

Indicator versus Dosimeter

Rad-Control blood irradiation indicators confirm that a blood bag was inside the irradiator during an irradiation cycle. The aim is to differentiate between an irradiated and a unirradiated blood bag. They are no dosimeters.

Dosimeters are devices for measuring the total absorbed dose from exposure to Gamma or X-ray radiation.

Blood irradiation indicator	Dosimeter
Verification tool	Measuring tool
Verifies that irradiation has been applied	Measures if the correct and required dose of radiation was applied
Proves that a blood bag was inside the irradiator and exposed to irradiation	Records a specific dose of radiation
Single-use disposable	Regular calibration and service

“Indicators are no dosimeters!”

4 key facts on blood irradiation indicators

1. While irradiated, the color of the indicator field of the label always changes gradually from red to black. It is guaranteed that the indicators will be fully black at 25Gys.
2. This is true for all irradiation indicators in all markets. They all work the same way and gradually change in color.
3. The discoloration of the indicator can be slightly different depending on the exact location in the canister during the irradiation cycle.
4. The assessment of different shades of color with the human eye remains subjective, which is another reason why the labels cannot be used to determine any specific dosage.

The intended use for irradiation indicators is to check the blood – NOT the machine!