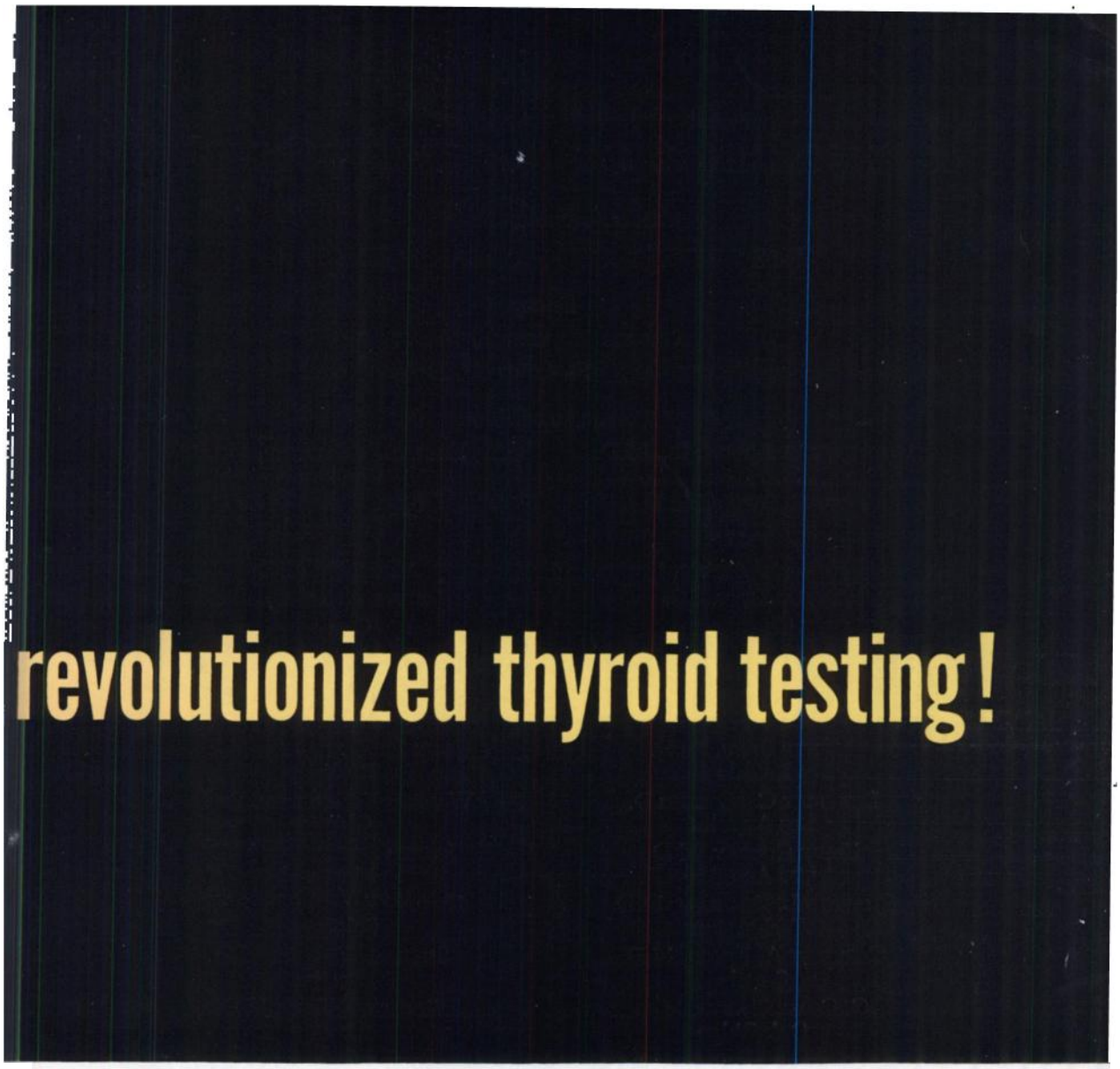
By eliminating the disadvantages of earlier methods, the Triosorb Sponge has achieved a real breakthrough in thyroid testing. **It is an in vitro test unmatched in accuracy, speed and convenience.**

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

Speed: With only 3 washes and no need for double pipettings, shakers, or incubators, the Triosorb Test can be



more rapidly performed than any other T-3 test.

Convenience: Triosorb is in a disposable kit ready for immediate use at room temperature, making it the simplest and most convenient thyroid function test to perform.

