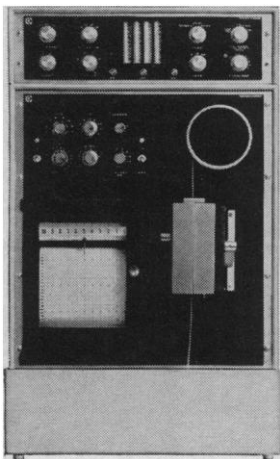


SPEED UP YOUR PAPER RADIOCHROMA- TOGRAPHY.



By a factor of up to six. How? With Nuclear-Chicago's new Digital Actigraph® III—the fast digital/analog paper-strip radiochromatography system. It's designed for speed and reliable, quantitative data.

FAST BETWEEN PEAKS

For example, Digital Actigraph III automatically senses low-activity areas between peaks. Then it stops counting and *speeds up* the paper strip and the recorder (up to 325 cm/hour) to the next peak—with no loss in time synchronization. This acceleration is particularly advantageous for widely-spaced radioactive fronts or for strips that require slow scan-speeds due to their low activity.

ACCURACY, TOO

Digital Actigraph III has a built-in digital rate-gate and exclusive pulse-stepped drive motors. These features ensure that deceleration and resumption of counting upon entering a peak are virtually *instantaneous*—essentially no counts are lost. All of which makes it possible to sense activity peaks with better than 97% accuracy in most cases.

PLUS DIGITAL INTEGRATION

This new paper-strip radiochromatography system also incorporates a fast digital integrator, which automatically *quantitates* the activity in each individual peak. And it prints out this data with virtually no loss of counts during printout. It'll also print out a running subtotal of the peaks, if desired.

HOW ABOUT TLC?

Is your interest thin-layer radiochromatography? The Digital Actigraph III is easily adapted for that kind of work too.

Find out more about Digital Actigraph III—the fast system that outperforms all the others. Ask your local Nuclear-Chicago sales engineer, or write to us.

7-848



**NUCLEAR-CHICAGO
CORPORATION**

A SUBSIDIARY OF G. D. SEARLE & CO.

349 E. Howard Ave., Des Plaines, Ill. 60018 U.S.A.
Donker Curtiusstraat 7, Amsterdam W.

the letters columns is in the interest of science and scientists, as well as of the few fuddy-duddies, in spite of what they say. Further, the humor in Bowne's letter is a definite step forward.

CONARD M. SWARTZ

Department of Chemical Engineering,
California Institute of Technology,
Pasadena 91109

Surely Bowne is aware that brains and bowels are as potently inter-influential in scientists as in other complete men.

JAMES D. SKEAN

Department of Biology, Western
Kentucky University, Bowling Green

Conflict in Medical Ethics?

Despite Levy's objections to the ethics of his military assignment, the oath taken by military officers does not conflict with the ethics of the medical profession. (News and Comment, 9 June, p. 1346).

The statement adopted by the American Medical Association's House of Delegates in June 1967 stated that the "oath, applicable to medical and other officers, provides that all officers shall support and defend the Constitution of the United States against all enemies, foreign and domestic, that they will bear true faith and allegiance to the Constitution of the United States and that they take such obligation freely and without any mental reservation or purpose of evasion. There is nothing in this oath which conflicts in any way with the ethics of the medical profession."

VINCENT A. JOY

460 Park Avenue, New York 10022

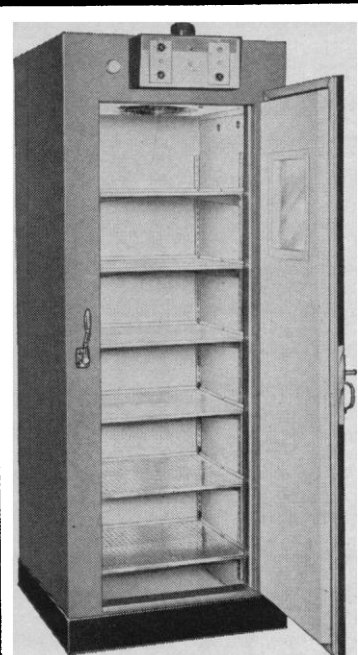
Tenacious Jargon

In "The fuzziness of 'fuzz'" J. F. A. McManus wittily criticizes a new expression used in electron microscopy and electron microscopical jargon in general (Letters, 4 Aug.). I wonder, first, if it is of any use to attempt to eradicate jargon and, second, how reasonable McManus' criticism is.

With regard to my first question, it is interesting to note that there is almost no human activity—in science, technology, or sports—in which a particular jargon is not used. This is not necessarily an evil, as one example may

PUT WASTED LAB SPACE TO WORK!

LAB-LINE Reach-in
"ENVIRONETTE"
Controlled
Environmental Rooms



Only 2 ft. deep!

Don't waste valuable bench space! New vertical "Environettes" occupy minimum floor space with the economy of a modern skyscraper. Exclusive De-Gradientator system minimizes chamber gradients with gentle, positive air circulation and solid state temperature controller.

6 Adjustable Shelves.

4 sizes, 8 models
2-ft., 3-ft., 4-ft., and
6-ft. wide chambers

- 24 to 72 sq. ft. shelf space
- 0° to +60°C, or ambient to +60°C.
- Only 24" deep—yet more shelf space.
- Corrosion-resistant metal construction.
- Built-in temperature safeties.

No. 700, Junior, "Environette."
From ambient to 60°C. Chamber 2'W
x 2'D x 5'9" H. \$1150.00

**No. 700A, same as above, except 0°C
to 60°C. \$1925.00**
Humidification, Dehumidification and
CO₂ options.

Write for Bull. No. 271
or call your Lab-Line dealer, today!
The top line is Lab-Line!

