



Xenon

Xenon Xe 133

**How you like it
When you like it**

How you like it

MPI Xenon Xe 133 is now available in four product configurations—from unit dose to bulk:

- Ventilation Study System (V.S.S.)
- 10 mCi vials
- 20 mCi vials
- 1.3-1.7 Ci ampules (crushable and breaksealed)

When you like it

MPI Xenon Xe 133 delivery and calibration schedule—utmost convenience and optimal product use:

Product	1st Rec.	Calibrated 12:00 Noon
V.S.S.	Monday	Thursday
10 & 20 mCi vials	Monday	Thursday
1.3-1.7 Ci Ampules	Thursday	Monday
	Monday	Prior Friday

For complete prescribing information consult package insert, a brief summary of which follows:

Xenon Xe 133-V.S.S. For the study of pulmonary ventilation.

Xenon Xe 133 Gas Ampule & MPI Xenon Xe 133 Gas Vial.

For the study of pulmonary ventilation and assessment of cerebral blood flow.

DESCRIPTION: The Xenon Xe 133-Ventilation Study System consists of a sealed frangible capsule containing 10 millicuries \pm 20% of Xenon Xe 133 gas at calibration time and date with less than 1% carrier xenon in air. Xenon Xe 133 Gas vials is supplied as a carrier-free gas in concentrations of 10 to 50 mCi per milliliter of gas for inhalation. Xenon Xe 133 Gas Ampule is supplied as a carrier-free gas in 4 ml crushable or break-sealed glass ampule in concentrations of 0.43 to 0.33 Curie/ml. Xenon Xe 133 is produced by fission of Uranium-235. It is chemically and physiologically related to elemental xenon, a non-radioactive monoatomic gas which is physiologically inert except for anesthetic properties as high doses.

CONTRAINDICATIONS: None known.

WARNINGS: Xenon Xe 133 should not be administered to children or to patients who are pregnant, or to nursing mothers unless the benefits to be gained outweigh the potential hazards. Ideally, examinations using radio-pharmaceuticals, 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. Adequate reproduction studies have not been performed in animals to determine whether this drug affects fertility in males or females, has teratogenic potential, or has other adverse effects on the fetus.

There are no well-controlled studies in pregnant women which allow any conclusions as to the safety of Xenon Xe 133 for the fetus. Xenon Xe 133 should be used in pregnant women only when clearly needed.

Concentrated Xenon Xe 133 gas supplied in ampule must be diluted to the activity range appropriate to the route of administration.

PRECAUTIONS: Xenon Xe 133 gas as well as other radioactive drugs, must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patients consistent with proper patient management.

Exhaled Xenon Xe 133 gas should be controlled in a manner that is in compliance with the appropriate regulations of the government agency authorized to license the use of radionuclides.

Xenon Xe 133 gas delivery systems, i.e., respirators or spirometers, and associated tubing assemblies must be leakproof to avoid loss of radioactivity into the laboratory environs not specifically protected by exhaust systems.

Xenon Xe 133 adheres to some plastics and rubber and should not be allowed to stand in tubing or respirator containers for such unrecognized loss of radioactivity from the dose for administration may render the study non-diagnostic.

ADVERSE REACTIONS: Adverse reactions specifically attributable to Xenon Xe 133 have not been reported.

HOW SUPPLIED: Each Ventilation Study System (V.S.S.) contains Xenon Xe 133 in a sealed frangible capsule containing 10 millicuries \pm 20% at calibration time and date stated on the label. Each Xenon Xe 133 Gas ampule is supplied in 4 ml crushable or break-sealed ampules containing 1.7 to 1.3 Curies. Each Xenon Xe 133 Gas vial contains 10 or 20 mCi of gas.

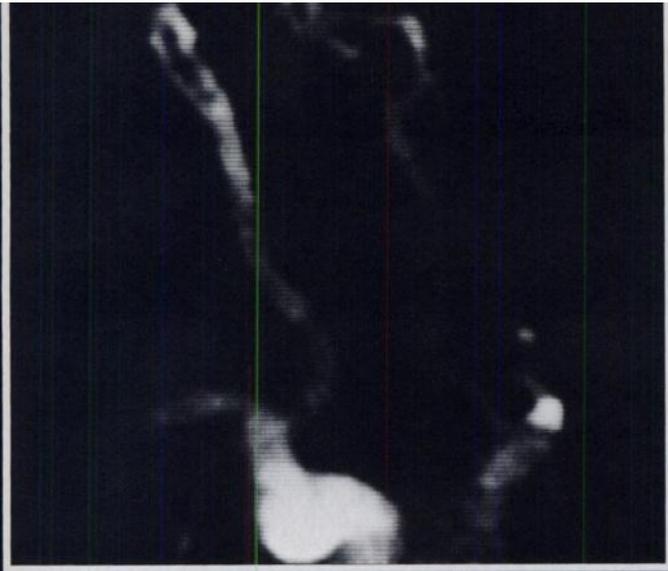
Safety, Convenience and Versatility

For more information, call or write

medi+physics™

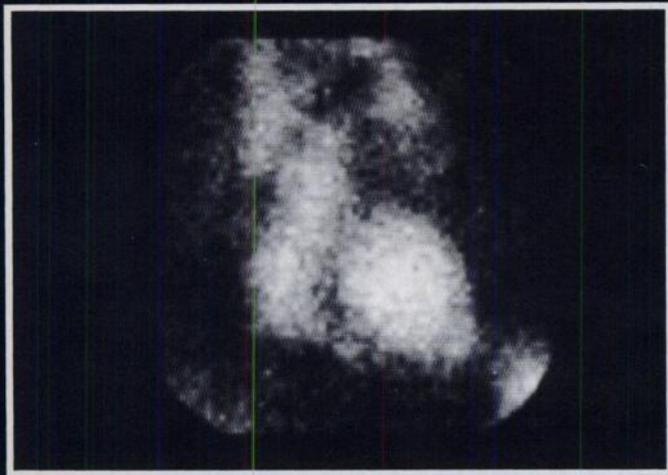
5801 Christie Avenue, Emeryville, CA 94608

(415) 652-7650, Toll Free (Outside CA) (800) 227-0492, (Inside CA) (800) 772-2477



1. Digital Fluorography

Adding digital capabilities to your conventional fluorographic procedures means sharper, clearer images with injection of less contrast media — through a vein rather than an artery.



2. Nuclear Medicine

Static, dynamic, gated, and serial studies provide diagnostic information about physiologic function. The unlimited quantification capability of the computer provides numbers you can count on. Multi-mode viewing stations facilitate intermodal comparisons.

TWO low-risk diagnostic techniques:

One system.



**CLINICAL
IMAGING
SYSTEMS**

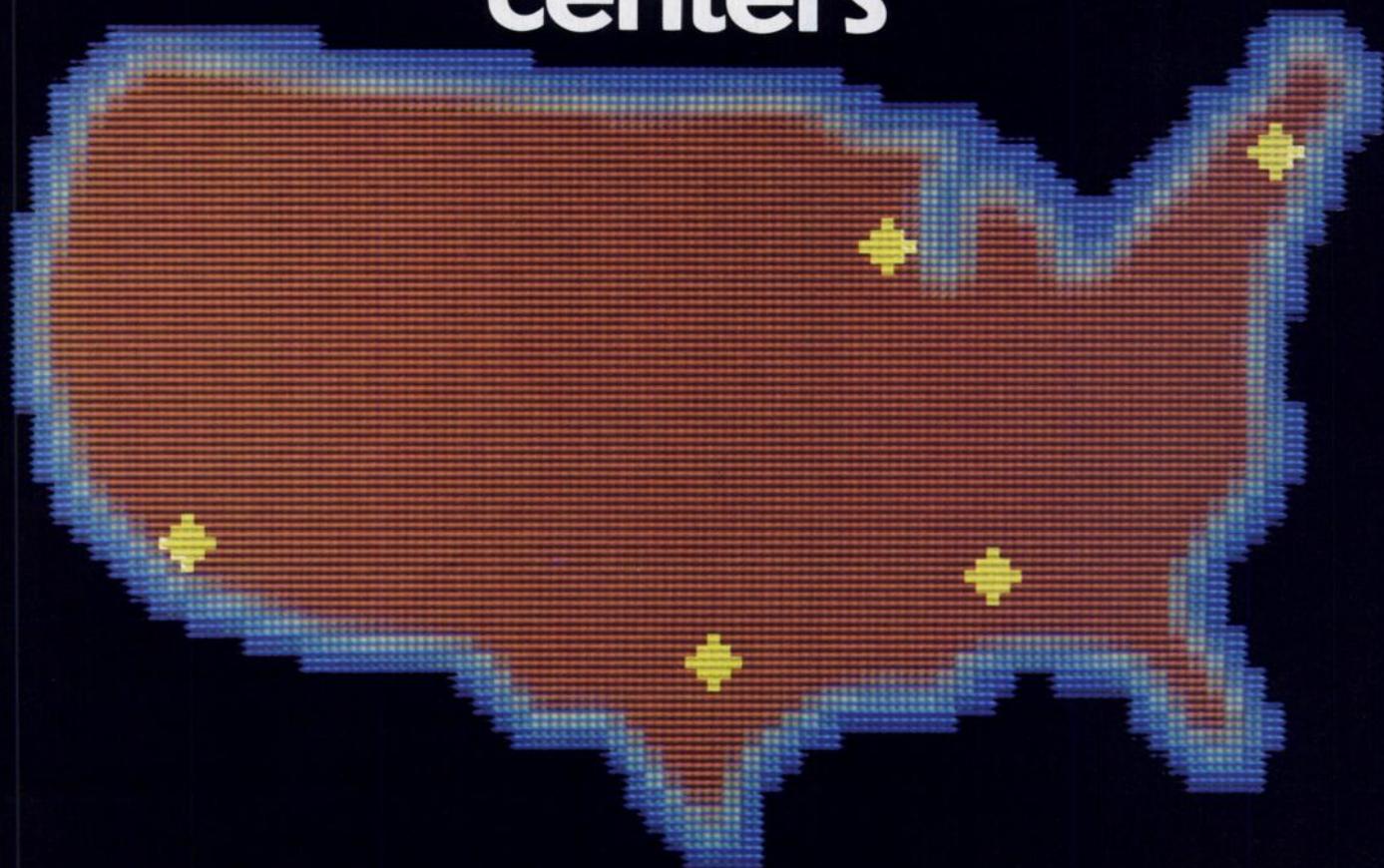
Medtronic  **Medical Data Systems**

2311 GREEN ROAD ANN ARBOR, MI 48105 (313)769-9353 TELEX 235794

Medical Data Systems products, hardware and software, are tools for discrete patient evaluation and research which do not come in contact with and cannot cause direct injury to the patient. Refer to the operation manual and instructions accompanying the acquisition device for further information on their use. To ensure proper clinical results, a Medical Data Systems product must be used under the direction of, and using procedures verified by, a qualified physician.

Only NEN

Five regional distribution centers



NEN's five regional distribution centers—Atlanta, Boston, Chicago, Dallas and Los Angeles—enable next-morning delivery to virtually any nuclear medicine department in the United States, 6 days a week. If you call us today, your order should arrive before 8:00 AM tomorrow.

And if you're within one of our distribution center radiuses, our Medical

Emergency Delivery Service (MEDS) can deliver your radiopharmaceutical order the same day, within hours of your call. That means thallium-201 is available whenever you require a study—even in the acute setting.

For Canadian nuclear physicians, NEN Canada provides the same high level of service from its Montreal distribution center.

We're committed. We're **NEN** New England Nuclear

Call us toll free at (800) 225-1572; in Massachusetts (617) 482-9595; in Canada (514) 636-4971

CintiChem[®]

Technetium Tc 99m Generators

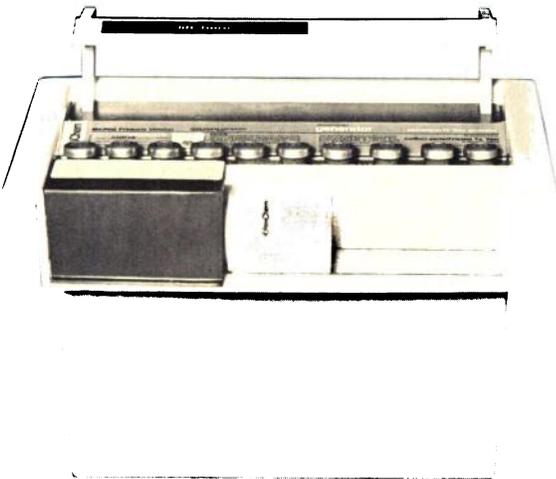
INCORPORATE THE FOLLOWING ADVANTAGES:

ONLY CINTICHEM[®]

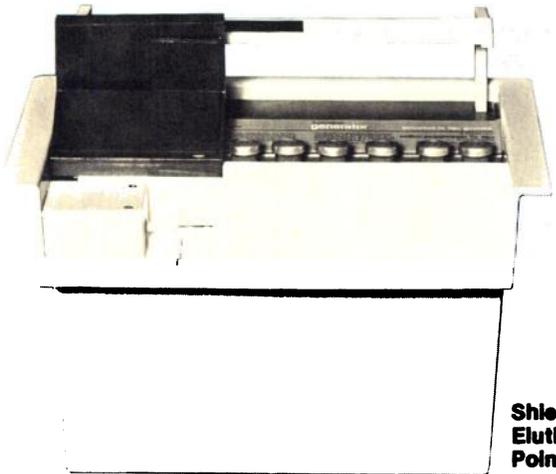
Technetium 99m Generators are produced *in total* at one domestic production site which:

- Possesses its own Nuclear Reactor for the production of high specific activity Fission Products Mo 99,
- manufactures and purifies by a patented process high specific activity Fission Product Mo 99,
- loads Fission Product Mo 99 onto columns,
- assembles the Generators,
- performs quality control procedures including an elution check on each Generator,
- ships Generators directly to the user

This provides you with a reliable product supply and a uniformly high quality product.



**Elution Transfer Point Shielded Hood
Maximizes Radiation Protection
During the Elution Process Itself**



**Shielded
Elution Transfer
Point**

**CINTICHEM[®]
TECHNETIUM
Tc 99m
GENERATORS**

**DIRECT FROM
THE SOURCE**

CINTICHEM, INC.

a wholly owned subsidiary of

Medi-Physics, Inc.

P.O. BOX 816, TUXEDO, NEW YORK 10987 • FOR PRODUCT INFORMATION CALL TOLL FREE (800) 431-1146, IN N.Y.S. CALL (800) 942-1986
CintiChem[®] Technetium Tc 99m Generators are jointly manufactured by Union Carbide Corporation and CintiChem[®] Inc., a wholly owned subsidiary of Medi-Physics, Inc.

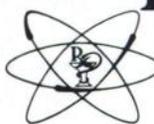
NEW YORK

PHARMATOPES, INC. IS
WELL KNOWN FOR THE PROMPT
AND RELIABLE DELIVERY OF
QUALITY UNIT DOSE
RADIOPHARMACEUTICALS. WE
NOW OFFER THIS SERVICE TO
THE NEW YORK AREA.



Pharmatopes, Inc.

NUCLEAR
PHARMACY
SERVICES



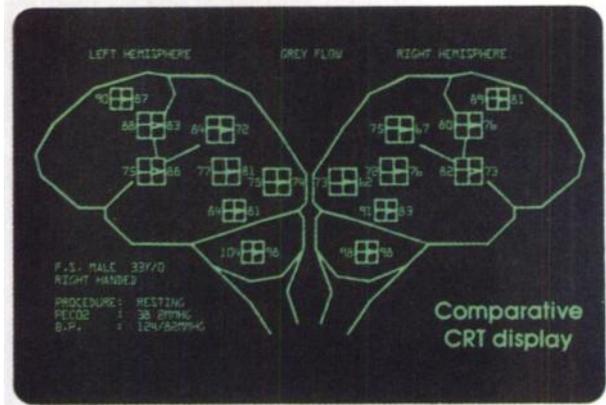
DETROIT • GRAND RAPIDS • TOLEDO • DAYTON • AKRON
CINCINNATI • COLUMBUS • INDIANAPOLIS • CHICAGO
DYER, IN • VIRGINIA BEACH • RICHMOND • BALTIMORE
WASHINGTON, D.C. • HARTFORD • NEW YORK CITY
SACRAMENTO • SANTA CLARA • OAKLAND • TULSA
MIAMI • NEWARK

IN NEW YORK CALL • 516-747-3101

FAST and ACCURATE

The Harshaw TASC-5™ is a completely integrated, fully computerized system for fast and accurate non-invasive rCBF analysis.

