QUANTISORB™

T_4N Diagnostic Kit

One step in Abbott's new T_4N thyroid test eliminates most false values due to TBG abnormalities.

After thyroxine is extracted from patient serum, 10 lambda of the untreated patient serum is added.

Pregnancy, estrogens—almost all external factors that can raise or lower thyroxine levels—are then balanced out or normalized by corresponding amounts of protein binding sites in the added serum.

Both Quantisorb (T_4N) and Tetrasorb® (T_4) tests have the same normal range, and values are read in micrograms. When the tests are run together, the results are easily correlated, and provide several parameters for diagnosis. Values normalized to reflect thyroid status by Quantisorb are quickly compared with the total serum thyroxine levels shown by Tetrasorb.

305426

How Quantisorb values correlated with thyroid status in 759 clinically diagnosed patients.

	Hypothyroid Range	Euthyroid Range	Hyperthyroid Range
472 Euthyroid Patients	7 Patients	461 Patients 98% Correlation	4 Patients
81 Hypothyroid Patients	74 Patients 91% Correlation	7 Patients	
109 Hyperthyroid Range		11 Patients	98 Patients 90% Correlation
25 Pregnant Euthyroid Patients		24 Patients 96% Correlation	1 Patient
72 Euthyroid Patients on Estrogen	2 Patients	68 Patients 94% Correlation	2 Patients

Chart represents findings by investigators in three separate geographical areas.

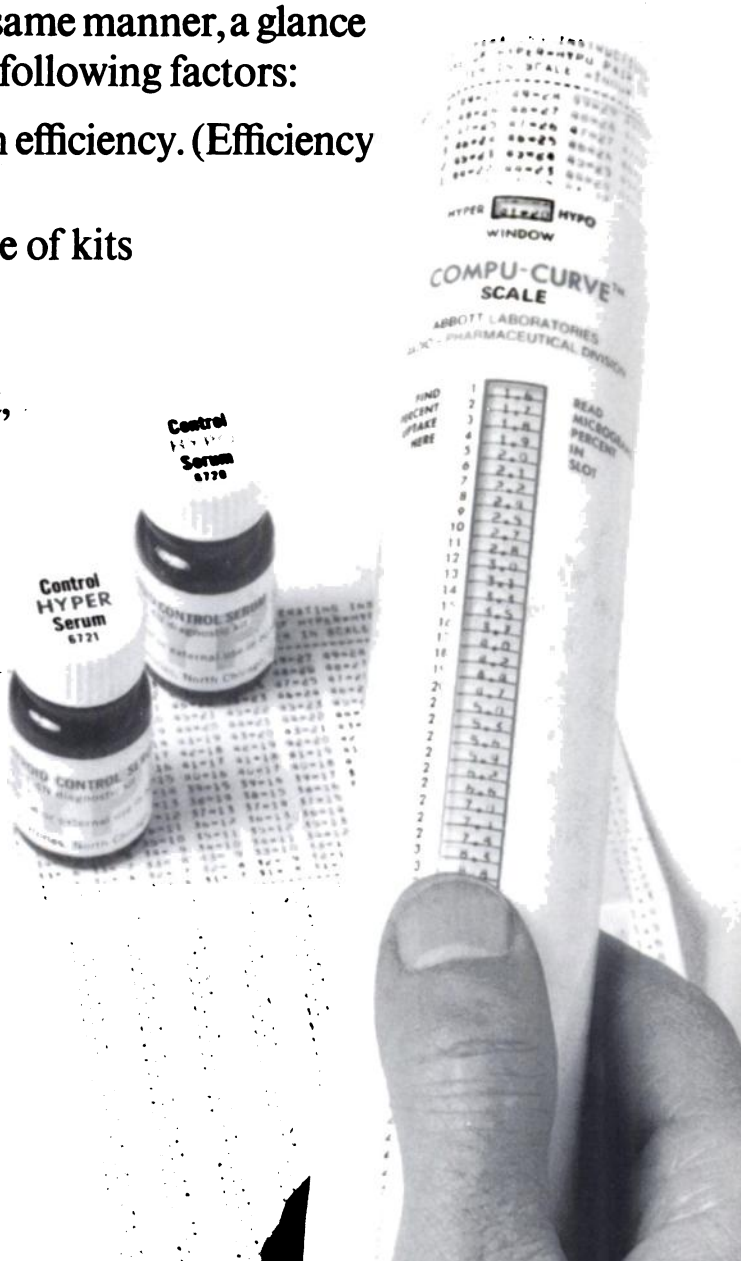
TM-Trademark

Abbott's new Computerized Curve cuts testing time-shows values corrected for lab and lot variances

The standard curve is supplied as a table with corrections for variance pre-calculated for you by computer. Place the table in Abbott's new Compu-curve™ scale. When hyper-hypo controls and tests have been run in the same manner, a glance shows you compensated values for the following factors:

1. Variances in thyroxine extraction efficiency. (Efficiency determinations are not needed.)
2. Variances between kits and in age of kits within their dating period.
3. Consistent variances within and between labs due to types of equipment, laboratory set-up, and individual techniques of personnel.

In short: You save time and money. Results are more easily compared within your laboratory, and with the results of others.

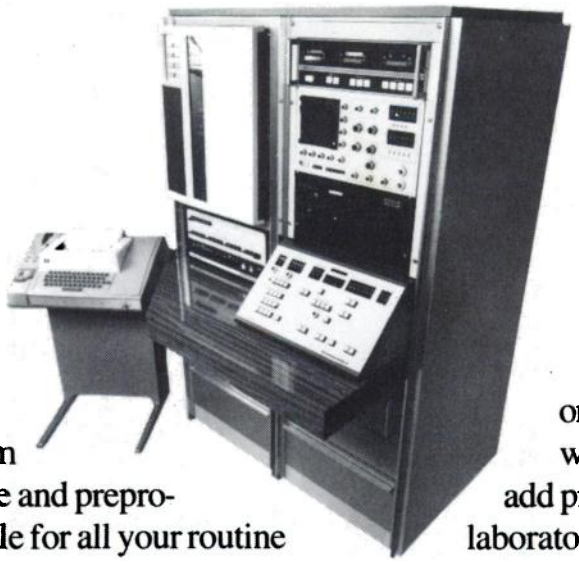


ABBOTT LABORATORIES
North Chicago, Illinois 60064
Radio-Pharmaceutical Products Division

In Europe: Labor-Service GmbH,
Abbott European Radio-Pharmaceuticals,
D 6236 Eschborn, Germany, Postfach 1245

How many data systems perform simultaneous real time image processing and general laboratory computation?

Just one.



With the Intertechnique Cinescintigraphy system you have a simple-to-use and preprogrammed system suitable for all your routine clinical imaging needs. And at the same time a powerful general purpose computer for radioimmunoassay determinations and other laboratory applications. Competitive systems promise this dual versatility, but Raytheon delivers.

For image data processing you can choose between a hard-wired function approach or utilize the clinically proven software. What's more, you can easily add programs specific to your clinical and laboratory requirements with LEM — our user-oriented language.

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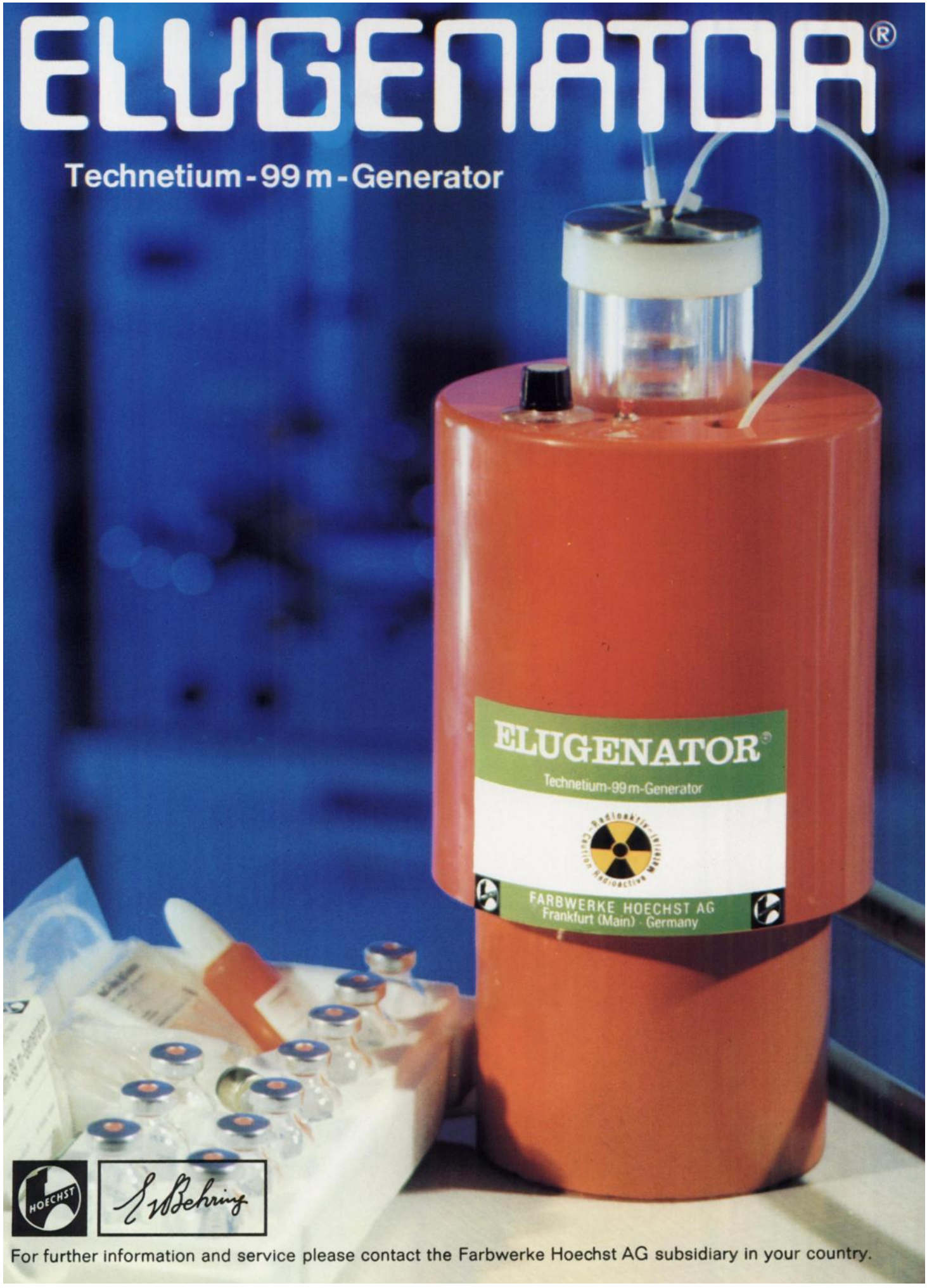

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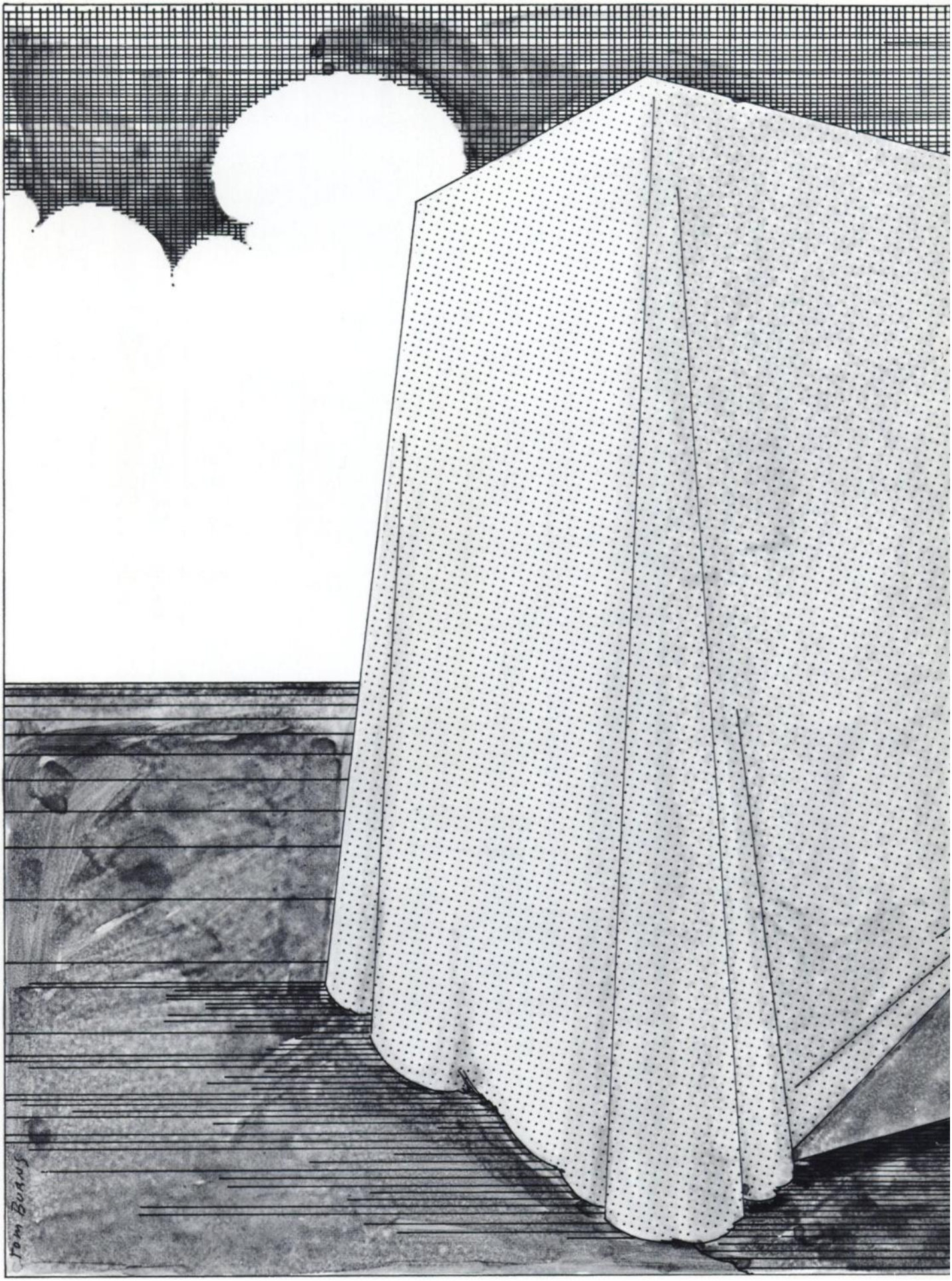
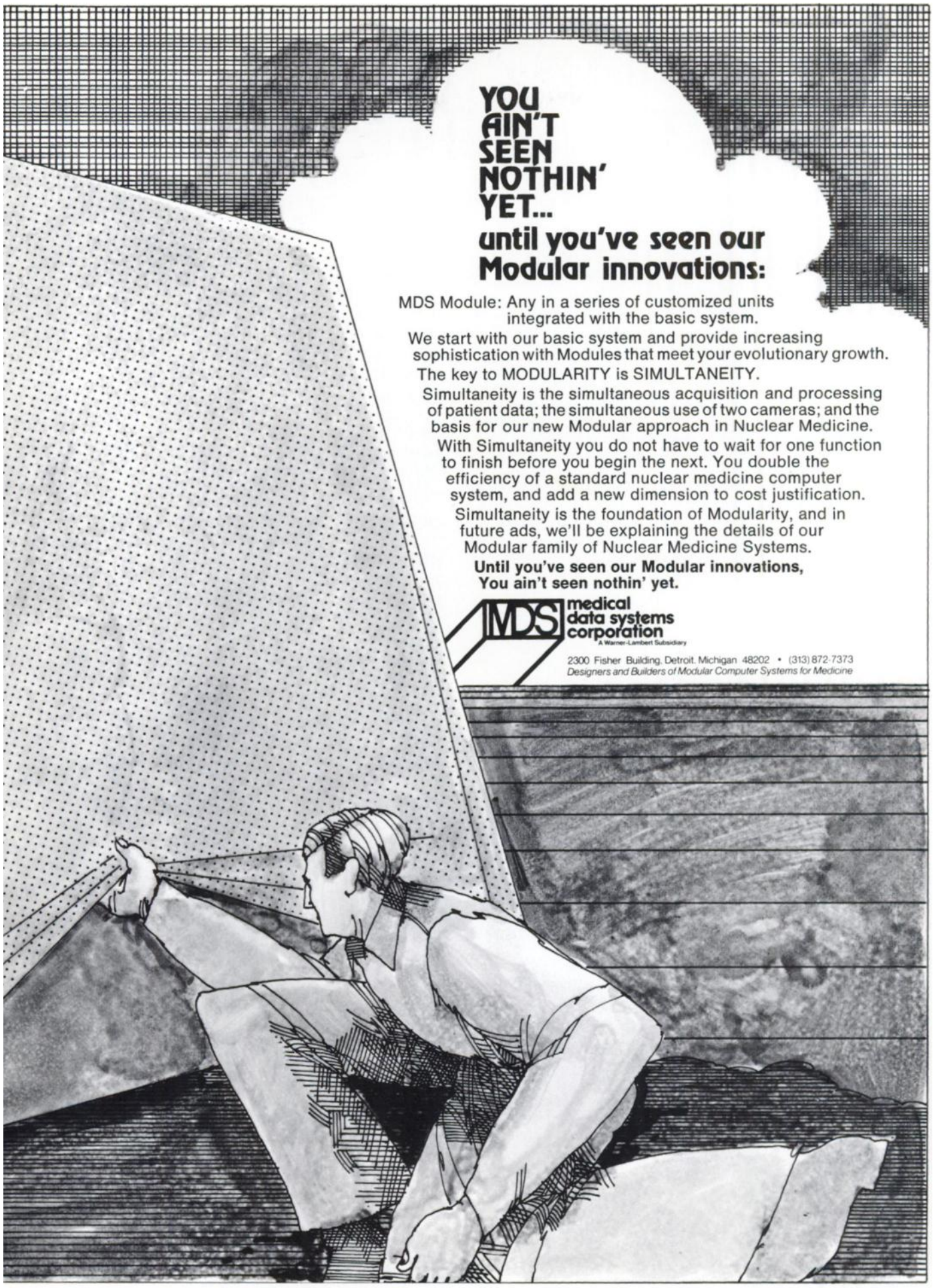
I. Behring

For further information and service please contact the Farbwerke Hoechst AG subsidiary in your country.


