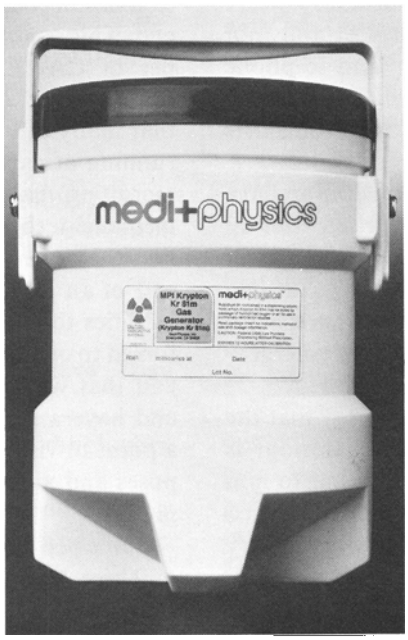
What's New

Every description of the items on the following two pages was condensed from information supplied by its manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way imply an endorsement by the Editorial Board of the JNMT *or by the Society of Nuclear Medicine.*

Lead Acrylic Material

Reactor Experiments, Inc., announces the availability of a new transparent lead-loaded acrylic material, called acryl-lead. It offers the strength of cast acrylic resins and good resistance to impact. It will provide shielding against all commonly encountered x-ray sources as well as most of the radionuclides used in nuclear medicine. Applications include: radionuclide handling, x-ray shield curtains, fluoroscopy shielding and protection against RIA sources, x-ray fluorescence sources, and x-ray diffraction equipment. The presence of hydrogen also provides significant neutron shielding, if required. —*Reactor Experiments, Inc., 963 Terminal Way, San Carlos, CA 94070.*

Circle Reader Service No. 51



Krypton Generator

Medi-Physics, Inc. has received FDA approval to market its MPI krypton-81m gas generator to evaluate regional lung ventilation.

The Kr-81m gas generator consists of rubidium-81 fixed to a solid support from which the Kr-81m is eluted by passage of humidified oxygen or air through the generator.

Krypton-81m has a 13-sec half life and decays to essentially stable krypton-81 by isomeric transition. The MPI Kr-81m gas generator also offers the following advantages: an optical gamma imaging energy of 190 keV, reduced radiation exposure to patient and technologist, and a technetium-99m MAA perfusion study and a Kr-81m ventilation study that can be performed consecutively before positioning patient for the next view.—*Medi-Physics, 5801 Christie Ave., Emeryville, CA 94608.*

Circle Reader Service No. 60

Radionuclide Exposure Minimization System

The Rems zero™ system offers nuclear medicine personnel unprecedented radiation protection when preparing and administering radionuclides. From milking through injection, it minimizes or practically eliminates radiation doses to the hands, fingers, and body. It protects completely during generator elution, multidose vial calibration, and unit dose withdrawal, and it minimizes exposure during the in-between steps.

The Rems zero system is easy to use. It consists of a patented vial shield, a syringe shield, and a special syringe-loading device, all coordinated to eliminate exposure. Lead-glass windows permit the syringe-vial contents to be viewed and dispensed accurately. The system components are compatible with any Tc-99m generator, most isotope calibrators, and all standard syringe shields and elution vial shields. *Nuclear Associates, 100 Voice Rd., Carle Place, NY 11514.*

Reader Service No. 55

Also from Nuclear Associates is the low-temperature "Cryo/Safe"™ xenon trapping system offering high-volume xenon users an excellent means of decreasing trap effluent concentrations. It features a series of activated-charcoal filter cartridges in a freezer compartment (-20° C) that makes the system about 100 times more effective than standard ambient-temperature types. The frequency of charcoal cartridge replacement is reduced significantly, resulting in long-term savings to users.

A pre-set timer limits the washout cycle so that the trap is not left on accidentally for long periods. The mobile trap can be integrated into any xenon system or used for patient exhalation by attaching a disposable face mask.—*Address same as above.*

Circle Reader Service No. 57

This hand/shoe/clothing monitor, also from Nuclear Associates, checks personnel for beta-gamma contamination with unusual speed. It uses large-area, xenon-filled proportional counters, which are more sensitive than GM tubes. Each detector covers a 200 cm^2 area completely, eliminating the dead spots usually found in conventional multi-GM detector systems. There are four separate detectors; one for each hand and two for shoes. The hand probes can also be removed for checking clothing.

A 3-channel monitor readout permits simultaneous and separate checks of the left hand, right hand, and shoes. If the count rate in any channel exceeds an adjustable alarm threshold, audible and visual warnings are emitted. If the user steps off the instrument before a count cycle is complete, alarms are activated. Short counting cycles allow rapid monitoring of large numbers of people. An alpha-beta-gamma version of the monitor is also available. —*Address same as above.*

Circle Reader Service No. 56

Dose Calibrator Reference Sources

Amersham Corp. announces the availability of dose calibrator reference sources. These sources are to be used to confirm dose calibrator accuracy—in

light of the NRC's recent increase in surveillance of dose calibrator QC programs in nuclear medicine departments.

