Introducing **Nephroflow™**

**IODOHIPPURATE SODIUM I 123 INJECTION**

Normal Transplant Renogram

**NEPHROFLOW, Iodihippurate Sodium I 123 Injection, 1.0 mCi**

**High Count Rate**
**High Detector Efficiency**

**Iodihippurate Sodium I 131 Injection, 0.15 mCi**

**Low Count Rate**
**Low Detector Efficiency**

NEPHROFLOW provides better counting statistics and higher data density.

**Now Available**
2 mCi Vial

To Order call (800) MEDI-123

---

1 Reference: Data on file, Medi-Physics, Inc., Richmond, CA
DESCRIPTION: Iodohippurate Sodium 123 Injection is supplied as a sterile, pyrogenic, aqueous, isotonic saline solution for intravenous administration. Each milliliter of the solution contains 37 megabecquerels (1 millicurie) Iodohippurate Sodium 123 at calibration time. 9 milligrams iodohippurate Sodium, 1 percent benzyl alcohol (as a preservative), 8 milligrams per milliliter sodium chloride for isotonicity, and up to 0.1 percent ethanol. The solution is buffered with sodium phosphate and the pH is adjusted to 7.0-8.5 with sodium hydroxide or hydrochloric acid. The radionuclidic composition at calibration time is not less than 94.7 percent I 123, not more than 4.8 percent I 124, and not more than 0.5 percent all others (I 125, I 126, I 130, Na 24, Te 121). The radionuclidic composition at expiration time is not less than 85.5 percent I 123, not more than 12.9 percent I 124, and not more than 1.6 percent all others.

INDICATIONS AND USAGE: Iodohippurate Sodium 123 Injection is a diagnostic aid in determining renal function, renal blood flow, and urinary tract obstruction, and as a renal imaging agent.

CONTRAINDICATIONS: None Known.

WARNINGS: None Known.

PRECAUTIONS: General
The contents of the vial are radioactive. Adequate shielding of the preparation must be maintained at all times. Do not use after the expiration time and date (24 hours after calibration time) stated on the label.

The prescribed iodohippurate Sodium 123 dose should be administered as soon as practical from the time of receipt of the product (i.e., as close to calibration time as possible) in order to minimize the fraction of radiation exposure due to relative increase of radionuclidic contaminants with time.

Iodohippurate Sodium 123, as well as other radiopaque drugs, must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Care should also be taken to minimize radiation exposure to the patient consistent with proper patient management.

Comparison of I 123 and I 131

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>I 123</th>
<th>I 131</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of Decay</td>
<td>Electron capture</td>
<td>Beta</td>
</tr>
<tr>
<td>Half-Life</td>
<td>13.2 hours</td>
<td>193 hours</td>
</tr>
<tr>
<td>Principal Gamma Energy (keV)</td>
<td>159</td>
<td>364</td>
</tr>
<tr>
<td>Intensity</td>
<td>84%</td>
<td>82%</td>
</tr>
<tr>
<td>Half-Value layer, lead, cm</td>
<td>0.037</td>
<td>0.24</td>
</tr>
<tr>
<td>Detection Efficiency: 1/4 Nal (TI) crystal</td>
<td>74.5%</td>
<td>22.5%</td>
</tr>
</tbody>
</table>

NEPHROFLOW™
IODOHIPPURATE SODIUM 123 INJECTION

For complete prescribing information consult package insert, a brief summary of which follows:

Radiopharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

Conceivability, Mutagenesis, Impairment of Fertility
No long term animal studies have been performed to evaluate carcinogenic potential, mutagenicity potential, or whether Iodohippurate Sodium 123 affects fertility in males or females.

Pregnancy Category C
Animal reproduction studies have not been conducted with this drug. It is also not known whether Iodohippurate Sodium 123 can cause fetal harm when administered to a pregnant woman, or can affect reproductive capacity. Iodohippurate Sodium 123 should be given to a pregnant woman only if clearly needed.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, in women of childbearing capability should be performed during the first few (approximately ten) days following the onset of menses.

