MPI DMSA KIDNEY REAGENT

(Technetium Tc 99m Succimer Kit)

- Localizes in the renal cortex
- Highest target to background ratio of Tc 99m agents[^1][^2]
- Low excretion rate[^3][^4]
- DMSA is the renal cortical imaging agent of choice. Even in patients with obstructed or dilated collecting systems, an accurate comparison of relative cortical uptake without interfering activity in the pelvocalyceal structures can be made.[^4][^5]

[mediphsics™](https://www.mediphsics.com)

5801 Christie Avenue, Emeryville, CA 94608
For More Information, Please Call (415) 652-7650 or Toll Free (800) 237-0492

---

Representative Images

(a) Cortical infarct

(b) Polycystic kidney disease

(c) Bilateral hypernephroma

R/O Polycystic Kidney Disease

(a) EU reported normal

(b) Tc-99m DMSA shows solitary lesion L lower pole

(c) Angiogram confirms single cyst
Meeting your diagnostic into the future.

Siemens nuclear imaging systems combine performance with flexibility.

For established and emerging applications in nuclear medicine, Siemens has new and advanced imaging systems with built-in upgradeability to accommodate the future.

At the heart of each system is our proven ZLC detector. Unequaled for its energy and linearity correction electronics, it now achieves a significant increase in count rate while maintaining image integrity. ZLC is your assurance of accuracy in imaging.

Whatever the clinical requirement, Siemens imaging systems are ready to provide you with the consistent results and system flexibility you expect.

For additional information on Siemens complete line of nuclear imaging systems, contact your local representative or:
Siemens Corporation
Nuclear Medicine Division
186 Wood Avenue South
Iselin, New Jersey 08830.
Telephone (201) 321-3400

SPECT Procedures
We offer you a secure approach to SPECT imaging with a choice of three ZLC based systems with expanded high count rate. The ZLC 3700 S and the ZLC 7500 S are backed by a new and powerful ECT processor for computerized acquisition, reconstruction, and display of tomographic images. And, our ROTA CAMERA system is upgradeable from single to dual head for greater system sensitivity, data accuracy, and image quality.

Siemens... an investment in diagnostic confidence.
requirements...

Conventional Imaging
We combined our high count rate ZLC detectors with the all new counterbalanced camera stand to give you a compact, articulate and exceptionally efficient imaging system. You will appreciate how this new design facilitates detector and patient positioning. Best of all, to maximize your investment, every Siemens counterbalanced system is upgradeable to SPECT.

Nuclear Cardiology
For bedside studies, our lightweight LEM (Low Energy Mobile) system now features ZLC detectors and expanded high count rate. It combines the convenience of a mobile camera with excellent imaging, and delivers both the performance and expanded count rate required for fast dynamic studies. The detector arrangement and counterbalanced design of the ZLC 370 and 750 provides for fast and easy patient positioning in stress test examination.

Whole Body Scanning
Our ROTA CAMERA system and ZLC 370 and 750 cameras with a whole body table perform whole body bone studies with minimal time and space requirements. For the diagnostic benefits of whole body image tomography, Siemens offers the PHO-CON camera system—the only proven system available for bone and gallium longitudinal tomographic studies. The tomographic display facilitates the location of lesions, and the removal of superimposed structures.
"I've been moving ultrasound equipment through Chicago streets for over five years. The unique fixed multi-lens camera systems from Illinois Imaging Electronics can take the daily pounding of mobile application. In fact, the only time they're down is when I've turned them off!

"And now IIE has solved the problem of portable instrument stability, virtually guaranteeing consistent image quality!

Their exclusive new Instant-On feature does away with warm-up and power flux by eliminating the photo cell that controls monitor brightness and timing.

"During transport the monitor filament is kept warm by a battery pack that is re-charged at bedside. I can move from van to hospital, monitor ready - camera ready!

"Now IIE systems are reliable anywhere, every day!"
Introducing the GammaDab® M IgE RIA Kit. What you’ll find is an IgE kit that eliminates the need for sample dilution, disc handling, reagent mixing, as well as the time-consuming setups to wash and aspirate — again and again.
What you’ll also find is the “M” in the GammaDab® M name. It stands for the monoclonal antibody which assures you of consistent maximum specificity.
You can also be sure of something else — quality. And that’s because the GammaDab® M IgE RIA Kit is from Clinical Assays.
So, find out for yourself. All you have to do is call toll-free (800) 225-1241.
RESEARCH GRADE RADIOCHEMICALS

FOR LABELING:
Monoclonal Antibodies
Chelates
Antibodies
Blood Cells
Proteins

CAUTION: THESE PRODUCTS ARE NOT FOR HUMAN USE IN PRESENT FORM AND ARE NOT TESTED FOR STERILITY OR APYROGENICITY.

These products are available for purchase by investigators for use in laboratory animal testing, in vitro testing, Radioactive Drug Research Committee 21 CFR 361.1, and IND holders. In addition, these products are available for purchase by manufacturers of in vitro and in vivo products. Sodium Iodide I-123 and Indium Chloride In-111 are autoclaved at 121°C for 33 minutes to insure stability during storage. However, these products are not certified to be sterile or non-pyrogenic and no such guarantee is implied.

FOR LABELING IN IN-VITRO RESEARCH:
HIGH SPECIFIC ACTIVITY SODIUM IODIDE I-125
Medium pH, medium concentration
Medium pH, high concentration
Low pH, medium concentration
Low pH, high concentration
TIN 113/INDIUM 113m GENERATORS
5 mCi-100 mCi

FOR LABELING IN IMAGING RESEARCH:
SODIUM IODIDE I-123
INDIUM CHLORIDE In-111
HIGH SPECIFIC ACTIVITY SODIUM IODIDE I-131

For technical information or product literature, please call toll free 800-227-0492 (in California 800-772-2477, internationally (415) 652-7650), or TELEX 335-491 (answer back MEDI-PHYS EMVIL). Or, you may write to Marketing Manager, Radiochemicals, at the address below.

medi+physics
Medi-Physics Inc., 5801 Christie Avenue, Emeryville, California 94608

All reactor products are jointly produced by UNION CARBIDE CORPORATION and CINTICHEM, INC., a wholly-owned subsidiary of MEDI-PHYSICS, INC.
With this Dosecalibrator you will always be up-to-date.

The RADX Assayer I isotope dosecalibrator is the heart of the RADX system. It is the only dosecalibrator with an atmospheric ionization chamber for high activity linearity. It also incorporates an optical scanner for isotope selection — no moving parts, no contacts to corrode. Other standard features include a remote chamber, automatic monitoring of background with subtraction, automatic ranging and much more. Unchallenged for reliability, accuracy and linearity.

The RADX Isotron is the only control unit which qualifies as a nuclear medicine inventory control computer. It keeps track of up to 20 radio pharmaceuticals in different chemical forms — simultaneously and independently, and provides constant inventory information on each radio pharmaceutical. It also performs dose volume calculations in real and totally variable future time. Computer programming skills not required.

The RADX Isocord produces a hard copy print out in triplicate for all of your record keeping needs, by patient name, and selected isotope. Addition of the Isocord completes the most advanced dosecalibration system available from anyone. RADX is the first to offer anything like it at anywhere near its price.

The RADX dosecalibration system meets all radiopharmaceutical inventory control and NRC or State accountability requirements. To get the complete story on staying completely up-to-date, call RADX. 713/468-9628.

RADX
P.O. Box 19164
Houston, Texas 77024
Our skills are yours worldwide

A wide range of in-vivo and in-vitro diagnostic products
Trustworthy

ISO CLEAN®
CONCENTRATE

Solubilizes Residual Radioactivity

A must for the isotope-using or analytical lab...whenever complete decontamination or analytical cleanliness is crucial. Isoclean solubilizes isotopic activity, whether inorganic or organically-bound, and other trace contaminants from glass, plastic or metallic labware. Freed contaminants disperse into dilute Isoclean just on soaking for safe disposal. Rinsed utensils are activity- and residue-free.

In use world-wide since 1966. A safe and effective substitute for hot acid-dichromate or caustic alkaline baths for radioisotope, tissue culture or general analytical work. Even safe for skin.

Available directly from Isolab or your favorite stocking distributor.
Request full information and evaluation sample.

Full Range of Standard Packaging

For more information contact:

ISOLAB Inc.
INNOVATIVE BIOMEDICAL PRODUCTS
Drawer 4350 Akron, Ohio USA 44321
Phones: 800-321-9632 or 216-825-4528
Telex: 98-6475 ISOLAB AKR

Full Range of Standard Packaging

THE JOURNAL OF NUCLEAR MEDICINE

12A
DIRECT READOUT
RADIOPHARMACEUTICAL ANALYZER

- RAPID COUNT (LESS THAN 30 SEC)
- DIRECT READOUT
- REPRODUCIBILITY (± 3%)
- SOLID STATE DESIGN
- THREE COUNTING RANGES
- SIMPLICITY OF OPERATION

New England applied research, inc.
60 NORTH MAIN STREET  NATICK, MA 01760  (617) 655 · 6998

PLEASE SEND MORE INFORMATION ON THE QA ANALYZER □ / TEST KIT □

NAME ___________________________________  TITLE ___________________________________
HOSPITAL __________________________________  ADDRESS ___________________________________
DEPARTMENT _______________________________  CITY _______________________________  STATE __________  ZIP __________
There are 32 reasons why Apex Processors are better than any other Nuclear Medicine Data Systems. This is reason Number 13.

The apex clinical repertoire includes every advanced program... except the one you just devised. Type it in— you’ve programmed it!

elscint's apex line

Elscint has prepared a full-color booklet detailing all 32 reasons. Contact us today for your personal copy.
The extensive Apex software library comprises advanced algorithms and programs for a vast range of clinical studies:

- Cardiac first pass, equilibrium, $^{201}$Tl scintigraphy
- Absolute and relative kidney clearance
- CBF and other brain studies
- Pulmonary ventilation and perfusion

...and scores of others.