Amersham's sources consist of a radionuclide uniformly dispersed in a 10-ml plastic cast within a 25-ml polyethylene vial. Several radionuclides are offered: Co-57, Ce-137, Ba-133, and Co-60 in different sizes. In addition to individual sources, sets made up of several sources may also be purchased. *—Amersham Corp., Radiation Sources Customer Service, 2636 Clearbrook Dr., Arlington Heights, IL 60005.*

Circle Reader Service No. 52

Portable Gamma Source Transporter

The "porta-pig" is a convenient, safe way to transport and store gamma sources. The device features an integrated shield and cart assembly designed to incorporate the maximum amount of shielding with no radiation streaming, while maintaining ease of movement.

The porta-pig makes it quick and simple for one person to move gamma sources where and when they are needed without physical strain or hazard. It is equipped with large, rubber-tired wheels making the carts easy to pull and maneuver over even the roughest surface. It occupies little more space than the storage cask itself and its pulling handle locks in an upright position for convenience and safety. A swivel caster is provided with a locking brake.—*R/X Nuclear, 963 Terminal Way, San Carlos, CA 94070.*

Circle Reader Service No. 54

Films for Nuclear Medicine

The "Kodak Films for Nuclear Medicine" brochure offers complete product listings that describe special features, codes and catalog numbers, packaging information, and film sizes. Included in the brochure is information on films for roll-film cameras, multi-imaging cameras, and whole-body and rectilinear scanners, as well as duplicating and copy film.

Kodak's newest film for nuclear medicine, ortho M film SO-140, is also listed in the brochure. This single-coated orthocromatic film allows approximately 33% reduction in intensity settings compared with Kodak NMB film. Its higher contrast allows imaging of low-count studies and its speed permits use of marginal cathode-ray tubes by decreasing the light intensity to minimize blooming of the CRT.—*Eastman Kodak Co., Health Sciences Markets Div., 343 State St., Rochester, NY.*

Circle Reader Service No. 53

What's New in Radioimmunoassay

Ferritin and TSH RIAs

The Dade Ferritin and TSH assays are two new coated-tube RIA methodologies, which are two-site sandwich assays using purified I-125-labeled anti-human ferritin or TSH as tracers and immobilized ferritin or TSH antibody in coated tubes. Excess solid-phase antibodies react with unknown antigens. Radioactively labeled antibody is added to determine the amount of antigen bound to unlabeled solid-phase antibodies.

The assays require no centrifugation, minimal pipetting steps and incubation time. Reagents are color-coded and come ready to use. Tri-level radioassay controls provide quality assurance coverage. *—American Dade, PO Box 520672, Miami, FL 33152.*

Circle Reader Service No. 58

B-12 and Folate RIAs

Three new no boil assays for vitamin B-12 and folate are available. The no boil folate, vitamin B-12 and simultaneous ComboStat kits use a room temperature alkaline denaturation of serum binding proteins, thus eliminating the burns and annoyance of boiling water baths. The resulting pH of the RIA remains at 9.3. Serum proteins are completely and permanently denatured but the analyte to be measured is unharmed.

One pipetting step has been substituted for the boiling step in all three assays. Capping and uncapping of tubes is eliminated, thus reducing actual hands-on time. Otherwise, the procedures are unchanged. *—RIA Products Inc., PO Box 914, 411 Waverly Oaks Rd., Waltham, MA 02154.*

Circle Reader Service No. 59

RIA for HB_e Antigen

The Abbott-HB_e is a radioimmunoassay for the detection of hepatitis B_e antigen (HB_eAg) and antibody to hepatitis B_e antigen (anti-HB_e). The presence of HB_eAg is indicative of circulating hepatitis B virus (HBV). Therefore, blood positive for HB_eAg is considered highly infectious; persistance of this e-antigen is usually associated with progression to chronic liver disease.

The e-antigen and antibody system is one of three distinct antigen-antibody systems associated with HBV infection. Patients with viral hepatitis B are expected to possess one or more of the HBV markers during HBV infection.

Previously, the other two antigen-antibody systems (core and surface) could be detected, but the level of e was unable to be determined. The availability of Abbott-HB_e completes the hepatitis B profile.—*Abbott Laboratories, Abbott Park, North Chicago, IL 60064.*

Circle Reader Service No. 61

Direct Assay for Trypsin

A direct RIA for quantitative determination of trypsin-like immunoreactivity (TLI) in plasma or serum is available from Damon Diagnostics.

This rapid and convenient assay aids in the diagnosis of acute and chronic pancreatitis. The clinical importance of trypsin measurement is best seen in cases of acute pancreatitis, where estimation of other pancreatic enzymes such as alpha-amylase and lipase are sensitive but not specific. By measuring TLI, a sensitive and specific indication of pancreatic condition can be obtained.

Specimen requirement is only 100 μl of serum or plasma and the assay can be performed with a 1-hr incubation at room temperature. Standards are precalibrated and range from 0–400 ng/ml. Shelf life of the kit is seven weeks.—*Damon Diagnostics, 115 Fourth Ave., Needham Heights, MA 02194.*

Circle Reader Service No. 62