FUJI MAMMOGRAPHY FILM
UM-MAHC

I.D. Notch

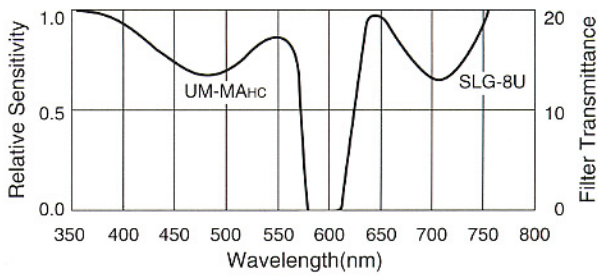
Fuji Mammography film UM-MAHC is a single-coated, orthochromatic, green sensitive film designed for use in all mammographic applications where high speed, high contrast and high resolution are essential. When used in conjunction with Fuji single green-emitting mammographic intensifying screen UM Mammo Fine and UM Mammo Medium, UM-MAHC enables accurate diagnosis in mammography, providing excellent visibility of micro-calcifications and minute tumors in the breast. Processing is accomplished in 90 second or extended cycle. This mammography film should only be used in combination with a single green-emitting rare-earth screen and the final image density of the processed film depends on the exposure and processing conditions.

PHOTOGRAPHIC AND PHYSICAL CHARACTERISTICS

Spectral characteristics

UM-MAHC incorporates a spectral sensitivity that matches the green-emitting intensifying screen spectral emission.

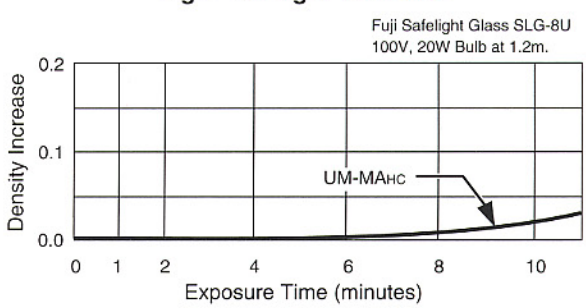
Fig.1 Spectral Characteristics



Safelight Safety

UM-MAHC tolerates high safelight illumination levels in spite of its high speed. it can be handled safety under red safelight such as provided by Fuji Safelight Glass SLG-8U (refer to Fig.1), or equivalent.

Fig.2 Safelight Tolerance

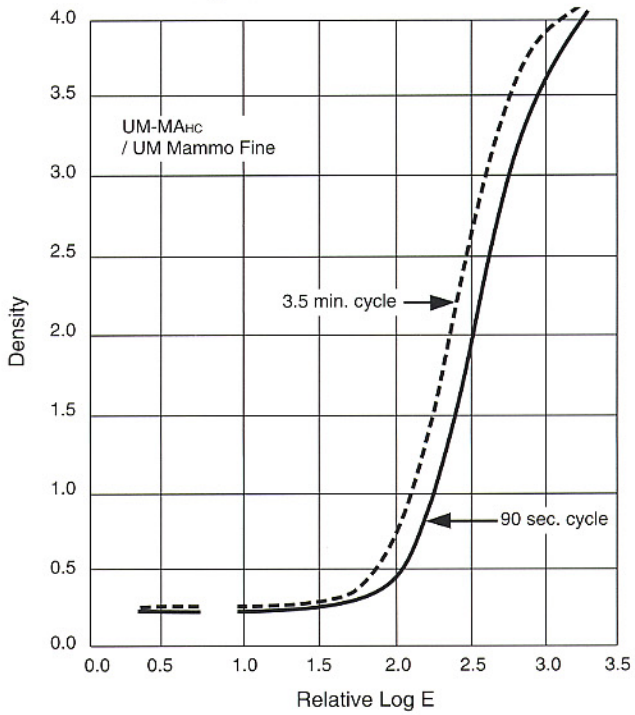


Characteristic Curves

Figure 3 indicates the characteristic curves for UM-MAHC processed in the standard 90 second and 3.5 minute extended cycle.