Tom Burns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BREAKTHROUGH IN ACCURACY OF HEROIN DETECTION...

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Radioimmunoassay for Morphine

THE RELIABLE WAY TO IDENTIFY HEROIN USERS

ABUSCREEN™ Radioimmunoassay for Morphine is a specific and unusually sensitive test for the presence of morphine and its analogs in biological specimens.

The test procedure is based on the competitive binding to antibody of radiolabeled antigen* and unlabeled antigen, in proportion to their concentration in the solution. Unlabeled antigen displaces radioactive antigen from the limited antibody present.

An unknown specimen is added to a test tube containing known amounts of morphine antiserum and radiolabeled antigen. Following precipitation and centrifugation, the supernatant fluid is transferred to test tubes for counting in a scintillation counter. A positive specimen is identified when its radioactivity is equal to or greater than that of the positive control.

Results can be quantified by comparing counts per minute (CPM) obtained from dilutions of the unknown specimen with the average CPM obtained from dilutions of the morphine positive control, plotted as a standard curve.

*Either tritium- or iodine-labeled antigen available

COMPARISON OF MORPHINE SCREENING PROCEDURES

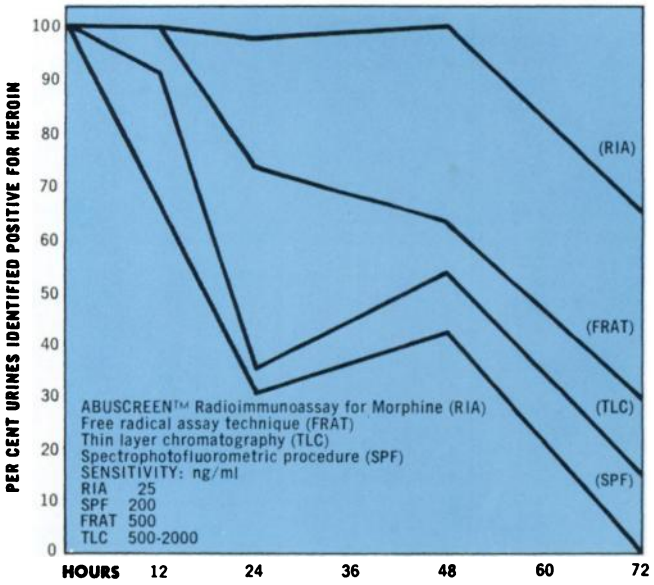
	ABUSCREEN™ Radioimmunoassay	Thin Layer Chromatography (TLC)	Free Radical Assay Technique (FRAT)	Automated Fluorescent Assay	Gas Chromatography
Recommended Level of Sensitivity	^{125}I-labeled antigen 40 ng/ml ^{3}H-labeled antigen 60 ng/ml	1,000 ng/ml	500 ng/ml	200 ng/ml	500 ng/ml
Labor Thruput (specimens per person per 7½ hour shift)	475 per day*	60/day	500/day†	260/day	60/day
Labor Cost	$0.15	$1.17	$0.15	$0.27	$1.17
Instrument Capacity (based on one shift)	500/day	—	450/day*	260/day	20/day
Treatment of Test Specimen	none	pH adjustment extraction hydrolysis column purification concentration	oxidation	none	pH adjustment multiple (∿8) extractions hydrolysis

*Exclusive of sample identification and labeling and evaluation of results.
†Manufacturer's claim.

PROVEN: GREATER RELIABILITY THAN COMMONLY USED SCREENING TECHNIQUES

In a study* comparing the reliability of ABUSCREEN™ Radioimmunoassay for Morphine† with three other primary screening procedures, urine samples from 72 known addicts who admitted to heroin use were analyzed by all four methods. Test results are summarized in the accompanying graph.

COMPARISON OF RELIABILITY OF HEROIN SCREENING TECHNIQUES



- **specific heroin assay**—The test utilizes an immunological reaction, and thus is specific for morphine and its analogs, minimizing the problem of false positives.

- **highly sensitive heroin-assay**—The test utilizes a radiochemical method, and thus is highly sensitive, making false negatives rare.

- **results achieved rapidly**—The procedure is simple and rapid, needs no hydrolysis or other pretreatment of urine, and does not require highly skilled personnel. Easily adapted to automated processes, it can be used for large- or small-scale screening as well as *stat* testing.

- **provides objective results**—The nature of the test procedure eliminates subjectivity in interpreting results.

*Catlin, D. H.: Paper presented at the 30th International Congress on Alcoholism and Drug Dependence, Amsterdam, Sept. 4-9, 1972.

†In this study, tritium-labeled morphine was used. Reevaluation of the study, using the same antiserum lot and ^{125}I morphine, produced similar results.

THE PRIMARY SCREEN FOR HEROIN ABUSE

Abuscreen™

Radioimmunoassay for Morphine

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Please have a salesman contact me to discuss Abuscreen™ Radioimmunoassay for Morphine

Please ship _____ kits

- ☐ ^{125}I label
- ☐ ^{3}H label
- ☐ One Kit (100 tubes) . . . $100.00
- ☐ I am interested in contract pricing

Name_____

Title & Field of Interest_____

Laboratory_____

Address_____

City_____ State_____ Zip Code_____

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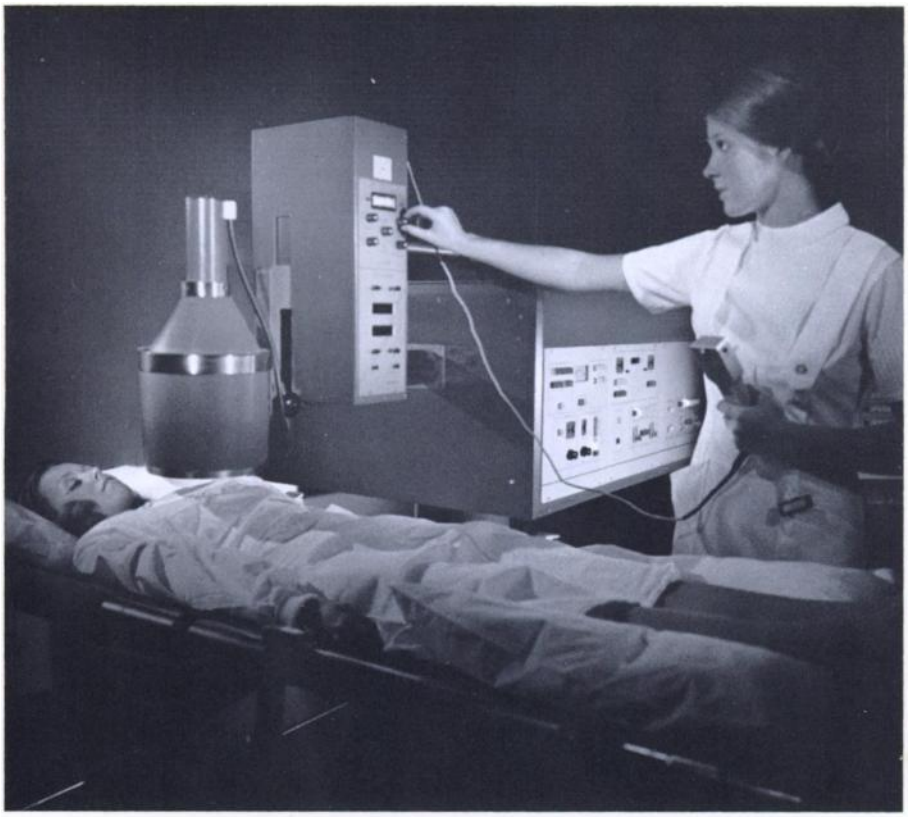
AEC or Agreement State License No._____



Single probe scanner automatically delivers diagnostic information

A combination of automatic features, preset with simple push button and thumbwheel controls, facilitates operation of General Electric's single probe digital scanner; thus provides less opportunity for technic errors.

Scanning speed is controlled and displayed automatically at the panel meter after desired line spacing and information density settings have been selected and the hot spot located. And, speed can be adjusted manually, if desired.

Other automatic features include: film exposure slit length changes with line spacing to prevent scan gaps or overlaps; scalloping corrections to align the photoscan display; and, photorecording density settings between preset minimum/maximum values.

The GE single probe scanner also provides a built-in scaler; push button probe positioning; easy-to-read light-emitting diodes; and four collimators as standard equipment.

Scan information is available three ways: standard format includes mechanical dot and photorecording. GE's electronic color Videodisplay and Processing Unit is optional.

Videodisplay Processor extends the diagnostic value of any scanner or nuclear camera. Permits viewing and quantification of patient count information, in black and white or fully functional color. Images are displayed on a video monitor; can be manipulated long after the patient leaves the department to enhance desired details aid interpretation and diagnosis. Information remains stored in the VDP's electronic memory, for further manipulations, until erased. Enhanced VDP data may be played back to the detector and recorded on 14 x 17 inch film. Scans can be recorded on cassette tape as well as on photographic film; count information from any scanner or camera can be transmitted to a VDP unit over regular telephone lines.

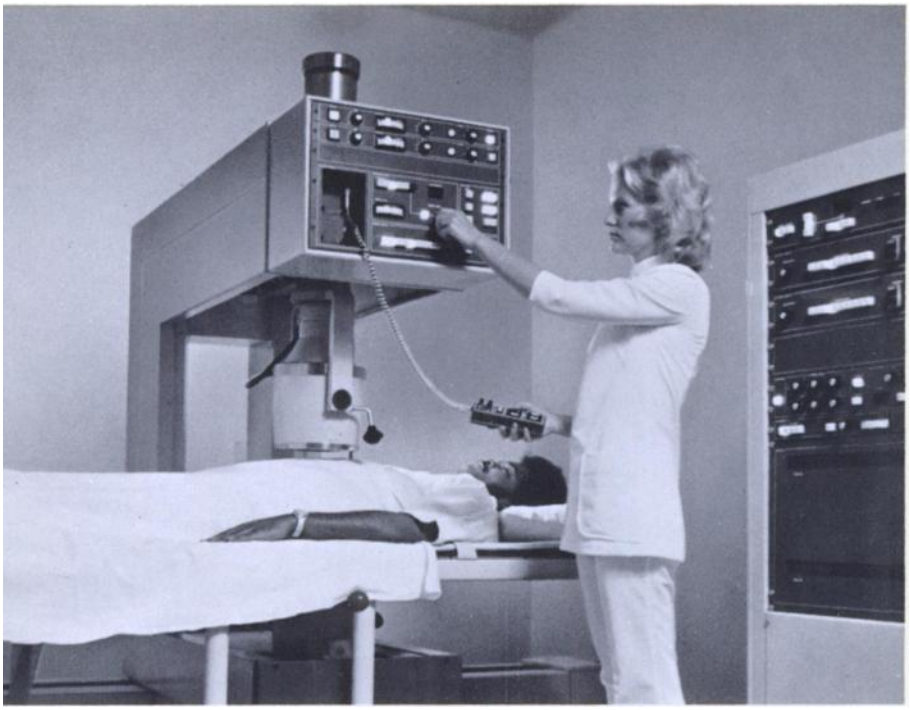
The complete nuclear laboratory The Nuclear Medicine Accessories & Non-imaging Instrumentation catalog by General Electric offers a complete product listing for the nuclear laboratory.

The featured instrument systems are for the most part, unique in their ability to provide versatile yet functional diagnostic tools.

In addition to a full line of diagnostic instrument systems, the catalog describes protective equipment, film processors and illuminators, phantoms, tables and other nuclear supplies.

This free catalog and specific product information is available by contacting your GE Medical Systems representative.

information compendium



Scan the whole body or a single organ with equal ease

The value is well established for viewing a full-size nuclear scan of a single organ on 14 x 17 inch film. Yet it's equally easy to scan any patient's entire body and minify the image to fit the same size film, using General Electric's Maxiscan Whole Body Digital Scanner.

The unit's two probes and three scanning directions provide maximum patient count information with minimum technic error and reduced set up time.

Skeletal surveys, for any size patient, can be conducted within a travel range of 2 feet wide by 6 feet 6 inches long. This permits the location and diagnosis of bone metastases beyond a specific organ, without a series of small area scans; such as, prior to radical mastectomy procedures.

In addition to whole body scans, Maxiscan performs local area studies too, all with minimum patient movement. The scanner's two probes and three scanning directions cover the entire lung, top and bottom, without turning the patient. The top probe angulates 270° and has a powered 12 inch vertical travel. With optional vertical plane scanning, the patient can be seated upright; also, vertex views of the brain can be accomplished with the patient reclining normally.

Rotating switch settings permit selection of full size scans or minifications of 2:1, 3:1, 4:1 and 5:1. This versatility, plus push button quadrant placement controls, precisely segments four different scans on a single 14 x 17 inch film, with no image overlap.

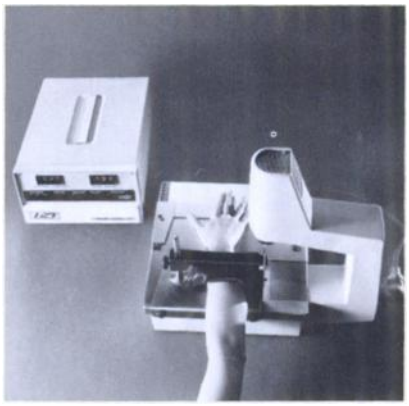
Maxiscan controls are sequentially arranged to minimize the operator's back and forth movement between the electronics console and the gantry. Also, a number of automatic features are controlled with push button and dial settings. For example: scanning speed. After desired line spacing and information density settings have been selected and the hot spot located, scanning speed for the procedure is automatically displayed; no charts, graphs or calculations.

To view and quantify scans in black and white or color, Maxiscan can be combined with GE's Videodisplay and Processing Unit.

Non-invasive technic for diagnosing bone diseases

Gradual decreases in the amount and strength of bone tissue, caused by osteoporosis and other metabolic bone diseases, can now be identified before serious complications set in.

This simple, non-invasive diagnostic unit, available from General Electric, measures changes and losses in bone mineral content and bone width. This permits quantitative assessment of skeletal integrity. Ideal for serial studies to determine therapeutic progress.

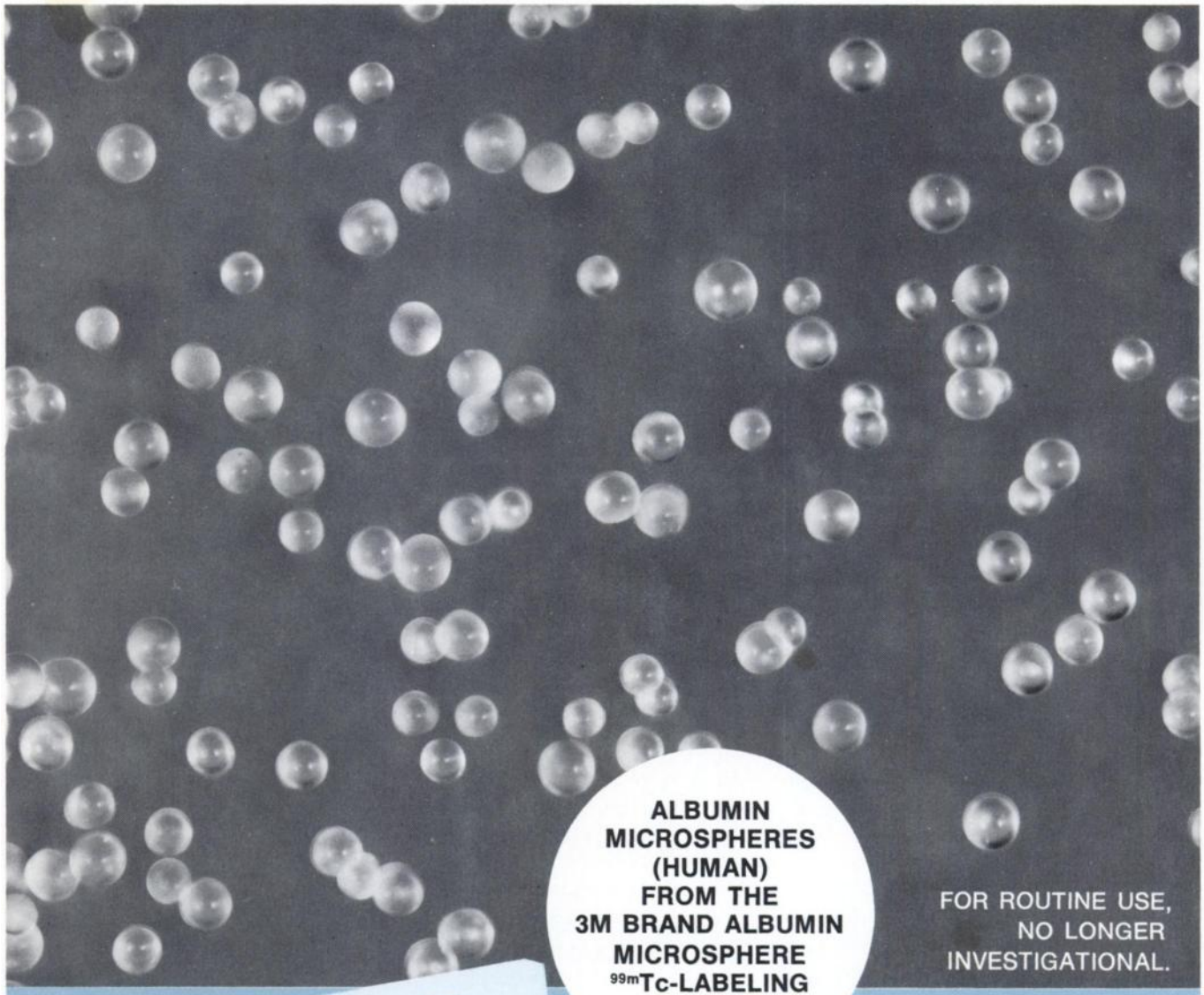


The Bone Mineral Analyzer includes a scanner, which automatically transports a closely collimated beam of mono-energetic gamma rays (^{125}I) across the limb in a programmed pattern. The generated data is transmitted to a mini-computer which calculates the mineral content and bone width; displays measurements in digital readouts. This data can be related to normal and specific patient populations.

