



By eliminating the disadvantages of earlier methods, the Triosorb Sponge has achieved a real breakthrough in thyroid testing. **It is an in vitro test unmatched in 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 unmatched 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: Triosorb is in a disposable kit ready for immediate use at room temperature, making it the simplest and most convenient thyroid function test to perform.

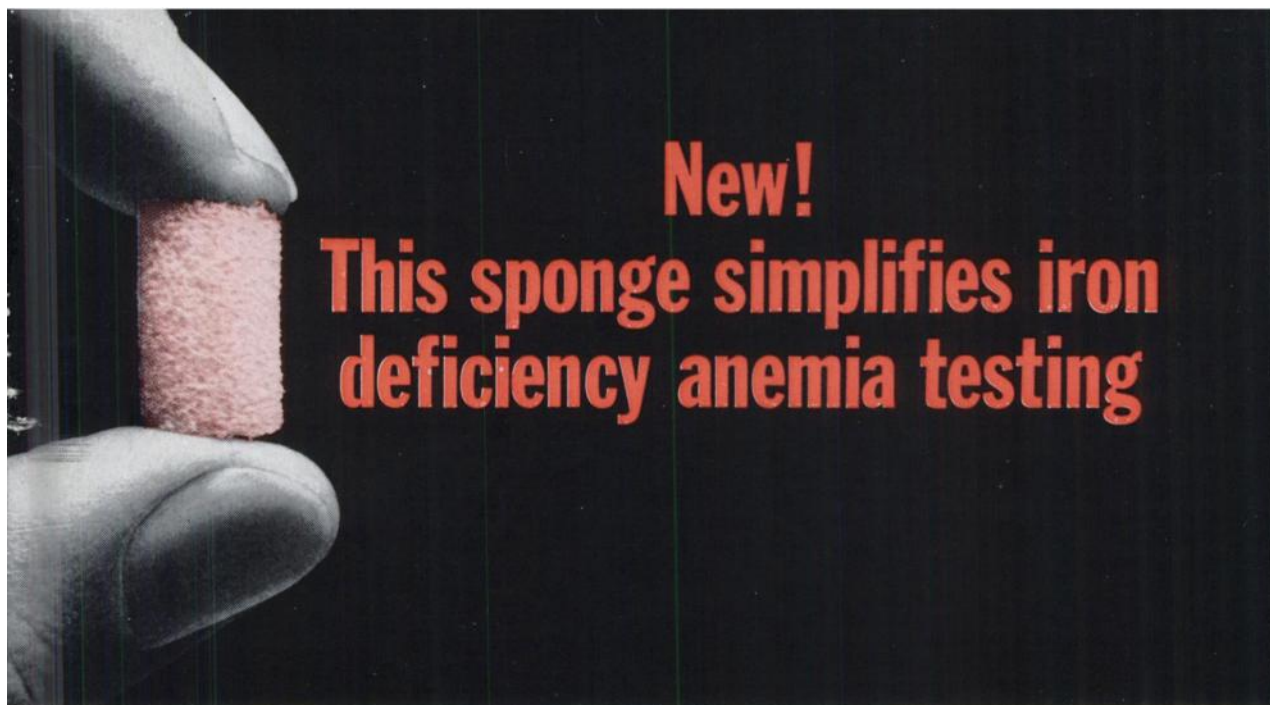
McAdams* reported that "The resin sponge (Triosorb) technique is superior to the erythrocyte method for performing the I^{131} T3 test in terms of simplicity, convenience and elimination of errors characteristic of the erythrocyte procedure."

Triosorb is available to all doctors, hospitals and clinical laboratories—AEC licensing is not required. Because Triosorb will enable far more screenings to be performed, this procedure may soon become as standard as today's blood counts and urinalyses.



*McAdams, G. B. and Reinfrank, R. F., Jnl. Nuclear Med., 5:112, Feb., 1964.

TRIOSORB®
T-3 DIAGNOSTIC KIT
ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS



Announcing IROSORB-59 Diagnostic Kit

Irosorb-59 is the second in a series of in vitro radio-pharmaceuticals tests developed by Abbott Laboratories. The Irosorb-59 sponge consists of a polyether foam in which is embedded a pre-measured finely divided ion-exchange resin. **Irosorb-59 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, it can be scheduled where other standard methods may not be applicable. For example, it may be used following the administration of ferrous iron.

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 material, 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. The 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.

Irosorb-59 is available to all doctors, hospitals and clinical laboratories—AEC licensing is not required.

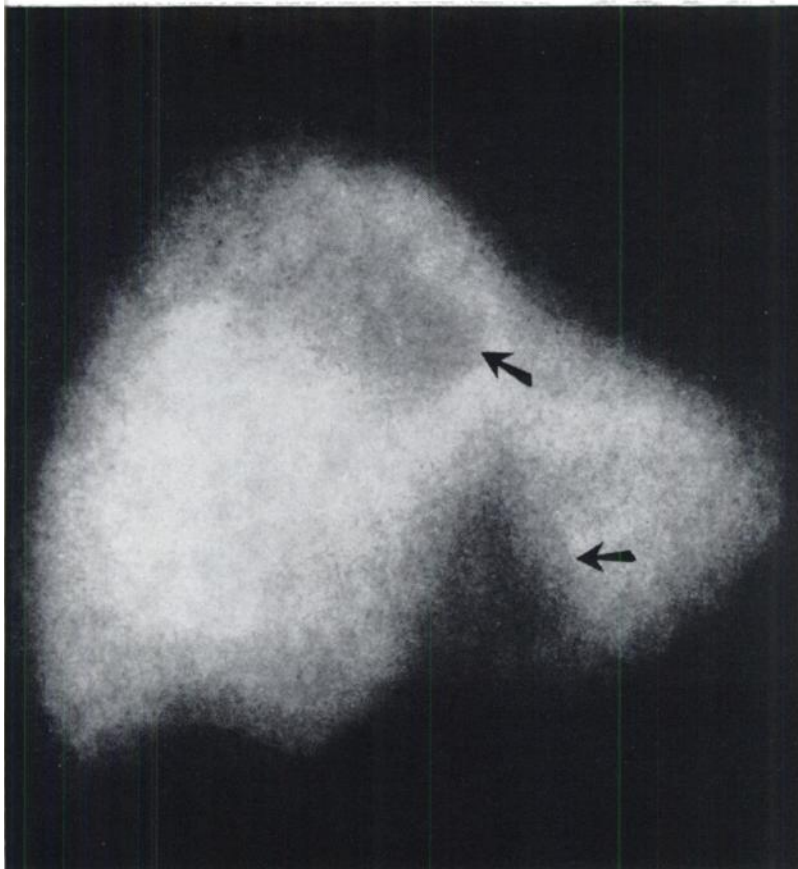


IROSORB-59®

DIAGNOSTIC KIT

ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS

801182



ORGAN: Liver.
DOSE: 3 millicuries
 technetium-99m sulfur-colloid.
VIEW: Anterior.
EXPOSURE TIME: One minute,
 started 15 minutes after injection.
DIAGNOSIS: Metastatic deposits.

Taken with Pho/Gamma
 Scintillation Camera.

Liver, abnormal.

Wouldn't you like to be able to locate
 lesions like these—before biopsy?

The picture shown above is a scintiphoto—a record of isotope distribution made by Nuclear-Chicago's Pho/Gamma® III Scintillation Camera. Consider the advantages of Pho/Gamma for your work.

First of all, Pho/Gamma's continuously sensitive view of all of the organ, all of the time, gives you high-speed, high-resolution isotope imaging. The benefits: Maximum patient comfort. Accommodation of heavy patient case loads. Minimal distortion from respiratory and other motions. True dynamic visualization of in-vivo processes by means of rapid-sequence, stop-motion scintiphotography.

And Pho/Gamma has a motorized, omnidirectional detector head for fast, versatile positioning. You can easily obtain multiple views of organs and body areas in all orientations.

We've also made Pho/Gamma easy to operate. Its convenient desk console houses all electronics including twin oscilloscopes. You can simultaneously monitor and record the area of interest. The console also contains a dual scaler/timer and all controls for set-up and operation.

