

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.

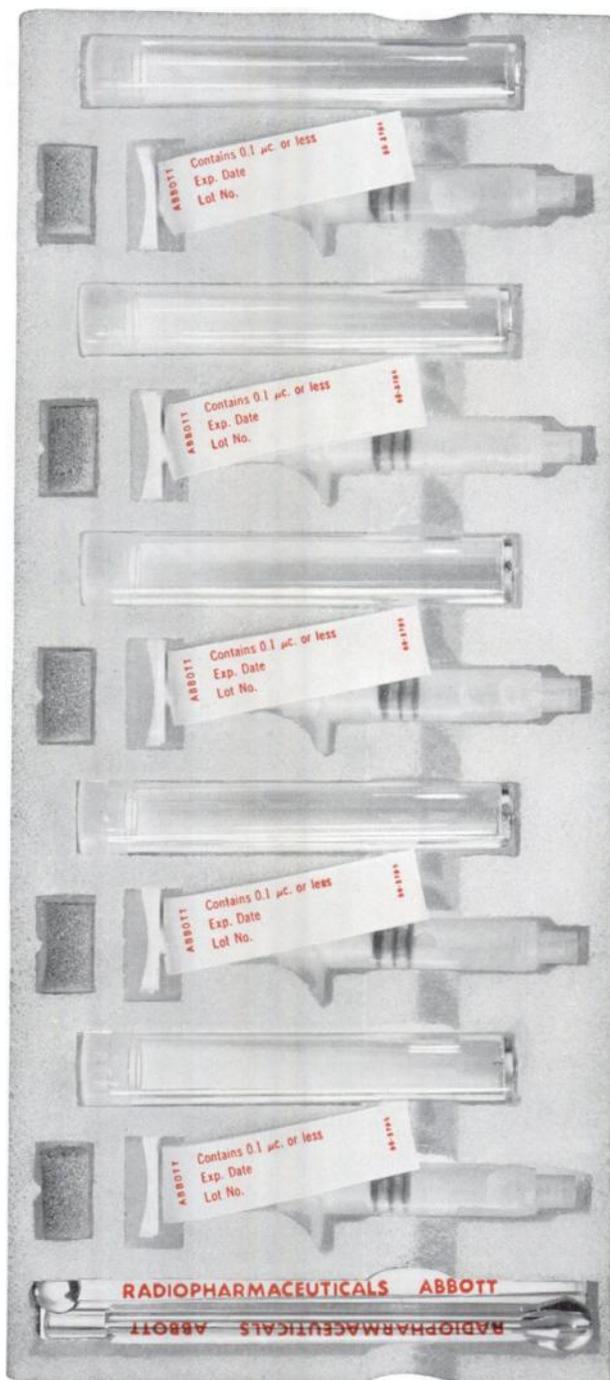
CONVENIENCE: It is in a disposable kit form ready for immediate use at room temperature (25° C.). Correction factors are available if room temperature varies.

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 μc . 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®-131 [Iiothyronine 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

**Product Quality
begins
INSIDE*
the
bottle**

NEOHYDRIN Hg-203
(chlormerodrin Hg-203)

A new stabilizing agent,
*theophyllin**,
suggested
by Dr. D. L. Tabern,
improves the stability
of Volk Neohydrin
to light and heat.
Decomposition in the
bottle is not a problem
with the Volk product.

**SODIUM
RADIOIODIDE
I-131
SOLUTION**
(sodium iodide I-131)

New stabilizing agent,
*ascorbic acid**
(0.5%), added to
solutions effectively
maintains the iodide
state, and is more
palatable to the patient
than cysteine which
forms H₂S.

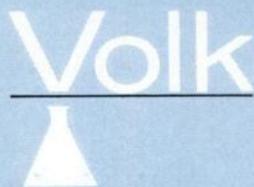
HIPPURAN I-131
(sodium iodohippurate I-131)
DIODRAST I-131
(iodopyracet I-131)
**ROSE BENGAL
I-131**
(rose bengal I-131)

The *Silver Saddle** is a
continuously active
purifying agent for the
removal of free iodide.
It is an exclusive Volk
agent added to these
products where free iodide
is released on storage.
A silver salt contained
within the porous porcelain
saddle binds iodide
in an insoluble form.



