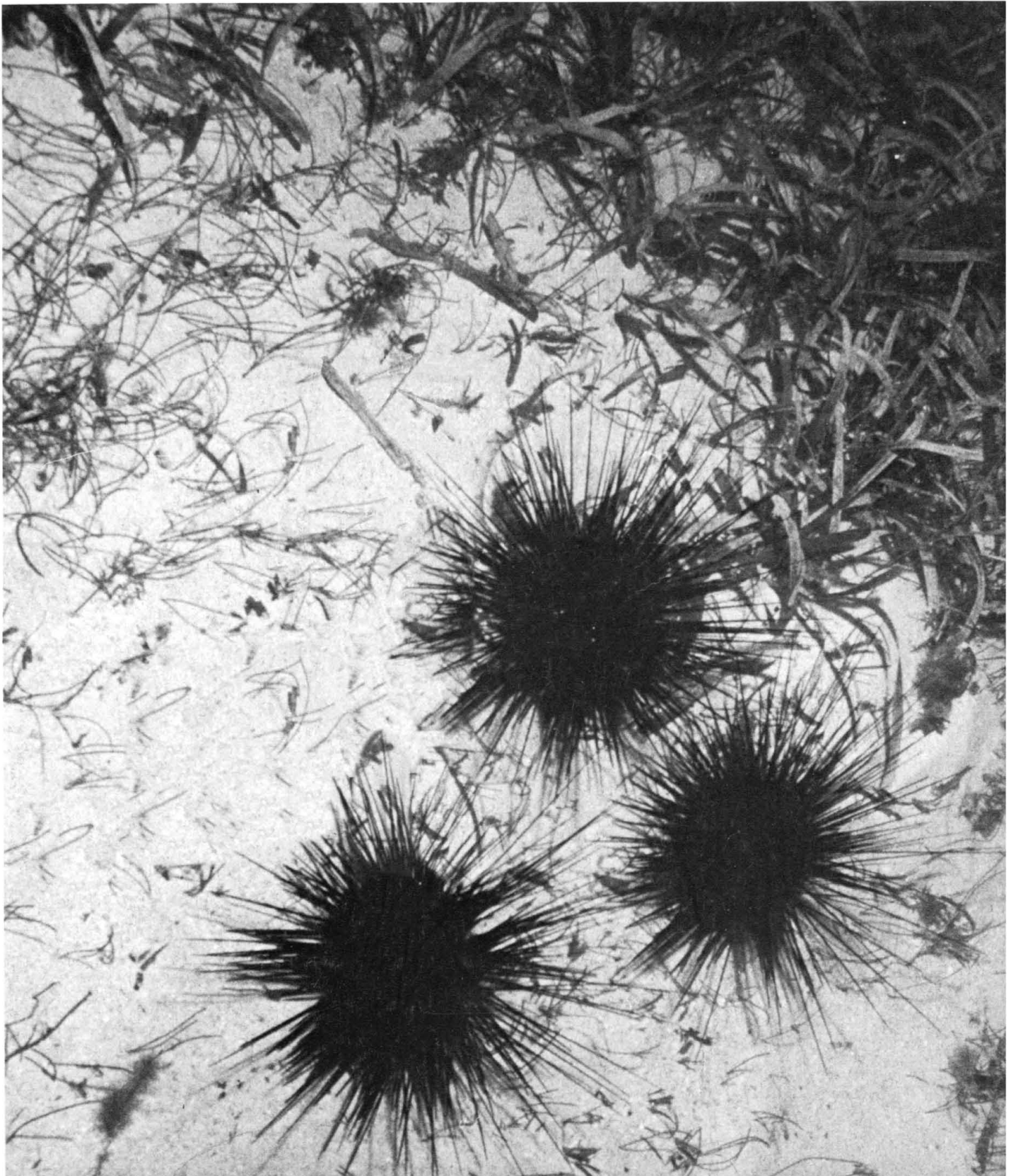


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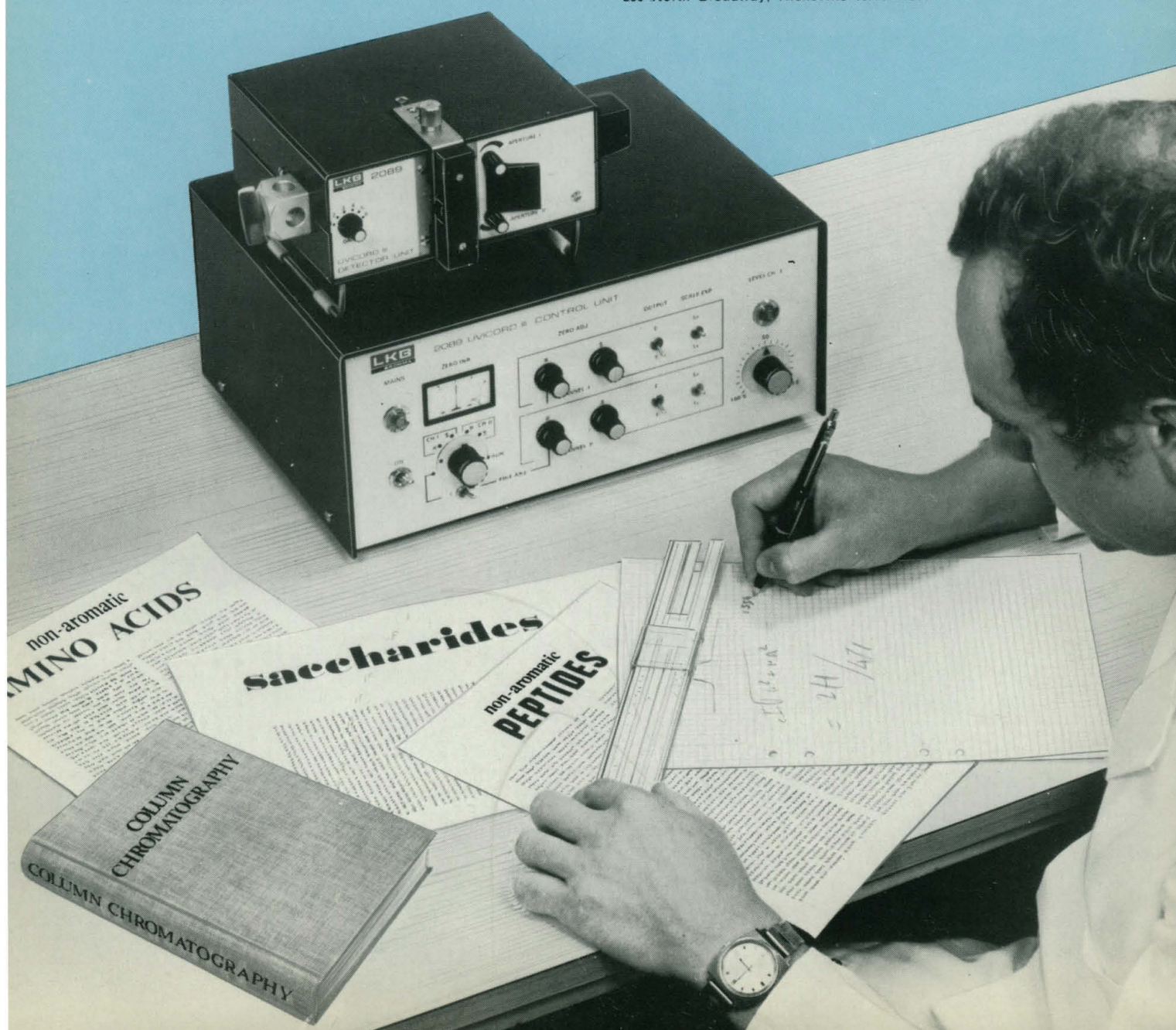
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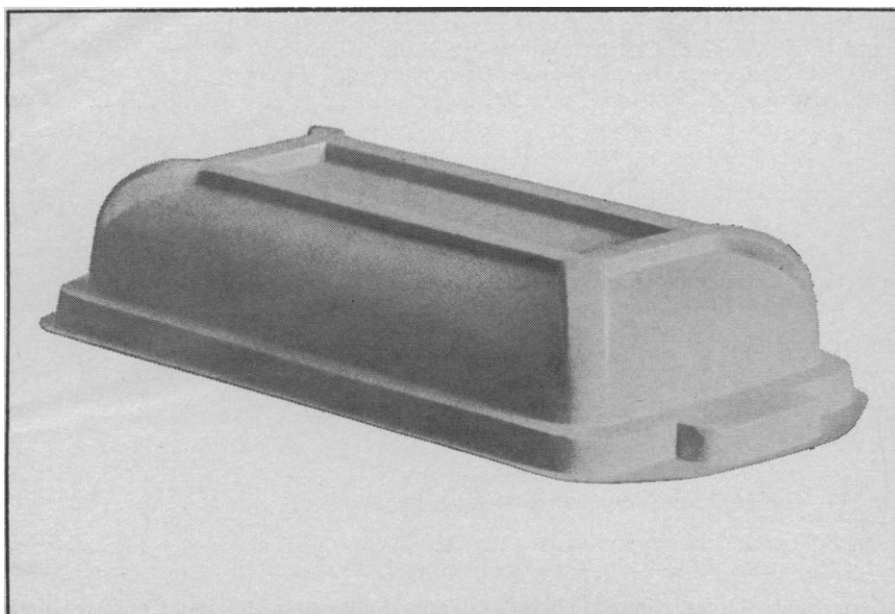
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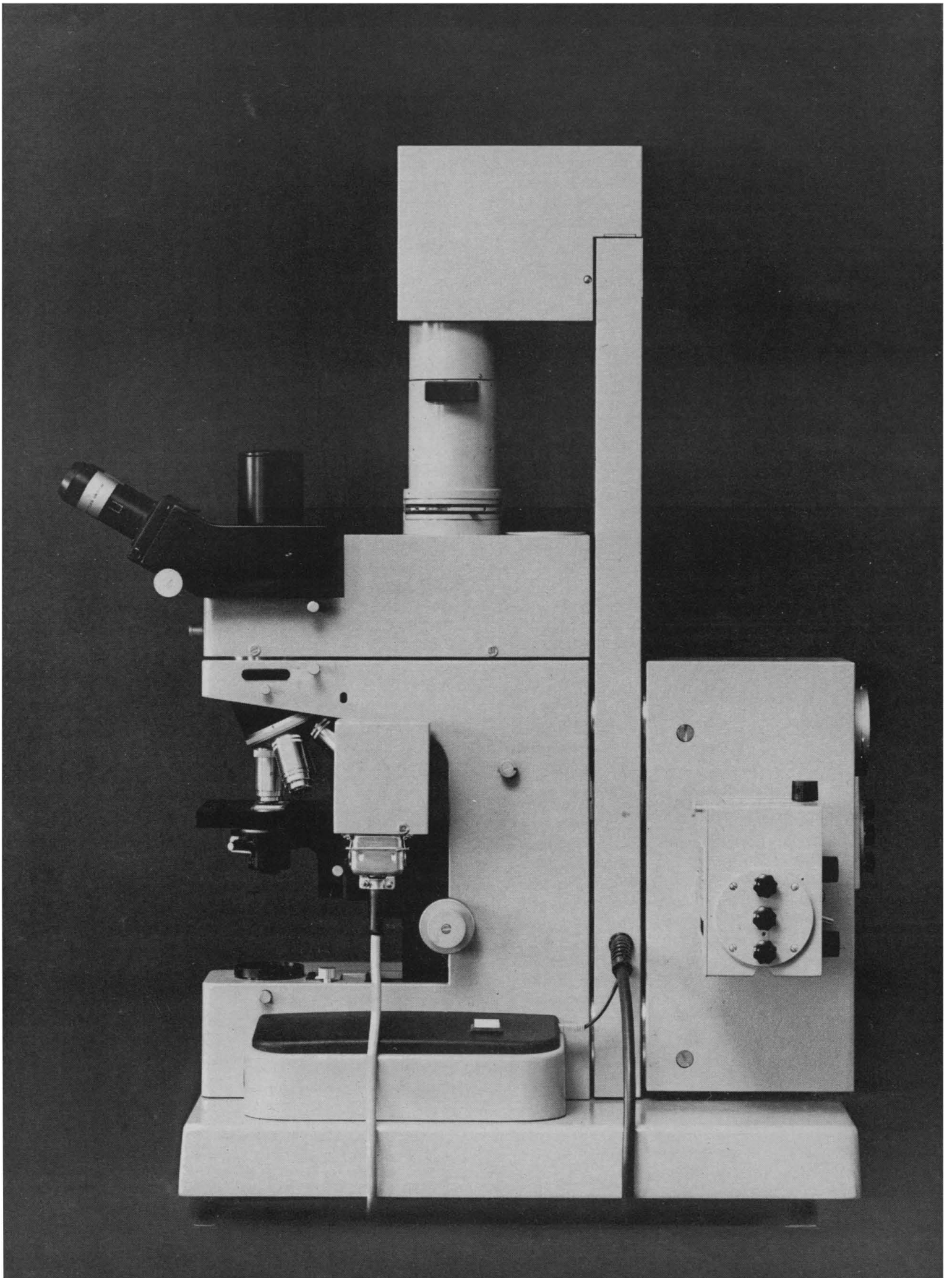
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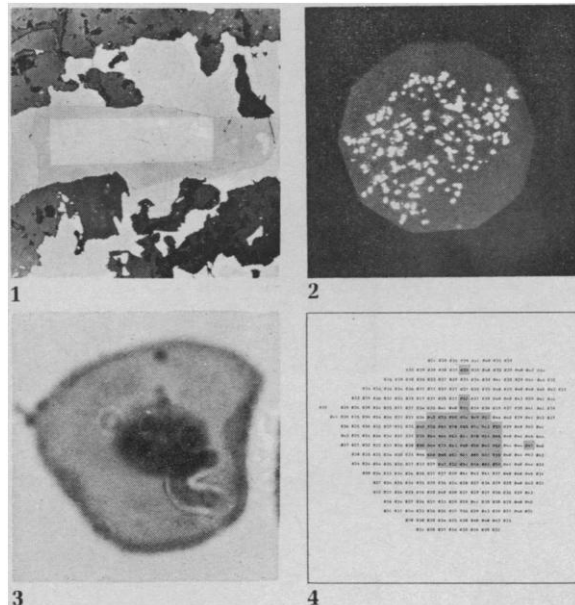
