

## Iron deficiency anemia testing— As easy as throwing in the sponge!

Irosorb-59 is the second in a series of *in vitro* radio-pharmaceutical tests developed by Abbott Laboratories. **The Irosorb-59 Sponge offers a remarkable degree of accuracy and simplicity that makes routine screening a practical matter.**

**Accuracy:** The diagnostic accuracy of the test is unsurpassed in measuring latent iron-binding capacity. What's more, unlike other methods, it can be used following the administration of a hematinic.

**Speed:** Irosorb-59 can be washed quickly, there being only 3 washes. No incubators or shakers are needed.

**Convenience:** Irosorb-59 is in a disposable kit form ready for immediate use at room temperature.

**Safety:** No dilution or pipetting of radioactive material is necessary. Since the patient receives no radioactive materials, the test can be used in children, pregnant women, or in adults without any hazard of radioactivity.

**Flexibility:** The test does not require the presence of the patient for the determination of the radioactivity. Serums can be frozen and saved until a sufficient number has been collected to run a rack full of tubes at one time, or serum samples can be mailed to personnel performing the test.

709418



**IROSORB-59<sup>®</sup>**  
**DIAGNOSTIC KIT**

ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS  
Abbott Laboratories, S.A., 2, rue Thalberg, 1201 Geneva, Switzerland



## Thyroid testing— As easy as throwing in the sponge!

**The Triosorb Sponge is an in vitro test providing accuracy, speed and convenience.**

**Accuracy:** Because factors such as red blood cells and exogenous iodine have been eliminated from consideration in the Triosorb Test, it is unsurpassed in accuracy.

**Speed:** With only 3 washes and no need for double pipettings, shakers, or incubators, the Triosorb Test can be more rapidly performed than any other T-3 test.

**Convenience:** Available in a disposable kit ready for immediate use at room temperature. There is no dilution or pipetting of radioactive materials with Triosorb. It is the simplest and most convenient thyroid function test to perform.

“The resin sponge (Triosorb) technique is superior to the erythrocyte method for performing the  $I^{131}$  T3 test in terms of simplicity, convenience and elimination of errors characteristic of the erythrocyte procedure.”<sup>1</sup>

“The T-3 uptake test was vastly improved by a resin-sponge . . . (Triosorb) . . . which is offered as a replacement for the red cells as well as for the loose granular resin which varies from day to day.”<sup>2</sup>

1. McAdams, G. B., and Reinfrank, R. F., J. Nuclear Med., 5:112, 1964.

2. Manfredi, O. L., et al., J. Nuclear Med., 7:72, 1966.

802457



**TRIOSORB®-131**  
**TRIOSORB-125**  
T-3 DIAGNOSTIC KIT

ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS  
Abbott Laboratories, S.A., 2, rue Thalberg, 1201 Geneva, Switzerland

Announcing  
**TETRASORB™-125**  
T-4 DIAGNOSTIC KIT

On the opposite page,  
Abbott announces its  
3rd “sorb” product—  
Tetrasorb-125.

Please lift this page  
for information about  
Triosorb® and Irosorb-59®.



This sponge puts the  
squeeze on the PBI!



"For many years the protein-bound iodine (PBI) has been used as an indirect index of the level of thyroid hormones; however, in an appreciable number of cases it does not provide an accurate measurement, because compounds containing iodine or mercury are present."<sup>1</sup>

It is now generally recognized that a quantitative **direct measurement** of thyroid hormones in serum is the most valuable single laboratory aid in assessing thyroid function.

"Using a resin-sponge and thyroxine tagged with I-125, a simple method was developed to determine serum thyroxine."<sup>2</sup>

**That method is Tetrasorb-125, the first diagnostic kit offering a direct measurement of thyroid function by determining serum thyroxine.** Hypothyroid patients show a decrease in serum thyroxine while hyperthyroid patients show an increase.

Tetrasorb-125 is based on the principle of saturation analysis for measuring total serum thyroxine (T-4). Prior to the availability and convenience of the Tetrasorb-125 Kit, these results were reported for the T-4 test:

"When T<sub>4</sub> and PBI values were compared, a good correlation ( $r=0.823$ ) was obtained with a higher diagnostic accuracy for the T<sub>4</sub> determination. All euthyroid individuals with PBI's elevated due to iodine had T<sub>4</sub> values in the normal range. . . . The T<sub>4</sub> level correlated well with the clinical status in hypothyroid subjects receiving T<sub>4</sub> or hyperthyroid subjects receiving various forms of therapy."<sup>1</sup>

"Unlike the protein-bound iodine determination, this technique is entirely unaffected by iodine or mercury, an important advantage from the clinical point of view."<sup>3</sup>

"These results proved that this method could be used as a routine clinical diagnostic test in place of the determination of PBI."<sup>4</sup>

By requesting both Tetrasorb-125 (a direct measure of thyroid activity) and Triosorb® (an indirect measure of thyroid activity) for his patient, the physician is provided with more information than ever before possible.

1. Murphy, B. P. and Pattee, C. J., J. Clin. Endocr., 26:247, 1966. 2. Kaplan, B. C., AAAS Meeting, Dec., 1966.  
3. Murphy, B. P., J. Lab. & Clin. Med., 66:161, 1965. 4. Nakajima, H., et. al., J. Clin. Endocr., 26:99, 1966.



Announcing **TETRASORB™-125**

**T-4 DIAGNOSTIC KIT**

**ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS**

Abbott Laboratories, S.A., 2, rue Thalberg, 1201 Geneva, Switzerland

TM—TRADEMARK. 810434R

# CHARCOAT T-3. No fuss, no muss, no multiple pipetting or rinsing.

*You don't even have to throw in a sponge. □ What's more, CHARCOAT T-3 tests take only thirty minutes — start to finish — without complicated setups. You do everything in one little two-part vial. □ Merely pipette 0.5 ml of patient serum into each test vial, invert, incubate, centrifuge, and count the supernatant. □ But don't take our word for how simple and economical CHARCOAT T-3 kits are. Put one to*

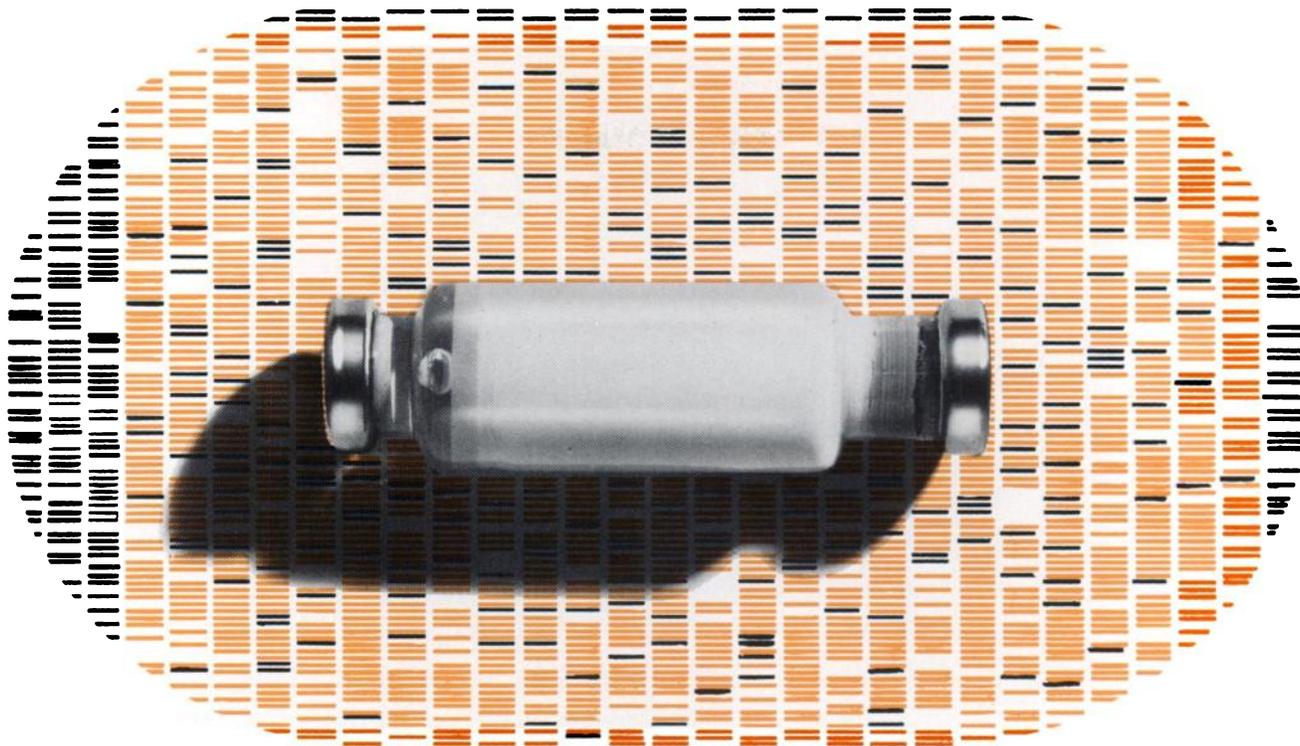


*the test. A standard kit (13 test vials) is only \$20, and just a phone call away. Moreover, the extra long shelf-life of the CHARCOAT T-3 test kit makes quantity discount purchases practical. □ Ask about our Automatic T-3 Computer. Easy to use—no calculations. \$1680 sale or lease.*