CLIP® – an innovative Apex language created for clinicians – enables the user to write his own unique programs on the spot, using familiar BASIC statements interpreted by the powerful Apex processor to clinical commands.

Apex Processors: 32 Ways Better!

Elscint European Operations,
40 Rue Jean Jaurès,
93170 Bagnolet, France.
Tel: (01)362.13.05.

Elscint Inc.
930 Commonwealth Avenue,
Boston, MA 02215, U.S.A.
Call Toll Free: 800-343-9504.
We were first to make ECT practical...
By working closely with clinicians, we were able to introduce the MaxiCamera™ 400T as the first nuclear diagnostic system with tomographic capability. It effectively meets real clinical needs, such as better contrast enhancement with more sensitive transaxial images in liver and soft tissue studies, and positive identification of cardiac infarcts. And for greater productivity, it can perform the whole range of routine and specialized nuclear procedures, including single pass, whole body studies.

MaxiCamera 400A makes spatial distortion corrections practical.
Now you can achieve even better resolution, linearity and uniformity with the advanced MaxiCamera 400A with Autotune ZS. This camera automatically retunes each photomultiplier tube many times each second to provide the stable detector response necessary to make real time spatial distortion and energy corrections practical for an analog system. With no delays in your system’s operation, and no decrease in sensitivity.

Star computer provides automatic ECT data acquisition and analysis.
By adding the Star™ data acquisition system and tomographic software to your MaxiCamera 400T system you can have comprehensive ECT capability, with touch-button convenience. Camera movement and data acquisition are automatically controlled according to your specifications. And you can display reconstructions as transaxial, sagittal, coronal and oblique angle projections. The Star system also features a full range of automatic programs for routine and specialized liver and cardiac studies, which dramatically increase diagnostic information while saving you precious time.

For greater investment value, GE nuclear systems are designed for upgradeability. And backed by our worldwide service network and parts availability. With practical, proven nuclear imaging systems from a single source, your choice could be practically automatic.

Now we’ve made it practically automatic.

We bring good things to life.

GENERAL ELECTRIC
Scan with the eye of an eagle

OSTEOSCAN-HDP
Technetium Tc99m Oxidronate Kit

The superior bone scanning agent

Higher bone uptake than MDP agents means higher count rates and faster patient imaging.

Superior bone to soft tissue ratios vs. MDP agents, based on Osteoscan-HDP's superior bone uptake and rapid blood clearance.

High abnormal to normal bone ratios for unsurpassed lesion detection. Osteoscan-HDP provides unsurpassed image quality even in difficult to scan elderly and obese patients.

For more information, contact your Sales Representative or:
Procter & Gamble Professional Services
P.O. Box 171, Cincinnati, OH 45201
(513) 977-5547.

Please see the following page for a brief summary of prescribing information.
Scan with the eye of an eagle

OSTEOSCAN-HDP
Technetium Tc99m Oxidronate Kit

INDICATIONS AND USAGE
OSTEOSCAN-HDP (Technetium Tc99m Oxidronate Kit) is a diagnostic skeletal imaging agent used to demonstrate areas of altered osteogenesis.

CLINICAL PHARMACOLOGY
During the 24 hours following injection, Technetium Tc99m-labeled
OSTEOSCAN-HDP is rapidly cleared from blood and other non-osseous tissues and accumulates in the skeleton and urine. In humans, blood levels are about 10% of the injected dose at one hour post-injection and continue to fall to about 6%, 4% and 3% at 2, 3 and 4 hours respectively. When measured at 24 hours following its administration, skeletal retention is approximately 50% of the injected dose. OSTEOSCAN-HDP exhibits its greatest affinity for areas of altered osteogenesis and actively metabolizing bone.

CONTRAINDICATIONS
None known.

WARNINGS
This class of compounds is known to complex cations such as calcium. Particular caution should be used with patients who have, or who may be predisposed to hypocalcemia (i.e., alkalosis).

PRECAUTIONS
General
Contents of the vial are intended only for use in the preparation of Technetium Tc99m Oxidronate and are NOT to be administered directly to the patient.

Technetium Tc99m Oxidronate should be formulated within eight (8) hours prior to clinical use. Optimal imaging results are obtained one to four hours after administration.

Technetium Tc99m Oxidronate as well as other radioactive drugs, must be handled with care, and appropriate safety measures should be used to minimize radiation exposure to the patients consistent with proper patient management.

Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

To minimize radiation dose to the bladder, the patients should be encouraged to drink fluids and to void immediately before the examination and as often thereafter as possible for the next four to six hours.

Carcinogenesis, Mutagenesis, Impairment of Fertility
No long-term animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc99m Oxidronate affects fertility in males and females.

Pregnancy — Category C
Animal reproduction studies have not been conducted with Technetium Tc99m Oxidronate. It is also not known whether Technetium Tc99m Oxidronate can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Technetium Tc99m Oxidronate should be given to a pregnant woman only if clearly needed. Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability should be performed during the first few (approximately 10) days following the onset of menses.

Nursing Mothers
Technetium Tc99m is excreted in human milk during lactation, therefore formula feedings should be substituted for breast feeding.

Pediatric Use
Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Although adverse reactions have not been reported that are specifically attributable to the use of Technetium Tc99m Oxidronate, allergic dermatological manifestations (erythema) have been infrequently reported with similar agents.

DOSEAGE AND ADMINISTRATION
General Instructions
The recommended adult dose of Technetium Tc99m-labeled OSTEOSCAN-HDP is 15 mCi with a range of 10 to 20 mCi. The activity of each dose should be measured by a suitable radiation calibration system just prior to administration. The dose should be given intravenously by slow injection. For optimal results imaging should be done 1-4 hours post-injection.

HOW SUPPLIED
OSTEOSCAN-HDP is supplied as a lyophilized powder packaged in vials. Each vial contains 2.0 mg oxidronate sodium and 0.16 mg stannous chloride as active ingredients, and 0.36 mg gentisic acid as a stabilizer. Kits containing 5 or 30 vials are available. The NDC number for this product is NDC 37000-403-01. The drug can be stored at room temperature both prior to and following reconstitution with ADDITIVE-FREE sodium pertechnetate Tc99m.
3 Big Favorites

OF OVER 500 NUCLEAR PRODUCTS available in our free catalog

a cardiac stress system that does more and costs less.
Designed for exercise imaging
SPECIFY MODEL 056-180 IN YOUR INFORMATION REQUEST

radiochromatogram scanner
Computerized analysis of radiopharmaceutical purity
SPECIFY "TAGMASTER" (149-300) IN YOUR INQUIRY

pulmonex xenon system
A single unit with an integrated gas trap
SPECIFY "PULMONEX" (130-500) IN YOUR INQUIRY

FOR COMPLETE INFORMATION WRITE OR CALL—

Atomic Products Corporation
ATOMLAB DIVISION • ESTABLISHED 1949
P.O. BOX 657 CENTER MORICHES, NEW YORK 11934 USA
(516) 878-1074
TWX #510-228-0449
It's one thing to talk about ideas.

It's another to turn them into practical realities for clinics and hospitals all over the world.

We do it all the time.

Three years ago, we introduced Systems I - IV — the first advanced nuclear medicine system that expands as your needs grow. It quickly became the best-selling system in nuclear medicine.

It still is.

Now there's the ADAC DPS-2800, the first compact, mobile system that lets you do simultaneous acquisition and processing. Plus advanced image manipulation and quantitation. All for under $50K.

There's also the ADAC DPS-3300, the first high-speed system for rotational emission tomography.

We've always had the idea that our systems should have a built-in future. In reality, you can run our most advanced software on the first system we ever built.

As part of our ongoing software commitment, ADAC supports software development at leading hospitals and clinics throughout the world. We incorporate their exclusive programs into our systems, providing you with the best in software capability.

For more information about ADAC Nuclear Medicine Systems, please call or write.

New Kodak ortho M film

The speed to nip dot blooms in the bud.

Increasing the brightness of the image on your nuclear medicine monitor can result in undesirable dot "blooming" which diminishes the diagnostic value of the image. The new Kodak ortho M film has the high speed necessary to reduce the need for increasing brightness levels, thus minimizing dot blooming. Kodak ortho M film is a single-emulsion film with high contrast and halation control which delivers crisp, sharp dots and clearly defined edges of dot concentration patterns. The film's orthochromatic sensitivity matches the phosphor emissions of blue and green cathode-ray tubes. Could you ask for more? Perhaps processing in 90 seconds? New ortho M film offers that, too.

Ask your Kodak Technical Sales Representative for a demonstration, or write Eastman Kodak Company, Department 740-B, Rochester, New York 14650.

TURNING ENERGY INTO IMAGES

© Eastman Kodak Company, 1981
DOSE CALIBRATOR

Activity Linearity Testing the easy way

Fast
Now with the newly developed Calicheck™ dose calibrator activity linearity test kit, you can meet N.R.C. Regulatory Guide 10.8, appendix D., Section 2E or your state's equivalent requirement in just 4 minutes — not days. You can complete the test in one short sitting and check for linearity virtually at a glance. Plus you eliminate the frustration of having to start the test all over simply because you forgot to take a reading on time.

Accurate and Reliable
The new Calicheck kit is designed to attenuate 99mTc by known values — accurate using a high yield generator eluant or unit dose.

A Calicheck kit provides for seven successive measurements simulating the decay of 99mTc at approximately 0, 6, 12, 20, 30, 40 and 50 hours from the initial assay.

Complete Yet Reusable
Your Calicheck kit comes to you complete with its own storage container, a unique arrangement of seven color-coded lead-wrapped tubes, work/record keeping sheets, instructions for use and a license amendment form (if needed.)

Just four minutes
As simple as 1, 2, 3, 4, 5, 6, 7. Place central tube in the dose calibrator. Place the source in this tube and take a reading. Then sequentially place color-coded tubes over the central tube. Additional readings are taken immediately, converted with a predetermined factor and you can see the degree of linearity virtually at a glance.

