

New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.

■ **THERMOMETER ENTRY PORT** for use with 10/30 standard-taper laboratory glassware is manufactured of Teflon and consists of a high-vacuum O-ring seal permitting use of pressure to 8 mm-Hg and temperatures as high as 500°F. The seal permits adjustment of stem exposure. (Arthur F. Smith, Inc., Dept. Sci7A, 311 Alexander St., Rochester 4, N.Y.)

■ **X-RAY VACUUM SPECTROMETER**, designed for use with the manufacturer's x-ray diffractometers, permits elements of atomic number 12 and higher to be analyzed spectrochemically. The sample chamber, which simultaneously accommodates three samples up to 5 cm in diameter and 2 cm thick, is isolated from the remainder of the vacuum system. Crystals of lithium fluoride and gypsum are used to analyze the radiation; a scintillation counter and a proportional flow counter are used as detectors. Operating vacuum is achieved in about 5 min; 30 to 60 sec is required to re-establish equilibrium after samples are changed. (Radio Corporation of America, Dept. Sci4, Building 15-1, Camden 2, N.J.)

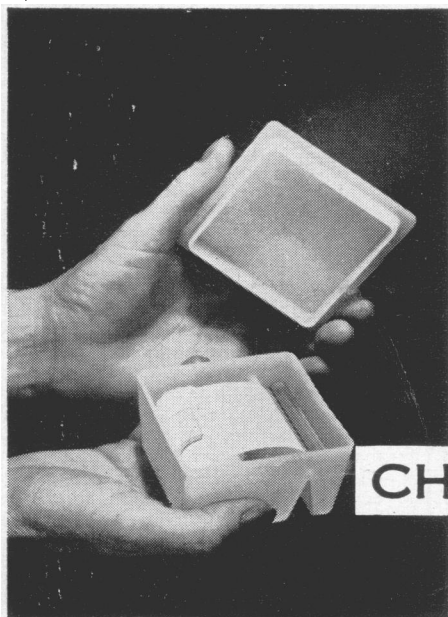
■ **METAL WORKING MACHINE** of multi-functional design converts from a 10-in bench lathe to a vertical milling machine, drill press, or jig borer. A vertical column attached to the back of the lathe bed accepts the detachable headstock for conversion. The column does not interfere with lathe operations. (American Edelstaal, Inc., Dept. Sci-13A, 350 Broadway, New York, N.Y.)

■ **BINARY DIGITAL RECORDER** handles digital information at rates up to 150 lines of 32 bits each per second. A recorded bit is made for a -10-volt input; zero voltage inhibits recording to represent the digital zero. Electro-sensitive paper is used at speeds from 2.5 to 25 in./sec. Standard designs incorporate up to a maximum of 32 recording channels and an ungated time-mark channel. Higher paper speeds and a larger number of channels are available on special order. (Electronic Counters, Inc., Dept. Sci1, 155 Eileen Way, Syosset, N.Y.)

■ **MAGNETOHYDRODYNAMIC FLOW FACILITY** furnishes a continuous flow of ionized gas with velocity to 4500 m/sec at 10,000°K and an average conductivity of 1 mho/cm. The gas is produced by a gas-stabilized electric arc. The hot gas proceeds through a mixing chamber into a supersonic nozzle and is expelled in an expanded condition as a low-pressure supersonic flow. The flowing gas is available for experimentation in a constant-diameter channel contained within a water-cooled transparent tube. (MHD Research, Inc., Dept. Sci2, 1571 Placentia, Newport Beach, Calif.)

■ **MICROWAVE RELAY LINK**, for point-to-point communication and data channels, operates in the 10,500 to 13,200 Mcy/sec range, has a band width of 5 Mcy/sec flat within 0.5 db, and power output 0.1 watt. The transmitter and receiver are each self-contained in individual units weighing 31 and 32 lbs respectively. The system is portable and may be mounted on a tripod or other base. Features include: plug-in intermediate-frequency amplifiers, variable-frequency wavemeter, built-in signal attenuator, and a built-in test meter for tuning and voltage measurements. (Electronic Systems, Dept. Sci10, 1479 River St., Jackson, Mich.)