**New England  
Nuclear Corp.**

NEN Pharmaceutical Division  
575 Albany Street, Boston, Mass. 02118  
Telephone (617) 428-7311 Telex 094-6582



# stercow 99m

Technetium-99m

**For high-definition diagnostic scans of brain lesions, thyroid, lungs, kidneys, liver, spleen and other organs.**



High-definition scans are an essential in the fast-developing field of radio-diagnosis.

Particularly so in the localisation of brain lesions and the scanning of thyroid, kidneys, liver, spleen and other human organs.

Good scan resolution is one of the major contributions of the technetium-99m yielded by Stercow 99m - an advanced-design sterile generator by Duphar.

Supplies are despatched during the week-end pre-calibrated for the first day of use, usually Monday at 18.00 hrs M.E.T. - and an elution efficiency of approximately 80% of the technetium-99m in the Stercow is guaranteed. Further, milking is a simple, safe and speedy operation. Full details of Ster-

cow 99m and the uses of the scanning agent technetium-99m will gladly be sent on request. Samples are available free of charge. Stercow 99m is manufactured by Duphar to the very high quality standards necessary for nuclear pharmaceuticals. A new design of sterile generator, it is available in three types with 150, 300 or 450 mc of the parent radioisotope Mo99. Complete elution with 15, 20 or 30 ml. When milked in the approved manner, the resultant technetium-99m is sterile, non-pyrogenic and hence ready for immediate use - either orally or intravenously. The Duphar Shielded Stercow Milking System gives additional safety and efficiency in the elution operations.

**Nuclear pharmaceuticals**



Contact our local representative  
or write direct to  
N.V. Philips-Duphar  
Cyclotron and isotope laboratories  
Petten - Holland

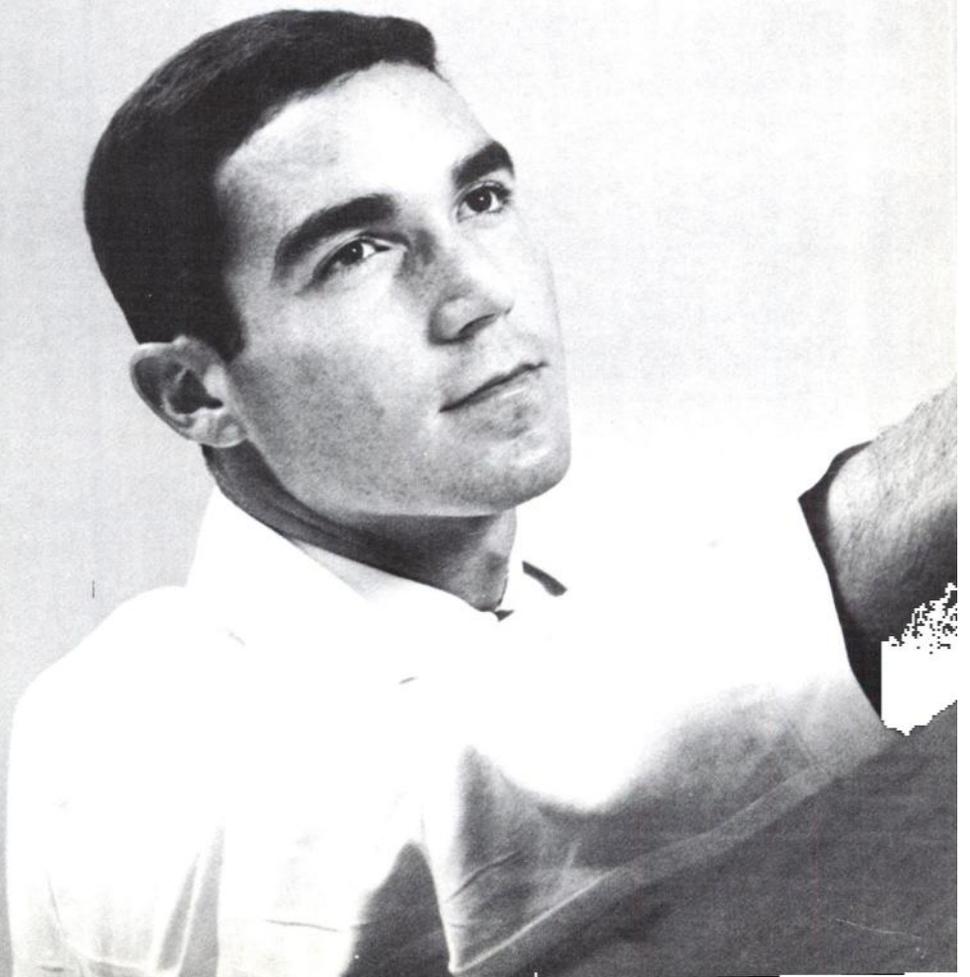
# NOW! Mallinckrodt / Nuclear TBI-25...

TBI-25, with iodine-125, is the T-3 test of choice that you can use now or a month from now. Stock it today. It's ready when you need it.

## **TBI-25 and TBI...Your Choice**

TBI-25 with iodine-125 and TBI with iodine-131 are both available to

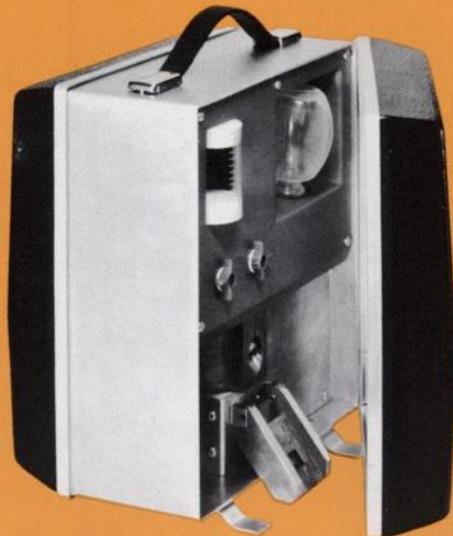
meet your individual T-3 requirements. The TBI family, with direct measurement of binding site uptake, offers a high degree of accuracy and takes less technician time. Write for full information and new TBI booklet.





# Cambridge Nuclear Technetium Generator

for production of sterile, pyrogen-free sodium pertechnetate Tc99<sup>m</sup>



## ADVANCED DESIGN

The self-contained unit provides maximum safety.

## COMPLETELY PRE-ASSEMBLED

Conveniently ready for use by opening door and starting elution procedure.

## DIRECT VOLUME READOUT

The observation and control of volume is accomplished by use of the built-in readout chamber.

## HIGH PURITY

Molybdenum and aluminum levels better than established standards.

## CALIBRATION SYSTEM INCLUDED

Compact and accessible arrangement in rear of unit provides all accessories needed for complete and accurate calibration.



ISO/SERVE DIVISION

*Cambridge Nuclear Corporation*

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# Scanavision™ brings you a new dimension in scanning.

Baird-Atomic announces an instant rescan instrument for converting any black and white scan negative into a full color picture. You get the advantage of extended range contrast enhancement which makes your scans easier to interpret and explain to your colleagues.

Now you can produce vivid color scans with your present scan-

ner without any change in your scanner. Simple controls on Scanavision™ allow you to "walk through" and inspect every bit of the data and to show the data subtraction or contrast that you want in your final picture. This will provide you with a more refined analysis.

As a separate color contrast system, Scanavision™ gives you

complete flexibility for the future at lower cost. A wonderful analytical and educational tool.

Call for an appointment. 33 University Rd., Cambridge, Mass. 02138. Tel. (617) 864-7420. Baird-Atomic Europe, The Hague, The Netherlands.

