

EDR2 Therapy Exposure Film

EDR2 film is designed specifically for oncology applications, specifically direct exposure applications. Compared to most x-ray films, it is relatively insensitive to x-ray energies and therefore has a response which extends to very high exposures. Intended for direct applications, EDR2 film is not suitable for portal imaging radiographs.

EDR2 film has a responsive range of 25 - 400 cGy and an approximate saturation exposure of 700 cGy, making it suitable for both relative and absolute dosimetry.

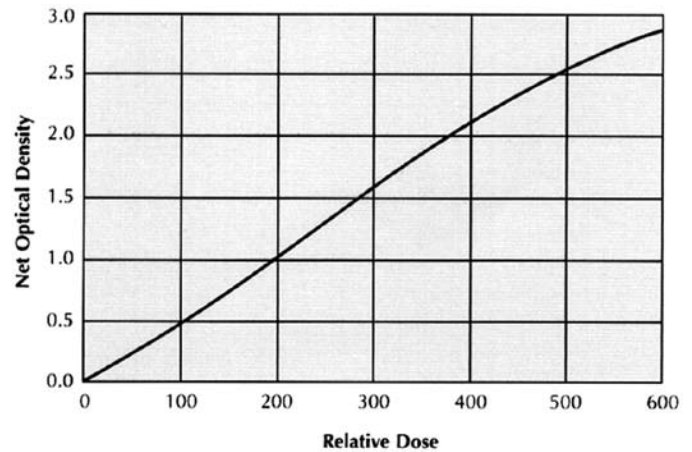
EDR2 has a number of features for direct exposure applications including a wide response range, robust processing, and it is approximately linear.

Exact dose responses are a function of facility-dependent factors including processing conditions, the density sampling, and exposure monitoring equipment. The exact response relationship should be measured and verified for the local conditions.

Model	Size	Standard Package
809-7214	10 in x 12 in	100
116-1769	14 in x 17 in	100

Features:

- ▶ Extended Dose Range (EDR) Ready-Pack Film for Monitoring and Evaluation of Exposures at Therapy Energies
- ▶ Large area
- ▶ Low cost
- ▶ Wide response range
- ▶ Approximately linear
- ▶ Robust processing
- ▶ Excellent for relative dosimetry: field uniformity; equipment characterization: field shapes, port openings, MLCs
- ▶ With appropriate calibration, film may be applicable to absolute dosimetry



The curve above shows the approximate relative dose response for EDR2 film.

The dose response of a film should be measured using appropriate amounts of build-up and backscatter material. A few of the references discussing the methodology are:

- ▶ M. D. C. Evans and L. J. Schreiner, "A simple technique for film dosimetry," *Radiotherapy Oncology*, Vol 23, pages 265-267, 1992.
- ▶ J. I. Hale, A. T. Kerr, and P. C. Shragge, "Calibration of film for accurate megavoltage photon dosimetry," *Medical Dosimetry*, Vol 19, pages 43-46, 1994.
- ▶ Ishwan J. Yeo, C-K Chris Wang, and Sandra E. Burch, "A filtration method for improving film dosimetry in photon radiation therapy," *Medical Physics*, Vol 24, pages 1943-1953, December 1997.
- ▶ J. L. Robar and B. G. Clark, "The use of radiographic film for linear accelerator stereotactic radiosurgical dosimetry," *Medical Physics*, Vol 26, pages 2144-2150, 1999.