Nursing Mothers
Since iodine-123 is excreted in human milk, formula-feeding should be substituted for breast feeding if the agent must be administered to the mother during lactation.

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

ADVERSE REACTIONS: As with all organic iodine containing compounds, the possibility of allergic reactions must be kept in mind. Nausea, vomiting, and fainting have been reported in conjunction with the administration of Iodohippurate Sodium 123.

HOW SUPPLIED: Iodohippurate Sodium 123 injection is supplied in nominal 3.5 ml vials as a sterile, nonpyrogenic, aqueous, isotonic saline solution for intravenous injection. Each milliliter contains 37 megabecquerels (1 millicurie) of Iodohippurate Sodium 123 at calibration time.

It is available in individual vials. In the following sizes:

MPI Catalog No. 2041: 1 ml and 37 megabecquerels (1 mCi) per vial

MPI Catalog No. 2042: 2 ml and 74 megabecquerels (2 mCi) per vial

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Inadequate axial sampling, inherent in many PET cameras, is shown by the data gaps in this finger phantom.*

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*Images obtained with the University of Texas TOFPET I (11mm x 11mm resolution) POSICAM Systems resolution expected to be (6mm x 12mm)

Conventional design shows data gaps and large sensitivity variations in adjacent slices.

IMPROVED AXIAL UNIFORMITY
POSICAM's proprietary detector arrangement provides more slices and uniform sensitivity across the field of view.

CLINICAL EXAMPLE

Transaxial 2-D image planes of Myocardial perfusion in patient with anterior infarct.

Same data converted into 3-D surface displays of Myocardial perfusion. Green areas show infarcted zones, caused by a mid LAD lesion.

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INTENSIVE LEARNING OPPORTUNITIES FOR ALL NUCLEAR SPECIALISTS

Washington, D.C., will be the backdrop of our thirty-third Annual Meeting. The meeting includes four days of intensive learning opportunities interspersed with exciting social events. Sites that are uniquely Washington, D.C., will house our get-togethers.

With our commitment to offering only the very best educational resources available in nuclear medicine, we feel that this meeting will be our finest to date.

SCIENTIFIC PAPERS

This year’s presentation of over 600 scientific papers includes a distillation of the latest advancements and finest work achieved by outstanding scientists and physicians in the field of nuclear medicine. These papers, presented by the original authors, with over 30 subjects to choose from, will provide a unique opportunity for enhancing your knowledge or exploring new avenues in correlative areas of nuclear medicine. Ample time is allotted at these presentations for questions and discussions.

An extensive display of scientific posters and exhibits will augment the presentations.

CONTINUING EDUCATION COURSES

Refresher and state-of-the-art continuing education courses in chemistry, physics, quality assurance, cardiovascular nuclear medicine, PET, SPECT, and NMR will supply up-to-the-minute approaches and procedures for all clinical settings.

TECHNOLOGIST PROGRAM

The ever-increasing importance of the role of the nuclear medicine technologist will be explored in our Technologist Program, and over 70 hours of clinical updates will provide chief and staff technologists with the latest in basic, intermediate, and advanced studies. This program will broaden expertise and enhance the technologist’s contributions to nuclear medicine.

EXPOSITION

More than 1,800 exhibitors from over 90 pharmaceutical and equipment manufacturers will display their latest products in a lively atmosphere. These knowledgeable commercial representatives offer the technical depth our field demands, and they are valuable sources of timely and pertinent information.

AUDIOVISUALS, BOOKS, JOURNALS

The Society of Nuclear Medicine is continually adding to its library of audiovisuals, books, and other publications. A stop at the publications booth is well worth the time. Here you will find on display what the society has to offer for year-round educational advancement.

Networking opportunities and job referral boards are available at special locations throughout the meeting as well as membership information at our membership booth.