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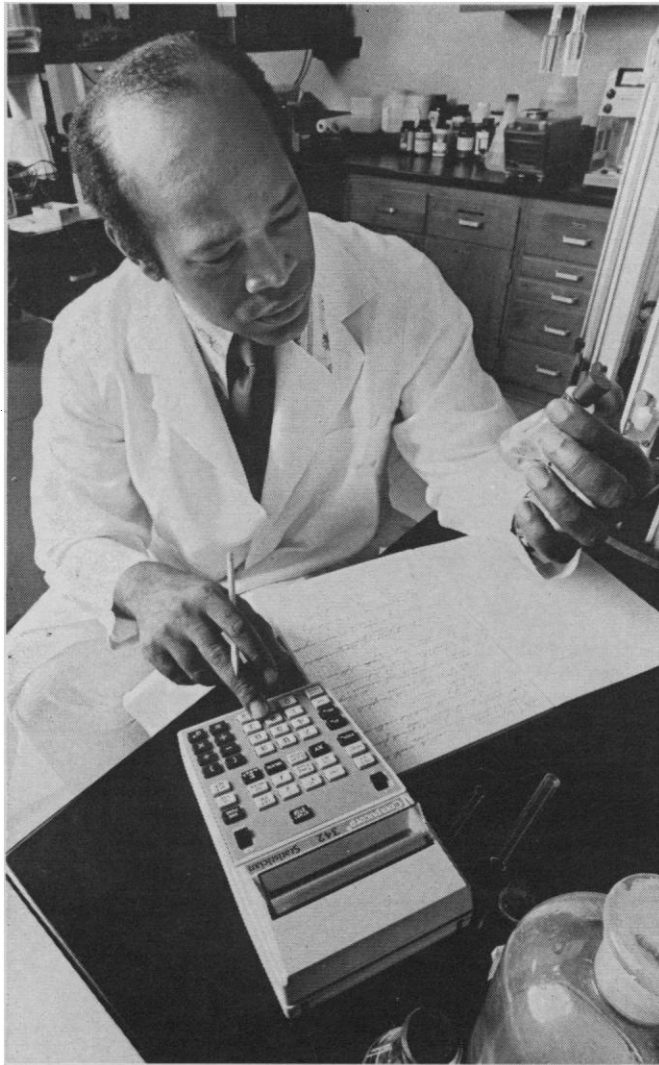
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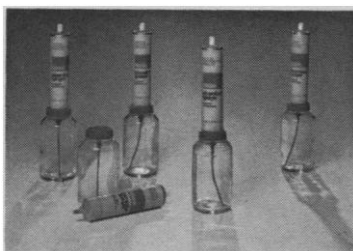
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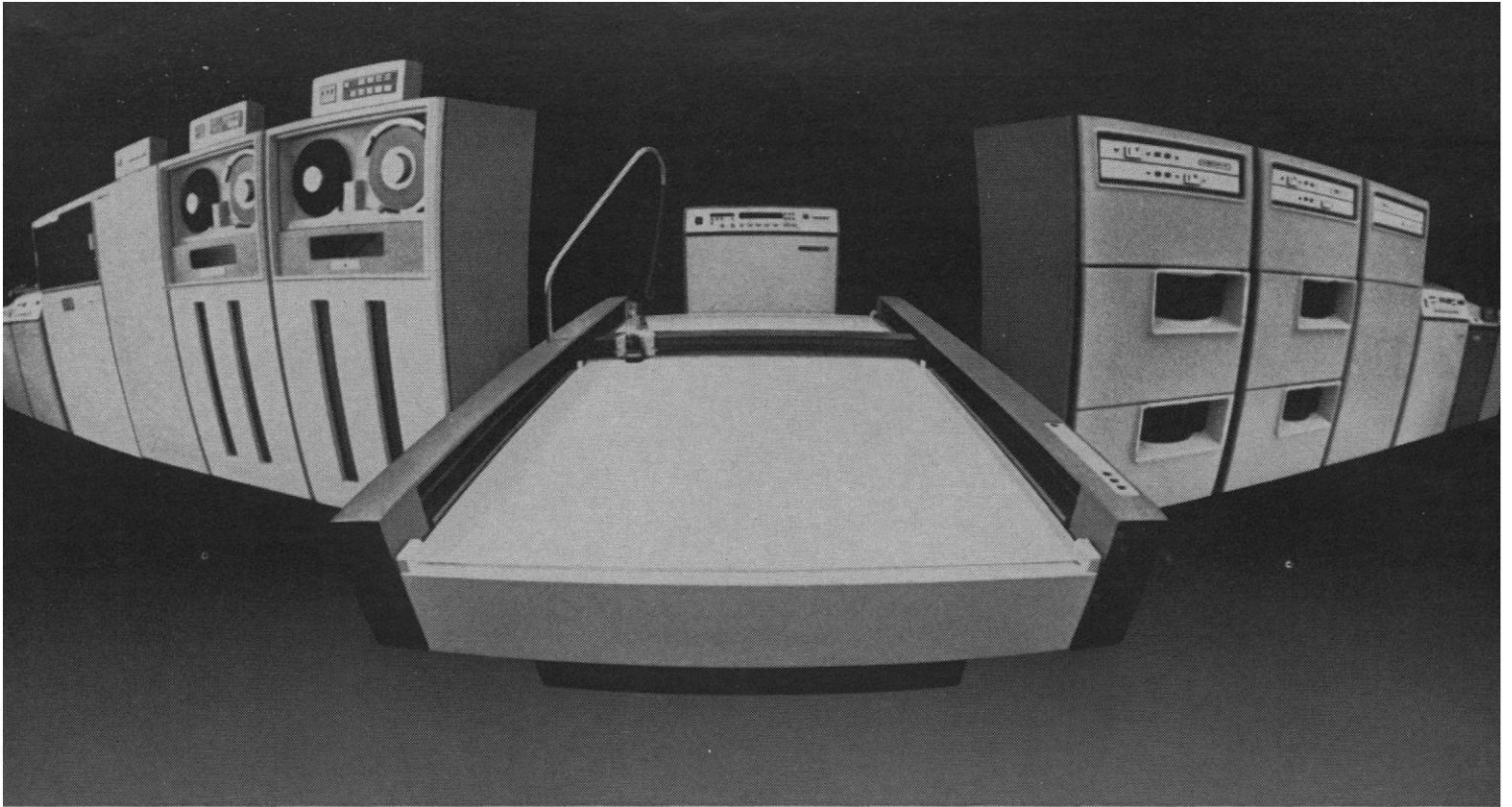
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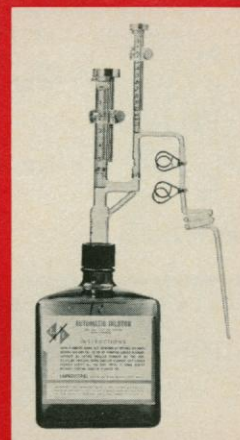
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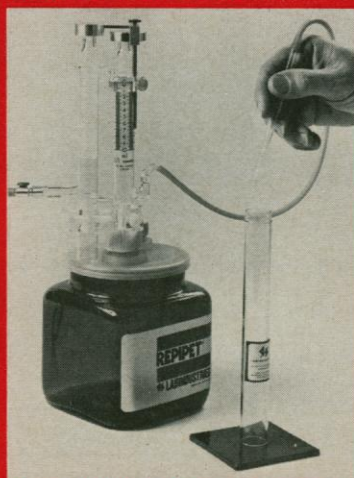
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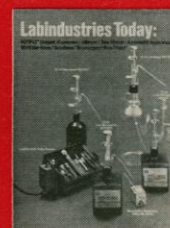
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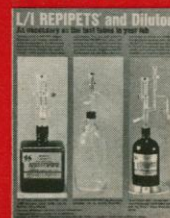
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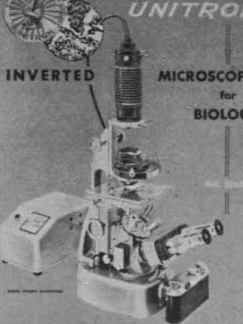