Finally, Pho/Gamma is ready for future developments in your work. There's built-in provision for adding a positron head for tomographic studies. Other system-expanding accessories include a fast printer and a 1600-data-point multidimensional analyzer for storage, manipulation, and analysis of digital data.

Your colleagues in nuclear medicine may well know the advantages of Pho/Gamma—why not ask them? Consult your local Nuclear-Chicago sales engineer, too, or write to us.



Pho/Gamma III
 Scintillation Camera



**NUCLEAR-CHICAGO
 CORPORATION**

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Research in the
 Service of Mankind

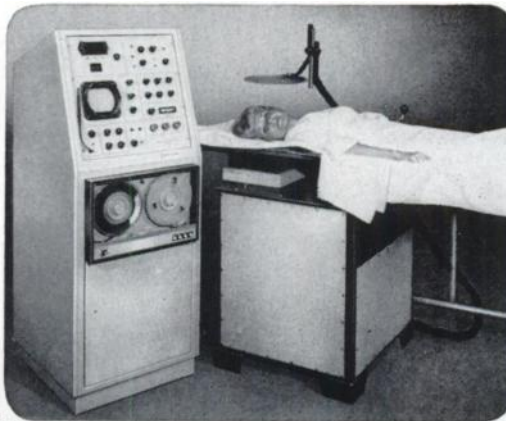
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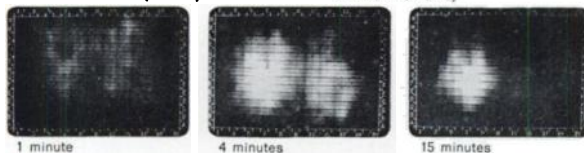
ATOMIC AND LABORATORY INSTRUMENTS DIVISION



MODEL 5000 DIGITAL AUTOFLUOROSCOPE®

FOR RAPID DIAGNOSTIC
LOCALIZATION AND
VISUALIZATION (BOTH DYNAMIC AND STATIC) OF GAMMA-EMITTING RADIOISOTOPES WITHIN THE HUMAN BODY!

DYNAMIC STUDIES/ABNORMAL KIDNEY AUTOFLUOROGRAMS (after injection — 30 second accumulation time)

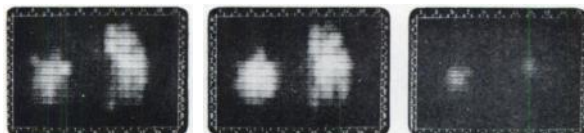


1 minute

4 minutes

15 minutes

DYNAMIC STUDIES/NORMAL KIDNEY AUTOFLUOROGRAMS

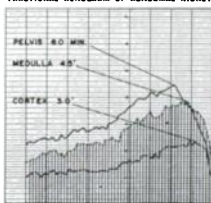


1 minute

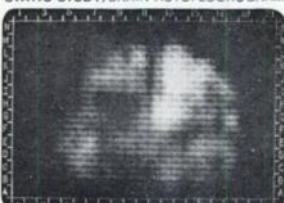
4 minutes

15 minutes

FRACTIONAL RENOGRAM OF ABNORMAL KIDNEY



STATIC STUDY/BRAIN AUTOFLUOROGRAM



Para-sagittal glioblastoma (Tc-99m)
30 second accumulation time

Another major achievement in the field of nuclear medicine, Baird-Atomic's MODEL 5000 DIGITAL AUTOFLUOROSCOPE now makes it possible to study organs of the human body *in action* without resorting to surgery! The AUTOFLUOROSCOPE is a fully-equipped, fixed (non-scanning) device with dual-memory storage which provides either a *dynamic* or *static* picture of the distribution of radioisotopes within any area of interest in the body — localization of tumors is much faster, and disease processes in the *brain, heart, lung, kidneys, liver, spleen, and pancreas* are routinely detected in only a fraction of the time required using conventional mechanical scanning techniques!

AUTOFLUOROSCOPE FEATURES:

- CONTRAST ENHANCEMENT OF PICTURE WITHOUT AFFECTING RAW DATA
- DYNAMIC AND STATIC VISUALIZATION OF THE ISOTOPE WITHIN THE BODY
- FULL RANGE OF (INCLUDING HIGH ENERGY) ISOTOPES CAN BE USED AND ACCUMULATED DATA CAN BE IMMEDIATELY VIEWED
- PATIENT'S RECORDS CAN BE PERMANENTLY STORED ON COMPUTER-FORMATTED MAGNETIC TAPE
- 284 CRYSTAL DETECTOR MATRIX AND MULTI-CHANNEL STORAGE OF ACCUMULATED DATA
- PERIODIC DISPLAY OF DATA DURING BUILD-UP PROCESS
- PERMITS STUDY OF ORGANS SCREENED BY OTHER ORGANS AND SELECTION OF SPECIFIC SECTIONS FOR QUANTIFICATION OF DATA

Call or write today for free descriptive literature!



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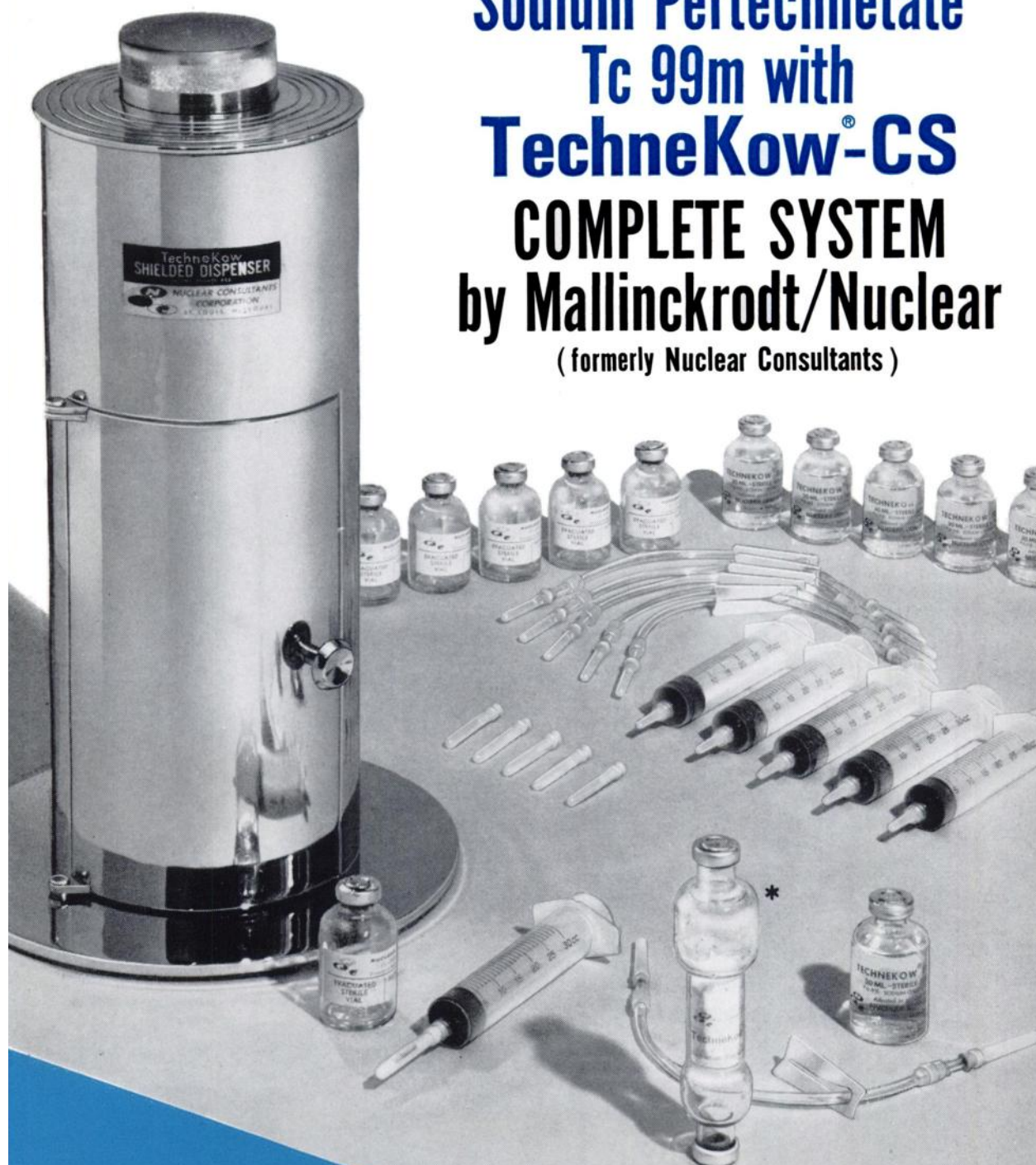
ATOMIC AND LABORATORY INSTRUMENTS DIVISION

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OFFICES ATLANTA BOSTON CHICAGO DALLAS DETROIT LOS ANGELES NEW YORK PHILADELPHIA PITTSBURGH RALEIGH SAN FRANCISCO WASHINGTON, D.C., EUROPE BAIRD-ATOMIC (EUROPE) N.V., 3627 VEENHADE, THE HAGUE, HOLLAND

Now in your own laboratory... Sterile...

