

HOW TO ESTIMATE THE RADIATION EXPOSURE

SIRAD® users can estimate their radiation exposure by comparing the color of the sensor with the color reference bars printed on each side of the sensor. The closest match indicates the dose in rad/rem/mSv (1 rad = 1 rem = 10 mSv for human). A color between two adjacent color reference bars indicates an in-between dose. The color bars are printed to match the color of the sensor under fluorescent light. Hence, use fluorescent light for matching the color of sensor with the bars. Color matching under other lights may not be accurate.

Color development of the sensor is essentially independent of the energy and the dose rate. It is essentially tissue equivalent and hence no corrections will be required.

If the personal radiation exposure dose is higher than 25 rads, it is advisable to seek medical help immediately. Contact appropriate authority for reporting radiation exposure. For the information on the effects of high dose of ionizing radiation on humans, see the symptoms. For dose higher than 50 rads, seek special treatment and facilities used for treating radiation burns and sickness. Inform others and appropriate agencies.

Before estimation of radiation exposure make sure that (1) the sensor(s) of your RADTriage-FIT badge is active and (2) if the sensor(s) has developed color, it is not due to a false positive. If the central blue dot of the FIT indicator or FIT indicator itself has changed color, e.g., purple or red, either your badge is not active and/or the ability of monitoring radiation has been changed due to exposure to high temperature, e.g., above 90°C. If the area surrounding the blue dot of the FIT indicator is darker than its color reference bar on its right, it is likely that your exposure may be genuine.