

Prostate Brachytherapy Services Offered Through Cardinal Health, Nuclear Pharmacy Services



Radiation Oncology

Introduction

Cardinal Health is uniquely qualified to be your full-service prostate brachytherapy solution. It can be your one resource in developing a new brachytherapy center for your institution.

Prostate brachytherapy is the fastest growing treatment modality for early stage (localized) prostate cancer and offers a number of advantages compared to alternative treatments including: outpatient procedure, rapid patient recovery, lower costs, and reduced side effects such as impotency and incontinence.

For the Radiation Oncologist, brachytherapy delivers a higher dose to the prostate than external beam techniques; and for the Urologist, brachytherapy offers an excellent alternative to surgery in those patients unwilling or unsuitable for surgery. Cardinal Health's domestic and international nuclear pharmacy network and leadership in distribution of radioactive pharmaceuticals enables it to provide unique service and local support to brachytherapy customers. Our clinically oriented staff is available to assist you with your brachytherapy needs. Refer to the next page for ordering and licensing information.

Full-Service Prostate Brachytherapy Solution



- Brachytherapy seeds
- Equipment
- Lease financing
- Marketing support
- Reimbursement hotline
- Training and proctoring
- Remote treatment planning
- Radioisotope licensing
- Preloaded sterilized needles

Services

Dual isotopes from the most trusted name in radiopharmaceuticals with I-125 and Pd-103 Prostate Brachytherapy Seeds. Our seed offering features high-density markers, which provide high contrast for imaging and can be obtained in a variety of wide activity ranges. Your seeds are hand delivered directly to your hot lab by our local Cardinal Health Radiopharmacy customer service staff.

An innovative, multi-faceted radiation oncology quality assurance software program, Seed Plus! is designed to document and track every non-treatment planning issue associated with an implant procedure. It allows the radiation oncologist, medical physicist and nurse practitioner to access and store data relating to seed inventory, seed calibrations, double checks, PSA results, complications and pre- and post-plan dosimetry tracking.

We aligned with experts in the field who can train urologists, radiation oncologists, radiation physicists, dosimetrists and nursing staff in state-of-the-art techniques. We also arrange for proctorships so your brachytherapists can feel confident beginning with the very first procedure.

Cardinal Health has an industry leading radiation safety compliance program and extensive expertise in regulatory compliance. Let us help your facility with radioisotope licensing.

As you establish and build your brachytherapy practice, you can take advantage of the financial services offered by Cardinal Health's leasing partners. We can help you get your facility up and running with several financial package options to facilitate procurement of your brachytherapy equipment.

We put together a program offering a customized ready-to-use delivery system for preloaded sterilized needles directly corresponding to the patient's treatment plan. This prepackaged, complete system helps eliminate loading time and radiation exposure for the clinician, and is available loaded with loose seeds and spacers or with World Wide Medical Technologies' Readi-Strand™. Once loaded to the pre-plan prescription, the needles are sterilized and shielded for shipment. A radiographic film is provided for verification of the load pattern.

Cardinal Health and American Medical Accounting and Consulting (AMAC) have formed a relationship that allows AMAC to provide, to Cardinal Health customers, financial information that is related to seed implant procedures. This service is intended to assist our customers with their reimbursement-related questions.

Cardinal Health, Nuclear Pharmacy Services Ordering and Licensing Information

How to reach your local Cardinal Health Radiopharmacy

Please contact your local Cardinal Health Radiopharmacy for details before placing an order. Note that terms and conditions may vary from country to country.

If you require equipment or services not featured in this catalog, please call us. Our product line is always being expanded, and we may be able to help you.

Order information requirements

To avoid errors and delays please include the following information:

- Shipping address
- Billing address
- Purchase order number
- Copy of radioactive materials license, if applicable
- Activity desired[†]
- Tax-exemption certificate, if applicable

[†] Actual activity content may vary from the stated nominal activity due to manufacturing tolerances and decay.

Prices

Quotations will be supplied on request. All orders are subject to tax and handling charges. All prices and specifications are subject to change without notice. International pricing can be obtained by contacting your local Cardinal Health Radiopharmacy.

