The latest types of preparations available for radium therapy. We stock the largest supply of standard containers, and manufacture all special loadings. Careful attention is given to the construction of each preparation.

Picturing the largest selection of intracavity and interstitial standard and special applicators, to meet your every requirement.

Displaying forceps designed for the specific purpose of inserting and handling radium and applicators. Stainless steel construction.

Presenting a complete line of protective safes, angle blocks and work tables, all designed to give the greatest possible protection to personnel.

Showing new rolling equipment designed to meet your exacting requirements of protection, distance and ease of handling.

Offering a complete radium leasing program for the Medical Profession. Radium sources for all modern application available.

Gold radon implants accurately calibrated for time of use. All necessary instruments furnished free of charge. Complete range of strengths available at all times.
RADIUM CONTAINERS

(Actual Size)

REMOVABLE CELLS

Removable platinum-iridium cell to hold any quantity of radium up to 5 milligrams.
11.5 mm. x 1.0 mm. x 0.2 mm. wall. Active length 10.0 mm.

Platinum-iridium capsule to hold 5 cells in a group.
16.8 mm. x 4.55 mm. x 0.8 mm. wall.

GOLD SHEATH NEEDLES

Gold-alloy sheath needles for 1, 2, 3 and 4 cells. Total filtration (needle and cell) equals 0.5 mm. platinum.

OTHER RADIUM PREPARATIONS

Needles, tubes and cells of special loadings, wall thickness, and radium content are regularly prepared.

ADDITIONAL TYPES

Other loadings such as half-strength, 0.33 per cm., double strength, Indian club, and dumbbell needles are available.

RADIIUM STANDARDS AVAILABLE

In addition to pictured sources, we manufacture all types and strengths of standards for instrumentation. Also RADIUM-BERYLLIUM NEUTRON SOURCES.

TUBES—PLATINUM-IRIDIUM CELL FILLED

5-Milligram
21.7 mm. x 2.65 mm. x 1.0 mm. wall. Active length 15 mm.

10-Milligram
21.7 mm. x 2.8 mm. x 1.0 mm. wall. Active length 15 mm.

15-Milligram
22.5 mm. x 2.9 mm. x 1.0 mm. wall. Active length 15 mm.

20-Milligram
22.5 mm. x 3.05 mm. x 1.0 mm. wall. Active length 15 mm.

25-Milligram
15.5 mm. x 3.55 mm. x 1.0 mm. wall. Active length 9 mm.

50-Milligram
19 mm. x 4.05 mm. x 1.0 mm. wall. Active length 12 mm.

NEEDLES—PLATINUM-IRIDIUM CELL FILLED

1.0-Milligram
11 mm. x 1.65 mm. x 0.5 mm. wall. Active length 3 mm.

5-Milligram
15 mm. x 1.75 mm. x 0.5 mm. wall. Active length 7 mm.

10-Milligram
20 mm. x 1.75 mm. x 0.5 mm. wall. Active length 12 mm.

LOW CONTENT NEEDLES CELL FILLED TROCAR POINTS

1.0-Milligram
27.7 mm. x 1.65 mm. x 0.5 mm. wall. Active length 15 mm., 0.66 per cm.

2.0-Milligram
44 mm. x 1.65 mm. x 0.5 mm. wall. Active length 30 mm., 0.66 per cm.

3.0-Milligram
60 mm. x 1.65 mm. x 0.5 mm. wall. Active length 45 mm., 0.66 per cm.
**APPLICATORS**

