ANNOUNCING

MPI Indium DTPA In 111

(Pentetate Indium Disodium In 111)

In Cisternography

Cisternography presents the dynamics of CSF flow

When you need to know *function*—
cisternography is useful in the evaluation of:

- Patients who may need ventricular shunts
- Shunt patency and/or site of blockage
- Patients with symptoms of "normal pressure" hydrocephalus
- Patients with symptoms of "communicating" hydrocephalus
- CSF rhinorrhea patients

CLINICAL CRITERIA

"An ideal radiopharmaceutical for cisternography would satisfy the following criteria: (I) physiologically governed by CSF flow, (II) adequate half-life for desirable period of study, (III) photons suitable for scanning, (IV) low radiation dose, (V) least probable chemical toxicity, and (VI) controlled pharmaceutical quality. Chelated ^{111}In satisfies all these conditions."[1]

COMPARISON OF TWO RADIOPHARMACEUTICALS USED IN EVALUATION OF CEREBROSPINAL FLUID PATHWAYS[2]

	^{169}Yb DTPA	^{111}In DTPA
Physical Half-Life	32 days	2.8 days
Biological Half-Life	12 hours	10 hours
Useful Photons (energy MeV)	0.177, 0.198	0.173, 0.247
Useful Photons (% disintegration)	0.57	1.85
Whole Body Dose	0.069/500 μCi	0.039/500 μCi
Spinal Cord Surface Dose (rads)	8.0/500 μCi*	1.9/500 μCi*

*Dose to spinal cord and brain surface

[1] Chelated ^{111}In: An ideal radiopharmaceutical for cisternography, F. Hosain, D. Phil., and P. Som, D.V.M.M.S. British Journal of Radiology, 45:677-679, Sept. 1972.

[2] Preparation, Physiology and Dosimetry of ^{111}In Labeled Radiopharmaceuticals for Cisternography, David Goodwin, M.D., Chung Hun Song, B.S., Roland Finston, Ph.D. and Philip Matin, M.D., Radiology, 109:91-98, July 1973.

medi+physics™

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

FOR COMPLETE PRESCRIBING INFORMATION PLEASE CONSULT PACKAGE INSERT, A SUMMARY OF WHICH FOLLOWS:

MPI Indium DTPA In 111

(Pentetate Indium Disodium In 111)

DESCRIPTION: MPI Indium DTPA In 111 is a diagnostic drug for intrathecal use. It is available as a sterile, apyrogenic, isotonic, aqueous solution, buffered to pH 7 to 8. At calibration time each milliliter contains 1 millicurie of Pentetate Indium Disodium In 111 (no-carrier-added), 20 to 50 micrograms of pentetic acid, and sodium bicarbonate for pH adjustment. *The drug is to be discarded after single use.* Radionuclidic purity at calibration time is at least 99.0% with less than 0.1% Indium In 114m and 0.1% Zinc Zn 65. The concentration of each radionuclidic contaminant changes with time. Graph 1 shows maximum concentration of each radionuclidic impurity as a function of time.

INDICATIONS AND USAGE: Pentetate Indium Disodium In 111 is recommended for use in radionuclide cisternography.

CONTRAINDICATIONS: None known.

WARNINGS: The contents of the vial are radioactive. Adequate shielding of the preparation must be maintained at all times.

Since the drug is excreted by the kidneys, caution should be exercised in patients with severely impaired renal function.

PRECAUTIONS:
Pentetate Indium Disodium In 111, as well as other radioactive drugs, must be handled with care and appropriate safety measures should be used to minimize external radiation exposure to clinical personnel, and to minimize radiation exposure to the patients consistent with proper patient management.

Do not use after the expiration time and date (7 days after calibration time) stated on the label.

Discard vial after a single use. Do not use if contents are turbid.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term animal studies have been performed to evaluate carcinogenic potential, or whether Pentetate Indium Disodium In 111 affects fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with MPI Indium DTPA In 111. It is also not known whether Pentetate Indium Disodium In 111 can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Pentetate Indium Disodium In 111 should be given to a pregnant woman only if clearly needed.

PRECAUTIONS: 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

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Pentetate Indium Disodium In 111 is administered to a nursing mother.

Pediatric Use

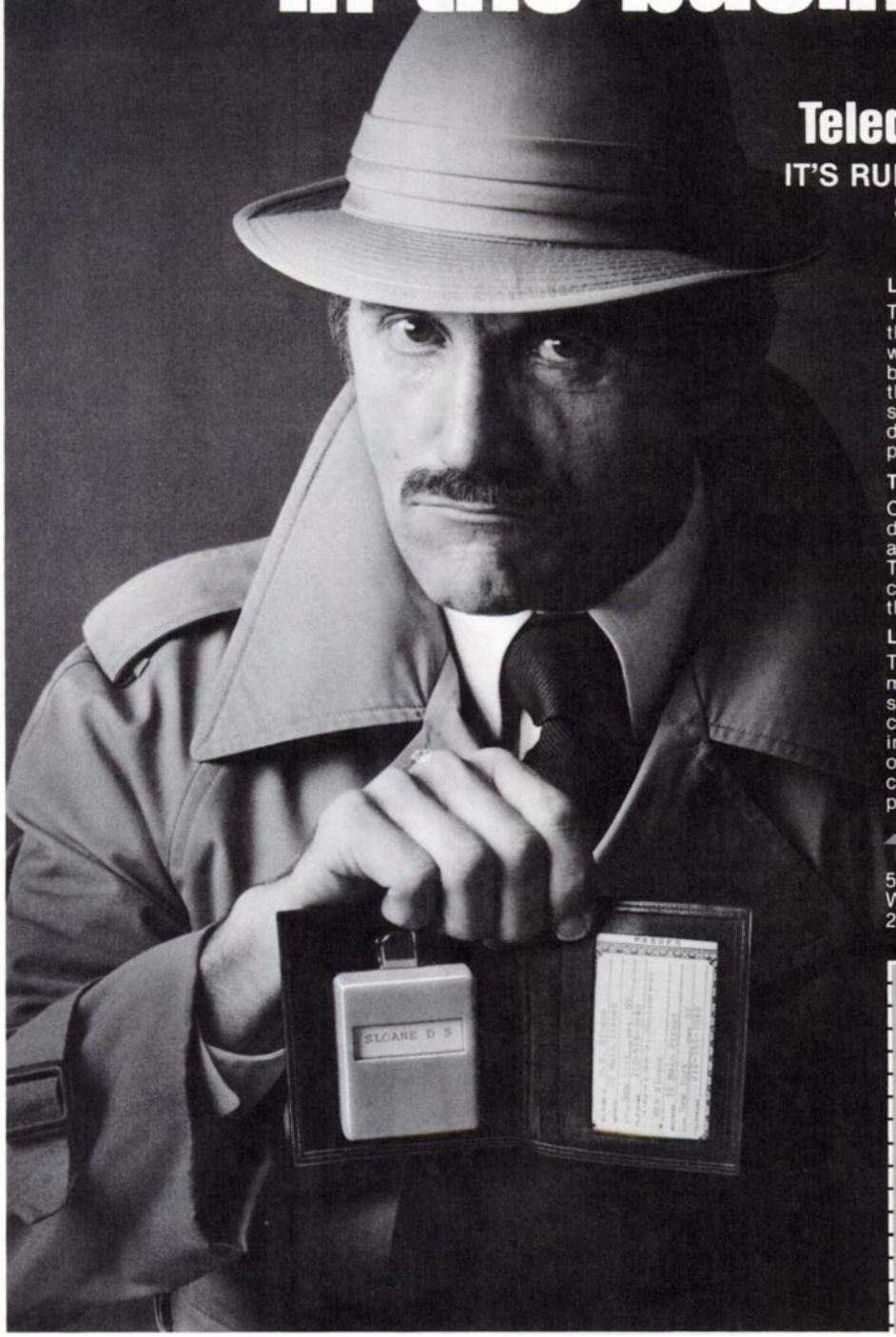
Safety and effectiveness in children have not been established.

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: Aseptic meningitis and pyrogenic reactions have been rarely (less than 0.4%) observed following cisternography with Pentetate Indium Disodium In 111.

HOW SUPPLIED: Pentetate Indium Disodium In 111 (no-carrier-added) is supplied in single dose glass vials, each containing 1.5 ml of solution with a concentration of 1 millicurie per ml and a total activity of 1.5 millicurie per vial at calibration time.

Meet the best radiation detective in the business.



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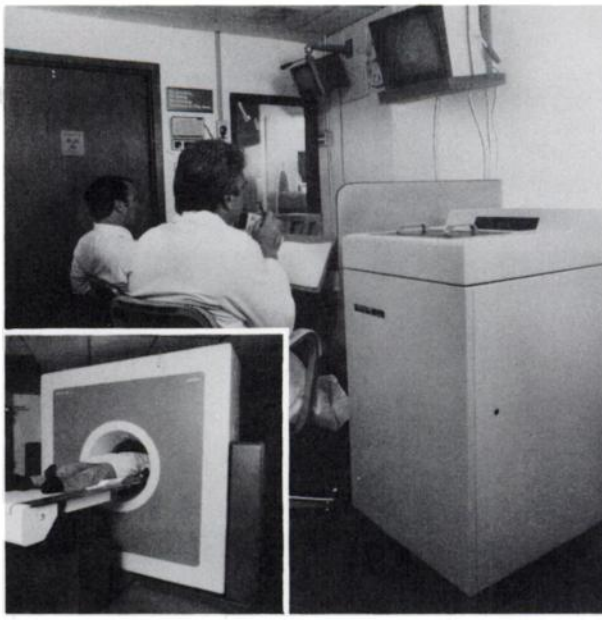
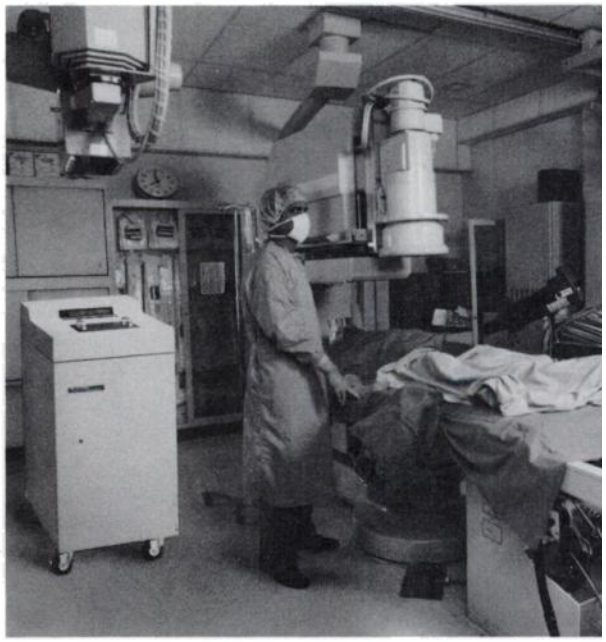
Video Imaging Camera





Unbelievable ease of operation-superior image quality

"Continuous capacity for more than 60 exposures and no operator — it's great." "The best image quality we've seen." "By the time you make the second trip to the darkroom you know why you want this camera." These are just a few of the scores of comments we've been getting from users of the new Radx Video Imaging Camera.