**Sodium Pertechnetate
Tc 99m with
TechneKow®-CS
COMPLETE SYSTEM
by Mallinckrodt/Nuclear
(formerly Nuclear Consultants)**



MALLINCKRODT/NUCLEAR

formerly Nuclear Consultants—leading supplier

*new sterile, pyrogen-free TechneKow-CS Generator;
also supplied in dual purpose shipping shield

Pyrogen-Free...**ASSAYED**...Ready-for-Injection

Now, the new Mallinckrodt/Nuclear **TechneKow-CS** Generator provides a truly *complete* laboratory procedure — with all equipment necessary — for daily production and immediate assay of injectable sodium pertechnetate Tc 99m for use in brain scanning.

Complete System includes the new **TechneKow-CS** (closed system) Generator . . . completely sterile and pyrogen-free to meet all of the requirements of the US AEC and agreement states. An exclusive double chamber design permits injection of the eluant solution into the unique vacuum/pressure eluting system . . . also provides a reservoir below for complete solution removal from the alumina column.

Milking is simple and rapid. The vacuum in the collecting vial, combined with elevated pressure in the generator, causes the eluate

solution to be forced rapidly through the milking system. The milking needle makes no contact with the alumina. The closed milking system eliminates venting to the atmosphere. And the **TechneKow** Shielded Dispenser offers additional convenience, eliminating the necessity for a cumbersome "hot lab".

Major Advancement in Assay and Calibration
Mallinckrodt/Nuclear's Complete System solves the complicated, time-consuming process of assaying ^{99m}Tc and checking for ^{99}Mo contamination, with the simple and easy-to-use **MOLYTECH™** Assay Kit. The Kit utilizes calibrated standards and a fast, direct method for quick daily assay of the milked solution.

Mallinckrodt/Nuclear will be happy to answer all inquiries and render assistance in obtaining necessary user licenses. Call or write today.



Mallinckrodt

NUCLEAR

RADIOPHARMACEUTICALS

(formerly Nuclear Consultants)

Box 6172, Lambert Field, St. Louis, Missouri 63145

Atlanta • Chicago • Cleveland

Los Angeles • New York

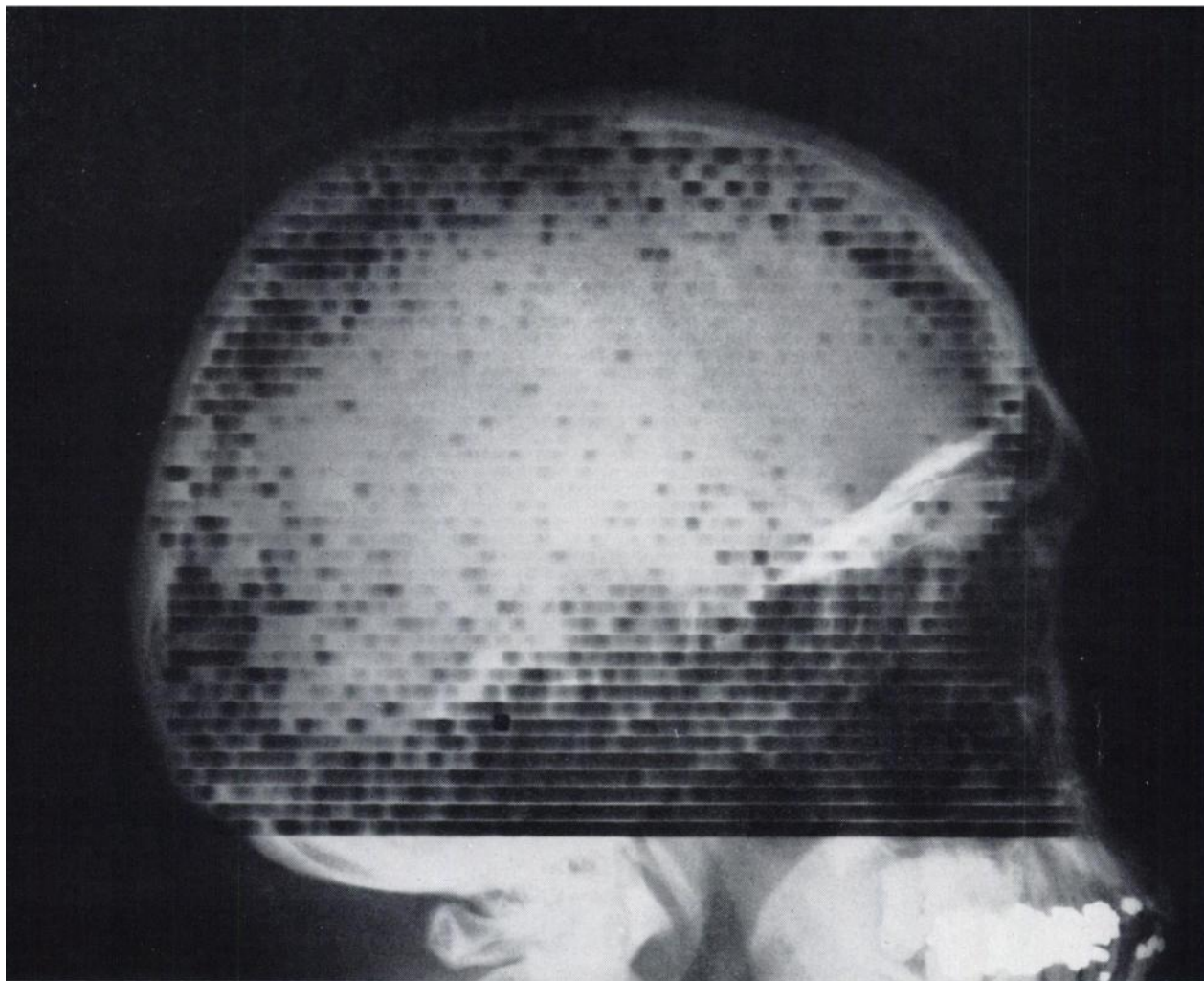
CONTRAINDICATIONS — Radiopharmaceuticals are contraindicated in pregnancy and during lactation and in persons less than 18 years of age, unless in the judgment of the physician the situation requires their use.

Sodium pertechnetate ^{99m}Tc should not be administered orally to patients who have recently ingested aluminum hydroxide or other similar antacid preparations, since such compounds may interfere with the absorption of the radioisotope.

PRECAUTIONS — Adequate care should be taken to minimize the radiation exposure to the patient and other individuals involved in the procedure. Any physician employing a radioactive drug should be thoroughly familiar with the technique and the clinical literature as well as the equipment required for its use. In addition, users should be knowledgeable concerning the safe handling of radioactive materials.

When making withdrawals from the Collecting Vial, do not remove the Vial from its protective lead shield. Note: Solutions obtained from the **TechneKow-CS** Generator should be free of particulate matter. Any solutions containing visible particulate matter should not be administered.

SIDE EFFECTS — At the dosages employed in diagnostic scanning procedures, side effects are rarely, if ever, encountered.



Abbott announces
Pertscan-99mTM
 SODIUM PERTECHNETATE Tc 99m

For brain scanning, Pertscan-99m provides more information with less radiation to the patient than any other related cerebral test — whether other radioisotopes or x-rays.

SPEED: Gives each projection fast — 15 minutes or less with rectilinear scanners, 2 to 4 minutes with a camera.

CONVENIENCE: Supplied in a ready-to-use single dose vial.

