LIFE SCIENCE

CELL • SMALL ANIMAL • BLOOD

RAD SOURCE

BIOLOGICAL IRRADIATON

RS® 1800• Q

The Most Powerful Cell & Tissue Irradiator Available

- **QUASTAR® X-ray Platform:** proprietary platform built for life science
- **High Dose Rate**: highest dose rate for a dedicated cell irradiator
- **Industry Leading Dose Uniformity**: symmetry, flatness, & penetration
- **Onboard Cooling**: no external water required for standard unit
- **Flexibility**: three-level chamber for dose rate flexibility

Applications

Cancer & Cell Research,
Immunology Research,
Immunotherapy Research,
Tissue Cells, Stem Cells &
Stem Cell Production,
Apoptosis, Feeder Cells &
Feeder Cell Arrestment,
Hybridoma Cells,
Seeds/Grains,

Specifications

Source: QUASTAR
Power: 208/240VAC, Single phase
Dimensions: 30" W x 64"H x 36"D
Weight: 1,350 lb

RS® 2000• Q2

The New Industry Standard for Small Animal, Cell, and Tissue Irradiation

- **Improved QUASTAR 2 X-ray Platform:** third generation dynamic tube technology with enhanced performance and reliability. Designed to be upgradeable
- **High Effective Energy:** comparable to 320 kV point source tubes
- **Industry Leading Dose Uniformity:** ensures consistent and reproducible experimental results
- **Unmatched reliability:** minimizes downtime and lowers operational costs
- **Plug and Play:** operates on a 120V wall outlet - no external chiller required (standard unit)
- **Flexibility:** three-level chamber for dose rate flexibility

Applications

Study of Small Animal Genetics
Disease Progression
Treatment Responses
Tissue Irradiation
Cancer Research
Cell Arrestment
Feeder Cell Irradiation
Immunotherapy Research
Myeloablation
Stem Cell Research
Stem Cell Production

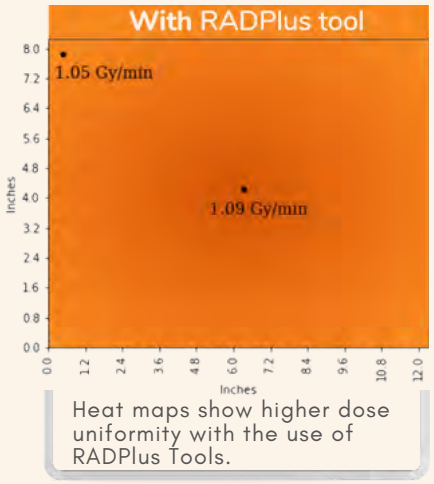
Specifications

Source: QUASTAR 2
Power: 104-120 V, Single Phase
208-240 V, Single Phase
Dimensions: 43" W x 75"H x 36"D
Weight: 2,750 lb

RADPlus® Research Tools

Better Dose Uniformity, Better Research Outcomes

RADPlus Research Tools boost the performance and versatility of our biological irradiators. Designed for compatibility with common research consumables, they help deliver consistent, reproducible results while supporting ethical practices.



Heat maps show higher dose uniformity with the use of RADPlus Tools.

Key RADPlus benefits include:

- Enhanced dose uniformity
- Higher dose rates
- Improved animal welfare
- Increased operational efficiency
- Improved research results

BLOOD IRRADIATON

RS® 3400

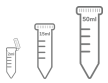
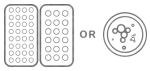
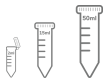
The #1 Blood Irradiator in the World

- **QUASTAR X-ray Platform:** proprietary platform built for life science
- **High Throughput:** process 6L in just 5 minutes
- **Industry Leading Dose Uniformity:** 1.6 to 1.36 DUR
- **Flexibility:** process blood, platelets, and syringes in the same cycle
- **Carousel Rotator:** further improves dose uniformity
- **Certifications:** US-FDA cleared, CE marked, and CB Scheme certified
- **Onboard Cooling:** no external water required

Applications
Blood
Plasma
Related blood products

Specifications
Source: QUASTAR
Power: 208/240VAC, Single phase
Dimensions: 34" W x 67.8"H x 33"D
Weight: 1,750 lb

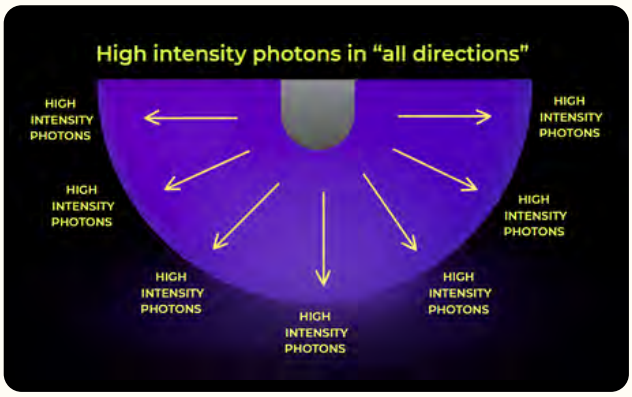
ACCESSORIES

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 Source Technologies Bar Coding System** 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

