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TECHNETIUM 99m

GENERATORS

Technetium Tc 99m Generators for the Production of Sodium Pertechnetate Tc 99m

Featuring:

- Indicated for use in adults and children for urinary bladder imaging (direct isotopic cystography).
- The only Generator with an "open/closed" valve to eliminate possible leakage, both during shipment and in your hot lab.
- Unique horizontal elution procedure increases ease of use and eliminates needle-vial alignment problems.
- A new sterile needle is utilized for each elution, reducing the chances of a septic or pyrogenic situation occurring in routine clinical usage. This method is superior to competitive dry column systems where the same needle assembly is used for the life of the product.
- Fission product molybdenum 99 is used in the Technetium 99m Generator to provide Sodium Pertechnetate Tc99m activity concentrations sufficient for bolus injections.
- Internal saline reservoir eliminates the need to stock saline vials.
- Evacuated elution vials are available in 5cc, 10cc, and 20cc volumes, allowing you to optimize the elution concentration to meet your needs.
- Optimum shielding design minimizes radiation to personnel in work areas, providing maximum protection.
- Generator is compact, providing for optimum maneuverability. Generator handle and shipping carton provide for ease in handling and lifting.

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TECHNETIUM Tc 99m GENERATOR for the Production of Sodium Pertechnetate Tc 99m

DESCRIPTION: The Technetium Tc 99m Generator is prepared with fission produced Molybdenum Mo 99 absorbed on alumina in a lead-shielded column and provides a means for obtaining sterile pyrogen-free solutions of Sodium Pertechnetate Tc 99m in sodium chloride injection. The eluate should be crystal clear. With a pH of 4.5–7.5, hydrochloric acid and/or sodium hydroxide may have been used for pH adjustment. Over the life of the generator, an elution will contain a yield of 80% to 100% of the theoretical amount of Technetium Tc 99m available from the Molybdenum Mo 99 on the generator column.

Each eluate of the generator should not contain more than 0.15 microcurie of the Molybdenum Mo 99 per millicurie Technetium Tc 99m per administered dose at the time of administration, and not more than 10 micrograms of aluminum per milliliter of the generator eluate, both of which must be determined by the user before administration.

INDICATIONS AND USAGE: Sodium Pertechnetate Tc 99m is used IN ADULTS as an agent for: brain imaging including cerebral radionuclide angiography; thyroid imaging; salivary gland imaging; placenta localization; blood pool imaging including radionuclide angiography; and urinary bladder imaging (direct isotopic cystography) for detection of vesico-ureteral reflux.

Sodium Pertechnetate Tc 99m is used IN CHILDREN as an agent for: brain imaging including cerebral radionuclide angiography; thyroid imaging; blood pool imaging including radionuclide angiography; and urinary bladder imaging (direct isotopic cystography) for the detection of vesico-ureteral reflux.

CONTRAINDICATIONS: None known.

WARNINGS: Radiation risks associated with the use of Sodium Pertechnetate Tc 99m are greater in children than in adults. In general, the younger the child the greater the risk owing to greater absorbed radiation doses and longer life expectancy. These greater risks should be taken firmly into account in all benefit-risk assessments involving children.

PRECAUTIONS: As in the use of any radioactive material, care should be taken to minimize radiation exposure to the patient consistent with proper patient management and to insure minimum radiation exposure to occupational workers.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc 99m may affect fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with Technetium Tc 99m. It is also not known whether Technetium Tc 99m can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Technetium Tc 99m should be given to a pregnant woman only if the expected benefits to be gained clearly outweigh the potential hazards.

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, and therefore formula feedings should be substituted for breast feedings.

Pediatric Use

See **Indications** and **Usage, dosage** and administration. See also description of additional risk under **warnings.**

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.

The generator should not be used after 16 days from the date and time of calibration.

At time of administration, the solution should be crystal clear.

ADVERSE REACTIONS: Allergic reactions including anaphylaxis have been reported infrequently following the administration of Sodium Pertechnetate Tc 99m.

HOW SUPPLIED: Sodium Pertechnetate Tc 99m is supplied as a Molybdenum Mo 99/Technetium Tc 99m generator in sizes from 830 millicuries up to 16,600 millicuries (in approximately 830 millicurie increments) of Molybdenum Mo 99 as of 10:00 P.M. Eastern Time of the day of calibration. The TECHNETIUM Tc 99m GENERATOR consists of:

1) sterile generator, 2) Sodium Chloride Injection source, 3) 10 cc sterile evacuated vials, 4) sterile needles, 5) elution vial shield* 6) finished drug labels. Elution vials in 5 cc and 20 cc sizes are available upon request.

*initial order only

The TECHNETIUM Tc 99m GENERATOR should not be used after sixteen (16) days from the date and time of calibration.

Jointly manufactured by:
CINTICHEM, INC.
Tuxedo, N.Y. 10987

and

June, 1983
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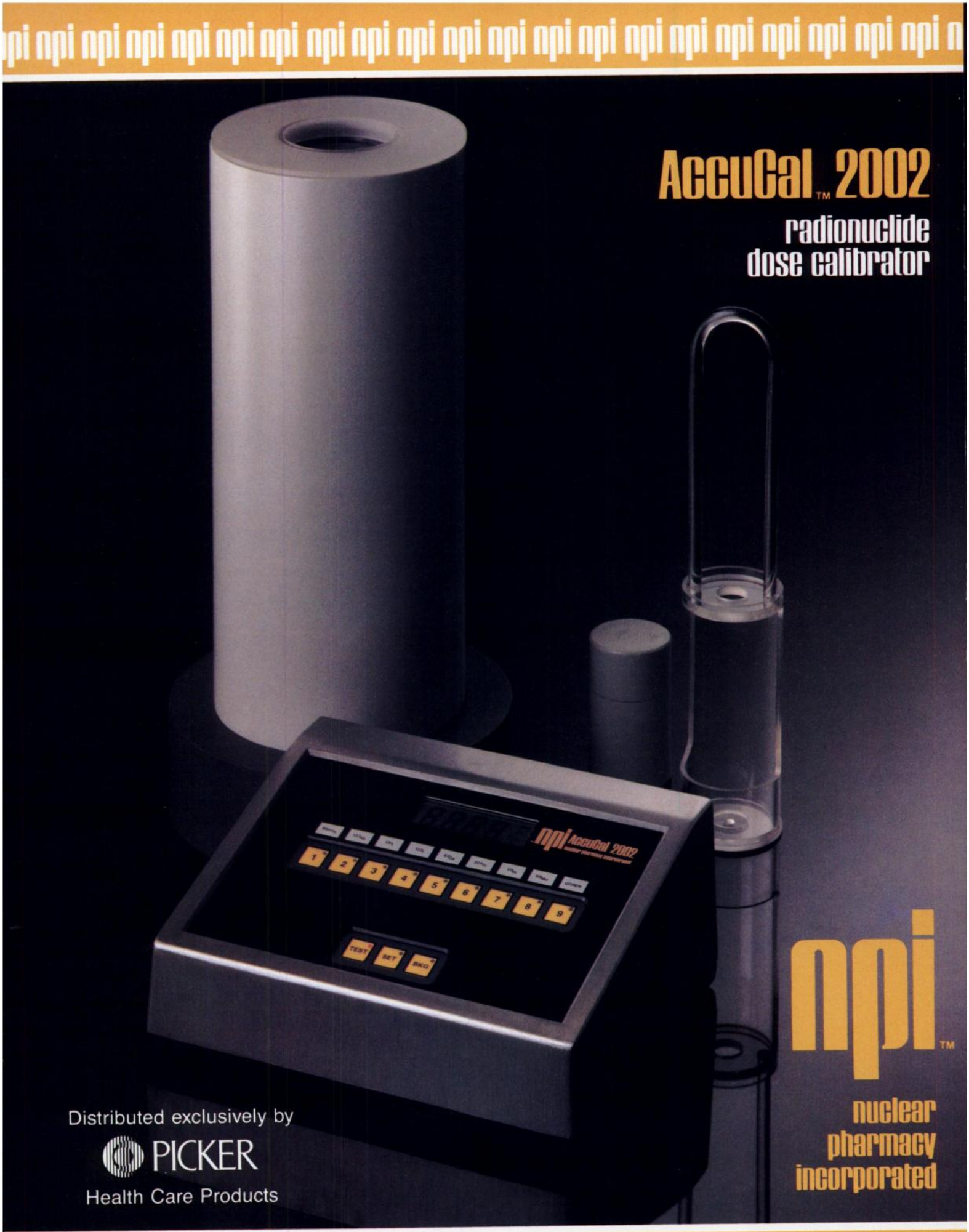