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## This is a black and white scan.



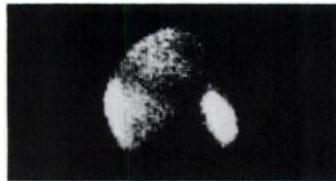


*digital* **CINESCINTIGRAPHY**

permits three important analyses

# Now...

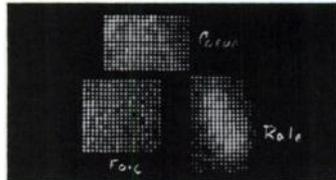
in a single patient run



### Static digital image

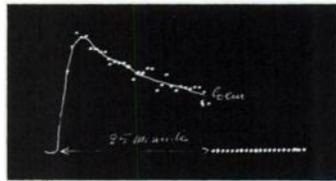
All data are digitally recorded on high speed magnetic tape while the scintigram development is displayed on the built-in oscilloscope. All information with respect to time is retained on tape.

On the left : scintigram showing location of heart, liver and spleen.



### "Conditioned" scintigrams

These images are obtained off-line from the magnetic tape record. One or several regions of interest may be selected to study the uptake/clearance functions.



### Dynamic uptake/clearance curves

These curves correspond to the above "conditioned" scintigrams. They give the digital value of the activity with respect to time in the selected zone. Up to 16 zones can be investigated and compared simultaneously.



Other interesting features :

- Provision to digitally subtract one scintigram from another.
- Pushbutton selection of section views of a scintigram, displaying activity distribution across the section.
- Transfer of accumulated information to a computer for subsequent data processing.



## INTERTECHNIQUE

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Telex and Cable address INTERTEC 25 942 F

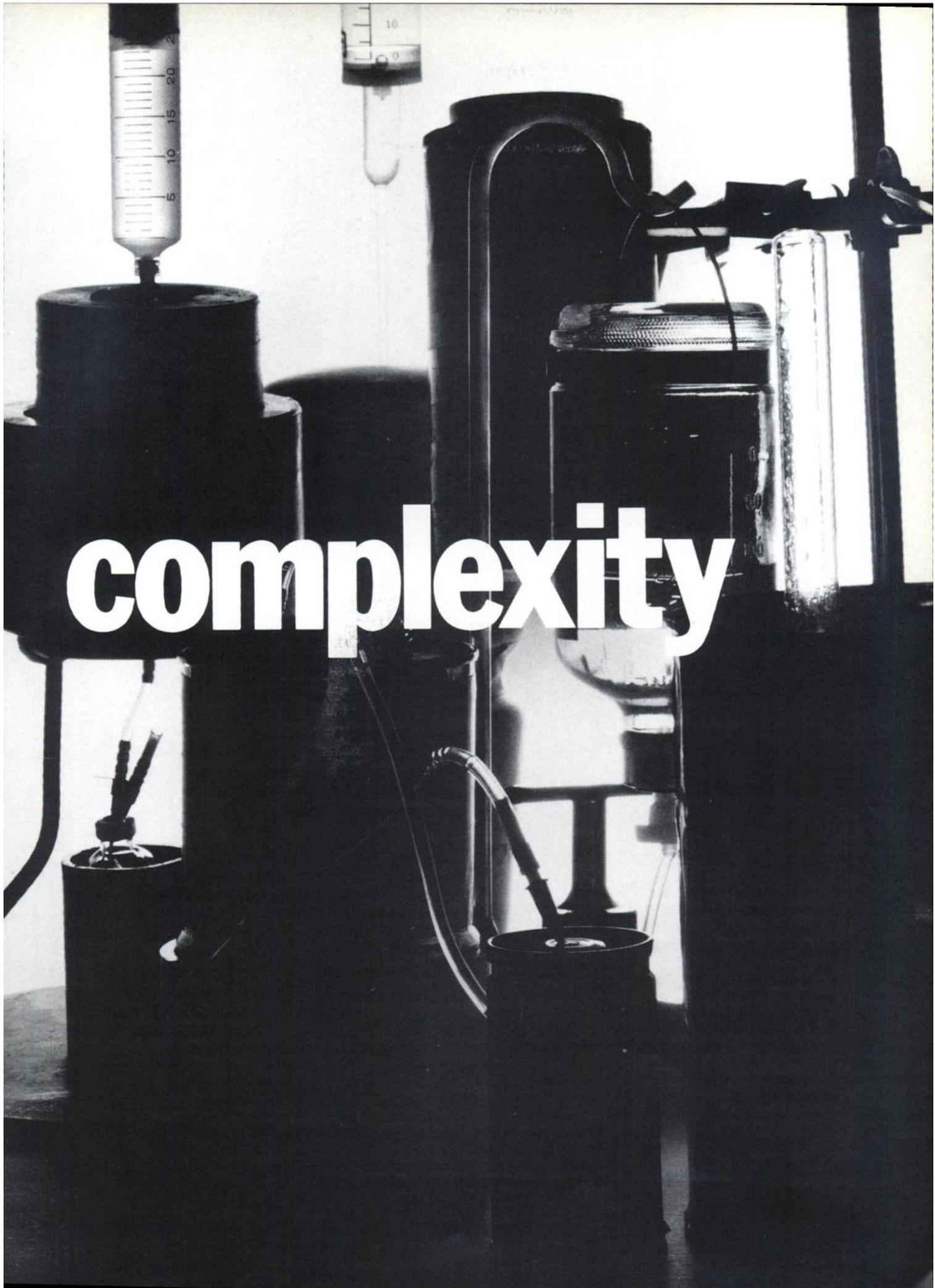
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**complexity**



# simplicity!

TECHNETOPE II

  
SQUIBB

CAUTION  
  
RADIOACTIVE  
MATERIAL

**SQUIBB**

a research concept in nuclear medicine

# Introducing new Technetope® II

## Squibb Technetium 99m STERILE GENERATOR

### A FAR SIMPLER GENERATOR . . .

Hooks, hangers, and handles complicate assembly, so you won't find any on Technetope II. It's so simple that, after the usual aseptic techniques, assembly consists basically of two insertions into the generator column. Then attach an eluent bottle, an evacuated collecting vial, and milk. *That's* simplicity.

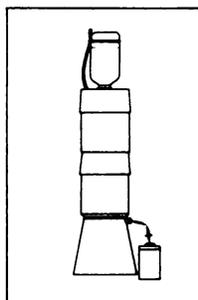
### . . . DESIGNED WITH "T.D.S." IN MIND

**Time:** Technetope II simplicity reduces assembly time...keeping radiation exposure to a minimum. However, proper radiation safety precautions should be maintained at all times.

**Distance:** Technetope II allows you to keep your distance. You don't have to be constantly near the generator because it is self-milking. And eluate collection is made at the side of the unit—away from an unshielded port.

**Shielding:** Technetope II has another half-value layer of lead shielding—without adding a cumbersome dispenser, additional cost, or special contract.

In addition, Technetope II is readily adaptable to tandem milking which provides high concentrations of <sup>99m</sup>Tc per ml.—another Squibb first and exclusive.



Technetope II (Squibb Technetium 99m) Sterile Generator provides a means of obtaining a sterile, non-pyrogenic supply of Technetium 99m (<sup>99m</sup>Tc). <sup>99m</sup>Tc, the short-lived daughter ( $T_{1/2} = 6$  hours) of Molybdenum 99 (<sup>99</sup>Mo,  $T_{1/2} = 67$  hours), is obtained from the generator by periodic elution. The amount (in millicuries) of <sup>99m</sup>Tc obtained in the initial elution will depend on the original potency of the generator, while the activity obtained from subsequent elutions will depend on the time interval between elutions.

**Warning:** Proper radiation safety precautions should be maintained at all times. The column containing <sup>99</sup>Mo need not be removed from the lead shield at any time. The radiation field surrounding an unshielded column is quite high. Solutions of <sup>99m</sup>Tc withdrawn from the generator should always be adequately shielded. The early elutions from the generator are highly radioactive. For radiation protection, a lead shield for the collecting vial is included with Technetope II.

For additional information on this advanced generator or the tandem milking technique, please use the coupon below.

I would like to receive full information on:

- Technetope® II (Squibb Technetium 99m) Sterile Generator
- Tandem Milking with Technetope II

Please attach this coupon to your letterhead and mail to Medotopes Customer Service Dept., P. O. Box #7, East Brunswick, N. J. 08816.

