

# Breakthrough In Thyroid Testing

Announcing

**TRIOSORB** Trademark

T-3 DIAGNOSTIC KIT\*

An in vitro test unmatched in accuracy, speed & convenience

Triosorb represents a major breakthrough in thyroid testing because it replaces the red blood cells in the test. Triosorb sponge is a polyurethane foam in which is embedded a pre-measured ion exchange resin.

**ACCURACY:** Because only serum is used (instead of red blood cells) and there are only 3 washings, accuracy is greatly increased. Triosorb also permits accurate evaluation of thyroid function under certain circumstances where other standard methods may not be applicable. For example, it may be used following the administration of iodine-containing compounds or during the course of treatment with thyroid medications.

**SPEED:** Triosorb sponge can be washed quickly. The 3 washes can be completed in one or two minutes—compared to the red cell technique requiring 5 time-consuming washes and centrifugations. Triosorb does not require an incubator or shaker.

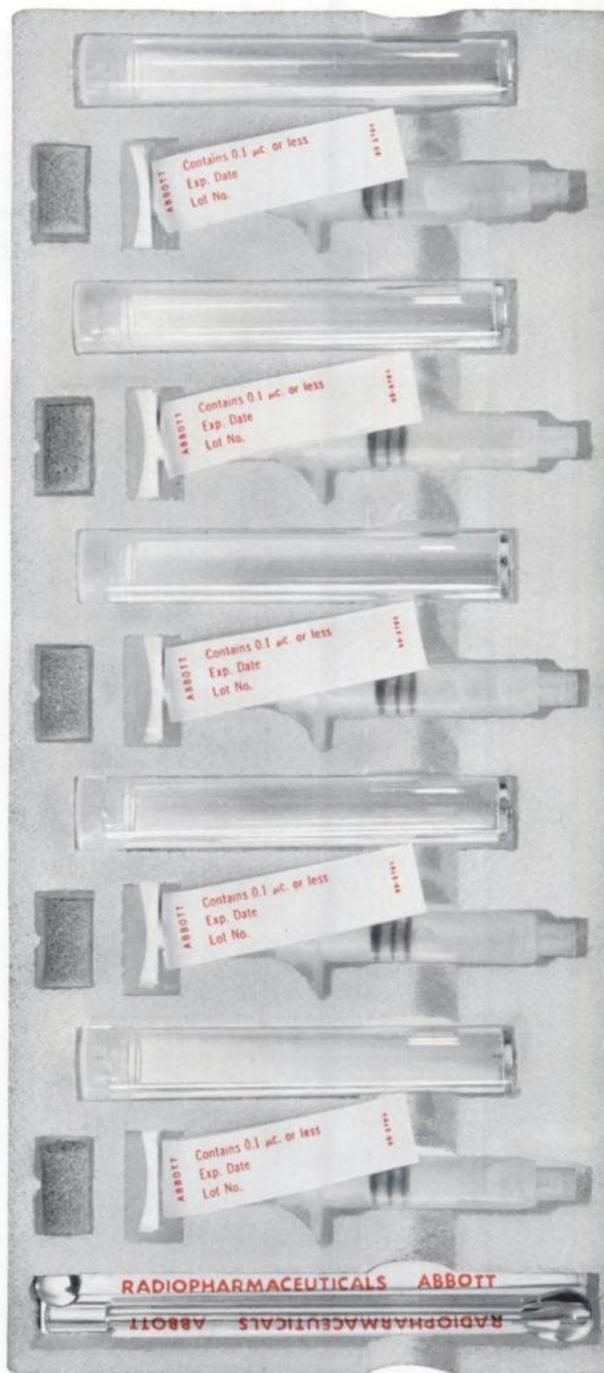
**CONVENIENCE:** It is in a disposable kit form ready for immediate use at room temperature (25° C.). Correction factors are available if room temperature varies.

**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 who fear ingestion of even tracer doses of radioactivity. Each syringe contains only 0.1  $\mu$ c. or less of  $^{131}$ I activity—an amount so minute that no special licensing is required by the AEC for its use.