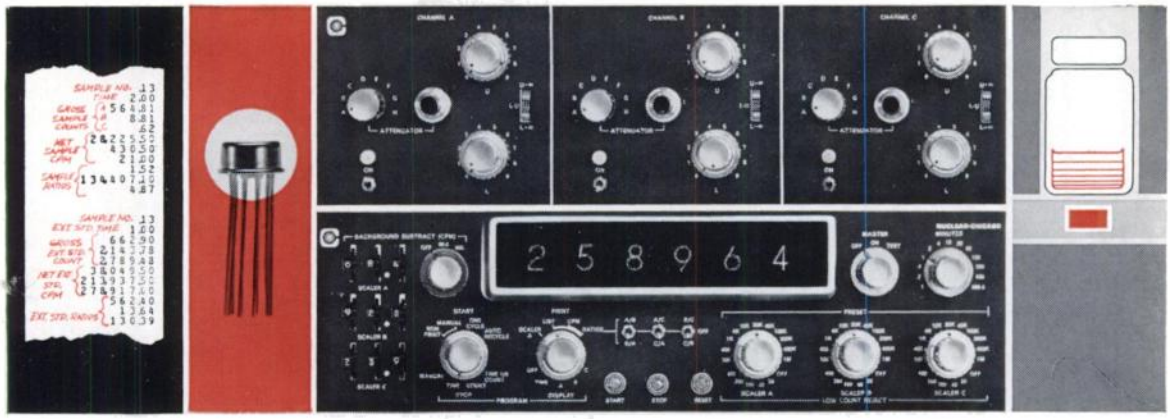
McAdams* reported that "The resin sponge (Triosorb) technique is superior to the erythrocyte method for performing the I^{131} T3 test in terms of simplicity, convenience and elimination of errors characteristic of the erythrocyte procedure."

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

501202

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

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



It takes a pretty special instrument package to give you simple, high-performance liquid scintillation counting.

Everything about our Mark I™ Liquid Scintillation Computer is there to help you cut down on your work load. To let you handle all sample types and energies, quickly and easily. To give you unmatched counting accuracy and system reliability.

Here are just some of the reasons why the Mark I has what it takes for your kind of work:

1. Exclusive, all-electronic data computer with integrated microcircuits.
2. Three separate, identical counting channels.
3. 150-sample capacity with temperature control.
4. All operating controls located on front panel within easy reach.
5. Automatic external standardization with choice of Ra^{226} or Ba^{133} standard.
6. Three scalers with 0.2 μsec resolution. Crystal-controlled timer.
7. Preset time, preset count, and preset time/preset count control on all three scalers.
8. No high-voltage adjustments necessary.
9. Reproducible, positive-step discriminators and amplifier attenuators with dynamic ranges to cover any beta spectrum.
10. Individual background subtracters on each counting channel.
11. Low-count reject on each counting channel.
12. Foolproof sample-changing and index numbering.
13. Automatic counting of preselected sample groups.
14. Repeat counting for best statistical accuracy and reproducibility comparison.
15. Built-in data conversion for card punch, tape punch, electric typewriter, and Teletypewriter.
16. Wide selection of data listing sequences.
17. Continuous presentation of number of sample being counted.
18. Calibration and operating logic designed for the individual convenience of multiple users.
19. Set-up for single-, dual-, or triple-labelled samples.
20. Guaranteed performance specifications.

Call your Nuclear-Chicago sales engineer or write to us for the complete details on the Mark I.

NUC:8-5-250

Only the Mark I Liquid Scintillation Computer has what it takes.

Model 6860 (Ba^{133} external standard)
Model 6863 (Ra^{226} external standard)