Registration: $120 SNM members; $215 nonmembers
Hotels: $89 average rate/night
If you need further information, please contact:

The Society of Nuclear Medicine
Education and Meetings Department
136 Madison Avenue
New York, N.Y. 10016

(212)889-0717 Telex: 510-100-5285
Imaging techniques currently used to evaluate myocardial infarction (MI) have a major drawback: They do not permit differentiation between myocardial necrosis and ischemia in the early hours following infarction. Thallium-201, for example, concentrates only in normal myocardial cells. The bone scanning agent technetium-99m pyrophosphate is taken up by necrotic, as well as by some reversibly damaged cells, and also by overlapping ribs. These agents are of limited use for differentiating between irreversible necrosis and severe ischemia. Yet the ability to make that distinction—and make it quickly—could significantly improve management of cardiac patients.

Myoscintᵀᴹ, an imaging agent based on a monoclonal antibody specific to cardiac myosin, may fill this void in cardiac imaging technology. Because this MAb binds solely to the intracellular myosin that is exposed on cell death, Myoscint concentrates only in necrotic cells. It therefore permits precise localization of unsalvageable tissue.

**Improved MI diagnosis may result**

Myoscint may permit MI detection and localization in situations that may otherwise be difficult to interpret. A recent study demonstrates this capability. A 62-year-old man with no history of coronary artery disease was admitted to the coronary care unit after a brief episode of chest pain and lightheadedness. He had evidence of hyperacute T wave changes in leads 2, 3, and aVF, as well as ST segment depression in leads V₃ through V₆. Multiple episodes of ventricular tachycardia were treated with intravenous lidocaine. He also developed heart block with AV dissociation and asystole. A temporary pacemaker was placed soon after admission to the coronary care unit. Subsequent electrocardiograms demonstrated ST and T wave changes in the inferolateral leads, but no Q waves. The creatine kinase level rose to 2098 with a positive MB fraction.

Indium-111 labeled Myoscint was injected without incident approximately 24 hours after admission. Serial images were obtained thereafter at 24 and 48 hours. Planar imaging demonstrated intense uptake of radiotracer in the inferior wall, extending into the posterobasal region. Thallium-201 imaging also was performed immediately prior to the Myoscint study. There was evidence of an inferior perfusion defect corresponding to approximately the area of increased indium-111 Myoscint uptake (see images).

This study demonstrates the ability of indium-111 labeled Myoscint to detect and localize an area of acute myocardial necrosis in a patient whose electrocardiogram only demonstrated a nontransmural MI.

**Ongoing Myoscint research**

Myoscint is being evaluated extensively in conjunction with traditional imaging techniques, including early thallium-201 imaging, contrast ventriculography, and gated radionuclide angiocardiography (wall motion studies). This research continues to verify Myoscint's efficacy for identifying zones of acute myocardial necrosis.

**Available for investigational use**

Myoscint is now available for investigational use only. If you would like more information on this product, or other biotechnological products under development at Centocor, please call us, toll free.

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Phone: 312-884-3636

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For investigation of trabecular bone in the axial skeleton

The ND2100 System includes the scanner unit in which the radioactive substance is maintained, a translucent table, sodium iodide detectors, and computer for operational control, data processing, and file storage.
Fundamentals of Nuclear Medicine

Edited by
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and Fred S. Mishkin, MD

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Taylor, Jr., MD, Heidi S. Weissmann, MD, Henry N. Wellman, MD

... a basic introductory guide to acquaint medical students
and physicians with the most useful nuclear medicine tech-
niques for detecting and evaluating common disorders.

Abbreviated Contents

Radiation in Perspective
1. Basic Science of Nuclear Medicine
   Radiation and Dose
   Radiation Effects
   Imaging of Radiation
2. The Diagnostic Process and Nuclear Medicine
   Sensitivity, Specificity, and Prior Probability

Organ Imaging With Radionuclides
3. Thyroid Uptake and Imaging
4. Cardiovascular System
5. Pulmonary System and Thromboembolism
6. Liver and Gastrointestinal Tract
7. Biliary Tract
8. Genitourinary Tract
9. Skeletal System
10. Central Nervous System

Imaging Disease Processes
11. Trauma
12. Inflammatory and Infectious Processes
13. Cancer