It has been proven under the most stringent demands of clinical applications. Using the inhalation method of ¹³³Xenon administration, Harshaw's TASC-5 System entirely eliminates patient danger and stress normally associated with invasive methods. In addition, three major improvements increase the TASC-5 System's accuracy, flexibility and ease of operation: a new software routine; a direct, onscreen and comparative graphic presentation; and instant hard copy capability with Harshaw's new hard copy attachment.



Hard copy attachment – a permanent record, instantly available.

Fast, accurate analysis is made even easier by Harshaw's hard copy attachment. It provides an instant, silent, permanent record of the tabular or comparative graphic presentation on the terminal CRT, and eliminates the need for a teletypewriter or other impact printer. The result is a significant savings in analysis time, and the elimination of "translation" errors that can reduce accuracy.

TASC-5 – an increasingly accepted clinical tool.

Harshaw's TASC-5 System is the most advanced and experienced Regional Cerebral Blood Flow Analyzer available. And it is the commercial, non-invasive system used by more U.S. institutions presently performing rCBF studies than all other commercial systems combined. We'll be happy to demonstrate its capability for you.

Call or write us. We're The Harshaw Chemical Company, Crystal & Electronic Products, 6801 Cochran Road, Solon, Ohio 44139. (216) 248-7400.



Improved hardware and software – for increased reliability and efficiency.

Equipment operation is simpler and even more reliable with Harshaw's newly refined hardware. An update of our classic computer program offers a significant reduction in analysis time.

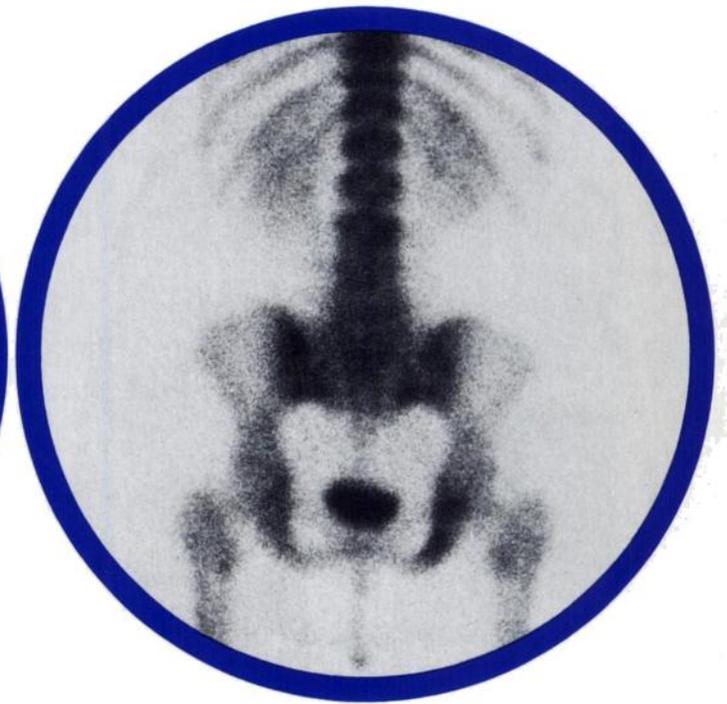


Hard Copy attachment

HARSHAW

A superior bone scanning agent

Osteoscan-HDP represents a significant technological advance in bone scanning agents. Its unique active ingredient, hydroxymethylene diphosphonate (HDP), provides higher bone uptake than MDP-based agents for clear, definitive scans and excellent lesion detection.



Bone uptake superior to MDP

HDP shows unusually high adsorption to bone. In a clinical comparison, Osteoscan-HDP averaged 21% higher bone uptake than the MDP-based agent.¹

Scan data:

The two scans above are of a 56-year-old female patient with breast cancer. Scan: abnormal activity in right ischial ramus. Instrument: General Electric MaxiCamera™ 535; total counts: 2000K; dose: 20.8 mCi; 5'5", 175 lb; dose-to-image time: 2.25 hours
Notice excellent bone delineation in this obese patient.

Rapid blood clearance

No bone agent clears the blood faster. Only 6% of Osteoscan-HDP remains in the blood two hours after injection.² Osteoscan-HDP's rapid blood clearance contributes to the overall quality of the image and permits flexibility in scheduling patient scans from 1 to 4 hours post-injection.

References:

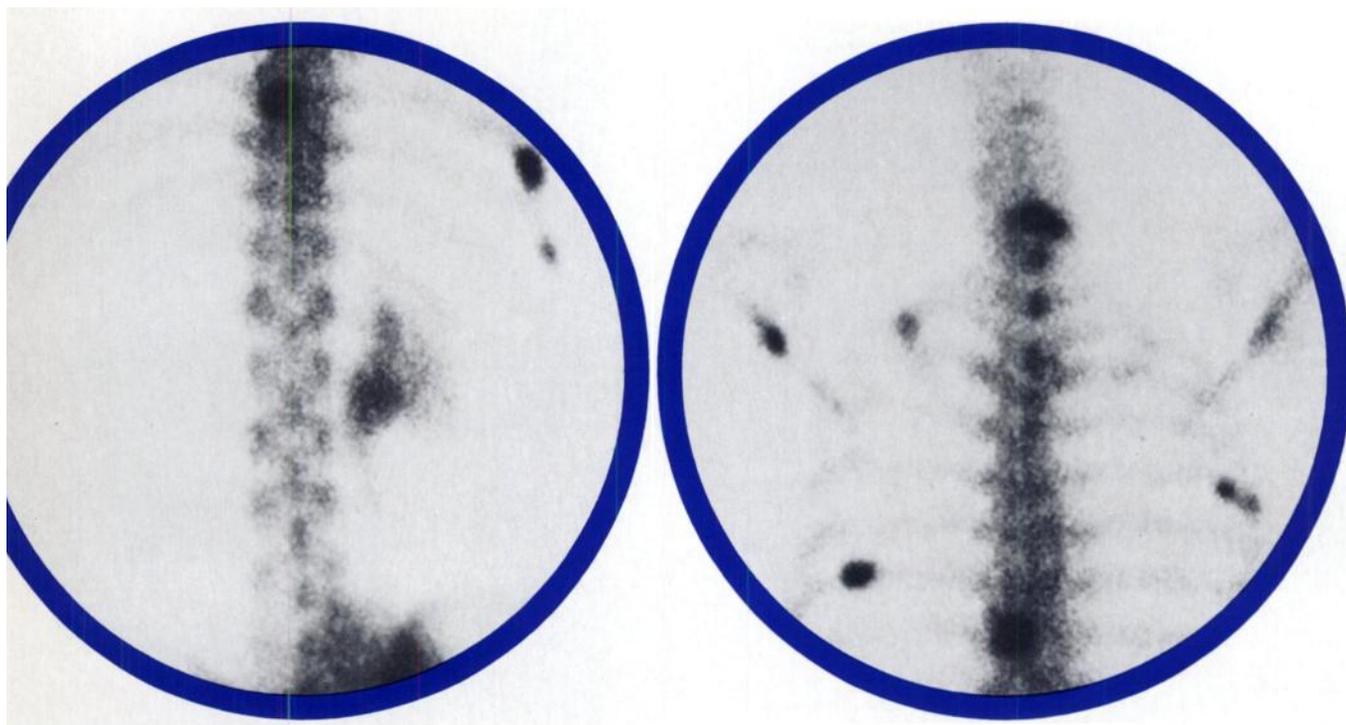
1. Fogelman, I. et al: Presented at the 1980 Annual Meeting, SNM, Southeastern Chapter.
2. Silberstein, E.B.: *Radiology* 136: 747-751, 1980.
3. Littlefield, J.L., and Rudd, T.C.: *Clin. Nucl. Med.* 5:S28, 1980 (abstr.).

Offering higher bone uptake

PROCTER & GAMBLE

OSTEOSCAN-HDP

Technetium Tc99m Oxidronate Kit



Unexcelled image quality³

Osteoscan-HDP's high bone uptake and rapid blood clearance permit clear visualization of skeletal detail even in difficult-to-scan elderly patients.

See for yourself

To order Osteoscan-HDP, or for further information, call or write Procter & Gamble, Professional Services, P.O. Box 85507, Cincinnati, Ohio 45201, (513) 977-5547.

High lesion sensitivity

HDP offers a high tumor-to-normal bone ratio. This results in high resolution scans capable of demonstrating subtle skeletal metastases and fractures with no sacrifice in overall image quality.

Scan data:

The two scans above are of a 79-year-old male patient with adenocarcinoma-prostate. Scan: multiple lesions. Instrument: Picker 4/15 Gamma Camera; information density: 3000; dose: 15 mCi; dose-to-image time: 3 hours

IVP revealed mass in right kidney causing retention.



Please see the following page for a brief summary of prescribing information.

PROCTER & GAMBLE

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 feedings.

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.

DOSAGE 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 3.0 mg oxidronate sodium and 0.24 mg stannous chloride as active ingredients, and 0.84 mg gentisic acid as a stabilizer. Kits containing 5 or 30 vials are available. The NDC number for this product is NDC 37000-407-01. The drug can be stored at room temperature both prior to and following reconstitution with ADDITIVE-FREE sodium pertechnetate Tc99m.

For additional product information, call (513) 977-5547 or write: Procter & Gamble, Professional Services, P.O. Box 171, Cincinnati, OH 45201.



November, 1981

Video Film FORMATTERS at almost 1/2 PRICE of others!



O'Neill Enterprises announces a family of video film formatters. These include a one on one imager, a four on one imager, and a four plus one on one imager. The formatters are in compact space-saving cabinets and are mounted on casters for easy mobility. A color option is also available to record color images on 8x10 Polaroid instant film. The O'Neill Video Formatters are considerably less expensive than all other commercially available formatters.

We offer the most complete line of nuclear stress equipment in the industry. Complete literature on request.

ENGINEERING EXCELLENCE
AT REASONABLE PRICES

O'Neill

O'NEILL ENTERPRISES 221 FELCH ST.
ANN ARBOR, MICHIGAN 48103
(313) 665-9777

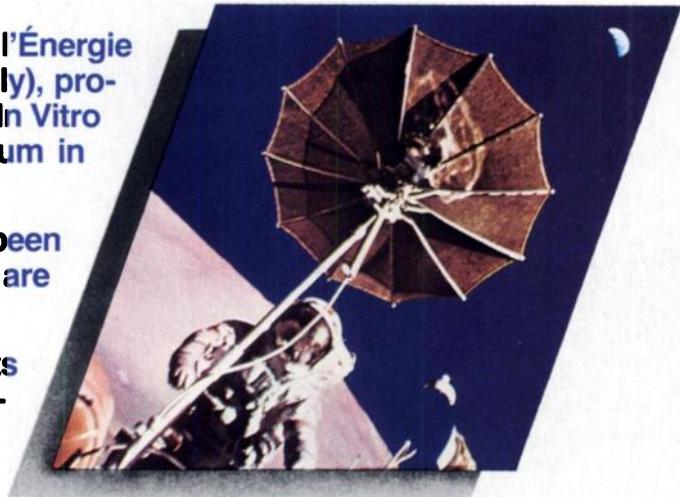
MAXIMUM IN PERFORMANCE AND SECURITY

CIS

CIS, a subsidiary of the Commissariat à l'Énergie Atomique (France) and Sorin Biomedica (Italy), provides the worldwide market with In Vivo and In Vitro diagnostic products which give the maximum in performance and security.

We are not a fly-by-night supplier. We have been in this business for over 20 years and we are here to stay.

The performance and security of our products is assured by a stringent quality control program which never loses sight of the purpose of a product: an aid in diagnosis.



CIS has one of the widest range of products available and it is constantly being increased due to our significant research and development efforts. Our program also includes a continual updating of our existing products, taking advantage of the latest technology.

So when you need a product giving the maximum in performance and security, think of CIS. You'll be glad you did.

For more information contact us or your local CIS distributor.



INTERNATIONAL CIS
Immeuble P3 "International"
2, rue Stephenson
78181 Saint-Quentin Yvelines
Cedex - France
Tél. (33) 3-043.00.09
Télex 698226

SUBSIDIARY OF :
COMMISSARIAT A L'ÉNERGIE
ATOMIQUE
LABORATOIRE DES
PRODUITS BIOMEDICAUX
B.P. n° 21 - 91190 Gif-sur-Yvette
France - Tél. 941.80.00 - Télex 692431

SORIN BIOMEDICA - S.p.A.
GRUPPO RADIOCHIMICA
13040 Saluggia (Vercelli) - Italy -
Tél. (0161) 48155 - Télex 200064

SUBDIARIES :

CIS (UK) Ltd - Rex House -
354 Ballards Lane North Finchley,
London, N 12 OEG - Tél. 1-446-4405
G.B.

Isotopen Dienst West -
Einsteinstrasse 9-11 - 6072 Dreieich
bei Frankfurt-am-Main
Tél. 06103-3855 - Germany

SIEMENS

NEW...ZLC Imaging Integrity With Counterbalanced Positioning

Proven ZLC Detector Performance

There's no cosmetic manipulation to compromise nuclear image integrity.

ZLC provides the best results possible...in terms of linearity, resolution and uniformity for routine nuclear diagnosis.

PLUS...New Counterbalanced Positioning

Versatile...the unique counterbalanced detector offers fast and accurate positioning. Operator fatigue is significantly reduced. And improved patient access permits gurneys, chairs, and stress test equipment to be easily accommodated.

PLUS...New Digital Operator Terminal

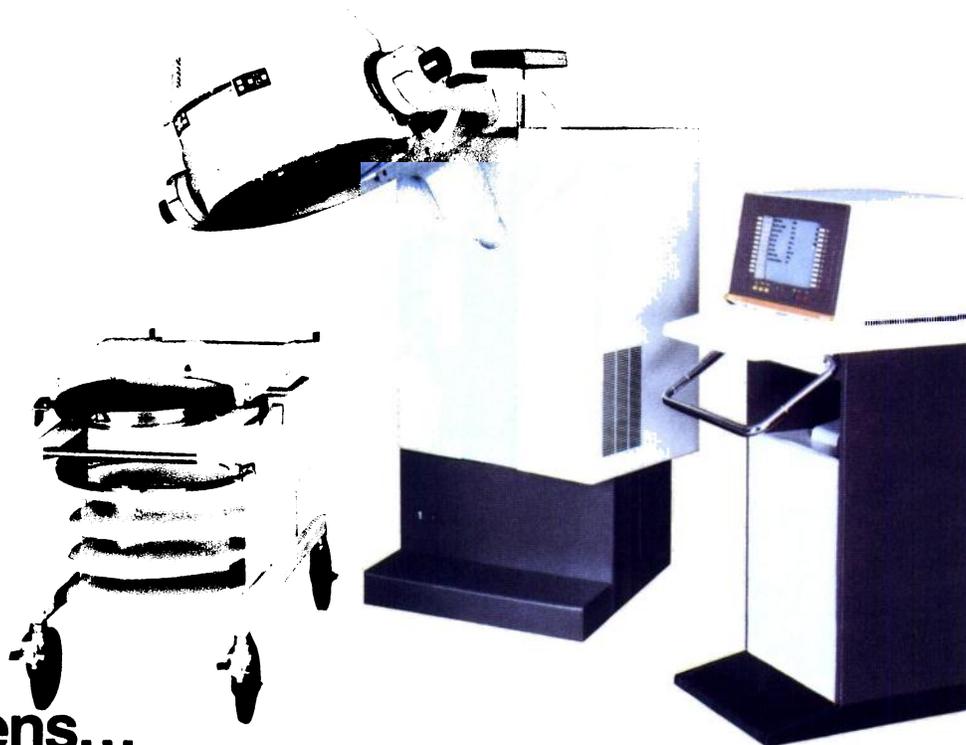
The Digital Operators Terminal (DOT)—recommended when no image processing is required—provides digital control of the camera for faster study set-up. DOT serves the persistence scope function for patient positioning or, alternately,

all of the command text required for camera set-up and control. Study parameters and isotope selection controls can be entered and stored as preset protocols to provide simple, one-button camera control.