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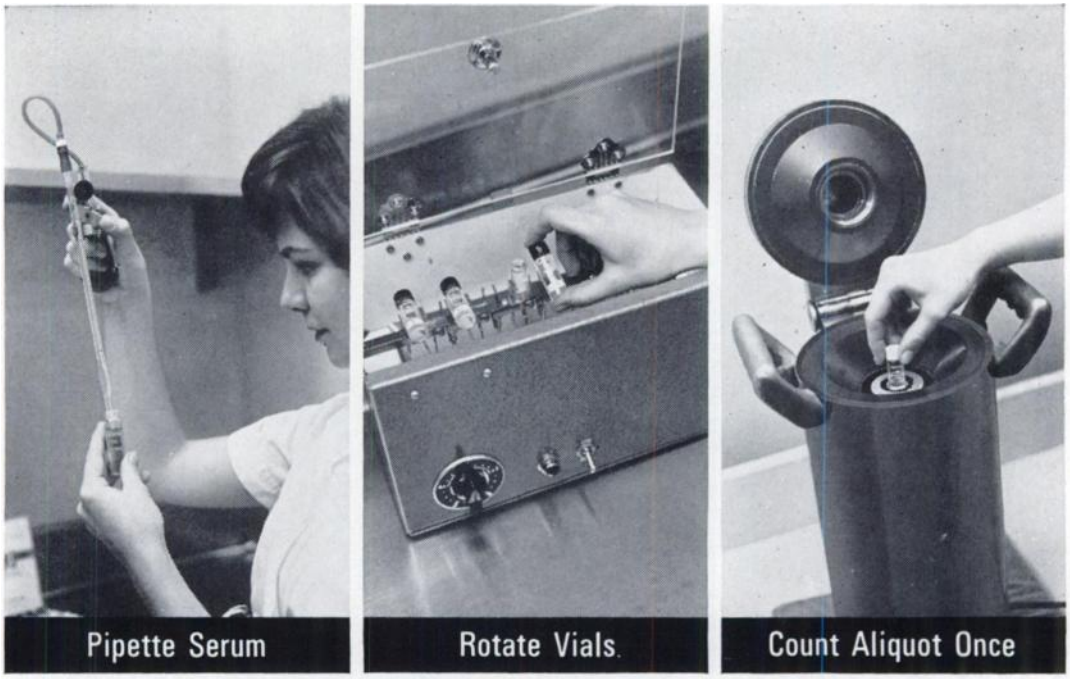
LESS TECHNICIAN TIME

Than Any Other T-3 Test

TBI KIT 265T



- Easiest, most reliable* *in vitro* thyroid function test. New buffer produces exceptional stability and reproducibility.
- Unmatched accuracy for hypo-, eu-, or hyperthyroid evaluation. Eliminates variables due to problems of serum handling.
- Takes less technician time than any other T-3 test . . . almost half.
- Time and temperature are not critical.
- Count patient serum only once in well counter.
- TBI test kits cost less, too. Permits use as a screening test.

*In tests performed on over 2200 patients, the TBI test was reported in agreement with final clinical diagnosis in over 90% of the cases. Ref: Scholer, J.F., J. of Nuclear Med., May '63, p. 192.

Write today for further information.

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DIVISION OF MALLINCKRODT CHEMICAL WORKS
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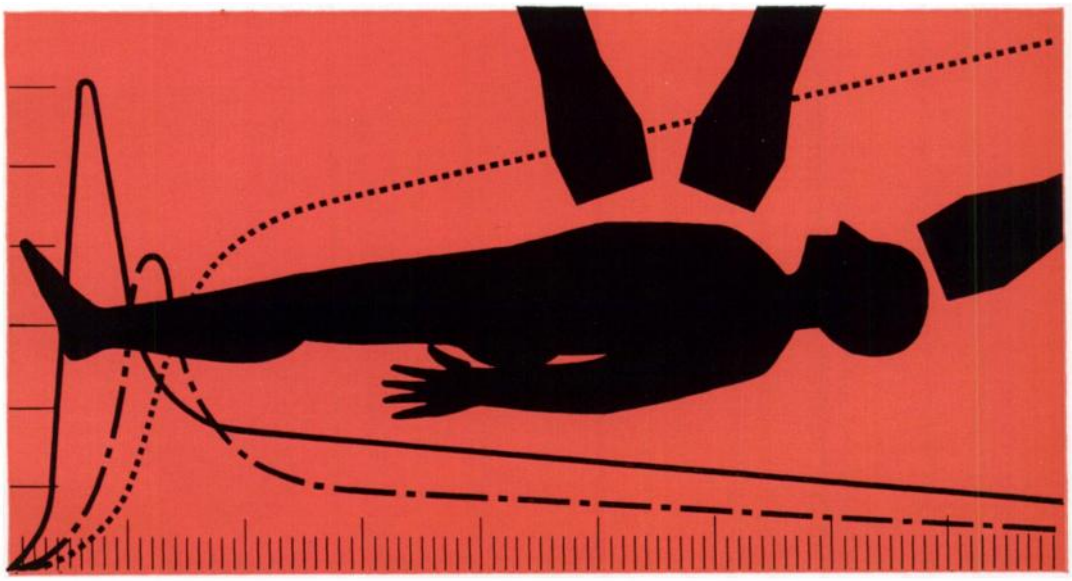
Dynamic clinical studies using radioisotopes:



Are you interested but don't know quite where to start?

Then start here.

First let us admit that the dynamic clinical techniques which use radioisotopes for studying various bodily functions are more complicated than well counting or even scanning procedures. Undeniable.

But these methods are valuable, providing either confirmatory clinical data or, in some instances, information which just cannot be obtained *by any other means.* Long-established applications of these techniques include, for example, renal function studies, cardiac output determinations and hepatic function assessment. Or perhaps the newer techniques such as cerebral blood flow or pulmonary function would be of interest.