The system is compact, readily portable and easy to operate. The radioisotope used can be purchased from General Electric.

General Electric Medical Systems, Milwaukee and Toronto.
In Europe, Elscint GmbH, Wiesbaden; Elscint France SARL, Buc.

GENERAL ELECTRIC



ALBUMIN MICROSPHERES (HUMAN) FROM THE 3M BRAND ALBUMIN MICROSPHERE ^{99m}Tc-LABELING KIT

FOR ROUTINE USE, NO LONGER INVESTIGATIONAL.

FOR CONSISTENT LUNG IMAGES day after day after day!

USE ^{99m}Tc ALBUMIN MICROSPHERES

- **Uniform Shape and Size**
Perfectly spherical, the 3M Albumin Microspheres are uniformly sized to 15-30 microns in diameter. This uniformity, coupled with an extremely low tendency to agglomerate, results in truer images of lung perfusion. The result — no hot spots or extra-lung activity.

- **Integral, yet Biodegradable**
Each Albumin Microsphere is a single homogeneous sphere of albumin — they won't disintegrate in the vial or syringe. Yet, microspheres readily clear from the lung. Pulmonary clearance half-times are long enough for multiple view imaging but are still short enough to allow daily imaging, if required. Microscopic analysis of lung tissue in the mouse showed 99 percent of the administered microspheres were gone after 29 hours.[1]

1. Data on file at the 3M Company and the Bureau of Biologics.

- **Eliminate Interference from "Free" Technetium**
"Free" isotope need no longer interfere with the scan. The unique filter construction of the Microsphere Labeling Vial allows the free isotope to be removed, leaving just labeled microspheres for suspension.

- **Stable Kit**
Currently the expiration date of each kit is *6 months* after the date of manufacture. You can stock the kit and have it available for immediate use. Even a department doing a moderate amount of lung imaging can take advantage of quantity discounts.

- **Each Lot FDA Approved**
Thoroughly tested by 3M, each lot is checked by the Bureau of Biologics, FDA, and approved for shipment. This provides a double-check of sterility, lack of pyrogens, and all the important performance parameters of the kit.

INDICATIONS Scintillation imaging of the lungs with ^{99m}Tc-Labeled Albumin Microspheres is indicated as an adjunct to other diagnostic procedures whenever information about pulmonary circulation is desired.

CONTRAINDICATIONS The safety of Albumin Microspheres in patients with a known right-to-left cardiac shunt has not been established and its use in such patients is contraindicated.

SIDE EFFECTS Although no anaphylactoid reactions have been reported in patients following the administration of Albumin Microspheres, the possibility should be considered that hypersensitivity reactions may occur rarely in patients who receive additional doses of the Microspheres.

HOW SUPPLIED Each kit contains five labeling units. Each labeling unit contains one day's supply of Albumin Microspheres (5mg — enough for 5 to 7 patients) plus all the reagents necessary to attach technetium to the microspheres.

For detailed information about Microspheres and the 3M Brand Albumin Microsphere ^{99m}Tc-Labeling Kit, write: **Nuclear Products for Medicine,** 3M Company, 3M Center, St. Paul, Minnesota 55101, or phone TOLL FREE (800) 328-1671.

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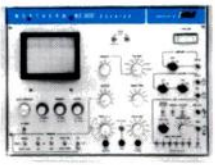

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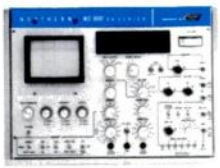

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400 mCi	Cat. No. 010		
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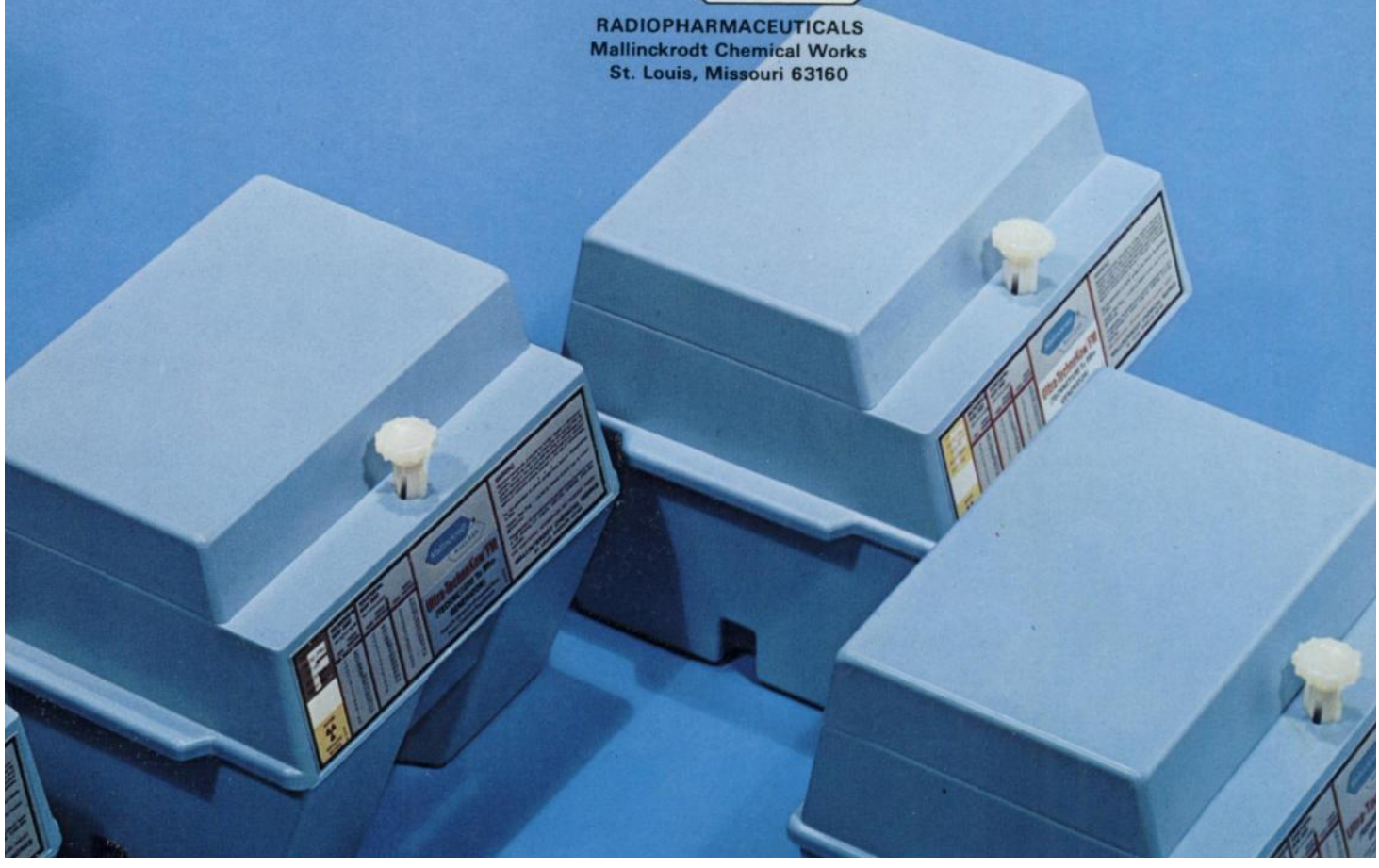

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Lepeska Leasing Corporation introduced its first lease plans to the Society in New Orleans in 1969, and we have not missed exhibiting at a single annual meeting since that time. Our Company now leases more nuclear imaging equipment than anyone else in the business.

Because of this experience and financial commitment to Nuclear Medicine, our lease rates and contract terms are the most competitive in the business. On top of that our leasing executives are expert at advising you on types of leases. For instance, your new camera probably requires a different kind of lease in private practice than it does for the hospital—and still different if you are part of a local, state or Federal government institution. Let us help you understand and compare leases, lease rates and other contract conditions.

We welcome all of our old friends and newcomers to our booth in Miami. Please visit us just to say "hello" and to discuss new ideas for financing Nuclear Medicine equipment. Or write to me personally at 301 East Main Street, Barrington, Illinois 60010. Better yet call us toll free 800/323-7400 (in Illinois 312/381-2330).

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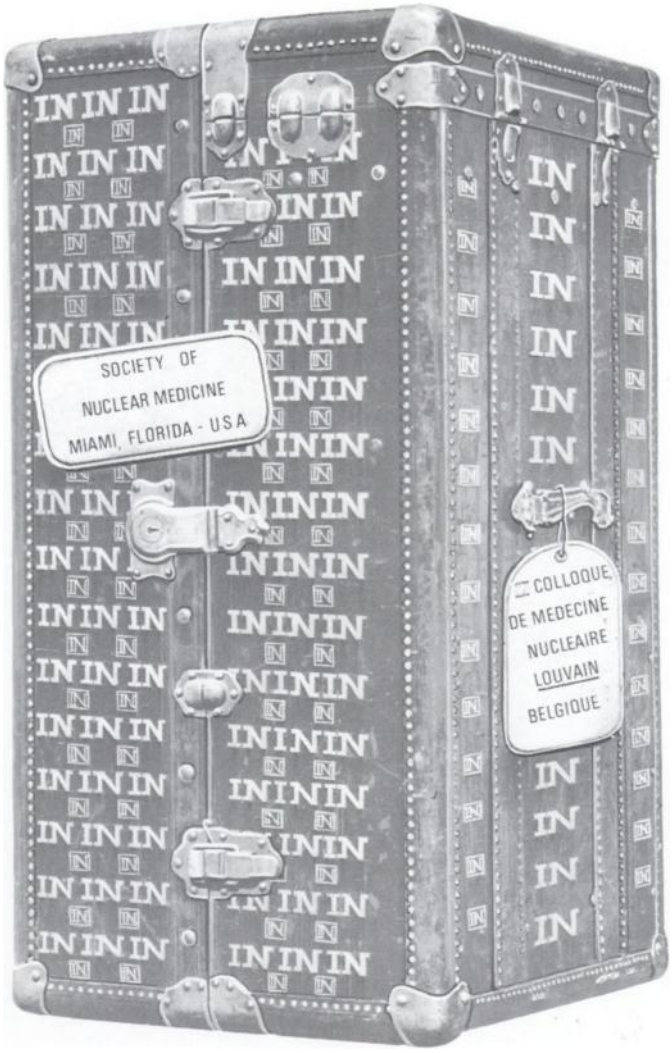

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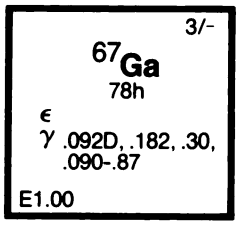
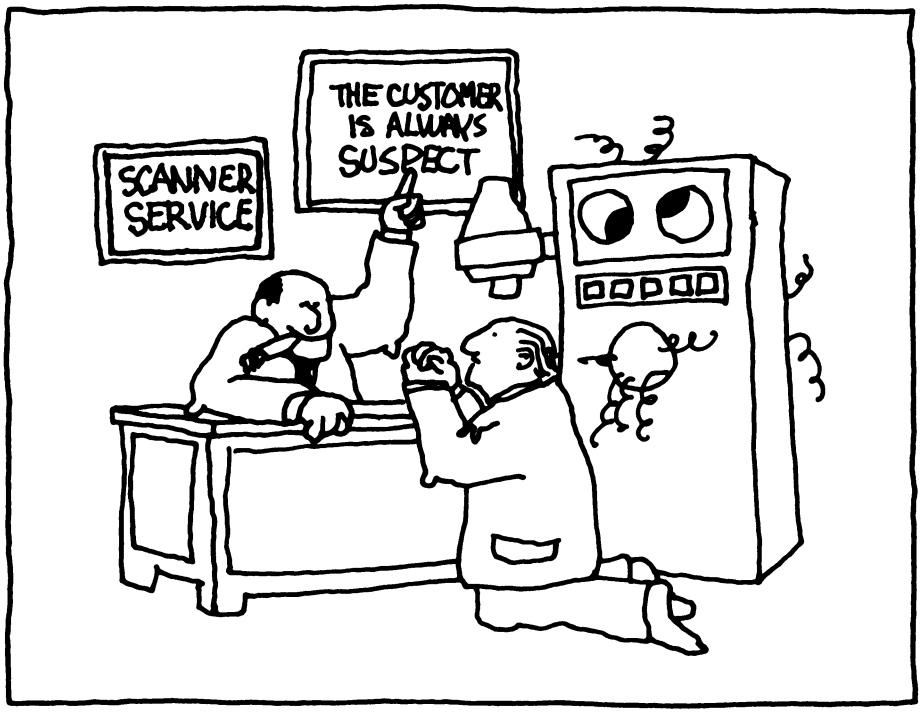


New England Nuclear
Radiopharmaceutical Division
Atomlight Place, North Billerica, Mass. 01862
Telephone (617) 667-9531

When were you last on your knees?



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The Graphic scanner team is not one man who sells you an instrument and then forgets you. We provide the assistance of a radio-pharmaceutical representative, nuclear instrument consultant and field service engineer. They are ready to help even when everything is running smoothly. Our team is capable and willing to help you set-up a new department. They can assist in licensing procedures, thorough training of technicians, including new diagnostic procedures and techniques.

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Synchronizes x-ray and γ-ray images...

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The completely safe, fully portable Brattle Physiological Synchronizer automatically synchronizes x-ray and nuclear medicine exposures of internal organs to predetermined phases of the patient's cardiac and/or respiratory cycles using signals obtained from a pair of ECG electrodes.

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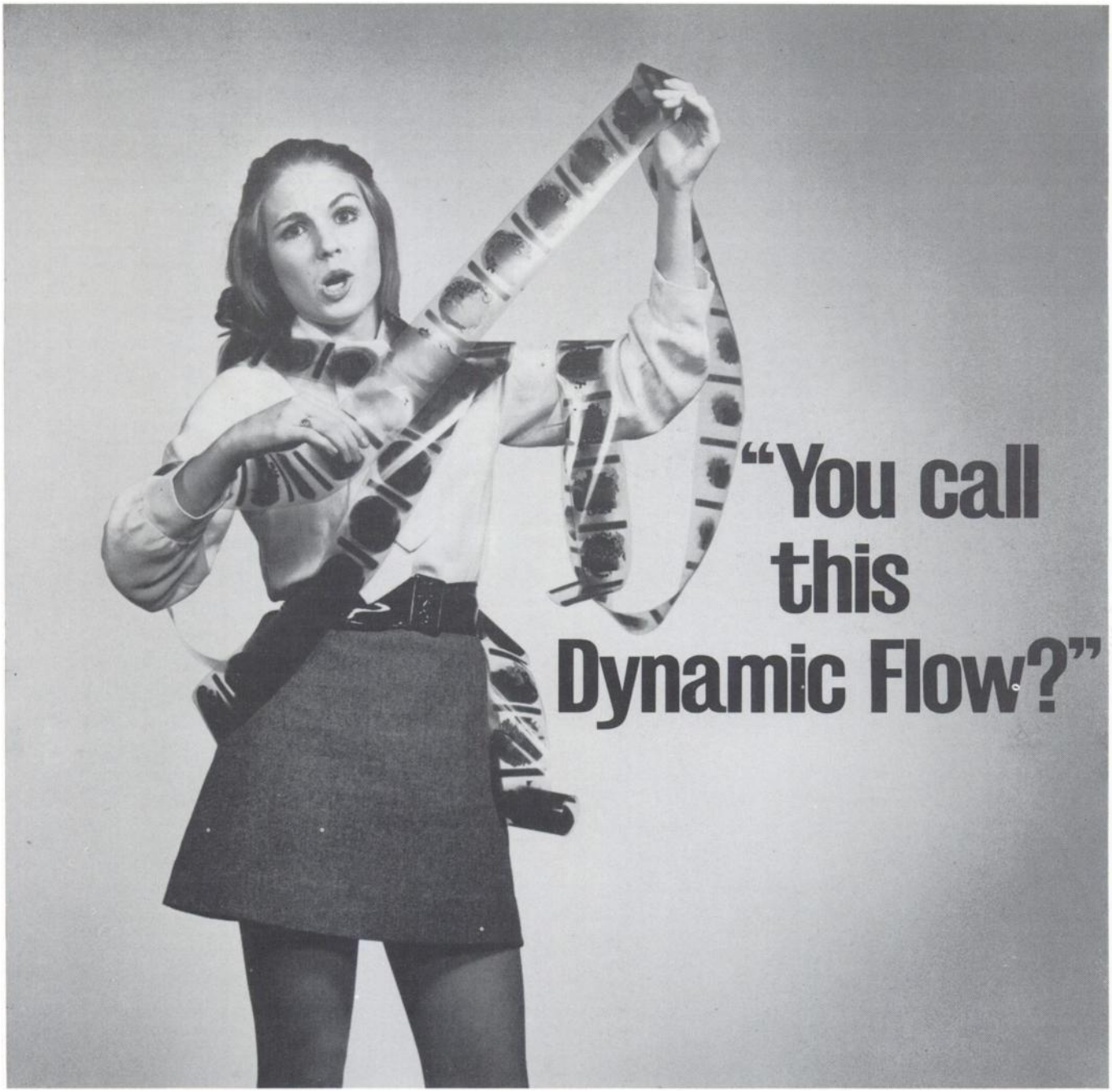

Use RADX plastic film holders to organize, view and file 35mm and 70mm organ images.

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When you do radioimmunoassays, manual micro pipetting is 90% of the work. That's where our Micromedic Automated Pipetting Station comes in. This is a system designed to automate precision analytical work that requires repetitive dilutions and reagent additions, including work in the ultramicro range.