PLUS...New Orbiter Axial Rotation For ECT

Designed for SPECT applications, the Orbiter option can be added to the counterbalanced detector to provide accurate rotational capability. The combination of ZLC imaging integrity and the mechanical accuracy of the Orbiter provides improved reconstructed image resolution for ECT requirements.

To find out how equipment available today will satisfy your requirements of the future, contact your Siemens representative for details on the new counterbalanced detector, the Orbiter option and Digital Operators Terminal or:
Siemens Corporation, Medical Systems Group
186 Wood Avenue South, Iselin, New Jersey 08830
(201) 494-1000



Siemens...
an investment in diagnostic confidence.

MG/5310-009 SIQ-848

AccuSync

The finest R-wave Triggering device available for computerized gated cardiac studies.

FEATURES

- Exclusive **Double Discrimination** provides precise definition of R-wave.
- ECG Strip Chart Recorder
- Four digit LED Display
- Trigger Pulse LED
- Unlimited Heart Rate Capability
- Trigger Control
- Digital CRT Monitor
- ONE YEAR WARRANTY

BENEFITS

- Computer is gated only on the R-Wave. High amplitude T-waves are ignored. No delay.
- Provides permanent record of patient ECG. Insures proper lead placement.
- Indicates R-R Interval or Heart Rate during stress studies.
- Monitors presence of output signals to the computer.
- Both Heart Rate display and R-trigger pulses have unlimited tracking capability during stress studies.
- Provides desired setting of R-wave amplitude discrimination. Ease of lead placement.
- Visual monitoring of ECG and R-wave trigger.
- ONE YEAR WARRANTY

MODEL

FEATURES

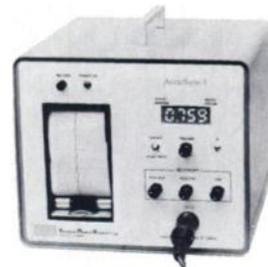
AccuSync-V

R-Trigger pulse output, ECG output, Heart Rate/R-R int., Strip Chart Recorder, Digital CRT Monitor and Isolation Amplifier for patient safety.



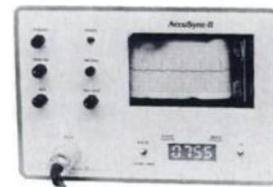
AccuSync-I

All AccuSync-V features with the exception of Digital CRT Monitor.



AccuSync-II

All AccuSync-I features incorporated into a Module designed to fit into certain Mobile cameras.



AccuSync-III

All AccuSync-I features with the exception of the Strip Chart Recorder.



AccuSync-IV

All AccuSync-III features with the exception of the Heart Rate/R-R int. display.

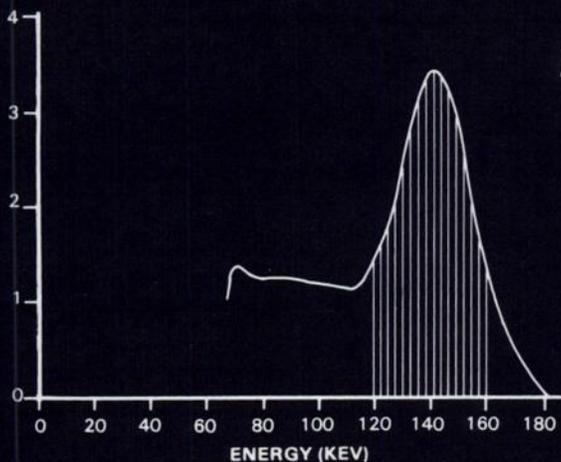


Advanced Medical Research Corp./P.O. Box 3094/301 Brewster Road
Milford, CT 06460/Telephone: (203) 877-1610

ACE™ IMAGING

DYNA™ CAMERA SERIES 5 EXCLUSIVE FEATURE

ASYMMETRIC CONTRAST ENHANCEMENT



CONVENTIONAL IMAGING



OPTIMUM PHOTOPEAK UTILIZATION

— Improved scatter rejection and in-depth resolution for image clarity.



CONTRAST ENHANCEMENT

— Improved image quality for greater diagnostic confidence.



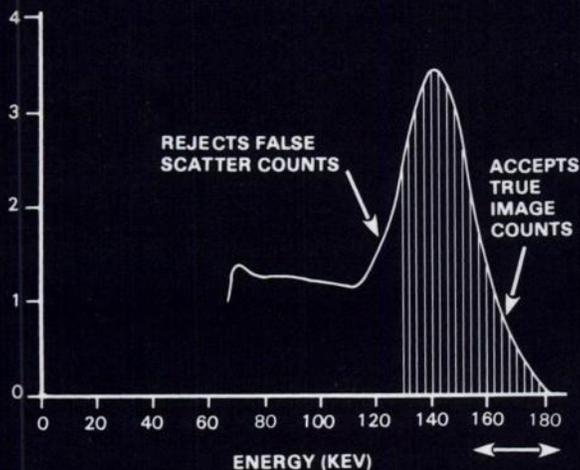
REGIONAL BACKGROUND SUBTRACTION

— Preferential elimination of scatter counts which obscure image detail.



PRESERVES FWHM & FWTM RESOLUTION IN SCATTER

— No loss of FWTM resolution with scatter as with pseudo-micro Z devices.



ACE™ IMAGING:

The ACE™ imaging feature of Micro Z now allows asymmetric window placement with no degradation in field uniformity and without flood field recalibration. This gives complete freedom in PHA window selection for improved scatter rejection and in-depth resolution for enhanced image clarity.

Through the use of ACE™, the number of false scatter counts are reduced. This allows the true image counts to expose the film over a wider density range. This increase in film density range translates into a wider gray scale and enhanced image contrast. The net result is improved image quality for greater diagnostic confidence.

For more information contact
your local Picker International
representative or write:

PICKER INTERNATIONAL, INC.

12 CLINTONVILLE ROAD
NORTHFORD, CONNECTICUT 06472

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.

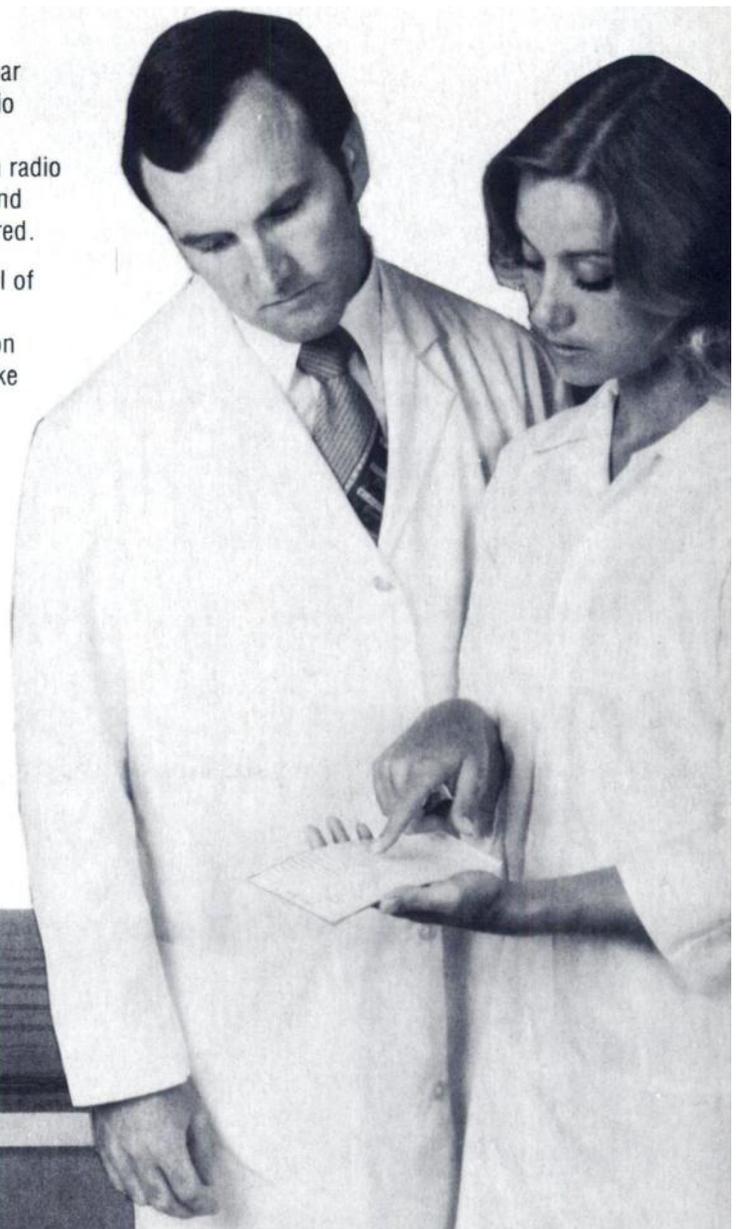
The RADX Isotron is the only control unit which qualifies as a nuclear medicine inventory control computer. It keeps track of up to 20 radio pharmaceuticals in different chemical forms — simultaneously and independently, and provides constant inventory information on each radio pharmaceutical. It also 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



CIS Kits : a world of precision

the wide range of CIS products for lung investigation

Ventilation
- Xenon 133 - Gas (XE-133-G)* and solution (XE-133-S)*
- Human serum albumin Millimicrospheres (TCK-9)*
To be used with MEDI-61 (apparatus for radioaerosol for lung scanning).

(*) not available in the U.S.A.

Perfusion
- Human serum albumin microspheres
TCK-5* (size of microspheres from 23 to 45 u)
TCK-5-S* (size of microspheres from 7 to 25 u)
- Human serum albumin macroaggregates
TCK-8 5 multidose vials
TCK-8-M 10 Monodose vials

for more information, contact us
or your local CIS distributor

VISION 360



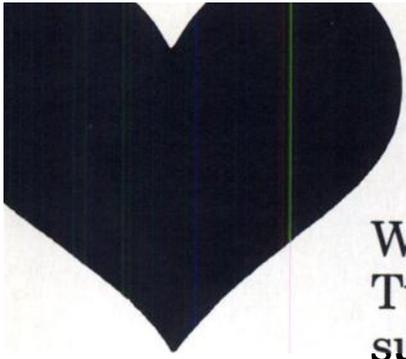
INTERNATIONAL CIS
Immeuble P3 "International"
2, rue Stephenson
78181 Saint-Quentin
Yvelines Cedex - France
Tél. (33) 3-043.00.09 Télex 698 226

Subsidiary of:
COMMISSARIAT A L'ÉNERGIE
ATOMIQUE
LABORATOIRE
DES PRODUITS BIOMÉDICAUX
B.P. n° 21 - 91190 Gif-sur-Yvette
France - Tél. 941.80.00 - Télex 692 431
SORIN BIOMEDICA-S.p.A.
GRUPPO RADIOCHIMICA
13040 Saluggia (Vercelli) - Italy -
Tél. (0161) 48155 - Télex 200064

SUBDIARIES :

CIS (UK) Ltd - Rex House -
354 Ballards Lane North Finchley,
London, N 12 OEG - Tél. 1-446-4405
G.B.

Isotopen Dienst West -
Einsteinstrasse 9-11 - 6072 Dreieich
bei Frankfurt-am-Main
Tél. 06103-3855 - Germany

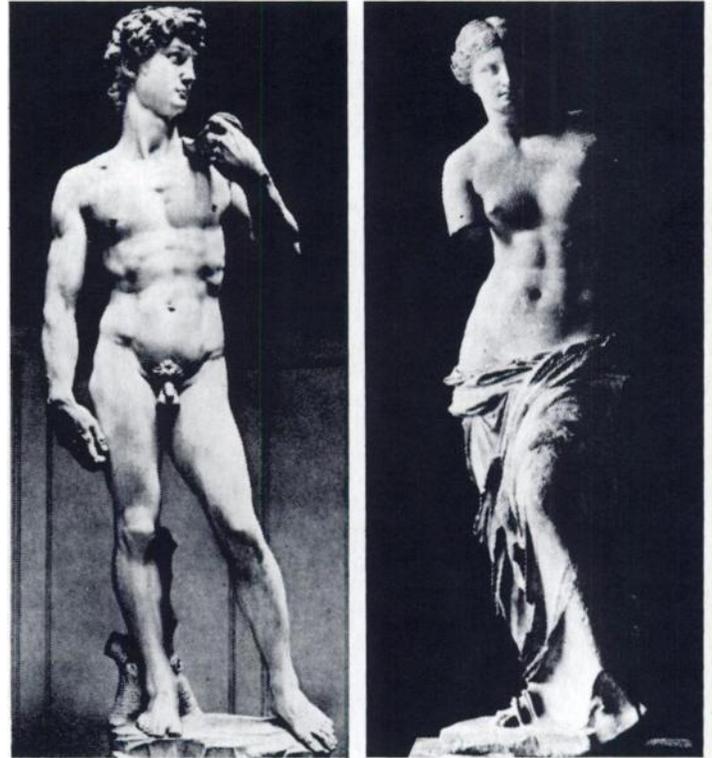


HAVE A HEART!

With an SX11 upgrade from NSI your 19 PM Tube Searle or Picker Gamma Camera can do superb Nuclear Cardiology imaging!

IMPROVE YOUR WHOLE BODY!

Large View upgrade from NSI makes your Ohio Nuclear, Picker Searle Small Field Gamma camera a large field and improves resolution to 1/10". For better and clearer whole body imaging.



BOTH FOR THE PRICE OF LESS THAN ONE!

An NSI Large View System gives you nuclear cardiology resolution, 15 inch field of view, new camera count rates, full one year warranty and about one half your gamma camera budget back to spend on other needs!