**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.

**SUPPLIED:** Each Triosorb Diagnostic Kit is made up of two trays (such as the one pictured to the right) containing: 10 syringes filled with Triomet<sup>®</sup>-131 [Iothyronine I 131, formerly called Radio-L-triiodothyronine ( $^{131}$ I)], 10 Triosorb Sponges, 10 plastic test tubes with caps, 2 plungers, and 2 aspirator tips.

Triosorb is available to all physicians, hospitals and clinical laboratories—AEC licensing is not required.



**ABBOTT LABORATORIES**

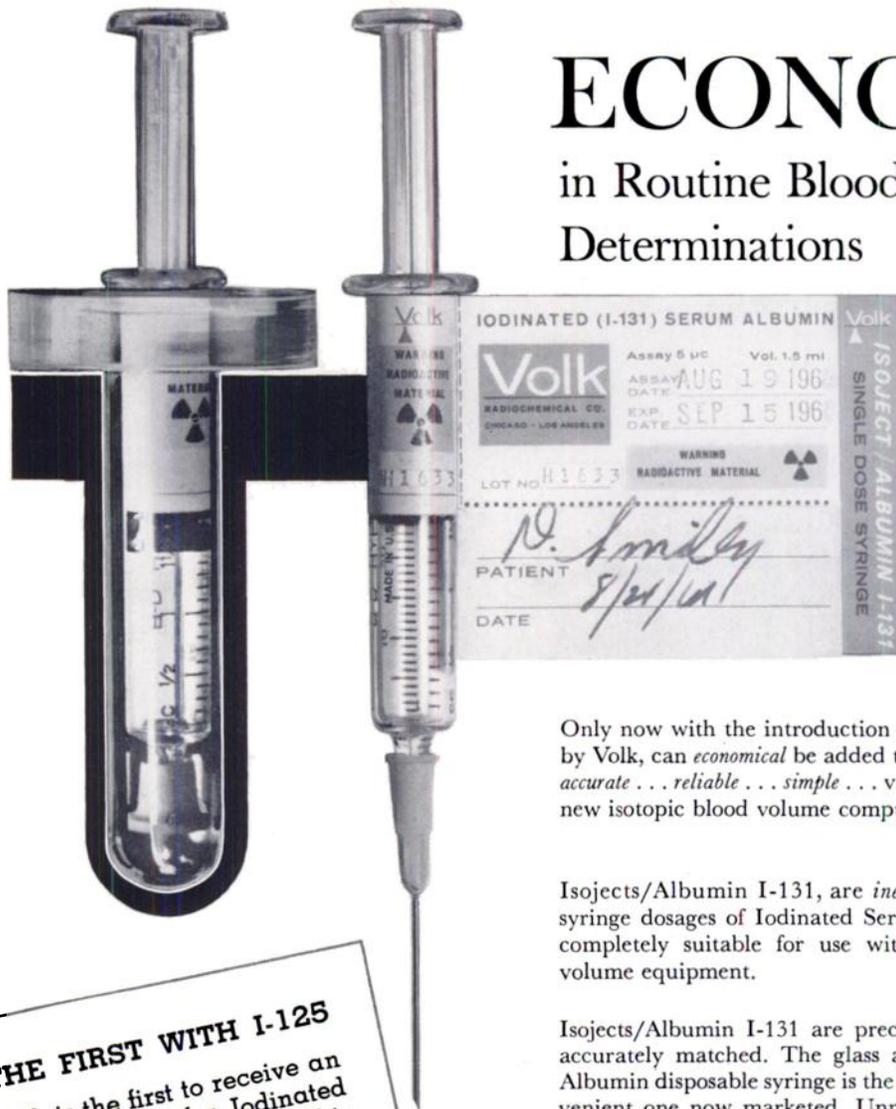
PIONEERS IN RADIO-PHARMACEUTICALS  
North Chicago, Illinois / Oak Ridge, Tennessee

\*Patent applied for.

305227

# ECONOMY

## in Routine Blood Volume Determinations



### THE FIRST WITH I-125

Volk is the first to receive an N.I.H. license for Iodinated Serum Albumin I-125. This 60-day half-lived, low radiation dose, product is also available in Isoject/Albumin form and usable in modified automatic equipment.

Only now with the introduction of Isojects/Albumin by Volk, can *economical* be added to the terms: *fast . . . accurate . . . reliable . . . simple . . .* validly describing the new isotopic blood volume computer technic.