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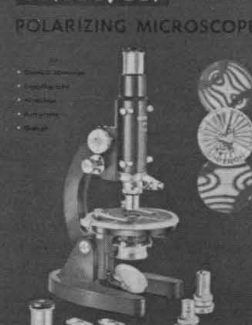
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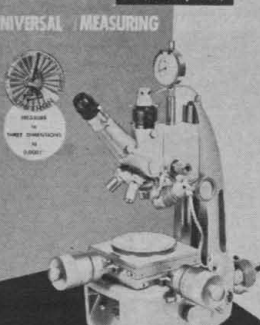
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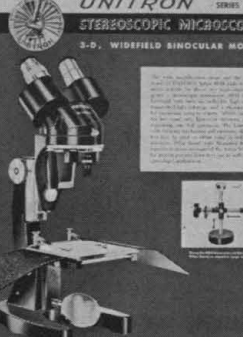
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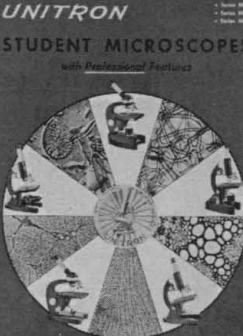
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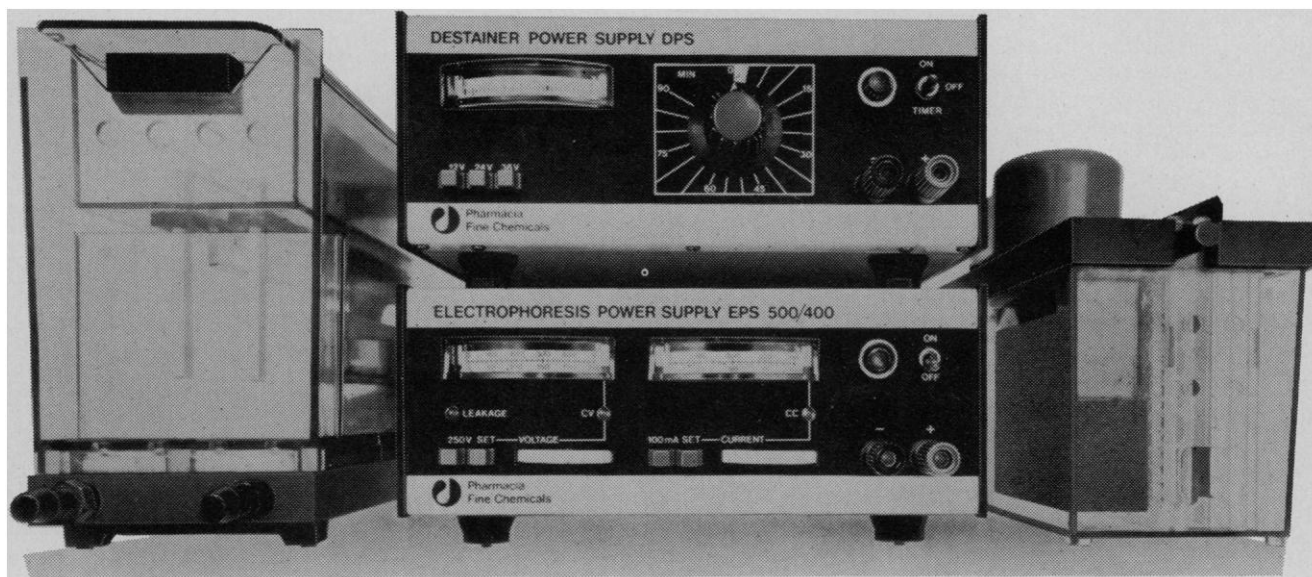
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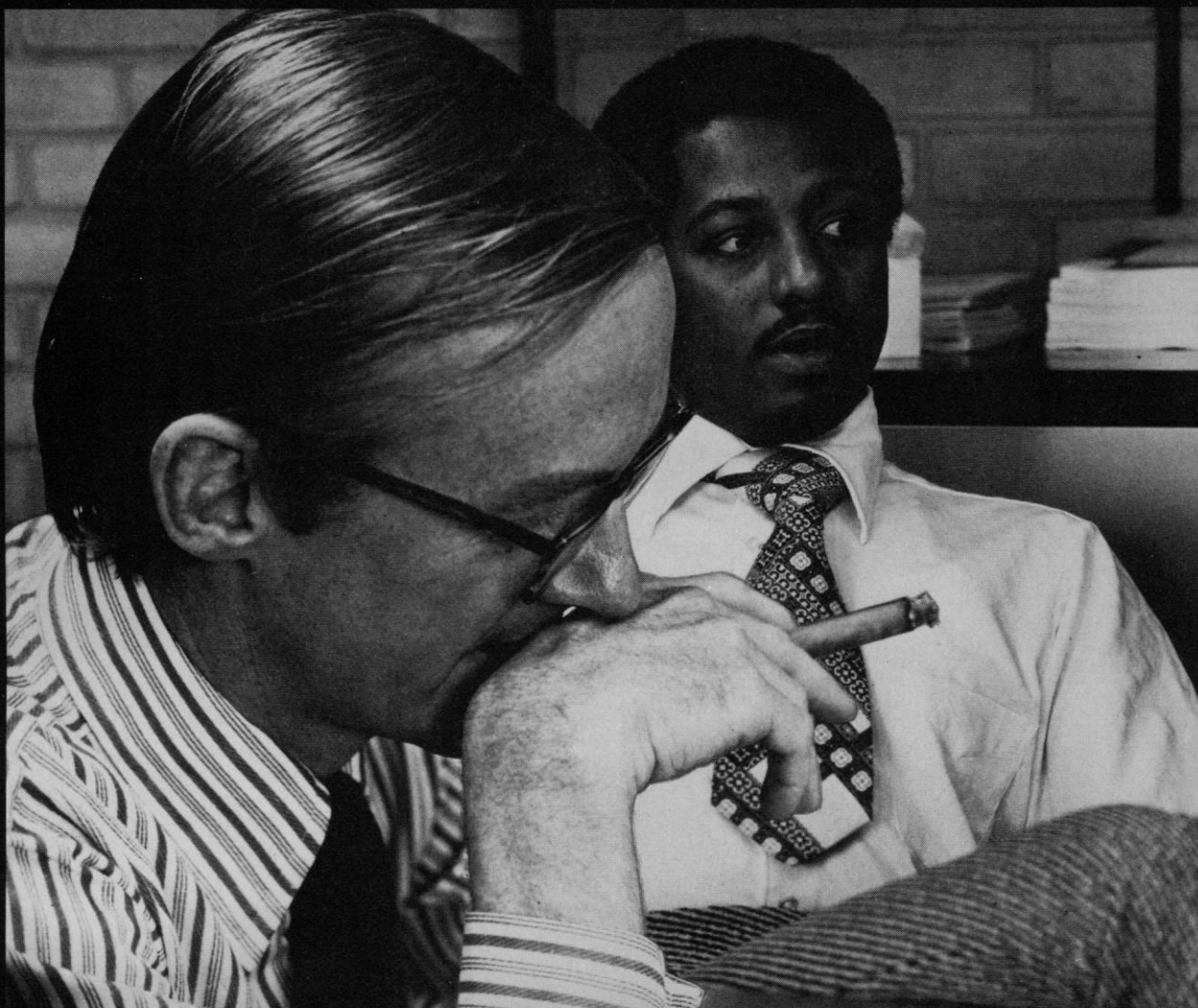
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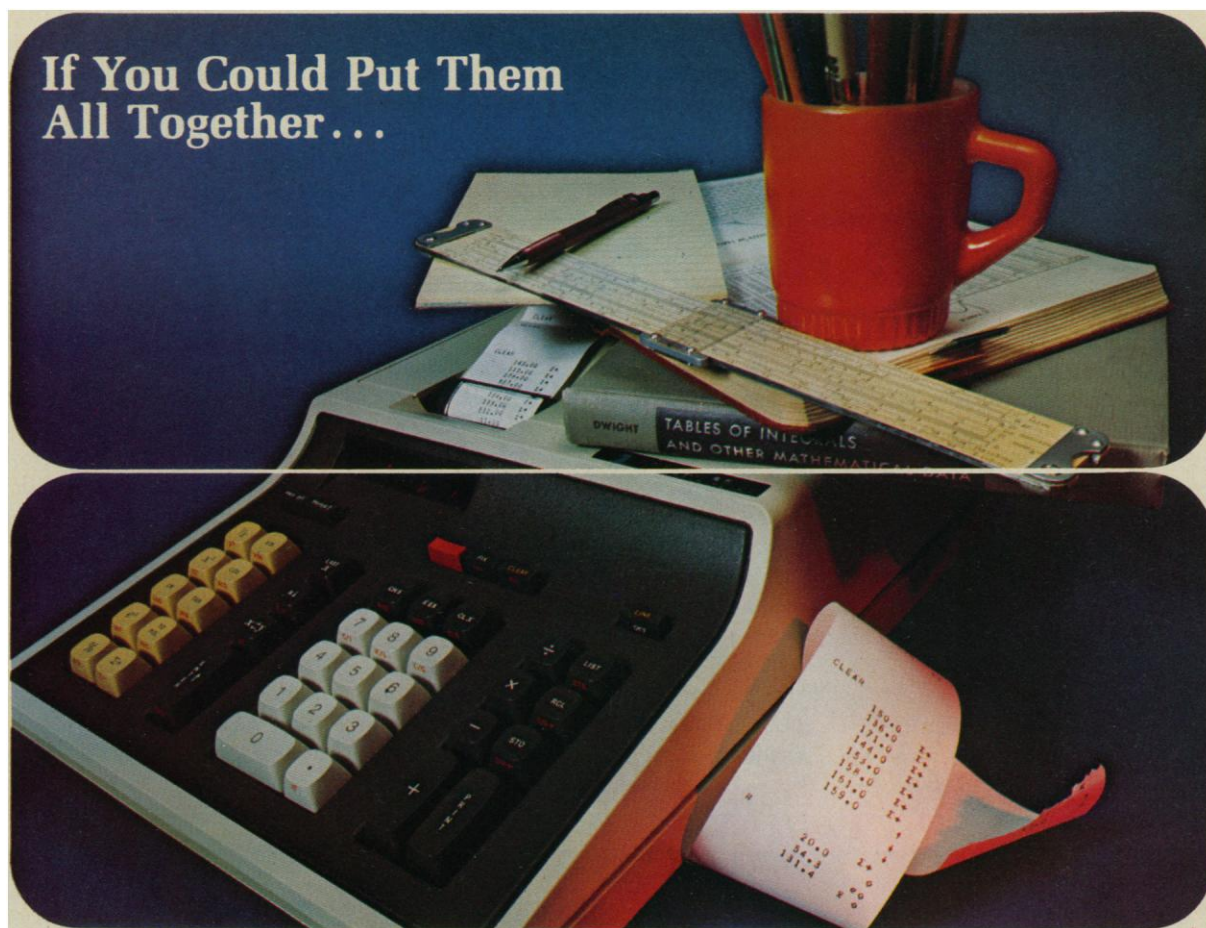
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## LETTERS