**No. 445**
Double crossarm applicator three-section tandem. Specify for needles, tubes or cells.

**No. 446**
Disk-type applicator. Specify for needles, tubes or cells.

**No. 434**
Kaplan rubber colpostat. Internal 22 mm. x 8 mm.

**No. 434M**
Kaplan rubber colpostat with thin wall reusable brass screens. Internal 26.5 mm. x 6 mm.

**No. 444**
Clark-type applicator. Specify for needles, tubes or cells.

**TANDEMS**

- **4107**
  Rubber—150 mm. length, 7 mm. bore

- **4105**
  Rubber—150 mm. length, 5 mm. bore

- **414**
  Thin rubber—158 mm. length, 5 mm. bore

- **413**
  Thin rubber—80 mm. length, 6 mm. bore

- **412**
  Thin rubber—55 mm. length, 5 mm. bore

- **411**
  Thin rubber—55 mm. length, 4 mm. bore

- **504**
  Raflex (flexible plastic) 120 mm. length, 4 mm. bore

- **505**
  Raflex (flexible plastic) 95 mm. length, 5 mm. bore

- **507**
  Raflex (flexible plastic) 95 mm. length, 7 mm. bore

- **408**
  Raflex with disk—gauss end. Specify bore of 4, 5 or 7 mm. and desired length

- **425**
  Raflex—gauss end. Specify bore of 4, 5 or 7 mm. and desired length

Stainless steel tandem. One or more sections. Specify desired bore and length.
The Ernst cervical uterine radium applicator is available for use with needles, tubes or removable cells. This applicator is constructed of stainless steel for durability and ease of maintenance. The standard applicator holds three 10-milligram needles in each section. The applicator for tubes holds one tube per section, and the applicator for cells holds up to five cells per section.

Nylon sleeves (No. 441S) are 20 mm. in diameter, 29.5 in length. Removable metal ovoids have additional 1 mm. metal.
APPLICATORS

432 Manchester rubber tandems and ovoids

25 mm.  35 mm.  48 mm.  60 mm.

Large  Medium  Small

Washers  Spacers

No. 70 Set of six brass screens for Manchester rubber—Internal 20 x 6 mm.

No. 71 Split tip screw driver

No. 72 Ovoid holding forceps
TER-POGOSSIAN APPLICATOR
No. 448

Standard for tubes—if needles are used thin brass screens for tandems are provided. Advise size and types of radium to be used. The head section may be used with or without tandems as shown. Set provided with #71 screw driver.

CORSCADEN APPLICATOR
No. 449

May be used with tubes or needles. A #504 Raflex tandem is used to irradiate the uterus.
HANKINS AND HOCKIN LUCITE OVOIDS
No. 433
Applicator set has three pairs of ovoids, one washer, one spacer, three nylon tandems (not shown), and three metal inserting handles.

FORDYCE APPLICATOR
No. 440
Ovoids are made to hold tubes. If needles are to be used, specify size. Supplied with a three-section stainless steel tandem with angle block and screw driver.

LONDON COLPOSTAT
No. 438
Brass covered with hard rubber. Detachable handle. Advise desired filtration, size and number of preparations to be used.
CAMPBELL-TYPE HEYMAN FUNDUS APPLICATOR
No. 442

Set of twelve numbered stainless steel capsules and inserter. Made for any preparation. Specify if tubes or needles are to be used. Special 14" cap remover available. See Page 20.

SPECIAL FUNDUS APPLICATORS
No. 703

Nylon covered stainless steel capsules in any diameter. To be used with standard inserters. Pictured (a) inserter, (b) all metal standard capsules, (c) nylon covered 1 cm. diameter capsules, (d) nylon covered 1.5 cm. diameter capsules. Order number and size required. Inserter may also be purchased separately.
FLETCHER MEASUREMENT INSTRUMENT
No. 453
(Not for treatment)
Interchangeable dummy nylon ovoids, 2.0, 2.5 and 3.0 cm. Interlocking handles

NOLAN CERVICAL APPLICATOR No. 450
Interchangeable ovoids, 1.5 and 2.0 cm. external diameter, with a hinged endocervical three-section adjustable tandem.
FLETCHER ADJUSTABLE APPLICATOR
NO. 443

2 Pairs of plastic jackets
(2.5 and 3.0 cm. diameter)
to fit over metal ovoids

Single ovoid on handle

Metal ovoids
(2 cm. diameter)
Interlocking handles

Steel uterine tandems
for tubes

Plastic uterine tandems
**APPLICATORS**

**BURNETT VAGINAL APPLICATORS**

**NO. 700**

Set of eight nylon cylinders and four screw plugs. Specify if for needles or tubes. Supplied with spacers.

