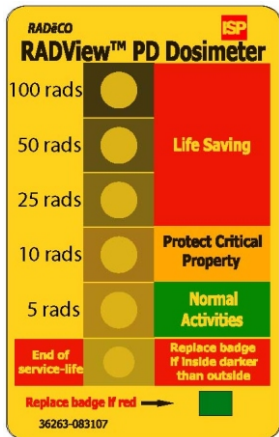


RADView PD Colorimetric Dosimeter

A new radiation monitoring badge for emergency and disaster response personnel.



The RADView PD is a credit-card sized dosimeter badge that develops a distinctive color upon exposure to radiation.

Ideal for First Responders and Emergency Personnel, this unit is simple to use and cost effective.

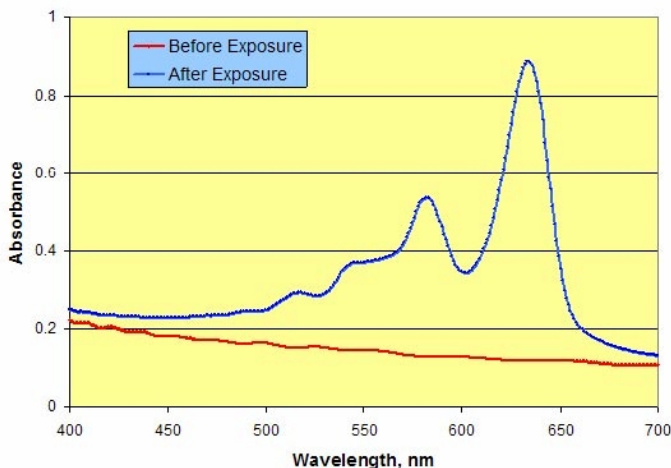
The RADView™ PD dosimeter badge is a credit card size radiation dosimeter incorporating a self-developing radiochromic film to provide visual measurement of absorbed radiation dose. The film develops a distinctive and characteristic color upon exposure to ionizing radiation, becoming progressively darker in proportion to absorbed dose. RADView™ PD dosimeters are unaffected by brief exposures to sunlight or normal room light. The films are water resistant, tissue equivalent, energy independent and dose-rate independent. The badges do not require calibration or maintenance, have no electronics or batteries, and are small and light. The RADView™ PD can be read visually by the wearer at the incident scene. Most users would be able to visually estimate the dose to within $\pm 20\%$. The visual read out does not require darkroom or processing equipment.

International Specialty Products (ISP) holds numerous patents (U.S. Pat. 5,731,112 and others) on the chemical technology and design elements of RADView™ PD dosimeters. Originally developed for the medical industry, the active component in the dosimeter is a microparticulate, radiation sensitive diacetylene monomer dispersed in a polymer matrix and applied to a polyester film base. When the active monomer is exposed to ionizing radiation, a polymerization reaction immediately produces an intensely colored dye polymer that changes the appearance of the dosimeter. The amount of dye produced is proportional to the radiation dose. The dye polymer is cyan blue with a major absorbance peak at 635 nm and a minor peak at 585 nm. The dosimeter will tolerate intermittent UV exposure and temperatures up to 130°F.

A quick visual observation of a RADView™ PD dosimeter allows anyone to assess the absorbed dose. Once an exposure is visually evident, a fully quantitative measurement to confirm the radiation dose can be performed, if required, by optically scanning the RADView™ PD dosimeter. The badge can be sent to Dade Moeller & Associates, Inc. for this independent read out and evaluation.

In the RADview™ PD dosimeter, the radiation sensitive film in the center of the badge is surrounded by calibrated annular segments with unique background colors. The color of each segment is calibrated to the dose printed on that segment. The background colors of each segment are permanently printed on the badge and do not change, providing a constant reference value for each dose level. If the sensitive film in the center is darker than the background of a segment, the dose is greater than the number on that segment ("dose is darker"), as shown in the examples below.

Characteristic Absorption Spectrum of a RADView™ PD Dosimeter

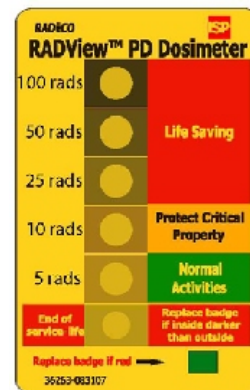


once once once once once once once

- Color coded read out
- Credit card size
- Waterproof
- Wear for a year
- Disposable
- Tissue equivalent
- Energy independent
- Preset calibration

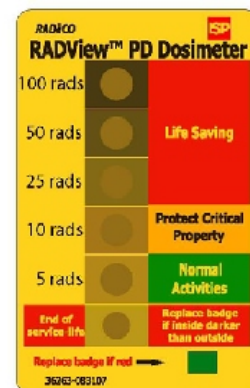
Before Radiation Exposure

In the first illustration, the color of the center matches the zero dose segment, indicating the badge has not been exposed to radiation. As the radiation dose increases, the color of the center film gradually darkens.



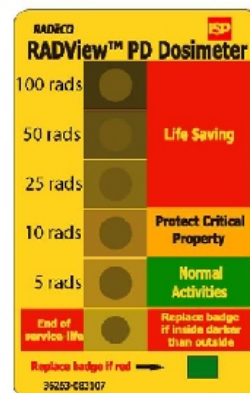
Exposure Dose of 5 to 10 rem

In the second illustration, the film in the center is darker than the 5 rem segment and lighter than the 10 rem segment. This indicates the badge has been exposed to a radiation dose between 5 rem and 10 rem.



Exposure Dose of 25 to 50 rem

In the third illustration, the dose is between 25 and 50 rem. Note that the center film is darker than the 25 rem segment and lighter than the 50 rem segment.



Under most conditions, the dosimeter can be worn for one year before replacement. A subscription service is available to send new dosimeters before the expiration date. Dosimeters can be prepared with the wearer's name and affiliation printed on the badge. A web based data service will log serial numbers, wearers, start/stop dates, and similar information. Quantity discounts are available for military and first responder organizations under a subscription plan. RADeCO, a veteran owned small business, is the exclusive world-wide distributor for RADview™ PD dosimeters. Laboratory read outs and dose evaluations can be provided by Dade Moeller & Associate, Inc. under an exclusive agreement with RADeCO.