### Medical School Policy

One reads Samuel Goldhaber's reports (News and Comment, 14 Sept., p. 1027) on the changes in curriculum policy at the Harvard and Yale medical schools with a mounting sense of déjà vu. Similar revisions were carried out at the University of Southern California (USC) School of Medicine at the same time, accompanied by dissatisfaction among the basic science faculty and a disturbing increase in student failure on the national board examinations. Perhaps because my colleagues are basically more level-headed, the USC medical school has weathered the storm without a major reversion to tradition. In a continuously changing curriculum we have retained the pass-fail grading system, the organ system of teaching, an essentially elective fourth-year program, and a strong clinical teaching program in the first 2 years.

Of the many questions raised by Goldhaber's report, two might be of interest: (i) If Harvard falls from the prestigious position of number one,

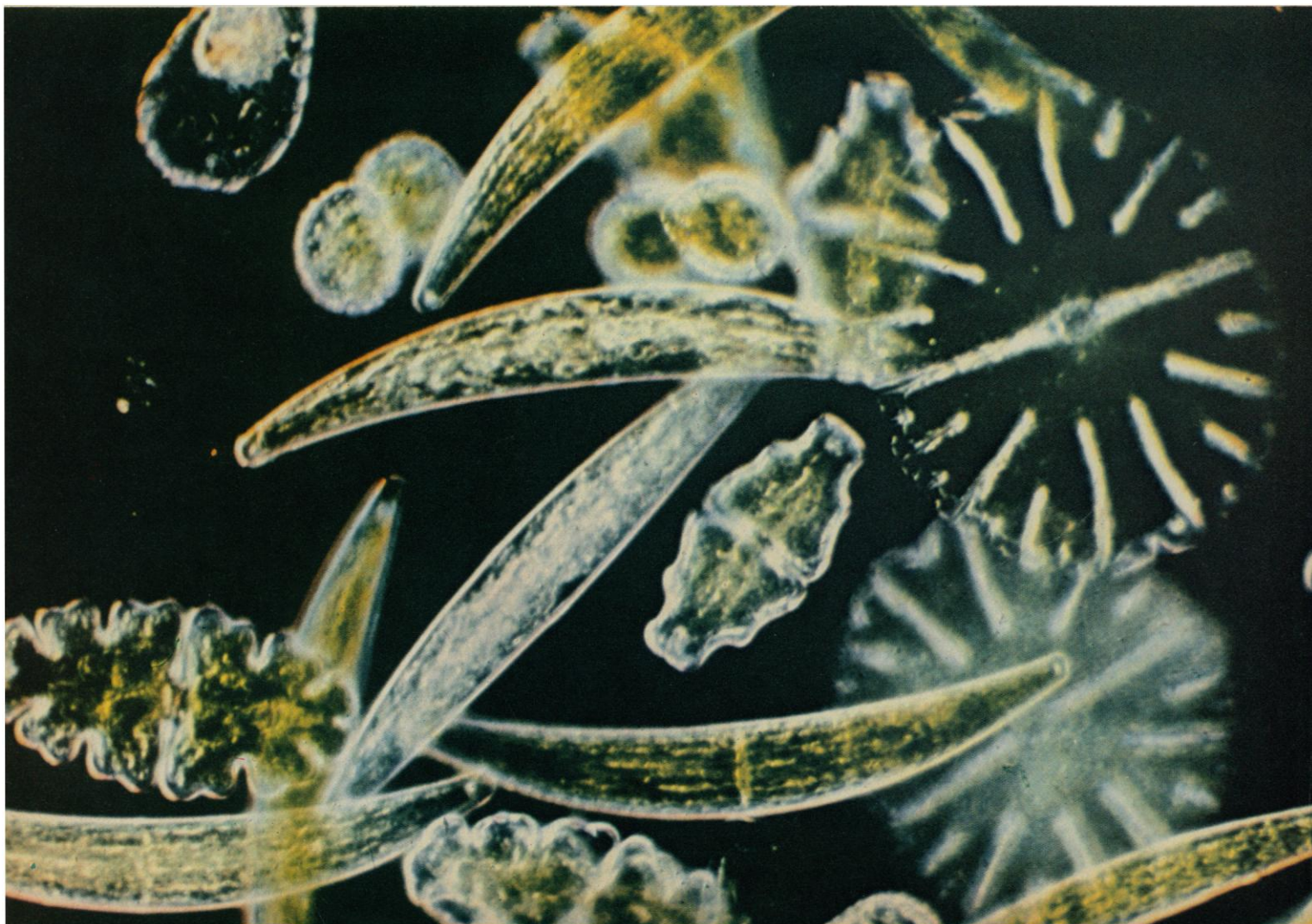
who rises to the top? What is their curriculum schedule, admissions policy, or student-faculty ratio? (ii) Why does medical education find itself measuring accomplishment exclusively by the national board exam, a maze of deviously instructed, multiple-choice questions that require the precise memorization of minute details, an exam which no doctor in practice and no medical school professor of basic science could hope to pass without months to years of preparation?

J. ERIC HOLMES

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Goldhaber's report would be more appropriately entitled: "Harvard returns to academic excellence," instead of "Harvard reverts to tradition." The comments on medical education only point out the prevalence of liberal thought in our universities. Because something is "traditional" it is not desirable, and, a priori, should be changed. The core curriculums in progress or being developed by many medical schools are somewhat

a response to change for change's sake. It should come as no surprise that national board scores are lower, or that many clinicians "are amazed at how little medical students know." Abandoning grades, competition, and organized course disciplines for integrated cores could not help but encourage laziness, and decrease motivation, resulting, of course, in happier students and substandard performances. Indeed, most faculty, not exclusively those in basic science, would have predicted the outcome of such programs, as Harvard's experience has shown quite well. Goldhaber talks about the politics of unhappiness among basic science faculty but says nothing about the politics of happiness (students') and how schools have striven gloriously in order to keep up with student demands. The quality of physician that such a system produces will be even more of a shock to medical schools in the future, despite the financial pressures to turn out more people. The inspired revisions of the medical curriculums at Harvard and Yale should not be viewed as "reversion to tradition" or a "move to the right," but, more accurately, as an expression of a



rational, reasonable recourse in continuing (but recently interrupted) quality medical education.

RONALD PAQUE

*Department of Microbiology,  
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Samuel Goldhaber, in his report on the "Yale system" of medical education (*News and Comment*, 14 Sept., p. 1029), quotes me several times, but he has quoted out of context.

To begin with, I do not spend the greater part of my day wondering "Have I gotten everything out of it?" I made this comment in reference to the first few months of my first year at Yale. This time would be a period of adjustment for anyone, at any institution. Yes, even Harvard.

As I told Goldhaber, after working for grades in a competitive college setting, I found some realignment of my approach to learning vast quantities of new material to be in order. But herein lies the main reason why I and many of my fellow students came to Yale. The thought of no longer having to measure my knowledge by the hourly exam in fact prompted my application. The Yale

student is afforded the unique opportunity to absorb those vast quantities of new material in much the same way as he will when he is no longer in medical school (although still very much a student). The majority of students at Yale have both the motivation and desire to study the practice of medicine in such a manner. My 3 years at Yale have been nothing less than enjoyable, in every sense of the word.

To state, as Goldhaber does, that the "Yale system is in serious trouble" (p. 1031) and to imply that the quality of medical education can be judged on the basis of National Board ranking is not justified.

ROBERT F. MALACOFF

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### Slow Viruses

In the report "Slow viruses: Role in persistent disease" (*Research News*, 29 June, p. 1351), Jean L. Marx states, "A conventional virus has . . . been isolated from the brains of patients

suffering from SSPE [subacute sclerosing panencephalitis]." She then describes the conclusion of John Sever and his colleagues that it is probably the absence of specific cellular immunity for measles virus in the host that is responsible for the development of SSPE. Although it is possible that future studies will indeed prove that this is correct, in the light of our present knowledge, we must challenge this viewpoint.

There have been a number of viruses isolated from patients with SSPE (1), and they have all been shown to react with measles antibody. Two of these agents, the JAC virus and the LEC virus, have been examined thoroughly in our laboratory and found to be different from a strain of wild measles virus. These differences are apparent in their growth pattern (2), susceptibility to suppression by antimetabolites (3), distribution of viral antigen in the cells (2), ultrastructural pattern of growth (4), and encephalitogenicity for experimental animals (5). All of these data, not cited by Marx, point to the fact that the agents we studied were not "a conventional

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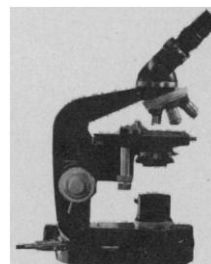
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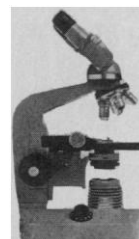


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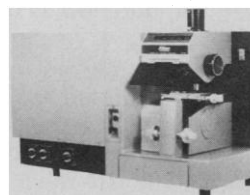
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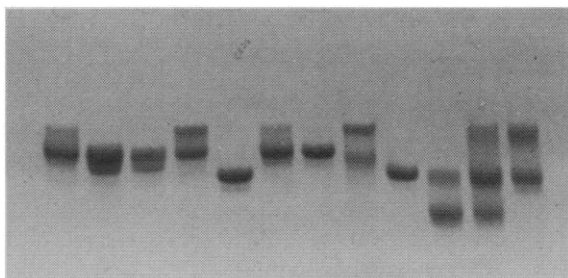
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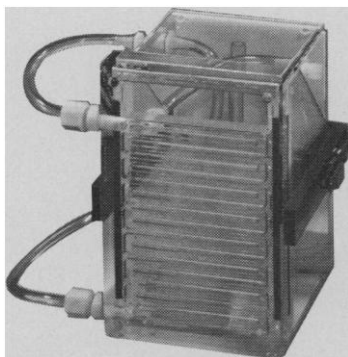


