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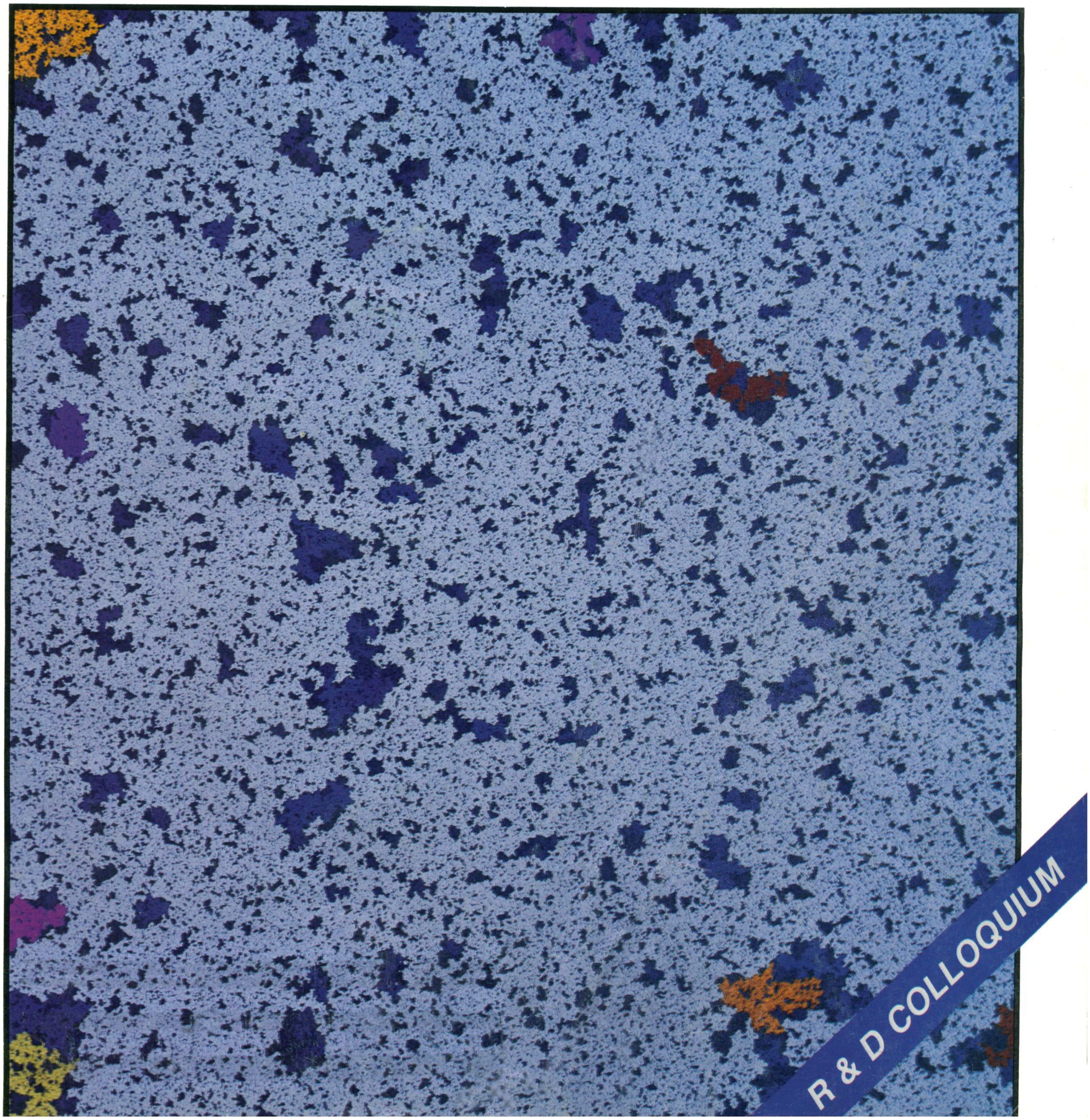

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Meet the new J-6M/E large-capacity refrigerated centrifuge!

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For cells in culture

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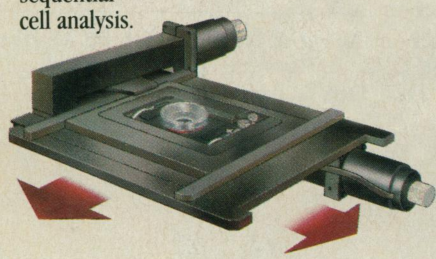
Controlled Laser Illumination with the ACAS 470 (Anchored Cell Analysis and Sorting) brings new light to discovery in cell biology. Focus the laser beam where you want it for
- fluorescence excitation
- photobleaching
- photoactivation
- cell surgery
- cell ablation

without disturbing the extracellular environment and attachment of cells.

Computer-Controlled Stage Movement allows precise and automatic targeting of the laser beam. Stage speed provides for rapid sorting of cell monolayers in culture. Stage coordinates can be used for repositioning with the high accuracy necessary for automated sequential cell analysis.

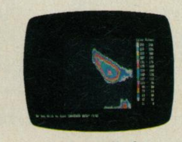


By integrating computer-controlled laser illumination and stage movement, the ACAS 470 lets you explore new frontiers in cell research. Now you can automatically isolate
- subpopulations of cells
- mutant cells
- transfected cells

for propagation or analysis.

Now you can use fluorescence to quantitatively measure
- orientation and localization of cellular components
- cell-cell interactions
- fluorescence redistribution after photobleaching (FRAP)
- cell subpopulations

and much more.

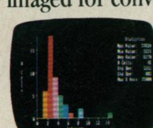


Isolate cells for propagation or analysis

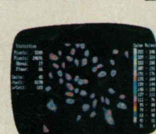
Cell Sorting of anchorage-dependent cells is now possible with the ACAS 470. Selective sorting is achieved by destroying unwanted cells via the laser beam, or by physical separation through a unique cookie-cutter selection method. In this way, homogeneous cell progeny can be obtained from a heterogeneous cell population.

Study cell-cell interactions

Quantitative Fluorescence Analysis is optimized with the ACAS 470. Cells are imaged for convenient manual or automated interaction. For fluorescence analysis, the ACAS 470 sequentially exposes only small areas of a cell to brief laser pulses. The resulting fluorescence represents emitted light from targeted fluorescent molecules, giving three-dimensional information.

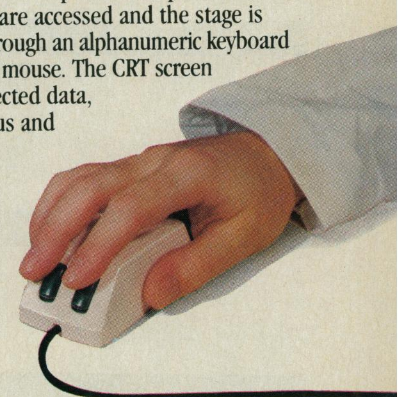


Perform quantitative fluorescence analysis on large numbers of cells



Analyze fluorescent images

Convenient Software that is easy to learn and to use is the heart of the ACAS 470. Experimental parameters are set, data are accessed and the stage is controlled through an alphanumeric keyboard or hand-held mouse. The CRT screen displays collected data, results, menus and prompts for greater user interaction.



