LIFE SCIENCE

CELL • SMALL ANIMAL • BLOOD

RAD SOURCE

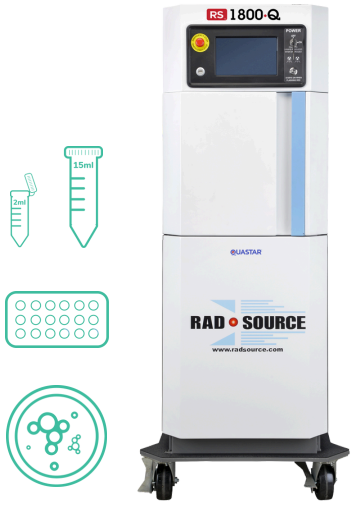
POWERED BY QUASTAR

BIOLOGICAL IRRADIATON

RS 1800•Q

The Most Powerful Dedicated Cell Irradiator Available

- Industry-Leading Dose Uniformity: Superior dose consistency across all cell samples
- Highest Dose Rate: Superior cell inactivation at top dose rates
- RADPlus™ Research Tools: Enhanced dose uniformity for superior research results
- Efficient Cooling System: Onboard cooling available dependent of capacity
- Flexible Dosing: 3-level chamber enables variable specimen placement and dose rate
- Convenient and Mobile: Sturdy wheels for easy placement and workflow efficiency



APPLICATIONS

Cancer research, immunology, feeder cell arrestment, hybridoma cells, apoptosis, seeds and grains, tissue cells, feeder cells, stem cells, stem cell production, immunotherapy, cell research.

SPECIFICATIONS

Source: QUASTAR™
Power: 208/240VAC, Single phase, 50/60Hz, 30 Amp
Dimensions: 30'' W x 64''H x 36''D
Weight: 1,350 lb

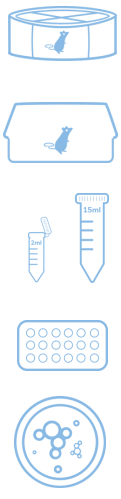
RS 2000•Q2

The New Industry Standard for Small Animal Irradiation

- Unmatched Dose Consistency: X-ray's leading symmetry, flatness, penetration platform
- High Effective Energy: Delivers power comparable to a 320 kV point source for effective results
- Research Support: RADPlus™ tools optimize dose uniformity and animal well-being
- Versatile Dosing Options: Multi-level chamber adapts to varying dosing needs with ease
- Plug-in and Work: Utilizes std. 120V outlets, simplifying integration into any lab
- Efficient Cooling System: Efficient cooling without requiring external water connections (120V)
- Enhanced Portability: Compact with casters allows for flexible placement and easy movement

APPLICATIONS

The RS 2000 • Q2 supports in vivo studies involving small animal models for genetics, disease progression, and treatment responses, as well as tissue irradiation, feeder cell irradiation, stem cell research, stem cell production, cancer research, immunotherapy, myeloablation, and cell arrestment.



SPECIFICATIONS

Source: QUASTAR™
Power: 104-120 V, Single Phase, 20 A, 50-60 Hz
208-240 V, Single Phase, 30 A, 50-60 Hz
Dimensions: 43'' W x 75''H x 36''D
Weight: 2,750 lb
Certifications: CE MARK, CB Scheme

BLOOD IRRADIATON

RS 3400

The #1 Blood Irradiator in the World

- International Gold-Standard Dose Uniformity: 1.6 to 1.36
- High Throughput Efficiency: Process 6L in just 5 minutes
- Advanced Cooling System: Onboard cooling, no external water required
- Versatile Sample Compatibility: Blood bags, platelet bags and syringes
- Superior Dose Uniformity: Rotating dosing carousel ensures even irradiation
- Compact and Mobile Design: Small footprint with easy mobility for lab use
- Global Certifications: US-FDA cleared, CE marked, and CB Scheme certified

APPLICATIONS

Blood, plasma, and other blood products.

SPECIFICATIONS

Source: QUASTAR™
Power: 208/240VAC, Single phase, 50/60Hz, 30 Amp
Dimensions: 34" W x 67.8"H x 33"D
Weight: 1,750 lb

RESEARCH ACCESSORIES

RadPlus™ Research Tools

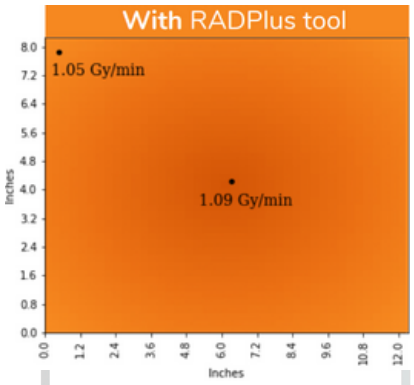
Better Dose Uniformity, Better Research Outcomes

Ensuring the well-being of lab animals and maintaining the integrity of biological samples is essential for achieving accurate and meaningful research outcomes. RADPlus Research Tools are specifically designed for scientists like you, working in biological irradiation with small animals, cells, and blood. These tools not only improve dose uniformity but also prioritize the welfare of your subjects and samples.