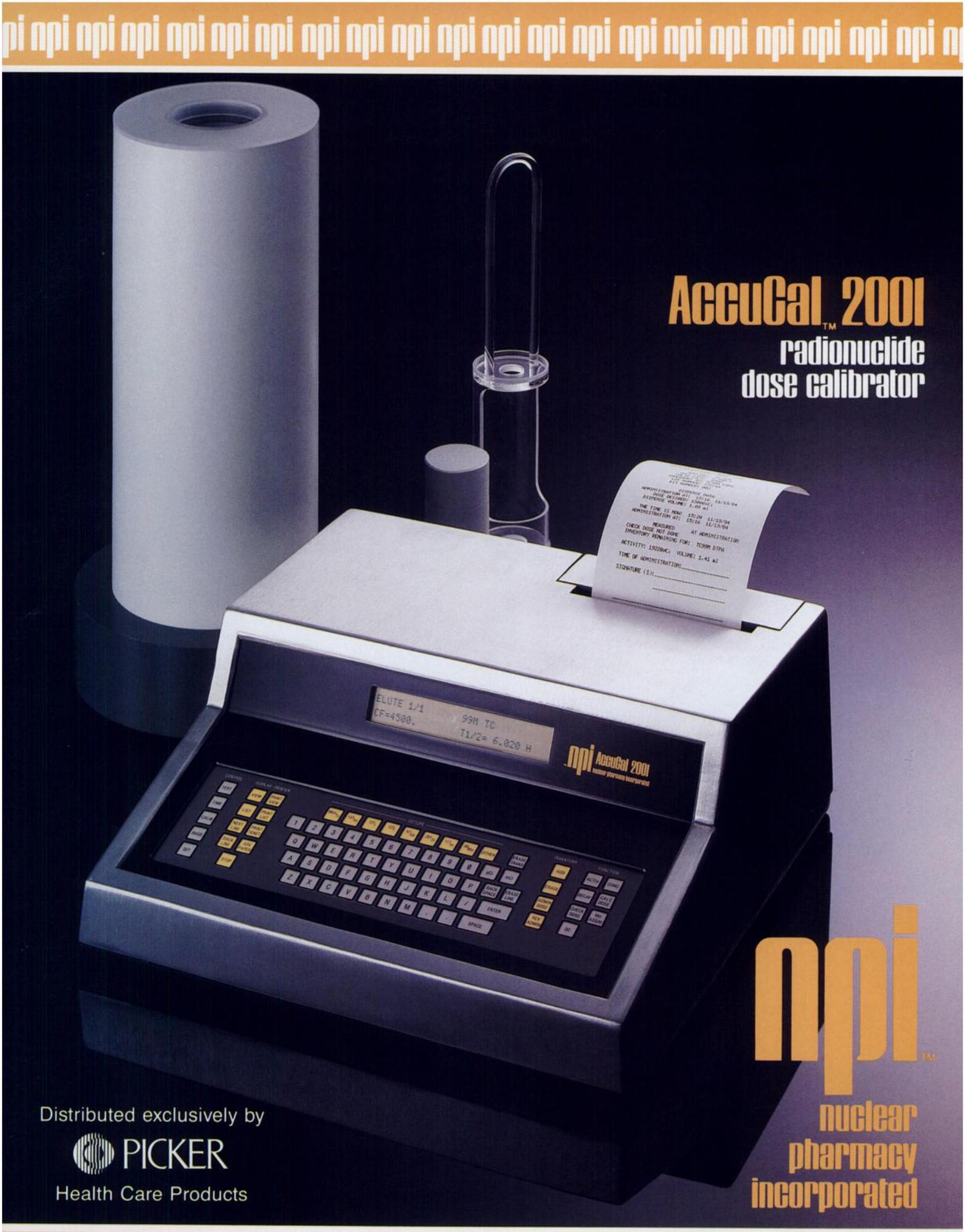

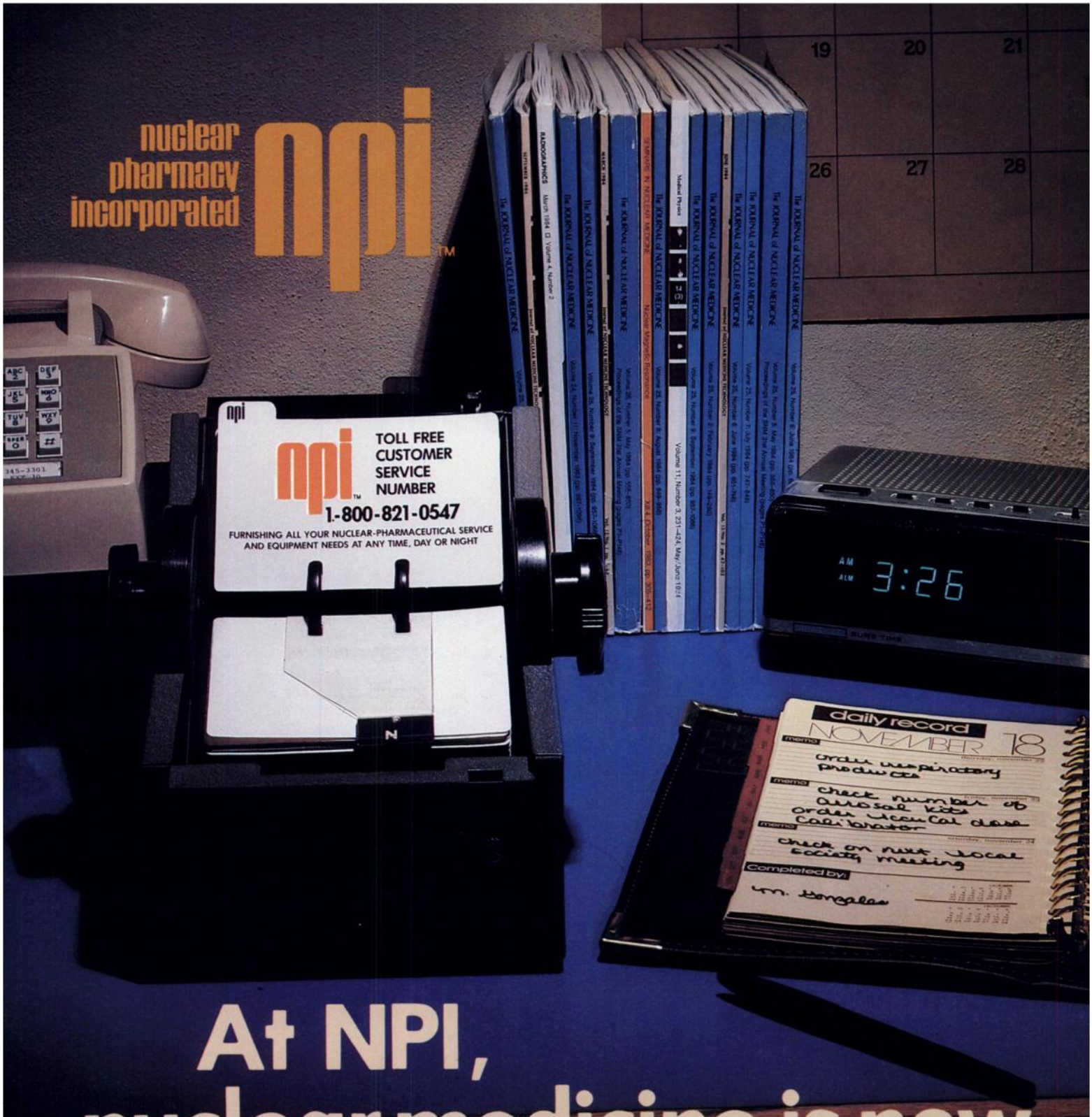

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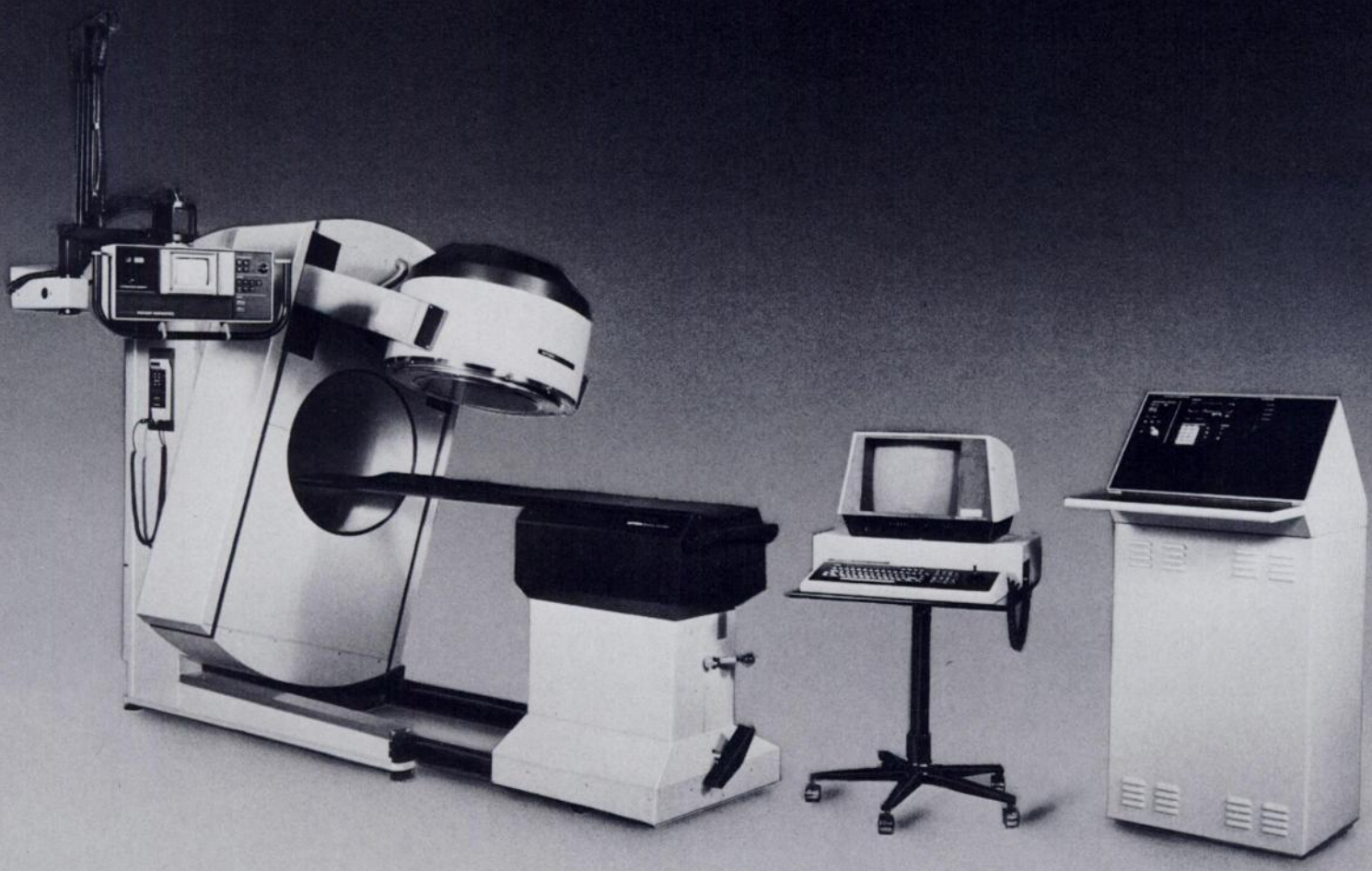
RAYTHEON SPECTRUM 91 ECT: THE INTELLIGENT ROBOTIC ECT SYSTEM... THAT KEEPS YOU IN TOTAL CONTROL.



Raytheon Medical Systems has harnessed the imaging power of our exclusive, fourth generation 91-tube detector — complete with variable linearity circuitry — to the profession's most precise gantry system, table and image processing to create the Spectrum 91. The result is the first optimized ECT system... with uncompromised planar capability.

State of the art.

The Spectrum 91 ECT System uses advanced robotics technology for total motion control. Four independent CPU units are the heart of the system. Simultaneously, they control gantry rotation, detector angle and parallelism.

True body contour acquisition covers a full 360°... plus circular and elliptical orbiting. All motions are electronically encoded for ±0.1° control... and to make sure the axis of rotation remains unchanged during body contouring.

"Teaching" the gantry is fast... easy... effortless. It can retrace virtually any contour after only two minutes of patient-specific programming. What's more, automatic parallelism of the detector head minimizes complex setup routines common to SPECT protocols.

Total imaging performance.

Spectrum 91 ECT gives you positive imaging control — two ways. First, the Raytheon Digital Parameter Controller gives you fast, accurate and repeatable entry and monitoring functions of all study, system and patient parameters. Status verification is positive... and reassuring.

But that's not all. The Spectrum 91 ECT System can also interface with a variety of computer systems for both gantry control and imaging capability. So the operational choice is left up to you.

Couple all this capability with a unique, interlocking carbon fiber table that easily simplifies all patient imaging... and you'll see exactly why the Spectrum 91 ECT System is a first in so many ways.

Find out about Raytheon's exclusive Spectrum 91 ECT System with a call to your Raytheon dealer. Or contact Raytheon Medical Systems, 2020 North Janice Avenue, Melrose Park, IL 60160. Phone 1-800-323-2213. In Illinois, 1-312-865-2600.

RAYTHEON

Circle Reader Service No. 7

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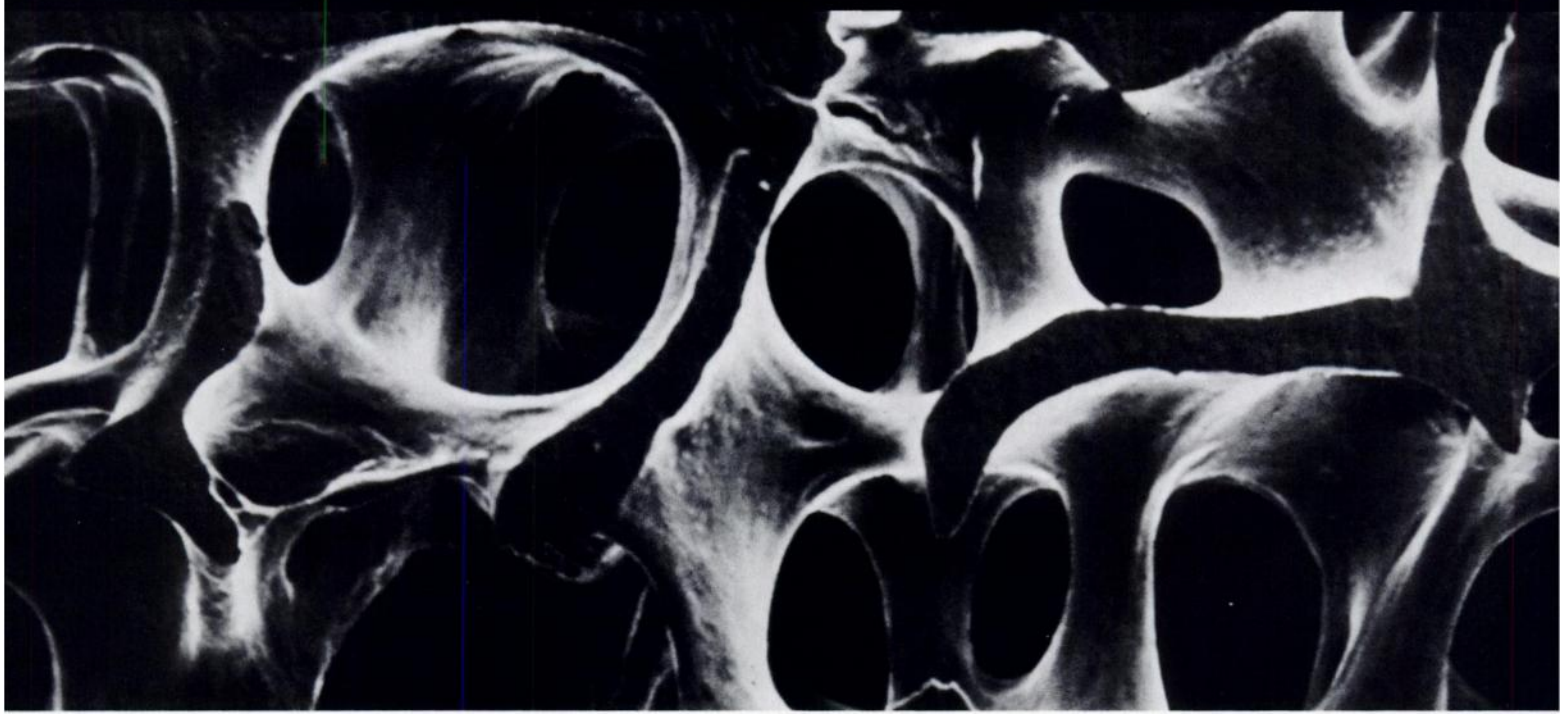

LUNAR is the world-recognized leader in crafting instrumentation and software for absorptiometry. We have become the world's largest manufacturer of bone scanning systems and currently supply 90% of the dual-photon scanners in the US. A complete line of bone scanners enables us to best suit your clinical needs. In addition our team of Wisconsin experts, that first developed this technology, continues to ensure that you will be at the leading edge. Contact us to see why the leaders in nuclear medicine and bone research have turned to LUNAR with confidence.

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REGIONS OF INTEREST:	lumbar vertebrae and the proximal femur
INTELLIGENT SCANS:	automatic localization reduces scan times to 15 - 20 minutes
MENU-DRIVEN SOFTWARE:	change speeds or regions of interest with a keystroke
CALIBRATION/QC:	allows ultra-precise serial measurements
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AUTOMATED ANALYSIS:	minimal operator intervention
SERVICE:	full 1-year warranty and 24-hour service
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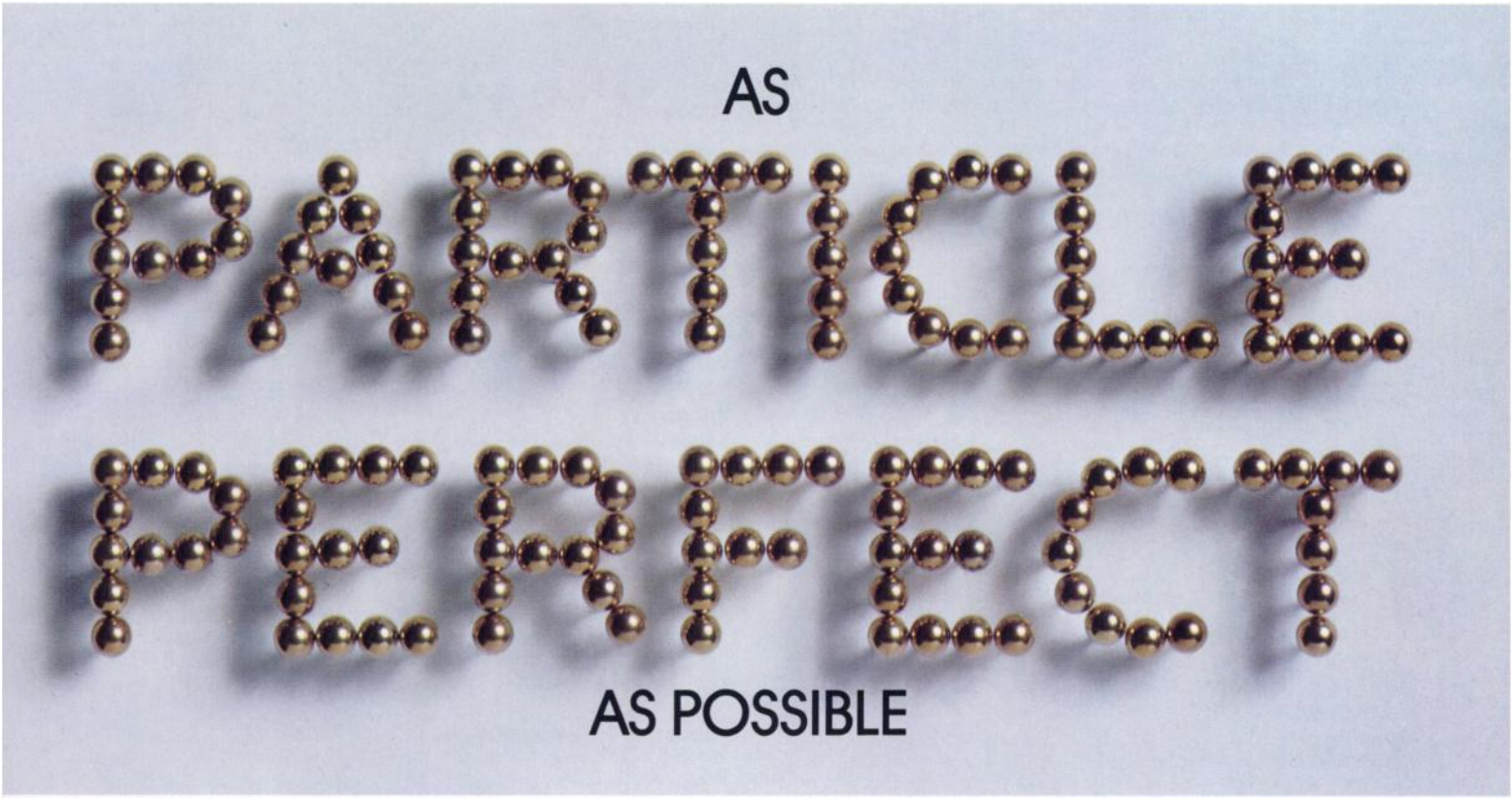
NOW AVAILABLE

In the evaluation of pulmonary perfusion

MACROTEC™

Technetium Tc 99m Albumin Aggregated Kit



More than 90% of particles in optimal 10 to 90 micron range

The average size is 20 to 40 microns... and no particles are greater than 150 microns. You'll get excellent images throughout a full 6 hours after reconstitution. Meets all your lung perfusion evaluation needs... scheduled or stat. Reconstitution time ... only 6 minutes.

More than 80% lung uptake for reliable biological efficacy

Low supernatant activity (SA) and very high radiochemical purity (RCP) help assure biological efficacy you can depend on time after time.

Please see adjacent page for brief summary.

The only MAA product indicated for use in isotopic venography

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SQUIBB™ Diagnostics

MACROTEC™

Technetium Tc 99m Albumin Aggregated Kit

Diagnostic — For Intravenous Use

DESCRIPTION

Macrotec is a sterile, nonpyrogenic, lyophilized preparation of albumin aggregated. Each 5 mL vial of Macrotec contains 1.5 mg of Albumin Aggregated, 10.0 mg Albumin Human, 0.06 mg (minimum) stannous chloride (maximum stannic and stannous chloride 0.16 mg), 1.8 mg of sodium chloride with trace amounts of sodium acetate, acetic acid and hydrochloric acid. Macrotec contains no preservatives. The pH of the reconstituted product is between 3.8 and 8.0.

The aggregated particles are formed by denaturation of Albumin Human in a heating and precipitation process. Each vial contains 1-8 million particles, 90% of which are between 10 and 90 microns in size. The average size is 20 to 40 microns; no particles are greater than 150 microns.

Reconstitution of Macrotec with sterile sodium pertechnetate Tc 99m forms an aqueous suspension of Technetium Tc 99m Albumin Aggregated for diagnostic use by intravenous injection. No less than 90% of the pertechnetate Tc 99m added to the reaction vial is bound to the aggregates at preparation time and remains bound throughout the 6-hour lifetime of the suspension.

INDICATIONS AND USAGE

Lung Imaging

Macrotec (Technetium Tc 99m Albumin Aggregated Injection) is a lung imaging agent which may be used as an adjunct in the evaluation of pulmonary perfusion in adults and children. It is useful in the early detection of pulmonary emboli and in the evaluation of the status of the pulmonary circulation in such conditions as pulmonary neoplasm, pulmonary tuberculosis and emphysema.

Isotopic Venography

Macrotec is also indicated for use in isotopic venography as an adjunct in the screening, diagnosis and management of deep vein thrombosis in the lower extremities.