SAFETY: Carrier-free, non-pyrogenic, sterile, and isotonic.

FLEXIBILITY: Oral or intravenous administration in two sizes: 10 millicuries in 4 ml. and 15 millicuries in 6 ml.

SHIPMENTS: Monday through Friday—and Sunday . . . allows scheduling of brain scans 6 days a week—Monday through Saturday.

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

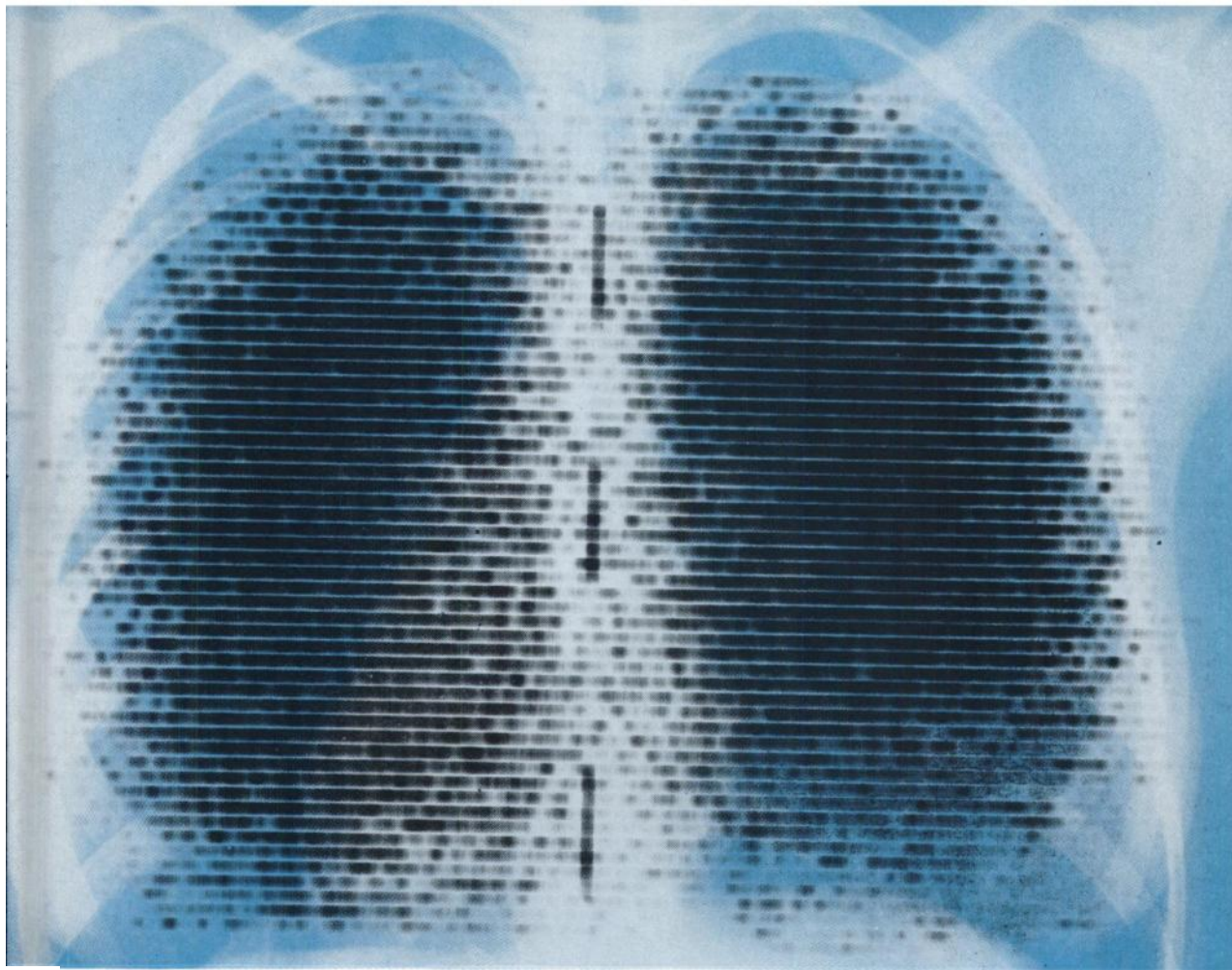
CONTRAINDICATION: Radio-pharmaceutical agents should not be administered to pregnant women or to persons less than 18 years old unless the indications are very exceptional.

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.

704391



TM-TRADEMARK



Abbott announces **Macroscan™-131** AGGREGATED RADIO-IODINATED (I^{131}) ALBUMIN (HUMAN)

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

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 degree of focal lack of perfusion.

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

Lung tumors: To evaluate the regional is-

chemia resulting from compression or obstructing 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.

CONTRAINDICATION: Radio-pharmaceutical agents should not be administered to pregnant women, nursing mothers, 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.

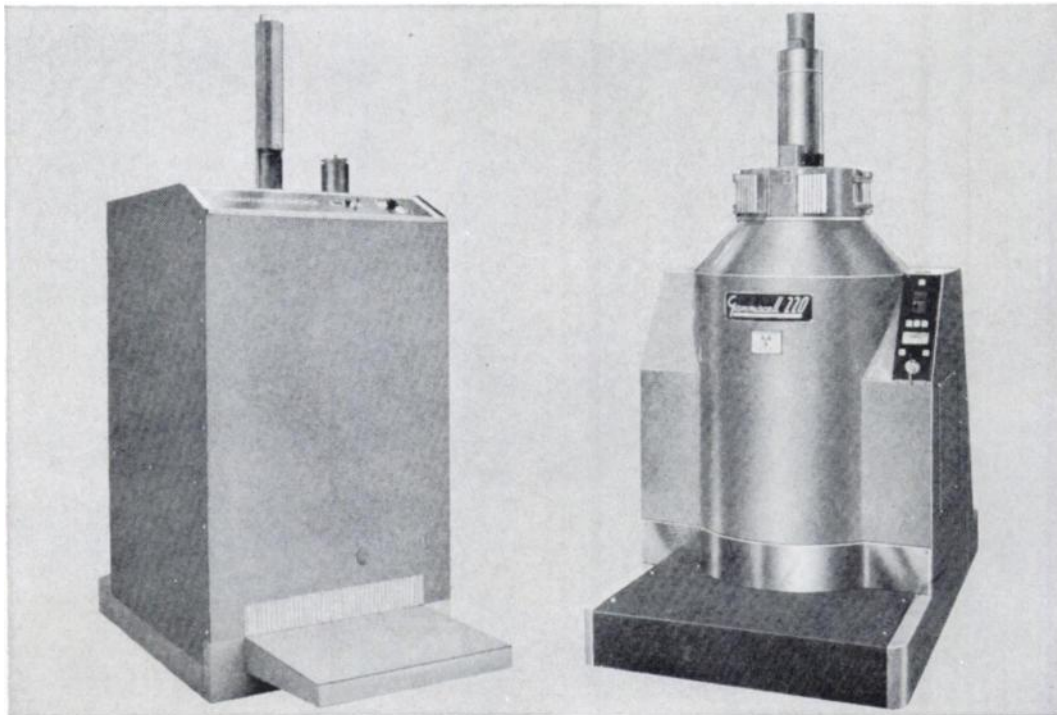


GAMMACELL*

Internationally famous, the ORIGINAL self-contained irradiators.
Since 1958 the preferred equipment for radiation studies.

World-wide installations, requiring
no additional shielding, are in daily use
in every field of radiation research.

- 1 Dose rates up to 2×10^4 roentgens/hour;
- 2 Industrial designs with integrated controls;
- 3 Digital timers for reliable automatic control;
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- 5 Certified central dose rate;
- 6 Selective source loading for greater uniformity;
- 7 Wide range of accessories;
- 8 Guaranteed source replacement;
- 9 Servicing available from local representatives.