RADIOTRIOLEIN
(triolein I-131)
AND
**RADIO-OLEIC I-131
ACID**
(oleic acid I-131)

Chromatographically pure
*radioiodinated lipids**
for meaningful
results in
absorption studies
through the use of chemically
pure starting materials and an
exclusive microtechnique
for removing
free iodide yields.



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8-INCH CRYSTAL RADIOISOTOPE SCANNER



More than a year ago Ohio-Nuclear *delivered* its first 8-inch crystal radioisotope scanner. It was our standard Model 54 Scanner except for the heavier shield and the scanning head beneath instead of over the patient.

The spectroscopy grade crystal in this scanner is 8 inches in diameter by 2 inches thick with a 2-inch thick inactivated sodium iodide light pipe. The crystal assembly is stainless steel.

The scanner has a massive 2000-pound shield mounted within the scanning table; a scanning area 60 x 16 inches; an electrically powered, adjustable height detector assembly to accommodate collimators of different thicknesses; and a Bucky beneath the patient.

The maximum scanning speed is 100 inches per minute.

The data plotter provides both a dot record as well as a photoscan. It is driven with synchros and may be located where it is most convenient for the operator.

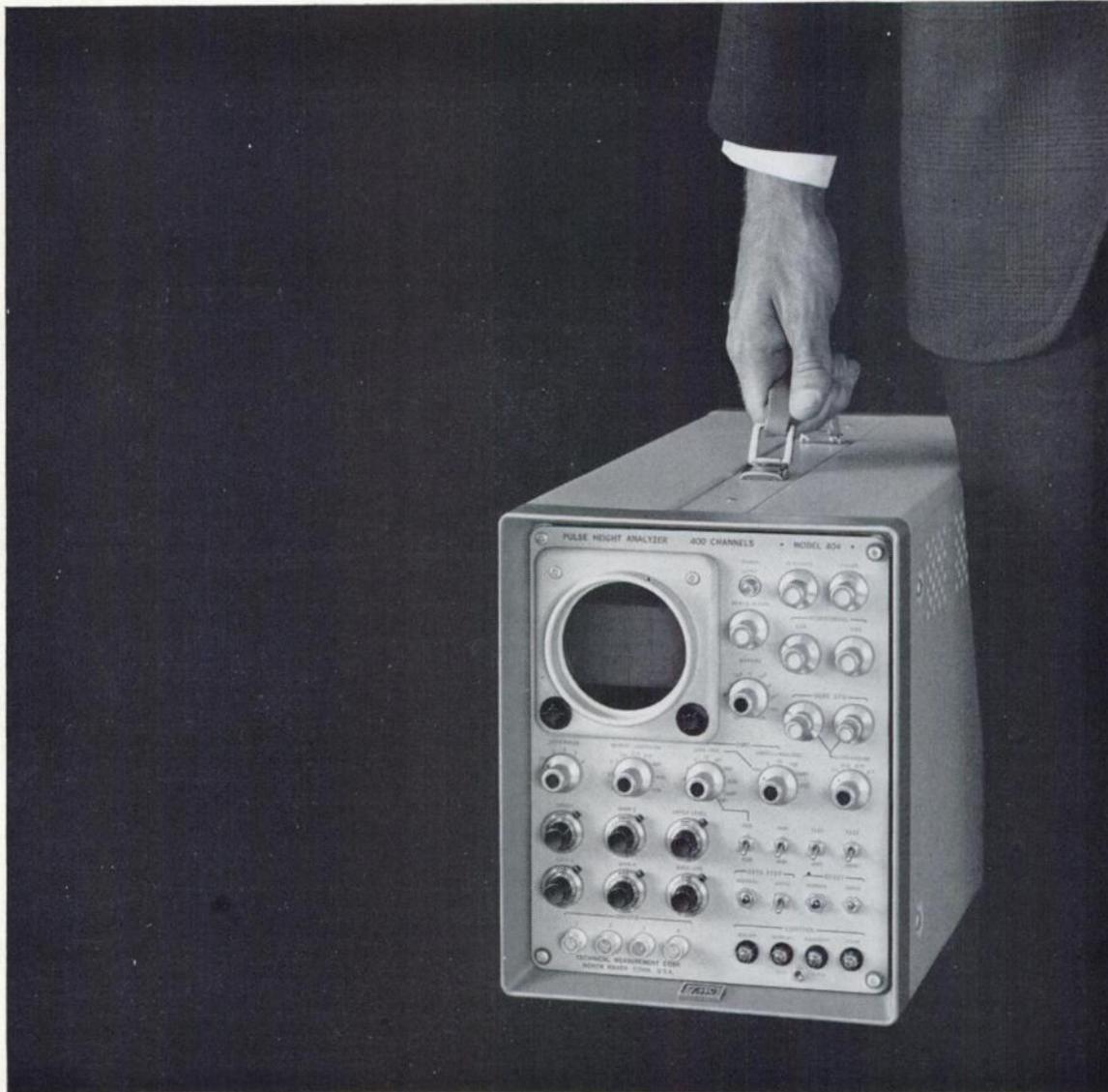
This scanner is in almost continuous use in research programs and special clinical studies. For example: as part of a current study, brain scans of extraordinary resolution are being obtained at scanning speeds of 50 inches/minute.

