



Our NMToolKit product is a Nuclear Medicine gamma camera software package supporting NEMA¹ based acceptance testing procedures and routine SPECT QC testing.

This Windows based application supports DICOM 3.0 image data. User selects images from a directory built from a user selected image folder containing DICOM images. Automatic output of results in an Adobe® Acrobat file format (pdf), database storage, summary report creation exportable to Excel.

NEMA processing tools available;

- Intrinsic spatial resolution
- Intrinsic spatial linearity
- Multiple window spatial registration
- System spatial resolution with scatter
- System spatial resolution without scatter
- SPECT reconstructed spatial resolution without scatter
- SPECT reconstructed spatial resolution with scatter
- Intrinsic Flood Field Uniformity

SPECT QC processing tools available;

Specphan™ phantom (The Phantom Laboratory, Salem, NY);

- Pixel size – geometric distortion
- Spatial Resolution – PSF
- Slice thickness and slice incrementation
- Reconstructed image uniformity

Jaszczak phantom (Data Spectrum, Hillsboro, NC);

- Integral Uniformity
- RMS noise
- Contrast

Utility Functions available;

- Multi-Frame processing - extract a single image or generate a composite image from a multi-frame file (e.g. transaxial set of data). This application could be used to manipulate slices from an ACR (Jaszczak) phantom study
- Pixel calibration tool - requires two line source image (as defined in NU 1- 2007 'System Spatial Resolution' procedure 3.2.3)
- System summary reports in PDF and Excel compatible formats
- *Database* support for all measurements

¹ NEMA Standards Publication NU 1-2007