Isojects/Albumin I-131, are *inexpensive* individual syringe dosages of Iodinated Serum Albumin I-131, completely suitable for use with automatic blood volume equipment.

Isojects/Albumin I-131 are precisely measured and accurately matched. The glass and rubber Isoject/Albumin disposable syringe is the safest and most convenient one now marketed. Unnecessarily elaborate packaging has been eliminated to make possible a unit dosage cost of less than \$1.50 per measurement with volume purchasing.

Available in 5 and 10 microcurie potencies. All necessary adjuncts—disposable needles, well-crystal guard tubes, blood sample tubes, and Isoject Adaptors for any machine—are furnished by Volk.

*For further details or to order: Call Collect*

# Volk RADIOCHEMICAL CO.

CHICAGO  
8260 ELMWOOD, SKOKIE  
TEL. 312 673-3760  
TWX 312 677-6768

LOS ANGELES  
803 N. LAKE, BURBANK  
TEL. 213 849-6023  
TWX 213 846-7301

NEW YORK  
P. O. BOX 345  
NEW YORK 5, N. Y.  
TEL. 212 891-9091

WASHINGTON, D. C.  
P. O. BOX 335  
SILVER SPRINGS, MD.  
TEL. 301 587-5337

# DETECTOR POSITIONING STAND



The Ohio-Nuclear, Inc. Model 72B Detector Positioning Stands hold scintillation detectors and shields at any height or angle relative to a seated or prone patient. They are especially convenient for thyroid and renal uptake studies.

These stands are available in both one- and two-detector models. The two-detector model has two separate columns on the same base so that each detector may be positioned completely independently.

The Model 72B Stands are built for detectors with crystals two inches in diameter or less and one inch of lead shielding. The shield shown is eight inches long and accepts interchangeable collimators.

The vertical height of the detector is changed manually by lifting or pushing down on the arm which supports the shield. The shield and supporting assembly is counterbalanced.

In addition to vertical and horizontal movement, the detector may be rotated about three different axis to obtain the desired angle relative to the patient.

The low base is mounted on rubber-tired, ball-bearing casters and is weighted to assure stability with the shield in any position.

Dimensions and specifications: overall height 67 inches; base height 7 inches; detector height variable 27 to 53 inches above the floor; detector extends to 35 inches from column; base dimensions 27 x 34 inches; rubber bumpers on corners of base; construction of anodized aluminum, stainless steel, and chrome plated steel.

Our usual one year unconditional warranty applies. Prompt shipment from stock. Write or telephone collect for additional information (Area code 216 Telephone 621-8477).

**OHIO - NUCLEAR, INC.**

1725 FALL AVENUE  
CLEVELAND 13, OHIO

# PACKARD offers two types of gamma counting systems:



this one needs people  
(MANUAL)

this one doesn't  
(AUTOMATIC)

Here are two of twelve different Packard gamma counting systems designed for the medical, biological, or chemical research laboratory. Each system incorporates the remarkable new 3000 Series Spectrometer which is noted for its stable performance, accuracy, and repeatability of results. The modestly priced single channel manual system which consists of the spectrometer and a well-type detector with either 2" or 3" crystal, is ideally suited for laboratories with modest gamma counting requirements. For users with maximum requirements, Packard offers a selection of six fully automatic, 100 sample capacity models which incorporate single, dual, or three channel spectrometers, patented constant background sample change mechanism, and printer or calculator.

*Your Packard Sales Engineer can provide complete details on these incomparable gamma counting systems, or, write for Bulletin 1025.*



**Packard**

**PACKARD INSTRUMENT COMPANY, INC.**

**BOX 428 • LA GRANGE, ILLINOIS • AREA CODE 312 • 485-6330**

# COUNT UP TO KNOW

## Precision Digital Ratemeter



### Nuclear Counting for Dynamic Function Studies

In dynamic function studies — such as cardiac insufficiency, renal function, and blood circulation — it is essential to record the rapidly changing concentrations of radioactivity as they occur. The University II Series Precision Digital Ratemeter Model 425 immediately and accurately records all pertinent events for precise evaluation.