When making a payment

- Make payments in favor of Cardinal Health
- Reference our invoice number on any checks

Payment is in U.S. dollars, unless otherwise specified.

Terms

Payment terms are payable upon receipt. Accounts not paid within a 30 day period are subject to 1.5% charge for each additional month; yearly charge is 18%. If the financial condition of the purchaser at any time does not justify continuance of production or shipment on the terms of payment specified, we may, in addition to other rights lawfully available, require payment or partial payment in advance. For international orders, contact your local Cardinal Health Radiopharmacy in your country for specific international terms.

Delivery

Cardinal Health is committed to maintaining excellence in processing and delivering your order as quickly as possible. We will make every effort to accommodate special shipping requirements that deviate from standard practice (additional charge may apply).

F.O.B. point

For domestic orders, all products in this catalog are F.O.B. shipping point, subject to change without notice. Cardinal Health can arrange for insurance at customer's expense.

Shipping method

Cardinal Health ships by the most economical common carrier. Rates vary by weight and distance. Domestic transit time is generally 3 to 7 working days. All shipments are made at the purchaser's expense and risk. Radioactive sources cannot be shipped by ground service. Method and route of shipments are at Cardinal Health's discretion, unless the purchaser supplies explicit instructions confirmed by Cardinal Health in writing. If special crating is requested, additional crating shall be added at the expense of purchaser. International orders must specify freight forwarder.

Taxes

Customer is responsible for all taxes. Cardinal Health will invoice the customer for all sales taxes. If applicable, the customer may provide Cardinal Health with evidence of tax exemption.

Damage in shipment

Our packaging complies with and, in most cases, exceeds normal shipping requirements. Despite the care used in packaging, damage sometimes occurs in transportation. All shipments must be opened immediately upon receipt for inspection of concealed damages occurring in transit. On discovery of any damage, stop unpacking, hold the shipping container and ask the carrier for an inspection report. Carrier notification must be made immediately. All claims for damage should be made against the transportation company.

Return shipment policy

All return or exchange of products must be prearranged with your local Cardinal Health Radiopharmacy within 30 days after receipt of an order. Returns or exchanges will be issued a Return Authorization Number. A restocking fee may be charged if applicable. Return or exchange may not be available in certain countries.

Return of radioactive material

Prior to the return of any radioactive material, customer must obtain a Return Authorization Number and shipping instructions from the local Cardinal Health Radiopharmacy. Under no circumstances will credit or replacement be issued for returns not identified with a return number. After receiving authorization, Cardinal Health will furnish specific instructions for the proper return of the material, including shipping documents, labels and packaging material.

Refund policy

Cardinal Health may credit your account or replace the shipment of product under the following circumstances:

- If your order has been incorrectly filled by Cardinal Health
- If the product does not meet specifications contained herein

In any of these above situations, notify your local Cardinal Health Radiopharmacy within 30 days of receiving the product. Otherwise, credit or replacement will not be issued.

Cancellation policy

Orders for regularly stocked catalog items may be canceled or changed at no charge provided notice is given at least 24 hours before the shipping date. Orders that can be changed or canceled on the day of shipment will incur a cancellation fee of 10%. However, if you cancel an order that requires special packaging less than 48 hours before the requested shipping date, then Cardinal Health will invoice you for 50% of the purchase price.

Orders for catalog items with a predated order cutoff (including short-lived radionuclides, non-prepackaged radionuclides, and microspheres) cannot be canceled within 48 hours of scheduled shipment.

Product availability

Cardinal Health reserves the right to make changes in its products and services offering, at any time and without prior notice.

Design changes

We reserve the right to make changes in the design of our products at any time, without incurring any obligation to install such changes on our products previously sold.

Limited warranty

Cardinal Health warrants that, at the time of shipment, Cardinal Health products sold are free from defects in material and workmanship. Cardinal Health makes no other warranties, including any warranty of merchantability or fitness for a particular purpose, express or implied, with respect to the products. In no event shall we be liable for transportation, installation, adjustment or other expense which may arise in connection with such products or their servicing or adjustment. Notification of any breach of warranty must be made within 30 days of receipt, or within the half-life of the radioisotope contained in the product, whichever period is shorter. No claim shall be honored if the customer fails to notify Cardinal Health within the period specified.

