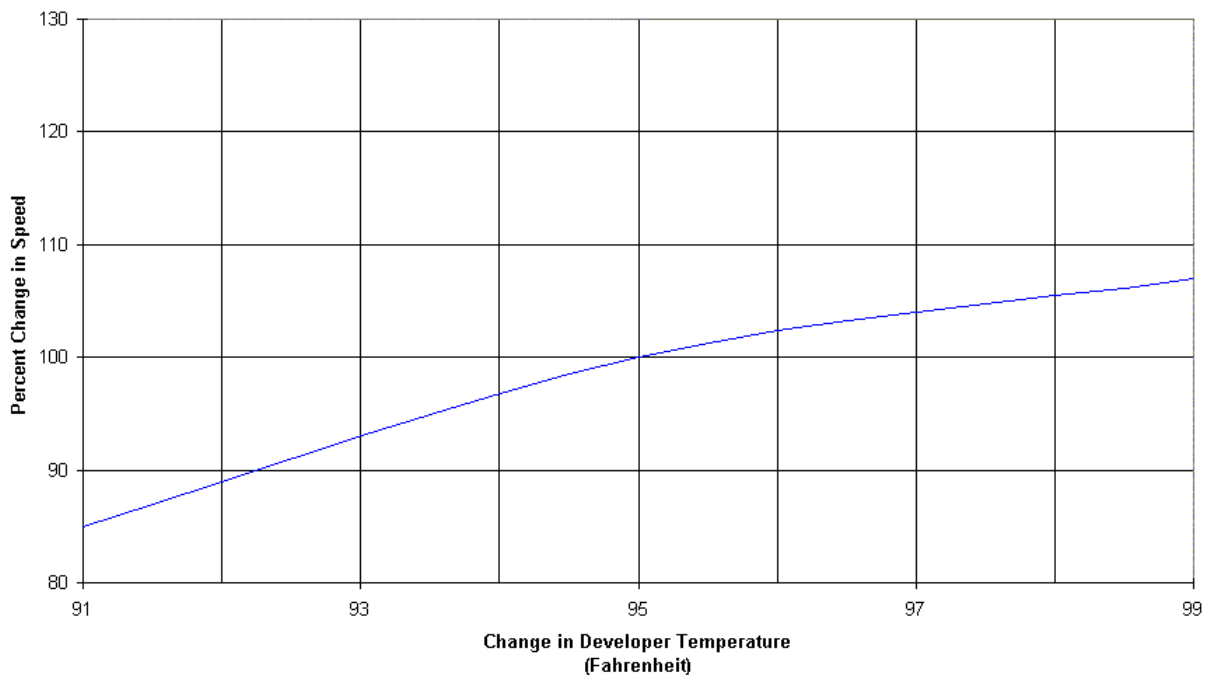
KODAK X-OMAT BT Film / 4530
1/50 sec. Simulated Blue Screen; KODAK X-OMAT 5000 RA Processor;
Fresh KODAK Medical X-ray Chemicals;
Diffuse Visual



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TI5016F 8-03
TEMPERATURE VARIATION, For Publication