Whatever your interest, we *can* minimize the technical difficulties of getting into this field.

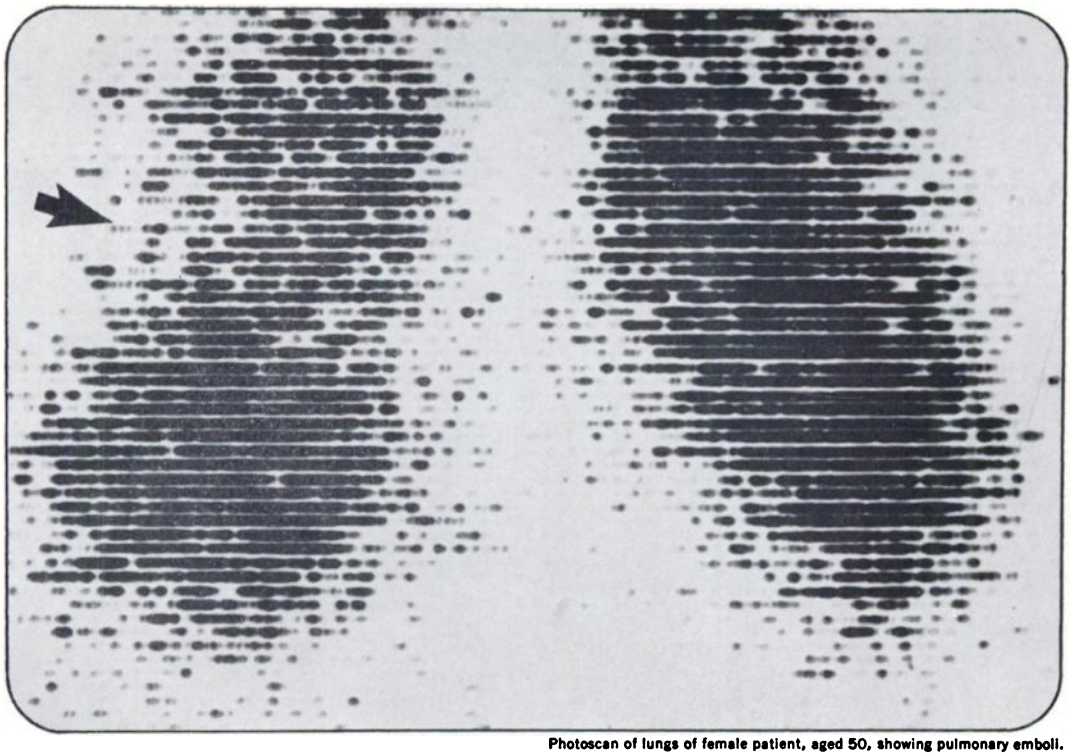
Our offer: to work with you in any and every way to make your entry into this area as painless as possible. Specifically, we would be happy to talk with you about these methods, to provide the necessary information on existing procedures, to help you plan your radiotracer studies, to assist in interpreting results, and to aid in the training of your staff in all phases of radioisotope dynamic function methodology. Or, to work with you in any other way that you may wish. With no obligation.

Then it will come as no surprise that we can also help you select the equipment that makes sense for your needs. And to begin with, this can be a relatively simple outfit; your first commitment can be limited to the basic equipment since refinements can be added easily as needed. You should also know that our line of instruments for dynamic function work of every kind is *unmatched in diversity or quality.*

So, an invitation: call your Picker Nuclear representative, or drop us a line. Start a dialogue.

Picker Nuclear: 1275 Mamaroneck Avenue, White Plains, New York 10605

PICKER nuclear



Photoscan of lungs of female patient, aged 50, showing pulmonary emboli.

ALBUMOTOPE®-LS

Squibb Aggregated Radio-Iodinated (I^{131}) Albumin (Human)

FOR EARLIEST EVIDENCE OF PULMONARY EMBOLISM...

A unique diagnostic feature of the lung scan technique that employs Albumotope-LS as the tracer is its capacity to display ischemic areas produced by small pulmonary emboli before evidence of infarction or ischemia is demonstrated in standard chest x-rays.

This method has been found to be a valuable adjunct to selective pulmonary arteriography with the advantages of being readily available, reliable, simple, direct and free from morbidity.

Albumotope-LS meets all the requirements for the ideal radiopharmaceutical for the scanning of pulmonary infarcts as described by Quinn et al:*

- ☐ Exhibits a marked difference in concentration between the infarcted and the uninvolved lung tissue.
- ☐ Because concentration in the lungs is so selective, it presents a low radiation background when other organs are compared to the lungs.
- ☐ Clears rapidly from the blood stream if the infarct concentration of radioactivity is lower than that in the blood.
- ☐ Has a suitable gamma energy for scanning and delivers a low radiation dosage to the patient.
- ☐ It is non-toxic.

