Iron deficiency anemia testing—
As easy as throwing in the sponge!

Irosorb-59 is the second in a series of in vitro radio-pharmaceutical tests developed by Abbott Laboratories. The Irosorb-59 Sponge offers a remarkable degree of accuracy and simplicity that makes routine screening a practical matter.

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Speed: Irosorb-59 can be washed quickly, there being only 3 washes. No incubators or shakers are needed.

Convenience: Irosorb-59 is in a disposable kit form ready for immediate use at room temperature.

Safety: No dilution or pipetting of radioactive material is necessary. Since the patient receives no radioactive materials, the test can be used in children, pregnant women, or in adults without any hazard of radioactivity.

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Irosorb-59 is available to all doctors, hospitals and clinical laboratories—AEC licensing is not required.
Thyroid testing—
As easy as throwing in the sponge!

The Triosorb Sponge is an in vitro test providing 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 unsurpassed 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: Available in a disposable kit ready for immediate use at room temperature. There is no dilution or pipetting of radioactive materials with Triosorb. It is the simplest and most convenient thyroid function test to perform.

"The resin sponge (Triosorb) technique is superior to the erythrocyte method for performing the 131I T3 test in terms of simplicity, convenience and elimination of errors characteristic of the erythrocyte procedure."\(^1\)

"The T-3 uptake test was vastly improved by a resin-sponge . . . (Triosorb) . . . which is offered as a replacement for the red cells as well as for the loose granular resin which varies from day to day."\(^2\)

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

Announcing

**TETRASORB-125**

T-4 DIAGNOSTIC KIT

On the opposite page, Abbott announces its 3rd “sorb” product—Tetrasorb-125. Please lift this page for information about Triosorb® and Irosorb-59®.
"For many years the protein-bound iodine (PBI) has been used as an indirect index of the level of thyroid hormones; however, in an appreciable number of cases it does not provide an accurate measurement, because compounds containing iodine or mercury are present."1

It is now generally recognized that a quantitative direct measurement of thyroid hormones in serum is the most valuable single laboratory aid in assessing thyroid function.

"Using a resin-sponge and thyroxine tagged with I-125, a simple method was developed to determine serum thyroxine."2

That method is Tetrasorb-125, the first diagnostic kit offering a direct measurement of thyroid function by determining serum thyroxine. Hypothyroid patients show a decrease in serum thyroxine while hyperthyroid patients show an increase.

Using the principle of saturation analysis for measuring total serum thyroxine, the following results have been reported:

"When T4 and PBI values were compared, a good correlation (r=0.823) was obtained with a higher diagnostic accuracy for the T4 determination. All euthyroid individuals with PBI's elevated due to iodine had T4 values in the normal range. . . The T4 level correlated well with the clinical status in hypothyroid subjects receiving T4 or hyperthyroid subjects receiving various forms of therapy."3

"Unlike the protein-bound iodine determination, this technique is entirely unaffected by iodine or mercury, an important advantage from the clinical point of view."3

"These results proved that this method could be used as a routine clinical diagnostic test in place of the determination of PBI."4

By requesting both Tetrasorb-125 (a direct measure of thyroid activity) and Triosorb® (an indirect measure of thyroid activity) for his patient, the physician is provided with more information than ever before possible.

Tetrasorb-125 is available to all doctors, hospitals and clinical laboratories—AEC licensing is not required.


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by Marshall Brucer, M. D.
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This new chart is displayed at the 15th Annual Meeting of the Society of Nuclear Medicine. It is available in two forms: as a 48-page booklet with the "Vignettes in Nuclear Medicine," available separately without charge; and as a 54" x 38" wall chart ready for mounting. The wall chart is available for a handling charge of $2.00. Check or money order must be sent with your request.

![Chart section shown is 2x size used in booklet.](chart-section.jpg)

![Color code indicating half-life](color-code.jpg)

![Chart with nuclides](nuclides-chart.jpg)
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Several studies have reported high mortality from pulmonary embolism. Yet, such deaths may be only a small fraction of the total disease incidence.

In a 1959 report, Coon and Willis attributed as many as 47,000 annual deaths solely to pulmonary embolism. They further held that pulmonary embolism may have significantly affected the outcome in three times this many deaths. Another study reported autopsy findings on 161 of 247 patients who had died after hip fracture. Thirty-eight percent of these were found to have died of pulmonary embolism. In the unautopsied cases, however, pulmonary embolism was listed as the primary cause of death in only 2%.

Deaths from pulmonary embolism, however, probably comprise only a small portion of the total incidence. For example, a recent study of 61 consecutive adult autopsies revealed recent and organized thrombi ranging from massive occluding emboli of the pulmonary arteries to minute and barely visible fragments in 64% of the cases. But the true incidence may be even higher. Based on accumulating evidence in the literature and on their own experience, some researchers postulate that pulmonary embolism may occur in nearly everyone at some time or another, that the recognized clinical entity is only a tiny part of the full spectrum of the disease. These studies point to the desirability of a high index of suspicion of pulmonary embolism and its earliest possible diagnosis.