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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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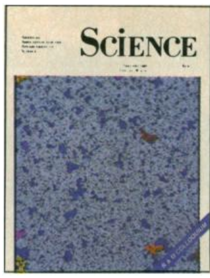
■ The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.

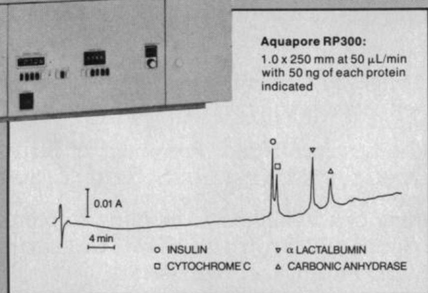


COVER Percolation network, for sites at concentration $p = 59.9$ percent, occupied at random on a square grid of 3000 sites on a side, using periodic boundary conditions. Sites are connected if they are adjacent along a vertical or horizontal direction, not along the diagonals. The white colored sites represent the infinite network; the next larger cluster colored bright yellow is a finite cluster. The size of the largest "hole" is the percolation correlation length, ξ_p. The network obeys fractal geometry for length scales $r < \xi_p$, and Euclidean geometry otherwise. See page 814. [Figure is courtesy of R. F. Voss, IBM Thomas J. Watson Research Center, Yorktown Heights, New York]

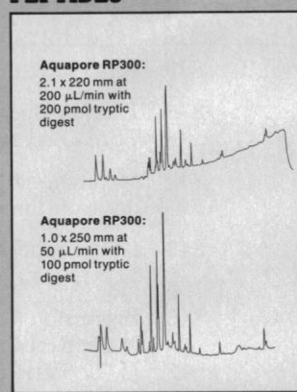
BIOSYSTEMS UPDATE

Announcing a Microbore HPLC System Designed for Protein/Peptide Isolation

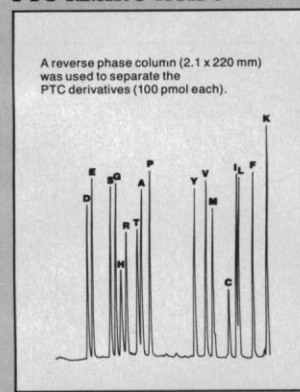
PROTEINS



PEPTIDES



PTC AMINO ACIDS



The Model 130A is the first integrated separation system expressly designed for the isolation, purification and analysis of proteins and peptides by microbore HPLC. The advanced technology of the 130A allows samples to be collected in volumes as low as 50 microliters. Many samples can be collected on filter disks for microsequencing with the Applied Biosystems Model 470A Gas Phase Sequencer.

Why Microbore?

With microbore technology, the inside diameter of the Model 130A column is decreased from the "standard" 4.6 mm to 1.0 mm to permit as much as a twenty-fold reduction in sample volume. In practical terms, this means a twenty-fold increase in concentration for a given sample size with the advantages of improved recovery, increased sensitivity and minimized sample handling. It also means a twenty-fold decrease in solvent consumption for more economical operation.

Microbore Capability by Design

The Model 130A combines microbore pumping and column technology, specially selected column packings optimized for protein/peptide separations and a low-noise, variable wavelength UV detector. The result is a chomatographic system which is unsurpassed in reproducibility, speed and sensitivity.

Reliability and Support

The most important features of the Model 130A are the people who support it:

- The scientists and researchers who developed this system continue to explore improved microsample preparation and analysis methods. They are always available to provide assistance with users' specific needs.
- The trained service engineers who can provide expert in-lab installation, calibration and user training; they are part of a worldwide support network for the Model 130A and all Applied Biosystems products.

Additional Information

For more data on how the Model 130A can solve your protein/peptide separation needs, simply contact your local Applied Biosystems representative at the nearest office listed below or circle reader service number 401.

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This Week in SCIENCE

Exploration of the infrared cosmos

INFRARED emissions emanate from at least 250,000 sources in the cosmos, according to a catalog prepared after a 10-month all-sky survey made by a telescope aboard the Infrared Astronomical Satellite (IRAS) in 1983 (page 807). Among the sources are 10,000 galaxies never before seen and comets and asteroids, including the IRAS-Araki-Alcock comet that came close to Earth—within 2 million miles. Other sources are particles orbiting around stars much as the planets orbit around the sun, and gas clouds, young stars, old giant stars enshrouded in dust, and other remnants and products of star-formation processes. Astronomers are now planning for further explorations of infrared emitters with a Space Infrared Telescope Facility (SIRTF), an orbiting observatory to be positioned 700 to 900 kilometers above Earth, containing a high-resolution camera, an imaging photometer, and a spectrograph. This facility would provide yet another qualitative and quantitative gain in detection sensitivity. Rieke *et al.* discuss how SIRTF analyses are expected to yield information about some of the primordial materials of the solar system and distant galaxies, contributing to an understanding of the mysteries of cosmic energy, the creation of galaxies, planets, and stars, and the origin of life.

Ubiquitin

HIGHLY conserved in evolution and found inside all eukaryotic cells, ubiquitin, a protein of 76 amino acids, has now been found on lymphocytic cell surfaces; it may contribute to the ability of the lymphocyte to recognize, adhere to, and then migrate through high endothelial venules (HEV) to organs of the immune system (pages 823 and 845). The traffic patterns of lymphocytes are specific: those of the peripheral lymphoid system home preferentially to peripheral lymphoid organs and those of the gut-associated lymphoid system home preferentially to gut-associated organs. Siegelman *et al.* and St. John *et al.* provide new details about the structure of ubiquitin and the genes from which it is produced as well as the relation of ubiquitin to cell surface molecules responsible for the lymphocyte-HEV attachment. Ubiquitination of surface molecules may not be specific to the lymphocyte surface; ubiquitin may associate with a range of surface molecules, perhaps to stabilize surface interactions or to tag surface molecules for internalization and degradation after homing or other processes have been accomplished. In a Research News article, Marx reports on these and other recent developments in ubiquitin research (page 796).

Protein diets and urinary cancer

THE protein-rich diets preferred by people in western countries contain amino acids that may promote bladder cancer (page 843). Results of a short-term (4-week) culture assay developed by Nishio *et al.* proved to be predictive of the long-term (40 to 60 weeks) likelihood that bladder tumors would develop in rats fed diets supplemented with possible carcinogens. The assay measured whether, in the presence of test substances, precancerous bladder cells continued to agglutinate (as they do when exposed to known cancer-promoting agents). Of 21 amino acids tested, L-isoleucine and L-leucine sustained the clumping in culture; these amino acids subsequently promoted the development of bladder cancer or precancerous lesions in the rats. High protein consumption may, through component amino acids, be causally associated with a high incidence of bladder cancer.