SQUIBB Squibb Quality—the Priceless Ingredient

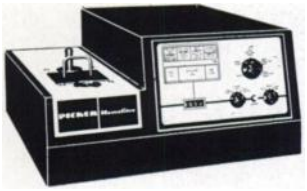
Dosage and Scanning Procedure: Recommended scan doses of 150 to 300 microcuries of aggregated radioalbumin depending on the instrumentation available and the technics employed. Scanning immediately follows administration of intravenous injection. Patient may be placed in a prone or supine position.

Side effects and Precautions: There have been no reported cardiovascular or other untoward effects attributable to Albumotope-LS. The product appears to possess no antigenic properties. One patient with a known history of angioneurotic edema, who had been given Lugol's solution in conjunction with aggregated radioalbumin similar to Albumotope-LS, developed urticaria. Extensive clinical use of Albumotope-LS has not borne out the hypothetical possibility that particles of large size might induce deleterious cardiovascular or cerebrovascular effects.

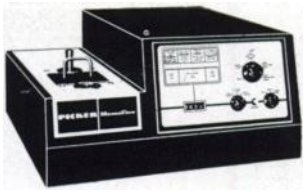
Radioisotopes should not be used in pregnant women, nursing mothers, or in patients under 18 years of age unless indications are very exceptional.

Available: As a sterile, pyrogen-free, aqueous suspension. Each cc. contains approximately 1 mg. aggregated human serum albumin labeled with 800-1500 microcuries of Iodine-131 at time of manufacture. Also contains 0.9% benzyl alcohol as a preservative.

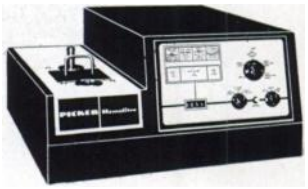
*Quinn, J. L., III, Whitley, J. E., Hudspeth, A. S. and Watts F. C.: An approach to the scanning of pulmonary infarcts, J. Nuclear Med. 5:1, 1964.



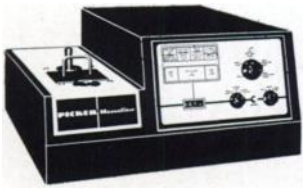
BODY WATER



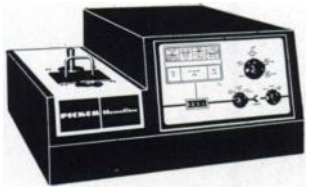
Thyroid Uptake*



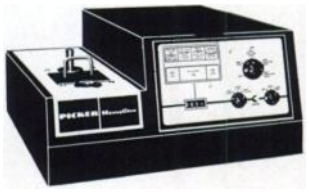
Urinary Rose Bengal Excretion



Schilling Test



BLOOD VOLUME

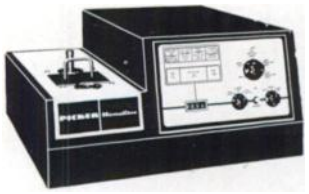


Plasma Disappearance

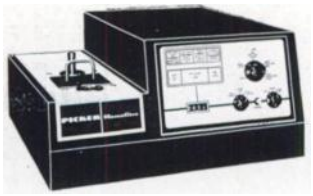
Now then, isn't it funny that we named it Hemolitre® if the measurement of blood volume is but one of its many talents?

Yes. Except that it now leaves us with this not-so-funny problem: to explain, credibly and compellingly, that this instrument's capabilities extend far beyond the measurement of blood volume. Read on if you'd like to hear about this truly versatile instrument useful for essentially all static nuclear medicine techniques.

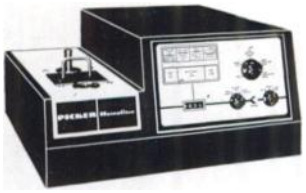
Basically, the Hemolitre is a complete, self-contained instrument for precise measurement of gamma radioactivity. As such, *any* of the clinical procedures using gamma-emitting radioisotopes can be performed easily with the Hemolitre. More specifically, the Hemolitre's usefulness extends to the measurement of small samples with low radioactivity (T-3 and PBI tests, red cell survival, plasma disappearance, fat absorption, iron binding, body-water measurement, etc.). Or tests involving bulk samples (Schilling test, urinary rose bengal excretion, counting of feces, etc.). Or tests using an external scintillation probe (thyroid uptake, placenta localization, regional perfu-