Your Calicheck kit is completely reusable for an indefinite period of time. There is nothing to wear out or use up. If damage should cause a tube to malfunction, individual replacements are available.

Safe
Your use of a Calicheck kit eliminates the need to fractionate eluants or decay the elution for several days while periodically collecting data to determine linearity. Time of potential exposure to radiation is drastically reduced, thereby maintaining exposures ALARA.

Low Price
A Calicheck dose calibrator activity linearity test kit is just $375.00 shipping included.

Just call (216) 663-1773 or write: Calcorp, Inc., P.O. Box 25589, Cleveland, Ohio 44125-0589.

A Calicheck dose calibrator can be returned to active service in just minutes. This savings alone can pay for a Calicheck kit in just three to four linearity tests. A Calicheck kit lets you return to active service too!

Can Improve Patient Care
A Calicheck kit is so fast, efficient and easy to use, you may wish to check dose calibrator linearity more frequently. Lets you spot trouble before it becomes serious.

Dose calibrator can be returned to active service in just minutes. This savings alone can pay for a Calicheck kit in just three to four linearity tests. A Calicheck kit lets you return to active service too!
Siemens provides you with the consistent diagnostic results and system flexibility you require in SPECT and routine or specialized nuclear applications. We offer a choice of ZLC detector-based systems for uncompromised image integrity...even in studies demanding expanded count rate capability.

Our ZLC 3700S and ZLC 7500S gamma cameras are enhanced with the new ECT Processor for computerized acquisition, reconstruction, and display of tomographic images. And, our ROTA CAMERA system with ZLC detectors is available with dual heads for even greater system sensitivity and data accuracy.

To maximize your investment, we offer comprehensive service programs supported by one of the industry's largest technical service organizations dedicated to nuclear medicine.

For additional information on Siemens complete systems for nuclear medicine, contact your local representative or:

Siemens Medical Systems, Inc.
Nuclear Medicine Division
186 Wood Avenue South
Iselin, New Jersey 08830.
Telephone (201) 321-3400.
At Landauer, man and machine measure together for greater accuracy. Every inch of Landauer Gardray® film or TLD chip is read by the most advanced film and crystal readers in the world, double-checked by computer and then scrutinized by skilled technicians.

At Landauer... our people, our highly accurate apparatus and our ability to meet your time requirements have made us the leader in radiation dosimetry for over 25 years. For more information about Landauer total dosimetry services, fill out the coupon below and mail to R. S. Landauer.

Please send me more information on Landauer radiation dosimetry.

NAME: 
ADDRESS: 
CITY: 
STATE: 
ZIP: 
Clip out and mail to: R. S. Landauer, Jr. & Co., NM-11
Division of Technical Operations, Incorporated,
Glenwood Science Park, Glenwood, Illinois 60425
(312) 755-7000
Now. An on-board computer and high resolution images. Anywhere.

New Data Mo™ Computerized Mobile Camera System from Picker International.

Micro Z and ACE Imaging. Automatically calibrates the detector to allow Asymmetric Contrast Enhancement.


13-inch Color Monitor. High resolution image and ECG display.

Integrated 16 bit computer. High capacity Winchester disc technology. Plus floppy disc drive for patient data.

Picker International's new Data Mo is a completely integrated mobile camera and computer. Its mobility brings all the benefits of high resolution imaging and quantitative analysis right to the patient. Fully supported software is available for your clinical setting. Use the Data Mo in intensive care, cardiac care unit or emergency room. Even right in the Nuclear Medicine Department to take the strain off peak workload periods.

Call your local Picker International representative to get all the information about the computer power of Data Mo with its high resolution images. Or write: Picker International, Nuclear and Ultrasound, 12 Clintonville Road, P.O. Box 99, Northford, CT 06472, (203) 484-2711.
thrombosis
detection of DVT using I-125 fibrinogen

- Direct digital percent readout
- Printout saves time
- Bedside operation
- Right angle probe minimizes patient disturbance
- Controls are on probe
- Operator error protection
- Versatile — settable for other isotopes

Print Out
1¾ inch wide

position on leg

percent uptake

 TECHNICAL ASSOCIATES
7051 ETON AVE. • CANOGA PARK, CA. 91303    (213) 883-7043
From Detection to Display
NU-TECH improves the image of Nuclear Medicine Imaging

THE INNOVATORS OF HEXARRAY™ COLLIMATION

For nearly two decades Nu-Tech has designed and manufactured nuclear imaging collimation. Acclaimed as the industry leader with the Hexarray™ foil collimator line, Nu-Tech now offers scintillation camera detector upgrades and refurbished "total" systems.

Quick Mount™

An ultra modern quick exchange bayonet-lock collimator system with up to 260 KEV imaging capability for Picker, Siemens, and Technicare LFOV cameras.

Upgrades & Total Systems

Our upgrades permit you to extend the clinical life of your scintillation camera without sacrificing the latest in clinical performance.

Roto Hexarray™

Precision "ball-bearing" movement rotational slant hexarray collimators for cardiology and tomographic applications. Large and small field of view assemblies available.

There is more you should know about NU-TECH'S clinically engineered and tested products.

Write or call us today . . .
240 Sargent Drive
New Haven, CT 06510
(203) 787-3985 (Call Collect!)
Sodium Iodide I 123
Diagnostic—Capsules for Oral Administration

Description: BNPI Sodium Iodide I 123 (Na I 123) for diagnostic use is supplied in capsules for oral administration. The capsules are available in a strength of 200 microcuries (uCi) Iodine 123 at time of calibration. The I 123 utilized in the preparation of BNPI’s Sodium Iodide I 123 capsules contains 1.9% or less I 125 as the only detectable radionuclidic impurity at time of calibration. At time of expiry, the capsules contain not less than 91.2% I 123, not more than 8.4% I 125 and not more than 0.4% all other radionuclides.

Indications and Use: Administration of Sodium Iodide I 123 is indicated as a diagnostic procedure to be used in evaluating thyroid function and/or morphology.

Contraindications: To date there are no known contraindications to the use of Sodium Iodide I 123 capsules.

Warnings: Females of childbearing age and children under 18 should not be studied unless the benefits anticipated from the performance of the test outweigh the possible risk of exposure to the amount of ionizing radiation associated with the test.

Precautions: Pregnancy Category C. Animal reproduction studies have not been conducted with Sodium Iodide I 123. It is also not known whether Sodium Iodide I 123 can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Sodium Iodide I 123 should be given to a pregnant woman only if clearly needed. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Sodium Iodide I 123 is administered to a nursing woman.

Safety and effectiveness in children have not been established.

Adverse Reactions: Although rare, reactions associated with the administration of Sodium Iodide isotopes for diagnostic use include, in decreasing order of frequency, nausea, vomiting, chest pain, tachycardia, itching skin, rash and hives.
Purity  No interfering radionuclidic contaminants.
Dosimetry  With comparable administered activity, less than one-half the radiation dose to the thyroid.
Useful Life  Expiration time is 30 hours after time of calibration.
Image Quality  Images retain high quality throughout the useful life of the agent.

Sodium Iodide I 123 is the first radiopharmaceutical to be commercially distributed by Benedict Nuclear Pharmaceuticals, Inc. And our first is the finest.

We are a company with a sole purpose—to develop and make available the highest quality radiopharmaceuticals in the world. And though our name may be new, the names of our scientists, researchers, technicians and management are known and respected throughout the field of nuclear medicine.

As advocates of quality studies, we share your concerns and welcome your inquiries. We invite you to get to know Benedict Nuclear so you can experience the finest right from the start.

Dosage and Administration: The recommended oral dose for the average patient (70 kg) is 100-400 uCi. The lower part of the dosage range (100 uCi) is recommended for uptake studies alone, and the higher part (400 uCi) for thyroid imaging. The individual patient dose should be measured by a suitable radiopharmaceutical calibration system (dose calibrator) immediately prior to each administration. The determination of 123I concentration in the thyroid gland may be initiated at six hours after administering the dose and should be measured in accordance with standardized procedures.

Radiation Dosimetry: A comparison of the estimated absorbed radiation dose to the thyroid of an average patient (70 kg) from an oral dose of 100 uCi of BNPI Sodium Iodide I 123 (p, 5n), Commercial (p, 2n) Sodium Iodide I 123 or Sodium Iodide I 131 at Time of Calibration (TOC) is shown below:

<table>
<thead>
<tr>
<th>Target Organ</th>
<th>Absorbed Dose (rads/100 uCi TOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Thyroid</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

Special Consideration: Radiopharmaceuticals should be used only by individuals who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

How Supplied: BNPI Sodium Iodide I 123 is supplied as capsules for oral administration in a strength of 200 uCi at time of calibration.

Ask For Benedict by Name from your Radiopharmacy or Call 800-525-3785
The most beautiful thing about our Dyna Camera Series 5 is the way it performs.

We're proud of the way our new Dyna™ Camera system looks. We think it's the industry's most attractive gamma camera system package. But we're far prouder of just how well Dyna Camera Series 5 works.

**A beautiful design.** Our central workstation, for instance, is stylish. But it was designed to meet your needs for efficiency, comfort and patient throughput. And, unlike its complicated and cluttered competitors, our control console has been fashioned to facilitate the performance of all the many manipulations necessary in the practice of modern nuclear medicine.

**A beautiful image.** Picker International continues to supply you with the leading edge in gamma camera technology in its Dyna Camera Series 5 system. Your choice of high performance detectors, exclusive Micro Z ACE™ Imaging for unequaled contrast enhancement, built-in Dyna Dot photographic camera system for high resolution films, and a host of other accessories insure top performance in all nuclear medicine modalities.

**A beautiful choice.** The Dyna Camera Series 5 represents the latest evolutionary step in the continuing development of Picker International's renowned gamma camera system. It's a performance-engineered package available in a number of upgradable system configurations, one of which is sure to fill your specific needs for both today and tomorrow.