AIDS pathogenesis

HOW long it takes for the AIDS virus to produce overt disease in an infected individual may depend on the extent of unrelated immune stimulation that is occurring coincidentally (page 850). Cells of the immune system, including the T4 lymphocytes that harbor the AIDS virus, differentiate and divide when activated by foreign antigens and mitogens. Upon activation, cells infected with the AIDS virus secrete the immune mediator interleukin-2, produce and release viruses that can then infect other cells, and die. Zagury *et al.* found that, when activated, fresh T cells from AIDS patients, AIDS patients' T cells grown for 60 days in culture, and normal T cells infected experimentally with the virus all showed the same sequence of secretion, viral production, and death. A similar sequence of events may occur in cells in the body: individuals infected with the AIDS virus and concurrently exposed to other infectious agents or foreign materials in semen or blood would acquire a full-blown immune deficiency syndrome when hyperstimulation has ended, T-cell depletion has occurred, and other changes in immune functioning have developed.

Varnish dwells after dwellers vanish

VARNISH on rocks in California's Mojave desert suggests that people may have lived there 15,000 years ago (page 830). Rock varnish is a slowly forming layer, usually less than 100 μm thick, of clay minerals, manganese and iron oxides, and trace elements. Rocks that have been carved, quarried, or in other ways worked by humans will be coated with varnish only after such use; thus, by dating the varnish, a minimum age for the post-use period can be determined. Dorn *et al.* dated rock varnish by cation-ratio dating, in which three elements that leach at different rates from rock varnish are measured, and by radiocarbon dating using a tandem accelerator mass spectrometer. The varnish layer closest to the rock surface was analyzed at each site studied and provided a date for the earliest post-use period. The techniques hold promise for determining minimum ages of landforms and artifacts composed of materials that are not, themselves, directly suitable for dating.

SCIENCE

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Increasing Productivity and Efficiency in Agriculture

Efforts to enhance agricultural productivity have two major objectives. One is to generate income growth for the producers of agricultural commodities. Another is to make agricultural commodities available to consumers on increasingly more favorable terms.

These two goals have at times appeared to be inconsistent or in conflict. During periods when the growth of productivity has lagged behind the growth of demand, the commodity component of food costs has risen. During periods when demand for agricultural commodities has stagnated, commodity prices have sometimes declined more rapidly than production costs. Yet during most of the last half century both consumers and producers have shared in the economic dividends generated by productivity growth. Consumers in the United States have access to food on more favorable terms than at any time in the past. And most farm families today enjoy a level of living that was not available to earlier generations.

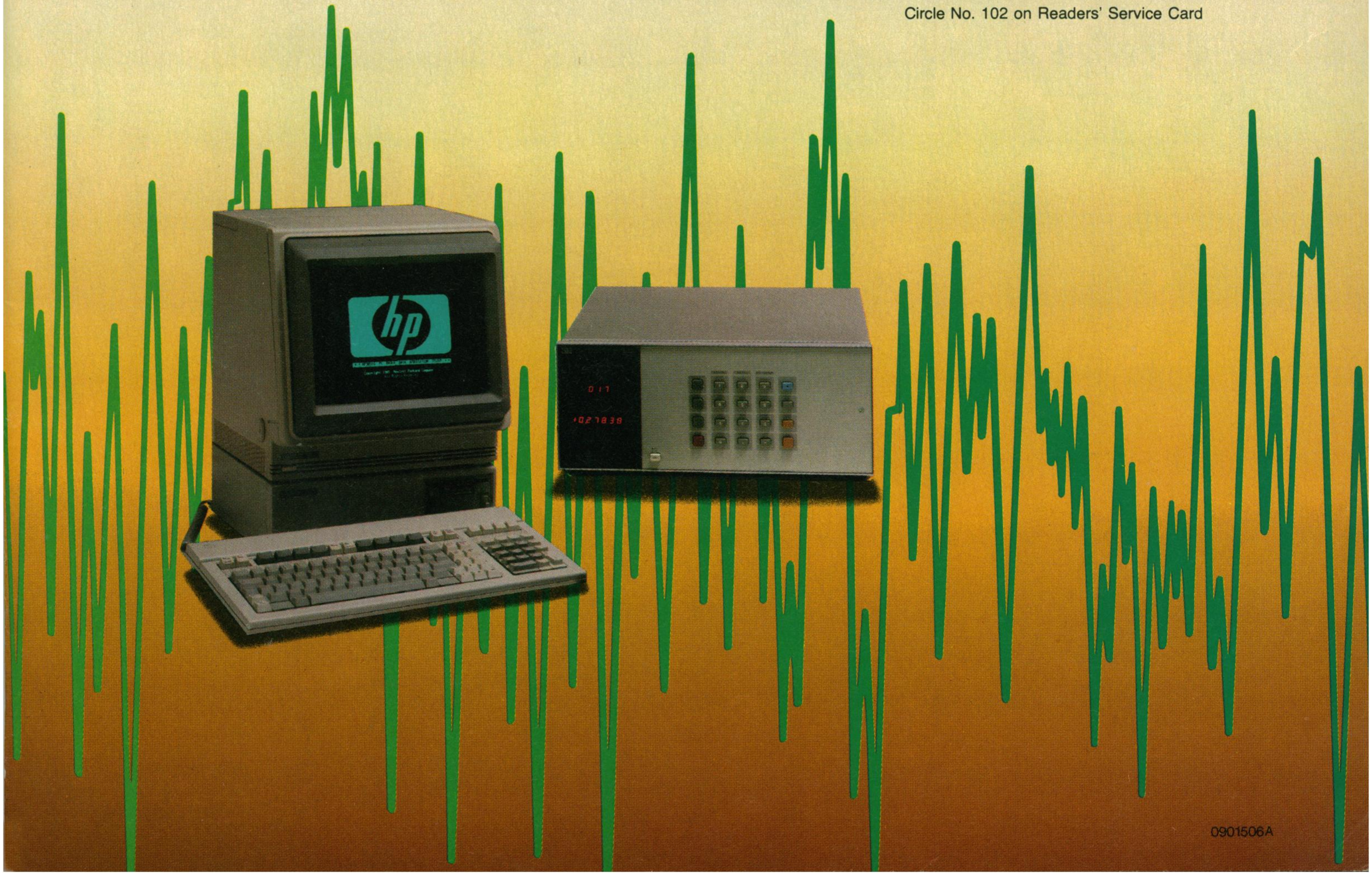
This is not to imply that all is well in rural America or in the nation's agricultural research system. During the last 5 years a global recession and the rising value of the dollar have dampened the demand for U.S. farm commodities abroad and high interest rates have imposed severe financial burdens on farmers and their suppliers. These have combined to force severe deflation in land values and a financial crisis for many farmers.

