Rad-Sure™
Type XR 15 Gy and Type XR 25 Gy
Blood Irradiation Indicator
Use Instructions
Rev. 04: February 2019

When attached to blood products, Rad-Sure Type XR 15 Gy and Type XR 25 Gy indicators show whether the blood products have been irradiated. Before a blood product and its attached indicator are irradiated, the indicator reads "NOT IRRADIATED". After the blood product and its attached indicator are irradiated, the word "NOT" in the indicator window is obscured and the indicator reads "IRRADIATED".

Rad-Sure XR indicators should be used only with x-ray irradiators that utilize x-rays generated from 160kVp sources that are filtered through 0.38 mm of copper, or 150kVp sources filtered through1 mm of aluminum. If Rad-Sure Type XR indicators are used with x-ray sources other than the indicated energy sources, the radiation sensitive film in the window may not darken completely when irradiated at the minimum dose for the product and the word "NOT" may still be visible.

Note: Rad-Sure XR indicators only indicate that irradiation has occurred. They do not measure the dose from an irradiator. Rad-Sure XR indicators should only be used with x-ray irradiators that are working properly and are properly calibrated. However, because of variation in lighting conditions, product batches and user eyesight, Rad-Sure XR indicators may appear fully opaque even after exposure to less than the minimum dose for the product. Therefore, Rad-Sure XR indicators should never be used to calibrate an irradiator.

1. Do not expose to 50°C (122°F)-Avoid prolonged exposure to elevated temperatures.

2. Remove a sheet of Rad-Sure™ XR indicators from the box. Look for the word "NOT" in the window of each indicator. Do not use an indicator unless the word "NOT" is clearly visible (see Fig. 1a).

3. Observe the product expiration date on the indicator. If the product is beyond the expiration date, do not use the indicator.

4. Enter the date and operator's initials in the spaces provided on the indicator.

5. Peel the indicator from its backing by bending the sheet. Avoid touching the adhesive layer with rubber gloves. Apply the indicator firmly to an appropriate, clean, dry place on the unit of blood prior to irradiation.

6. Irradiate the unit of blood with the attached indicator in an x-ray irradiator at or above the recommended minimum dose.

7. After irradiation, check the indicator to verify that the window is black and obscures the word "NOT". The indicator should now read "IRRADIATED" (see figure 1b). If the word "NOT" remains visible, notify your supervisor immediately.

8. Return any remaining indicators to the box and close the lid to avoid prolonged exposure of the indicators to sunlight or ultraviolet light. Do not use the indicators in microwave ovens.

9. Store indicators at or below 25ºC. Store away from all radiation sources, including gamma, rays, x-rays, electron devices, and microwaves.

10. Rad-Sure XR indicators can be disposed of with non-hazardous waste when they are not attached to a bag containing hazardous waste. Rad-Sure XR indicators have a shelf life of 36 months from the date of manufacture.

Disclaimer

The information contained herein is believed to be reliable but is not to be taken as representation, warranty or guarantee and customers are urged to make their own tests. No recommendation or permission is implied to violate any patents or other proprietary rights and Ashland Specialty Ingredients G.P. assumes no liability for any such violation.

Rad-Sure is a registered trademark of the Ashland
U.S. Patent Nos. 7445880

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For service or information in the US, email: AdvancedMaterials@Ashland.com

For service or information outside the U.S., contact your local distributor. For the name of a distributor in your area, contact: AdvancedMaterials@Ashland.com

FDA Listed

product list

product	product code
rad-sure™ XR 15 Gy blood irradiation indicators	831396
rad-sure™ XR 25 Gy blood irradiation indicators	831398

Figure 1a

Figure 1b

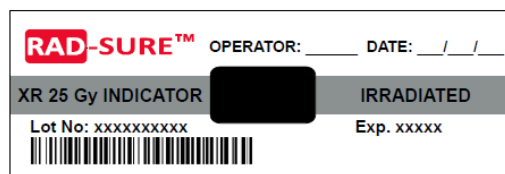Rad-Sure™ XR irradiation indicators before and after irradiation
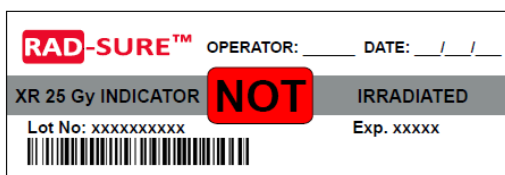
Symbol	Symbol Title
LOT	Batch code
⧖	Use-by date
🏭	Manufacturer
⊘	Do not re-use