Nonimaging Diagnostic Techniques
14. Nonimaging Procedures

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Add $2.50 postage and handling for each book ordered. Prepayment required in U.S.
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136 Madison Avenue, New York, NY 10016 (212)889-0717
MOTHER OF MODERN NUCLEAR PHYSICS
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1984 FRENCH 100 FRANC
MARIE CURIE
COMMENORATIVE
COIN

In 1984 France issued a commemorative coin honoring one of the truly great scientists and women of the 20th century, Marie Curie. Madame Curie, a Nobel Prize winner and the discoverer of the radioactive element radium, is portrayed as a mature woman on this 100 franc .900 fine silver coin. Around her portrait are the words "Marie Curie" and the dates of her birth and death "1867-1934". Under her portrait is the name of the designer "Corbin". On the central portion of the reverse are two sprigs of leaves with the word "Physique" (Physics) and "Chimie" (Chemistry) interspersed between them, an allusion to her two lifetime pursuits. The legend around the sprigs read "Liberte-Egalite-Fraternite", and above and below the sprigs are "Republique Francaise" and "100 F", respectively. The coin measures 31 mm in diameter, with a gross weight of 15 grams, and a PURE SILVER weight of 13.49 grams or .4340 oz.

The depiction of Madame Curie is exquisite showing finely chiseled hair detail and well defined facial features. This classical bust portrait of a Madame Curie by the artist/engraver Corbin, in the precious metal silver, memorializes the greatest of French women scientists.

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Positions Wanted

Physician
NUCLEAR RADIOLOGIST. Experienced general diagnostic radiologist completing fellowship in nuclear radiology July 1986. Desire nuclear radiologist position or one requiring general and nuclear radiology capabilities, preferably in Metropolitan NYC area. Reply to: Box 300, Sociey of Nuclear Medicine, 136 Madison Ave., New York, NY 10016.

PHYSICIAN. CERTIFIED ABNM and ABR. Extensive experience managing a full service nuclear medicine division in a 500-bed teaching hospital (ass. prof.). Strong interest in advanced technology and computers. Available immediately. Reply to: Box 301, Society of Nuclear Medicine, 136 Madison Ave., New York, NY 10016.

For Sale
FOR SALE Technicare 410 Gamma Camera with LEAP, medium energy, RSH, and pinhole collimators. Includes area-scan, whole-body imaging table. Technicare 560 Computer with VI-4 multi-formatter; (414)556-5731, ext. 247.
NUCLEAR MEDICINE PHYSICIAN

The general hospital, St. John’s, Newfoundland is recruiting a physician to direct the Department of Nuclear Medicine. The hospital is a referral center for the province and is located within the health sciences center which also houses the memorial university faculty of medicine.

In addition to directing the department, the appointee will be expected to participate in undergraduate and post graduate teaching. Research activities will be encouraged, an appropriate joint appointment to the faculty of medicine will be offered.

Candidates should possess (or be eligible for) appropriate certification by the Royal College of Physicians and Surgeons of Canada.

All qualified individuals are encouraged to apply but in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Enquiries, along with a curriculum vitae and the names of three referees, should be forwarded to:

Dr. G. B. Adams
Chairman, Nuclear Medicine Search Committee
The General Hospital Health Sciences Centre
Prince Philip Drive, St. John’s, Newfoundland, Canada A1B 3V6

The University of Texas
Health Science Center at Houston
The Heart Institute of Japan
and
Kyoto University School of Medicine
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U.S.–JAPAN CARDIOLOGY UPDATE
NEW APPROACHES TO CORONARY ARTERY DISEASE, PTCA, AND PET

In memory of Dr. Andreas Gruentzig

JUNE 5-6, 1986
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For information contact:
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(713) 792-5346 (Texas only)/1-800-231-9481 (outside Texas)

For travel information contact:
Danan International Travel
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Director
Radiochemistry Research Group

The worlds leading independent monoclonal healthcare products company is seeking innovative and experienced Ph.D. chemist to assume senior position assembling, organizing, and directing radiochemistry research team. Major scientific thrust is to develop optimal techniques to label monoclonal antibodies and other biological compounds for diagnostic imaging and radioimmunoassay. Extensive state-of-the-art facilities available. Ample opportunity for collaboration with academic research centers and significant professional growth. Expertise in technetium metallochemistry and/ or inorganic ligand synthesis desirable. Position available immediately.