With a new patented transistorized design, the 425 records all events occurring in a pre-selected time interval and transposes the data instantaneously into a buffer storage "memory". Rate per second is then determined and displayed as often as every tenth of a second; rate per minute, every hundredth of a minute. Only a fraction of a millisecond is needed at the end of each interval to actuate the digital display. (Pulse-events as rapid as one million counts per minute can be detected and displayed!) No information is lost.

In effect, ordinary ratemeter lag is eliminated, and there is no "smoothing" of the radioactivity curve.

The output data are available in three forms — as a visual display on the face of the instrument; as a printed paper tape record indicating counts per unit of time, time interval, and selected range; and as an analog-record of the curve plotted on a standard chart recorder. The researcher can easily correlate this information for the most accurate interpretation of the dynamic function being studied.

COUNT UP TO KNOW in all dynamic clinical or research studies with the University II Series Digital Ratemeter Model 425. Write to the Nuclear Instrument Dept. for brochure 425 or for a demonstration by a field engineer.

**Scientists: Investigate challenging opportunities with Baird-Atomic. An Equal Opportunity Employer.**

**BAIRD-ATOMIC, INC.**



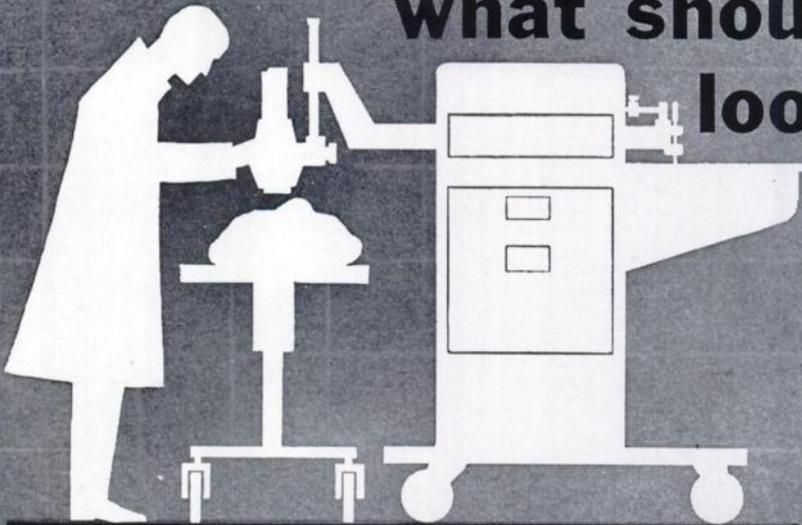
33 University Road, Cambridge, Mass. 02138

Subsidiaries:  
Atomic Accessories, Inc., Valley Stream, N. Y.; Chemtrac, Inc., Cambridge, Mass.

Europe: B/A (Holland) N.V., 5A Hartogstraat, The Hague, Holland

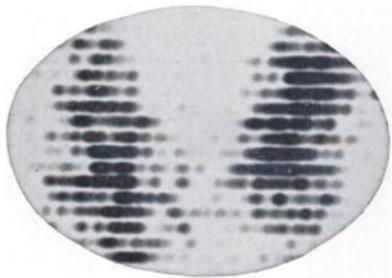
when investing in a scintillation scanner

what should you  
look for?

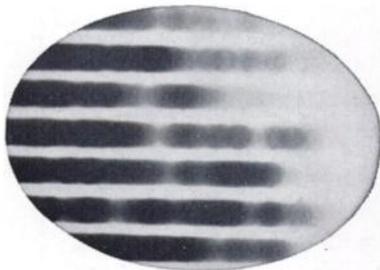


among other things...

**flexibility in line spacing**



small dot, close line spacing for thyroid detail



large dot, extra wide line spacing for fast liver scan

The distance separating successive scan lines is one of the factors determining how long it takes to make a scan. The Picker Magnascanner lets you set it according to (1) the organ being examined and (2) the size of the defect being investigated, anywhere from 0.2 to 1.0 cm.

The Magnascanner also lets you adjust the size of the lightspot to your taste and to the line spacing selected.

Some other scanners give you a meager choice of only three line spacings, and allow you no discretion whatever in choosing lightspot size.