Combined isotopic venography of the lower extremities and the pulmonary vasculature may be performed.

CONTRAINDICATIONS

Technetium Tc 99m Albumin Aggregated Injection should not be administered to patients with severe pulmonary hypertension.

The use of Technetium Tc 99m Albumin Aggregated Injection is contraindicated in persons with a history of hypersensitivity reactions to products containing human serum albumin.

WARNINGS

The literature contains reports of deaths occurring after the administration of Albumin Aggregated to patients with pre-existing severe pulmonary hypertension. Instances of hemodynamic or idiosyncratic reactions to preparations of Technetium Tc 99m Albumin Aggregated have been reported.

PRECAUTIONS

General

In patients with right to left heart shunts, additional risk may exist due to the rapid entry of Albumin Aggregated into the systemic circulation. The safety of this agent in such patients has not been established.

Hypersensitivity reactions are possible whenever protein-containing materials such as pertechnetate labeled Albumin Aggregated are used in man. Epinephrine, antihistamines and corticosteroids should be kept available for immediate use.

The intravenous administration of any particulate material such as Albumin Aggregated imposes a temporary, small mechanical impediment to blood flow. While this effect is probably physiologically insignificant in most patients, the administration of Albumin Aggregated is possibly hazardous in acute cor pulmonale and other states of severely impaired pulmonary blood flow.

The components of the Macrotec (Technetium Tc 99m Albumin Aggregated Kit) are sterile and non-pyrogenic. It is essential to follow directions carefully and adhere to strict aseptic procedures during preparation.

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

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

The technetium Tc 99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, sodium pertechnetate Tc 99m containing oxidants should not be employed.

The preparation contains no bacteriostatic preservative. Technetium Tc 99m Albumin Aggregated Injection should be stored at 2-8°C and discarded 6 hours after formulation.

Technetium Tc 99m Albumin Aggregated Injection is a physically unstable suspension and consequently the particles settle with time. Failure to agitate the vial adequately before use may result in non-uniform distribution of radioactive particles.

If blood is drawn into the syringe, unnecessary delay prior to injection may result in clot formation.

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.

As in the use of any other radioactive material, care should be taken to minimize radiation exposure to patients consistent with proper patient management, and to minimize radiation exposure to clinical personnel.

Carcinogenesis, Mutagenesis, Impairment of Fertility

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

Pregnancy Category C

Animal reproduction and teratogenicity studies have not been conducted with Technetium Tc 99m Albumin Aggregated Injection. It is also not known whether Technetium Tc 99m Albumin Aggregated Injection can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. There have been no studies in pregnant women. Technetium Tc 99m Albumin Aggregated 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

The lowest possible number of particles should be used in the right-to-left shunting, in neonates and in severe pulmonary disease.

ADVERSE REACTIONS

Although adverse reactions specifically attributable to the Technetium Tc 99m Albumin Aggregated Injection have not been noted, the literature contains reports of deaths occurring after the administration of Albumin Aggregated to patients with pre-existing severe pulmonary hypertension. Instances of hemodynamic or idiosyncratic reactions to preparations of Technetium Tc 99m Albumin Aggregated have been reported.

HOW SUPPLIED

Macrotec (Technetium Tc 99m Albumin Aggregated) is supplied as a kit containing 10 reaction vials (5 mL size).

SQUIBB™ Diagnostics
New Brunswick, NJ 08903

 604-502 Sept 1984

This tiny package contains all it takes to make an oak tree

Introducing Starcam

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Using advanced digital technology, General Electric has engineered a totally compact, *integrated nuclear diagnostic system* that gives you exceptional imaging capability and enhanced departmental productivity . . . in a single system. With the Starcam™ system, *all* acquisition functions are computer controlled. That means peak camera performance is maintained at all times,

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Starcam represents General Electric's continued commitment to developing nuclear diagnostic imaging technology that's innovative today and designed to stay that way tomorrow.

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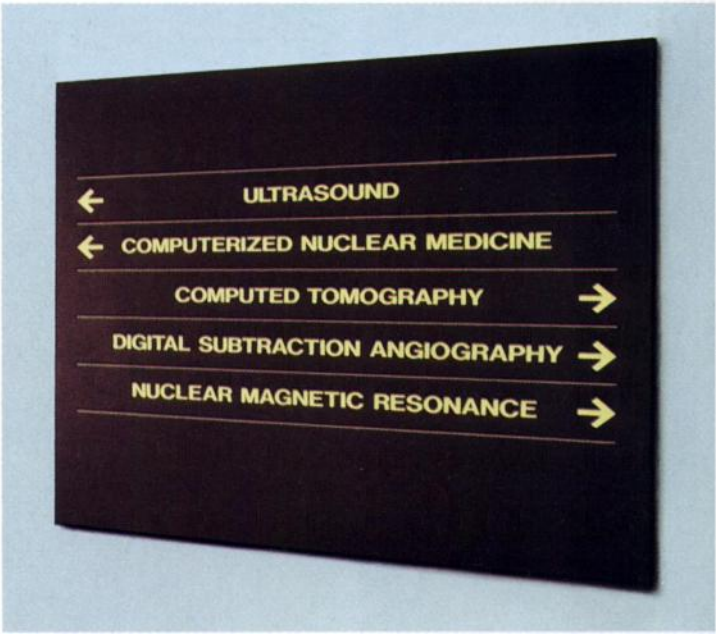

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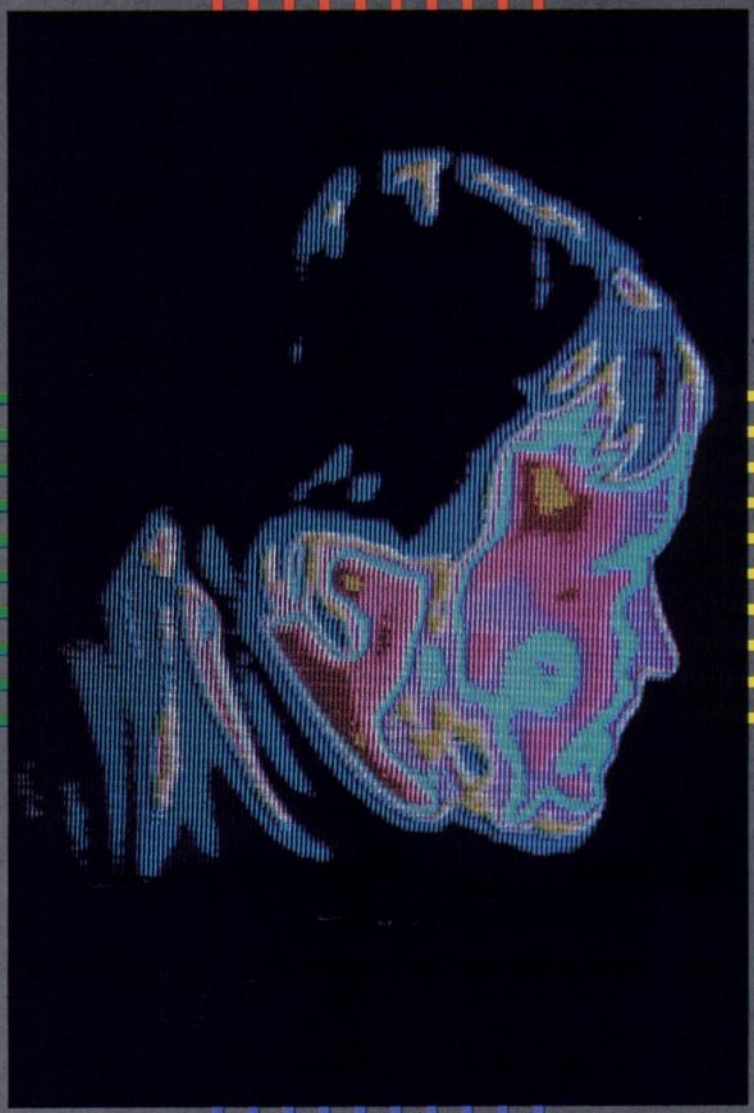

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NEW from Du Pont

MICROLITE™

Technetium Tc 99m Albumin Colloid Kit

The first "no boil" instant colloid kit for consistent liver/spleen and bone marrow imaging

Provides convenience, safety and quality images diagnostically equivalent to sulfur colloid

- **SAVES TIME**
  one-step preparation, no need to boil, ready to inject
- **CONSISTENT QUALITY**
  less chance of product variations during preparation
- **REDUCES PREPARATION ERROR**
  simple procedure, just add technetium 99m and swirl
- **MINIMIZES EXPOSURE**
  less handling, shorter prep times, helps meet ALARA guidelines

Available in 5-vial or 30-vial kits. Call Du Pont NEN Products toll-free 800-225-1572 (in Mass. and International 617-482-9595).

NEN Medical Products

DUPONT

21A

MICROLITE™

Kit for use in the preparation of
Technetium Tc 99m Albumin Colloid

FOR DIAGNOSTIC USE

INDICATIONS AND USAGE: Technetium Tc 99m Albumin Colloid is indicated for use as a diagnostic imaging agent for visualization of the functioning reticuloendothelial (RE) system, of the liver, spleen and bone marrow.

CONTRAINDICATIONS: Technetium Tc 99m Albumin Colloid is contraindicated for persons with a history of hypersensitivity to products containing human serum albumin.

WARNINGS: The theoretical possibility of allergic reactions should be considered in patients who receive multiple doses.

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

The labeling reactions involved in preparing the agent depend on maintaining tin in the reduced state. Any oxidant present in the sodium pertechnetate Tc 99m supply may thus adversely affect the quality of the prepared agent. Hence, sodium pertechnetate Tc 99m containing oxidants, or other additives, should not be employed without first demonstrating that it is without adverse effect on the properties of the resulting agent.

The contents of the vial are sterile and non-pyrogenic. It is essential that the user follow the directions carefully and adhere to strict aseptic procedures during preparation of the radiodiagnostic.

Technetium Tc 99m Albumin Colloid should be used within six hours from the time of reconstitution. Refrigerate at 2° to 8°C after reconstitution. If blood is withdrawn into the syringe, unnecessary delay prior to injection may result in clot formation *in situ*.

Do not use if clumping of the contents is observed.

Technetium Tc 99m Albumin Colloid (MICROLITE) as well as other radioactive drugs should be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patient consistent with proper patient management.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc 99m Albumin Colloid affects fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with Technetium Tc 99m Albumin Colloid. It is also not known whether Technetium Tc 99m Albumin Colloid can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Technetium Tc 99m 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 feeding.

Pediatric Use

Safety and effectiveness in children below the age of 18 have not been established.

General

This radiopharmaceutical preparation should not be administered to children or to pregnant women unless the expected benefits to be gained outweigh the potential risks.

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.

ADVERSE REACTIONS: Although no adverse reactions associated with the use of Microlite have been reported, hypersensitivity reactions are theoretically possible whenever protein-containing materials such as Tc 99m-labeled aggregated albumin are used in man. Epinephrine, antihistamines and corticosteroid agents should be available for use in the event such a reaction occurs.

DOSAGE AND ADMINISTRATION: The recommended intravenous dose range for the average (70kg) patient is 37-296MBq (1-8 millicuries).

The patient dose should be measured by a suitable radioactivity calibration system immediately prior to patient administration. Re-suspend colloid by repeated inversion of the shielded vial immediately prior to withdrawal of dose into syringe. Inspect the vial for foreign particulates. Do not administer if foreign particulates are found in the colloid. (If blood is drawn into the syringe, any unnecessary delay prior to injection may lead to clot formation *in situ*.) Do not backflush the syringe. Slow injection is recommended and for optimum results imaging may begin about 15 minutes after injection. Radiochemical purity should be checked prior to patient administration, using the following or equivalent procedure. (Please see complete prescribing information.)

HOW SUPPLIED: MICROLITE™ Kit for use in the preparation of Technetium Tc 99m Albumin Colloid is supplied in kits of five or thirty vials, sterile and non-pyrogenic, each vial containing in lyophilized form:

Albumin Colloid	1mg
Normal Human Serum Albumin	10mg
Total Tin, maximum (as stannous chloride $SnCl_2 \cdot 2H_2O$)	0.17mg
Stannous Chloride ($SnCl_2 \cdot 2H_2O$) (minimum)	0.006mg
Poloxamer 188	1.1mg
Medronate disodium	0.12mg
Sodium Phosphate (anhydrous)	10mg

Prior to lyophilization the pH is adjusted with HCl and/or NaOH. The contents of the vial are lyophilized and stored under nitrogen. Included in each five (5) vial kit are one (1) package insert and twelve (12) radiation labels. Included in each thirty vial kit is one (1) package insert and seventy-two (72) radiation labels. Before reconstitution store at room temperature (15°-30°C) and protect from light.

The components of the Kit for use in the preparation of Technetium Tc 99m Albumin Colloid are supplied sterile and non-pyrogenic. Aseptic procedures normally employed in making additions and withdrawals from sterile, non-pyrogenic containers should be used during addition of pertechnetate solution and the withdrawal of doses for patient administration.

Technetium Tc 99m Albumin Colloid is prepared by adding 2-8ml of oxidant-free sodium pertechnetate Technetium Tc 99m solution to the vial and swirling for about one minute. Shielding should be utilized when preparing the Technetium Tc 99m Albumin Colloid.

Catalog Number NRP-470 (5-Vial Kit)
Catalog Number NRP-470C (30-Vial Kit)

May 1984 511616

DUPONT

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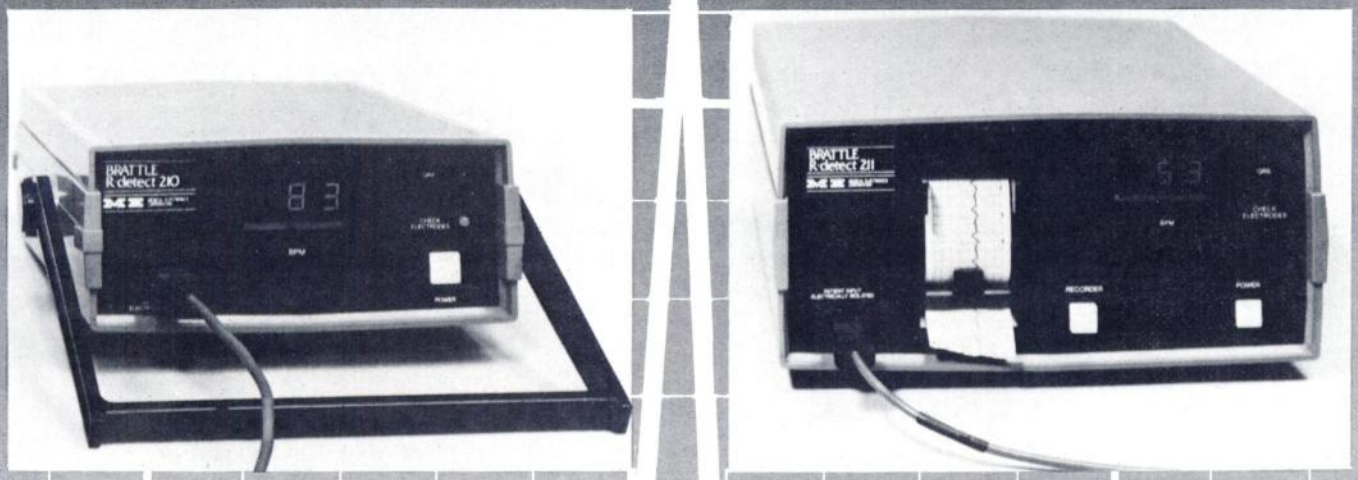