If a similar scanner would interest you, call us. The price is \$19,950 complete with transistorized electronics, ready to scan in your laboratory, *120 day delivery guaranteed.*



OHIO—NUCLEAR, INC.

1725 FALL AVENUE
CLEVELAND 13, OHIO
621-8477



Take it and use it anywhere

It is true that the TMC Model 404 is the most portable pulse height analyzer you can own. But it offers a lot more than portability. Built-in CRT, four detector inputs, multiscaling mode, push button data transfer and display overlap are a few examples of the 404's capabilities. It requires a mere 36 watts of power. Analog and digital outputs permit readout on an X-Y plotter, paper tape printer, paper tape punch, IBM typewriter or computer compatible magnetic tape.

We think it is the record of reliable performance and large capabilities of this small instrument (just over 1 cubic foot) that explain why TMC 400 Series Analyzers are occupying

less bench space in more laboratories than any other pulse height analyzer made. And why it was chosen for airborne monitoring of radioactivity . . . or monitoring sea water samples aboard submarines . . . or radioactivity measurements on cattle out on the range . . . or whole body counts in medical research laboratories.

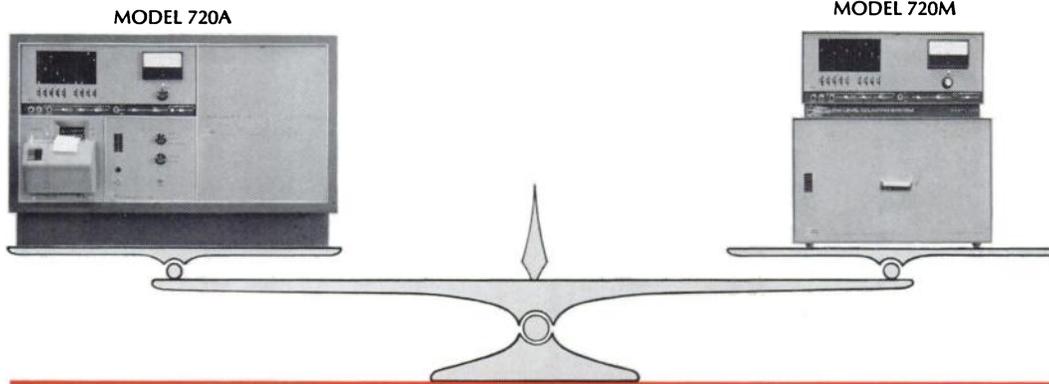
Other TMC Multi-Channel Analyzers include 100, 256, 1024, 4096 and 16,384 Channel Models. One of them is probably right for your application. Contact any TMC office for more information or write Technical Measurement Corporation, 441 Washington Ave., North Haven, Conn., U.S.A. 06473.