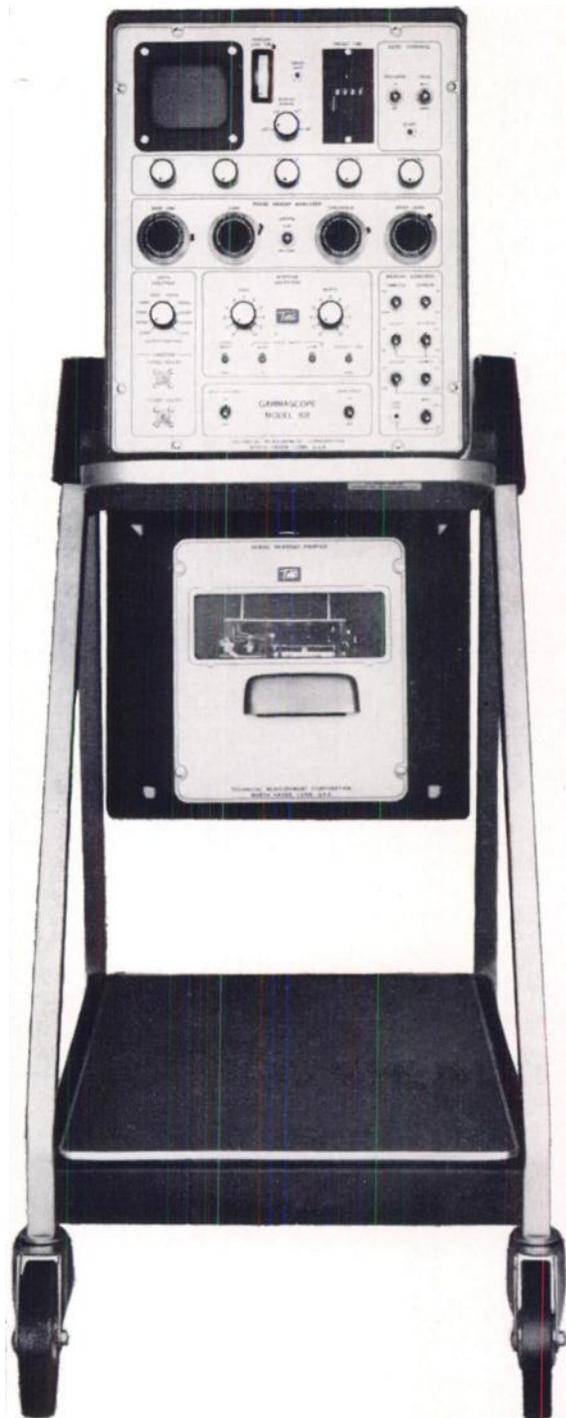
**PICKER**  
nuclear

**Magna Scanner**

the *versatile* scanner / the *proven* scanner

PICKER NUCLEAR  
DIVISION / PICKER X-RAY CORPORATION  
WHITE PLAINS, NEW YORK

# Five Radiation Lab Functions You Can Perform Best with a **GAMMASCOPE<sup>®</sup>**



## **1. Using mixed tracers in absorption studies**

The 100-channel Gammascope will function as a dual-peak spectrometer, clearly displaying the energy peaks of both elements on the visual and printed spectrum. Both elements are counted automatically and simultaneously.

## **2. Working with short-lived isotopes**

Half-lives of less than a day are problems for scanning devices, but the Gammascope, with fast automatic data accumulation, can complete a spectrum analysis in far less time than it takes to materially affect the isotope's energy.

## **3. Determining isotope purity**

Monitoring samples to determine their purity or to check the specifications of matched samples are other laboratory processes that can be completed quickly and accurately with the greater resolution, counting speed and readout efficiency of the Gammascope.

## **4. Using several isotopes in succession**

It is a simple matter to recalibrate the Gammascope for each new element used. Simply set the adjustable visual window to intensify the primary energy peak. The window adjusts to any width (number of channels) and any location on the energy spectrum.

## **5. Making diagnostic and experimental spectrum analyses**

In whole body counts, uptake studies and other biophysical radiation applications, the Gammascope will complete a spectrum analysis in a fraction of the time a scanning spectrometer takes. All pulses are stored in the 100-channel magnetic core memory while the cathode-ray tube simultaneously displays the build-up of the spectrum. To make a complete analysis you calibrate in one step, start the analysis and the automatic accumulation takes over. The completed count — determined by the pre-set live timer — can be printed out on the digital printer.