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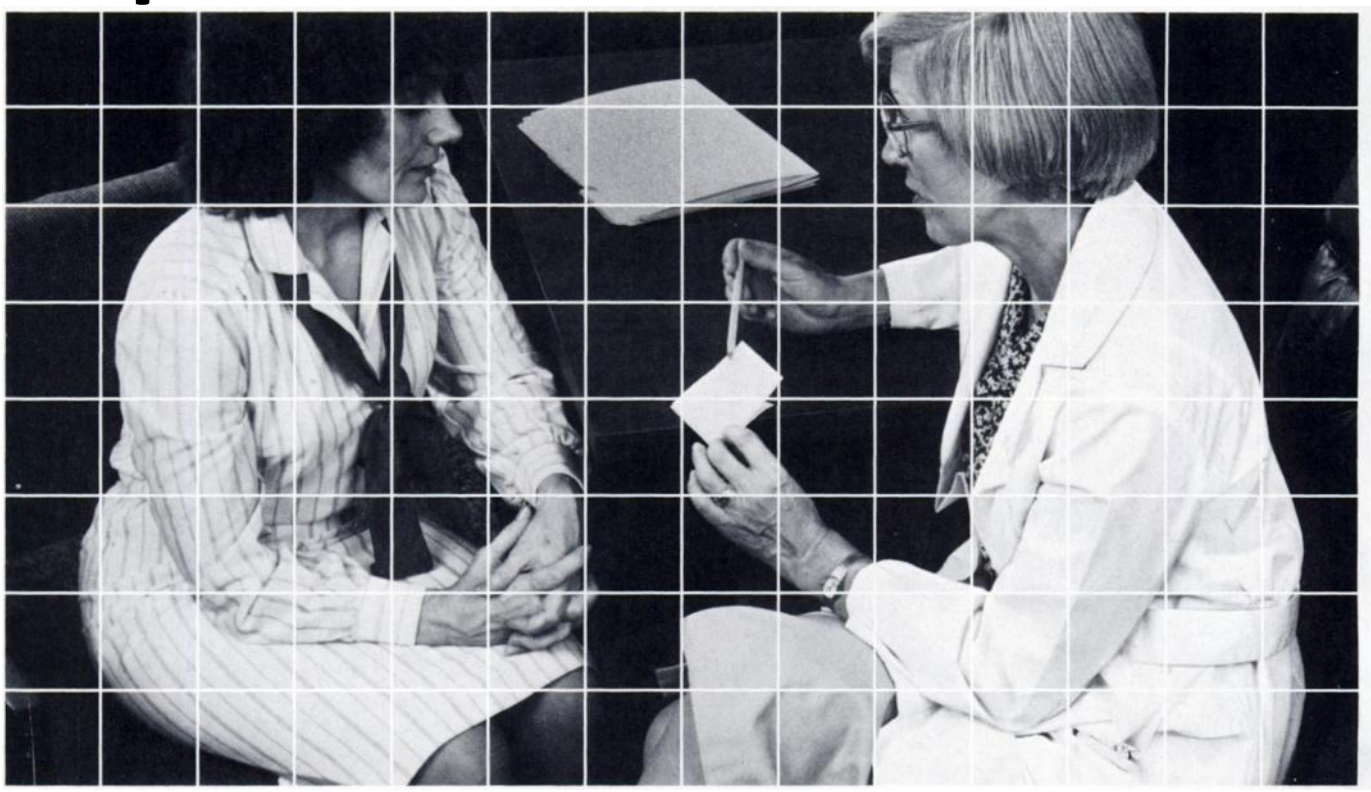

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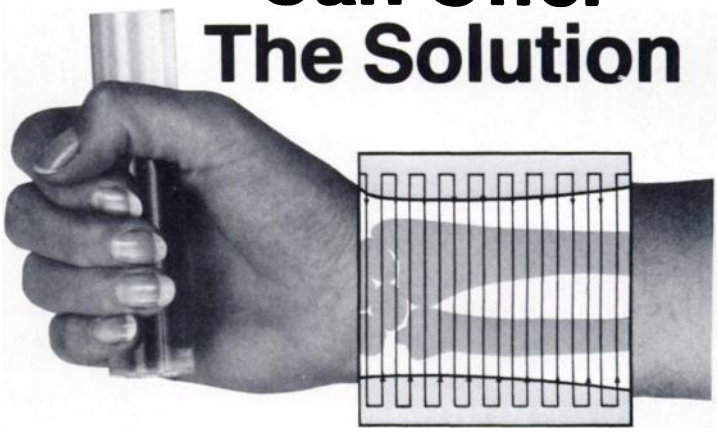

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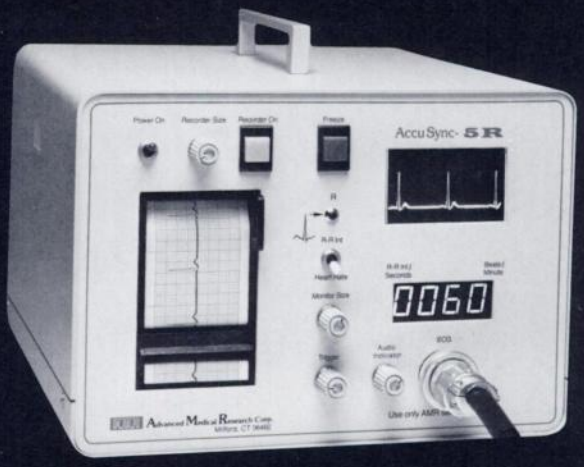

MODEL		FEATURES
AccuSync-6		All **AccuSync-5R** features with the exception of the Strip Chart Recorder.
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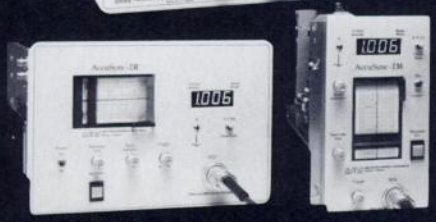
AccuSync-2R AccuSync-2M		All **AccuSync-IR** features incorporated into a Module designed to fit into certain Mobile cameras.
AccuSync-3		All **AccuSync-IR** features with the exception of the Strip Chart Recorder, Playback Mode and Audio Indicator.
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Circle Reader Service No. 18

Chromatography of Technetium-99m Radiopharmaceuticals —A Practical Guide

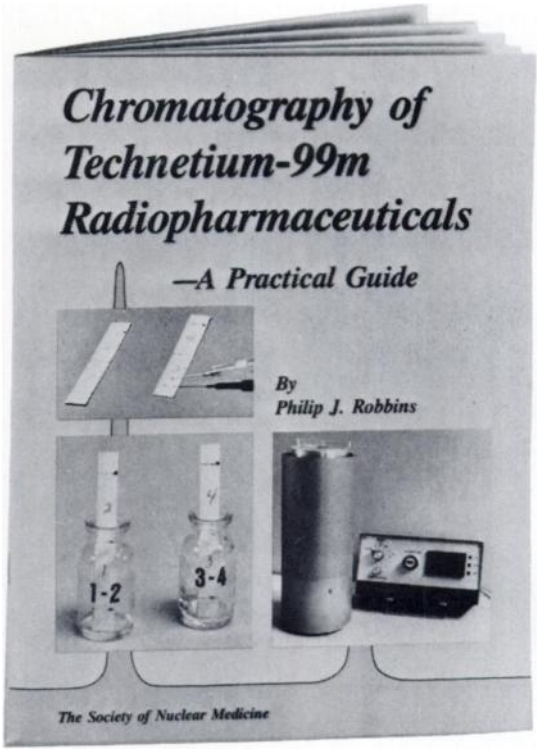
By Philip J. Robbins

To provide up-to-date information about the most accurate procedures for ensuring quality control of radiopharmaceuticals, The Society of Nuclear Medicine presents *Chromatography of Technetium-99m Radiopharmaceuticals—A Practical Guide.*

This new manual offers readers a collection of miniaturized chromatographic methods for the rapid and precise determination of the radiochemical purity of commonly used Tc-99m radiopharmaceuticals.

Topics covered include the nature and source of impurities, principles and classic techniques of chromatography, methods for counting miniature chromatographic strips, and pitfalls of miniature methods and how to avoid them. Also contained herein is a listing of each radiopharmaceutical with the USP criteria for radiochemical purity, typical scans of impure products, and standards and interlaboratory comparisons for miniaturized systems.

Prepared to aid nuclear medicine personnel in implementing voluntary quality-assurance programs, the material may also be used as a training resource for individuals preparing for professional licensure and certification.



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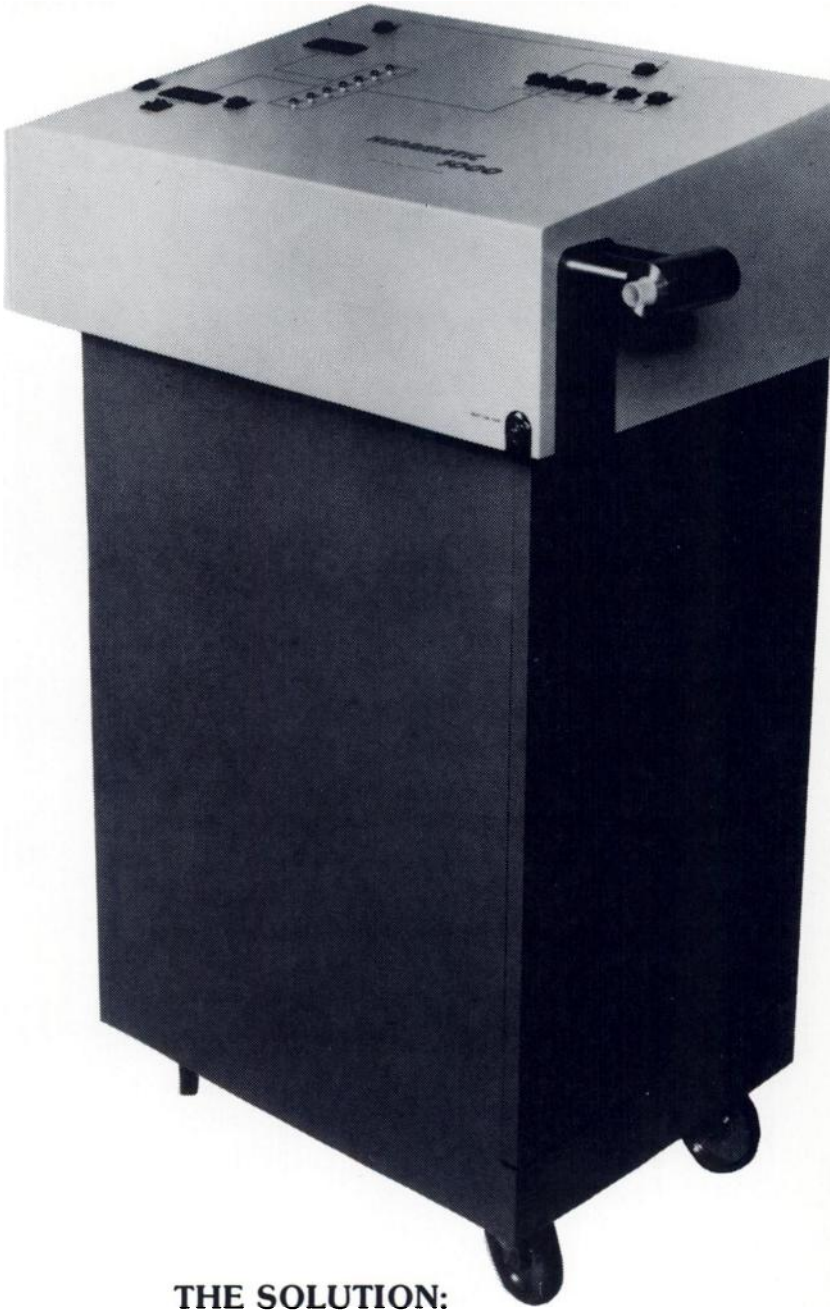

THE PROBLEM:
You would like to do the lung perfusion images first, look at the images and decide if a ventilation study is called for.

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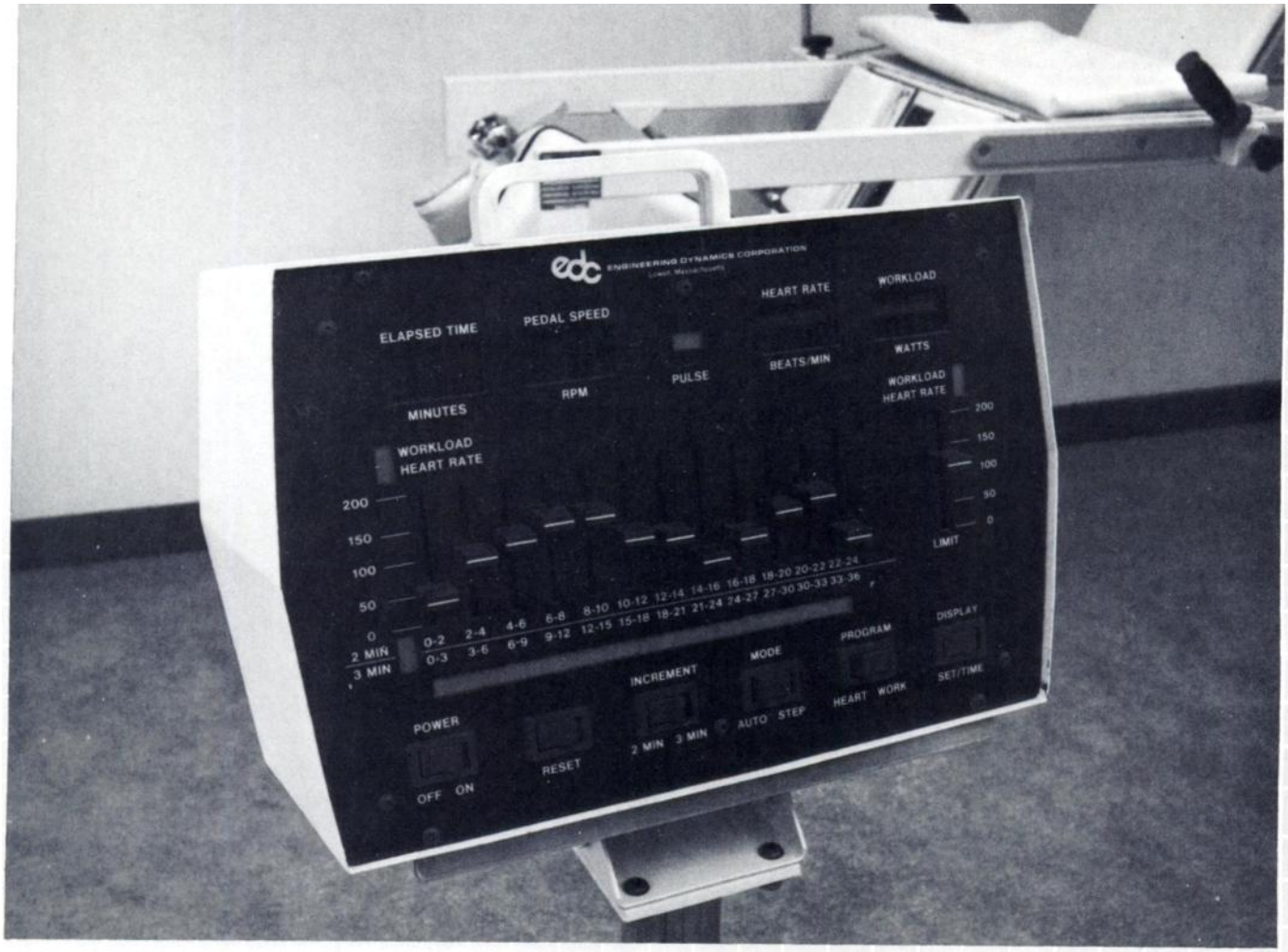

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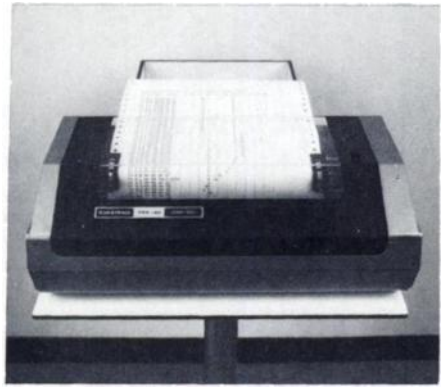