**External Dimensions (For Needles)**

- A 20 x 52 mm.
- B 20 x 75 mm.
- C 25 x 75 mm.
- D 30 x 76 mm.
- E 35 x 78 mm.
- F 25 x 86 mm.
- G 30 x 87 mm.
- H 35 x 89 mm.

**NYLON VAGINAL PLAQUE**

**NO. 701**

Custom made to hold any size and number of radium preparations. Hinged handle, easy loading and unloading.
MORPHIS AFTERLOADING APPLICATOR

NO. 702

Teflon set for implantation of radium needles. Set consists of pictured needles, points, pin vises, pushers, forceps, clips and 100 feet of teflon tubing.

No. 28
Nylon rectal applicator
External: 63 mm. x 20 mm.
Internal: 51 mm. x 5.4 mm.
10" Flexible handle

No. 426
Kaplan rubber rectal applicator
150 mm. x 15 mm.
Space for nine radium sources
**FORCEPS**

**No. 13**
Needle inserting forceps 7½" long — groove retro

**No. 11**
Needle inserting forceps 7½" long — groove cut at 45°

**No. 14**
Needle inserting forceps 7½" long — grooves cut at straight and 90° angle

**No. 10**
Multiple-groove needle inserting forceps 9" long — 360° usage

**No. 402**
Needle inserting forceps 10½" long — grooves cut at straight and 90° angle

**NEEDLE PUSHER SET**

**No. 6**
Needle extractor — 6½" long

**No. 7**
Needle pusher — 135° angle, 6½" long

**No. 8**
Needle pusher — retro angle, 6" long

**No. 9**
Needle pusher — straight, 6½" long
**No. 21**
Cross-action forceps — grooved tip
8½" long — #21A for needles
#21B for tubes
#21C for cells

**No. 20**
Straight hand forceps for tubes 9" long — grooved tip

**No. 4DF**
12" Handling forceps

**No. 18**
14" Handling forceps

**No. 407**
Teperson intubating forceps for tandem applicators — length 10½"

**No. 406**
Uterine tandem holding forceps — length 10"

**No. 437**
Applicator holding forceps with rubber jaws — length 10"
No. 478
Wooden assembly tray. Available for small and large protection block. Specify size.

No. 471
Small protection block. Lead 2", linoleum covered. 11" height, width 8", depth at base 10½", weight 140 pounds.

No. 472
Large protection block. Lead 2", linoleum covered. 16½" height, 14" width, depth at base 14½", weight 360 pounds. Designed for best body protection.

No. 473
Lead hand shield with 12" forceps.

No. 405
Pick up forceps. 14" overall length — spring loaded. Duck-bill action, grooved tips.
Lead Storage Safe — Designed for small supplies of radium. One locked drawer with 2½" lead in all directions. 3" drawer opening drilled for radium preparations in separate holes. Weight 150 pounds — Size 7½" x 7½" x 8½".

Lead Storage Safe — 3" lead in all directions. Designed to store individual preparations in separate holes in one drawer. Second drawer has opening 6" x 2" x 2", large enough for loaded Ernst applicator. Drawer may be lead filled to allow additional radium storage if desired. Weight: 380 Pounds — Size 8½" wide, 10½" high.

RADIUM STORAGE CABINETS
We regularly manufacture all types of storage facilities. The number of drawers and the thickness of the lead varies with each individual installation, amount of radium, location of safe, applicator storage, etc. See page 24 for other types.
Heyman (Campbell type) Carrier
No. 442C
Solution tight 2" internal diameter, stainless steel removable core to hold twelve individual capsules. 1" Lead around sources, strap handle. Weight 30 pounds, height 21". Excellent for threaded needles.

Ernst Carrier
No. 479
1" Lead monel covered, fitted with 6" x 2" x 2" metal liner and lock. Total height 15", weight 43 pounds.