These difficulties have prompted some critics to suggest a moratorium on agricultural research and technology development. Such a moratorium, it is suggested, would result in slower growth in agricultural production and permit domestic and international markets to absorb surplus production capacity at no real cost to consumers or producers.

Such reasoning is seriously flawed. The capacity of American agriculture to expand its foreign markets and retain its domestic markets depends on continued declines in the real costs of production. American agriculture has achieved its preeminence in the world by substituting knowledge for resources. This knowledge, embodied in more productive biological, chemical, and mechanical technologies and in the managerial skills of farm operators, has given the United States a world-class agricultural industry at a time when many other sectors of our economy are losing their preeminent position. A necessary condition for U.S. agriculture to retain its status is enhancement of both public and private sector capacity for scientific research and technology development. The costs, to both consumers and producers, of failure to maintain and enhance our efficiency in production would greatly exceed the adjustment costs resulting from abundance.

It is important for both producers and consumers that the agricultural research mission not be too narrowly defined. Research should provide farmers and policy-makers with the knowledge needed to adjust to the changes driven by national and international economic forces. Research should also be directed to the design of more efficient institutions to protect both our production capacity and the income of farm people from the costs resulting from the integration of U.S. agriculture into world markets. Society should also insist that agricultural research be concerned with the effects of agricultural technology on the health and safety of agricultural producers, with the nutrition and health of consumers, with the impact of agricultural practices on the esthetic qualities of natural and modified environments, and with the quality of life in rural communities.

New sources of productivity will be needed if U.S. agriculture is to maintain its preeminence. From 1955 to 1965, increased levels of fertilizer accounted for a yield gain of two bushels of corn per year. By the early 1980's, higher levels of fertilizer use were accounting for less than half a bushel per year yield increase. The gains in productivity growth that can be expected from traditional sources will be inadequate to meet even the relatively slow growth in demand for U.S. agricultural commodities that is now anticipated over the next several decades. During the last half century U.S. agriculture has experienced rapid gains in both output per worker and output per hectare. New sources of productivity growth consistent with changing resource endowments and the dramatic growth of scientific opportunity must be sought.—VERNON W. RUTTAN, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul 55108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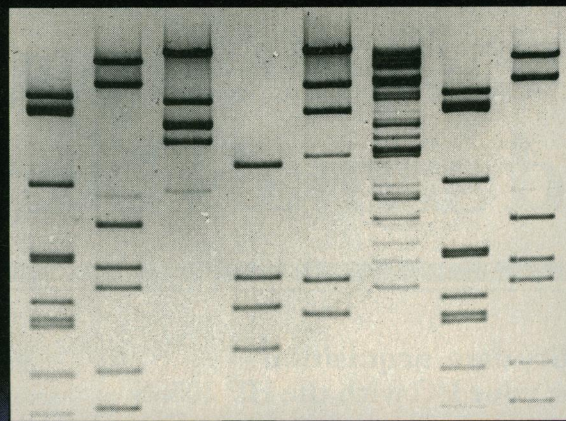

A better way to get uniform band spa

Wedge-shape


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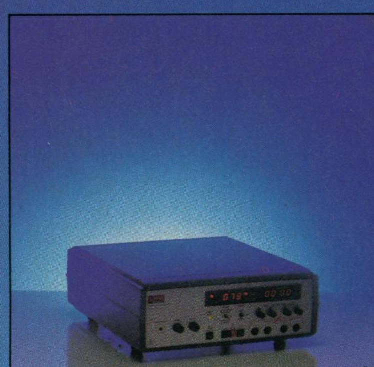
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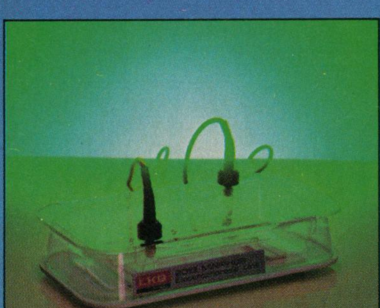
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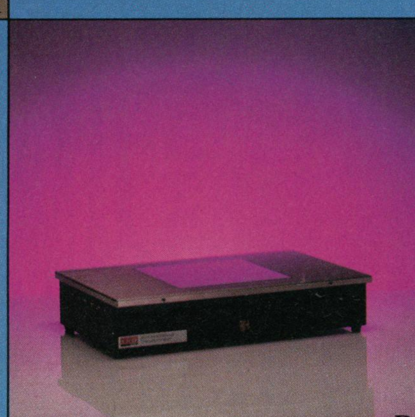
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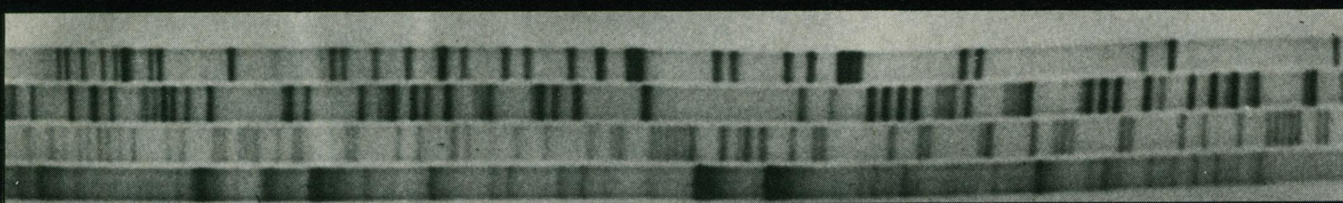
No longer need you resort to multiple loading with its increased time and greater required sample volumes. Whether for nucleotide separations in agarose gels or sequencing in acrylamide gels, the technique of wedge-shaped field strength gradients lets you get linearly spaced bands for maximum resolution and ease of reading. Two new instrument systems from LKB render the technique rapid, reliable and above all, reproducible.

In the Maxiphor™ horizontal electrophoresis unit (A), it is the simplest thing in the world to pour wedge-shaped agarose bridge gels directly on the central platform when adjustable legs beneath the cathode dam are extended. Gels can be run rapidly at high power even without external buffer circulation, the half-litre reservoir providing enough internal cooling capacity even at 500 volts. Want to use the Maxiphor for constant thickness bridge or submarine gels? Just as easily done. And you can run up to 40 samples every time.

For greatest economy and speed in fragment separations, the sibling Miniphor™ unit (B) with its integral cooling jacket lets you run submarine gels at very high power. Companion to both units is the LKB constant power supply (C) that permits regulation to 1 volt or 1 milliamp with 1 minute precision for automated runs. And completing the system is the MacroVue™ transilluminator (D) whose optical design permits you to detect as little as 1 ng DNA in a single band. This instrument makes publication grade photography easy.



cing in DNA/RNA electrophoresis
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In the Macromould™ unit (E), you can cast wedge-shaped acrylamide gels that are covalently bonded to a glass plate for maximum support. (If you are interested in constant thickness gels, you can cast them as thin as 0.1 m, allowing much greater use of ^{35}S labeling with its attendant virtues of lower scattering and better resolution – without wrapping or refrigeration – as well as longer half-life and improved safety.)