In no case is Cardinal Health responsible for customer's, or any third party's, incidental, consequential or indirect damages of any kind (including, but not limited to, loss of use, sales, profits or business interruption). All statutory warranties are expressly negated and excluded. Use or misuse by the customer and/or agents, employees or others will, at the option of Cardinal Health, void all warranties. The benefits of this warranty shall extend only to the purchaser and to none other. No agent, employee or representative of Cardinal Health has any authority to bind Cardinal Health to any representation or warranty concerning the products sold herein. No waiver, alteration or modification of the foregoing conditions shall be valid, unless made in writing and signed by a Cardinal Health officer.

Force majeure

Cardinal Health shall not be liable for any failure or delay because of force majeure, including but not limited to Acts of God, war, insurrection, riot, fire, explosion, flood, sabotage, accidents or breakdown or damage of transport, strike or other labor disturbances, governmental action, or any other cause beyond Cardinal Health's reasonable control.

Conflicting terms

Our acceptance of purchaser's order is expressly limited to the terms and conditions contained herein. Any additional or different terms or conditions contained in purchaser's response are rejected without further notice, and shall have no effect or in any circumstances be binding. By placing an order, customer explicitly agrees to all terms and conditions contained herein.

Regulations concerning the commercial use of research products

The research products listed in this catalog are intended only for research and analysis use.

Radioactive materials

In most areas of the world, the possession and use of radioactive materials is regulated by law, and purchasers must possess licenses or permits issued by governmental regulatory authorities. In addition, users of radioactive materials may be subject to local and institutional regulations. Compliance with institutional, local, state, national and international regulations concerning the procurement, or national license possession, and use of radioactive materials, is the responsibility of the purchaser.

Licensing requirements

A photocopy of your NRC or Agreement State License must accompany orders for radioactive sources or material and must clearly indicate your authority to possess the items being ordered.

Limitations on use

All pharmaceuticals and drugs are for end use only by the purchaser, and cannot be resold by law, except if specifically authorized and licensed to do so. As a condition of purchase, the purchaser hereby certifies that all pharmaceuticals and drugs shall be used solely for the purposes intended, and they shall be used and disposed of only within the scope of currently recognized critical standards related to human health and the physical environment.

Note

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For additional information, please contact Cardinal Health, Radiation Management Services customer service at 440.248.9300, 800.850.4608, or fax: 440.349.2307; located at 6045 Cochran Road, Cleveland, Ohio 44139-3303, USA.

Specifications are subject to change without notice.

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For further information and/or to place an order, call your local Cardinal Health Radiopharmacy.



Brachytherapy/Ultrasound QC Phantom

Nuclear Associates Model 84-345

Introduction

The Brachytherapy/Ultrasound QC Phantom is designed for transrectal ultrasound QC and calibration of brachytherapy systems. It contains targets to assess volume measurements, internal and external grid accuracy, and probe retraction accuracy. When scanning toward the top of the phantom, a partial grid of wires appears. These wires should line up with the grid that appears on your screen, thus ensuring correct vertical and horizontal distance measurements. A needle may be inserted through the external grid and into the phantom, guaranteeing proper correlation between external and internal grids. Five cross-wires are embedded within the phantom to help determine if the probe is being retracted the specified distance.

Applications

To use the phantom, simply turn the probe 60° to the right or left to visualize and measure the volume of three different calibrated spherical-shaped objects.

The phantom is constructed from a proprietary urethane. At normal room temperature, the urethane material will accurately simulate the ultrasound characteristics found in human liver tissue.

