



MORE SENSITIVE BALANCE—Miss Bunny Geisbert of the National Institutes of Health staff here shows how the newly developed balance, 10 times as sensitive as conventional projection balance, is operated.

TECHNOLOGY

Sensitive Balance Shown

➤ A NEW balance 10 times as sensitive as conventional projection balances made its debut at the second annual Research Equipment Exhibit at the National Institutes of Health in Bethesda, Md.

The balance is for fast, accurate weighing of small quantities, up to about 7 ounces (200 grams). Weighings to one-tenth of a milligram can be made within seconds by straight projection, or to one-hundredth of a milligram by sensitivity shift and an additional set of 10 weights. It is manufactured by Voland and Sons, Inc., of New Rochelle, N. Y.

A slicing machine with a glass knife that cuts slices too thin to be seen with the naked eye was shown by the International Equipment Co. of Boston. Known as the Minot Rotary Microtome, this slicer cuts much-thinner-than paper sections of nerve and other tissue for examination with the electron microscope. The actual thinness of the pieces is in the order of one-twentieth to one-fortieth of a micron, microns being so small that it takes more than 25,000 of them to make one inch.

For measuring the amount of carbon dioxide, oxygen, nitrogen or carbon monoxide in a pin prick amount of blood, when the test needs to be made on a new baby or a small laboratory animal, there is a new gas analysis apparatus called the

Kopp-Natelson Microgasometer available through E. Machlett and Son of New York.

The acidity or alkalinity of soils, water, and foods during the canning process can be measured easily, accurately and on the spot by relatively unskilled personnel with a new machine, called the Compax pH Meter, made by Coleman Instruments, Inc., of Maywood, Ill. The electrode system for this folds into a five-pound case, so that when the cover is closed the system is off. A mercury cell battery like that in modern hearing aids is part of the equipment that gives service for more than a year without going dead.

Science News Letter, May 31, 1952

MEDICINE

TB Patients Helped by Streptomycin and Drainage

➤ PATIENTS WITH tuberculosis of the bones and joints are being helped by a combination of streptomycin treatment and surgical drainage, Drs. M. S. DeRoy and Harry Fisher of Pittsburgh, Pa., reported to the International College of Surgeons in Madrid, Spain.

Fewer children will grow up crippled by painful, deformed joints as a result of this treatment, they said.

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MARINE BIOLOGY

If Beach Rises, Suspect Mole Crabs on Mass Move

➤ IF WHEN swimming at the ocean this summer, a portion of the beach seems to rise up, move a bit, then settle down again, you are probably watching mole crabs out after their food.

These curious animals bury themselves in the wet sand of sloping ocean beaches that is covered by the wash of waves. Then they extend their long antennae to collect food, microscopic sea life, from the water flowing past them.

The mole crabs move up or down the beach according to the tide, R. E. Snodgrass of the Smithsonian Institution reported, since as they are exposed by the receding waves, they quickly back themselves into the wet sand in a slanting position. A general migration of the less than inch-sized animals as they search for food is what makes the beach appear to move a few feet.

Science News Letter, May 31, 1952

BIOPHYSICS

Wasted Atomic Energy Product to Treat Cancer

➤ A WASTE product of atomic energy reactors is going to be put to work helping cancer patients.

The waste product is a soft, silvery metal called cesium. More than six percent of the atoms produced when uranium-235 is split is cesium. And this waste product, in its radioactive form, gives off cancer-killing energy equivalent to the million volt X-ray machines.

Only a few of the nation's largest hospitals have these big, supervoltage X-ray machines. A cesium treatment unit can put supervoltage treatment in the hands of every qualified radiologist in the country, in the opinion of Dr. Marshall Brucer, chairman of the medical division of the Oak Ridge Institute of Nuclear Studies.

At a conference of scientists from southern medical schools Dr. Brucer listed the following advantages of a cesium treatment unit for cancer:

1. A unit will be good for 30 years without any maintenance cost.
2. When development costs are amortized, cesium units will be available at a fraction of the cost of present supervoltage units.
3. The single-energy radiation beam of about 600,000 volts will deliver a strong dose to the tumor with a minimum of dosage to intervening tissue, particularly when used in multi-port or rotating beam therapy.
4. Adequate radioactive cesium is now available for making large numbers of units as soon as separation processes are worked out (these processes are now on a pilot plant scale).

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