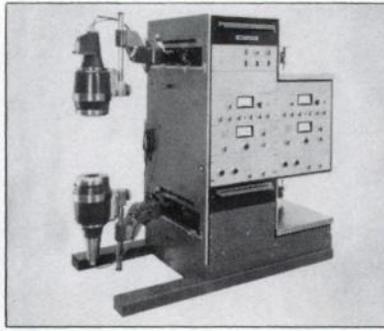
Medotopes\*



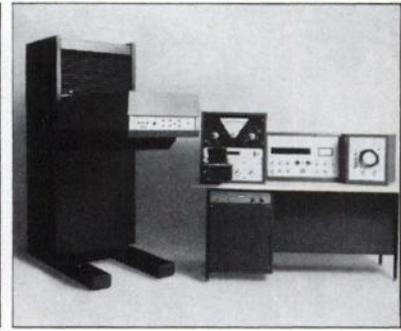
Squibb Division of Nuclear Medicine  
East Brunswick, New Jersey 08816



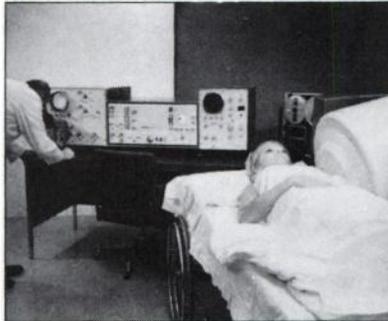
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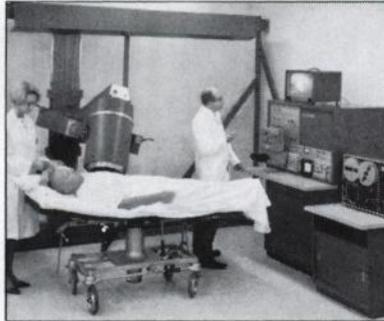
2



3



4



5

- 1 Magnascanner® 500
- 2 Dual Magnascanner®
- 3 Dynapix®
- 4 Dynacamera™
- 5 Magnacamera®

# “Which is the better choice for gamma imaging, a scanner or a camera?”

(Yes.)

That's much like: “which is better: a plane or a car?” Surely it depends upon the problem at hand.

As it does with gamma imaging. Your one best bet might well be a scanner. Or a camera. You may need both. Sadly, there can be no universal instrument, no all-things-to-all-men system. Consequently, Picker now offers five separate and distinct imaging devices: three are scanners, two are cameras. And this is the most complete line in the world. By far.

The implication is simple: the chances are excellent that Picker has the specific system that precisely matches your needs. Here now are some recognizable user requirements coupled with the appropriate Picker instruments.

Need: small hospital, starting static-imaging, small patient load, modest budget. Or: large hospital needing additional diagnostic confirmation. Solution: Magnascanner® 500. Four out of five nuclear medicine departments start with a Magnascanner. Now over 2000 in use throughout the world. Despite many new features and very high resolution, cost is modest.

Need: specialized static studies involving two views at same time. Solution: Dual Magnascanner®. Provides two large, high resolution scans simultaneously.

Need: heavy static-imaging patient load. Some demand for dynamic function work also. Solution: Dynapix®. High speed static imaging with very high resolution. Also useful for medium speed dynamic function studies.

Need: broad capability for handling both static imaging and dynamic function (and a great deal of it). Solution: Dynacamera™. Very fast instrument providing high resolution. Does both static and dynamic work.

Need: sophisticated dynamic function work at very high speeds. Solution: Magnacamera®. Exceptionally high speed for studying the most rapid dynamic processes.

The conclusion: Picker has a wide selection of imaging systems because there are many imaging needs. The *widest* selection in the world. Suggestion: describe your situation to your local Picker representative and ask him to develop solutions. Or, if more convenient, start by requesting our detailed gamma-imaging brochure. Write Picker Nuclear, 1275 Mamaroneck Avenue, White Plains, N.Y. 10605. Dept. B

**PICKER**

If your isotope department  
had a heavy programme of  
assorted brain, lung, liver, kidney  
and blood pool scans  
over the next 6 months or so,  
what radioisotope supplies  
would be required?

Just one of the Indium-113m  
generators now available from  
The Radiochemical Centre

Each generator column permits elution of Indium-113m up to 3 times daily over a useful life of several months. Thus, ordering arrangements are simplified, transport costs cut and, depending on usage, costs per patient treatment are reduced. Indium-113m (393 keV gamma emission) is important as a source of labelled compounds for a variety of scanning applications. Its short (100 minute) half-life allows selection of doses adequate for rapid scanning, where indicated, without introducing unacceptable radiation-dose problems.

Generators of 5, 10 and 25 mCi are available.



For further information, contact

**The Radiochemical Centre Amersham England**

Marketed in the Americas by the Amersham/Searle Corporation,  
2000 Nuclear Drive, Des Plaines, Illinois 60018, USA. Tel: 312-296-1055

RC.175/1

# WHAT'S NEW ?

from the leaders in T-3 testing

## THE NEW HIGH SPEED I.S.G. 1A\*

Using this new method, the I.S.G. T3 Syringes can produce from 3 to 100 tests ready for counting in 30 minutes. The ideal method for the busy hospital or laboratory. Any quantity (up to 100 tests) can be completed in 30 minutes or less. How much time are you now spending? Requires 0.4 ml. of patient serum per test. No rotation or temperature control is needed.



## T-3 EXCHANGE COLUMN\* (Scholer, modified)

For those who prefer the t.b.i. or loose granular techniques. No final pipetting and only 0.5 ml. patient serum is required. Inexpensive too!



"In-Vitro diagnostic testing should be a specialized area of interest". We are constantly striving to improve our products in our.....

## Approach toward excellence

\*T3 exchange column and I.S.G. 1A  
are the subjects of patents pending.



*An approach toward  
excellence in medicine*

**BIO • NUCLEAR LABORATORIES**

32325 South Coast Highway South Laguna, California 92677

# A recommended course of action for the buyer of radiopharmaceuticals:

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**1** **INTROSPECTION.** Think for a moment. What's your prime concern when you're ready to buy radiopharmaceuticals? Purity? Stability? Availability? Service? Which of these are important to you? Sort them out. Write them down. Give them an order of importance.

No matter what your analysis reveals, Amersham/Searle Corporation is more than likely to have the solutions. Our range of compounds is wide—from arsenic-74 to xenon-133. Imaging agents for in-vivo investigations. Compounds for in-vitro studies. All with purity and stability of the highest order. All for prompt delivery.

---

**2** **INVESTIGATION.** Next, look into the credentials of the suppliers of radiopharmaceuticals. What have they done? What are they doing—in research, in involvement with the field of nuclear medicine itself?

When you look into Amersham/Searle, the facts are these: A company formed as a joint venture of The Radiochemical Centre, Amersham, England, and G. D. Searle & Co. An organization capable of drawing on the resources of The Centre for radiopharmaceutical research and manufacture. A manufacturer able to utilize the resources of G. D. Searle & Co., a firm long experienced in pharmaceutical research. And a resourceful enterprise capable as well of benefiting from

an exchange of information with Nuclear-Chicago Corporation (a Searle subsidiary), designers and manufacturers of nuclear instrumentation.

---

**3** **INFORMATION.** Ask to see all available information on the compounds you're interested in. What does the supplier have to say about the radiopharmaceutical? How is it said?

A Radiopharmaceutical Bulletin from Amersham/Searle is a detailed compilation of facts on every aspect of the compound offered. Clinical information. Biochemical and chemical data. Complete specifications. And extensive bibliographies. Every radiopharmaceutical we make gets the same treatment in our Bulletins.

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**4** **DECISION:** Once you have decided on your probable source of radiopharmaceuticals, make your move. Ask for proof of performance.

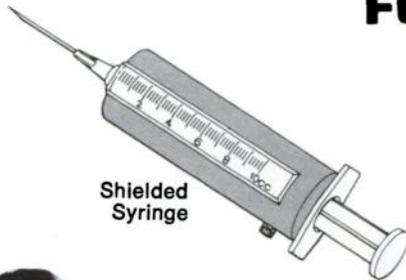
Your phone call or written request to Amersham/Searle will start things moving. We will send complete data on any radiopharmaceutical or attempt to answer any and all questions that go beyond such data. And we'll send you a list of our Telex-connected sales offices. After all, you would expect our actions to speak louder than our words.