X-ray Sensitometry,
3 cm Acrylic Phantom, 28 kVp at AEC
with UM Mammo Fine screen.
Fuji FPM4200 Processor
Fuji RD-3 Developer at 35°C (95°F), F Fixer

Fig. 3 Characteristic Curves



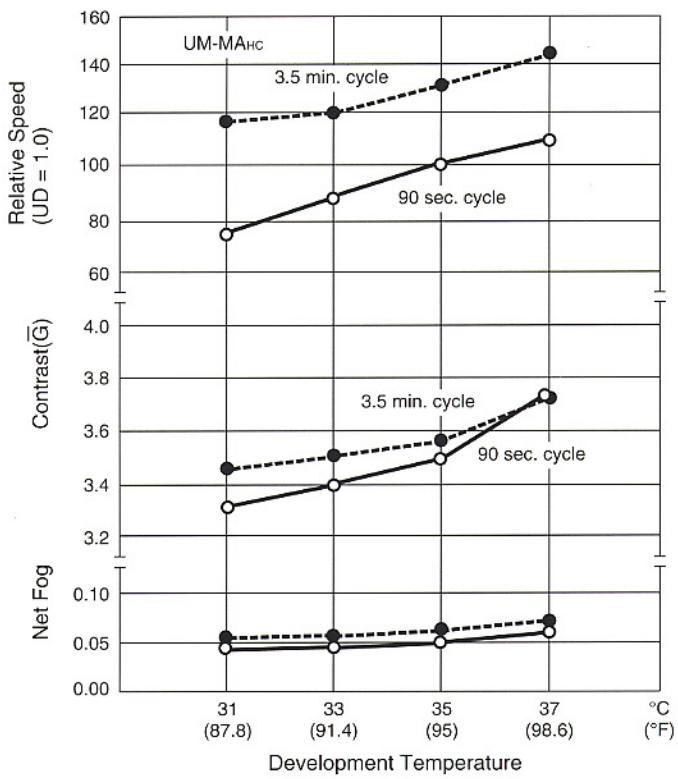
Processing Cycle	90 sec.	3.5 min.
Dev. Temperature	35°C	35°C
Development time	24 sec.	58 sec.
Relative Speed	100	130
Contrast ($\bar{G}$)	3.50	3.55
Net Fog	0.05	0.06

Development Temperature Characteristics

Figure 4 indicates the development temperature characteristics for the UM-MAHC film in the standard 90 second and 3.5 minute extended cycle processing.

X-ray Sensitometry,
3 cm Acrylic Phantom, 28 kVp at AEC
with UM Mammo Fine screen.
Fuji FPM4200 Processor
Fuji RD-3 Developer at 35°C (95°F), F Fixer

Fig. 4 Development Temperature Characteristics

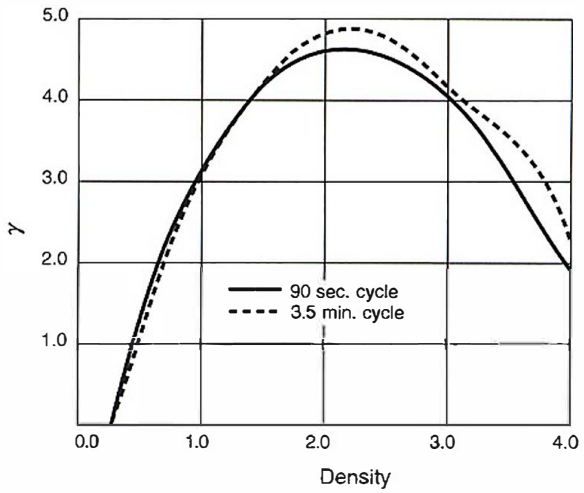


D-γ Curves

Figure 5 indicates D-γ curves of the UM-MAHC film. Gamma (γ) is expressed by the gradient of the tangent line at the point on the characteristic curve.