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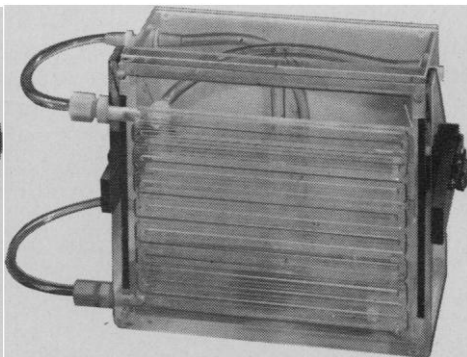
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## Let the Bastards Freeze in the Dark

A combination of environmental concerns and energy shortages is fostering widespread beggar-your-neighbor attitudes. Everyone wants cheap, unlimited energy, but all are prepared to fight tooth and nail to protect the environment and to prevent the location of energy facilities in their vicinity. It so happens that we are going to have neither cheap energy nor a perfect environment. Moreover, if we do not learn how to think nationally rather than parochially and to balance energy needs against environmental concerns, we are headed for trouble. Likely candidates for experiencing miseries are the people of the northern and eastern states. They have enjoyed cheap hydrocarbons from Texas, Louisiana, and Oklahoma. These supplies seemed to be guaranteed, but two developments have cast doubt on the security of supplies, particularly of natural gas. One is depletion of reserves. The other is a threat of indefinite dimensions. The southern states have awakened to the fact that they face future shortages and are looking for means of reserving their hydrocarbons for themselves. Bumper stickers can be seen in Texas, Louisiana, and Oklahoma with the motto, "Let the Bastards Freeze in the Dark."

Some Southerners were shocked recently by news from San Antonio. An electric power plant there will be fueled not by Texas oil or gas, but by coal, probably from Colorado. Louisiana, the principal supplier of natural gas to the eastern states, cannot expand industry as it would like because its gas is already committed. Moreover, some of its citizens will lose their jobs this winter because interruptible supplies previously available to Louisiana industry will be going north. Of the large curtailments of natural gas this winter, nearly half will be in the Gulf Coast region. Small wonder that the governors of Louisiana, Texas, Mississippi, and Oklahoma have joined in threatening to use police power if necessary to preserve their states' fuel supplies.

Governor Edwin Edwards of Louisiana recently pointed out that people in other states are content to have oil gas wells drilled off the Gulf Coast and to have refineries running in his state and pipelines crisscrossing its terrain. "But these states don't want any of that activity in their own backyards." The governor went on to say, "We're not going to be forced to continue operating our refineries and drilling new wells to deplete our resources in Louisiana to benefit the rest of the country."

The governor has a point. When Louisiana's resources are exhausted, who will furnish his people hydrocarbons, and at what cost? The governor was also on target in criticizing the attitude of the Atlantic Coast states toward exploration of their offshore resources. To the east on the continental shelf are thick sedimentary layers with substantial potential for oil and gas. Not a single exploratory hole has been drilled, however, and when the possibility of such exploration was mentioned about a year ago, there was immediate, strong opposition. Even if exploratory wells could be drilled within the next year, it would be 1980 before natural gas would be flowing into homes. But events on the energy front have been moving with a time scale of weeks rather than years. It is not clear that the southern governors can curtail northern supplies of gas soon, but they will be under increasing pressure to do so.

Given resolute action and national cooperation, we can make it through the coming crisis without suffering. But a continuation of present energy consumption patterns, coupled with the trend toward parochial self-interest, can only lead to divisive tensions and some freezing in the dark.—PHILIP H. ABELSON

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**Advances in Lipid Research.** Vol. 11. Rodolfo Paoletti and David Kritchevsky, Eds. Academic Press, New York, 1973. xviii, 364 pp., illus. \$26.

**Advances in Satellite Meteorology.** A. I. Burtsev, P. N. Belov, and Sh. A. Musaelyan, Eds. Translated from the Russian edition (Leningrad, 1971) by A. Baruch and D. Lederman. P. Greenberg, Transl. Ed. Halsted (Wiley), New York, and Israel Program for Scientific Translations, Jerusalem, 1973. vi, 306 pp., illus. \$21.50.

**Advances in Solid State Physics.** Proceedings of a meeting, Münster, Germany, Mar. 1973. H. J. Queisser, Ed. Pergamon, New York, and Vieweg, Braunschweig, Germany, 1973. viii, 396 pp., illus. \$32.50. Festkörper Probleme 13.

**Air Pollution and Atmospheric Diffusion.** M. E. Berlyand, Ed. Translated from the Russian edition (Leningrad, 1971) by A. Baruch. D. Slutzkin, Transl. Ed. Halsted (Wiley), New York, and Israel Program for Scientific Translations, Jerusalem, 1973. vi, 222 pp., illus. \$21.50.

**Alcohol Intoxication and Withdrawal.** Experimental Studies. Proceedings of a symposium, Amsterdam, Sept. 1972. Milton M. Gross, Ed. Plenum, New York, 1973. xiv, 422 pp., illus. \$24.

**Annual Review of Biochemistry.** Vol. 42. Esmond E. Snell, Paul D. Boyer, Alton Meister, and Charles C. Richardson, Eds. Annual Reviews, Palo Alto, Calif., 1973. viii, 710 pp. + index. \$16.

**Annual Review of Biophysics and Bioengineering.** Vol. 2. L. J. Mullins, William A. Hagins, and Lubert Stryer, Eds. Annual Reviews, Palo Alto, Calif., 1973. viii, 334 pp., illus. \$12.