By reducing stress on animals and enhancing sample handling, RADPlus supports more reliable, reproducible results while upholding ethical research practices.

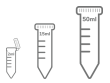
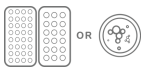
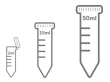
Key RadPlus benefits include:

- Uniform Dosing with Higher Dose Rates
- Safe and Reduced Stress Animal Irradiation
- Versatile Support for Research Consumables



Heat maps show higher dose uniformity with the use of RadPlus Tools. Darker areas signify higher dose rates.

ACCESSORIES

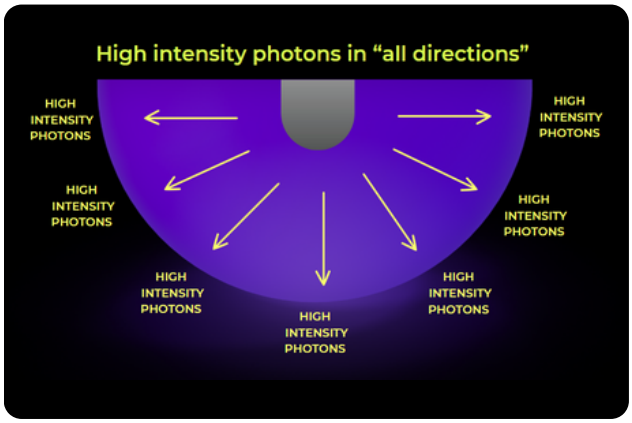
CONSUMABLE	ACCESSORY	DESCRIPTION + PART NUMBER	1800•Q	2000•Q2	3400
		**RadPlus Vial Rotator** Holds vials at an angle and rotates for better dose uniformity. Holds eight 15 ml vials. RS# 1409656	●	○	○
		**RadPlus Shelf** Improves dose uniformity for cell applications. Holds well plates and petri dishes. RS# 1404471	●	○	○
		**RadPlus Vial Holder** Holds vials at an angle for better dose uniformity. Holds 2 mL to 50 mL vials. RS# 1402270	●	○	○
		**RadPlus Well Plate Holder** Improves dose uniformity for cell applications. Holds standard 24 and 96 well plates. RS# 1402273	●	●	○
		**RadPlus Petri Dish Holder** Improves dose uniformity for cell applications. Holds 3 to 14 plates depending on size. RS# 1402272	●	●	○
		**RadPlus Round** Improves dose uniformity for small animal applications. Holds Braintree cages. RS# 1420221	○	●	○
		**RadPlus Rectangle** Improves dose uniformity for small animal applications. Holds Innovive cages. RS# 1402300	○	●	○
		**Syringe Holder** Holds up to three drawn syringes with Leur Lock Caps. RS# 3400-09401	○	○	●
		**Carbon Fiber Canister** Holds blood bags, platelet bags, and drawn syringes. RS# 1402055	○	○	●
		**Rad Scan Bar Code Reading Kit** Scanner, tablet, and software to manage cycle data. RS# 1409383	○	○	●
		**AccuTag Blood Irradiation Indicators** Identifies if a blood bag has received accurate dosing. RS# AccuTag	○	○	●

QUASTAR®- Engineered for the Demands of Life Sciences

Setting New Standards in Precision and Reliability

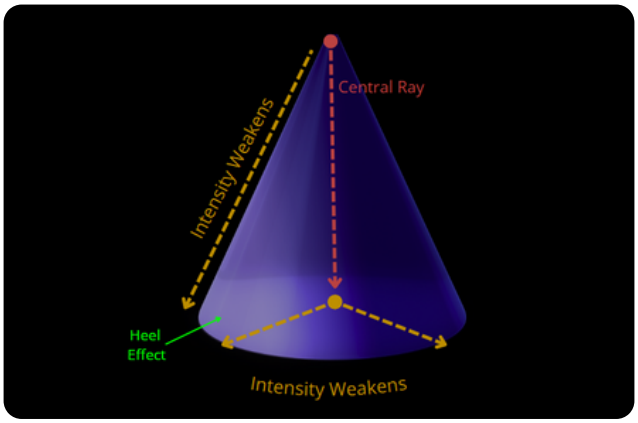
Precision in irradiation ensures accurate and consistent radiation delivery to specific targets, critical for reliable experimental results. It minimizes variability, providing uniform dose distribution to the entire sample, and allows researchers to replicate findings with consistency. The advanced technology of QUASTAR delivers superior precision compared to older methods such as point source, ensuring more controlled and reliable outcomes.