GAMMACELL 200
Maximum central dose rate 1.5×10^4 r/hr
Irradiation Chamber
8.9 cms (3.5 ins.) diameter by 14 cms (5.5 ins.) high

GAMMACELL 220
Maximum central dose rate 2.0×10^4 r/hr
Irradiation Chamber
15.2 cms. (6.0 ins.) diameter by 20.6 cms (8.1 ins.) high



Designers of the first self-contained irradiators—Still the leaders

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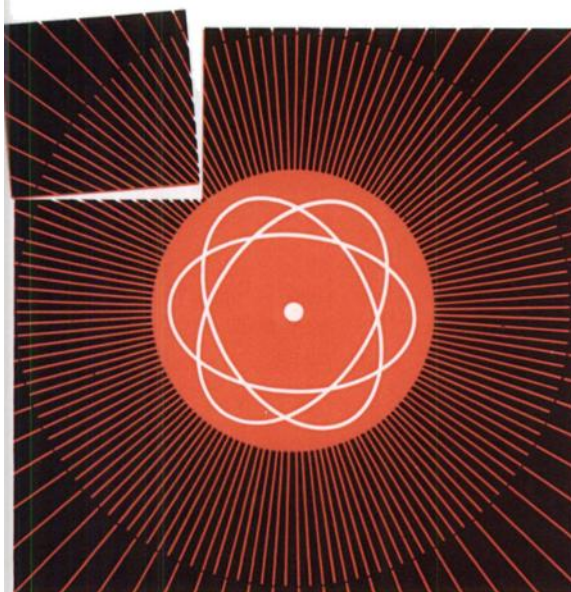
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Telephone 613-728-1841—Cable "NEMOTA"

SQUIBB

a research concept in radiopharmaceuticals

Are you ordering radioisotopes piecemeal?



Are you ordering separately after each referral and then rescheduling the patient? Most drugs are on hand when the patient needs them. Why not radiopharmaceuticals?

If a hospitalized patient needs blood, he can have it within minutes. If an ill patient needs penicillin, it can be prescribed immediately. But if he should need a radio-diagnostic test, he may have to wait several days for the material to arrive.

There was a time when such waiting was necessary, but no longer. Many of the available radio-pharmaceuticals have now reached the stage when they can be integrated into the mainstream of medical and hospital practice and can be "at hand" when needed. In particular, the unique 5-day precalibration of Squibb radioisotopes makes the

need for ordering separately after each referral a thing of the past. Most laboratories can pretty well estimate what their approximate weekly need will be, so that everything can be ordered in one shipment to arrive on any given day. Thus, when a patient is referred, the diagnostic agent is already on hand and the test can be run immediately. Moreover, there is only one shipping charge. And if the material arrives for use during the latter part of the working week, Squibb will bear the cost of radioactive decay over weekends.

If you want to know more about this unique service feature, please contact your Squibb professional representative. He can arrange for a weekly "blanket order" that is shipped to you automatically for arrival on any day you specify.

It is also important that you know of the unique Squibb "prefill" program that anticipates and programs radiopharmaceutical parenteral production so that sterility and pyrogen test data are "in house" before the material is released. Thus, Squibb good manufacturing practices assure—even with radiopharmaceuticals—the same high standards you would expect in any regular parenteral preparation.

These are only a few of the many important features and services available to you when you use Squibb radioisotopes. Your Squibb representative will be happy to give you more details.

Medotopes®

Squibb Radiopharmaceuticals

unique 5-day precalibration lets you have your entire week's needs at one time

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

4 of every 5 new Departments of Nuclear Medicine get started with a Magnascanner®

(What does this suggest to you?)

This fact hopefully suggests — to those contemplating the start (or expansion) of such a service — something about this instrument and the organization behind it. Other compelling points: the Magnascanner is far and away the instrument most widely used for diagnostic purposes by new or established Nuclear Medicine Departments; nearly 2000 hospitals are now serviced by Picker Nuclear. (Most Radioisotope Departments start with us and seem to stay with us.)

More. In less than 10 years the Magnascanner has become the keystone instrument in most Departments of Nuclear Medicine. This was the instrument that helped Nuclear Medicine specialists develop radioisotope diagnosis from a limited research technique to a practical, valuable, everyday, reliable, routine methodology. And in this rapidly-changing decade, the instrument changed too: multiple improvements and options were (and are always being) incorporated, making this the most up-to-date scanner available. Simultaneously, our line of other instruments for Nuclear Medicine expanded to the point of being the widest around. Nevertheless, nothing *anyone* has been able to do in this area (ourselves or others) has served to dislodge the Magnascanner from its keystone position in most Radioisotope Departments.

Now more about the new Magnascanner's versatility. Every new Magnascanner has both automatic and manual modes of operation—the new automatic mode speeds and simplifies set-up and self-checks the entire photo-recording system prior to the scan. And this is the *only* scanner that supplements the usual black and white data presentation with "colorscanning" (both photo and dot) which provides semi-quantitative radioisotope distribution pictures. The Magnascanner also offers: the widest choice of collimators, an ability to upgrade (easily) from a 3" detector system well suited to the needs of the beginning program to a faster 5" system, exclusive subtraction and two-color scanning, and dual-detector scanning.

A few final words about our obligations to you. We accept the premise that our obligations don't end at time of delivery. We not only install the instrument and show you how to use it, but we feel it our obligation to help train personnel when an institution new to this field doesn't have experienced personnel on staff. We have *other* obligations to you which our people are happy to detail. But meanwhile, consider further the choice of the Magnascanner (and the Picker commitment to you) as the keystone of *your* service too by requesting our new brochure number 130N.

PC67-130

Picker Nuclear, 1275 Mamaroneck Avenue, White Plains, N. Y. 10605

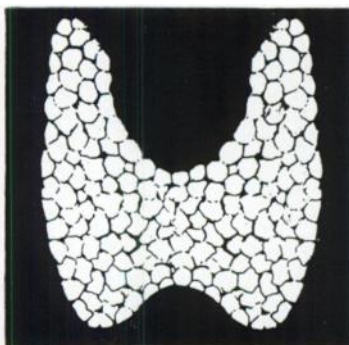
PICKERNUCLEAR



SQUIBB

a research concept in radiodiagnostics

Some significant advances in thyroid-testing technique



The Tresitope Diagnostic Kit offers significant refinements in the performance of the resin uptake test for thyroid function. First, it employs I^{125} which permits a much longer shelf life of test materials than I^{131} and also lowers radiation exposure to the technician. Second, the kit is completely self-contained—no other equipment is required. And, as an *in vitro* test, it avoids exposing patients to any ionizing radiation, and the results are unaffected by the prior administration of most iodine-containing preparations. Furthermore, the technique is simple enough so that the test can be run in any hospital or office laboratory with suitable isotope facilities, and the amount of radioactivity is sufficiently small so that no AEC licensing is necessary, provided that not more than 100 vials of Liothyronine I^{125} Buffer Solution are on hand at any one time.

The technical difficulties encountered in preparing different batches of resin sponges are avoided.

Moreover, because it is an *in vitro* test, it is diagnostically significant in the presence of unrelated nonthyroidal factors that are known to complicate interpretation of other test findings. More specifically, the test is unaffected by anxiety, hypertension, congestive heart failure, or administration of mercurial agents. And it is unaffected by prior administration of most iodine-containing preparations that can completely nullify the results of other thyroid function tests for considerable periods.

I^{125} versus I^{131}

The use of I^{125} rather than I^{131} to label the liothyronine employed in the test is also advantageous. Employing I^{125} considerably lengthens the shelf life of the liothyronine because I^{125} has a longer half-life and also because it emits no beta rays to affect the stability of liothyronine. The half-life of I^{125} is considered to be 60 days while I^{131} has a half-life span of approximately 8 days. Other advantages of I^{125} -labeled material include lowered radiation exposure to the technician, yet radioactivity is well within good counting range of modern standard equipment and *in vitro* counting is quite efficient.

In the continuing research for superior thyroid function tests, the *in vitro* Tresitope procedure represents important refinements in safety and simplicity—with longer shelf life of test material.

convenient, safe, and practical

The Tresitope Diagnostic Kit was specifically designed so that the test procedure is simplified and the possibility of radioactive contamination of the laboratory is minimized. The kit contains 10 capped vials, each containing Liothyronine I^{125} Buffer Solution (activity does not exceed 0.1 microcurie per vial), 10 plastic tubes of resin powder, and 10 separate droppers to avoid cross-contamination. The polystyrene carrier is also a test-tube rack, and it has been modified to facilitate washing of the resin powder. The reverse side of the package insert becomes the record sheet for test results.