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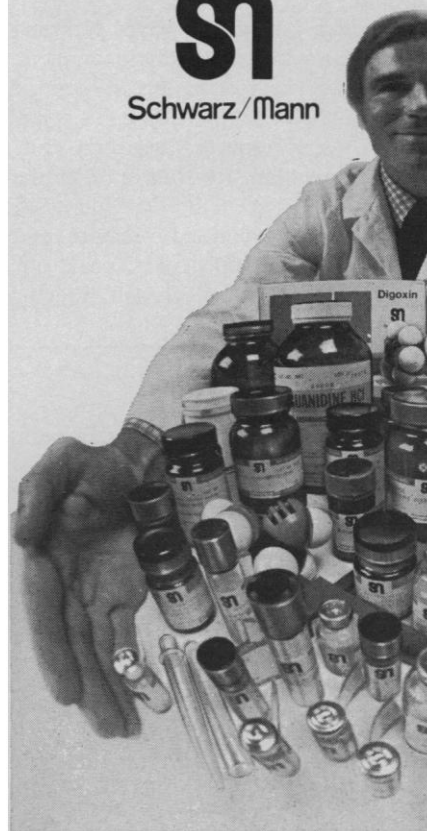
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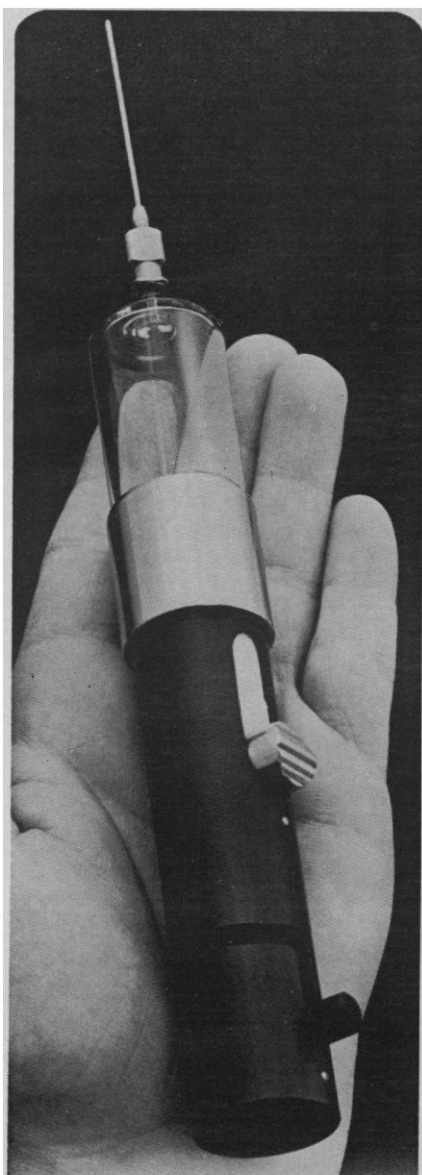
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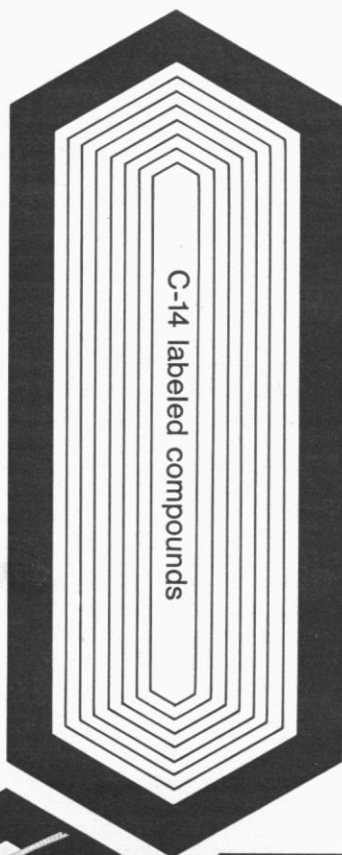
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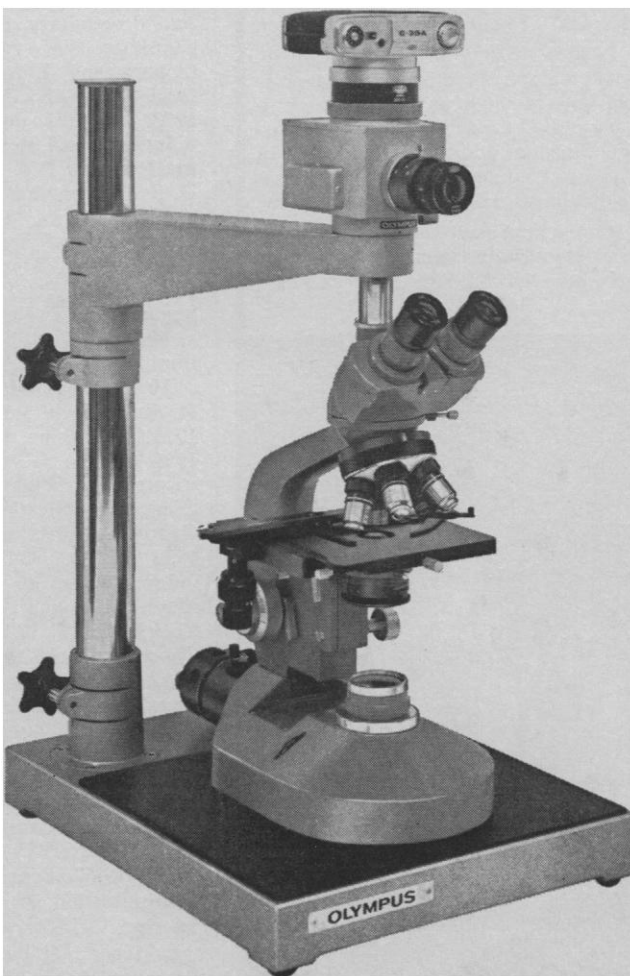
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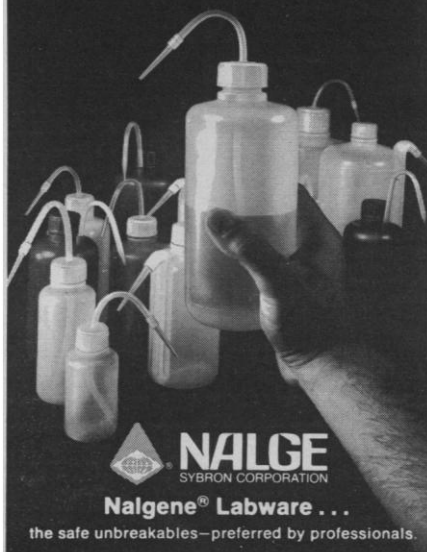
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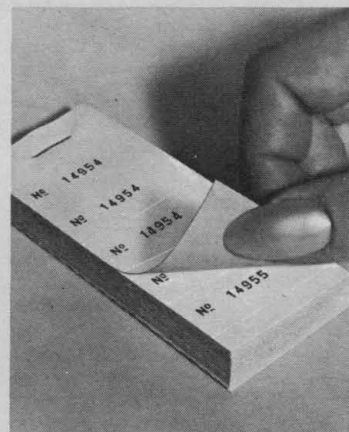
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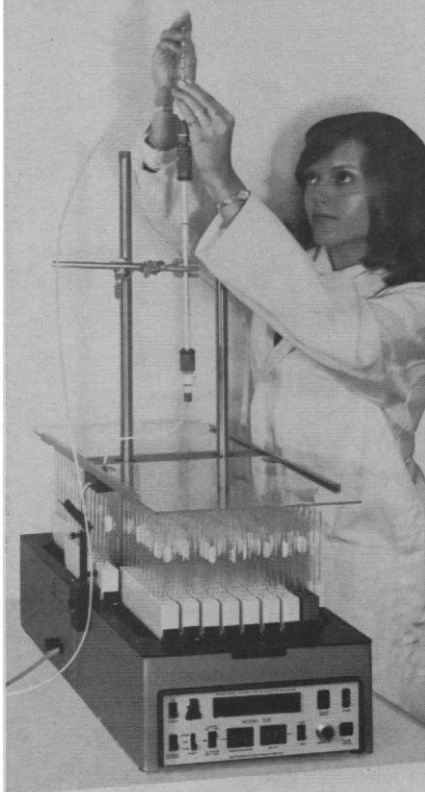
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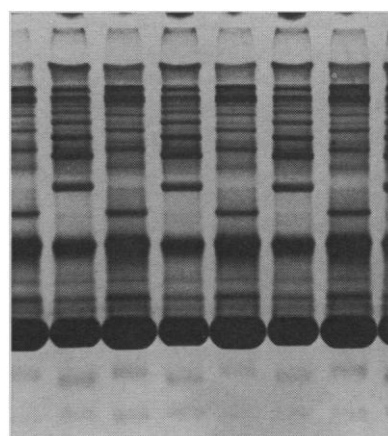
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