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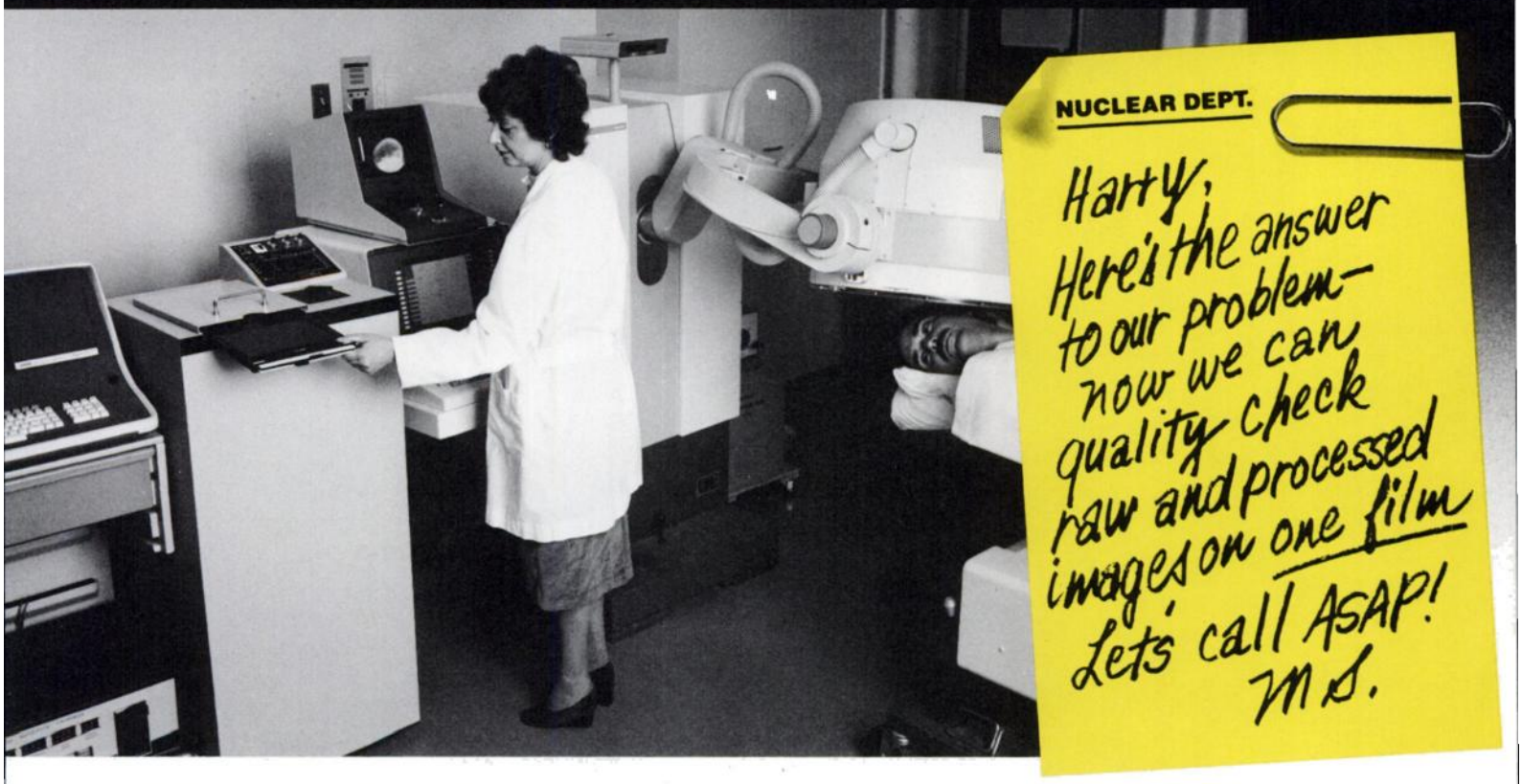

The 5000C combination nuclear detector and computer/video imager from IIE.

Until now, computer assisted nuclear imaging required two separate hard copy imagers: one for the gamma camera and one for the computer. Now there's an imager that does both.

Actually, the 5000C does a lot more. It's the first combination imager that lets you alternate from raw data to computer at a flip of a switch. And allows side-by-side x,y and video studies on the same sheet of 8 x 10 film. It even offers a choice of format sizes and separate contrast controls for each mode. And features the proven reliability of IIE's patented electro-magnetically controlled shutter.

In fact, compared to any two single mode imagers, the 5000C is one investment that can advance the efficiency of your nuclear department—while saving time, space and the cost of extra equipment. And that's good news, no matter how you look at it!

For complete information, call or write,
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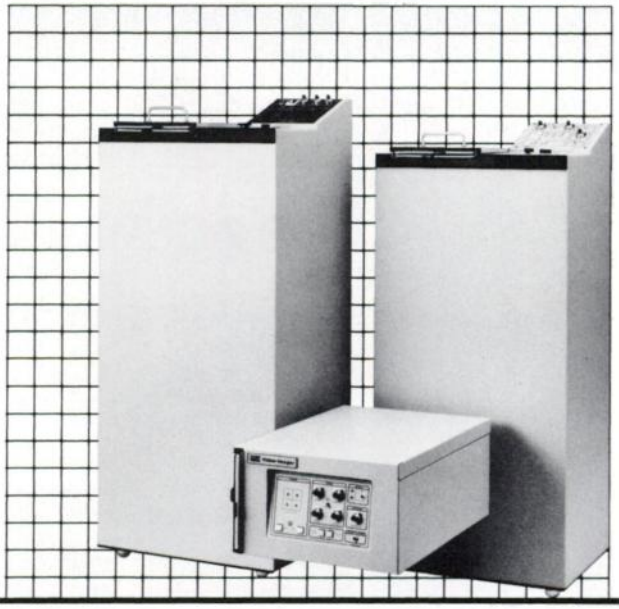

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In which range is Gastrin test sensitivity most important?

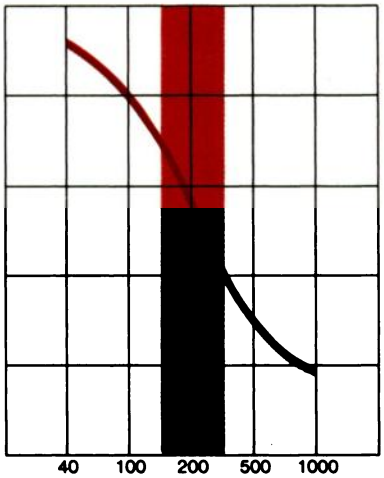
The answer is "questionable."

Why? Because values in the "questionable" range (150 pg/ml-350 pg/ml) could reflect any of a number of disorders. Exactly where a value falls within this range can help the physician determine what might be wrong, and what follow-up tests or clinical observations could resolve the "questionable" diagnosis.

So it is within this elevated range that accurate gastrin values can be of greatest clinical significance to the physician.

And the GAMMADAB® Gastrin RIA Kit is designed to provide exactly that. Unlike other gastrin kits, its greatest sensitivity is in this critical "questionable" range.

In addition, our double-antibody gastrin kit is convenient to run. All reagents come ready-to-use, with just two pipetting volumes. Total room temperature incubation is only 70 minutes, for fast turnaround.



For more information about the value of gastrin testing in the questionable range, or for an evaluation kit, please contact us. Call or write Clinical Assays, Division of Travenol Laboratories, Inc., 620 Memorial Drive, Cambridge, Massachusetts 02139. Toll free in U.S.: (800) 225-1241. In Massachusetts: (617) 492-2526.

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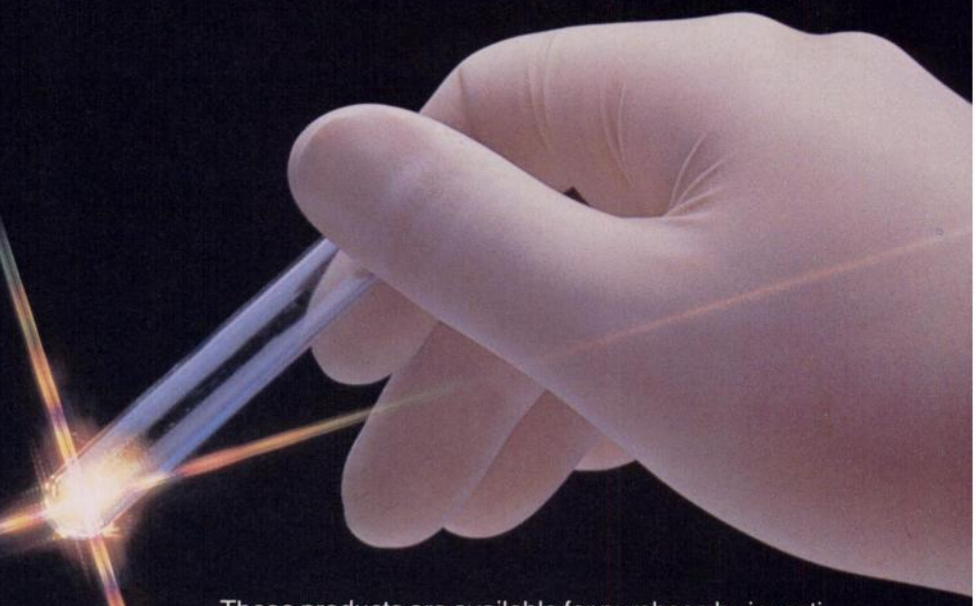

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Low pH, medium concentration
Low pH, high concentration