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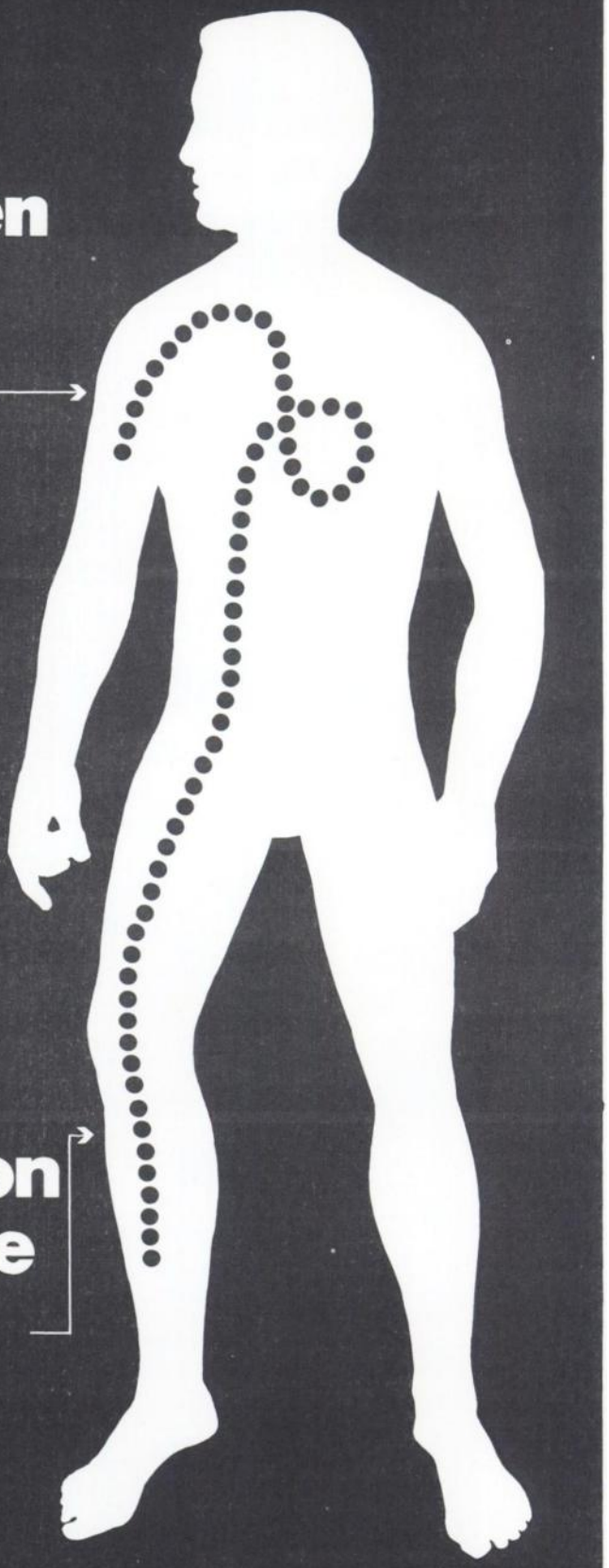
Iodinated (^{125}I) human fibrinogen



- 90% of iodinated fibrinogen is available for coagulation.
- prepared from a restricted pool of donors, screened to minimize the possibility of transmission of serum hepatitis.
- can be used for monitoring treatment of thrombus as well as detection.
- more convenient than phlebography–can be used for routine screening by ward staff.
- available from stock.

Post-operative deep vein thrombosis of the leg can give rise to many serious sequelae, including fatal pulmonary embolism, yet in many cases there are no clinical signs of the thrombus, itself. Labelled fibrinogen, administered by intravenous injection, becomes incorporated in the thrombus, and can be followed by daily scanning of each leg (using a hand held Isotope Localization Monitor). The area of maximum radiation intensity indicates the size and site of the thrombus. This simple daily procedure can be easily carried out at the patient's bedside.

Full information on the material and the technique is available from The Radiochemical Centre.

Availability of this product may be subject to national regulations.

For early detection of post-operative deep vein thrombosis

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Not available in the USA or Canada.

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IODINE—123... IRON—52... ZINC—72

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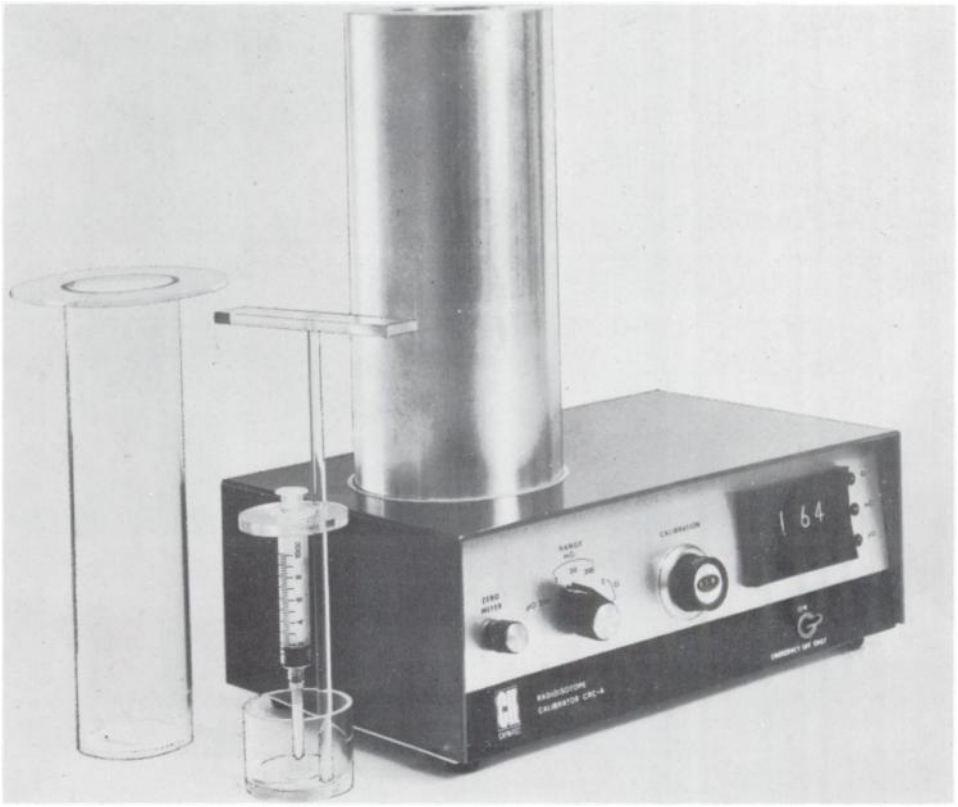

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Nuclear Medicine Clinician: It's clear to me that our scintiphotos don't give us all the information available. What can Mednet add?

Mednet: Quantitative information. Numbers. Not simply an indication of direction of flow, but how much, how fast. Better diagnostic data about heart and kidney function.

Administrator: What is Mednet?

Mednet: We're a medical communication and computational service that provides computer-aided analysis of clinical data.

Nuclear Medicine Clinician: How does Mednet work?

Mednet: We take the output from your scintillation camera, format it, transmit the data to our computer for processing and return the test results to your nuclear medicine department in clinical form.

Nuclear Medicine Clinician: How fast?

Mednet: 24 hours or less. Nationwide. All you need is a scintillation camera and a phone.

Urologist: What specific information does Mednet give me?

Mednet: Total and fractional blood flow to the kidneys. Total and fractional urine output. And other values previously not measured.

Cardiologist: What about the heart?

Mednet: Cardiac output and pulmonary blood volume, non-invasively.

Nuclear Medicine Clinician: Our hospital has a reputation for moving conservatively with new diagnostic tools. Is anyone currently using Mednet?

Mednet: Yes, we've already processed over 1300 patient studies for more than twenty hospitals across the U.S.

Administrator: What capital outlay is required for installing Mednet?

Mednet: Hospitals pay a one-time installation charge (typically $200) and then a per test fee. We provide the nuclear medicine department with the computational assistance of our large computer facilities and even the telecommunications interface required with your existing nuclear instruments.

Cardiologist: I'd like to find out more. Who do I call?

Mednet: If you'd like to speak to our professional staff, call (408) 255-6353. ADAC, Analytical Development Associates Corporation, is the name of our company. Mednet is the name of our service. If you would like our Mednet literature, send a note to ADAC, 10300 Bubb Road, Cupertino, CA 95014.

Stop by and see us in Miami at Booths 345 and 346.

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The total performance imaging table

Ultimately, it had to happen . . . a table that matches the high diagnostic aims of Nuclear Medicine. When you consider the high cost and sophistication of imaging equipment, partially adequate tables seem slightly incongruous. Long needed was a stable platform with movement capabilities that maximized patient comfort, facilitated patient handling and access, and was easy to operate. Above all, the table would have to allow a precise control of the patient's position so that the entire organ of interest could be encompassed within the limited field of view of the detector. Result: The DI 800 Triaxial Table.

The DI 800 offers continuous height adjustment. Hence, easy patient transfer (whatever the height of the conveyance vehicle) onto either side of our table because of its flush edges. All four wheels lock from two controls.

For final precise positioning the DI 800 has long axis adjustment of 18 inches in the horizontal plane. Most important, the top is tiltable, head up or head down. This means greater patient comfort. More, it will permit oblique imaging. Example: tilting will permit cephalad displacement of the liver for improved pancreas imaging.

With its open under carriage, overhanging adjustable head rest and ¼ inch lucite top, the DI 800 offers an unobstructed view of the patient—above, below, either side and vertex. That's total performance.

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New Vitamin B_{12} Kit

Schwarz/Mann, the world's leader in RIA kits, now announces a superior vitamin B_{12} radioassay kit. Why superior? Because this simple assay requires far fewer manipulations (e.g., pipetting and centrifuging). Result: you'll spend from 30 to 60 minutes less at the bench . . . and you'll get results 120 minutes sooner. So when seeking vitamin B_{12} deficiency data in pernicious anemia or whatever, this is the kit to seek it with. Kit with 100 tubes is only $98.50. (Please note that *every* price we show on this page is for an individual kit. Quantity orders enjoy interesting discounts.)

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Many physicians and researchers are concerned with over and under digitalization problems and we're telling them that *you* can help. We supply four fine kits:

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Digitoxin [^{3}H] with 240 tubes	121.90
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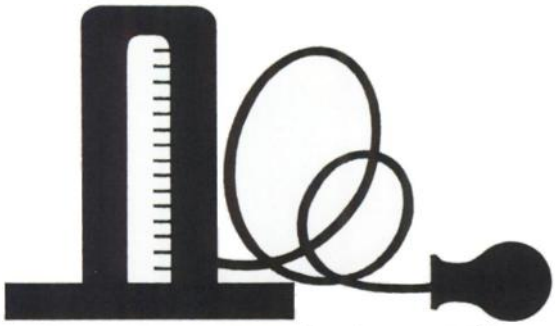

Renin Activity Kit

About 25 million Americans have hypertension but only half of them know it! Renin activity determinations help to find and evaluate them. And this kit was the first commercially available radioimmunoassay kit for this purpose. Kit with 400 tubes—$79.50.

Prices are subject to change without notice.

Insulin Kit An accurate, sensitive, reproducible radioimmunoassay. For insulin concentrations in small volumes of serum or plasma of diabetics. Kit with 400 tubes—$58.30.

Cyclic AMP Kit A kit for the radioimmunoassay of this intermediary in many hormone systems. Kit with 200 tubes—$84.25.

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HPL Kit Assays Human Placental Lactogen and helps to monitor fetal health. Kit with 200 tubes—$79.50.

Cortisol Kit A competitive binding method for measuring the adrenal cortex output of cortisol. Kit with 200 tubes—$79.50.

New RIA Hot Line

Schwarz/Mann has established an RIA (Rapid Informative Answers) hot line for RIA (radioimmunoassay) *technical* questions. Whenever (i.e., between 8:30 AM and 5:00 PM Eastern time on business days) you need such assistance, just call 914/358-4555, collect. Someone will respond with a ready answer or a way to get it for you promptly. Life gets simpler.

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MODEL 145 LOCALIZATION MONITOR

Detection of Deep Vein Thrombosis

and other in vivo applications

- CPS & PERCENTAGE READOUT
- COMPACT & PORTABLE
- BATTERY OPERATED (3 D cells)
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- CLINICALLY PROVEN FOR OVER ONE YEAR

CONTROLS

High voltage
Threshold
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Response (fast & slow)
CPS or percent switch
Reset

For DEEP VEIN THROMBOSIS DETECTION, the Model 145 offers the important features of **portability**, standard **D cell** operation yielding at least 100 hours of uncycled use, **unlimited** channel selection, and **prompt** servicing.

Using I-125 labelled fibrinogen and the Model 145, early detection of deep vein thrombosis of the legs can be accomplished. With the Model 145, the leg is scanned after intravenous injection of the labelled fibrinogen. As a thrombosis develops, the radioactive fibrinogen is detected with the Model 145 and measured directly in percentage, where 100% is determined over the precordial area.

SPECIFICATIONS

RANGE: 30, 100, 300, 1000, 3000 cps and 0 - 120%

TIME CONSTANT: Fast 2 sec., slow 14 sec.

SIZE: 4½ x 5½ x 8 inches (HxWxL exclusive of handle).

WEIGHT 6.5 lbs total

DETECTOR: 1mm x 1 inch NaI (TL) mounted on PMT and 7 mg/cm^2 aluminum window. Optional – 1 inch x 1 inch NaI (TL) detector with thin window at extra cost.

PRICE: $995.00 – FOB Wellesley, Massachusetts

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on the subject of ULTIMATE FATE

The controversy over long-term retention and biologic fate of Iron Hydroxide Macroaggregates for lung imaging has been put into realistic perspective in a recently published paper.* Clearly, the ultimate fate of FHMA has been more thoroughly studied than that of any other lung imaging agent. The findings shed new light on the predictable fate of FHMA.

We believe our FHMA makes the light brighter. Our FHMA is freeze dried. Its keeping qualities are far superior to those of other agents and tagging is comparable to MAA. It's safer and simpler to use than other FHMA agents. Preparation is quick, with less manipulation making it ideal for emergency situations.

Write for our descriptive literature and a copy of the Davis paper.

*M. A. Davis, "Long-term Retention and Biologic Fate of ^{99m}Tc-Iron Hydroxide Aggregates," presented at the Symposium on New Developments in Radiopharmaceuticals and Labelled Compounds sponsored by the International Atomic Energy Agency and World Health Organization at Copenhagen, Denmark on 26 to 30 March 1973.

Kit contains vial and two syringes	
1 — 3	6-packs $50.00 ea.
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Now, thanks to the AVM-3 Automated Ventilation Module, radioxenon ventilation studies need no longer be technically difficult to accomplish.

The AVM-3 system provides a simple, yet reliable and flexible method of administering radioactive gas and controlling patient breathing during ventilation studies.

And, since the AVM-3 system is linked to your scintillation camera by remote control, it automatically initiates all scintiphoto exposures at precise predetermined intervals. As a result, the only functions of the operator are to select the desired study sequence, push the start button and then collect camera data.

In short, the AVM-3 Automated Ventilation Module allows you to perform Single Breath — tidal volume or vital capacity, Rebreathe and Washout Studies — singly or in the combination of your choice — using just one operator. All without patient cooperation. All with consistently reproducible results. (Single breath studies may be made at any lung volume.)

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$3,375 F.O.B. Los Angeles. Effective July 1, 1973.

The AVM-3 system, with protective lead-shielding, is enclosed in a single case mounted on an overbed table for use on patients in either sitting or supine positions.

The Surprenant/Douglas AVM-3 Automated Ventilation Module. Just one of the ways in which we're working to make your job a little easier.

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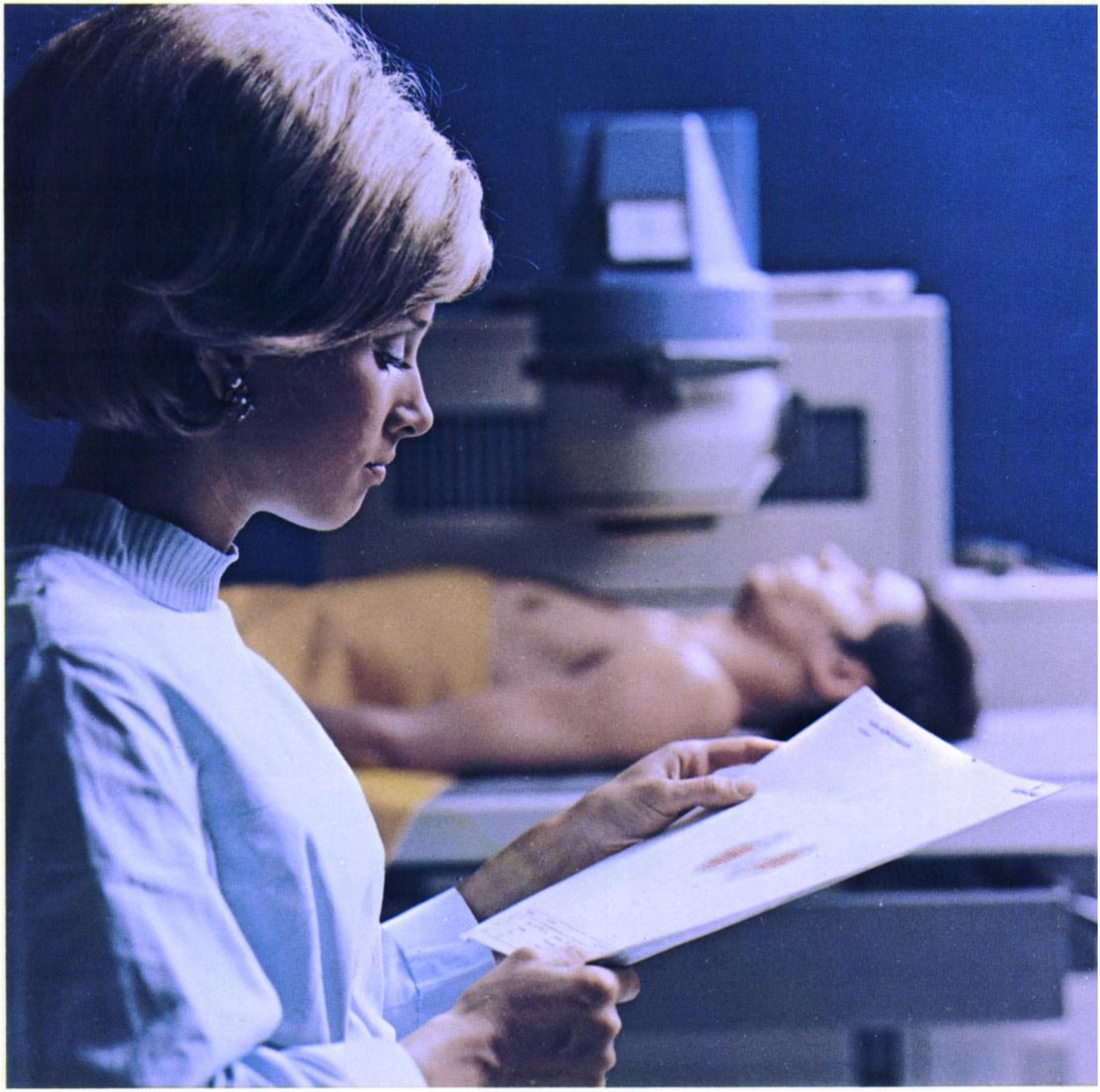

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uilt-in automatic controls ensure that the SCINTIMAT will roduce consistently good scintigrams. And, what's more, ie unit will relieve you from time-consuming routine calcu- lations. All required input data is being selected with only three rotary knobs, the recording systems are automatically adjusted at the same time.

