

HUMAN HEALTH

ENVIRONMENTAL HEALTH



TAKE COMMAND OF YOUR GAMMA COUNTING



WIZARD²
Automated Gamma Counters



THE ONE TO COUNT ON FOR YEARS TO COME

Whether you're conducting research, testing or monitoring, you know that gamma counting delivers unprecedented sensitivity for results you can trust. Now, with the expanded WIZARD² family of automatic gamma counters, you can have outstanding sensitivity together with the highest-level security, connectivity and ease of use, giving you greater command over your gamma counting process. Whatever your application need, there's a WIZARD² that delivers superior gamma counting performance.

A gamma counter for today's needs – and tomorrow's challenges

Today's laboratories are pressured to do more with less – fewer resources, less time and tighter turnaround expectations. WIZARD² gamma counters offer enhanced features to make sure you're up to the challenge now and in the future.

- **Simplicity.** Easy viewing and editing of instrument performance parameters such as protocol definition, conveyor movement, general settings and instrument diagnostic settings
- **Fully automated data analysis.** WorkOut Plus™ with QA software for RIA/IRMA and custom data analysis and reporting lets you easily create and transfer custom reports
- **STAT.** Allows high priority, interrupt sample measurement
- **Networkability.** WIZARD² instruments include Ethernet connections to easily share and analyze your data
- **21 CFR Part 11 compatibility.** With optional WorkOut Plus Security software, you can automate your audit trail for electronic record and signature compliance
- **More choices than ever.** From routine counting to more sophisticated research to customer validated clinical solutions in a regulated environment, there's a WIZARD² that's right for your lab
- **WIZARD² Result Viewer.** Allows data viewing and export of sample data, Instrument Performance Assessment™ (IPA), normalization and spectral data

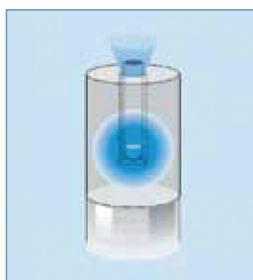
WIZARD² – the ultimate gamma counter that gives today's laboratories a commanding long-term solution.

SUPERIOR PERFORMANCE LABS EVERYWHERE DEPEND ON

Laboratory professionals have relied on WIZARD® and WIZARD² for years. That's because WIZARD² instruments have consistently provided superior gamma counting performance. Only WIZARD² counters provide the following high-performance features.

Well-type detectors for superior counting efficiency

Well-type NaI (TI) detectors collect signals from all around the sample rather than from the sides only. This minimizes the variance effect caused by sample position and volume and provides the best counting efficiency possible.



Well-type detector

Effective lead shielding for consistent background and minimal cross talk

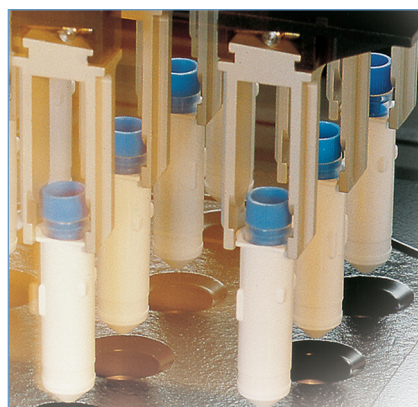
In a universal gamma counter, the lead shielding around the detector is another important factor in determining the performance of the instrument. WIZARD² counters feature a unique sample deck, well type detectors and lead shielding to decrease interferences such as detector and sample deck crosstalk, environmental and background radiation. Additionally, they feature the most lead shielding available on gamma counters today. As a result, you can rely on WIZARD² counters to surpass all other gamma counters in background and cross talk reduction.

WIZARD² lead shielding measurements:

Instruments	Detector Lead Thickness (mm/in)	Lead Shielding Thickness (mm/in)
2470 WIZARD ²	30/1.2	12/0.5
2480 WIZARD ²	75/3.0	50/2.0
3470 WIZARD ²	30/1.2	12/0.5

Robotic sample changer further minimizes cross talk

Only WIZARD² counters feature a unique sample changer system that enables the lifting of samples to the well-type detectors from a conveyor. The conveyor, with the remaining samples, always remains hidden behind the lead shielding.



