

Hoffman Multi-Compartment 2-D Brain Phantom™

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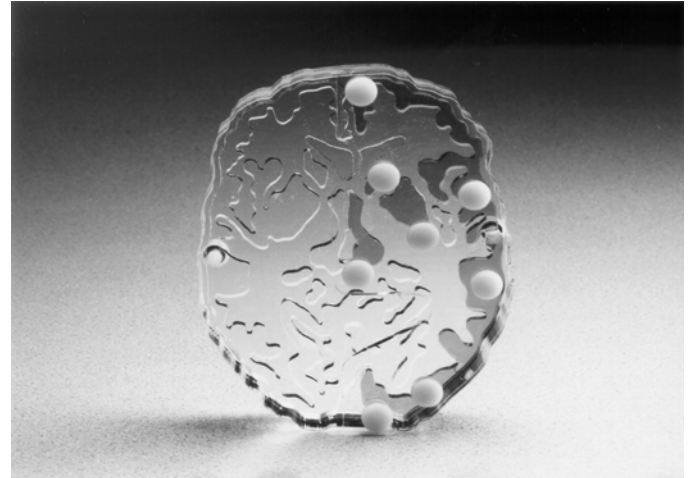
Model BR/2D-MC/P

Main Features:

- Anatomically correct - varying isotope uptake ratios - simulation of the activity distribution in a flow or metabolic image of normal and abnormal human brain*
- Seven (7) gray-matter compartments that may be separately filled with varying amounts of radiotracer to simulate a variety of "hot" and "cold" abnormalities
- Normal gray-matter:white-matter:ventricle activity, ratio is 4:1:0 (simulated by partial volume effect)
- Abnormal-gray-matter:normal-gray-matter activity, ratios can be varied from 0.25:1 to greater than 100:1

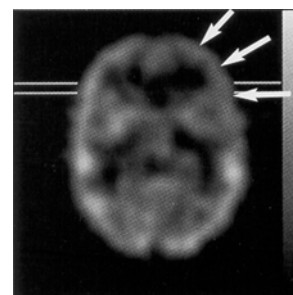
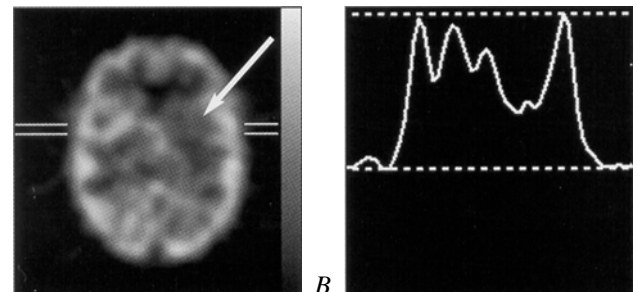
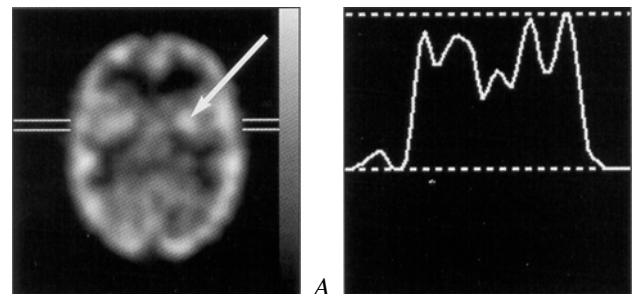
Main Applications:

- SPECT and PET applications include research, system performance measurements, optimization of imaging protocols, image interpretation, and training



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- (A) SPECT image and profile of Hoffman 2-D Multi-Compartment Brain Phantom™ with a compartment (arrow) filled with increased activity to simulate a 67% increase in perfusion during an intraictal phase.
- (B) SPECT image and profile of Hoffman 2-D Multi-Compartment Brain Phantom™ with a compartment (arrow) filled with decreased activity to simulate a 67% reduction in perfusion during an interictal phase.
- (C) SPECT image and profile of Hoffman 2-D Multi-Compartment Brain Phantom™ with a compartment (arrows) filled with decreased activity to simulate a 33% reduction in perfusion in the left frontal lobe.



* Hoffman EJ, Ricci AR, van der Stee LMAM, Phelps ME. ECAT -- Basic Design Considerations, IEEE Trans Nucl Sci, NS-30:729-733, 1983.