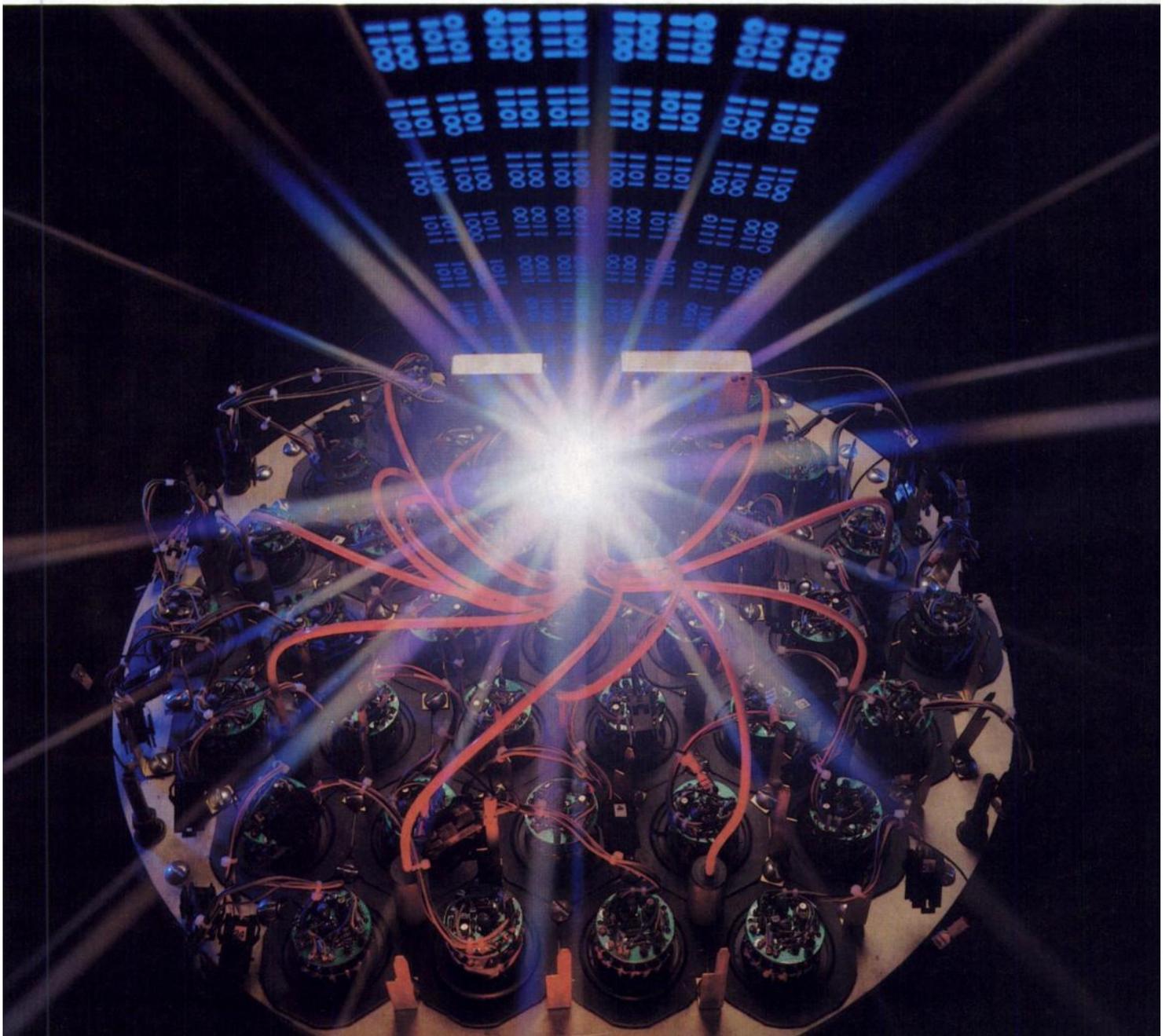
Want more information?
Call us at 203 481-7211 or write:

NSI

242 Branford Road
No. Branford, Ct. 06471

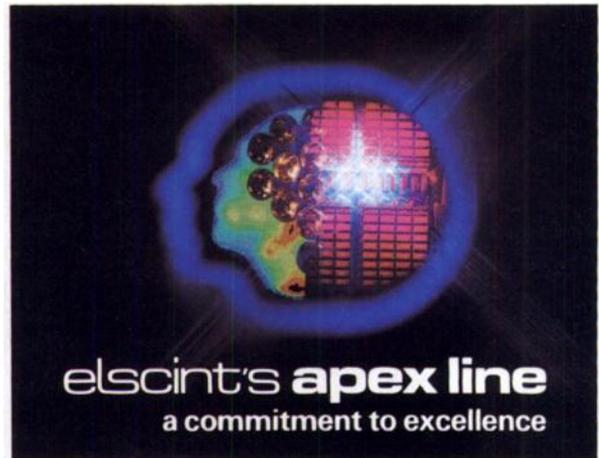
automatic drift correction in nuclear imaging **digital guard**

another unique feature of Elscint's Apex Line



In most gamma cameras, detector drift poses a severe maintenance problem. This weakness — inherent in all analog cameras — necessitates periodic servicing, sometimes as often as every week. An accurate detector-circuit “tune-up” normally requires a trained technician, specialized test equipment, and a lot of time.

Elscint Inc.
 930 Commonwealth Avenue,
 Brookline, Mass. 02215, U.S.A.
 Call Toll Free: 800-343-9504.

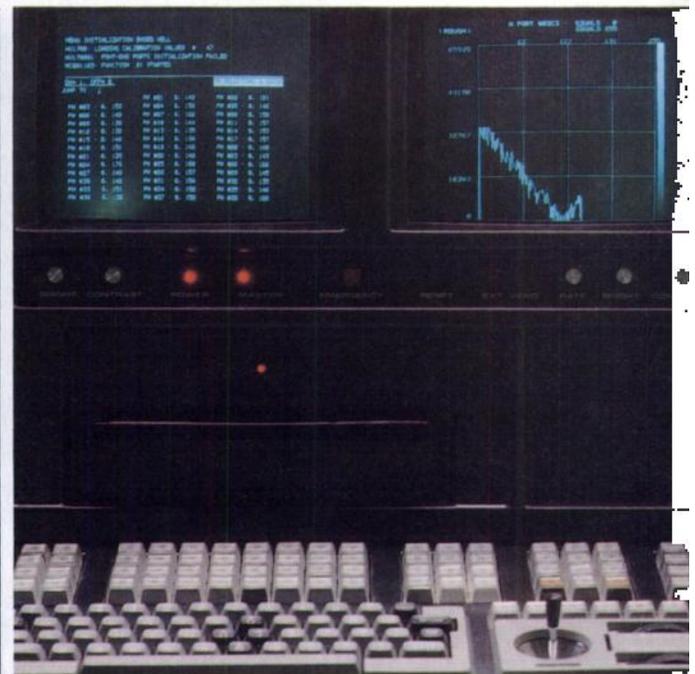


Digital Guard Solves the Problem

Every Apex Digital Gamma Camera has built-in Digital Guard circuitry — another unique feature of Elscint's Apex Line. Digital Guard makes use of an integrated digital device to check detector head alignment many times each day, automatically sensing and precisely correcting circuit imbalance. Digital Guard also monitors and diagnoses hardware faults, pinpointing the exact location of any failed circuit board and enabling instant replacement.

Digital Guard Assures Image Quality

An integrated Elscint Quality Assurance Package is an essential part of Digital Guard. This, together with Digital Guard's frequent automatic detector head alignment, results in maximum acuity — enabling Apex systems to maintain consistently superior uniformity, linearity and resolution.





CLINICAL ASSAYS PUTS YOU ON THE FAST TRACK TO URINARY CORTISOL.

Now you can arrive at urinary cortisol values with the same simple procedure you use for serum or plasma cortisol. Clinical Assays' GAMMACOAT™ Cortisol RIA Kit not only puts you on a faster testing track . . . it assures highly accurate results as well.

Features:

- No time-consuming extraction
- Fewer procedural steps mean less chance of error
- Solid phase coated tube separation
- Single time-saving incubation

GAMMACOAT™ CORTISOL RIA KIT

Let a leader in cortisol RIA show you the streamlined approach to urinary cortisol. For fast response, call our toll-free number (800) 225-1241, and ask for a free evaluation kit and technical information.

Innovating for Life™



CLINICAL ASSAYS
DIVISION OF TRAVENOL LABORATORIES, INC.

620 Memorial Drive • Cambridge, MA 02139
(617) 492-2526 • TLX: 921461 CLASS CAM
Toll free: (800) 225-1241

For worldwide locations, please contact your local Clinical Assays/Travenol representative or the International Sales Department, Clinical Assays, Cambridge, MA 02139, U.S.A.

SIEMENS

New ROTA CAMERA with dual ZLC detectors for high performance Single Photon ECT

Introducing an imaging system designed to the rigid performance criteria of SPECT and engineered to set the standard of excellence.

Linearity and Uniformity

ZLC detectors dramatically improve linearity and uniformity by correcting intrinsic energy variations and spatial non-linearities, over the entire field of view. The source of circular artifacts is eliminated and optimum spatial resolution is achieved.

Mechanical Stability

The stable gantry precisely controls and tracks the detectors position during rotation to ensure high resolution images, free of artifacts and blurring.

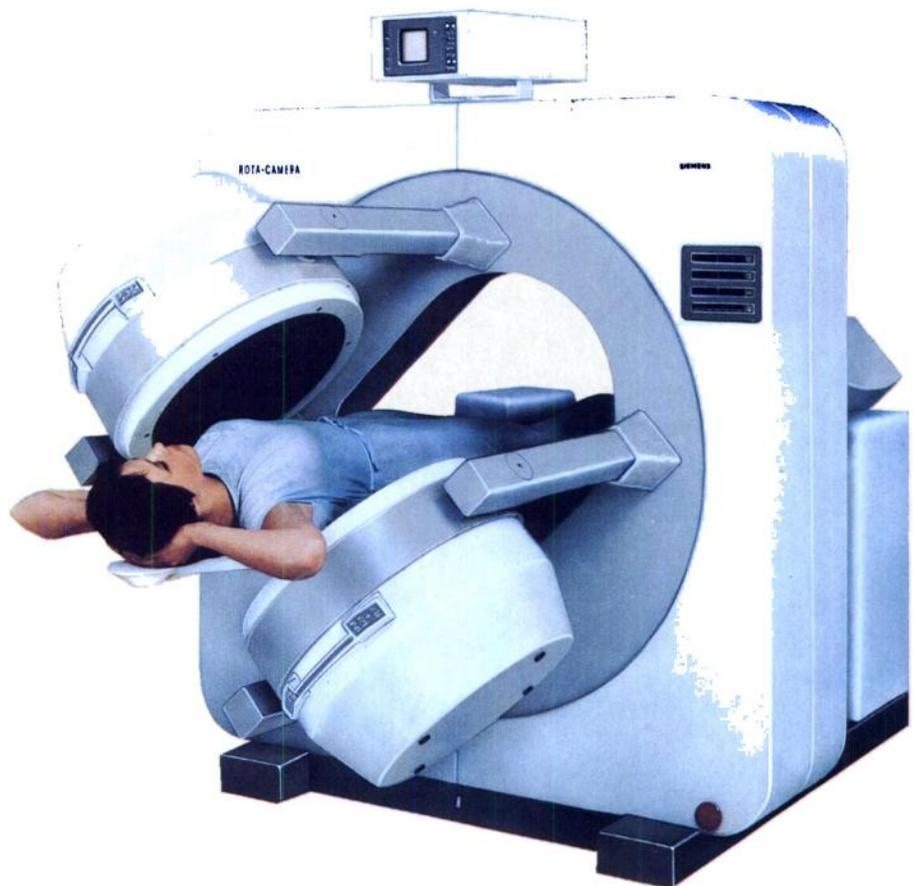
Patient Comfort

The gantry's cantilever construction and 4-way powered tabletop facilitates patient set up. Clearances are easily maintained and the new narrow detector flange improves patient-detector positioning while maximizing usable crystal area.

Sensitivity

Dual detectors double the system sensitivity and the additional counts achieved assure more accurate data and image quality for evaluation.

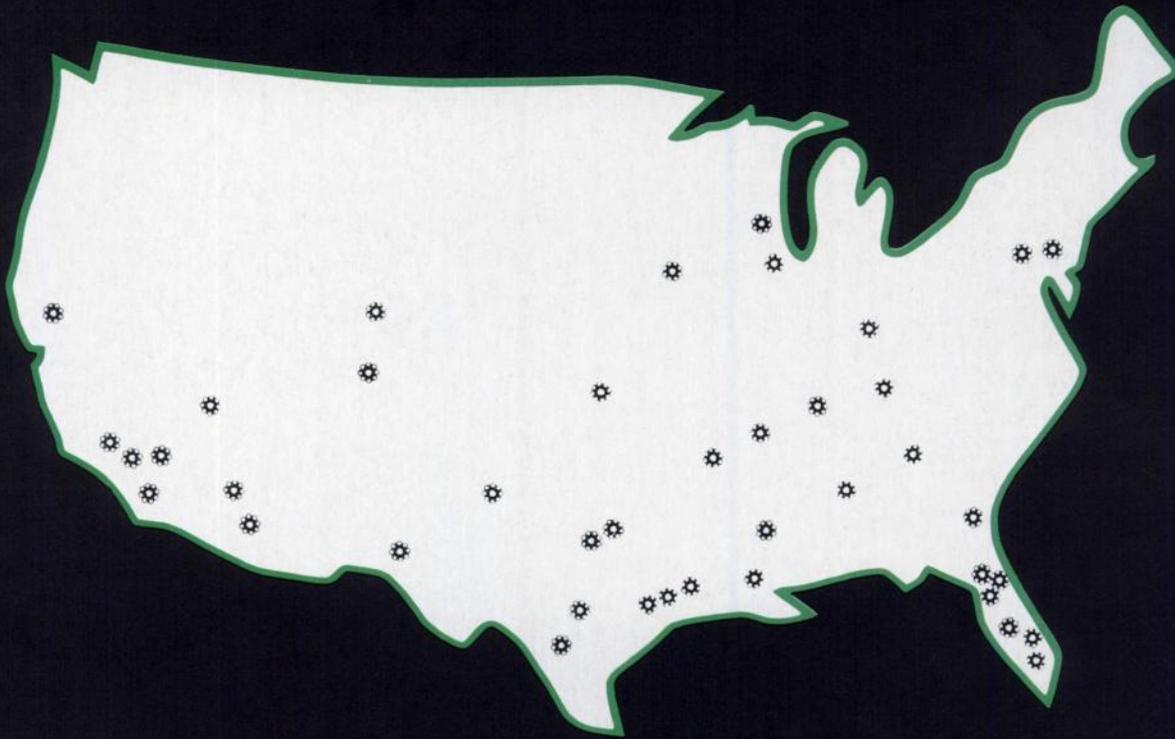
Siemens Corporation,
Nuclear Medical Division,
186 Wood Avenue South,
Iselin, N.J. 08830
Telephone: (201) 494-1000



Siemens...
an investment in diagnostic confidence

36 NATIONWIDE CENTERS MEAN SERVICE!

We've Increased Our Service Centers By
More Than 40%. That's Commitment!



WE BLANKET THE NATION...

...and because we do, you get the immediate service you need. Only Nuclear Pharmacy can guarantee this kind of service because only Nuclear Pharmacy blankets the nation. And we're adding more pharmacy service centers all the time, with six more to open soon.

Birmingham • Phoenix • Tucson • San Antonio • Orlando, FL • San Diego • Baton Rouge*
Anaheim • Van Nuys • Denver • St. Petersburg, FL • Little Rock* • Colorado Springs • Miami
Ft. Lauderdale • Atlanta • Tampa • Riverside, CA* • Chicago • Louisville • Ft. Meyers, FL
San Gabriel Valley, CA* • Jackson, MS • El Paso • Las Vegas • Jacksonville, FL • Wichita*
Philadelphia • Dallas • Harrisburg, PA • Des Moines* • Memphis • Austin • Nashville
Knoxville • Houston (2) • Lubbock • Ft. Worth • Milwaukee • Beaumont/Port Arthur *soon to open



For Service...With Speed!

P.O. Box 25141
Albuquerque, NM 87125
505/ 292-5820

Announcing **Techneplex[®]** (Technetium Tc 99m Pentetate Kit)

from Squibb

For kidney imaging, brain
imaging, to assess renal
perfusion, and to estimate
glomerular filtration rate

Does not accumulate in choroid plexus
Rapid clearance rate of DTPA allows:

- brain imaging in less time than with sodium pertechnetate Tc 99m
- delayed brain imaging in 30-40 minutes, as compared with 3-4 hours with technetium Tc 99m pertechnetate

Easy two-step procedure

Kit contains 10 multidose reaction vials.

For further information, call Technical Customer Service, 609-921-4100.

See next page for brief summary.



TECHNEPLEX®

Technetium Tc 99m Pentetate Kit DIAGNOSTIC—FOR INTRAVENOUS USE

DESCRIPTION: The kit consists of 10 multidose reaction vials, each containing a sterile, pyrogen-free lyophilized mixture of 10 mg pentetate calcium trisodium, 0.50 mg stannous chloride under a nitrogen atmosphere. When sterile, pyrogen-free sodium pertechnetate Tc 99m in isotonic saline is added to the vial, a chelated technetium Tc 99m pentetate is formed. The product as supplied is sterile and pyrogen-free.

