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The advantages of technetium

As a technetium-labeled agent, TECHNESCAN MAG3™ offers key advantages over I-123 OIH or I-131 OIH. These include ready availability in cold-kit form, much shorter half-life (6.02 hours, vs 13.13 hours for I-123 and 8.04 days for I-131), and lower radiation dose per mCi administered. (Total body absorbed dose [rad/mCi]: Tc99m = 0.0027, I-131 = 0.039, I-123 = 0.023.)

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NEW

TECHNESCAN MAG3™

Kit for the Preparation of Technetium Tc99m Mertiatide

Circle Reader Service No. 43 Please see the following page for references and brief summary of prescribing information.
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CLINICAL FELLOWSHIP
Department of Radiology
Section of Nuclear Medicine

BENEFIT:
This program is designed for nuclear medicine physicians, radiologists, technologists and referring physicians. It is intended to educate participants about the clinical utility of SPECT brain imaging with agents such as SPECamine® and Ceretec®. Objectives include:

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• Appreciation of clinical applications of SPECT brain imaging.
• Knowledge of image acquisition and reconstruction.
• Appreciation of factors that influence image quality.
• Knowledge of quality control techniques for SPECT.

SPONSORSHIP:
This program is sponsored by the Medical College of Wisconsin.

TUITION:
The tuition fee of $650 includes the course syllabus, handouts, breaks, breakfasts, lunches, and other amenities involved in making this a pleasant learning experience. Maximum enrollments have been established. Cancellations prior to the course will be refunded, less a $30 administrative fee.

CREDIT:
The Medical College of Wisconsin is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

Accordingly, the Medical College of Wisconsin designates this continuing medical education activity as meeting the criteria for 13.00 hours in Category I toward the Physician's Recognition Award of the American Medical Association.

Nuclear Medicine Technologists who attend the SPECT Brain Imaging Clinical Fellowship are eligible for 1.0 VOICE credit.

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☐ September 17–18, 1990 ☐ November 12–13, 1990

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A check in the amount of $650 should accompany this registration form and be made payable to the Medical College of Wisconsin. Telephone registrations must be confirmed by check within 10 days.

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(work address) __________________________

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SPECT Brain Imaging Fellowship Coordinator
Nuclear Medicine Division
Medical College of Wisconsin
8700 W. Wisconsin Avenue
Milwaukee, WI 53226 (414)257-6068

TECHNESCAN MAG 3™
Mag 3 Kit for the Preparation of Technetium Tc99m Mertiatide

INDICATIONS AND USAGE
Technetium Tc 99m mertiatide is a renal imaging agent. In addition, it is a diagnostic aid in providing renal function, split function, renal angiograms and renogram curves for whole kidney and renal cortex.

CONTRAINDICATIONS None known.

WARNING None known.

PRECAUTIONS

General
The contents of this kit are not radioactive. However, after sodium pertechnetate Tc 99m is added, adequate shielding of the final preparation must be maintained.

Contents of the reaction vial are intended only for use in the preparation of technetium Tc 99m mertiatide and are NOT to be administered directly to the patient.

To help reduce the radiation dose to the bladder, as well as other target organs, the patient should increase his or her fluid intake (unless medically contraindicated) and void as often as possible after the injection of technetium Tc 99m mertiatide for six hours after the imaging procedure.

Technetium Tc 99m mertiatide should not be used more than six hours after preparation.

The components of the kit are sterile and nonpyrogenic. It is essential that the user follow the directions carefully and use aseptic procedures normally employed in mixing additions and withdrawals from sterile, nonpyrogenic containers during the addition of pertechnetate solution and withdrawal of doses for patient/technologist administration.

The technetium Tc 99m labeling reactions involved in preparing Technescan MAG 3™ depend on maintaining the stannous ion in the reduced state. Any salt present in the sodium pertechnetate Tc 99m may adversely affect the quality of the radiopharmaceutical. Therefore, sodium pertechnetate Tc 99m containing salts should not be employed.

As in the use of any other radioactive material, care should be taken to insure minimum radiation exposure to the patient and to occupational workers.

Radiopharmaceuticals should be used only by physicians who are qualified by specific training in the safe use and handling of radiocinides produced by nuclear reactor or particle accelerator and whose experience and training have been approved by the appropriate state and/or local governmental agencies.

Carcinogenesis, Mutagenesis, Impairment of Fertility
No long term animal studies have been performed to evaluate carcinogenicity or mutagenic potential, or whether this drug affects fertility in males or females.

Pregnancy Category C
Animal reproduction studies have not been conducted with technetium Tc 99m mertiatide. It is also not known whether this drug can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Technetium Tc 99m mertiatide should be given to a pregnant woman only if clearly needed.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capacity should be performed during the first few (approximately 10) days following the onset of menses. Nursing Mothers Technetium Tc 99m is excreted in human milk during lactation, therefore, formula feedings should be substituted for breast feeding.