The patient's life is also made a lot easier. The Siemens SCINTIMAT is equipped with a floating table top which can be adjusted horizontally and vertically. This feature is of particular importance when diagnosing patients who are not able to cooperate fully.

Our SCINTIMAT-brochure will tell you more about the Siemens scanner and the wide variety of peripheral equipment offering utmost flexibility for all applications. Or if you want to see a live demonstration, visit us at the forthcoming meeting of the Society of Nuclear Medicine at Miami Beach. Our specialists will be there from June 12 to June 15 to answer all your questions.

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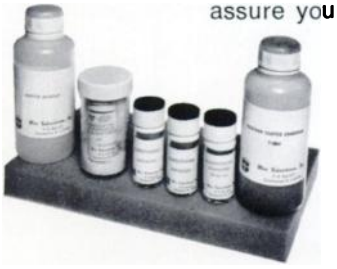
Each set contains all reagents* and antibodies needed for complete serum value determinations. And these sets are uniquely designed to assure you of more accurate results with less complicated procedures.



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*except solvents and liquid scintillation cocktail

NOTE: radioactive substances tagged with tritium (^{3}Hydrogen), except T_3.

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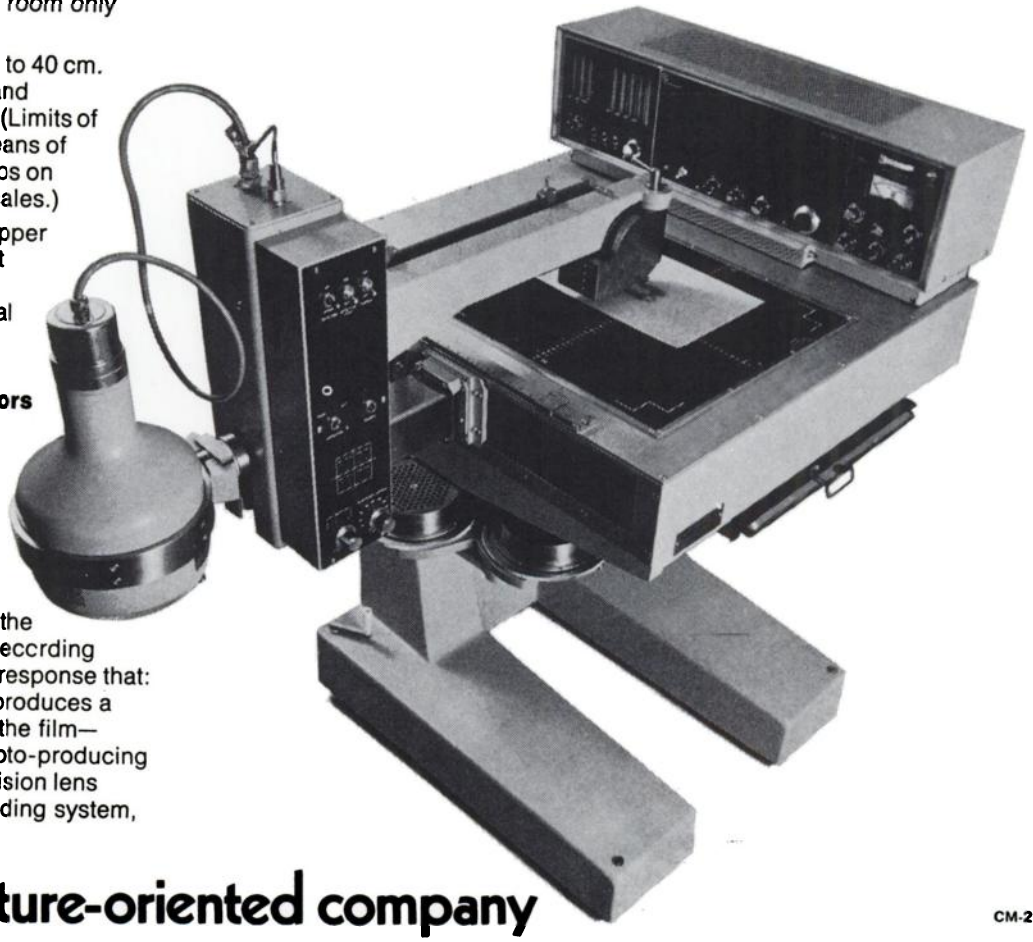

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CM-278

We have built a unique system to acquire, playback and analyze Gamma-Camera studies.

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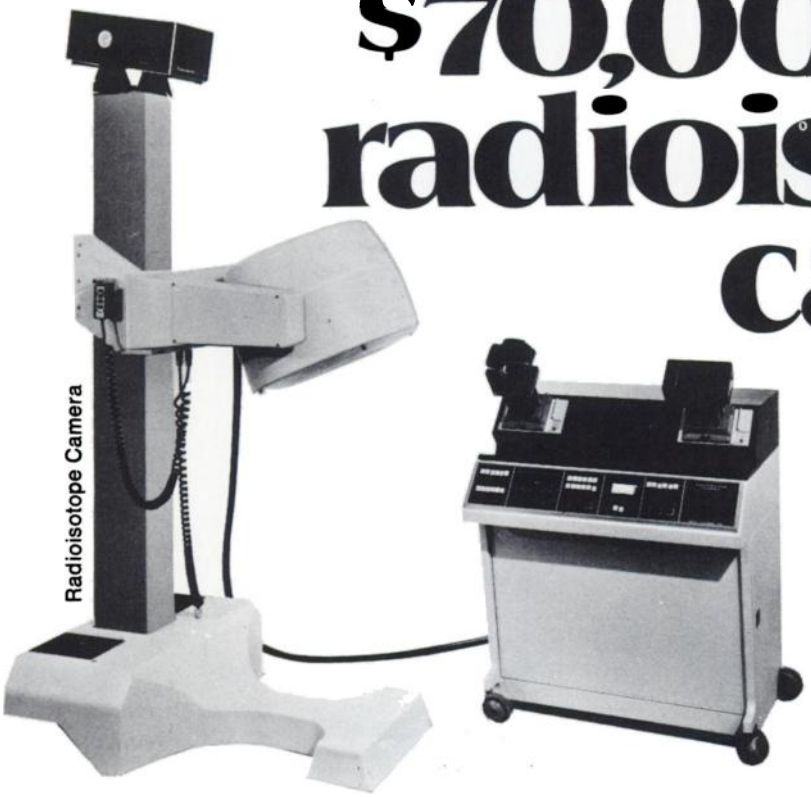
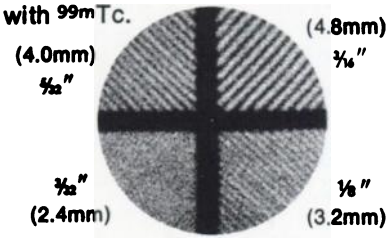
*Patented: U.S. No. 3,676,679 Other U.S. and foreign patents pending.

See this new instrument at Booth 102, Society of Nuclear Medicine Annual Meeting, Americana Hotel, Miami Beach. June 12-15.

When you spend $70,000 for a radioisotope camera,



Resolution. Ohio-Nuclear's Series 100 has an intrinsic resolution of better than ⅛" (3.2mm) with ^{99m}Tc.



Scintiphoto (above) taken using ⅛" (3.2mm) thick bar phantom. No collimator. 500,000 counts ^{99m}Tc.

Uniformity. Typical Series 100 flood field made with ^{99m}Tc — 500,000 counts.

Speed. Maximum output count rate of 100K counts/sec. Performs standard studies more rapidly. Helps make fast dynamic studies a standard practice.

Ease of operation. Fast setup with two speed—conventional and express—detector motion. Manual or pushbutton isotope selection. Entire study conducted from hand control without leaving patient's side.

Uniformity. Typical Series 100 flood field made with ^{99m}Tc — 500,000 counts.

Economy. Reduced setup time. Reduced study time. Photomultiplier tube gains balanced by your technologist, eliminating need for serviceman.

Want proof? Send for our Series 100 Radioisotope Camera brochure, and our Systems Resolution product bulletin. Visit an installation . . . we'll arrange it. And talk to us. We have something better. The Superior Radioisotope Camera. From Ohio Nuclear.

and a DataSystem, what should you be getting?

Resolution. All three modes are built in and operator selected.

128 x 120 (16K) matrix (8 bits deep), or
64 x 60 (4K) matrix fields (12 bits deep), or
32 x 30 (1K) matrix fields (12 bits deep).

Fast Framing. Dynamic studies are recorded as follows:

Speed	Resolution
16 frames/sec	32 x 30 (1K)
5 frames/sec	64 x 60 (4K)
1 frame/sec	128 x 120 (16K)

Available options provide:

39 frames/sec	32 x 30 (1K)
13 frames/sec	64 x 60 (4K)
3 frames/sec	128 x 120 (16K)

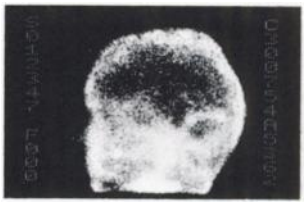
Digital Computer Compatibility. Nine track 800 bpi magnetic tape.

Isometric Displays. View isometrics, profile histograms, and isotope uptake at camera console.

Contrast Enhancement/Background Erase

Regions of Interest. Two—rectangular. Operator selects size and position. Counts read out on display, along with area.

Display. Non-flickering interactive display continually refreshed from core memory.



Alphanumeric Display. Patient study number always displayed on left of image. Six digit time of storage (in hundredths of a second) and dynamic study frame number displayed on right; or six digit count and four digit area within an area of interest (or the total count of the area) can be displayed on the right.

Slices. Two slices along either the X or Y axis can be defined independently, & observed on the isometric view.

Options Available. Black and White video displays, 9″ and 14″ diagonal, with 64 shades of gray, flicker free; Isometric display, 14″ and 5″ diagonal, sixteen shades of green; Color display, 12″ diagonal, 16 or 8 colors, switch selectable; Color and B&W simultaneous display; Field uniformity correction; Statistical Smoothing; Chart Recorder for plot of profiles set by slices, or plot of dynamic study count versus time; Fast Framing Tape; Added Memory;16 Extended Rectangular Areas; Irregular Areas; Interfaces; B&W or Color Polaroid Capability.

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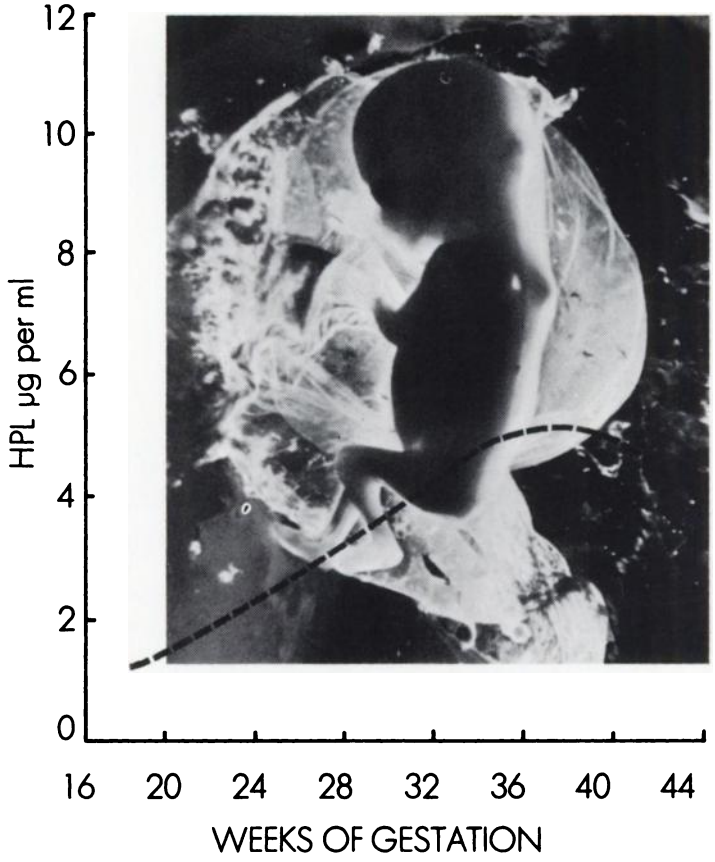

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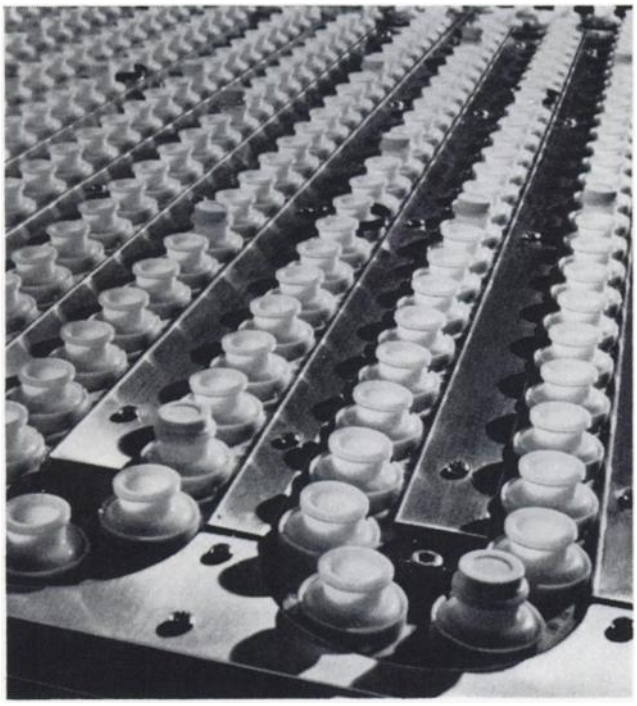

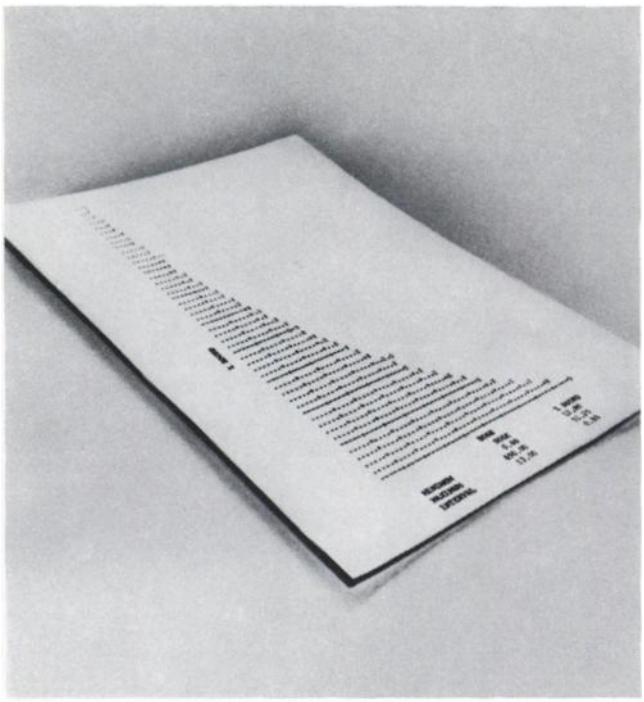

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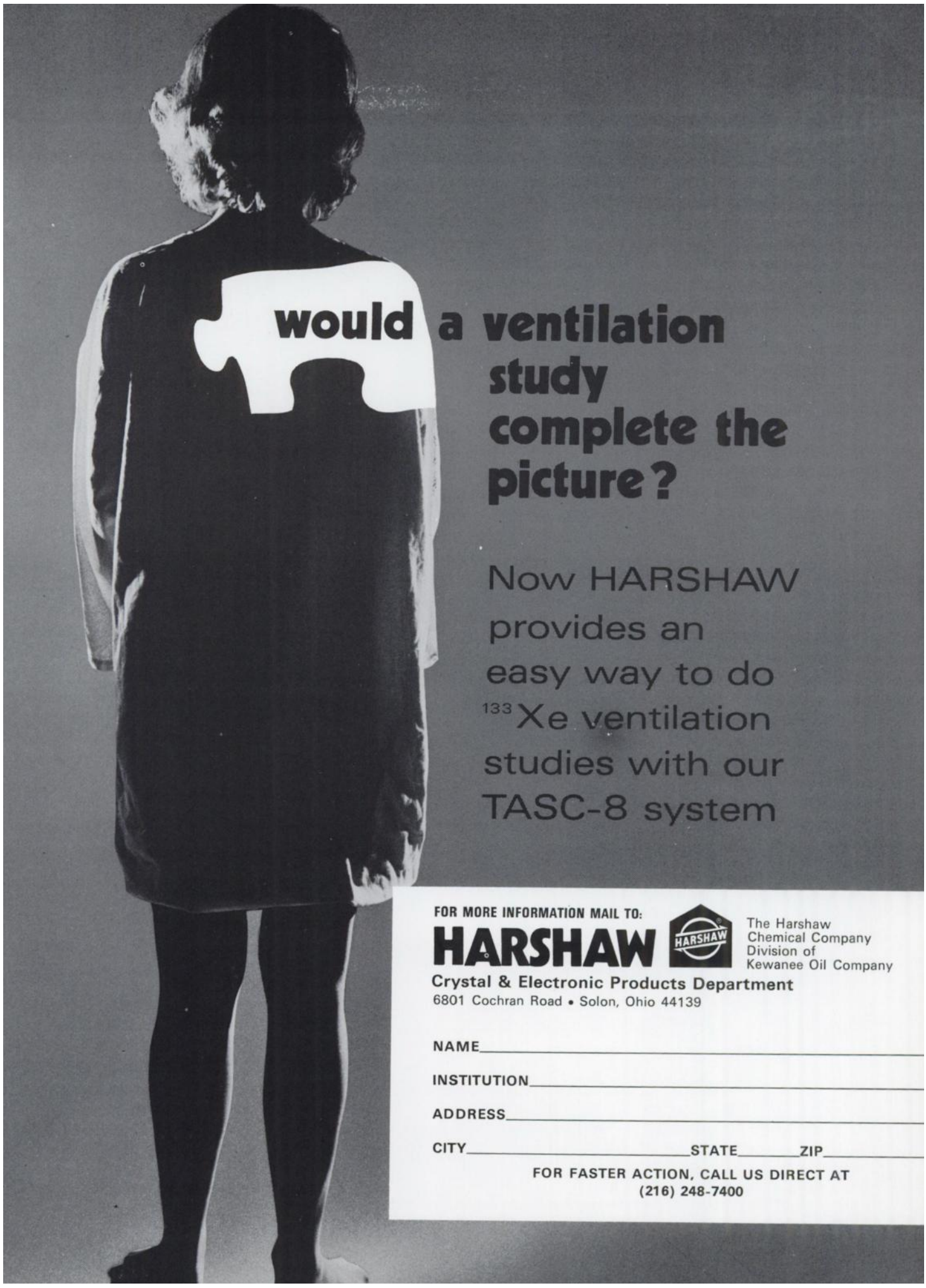