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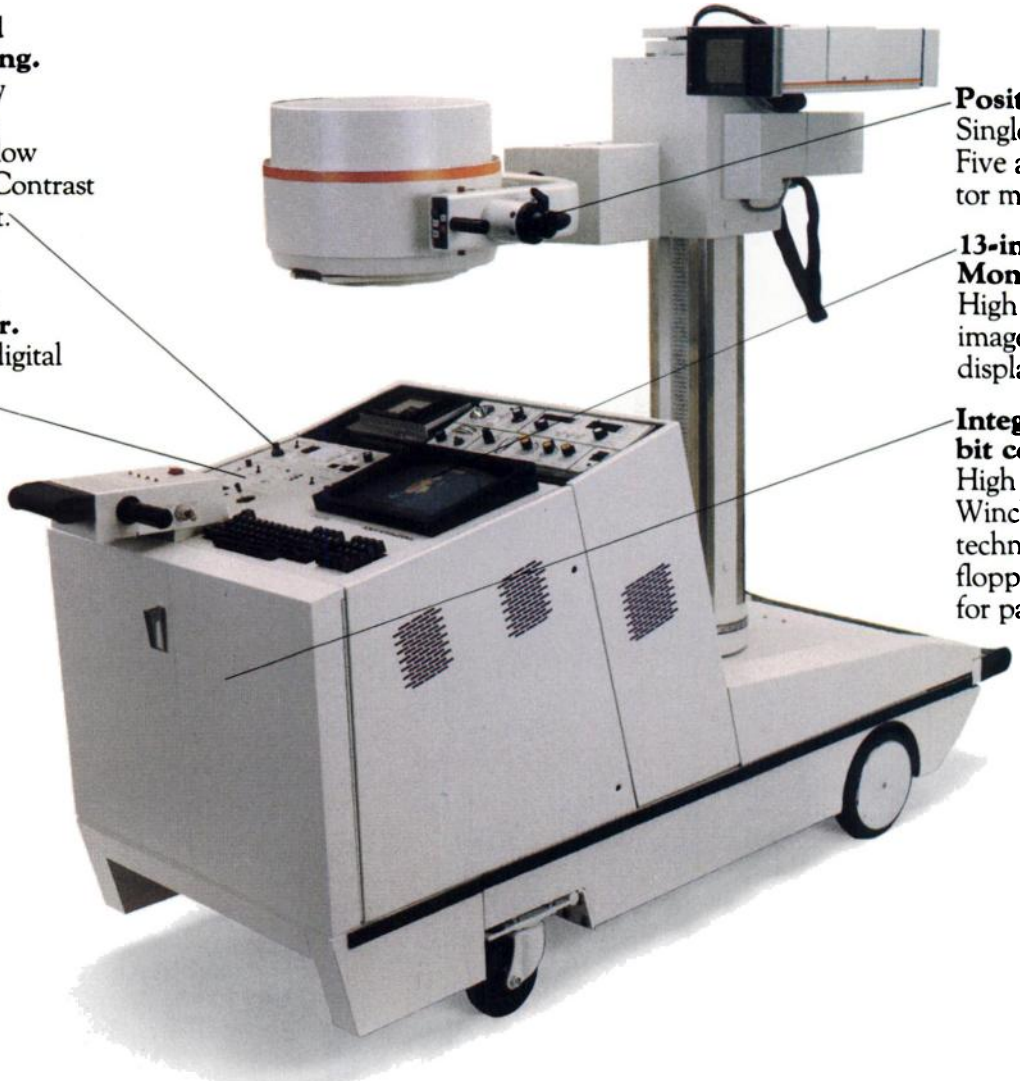

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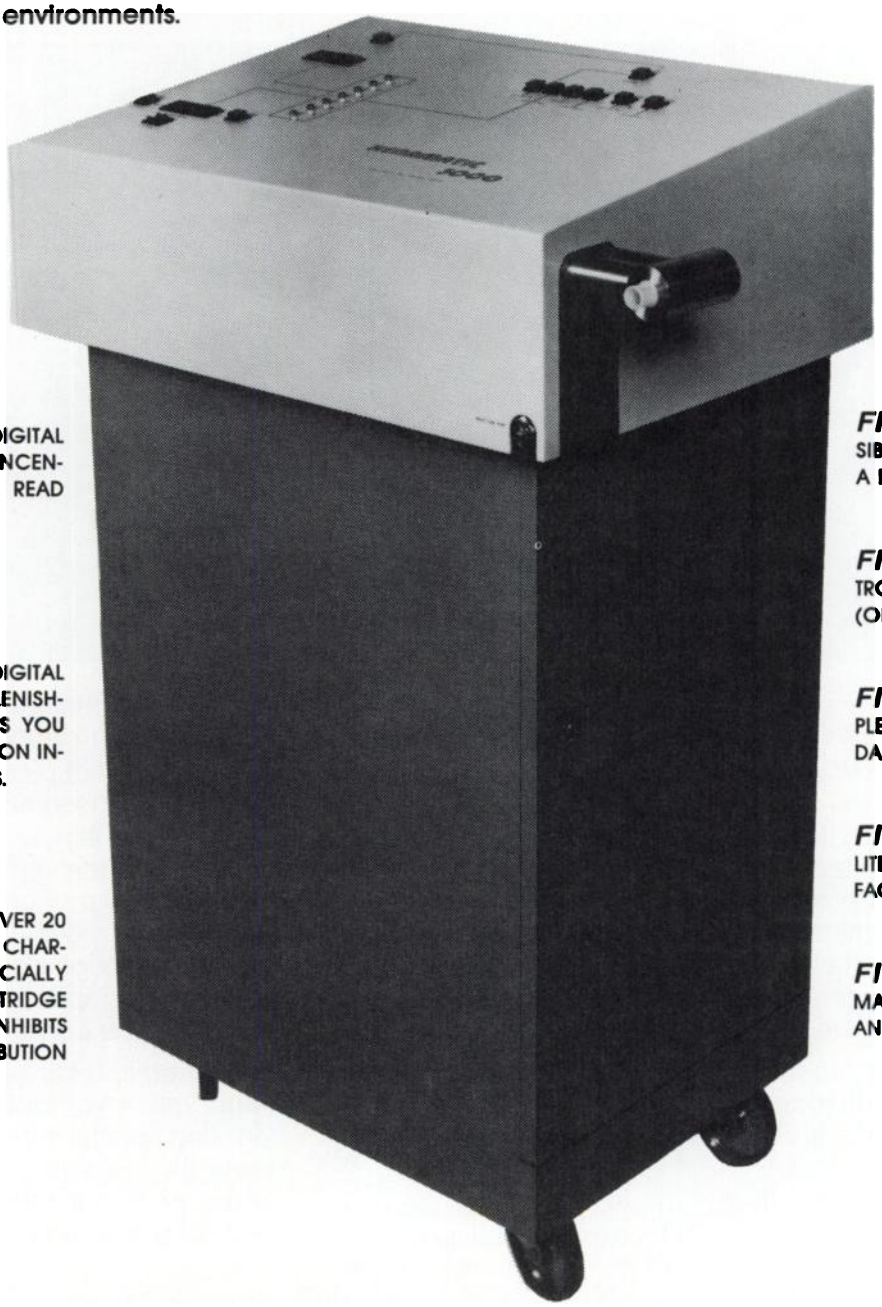

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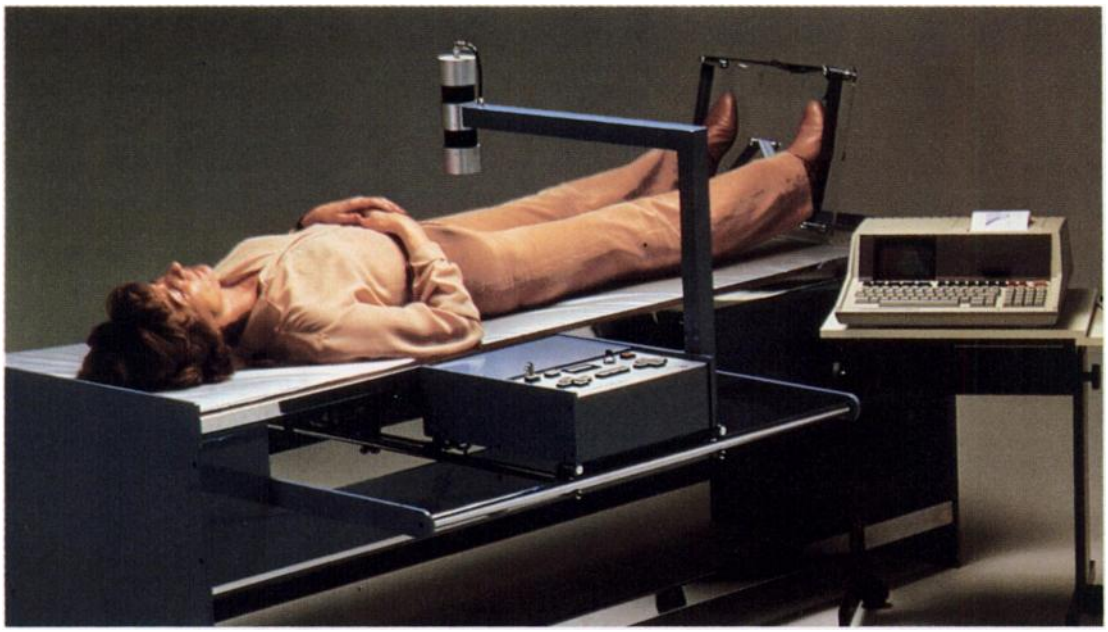

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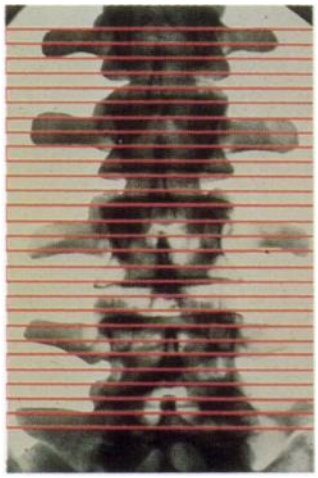

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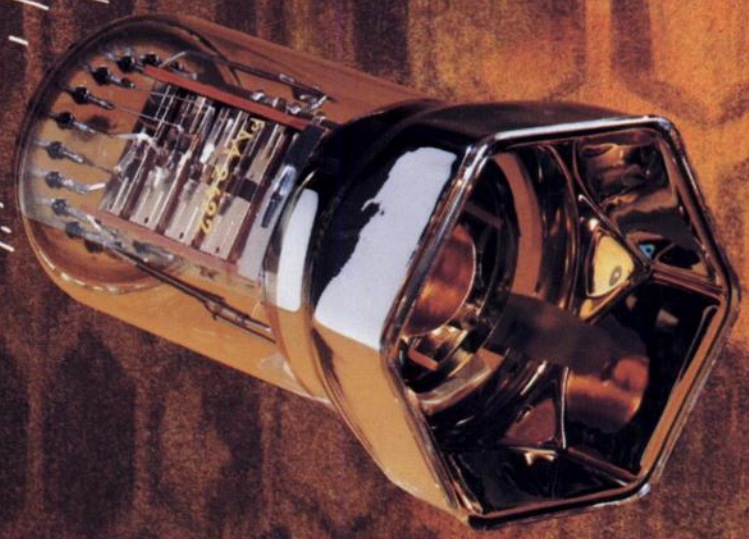