Pediatric Use Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

None known.

RADIATION DOSIMETRY
The estimated radiation doses1 to the average adult (70 kg) from an intravenous administration of 185 MBq (5 mCi) and 370 MBq (10 mCi) technetium Tc 99m mertiatide are presented in Table 1. These radiation absorbed dose values were calculated using the Medical Internal Radiation Dose Committee (MIRD) Schema.

Table 1

<table>
<thead>
<tr>
<th>Organ</th>
<th>mCi 185 MBq</th>
<th>mCi 370 MBq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Bladder Wall</td>
<td>24</td>
<td>48</td>
</tr>
<tr>
<td>Upper Large Intestine</td>
<td>1.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Gall bladder Wall</td>
<td>1.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Lower large Intestine</td>
<td>0.16</td>
<td>0.33</td>
</tr>
<tr>
<td>Kidneys</td>
<td>0.14</td>
<td>0.67</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>0.16</td>
<td>0.67</td>
</tr>
<tr>
<td>Ovaries</td>
<td>0.13</td>
<td>0.26</td>
</tr>
<tr>
<td>Liver</td>
<td>0.18</td>
<td>0.36</td>
</tr>
<tr>
<td>Red marrow</td>
<td>0.24</td>
<td>0.67</td>
</tr>
<tr>
<td>Tests</td>
<td>0.01</td>
<td>0.26</td>
</tr>
<tr>
<td>Total Body</td>
<td>0.33</td>
<td>0.67</td>
</tr>
</tbody>
</table>

1Assuming patient weights 4.8 hour intervals.

References:

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TECHNOLOGIST JOB NETWORK

The New England Chapter—SNM/TS announces "The Job Hotline," a national toll-free, hotline for nuclear medicine. The hotline is designed to provide a quick link for technologists seeking jobs and for hospitals seeking technologists. Institutions seeking technologists should call the hotline number, leave the name of the institution, title of the job opening, and name and number of the contact person; data are then stored for three months in a database for anyone who calls the hotline seeking employment. Technologists seeking employment should call the hotline number, specify state(s) which are of interest, specify type of job desired, and leave name and address. A listing will then be sent out in 48 hours; all inquiries are kept confidential. If an opening has not been filled within three months, the institution should call again to have it listed. The institution should also call if an opening has been filled so that it can be deleted from the database. The hotline numbers are 1-800-562-6387 or 1-990-4212 in Maine. Questions or comments should be directed to: Tom Starno, President, New England Chapter—TS at (207) 945-7195.

The Midwestern Chapter—SNM/TS will provide a referral network for technologists seeking employment and for hospitals in need of technologists. Interested individuals should call Cathy Gonzalez at (301) 855-1712. Please leave your name, address, phone number and a brief description of your request.

NOTE: SNM chapters are invited to submit job referral service listings for publication. Pertinent information—name and brief description of the service, telephone number and/or address, name or number of contact person for inquiries—should be sent to:

Joan Hiam, Section Editor, JNMI/JNMT The Society of Nuclear Medicine, 136 Madison Avenue New York, NY 10016-6760.
Marshall Brucer’s
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For the first time Marshall Brucer tells the real story of Nuclear Medicine—how it started, how it grew, and how it is developing today. No one has done it before and only Brucer could do it now, reflecting on the elements of the past and reporting the events that “either supported or suppressed Nuclear Medicine.” It is a massive compilation of data not available anywhere else.

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BROOKHAVEN NATIONAL LABORATORY

Chemistry Department
Scientific Staff Vacancy

The Cyclotron-PET Program at Brookhaven National Laboratory has a staff opening for a synthetic chemist to oversee the routine production and analytical and quality control of short-lived positron emitter labeled radiopharmaceuticals for human studies. Applicants should have a Ph.D. in synthetic, pharmaceutical or medicinal chemistry and should have experience in handling and assay of radioactivity and in the preparation, quality control and documentation of radiopharmaceuticals for human use and the preparation of investigative new drugs. The position will involve collaboration with a multidisciplinary group of scientists in the development of analytical control procedures for new radiopharmaceuticals which are to be introduced into the clinical research program and the development of streamlined, rapid methods for the analysis of labeled compounds in biological fluids.

The Cyclotron-PET Program at Brookhaven is multidisciplinary, focusing on the development and application of new radiopharmaceuticals to problems in neurology, psychiatry, and cardiology with a special emphasis on the study of the biochemical problems associated with substance abuse. High technology facilities include two cyclotrons and two positron emission tomographs as well as a fully equipped laboratory for rapid synthesis and analytical control of short-lived radiotracers.

Brookhaven offers a stimulating research environment and excellent benefits. Interested applicants should send resumes and the names of three references to: Dr. Alfred P. Wolf, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, New York 11973. Equal opportunity employer M/F.