Plaque Storage Box
No. 476
1" Lead, chrome-plated.

Applicator Carrier
No. 451
1/2" Lead, internal diameter 2", total height 15". Weight 18 pounds, strap handle.
Heyman Carrier and Transport Cart
No. 500

Cart is fitted with two 8" conductive rubber wheels and 3" caster. Handle is 40" long for distance. Rolls easily on and off elevators. Carrier is removable.

Ernst Applicator Carrier and Transport Cart
No. 501

Conductive rubber wheels enable loaded applicators to be carried from preparation area to operating room. Short handled case may be lifted to treatment table. Case is monel covered with lock. Designed for speed and distance.
ROLLING STAND
NO. 6505

Specially designed steel table with a stainless steel cover to hold protective devices in operating room or preparation area. Heavy duty 3" conductive rubber casters aid in movement. #708 lead blocks 2" x 4" x 8" form a protective well which may be sterile draped.

ROLLING STAND
NO. 6505

Steel stand holding #472 large protective angle block. Lead blocks #708 form side barriers for additional protection.
RADIUM PREPARATION AND STORAGE UNIT

No. 2650

Picturing:
Special Steel Bench with drawer

No. 47032
Safe — 3" lead, radium storage

No. 472
Large angle block

No. 800
Viewing lamp
**Viewing Lamp**  
No. 800

Spring loaded extension arms hold magnifying glass in any position. The circular lamp places excellent light on the work area and operates on 110V A.C. current. The entire lamp is mounted on a 26 pound lead block for stability.

**Lead protected vise**  
No. 474

Designed to hold capsules and tandems during the loading and unloading operation. Lead jaws and long handle add protection.

**Heyman cap remover**  
No. 442CR

The problem of opening and closing Heyman capsules is eliminated by this 1 1/4" cap remover. When used with the #474 vise behind the #472 angle block unnecessary exposure is eliminated.
RADIUM LEASING PROGRAM

**COST**
Your Radium therapy program can begin by leasing necessary preparations at a very low monthly rate.

**CONTINUOUS POSSESSION**
You are able to treat your cases immediately, because you will have your Radium available at all times.

**MODERN PREPARATIONS**
We offer the latest and most versatile units for all types of therapy. These Radium preparations are designed for use with the applicators pictured in this catalog.

**INSURANCE**
The Radium is covered with full loss insurance at no extra cost to you.

**AVAILABILITY**
You can begin your RADIUM program at once. Select the types required and call or write for your shipment.

### LOW CONTENT NEEDLES
A limited number of low content needles are available to customers with a lease of 100 milligrams or more. The needles pictured are loaded 0.66 milligrams per cm.

#### PLATINUM-IRIDIUM NEEDLES

<table>
<thead>
<tr>
<th>Milligram</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Milligram</td>
<td>14.5 mm. x 1.7 mm. x 0.5 mm. wall</td>
</tr>
<tr>
<td>10-Milligram</td>
<td>19.0 mm. x 1.7 mm. x 0.5 mm. wall</td>
</tr>
</tbody>
</table>

#### PLATINUM-IRIDIUM TUBES

<table>
<thead>
<tr>
<th>Milligram</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Milligram</td>
<td>21.7 mm. x 2.8 mm. x 1.0 mm. wall</td>
</tr>
<tr>
<td>15-Milligram</td>
<td>22.5 mm. x 2.9 mm. x 1.0 mm. wall</td>
</tr>
<tr>
<td>25-Milligram</td>
<td>15.0 mm. x 3.5 mm. x 1.0 mm. wall</td>
</tr>
</tbody>
</table>

#### LOW CONTENT PLATINUM-IRIDIUM NEEDLES

<table>
<thead>
<tr>
<th>Milligram</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Milligram</td>
<td>27.7 mm. x 1.65 mm. x 0.5 mm. wall</td>
</tr>
<tr>
<td>2-Milligram</td>
<td>44.0 mm. x 1.65 mm. x 0.5 mm. wall</td>
</tr>
<tr>
<td>3-Milligram</td>
<td>60.0 mm. x 1.65 mm. x 0.5 mm. wall</td>
</tr>
</tbody>
</table>