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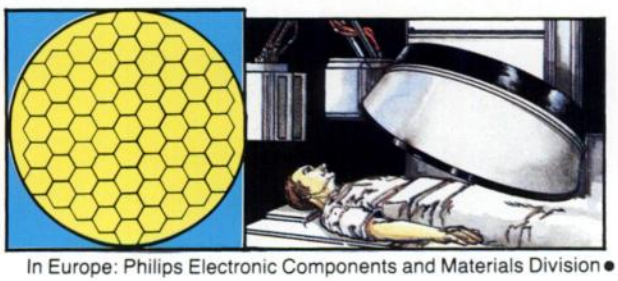

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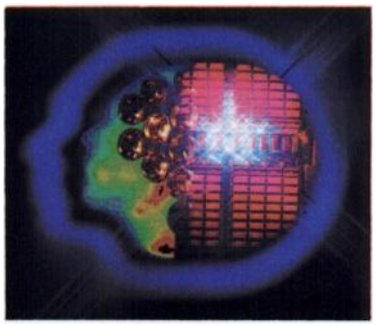

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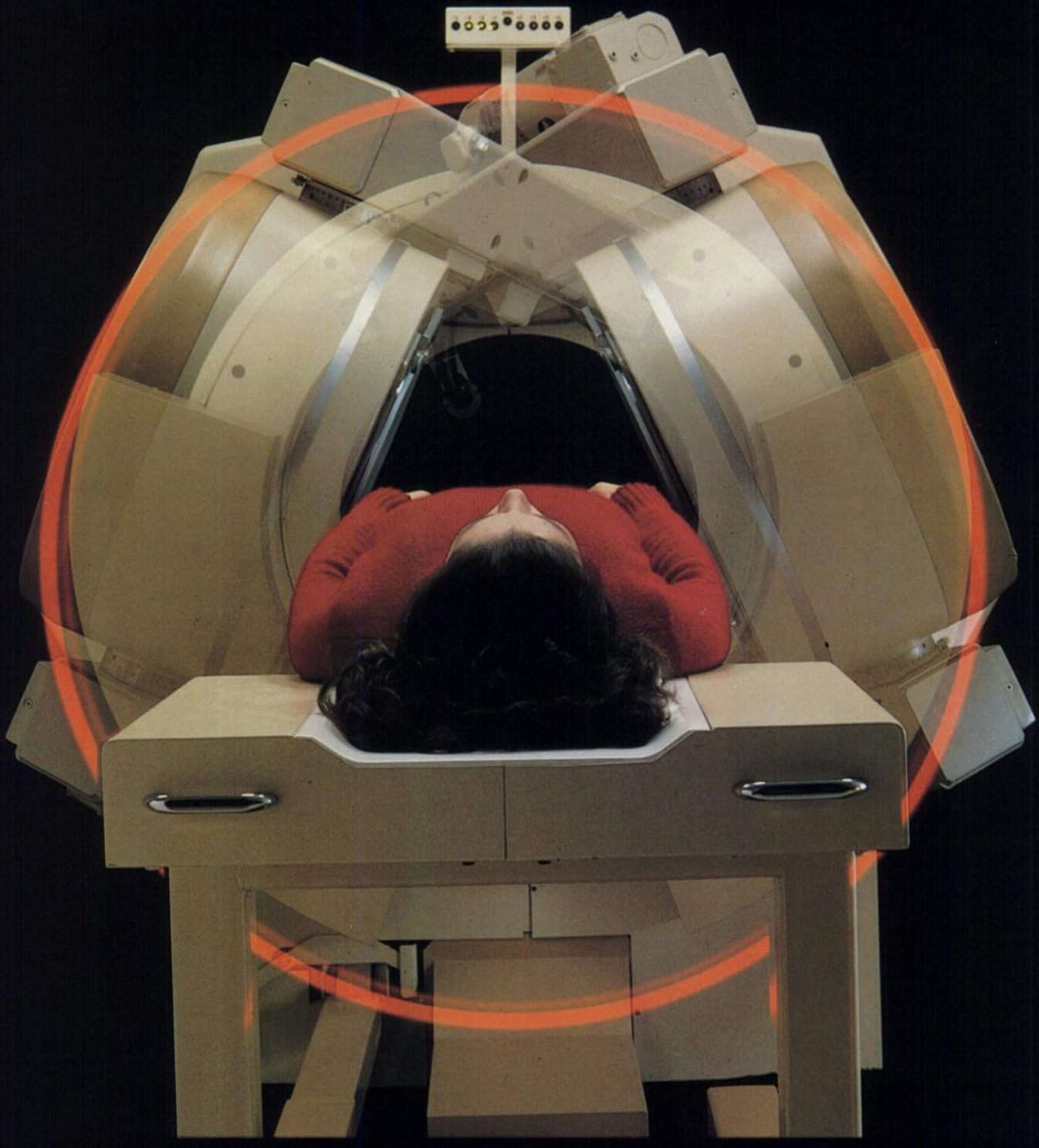

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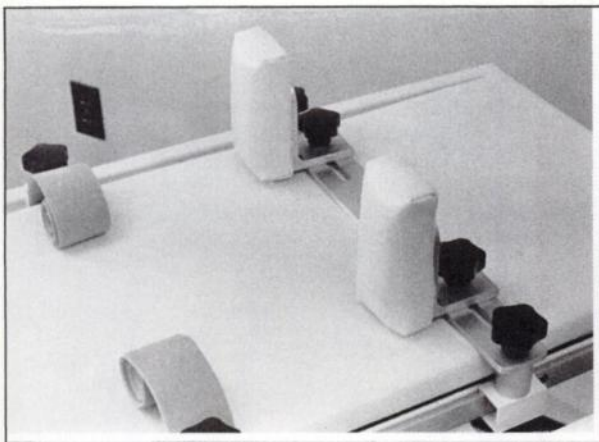

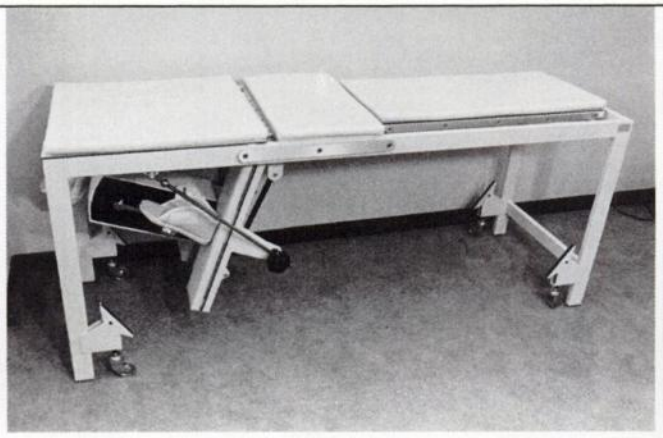

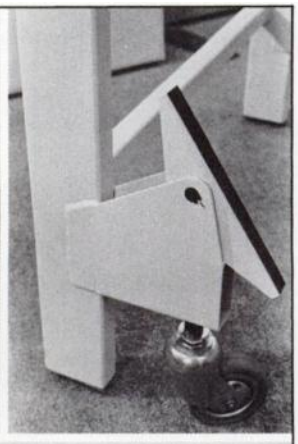

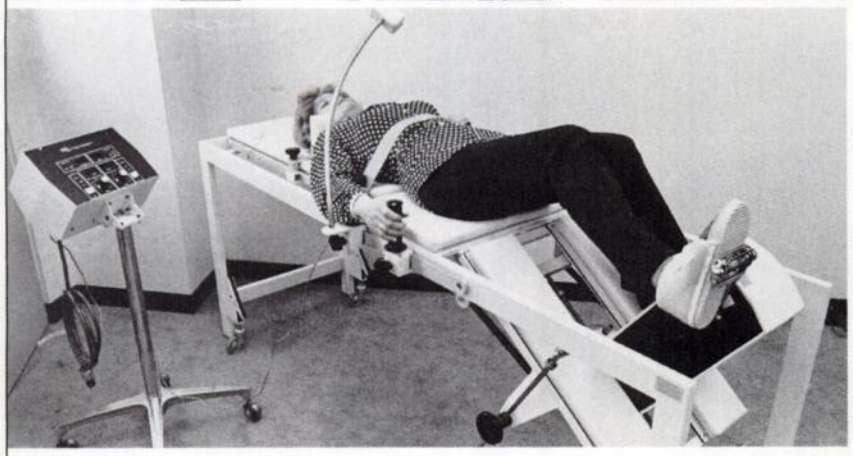

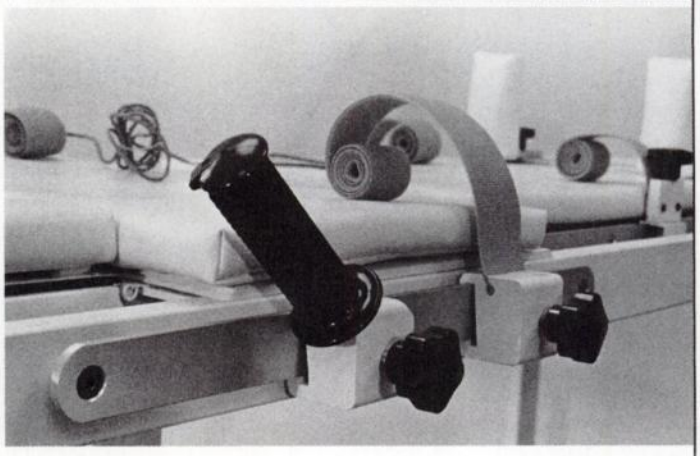

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Thallous Chloride Tl 201

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See your Squibb Representative for details or call toll-free 800-257-5181 (New Jersey 800-582-5913).