NOTE: While the resin uptake test is a very useful aid in the evaluation of thyroid function, it should not be used as the sole basis for such an evaluation. In any patient, the clinical state is probably the best indication of thyroid status, and any laboratory test must be interpreted with caution when test results do not agree with clinical evidence.

Precautions

Use appropriate radiation precautions in handling, identifying and discarding all radioactive material. Remember that minute amounts of radioactivity remain on components used in the test, including the polystyrene platform when it is used in performing the test, and particularly when the Tresitope Suction Method is used for a number of tests.

Tresitope® Diagnostic Kit

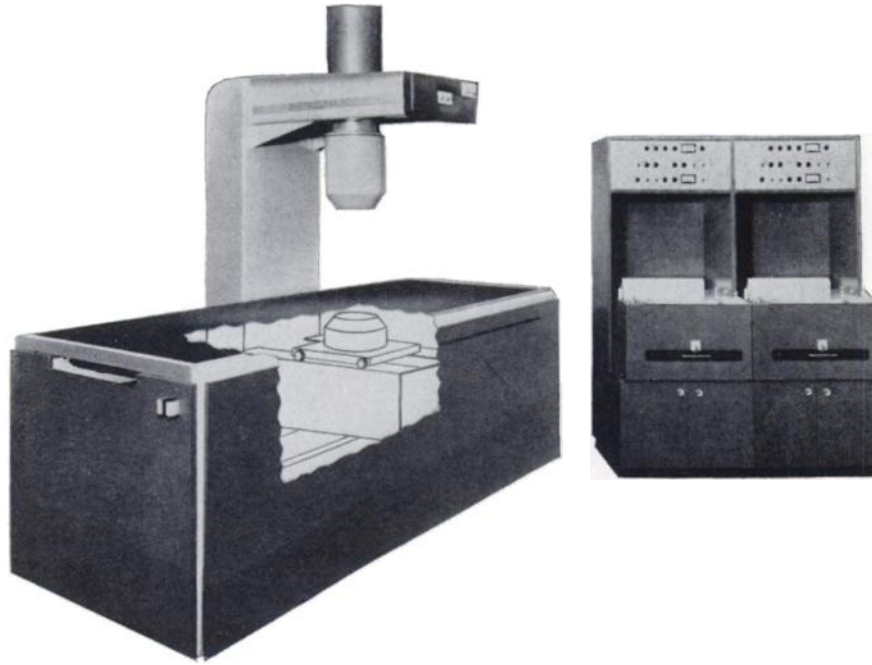
Squibb Resin Uptake Kit with
Liothyronine I^{125} Buffer Solution

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

RADIOISOTOPE SCANNER

MODEL 54-FD

DUAL, OPPOSED, 5-INCH CRYSTALS



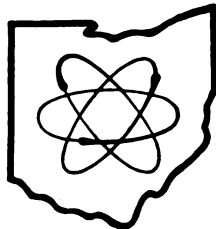
The demonstrable advantages of a dual 5-inch crystal scanner should be investigated by all those with a high clinical load who desire high resolution, rapid scans of both large and small organs or of the whole body.

The two scanning heads, exactly opposite each other, have separate, and complete electronics and print-out so that the data collected by each crystal may be used separately, in coincidence, or additively.

Mechanical and electronic specifications are the same as for our other large-crystal radioisotope scanners Models 54F and 54H:

Scanning speeds continuously variable to 200 inches per minute (500 cm/min.); adequate shielding even for high energy gamma emitters (up to 3 inches lead and 1 inch steel); high resolution crystals (9 per cent or better); accurate, reproducible scanning speeds and line spacing; no scalloping at any speeds; low background crystals (2 inch thick pure NaI light pipe); Gamma-graphic (patent pending) or slit mask photoscans; unequivocal one year warranty anywhere in USA or Canada.

This unparalleled radioisotope scanner is priced at \$28,750 with delivery in 90 days guaranteed.



OHIO-NUCLEAR, INC.

1725 FALL AVENUE

CLEVELAND, OHIO

216 - 621-8477

Name the radioisotope dose you want to calibrate:

Technetium-99m	Mercury-203
Iodine-131	Gold-198
Xenon-133	Chromium-51
Strontium-87m	Selenium-75
Gallium-68	Cobalt-60
Cobalt-57	Cadmium-109
Mercury-197	Iron-59
Radium-226	Cesium-137
Sodium-24	or what have you.

Calibrate them all with Nuclear-Chicago's Mediac® Dose Calibrator.



And read the amount of radioactivity, in microcuries or millicuries, on the lighted digital display. Sensitivity ranges from 0.05 microcurie (background) to 99.9 millicuries (999 millicuries for Tc-99m). Use any standard vial or syringe. Routine calibration with gamma-ray energies as low as 75 Kev. Backed by nation-wide, world-wide Nuclear-Chicago service.

Please write for the Mediac Dose Calibrator Brochure or consult your local Nuclear-Chicago sales engineer.

7-886

Research in the Service of Mankind



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CORPORATION**

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Donker Curtiusstraat 7, Amsterdam W, The Netherlands

How can you prove the engineering excellence of an Eberline Instrument

Take it apart!

The quality features of an Eberline Instrument are obvious from any angle . . . compact, sturdy, usable! But have a look inside where engineering excellence really counts. Take this instrument for example. A single etched board holds and connects all components. Result . . . minimum soldered joints to insure reliability. The etched board connects to diecast aluminum cover,

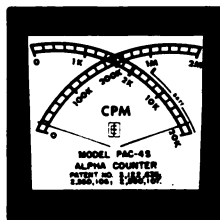
forming a completely operational instrument with controls and test points exposed for easy calibration or service. The O-ring cover seal forms a rugged, weatherproof housing. Note all the excellent features in any Eberline instrument then prepare for a pleasant surprise . . . while obviously superior, your Eberline is economically priced!



MODEL
E-120

PORTABLE BETA-GAMMA SURVEY METER

This small, rugged instrument provides integrated circuits, excellent linearity and readability, variable meter response time and stability over wide temperatures. Its combination power switch provides battery check and three sensitivity ranges . . . furnished with a HP-177B hand probe. Available accessories include headset, speaker assembly and end window detector.



LIN-LOGTM

FOUR DECADES OF COUNT RATE

The new Lin-Log, designed and manufactured exclusively by Eberline, provides four color coded decades of count rate for continuous readout from lowest to highest. Insures against error . . . just read the needle that is on scale. Lin-Log is adaptable to all pulse type detectors. Accessories include headset and audio speaker. A new quality product at the price of counterparts.



MODEL
RM-3C

RADIATION MONITOR WITH HIGH LEVEL AUDIBLE ALARM

This all-transistorized instrument, a revised version of the reliable RM-3A, incorporates an adjustable high level alarm and interchangeability of detectors. Lightweight and portable, it provides alpha or beta-gamma measurements on surfaces, clothing and samples. Its audible high frequency alarm can be set at any warning level. Accessories include a complete range of detectors capable of monitoring Alpha, Beta and Beta-Gamma radiation, anywhere.



EBERLINE INSTRUMENT CORPORATION

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Name the kind of *T3 test you plan to use:

*T3_{RBC} U (Iodine-131)

*T3_{RESIN} U (Iodine-131)

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Use any or all
of them with Nuclear-Chicago's
Mediac® *T3 Counter.



And read the per cent thyroid uptake directly, in digits. Panel-mounted cards show step-by-step procedure for all *T3 tests. Lighted display tells you what Mediac is doing and when to go to next step. Simple, two-button operation. Electronic normalizing. Plus dependable Nuclear-Chicago service—everywhere.

Please write for the Mediac *T3 Brochure or consult your local Nuclear-Chicago sales engineer.