TECHNICAL MEASUREMENT CORPORATION

Your Count is on the Level

with Baird-Atomic low level planchet counting systems



AUTOMATIC

The 720A Automatic Low Level Counting System has a capacity of 100 planchets up to 2" in diameter. The automatic changer can be programmed to count on a single sample or continuous-run basis.

MANUAL

The 720M Manual Low Level Counting System offers a simple, compact, and economic arrangement with the same sensitivity, shielding effectiveness, and electronic capability as the automatic system.

WHEN THE BACKGROUND RADIOACTIVITY IN THE ENVIRONMENT IS COMPARABLE TO THE LOW LEVEL RADIOACTIVITY OF YOUR EXPERIMENTAL SAMPLE, HOW DO YOU MEASURE YOUR SAMPLE?

You are engaged in radiometric studies of material with low levels of radioactivity — in health physics, in life sciences, in geochemistry, or in neutron activation analysis. The test samples generally contain smaller quantities of radioactive material than normally encountered in routine counting. Yet you must be certain that **YOUR COUNT IS ON THE LEVEL!**

With B/A Low Level Counting Systems, background radiation is reduced to as little as 0.5 cpm (30 counts per hour!) That outstanding performance stems from Baird-Atomic's traditional reliability, and from specific engineering features such as the use of a 4" virgin lead shield, with an inner shield of OHFC copper. The materials used in the detector and sample slide are also carefully selected to insure low natural radioactivity content.

The background is further reduced through the use of anticoincidence circuitry, guaranteeing greater sensitivity and more statistically reproducible results. Detectors of 1.25" or 2.25" diameter with windows of 800 $\mu\text{gms}/\text{cm}^2$ or 100 $\mu\text{gms}/\text{cm}^2$ are available.

Your own counting problems may be amenable to solution through low level techniques. If you are engaged in studies in any of the fields named above (age dating? fallout? trace quantities of radioactivity in samples of air, water, milk, metals, vegetable or animal tissue? others?) you can be certain, with a Baird-Atomic Low Level Counting System, that **YOUR COUNT IS ON THE LEVEL.**

Service is available through all Baird-Atomic sales offices, in the US and abroad. Write to the Atomic Instrument Division for our detailed data sheet 720A-720M. Scientists: Investigate challenging opportunities with Baird-Atomic. An Equal Opportunity Employer.

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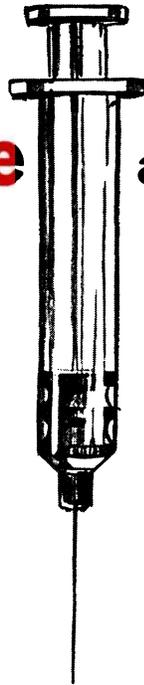
beset



**by worries about
blood volume?**

- pre-operative transfusion necessary?
- post-operative replacement, maybe?
- blood loss during surgery?
- G.I. hemorrhage?
- hypervolemia?
- red cell survival?
- guidance for anesthesiologist?

Hemolitre

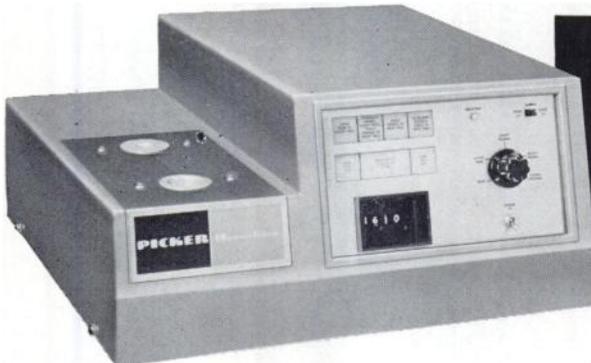


**automatic measurement
can resolve them...**

- by providing rapid determination of the patient's circulating blood volume
- by using radioisotope dilution techniques and errorproof programmed operation
- with accurate digital readout to nearest 10 ml
- needs only small blood sample
- no preparative delay: dosage is prepackaged
- repeat tests any time

without capital investment.