Please reply with curriculum vitae to:
Harvey J. Berger, MD
Senior Vice President
Centocor, Inc.
244 Great Valley Parkway
Malvern, PA 19355
Telephone: (215) 296-4888

Computer Scientist

We are recruiting for a computer scientist, preferably with experience in image processing, for an expanding Nuclear Cardiology Laboratory at The Long Island College Hospital—a major teaching affiliate of Downstate Medical Center in New York City. Responsibilities include teaching of residents and technologists, supervision of clinical computer applications and a major effort in the development of new quantitative programs for both planar and SPECT imaging modalities.

Send CV with salary history and requirements to: Steven Reisman, MD, Director, Nuclear Cardiology.

THE LONG ISLAND COLLEGE HOSPITAL
Brooklyn, NY 11201

An Equal Opportunity Employer M/F/H
To satisfy the needs of those individual disciplines within nuclear medicine, The Society of Nuclear Medicine has established special interest Councils that function autonomously within the Society and are open to all interested members.

Academic Council
The ACADEMIC COUNCIL is composed of faculty members of nuclear medicine departments, divisions, or sections in accredited nuclear medicine schools, or in those in AMA approved nuclear medicine residency programs in the U.S. or Canada. The objectives of the Council are: (1) to promote medical education, research, and patient care related to nuclear medicine; (2) to develop better methods of undergraduate and graduate teaching of nuclear medicine; and (3) to provide a forum for discussion of problems of mutual interest and concern, as well as an informal exchange of ideas and programs. Within the Council there is a subgroup of directors of nuclear medicine residency training programs who confer at least annually with the ABNM on areas of mutual interest.

Cardiovascular Council
The CARDIOVASCULAR COUNCIL consists of Society members interested in the performance and application of cardiovascular nuclear medicine procedures. It seeks to provide a forum for discussion and development of cardiac scintigraphic methods in an effort to realize the most beneficial applications. The Council actively seeks individuals who share this goal.

Instrumentation Council
The INSTRUMENTATION COUNCIL promotes the advancement and dissemination of knowledge of instrumentation utilized in nuclear medicine and serves as a resource center in instrumentation for the Society.

Computer Council
The COMPUTER COUNCIL is made up of Society members who have an interest in computers and their application in the diagnostic, therapeutic, and investigative areas of nuclear medicine. It provides a source of information relating to computer science to the Society membership through its meetings and publications.

Correlative Imaging Council
The CORRELATIVE IMAGING COUNCIL provides a structure in which clinicians and scientists can develop and disseminate information on the medical and physiological applications of various imaging modalities as they correlate to nuclear medicine.

Radioassay Council
The RADIOASSAY COUNCIL maintains the scientific, economic, and historic elements of the radioassay discipline within the Society.

Radiopharmaceutical Science Council
The RADIOPHARMACEUTICAL SCIENCE COUNCIL provides a forum for discussion and dissemination of information relating to the radiopharmaceutical sciences and promotes and encourages basic radiopharmaceutical research and development within the Society. It publishes a newsletter and holds periodic meetings on special subjects.

If you are interested in joining any or all of the Councils, please contact the Membership Department. The cost for 1986 Council membership is only $5.00 per council.

The Society of Nuclear Medicine
Membership Department 136 Madison Avenue, New York, NY 10016, (212)889-0717.
**Educate your patients with SNM**

**Patient Information Pamphlets**

**A Patient's Guide to Nuclear Medicine**

Well illustrated, this 16-page pamphlet explains what nuclear medicine is, how the procedures are performed, and how they can help in the early detection of disease.

Divided into 3 sections, the guide opens with a general overview of nuclear medicine. A question-and-answer section follows, addressing such topics as safety, the benefits of nuclear medicine procedures, pre- and post-instructions, and testing of pregnant women and children.

The third section explains some of the more commonly performed procedures such as bone, liver, lung, heart, and thyroid uptake scans.

