Xenogen IVIS

Purpose

The IVIS® Spectrum is a versatile and advanced in vivo imaging system. The system uses a novel patented optical imaging technology to facilitate non-invasive longitudinal monitoring of disease progression, cell trafficking and gene expression patterns in living animals. With an optimized set of high efficiency filters and spectral un-mixing algorithms, the IVIS lets you take full advantage of bioluminescent and fluorescent reporters across the blue to near infrared wavelength regions. The system offers single-view 3D tomography for both fluorescent and bioluminescent reporters that can be analyzed in an anatomical context using a Digital Mouse Atlas or registered with a multimodality module to other tomographic technologies such as MR, CT or PET.

For advanced fluorescence pre-clinical imaging, the IVIS Spectrum has the capability to use either trans-illumination (from the bottom) or epi-illumination (from the top) to illuminate in vivo fluorescent sources. 3D diffuse fluorescence tomography can be performed to determine source localization and concentration using the combination of structured light and trans illumination fluorescent images. The instrument is equipped with 10 narrow band excitation filters (30nm bandwidth) and 18 narrow band emission filters (20nm bandwidth) that assist in significantly reducing autofluorescence by the spectral scanning of filters and the use of spectral unmixing algorithms. In addition, the spectral unmixing tools allow researchers to separate signals from multiple fluorescent reporters within the same animal.

Features/Benefits

- High-sensitivity in vivo imaging of fluorescence and bioluminescence
- High throughput (5 mice) with 23 cm field of view
- High resolution (to 20 microns) with 3.9 cm field of view
- Twenty eight high efficiency filters spanning 430 – 850 nm
- Supports spectral unmixing applications
- Ideal for distinguishing multiple bioluminescent and fluorescent reporters
- Optical switch in the fluorescence illumination path allows reflection-mode or transmission-mode illumination
- 3D diffuse tomographic reconstruction for both fluorescence and bioluminescence
- Ability import and automatically co-register CT or MRI images yielding a functional and anatomical context for your scientific data.
- NIST traceable absolute calibrations
- Gas anesthesia inlet and outlet ports
- Class I Laser Product

Product Literature

Xenogen IVIS Manual

Xenogen IVIS Operator Training PowerPoint

IVIS Spectrum Operator Training.pptx