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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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**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.
The Triosorb Sponge is an in vitro test providing accuracy, speed and convenience.

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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 I\textsuperscript{131} T\textsubscript{3} test in terms of simplicity, convenience and elimination of errors characteristic of the erythrocyte procedure.”

“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.”

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. 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 1-125, a simple method was developed to determine serum thyroxine. 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. Tetrasorb-125 is based on the principle of saturation analysis for measuring total serum thyroxine (T-4). Prior to the availability and convenience of the Tetrasorb-125 Kit, these results were reported for the T-4 test:

“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.”

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

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

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Lung scan demonstrating abnormal perfusion of right lung, female patient, age 58; courtesy Washington University School of Medicine. (AP view at left, PA view at right.)

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"... indicate the site and magnitude of pulmonary arterial obstruction before this is recognizable radiographically."

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"... estimation of regional pulmonary function, particularly in patients with emphysema, bronchiectasis, and chronic pulmonary tuberculosis."

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**Photomicrograph of MAA I 131 aggregates**

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**Specifications**

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**Contraindications**

Radiopharmaceuticals are contraindicated in pregnancy and during lactation and in persons less than 18 years old unless, in the judgment of the physician, the situation requires their use. In acute or pulmonary, the procedure may be hazardous due to the temporary small additional mechanical impediment to pulmonary blood flow.

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**Excellent liver scans** Albumotope-H appears to be free of a major disadvantage of \(^{131}I\)-rose bengal, one of the most widely used agents for liver scanning. Rose bengal is rapidly excreted in the bile, a constantly varying amount is present in the liver during the 40 to 60 minutes of the scanning procedure. This can produce a wide range of densities or "...excessively dark and light areas which may give rise to misinterpretations."

**Less radiation exposure to patients** Radiation exposure with Albumotope-H is low because of rapid metabolic degradation in the liver and elimination of the \(^{131}I\) label from the body within 72 hours, if thyroid uptake is blocked by prior oral administration of non-radioactive iodine. The calculated radiation dose to the liver has been estimated to be at least 100 times less than that of an equivalent dose of colloidal radiogold-198 and about 3 times less than \(^{131}I\)-rose bengal.

**Less chance of toxicity** Unlike inorganic colloidal radiopharmaceuticals, Albumotope-H is metabolized by the body. In contrast to radiogold, there is no accumulation in the reticuloendothelial cells and no alteration in their function or future capacity. This not only means reduced potential for toxicity but also that serial liver scans can be done with the same test agent. In addition, anaphylactoid reactions have not been reported in studies of colloidal albumin \(^{131}I\). And only a few isolated instances of skin reactions have been reported.

**Squibb "first" ALBUMOTOPE-H** Squibb Aggregated Radio-Iodinated \(^{131}I\) Albumin [Human] for Liver Scanning is a Squibb "first" and a new addition to a broad line of radiopharmaceuticals available under the Medotope\(^{\text{®}}\) label. The isotope clinician in your area or your Squibb Professional Representative will be happy to give you additional information concerning Albumophe-H and how liver scanning may be of value to you in your practice.

**Contraindications and precautions** Radiopharmaceuticals should not be administered to pregnant women or to persons under the age of 18 years unless indications are very exceptional. Colloidal radioalbumin should not be administered to nursing mothers because iodide is excreted in human milk. In women of child-bearing age, radiopharmaceuticals may be administered during or immediately following a menstrual period to minimize the possibility of administration during pregnancy.

**Adverse reactions** A few isolated instances of generalized urticaria or dermatitis have been reported in patients receiving an aggregated albumin preparation.

**References**

**Albumotope-H**
Squibb Aggregated Radio-Iodinated \(^{131}I\) Albumin (Human) for Liver Scanning
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**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.

**Pertscan-99m**
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**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.

**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.
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Up to three areas of quantitation can be outlined by a light pen and presented to the multiple pen recorder for a graphic display of total organ activity versus time. It is the only complete instrument having all the high demand computer functions built into the system. Let us prove to you that the Baird-Atomic Scintillation Camera will do everything we say it will. 33 University Road, Cambridge, Mass. 02138, Telephone 617 864-7420 • Baird-Atomic Europe, The Hague, The Netherlands. Baird-Atomic Ltd., Hornchurch, England.
Follow these simple directions for magnetic-tape storage, manipulation, and analysis of data from our Pho/Gamma III Scintillation Camera:

1. To the Pho/Gamma III...

2. Add our multidimensional analyzer...

3. Connect to our magnetic tape transport, and...

4. Make tracks.

And, if you have access to an off-line computer, our Magnetic Tape System can be even more valuable. The data from Pho/Gamma III can be recorded in computer-compatible form and then fed into the computer (properly programmed, of course). You can thereby generate essentially automatic analysis, which can bring you entirely new insights into the organs under investigation.

The true worth of our new Magnetic Tape System can only be measured in your own work. Our job is to make Pho/Gamma III more and more versatile by making available the analytical or storage procedure you need.

Which is why, in addition to the Magnetic Tape System, we also are introducing a fast digital printer, an automatic 35-mm time-lapse camera, and a dual-channel ratemeter/dual-pen recorder as accessories for the Pho/Gamma III.

Your Nuclear-Chicago sales engineer can tell you all about Pho/Gamma III and its expanded range of accessories, including the Magnetic Tape System. Please call him. Or write directly to us.

Research in the Service of Mankind

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