16 pp; 5 1/2 x 8 1/2; in 2 colors; 20¢ per pamphlet; minimum order: 100 copies

**Guidelines for Patients Receiving Radioiodine Treatment**

Prepared in collaboration with the U.S. Nuclear Regulatory Commission, this 8-page pamphlet answers patients' questions about home care after receiving radioiodine treatment for thyroid conditions.

Easy-to-read language outlines important precautions patients can follow to help reduce radiation exposure to others. It also contains a checklist that physicians can review with their patients to determine which guidelines are appropriate for them and how they should be followed.

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Healthcare professionals in private practice, hospitals, and clinics will find that these pamphlets provide a brief, attractive, and inexpensive way to educate patients and their families about the importance of proper health care.

**ORDERING INFORMATION**

Single copies are available for review at $1.50 each. All prices include postage and handling. Prepayment required in U.S. funds drawn on U.S. banks only. Make checks payable to: The Society of Nuclear Medicine. Prices are in U.S. dollars and subject to change without notice.

THE SOCIETY OF NUCLEAR MEDICINE

Book Order Department, 136 Madison Avenue, New York, NY 10016
NUCLEAR MEDICINE SCIENCE SYLLABUS
Second Edition

This enlarged and updated edition presents a comprehensive, but carefully screened, bibliography of the current literature available in the field of nuclear medicine science. Arranged in outline form, the book contains references chosen for clarity, depth, and availability. General references provide a broad overview of each topic and additional references deal with subjects in greater depth or provide historical insight.

The new edition addresses exciting new areas in the field such as emission computed tomography and nuclear magnetic resonance. Expanded sections include chapters dealing with clinical imaging and nonimaging procedures.

This book provides a valuable reference source for radiopharmacists, radiochemists, physicists, health physicists, clinicians, electronic engineers, computer engineers, and laboratory specialists working or studying in the field.

Book Reviews of the First Edition

"The book is strongly recommended to all engaged in training personnel for work in nuclear medicine, whether the course concerned is aimed at medical, scientific, or radiography staff." — The British Journal of Radiology

"This book attempts to catalog and categorize in outline form the more pertinent journal articles and book chapters relating to the extensive field of nuclear medicine science. The result is surprisingly detailed, complete, well-organized, and clear." — Medical Ultrasound

"The Syllabus appears to be a sound investment for any nuclear medicine department actively involved in the teaching of students." — American Journal of Roentgenology

Ordering Information: $30.50 plus $2.50 postage and handling for each book ordered. Prepayment required in U.S. funds drawn on U.S. banks only. No foreign funds accepted. For payments made in U.S. dollars, but drawn on a foreign bank, add a bank processing fee of $4.50 for Canadian bank drafts or $40.00 for all other foreign bank drafts. Check or purchase order must accompany all orders. Make checks payable to: The Society of Nuclear Medicine. Prices are in U.S. dollars and subject to change without notice.

Society of Nuclear Medicine
136 Madison Avenue, New York, NY 10016
If you're looking for the best uptake system, designed for patient comfort and easy operation, take a look at the Thyroid Uptake System II from Atomic Products.

It sets new performance standards because it is "truly dedicated" to thyroid uptake activity studies.

Operation is simple, and straightforward, thanks to the user friendly menu selection and logical control panel design. All operations and calculations are handled by a high-speed microprocessor with data displayed on the built-in video monitor. An optional printer is available for hard copy.

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Patient measurements are automatically decay corrected, and it calculates the final uptake percentage. It has a memory capacity for 8 separate patients, 3 measurements per patient.

The system can be configured as a free-standing unit, or used in a table top setting, depending on your needs and patient requirements.

The Thyroid Uptake System II. It sets new standards for uptake studies. From your Nuclear Medicine Source... Atomic Products Corporation.

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Kit for the Preparation of Technetium Tc 99m Medronate Injection

High bone to soft tissue ratios: Usually 40% to 50% uptake within 3 hours. Up to 50% is usually cleared by urinary excretion within the first 3—6 hours.