Precision performance. Sophisticated styling. The new Dyna Camera Series 5 has it all. And it all works beautifully. For you. Contact Picker International, Nuclear and Ultrasound, P.O. Box 99, 12 Clintonville Road, Northford, CT 06472.

Picker International
Teledyne Isotopes supplies NaI(Tl) crystals to many hundreds of satisfied customers. Why do they come back to Teledyne Isotopes? Because, in an industry that has always been precise and demanding, they know they can depend on our:

- **Crystal Purity.** K content of < 1.0 PPM.
- **Reliability.** The hermetic seal is designed to last for years... and does.
- **Performance.** Resolution for most solid crystals is down to 7.0-7.5% for Cs-137; lower resolutions are available at a premium price. For well-types and hole-through, we offer the best resolution.
- **Stability.** We use the best P.M. tubes available.

- **Full Range.** Crystals of various shapes and sizes to suit most applications.
- **Fast Delivery.** On-time service makes Teledyne Isotopes the first supplier for many O.E.M.'s.
- **Low Prices.** 20-30% less expensive than published list prices of other crystal manufacturers.

Face it... there's little difference in quality among the crystals being manufactured today.

Your important choices are in the areas of delivery and price. Contact Teledyne Isotopes for a price list or quotation, and then check our delivery.

Teledyne Isotopes
50 Van Buren Ave.
Westwood, NJ 07675
(201) 664-7070
Telex 134-474
To save money, buy direct. That goes for collimators, too. Septa Corporation manufactures and sells collimators direct to the user. No middleman and no markup. Just big savings.

Septa makes collimators and mountings to fit all Gamma cameras:
- Siemens
- General Electric
- Picker
- Technicare
- Toshiba

Septa manufactures all collimator types:

**Parallel Hole**
- Low Energy
  - 6 Resolutions available 7mm thru 12mm.
  - Ultra Hi-Res thru Ultra Hi-Sens, all Hex.
- Medium Energy, various resolutions available, hex and square
- High Energy, various resolutions available, hex and square

**Rotating 30° Slant Hole**
- 6 Resolutions available 7mm thru 12mm.

**Diverging/Converging**

**Seven Pinhole**

**Single Pinhole, Low Energy and High Energy, With or Without Uptake Probe**

**Trade-ins:**
We offer another great way to save, too. We offer trade-ins that will upgrade your aging equipment for increased sensitivity by replacing obsolete cores in your old collimators.

**Save:**
Tell us what camera you have and we'll rush you a collimator price list and complete specifications. Then start saving — buy the best direct from Septa.

**SEPTA COLLIMATORS**

Septa Corporation | A subsidiary of Engineering Dynamics Corporation.
124 Stedman Street, Lowell, MA 01851
Tel: (617) 458-9064 Telex No.: 951-779 EDC LOWE
THE LAST SHALL BE FIRST

The XENAMATIC™ Series of Xenon Gas Delivery Systems is the most recent Xenon system to be developed yet it is the FIRST in a number of VERY IMPORTANT FUNCTIONS.

**FIRST:** To deliver a forced breathing system that can duplicate all the functions of a respirator, including PEEP and allows you to study patients with chronic lung disease that require breathing assistance and controlled $O_2$ environments.

**FIRST:** With Digital Radioactive Concentration (mCi/L) Read Out.

**FIRST:** With Digital Precision $O_2$ Replenishment That Allows You To Study Patients On Increased $O_2$ Levels.

**FIRST:** With Over 20 Ft. of Activated Charcoal In a Specially Designed Cartridge Pack That Inhibits Xenon Redistribution When Not In Use.

**FIRST:** With Reversible Breathing Port On a Fully Lead Lined Arm.

**FIRST:** With Electronic Remote Control (Optional).

**FIRST:** With A Completely Shielded Expandable Interface.

**FIRST:** With A 150 Liter Expandable Interface.

**FIRST:** With Automatic Xenon Trap On and Off.

**OTHER STANDARD FEATURES INCLUDE:** Xenon Trap exhaust port monitor/alarm, low dead space, retractable and reversible breathing port arm, totally mobile, easy open CO$_2$ and Moisture Trap jars, low breathing resistance, inline bacteriological filter, reuse of stored Xenon, and ease and simplicity of operation found in no other unit.

The XENAMATIC Series was designed to meet the stringent requirements of rCBF. The same requirements can expand your Xenon lung function capabilities.

FOR MORE INFORMATION, CALL OR WRITE TODAY:

DIVERSIFIED DIAGNOSTIC PRODUCTS, INC.
7007 Brittmoore #15
Houston, Texas 77041 713-466-9728

38A THE JOURNAL OF NUCLEAR MEDICINE
NUCLEAR MEDICINE REFERENCES

Nuclear Medicine: An Introductory Text
By Peter Josef Ell, M.D. and Edward Sydney Williams, M.D.
This book applies current nuclear medicine techniques to clinical practice with perspectives on their advantages and limitations.
- "Nuclear Medicine is recommended for its conciseness, readability, and clinical astuteness." The New England Journal of Medicine, review.
- practical, clinically oriented text
- pragmatic approach

Cancer and the Nervous System
By R.A. Henson, M.D. and H. Urich, M.D.
Turn to this book for an in-depth study of the neurological manifestations of systemic malignant disease. Direct involvement of the nervous system in neoplastic processes... and indirect effects. Features you'll appreciate:
- details diagnosis, investigation and treatment of patients
- discusses pathology and pathogenesis
- written by world-respected leaders in the field

Interventional Radiology
Edited by R.A. Wilkins, F.R.C.R. and M. Viamonte, M.D.
Written by a team of European and North American radiologists, this reference offers a comprehensive account of the latest developments in interventional radiology. Each section discusses:
- methodology, equipment and patient prep
- indications and contraindications
- results and complications

Lecture Notes on Clinical Oncology
By Barry W. Hancock, M.D. and J. David Bradshaw, F.R.C.R., D.M.R.T.
Here's an up-to-date guide to the theory and practice of clinical oncology. This insightful book:
- emphasizes the multidisciplinary approach necessary for successful management of any cancer patient
- provides a core of systems-based chapters
- discusses terminal care, education, screening and prevention

Nuclear Medicine Technology and Techniques
- "...one cannot deny the overall excellence of the text." Journal of Nuclear Medicine Technology

- The British Journal of Radiology called the last edition "...highly recommended as a reference for those starting their careers in the field."

YES! Please send me my 30-day on approval copies of:

[] ELL (B-1564-X) Price, $39.50
[] HENSON (B-2148-6) Price, $80.00
[] HANCOCK (B-2035-X) Price, $14.75
[] WILKINS (B-6256-1) Price, $59.95
[] BERNIER (0662-4) Price, $39.50
[] SODEE (4729-0) Price, $39.95

[] Bill me [ ] Payment enclosed
[] MasterCard [ ] Visa

Name ____________________________
Address ____________________________
City __________________ State ____ Zip __

For faster handling, mail to: Linda Anderson, The C.V. Mosby Company, 11830 Westline Industrial Dr., St. Louis, MO 63141

30-day approval good in U.S. and Canada. PRICES SLIGHTLY HIGHER OUTSIDE U.S.A. ALL PRICES ARE SUBJECT TO CHANGE. Add applicable sales tax.
more than just equipment...

LFOV
SFOV
Imagers
Accessories
Digital P-Scope
Nuclear Cardiology
High Speed Systems
Computer Compatible
On-Site Imaging Services
Proven, Practical Instrumentation and Service to the Entire Nuclear Medicine Community

Whether you are establishing a new nuclear medicine department or upgrading your present capability, MEDX is the logical supplier. We offer the broadest range of nuclear instrumentation from new, top of the line systems, to upgrades, which extend the life of your equipment and provide state-of-the-art performance. Designed to meet your needs today, MEDX offers: LFOV and SFOV Cameras, High Speed Systems, Nuclear Cardiology, Imagers, Digital P-Scope, Accessories, Computer compatibility, and On-site Imaging Services.

Every instrument, every system sold by MEDX is warrantied and backed by a fully trained, nationwide network of service technicians. When you need us, we'll be there, because nuclear equipment is our business.

The MEDX Pledge

In the everyday world of nuclear medicine where clinical performance, reliability, and economy are essential, MEDX is committed to serving the entire nuclear medicine community with proven systems that perform. MEDX is your nuclear imaging specialist with marketing, engineering and service organizations attuned to your true needs and ready to help you meet them. Let us show you how.

MEDX—Your Logical Choice in Nuclear Medicine

501 South Vermont Street, Palatine, Ill. 60067
312-991-0660 • 800-323-3847 • Telex: 206639
Now, more accurate images from Picker International's new DynaScan ECT System.

Dyna Scan with Micro Z and ACE Imaging for increased contrast and resolution.

Now, you can attain superior three dimensional ACE images. The Dyna Scan system provides rock-solid rotation and body contouring for clearer, sharper images. Yet this system preserves the positioning flexibility required for routine spot-view imaging, while adding the capacity for single or multi-pass whole body scanning. The Dyna Scan system is compatible with Dyna Cameras 4, 4C and Series 5. And unlike other ECT manufacturers, we didn't compromise on our shielding which remains at 500 KeV.

Easily interfaces with all computers. Our microprocessor-based gantry allows trouble free interface with your present computer. You can also purchase the system with a complete turnkey work station with computer.

See the Dyna Scan difference in image quality. Call your local representative, or write Picker International, Nuclear and Ultrasound, 12 Clintonville Road, P.O. Box 99, Northford, CT 06472.

PICKER INTERNATIONAL
Now—a single source for crucial information on technical and clinical aspects of

DIGITAL NUCLEAR MEDICINE provides a comprehensive and concise presentation of the concepts of computers and the computational manipulations of clinical nuclear medicine data. The text includes sufficient fundamental information to guide the novice through the terminology, basic components, and theory of operation of the nuclear medicine computer system.