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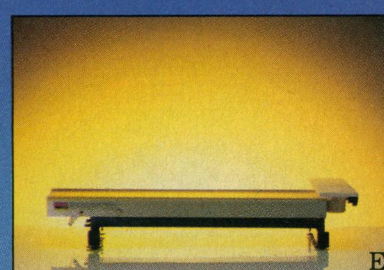
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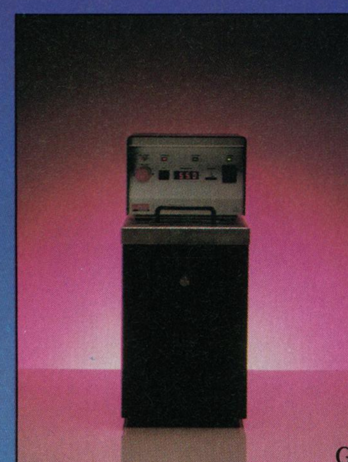
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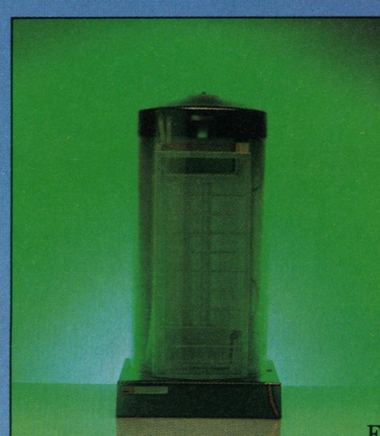
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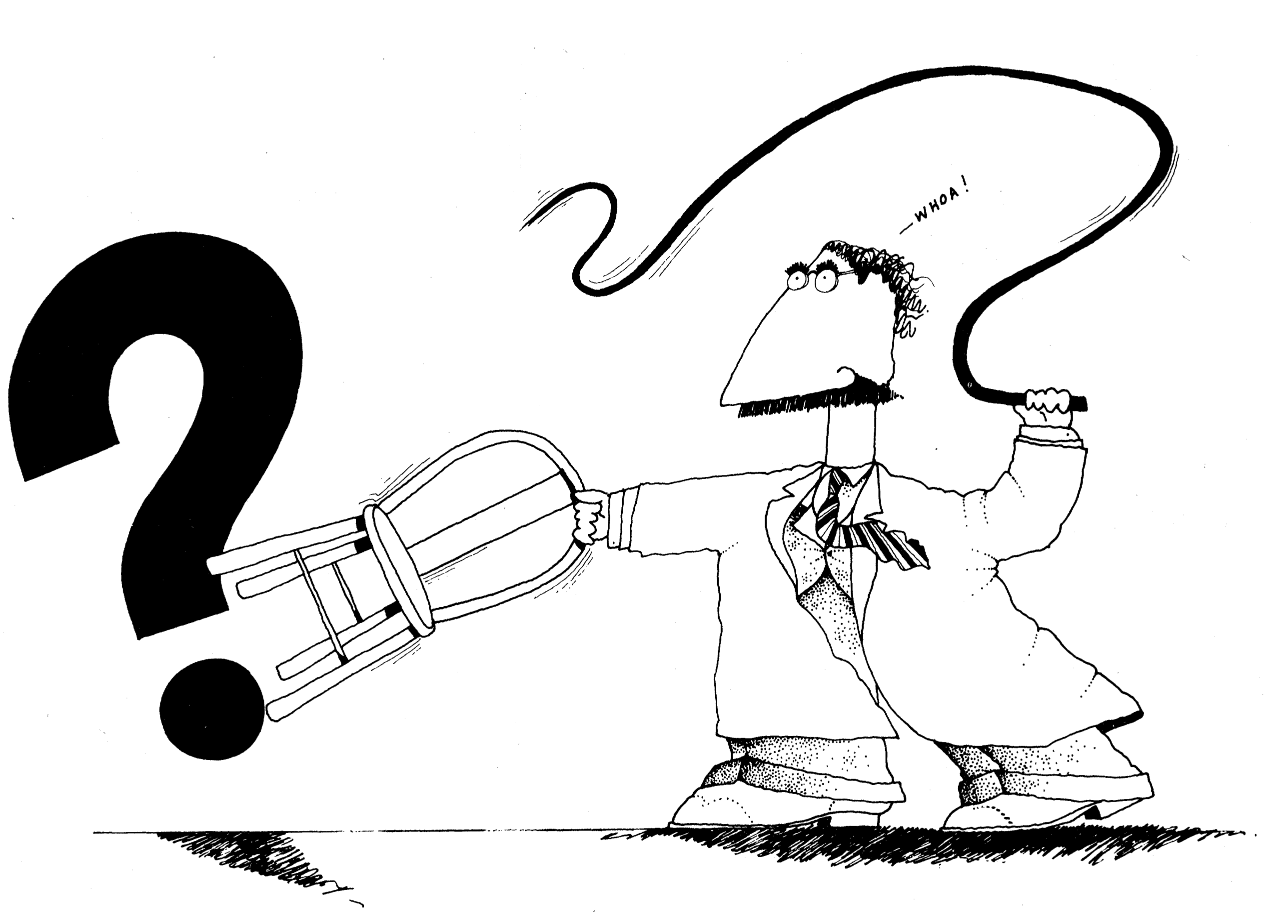
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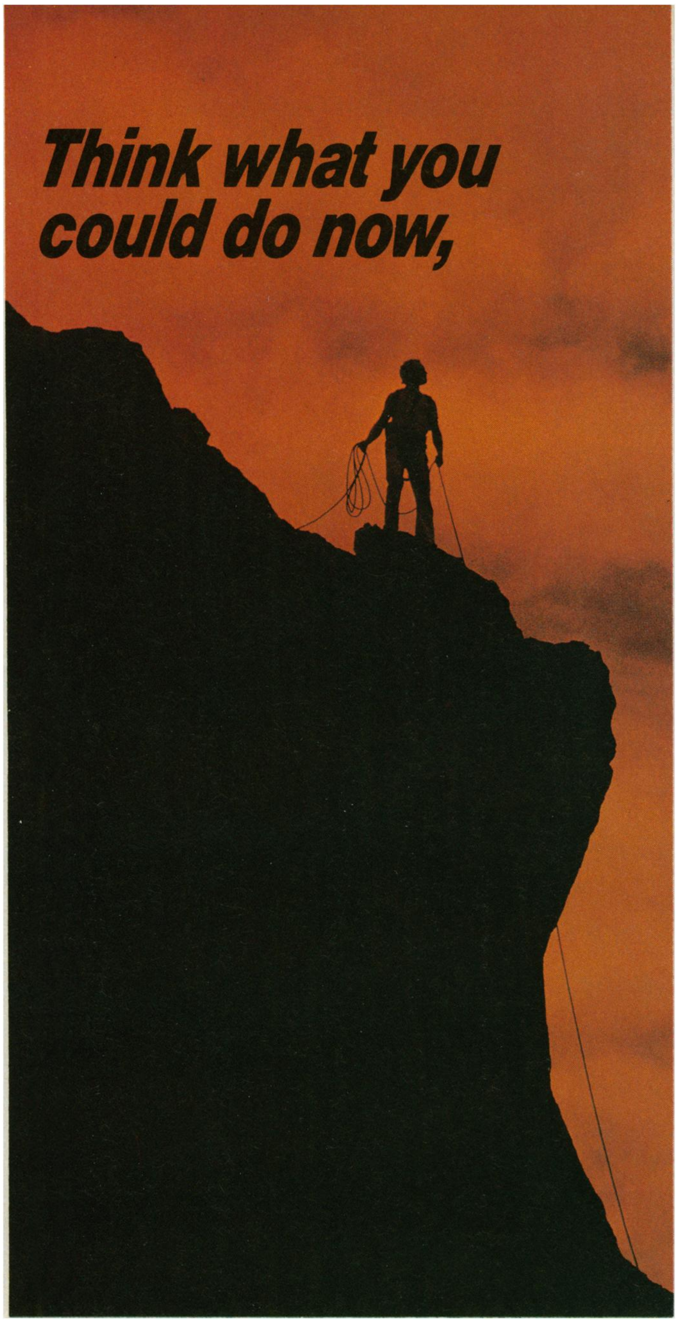