The Gammascope pulse analysis system includes built-in linear amplifier, high voltage supply, visual display and external printer — \$5990 (export slightly higher).

For complete data contact the nearest TMC office or Technical Measurement Corporation, 447 Washington Avenue, North Haven, Connecticut.

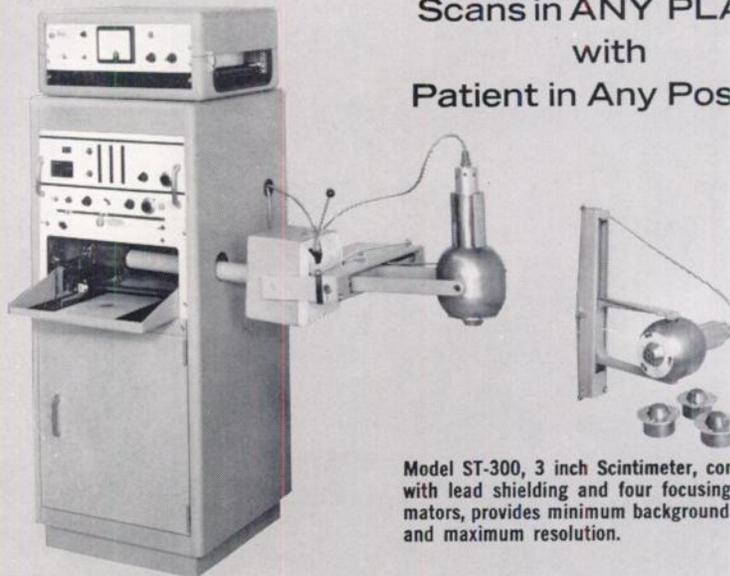


TECHNICAL MEASUREMENT CORPORATION

# universal II scintiscanner

Shown with 3" Detector and Photoscanner

Scans in ANY PLANE  
with  
Patient in Any Position



Model ST-300, 3 inch Scintimeter, complete with lead shielding and four focusing collimators, provides minimum background count and maximum resolution.

*Variable Scan Speed and Adjustable Spacing*

The only scanner that accepts both 2 and 3 inch detectors for scanning in any plane, Curtis Nuclear's Model SN-250 Scintiscanner is designed to scan the brain, heart, liver, kidneys and other vital organs with no discomfort to the patient. A one operator instrument, its modular construction permits its use with a wide selection of detectors, collimators, and counting and recording instruments. Features includes "joy stick" positioning, no large "over-the-patient" structure, illuminated outline of scan area, and universal head assembly that allows a multitude of tests in addition to scanning.

When connected with the dual, transistorized Photoscanner, Model PS 123T, the scanner provides a choice of either continuous film exposure (rate) or periodic exposure (integral).