Picker will supply you with 15 prepackaged doses and the use of a Picker-serviced Hemolitre for \$80 per week



PICKER Hemolitre

For the full story call any local Picker Sales Office (see 'phone book) or write
PICKER X-RAY CORPORATION, WHITE PLAINS, N.Y.



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Medotopes reflect the latest developments in nuclear medicine. All provide the utmost in safety and convenience. All have unique packaging safeguards so that direct contact is never required. Exclusive lead shield enclosures are fitted with bottle caps that unscrew automatically. Saf-Tag® vials and bottles are carefully encased and double protected by transparent, shatterproof plastic coatings, and shipping cartons have convenient "pull-tab" openers. And, each preparation is custom-handled, each delivery custom-routed by Squibb Traffic Service. Access to three major airports expedites shipment.

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Here's the perfected film badge service — the unique Twin-film badge from Tracerlab. For complete laboratory peace of mind, for full detection of beta, gamma, neutron, x-ray and mixed radiation — the Twin-film badge assures health-guarding dosimetry. And computers speed results to you!

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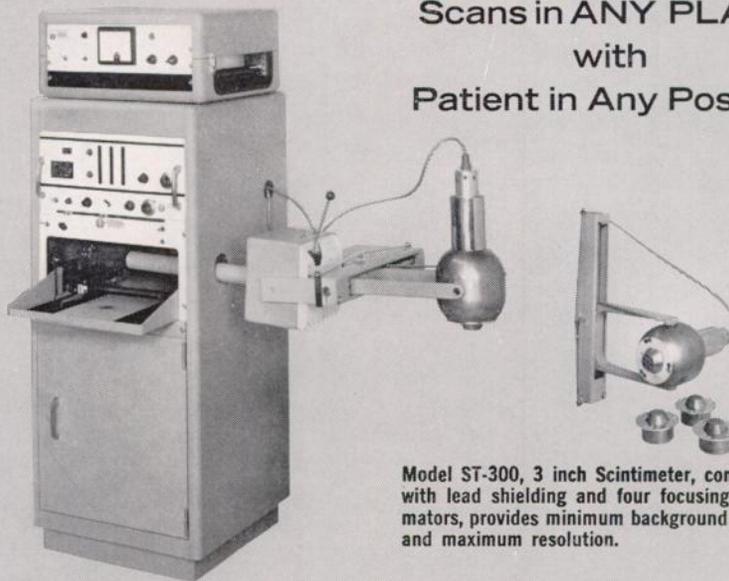
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universal II scintiscanner

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 . . .