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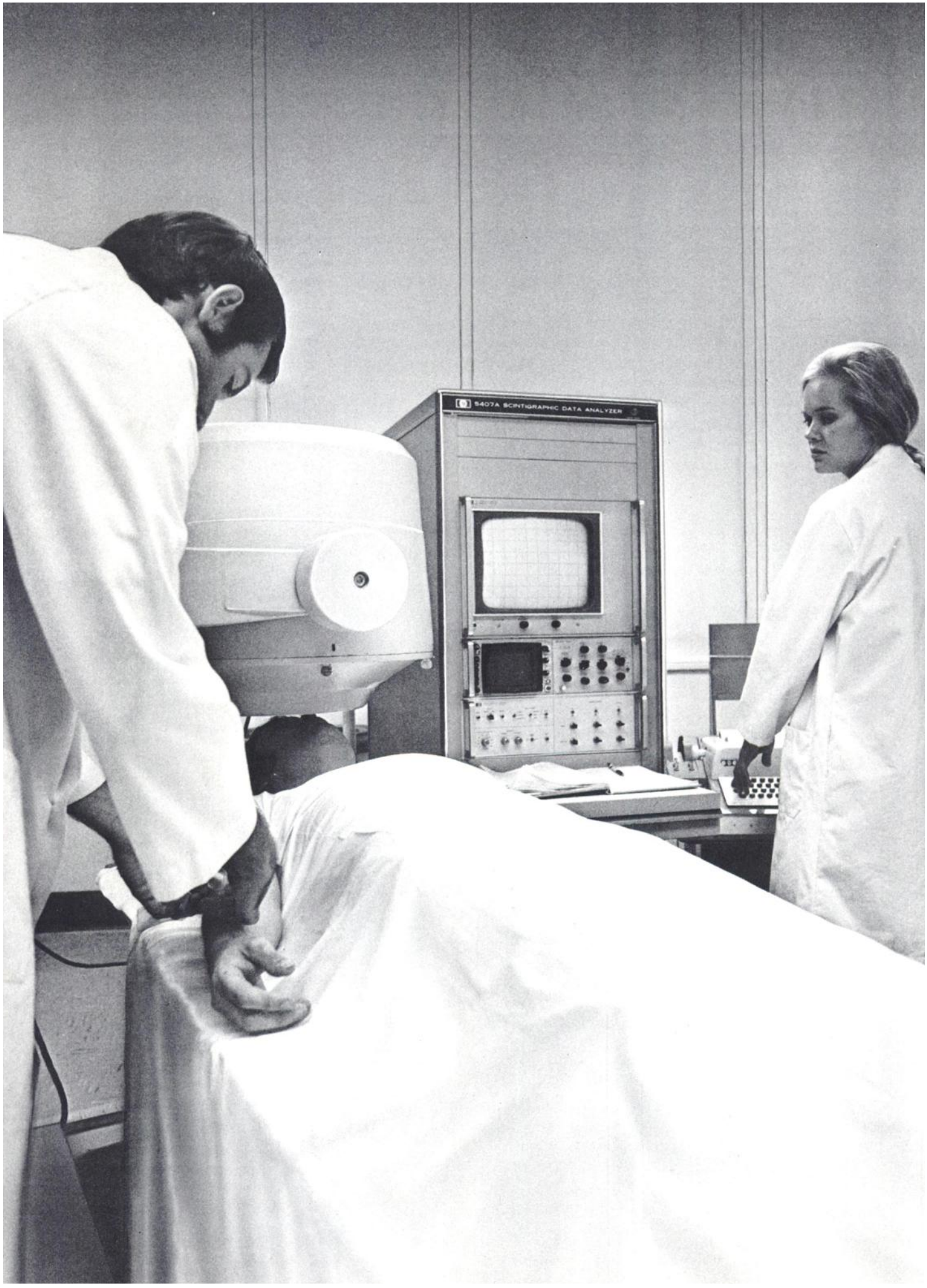
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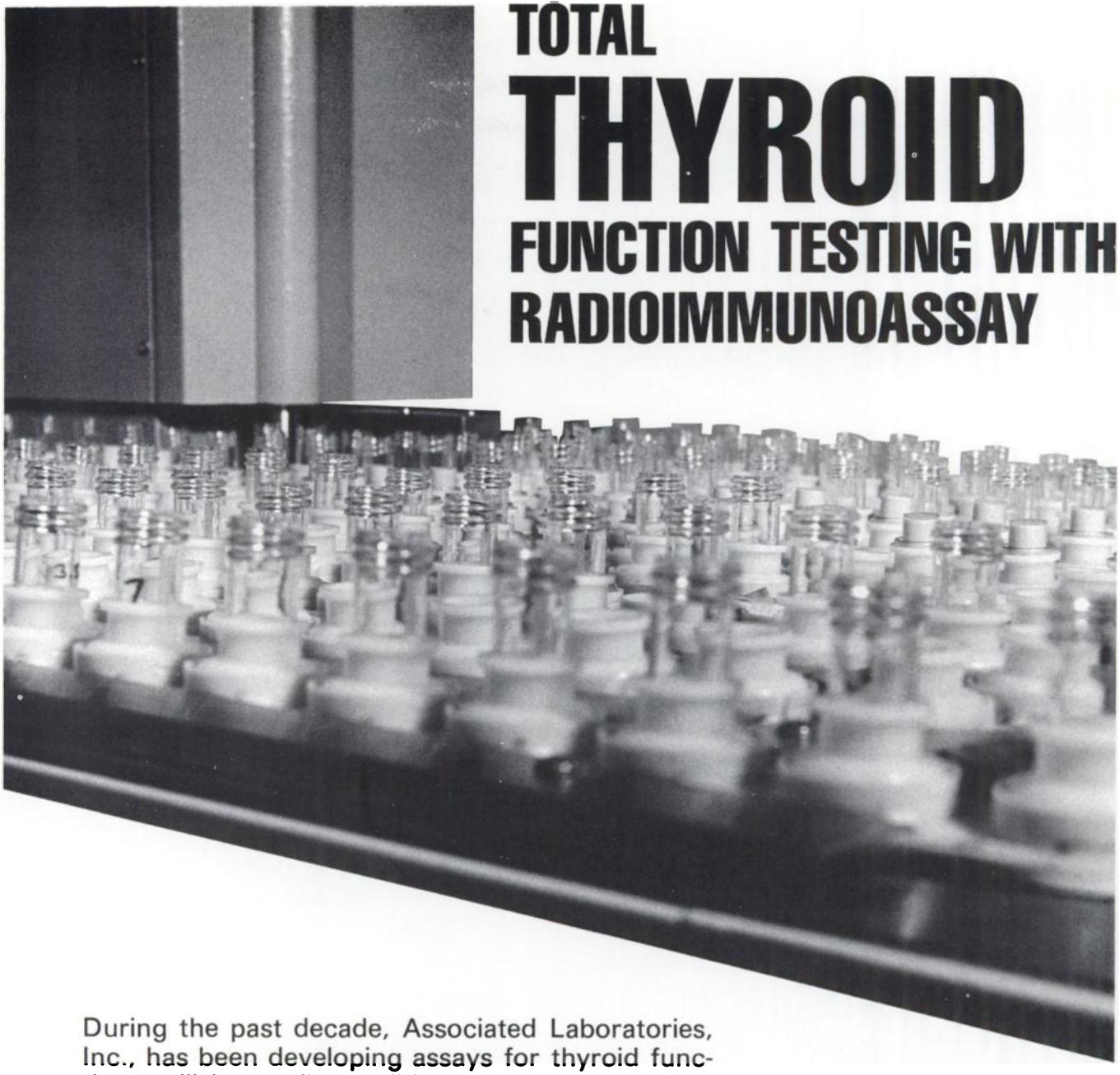

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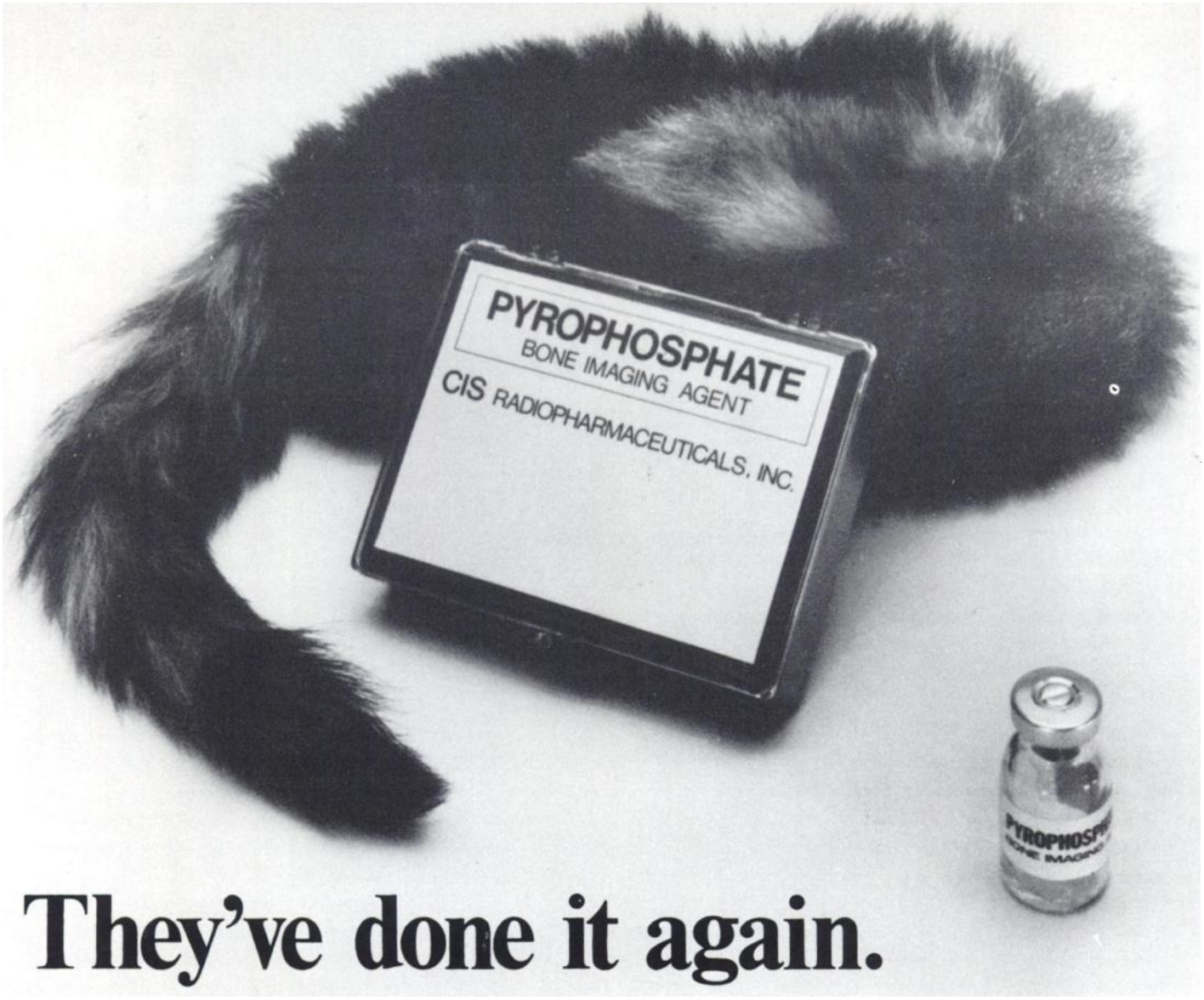

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*Y.Cohen *et al. C.R. Acad. Sci. Paris* **275**, 18-20 (1972)

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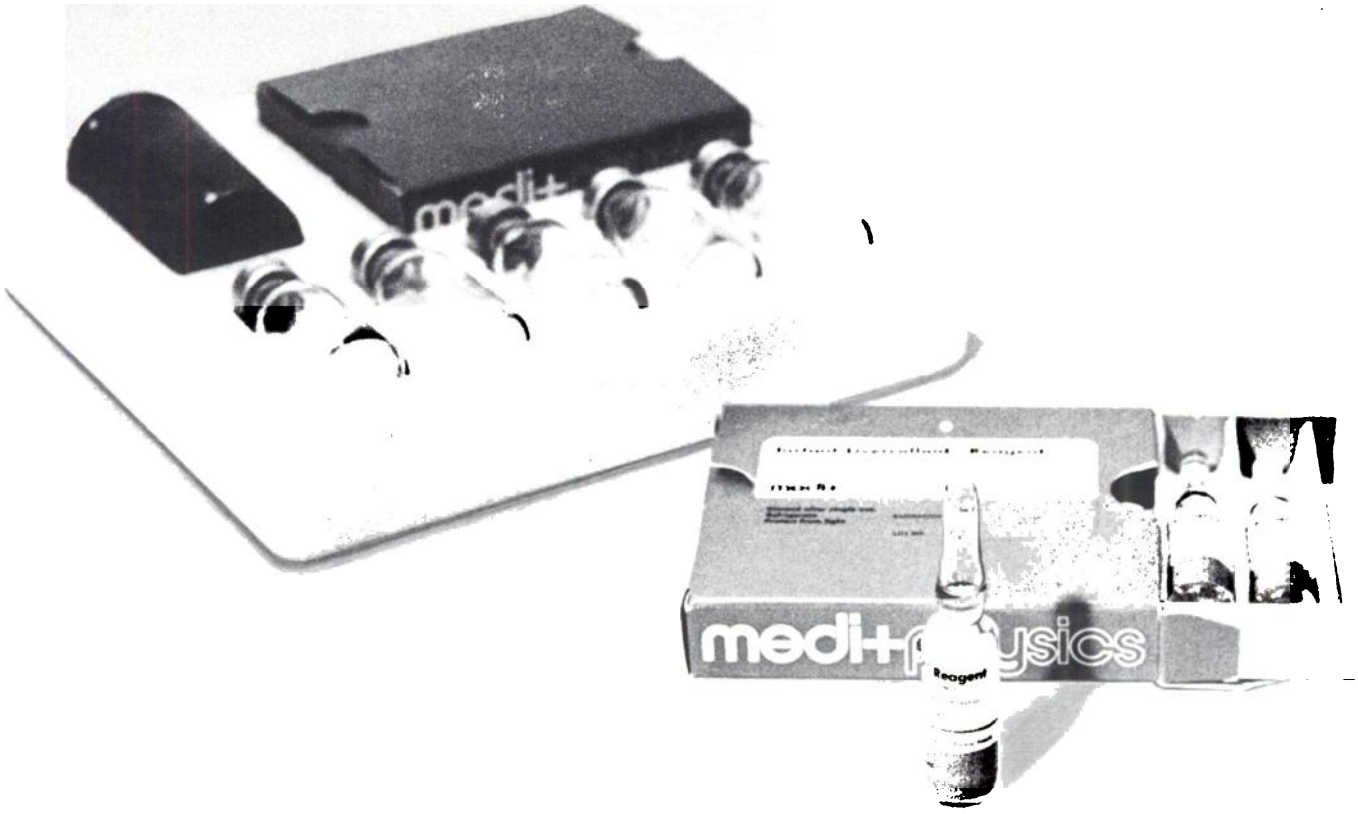

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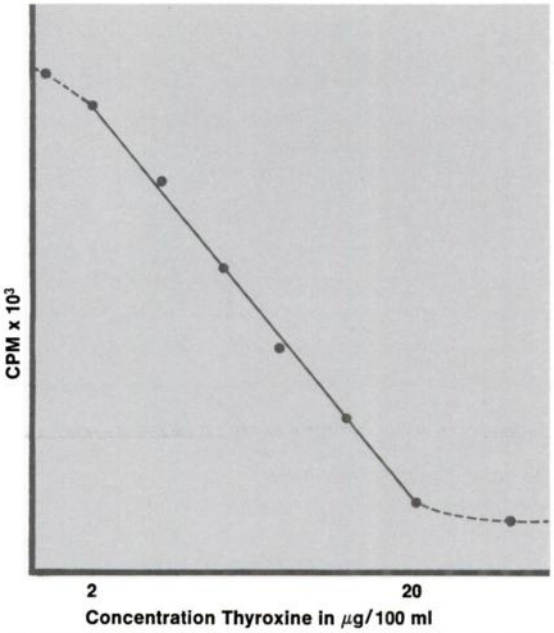

Fig. 1. Plot of thyroxine concentration vs. counts per minute for 0.1 ml of 6% Bovine Albumin in saline containing various concentrations of thyroxine at ambient temperature.