*Write for complete information and specifications to . . .*

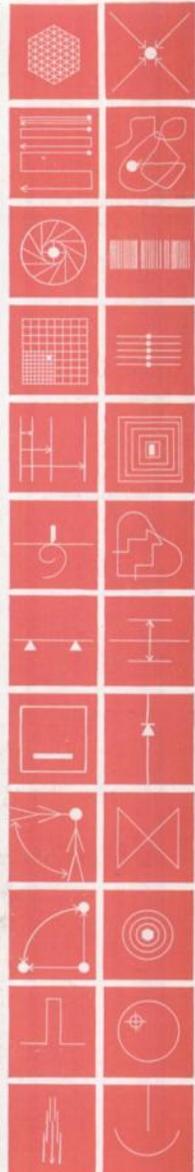
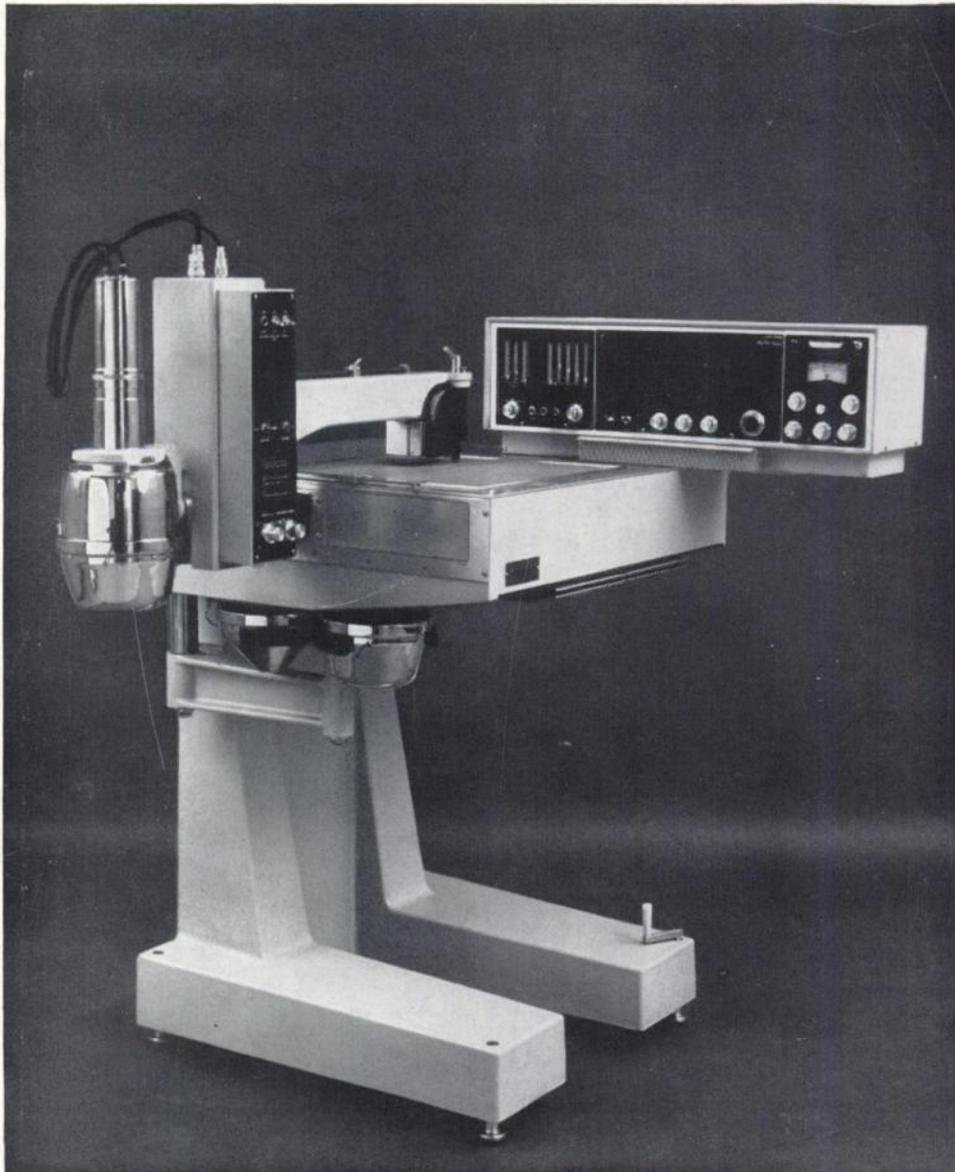


**CURTIS NUCLEAR CORPORATION**

*"first in scanning"*

THE ORIGINAL REED-CURTIS

1645 West 135th Street Gardena, California



PHO/DOT IS A NUCLEAR-CHICAGO TRADEMARK

## THIS IS PHO/DOT

It is the definitive photo-mechanical isotope scanner. It offers a host of operating and performance superiorities that take the guesswork out of scanning and that establish a new order of fidelity, convenience, and reliability.

Nuclear-Chicago's Model 1735 PHO/DOT Isotope Scanner produces a superb display of the

location and concentration of isotopes in organs or areas of the body. Data is recorded on X-ray film by a photorecording system and is also printed on paper by a dot recording system.

The instrument incorporates 24 significant advances in both human engineering and electro-mechanical design.

These advances are the key to PHO/DOT's increasing acceptance and are portrayed in red by the symbols above. They con-

tribute materially to simplified procedures and all but eliminate the chance of operator error.

Your Nuclear-Chicago sales engineer will be happy to review PHO/DOT for you in detail. Please consult him or write for our PHO/DOT brochure.



**NUCLEAR-CHICAGO**

A DIVISION OF NUCLEAR-CHICAGO CORPORATION

313 Howard, Des Plaines, Illinois 60018