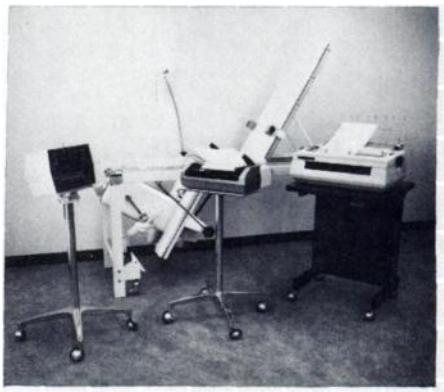

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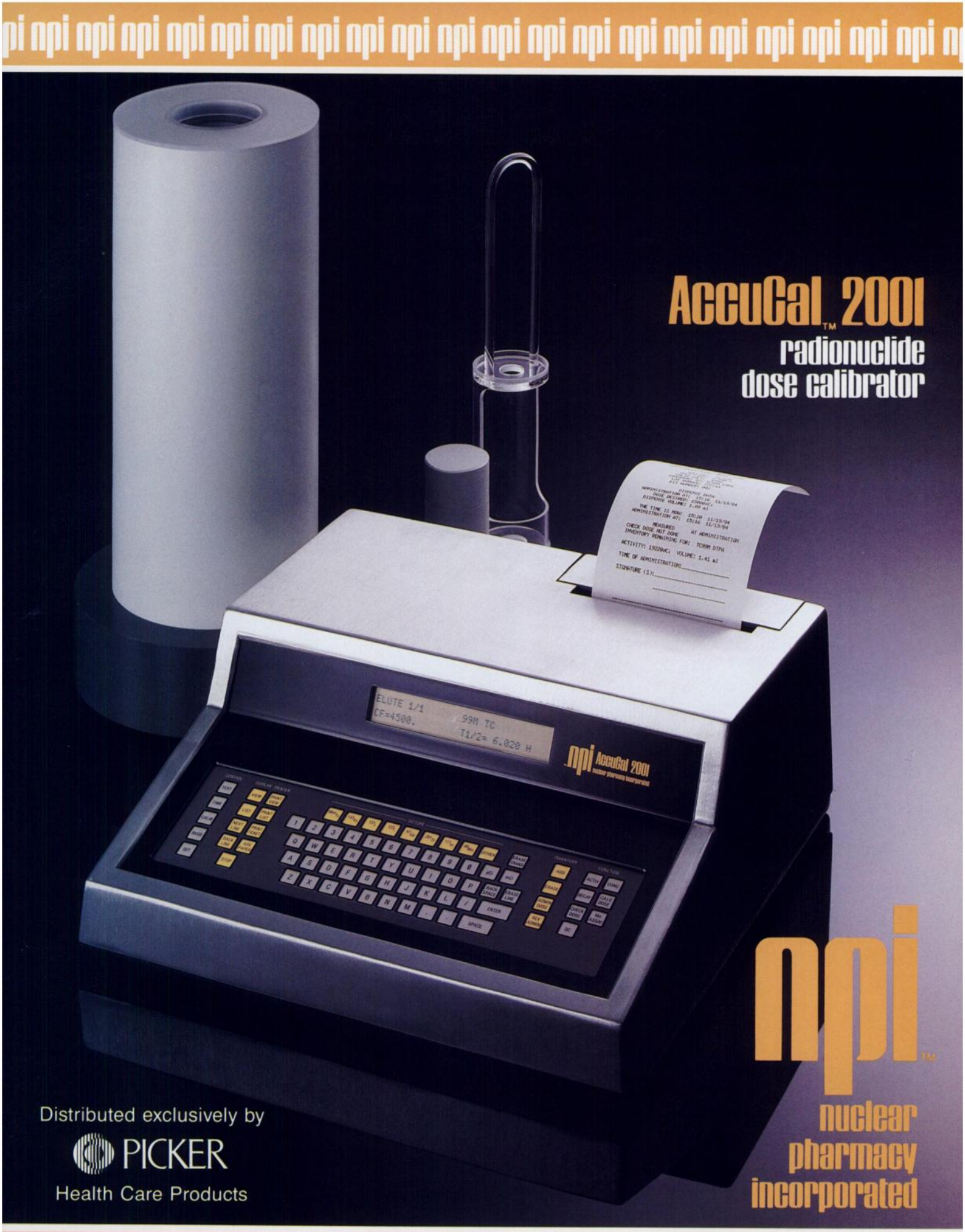

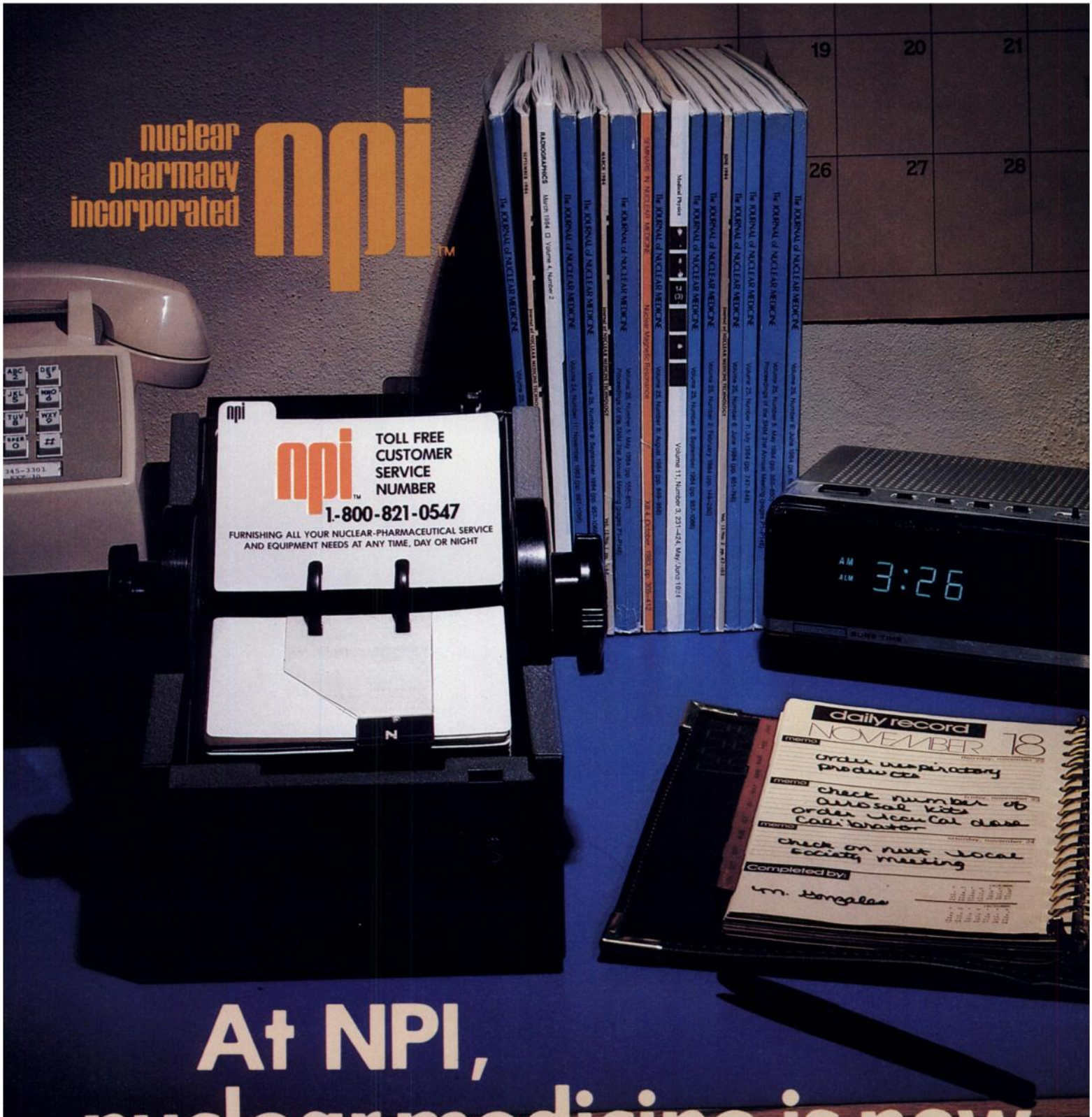

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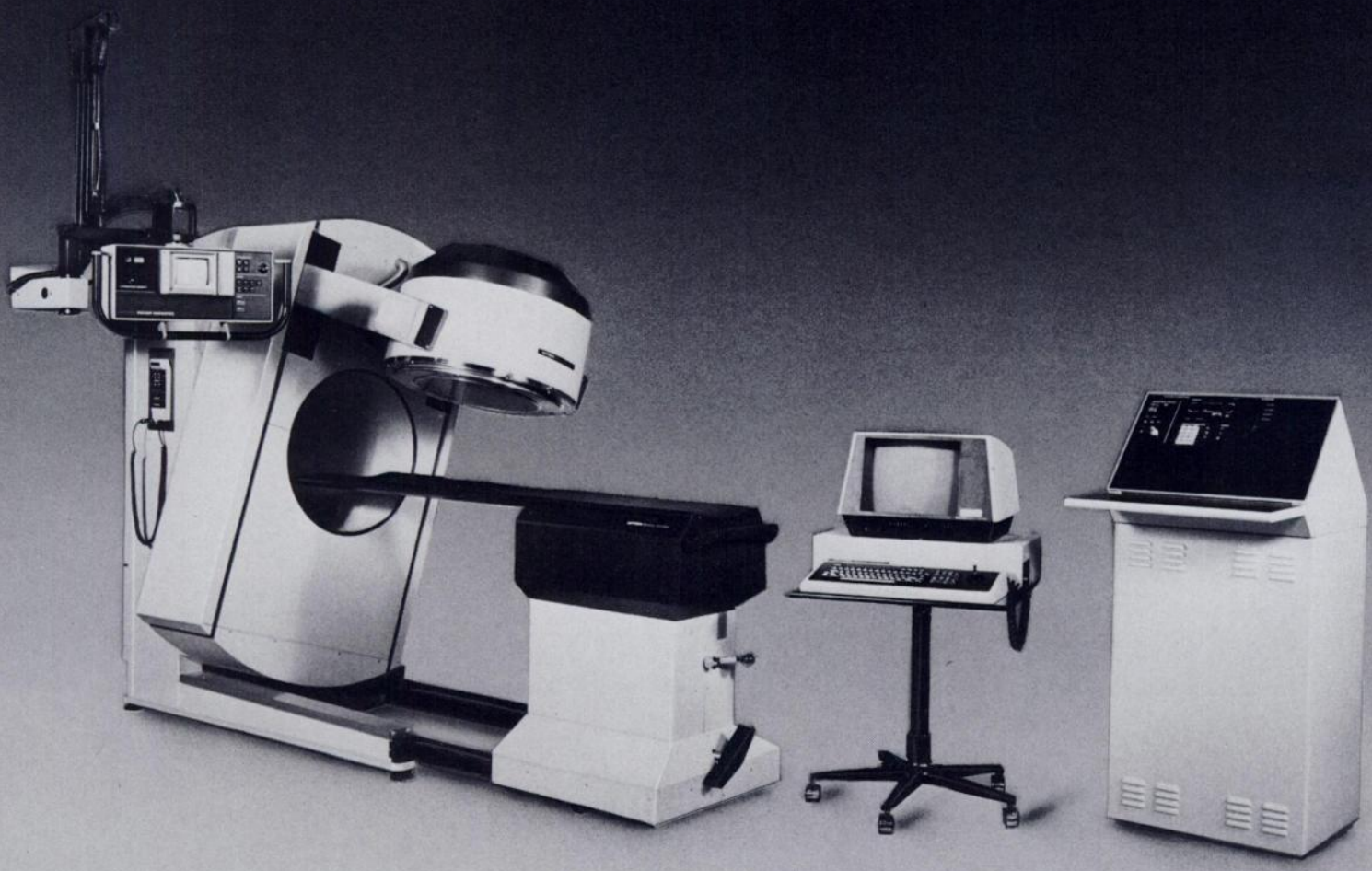

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Spectrum 91 ECT gives you positive imaging control — two ways. First, the Raytheon Digital Parameter Controller gives you fast, accurate and repeatable entry and monitoring functions of all study, system and patient parameters. Status verification is positive... and reassuring.

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Find out about Raytheon's exclusive Spectrum 91 ECT System with a call to your Raytheon dealer. Or contact Raytheon Medical Systems, 2020 North Janice Avenue, Melrose Park, IL 60160. Phone 1-800-323-2213. In Illinois, 1-312-865-2600.

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LUNAR RADIATION *IS* DUAL-PHOTON ABSORPTIOMETRY

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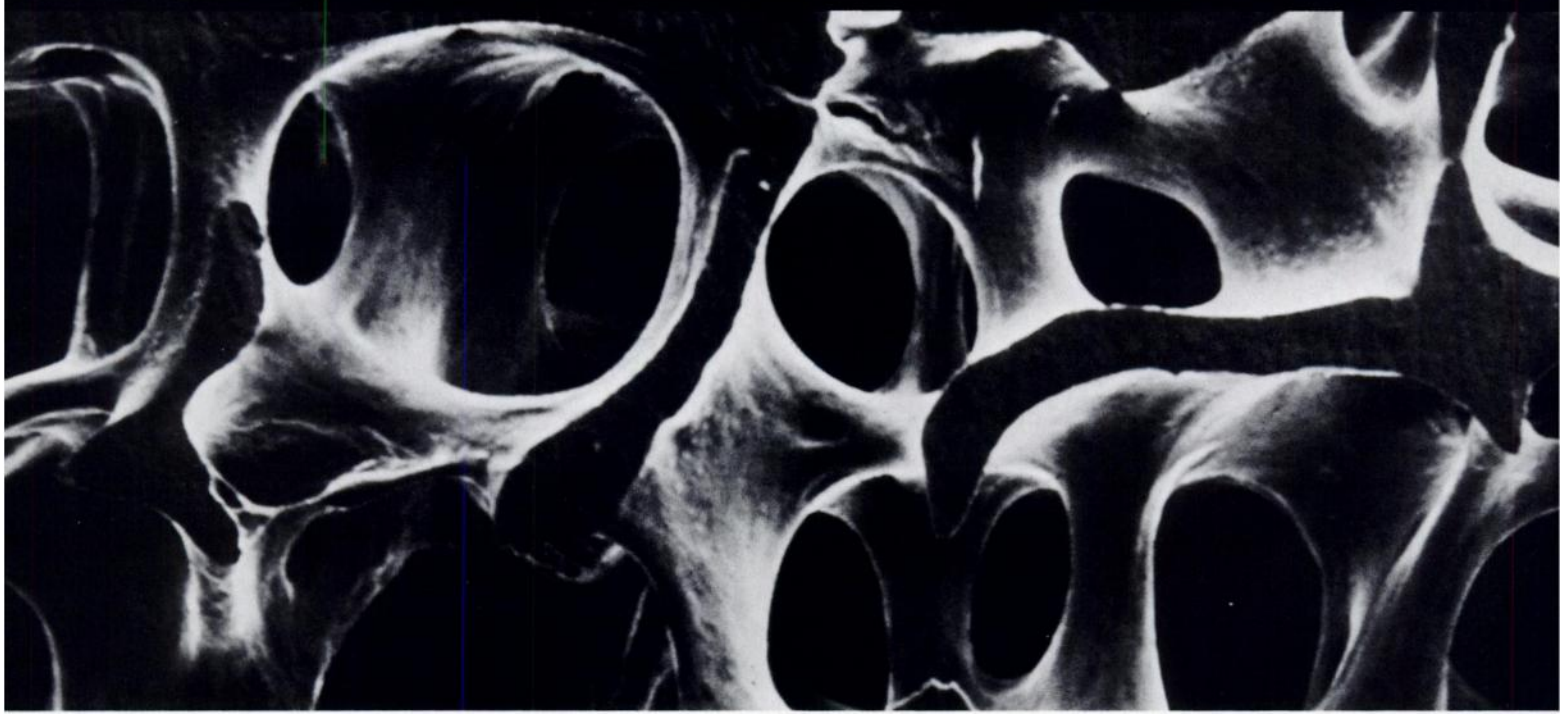

