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Recycled Materials Use

Spectrum Dynamics Medical (SDM) is committed to achieving sustainability, environmental, health and safety (SEHS) excellence. SDM will attempt to provide a safe and healthy working environment to avoid workplace injuries and illnesses and minimize adverse impact to the environment.

Recycled materials are generally not used in SPECT/CT devices due to several critical limitations:

- *Material purity and composition: SPECT/CT devices require high-precision components with specific material properties. Recycled materials may contain impurities or have inconsistent compositions, which could compromise the performance and accuracy of the imaging equipment.*
- *Regulatory constraints: Medical imaging devices are subject to strict regulatory standards to ensure patient safety and diagnostic accuracy. The use of recycled materials may not meet these stringent requirements, as their exact composition and history cannot be easily verified or controlled.*
- *Image quality concerns: The presence of contaminants or variations in material properties could introduce artifacts or distortions in the images, potentially leading to misdiagnosis. For example, metallic impurities can cause beam-hardening artifacts in CT scans.*
- *Safety and reliability: SPECT/CT devices must operate consistently and safely over long periods. The use of recycled materials could introduce unpredictable factors that may affect the device's long-term performance and reliability.*
- *Technological limitations: Advanced SPECT/CT systems require specialized materials, such as rare earth elements for magnets in MRI components. These materials are often not easily recyclable or may lose their critical properties during the recycling process.*

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