Robotic sample changer

SOPHISTICATED TECHNOLOGIES FOR FASTER, EASIER ANALYSIS

Improve your entire process with WIZARD², from gamma counting studies to studies for use in customer validated clinical solutions. With the addition of WorkOut Plus software, you can now achieve accuracy, performance and quality control – while significantly reducing the time required for validation in clinical settings.

Easy to Start

Workout Plus will kick-start your analysis with preconfigured protocols, quick start wizards and accompanying online content to get you up and running faster than ever.

- Ready-to-use and easy-to-edit preinstalled example protocols
- Wizards guide you through building your own tailor-made protocols
- Portable protocol format means you can easily share and re-use methods with colleagues, from tech-support and online protocols (www.myassays.com)
- Intuitive layout editor designed for rack-based assays (easily arrange, and change your sample mapping)
- Integrated seamlessly with WIZARD² counting

Ready for Performance

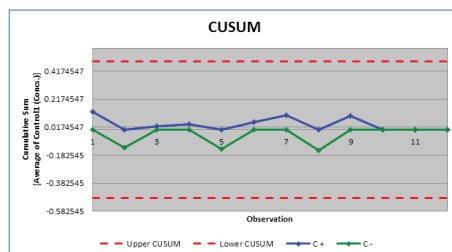
All the data analysis tools you would expect and a whole lot more:

- Transform your data just as your assay dictates: background/blank corrected, % binding, B/B0%, B/T%, factor based, etc.
- Quantitative tools: weighted and unweighted 4-parameter-logistic, 5-parameter-logistic, linear regression, cubic spline, cubic regression, point-to-point and more!
- Qualitative tools: automatically label your sample results with cut-off points (and optional grey zones)
- Easy layout-linked replicate analysis (%CV, standard deviation, variance, median, average, etc.).
- Validation: easy to configure intra-assay and inter-assay validation rules. Flag, highlight or add warning messages to your reports.
- Detect and mark outliers manually, automatically or directly from the curve to exclude from calculations

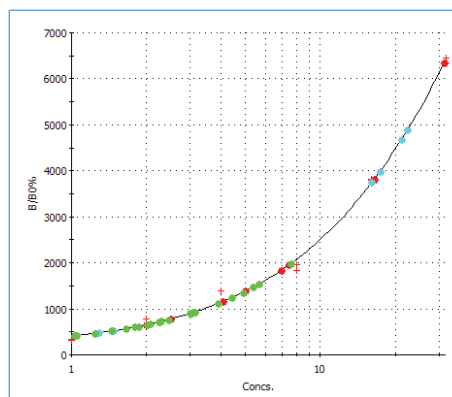
Power and Flexibility

WorkOut's data analysis framework neatly handles more sophisticated applications:

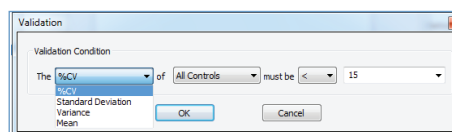
- Create your own methods on top of the included extendable library of data-analysis components designed for assays
- Use WorkOut expressions to write your own formula (refer directly to sample measurements, groups, calculated parameters and reduced data)
- Flexible reporting options - export to Excel/Word/HTML/plain text or auto-print.
- Worklists functions – automatically import sample IDs, concentrations, other data analysis parameters, and assay data fields into analyses and reports
- Advanced import - utilize preconfigured and customizable import scripts to get your data into Workout Plus whatever text/CSV file format you use
- Advanced export options designed to produce exacting output compatible with your LIM system



CUSUM chart observing inter-assay control concentrations



Standard Curve with samples shown on the SPL fit



Specifying intra-assay validation rules

Quality Control

Process inter-assay observations for charting, monitoring and validation of real-time and/or historical data.