INDICATIONS AND USAGE: Technetium Tc 99m pentetate may be used to perform kidney imaging, brain imaging, to assess renal perfusion, and to estimate glomerular filtration rate.

CONTRAINDICATIONS: None known.

WARNINGS: None known.

PRECAUTIONS: Contents of the vial are intended only for use in the preparation of technetium Tc 99m pentetate and are **not** to be administered directly to the patient except after the addition of sodium pertechnetate Tc 99m. The contents of the kit are not radioactive. However, after the sodium pertechnetate Tc 99m is added, adequate shielding of the final preparation must be maintained. Technetium Tc 99m pentetate 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 and to insure minimum radiation exposure to occupational workers.

To minimize radiation dose to the bladder, the patients should be encouraged to drink fluids and to void immediately before the examination, and for the next 4 to 6 hours thereafter, as often as possible.

Technetium Tc 99m pentetate should be formulated within 6 hours prior to clinical use for brain and kidney imaging, and for assessing renal perfusion. For estimating glomerular filtration rates Tc 99m pentetate should be used within 1 hour after formulation.

The components of the Technetium Tc 99m Pentetate Kit (Chelate) are supplied sterile and non-pyrogenic. Aseptic procedures normally employed in making additions and withdrawals from sterile, non-pyrogenic containers should be used during addition of pertechnetate solution and the withdrawal of doses for patient administration.

The labeling reactions involved in preparing the agent depend on maintaining the tin in the reduced state. Any oxidant present in the sodium pertechnetate Tc 99m supply may thus adversely affect the quality of the prepared agent. Hence, sodium pertechnetate Tc 99m containing oxidants, or other additives, should not be employed without first demonstrating that it is without adverse effect on the properties of the resulting agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term animal studies have been performed to evaluate carcinogenic potential or whether technetium Tc 99m pentetate affects fertility in males or females.

Pregnancy Category C: Animal reproductive studies have not been conducted with technetium Tc 99m pentetate. It is also not known whether technetium Tc 99m pentetate can cause fetal harm or affect reproduction capacity when administered to a pregnant woman. Technetium Tc 99m pentetate 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 (approx. 10) days following the onset of menses.

Nursing Mothers: Since Tc 99m is excreted in human milk during lactation, formula feedings should be substituted for breast feedings.

Pediatric Use: Safety and effectiveness in children below the age of 18 have not been established.

Radiopharmaceuticals should be used only by physicians 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.

ADVERSE REACTIONS: None specifically attributable to the use of technetium Tc 99m pentetate have been reported.

Drug Abuse and Dependence: There is no report of any drug abuse or dependence with this diagnostic agent.

Overdosage: Increased radiation exposure would be expected if an overdosage of the diagnostic agent occurred.

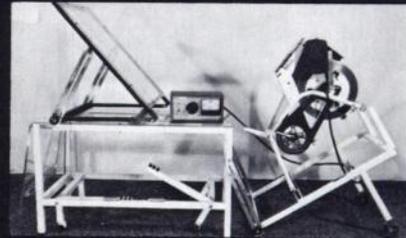
For complete prescribing information, consult package insert.

HOW SUPPLIED: Techneplex (Technetium Tc 99m Pentetate Kit) is supplied as a sterile, pyrogen-free kit containing 10 sterile multidose reaction vials and 20 pressure-sensitive labels.

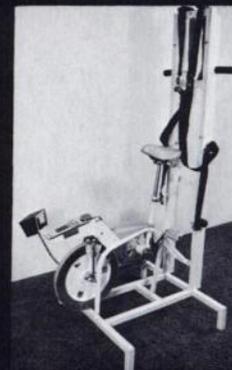
SQUIBB® The Priceless Ingredient of every product is the honor and integrity of its maker.™

©1981 E.R. Squibb & Sons, Inc. 601-511 Issued: October 1981

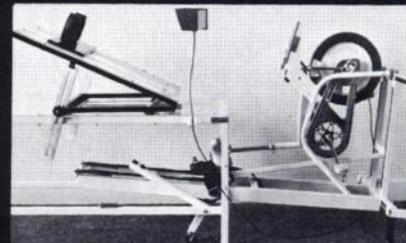
STRESS SYSTEMS at almost 1/2 PRICE of others!



SUPINE SYSTEMS



UPRIGHT SYSTEMS



CONVERTIBLE SYSTEMS

- Compatible with every major ergometer on the market
- Modular designs simplify system updating
- Heavy-duty welded-steel frames for extra stability

ENGINEERED EXCELLENCE
AT REASONABLE PRICES

O'Neill

O'NEILL ENTERPRISES 221 FELCH ST.
ANN ARBOR, MICHIGAN 48103
(313) 665-9777

Now from Nuclear Pacific



Model	Lead Equivalent	HVL for 99mTc	Size of Vial Accommodated
75	3 mm	10	5 thru 30 ml
77	6 mm	20	5 thru 30 ml
79	12 mm	40	5 thru 30 ml

Shielding protection is a necessity. Now, Nuclear Pacific makes it a convenience, as well, with a line of easy-to-use high-visibility vial shields that accommodate most U.S. made vial sizes.

The secret is hospital engineered design plus Nuclear Pacific's own patented optical quality Hi-D® lead glass. Glass tested and used in nuclear and radiation shielding products and viewing systems worldwide.

In addition to protection and visibility, each Nuclear Pacific vial shield offers automatic centering action to position vials and hold them securely. And removable twist lock caps for easy cleaning and needle insertion. To order, or for more information, call Nuclear Pacific, Inc., (206) 763-2170.

*Registered U.S. Patent Office. Platinum melted ultra high density optical glass.

Nuclear Pacific, Inc.

1. Radiation shielding eyeglasses
2. Syringe Shields



3. Vial shields
4. Radiation dose shield

6701 Sixth Ave. S.
Seattle, WA 98109
(206) 763-2170
Telex: 32-8891

MPI Thallous Chloride TI 201 Injection

Thallous Chloride TI 201
Diagnostic—For Intravenous Use
For Imaging Myocardial Perfusion

DESCRIPTION MPI Thallous Chloride TI 201, Thallous Chloride TI 201, is supplied in isotonic solution as a sterile, nonpyrogenic diagnostic radiopharmaceutical for intravenous administration. Each ml contains 1 mCi Thallium Chloride TI 201 at calibration time made isotonic with 9 mg sodium chloride and preserved with 0.9% (v/v) benzyl alcohol. The pH is adjusted to between 4.5-7.0 with hydrochloric acid and/or sodium hydroxide. Thallium TI 201 is cyclotron produced. It is essentially carrier-free and contains no more than 1.0% Thallium TI 200 and no more than 1.0% Thallium TI 202.

CONTRAINDICATIONS None known

WARNINGS When studying patients suspected or known to have myocardial infarction or ischemia, care should be taken to assure continuous clinical monitoring and treatment in accordance with safe, accepted procedure. Exercise stress testing should be performed only under the supervision of a qualified physician and in a laboratory equipped with appropriate resuscitation and support apparatus.

Pregnancy Category C

Adequate reproduction studies have not been performed in animals to determine whether this drug affects fertility in males or females, has teratogenic potential, or has other adverse effects on the fetus. Thallous Chloride TI 201 should not be used in pregnant women except when benefits clearly outweigh the potential risks.

PRECAUTIONS Ideally, examinations using radiopharmaceutical drug products—especially those elective in nature—of women of childbearing capability should be performed during the first ten days following the onset of menses.

Nursing Mothers

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, as a general rule nursing should not be undertaken when a patient is administered radioactive material.

Safety and effectiveness in children have not been established.

Carcinogenesis

No long-term animal studies have been performed to evaluate carcinogenic potential.

Data are not available concerning the effect on the quality of Thallium TI 201 scans of marked alterations in blood glucose, insulin or pH (such as is found in diabetes mellitus). Attention is directed to the fact that thallium is a potassium analog, and since the transport of potassium is affected by these factors, the possibility exists that the thallium may likewise be affected.

As in the use of any radioactive material, care should be taken to minimize radiation exposure to the patient consistent with proper management and to insure minimum radiation exposure to occupational workers.

Radiopharmaceuticals should be used only by physicians 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 governmental agency authorized to license the use of radionuclides.

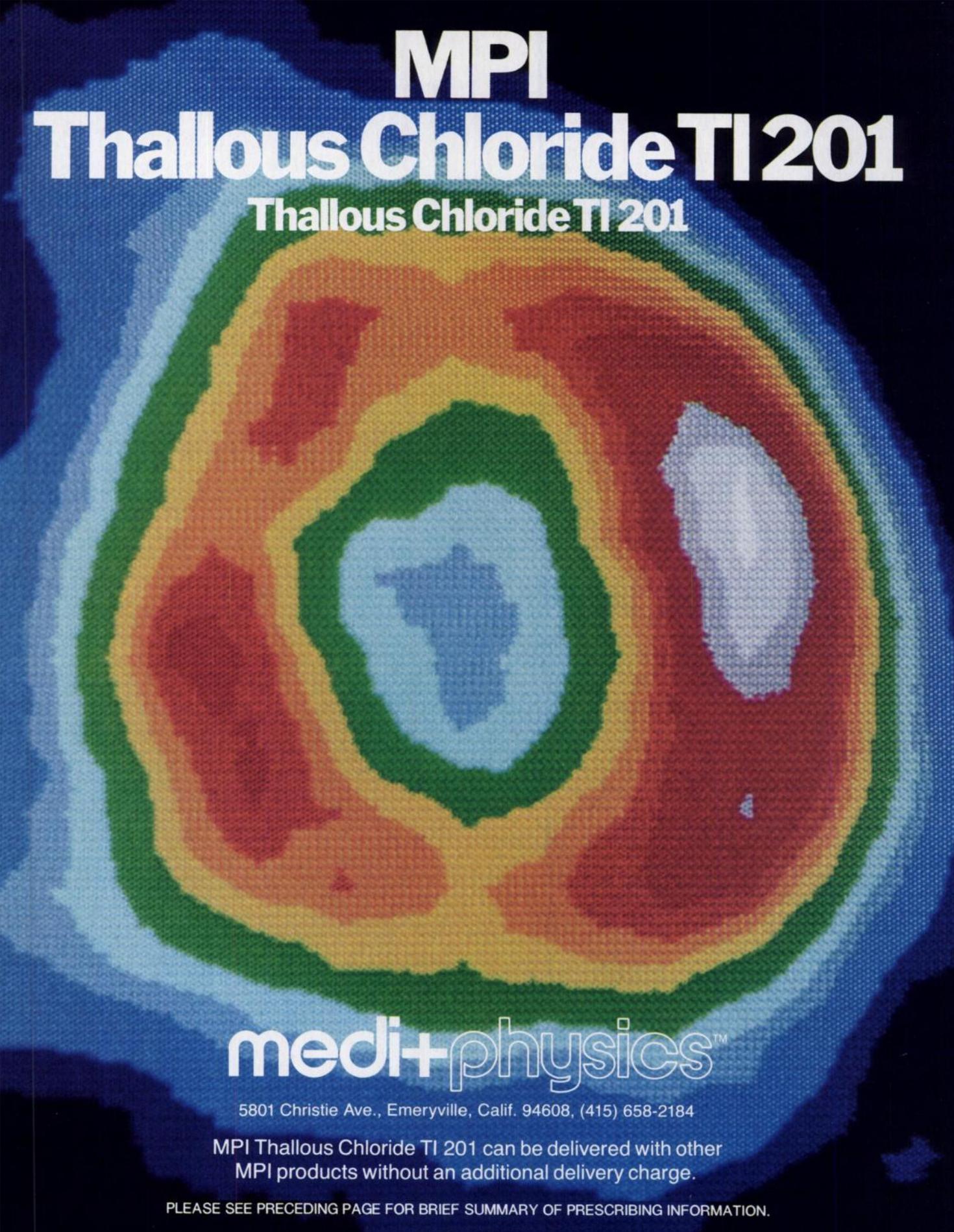
This drug should not be used six (6) days after the calibration date.

ADVERSE REACTIONS Adverse reactions related to use of this agent have not been reported to date.

HOW SUPPLIED MPI Thallous Chloride TI 201, Thallous Chloride TI 201 is available in 2.0 mCi vials.

medi+physics™

5801 Christie Avenue,
P.O. Box 8684,
Emeryville, California 94608



MPI

Thallous Chloride TI 201

Thallous Chloride TI 201

medi+physics™

5801 Christie Ave., Emeryville, Calif. 94608, (415) 658-2184

MPI Thallous Chloride TI 201 can be delivered with other
MPI products without an additional delivery charge.

PLEASE SEE PRECEDING PAGE FOR BRIEF SUMMARY OF PRESCRIBING INFORMATION.

Now there's another innovation in our CRC-30 radioisotope calibrator. Capintec's FUTURE-DOSE adds a new dimension to calibration technology. It lets you supply precalibrated doses for specific injection times. Lets you plan injection schedules a week in advance or calculate dose requirements for seven radioisotopes scheduled up to six months in advance. Naturally, a printed record is made available for all these calculations. With the addition of this new Capintec technology, you have a complete picture of every phase of dose calibration. What's more, with a CRC-30 calibrator or a CRC-U upgrade you can enjoy the most advanced automated assay capabilities — dose computation, isotope inventory control, radiochemical purity analysis. You'll have complete permanent printed records including ⁹⁹MO assay records and injection site records. In addition, you'll be able to meet NRC or state requirements for accountability. Important in keeping your department operating as controls get tighter. Why wait? Now's the time to replace your department's radioisotope dose calibration system (or upgrade your Capintec system) with the best selling, most respected, most capable equipment, from Capintec.



Capintec, Inc.,
 136 Summit Avenue,
 Montvale, NJ 07645.
 Toll Free (800) 631-2557.
 In New Jersey (201) 391-3930.
 Telex 642375 CAPINTEC MTLE.

CAPINTEC
 THE MEASURE OF EXCELLENCE

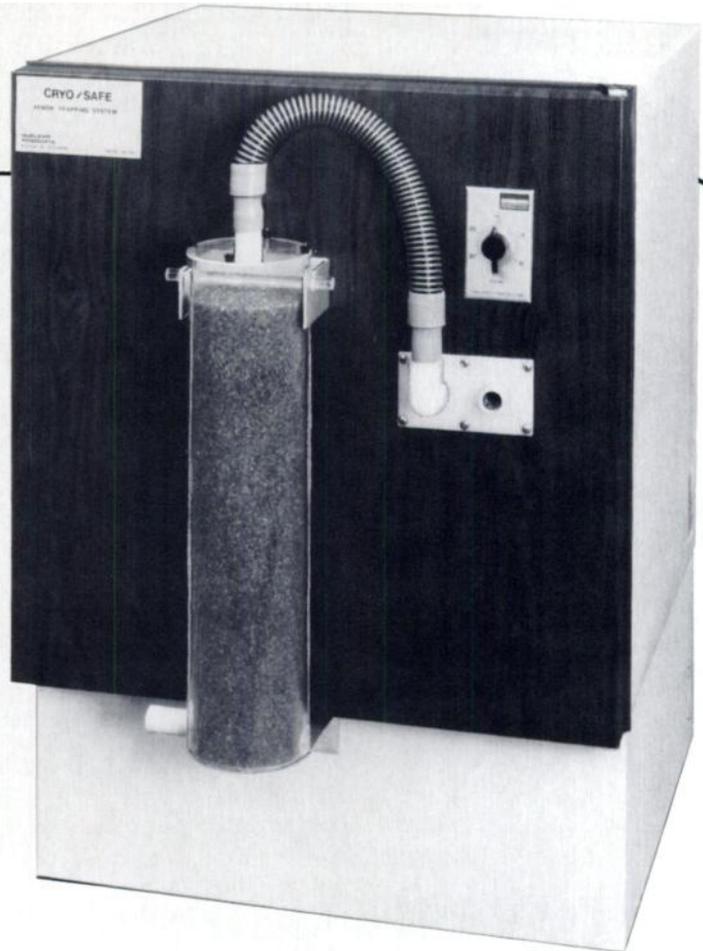
RADIOISOTOPE CALIBRATOR CRC-30
 CRC is a registered trademark of Capintec

Xenon Gas Guzzler

Ultra-Efficient, Refrigerated Cryo/Safe™ Xenon Trap

**100 times
more effective
than standard
gas traps**

- *Reduces frequency of charcoal cartridge replacement.*
- *Recommended for high-volume xenon gas users.*
- *Ideal for xenon-127.*



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.