2000 NUCLEAR DRIVE DES PLAINES, ILLINOIS 60018 TELEPHONE: (312) 296-1055



8-216

# WHAT'S NEW IN RADIATION SHIELDING FOR NUCLEAR MEDICINE?



Shielded Syringe

*Here is a small sample of the safety shielding now in stock at Nuclear Associates, Inc.... your one source for Nuclear Medicine accessories and supplies.*

## SHIELDED SYRINGE

Protect your fingers and hands from syringe-administered milli-curie quantities of radioactive doses—with the new "Gamma Vue" Syringe Shield.\* For example, 8 mc of Tc-99m in an unshielded syringe will expose you to 5,000 mR/hr. The "Gamma Vue" cuts this exposure by a factor of 50; dose rates for I-131 are reduced 4-fold. Consists of 3/16" lead shield with a lead-glass panel for viewing the syringe calibration marks. Tapered lead wall permits minimum interference with venepuncture. Accepts standard disposable syringes.

\*Patent Pending



Protective Lead Barrier

## PROTECTIVE LEAD BARRIER

Eliminates radiation to your body or face while milking a Tc-99m generator or other types. Most generators provide enough shielding for the generated activity but not for the setting-up process (e.g., energetic Mo-99 gamma radiation to the face, at 3 feet from a generator, can be as high as 35 mR/hr). All exposure is stopped by a 12" x 12" x 1/2" lead shield and a 12" x 24" lead-glass sheet (4.8 gm/cc).



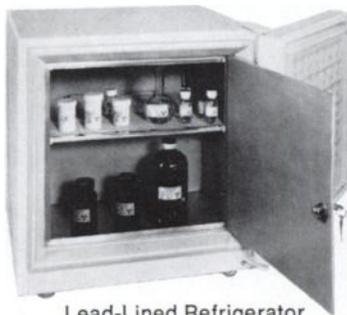
Syringe Holder

## SYRINGE HOLDER

Syringes filled with radioisotopes can be stored or hand-carried safely by inserting them in this special lead cylinder, 3/8" thick x 3/4" I.D. x 5 3/4" inside depth. Accepts standard 10cc disposable syringes.

## LEAD-LINED REFRIGERATOR

For radiopharmaceuticals, tagged biological and other radioactive materials requiring low-temperature storage. Key-lock prevents unauthorized access. Completely lead-lined, 1/8" thick. Only 19 1/2" high x 19" wide x 23" deep, small enough to fit on or below a lab bench. Holds 2 cubic ft.



Lead-Lined Refrigerator

## ALSO AVAILABLE

Lead bricks (plain or interlocking), lead-glass bricks, large and small lead storage containers, phantoms, warning signs, remote handling tools, ultrasonic cleaners, dosimeters, monitors, and more.

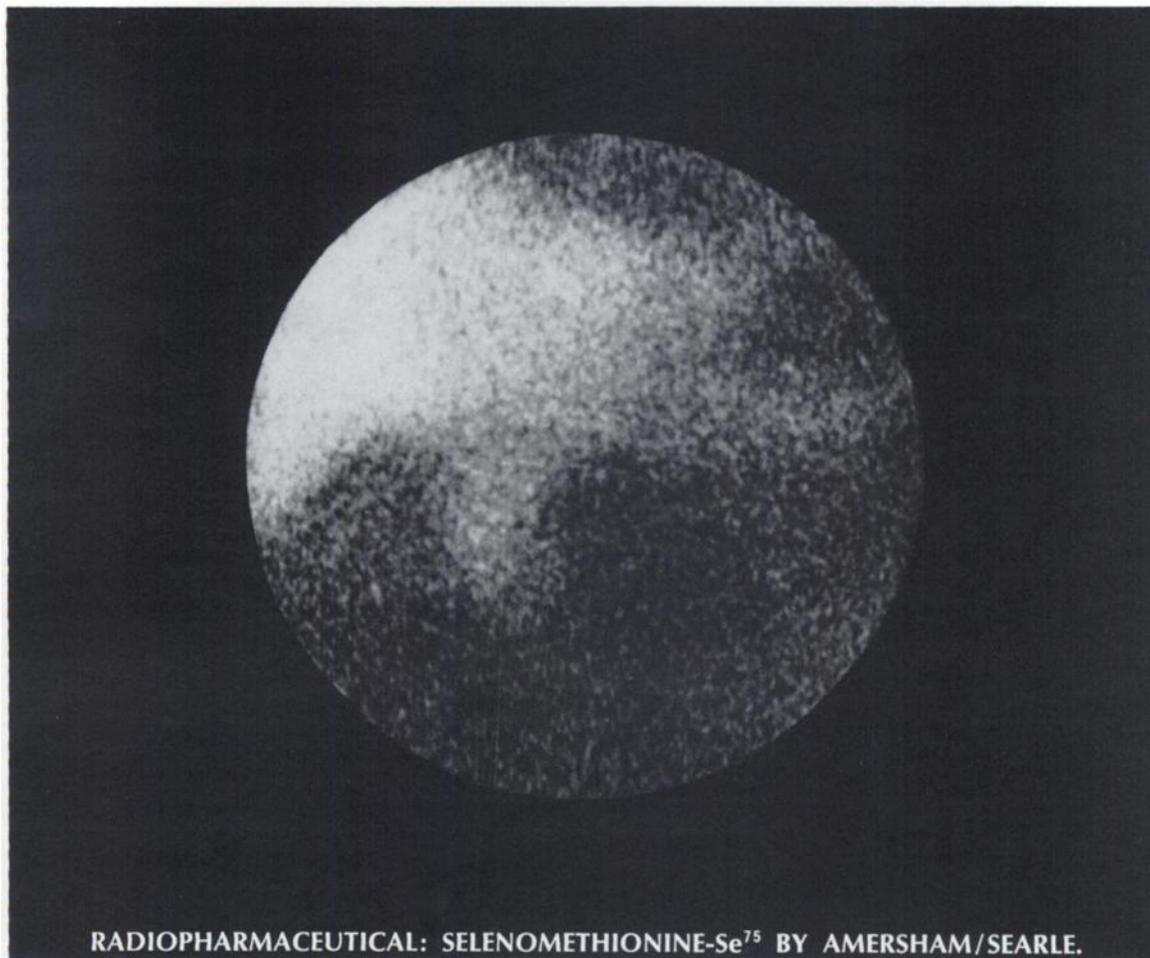
For more details, ask for Catalog NM-68-B



**NUCLEAR ASSOCIATES, INC.**

35 URBAN AVENUE, WESTBURY, N. Y. 11590, PHONE (516) 333-9344

# Portrait of a Pancreas.



There are many problems inherent in diagnosing diseases of the pancreas by standard radiographic techniques. Further, laboratory determinations are often inconclusive.

**Question:** Can pancreatic pathology be ruled out as a possible diagnosis short of exploratory surgery?

**Answer:** Amersham/Searle Corporation now offers the clinician selenomethionine-Se<sup>75</sup>—a diagnostically reliable imaging agent, especially when used with the gamma scintillation camera for rapid, continuous scintiphotography.

Amersham/Searle's seleno-

methionine-Se<sup>75</sup> is of unsurpassed purity and stability. And these qualities are vital to your selection of a drug for your patients. Here are the important specifications for selenomethionine-Se<sup>75</sup> as supplied by Amersham/Searle:

**Stability:** Little evidence of radiation decomposition after storage for up to 4 months at room temperature in concentrations of 1 mCi/ml.

**Radiochemical purity:** >95%.

**Chemical purity:** >90%.

For further clinical, biochemical, and technical information on L-selenomethionine-

Se<sup>75</sup> (sterile aqueous solution) please write for *Radiopharmaceutical Bulletin RP-1*. Or call us directly.

**Indications:** Pancreas imaging. **Contraindications:** Radioisotopes should not be administered to patients under 18 years of age, or to pregnant or nursing women, unless invaluable diagnostic information cannot be otherwise obtained. **Precautions:** Observe appropriate radiation-safety procedures at all times. **Availability:** Sterile aqueous solution. Specific activity ranges from 1 to 6 mCi/mg. Radioactivity concentration approximately 250  $\mu$ Ci in 1 ml. Scintiphoto courtesy D. Bruce Sodee, M.D., Doctors Hospital, Cleveland, Ohio.

2000 NUCLEAR DRIVE DES PLAINES, ILLINOIS 60018 TELEPHONE: (312) 296-1055



**Amersham/Searle**

AMERSHAM/SEARLE CORPORATION:  
AN ACTIVITY OF G. D. SEARLE & CO. AND THE RADIOCHEMICAL CENTRES

B-214

Demonstrated, superior performance should be applied in a growing company where you can see the result of your achievements.