- Flexibly define multiple observations to track (such as control measurements, analysed data, ED20, ED50, ED80, etc.)
- Generate CUSUM, Levey-Jennings charts as PDF or Excel
- Define QC rules (such as Westgard) to validate control observations against limits and expected trends
- Add automatic warning messages to assay reports to automatically report inter-assay QC violations
- Observe on-demand or as part of a WorkOut protocol

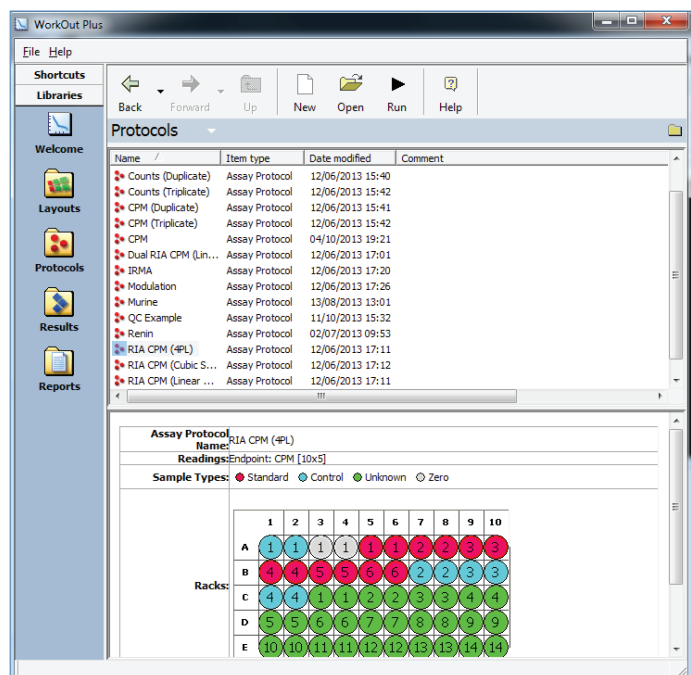
21 CFR Part 11 Compatibility

Optional Enhanced Security module designed specifically for integration with WIZARD² system provides features required for 21 CFR Part 11:

- Data files protected at the operating-system level for maximum security against unauthorized access
- Shared authentication system with WIZARD² Enhanced Security system to simplify user administration
- User management – assign each user to a customizable group of WorkOut authorizations
- Audit trail – secured exportable and printable logs containing full details of all log-in attempts, user operations and full calculation history all date/time stamped and user linked.

WorkOut Plus Online Support

- Renowned technical support experts
- Extensive online training videos provided at www.myassays.com/workout-plus
- Further assay protocols available online or through technical support.



Ready-to-run example protocols in a familiar user-interface

WHICH WIZARD² IS RIGHT FOR YOU?

WIZARD² gamma counters offer you choice in sample capacity, shielding thickness and configurations, including optional security features. With so many options, there's a WIZARD² that's right for you and your applications. No matter which model you choose, you can count on superior gamma counting performance year after year.

FOR RESEARCH APPLICATIONS

2470 WIZARD² with optional WorkOut Plus data analysis

- **Ideal for RIA and IRMA studies.** All RIA tube-based studies can be performed with WIZARD² instruments. Optional WorkOut Plus software can be added for additional data analysis
- **Perfect for chromium release studies.** Minimal cross talk from samples on the conveyor means that the WIZARD² is optimal for working with higher energy isotopes such as ⁵¹Cr
- **Isotope library.** Contains information for 45 radionuclides
- **IPA.** WIZARD² monitors 9 detector parameters and automatically provides documentation
- **LAN connectivity and USB.** Makes networking and data transfer flexible
- **Choice of models.** Available with 1, 2, 5 or 10 detectors with 550-sample capacity; 5 and 10 detectors with 1,000-sample capacity
- **Compact footprint.** The 550-sample WIZARD² is the smallest automatic 10-detector gamma counter available. Its 65 x 77 cm (25.6 x 30.3 in) footprint makes the most of your lab space