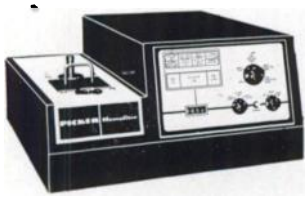
RED CELL SURVIVAL



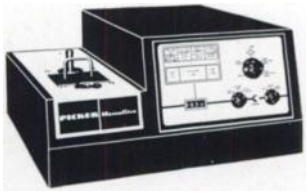
*Placenta Localization**



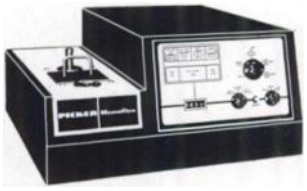
PBI



Fat Absorption



T-3



Iron Binding

sion, etc.). Or *even* blood volume measurement. Versatile instrument.

Also worthy of emphasis: the Hemolitre is fully transistorized, gives direct reading in per cent, and has automatic background correction. And Picker service everywhere.

So, if you are interested in a seasoned, dependable instrument for blood volume measurement and/or other static nuclear medicine procedures, think Hemolitre. The name may be limiting, the instrument certainly isn't.

(Finally, *why* did we name it Hemolitre if its versatility extends so far beyond the measurement of blood volume? Simple. It was born, baptized, and known to so many people as the Hemolitre *before* the full development of its capabilities. It just seemed much too complicated—and, hopefully, unnecessary—to start changing its name at this late date. And the same reasoning applies to the price: it, too, remains the same.)

Write for the Hemolitre brochure **HNM4.**

*With external detector.

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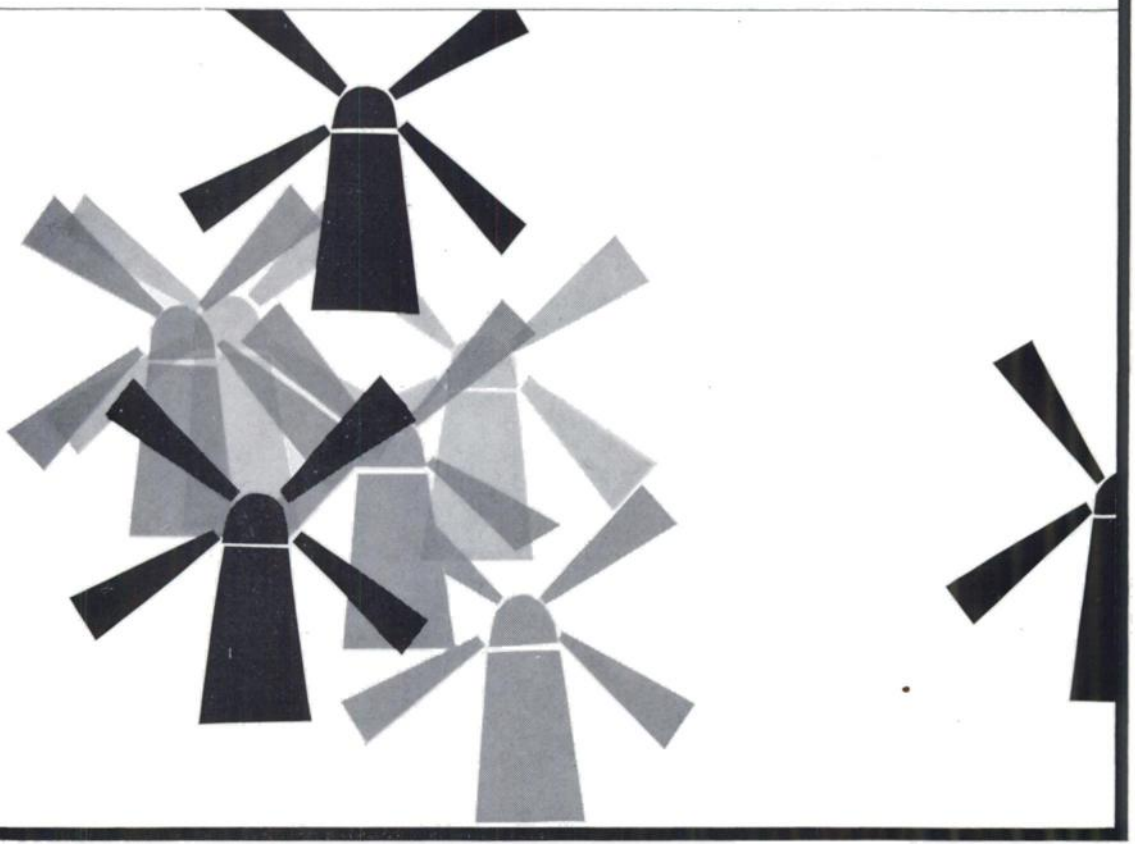