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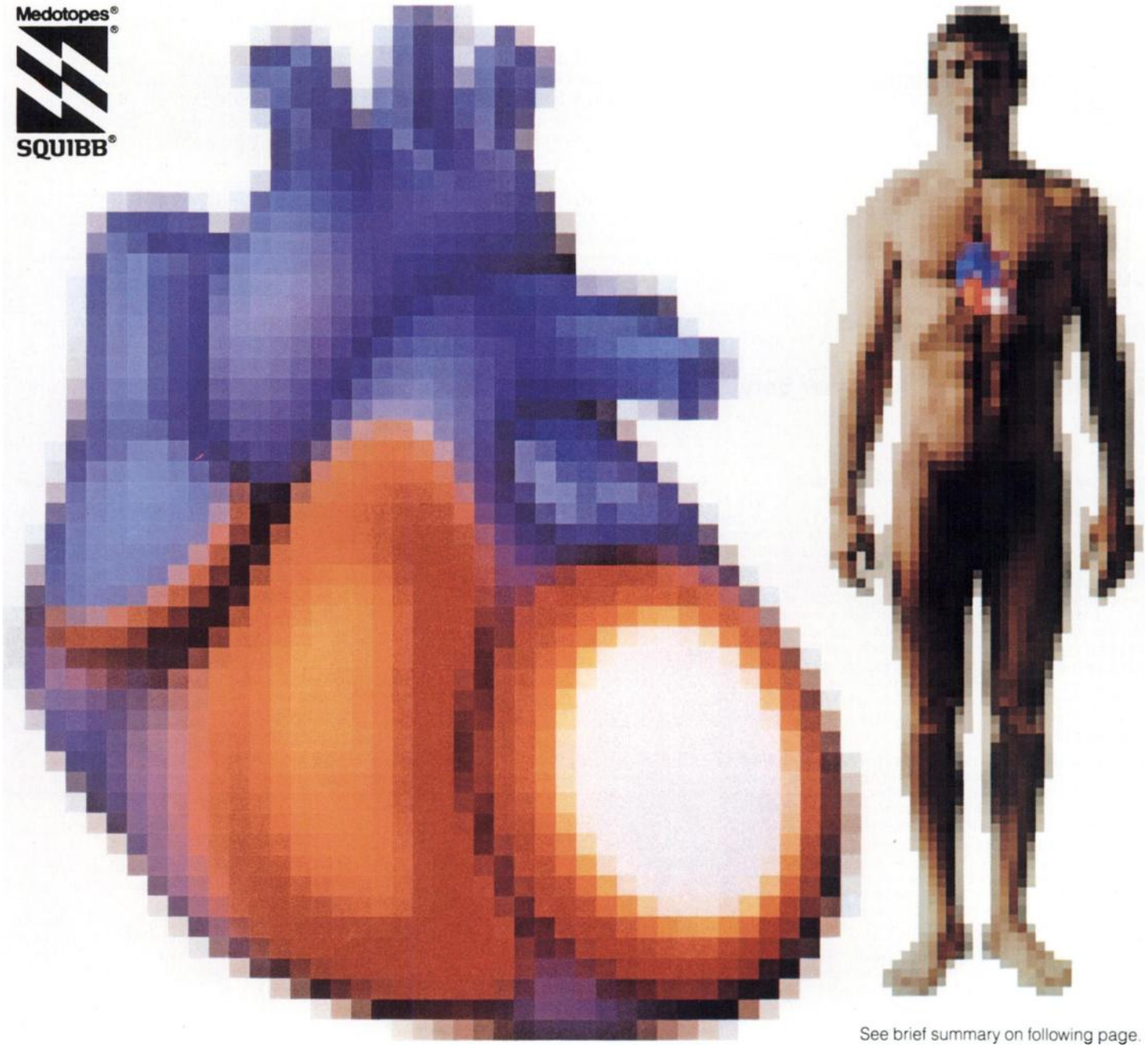

See brief summary on following page.

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Medical Education	Squibb helps further medical education through its support of state and local nuclear medicine societies' meetings, medical symposia and scientific exhibits.
Customtec®	Computerized report of a laboratory's daily technetium Tc 99m needs.
Delivery	Reliable, fast delivery service from manufacturing facilities and distribution centers throughout the U.S.
Toll-Free Technical Customer Service	Trained personnel are available at Squibb headquarters to answer questions and give expert assistance when problems arise. Call 800-257-5181. In New Jersey, 800-582-5913.

THALLIUM 201-SQUIBB® (Thallous Chloride Tl 201)
For Diagnostic Use

DESCRIPTION: THALLIUM 201-SQUIBB (Thallous Chloride Tl 201) is supplied in isotonic solution as a sterile, nonpyrogenic diagnostic radiopharmaceutical for intravenous administration. The aqueous solution at calibration time contains 1 mCi/ml Thallous Chloride Tl 201 adjusted to pH 4.5-6.5 by the addition of hydrochloric acid and/or sodium hydroxide solution. It is made isotonic with 0.9% sodium chloride and is preserved with 0.9% benzyl alcohol. Thallium Tl 201 is cyclotron-produced with no carrier added. Radionuclidic purity at calibration is at least 97.0% Thallium Tl 201 with less than 0.25% Lead Pb 203, 1% Thallium Tl 202, and 1% Thallium Tl 200. The concentration of each radionuclidic contaminant changes with time.

INDICATIONS AND USAGE: Thallous Chloride Tl 201 may be useful in myocardial perfusion imaging for the diagnosis and localization of myocardial infarction.

It may also be useful in conjunction with exercise stress testing as an adjunct in the diagnosis of ischemic heart disease (atherosclerotic coronary artery disease).

CONTRAINDICATIONS: None known.

WARNINGS: If studying patients in whom ischemia or myocardial infarction is known or suspected, 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.

PRECAUTIONS: General — Data are not available concerning the effect on the quality of Thallium Tl 201 scans of marked alterations in the 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. Data are not available concerning the effect of drug treatment (such as antihistamines and cimetidine, either alone or in combination).

A myocardial imaging study was unsuccessful in one clinical study involving a patient taking cortisone and cimetidine the day of the study.

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.

As in the use of any radioactive material, care should be taken with Thallous Chloride Tl 201 to minimize radiation exposure to the patient consistent with proper management and to ensure minimal exposure to occupational workers.

This drug should not be used after the expiration date on the label. The expiration date will be six (6) days or less after the calibration date.

Do not use if contents are turbid.

It is recommended that the product be administered close to calibration time to minimize the effect of higher levels of radionuclidic contaminant pre- and post-calibration.

Carcinogenesis — No long-term animal studies have been performed to evaluate carcinogenic potential, mutagenicity potential, or whether Thallous Chloride Tl 201 affects fertility in males or females.

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

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.

Pediatric Use — Safety and effectiveness in children below age 18 have not been established.

ADVERSE REACTIONS: A single adverse reaction to Thallous Chloride Tl 201 has been reported consisting of hypotension accompanied by pruritus and rash which responded to antihistamines and steroids within one hour.

HOW SUPPLIED: Thallous Chloride Tl 201 is supplied in a 2.2 millicurie size and a 6.6 millicurie size. Each package contains one vial. The contents of the vial are radioactive. Adequate shielding and handling precautions must be maintained.

For full prescribing information, consult package insert.

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Newsletter

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The kit contains 5 vials.

Not available in U.S.A.

CIS is the first to offer you a human Fibrinogen kit labelled with Technetium 99m.

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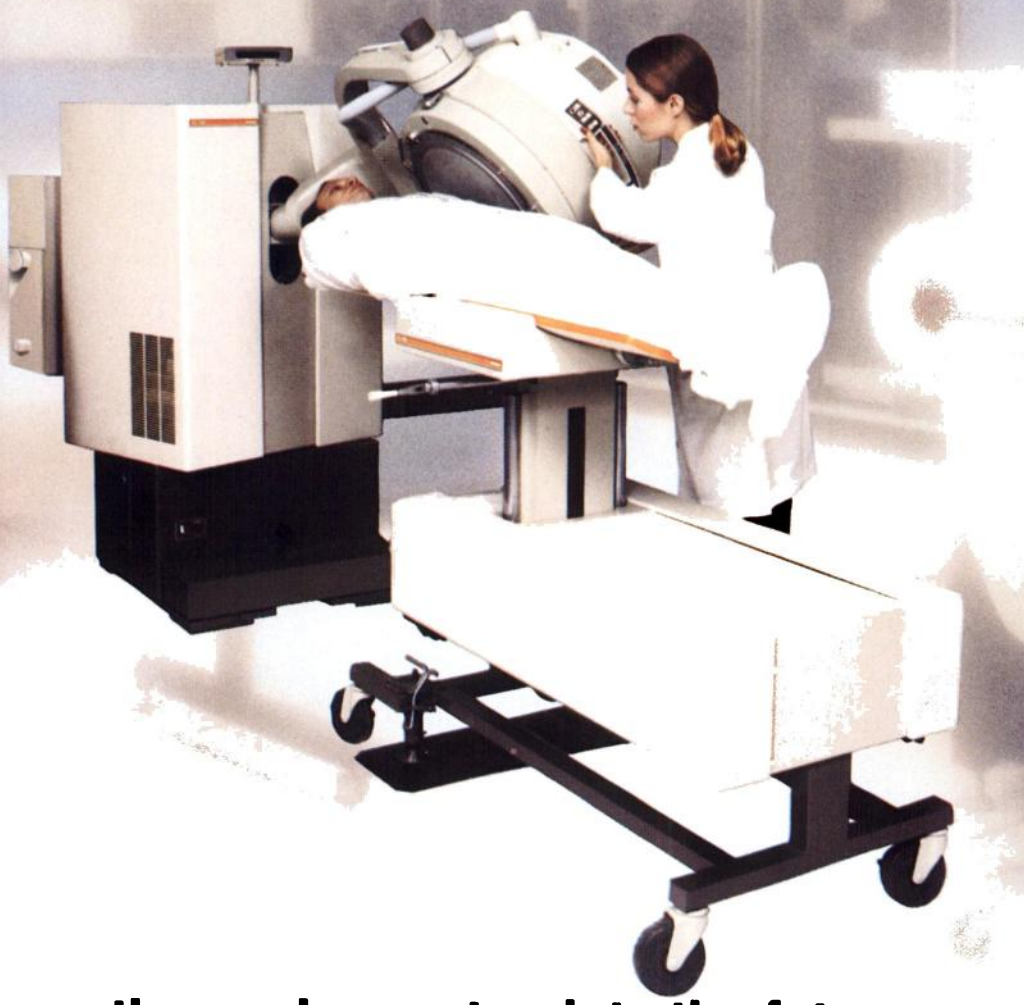

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System for measurement of regional cerebral blood flow for use by the neurosurgeon, neurologist, nuclear medicine physician and psychiatrist

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The Novo Cerebrograph® 32c quantifies various hemodynamic and functional changes in the brain through measurement of regional Cerebral Blood Flow (rCBF).