Processing : Fuji FPM4200, Fuji RD-3, Developer at 35°C (95°F), F Fixer

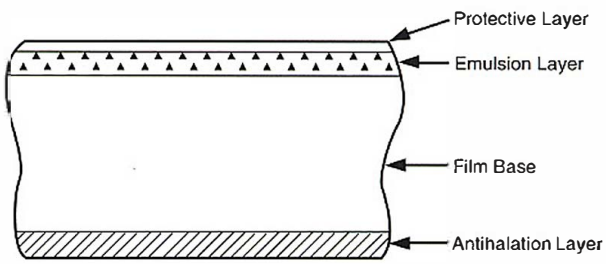
Fig. 5 D-γ Curves



Film Structure

UM-MAHC is a single-coated film having a blue-tinted polyester base with 175 µm thickness. An antihalation layer is provided to increase image sharpness.

Fig. 6 Film Structure



Storage and Handling

Store and handle film at 10 to 23°C, at 30 to 60%RH and properly shielded from X-rays, gamma rays or other penetrating radiations.

Raytech Diagnostics
https://raytechdiagnostics.com/
613-799-4171
sales@raytechdiagnostics.com

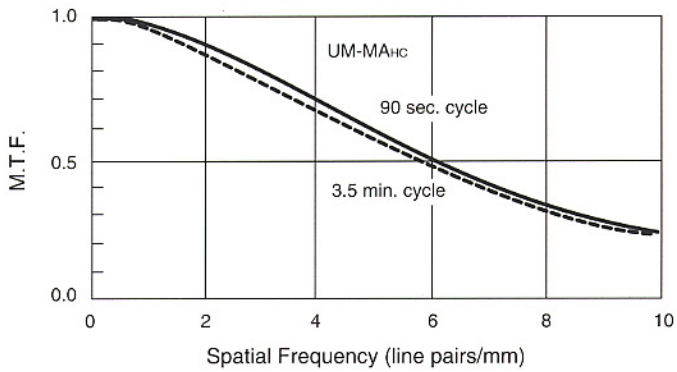
IMAGE CHARACTERISTICS

Sharpness

Image sharpness is shown in Figure 7 as M.T.F. (Modulation Transfer Function) at Varying Spatial frequencies for both 90 second and 3.5 minute cycle processing.

X-ray Sensitometry,
3 cm Acrylic Phantom, 28 kVp
with UM Mammo Fine screen.
Fuji FPM4200 Processor
Fuji RD-3 Developer at 35°C (95°F), F Fixer

Fig. 7 M.T.F. Curves



Graininess

Figure 8 expresses graininess as R.M.S. (Root Mean Square)* granularity.

* Deviations of the mean density per unit area.

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Fuji FPM4200 Processor
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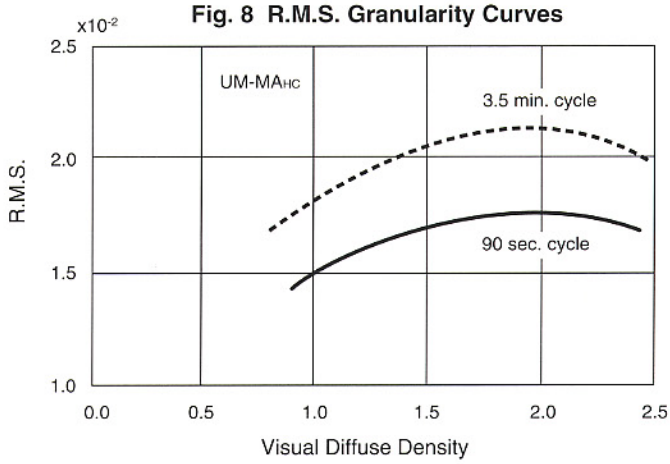
Fig. 8 R.M.S. Granularity Curves



SYMBOLS AND ABBREVIATIONS

LOT	Batch code
	EXP. DATE
NIF	Non Interleaved Film
	Store film at 10 to 23°C, at 30 to 60%RH
	Store film properly shielded from X-rays, gamma rays or other penetrating radiations and the direct sun.
UM-MA HC	Improved UM-MAHC (with Black Triangle)

FUJIFILM
FUJI PHOTO FILM CO., LTD.
26-30, Nishiazabu 2-chome, Minato-ku, Tokyo 106-8620, Japan

CE 0344

European Authorized Representative:
FUJI PHOTO FILM (Europe) GmbH
Heesenstrasse 31, D-40549 Düsseldorf Germany

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