**Comprehensive, clear, up to date**

The book is divided into three main sections, *Basic Computer Concepts, Clinical Applications, and Ancillary Information.* A complete description of a general operating system as well as specific operating systems of nuclear medicine are included. Discussions cover general image processing and specific applications such as those of emission tomography and data base management. A comprehensive review of current clinical imaging applications, including protocols, is also included.

**Emphasis on clinical utility**

Attention is directed to the performance of accepted clinical procedures in nuclear cardiology and pulmonary and renal imaging. The reader is guided through the selection of study parameters by pointing out the clinical consequences of the various choices. Chapters deal with microprocessor technology as well as special considerations that should be made when developing a cardiovascular nuclear medicine laboratory.

**New material on acquisition and quality control**

An important section provides crucial information on selection, purchasing, and establishing an appropriate computer system. A unique chapter gives information not previously available on quality control for the computer as well as the computer-imaging device.

DIGITAL NUCLEAR MEDICINE will be an invaluable reference/text for nuclear medicine specialists and residents, radiologists, and nuclear medicine technologists.


You’ll want to examine these other new titles in your specialty:

**Gastrointestinal Radiology:**

A Pattern Approach.

By Ronald L. Eisenberg, M.D.

A major new approach to the day-to-day performance of radiology, incorporating in a single source the best features of lists of gamuts and the extensive information of disease-oriented texts. 1042 Pages. 1443 Illustrations. 1983. 85-07370. $95.00.

**Nuclear Medicine In Vitro,**

2nd Edition

By Benjamin Rothfield, M.D.


J. B. Lippincott Company • The Health Professions Publisher of Harper and Row, Inc.

East Washington Square, P.O. Box 1430, Philadelphia, PA 19105

Please send me for 30 days* ON-APPROVAL EXAMINATION

___ copy(ies) of Digital Nuclear Medicine, (65-06786), @ $19.50
___ copy(ies) of Gastrointestinal Radiology: A Pattern Approach, (65-07370), @ $95.00

Name

Address

City/State/Zip

Also available at your medical bookstore.

Payment enclosed *(save postage & handling)

Charge it:

[ ] Master Charge [ ] Visa [ ] American Express

Expiration Date

*The law requires that we collect sales tax where applicable. Please include the prescribed amount with your payment. Prices U.S.A. only and subject to change. Orders subject to the approval of Lippincott.
Now, from Medical Data Systems, comes Emission Computed Tomography.

This ECT system benefits from our 11 years of experience with equipment and programming for nuclear medicine.

Test installations for the last two years have proven the system.

During those same two years, Medical Data Systems acquired the experience necessary to provide the high level of training and support our customers expect.

What's more, the system operates with all major brands of tomographic cameras.

For more ECT information, call Mr. Stephen Schweer, Product Manager-Nuclear Medicine, (313) 769-9353.

Attractive leasing or time purchase plans are available through our “Prime” program. Ask your Medical Data Systems representative about it.
What do these names have in common?

GENERAL ELECTRIC
BELL LABORATORIES
FORD DU PONT XEROX
POLAROID IBM BOEING
NUCLEAR PHARMACY, INC.

It's not only that these companies are leaders in their fields. They started it all. And Nuclear Pharmacy, Inc. pioneered the nuclear pharmacy field. We are the leaders because you, our customers, like the job that we do! We place the highest priority on radiation safety and rigid quality control. We have a “Pharmacy Service Center” near you. Call us.

We're No. 1 and we earn the right every day. For Service...With Speed!

505/345-3551
P.O. Box 25141, Albuquerque, NM 87125
For increasing both the resolution and the sensitivity of nuclear medicine imaging, look first to the collimator – and Collimation, Inc. We've provided the latest advances in collimator engineering to nuclear medicine professionals nationwide for over ten years. Today, we produce a wide variety of precision collimators – from large field, medium energy to standard field, insert-type – that can be readily incorporated into your imaging system.

Our computer design and manufacturing capability achieves results you can see in product quality and cost. And as part of your camera or scanner system, a new or re-cored collimator from Collimation can help you achieve a clinically significant improvement in spatial resolution and image contrast. So for enhanced nuclear medicine imaging that can be clinically useful and economically prudent, focus in on Collimation.
Unprecedented performance like the recently recorded 8.9% PHR of a Harshaw BGO crystal is what you'd expect from the world leader in scintillation crystal growth. We earned that distinction through the inherent quality of our crystals—quality that is grown into each scintillation crystal we deliver.

And Harshaw BGO beat sodium iodide hands down when a national research laboratory needed a compact scintillator to meet stringent packing and performance needs.

Over eight years ago, Harshaw pioneered the use of oxide materials in medical CT scanning, X-ray and positron tomography. Today, Harshaw continues to play a key role in these valuable diagnostic tools.

So in April 1982, when NASA needed a unique geometry BGO annulus to gather data on gamma rays caused by solar flares, they called Harshaw for reliable performance and delivery in time for the next Space Shuttle flight. From concept to fabrication, Harshaw delivered in June.

Our recent addition to R&D and production facilities promises even more significant advances over the next twelve months—new scintillation materials, larger crystal sizes and even better resolutions. It is this type of commitment that has kept Harshaw the leader in crystal technology—responsive to the evolving needs of research, exploration, industry and medicine since 1936.

So whether you need a large or small geometry, call Harshaw. We have the flexibility and the resources to deliver the oxide scintillators with the quality and performance you demand.

PUT HARSHAW BGO TO WORK IN YOUR APPLICATION... CALL (216) 248-7400

HARSHAW
Harshaw Chemical Company
Crystal & Electronic Products
6801 Cochran Road,
Solon, Ohio 44139.
The low-temperature (−20°C) “Cryo/Safe” offers high-volume xenon users an excellent means of decreasing trap effluent concentrations. At −20°C, the xenon adsorption capacity of activated charcoal is about five times greater than at 20°C because xenon atoms remain adsorbed on the charcoal surface for a longer period at lower temperatures. This greatly slows the xenon bolus migration through a charcoal cartridge when carried by a steady air flow. These factors give the xenon more time to decay and thus greatly reduce the xenon concentration in the effluent. In fact, the long-term, steady-state, effluent xenon concentration of this freezer trap is less than 1% of that for a room-temperature trap (assuming a typical use for about 10 patients per week).

For detailed information, see Technical Notes: “Refrigerated Charcoal Trap For Xe-133”, in the Nov./Dec. 1981 issue of Medical Physics.

Or, contact us and ask for Bulletin 300-B.
The Society of Nuclear Medicine offers you . . .

RADIOPHARMACEUTICALS AND RADIOPHARMACEUTICALS II
Proceedings of the 1st and 2nd International Symposia on Radiopharmaceuticals
These 2 volumes contain a series of informative papers that examine the present state of the field of radiopharmacology. Chapters cover such topics as the design, development, preparation, regulation, and clinical use of radiopharmaceuticals. Also discussed are organic and inorganic radiopharmaceuticals, functional imaging, RIA, pharmacokinetics, and various body systems.
Radiopharmaceuticals: Hardcover; 7 x 10¼; 571 pp; $30.00. Radiopharmaceuticals II: Softcover; 6¼ x 11, 557 pp; $40.00. SPECIAL BONUS OFFER: Purchase both as a set for $50.00.

FUNCTIONAL MAPPING OF ORGAN SYSTEMS AND OTHER COMPUTER TOPICS
Sponsored by the Computer and Instrumentation Councils, this book contains 25 papers that highlight important areas of computer software development in nuclear medicine, such as functional mapping and imaging of organ systems. Other important aspects of computer development and use—background subtraction, computer tomography, and image display techniques—are also included. This volume is indispensable to physicians, medical research scientists, and computer specialists. Softcover; 8½ x 11; 272 pp; $19.00 members; $28.00 non-members.

NUCLEAR MEDICINE REVIEW SYLLABUS
Prepared by more than 50 noted authorities in the field, this volume presents a comprehensive overview of the major scientific and clinical advances that have occurred in nuclear medicine over the last decade. Chapters include Radiopharmacology, Instrumentation, Radiation Effects and Protection, Cardiovascular, Central Nervous System, Endocrinology, Gastroenterology, Genito-Urinary System, Hematology, Oncology, Pulmonary, Radioassay, and Skeletal System. Softcover; 8½ x 11; 630 pp; $30.00. Now into its second printing!

SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY
This book presents an overview of single photon emission computed tomography and includes numerous papers that describe and evaluate specific systems and techniques. Papers cover such topics as Anger cameras, septapinhole and slant-hole collimators, brain, cardiac, and gated blood-pool studies, and the BICLET and SPECT systems. Physicians, physicists, and computer specialists will find the current research of clinical interest. Softcover; 8½ x 9; 252 pp; $18.00 members; $27.00 non-members.

New from the Technologist Section

CURRICULUM GUIDE FOR NUCLEAR MEDICINE TECHNOLOGISTS
Arranged in 25 sequential units containing an overview, outline, and objectives, this guide features topics recommended for a 1-year nuclear medicine technology program. Two sections describing associate and baccalaureate degree programs are included. The book serves as a model for nuclear medicine technology educators to develop or expand their curricula. Loose-leaf; 8½ x 11; 338 pp; $50.00.

CLINICAL EVALUATION METHODS GUIDE
This guide is designed to aid allied health and nuclear medicine technology educators in developing appropriate assessment instruments for evaluating student performance. The 6 assessment tools examined include: checklists, rating scales, anecdotal records, critical incident technique, questionnaires, and data forms. Softcover; 8½ x 11, 72 pp; $15.00.

And look for our 3 new books: LOW-LEVEL RADIATION EFFECTS: A FACT BOOK; NUCLEAR MEDICINE SCIENCE SYLLABUS, second fully revised edition; and DIGITAL IMAGING: CLINICAL ADVANCES IN NUCLEAR MEDICINE.