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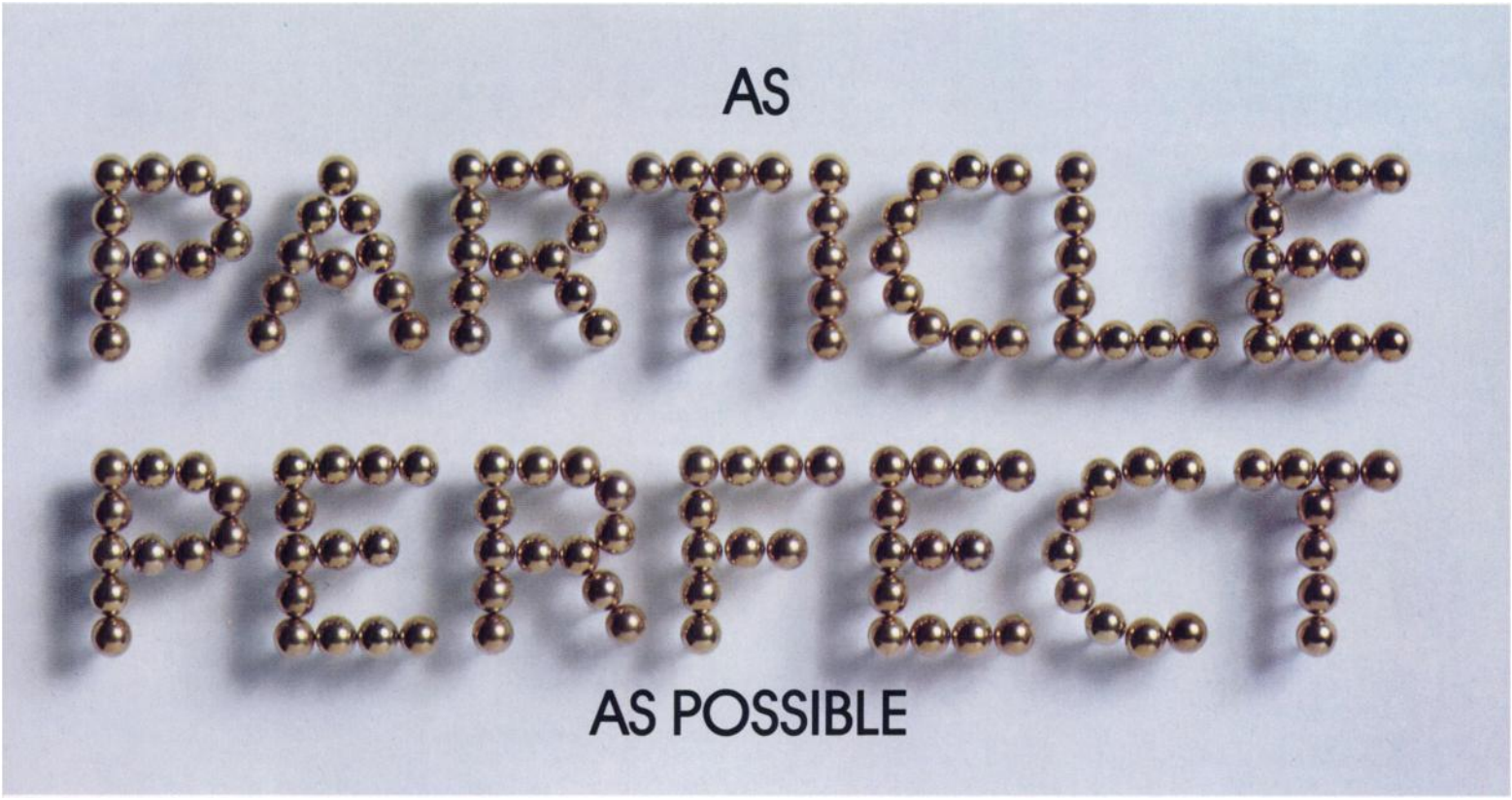
NOW AVAILABLE

In the evaluation of pulmonary perfusion

MACROTEC™

Technetium Tc 99m Albumin Aggregated Kit



More than 90% of particles in optimal 10 to 90 micron range

The average size is 20 to 40 microns... and no particles are greater than 150 microns. You'll get excellent images throughout a full 6 hours after reconstitution. Meets all your lung perfusion evaluation needs... scheduled or stat. Reconstitution time ... only 6 minutes.

More than 80% lung uptake for reliable biological efficacy

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Please see adjacent page for brief summary.

The only MAA product indicated for use in isotopic venography

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SQUIBB™ Diagnostics

MACROTEC™

Technetium Tc 99m Albumin Aggregated Kit

Diagnostic — For Intravenous Use

DESCRIPTION

Macrotec is a sterile, nonpyrogenic, lyophilized preparation of albumin aggregated. Each 5 mL vial of Macrotec contains 1.5 mg of Albumin Aggregated, 10.0 mg Albumin Human, 0.06 mg (minimum) stannous chloride (maximum stannic and stannous chloride 0.16 mg), 1.8 mg of sodium chloride with trace amounts of sodium acetate, acetic acid and hydrochloric acid. Macrotec contains no preservatives. The pH of the reconstituted product is between 3.8 and 8.0.

The aggregated particles are formed by denaturation of Albumin Human in a heating and precipitation process. Each vial contains 1-8 million particles, 90% of which are between 10 and 90 microns in size. The average size is 20 to 40 microns; no particles are greater than 150 microns.

Reconstitution of Macrotec with sterile sodium pertechnetate Tc 99m forms an aqueous suspension of Technetium Tc 99m Albumin Aggregated for diagnostic use by intravenous injection. No less than 90% of the pertechnetate Tc 99m added to the reaction vial is bound to the aggregates at preparation time and remains bound throughout the 6-hour lifetime of the suspension.

INDICATIONS AND USAGE

Lung Imaging

Macrotec (Technetium Tc 99m Albumin Aggregated Injection) is a lung imaging agent which may be used as an adjunct in the evaluation of pulmonary perfusion in adults and children. It is useful in the early detection of pulmonary emboli and in the evaluation of the status of the pulmonary circulation in such conditions as pulmonary neoplasm, pulmonary tuberculosis and emphysema.

Isotopic Venography

Macrotec is also indicated for use in isotopic venography as an adjunct in the screening, diagnosis and management of deep vein thrombosis in the lower extremities.

Combined isotopic venography of the lower extremities and the pulmonary vasculature may be performed.

CONTRAINDICATIONS

Technetium Tc 99m Albumin Aggregated Injection should not be administered to patients with severe pulmonary hypertension.

The use of Technetium Tc 99m Albumin Aggregated Injection is contraindicated in persons with a history of hypersensitivity reactions to products containing human serum albumin.

WARNINGS

The literature contains reports of deaths occurring after the administration of Albumin Aggregated to patients with pre-existing severe pulmonary hypertension. Instances of hemodynamic or idiosyncratic reactions to preparations of Technetium Tc 99m Albumin Aggregated have been reported.

PRECAUTIONS

General

In patients with right to left heart shunts, additional risk may exist due to the rapid entry of Albumin Aggregated into the systemic circulation. The safety of this agent in such patients has not been established.

Hypersensitivity reactions are possible whenever protein-containing materials such as pertechnetate labeled Albumin Aggregated are used in man. Epinephrine, antihistamines and corticosteroids should be kept available for immediate use.

The intravenous administration of any particulate material such as Albumin Aggregated imposes a temporary, small mechanical impediment to blood flow. While this effect is probably physiologically insignificant in most patients, the administration of Albumin Aggregated is possibly hazardous in acute cor pulmonale and other states of severely impaired pulmonary blood flow.

The components of the Macrotec (Technetium Tc 99m Albumin Aggregated Kit) are sterile and non-pyrogenic. It is essential to follow directions carefully and adhere to strict aseptic procedures during preparation.

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

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

The technetium Tc 99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, sodium pertechnetate Tc 99m containing oxidants should not be employed.

The preparation contains no bacteriostatic preservative. Technetium Tc 99m Albumin Aggregated Injection should be stored at 2-8°C and discarded 6 hours after formulation.

Technetium Tc 99m Albumin Aggregated Injection is a physically unstable suspension and consequently the particles settle with time. Failure to agitate the vial adequately before use may result in non-uniform distribution of radioactive particles.

If blood is drawn into the syringe, unnecessary delay prior to injection may result in clot formation.

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.

As in the use of any other radioactive material, care should be taken to minimize radiation exposure to patients consistent with proper patient management, and to minimize radiation exposure to clinical personnel.

Carcinogenesis, Mutagenesis, Impairment of Fertility

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

Pregnancy Category C

Animal reproduction and teratogenicity studies have not been conducted with Technetium Tc 99m Albumin Aggregated Injection. It is also not known whether Technetium Tc 99m Albumin Aggregated Injection can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. There have been no studies in pregnant women. Technetium Tc 99m Albumin Aggregated 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

The lowest possible number of particles should be used in the right-to-left shunting, in neonates and in severe pulmonary disease.

ADVERSE REACTIONS

Although adverse reactions specifically attributable to the Technetium Tc 99m Albumin Aggregated Injection have not been noted, the literature contains reports of deaths occurring after the administration of Albumin Aggregated to patients with pre-existing severe pulmonary hypertension. Instances of hemodynamic or idiosyncratic reactions to preparations of Technetium Tc 99m Albumin Aggregated have been reported.

HOW SUPPLIED

Macrotec (Technetium Tc 99m Albumin Aggregated) is supplied as a kit containing 10 reaction vials (5 mL size).

SQUIBB™ Diagnostics
New Brunswick, NJ 08903

 604-502 Sept 1984

This tiny package contains all it takes to make an oak tree

Introducing Starcam

The revolution in nuclear imaging

Using advanced digital technology, General Electric has engineered a totally compact, *integrated nuclear diagnostic system* that gives you exceptional imaging capability and enhanced departmental productivity . . . in a single system. With the Starcam™ system, *all* acquisition functions are computer controlled. That means peak camera performance is maintained at all times,

providing consistently high quality images. Our large image monitor offers acquisition and display in matrices up to 512^2, making images easier to view and giving you the best possible resolution.

Evolution backed by experience

The Starcam system is the technological evolution of our Star® system data processor and MaxiCamera® line. It's entirely compatible with existing Star systems through floppy data transfer and the future Starlink network. Starcam's modular digital design makes it adaptable to technological enhancements; a feature that lets you broaden the scope of your imaging capabilities as innovations in technology are made.

Starcam is available in 300, 400 and 500 mm configurations. And General Electric's field proven Autotune® detectors, integral to the Starcam system, automatically adjust photo multiplier tubes "on-the-fly," stabilizing camera performance and reducing system downtime and maintenance caused by PM tube drifting.

Digital "on-the-fly" energy and spatial corrections provide improved linearity, uniformity and overall image resolution.

Performance you can count on

Starcam incorporates five high-speed microprocessors, two of them 16-bit multi-tasking units, that work together in a distributed processing fashion. Combined with an integrated Array Processor (optional), this delivers exceptional computing capability, essential when performing studies such as ECT.

Starcam features dual central processing units with over one megabyte of very high-speed expandable memory that's directly accessible for display and processing. An 84-megabyte Winchester disc, standard with Starcam, gives you more than twice the data storage available with other systems.

The bottom line . . . productivity

Starcam is a breakthrough in imaging technology. It provides today's nuclear departments with procedural capabilities unsurpassed by any other system. It redefines the operation of your department, eliminating many time-consuming functions without compromising the diagnostic value of the information obtained. The result is a more effective, efficient imaging department; one that optimizes diagnostic capability without jeopardizing the economic well-being of your health care institution.

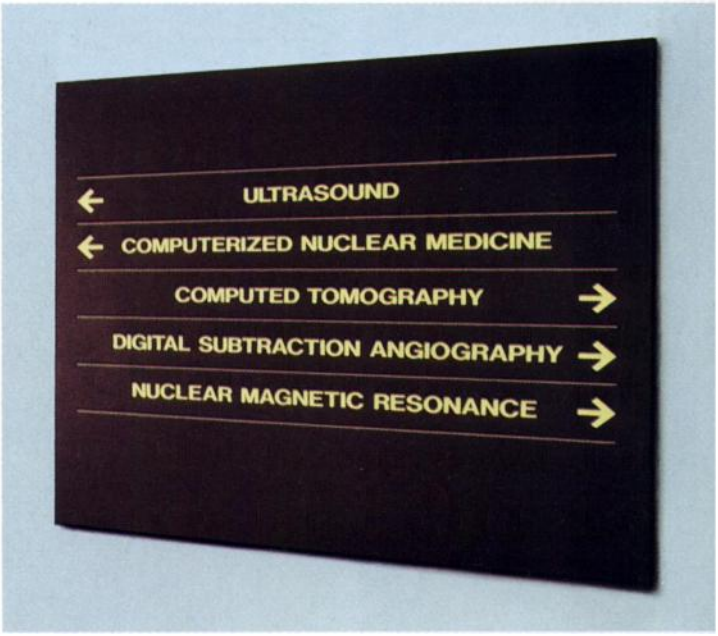
Starcam represents General Electric's continued commitment to developing nuclear diagnostic imaging technology that's innovative today and designed to stay that way tomorrow.

Find out how you can revolutionize your nuclear imaging department. Call our toll-free number today: 1-800-433-5566.

GENERAL ELECTRIC

Kodak...for video look you like...and

Only you know the look you like in video images. Show that look to a Kodak representative, and we're prepared to deliver that look. And keep it. It's a big commitment, but one we're equipped to back up.



Become a VIP.

This service, and many more, is part of a comprehensive Kodak video imaging program. It's a complete package of products and services designed to make your life easier in any modality that involves imaging on a video monitor. It's brought to you only by Kodak, and only by your Kodak representative.

It all begins with the widest choice of films in video imaging: five films, ideally suited to recording images from video monitors. Depending on your preferences, imaging modality, and equipment, each of these high-resolution, single-emulsion films can deliver a superb image. As a first step, your Kodak representative will suggest which is best for you.

images with the roomlight too!

Putting numbers on your "look."

Now, watch the monitor on your multiformat camera as your Kodak representative helps you arrive at the specific look you like. Then, drawing on special training and experience, and the Kodak video display analyzer, your technical sales representative can—with many multiformat cameras—literally "put numbers" on that look.

Even write them on a special label applied to your camera. So you can always return the monitor to the exact settings which produce the results you prefer. Your look is repeatable.

All in full room illumination ...with Kodaflex products.

We've even improved on the way you do everyday jobs like loading, unloading, and processing film. Made them easier, more convenient. Because new Kodaflex products let you do all these things in full room illumination! It's not only handy; it means you can now make more efficient use of available space.

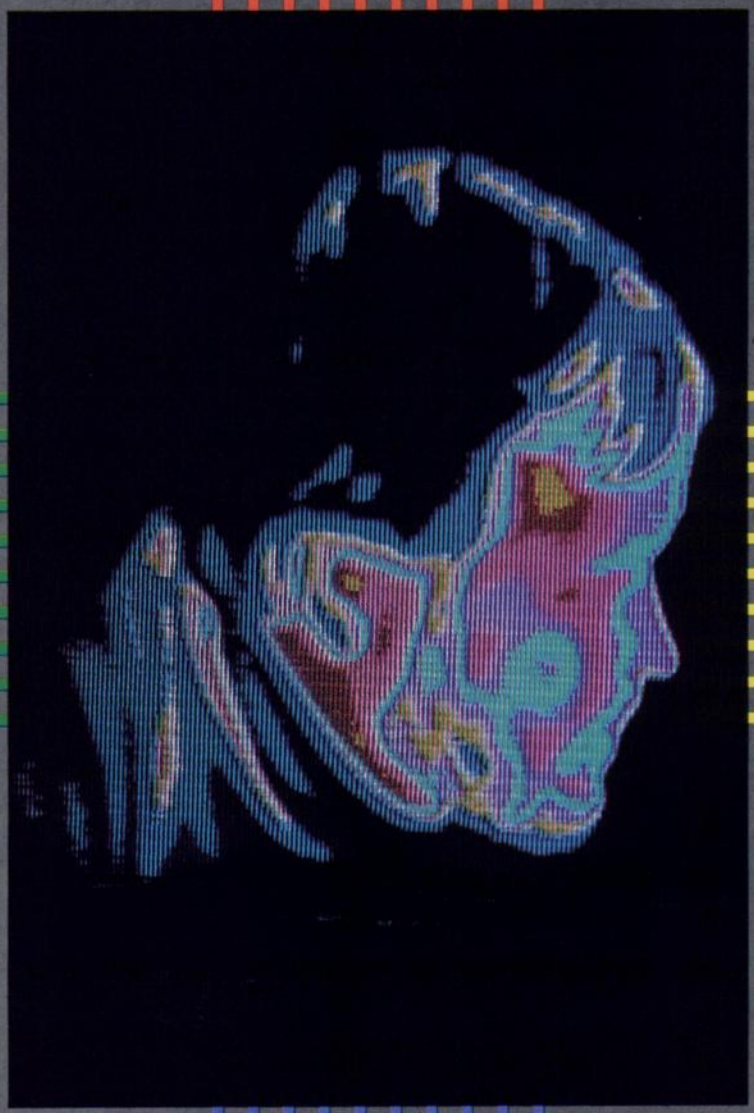
With Kodaflex products you can have a roomlight film-handling system with a difference. And that difference is the reliable operation you expect from Kodak products with the knowledgeable backup you expect from your Kodak representative. The system includes filmholders and dispensers, magazines, unloaders, and, of course, your favorite Kodak X-Omat processors. Everything it takes to make your life a little easier.