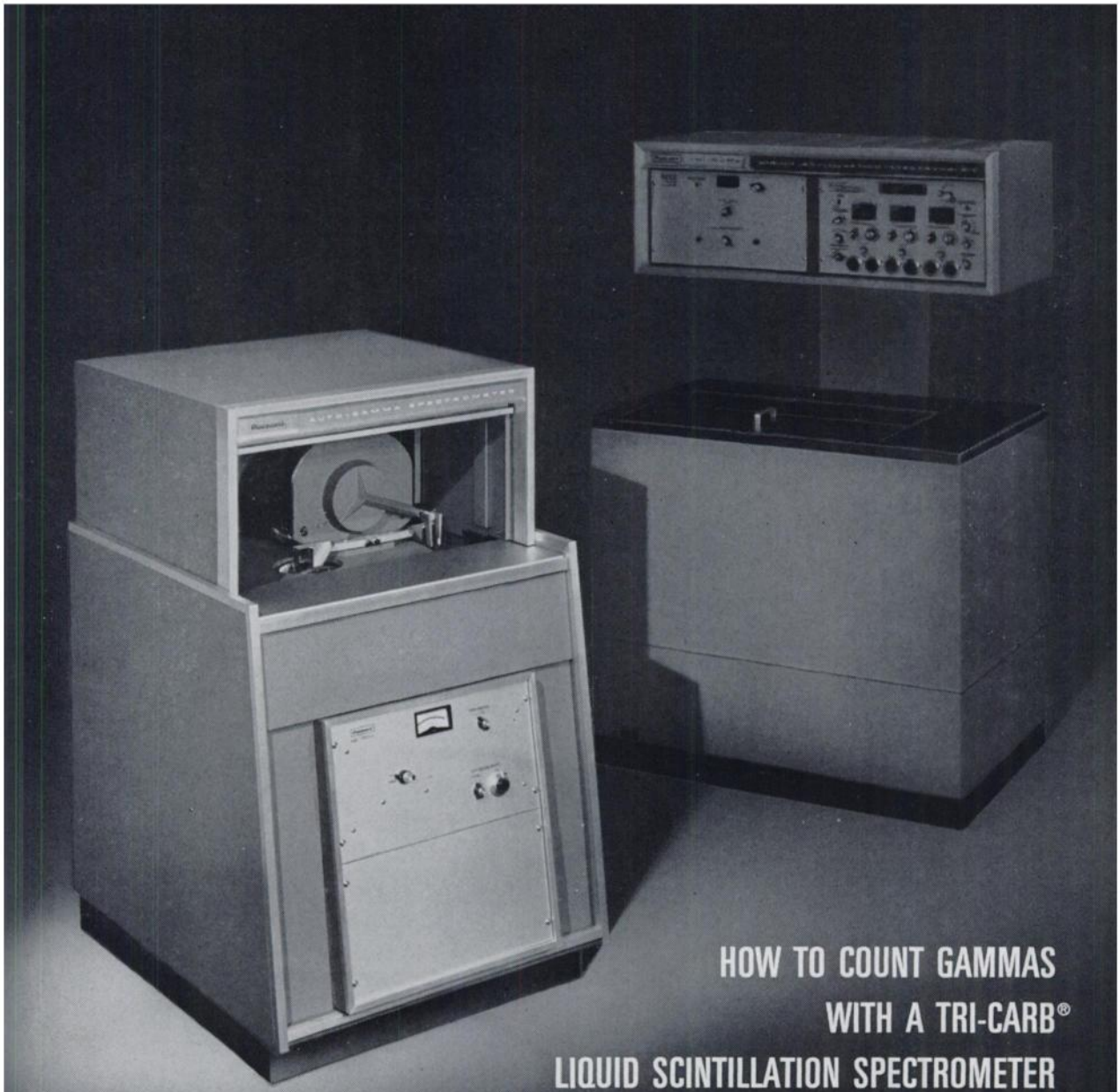

HOW TO COUNT GAMMAS WITH A TRI-CARB® LIQUID SCINTILLATION SPECTROMETER

Take an Automatic Tri-Carb Liquid Scintillation Spectrometer. Add the low-cost Model 5022 Auto-Gamma Console. Now you're ready to do fully automatic gamma counting of up to 100 samples.

Model 5022 incorporates a sample changer, a well-type crystal detector, a beta-gamma switch and *its own* high voltage supply. It uses the Tri-Carb Spectrometer and Control Unit for sample analysis and changer actuation. Because each system has its own power supply, you can switch from beta to gamma counting as often as you like with no adverse effects on counting stability.

