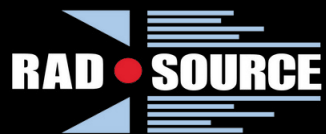


# LIFE SCIENCE

CELL • SMALL ANIMAL • BLOOD



# BIOLOGICAL IRRADIATION

## RS® 1800•Q

### The Most Powerful Cell & Tissue Irradiator Available

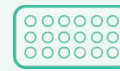
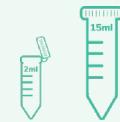
- **QUASTAR® X-ray Platform:** proprietary platform built for life science
- **High Dose Rate:** highest dose rate for a dedicated cell irradiator
- **Industry Leading Dose Uniformity:** symmetry, flatness, & penetration
- **Onboard Cooling:** no external water required for standard unit
- **Flexibility:** 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: 220 V +/- 5%, 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

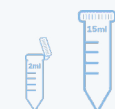
- **Improved QUASTAR® 2 X-ray Platform:** third generation dynamic tube technology with enhanced performance and reliability. Designed to be upgradeable
- **High Effective Energy:** comparable to 320 kV point source tubes
- **Industry Leading Dose Uniformity:** ensures consistent and reproducible experimental 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: 110-120 V, Single Phase  
220 V +/- 5%, Single phase  
Dimensions: 43" W x 75" H x 36" D  
Weight: 2,750 lb



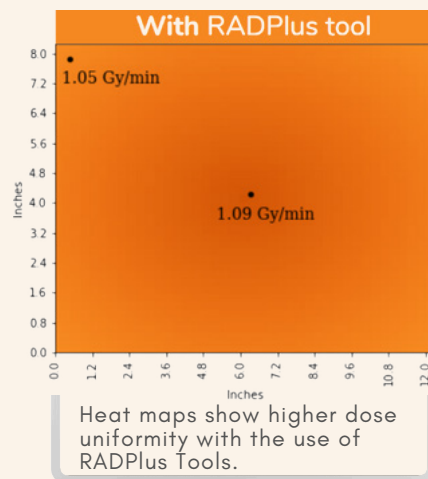
# RADPlus® Research Tools

## 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.

### Key RADPlus benefits include:

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



## BLOOD IRRADIATION

### RS® 3400

#### The #1 Blood Irradiator in the World

- **Industry Leading Dose Uniformity**
- **QUASTAR® X-ray Platform:** proprietary platform built for life science
- **High Throughput:** process 6L in just 5 minutes
- **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

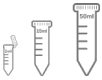


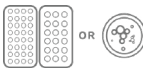





























#### Specifications

Source: QUASTAR  
Power: 220 V +/- 5%, Single phase  
Dimensions: 34" W x 67.8" H x 33" D  
Weight: 1,750 lb





# ADD-ONS

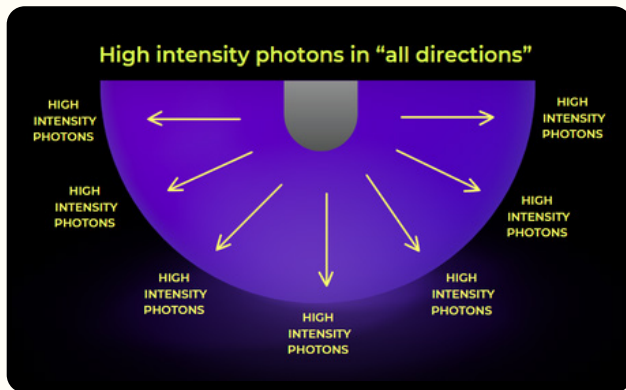
CONSUMABLE	ADD-ONS	DESCRIPTION + PART NUMBER	1800•Q	2000•Q2	3400
			<b>RADPlus Vial Rotator</b> Holds vials at an angle and rotates for better dose uniformity. Holds eight 15 ml vials. RS# 1409656		
			<b>RADPlus Shelf</b> Improves dose uniformity for cell applications. Holds well plates and petri dishes. RS# 1404471		
			<b>RADPlus Vial Holder</b> Holds vials at an angle for better dose uniformity. Holds 2 mL to 50 mL vials. RS# 1402270		
			<b>RADPlus Well Plate Holder</b> Improves dose uniformity for cell applications. Holds standard 24 and 96 well plates. RS# 1402273		
			<b>RADPlus Petri Dish Holder</b> Improves dose uniformity for cell applications. Holds 3 to 14 plates depending on size. RS# 1402272		
			<b>RADPlus Round</b> Improves dose uniformity for small animal applications. Holds Braitree cages. RS# 1402221		
			<b>RADPlus Rectangle</b> Improves dose uniformity for small animal applications. Holds Innovive cages. RS# 1402300		
			<b>Syringe Holder</b> Holds up to three drawn syringes with Leur Lock Caps. RS# 3400-09401		
			<b>Carbon Fiber Canister</b> Holds blood bags, platelet bags, and drawn syringes. RS# 1402055		
			<b>Rad Source Technologies Bar Coding System</b> Scanner, tablet, and software to manage cycle data. RS# 1409383		
			<b>AccuTag Blood Irradiation Indicators</b> Identifies if a blood bag has received accurate dosing. RS# AccuTag		



