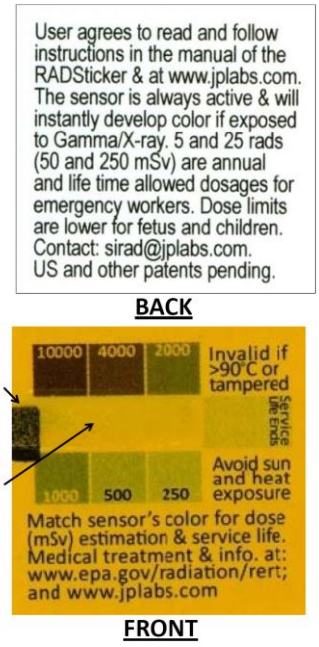
Instruction Manual for Stockpileable RADSticker™



General instructions: **1)** Read this manual and follow the instructions. The sensor's color must be lighter than that of the "Service Life Ends" bar when received. **2)** Read the instructions and then remove the release liner in the back. Apply RADSticker onto an object (e.g., inside a wallet, clothing, driver license and credit card, if it is allowed and does not block any information). **3)** RADSticker is an acute dose (**casualty) dosimeter** for monitoring harmful high dose. It supplements, but does not replace, other dosimeters or detectors that may be required to use. **4)** Protect RADSticker from high temperatures (above 60°C) and UV/sunlight for a prolonged period. **5)** The usable service life of this stockpileable RADSticker can be extended to about ten years by keeping it in a freezer. Visit www.jplabs.com for additional information

Introduction: RADSticker™ provides wearers (public, medical and law enforcement personnel) timely personal radiation exposure information in an event of a radiological incident, such as a major accident at a nuclear power plant or a nuclear/dirty bomb explosion. The objective of this low cost RADSticker is to quickly determine the need for medical treatments and to minimize panic in such events. RADSticker has a sensor (a rectangular strip between the color bars) with 250, 500 and 1,000 mSv bars on its bottom and 2,000, 4,000 and 10,000 mSv bars on its top for triaging information and medical treatments in emergencies. When exposed to radiation, the sensor of RADSticker develops color instantly. The color changes are permanent, cumulative and proportional to dose.

General guidelines: If during or after a radiation incident, the color of the sensor is lighter than the "Service Life Ends" bar, the wearer has not received a large enough exposure to radiation to cause acute medical effects. If the sensor has developed a color darker than that of "Service Life Ends" bar but lighter than the 250 mSv bar, a low radiation exposure is indicated and further exposure should be avoided. If a user is exposed to a dose between the 250 and 500 mSv, the user should seek medical advice and/or evaluation. A person exposed to a dose higher than 500 mSv should immediately contact an emergency room and inform the authority.

Scratch off bar: RADSticker has a black bar on the left hand end of the sensor. This bar is for internal uses of the manufacturer (or trained/qualified personnel) to determine remaining shelf life, thermal & UV/sunlight exposures and tampering. **All warrantees are null and void if RADSticker or its components (e.g., the scratch off bar) are tampered in anyway.**

"End of service life" bar: RADSticker has a color reference bar labeled "Service Life Ends" on the right hand side of the sensor to indicate the end of the usable service life of the dosimeter. The sensor will acquire a color similar to the bar after about two years of storage at room temperature (about 22°C) or upon exposure to about 100 mSv. The sensor will also acquire the color of the "Service Life Ends" bar if it is exposed to direct summer sunlight for a few days. We recommend that RADSticker is replaced if the color of the sensor matches or becomes darker than the "Service Life Ends" bar due to storage/usage.

Types of radiation: The RADSticker sensor responds to gamma/X-ray (energy higher than 30 KeV) and high energy (e.g., above 0.5 MeV) electrons/beta particles. Color development of the sensor is essentially independent of dose rate. However, protective films attenuate low energy (below 200 KeV) X-ray. RADSticker will not be affected by a normal exposure to diagnostic X-ray (e.g., chest or dental) or security X-ray machines. Multiple (more than ten) exposures to medical or airport luggage CAT scans will result in sufficient exposure to produce a detectable color change in the sensor.

How to read dose with RADSticker: Estimate the exposure dose by comparing the color of the sensor with the color reference bars. If the sensor develops a color in-between any two adjacent bars, this indicates an in-between dose. It can be viewed in any light. However, we recommend reading the dose under fluorescent lights for a better accuracy. **Color matching under other lights may not be as accurate, especially at higher dosages**. Dose can be estimated with an uncertainty of about 30% with the color-matching reference chart.

Laundry cycle: A normal residential laundry cycle of washing and drying (below 80°C) has a negligible effect on RADSticker. However, repeated laundry cycles or exposure to temperatures higher than 80°C will damage the sensors and hence must be avoided. Replace RADSticker if it is subjected to boiling water or more than one laundry cycle.

False positive & tamper indicators: RADSticker is not equipped with an indicator (e.g., the FIT indicator) to monitor the false signals. If used as per instructions, it is least likely that RADSticker will provide false positives or negatives. Replace the dosimeter if it was exposed to a temperature higher than 90°C or if the color of the sensor matches or becomes darker than that of the "Service Life Ends" bar.

LIMITED LIABILITY: In the event that the product does not perform as specified, JP Labs (120 Wood Avenue, Middlesex, NJ 08846; Phone: (732) 469 6670; Email: sirad@jplabs.com; www.jplabs.com) will replace the product. JP Labs specifically disclaims all other warranties and liabilities expressed or implied. All warranties are null and void if any of the following occur: (1) the usable shelf life is expired (2) RADSticker is tampered with in any way, form or kind.