# If you're ready to make it with a company on the move, PROVE IT!!

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**ohio-nuclear, inc.**

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# Improved reliability, even better performance.

Ohio Nuclear's new Model 84FD Dual Five, is the only scanner employing reliable, digital logic, computer-type electronics.

Speeds up to 750 cm./minute produce simultaneous, opposed view photoscans in less than half the time required by other scanners.

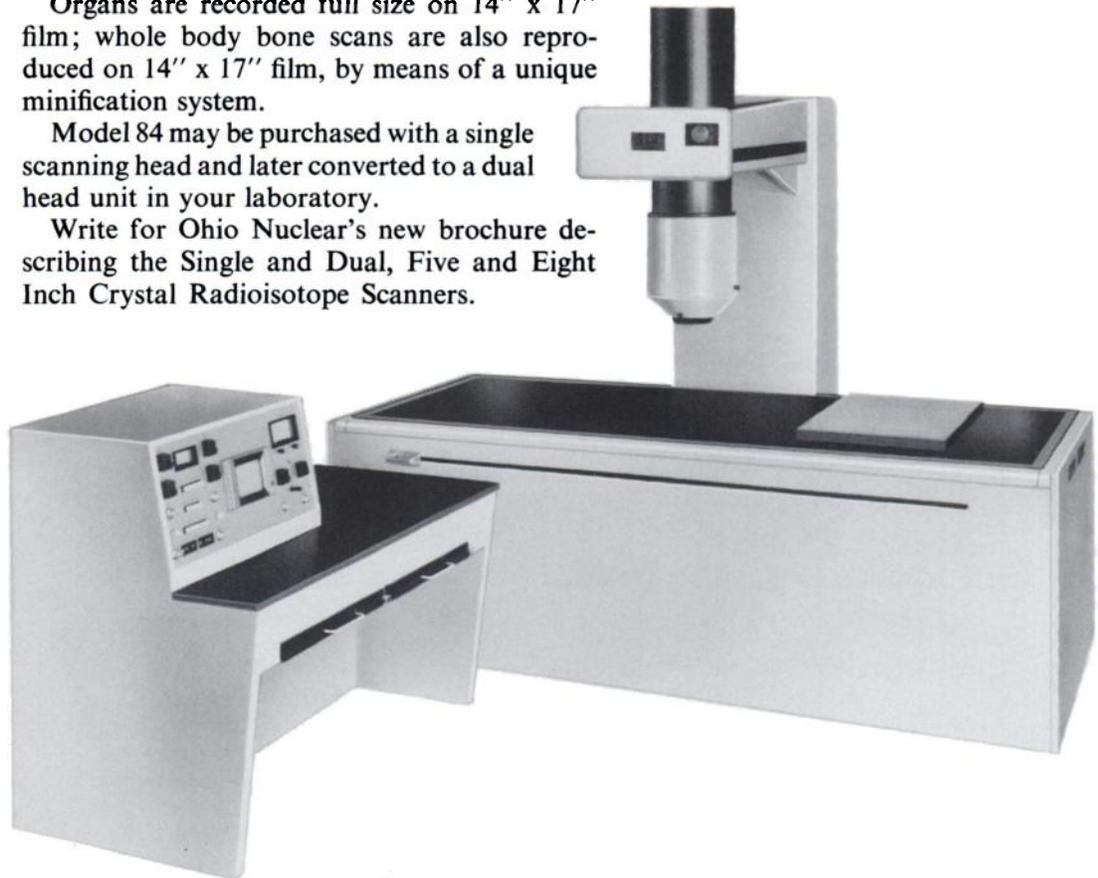
Scan progress is visually monitored on a storage cathode ray tube, which retains the organ image until manually erased.

Simplified pushbutton controls are conveniently located on the desk console. Photo Intensity Computer (PIC) circuit provides consistent, comparable maximum film density at the push of a button. Selectable levels of contrast enhancement and background erase accommodate individual preference.

Organs are recorded full size on 14" x 17" film; whole body bone scans are also reproduced on 14" x 17" film, by means of a unique minification system.

Model 84 may be purchased with a single scanning head and later converted to a dual head unit in your laboratory.

Write for Ohio Nuclear's new brochure describing the Single and Dual, Five and Eight Inch Crystal Radioisotope Scanners.



**ohio-nuclear, inc.**

1725 Fall Avenue, Cleveland, Ohio 44113 (216) 621-8142

# NEW SYRINGE SHIELD

**Protects fingers and hands from radioactive doses administered by syringe**

- Reduces Tc-99<sup>m</sup> exposure by a factor of 50.
- Offers maximum shielding for technician. Tapered lead wall permits minimum interference with venepuncture.
- Uses standard disposable syringes.

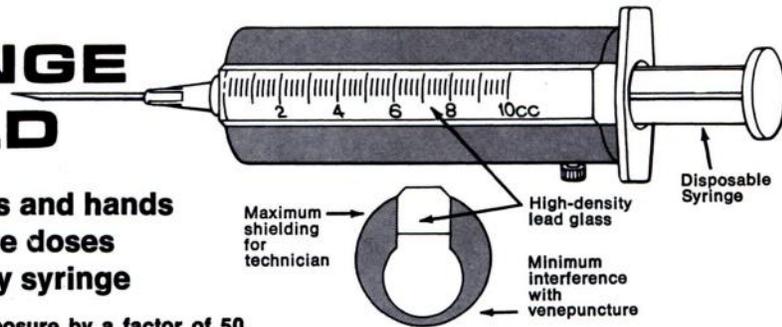
Protect your fingers and hands from syringe-administered millicurie doses of radioisotopes ... with the new "Gamma Vue" Syringe Shield.\* Whether you are working with Technetium-99<sup>m</sup> or other activities, this shield effectively reduces the ionizing radiation to tolerable limits.



**NUCLEAR ASSOCIATES, INC.**

35 URBAN AVENUE, WESTBURY, N. Y. 11590, PHONE (516) 333-9344

\*Patent Pending



For example, 8 mc of Tc-99<sup>m</sup> in an unshielded syringe will expose your fingers and hand to a 5,000 mR/hour hazard. The "Gamma Vue" cuts this exposure by a factor of 50; I-131 dose rates are reduced 4-fold.

Consists of 3/16" lead shield with lead-glass panel for viewing the syringe calibration marks. Accepts standard disposable syringes.

<b>56-262</b>	Syringe Shield, 2½ cc.	\$36.00
<b>56-263</b>	Syringe Shield, 5 cc.	\$37.00
<b>56-260</b>	Syringe Shield, 10 cc.	\$38.00
<b>56-261</b>	Syringe Shield, 20 cc.	\$42.00

For more details, request Bulletin NM-68-B

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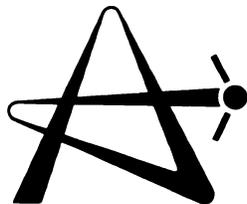
# SYMBOL OF LEADERSHIP



AECL's new corporate symbol depicted above was designed to signify the company's vigorous activity and forward progress in the application of atomic energy to the fields of medicine, research and industry.



Originators of the first commercially successful Cobalt 60 Teletherapy unit, AECL maintains its leadership by making it unnecessary for the radiologist to confine his treatment prescriptions to the limitations of a machine.—With a Theratron 80, the radiologist can exercise his knowledge and capability to the fullest extent. Because of its many new and unique features (including provision for complete, computerized automation), its remarkable versatility and proven dependability, AECL's THERATRON 80 continues to be the outstanding leader in its field.



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**Commercial Products**

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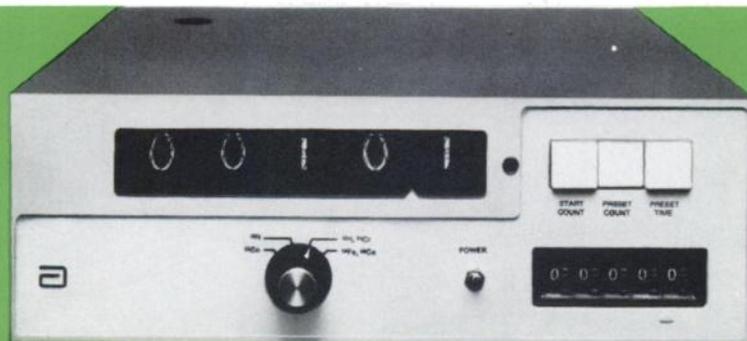
# Abbott Laboratories is now



This is the  
LOGIC™ Well Counter—  
only inches larger than this page  
(12<sup>1</sup>/<sub>4</sub>" x 4<sup>1</sup>/<sub>16</sub>" x 13" to be exact)

TM—TRADEMARK

# in Nuclear Instruments



LOGIC  
101



LOGIC  
111



LOGIC  
121

The LOGIC Series—the most compact counting systems ever designed—is available now in 3 models.