# QUASTAR® - Engineered for the Demands of Life Sciences

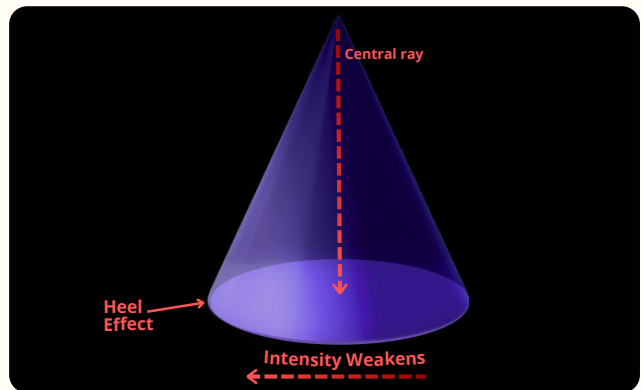
The advanced QUASTAR X-ray platform outperforms traditional irradiators reliant on outdated point source tubes, providing the high-level performance essential for modern life science research.

## QUASTAR Beam (c. 2008)



QUASTAR's through-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.

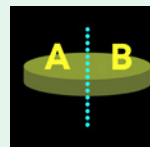
### Larger Field Size

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:



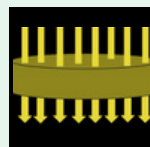
### Symmetry

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



### Flatness

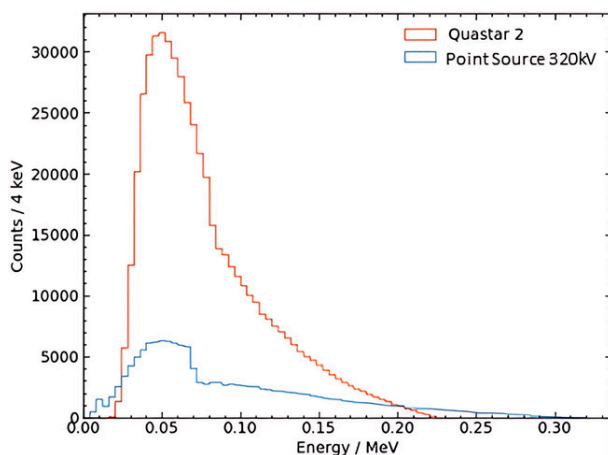
Consistent intensity across the entire beam provides uniform dosing throughout the entire target area.



### 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
- 3x 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

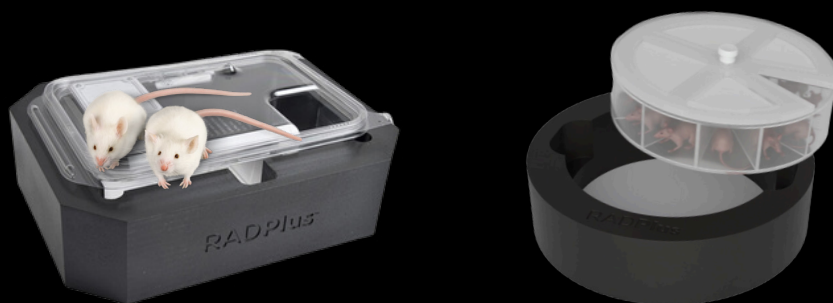
Keeping animals in their cages minimizes the chance of exposure to other groups.

### 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.radsourcetechnologies.com](http://www.radsourcetechnologies.com)



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[www.radsourcetechnologies.com](http://www.radsourcetechnologies.com) | 678.765.7900

BU-BR-0007 Rev 3, 10/2025



Our Irradiators are  
Made in the USA