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Useful in CVD, head trauma, migraine, dementia, pre- and post-op evaluation in vascular surgery. Also investigates neurotoxic effects of drugs and organic solvents; studies higher mental function and abnormality.

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NV-1012

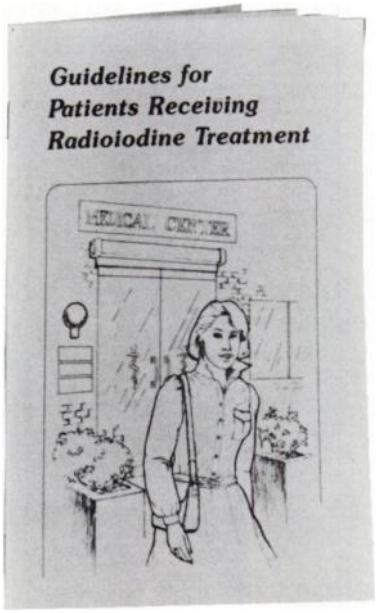
A new patient information pamphlet

Guidelines for Patients Receiving Radioiodine Treatment

SNM presents a new educational pamphlet that answers patients' most frequently asked questions about home care after receiving radioiodine treatment for thyroid conditions.

Prepared in collaboration with the U.S. Nuclear Regulatory Commission, this 8-page pamphlet outlines in easy-to-read language important precautions patients can follow to help reduce radiation exposure to others. It also contains a checklist that physicians can review with their patients to determine which guidelines are appropriate for them and how long they should be followed.

Health care professionals in private practice, hospitals, and clinics will find this pamphlet provides a brief, attractive, and inexpensive way to educate patients and their families about the importance and safety of proper health care.



8 pp; 5½ × 8½″; in 2 colors

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Ordering Information:
30¢ per pamphlet
The minimum order accepted is 25 copies.
Note: Single copies are available for review @ $1.50 each.
(Prices include postage and handling.)

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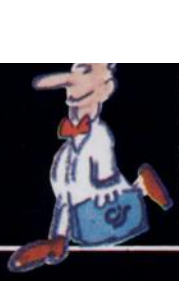

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The kit contains five vials.

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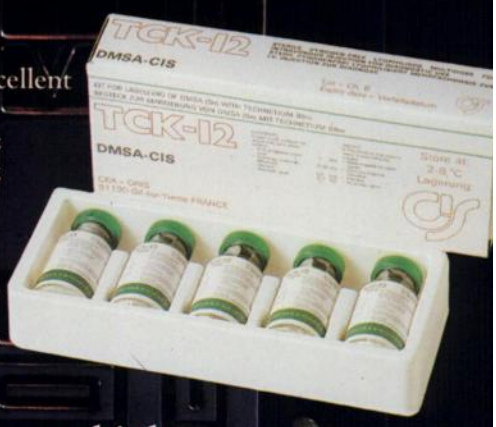
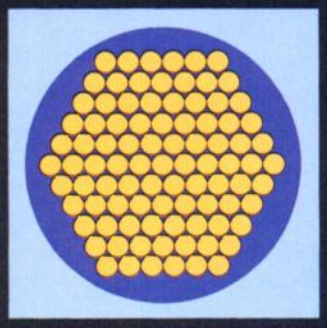


CIS has a complete range, think about DMSA.

RAYTHEON NUCLEAR SYSTEMS: THEY GIVE YOU A CLOSER LOOK.



"Honeycomb" 91-tube detector array provides edge-to-edge LFOV resolution, detail and speed.

You've heard a lot of talk about improvements in linearity . . . or uniformity . . . or resolution.

But the gain in one parameter is usually at the expense of others. In short—a compromise.

With Raytheon nuclear systems, there is no such compromise. All factors are optimized in a superbly balanced, thoroughly proven system. One that gives you a closer, more detailed view of every patient.

A good head for numbers.

Performance is, ultimately, a function of the detector head. And in our Step One gamma camera, Raytheon's technological expertise comes to the fore.

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Triple-pulse analysis adds still more detail.

The exclusive Raytheon detector head is interfaced with a specialized triple-pulse height detector. This advanced electronic system accepts peak pulses only and analyzes each one separately. So you can study up to three Ga^{67} photo peaks at one time . . . and know you've captured the most significant detail.

A protected investment, too.

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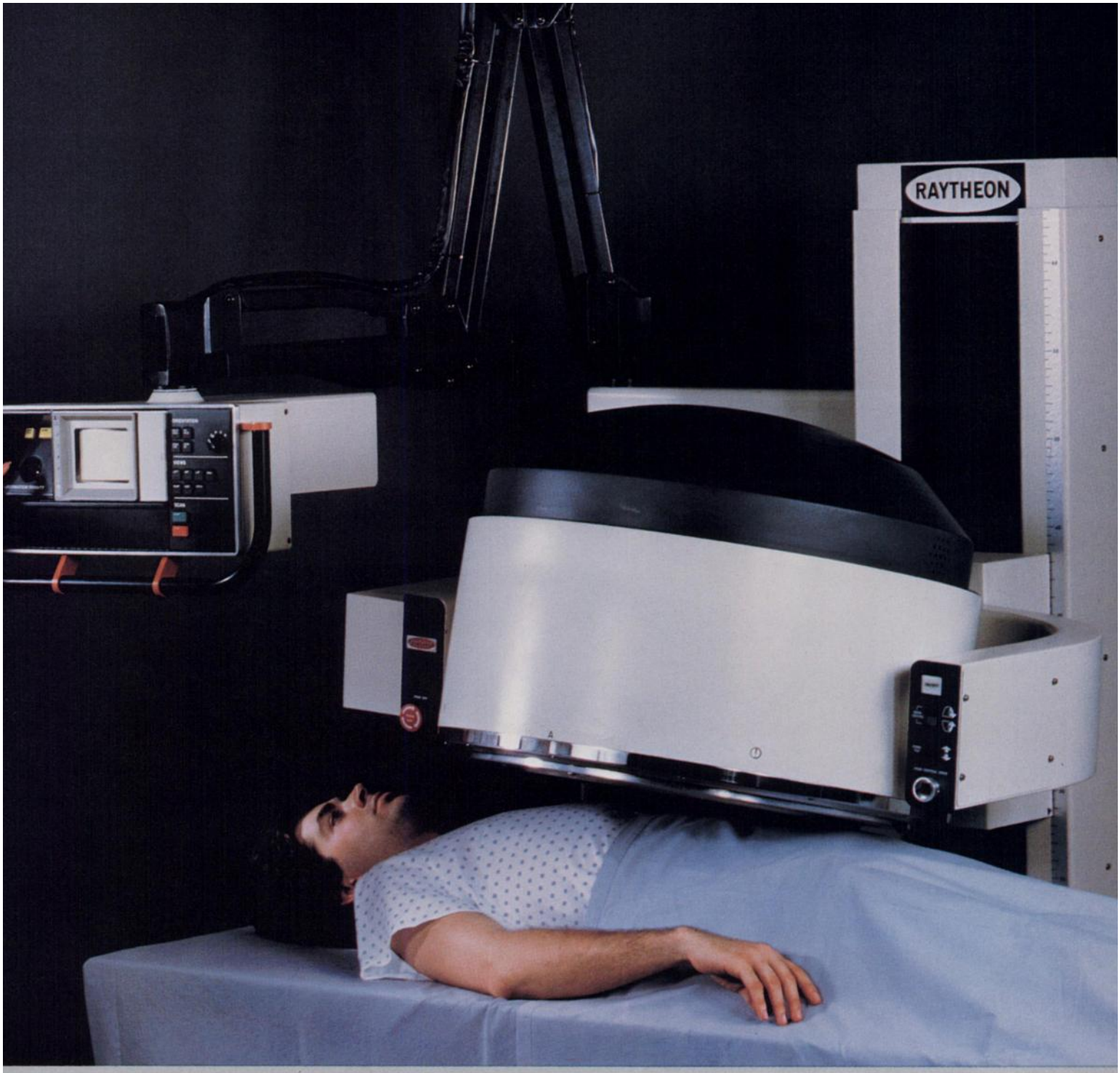

ter with remote control, patient data entry and exceptional information density.

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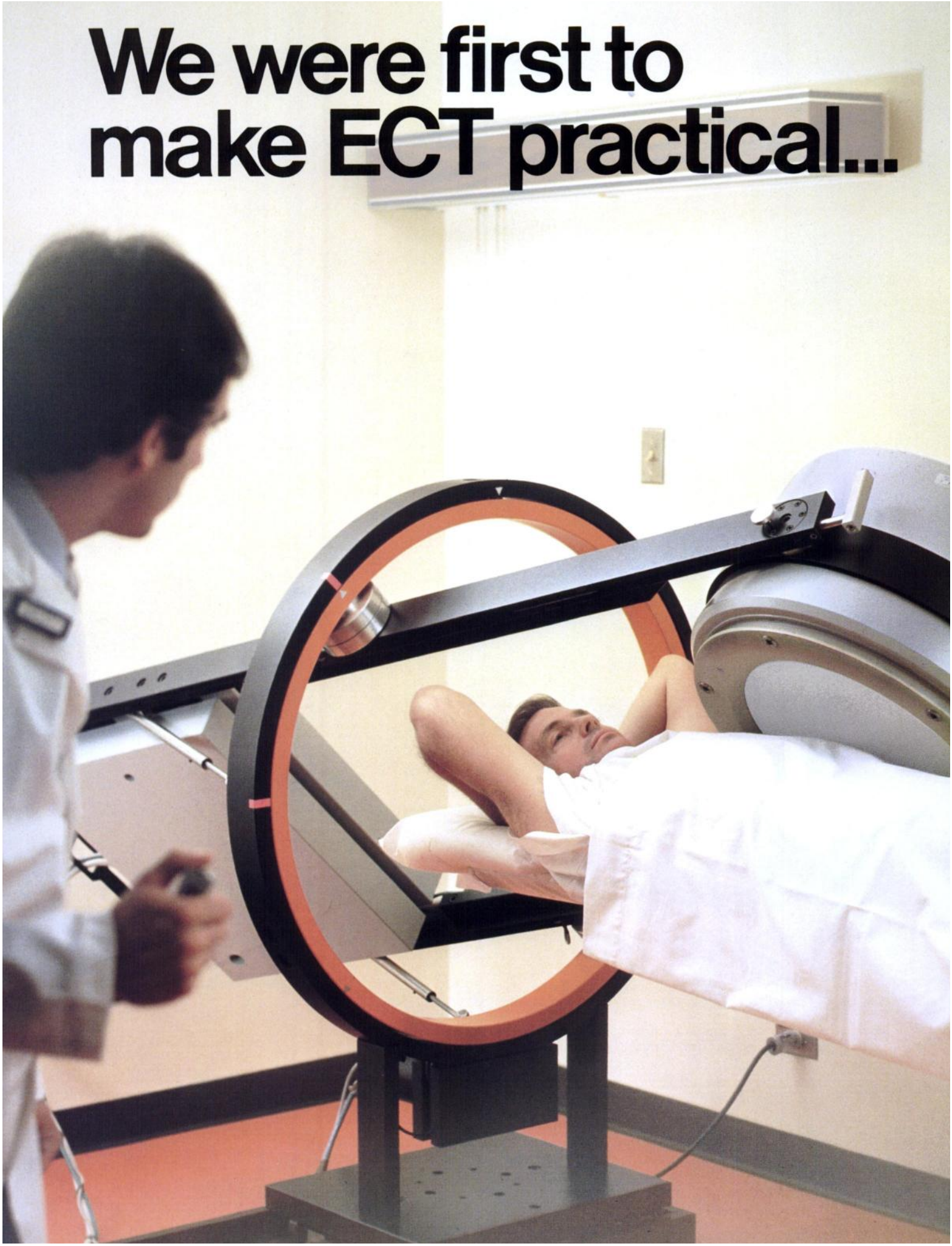
We were first to make ECT practical...



