FlowCount

Radio-HPLC Detector System



FlowCount

FlowCount is a flexible & low cost radioisotope HPLC detection system designed for the remote detection of a wide range of isotopes

Technology

FlowCount is a radioisotope HPLC detection system, which is compatible with all HPLC systems. It is designed for the remote detection of a wide range of isotopes and has a variety of shielding, detector, and flow cell options. It uses specially configured photomultipliers and/or PIN diode detectors to detect gamma, positron, and high energy beta emitters at both high and low levels of activity. FlowCount eliminates the need for fraction collection and scintillation counting. It is a flexible and easy-to-use system. Background interference is reduced with variable energy window settings and sensitivity is optimized with adjustable flow cell volumes. Miniature detectors can fit into small locations and can operate up to 12 feet away from the base unit, making shielding easier. Several detector holders and flow cells are available to suit your particular application requirements. A standard 0 to 1 volt analog signal or optional extended range module is used to connect FlowCount to your existing chromatography data system. Or interface the digital TTL pulse signal with *RaPET Chromatography Software* for maximum sensitivity, dynamic range, and optional cGMP and 21 CFR Part 11 compliance.

Applications

- Radiopharmaceutical Purity (^{99m}Tc, ^{111}In, ^{125}I, ^{123}I, ^{131}I, ^{90}Y)
- HPLC Analysis of ^{125}I and ^{32}P labeled compounds
- Monoclonal antibody labeling and analysis (^{125}I, ^{131}I, ^{90}Y)
- Protein and DNA labeling and analysis (^{32}P, ^{125}I)
- PET tracer analysis (^{18}F, ^{11}C)

RaPET Chromatography Software

RaPET Chromatography Software is a comprehensive chromatography data collection and analysis package. This evaluation software is very reliable and easy-to-use.
It furthermore consists of a GMP database ensuring GMP compliant documentation and adhering to 21 CFR part 11.

Holders and flow cells

A variety of detector holders and flow cells are easily adapted to a wide range of applications. Since the flow cells are made of inexpensive standard Teflon tubing, the flow cells are disposable should they become contaminated. All of our flow cells have variable volumes, which can be set by the user.



FC-5200: Lead shielded (0.5") holder and flow cell for FC-3100/3200 - (FC-3600) detectors. For use with high activity gammas.



FC-5250: Heavily Shielded (2.0") lead holder and flow-cell for FC-3200 detectors. For use with PET isotopes.



FC-5260: Heavily Shielded (2.0") lead holder and flow-cell assembly for FC-3400 and FC-3500 detectors. For use with high activity PET isotopes.

Features and Benefits

- Easy-to-use system with maximum flexibility
- Disposable and easily adjustable flow cells
- Compatible with all chromatography data systems and *RaPET Chromatography Software*
- Various flow cells and holders for most types of applications
- Capable of monitoring two detectors simultaneously
- Lead shielded detector and flow cell holders
- Optional extended range module for 6 decade analog output range Models

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FlowCount

Models

FC-1000

Radiochromatography base unit with inputs for both PMT/NaI and PIN Diode detectors. Analog and digital output for one detector at a time.

FC-2000

Radiochromatography base unit with inputs for both PMT/NaI and PIN Diode detectors. Analog and digital outputs for both detectors available simultaneously.

FC-2000D

Radiochromatography base unit with inputs for two PIN Diode detectors. Analog and digital outputs for both detectors available simultaneously.

FC-2000P

Radiochromatography base unit with inputs for two PMT/NaI detectors. Analog and digital outputs for both detectors available simultaneously.

Detectors

Two types of detectors are available for the FlowCount system, a standard photomultiplier tube (PMT) combined with a scintillation crystal, and a solid state PIN Diode detector. These interchangeable detectors provide the system with the flexibility to measure a wide range of isotopes and activities.

- The FC-3100 Na/I PMT based detector is a low energy gamma (10 – 60 keV) detector used primarily for ^{125}I.
- The FC-3200 Na/I PMT based detector is a high energy gamma (> 60 keV) detector used in most nuclear medicine applications.
- The FC-3600 Plastic Scintillator/PMT based detector is ideal for the detection of ^{32}P, ^{90}Y and other high energy beta emitters.
- The FC-3300 NaI/PMT based detector is a wide range gamma detector with built-in lead shielding to reduce background. It uses a well configuration which gives 4 pi counting geometry.
- The FC-3400 PIN Diode detector is compact and easy to shield. It has a high count rate capability and low sensitivity to provide a linear range from 10 µCi to 1 Ci for most gamma emitters.
- The FC-3500 PIN Diode detector is compact and easy to shield. It uses a CsI (Tl) crystal to provide greater sensitivity for gammas. With the shielding FC-5260, the FC-3500 is recommended for quality control of high activity ^{18}F labeled compounds.

Upgrade your FlowCount to a TLC Scanner: MiniScan

Reference MS-1000: MiniScan TLC mechanical scanning unit with scan speed control and collimated detector holder.

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