**MONEL METAL NASOPHARYNGEAL APPLICATOR**

50 Milligrams of radium element in a 21.5 mm. x 2.3 mm. x 0.3 mm. capsule on a 6" handle.
No. 10G
Depth gauge.

No. 14
Four inch implanter — 2 inch point

Rigid Implanter — 2 inch point
Available in 6"(#16), 8"(#18), 10"(#110), 12"(#112),
14"(#114), 18"(#118), and 24"(#124) lengths

No. 110-1
Ten inch implanter with 1 cm. point

Semi-flexible implanter
Available in 8" length — 4" point — (#18-4).
10" length — 6" point (#110-6) or 8" point (#110-8)

No. 100
Flexible cystoscopic implanter — 14½"

No. 100F
Pickup and loader for No. 100

C curve

D curve

SX curve

OB curve

RA curve

SC curve
Curved implanters available in 6"(#106-), 9"(#109-) and
11"(#111-) lengths
RADON IMPLANTS

UNSURPASSED RELIABILITY AND SERVICE
Due to the increased usage of Radon implants throughout the United States we are pleased to give you the following information to aid in securing Radon implants.

ORDERING
By letter, telephone or telegram, or by free order cards. Give date and time of operation.

STRENGTH
Available in any strength from 0.05 millicuries to 5.0 millicuries at time of use. Specify number and strength desired.

INSTRUMENTS
Loaned free of charge for each case. Indicate type desired (see pictures on Page 22) or indicate location of lesion.

DELIVERY
Seeds shipped in free lead container via fastest method within I.C.C. Regulations.

RETURN of Instruments
Simply place lead cylinder and instruments in shipping box. Affix return label and notify rail express for pick up.

IMPLANTS
Physical dimensions of Gold Radon Implants
4.00 mm. in length
0.75 mm. in diameter
0.30 mm. wall thickness
24 K Gold

CALIBRATION
All Radon implants are measured against standards which have been calibrated by The National Bureau of Standards.

We know you demand accuracy and prompt service for Radon implants. During the past forty years we have supplied the finest and most accurate gold Radon implants to leading hospitals, clinics and physicians.

EXPERIENCE—RELIABILITY—SATISFACTION
No. 29
Brass eye screens — 1 mm. brass gold-plated. Small or large — with suction cups.

No. 60
Needle point remover for sheath needles

No. 409
7" Steel needle to thread rubber sounds

No. 415
Needle thread — black braided silk U.S.P. 2

No. 416
Needle thread — white braided silk U.S.P. 2

No. 417
Needle thread — white waxed U.S.P. 1

No. 418
Needle thread — black waxed U.S.P. 1

No. 423
Needle thread — blue U.S.P. 0 — 20 yards

No. 420
Caution tags, 2" x 4" — boxes of 100

No. 424
Needle and tube threader

No. 436
Andrews tray for plaques — 2 mm. brass with copper clips

No. 441
Silver-stainless steel Ernst for cells

No. 454
Healy vaginal bomb for tubes or for needles — specify

No. 455
Schuberts curved biopsy punch

No. 47034
Radium storage cabinet — 3" lead
4 drawers, 3 drilled, 1 open 6" x 2" x 2"
10½" wide, 11½" high, 12" deep. Weight 540#

No. 47042
Radium storage cabinet — 4" lead
2 drawers, 1 drilled, 1 open 6" x 2" x 2"
10½" wide, 10½" high, 12½" deep. Weight 580#

No. 47044
Radium storage cabinet — 4" lead
4 drawers, 3 drilled, 1 open 6" x 2" x 2"
12½" wide, 12½" high, 14½" deep. Weight 870#

No. 475
Adjustable chuck for opening tandems

No. 480
Kerr's molding compound

No. 481
Unfilled molding wax. Thickness 1.0 cm.
Sheet 28 cm. x 20 cm. — for surface molds and plaques

No. 482
Filled molding wax. Contains hardwood dust to maintain shape for plaques and molds. 1.0 cm. thickness. Sheet 28 cm. x 20 cm.