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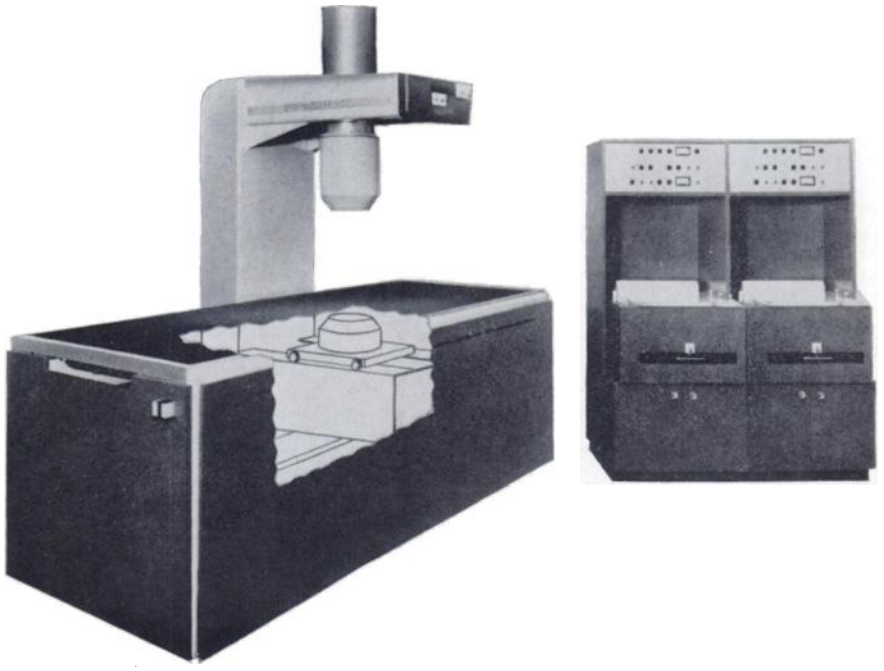
MODEL 54-FD
DUAL, OPPOSED, 5-INCH CRYSTALS



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

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

Mechanical and electronic specifications are the same as for our other large-crystal radioisotope scanners Models 54F and 54H: Scanning speeds continuously variable to 200 inches per minute (500 cm/min.); adequate shielding even for high energy gamma emitters (up to 3 inches lead and 1 inch steel); high resolution crystals (9 per cent or better); accurate, reproducible scanning speeds and line spacing; no scalloping at any speeds; low background crystals (2 inch thick pure NaI light pipe); Gammagraphic (patent pending) or slit mask photoscans; unequivocal one year warranty anywhere in USA or Canada.

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

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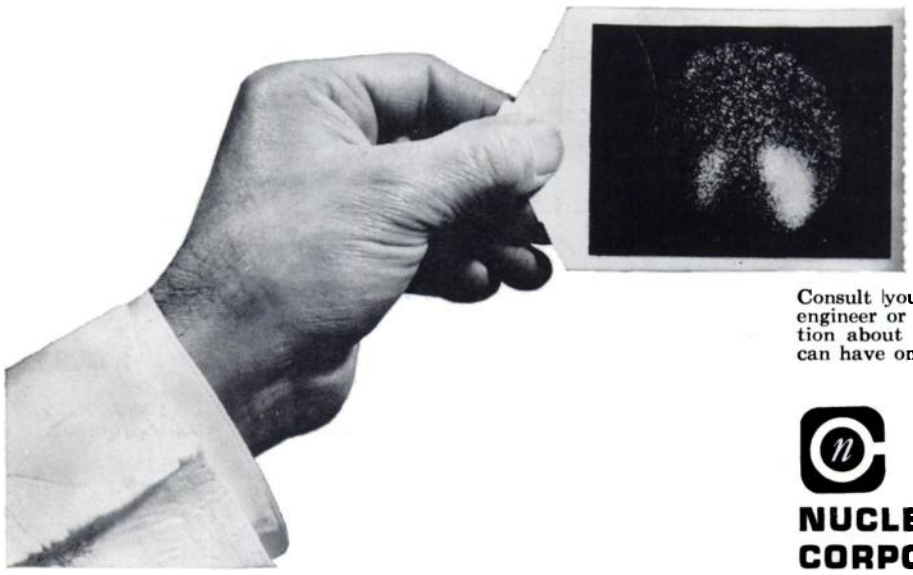
Unless you like speed, sensitivity, and statistical accuracy.

That's why the Pho/Gamma® Scintillation Camera is making all rectilinear scanners obsolete (even our own).



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