We've put over a century of imaging experience into the Kodak video imaging program. We think you'll say, "It shows!" Ask your Kodak representative for all the details. Or, write Eastman Kodak Company, Department 412-L, VI, Rochester, New York 14650.

Imaging as you like it.

Circle Reader Service No. 11

Isn't it time to find out how good you can be?



Right now at Hermann Hospital, professionals are taking on challenges, meeting them, and growing.

Hermann offers the opportunities and facilities of a major teaching hospital specializing in trauma and critical care. A fast-paced environment where you can add the human touch to high-tech health care.

We employ a multidisciplinary approach to patient care, and give team members a broad responsibility and autonomy—and the freedom to excel.

If your goal is nothing short of excellence in your field, join a hospital where that is a common goal. Hermann Hospital, Department of Human Resources, 1203 Ross Sterling Avenue, Houston, TX 77030. Call collect, (713) 797-4473.

HERMANN HOSPITAL

Affiliated/The University of Texas Medical School at Houston

NEW from Du Pont

MICROLITE™

Technetium Tc 99m Albumin Colloid Kit

The first "no boil" instant colloid kit for consistent liver/spleen and bone marrow imaging

Provides convenience, safety and quality images diagnostically equivalent to sulfur colloid

- **SAVES TIME**
  one-step preparation, no need to boil, ready to inject
- **CONSISTENT QUALITY**
  less chance of product variations during preparation
- **REDUCES PREPARATION ERROR**
  simple procedure, just add technetium 99m and swirl
- **MINIMIZES EXPOSURE**
  less handling, shorter prep times, helps meet ALARA guidelines

Available in 5-vial or 30-vial kits. Call Du Pont NEN Products toll-free 800-225-1572 (in Mass. and International 617-482-9595).

NEN Medical Products

DUPONT

21A

MICROLITE™

Kit for use in the preparation of
Technetium Tc 99m Albumin Colloid

FOR DIAGNOSTIC USE

INDICATIONS AND USAGE: Technetium Tc 99m Albumin Colloid is indicated for use as a diagnostic imaging agent for visualization of the functioning reticuloendothelial (RE) system, of the liver, spleen and bone marrow.

CONTRAINDICATIONS: Technetium Tc 99m Albumin Colloid is contraindicated for persons with a history of hypersensitivity to products containing human serum albumin.

WARNINGS: The theoretical possibility of allergic reactions should be considered in patients who receive multiple doses.

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

The labeling reactions involved in preparing the agent depend on maintaining tin in the reduced state. Any oxidant present in the sodium pertechnetate Tc 99m supply may thus adversely affect the quality of the prepared agent. Hence, sodium pertechnetate Tc 99m containing oxidants, or other additives, should not be employed without first demonstrating that it is without adverse effect on the properties of the resulting agent.

The contents of the vial are sterile and non-pyrogenic. It is essential that the user follow the directions carefully and adhere to strict aseptic procedures during preparation of the radiodiagnostic.

Technetium Tc 99m Albumin Colloid should be used within six hours from the time of reconstitution. Refrigerate at 2° to 8°C after reconstitution. If blood is withdrawn into the syringe, unnecessary delay prior to injection may result in clot formation *in situ*.

Do not use if clumping of the contents is observed.

Technetium Tc 99m Albumin Colloid (MICROLITE) as well as other radioactive drugs should be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patient consistent with proper patient management.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No animal studies have been performed to evaluate carcinogenic potential or whether Technetium Tc 99m Albumin Colloid affects fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with Technetium Tc 99m Albumin Colloid. It is also not known whether Technetium Tc 99m Albumin Colloid can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Technetium Tc 99m 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 feeding.

Pediatric Use

Safety and effectiveness in children below the age of 18 have not been established.

General

This radiopharmaceutical preparation should not be administered to children or to pregnant women unless the expected benefits to be gained outweigh the potential risks.

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.

ADVERSE REACTIONS: Although no adverse reactions associated with the use of Microlite have been reported, hypersensitivity reactions are theoretically possible whenever protein-containing materials such as Tc 99m-labeled aggregated albumin are used in man. Epinephrine, antihistamines and corticosteroid agents should be available for use in the event such a reaction occurs.

DOSAGE AND ADMINISTRATION: The recommended intravenous dose range for the average (70kg) patient is 37-296MBq (1-8 millicuries).

The patient dose should be measured by a suitable radioactivity calibration system immediately prior to patient administration. Re-suspend colloid by repeated inversion of the shielded vial immediately prior to withdrawal of dose into syringe. Inspect the vial for foreign particulates. Do not administer if foreign particulates are found in the colloid. (If blood is drawn into the syringe, any unnecessary delay prior to injection may lead to clot formation *in situ*.) Do not backflush the syringe. Slow injection is recommended and for optimum results imaging may begin about 15 minutes after injection. Radiochemical purity should be checked prior to patient administration, using the following or equivalent procedure. (Please see complete prescribing information.)

HOW SUPPLIED: MICROLITE™ Kit for use in the preparation of Technetium Tc 99m Albumin Colloid is supplied in kits of five or thirty vials, sterile and non-pyrogenic, each vial containing in lyophilized form:

Albumin Colloid	1mg
Normal Human Serum Albumin	10mg
Total Tin, maximum (as stannous chloride $SnCl_2 \cdot 2H_2O$)	0.17mg
Stannous Chloride ($SnCl_2 \cdot 2H_2O$) (minimum)	0.006mg
Poloxamer 188	1.1mg
Medronate disodium	0.12mg
Sodium Phosphate (anhydrous)	10mg

Prior to lyophilization the pH is adjusted with HCl and/or NaOH. The contents of the vial are lyophilized and stored under nitrogen. Included in each five (5) vial kit are one (1) package insert and twelve (12) radiation labels. Included in each thirty vial kit is one (1) package insert and seventy-two (72) radiation labels. Before reconstitution store at room temperature (15°-30°C) and protect from light.

The components of the Kit for use in the preparation of Technetium Tc 99m Albumin Colloid are supplied sterile and non-pyrogenic. Aseptic procedures normally employed in making additions and withdrawals from sterile, non-pyrogenic containers should be used during addition of pertechnetate solution and the withdrawal of doses for patient administration.

Technetium Tc 99m Albumin Colloid is prepared by adding 2-8ml of oxidant-free sodium pertechnetate Technetium Tc 99m solution to the vial and swirling for about one minute. Shielding should be utilized when preparing the Technetium Tc 99m Albumin Colloid.

Catalog Number NRP-470 (5-Vial Kit)
Catalog Number NRP-470C (30-Vial Kit)

May 1984 511616

DUPONT

NEN Medical Products

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North Billerica, Massachusetts 01862
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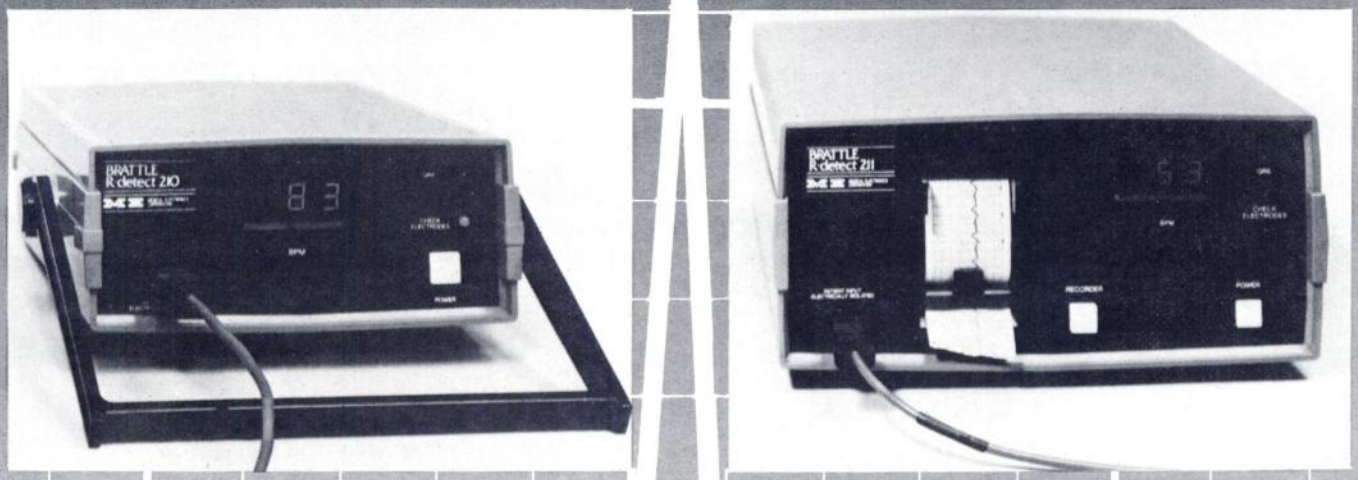
Circle Reader Service No. 13

YOU DON'T HAVE TO KEEP YOUR FINGER ON THE TRIGGER!!

The BRATTLE R-DETECT automatically adjusts the threshold level . . . there is *no* manual setting needed.



MODEL 210 **MODEL 211**

The BRATTLE R-DETECT offers you fully automatic R-wave triggering and is compatible with all nuclear medicine computers. In addition, the model 211 has a strip chart with EKG and event marker indicating the exact location of the R-DETECT signal.

Special Features

- Fully automatic threshold
- Only two electrodes
- High heartrate capability . . . ideal for stress testing
- Selectable PVC rejection
- Digital heartrate readout
- Pacemaker pulse rejection
- Flashing LED indicates QRS
- LED indicates faulty electrode connections
- Analog ECG output
- Compatible with all nuclear medicine computers
- Stripchart with EKG and R-DETECT event marker (model 211 only)

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Medical Electronics
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State Of The Art Performance

Now You Have A Choice In Radionuclide Calibrators

Radcal Corporation has taken state of the art one step further by applying microprocessor control to the sensing electronics of its calibrators.

This combination provides wide dynamic range (without range switching), increased speed of response, improved linearity and reproducibility.

This technology also permits Radcal to continuously upgrade your unit through regular or custom software changes which will provide additional capabilities to suit your particular needs. Whether your application is multi-dose or unit dose, we have a calibrator for you.

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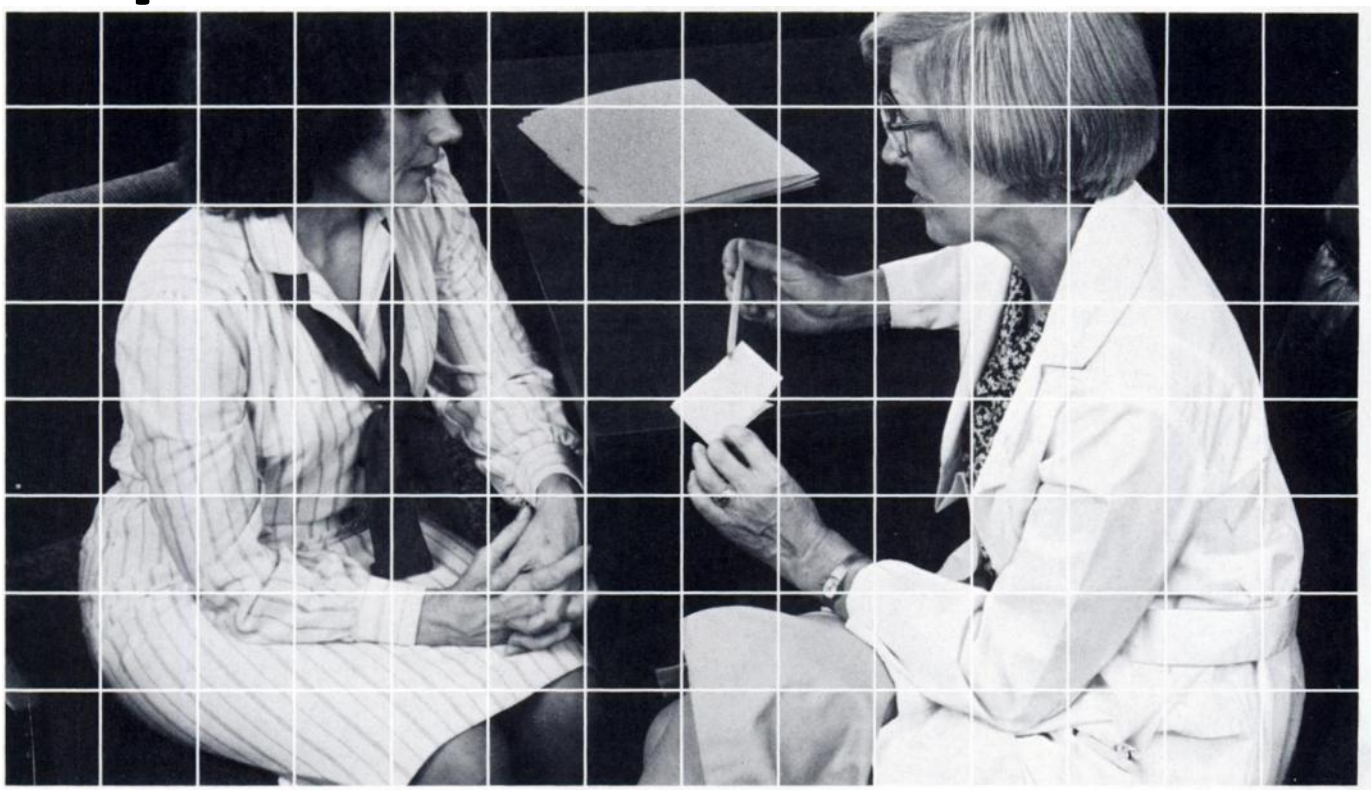
the problem...OSTEOPOROSIS



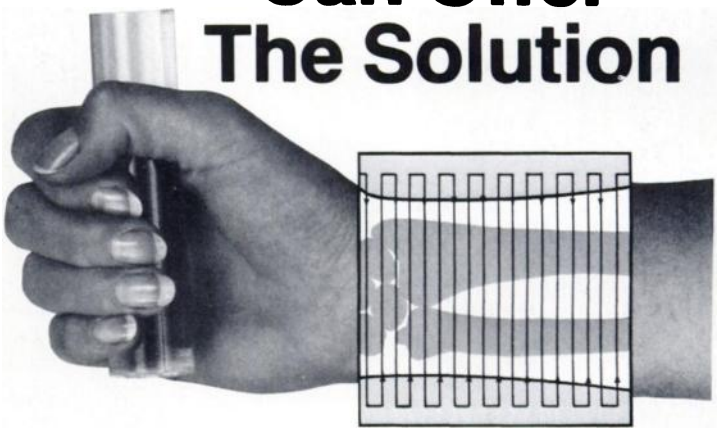
Precise, Repeatable Measurement Through Single-Photon Rectilinear Forearm Scanning Of Both Cortical and Trabecular Bone

Now, for the first time, an easy-to-use, high precision osteoporosis screening procedure is available for clinical use for patient monitoring and management. With the ND1100 Bone Density Scanner, bone mineral content (mass), can be measured quickly and inexpensively, providing valuable early detection of the onset or development of osteoporosis or other metabolic bone diseases and disorders.

Utilizing an improved single-photon bone densitometry system with rectilinear scanning of both trabecular and cortical bone of the forearm, the ND1100 is the high-precision, low-radiation instrument you've been looking for. Best of all, once baseline data is established for a patient, minute changes in bone mineral content which may occur in a relatively short period of time can be monitored.

Useful for:	Non-invasive screening for patient monitoring and management • Osteoporosis • Renal Osteodystrophy • and other metabolic bone disorders and diseases
Gives You:	1% accuracy of measurement 1% precision (Repeatablity) Computer friendly easy operation Patient files stored on tape Hard copies of pertinent data Economy

Now You Can Offer The Solution



Used successfully in research for 15 years, the single-photon absorptiometry technique is now available for clinical osteoporosis screening. The ND1100 gives you a new dimension for osteoporosis measurement and monitoring. This in vivo procedure is reimburseable by Medicare.

For full details, send for our new brochure: "Bone Densitometry Comes of Age – ND1100 Bone Density Scanner."