ORDER NOW!
Prepayment required in US funds drawn on US banks only. Add $1.50 processing fee for US dollars drawn on Canadian banks; $12.50 on banks outside US and Canada. Also add $2.50 postage and handling for each book ordered. Make checks payable to: The Society of Nuclear Medicine, at 475 Park Avenue South, New York, NY 10016 (212)688-0717. Prices are subject to change without notice.
COMMITTED TO THE FUTURE OF NUCLEAR MEDICINE

More Than Just The Leaders In Dose Calibrators... Capintec, Your Answer For Quality Assurance.

- The CRC®-50 Quality Assurance Center
  All the radionuclide dose calibration data you need is at your fingertips with the CRC-50. The compact modular system provides future dose planning, inventory control, and record keeping capabilities. You’ll have push-button access to ten program modes, CRT display, both ticket and page-size reports plus a minicassette record — all together in an easy-to-operate, easy-to-own system.

- The CAP-MAC™ Moly Assay Canister
  A fully shielded method for molybdenum breakthrough assays. The CAP-MAC encloses the vial during “milking” of your technetium generator; during transport to the ionization chamber; during Mo99 and Tc99m activity measurement; and, finally, for safe removal from the chamber. It’s safe — and simple.

- The Vanderbilt Cardiac Phantom (CP-201)
  The CP-201 provides unparalleled simulation of left ventricle and atrium geometry. It produces a variable heart-beat rate and assesses ejection fraction. It rotates to allow for exact determinations of wall motion. The Vanderbilt Cardiac Phantom is the new standard in total imaging system evaluation, including gated studies.

Contact the leader: A Capintec sales representative is ready to demonstrate the latest developments in nuclear medicine quality assurance technology.
BRATTLE IS BACK... with the R-DETECT you've been waiting for.

MODEL 210

The Brattle R-Detect offers reliable, fully-automatic R-wave triggering, compatible with all nuclear medicine computers.

Features include:

• Digital heart rate readout
• Pacemaker pulse rejection
• Flashing LED to indicate each QRS
• LED indicating faulty electrode connection
• Analog ECG output

Model 211, in addition to the above features, has a strip chart recorder with event marker showing location of the R-Detect signal.

Medical Electronics Corporation
Brattle Division
335 Newbury Street
Boston, Massachusetts 02115
(617) 536-8300
Here is EDC's Hi-Low Model 8430 Cardiac Stress Testing System with these features:

- UL Listed
- Imaging During Stress — Upright or Supine.
- All Digital Readout Provides Error-Free Indications.
- Fully Adjustable Ergometer Position and Angle to Fit Patients of any Size.
- Designed to be Used with Standard View and Large Field Cameras.
- Low Density Table Top.
- Posterior Viewing with any Camera.
- Controls Conveniently Located on Separate Console which can be Positioned anywhere.
- Heart Rate Control of Workload.
- Can Accept ECG and Computer Heart Rate Signals.
- Patient Monitors Own Speed, Thus Eliminating Unnecessary Directions.
- Rugged Construction.
- Visual Heartbeat Indicator, Aural Indication Available Through Front Panel Switch.
- Can be Calibrated in the Field.
- Automatic Load Drop-out at Low Pedal Speed.
- Table can be used for General Imaging.
- Elapsed Time Clock Updated Every Six Seconds.
- Stands on Four Legs — Retracting Wheels.
Only **SELO**
gives you the unique

**2X53 UNICAMERA**

- **TWO 53 cm (21”)**
camera detectors.
- Four times the sensitivity of 39 cm cameras.
- Two views with a single scan.
- **Greater** speed, sensitivity &
patient throughput, **less** patient dose,
**same** floor area & staff requirements

the **best** specialized whole body system
available.

- Emission tomography
(one and two head Gamma-CAT).
- Gamma cameras.
- Special systems.
- Radioisotope scanners.

Thirty years of experience.

**S.E.L.O.**

We develop ideas
before anyone else.

Via G. Di Vittorio 307/28 - I 20099 Sesto S. Giovanni (Milano)
Tel. 2423051 - Telex 310019 SELO I - (P.O. Box) 10011 - 20100 Milano (Italy)
INTRODUCTORY PHYSICS OF NUCLEAR MEDICINE, 2nd ed.

By RAMESH CHANDRA, Ph.D., New York University Medical School, New York, New York. The enthusiastic reception which followed the publication of the first edition of this widely acclaimed book was partially responsible for the organization of this new edition. The author has covered many examples and problems taken from the routine practice of nuclear medicine in a clear and easily understood manner in this edition. New and updated material has been added to almost every chapter in the book. An enlarged and updated chapter on radiopharmaceuticals has been added and an expanded discussion of in vivo detection of radiation led to the addition of a new chapter on the scintillation camera. Not only is this an excellent reference for both the physician in nuclear medicine and resident in radiology, pathology, or internal medicine, but also for nuclear medical technicians who wish to advance in their field. Review of first edition: "Fills a long standing need for a basic introduction to the physics necessary to understand nuclear medicine."—Journal of Nuclear Medicine. 237 pp., illus., 1982, $17.50.

MEDICAL RADIATION BIOLOGY, 2nd ed.

By DONALD J. PIZZARELLO, Ph.D., New York University Medical Center, New York; and RICHARD L. WITCOFSKI, Ph.D., The Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina. The second edition of this book might be considered a new book since it has been completely rewritten, is revised and up-to-date. The book is still a must for radiologists, residents in radiology, and technologists. An entirely new structure has been adopted in this new edition. Much new information has been incorporated and outdated material eliminated. The authors emphasize the effects of doses of ionizing radiation resulting from diagnostic procedures and the risks associated with them. Accordingly, discussion of low dose effects has been greatly expanded allowing the reader to understand how radiation induction of mutation, malignant disease and embryonic and fetal damage are relevant to medicine. A second focus of this new edition is on the effects produced by the therapeutic dose range and the problems and risks they present. In addition, the text covers dangers of occupational exposure to ionizing radiation and the potential biological effects of ultrasound. Review of first edition: "...an indispensable guide..."—Medical Book News. 164 pp. (7 x 10), illus., 1982, $18.50.
The RADX Ventil-Con II is the only completely functional self-contained mobile xenon gas ventilation unit available anywhere. Ventil-Con retains over 90% of the xenon gas within its internal dry spirometer system, ready for continued use in examination after examination. A bacteriological filter and a CO₂ absorber within the spirometer breathing system constantly filter the xenon enriched atmosphere the patient breathes. The patient experiences only 0.2" of water resistance. No disconnects or aborted exams because of breathing resistance.

The xenon gas exhausted from the patient at washout is trapped by a charcoal cartridge pack. If more than 2 uCi/liter attempts to escape, (well below NRC maximum permissible concentration), a built-in alarm alerts the operator. An interface system within the breathing apparatus completely controls the xenon gas flow into the charcoal cartridge. Result: many more examinations can be safely conducted with Ventil-Con II than with any other system.

Ventil-Con II automatically admits oxygen as CO₂ is removed. Spirometer volume is held constant, patient comfort is assured. And Ventil-Con's movable arm allows exceptional flexibility in patient positioning while minimizing "dead air space". Radiation shielding of 1/8" to ¼" thickness of lead provides positive containment of radioactivity. A volume meter and a xenon concentration meter inform the operator that the system is operating normally. Provisions for use in cerebral blood flow studies are optionally available.

The RADX Ventil-Con II is the unchallenged leader in value and excellence. For more details and pricing information, call or write RADX.
POSITIONS OPEN

NUCLEAR MEDICINE TECHNOLOGISTS. Staff and supervisory positions available in hospitals nationwide. Tell us your geographic preferences, career goals, and past experience. Our=torch of qualified care consultants will work with you to find your next position. All positions paid. Contact: Cathy Way, HealthCare Fitness, Inc., 6699 Lake Plaza Suite 270, Winter Park, FL 32789; (352)628-4227.

Applications welcomed from BOARD-CERTIFIED RADIOLOGISTS with special interest in Nuclear Medicine at Saint Paul-Ramsey Medical Center. Of M of teaching appointment, contact immediately. Contact P. L. Heard, M.D., Chief, Department of Radiology, Saint Paul-Ramsey Medical Center, 640 Jackson Street, Saint Paul, MN 55101. (612)221-3793.

NUCLEAR MEDICINE TECHNOLOGISTS needed nationwide! Attractive locations, excellent salaries, and educational opportunity await you. Contact Knight, Nationwide Recruiters, 3710 Landscape Dr., Suite 111, Columbia, SC 29024. (800)485-0992 or (803)736-1790.

NUCLEAR MEDICINE RESIDENCY. The Nuclear Medicine Division, Department of Radiology of the University of Texas Medical Branch, Galveston, TX (1,200 hospital beds) invites applications for its two-year residency training program. The program is approved by the Accreditation Council on Graduate Medical Education and satisfies the residency requirements of the American Board of Nuclear Medicine. Comprehensive training is provided by a large staff that offers both a broad clinical experience and strong basic science instruction. Areas of experience include full range of patient care services (diagnostic and therapeutic), imaging procedures, image data processing and computer technology, nuclear cardiology, laboratory studies (in vitro and in vivo) and opportunities for research. Excellent salary and benefits package. Contact Director, Nuclear Medicine Division, Department of Radiology, University of Texas Medical Branch, Galveston, TX 77550. AC (713)765-2026. UTMB is an Equal Opportunity Affirmative Action Employer.

Nuclear Medicine, Fresno, California. The University of California (San Francisco Medical Education Program seeks a NUCLEAR MEDICINE PHYSICIAN for its affiliated Veterans Administration Hospital (VA hospital). Possibility exists if desired. The position is for a 12-month position (or eligibility by ABNM is necessary. The position involves active clinical teaching and patient care in a VA hospital. Interested applicants should be addressed to Malcolm Jones, MD, Chief of Radiology, Veterans Administration Medical Center, 2615 E. Clinical Ave., Fresno, CA 93703. The University of California is an Equal Opportunity/Affirmative Action Employer.