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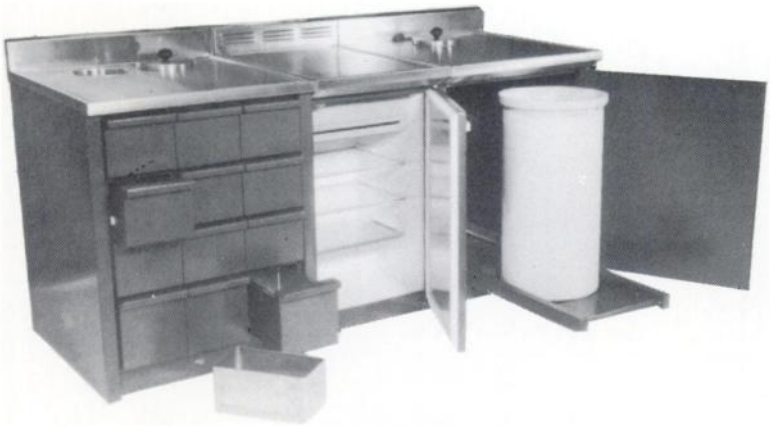

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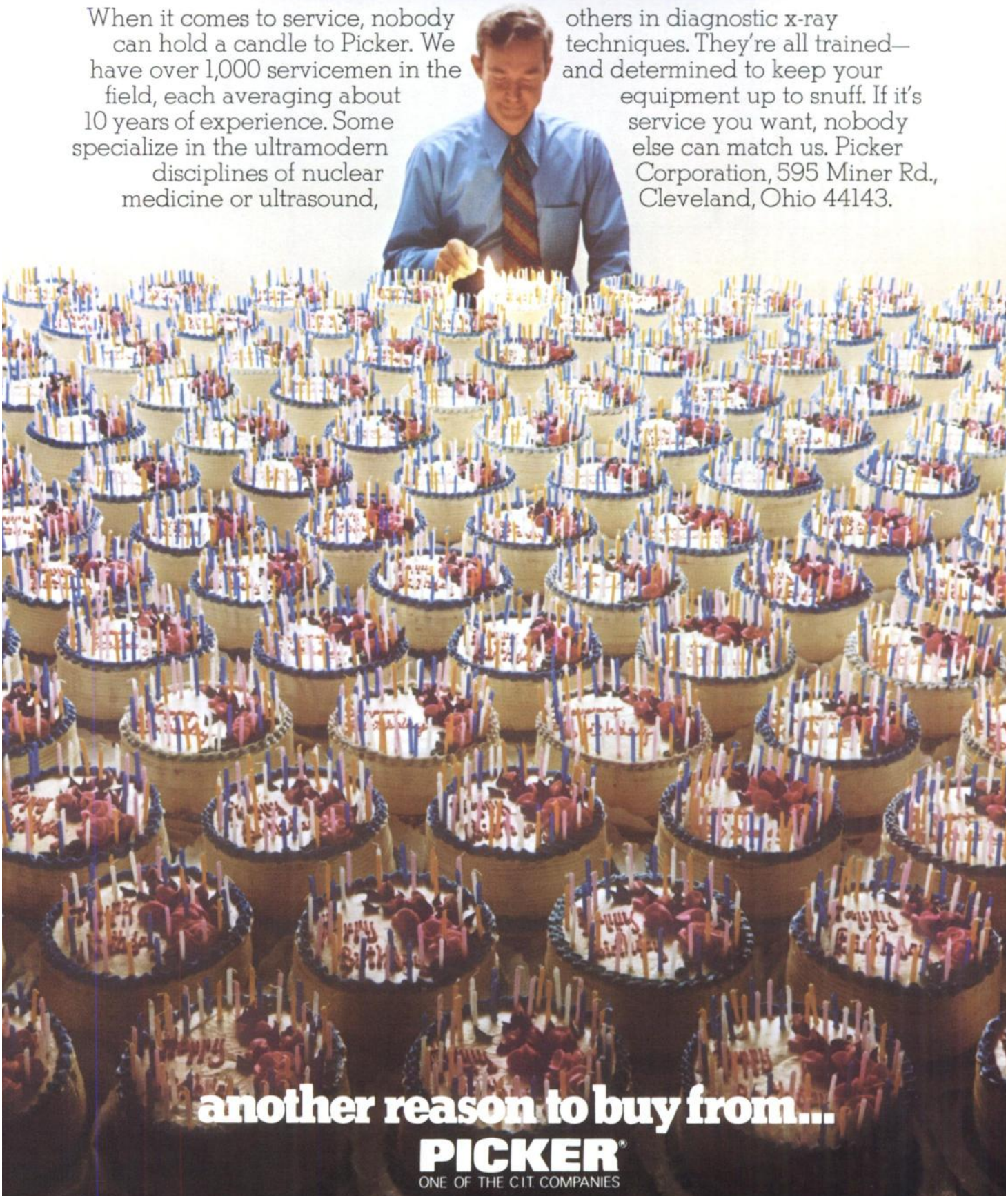

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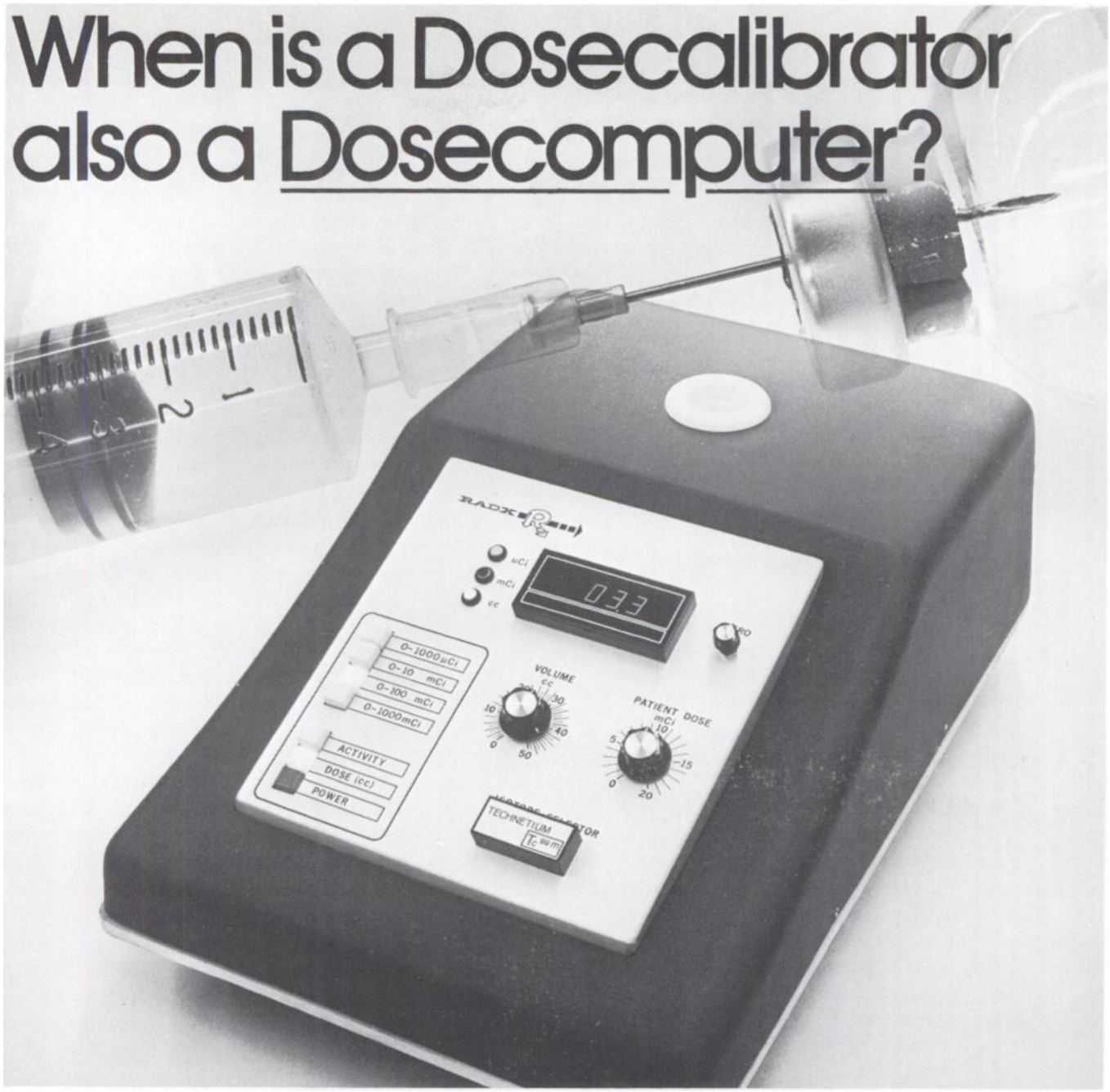

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RADX CORP.

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This, one of the three top scintillation cameras, weighs 1300 lbs. less than the other two.

(And if you think that's trivial, you have a surprise coming.)

Now why in the world would anyone ask you to focus your attention on gross weight (of all things!) when considering a piece of sophisticated instrumentation like a scintillation camera?

Because, as we hope you'll soon come to agree, low weight tells you something. As a matter of fact, it really tells you a great deal because technologic progress almost always leads to a dimunition of both size and weight (e.g., from vacuum tubes to transistors to integrated circuits). Thus, the functionally equivalent instrument that weighs substantially less than others, bespeaks a newer design. And so it is with the Nuclear Data Radicamera.™ This quite remarkable camera weighs about 1300 lbs. less than the other two fine competitive instruments. (Mind you, only 1300 lbs. as compared to 2600 lbs.—a 50% weight reduction!)

Ah, but what did we leave out? Functionally, nothing. We simply designed out the older technology, both electronic and mechanical, that tends to weigh more and bulk larger. And the newer technology, with its lesser weight and size, is often more reliable. And *that's* a nice bonus.

What else does Radicamera offer? A full capability camera with resolution as good as the best (really), and operating ease that defies comparison. You can actually position it with one finger and, with the appropriate accessory, move it easily to the patient that can't be moved easily. The innovative design yields a more compact unit that occupies less of your ever-evaporating space. In toto, a superbly designed instrument that is easy to live with and yields diagnostic data second to none.

Finally, we should also mention the following: newer technology not only tends to diminish size and weight. It shrinks cost (and hence, price) too. Check it out.

So, if you're looking at cameras, consider this: we want you to speak to Radicamera users because you really ought to hear our story from someone else, too. Contact us for names and for Radicamera literature.

A word about Med II ™

Very revealing fact: Med II is the world's best selling image processing system. And although we're happiest when its coupled to our Radicamera, candor forces us to reveal that it also functions beautifully with those other cameras. This very flexible system does everything a computerized image processing system should do. Things like correcting for non-uniformities, curve smoothing and fitting for cardiac output studies, ejection fraction and xenon ventilation/perfusion computations, acquiring and storing dynamic data from 12 regions of interest to produce 12 curves simultaneously, and much more. And its ready-to-use, conversational and upgradeable software makes it ideal for both routine and investigative dynamic function work. Once again, we invite discussion with current Med II users.

Radicamera: the lightweight that really isn't.

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Whoever thought Bone Scanning F-18 with a 2 hr. half-life could be delivered to your hospital daily from the San Francisco Bay Area and do it consistently. Medi+Physics is proving it can be done. If your hospital is in one of the direct flight cities listed above and you are interested in taking advantage of F-18 for bone scanning, call or write our Emeryville facility.

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Clincom.™

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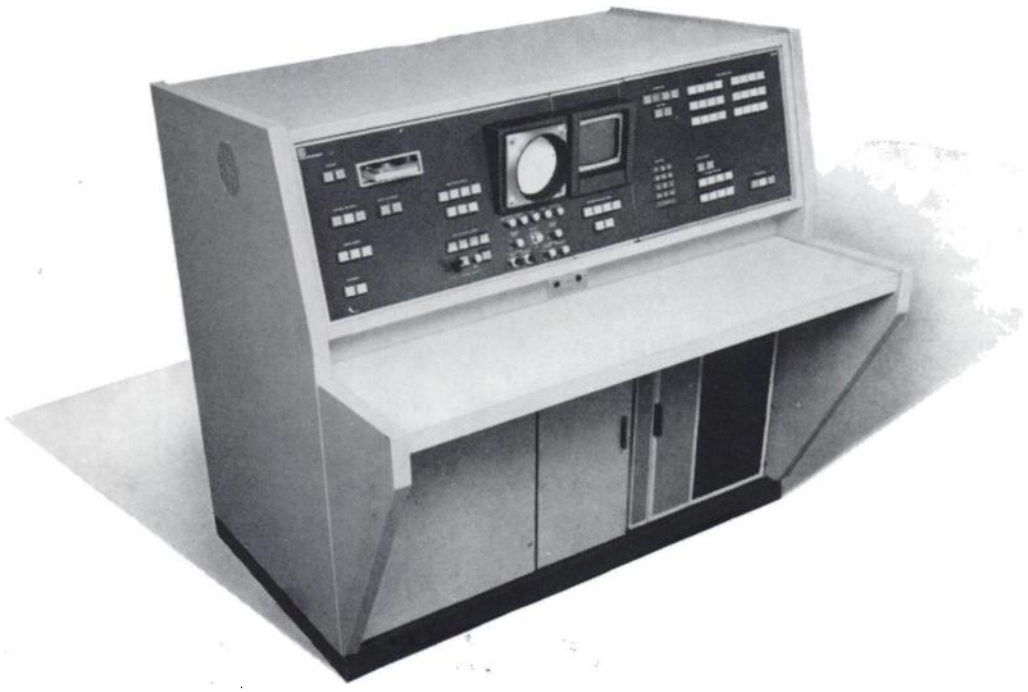

Only Clincom is specifically designed to improve on the image of the world's most experienced scintillation camera. Clincom is fully compatible with Pho/Gamma—forming an integrated unit of unprecedented versatility in data storage, playback, and manipulation at the push of a button. It includes many "firsts"—in both today's and tomorrow's nuclear medicine procedures—to aid the physician in his particular diagnosis. To name a few Clincom enhancements of Pho/Gamma . . .

Simplified Acquisition—Mounted on top of Pho/Gamma's console, the Acquisition Panel easily facilitates camera/Clincom control by the technician. All operating parameters including date, patient identification number, collimator used, framing rates, and patient orientation are pushbutton selected. Furthermore, the acquisition of data begins when the Pho/Gamma's "Start" button is activated.

Image Processing—All processing controls are located on the Physician's Viewing Console. The Analysis Scope displays either current data being received from Pho/Gamma, or stored images developed from Clincom's wide-ranging diagnostic procedures. The Text Scope continuously logs (in everyday clinical language) all information on the desired study. Both the processed image and the text may be photographed with a synchronized camera for storage in patient records.

Permanent Storage—Data is stored on the master tape and later may be transferred to cartridge tape for inexpensive, long-term storage. Self-checking features are incorporated to prevent unintentional data erasure.

"Powerful" Software—Clincom will remember, with the help of the "Capture Procedure" pushbutton, an entire sequence of data operations. A program thus generated is simply recalled with fingertip control. In addition, Clincom offers a wide range of on-line and off-line programs for future research and clinical needs.

Remote Viewing—Clincom can be placed up to 200 feet from the Pho/Gamma Console. This allows the physician to process studies in any area removed from the patient's presence.

Clincom . . . the image processing system for Pho/Gamma. Find out how Clincom can specifically meet your clinical and diagnostic needs. Contact your Searle Radiographics (formerly Nuclear-Chicago) sales engineer, or write to us for your free brochure.

