



The ORTEC TIMES Customer Newsletter

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To Our Valued Customers

This global customer newsletter is presented to inform you of new product developments, technical tips, and promotions on ORTEC products. We welcome input from our customers on how to make it more useful. If you have a case study you would like to share, please e-mail it to susie.brockman@ametek.com.

New Product Development

ORTEC is moving forward with a fast paced new product development and release program for 2009 with the introduction of a variety of new products for universities, counting labs, homeland security, research and nuclear power plants. Eight new products have been introduced since January 2008, some of which are highlighted in the articles below.

Check our website at www.ortec-online.com for our current product offerings and check back frequently for new releases coming soon.

NEW! Micro-trans-SPEC - Ultra Light, Battery Powered HPGe Gamma Spectrometer



The Micro-trans-SPEC is a portable HPGe Gamma Spectrometer for use in nuclear hold up measurements, in situ waste assay applications, emergency response, nuclear safeguards, reactor maintenance and medical physics. It is useful wherever a portable instrument is desired and light weight is at a premium. The all in one package allows the user to make gamma spec measurements in the field, not just in a laboratory setting. The Micro-trans-SPEC comes complete with MAESTRO-32 software for MCA control, display and basic analysis.

NEW! EASY-MCA - USB2.0, Low Cost, Standalone, Multichannel Analyzer



The EASY-MCA is a low cost, non-NIM MCA. Two versions are available in 2k or 8k resolution. It is stackable, portable, and no PC slots are required. The EASY-MCA comes complete with MAESTRO-32 software for MCA control, display and basic analysis.

NEW! HE Harsh Environment Detector Option



The Harsh Environment (HE option) is now available for PopTop detectors.

This is an excellent option when performing measurements in damp, dusty or hostile environmental conditions. The HE detector includes a carbon fiber endcap to inhibit corrosion, and sealed electronics to prevent moisture and dust from entering the capsule.

NEW! 976 Quad 250-MHz Counter / Timer



The 976 offers four independent 8 digit counters with their own display that can accept up to 250 MHz input rates. A fifth display operates as a timer/counter, rate divider or relay. This NIM solves the problem of multiple counting setup issues for large chemistry or physics experiments.

NEW! DSPEC LF Gamma-Ray Digital Spectrometer



The DSPEC LF is a low cost digital gamma-ray spectrometer for use with HPGe detectors and sodium iodide detectors. The DSPEC LF was built specifically for the customer who needs an "entry level" digital spectrometer and is similar to ORTEC's DSPEC PRO and DSPEC Jr-2.0. It has the temperature stability and high throughput benefits of these digital signal processors as well as the speed and ease of setup with USB, but at less cost.

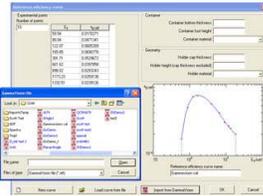
DSPEC LF includes the most popular performance attributes of the DSPEC family, including "rock-solid" peak position and resolution stability with variations in both temperature and count rate over long and short measurement times. Its Insight™ Virtual Oscilloscope and patented Automatic Pole Zero and Baseline Restorer circuits ensure easy set up and optimum performance. DSPEC LF also features the latest USB 2.0 communications, which is 40 times faster than the previous USB implementation.

NEW! Trans-SPEC-DX-100 HPGe Gamma Spectrometer



The trans-SPEC-DX-100 offers users the ability to perform quantitative gamma spectroscopy assays in the field and is perfectly suited for a variety of in situ applications. It features a High-Purity Germanium (HPGe) detector with a greater than 40% relative efficiency. It also provides users with the ability to operate the instrument through wireless communications as well as store data on a removable Secure Digital I/O card. The trans-SPEC-DX-100 comes complete with MAESTRO-32 software for MCA control, display and basic analysis.

NEW! ANGLE Efficiency Calibration Software



ANGLE software provides an alternative to purchasing multiple calibration sources, and removes the need to purchase and count multiple standards to perform all the calibrations - saving time and money.

ANGLE software is a broadly applicable, flexible and user-friendly PC-code for HPGe detectors that derives efficiency calibrations for multiple geometries based on a single measurement from a point source.

Using ANGLE and a single point source, you can create calibrations for a Marinelli beaker (a common geometry in many count rooms), a bottle, a filter paper, or even a can. With just one count of a calibration source, multiple calibrations for various container/geometry/matrix combinations can be generated.

NEED Instant Delivery for a HPGe Detector?

Check our [detector stock list](#).

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tip

Get the Most out of Your GMX or GEM HPGe Purchase!

By - Dr. Richard Hagenauer

The aspect ratio of the HPGe crystal is defined as the length of the crystal divided by its diameter. For general purpose measurements, that is measurements for a wide range of gamma-rays energies, the best choice is a so-called "square" detector. A square detector is not square but the length and diameter are about the same. But detectors can be made and purchased with a different aspect ratio. If you are primarily interested in low-energy gamma rays, you should specify a diameter that is greater than the length. This is because for energies below about 130 keV, the efficiency is approximate proportional to the front surface area of the detector. These low energy gamma rays do not penetrate very far into the crystal before they are completely absorbed. For energies higher than 700 keV, the detector should be longer than the diameter to absorb the high-energy gamma rays.

You can also specify the aspect ratio to better meet the needs of your measurement. This might increase the cost of the detector slightly, but the benefit of better efficiency for your measurement more than compensates.

In addition, ORTEC offers several different types of detectors for specific purposes, such as the Profile series. The Profile detectors are designed to meet the needs of customers who measure activity on filter paper or activity in Marinelli Beakers.