7-000

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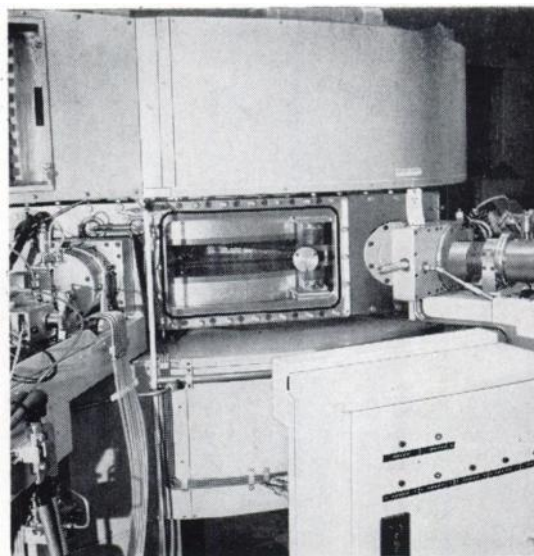
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The Duphar cyclotron located at the Reactor Centre Petten/Holland greatly enlarges the availability of many **carrier-free** radioactive isotopes

Known isotopes will be produced at a regular basis, new isotopes are to be developed.

Your isotope needs now can be satisfied.

Se72/As72	Fe52	Sr82/Rb82
Ag106	Fe55	Rb84
Al26	Fe59	Se75
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Au195	Hg197	Y87/Sr87m
Be7	I124	Mo99/Tc99m
Bi205	I125	Tl 202
Bi206	I126	V48/49
Bi207	Ar42/K42	W181
Br77	Rb83/Kr83	Xe127
Cu67	Mg28	Y88
Cd109	Mn52	Sr90/Y90
Ce139	Mn54	Zr89
Co57	Na22
Co58	Pb203
Cr51	Pm145
Ba131/Cs131	Po208



Mark your interest and send your enquiries to:

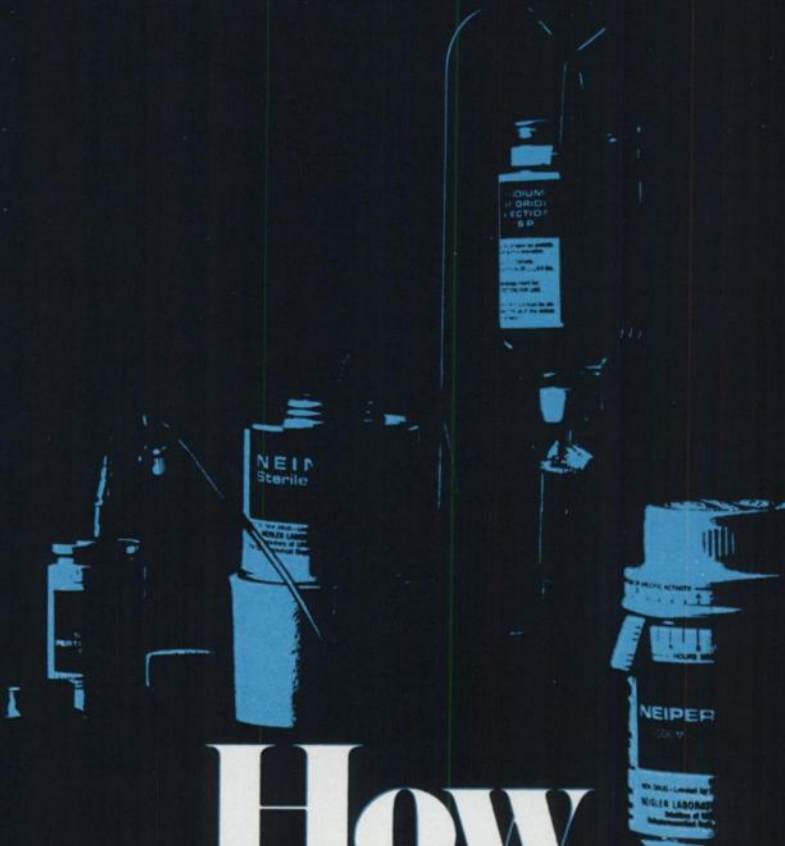


cyclotron and isotope laboratories

E 658

N.V. PHILIPS-DUPHAR
Cyclotron and Isotope Laboratories
PETTEN HOLLAND

Telephone: (0)2246 - 678
Telegrams: Cyclotron-Petten

A collection of medical equipment and NEIPER products is arranged on a dark surface. In the center is a large, clear cylindrical container with a label that reads 'NEIPER Sterile'. To its right is a smaller, clear cylindrical container with a label that reads 'NEIPER'. Above the large container is a small, clear vial with a label that reads 'SOLUM'. To the left of the large container is a small, clear vial with a label that reads 'NEIPER'. To the right of the large container is a small, clear vial with a label that reads 'NEIPER'.

How
do you
prefer your
 ^{99m}Tc
?

now from Neisler...

**STERILE, PYROGEN-FREE
SODIUM PERTECHNETATE Tc 99^m
AS YOU NEED IT,
ALL WEEK LONG**

NEIMOTEC® Sterile Generator

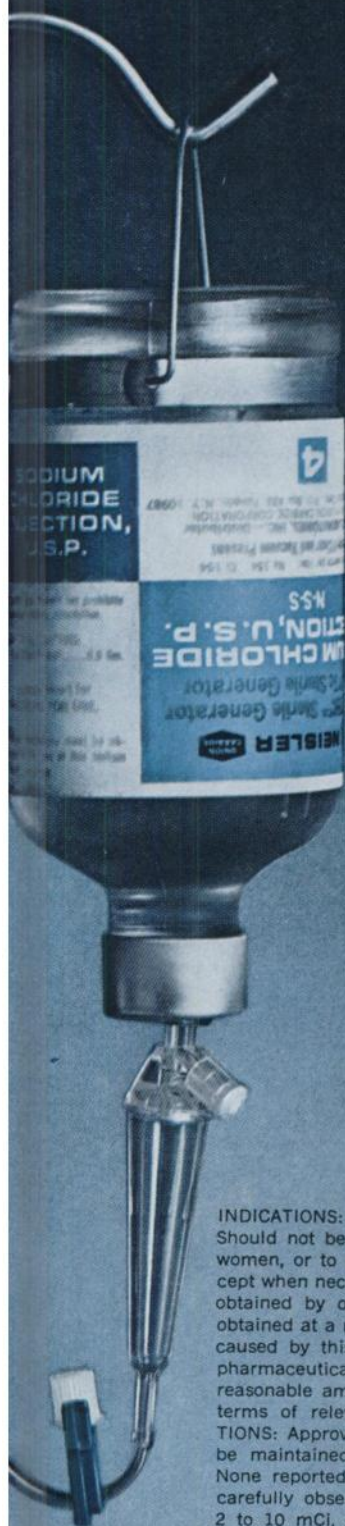
⁹⁹Mo/^{99m}Tc Sterile Generator

FAST...EASY...ECONOMICAL

- simple vacuum elution system for maximum dependability
- entire system sterile...one-time entry to easily accessible septa
- high-yield...high chemical purity
- multiple daily elutions possible

SUPPLIED: 100, 200
or 300 mCi at noon,
New York time, on Mondays
following shipment;
in nonreturnable lead
container, with complete
eluting accessories.





INDICATIONS: Brain scanning. **CONTRAINDICATIONS:** Should not be administered to pregnant or lactating women, or to patients under the age of 18 years, except when necessary diagnostic information cannot be obtained by other types of studies or can only be obtained at a risk greater than the radiation exposure caused by this drug. **WARNINGS:** As with all radiopharmaceuticals, dose should be limited to smallest reasonable amount consistent with greatest value in terms of relevant diagnostic information. **PRECAUTIONS:** Approved radiation safety precautions should be maintained at all times. **ADVERSE REACTIONS:** None reported to date; however, patients should be carefully observed. **DOSEAGE AND ADMINISTRATION:** 2 to 10 mCi, administered by intravenous injection.

Physicians should consult product package insert before administering.



NEISLER LABORATORIES, INC.
Subsidiary of
UNION CARBIDE CORPORATION
Radiopharmaceutical Dept.
P.O. Box 433, Tuxedo, New York 10987

PRECALIBRATED READY-TO-USE

NEIPERTEC™ 99m

sodium pertechnetate Tc 99m

SUPPLIED: In lead-shielded vials in convenient COMPUTERCAP™ packaging; 10 or 15 mCi at the time of calibration.



RADIOCHEMICAL products for medical research and practise



The metabolism of selenomethionine appears to be closely similar to that of methionine and on administration the compound is rapidly incorporated into the pancreatic enzymes. By using selenomethionine labelled with the gamma emitting radioisotope selenium-75,

successful visualisation of the human pancreas can be obtained.