## The LOGIC Counting Systems offer:

- Compactness (micrologic integrated circuitry)
- Dependability (pre-tested for 40 hours)
- Portability (25-35 lbs.)
- Versatility (choice of 3 models)
- Quality (backed by Abbott)

804468

**For more information,  
contact your Abbott man  
who knows both instruments  
and radio-pharmaceuticals**

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Abbott Laboratories, S.A., 2, rue Thalberg, 1201 Geneva, Switzerland



# Now – the Pho/Gamma<sup>®</sup> III Scintillation Camera talks to computers.



# And listens.



## How? With our new computer-compatible Magnetic Tape System.

The two instrument consoles shown directly above constitute our Magnetic Tape System. In the console on the right is our multidimensional analyzer. It connects to the Pho/Gamma III Scintillation Camera. This combination provides analog-to-digital conversion of data on the location and distribution of gamma-emitting radioisotopes in body organs.

The analyzer also encodes the data, in computer-compatible form. And then transfers the data to the second console (above left), the magnetic tape transport.

So much for theory. Application is where the Magnetic Tape System pays off. Because the taped data on a multitude of clinical organ studies can now be fed to a programmed off-line computer.

Which then does what a computer is meant to do—analyze, correlate, and manipulate data. To let you find out more, in more ways. New ways.

Of course you can play back the tape. And re-display and re-orient the data on the analyzer's scope. Then photograph the scope display. Or read out the data on a digital printer. Or—well, you're sure to find more to do with data in a convenient, permanent taped form.

But first you should talk to your Nuclear-Chicago sales engineer about the Magnetic Tape System for

Pho/Gamma III. And about our other new Pho/Gamma III accessories (fast digital printer, chart recorder, and 35-mm automatic time-lapse camera, among others). Or, if you'd like, write directly to us. ■■■

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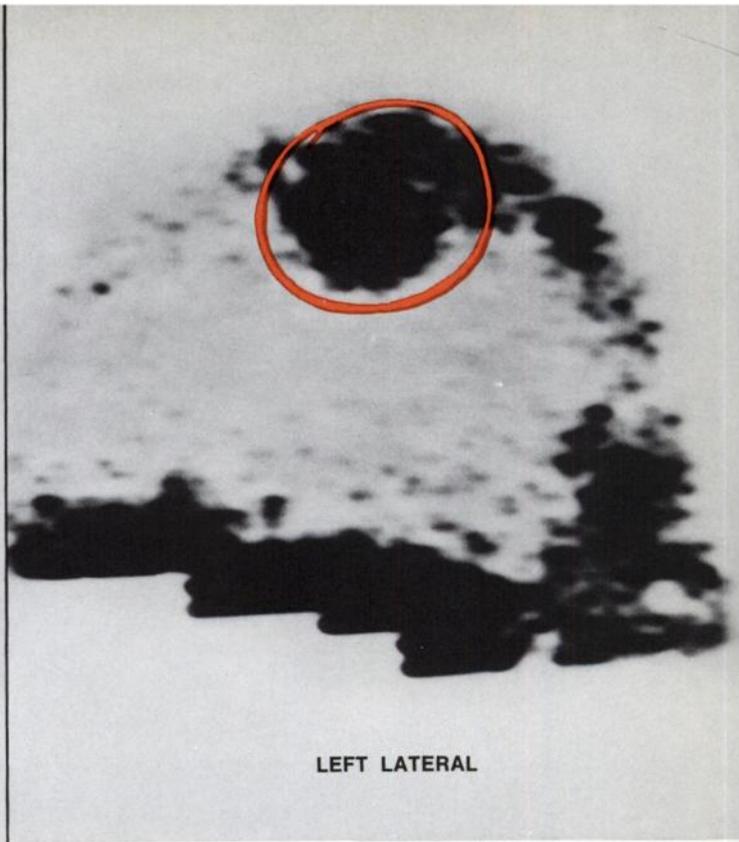
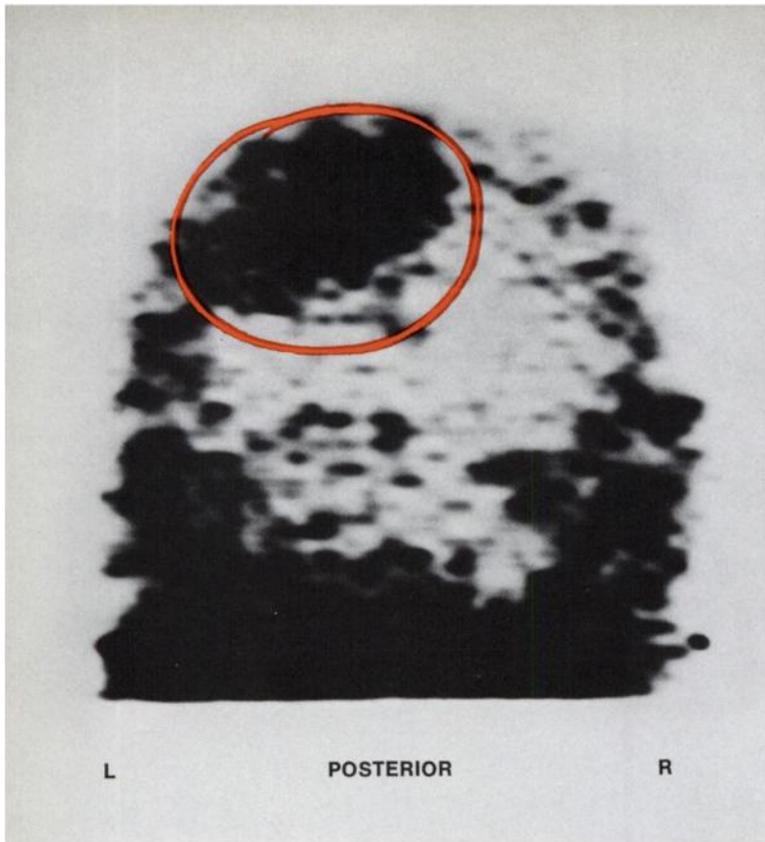


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A SUBSIDIARY OF G. D. SEARLE & CO.

313 East Howard Avenue  
Des Plaines, Illinois 60018, U.S.A.

Donker Curtiusstraat 7, Amsterdam W.



## In suspected brain pathology, find out fast with **Pertsan-99m**

**For brain scanning, Pertsan-99m provides more information with less radiation to the patient than any other related cerebral test—whether other radioisotopes or x-rays. And you get each projection fast—as little as 2 minutes with a camera, 15 minutes or less with rectilinear scanners.**

A 54-year-old man was hospitalized with progressive weakness of the right side, followed by seizures of the right side (Jacksonian seizures). Brain scans showed an abnormal concentration of isotope in the left parasagittal area. Surgery revealed a meningioma, which was removed, and the patient recovered.

The 2 scans above, showing the marked abnormal uptake (which turned out to be a meningioma), were made with Pertsan-99m. This product is shipped Monday through Friday—and Sunday. Thus, brain scans can be scheduled 6 days a week—Monday through Saturday.

**INDICATIONS:** Adjunctive diagnostic aid in detecting and localizing intracranial neoplastic (primary or metastatic) and non-neoplastic lesions.

**CONTRAINDICATIONS:** Radio-pharmaceutical agents should not be administered to pregnant women or to persons less than 18 years old unless the indications are very exceptional.

**PRECAUTIONS:** Care should be taken to ensure minimum radiation exposure to the patient as well as all personnel; to prevent extracranial contamination because this can lead to erroneous interpretation; and to differentiate areas of abnormal activity from areas of normal vascular activity.