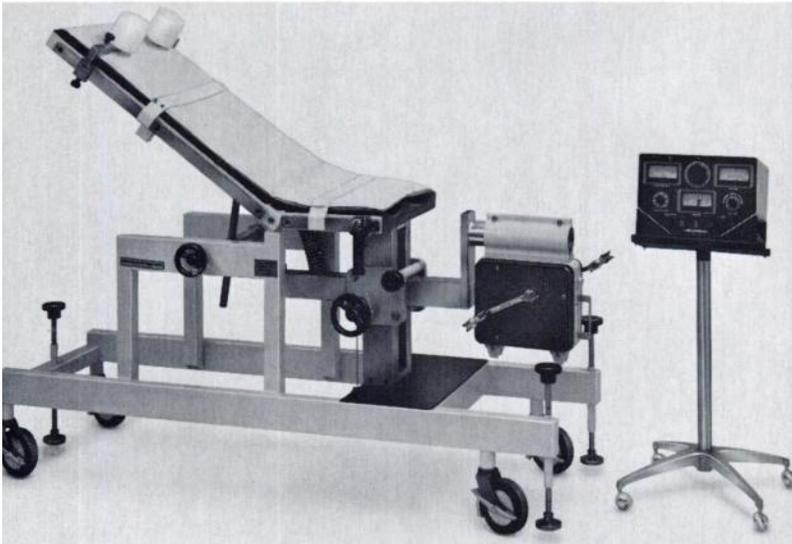
VICTOREEN NUCLEAR ASSOCIATES



100 Voice Road
Carle Place, N.Y. 11514
(516) 741-6360

a cardiac stress system that does more and costs less

DESIGNED FOR EXERCISE IMAGING



Model
056-180

Atomic Products Corporation

ATOMLAB DIVISION • ESTABLISHED 1949
P.O. BOX 657 CENTER MORICHES, NEW YORK 11934 USA
(516) 878-1074
TWX #510-228-0449

Comfortable Erect or Supine Imaging

The Cardiac Stress Table is a new approach in design. It allows the widest possible accommodation to desired exercise position, patient physique, preferred exercise/scanning procedure, and camera geometry.

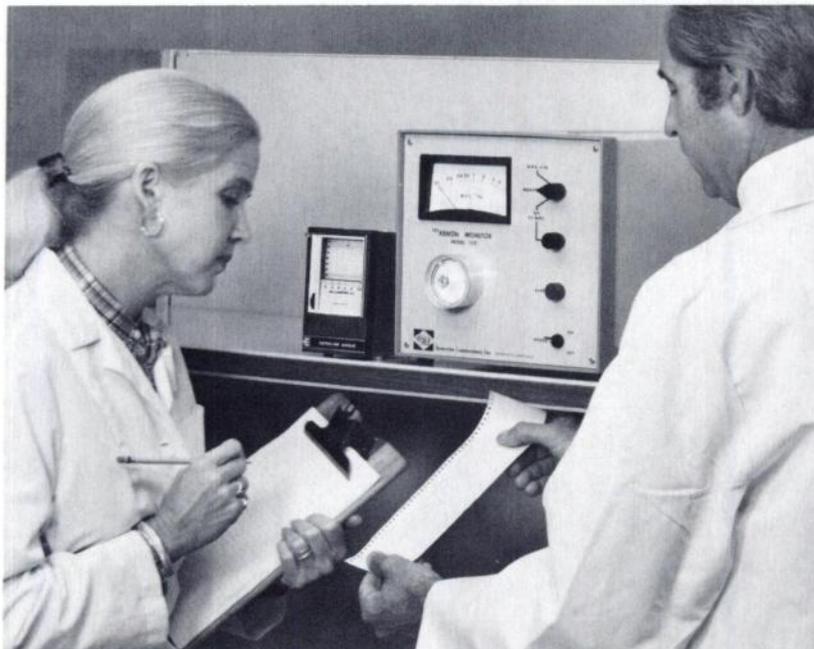
The ergometer is mounted on a moveable beam, permitting it to float in an X-Y plane until firmly locked in place. This allows ergometer adjustment to accommodate any patient leg length. The back of the table swings from horizontal to vertical to permit stress, either sitting, supine or any degree in between. The combination of angulated back and moveable ergometer creates the most comfortable patient position, affording unobstructed clear approach for portable or wide field cameras. The streamlined design allows easy access and accurate positioning for both detector and pedestal.

The gently contoured seat and back passively restrains the patient, while adjustable hand grips, restraining straps and shoulder pads hold the patient firmly during the stress procedures. Locking casters and separate screw-down brakepads keep the table stationary.

Choice of Ergometers

The Atomlab Cardiac Stress Table accommodates both the Tunturi and the Collins Ergometers.

Prevent Unnecessary Exposure With Johnston Laboratories Triton 133C— The Advanced Xenon Air Monitor



- Ensures room ventilation is clearing airborne XE-133.
- Finds sources of leakage.
- Monitors and measures trap breakthrough.
- Reduces personnel exposure to XE-133.
- Verifies compliance with regulations.

This is the only xenon monitor that gives you hard copy of real time XE-133 concentrations—PLUS these other important features: Fast response, dependable ion chamber design, positive displacement pump, sniffer hose, alarm feature, and Johnston Laboratories' dependability and quality.

Find out more! Write or call

**Johnston
Laboratories**



Cockeysville, Maryland 21030
(301) 666-9500

POSITIONS OPEN

NUCLEAR MEDICINE PHYSICIAN AT the Assistant Professor level. Applicant should be board certified or eligible in nuclear medicine (ABNM). Background in diagnostic radiology is preferred. Excellent clinical and research capabilities are available (positron emission tomography, dynamic x-ray computerized tomography, and nuclear magnetic resonance). Strong interest in research and teaching is highly desirable. Send curriculum vitae to A. Alavi, M.D., Chief, Division of Nuclear Medicine, Department of Radiology, Hospital of the Univ. of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104. The University of Pennsylvania is an equal opportunity, affirmative action employer.

NUCLEAR MEDICINE PHYSICIAN to join two incumbent physicians in combined academic private practice involving two university-affiliated hospitals. Rapid growth areas include cardiovascular, pulmonary, and oncology procedures. Opportunity for clinical instruction and research. Excellent technical staff and equipment. Central California location offers delightful living conditions and easy access to mountain and coastal recreation areas. Applicants should have recent training and be certified (or eligible) by the ABNM. Background in internal medicine desirable. Salary negotiable, competitive. Reply: Box 1203, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

CARDIOLOGIST, BOARD CERTIFIED or board eligible to join a four-man cardiopulmonary group located in north central Pennsylvania. We are seeking a cardiologist with particular interest in noninvasive cardiology including two-dimensional echocardiograph and radionuclide cardiac studies. Also, an interest in teaching house staff and experience in Swan-Ganz, pacemakers, and critical care is necessary. This position offers a competitive compensation package as an employee of the hospital in a hospital-based group cardiopulmonary practice. For further information call collect (717)322-7861, Ext. 2806 or write: David Finn, M.D., Director, Cardio-Pulmonary Dept., The Williamsport Hospital, 777 Rural Ave., Williamsport, PA 17701.

HOSPITAL CONSULTANTS—NUCLEAR Medicine specialists. Trainee Position. A consultant trainee position is presently available with our expanding professional service firm. Applicants must have a B.S. or advanced degree in the biological and/or physical sciences with a solid background in the operations of nuclear medicine facilities. The training-orientation program and starting salary will be commensurate with capabilities. Basic duties will include servicing hospital and physician clients throughout the Midwest and North Central U.S. to maintain regulatory and license compliance, radiation safety, record systems, quality assurance programs, instrument calibrations and leak tests. Our consulting services also cover continuing education, overall planning, organization, and management categories. Requests for further information (include curriculum vitae and reference list) should be sent to Stan A. Huber Consultants, Inc., 235 Essex Lane, New Lenox, IL 60451.

NUCLEAR MEDICINE PHYSICIAN. Experienced nuclear medicine physician in expanding progressive private in vivo and in vitro NM outpatient laboratory. Applicant should be board certified by ABNM or board eligible in nuclear medicine with preferably two years internal medicine residency training. Medical school association or affiliation possible if desired. Please send resume to: Box 1208, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

NUCLEAR MEDICINE TECHNOLOGIST. We have a unique opportunity for a registered nuclear medicine technologist with extensive nuclear cardiology experience, including first pass and gated studies. Responsibilities include research and clinical work. Cedars-Sinai is the West's largest private not-for-profit medical center, located adjacent to Beverly Hills. We provide an excellent salary and benefit package in addition to the opportunity to work in a stimulating state-of-the-art environment. Please submit resume or call (213)855-5521 for more information. Cedars-Sinai Medical Center, 8723 Alden Drive, Los Angeles, CA 90048. Equal Opportunity Employer.

NUCLEAR CARDIOLOGY TECHNOLOGISTS. Staff positions available in the Nuclear Cardiology department of an 1100-bed teaching hospital. Candidates must be registered and have experience in cardiovascular Nuclear Medicine. For additional information write: LeAnna Nylaan, Nuclear Cardiology Department, The Methodist Hospital, 6565 Fannin, MS F903, Houston, TX 77030, or call (713)790-3341.

NUCLEAR MEDICINE TECHNOLOGIST. Position now available for an experienced nuclear medicine technologist certified by SNM or registered technologist in a private progressive outpatient nuclear medicine laboratory in a large city in a large medical center in the Sun Belt. Knowledge of radioimmunoassay, imaging, computer, and nuclear cardiology in addition to supervisory, administrative, and teaching experience required. Please send resume to: Box 1207, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

NUCLEAR MEDICINE TECHNOLOGIST. Full-time position for registered Nuclear Medicine Technologist in university medical center two-year old facility. Full range of in vivo and in vitro procedures. Five gamma cameras, including mobile with on-board computer and computer interfaced to stationary cameras. Base salary range: \$16,411 per year. Good benefits. Contact Sara Jane Davis, CNMT, Supervisor, Division of Nuclear Medicine, University of Kansas Medical Center, 39th & Rainbow, Kansas City, KS 66103. Tel: (913)588-6843.

NUCLEAR MEDICINE TECHNOLOGISTS needed NATIONWIDE! Attractive locations, excellent salaries, career opportunities. No cost to you. Contact Ruth Knight, NATIONWIDE RECRUITERS, 3710 Landmark Dr., Suite 111, Columbia, SC 29204. (800)845-0992 or (803)738-1790.

NUCLEAR MEDICINE TECHNOLOGIST. One full-time day position available for high school grads that have completed an approved Nuclear Medicine Program; either registered or registry-eligible and 1 year clinical experience in all phases of Nuclear Medicine Technology. We offer good salary and excellent benefits that include paid health and life insurance coverages and tuition assistance. Call: (202)574-6641 collect to arrange an interview, or send resume, in complete confidence, to: Employment Manager, Greater Southeast Community Hospital, 1310 Southern Ave., S.E., Washington, DC 20032.

ULTRASOUND TECHNOLOGIST. A full-time day position is available for a registered or registry-eligible technologist in a modern progressive Radiology Dept. Requirements: completion of ultrasound technical training program, ASUTS-ALUM registration, and at least 1 year clinical experience preferred in B-scanning. We provide excellent salary and benefits including tuition assistance, comprehensive health insurance with dental option, and FREE PARKING. For more information or to arrange an interview call: (202)574-6641 collect, or send resume, in complete confidence, to: Employment Manager, Greater Southeast Community Hospital, 1310 Southern Ave., S.E., Washington, DC 20032.

FACULTY POSITION AVAILABLE. Nuclear medicine technologist, certified, B.S. or higher. Experience in imaging, in vitro procedures, and computer applications. To teach AMA accredited BS degree Nuclear Medicine Technology Program. Full-time faculty appt. excel. fringe benefits. Personal interview required. Send resume by December 30, 1981 to Chairman, Search Committee, Nuclear Medicine Technology, RTI Room 118, University of Alabama in Birmingham, University Station, Birmingham, AL 35294. Affirmative Action, Equal Opportunity Employer.

B.C. CHILDREN'S HOSPITAL, GEN-eral Duty Technologist Nuclear Medicine. In early 1982 we will be amalgamating two presently existing pediatric centers into one 250-bed regional facility. The health care needs of British Columbia's children will be met in this tertiary care center. General duty scanning technologists are required for our spacious, new Nuclear Medicine Laboratory. Equipment includes large-field-of-view rotational tomography gamma camera, mobile gamma camera, and nuclear medicine computer system. Preference will be given to applicants with pediatric experience. Applicants must be eligible for registration with C.A.M.R.T. This position offers a competitive salary and a comprehensive range of employee benefits. Interested applicants are invited to send resumes to: EMPLOYEE RELATIONS, Children's Hospital, 250 West 59th Avenue, Vancouver, B.C. V5X 1X2.

NUCLEAR MEDICINE TECHNOLOGIST. Immediate opening in large, diversified, university-affiliated DM&S hospital. Competitive salary, liberal fringe benefits. VA Medical Center, Allen Park, MI 48101. (313)562-6000 X676. An Equal Opportunity Employer.

NUCLEAR MEDICINE TECHNOLOGIST. 540-bed hospital located in scenic east Tennessee has an immediate opening for a registered or registry-eligible Nuclear Medicine Technologist. The department is equipped with one (1) ADAC Computer. Salary commensurate with experience. Excellent benefits program. Send resume to: Personnel Office, Holston Valley Hospital & Medical Center, Ravine Street, Kingsport, TN 37662. (615)246-3322, Ext. 1258.

NUCLEAR MEDICINE TECHNOLOGISTS. Registered or registry-eligible Nuclear Medical Technologists. Sun Belt locations. A dynamic and growing mobile service, serving the South and West for 9 years, has immediate openings in several locations. Top salary and good benefits package. If you would like a challenge and more independence, send resume to: Nuclear Diagnostic Laboratories, Inc., P.O. Box 470307, Dallas, TX 75247.

NUCLEAR MEDICINE TECHNOLOGIST. Live in Houston . . . Work in the future. The Texas Medical Center, with over 30,000 employees, is truly a city within a city—one of Houston's largest employers. At the heart of this medical city stand our institutions, St. Luke's Episcopal Hospital, Texas Children's Hospital, and the Texas Heart Institute. We're guided by one administration with a combined total of 1157 beds. We have a progressive lab with state-of-the-art instrumentation and perform a full spectrum of routine stress-cardiac and mobile procedures. If you are registered and have experience in nuclear cardiology and computer application, let us tell you more! Call Mrs. Smith collect (713)791-2237 or send resume to Personnel Dept. P.O. Box 20269, Houston, TX 77225. EOE/M/F/Handicapped.

NUCLEAR MEDICINE TECHNOLOGIST. Ft. Lauderdale, Florida. Florida Medical Center, a 400-bed acute-care facility, has positions available for registered or registry-eligible technologists in its expanding and progressive Nuclear Medicine Department. The department contains six scintillation cameras, a MDS

computer, RIA department, and radiopharmacy. Excellent starting salary and benefits. Inquire to Chief Technologist, Dept. of Nuclear Medicine, Florida Medical Center, 5000 West Oakland Park Blvd., Fort Lauderdale, FL 33313; (305) 735-6000.