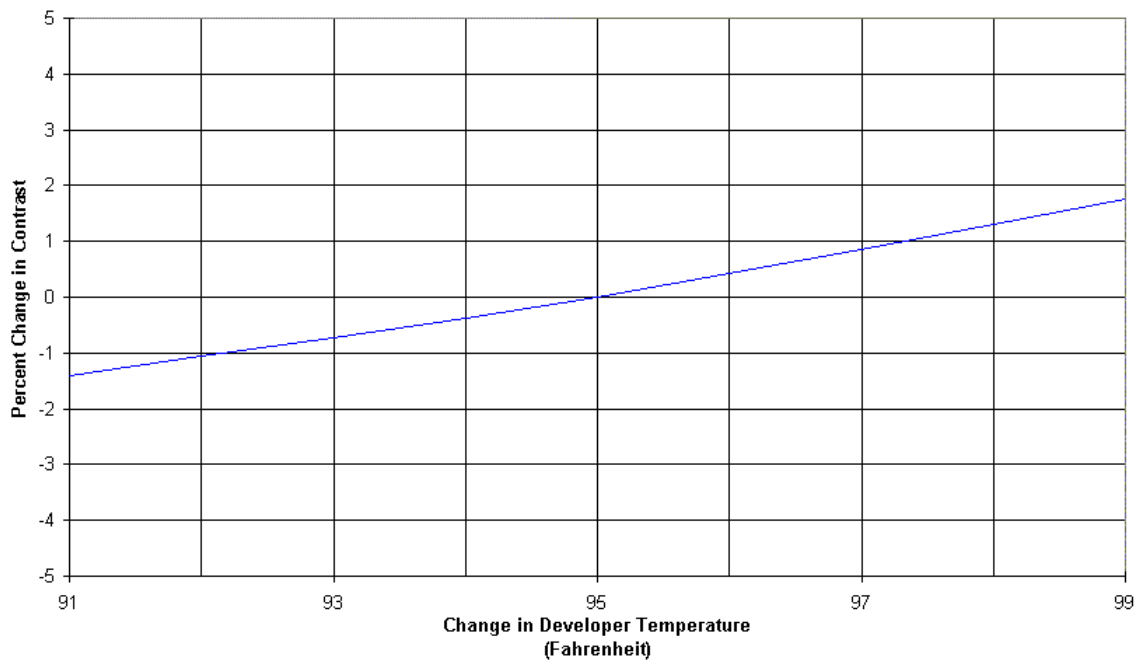
KODAK X-OMAT BT Film / 4530
Percent Change in Relative Speed
KODAK RP X-OMAT Chemicals, KODAK RP X-OMAT 5000 RA Processor
(Reference: 95 F = 100%)
(4 F = 2.2 C)



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TI5016G 8-03
TEMPERATURE VARIATION, For Publication

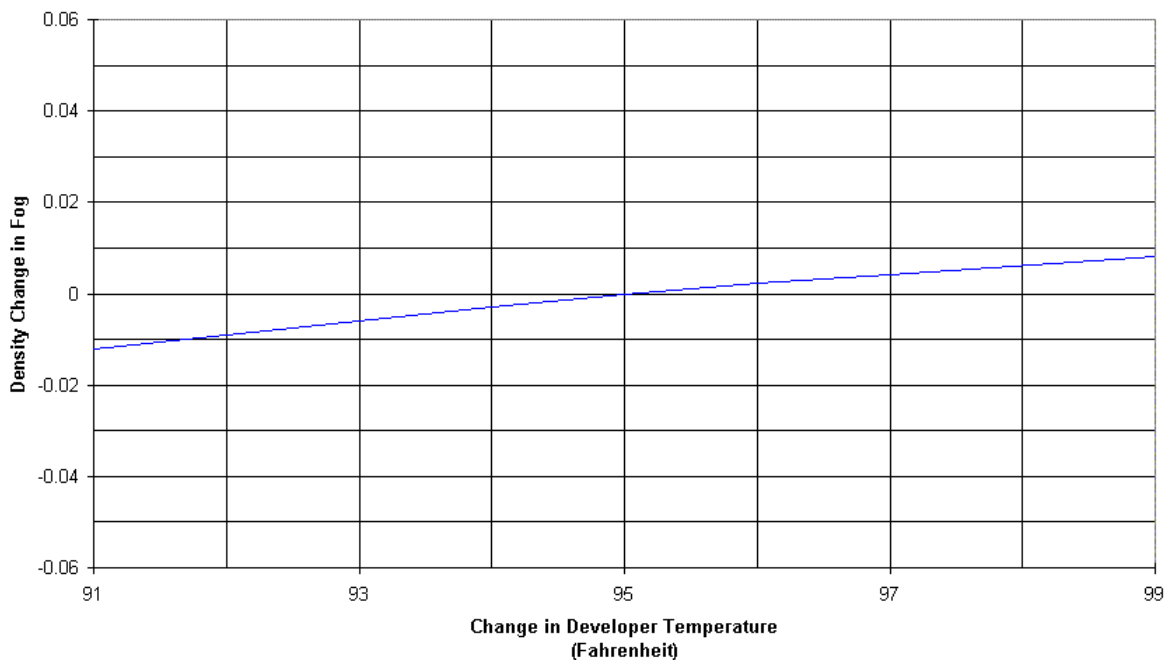
KODAK X-OMAT BT Film / 4530
Percent Change in Contrast
KODAK RP X-OMAT Chemicals, KODAK X-OMAT 5000 RA Processor
(Reference: 95 F = 0%)
(4 F = 2.2C)