Stabilized with ascorbic acid, providing in-vitro stability for the 6 full hours until expiration, by utilizing an MPI process so unique that we had it patented.*

Visit us at the SNM Show in Houston at Island 8

MPI MDP KIT Multidose Kit for the Preparation of Technetium Tc 99m Medronate Injection

For complete prescribing information consult package insert, a brief summary of which follows:

DESCRIPTION: Each kit contains 10 multidose reaction vials, each containing 10 mg of medronic acid, 0.17 mg (minimum) stannous chloride (maximum stannous and stannic chloride 0.29 mg), and 2 mg ascorbic acid. The contents of the vial are sterile, pyrogen-free, lyophilized and sealed under nitrogen. The pH has been adjusted to 4-6 with hydrochloric acid and sodium hydroxide.

Administration is by intravenous injection for diagnostic use, after reconstitution with oxidant-free Sodium PerTechnetate Tc 99m Injection. The product as supplied is sterile and pyrogen-free.

The precise structure of stannous Technetium Tc 99m medronate complex is unknown at this time.

INDICATIONS AND USAGE: Technetium Tc 99m Medronate Injection may be used as a bone imaging agent to delineate areas of altered osteogenesis.

CONTRAINDICATIONS: None known.

WARNINGS: This class of compound is known to complex cations such as calcium. Particular caution should be used with patients who have, or who may be predisposed to, hypocalcemia (i.e., alkalosis).

Preliminary reports indicate impairment of brain scans using Sodium PerTechnetate Tc 99m Injection which have been preceded by a bone scan using an agent containing stannous ions. This impairment may result in false-positive or false-negative brain scans. It is recommended, where feasible, that brain scans precede bone imaging procedures. Alternatively, a brain-imaging agent such as Technetium Tc 99m Pentetate Injection may be employed.

PRECAUTIONS:

General

The contents of the kit before preparation are not radioactive. However, after the Sodium PerTechnetate Tc 99m Injection is added, adequate shielding of the final preparation must be maintained.

Contents of the vial are intended only for use in the preparation of Technetium Tc 99m Medronate Injection and are NOT to be administered directly to the patient.

Technetium Tc 99m Medronate Injection, as well as other radioactive drugs, must be handled with care. Onsite Sodium PerTechnetate Tc 99m Injection is added to the vial, appropriate safety measures should be used to minimize external radiation to clinical occupational personnel. Care should also be taken to minimize radiation exposure to patients in a manner consistent with proper patient management.

To minimize radiation dose to the bladder, the patient should be encouraged to drink fluids and to void immediately before the examination and as often thereafter as possible for the next 4—6 hours.

Technetium Tc 99m Medronate Injection should be formulated within six (6) hours prior to clinical use. Optimal imaging results are obtained one to four hours after administration. The solution should not be used if cloudy.

The vials should not be used after the expiration date shown on the label.

Radiopharmacists should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term animal studies have been performed to evaluate carcinogenic potential, mutagenic potential, or whether Technetium Tc 99m Medronate Injection affects fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with Technetium Tc 99m Medronate Injection. It is also not known whether Technetium Tc 99m Medronate Injection can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Technetium Tc 99m Medronate Injection 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 capability, 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 feedings.

Pediatric Use

Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Although adverse reactions have not been reported that are specifically attributable to the use of Technetium Tc 99m Medronate Injection, allergic dermatological manifestations (erythema and other allergic reactions) have been reported with similar agents.

HOW SUPPLIED:

Kit Contents

10 STERILE REACTION VIALS (10 c., silver aluminum overwrap), each containing, in lyophilized form and under nitrogen atmosphere, 10 mg of medronic acid, 0.17 mg (minimum) stannous chloride (maximum stannous and stannic chloride 0.29 mg), and 2 mg ascorbic acid. Hydrochloric acid and sodium hydroxide have been added for pH adjustment prior to lyophilization.

20 PRESSURE-SENSITIVE LABELS for final preparation of Technetium Tc 99m Medronate Injection

1 PACKAGE INSERT

*U.S. Pat. #4,364,920, Medi-Physics, Inc.