THE BEST OF EVERYTHING AWAITS licensed nuclear medicine technologists at Desert Hospital, a dynamic 350-bed, acute-care hospital in beautiful Palm Springs, CA. Our facilities offer the ultimate professional environment, and our desert community provides perfect year-round weather, ample cultural and recreational attractions, and an unlimited choice of lifestyles. We offer excellent salaries, outstanding benefits, and plenty of room for growth. Registration or eligibility needed. For more information call Personnel collect at (714) 323-6287, or send your resume to Desert Hospi-

tal, 1150 N. Indian Ave., Palm Springs, CA 92262.

POSITIONS WANTED

ABNM CERTIFIED NUCLEAR MEDICINE Physician. Trained at Johns Hopkins. Currently Assistant Professor, extensive experience in nuclear cardiology, general nuclear medicine and teaching. Seeking private/academic position/association. Reply Box 1206, Society of Nuclear Medicine, 475 Park Ave. So., New York, NY 10016.

BOARD-CERTIFIED NUCLEAR MEDICINE physician. Internal Medicine background. 9-yr academic experience in all aspects of Nuclear Medicine, including cardiology, RIA, administration, and publications. Seeking new

position. All possibilities and locations considered. Reply Box 1202, Society of Nuclear Medicine, 475 Park Ave. S., New York, NY 10016.

NUCLEAR PHYSICIAN-PATHOLOGIST seeks hospital or private group practice. Available April 1982, board eligible, extensive training in imaging, radioimmunoassay, computer techniques, and thyroidology. Reply Box 1201, Society of Nuclear Medicine, 475 Park Ave. S., New York, NY 10016.

EQUIPMENT WANTED

WE BUY USED TECHNICARE/OHIO Nuclear gamma cameras and computers. Please make offers in writing to: Globus Industries, 299 Broadway, New York, NY 10007.

NUCLEAR MEDICINE TECHNOLOGIST

Full-time position available for registered technologist in nuclear medicine. Expanding facility with excellent growth potential. The department has two cameras and computer to do a full range of nuclear exams.

Good salary range, medical and dental insurance, stock options, in-house credit union, continuing educational programs, and pleasant surroundings.

Contact: Lakeview Hospital, 630 East Medical Drive, Bountiful, UT 84010. (801)292-6231 ext. 103.

Nuclear Medicine Technologist

Registered or registry-eligible technologist for full-time position in modern, 402-bed, acute-care hospital. St. Mary's is located in a city of 100,000 midway between St. Louis and Chicago. Contact: Personnel Office, St. Mary's Hospital, 1800 E. Lake Shore Drive, Decatur, IL. (217)429-2966.

NUCLEAR MEDICINE TECHNOLOGIST

JOHNSTON-WILLIS HOSPITAL

1401 JOHNSTON-WILLIS DRIVE
RICHMOND, VIRGINIA 23235
(804)320-2900, ext. 4600

Johnston-Willis Hospital, located in historic Richmond, Virginia, is seeking a Staff Nuclear Medicine Technologist to work in our new 292-bed acute-care facility.

Required background includes experience in cardiac procedures, in vivo procedures, quality control program, Shillings testing, blood volume testing, and supervision.

Equipment includes Siemens (Searle) and Ohio Nuclear LFOV Cameras and Siemens Scientiview and MDS Computer Systems.

Salary is commensurate with experience and excellent company benefits are offered.

If interested, please contact John D. Smith, Director of Personnel, Johnston-Willis Hospital, 1401 Johnston-Willis Drive, Richmond, VA 23235.

An Affiliate of Hospital Corporation of America.

INSTRUCTOR

We anticipate an opening in the near future for an Instructor in our CAHEA accredited, college affiliated, training program for Nuclear Medicine Technologists, and we are now accepting applications to fill this position.

Applicants should possess a B.S. degree and be a registered or certified Nuclear Medicine Technologist with 3-5 years of clinical experience. Preference will be given to those with teaching experience and/or those showing dedication to providing high quality didactic education to students.

In addition to teaching duties, the individual will be expected to aid the Directors in developing an innovative teaching program.

Please send resume and references to: Box 1205, Society of Nuclear Medicine, 475 Park Ave. S., New York, NY 10016.

GAMMA-II® TRAINING COURSE
VICTORIA HOSPITAL CORPORATION
LONDON, CANADA
DEPARTMENT OF NUCLEAR MEDICINE
 ® Registered Trade Mark - Digital Equipment Corporation

INTRODUCTION TO GAMMA-II
A training course for new users.

This course is designed for the physician or technologist with little or no previous computer experience. It covers the basic command structures of RT-II and Gamma-II CALL routines. The course ensures that users will become fully conversant with the Gamma-II commands and provides a base from which he or she can develop facility in the creation and execution of Gamma-II Macros and user programs. The course is divided approximately equally into didactic and laboratory or practical sessions. Homework assignments will be given.

1982		
January	11 - 15	8201
March	8 - 12	8203
May	10 - 14	8205
June	7 - 11	8206
October	4 - 8	8210
November	8 - 12	8211

COURSE FEE: \$400.00 Canadian payable in advance. Cheques should be made payable to "Victoria Hospital Corporation - Gamma-II Training Course". This course fee is subject to change without notice.

ENROLLMENT: To enroll in one of the above course, contact:
 Dr. T.D. Craddock,
 Department of Nuclear Medicine,
 Victoria Hospital, LONDON, Ontario,
 CANADA N6A 4G5
 Telephone: (519)432-5241, Ext. 267

Nuclear Medicine Chief Technologist

**Live, work and play
 in the "Land of Pleasant Living,"
 right in the heart of
 the Chesapeake Bay County.**

A challenging management position complete with comprehensive benefits and excellent salary is available in our 300-bed general hospital. The successful candidate will have a minimum 2 years supervisory experience, as well as a working background that includes in vivo and in vitro procedures. Individual will be familiar with all documentation areas of nuclear medicine and be certified by ARRT, ASCP, or NMTCB. Interested individuals should forward resumes including salary requirements or call:

Mrs. Arden Schonau
 Employment Manager
 The Anne Arundel General Hospital
 Franklin & Cathedral Streets
 Annapolis, MD 21401
 (301)267-1367

An Equal Opportunity Employer M/F/H

BAYLOR COLLEGE OF MEDICINE

Nuclear Medicine Fellowship and Residency Program

1982-1983

Residency and fellowship positions are available in an AMA approved residency program which includes training in two large nuclear medicine laboratories: (1) St. Luke's Episcopal-Texas Children's Hospitals and Texas Heart Institute joint facilities and (2) Ben Taub General Hospital.

Residency training encompasses the full spectrum of nuclear medicine procedures, both in vivo and in vitro, in pediatric and adult patients. A mobile nuclear medicine capability emphasizes critically ill patients. Because of a substantial commitment to education, including a bachelor's degree program in nuclear medicine technology, the faculty of the Nuclear Medicine Section is very broad based. Trainees attend lectures

and laboratories in radiation physics, instrumentation, radiopharmacy, radioimmunoassay, radiobiology, and radiation health in addition to the usual clinic nuclear medicine courses and seminars.

Fellowships with emphasis on cardiac and pulmonary disease are available in association with the Texas Heart Institute. With the mobile capabilities and a large population of critically ill patients (total hospital beds, 1200; intensive care beds, 190), participation in one of the most rapidly growing areas of clinical nuclear medicine is possible with potential for participation in several research projects related to cardiovascular, pulmonary, and critical care nuclear medicine.

Requests for further information should be directed to: John A. Burdine, M.D., Chief, or Paul H. Murphy, Ph.D., Residency and Fellowship Coordinator, Nuclear Medicine Section, Department of Radiology, Baylor College of Medicine, Houston, TX 77030.

Chief Nuclear Medicine Technologist

St. John's Regional Health Center, a 1,000-bed complex in Springfield, Missouri, is seeking a Chief Nuclear Medicine Technologist. The position includes administrative, supervisory, and clinical responsibilities. Nuclear Medicine is a separate department directed by a full-time Nuclear Medicine Physician. We have a new physical plant and the latest in imaging and data processing equipment. Springfield, Missouri is a city of 150,000 which boasts a cost-of-living index 12% below the national average. With four colleges, a state university, unlimited recreational opportunities, and excellent public schools, Springfield is an almost ideal place to live.

We are seeking an individual with a Bachelor's Degree in Science and substantial supervisory and clinical experience. Data processing and cardiovascular experience is essential. Registry is required. Salary will be based upon experience and qualifications. Excellent benefits. For immediate contact, send C.V. or resume, including salary history, to: Paul Elmore, Personnel Director, St. John's Regional Health Center, 1235 E. Cherokee, Springfield, Missouri 65802, or call collect (417)885-2948.

SOUTH FLORIDA NUCLEAR MEDICINE SERVICES

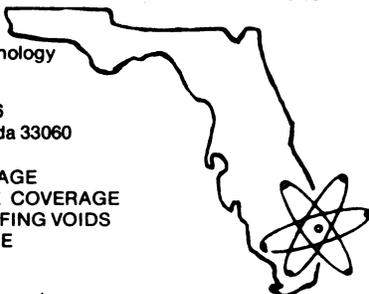
Consultation:
Nuclear Medicine Technology
Staffing & Placement

400 E. Atlantic Blvd., #6
Pompano Beach, Florida 33060

- VACATION COVERAGE
- MATERNITY LEAVE COVERAGE
- TEMPORARY STAFFING VOIDS
- TRAVEL ANYWHERE

2 week minimum stay
40 hour minimum work week
No overtime charges

Call Collect (305)782-7371



JNM CLASSIFIED PLACEMENT SERVICE SECTION

This section in the *Journal of Nuclear Medicine* contains "Positions Open," "Positions Wanted," "For Sale," and "Equipment Wanted" listings. Nondisplay "Positions Wanted" ads by members of the Society are billed at 70¢ per word for each insertion with no minimum rate. Nondisplay "Positions Wanted" ads by nonmembers and all nondisplay "Positions Open," "For Sale" and "Equipment Wanted" ads by members and nonmembers are charged at 90¢ per word. Display advertisements are accepted at \$150 for 1/8 page, \$205 for 1/4 page, \$325 for 1/2 page, and \$560 for a full page.

Closing date for each issue is the 1st of the month preceding publication. Agency commissions and cash discounts are allowed on display ads only. Box numbers are available for those who wish them.

All classified ads must be prepaid or accompanied by a purchase order. Send orders to:

Journal of Nuclear Medicine
475 Park Avenue South
New York, NY 10016

VETERANS ADMINISTRATION MEDICAL CENTER

Long Beach, California
affiliated with
University of California at Irvine

NUCLEAR MEDICINE RESIDENCIES

Position available July 1982 for first-year resident AMA approved program. Professional staff includes radiopharmacist and physicist offering broad opportunity for clinical and research experience. Equal opportunity employer. English language proficiency required (PL 95-201). Contact:

Kenneth P. Lyons, M.D.
Chief, Nuclear Medicine Service
or

Norah Milne, M.D.
Director of Training, Nuclear Medicine
VA Medical Center
Long Beach, CA 90822
(213)498-6237

Cardiovascular Nuclear Medicine Technologist

Come to Connecticut and Yale-New Haven Hospital for an exceptional and challenging full-time staff position in our nuclear medicine department.

If you are registered or registry eligible and have broad experience and training in all phases of nuclear medicine and cardiology procedures, then this may be the opportunity you've been looking for.

We offer an excellent, stimulating, and diversified work environment as well as an outstanding compensation package that includes a competitive starting salary, paid medical insurance coverage, an innovative and flexible paid time off program, extended sick benefits plan (short-term disability), long-term disability, pension plan, tax shelter annuity program, employee educational assistance program, and many other benefits.

If you are interested in becoming a member of the Nuclear Medicine staff of our progressive acute-care medical center hospital, then please respond in confidence to Mrs. Zannette Moore, Personnel Administration - J2.



YALE-NEW HAVEN HOSPITAL

789 Howard Avenue
New Haven, Connecticut 06504
an equal opportunity employer m/f

Nuclear Medicine Technologist

We have an opportunity in our growing Radiology Department for a Nuclear Medicine Technologist. You would be involved in a full complement of scanning procedures using a large-field-of-view gamma camera and a Digital Gamm II computer. Responsibilities include nuclear medicine procedures, isotope preparation, and quality control. Candidates must have completed an accredited nuclear medicine program. ARRT registration in nuclear medicine or eligibility for registration is required. The position offers a commensurate starting salary based on background and experience. An excellent benefits program, including a hospital-paid employee-owned retirement program, is provided.

Call or write: Barbara L. Murray, Personnel Representative, The Mary Imogene Bassett Hospital, Coopers-town, NY 13326. Tel: (607)547-3121.

Located in a rural resort village, The Bassett Hospital is a regional referral and teaching center affiliated with Columbia University. There are approximately 70 physicians on the staff, which is organized as a hospital-based group medical practice.

RADIATION THERAPY TECHNOLOGIST

450-bed community general hospital has an immediate opening for a Radiation Therapy Technologist. Candidate must be certified or have a New York State Therapy license or be eligible. Location: upstate New York resort/recreation area, fine schools, scenic surroundings.

Please submit resume and salary requirements to: Edmund T. Capezzuti, Assistant Personnel Director, Glens Falls Hospital, 100 Park St., Glens Falls, NY 12801.

**Help your
Heart...**

**Help your
Heart Fund**



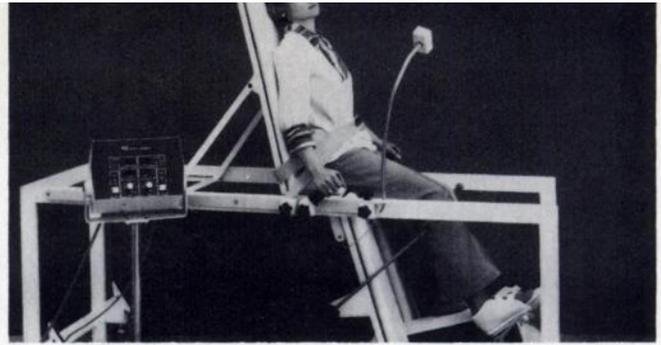
American Heart Association

INDEX TO ADVERTISERS

A.M.R. Corporation 15A	New England Nuclear 4A
Atomic Products 32A	Nuclear Associates 31A
Brattle Instruments IBC	Nuclear Pacific 39A
Capintec, Inc. 29A	Nuclear Pharmacy 24A
Clinical Assays 22A	Nuclear Services 19A
Cyclotron Corporation 40A	O'Neill Enterprises 12A, 26A
EDC/Medical Imaging 38A	Pharmatopes 8A
Elsclint Ltd. 20A, 21A	Picker International 16A
Harshaw Chemical 9A	Procter & Gamble Co. . . 10A, 11A, 12A
International C.I.S. 13A, 18A	Radx Corporation 17A
Johnston Laboratories 32A	Siemens Corporation 14A, 23A
Medi-Physics, Inc. IFC, 1A, 6A, 27A, 28A, BC	SNM Placement 33A, 34A, 35A, 36A, 37A
Medtronix/M.D.S. 3A	E.R. Squibb & Sons, Inc. 25A, 26A



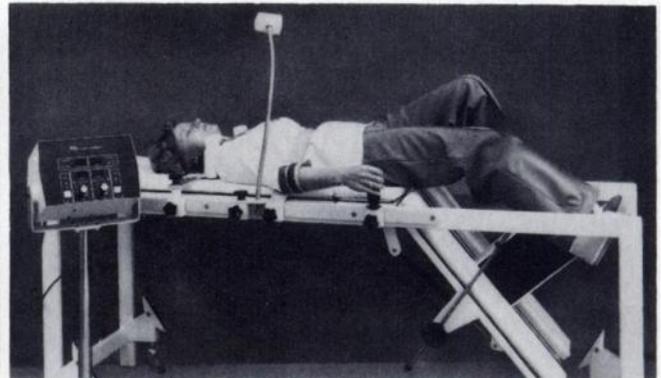
Upright Position with ergometer at partial extension



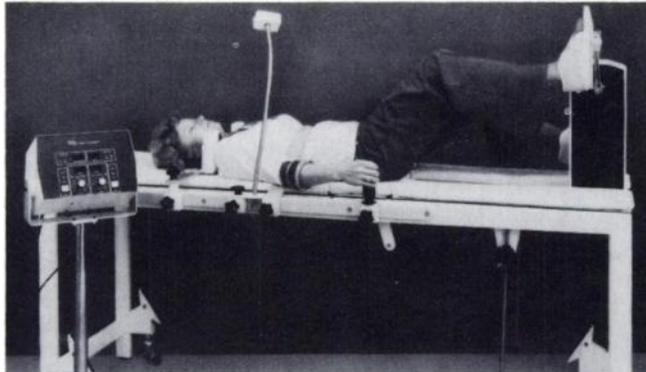
Upright Position with ergometer fully extended



Supine Position with ergometer elevated and partially extended



Supine Position with ergometer depressed and partially extended



Supine Position with ergometer elevated and fully extended

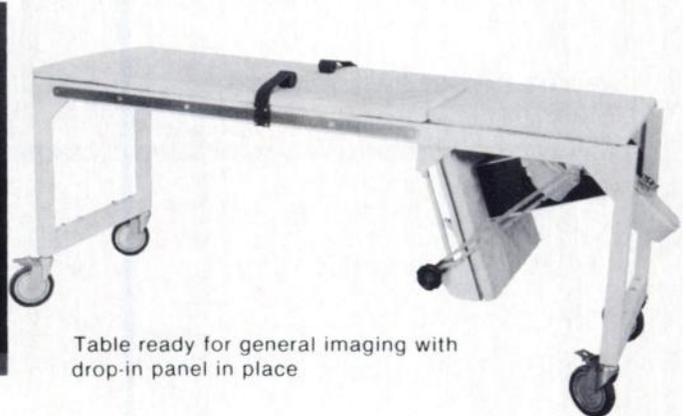


Table ready for general imaging with drop-in panel in place

Cardiac Stress?