**LAB-LINE
INSTRUMENTS, Inc.**
MANUFACTURERS and DESIGNERS
MELROSE PARK, ILL.

show: Some kinds of electrical terminals, the "banana" type are described as "male" and "female." However, if you read that two of these connectors had been plugged together, would you believe that a sexual act between two friendly bananas had been committed?

The second question arises by applying McManus' criterion to the word "cell," which was just plain jargon when used by Hooke three centuries ago. As Webster says, "cell" comes from the Latin "cella," meaning small room. It is obvious that to compare the cell (even cork cell walls) with a little room "... should be discouraged by editors because of the inappropriate application of a word describing something seen with the naked eye to structures visible only with the ... microscope," to use McManus' words.

MANUEL P. DEL CERRO
Center for Brain Research,
University of Rochester,
Rochester, New York 14627

Math: Erratum

In my letter, "College math for 11-year-olds" (28 July), I stated that "it was apparent after a while that parabolas and hyperbolas could sometimes fall into circles and ellipses or vice versa." This is not true! Under any nonsingular linear transformation parabolas become parabolas, hyperbolas become hyperbolas, and ellipses become ellipses (or circles).

EUGENE H. LEHMAN, JR.
Department of Mathematics,
Northern Michigan University,
Marquette 49855

Reprint Philosophy

It is time to bring up a relatively neglected aspect of the reprint problem, mentioned by Clark in her letter, "Reprints unlimited" (17 Feb.) but not acknowledged by Mota, "Economics of reprints" (12 May).

As grant support (foundation or government) of university research approaches 100 percent, it is well to remember that papers are still being published by authors with no such support. Being numbered among the grantless, I like to believe that some of us publish meritorious papers for which there will be reprint demand. I cannot follow Mota's suggestion and "have

[my] institution pay for as many reprints as [I] consider necessary." My institution, being small and underfunded, does not pay for any reprints of papers published in outside journals. The printer's bill for my reprints is paid with my personal check.

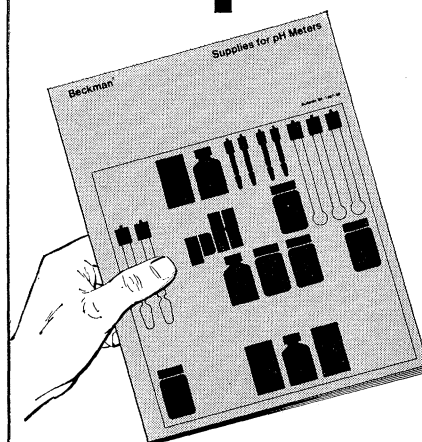
The "convenient number" to which Mota alludes, therefore, cannot always be the total number that *might* be of use to somebody, but sometimes (even in 1967) must be the number the author can afford. Also, many papers in great demand predate the era of subsidized research. Of my own publications, the one that has been most frequently requested appeared in 1951. I was a graduate student at the time, and \$14 for 100 reprints made a large impact in my budget. If I had been able to afford them, I would now be well into the third hundred, sending reprints only when requested and not on the scattergun principle advocated by Mota.

I am well acquainted with the additional problem described by Clark—the influx of reprint requests after a paper has been listed in an abstracting journal. I have also noticed that I get clusters of requests on identical postcards from single university departments, indicating that a professor has asked his students to read the paper, and perhaps suggested that they write me for reprints. I sometimes suspect that students do this as the easy way out, rather than take the trouble of going to the library and finding the paper in the original journal.

My usual procedure is to send reprints in response to any request, as long as I have a reasonably good stock left (say one-fourth of the original printing). After that I am more cautious. If, like Clark, I am concerned about the reprints being sent only to those who have a real need for them, I invest a few minutes in typing out a postcard, stating that I have only a few copies left and asking the requester to explain more fully his interest in obtaining the paper. If he really wants it, he'll write again. In fact, by learning in this way the specific interests of my correspondent, I am sometimes able to send him other papers of mine that had not come to his attention, and direct him to additional pertinent literature. In a few instances, this has developed into a long-lasting and mutually profitable correspondence.

KENNETH C. PARKES
Carnegie Museum,
Pittsburgh, Pennsylvania 15213

pH supplies ?



Buy 'em from Beckman direct-order supply catalogs

and get same-day-shipment service on all these off-the-shelf pH items:

Glass Electrodes	Reference Electrodes
Specific Ion Electrodes	Combination Electrodes
Special-purpose Electrodes; thin probes, small samples, blood	Filling Solution for reference electrodes
Desicote® rinsing aid	Buffer standards—liquid and powder
and other original equipment supplies for Beckman pH Meters	

from the nearest of our coast-to-coast stockpoints. Direct-to-you delivery means you can now fill every need whenever you feel the need. And who knows your analyzer supply requirements better than the instrument manufacturer? Other catalogs list supplies for IR, UV, GC, Nuclear, Atomic Absorption, Aquameters & Titrators, Pumps & Fittings. Order the specific catalogs you need now and take advantage of special introductory offers. Contact your nearest Beckman office or write direct for Data File No. 1303C.

Beckman®

INSTRUMENTS, INC.
SCIENTIFIC INSTRUMENTS DIVISION
FULLERTON, CALIFORNIA • 92634

INTERNATIONAL SUBSIDIARIES: GENEVA; MUNICH; GLENROTHES, SCOTLAND; TOKYO; PARIS; CAPE TOWN; LONDON; MEXICO CITY