FOR RESEARCH, ANALYTICAL OR CUSTOMER CLINICAL APPLICATIONS

2480 WIZARD² with optional WorkOut Plus or WorkOut Plus ES (21CFR compatibility)

- **Superior performance for PET studies.** Designed for minimal cross talk, the 2480 WIZARD² delivers the best possible counting performance for PET studies
- **Ideal for high-energy or low-activity samples.** With its high-efficiency detector, ability to count sample volumes up to 20 mL and effective lead shielding, the 2480 WIZARD² is particularly suitable for high-energy gamma emitters, low-activity samples, environmental samples or Schilling tests
- **High-efficiency, 3-inch well-type detector.** Delivers improved counting efficiency, extended energy range and better energy resolution
- **Isotope library.** Contains information for 51 radionuclides
- **One model for all special application needs.** Accommodates both 1,000- and 270-sample capacity of 13 mm (0.5 in) and 28 mm (1.1 in) vial diameters, respectively
- **IPA.** WIZARD² monitors 9 detector parameters and automatically provides documentation
- **Enhanced Security compatibility and LIM system integration.** Optional WorkOut Plus ES (21CFR compatibility) and WIZARD² Enhanced Security Software streamlines 21 CFR part 11 compatibility and your ability to upload work lists and download results to a LIM system
- **LAN connectivity and USB.** Makes networking and data transfer easy
- **Results Viewer utility.** Access and export data from the WIZARD² database



WIZARD² is available in several models featuring 550- and 1,000-sample configurations and with 1, 2, 5 or 10 detectors.

FOR CUSTOMER VALIDATED CLINICAL APPLICATIONS

3470 WIZARD² with WorkOut Plus Enhanced Security (21CFR compatibility)

The ultimate gamma counter for the clinical setting, the 3470 WIZARD² delivers all the features and benefits of the 2470 WIZARD² in the same small footprint, in addition to the following:

- **21CFR part 11 compatibility and LIM System integration.** WorkOut Plus ES (21CFR compatibility) and WIZARD² Enhanced Security Software streamlines 21 CFR part 11 compatibility and your ability to upload work lists and download results to a LIM system
- **IPA.** WIZARD² monitors 9 detector parameters and automatically provides their documentation
- **LAN connectivity and USB.** Make networking and data transfer easy
- **Results Viewer utility.** Access and export data from the WIZARD² database

SUPERIOR PERFORMANCE, YET EASY TO USE

No matter which model you choose, WIZARD² is designed for ease of use. Once protocols are entered, simply load your samples and press START. It's that simple to take command of your gamma counting.

WIZARD²: Choose the model and options right for your labs

	2470 WIZARD ²		2480 WIZARD ²	3470 WIZARD ²	
Sample capacity available	550	1,000	270/1,000*	550	1,000
# of detectors available	1, 2, 5 or 10	5 or 10	single 3-inch detector	5 or 10	5 or 10
WIZARD ² Data Viewer	optional	optional	standard	standard	standard
WIZARD ² Enhanced Security	optional	optional	optional	standard	standard
WorkOut Plus	optional	optional	optional	standard	standard
WorkOut Plus ES (21CFR compatibility)	NA	NA	optional	standard	standard

* Model can run 270 20 mL vials or 1,000 12 x 75 mm tubes.

PerkinElmer IPA: designed to detect any errors before you do

Exclusive to WIZARD², IPA automatically supports laboratory QC systems by performing routine tasks for continued reliability.



- Instrument Performance Assessment (IPA) inspects the isotope spectrum and immediately warns of any condition that generates an unexpected result
- IPA automatically monitors parameters such as window counts and absolute efficiency on each detector and provides documentation
- IPA offers at-a-glance performance history views on the WIZARD² simple touch screen, which further improves your lab's productivity

Count on WIZARD²

From setup to training, low to high capacity, simple counting studies to sophisticated analysis, look to WIZARD² as the long-term solution that delivers superior counting performance and excellent security. It's the one your lab can count on for years to come.

Results. Smarter. Faster.

With a growing emphasis on translational insight, it is more important than ever to be able to examine the molecular mechanisms of disease and translate your *in vitro* models into *in vivo* results. PerkinElmer offers leading solutions and renowned expertise in assays, imaging and informatics that will help you bring it all together. Whether working in a well, cells or small animals, now you can focus on your science, gain insight sooner and succeed faster.

Learn more at www.perkinelmer.com/wizard2

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