How's this for VERSATILITY.

- Upright or Supine
- Large or Standard Field Cameras
- Workload or Heart Rate Control
- ECG or Computer Fed
- Anterior or Posterior Imaging
- Fixed or Mobile Cameras and — it can be used for Stress or General Imaging

With These Unmatched Features

- 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.

edc **ENGINEERING DYNAMICS CORPORATION**

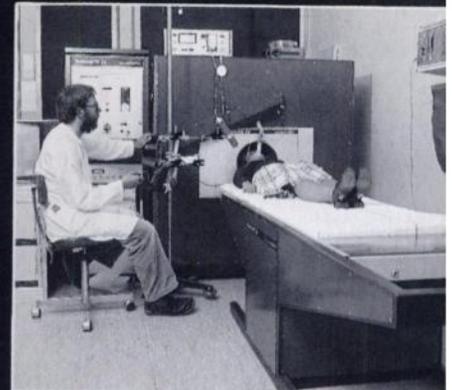
120 Stedman Street, Lowell, MA 01851
(617) 458-1456 Telex No. 951-779 EDCLOWE

rCBF Tomography

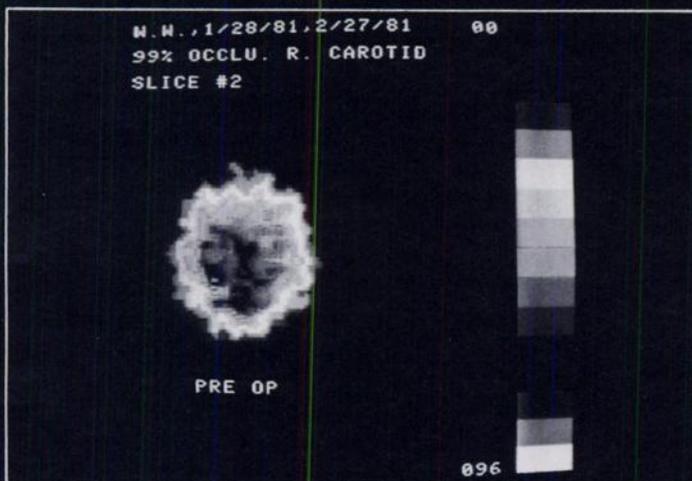
Dynamic rCBF pictures that show not only what is wrong but also where it is wrong

The Tomomatic 64 gives you true objective measurements in rCBF studies. It can be used for clinical investigations of such conditions as: all cerebral vascular arterial diseases, dementia, cerebral infarction, stroke, epilepsy, brain tumors, drug addiction and migraine. It functions by non-invasive $^{133}\text{Xenon}$ and $^{127}\text{Xenon}$ inhalation technique. It gives you true, dynamic, three dimensional multicolor pictures of 3 to 4 slices of the brain.

These pictures show an example of a patient with occluded carotid artery (University of Texas, Dallas, Department of Radiology).

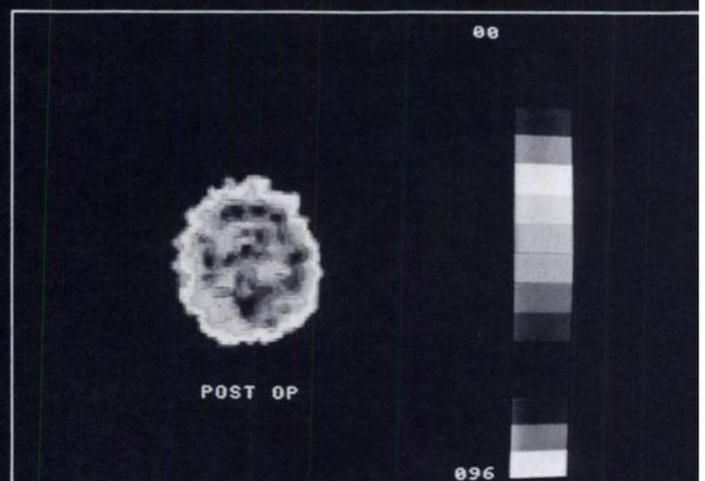


Typical TOMOMATIC 64 set-up.
(Clinic of prof. N. A. Lassen and O. Paulson
- Rigshospitalet, University of Copenhagen).



1. Pre-operative picture

This patient is an 81-year old male who experienced symptoms of dizziness. His right carotid artery was found to be 99% occluded. Prior to an operation to remove the occlusion, his preop study shows an absence of frontal perfusion and a chaotic perfusion pattern in the posterior part of the second slice (6 cm above the OM line).



2. Post-operative picture

After removal of the occlusion, his postop study shows restoration of perfusion to the cortical rim and to the frontal areas of the brain. The perfusion landscape now appears to be nearly normal.

Name _____
Address _____
City _____
Country _____
Phone _____

Please see the editorial page 1094-1097 and page 1049 -1053, Bonte et al "Single Photon Tomographic Study of Regional Cerebral Blood Flow after Stroke".

**Please send me
more information
on
TOMOMATIC 64**

medimatic

Medimatic, Division of M.I.D.
18103 Sky Park South,
Irvine, Cal 92714 USA
Phone 714-979-1305

Medimatic A/S
Gersonsvej 7 • 2900 Hellerup
Copenhagen, Denmark
Phone 45-1-610622

POSITRON COMPUTED TOMOGRAPHY

A New Level of Diagnostic Capability

The Cyclotron Corporation's PCT 4600

A MAJOR ADVANCE IN PCT INSTRUMENTATION

With the advent of The Cyclotron Corporation's Multi-slice Positron Computed Tomograph (PCT 4600), a new level of diagnostic research capability is now possible. The PCT 4600 system provides high speed, high resolution quantitative images of positron emitting isotopes in the human brain.

QUANTITATIVE ACTIVITY LOCALIZATION

Conventional imaging techniques provide somewhat distorted views of radioactive isotopes because of variations in response and the compression of three dimensions into two. The PCT 4600 system delivers precise quantitative images of excellent quality in transverse sections. Additionally, the positron emitting isotopes used with the PCT 4600 enable the use of more straightforward techniques to evaluate physiological processes.

A POWERFUL RESEARCH TOOL YOU CAN USE TODAY

PCT 4600 systems are currently being built for a number of leading research institutions. Although the specific programs of research to be carried out at these institutions vary in focus, the PCT 4600 system may be used to quantitate the concentration of any suitably labeled compound in an area of study. This research capability may be extremely valuable in the measurement of flow, metabolism, and other biological processes in tissue. Research studies using The Cyclotron Corporation's PCT 4600 should help define the therapeutic efficacy of anticonvulsants in the brain.

NEW RESEARCH POSSIBLE

For the first time it may be possible to map in human subjects the response of specific brain receptors and transmitters to drugs with specified binding characteris-

tics. This type of research may clarify the action of psychotropic agents on conditions such as schizophrenia and Parkinson's Disease. Studies of the permeability of tissues and research into the physiology of psychoses may now be possible. The PCT 4600 system provides the research tool necessary to view pathological conditions that have been difficult or impossible to obtain through other means. It moves diagnostic research to a new level of capability.

SPECIAL CONFIGURATIONS TO MEET YOUR RESEARCH NEEDS

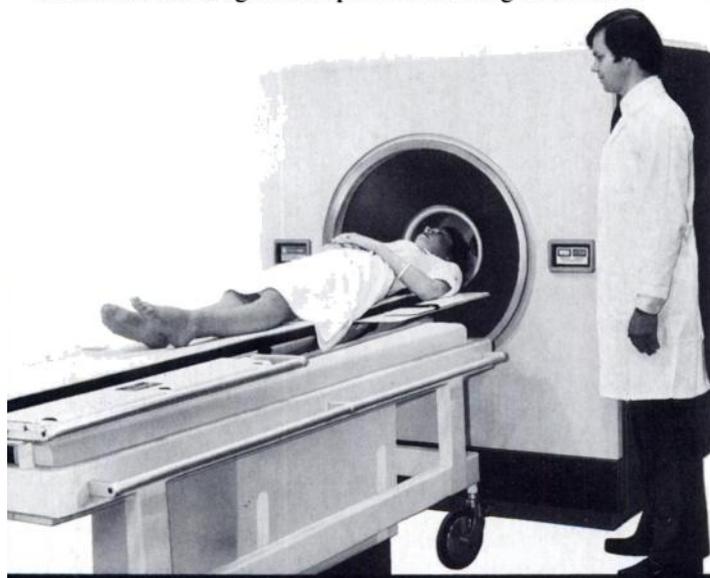
The PCT 4600 system is one of a family of high performance, research grade instruments designed for maximum effective count rate, optimum sensitivity, and rejection of unwanted background due to scatter and random events.

The signal processing data acquisition systems comprise a parallel ensemble of individual channels maintaining negligible deadtime, even at the highest count rate. A powerful computing system provides rapid image reconstruction plus the capability for efficient parametric analysis of time sequential studies.

The modular design approach employed in this family of tomograph systems allows The Cyclotron Corporation to configure systems to meet many different research applications by optimizing the tradeoffs between sensitivity, resolution and count rate.

A RESPECTED LEADER IN NUCLEAR MEDICINE

The same technical expertise and commitment to developing state-of-the-art equipment that gained The Cyclotron Corporation its leading position in the manufacturing of cyclotrons and neutron therapy systems can be found in the design of the PCT 4600. It is a valuable and powerful diagnostic research tool of unparalleled capability. In addition to the PCT 4600, the Cyclotron Corporation also manufactures a family of whole body, multi-slice PCT systems. Also available is a complete line of compact medical cyclotrons and accessories, including state-of-the-art targetry and processing systems for the production of the short-lived positron emitting isotopes used in positron imaging. We invite the opportunity to discuss your research interests and to configure a complete system to meet those specific requirements.



THE CYCLOTRON CORPORATION

950 Gilman Street, Berkeley, CA 94710
(415) 524-8670 Telex 910-366-7116

Help your cardiologist study heart kinetics non-invasively with Brattle-gated scintiphotos.



RAO, DIASTOLE



RAO, SYSTOLE



LAO, DIASTOLE

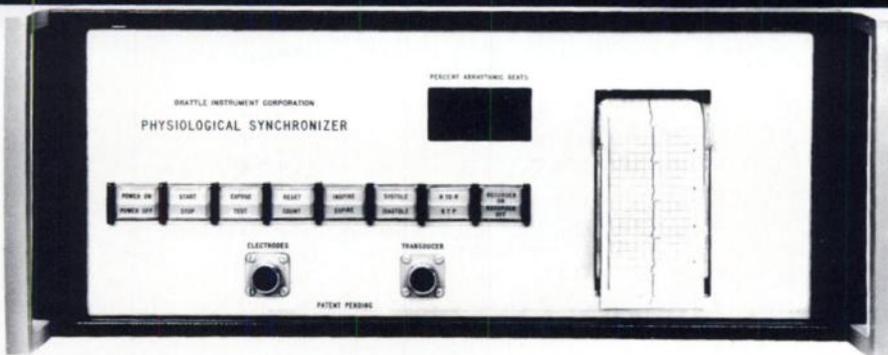


LAO, SYSTOLE

The RAO view shows akinesis of the lower antero-lateral wall and apex; and contraction of the inferior wall and high up the antero-lateral wall. The LAO view shows good contrac-

tion posteriorly and akinesis of the septal aspect of the chamber. Patient was injected IV with 20mCi of ^{99m}Tc -labelled Human Serum Albumin. The agent was prepared using the New

England Nuclear Electrolysis Kit for labelling HSA. Write or call for a portfolio of Brattle-gated lung, liver and heart studies.



No knobs, no meters, no errors
The spartan panel above tells the second-best part of our story. If you want to photograph peak systole, press the SYSTOLE button. If, say, you want systole only at full expiration, press the EXPIRATION button as well. If only breathing is relevant, don't press the heart button.

The Brattle is connected to the patient and to your gamma (or x-ray or ultrasonic) camera. Whenever the patient is in the selected phase, both the scope and the scaler on your gamma camera are gated ON, and film is exposed. Otherwise, they are OFF.

Brattles lock onto patients— and stay locked on
It doesn't matter if the patient's heart rate and breathing depth change while he's under the collimator be-

cause we stay right with him. Brattles contain an ECG to track heart, a plethysmograph to track respiration, and a tiny computer to deduce systole and diastole times from the heart signal. And because it's all built in, your operator need not be a physiologist.

We don't cover our tracks—we print them
The panel lights flash whenever the patient reaches the selected phases; and pushing the RECORDER-ON button gets you an ECG tracing marked with breathing and camera-on times. You can verify function before, during and after exposure.

A single pair of axillary electrodes captures both heart and breath
It's easy. And we supply disposable, pre-filled electrodes.

Some Brattles have been in clinical use for over three years—in community and major hospitals
More than half of our instruments are in community hospitals and the list is growing rapidly. Upon request, we'll supply names of happy users in your area.

What's the next step? Get in touch
Ask your NEN man about Brattles and HSA Kits. He can show you a portfolio of clinical pictures and arrange to have one of our people give you a demo. Or write or call us direct. We'll send you brochures on this and other models, and will give you your own set of clinical pictures and a bibliography on gated scintigraphy. If you wish, we'll even make you a Brattle owner. (This is the best part of our story.)

Brattle Instrument Corporation

243 Vassar Street • Cambridge, Massachusetts 02139 • 617-661-0300

Neoscan[®]

Gallium Citrate Ga 67

3 Sizes 3, 6 and 12 mCi vials

3 Calibration Days

First Receipt	Calibration 12:00 Noon
Monday	Wednesday
Wednesday	Friday
Friday	Monday

4 Cyclotrons

More when you need it.

medi+physics[™]

5801 Christie Avenue, Emeryville, CA 94608

For More Information, Please Call (415) 652-7650

Inside California Toll Free (800) 772-2477 • Outside California Toll Free (800) 227-0492