No. 483
Filled molding wax. Identical with No. 482 except 1.5 cm. thick

No. 487
14" Cap remover for silver screens with bulldog eyelets

No. 488
12" Cap remover for platinum capsules for cells

No. 491
Weisman-Graves vaginal speculum for cervical applicators, small, medium

No. 600
Holt radium dosage nomographic wheel in plastic case

No. 602
Set of six silver-plated Gougelman eye shields

No. 704
Extruded flat-sided lead blocks — 2" x 4" x 4"

No. 708
Extruded flat-sided lead blocks — 2" x 4" x 8"

No. 900
Ra-di-clean — one pound box of instrument and glassware cleaner and wetting agent

Special applicators, safes and handling devices made to your specifications.

DO NOT FORGET TO ORDER
Ra-di-clean

No. 900 - One pound can

Keep your mechanical applicators in perfect condition. This excellent cleaning and wetting agent is the answer to the problem of removing solids and fluids. After treatment, soak the applicator for a few minutes in a solution of warm water and Ra-di-clean; only one tablespoon to a gallon of warm water. Not a sterilizing agent. Problems of cleaning glassware used for isotope samples? Radiologists tell us that this is the best they have found to decontaminate glassware after using radiiodine 131. A single washing in Ra-di-clean will reduce the background in pipettes, flasks and dose bottles to extremely low levels. Order a supply now for your isotope laboratory and your radiation therapy department.
Dear Doctor:

Our fifty years of service to the Medical Profession is your assurance that you will receive the finest in Radium, Radon, Instruments and Accessories.

When we sold the first Radium in this country a half a century ago only a few screens and forceps were available. This new catalog presents the latest Radium therapy units which have been developed in cooperation with leading physicians throughout the country.

These many years of experience enable our technical personnel to assist you on problems relating to Radium programs and equipment.

The Radium Chemical Company, Inc., is exclusive sales representative in the United States, Mexico, Central America and South America for the Union Miniere du Haut Katanga, Brussels, Belgium, the largest producer of Radium in the world.

Whenever you purchase or lease Radium, order Radon implants, buy applicators, accessories, or protective devices you are certain that they are of the best quality and manufactured to the highest standards.

Radium Chemical Company, Inc.

RADIUM CHEMICAL COMPANY, INC.
NEW AND IMPROVED LEAK TEST SERVICE FOR RADIIUM SOURCES

A new service that combines high precision and low cost, with the added advantage of a simple accurate sampling method, is now available from the RADIUM CHEMICAL COMPANY, INC.

This commercial service provides a graphic record of the actual GAMMA SPECTRUM as a permanent record for your files.

A test kit and simple instruction sheet are supplied. All preparations remain in your possession.

You will be notified by telegram of the test results.

Alternate plans are available.

For Details Write To:

RADIUM CHEMICAL COMPANY, INC.
161 East 42nd Street
New York 17, New York
We offer the following plans for leak test of RADIUM preparations

**PLAN A - SPECTROGRAPHIC**

1. We supply necessary vials for each test to be made.

2. You will receive a complete set of instructions.

3. Preliminary findings will be sent via night letter.

4. A confirming report, including GAMMA SPECTRUM, will be issued for your files.

5. This charge is only $10.00 for each test vial.

**PLAN B - REGULAR**

1. We supply vials for each test to be made.

2. You receive a complete set of instructions.

3. A night letter of results followed by written report only is sent for your records.

4. This charge is $7.50 for each test vial.

Included in each plan will be a test to check possible contamination of your storage area. There will be no charge for this service.

WRITE US FOR THE NUMBER OF TEST VIALS REQUIRED AND THE TYPE SERVICE DESIRED.

**RADIIUM CHEMICAL COMPANY, Inc.**

161 EAST 42nd STREET

NEW YORK 17, NEW YORK