■ **RADIOISOTOPE HANDBOOK** and decay-rate calculator furnishes 64 pages of general and technical information useful to the user or potential user of radio-nuclides. Chapters on fundamentals and definitions, radiation, nuclear fission and nuclear reactors, radioisotope production, radiation shielding, uses of radioisotopes, and cobalt-60 are included. Data are also furnished in four



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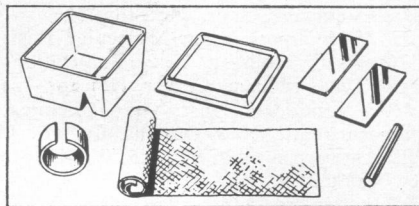
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appendixes. The decay-rate calculator is a circular-disk type that provides information on remaining activity when half-life and original activity are inserted. The handbook and the calculator are both available free of charge in small quantities. (Atomic Energy of Canada Ltd., Dept. Sci12, Commercial Products Div., P.O. Box 93, Ottawa, Can.)

■ **DYNAMIC BALANCER** for gyros consists of a balancing stand and an amplifier. Rotors up to 2½ in. in diameter and weighing up to 16 oz are accommodated. Balancing speeds from 8000 to 10,000 rev/min are available. Unbalance vibration as small as 0.25×10^{-6} in. is said to be determined. The tester discriminates between bearing noise and unbalance vibration. Provision is made for analysis of the former. (Micro Balancing, Inc., Dept. Sci3, Herricks Rd., Garden City Park, N.Y.)

■ **PULSE GENERATOR** furnishes pulses of 0.5 nsec duration at repetition rates of 50 to 60 per second. Spectral intensity is said to be flat within ± 0.5 db from 60 kcy/sec to 1000 Mcy/sec. Output into a 50-ohm resistive load is a maximum of 101 db above $1 \mu\text{V}/\text{Mhz}$ and is adjustable in ¼-db steps from 10 db to maximum. Power requirement is 30 watts at 105 to 125 volts, 50 to 60 cy/sec. (Stoddart Aircraft Radio Co., Dept. Sci11, 6644 Santa Monica Blvd., Hollywood 3, Calif.)

■ **FREQUENCY CONVERTER** delivers 100 va with a wide selection of frequency ranges from 50 to 4000 cy/sec and fixed-frequency accuracy said to be ± 0.001 percent. Nominal harmonic distortion is 1 percent. The unit has zero output impedance and zero recovery time and is capable of handling resistive or reactive loads. (Tel-Instrument Electronics Corp., Dept. Sci5, 728 Garden St., Carlstadt, N.J.)

■ **FREQUENCY MEASUREMENT** to 220 Mcy/sec is provided by model 1290 extender for use with the manufacturer's model 1039 solid-state counter timer. The combination can be utilized for measurement of frequency, period, time, ratio, and phase. (Systron-Donner Corp., Dept. Sci6, 950 Galindo St., Concord, Calif.)

■ **CURRENT MEASURING INSTRUMENT** has full-scale ranges variable from 1 ma to 3 na in 12 settings. Drift is said to be less than 0.01 percent/hr, and accuracy ± 1 percent of full scale. Response time is 10 msec. An auxiliary output provides for driving a 1-ma recorder. (Elcor Inc., Dept. Sci8, Falls Church, Va.)

JOSHUA STERN
National Bureau of Standards,
Washington, D.C.

Letters

(Continued from page 68)

way, due to the Faraday effect of the building. If the authors found that there was a field within the building, there would still be a Faraday effect applicable to the culture medium within the bottles.

In experiments to study progeny yields one should also consider the factors which affect behavior and oviposition of the parents, in addition to those factors which might act on larval development. In this regard, one of

the "unknown factors" Levengood and Shinkle associated with barometric pressure changes might be air ions. Air-ion densities are known to change with different kinds of weather, and I have found that positive air ions can influence the activity of adult blowflies.

DONALD K. EDWARDS
Forest Biology Laboratory, Canada
Department of Agriculture, Victoria

We would first like to comment on Edward's question concerning variability in progeny yields from cultures subjected to the influence of the electric field. The 16 cultures in the elec-

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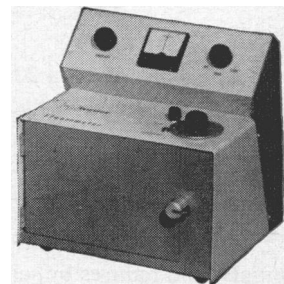
We invite your consideration of the following items:

TURNER FLUOROMETER

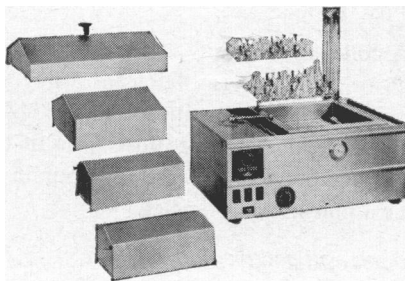
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