By working closely with clinicians, we were able to introduce the MaxiCamera™ 400T as the first nuclear diagnostic system with tomographic capability. It effectively meets real clinical needs, such as better contrast enhancement with more sensitive transaxial images in liver and soft tissue studies, and positive identification of cardiac infarcts. And for greater productivity, it can perform the whole range of routine and specialized nuclear procedures, including single pass, whole body studies.

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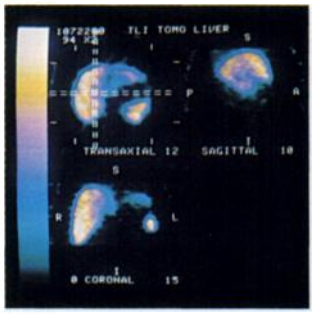
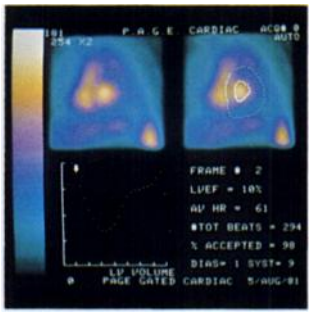
For greater investment value, GE nuclear systems are designed for upgradeability. And backed by our worldwide service network and parts availability. With practical, proven nuclear imaging systems from a single source, your choice could be practically automatic.



Liver data shown in a transaxial, sagittal and coronal view projection.



Fully automatic cardiac analysis with the P.A.G.E. software program.

Now we've made it practically automatic.

We bring good things to life.

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OCCUPATIONAL EXPOSURE STOPS HERE!

For patient-emitted radiation...

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- ***Permits unobstructed observation of patients.***
- ***Made of rugged, shatterproof lead-acrylic.***

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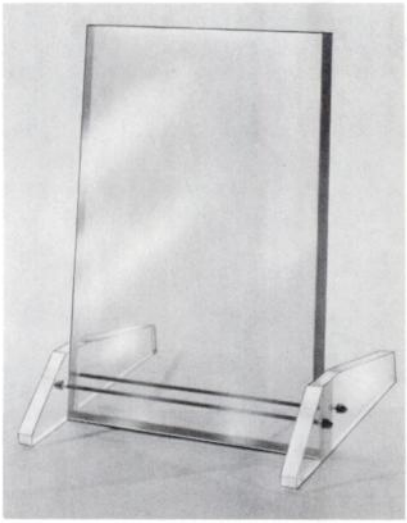
Overall Size: 58" high x 36" wide. Net 110 lbs.

56-602B "Clear-Pb" Mobile Barrier $895.00

For working with radionuclides...



Clear-Pb™ Bench-Top Shield

- ***Permits distortion-free views of work area.***
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Let the "Clear-Pb" Bench-Top Shield protect you from radiation exposure when working with radionuclides. It features a fully-transparent, lead-acrylic window that attenuates gamma radiation to your face and body while permitting crystal-clear views of your operations. The rugged, shatter-resistant viewing panel comes in standard or jumbo sizes and rests on sturdy clear-acrylic legs. For strength, protection and clarity, nothing beats a "Clear-Pb" lead-acrylic barrier.

Nuclide	I-125	Xe-133	Co-57	Tc-99m	I-123	Ga-67
Attenuation	99.99%	97.6%	99.8%	98%	99.5%	67%

Panel thickness 35 mm (1⅜"). Lead equiv. 1.5 mm (1/16").

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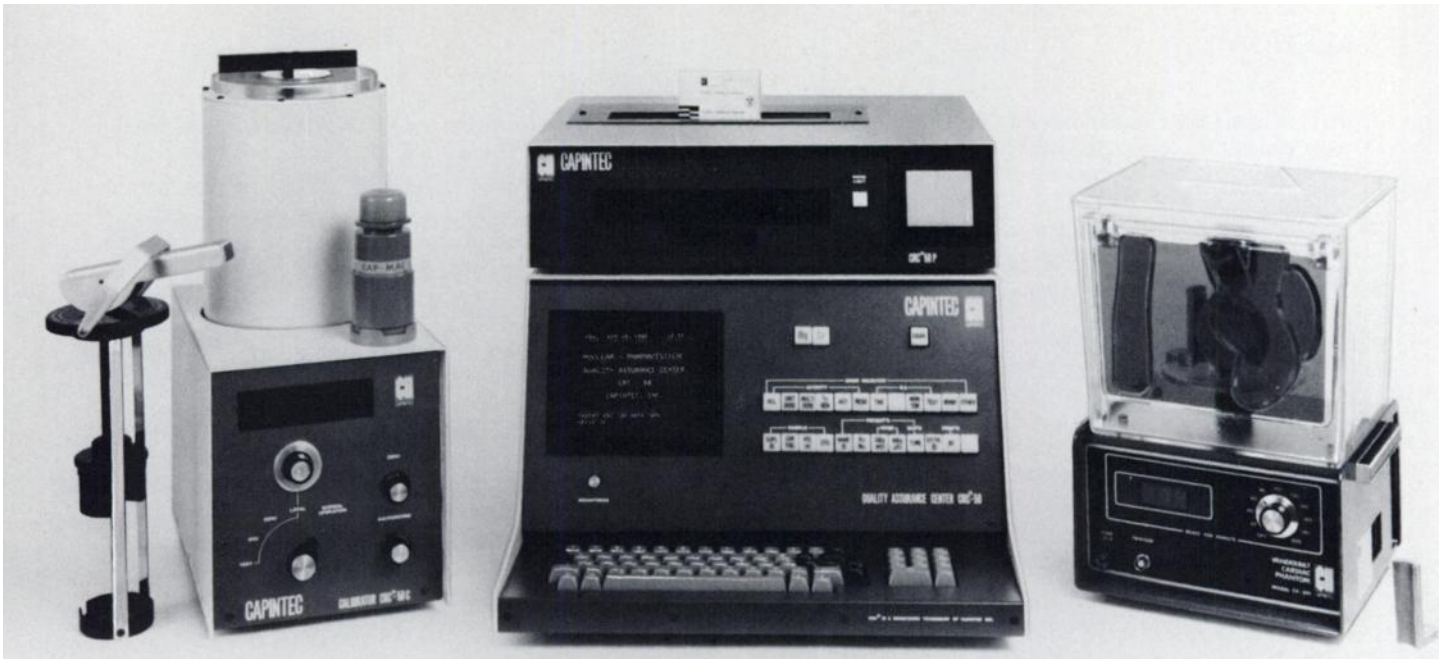

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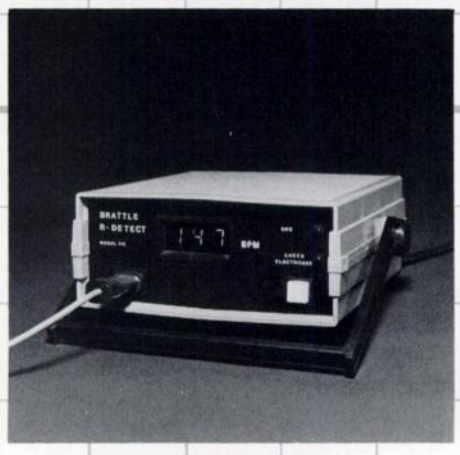

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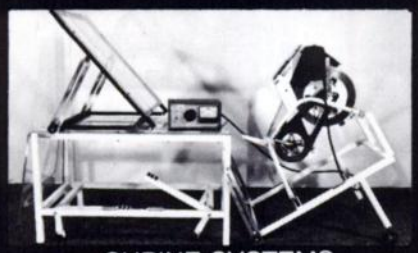

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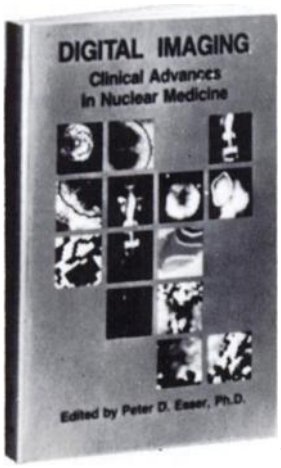

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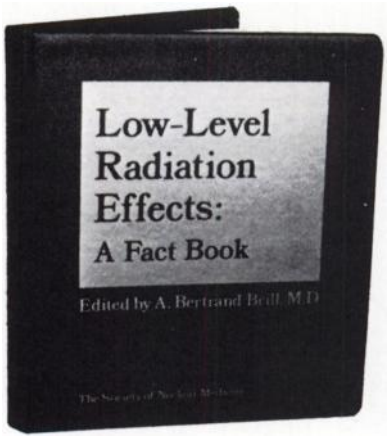

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Gelman's **Instant** TLC:

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Gelman's ITLC is the thin layer chromatography medium that you can cut. Use an individual strip to eliminate waste, or a special shape to concentrate substances.

