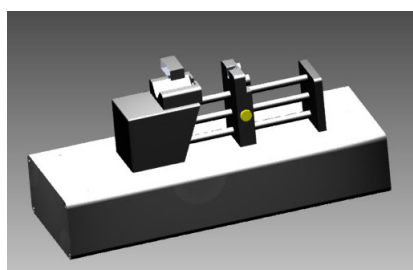


LabPET μ Volumetric Blood Counter

Blood radioactivity counting in real time made easy

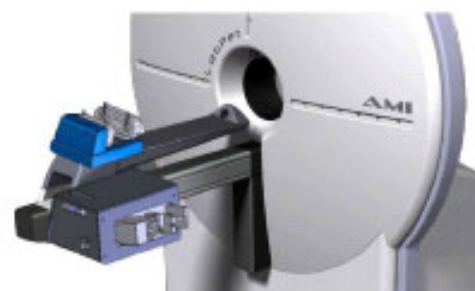
The LabPET™ μ Volumetric Blood Counter is a fully integrated system for measuring the radioactivity concentration in the blood of live small animals. The system consists of a main unit, a pumping system and a detector assembly. It offers a reliable and reproducible solution for accurate radioactivity measurement in μ l volumes of arterial or venous blood drawn from small animals. The tiny detection volume (3-8 μ l) and programmable sampling speed enable the full blood time-activity curve to be obtained routinely from rats and mice. The counter is offered as stand alone instrument or hooked to the LabPET™ scanner with perfect co-registration of the blood data with the PET image data.



Computer controlled pumping system with integrated detection electronic



Self shielded detector assembly



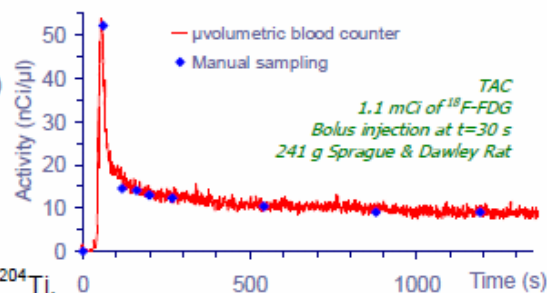
Counter integrated to the LabPET™

Benefits

- Fully automated under computer control
- Minimized jolt of implanted arterial catheter
- Minimum blood withdrawal from animal
- Reduces staff exposure to radiation
- Increased throughput of PK studies
- High accuracy

Features

- High detection sensitivity
- Low sensitivity to γ background (<5 cps for 37 MBq/1 mCi ^{18}F @ 10 cm)
- Flexible software (XP and MAC OS)
- Automatic calibration
- Programmable sampling rate from 3 μ l/hr to 10 μ l/sec
- Linearity: up to 160 kBq/ μ l or 4.2 μ Ci/ μ l
- Compensation for dispersion (0.15 s^{-1} @ 0.5 ml/min, rat whole blood)
- Detection of ^{11}C , ^{13}N , ^{15}O , ^{18}F , ^{64}Cu , ^{68}Ga , ^{82}Rb , ^{124}I , ^{32}P , $^{90}\text{Sr}/^{90}\text{Y}$, ^{204}Ti .



Absolute Sensitivity

	$E_{\beta\text{max}}$ (Mev)	Probability	Other Radiation	Absolute Sensitivity
^{18}F	0.634	96.7 %	γ (511 keV)	7 %
^{64}Cu	0.578, 0.653	55.1 %	γ (511, 1346 keV)	3 %
^{18}N	1.199	99.8 %	γ (511 keV)	23 %

Patent Pending