QUASTAR Beam (c. 2008)



QUASTAR emits photons in all directions, using a through-transmission design that ensures consistent uniform radiation intensity across the entire target.

Point Source Beam (c. 1895)



PS technology uses reflection causing non-symmetrical distribution of photons. Intensity also weakens as the beam travels further from the source leading to less consistent radiation intensity across the target.

Why the QUASTAR X-ray platform Stands Out

Traditional Point Source tubes, designed over a century ago for imaging, struggle with modern life science applications. QUASTAR's advanced X-ray platform overcomes the following limitations, making it the ideal choice for today's cutting-edge life science research.

Photon Flux

QUASTAR generates a higher photon output, delivering stronger beams with better penetration.

Anode Heel Effect Elimination

QUASTAR eliminates intensity loss at the beam's edges seen in Point Source designs, resulting in uniform radiation distribution.

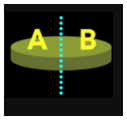
Field Size

QUASTAR emits X-rays in all directions, covering a larger field size.

X-ray Generation Efficiency

QUASTAR uses 10X less energy to produce one usable photon.

Why QUASTAR Leads in Dose Uniformity

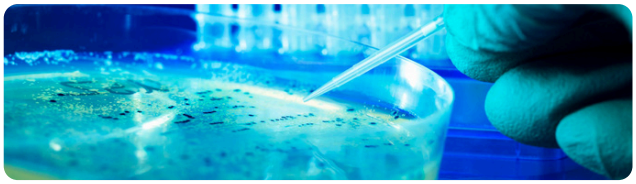


Symmetrical Beam
A balanced beam from one side to the other, ensuring even exposure.

Flat Beam Profile
More homogeneous dose across the target, critical for research accuracy.

Beam Penetration
Effective energy comparable to a 320 kV point source tube for deep tissue irradiation.

Better Dose Uniformity = Better Research



QUASTAR's Unmatched Dose Uniformity Benefits include:

- Optimized Dose Delivery
- Improved Cell and Animal Viability
- Consistent and Reproducible Experimental Outcomes
- Enhanced Ethical Research Practices
- Improved Operational Efficiency

Healthier Animals, Better Research™

As a research scientist, you understand that the welfare of lab animals is not just an ethical responsibility but also critical for obtaining high-quality, reproducible results. RADPlus Research Tools support humane treatment by improving animal comfort, minimizing stress, and enhancing overall research conditions. These tools enable you to uphold the highest standards of care while maintaining the scientific rigor of your studies.

Improved Animal Comfort

RADPlus Research Tools enhance dose uniformity, allowing animals to remain in their familiar cages during irradiation without the need for sedation or restraint. By minimizing stress and discomfort, you can produce more accurate data and ensure the integrity of your results.

Lower Risk of Cross-Contamination

Keeping animals in their own cages during irradiation not only improves their comfort but also reduces the risk of cross-contamination. This controlled environment ensures that your research remains consistent and reliable throughout the study.

Shorter Handling Time

With RADPlus Research Tools, the reduced handling and quicker irradiation process minimize the time animals spend under stress. This not only enhances the welfare of the animals but also improves operational efficiency in your lab.

Enhanced Ethical Practices

RADPlus Research Tools meet and exceed humane treatment standards, helping you align with ethical guidelines. By prioritizing the well-being of your animal subjects, you strengthen the credibility of your research and its acceptance in the scientific community.

About Rad Source

Rad Source Technologies is a global leader in delivering innovative and high-quality irradiation solutions for life science, medical research, cannabis decontamination, and inspection. With over 24 years of experience and a strong commitment to excellence, Rad Source has transformed the field of biological irradiation through our proprietary QUASTAR™ X-ray platform. Our cutting-edge systems are engineered to provide unmatched dose uniformity, precision, and safety, ensuring optimal results for our clients across various industries.

Trusted by leading hospitals, universities, research institutions, and commercial facilities worldwide, Rad Source is dedicated to advancing scientific research and public health. Our team of experts continuously works to innovate and enhance our products, keeping pace with the evolving needs of our customers. With over 1,000 installations globally, Rad Source continues to set the industry standard for excellence and reliability.

Discover the difference that Rad Source Technologies can make in your irradiation needs.

Visit our website at www.radsource.com for more information.

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