Specifications

Material Urethane

Attenuation coefficient 0.50 dB/cm/MHz
± 0.05 dB/cm/MHz

Speed of sound 1430 m/s ± 6 m/s

Targets

For internal grid assessment

Material Nylon monofilament

Diameter 0.5 mm

Number of targets 13

Position B1 to B5, C4, D3, F1 to F5

For external grid assessment

Three removable needle plugs

Position A2, D5, and G2

For probe retraction assessment

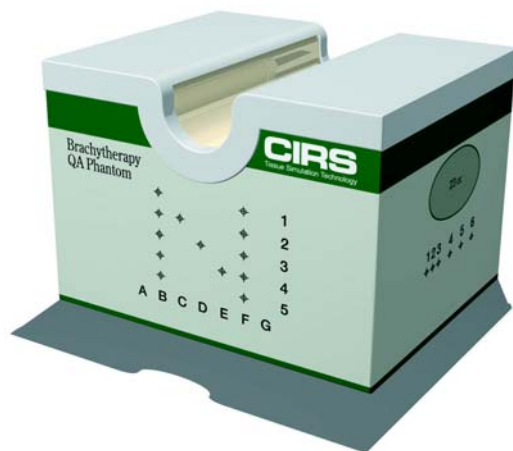
Material Nylon monofilament

Diameter 0.5 mm

Number of targets 5

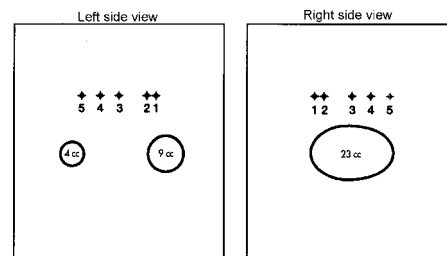
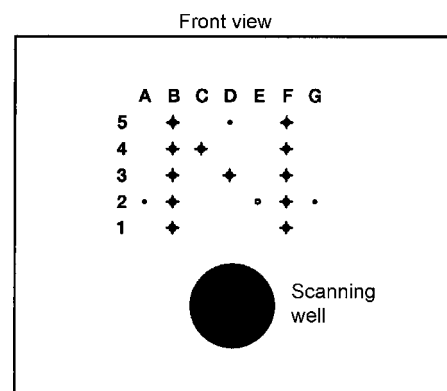
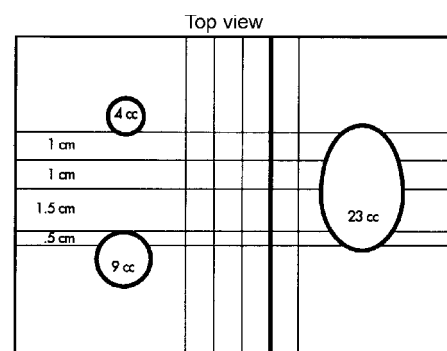
Spacing 1 cm, 1 cm, 1.5 cm, 0.5 cm

Position Along row 4



It's the only brachytherapy/ultrasound phantom that performs:

- Quality control on ultrasound sidefire transrectal probes and calibration of prostate brachytherapy systems
- External grid assessment
- Internal grid assessment
- Probe retraction step assessment
- Volume verification



Targets (continued)

For volumes

Material Urethane

Approximate sizes: 4, 9, and 23 cm³
(Exact volumes provided on certification sheet)

Needle visualization

18-gauge needle permanently embedded

Position E2

Dimensions 4.45 (w) x 6.10 (d) x 5.24 in (h)
(11.3 x 15.5 x 13.3 cm)

Weight 5.25 lb (2.39 kg)

Available model(s)

84-345 Brachytherapy/Ultrasound QC Phantom

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Afterloading Accessories

Models 67-905, 67-908, & 67-730

Round-Handled Fletcher-Suit and Delclos Afterloading Applicator Set

Components:

- Right and left colpostats, with carriers and bucket assemblies for sources
- Four stainless steel tandems of varying curvatures
- Two regular and two flagged cervical stops
- One cervical stop-wrench
- Four plastic tandem/pusher source carriers



The stainless steel ovoids are 2.0 cm in diameter and 3.0 cm high, with an angle of 15°. Tungsten shielding provides rectal and bladder protection. Weight of set: 0.12 lb (0.42 kg).

Optional accessories

Two-Piece Nylon Jacket for Stainless Steel Ovoid, 2.5 cm (Model 67-905-2500)

Two-Piece Nylon Jacket for Stainless Steel Ovoid, 3.0 cm (Model 67-905-3000)

Sterilization/Storage Case for Afterloading Applicators (Model 67-730-1000)

Available model(s)

67-905 Round-Handled Fletcher-Suit and Delclos Afterloading Applicator Set

Sterilization/Storage Case for Afterloading Applicators



Consists of a stainless steel case with a soft plastic-coated stainless steel liner that holds all components for gas (ethylene oxide) or cold solution (Adex, Xephiren) cleaning and sterilization. Weight of set: 4 lb (2 kg).