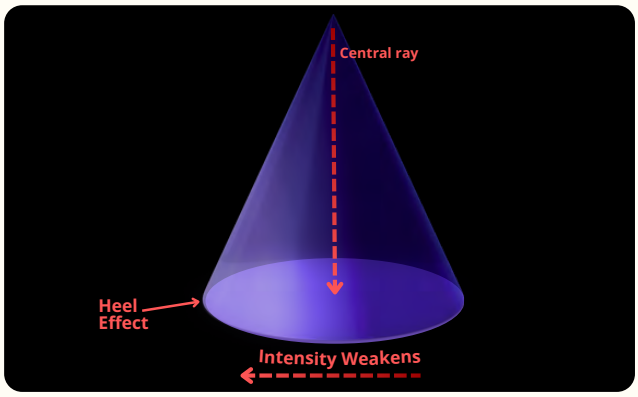
The advanced QUASTAR X-ray platform outperforms traditional irradiators reliant on outdated point source tubes, providing the high-level performance essential for modern life science research.

QUASTAR Beam (c. 2008)



QUASTAR's though-transmission design emits high-intensity photons in all directions.

Point Source Beam (c. 1895)



Point source tubes produce a non-symmetrical photon distribution, resulting in uneven intensity.

Why the QUASTAR X-ray Platform Stands Out:

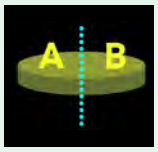
Industry Leading Dose Uniformity
QUASTAR eliminates low-intensity on one side of the beam, which is characteristic of all point source tubes, and has superior symmetry, flatness, and penetration.

Higher Dose Rates
QUASTAR generates a higher photon output and higher average photon energy, resulting in higher dose rates.

Larger Field Size
QUASTAR emits photons in all directions, creating a larger field size than point source tubes.

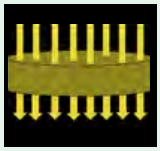
Energy Efficiency
QUASTAR uses 90% less energy than point source tubes, which truncate the majority of the photons produced.

Why QUASTAR Leads in Dose Uniformity:



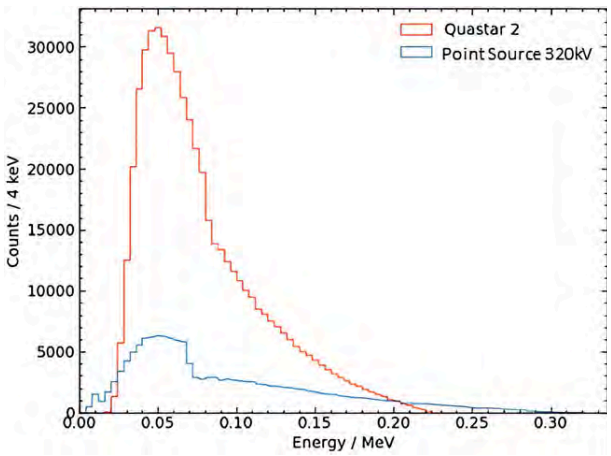
Symmetry
Balanced intensity across the beam's centerline ensures both sides of the irradiated area receive equivalent doses.

Flatness
Consistent intensity across the entire beam provides uniform dosing throughout the entire target area.



Penetration
Unique filtration produces a harder inherent beam with a greater proportion of high-energy photons, enabling more effective deep tissue irradiation.

Energy Spectrum:



QUASTAR Delivers:

- Higher average energy for superior penetration
- 3× greater usable photons (area under the curve)

QUASTAR's Key Benefits:

- Optimized Dose Delivery
- Improved Cell Viability and Animal Welfare
- Consistent and Reproducible Experimental Results
- Improved Operational Efficiency

Better Dose Uniformity = Better Research

Healthier Animals, Better Research™

Animal welfare is not only an ethical obligation, it's essential to achieving high-quality, reproducible scientific results. RADPlus Research Tools support both by improving dose uniformity and animal health, while streamlining your workflow.

Minimized Stress and Injury

Animals remain in their cages during irradiation, eliminating the need for sedation or restraint, and reducing stress and the risk of injury.

Reduced Cross-Contamination

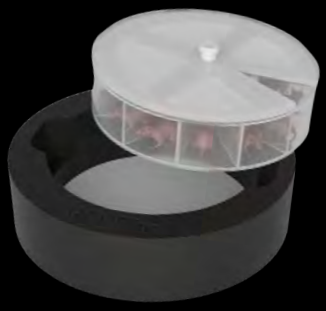
Keeping animals in their cages minimizes the chance of exposure to other groups.

Shorter Handling Time

Less handling means quicker procedures, improving animal welfare and operational efficiency.

Versatile by Design

RADPlus tools support both rectangular and pie-shaped cages, ensuring a smooth transition from legacy irradiators to the RS 2000 • Q2.



About Rad Source

- Rad Source Technologies is a global leader in irradiation systems for life science applications
- With over 1,000 installations, Rad Source is trusted by top hospitals, universities, research institutions, and commercial facilities
- Discover the difference that Rad Source Technologies can make at www.radsource.com

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