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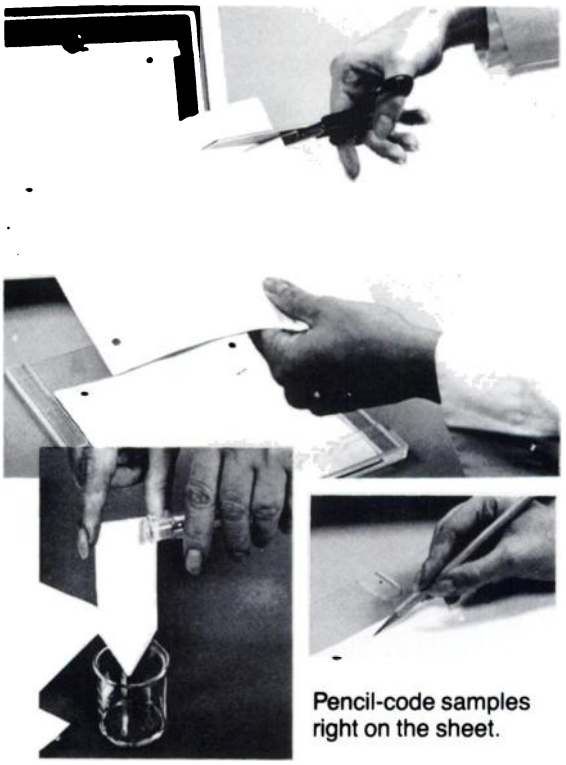
- easier to store than glass plates

Gelman ITLC is available through: American Scientific Products, Curtin Matheson Scientific, Fisher Scientific, or VWR Scientific. For additional technical literature, contact Gelman Sciences.

Gelman Sciences
600 S. Wagner Rd., Ann Arbor, Michigan 48106



Pencil-code samples right on the sheet.

No scraping—sample elutes off tip.

For the Love of Life

St. Jude wants to give children more tomorrows.

For information on how you can help this life-saving research continue, please write St. Jude Children's Research Hospital, 505 N. Parkway, Box 3704, Memphis, Tennessee 38103.

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1 "STATE OF THE ART" SUPER STABLE SPECTROMETER/ SCALER SYSTEM ALLOWS MANUAL OR AUTOMATIC OPERATION.

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ADD THAT HALF DOZEN REASONS TO THE MORE THAN 200 SATISFIED USERS OF ADC MEDICAL'S 111S AND 111S2 THYROID UPTAKE SYSTEMS AND YOU KNOW YOU HAVE MADE THE RIGHT CHOICE!

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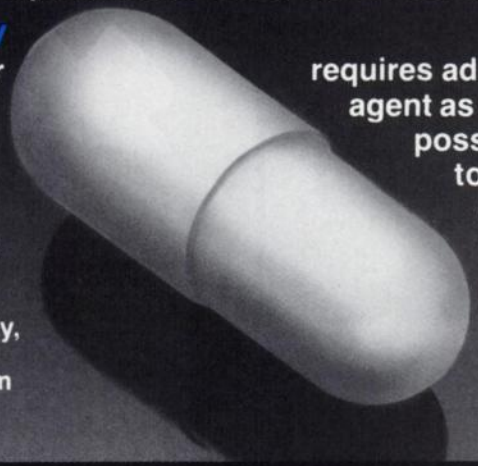
Now from Benedict Nuclear... a

THEIRS

- **Purity** Interfering, longer lived contaminants with the presence of higher energy photons, namely I 124 (4.15d, 603 keV), I 126 (13.02d, 389 keV, 666 keV), Na 24 (15.03hr, 1369 keV, 2754 keV).
- **Dosimetry** With comparable administered activity, longer lived, radionuclidic contaminants deliver twice the radiation dose to the thyroid.
- **Useful Life** Expiration time is 24 hours after time of calibration.
- **Image Quality**

The effect over time of higher relative proportions of radionuclidic contaminants requires administration of the agent as soon as reasonably possible after receipt to minimize their effect on image quality.

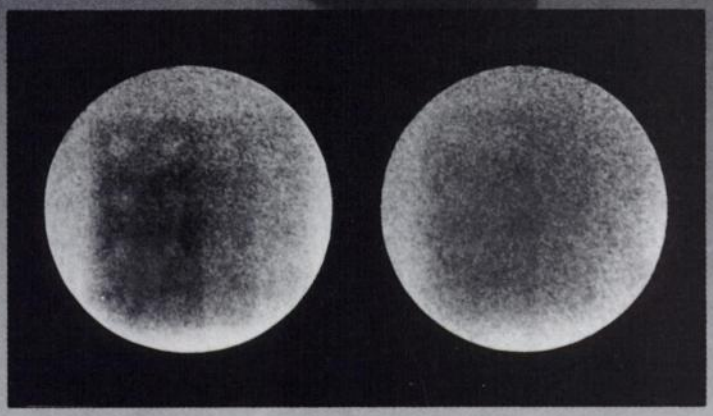


Compare the radionuclidic purity, radiation dose, useful life and image quality of our new Sodium Iodide I 123 with their Sodium Iodide I 123.

Ours has a small amount of low energy Iodine 125 so image quality is not compromised, useful life is extended and the patient receives a lower radiation dose.

The lack of high energy radiocontaminants in our new Sodium Iodide I 123 is contrasted here with their agent in the Rollo phantom studies, a reflection of clinical situations in which various sized, cold focal lesions are located within a radioactive tissue.

Compare and you'll know new Sodium Iodide I 123 from Benedict Nuclear is the purest, safest radiopharmaceutical to evaluate thyroid function and morphology.



Hines, H.H., Lagunas-Solar, M: Comparison of Scintillation Camera Images for I 123 Produced by (p, 2n) and (p, 5n) Reactions. J Nucl Med 23:P121, 1982 (Sci Exhibit).

Time of Calibration **24 Hours Post TOC**
Low Energy Pinhole Collimator (Picker)
(p, 2n) Commercial I 123

Brief Summary—for complete prescribing information consult package insert.

Sodium Iodide I 123

Diagnostic—Capsules for Oral Administration

Description: BNPI Sodium Iodide I 123 ($Na\ ^{123}I$) for diagnostic use is supplied in capsules for oral administration. The capsules are available in a strength of 200 microcuries (uCi) Iodine 123 at time of calibration.

The I 123 utilized in the preparation of BNPI's Sodium Iodide I 123 capsules contains 1.9% or less I 125 as the only detectable radionuclidic impurity at time of calibration. At time of expiry, the capsules contain not less than 91.2% I 123, not more than 8.4% I 125 and not more than 0.4% all other radionuclides.

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

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

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

Precautions: Pregnancy Category C. Animal reproduction studies have not been conducted with Sodium Iodide I 123. It is also not known whether Sodium Iodide I 123 can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Sodium Iodide I 123 should be given to a pregnant woman only if clearly needed.

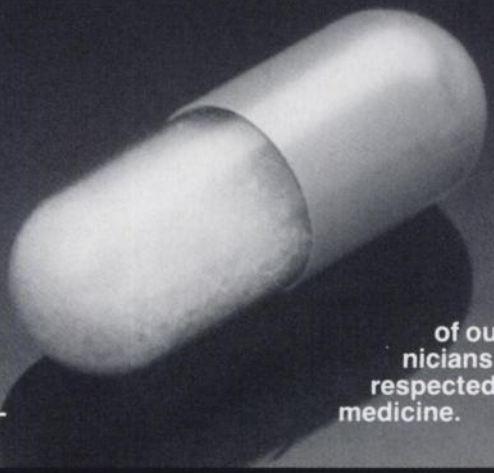
It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Sodium Iodide I 123 is administered to a nursing woman.

Safety and effectiveness in children have not been established.

Adverse Reactions: Although rare, reactions associated with the administration of Sodium Iodide isotopes for diagnostic use include, in decreasing order of frequency, nausea, vomiting, chest pain, tachycardia, itching skin, rash and hives.

OURS

- **Purity** No interfering radionuclidic contaminants.
- **Dosimetry** With comparable administered activity, less than one-half the radiation dose to the thyroid.
- **Useful Life** Expiration time is 30 hours after time of calibration.
- **Image Quality** Images retain high quality throughout the useful life of the agent.

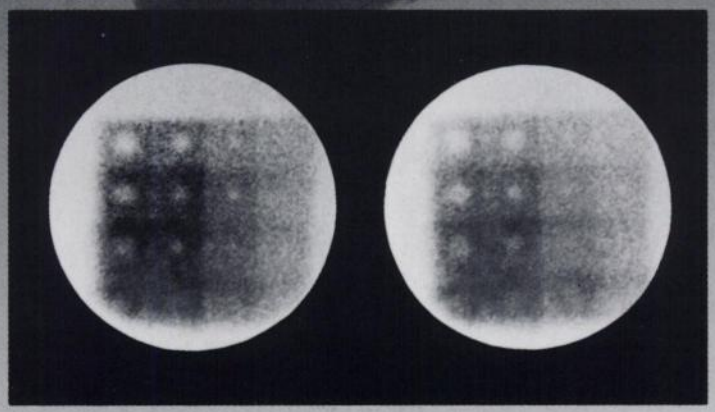


The Image of Excellence Begins with Benedict Nuclear

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

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

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



Time of Calibration 24 Hours Post TOC
Low Energy Pinhole Collimator (Picker)
(p, 5n) BNPI I 123

benedict nuclear pharmaceuticals inc.
P.O. Box 548
Golden, CO 80401

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

Radiation Dosimetry: A comparison of the estimated absorbed radiation dose to the thyroid of an average patient (70 kg) from an oral dose of 100 uCi of BNPI Sodium Iodide I 123 (p, 5n), Commercial (p, 2n) Sodium Iodide I 123 or Sodium Iodide I 131 at Time of Calibration (TOC) is shown below:[1]

	Absorbed Dose (rads/100 uCi TOC)			
	Maximum Thyroid	Sodium Iodide I 123		Sodium
Target Organ	Uptake (%)	BNPI (p, 5n)	Commercial (p, 2n)	Iodide I 131
Thyroid	5	0.5	1.2	26.0
	15	1.6	3.6	80.0
	25	2.9	6.0	130.0

[1] **Reference:** MIRD/Dose Estimate Report No. 5 "Summary of Current Radiation Dose Estimates to Humans From ^{123}I, ^{124}I, ^{125}I, ^{126}I, ^{130}I, ^{131}I, and ^{132}I Sodium Iodide." J Nucl Med 16:857-60, 1975.

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

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

Ask For Benedict by Name from your Radiopharmacy or Call 800-525-3785

Indium Oxine In 111*

CAUTION:
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A STERILE, APYROGENIC SOLUTION

Contains: Indium Oxine In 111, 0.05 mg Oxyquinoline, 0.05 ml alcohol.

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

MPI Indium Chloride In 111*

Indium Chloride In 111 Radiochemical

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

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

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

Total chloride as sodium chloride: 0.7-0.9%

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