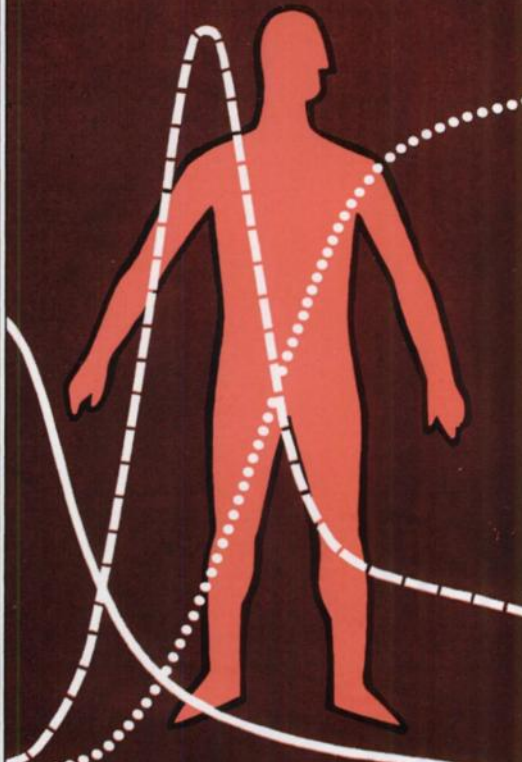
Scans of the pancreas require about 250 μ c of L-Selenomethionine-Se75. The product is supplied as a sterile aqueous solution (code SC.1P), specific activity 100-400 mc/mM.

The Radiochemical Centre Amersham England



TAS/RC. 133/1

NOW AVAILABLE FOR THE FIRST TIME!

<p>XENON-133 IN A CONVENIENT, PRACTICAL FORM</p>  <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">XENEISOL 133 <small>TRADEMARK</small></p> <p style="text-align: center;">(XENON 133 Solution)</p> <p style="text-align: center;"><small>CAUTION: NEW DRUG—Limited by Federal Law to investigational use. See accompanying literature for DIRECTIONS FOR USE.</small></p> <p style="text-align: center;"><small>Replace this cartridge in outer container when not in use.</small></p> <p style="text-align: center;"><small>NEISLER LABORATORIES, INC.—Distributor Subsidiary of UNION CARBIDE CORPORATION Radiopharmaceutical Dept. P.O. Box 433, Tuxedo, New York 10987</small></p> </div>	<p>FOR INVESTIGATIONAL DYNAMIC FLOW STUDIES</p> 
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XENEISOL^{T.M.} 133

(XENON-133 IN SODIUM CHLORIDE FOR INJECTION)

☐ **ALL OF THE GAS IN SOLUTION —**

No gas phase in the cartridge, therefore no loss of ¹³³Xe into a gas space. Order the amount you need...know the dose you administer.

☐ **REDUCED RADIATION RISK...
CONVENIENT SHELF-LIFE—**

Biological half-life of *15 minutes or less* assures minimal radiation exposure... physical half-life of 5.27 days affords practical storage and use time.

☐ **READY FOR USE BY INJECTION —**

Supplied as sterile, pyrogen-free solution—for investigational use only.

☐ **UNIQUE COMPUTERCAP^{T.M.} PACKAGING—**

Automatic computation of activity and concentration at any time after calibration.

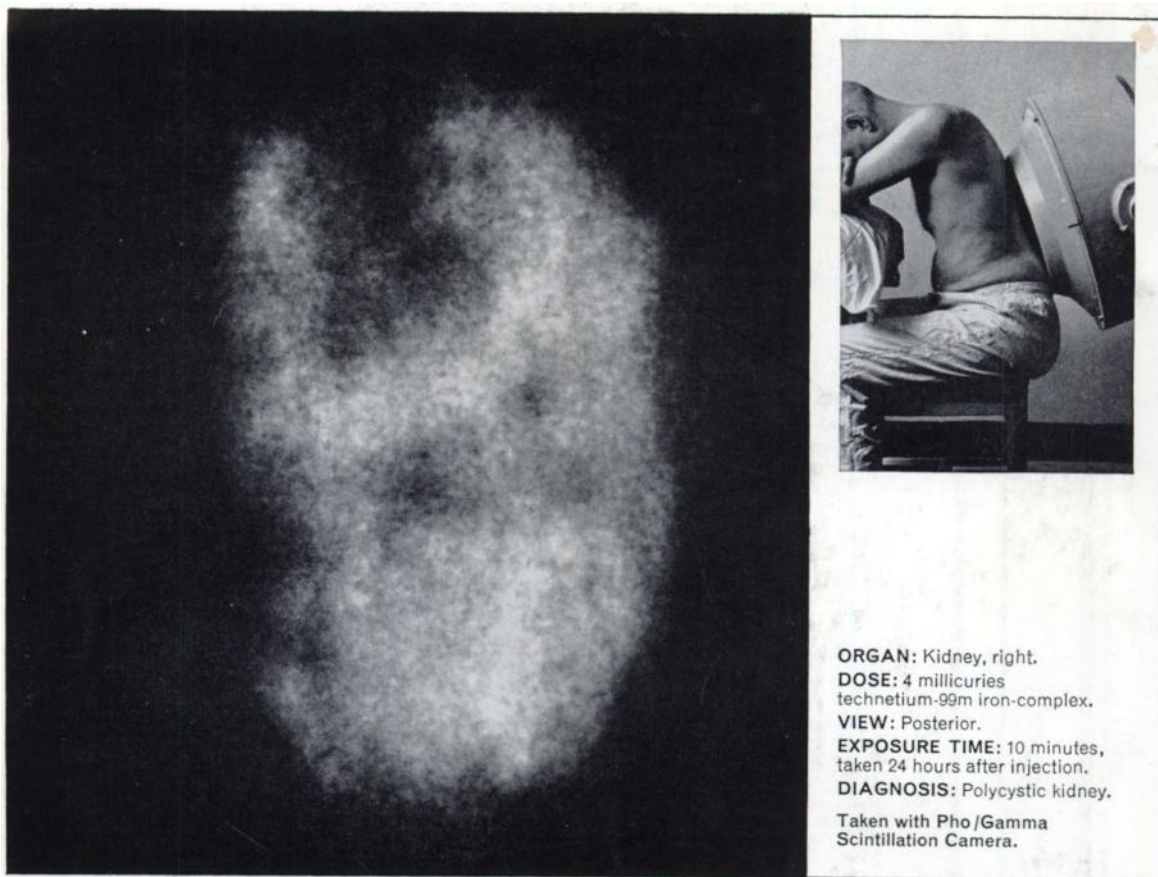
PRECAUTIONS: Approved radiation safety precautions should be maintained at all times. Do not administer to pregnant or lactating women, or to patients under the age of 18 years, except when necessary diagnostic information cannot be obtained by other types of studies or can only be obtained at a risk greater than that of the radiation exposure caused by this drug.

SIDE EFFECTS: None reported to date; however, care should be exercised in administration.

Comprehensive literature available on request.



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Kidney, abnormal.

Wouldn't you like to be able to locate lesions like these—rapidly?

The picture shown above is a scintiphoto—a record of isotope distribution made by Nuclear-Chicago's Pho/Gamma® III Scintillation Camera. Consider the advantages of Pho/Gamma for your work.

First of all, Pho/Gamma's continuously sensitive view of all of the organ, all of the time, gives you high-speed, high-resolution isotope imaging. The benefits: Maximum patient comfort. Accommodation of heavy patient case loads. Minimal distortion from respiratory and other motions. True dynamic visualization of in-vivo processes by means of rapid-sequence, stop-motion scintiphotography.

And Pho/Gamma has a motorized, omnidirectional detector head for fast, versatile positioning. You can easily obtain multiple views of organs and body areas in all orientations.

We've also made Pho/Gamma easy to operate. Its convenient desk console houses all electronics including twin oscilloscopes. You can simultaneously monitor and record the area of interest. The console also contains a dual scaler/timer and all controls for set-up and operation.

Finally, Pho/Gamma is ready for future developments in your work. There's built-in provision for adding a positron head for tomographic studies. Other system-expanding accessories include a fast printer and a 1600-data-point multidimensional analyzer for storage, manipulation, and analysis of digital data.

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