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TI5016H 8-03
TEMPERATURE VARIATION, For Publication

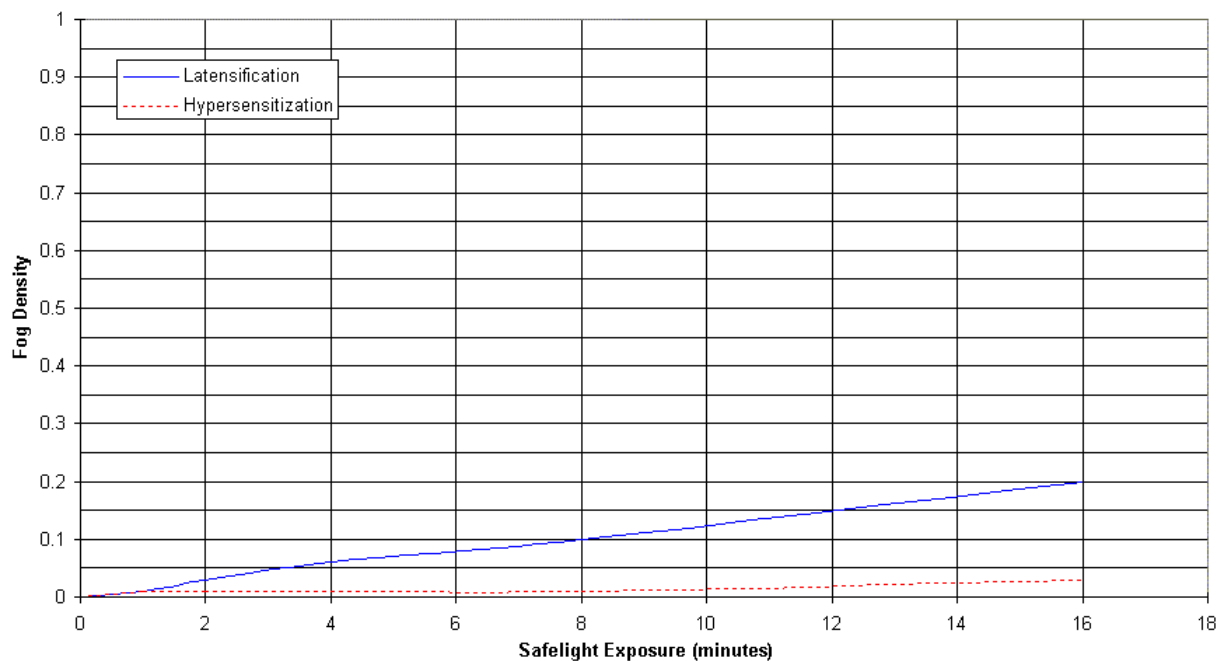
KODAK X-OMAT BT Film / 4530
Change in Net Fog
KODAK RP X-OMAT Chemicals, KODAK X-OMAT 5000 RA Processor
(Reference: 95 F = 0)
(4 F = 2.2 C)



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TI5016J 8-03
SAFELIGHT SENSITIVITY, For Publication

KODAK X-OMAT BT Film / 4530
KODAK GBX-2 Safelight Filter, 15 watt lamp, located 4 feet from film;
KODAK X-OMAT 5000 RA Processor; KODAK RP X-OMAT Chemicals, 95 F (35.5 C);
(Fog Growth with Increasing Safelight Exposure)



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TI5016K 8-03
SPECTRAL SENSITIVITY, For Publication
KODAK X-OMAT BT Film / 4530
Effective Exp 1.4 sec; KODAK RP X-OMAT Chemicals,
KODAK X-OMAT 5000 RA Processor; Diffuse visual



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