Available model(s)

67-730-1000 Sterilization/Storage Case for Afterloading Applicators

Delclos Mini-Ovoid Afterloading Applicator Set

This set is designed for the patient with a narrow vault. The medical area of the ovoid is flattened to accommodate a very small anatomy. The stainless steel unshielded ovoids are 1.2 cm across the flat surface and 2.9 cm high, with a 15° angle. Weight of set: 0.75 lb (0.35 kg).

Optional accessories

Plastic Tandems (Model 67-908-5000)

Sterilization/Storage Case for Afterloading Applicators (Model 67-730-1000)

Available model(s)

67-908 Delclos Mini-Ovoid Afterloading Applicator Set



Cervix Marker Kit

Model 67-665



- One implanter (designed to limit implantation to 1 cm)
- 50 metallic markers

Specifications

Implanter length 25 cm long

Metallic marker dimensions

0.8 mm Ø x 5 mm long

Weight < 1 lb

Optional accessories

Cervix Markers, Vial of 50 (Model 67-666)

Implanter (Model 67-665-1000)

Available model(s)

67-665 Cervix Marker Kit, includes 50 markers

For additional information, please contact Cardinal Health, Radiation Management Services customer service at 440.248.9300, 800.850.4608, or fax: 440.349.2307; located at 6045 Cochran Road, Cleveland, Ohio 44139-3303, USA.

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Carriers, Cores, and Carts

Models 67-706 to 67-725



Radiation Oncology



Heyman Carrier



Heyman Core



Cart for Heyman Carrier



Fletcher-Suit Core

- For rapid transport of radioactive sources to bedside or operating room
- Ideal for temporary storage of approximately 100 mg Ra-eq ^{137}Cs or 100 mg Ra

These units are designed for safety and convenience when transporting radioactive material between a permanent storage safe and the patient's bedside. The carrier and lift-out cores are made of corrosion-free stainless steel, and the carrier is shielded with 1 inch of lead. It fits on a rugged, enameled-steel cart equipped with two wheels, a caster, and a long handle.

Two types of lift-out cores are available for the Heyman Carrier: Fletcher-Suit and Heyman. The Fletcher-Suit Core holds one loaded uterine source carrier and two loaded colpostat source carriers. The Heyman Core holds up to 12 MICRAD or Heyman sources.

Specifications

Carrier All-welded stainless steel shielded with 1 inch of lead

Weight (approx.) 4 lb (2 kg)

Cores Stainless steel, designed for easy lift-out. Maximum radiation level (at 1 meter from center of shield). 5 mR/hr when 100 mg ra-eq ^{137}Cs is stored; 20 mR/hr for 100 mg radium

Weight of Fletcher-Suit Core 0.82 lb (0.37 kg)

Weight of Heyman Core 2 lb (0.92 kg)

Cart Enameled steel; has two 8 inch wheels, one 3 inch caster, and a 40 inch handle

Weight 14 lb (6.4 kg)

Available model(s)

67-706 Cart for Heyman Carrier

67-715 Fletcher-Suit Core

67-724 Heyman Carrier

67-725 Heyman Core

Radioisotope Storage Safe

Model 67-745

- Provides maximum radiation protection
- Fireproof
- Key-locking
- Custom-designed storage drawers available

This rugged safe ensures optimum shielding against exposure to radiation from tube sources. Made of steel with 4 inches of lead.

Specifications

Storage area in each drawer 1.75 (w) x 6 (d) x 1.88 in (h) (4.45 x 15.24 x 4.76 cm)

Safe dimensions 12.75 (w) x 14.50 (d) x 2.75 in (h) (32.4 x 36.83 x 32.4 cm)

Weight 950 lb (432 kg)

Available model(s)

67-745 Radioisotope Storage Safe, four-drawers

Custom-designed storage drawers

67-701 MICRAD Source Drawer, converts 1 safe drawer to front-opening for storing 10 MICRAD sources



Four-drawer radioisotope (Model 67-745)

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