NEARLY FOUR YEARS AGO, a radical new technique called FPLC started to turn the heads of chromatographers. Before FPLC, "high performance" was a sometimes cliché used to describe what HPLC *could* do for small molecules and what Life Scientists *wanted* to do for large molecules. Hinging on monodisperse media and biocompatible instruments, Pharmacia opened the door to protein purification in minutes (compared to days).

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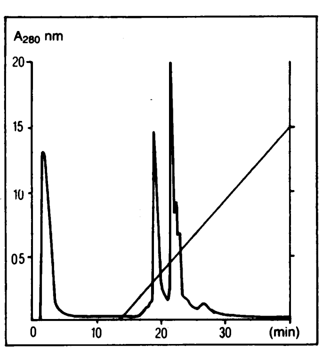
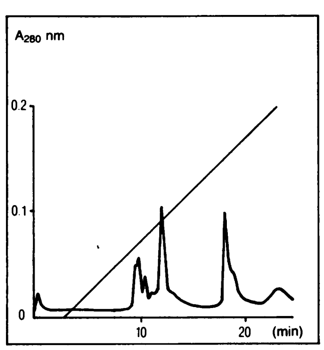
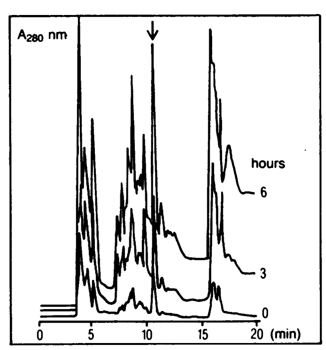


1. Single step purification of DNase I from crude material yields 7 mg in 25 minutes.



2. One-step separation of monclonal IgG from mouse ascites. Repetitive FPLC runs using the LCC-500 controller and motorized valves yields 7.5 mg/20 min.



3. Time study of β-galactosidase in an *E. Coli* fermentation broth shows optimal harvest time.

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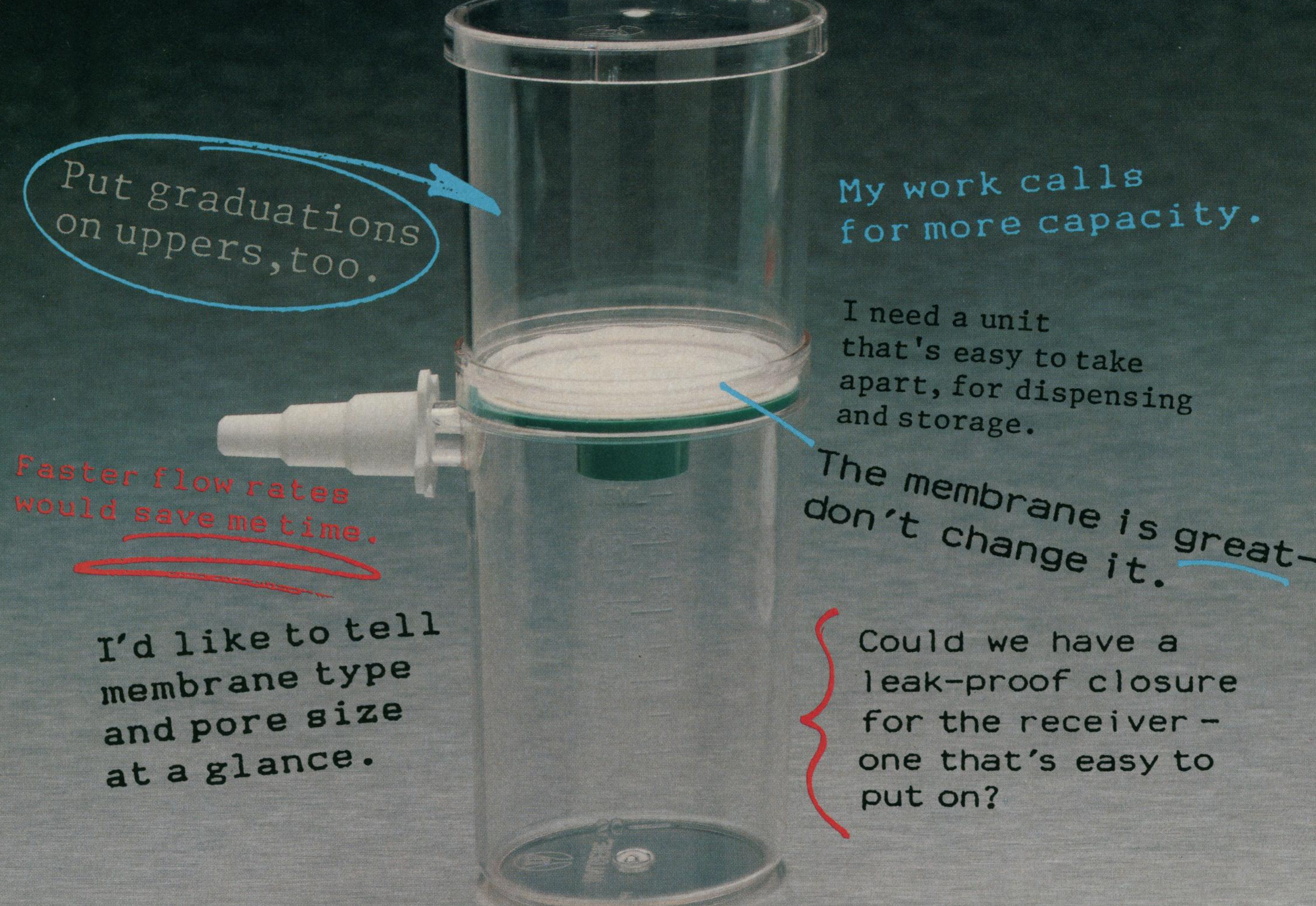
Pharmacia products will be on display at the Pittsburgh Conference—Booths 4005, 4007, 4009

You talked.