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The long-awaited 2nd edition of
SPECT: A Primer
has been published.
It is available to members at $20;
to non-members at $25.
Please see the ad in this issue on page 31A for details.

Children’s Hospital of San Francisco is the city’s largest private hospital and cares for both adults and children. With 597 beds, it has Centers of Excellence in Maternal and Infant Services, Pediatrics, Oncology, Orthopedics, General Medicine, Surgical care, and Medical Education.
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The Nuclear Medicine Service offers a full range of diagnostic and therapeutic procedures with special emphasis on SPECT imaging techniques. The Service employs state-of-the-art equipment and computers. The Service is now offering two full-time positions as Nuclear Medicine Technologists.
Immediate openings are available. Applicants should have experience in General Imaging Procedures, Cardiac Imaging, and Computer Processing. All applicants should also be ARRT or CNMT certified or certifiable. Applicants can send résumé to:

Children’s Hospital of San Francisco
Human Resources Department
3360 Geary Blvd.
San Francisco, CA 94118

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**SNM 38th Annual Meeting Critical Dates**

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**DON’T FORGET THE MID-WINTER MEETING IN TAMPA, FL**

**SPONSOR:** The Computer and Instrumentation Council

**DATES:** February 4–5, 1991

**PLACE:** Hyatt Regency Westshore, Tampa, Florida
Each description of the products below was condensed from information supplied by the manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way imply an endorsement by the Editorial Board of The Journal of Nuclear Medicine or by The Society of Nuclear Medicine.

**GRAPH Version 2.0 Released**

Micromath Software has released a major upgrade to the GRAPH package for scientific plotting and data transformation. Version 2.0 of GRAPH comes with an expanded and rewritten manual. New features include grid line plotting for better data visualization, bar graph plotting with a variety of fill styles, logit and probit axes, and transforms for analysis of sigmoidally or normally distributed data, the ability to reverse the plotting direction of the axes, and goodness-of-fit statistics for the least squares fitting capability. In addition, support for 24-pin printers has been improved, the plot/aspect ratio may be changed, and the x-axis may have either numeric or calendar labels. GRAPH was designed as a low cost package that incorporates the most important plotting features for research data presentation; it retains a simplicity and ease of use that encourages the use of graphics. The software requires 640K of memory, two floppy disk drives, a graphics adapter, and MS-DOS 2.0 or higher. Micromath Scientific Software, 2034 East Fort Union Blvd., Salt Lake City, UT 84121. (801) 943-0290.

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**CAMAC Quad 8K ADC**

EG&G Ortec introduces the 8000-channel, CAMAC 13-bit ADC with four multiplexed inputs, Model AD413, for use in high-resolution gamma-ray spectroscopy with multiple germanium detectors. The 6-μs ADC has both CAMAC readout and a 100 ns/word LeCroy FERAbus readout that can skip ADCs with zero information in 3 ns. Numerous CAMAC control features are provided. The AD413 can also be used with silicon detectors, proportional counters, and ionization chambers. Sanford Wagner, EG&G Ortec, 100 Midland Road, Oak Ridge, TN 37831. (615) 482-4411.

Circle Reader Service No. 103

**Teflon Separatory Funnel**

Nalge company introduces a new 2-liter size Teflon FEP Separatory Funnel. EPA tests specify 2-liter funnels for use in numerous analyses. Teflon FEP is break-resistant, nearly transparent, has a non-stick, non-wetting surface for easy cleaning and complete draining, and is impervious to any chemical commonly used in a separator funnel. Phase interface of even colorless liquids is visible. Closure, stopcock, stem, and plug are leakproof up to 10 psig. Stopcock assemblies have 4-mm bores to improve drainage times. The funnel can be autoclaved except for the stopcock assembly, which can be chemically disinfected. Jorge M. Pardo, Marketing Communications, Nalge Company, 75 Panorama Creek Drive, Box 20365, Rochester, NY 14602. (716) 586-8800.

Circle Reader Service No. 101

**Cyclone 3-D Cyclotron**

Ion Beam Applications (IBA) has sold its first unit of the Cyclone 3-D, an ultra-compact commercial cyclotron. The Cyclone 3-D is an oxygen-15 (¹⁵O) dispensing unit only slightly larger than a soft drink vending machine. Designed for easy installation at almost any existing site, it offers a large number of PET centers the opportunity to produce an inexpensive and permanent supply of short-lived Ox compounds. This dispensing unit generates four short-lived O-based compounds through pushbutton operation virtually at a moment's notice. It can be operated by existing staff with minimal training. The Cyclone 3-D is an economical replacement for strontium-82/rubidium-82 generators and offers a wider variety of applications and sharper image resolution. René André, Communications Manager, Ion Beam Applications, Chemin du Cyclotron, 2, B-1348 Louvain-la-Neige, Belgium. 32 10/57 5811.

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