NUCLEAR MEDICINE TECHNOLOGIST. Position now available for an experienced nuclear medicine technologist certified by SNM or registered technologist in an academic setting or progressive out-patient nuclear medicine laboratory in a large city in a large medical center in the Sun Belt. Knowledge of radiopharmaceuticals, imaging, computer and nuclear cardiology in addition to supervisory, administrative, and teaching experience required. Please send resume to: Box 1100, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

NUCLEAR MEDICINE PHYSICIAN. Experienced nuclear medicine physician in a large progressive private in vivo and in vitro NM out-patient laboratory. Applicant should be board certified and eligible in Nuclear Medicine with preferably 2 years internal medicine residency training. Medical school association or affiliation required. Please send resume to: Box 1101, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

NUCLEAR MEDICINE PHYSICIAN. University of Washington, Seattle. Full-time faculty position, Assistant Professor. Responsibility for clinical service and teaching. Major research responsibility. Skills required for current and future research in imaging, kinetic modeling, and quantitative autoradiography. Physiology and radiochemistry background preferred. Board certified in Nuclear Medicine required. Will B. Nettles, MD, University Hospital, 1409, Seattle, WA 98195. The University of Washington is an equal opportunity affirmative action employer.

University of Minnesota Department of Radiology has a position for a DIAGNOSTIC RADIOLOGIST at the rank of Assistant Professor beginning March 16, 1983. Board certification in Radiology and Ph.D. in pharmacology is required, along with expertise in mammography and clinical research in radiopharmaceuticals. Responsibilities will include teaching nuclear medicine and nuclear pharmacology to graduate and undergraduate medical students in a hospital setting, supervising the conduct and operation of the nuclear medicine and conducting a research program in radiopharmaceuticals for experimental and clinical use. Appropriate salary level will depend upon past scholarly productivity and post-M.D. experience. Send letter to: Eugene Geudagna, MD, Professor and Chairman, Department of Radiology, University of Minnesota, Medical School, 252 Mayo, Minneapolis, MN 55455. The University of Minnesota is an equal opportunity affirmative action employer and specifically encourages applications from women and minorities.

NUCLEAR MEDICINE TECHNOLOGISTS. Jackson-Madison County General Hospital, a 572-bed regional hospital, is seeking staff technologists for an expanding Nuclear Medicine department to include Nuclear Medicine Technologist (ABNR certified) or eligible. We offer competitive salary, excellent benefits, modern facilities and a very comfortable living community located between Nashville and Memphis. Direct inquiries to Robert Hendersen, Personnel Director, Jackson-Madison County General Hospital 3801 (901) 424-0424. Equal Opportunity Employer M/F/H.

University of California, Irvine, College of Medicine, Department of Radiological Sciences. Applications are invited for a position at the ASSISTANT PROFESSOR level, or equivalent in nuclear medicine physics. Responsibilities will include radiation safety, participation in ongoing research, and teaching, with some service duties. Applications, including CVs and copies of citations, should be sent to: Richard M. Friedenberg, MD, Professor and Chairman, Department of Radiological Sciences, University of California Irvine, College of Medicine, 101 City Drive South, Orange, CA 92668. UCI is an equal opportunity/affirmative action employer.

NUCLEAR MEDICINE TECHNOLOGIST. University of Washington Hospital, Seattle. Registered, B.S. degree. Staff technologist with 3 years experience. Programmed to become Chief Technologist in 3 months. 350-bed progressive teaching hospital. Excellent benefits, staff and equipment. Inquire Gail Erickson, Chief Technologist, Department of Nuclear Medicine, University Hospital RC-70, Seattle, WA 98195. (206)454-3558. The University of Washington is an equal opportunity affirmative action employer.

ASSISTANT PROFESSOR OF MEDICINE. Assistant Professor to do research in image enhancement and pattern quantification of nuclear medical images as well as computer-aided and micro-computer development for implementation of fast bistatic micro-processors. Programming in Fortran 77 on a VAX computer and knowledge language on the LSI-11 is essential. Experience in Position Computed Tomography, Ph.D. degree in Electrical or Biomedical Engineering with time training in computational tomography and two years experience. $36,000 annual salary, 40 hrs/week. Apply at the Texas Employment Commission, 1001 Avenue of the Americas, Suite 1100, South, Texas, or send resume to Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. 2699162.

"Ad Paid by Equal Opportunity Employer. Women and members of minority groups are encouraged to apply."

NUCLEAR MEDICINE RESIDENCY. University of Washington, Seattle. Full-time, academic, 2-year position. 2000 bed, multi-hospital, and scientific faculty-to-student ratio of 2:1. Comprehensive training in basic science, computer technology, patient care services, and research. Located in the Sunbelt in one of America's "united" cities. A one-of-a-kind experience within an easy drive of the Texas Gulf Coast, Mexico, and the lovely Texas Hill Country and Big Bend areas. Contact Ralph Blumberg, MD, Director, U.W. University of Texas Southwestern Medical School, 1747 N. Haskell Ave., Dallas, Texas, 75235.

The Faculty of Medicine of the University of Alberta in association with the Alberta Cancer Board invites applications for the position of PROFESSOR and HEAD OF A DIVISION OF NUCLEAR MEDICINE within the Department of Radiology. The Division Head will have responsibilities for educational, research, and services programs in the University Cross Cancer Institute, the University of Alberta Hospitals, and the University of Alberta. The successful applicant must demonstrate a proven academic record in Nuclear Medicine and will possess strong leadership and administrative abilities. Deadline for applications December 31, 1983. The University of Alberta is an equal opportunity employer. Applications should be made in compliance with Canadian immigration requirements. Applicants are requested to submit a complete curriculum vitae and three references to Dr. Tom Dean, Faculty of Medicine, 3-117 Clinical Sciences Building, University of Alberta, Edmonton, Alberta, T6G 2V3.

NUCLEAR MEDICINE EDUCATION COORDINATOR. The University of Missouri-Columbia/Harry S. Truman Memorial Veterans Hospital Nuclear Medicine Technology Program has an immediate opening of NMT Educational Coordinator. Experience with educational degree or training preferred but will consider persons with comparable background and with or eligible for NMT certification. Academic, clinical, and administrative responsibilities. Salary commensurate with training and experience. NMT program approved. Position will require some teaching, administrative and recruitment opportunity. To perform in vitro and imaging procedures and collaborate in radiopharmaceutical research. If interested contact: Richard A. Holmes, MD, Chief, Nuclear Medicine Service, H.S. Truman Memorial Veterans Hospital, 800 Stadium Road, Columbia, MO 65201. Tel: (314)443-2511, extension 6675.

NUCLEAR RADIOLOGIST. The Department of Radiology at The University of Florida College of Medicine is currently recruiting for a full-time, academic, NUCLEAR RADIOLOGIST with a strong interest in teaching and research. The ideal candidate will have an open position in Nuclear Medicine at the Gainesville Veterans Administration Hospital, to begin December 1, 1982. Certification in Nuclear Medicine necessary for Nuclear Radiology desirable. One or more years additional training in nuclear radiology desirable. Instructor to Assistant Professor rank and advancement to Associate Professor rank is possible. Requirements and qualifications and experience. Application deadline is November 1, 1982. Contact Clyde M. Williams, MD, Chairman, Department of Radiology, University of Florida, Box J-374 HMMHC, Gainesville, FL 32610. An equal employment/affirmative action employer.

NUCLEAR MEDICINE PHYSICIAN. St. Mary's Hospital is a 340-bed, 42 bedroom, comprehensive medical center. Our fully-equipped Nuclear Medicine department is expanding. We're currently seeking an individual with a minimum of 1 year experience. We offer an excellent salary along with an attractive benefits package and relocation assistance. Additionally, the Palm Beaches provide a large and varied environment...a unique combination of sophistication along with a relaxed and friendly environment. For immediate consideration, please apply to: Ruth Rice, Recruiter, (305)844-6300, ext. 5110. St. Mary's Hospital, 901 45th Street, West Palm Beach, FL 33407. An Equal Opportunity Employer.

NUCLEAR MEDICINE STAFF PHYSICIAN. Full-time staff position available at St. Louis Veterans Administration Medical Center, Affiliation with Saint Louis University School of Medicine affords teaching responsibility and academic appointment.
ment. Clinical and research opportunities in large tertiary care medical center include participation in new cardiac magnetic resonance imaging facility. Board certification or eligibility in nuclear medicine or nuclear radiology required. Respond with curriculum vitae to James W. Fletcher, MD, Chief, Nuclear Medicine Service (115SC), VA Medical Center, St. Louis, MO 63125. An equal opportunity employer.

RADIOASSAY TECHNOLOGIST. Registered (NMTCB/ARRT/ASCP) Nuclear Medicine Technologist with special knowledge & interest in radioassay work. Must be able to perform routine RIA exams, evaluate kits, and maintain quality assurance program. Please send resume to: Ronald W. Padgett, Personnel Manager, University Community Hospital, Tampa, FL 33612.

NUCLEAR MEDICINE TECHNOLOGIST. Cottonwood Hospital Medical Center, a non-profit 243-bed secondary care facility is seeking registered or registry eligible technologists. Located along the Wasatch Front, excellent benefits and competitive salary are offered. Submit resume to: Personnel, Cottonwood Hospital Medical Center, 5770 E. 300 S., Salt Lake City, UT 84107. (801)262-3461. Equal Opportunity Employer.