804464

### **Pertsan-99m**<sup>TM</sup>

SODIUM PERTECHNETATE Tc 99m

Also available:

### **Pertgen-99m**<sup>TM</sup>

TECHNETIUM 99m GENERATOR KIT

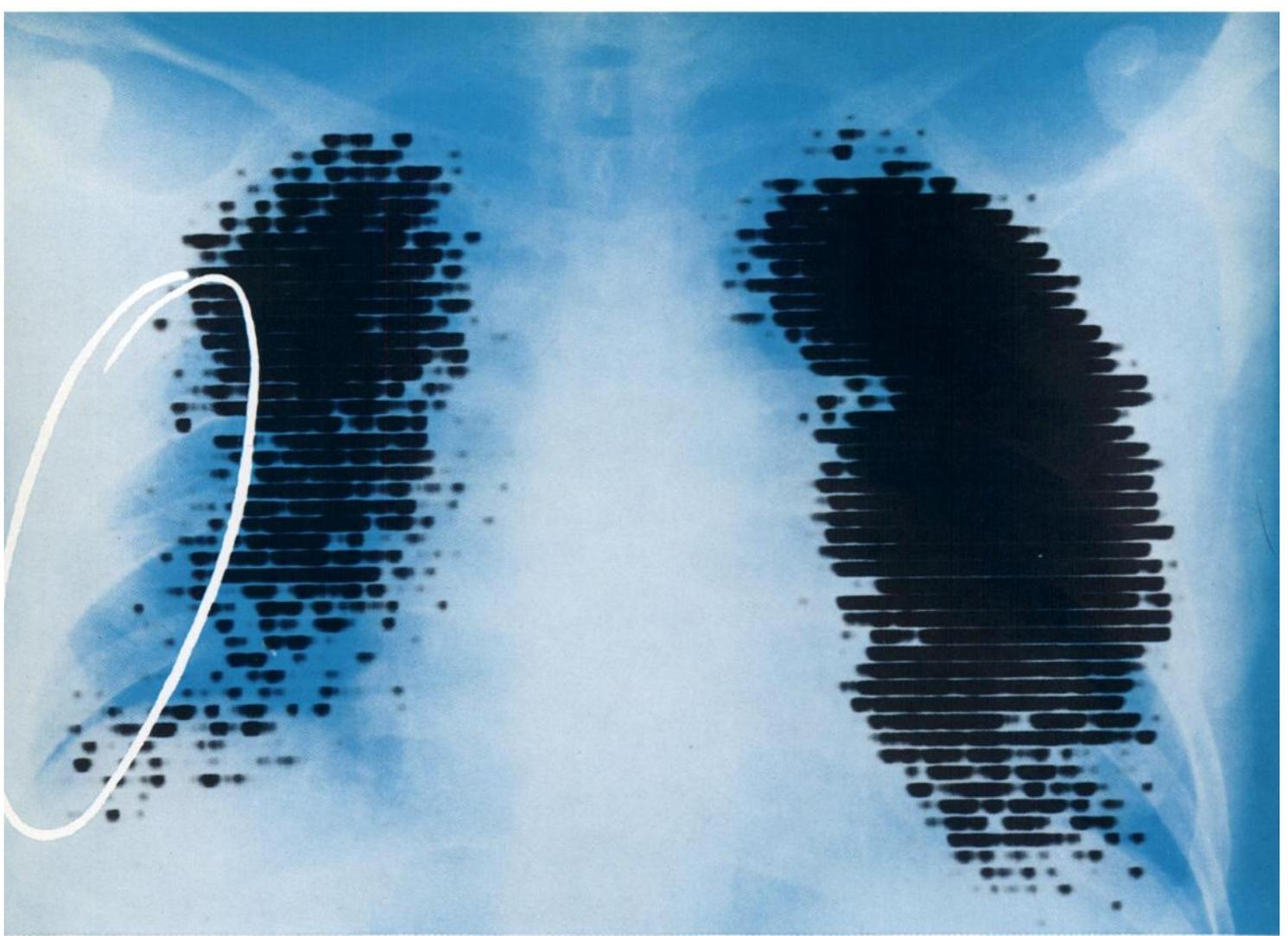


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## If it's a pulmonary problem, Macroscan-131 pictures it!

A 50-year-old man was hospitalized after complaining of vague chest pains. Shortly after, he suffered a cardiac arrest. An EKG showed no evidence of cardiac infarction. A lung scan revealed a decreased concentration of isotope in the right lower lobe. This was diagnosed as a pulmonary infarct, therapy was instituted, and the patient recovered.

His scan above, showing the marked diminished uptake, was made with Macroscan-131. This product has many diagnostic uses:

**Pulmonary embolism, suspected:** To confirm (or rule out) its occurrence.

**Chronic pulmonary tuberculosis:** To estimate unilateral and regional function and perfusion of the lungs.

**Emphysema:** To evaluate the decreased regional blood flow that occurs with obstruction of vessels.

**Pneumonitis:** To evaluate the decreased regional blood flow that occurs without obstruction of vessels.

**Lung Tumors:** To evaluate the regional ischemia resulting from compression or obstruction of pulmonary arteries.

**Surgery and/or other therapy for lung disorders:**

To evaluate the effectiveness of therapeutic measures.

Macroscan-131 is sterile and non-pyrogenic. It is ready to use and should not be heated prior to use.

**INDICATIONS:** For scintillation scanning of the lungs to evaluate total, unilateral, and regional arterial perfusion of the lungs.

**CONTRAINDICATIONS:** Radio-pharmaceutical agents should not be administered to pregnant women or to persons less than 18 years old unless the indications are very exceptional.

**PRECAUTIONS, SIDE EFFECTS:** Care should be taken to administer the minimum dose consistent with safety and validity of data. The possibility of an immunological response to albumin should be kept in mind when serial scans are performed. There is a theoretical hazard in acute cor pulmonale, because of the temporary small additional mechanical impediment to pulmonary blood flow. A possible case of urticaria has been related to a similar preparation. The thyroid gland should be protected by prophylactic administration of concentrated iodide solution.



**Macroscan<sup>TM</sup>-131**  
AGGREGATED RADIO-IODINATED (<sup>131</sup>I) ALBUMIN (HUMAN)

**ABBOTT LABORATORIES** NORTH CHICAGO, ILLINOIS

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809483

# The tiny



# difference.

## Unlike other scintillation cameras, Baird-Atomic's Autofluoroscope features computer-type memory. And that's saying a lot.

It says our non-volatile magnetic core memory can store raw digital data for each picture element. And restore image plane uniformity. It lets you flag any areas of the picture for numerical integration in dynamic studies. It permits fast storage on magnetic tape to provide more data points in dynamic studies. It lets you play back patient

data in its original form at any time. Instantly. And because of magnetic core memory, the picture has the same integrity as the raw data. The fact is, magnetic core storage makes the Autofluoroscope a fundamentally more practical and objective tool. What's more, it's faster and easier to use in all procedures than other cameras. So if you're going to buy or lease an imaging device, you should talk to Baird-Atomic before you make your final decision. You owe it to yourself to fully understand why the tiny difference will make such a big difference to your program. Naturally, if you're not already thinking about the Autofluoroscope, we may

not change your mind. But we'll give you a tough decision to make. Call for an appointment. 33 University Road, Cambridge, Massachusetts 02138, Telephone: 617 864-7420. Baird-Atomic



**BA** BAIRD-ATOMIC

Europe, The Hague, The Netherlands. Baird-Atomic Limited, Hornchurch, England.

Up to now, whenever you read in the literature of a clinician using a "scintillation camera," the chances are it could mean only one thing. He was using *our* scintillation camera—the Nuclear-Chicago Pho/Gamma® III Scintillation Camera or one of its predecessors.

That fact prompts us to call Pho/Gamma III the most (if you will) experienced scintillation camera there is. And, as such, it's the instrument of choice for the in-vivo visualization of radioisotopes in body organs.

Note that we've given the current Pho/Gamma detector a significantly increased range of positioning. We've also improved the electronics and arranged everything to fit into a human-engineered desk console.

And, perhaps most importantly, we've made it possible for Pho/Gamma III to be used with an ever-wider array of accessories. Recently added to this array are these: a 35-mm automatic time-lapse camera for sequential scintiphotos, a dual-pen recorder/dual-channel ratemeter for renal studies, our Photo/Scope III attachment for 1-to-1 scintiphotos, and a high-speed digital printer. Plus a magnetic-tape system for data recording and manipulation, as well as computer processing, of clinical information.

The proof of Pho/Gamma's experience is in the hands of your Nuclear-Chicago sales engineer. Please call him or write to us.

You'll find that we're the people who successfully marketed the first and, consequently, the most experienced scintillation camera — the Pho/Gamma III.

And experience, after all, is the best teacher.

0-950

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**The world's  
most experienced  
scintillation  
camera.**