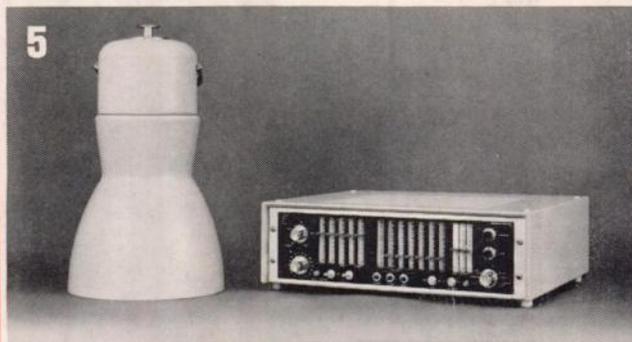
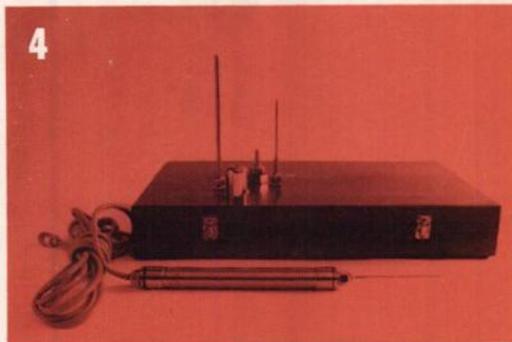
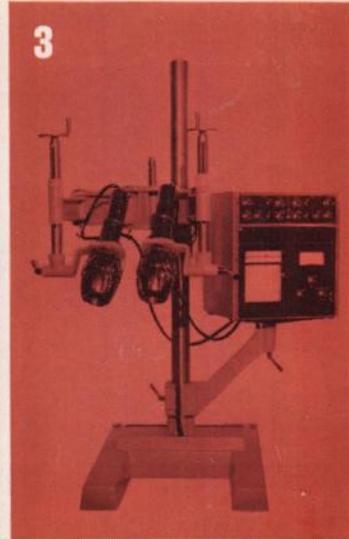
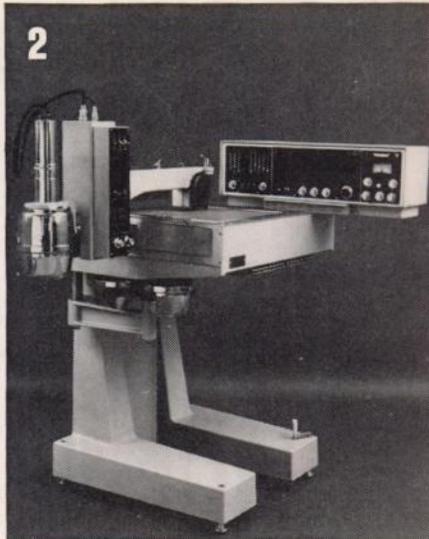
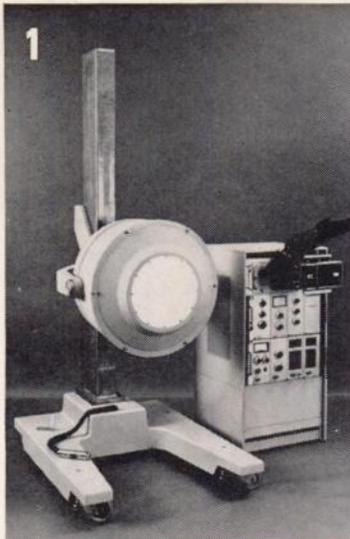


CURTIS NUCLEAR CORPORATION

"first in scanning"

THE ORIGINAL REED-CURTIS

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1. Pho/Gamma Scintillation Camera. 2. Pho/Dot Isotope Scanner. 3. Renaltron IV. 4. Miniature Surgical Scintillation Probe Set. 5. Well-Detector Counting System with Analyzer/Scaler.

NUCLEAR INSTRUMENTS FOR CLINICAL RESEARCH AND DIAGNOSIS: COMPLETE, CURRENT, CREATIVE

Since 1946, Nuclear-Chicago Corporation has designed and produced versatile, automatic instruments and systems for clinical research and diagnosis.

The instrument or system that bears the Nuclear-Chicago name often provides the stimulus for the increasing use of radioisotopes in clinical medicine. Here are but a few examples. There are more—instruments and systems of proven merit and constantly enlarging application.

Pho/Dot™ Isotope Scanner—the

most advanced scanner available. Automatic controls take the guesswork out of scanning. Separate photo- and dot-recording systems produce a superb display of the location and concentration of isotope-labelled compounds within the human body.

Pho/Gamma™ Scintillation Camera—faster, more efficient than the most advanced photomechanical scanner. Because of its speed and sensitivity, it can (1) produce complete pictures of radioisotope distribution in organs or body areas at speeds up to ten times faster than photomechanical scanners and (2) produce rapid-sequence, stop-motion pictures of dynamic processes such as the flow of isotopes into and out of an organ.

In-Vivo Counting—with Thyrad™ and Renaltron™ Systems for evaluating thyroid uptake and kidney function. Both use highly efficient

Nal(Tl) crystal detectors plus the latest solid-state electronics for reliable, long-term performance.

In-Vitro Counting—with the largest selection of manual and automatic gamma systems. Advanced electronics, sensitive Nal(Tl) crystal well-type detectors ensure a high order of reliability.

Clinical Accessories—include a variety of mobile detector stands and instrument racks. Also available are specialized detectors for surgical applications and a selection of scintillation detectors, collimators, and lead shielding.

For further details, consult your Nuclear-Chicago sales engineer.

NUC-D-4-240



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