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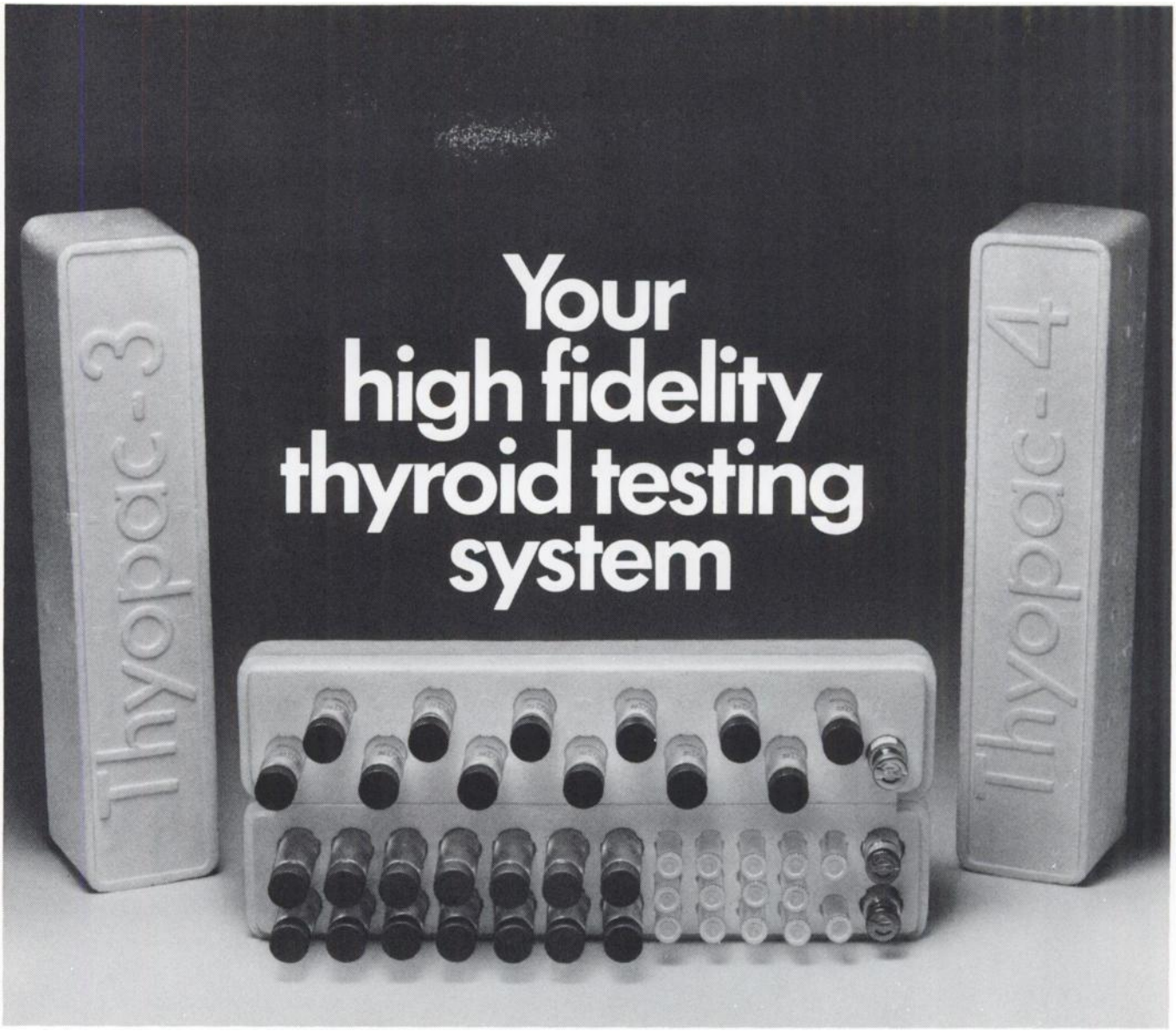

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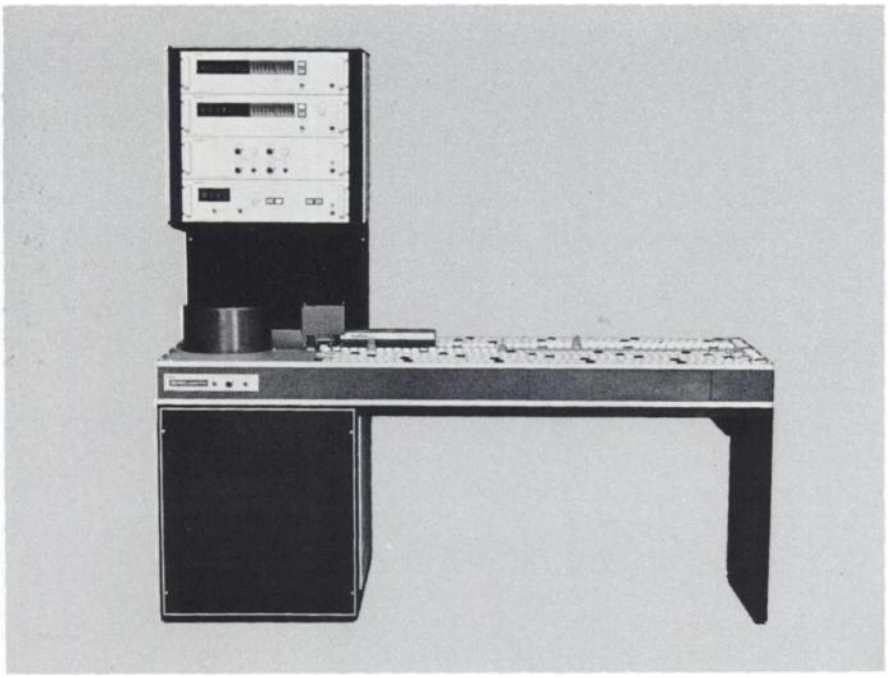
Abbott gamma counters work hard for you because of these unique features.



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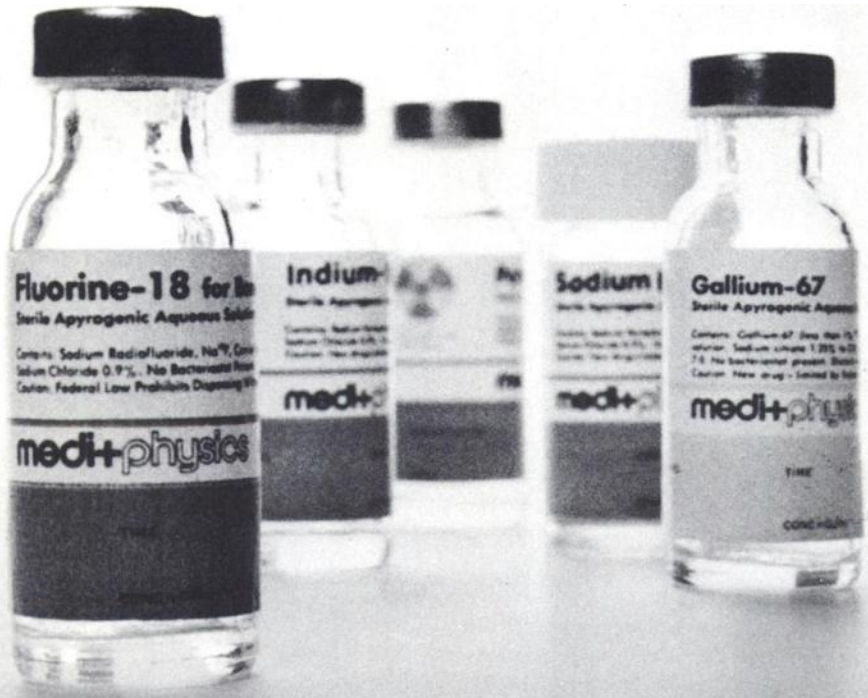

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- ☆ Each scintillation event fades from the image at a rate determined by the operator.
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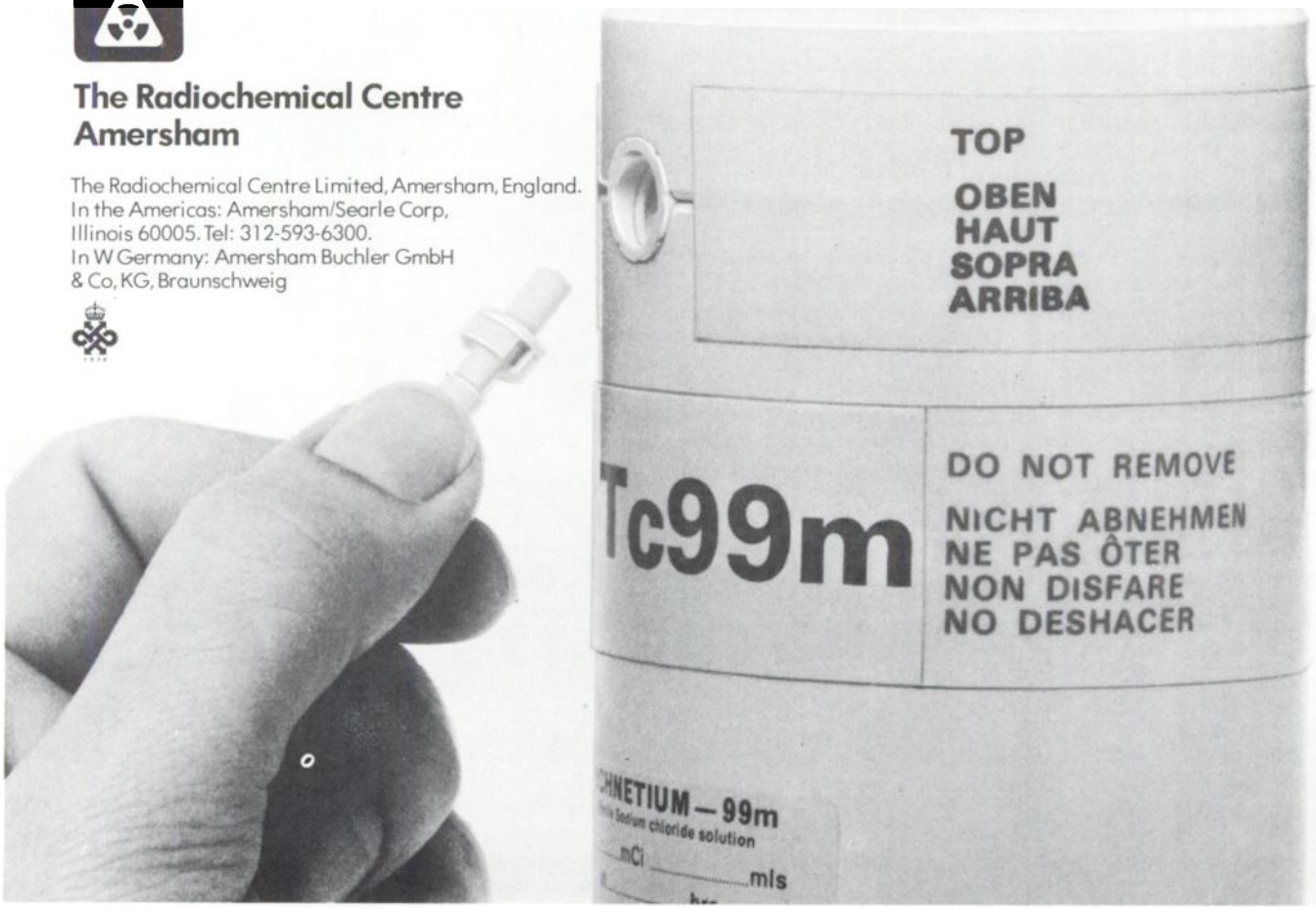
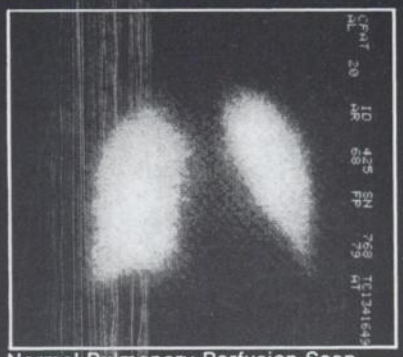


This product is not for sale in United States.

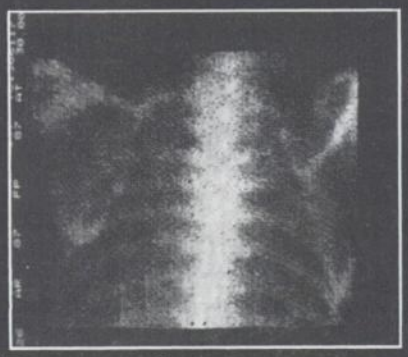
Statics

Abnormal Brain Scan — ant. view
(Subdural Hematoma)
Study Time — 80 sec.
Isotope — 15mCi $^{99m}Tc\ O_4^-$
Total Counts — 740,943

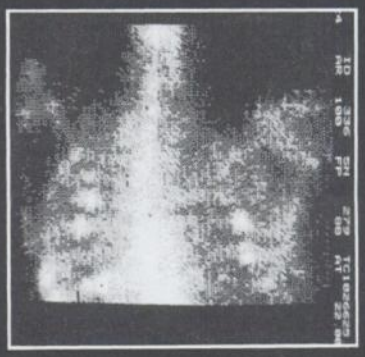


Normal Pulmonary Perfusion Scan — ant. view
Study Time — 320 sec.,
Isotope — 2.5mCi ^{99m}Tc Microspheres
Total Counts — 1,341,649

Normal Liver Scan — ant. view
Study Time — 320 sec.
Isotope — 2.0mCi ^{99m}Tc Sulfur Colloid
Total Counts — 4,072,206



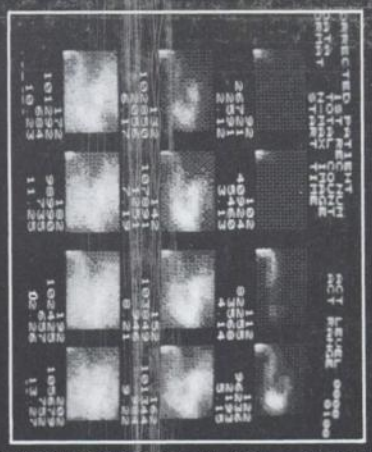
Normal Thoracic Cage Scan — ant. view
Study Time — 960 sec.
Isotope — 15mCi ^{99m}Tc Polyphosphate
Total Counts — 1,386,117



Abnormal Thoracic Cage Scan — ant. view
Study Time — 704 sec.
Isotope — 15mCi ^{99m}Tc Polyphosphate
Total Counts — 1,026,625

Dynamics

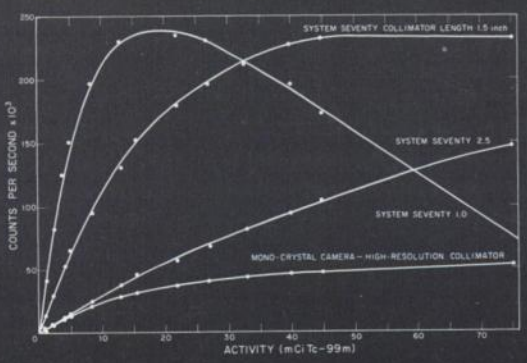
Normal Cerebral Blood Flow – post. view
Accumulation Interval — 0.5 sec.
Display Interval — 2.0 sec.
Peak Counts per sec. — 37,110
Isotope — 15mCi $^{99m}Tc\ O_4^-$



Normal Cardiac Blood Flow — ant. view
Accumulation Interval — 0.1 sec.
Display Interval — 1.0 sec.
Peak Counts per sec. — 107,891
Isotope — 15mCi $^{99m}Tc\ O_4^-$

Normal Left Ventricular Quantitative Histogram
Each double vertical line represents a 1.0 sec. time interval.
The entire histogram is 10.0 sec. long and consists of 100, 0.1 sec. count accumulations. This area-of-interest histogram took less than 1.0 min. to produce from end-of-study.
Note — definition of sinus rhythm of left heart.

Performance



These curves provide a useful calibration of System Seventy. The observed count rate for 15 mCi of ^{99m}Tc for the 1.0, 1.5, and 2.5-inch thick collimators is 230,000, 150,000, and 45,000 cps respectively.

The count-rate curve obtained from a mono-crystal camera using the high-resolution collimator shows an efficiency about equal to that of the 2.5-inch thick collimator at low count rates and exhibited a saturation rate of about 40,000 cps. The same saturation rate has also been observed with the other collimators available for this type of system.

The efficiencies of the parallel-hole collimators are such that the saturation rate of 230,000 cps is observed with 15, 45, and 180 mCi of ^{99m}Tc with the 1.0, 1.5, and 2.5-inch thick collimators respectively.

System Seventy or...

(how the unique combination of a programmed computer and a matrix detector allow you to practice the NOW and FUTURE art of nuclear medicine consistently, simply and reproducibly.)

Diagnostic Superiority

That's what you're really looking for. We routinely obtain 3-4mm. static resolution scans — regardless of energy. Dynamic studies can now be accomplished at high frame rates with count/unit time accumulations (at low dose rates) that are not achievable on any other gamma camera, and the results can be displayed or printed-out in histogram or numerical form within seconds of the end-of-study. That's diagnostic superiority!

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Our unique "back-lit" front panel reduces each operation to a logical-computer assisted-series of steps. Select the mode; i.e. Static/ Dynamic, and only those buttons or controls necessary to complete the study will be illuminated. That's operation simplicity!

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The New Standard in diagnostic nuclear medicine. The only words that can describe a camera that is easy to use, delivers the greatest patient throughput, and provides the most technically superior diagnostic data while doing it.

No ONE of these terms really describes SYSTEM SEVENTY.

SYSTEM SEVENTY offers the highest spatial resolution, and that's why our static images are the best. This means that you can choose to increase patient throughput by selecting the best clinical measurement which optimizes spatial resolution and efficiency.

The system's high count rate capability (>200,000 cps) enhances the time resolution of dynamic studies which is a scientific necessity to achieve diagnostically meaningful evaluations of physiological time parameters. Stop thinking about the eventual possibility of more meaningful dynamic procedures and do them *now*, with SYSTEM SEVENTY.

And, the operational functions we've wired into the system and the software support we provide leave very little for you or your technician/operators to learn in putting SYSTEM SEVENTY to work and realizing the technically superior results.

So, looking back on them, certainly ALL of those terms apply, though no one of them really does SYSTEM SEVENTY justice.

Come see it for yourself at the Society of Nuclear Medicine Exhibit in Miami. We'll have two SYSTEM SEVENTIES there. One specifically for you to use. Get acquainted with the *new standard* of gamma scanning cameras, SYSTEM SEVENTY.

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See this system in operation at the Miami exhibition, Society of Nuclear Medicine, Booths 330-334, 340-344.

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Pho/Gamma can do more because we've taken the three most important qualities that make a scintillation camera great—*sensitivity, uniformity,* and high *resolution*—and included an exclusive fourth:

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The Tomocamera™ for imaging organs in 4 separate and variably selectable focal planes at one time. An Anatomical Marker which electronically provides direct transfer of anatomical landmarks to all film readouts and system accessories, and eliminates the need for cumbersome radioactive markers. A Clinical Data System (CDS-4096) to perform functional data manipulation and present the processed results as unambiguous, easily interpreted results for more accurate and faster interpretation. A Data-Store/Playback System which allows you to digitally capture the scintillation events, play the results back at your convenience, study, step-by-step, the nuclide distribution in the organ, and interpret the study with information that might have been missed on the initial scintiphoto study—and many more features, including the totally variable area of interest capability—all at the push of a button on the master console.

Pho/Gamma. Everything about it sounds like 2002 A.D., but it's here now for you to use. Contact your Searle Radiographics (formerly Nuclear-Chicago) Sales Engineer, or write to us for further information.

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