Nalgene® Disposable Filterware 1965 to 1985

When we redesigned Nalgene Disposable Filterware, we consulted the experts. You!
And now we're introducing a whole new generation of your favorite disposable filterware. Designed to make your work faster and more efficient than ever before.

Quarter-turn locking closure.
You asked for a two-part unit that's easy to use. You've got it! With a separate receiver designed for convenient dispensing and storage, and an easy-lock, leak-proof closure.

Just your size. You told us you wanted extra capacity. We listened! Now you can choose from 150-, 250-, 500- and 1000-mL sizes.

And if you prefer the original 115-mL design you've always used, it's still available.

The faster the better. You wanted to speed up your filtration work. We've helped by increasing the effective filtration area of our new design filter units by more than 25% for faster flow rates.

Measuring up. You wanted graduations on receivers and uppers for easy measuring. We did it! And you'll enjoy the convenience of receivers that match the sizes of your media bottles.

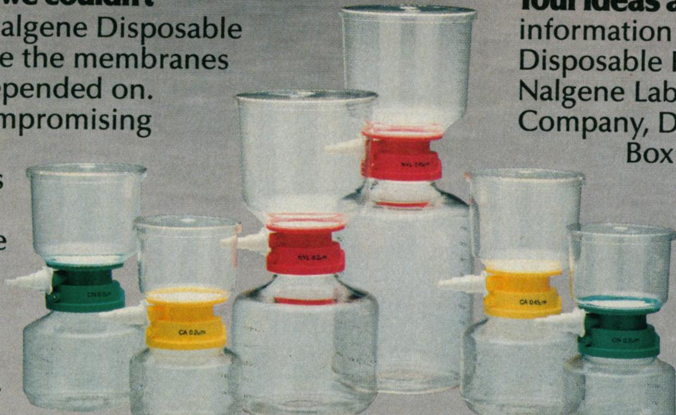
Instant identification. Take a quick look at the collar of any New Design Nalgene Filter Unit. It's color-coded by membrane material, and the pore size and membrane material are marked right on it. Because you asked us!

We listened.

Nalgene® Disposable Filterware 1986

But we didn't change what we couldn't improve. In New Design Nalgene Disposable Filterware, we didn't change the membranes or plastics you've always depended on.

You get the same uncompromising standards you expect from Nalge, because all materials are carefully tested for cytotoxicity and all units are guaranteed sterile. You won't introduce any variables whatsoever into your work. Nalgene Filterware... the name you've trusted for 20 years.



Your ideas are built right in. Get more information on New Design Nalgene Disposable Filterware. Write or call: Nalgene Labware Department, Nalge Company, Division of Sybron Corp., Box 365, Rochester, NY 14602, Telephone: (716) 586-8800 Telex 97-8242

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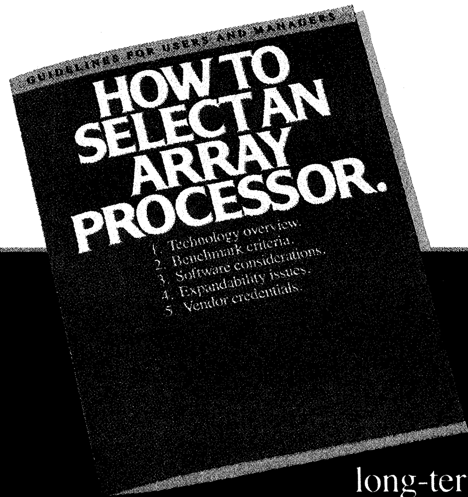
OF ARRAY PROCESSORS



To guide users and managers through all aspects of an array processor investment, Floating Point Systems has compiled this analysis of selection basics—including architectures, benchmarking, software considerations, long-term strategies and much more. For a copy, contact your FPS representative or call the toll-free number below.

Data Set	Array Processor Configuration	Execution Time	Effective MFLOPS	Comments
70 traces 2048 real samples per trace	FPS5420	0.323 sec	23.8	Uses a frequency domain convolution with a 1024 point complex operator. All computation performed on 2 coprocessors with calls from 5000 FORTRAN 77.
120 traces 1625 samples per trace 31 by 31 point operator	FPS 5410	33.60 sec	11.1	One coprocessor
	FPS 5420	17.12 sec	21.9	Two coprocessors
	FPS 5430	11.48 sec	32.6	Three coprocessors

Floating Point Systems products reflect ten years of experience as the leader of array processing. Our understanding of the technology and your application needs have resulted in the following solid capabilities:

Attainable Performance: Our architectures are tuned for attainable performance, not only for best-case MFLOPS. We perform benchmarks and post our run times to prove our performance on real applications.

Flexibility: The most expandable family, by far, of 32-bit array processors. All offer processing, I/O, and memory modules configurable to meet your application needs.

Comprehensive Software: The largest optimized subroutine library, coupled with a rich FORTRAN software development environment, ensures fast and cost-effective implementation of a range of applications.

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Call for Symposium Proposals

Chicago Meeting • 14–19 February 1987

AAAS members are invited to submit symposium proposals for the next Annual Meeting in Chicago, 14–19 February 1987. Please complete the form below, attach a "Synopsis of Objectives" (about 200 words), and send it to us **not later than 15 April 1986.**

We are particularly interested in symposia dealing with the latest developments in science and technology, and the implications of these developments for society. Coordinated contributed paper sessions are also welcome; inquire for details with this submission.

All symposium proposals are subject to review. If the information submitted is inadequate for reviewing, the proposal will be returned. Endorsement (sponsorship) by a AAAS Section Committee expedites the review process. It is therefore in the interest of the proposer to send a *copy* of the proposal to the appropriate Section Secretary (see "AAAS News" section in *Science* for names) for endorsement at the same time the original is sent to the AAAS Meetings Office.

Speakers should *not* be confirmed at this time; however, sufficient information about probable speakers and their topics should be provided to allow for evaluation of the proposal. Please note that AAAS does not pay honoraria to speakers.

Some Deadlines

June: You will be notified about acceptance, conditional acceptance, or nonacceptance of your proposal. Further information will be provided at that time.

July: Preliminary programs with confirmed speakers are due.

October: Final program copy, suitable for publication, is due.