Help in diagnosing pulmonary emboli—Lung-scanning procedures utilizing such agents as Albumotope—LS (Squibb Aggregated Radio-Iodinated (131) Albumin (Human)) now offer help in detecting pulmonary emboli when used in conjunction with other procedures. In fact, it appears that the lung scan can point to the site of embolic lesions before signs of lung infarct are recognizable on plain chest films.

Then, too, lung scanning is simpler, faster, and comparatively safer than pulmonary arteriography and has proven to be an objective and reliable means of establishing a firm diagnosis of pulmonary embolism.

In some instances it has also shown the capacity to detect small areas of pulmonary ischemia in the absence of abnormal angiographic findings. Finally, lung scanning provides a simple and reliable means of follow-up during recovery from pulmonary embolism which may be repeated at relatively short intervals when necessary. Indeed, it is considered by some to be "...the most convenient and probably the most sensitive method now available for this purpose.”

Albumotope—LS for lung scanning: another example of Squibb leadership in radiopharmaceutical research and development:

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

There have been no reported cardiovascular or other untoward effects attributable to Albumotope—LS. 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. 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.

Available: As a sterile, nonpyrogenic, 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.

References:

Albumotope—LS
Squibb Aggregated Radio-Iodinated (I") Albumin (Human)
For Lung Scanning

Same patient. Initial scan: massive pulmonary embolism, left lower lobe*.

*Illustration furnished through the courtesy of George V. Taplin, M.D., Harbor General Hospital, Torrance, California.
For brain scanning, Pertscan-99m provides more information with less radiation to the patient than any other related cerebral test—whether other radioisotopes or x-rays. And you get each projection fast—as little as 2 minutes with a camera, 15 minutes or less with rectilinear scanners.

A 54-year-old man was hospitalized with progressive weakness of the right side, followed by seizures of the right side (Jacksonian seizures). Brain scans showed an abnormal concentration of isotope in the left parasagittal area. Surgery revealed a meningioma, which was removed, and the patient recovered.

The 2 scans above, showing the marked abnormal uptake (which turned out to be a meningioma), were made with Pertscan-99m. This product is shipped Monday through Friday—and Sunday. Thus, brain scans can be scheduled 6 days a week—Monday through Saturday.

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

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

**PRECAUTIONS:** Care should be taken to ensure minimum radiation exposure to the patient as well as all personnel; to prevent extracranial contamination because this can lead to erroneous interpretation; and to differentiate areas of abnormal activity from areas of normal vascular activity.

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I. It is a result from compression or obstruction of pulmonary arteries. Surgery and/or other therapy for lung disorders: To evaluate the effectiveness of therapeutic measures. Macroscan-131 is sterile and non-pyrogenic. It is ready to use and should not be heated prior to use.

**INDICATIONS:** For scintillation scanning of the lungs to evaluate total, unilateral, and regional arterial perfusion to the lungs.

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

**PRECAUTIONS, SIDE EFFECTS:** Care should be taken to administer the minimum dose consistent with safety and validity of data. The possibility of an immunological response to albumin should be kept in mind when serial scans are performed. There is a theoretical hazard in acute cor pulmonale, because of the temporary small additional mechanical impediment to pulmonary blood flow. A possible case of urticaria has been related to a similar preparation. The thyroid gland should be protected by prophylactic administration of concentrated iodide solution.

**Pulmonary embolism, suspected:** To confirm (or rule out) its occurrence.

**Chronic pulmonary tuberculosis:** To estimate unilateral and regional function and perfusion of the lungs.

**Emphysema:** To evaluate the degree of focal lack of perfusion.

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

**Lung tumors:** To evaluate the regional ischemia resulting from compression or obstruction of pulmonary arteries.
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Time: Technetope II simplicity reduces assembly time...keeping radiation exposure to a minimum. However, proper radiation safety precautions should be maintained at all times.
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Shielding: Technetope II has another half-value layer of lead shielding—without adding a cumbersome dispenser, additional cost, or special contract.

In addition, Technetope II is readily adaptable to tandem milking which provides high concentrations of **Tc per ml.—another Squibb first and exclusive.

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Warning: Proper radiation safety precautions should be maintained at all times. The column containing **Mo need not be removed from the lead shield at any time. The radiation field surrounding an unshielded column is quite high. Solutions of **Tc withdrawn from the generator should always be adequately shielded. The early elutions from the generator are highly radioactive. For radiation protection, a lead shield for the collecting vial is included with Technetope II.

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And now, even more than before, the instrument that clarifies, enlarges, and simplifies these investigations is the Pho/Gamma Scintillation Camera.
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And for a new and different look at Pho/Gamma Man, our magnetic tape system. For recording of clinical data, on magnetic tape, for later analysis. With an off-line computer perhaps. Or for playback and manipulation on our multidimensional analyzer.
The inevitable conclusion thus presents itself: only the Pho/Gamma III Scintillation Camera can offer so wide a choice of data recording and analysis.
For all the facts supporting this conclusion, call your Nuclear-Chicago sales engineer. Or write to us.

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