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ND Medical Products

Golf and Meacham Roads
Schaumburg, Illinois 60196
Phone: 312-884-3636

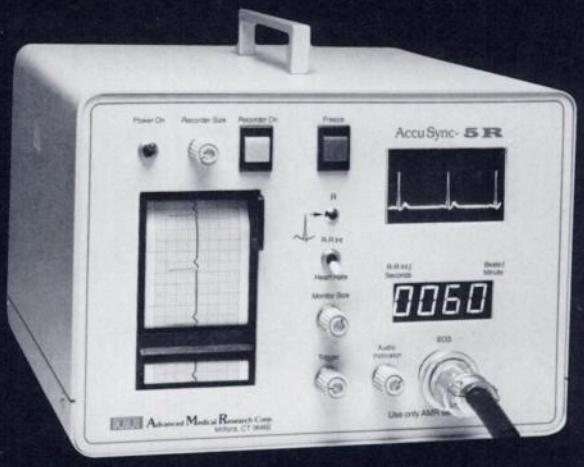
Circle Reader Service No. 17

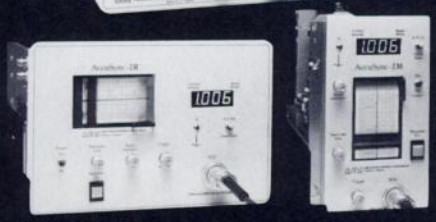
AMR's AccuSync provides R-wave detection with precision and reliability.

The finest R-wave Triggering device available for computerized gated cardiac studies.

AccuSync-5R Features

- Isolation Amplifier for Patient Safety.
- Digital CRT Monitor.
- ECG Strip Chart Recorder.
- Heart Rate/R-R int.
- Trigger Pulse LED.
- Trigger Control for Ease of Lead Placement and Precise Location of Trigger Pulse.
- R-Trigger Output, Compatible with all Computers.
- No Delay.
- ECG Output
- Playback Mode. (optional)
- Event Marker. (optional)
- Audio Indicator.



MODEL		FEATURES
AccuSync-6		All **AccuSync-5R** features with the exception of the Strip Chart Recorder.
AccuSync-IR		All **AccuSync-5R** features with the exception of Digital CRT Monitor.
AccuSync-2R AccuSync-2M		All **AccuSync-IR** features incorporated into a Module designed to fit into certain Mobile cameras.
AccuSync-3		All **AccuSync-IR** features with the exception of the Strip Chart Recorder, Playback Mode and Audio Indicator.
AccuSync-4		All **Accu Sync-3** features with the exception of the Heart Rate/R-R int. display.

ADVANCED MEDICAL RESEARCH

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Circle Reader Service No. 18

Chromatography of Technetium-99m Radiopharmaceuticals —A Practical Guide

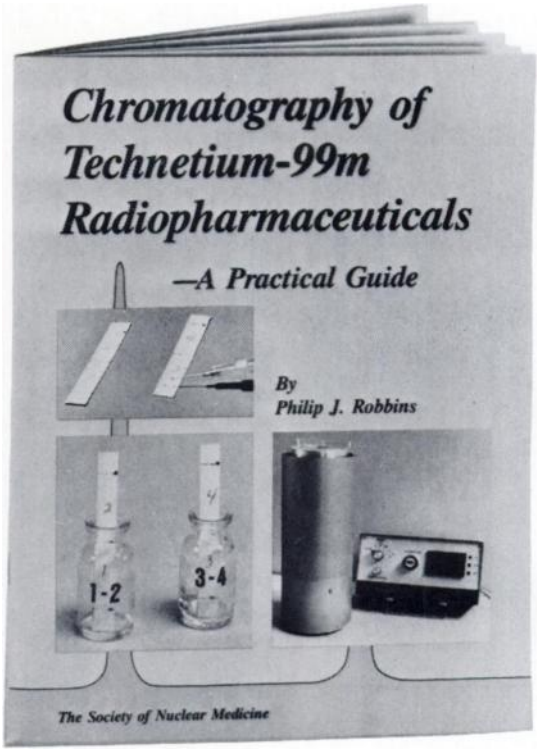
By Philip J. Robbins

To provide up-to-date information about the most accurate procedures for ensuring quality control of radiopharmaceuticals, The Society of Nuclear Medicine presents *Chromatography of Technetium-99m Radiopharmaceuticals—A Practical Guide.*

This new manual offers readers a collection of miniaturized chromatographic methods for the rapid and precise determination of the radiochemical purity of commonly used Tc-99m radiopharmaceuticals.

Topics covered include the nature and source of impurities, principles and classic techniques of chromatography, methods for counting miniature chromatographic strips, and pitfalls of miniature methods and how to avoid them. Also contained herein is a listing of each radiopharmaceutical with the USP criteria for radiochemical purity, typical scans of impure products, and standards and interlaboratory comparisons for miniaturized systems.

Prepared to aid nuclear medicine personnel in implementing voluntary quality-assurance programs, the material may also be used as a training resource for individuals preparing for professional licensure and certification.



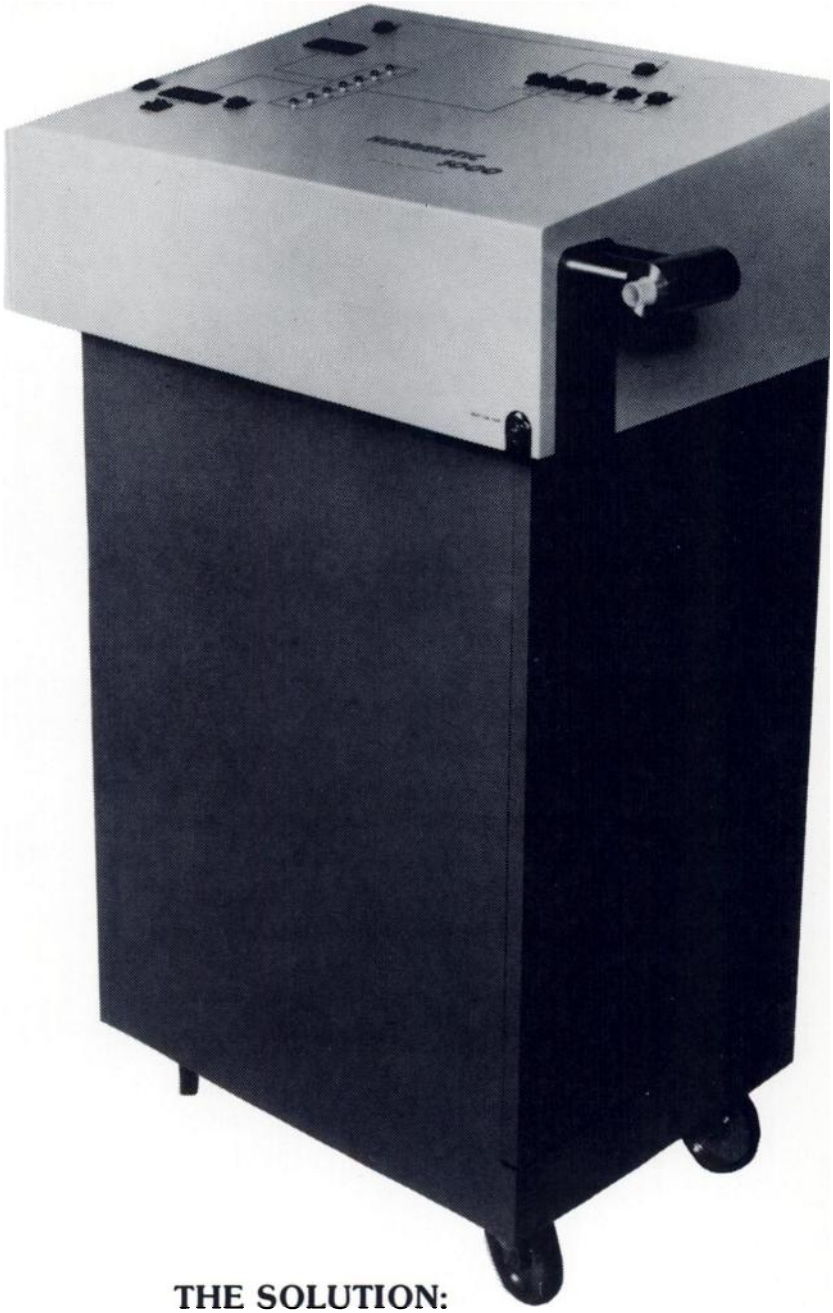
8½ × 11" softcover, 48 pages
$12.00 SNM members;
$16.00 non-members
Publication Date: 1984

Ordering Information:

Add $2.50 postage and handling for each book ordered. Prepayment required in U.S. funds drawn on U.S. banks only. 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 are subject to change without notice.*

The Society of Nuclear Medicine, 475 Park Avenue South, New York, NY 10016

XE 127 + XENAMATIC™ = THE SOLUTION



THE PROBLEM:
You would like to do the lung perfusion images first, look at the images and decide if a ventilation study is called for.

THE SOLUTION:
Xenon 127. Its higher energies allow effective elimination of Tc 99m gammas from subsequent ventilation images.

THE PROBLEM:
The short half-life of Xenon 133 makes availability a problem, increases shipping costs, and we lose much of it through decay.

THE SOLUTION:
Xenon 127. Its 36 day half-life eliminates the inherent problems of short lived Xenon 133.

THE PROBLEM:
Xenon delivery systems currently being offered are not sufficiently shielded for Xenon 127.

THE SOLUTION:
The XENAMATIC Xenon Gas Delivery System with the optional Xenon 127 lead shielding. Additional lead is provided throughout the unit. In strategic locations we provide up to 1/2 inch of lead. Our goal: to achieve a radiation level of less than 2 mr/hr at the surface under normal use conditions.

THE PROBLEM:
Xenon Traps are really delay systems. If it delays the Xenon long enough for it to decay, then it approaches a trap in function. With Xenon 127, activated charcoal traps either must be significantly larger than previously available traps or they must be refrigerated.

THE SOLUTION:
The XENAMATIC. Our Xenon Trap Cartridge Pack offers 20 feet of continuous activated charcoal pathway (3" in diameter) via nine individual tubes connected in series. Additionally, the individual tubes are specially constructed to inhibit the normal redistribution of "trapped" Xenon which occurs even when the trap is not being used.

THE XENAMATIC™ IS THE ONLY ANSWER!

For more information, call or write today:

DIVERSIFIED DIAGNOSTIC PRODUCTS, INC.

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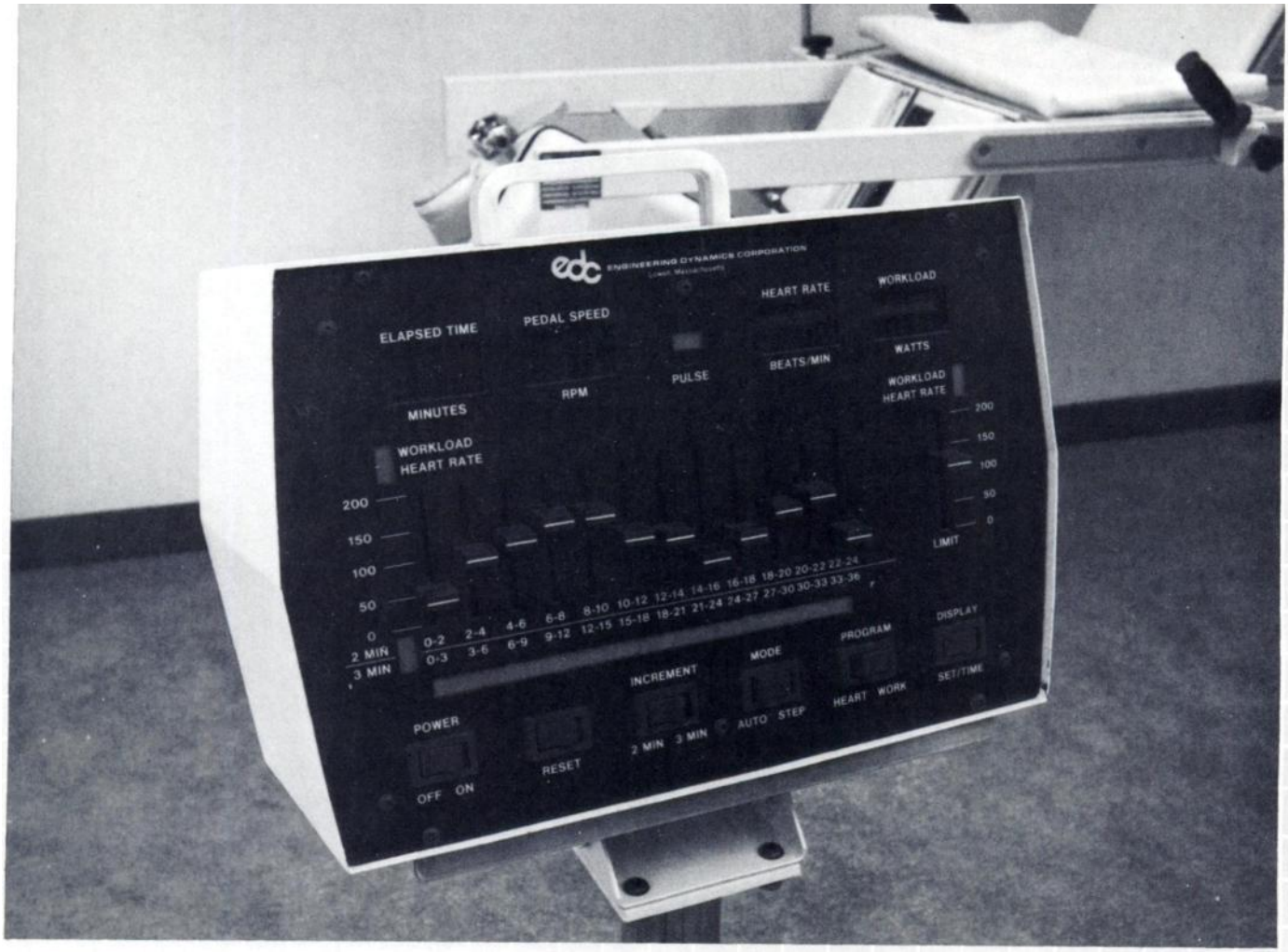
Circle Reader Service No. 19



The Ultimate Cardiac Stress System.

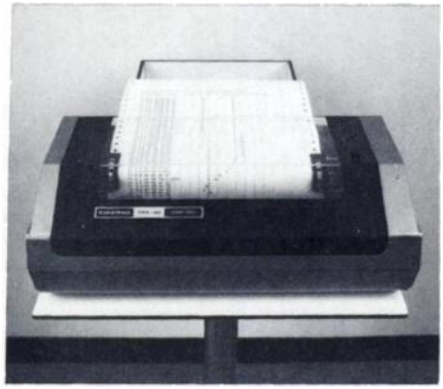
Designed to put more muscle into your Cardiac Testing.

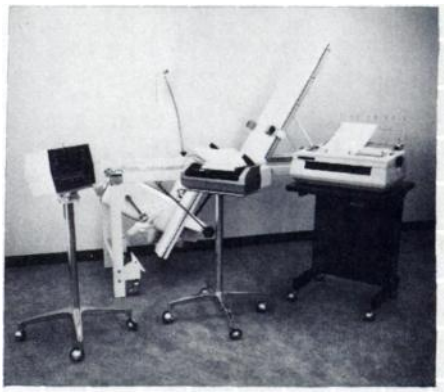
Introducing the most advanced cardiac stress system — the EDC Model 8450. Now you can program any protocol in seconds — either workload or heart rate — right at the front panel by a mere touch of the programmer.

Our powerful microprocessor insures the highest accuracy of any stress system — and as an option, you can have a permanent printed record of the entire stress test, with digital readings of elapsed time, workload, and heart rate every six seconds — and with the integrated workload (in KPM) at the end of each program segment.

These three new advances have been added to the already well accepted features of our classic model 8430, with its ability to be used either as a stress testing table or as a general imaging table — its fully adjustable table and ergometer — its clear, error-proof, digital readouts — its sturdy construction — and all the other excellent features that nuclear cardiology has come to expect from EDC.

We think the EDC Model 8450 has everything you will ever want, or need, for Cardiac Stress Testing. Give us a call for further details.





edc **ENGINEERING DYNAMICS CORPORATION**

Circle Reader Service No. 20

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