AAAS ANNUAL MEETING Chicago 14–19 February 1987	**PROPOSED SYMPOSIUM** Submit not later than 15 April 1986	**Return this form to:** AAAS Meetings Office 1333 H Street, NW Washington, DC 20005 Telephone: (202) 326-6450

PRINCIPAL ORGANIZER (who will receive correspondence): TELEPHONE ______ (Area Code) (Number)

NAME ______ AFFILIATION ______

MAILING ADDRESS ______ (Street) (City & State) (Zip Code)

CO-ARRANGER (if applicable): TELEPHONE ______ (Area Code) (Number)

NAME ______ AFFILIATION ______

MAILING ADDRESS ______ (Street) (City & State) (Zip Code)

TITLE OF SYMPOSIUM ______

SPONSORSHIP (AAAS Section, Office, or Affiliate **only**) ______ No. of 3-hr. Sessions ______

Presider ______

Affiliation ______

1. Speaker ______
   Affiliation ______
   Topic ______
2. Speaker ______
   Affiliation ______
   Topic ______
3. Speaker ______
   Affiliation ______
   Topic ______
4. Speaker ______
   Affiliation ______
   Topic ______
5. Speaker ______
   Affiliation ______
   Topic ______

PLEASE ATTACH SYNOPSIS OF OBJECTIVES OF PROPOSED SYMPOSIUM (APPROXIMATELY 200 WORDS).

Eleventh Annual AAAS Colloquium on R&D Policy ✦ 26–27 March

R&D and the Budget Crisis

Preliminary Program

Wednesday, 26 March

8:00 am Registration

8:45 am Welcome
David A. Hamburg, *Chairman, Board of Directors, AAAS, and President, Carnegie Corporation of New York*

Overview of R&D in the FY 1987 Budget
Willis H. Shapley, *Consultant, AAAS R&D Budget Project;* Stephen D. Nelson, *Manager, Science Policy Studies, AAAS*

9:30 am Budgetary and Policy Context for R&D in FY 1987

Administration proposals for R&D, Gramm-Rudman-Hollings Act, overall budget and economic context, R&D community perspectives

Moderator: J. Thomas Ratchford, *Associate Executive Officer, AAAS*

Speakers: Edwin L. Dale, Jr., *Assistant Director, Public Affairs, Office of Management and Budget;* John P. McTague, *Acting Director, Office of Science and Technology Policy, Executive Office of the President;* Frank Press, *President, National Academy of Sciences*

12:30 pm Lunch (speaker to be announced)

2:15 pm Impacts of Federal Budgetary Cutbacks

Universities, industrial R&D, federal R&D laboratories

Speakers: Alan Schriesheim, *Director, Argonne National Laboratory;* Charles F. Cook, *Vice President of R&D, Phillips Petroleum*

4:30 pm Agency Perspectives on R&D in the FY 1987 Budget

Simultaneous small group sessions, highlights of major agency R&D budgets, congressional reactions, questions and discussion

Department of Defense: Leo Young, *Director, Research and Laboratory Management, Office of the Deputy Undersecretary of Defense for Research and Engineering*

Department of Energy: Joel A. Snow, *Director, Science and Technology Affairs, Office of Energy Research, DOE*

National Aeronautics and Space Administration: Frank B. McDonald, *Chief Scientist, NASA*

National Institutes of Health: Norman Mansfield, *Director, Division of Financial Management, NIH*

National Science Foundation: Sandra D. Toye, *Controller, NSF*

Environmental Protection Agency: Speaker to be announced

6:00 pm Reception

Thursday, 27 March

7:45 am Breakfast (speaker to be announced)

9:00 am R&D Community Responses to the Budgetary Situation: Charting a Course for the Stormy Future

Universities, engineering, private sector, overview

Panel: Robert Rosenzweig, *President, Association of American Universities;* Lewis Branscomb, *Vice President and Chief Scientist, IBM Corporation;* Don I. Phillips, *Executive Director, Government-University-Industry Research Roundtable, National Academy of Sciences;* Alvin W. Trivelpiece, *Director, Office of Energy Research, DOE;* John A. White, *Chairman, American Association of Engineering Societies*

12:45 pm Lunch

Presiding: Lawrence Bogorad, *President-Elect, AAAS;* Maria Moores Cabot, *Professor of Biology, Harvard University*

Speaker: Pat Choate, *Director, Office of Policy Analysis*

Concluding Remarks: William D. Carey, *Executive Officer, AAAS*

2:30 pm Adjournment

See reverse for registration form

11th AAAS R&D Colloquium
Washington, D.C.
26–27 March 1986

ADVANCE REGISTRATION FORM

S3

The Capital Hilton, 16th & K Streets, N.W., Washington, D.C.

Please Type or Print Clearly

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(last) (first and initial)

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REGISTRATION FEES

$165	Full (meals and publications)	$_______
$125	Partial (publications only)	_______
$ 60	Student (publications only)	_______

SEPARATE MEAL TICKETS

$ 20	Lunch, Wednesday (26 Mar.)	_______
$ 7	Breakfast, Thursday (27 Mar.)	_______
$ 20	Lunch, Thursday (27 Mar.)	_______
	TOTAL AMOUNT:	$_______

Packets will be mailed to preregistrants on about 12 March; registrations received after 12 March will be held at the AAAS Registration Desk in the Capital Hilton. **Refund Policy:** Advance registration fees and meal tickets will be refunded for cancellations received by 24 March; no refunds will be made on cancellations received after this date.

Registration fees include all sessions and publications; meals are included only with payment of full registration fee. All registrants receive *AAAS Report XI: Research and Development, FY 1987* before or at the Colloquium, published *Proceedings* after the meeting, and a supplementary report, *Congressional Action on R&D in the FY 1987 Budget,* in the fall.

Mail registration form to: AAAS Meetings, R&D Forum Registration, 1333 H Street, N.W., Washington, D.C. 20005

Capital Hilton Hotel Reservation

AAAS R&D Colloquium ◆ 26–27 March 1986

(Reservations received after 28 February cannot be guaranteed)

Send confirmation to:

Name ______________________ Street ______________________

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Other occupants of room: Name ______________________ Name ______________________

Room: ☐ Single ($115)* ☐ Double ($135)* ☐ Twin ($135)* *Add 10% D.C. sales tax and $1 occupancy tax.

Arrival: Date __________ Time __________ **Departure:** Date __________ Time __________

Be sure to list definite arrival and departure time. Check-in time is 3:00 p.m.; check-out time is 12 noon.

Special housing needs due to handicap ______________________________

Enclose separate check, made out to **The Capital Hilton,** for first night's room deposit or provide major credit card information:

Credit Card Name ______________ Number ______________ Expiration Date __________

Cardholder's signature ______________________________

Mail hotel reservation form to: Reservations, The Capital Hilton, 16th & K Streets, N.W., Washington, D.C. 20036