---

**FREE HOSPITAL JOB GUIDE!**

**TEXAS FLORIDA**

Call Toll Free Anytime
1-800-874-7777

NURSING & HOSPITAL JOB GUIDES provide comprehensive medical opportunity listings for administrative and staff positions in Florida and Texas. In addition to salary programs, benefit packages and general career information about top medical institutions, the Guides cover such matters as times, hours, holidays, career advancement, educational and recreational activities. (In Florida Call 1-800-824-7668)

---

**FELLOWSHIP AND RESIDENCY PROGRAM**

**BAYLOR COLLEGE OF MEDICINE**

**NUCLEAR MEDICINE SECTION**

Baylor College of Medicine is now accepting applications for residency and fellowship positions for the 1983-84 academic year. The residency program includes training in two large nuclear medicine laboratories, St. Luke’s Episcopal Hospital-Texas Children’s Hospital-Texas Heart Institute joint facilities and Ben Taub General Hospital.

Residency training encompasses the full spectrum of nuclear medicine procedures, both in vivo and in vitro, in pediatric and adult inpatients and outpatients. Instruction includes clinical nuclear medicine, radiopharmacy, radioimmunoassay, and basic sciences, as well as experience with computer applications and tomographic imaging.

Fellowships with emphasis on cardiac and pulmonary disease are available in association with the Texas Heart Institute. With mobile capabilities and a large population of critically ill patients (total hospital beds, 1250; intensive care beds, 190) there is ample potential for participation in research projects related to cardiovascular, pulmonary, and critical care medicine.

Requests for further information should be directed to:
John A. Burdine, MD, Chief
or Paul H. Murphy, PhD, Training Coordinator
Nuclear Medicine Section, Department of Radiology
Baylor College of Medicine
Houston, Texas 77030

---

**PHYSICIST**

Position open for recently expanded section in University Hospital. Required, experience with computer use in cardiac functional evaluation and/or high level competence in image processing techniques. Opportunity for developmental work in Nuclear Cardiology and Digital Radiology.

Send C.V. to: Dan G. Pavel, MD, University of Illinois Medical Center, 1740 W. Taylor Street, rm. 2500, Chicago, IL 60612.

An Equal Opportunity Employer

---

**CAREERS IN NUCLEAR MEDICINE**

The University of Texas Medical Branch
on Galveston Island

Join the expanding Nuclear Medicine staff of Texas’ 1200-bed teaching hospital complex. A full complement of physicians, scientists, educators and technical staff operate a progressive facility. Positions Now Available!

RADIOPHARMACIST/CLINICAL RADIOCHEMIST

Combines clinical practice, research and teaching in a large and active university nuclear medicine division. Req. Ph.D., prefer BS in pharmacy.

NUCLEAR MEDICINE TECHNOLOGISTS

Performs clinical procedures in radiopharmacy, RIA lab or imaging and function section. Req. assoc. degree or equiv. exp. & cert. elig. Prefer exp.

Benefits include 15 days paid vacation, health and dental insurance, state contributions to Social Security and no state income tax.

Contact
Huyn D. Barnett, Ed.D.
UTMB Div. of Nuclear Medicine R-G
Galveston, TX 77550
or call collect: (713) 765-2928
EO M/F/H AA

---

**For the Love of Life and the hope of tomorrow**

Dan Thomas, Founder
St. JUDE CHILDREN’S RESEARCH HOSPITAL
HOSPITAL RADIATION PHYSICIST
Nuclear Medicine/ Environmental Health & Safety

Exciting opportunity to join a major university teaching hospital ideally located between San Francisco and Lake Tahoe. Assists in developing new procedures, and evaluates the technical quality of Nuclear Medicine examinations. Evaluates the purchase of equipment, and trains technologists in its use; calibrates equipment and performs minor repairs. Provides formal training for technologists, students, and residents (Basic Science of Nuclear Medicine 400A). As radiation safety officer ensures compliance with regulations regarding the use of radionuclides, and radiation-producing machines; supervises radiation safety personnel, and teaches radiation safety procedures. Participates on the Radiation Use Committee.

MINIMUM QUALIFICATIONS: Ph.D. with experience in medical physics, computer programming, and analysis of patient studies (emphasis on cardiac patients); hospital experience in nuclear medicine and radiation safety; ability to perform absorbed radiation dose calculations for internal radionuclides; teaching experience; Board eligibility for certification in nuclear medicine or in health physics by the Health Physics Society; or an equivalent combination of education and experience; and knowledge and abilities essential to the successful performance of the duties assigned to the position.

Please submit Resume and Salary History To:
University of California, Davis
Medical Center, Sacramento
Personnel Department, Room 1024,
Carmel Cottages
2315 Stockton Blvd.
Sacramento, California 95817

An Equal Opportunity Affirmative Action/ Disabled M/F Employer

RADIOLOGY ADMINISTRATION
2 + 2 Bachelor’s Degree Program

The George Washington University, Washington, D.C. offers an upper division B.S. degree in Radiologic Sciences and Administration to individuals registered in Radiography, Radiation Therapy, Nuclear Medicine or Ultrasound. Registered technologists are eligible to receive up to 48 hours credit upon completion of a two year AMA approved program and submission of Registry score. An additional 42 semester hours may be transferred from an accredited academic institutions.

Courses cover a wide range of subjects including: budgeting, facility design, statistics, financial management, and medical sociology. Several hospitals offer tuition reimbursement to their employees, enabling technologists to attend school as part-time students.

For more information, write or call: Joan A. Becker, M.B.A., R.T-R. The George Washington University, School of Medicine and Health Sciences, 2300 Eye Street, N.W., Washington, D.C. 20037. Tel: (202) 676-3650.

CHIEF RADIOLGY TECHNOLOGIST

A new progressive and well equipped acute care facility is seeking a qualified individual to manage its busy Radiology Department. Department offers a full range of services including nuclear medicine, ultrasound and special procedures. Applicants should be ARRT certified in radiography and preferably ARRT or NWCTB certified in nuclear medicine. Salary commensurate with experience.

Cary Medical Center is a beautifully decorated facility which offers excellent working conditions. Area offers natural lifestyle with close proximity to lake regions and numerous outdoor adventures. Please call collect (907) 498-3111 or send resume to: Joe DePalantino, Director of Support Services, CARY MEDICAL CENTER, MRA Van Buren Roed, Box 37, Caribou, ME 04736. An equal opportunity employer.

CARY MEDICAL CENTER

Thirteenth Annual Aspen Radiology Conference
Sponsored by Beth Israel Hospital, Denver, Colorado
February 27–March 4, 1983
Aspen Institute for Humanistic Studies, Aspen, Colorado

Independent Five-day Postgraduate Refresher Courses
Nuclear Radiology Diagnostic Ultrasound
Diagnostic and Interventional Radiology Computerized Tomography
Nuclear Magnetic Resonance Plenary Session
Outstanding Nuclear Radiology Faculty
Ben C. Berg, Jr., M.D., University of Illinois
Duncan Burdick, M.D.,
University of Colorado
Alexander Gottschalk, M.D., Yale University
William Klingensmith, M.D.,
University of Colorado

CATEGORY 1 CREDIT Available
Ample time for skiing and other winter sports

For information, contact: Emanuel Salzman, MD, Chairman, Aspen Radiology Conference, PO Box 11338, Denver, CO 80211-0338, (800) 525-5810 (toll-free), (303) 629-5333 (in Colorado).

Volume 23, Number 11 59A
Suppose you opened your department one morning... and no patients showed up.

Unlikely. Nuclear medicine has earned its place as a valued part of hospital diagnostics. But it’s still 100% dependent upon referrals from private and staff clinicians.

The vast majority of today’s physicians and surgeons finished their training long before radiopharmaceutical bone imaging, ventilation-perfusion lung imaging, nuclear cardiology and other such “routine” procedures were available. As much as any other medical specialist, the nuclear physician has had to teach his clinical colleagues virtually all they know about nuclear medicine.

And far more than all other radiopharmaceutical and equipment companies combined, New England Nuclear has invested heavily in assisting nuclear medicine in that teaching role.

Over the past 5 years alone, NEN has supplied the profession with more than 400,000 teaching slides on nuclear medicine practices for use in teaching rounds. We have provided almost 500,000 continuing education programs on nuclear diagnostics to referring physicians; sponsored hundreds of special symposia and seminars; provided educational exhibits for more than 20 major conventions of referring physicians; spent hundreds of thousands of dollars on advertising promoting nuclear medicine procedures in the journals read by the physicians who send you patients.

Each time you buy an NEN product, we invest part of that in promoting nuclear medicine to your referring clinicians... to guarantee that every day your department opens there are always patients waiting.
Indium Oxine In 111

CAUTION:
NEW DRUG LIMITED BY FEDERAL LAW TO INVESTIGATIONAL USE.

A STERILE, APYROGENIC SOLUTION
Contains: Indium Oxine In 111, 0.05 mg Oxyquinoline, 0.05 ml alcohol.

In 111 activity per vial: 1mCi at noon PST, day of calibration
Specific Concentration: 20mCi/ml
Volume per vial: 0.05ml
Radiochemical purity: not less than 90%
Radionuclidic Purity and Identity at Calibration:
In-111 not less than 99.0%

MPI Indium Chloride In 111

Indium Chloride In 111
Radiochemical

CAUTION:
FOR MANUFACTURING, PROCESSING, REPACKING, OR IN THE
PREPARATION OF A NEW DRUG OR NEW ANIMAL DRUG
LIMITED BY FEDERAL LAW TO INVESTIGATIONAL USE.

Each lot is tested for sterility following release.
The manufacturing system is periodically tested for apyrogenicity.

In 111 activity per vial: 3.0mCi
Specific Concentration: 2.0mCi/ml
Volume per vial: 1.5ml
Radiochemical purity: not less than 90%
pH: 1.0-3.0
Radionuclidic Purity and Identity at Calibration:
In-111: not less than 99.0%
In-114: not more than 0.1% (1μCi/mCi In 111)
Zn-65: not more than 0.1% (1μCi/mCi In 111)
Total chloride as sodium chloride: 0.7-0.9%

*Now available from MPI to investigators used under the following conditions: A. In vitro testing; B. Laboratory animals; C. Radioactive Research Committee 21 CFR 361.1; D. IND holders; MPI is not sponsoring any clinical investigation for this product.