BETTER STILL, THEY'RE ALL GLASS

Now there's a CORNING[®] all-glass water distillation unit to meet *your* need for quantity, anybody's need for purity. From 1 liter per hour to 10 liters per hour.

For instance our brand new AG-3 is capable of delivering over 3 liters of ultrapure water every hour. All its wet surfaces are glass—or Teflon*—to guarantee maximum purity, easy cleaning, and full visibility. Single distillation gives you water with resistivity of 1.7 megohms-cm; pyrogen-free per U.S.P. XVII; total solids 0.3 ppm.

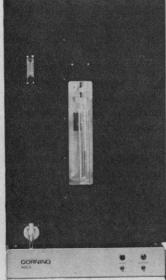
The new standards come from

Are your pure water requirements different? Then consider our AG-1a and AG-10a models shown below. Like the AG-3, they feature all-glass components. All 3 units are compact enough to sit on a bench or floor, or hang on the wall. If you're going to more trouble and ending up with less purity, see your Corning dealer, or send for our new bulletin that describes all of the CORNING distillation units. Corning Glass Works, Laboratory Products Department, Corning, N.Y. 14830.





MODEL AG-1a delivers 1.4 liters per hour of all glass distilled water.



3 liters per hour, as described

NEW AG-3

above.

MODEL AG-10a 10 liters per hour; same high purity, same ease of operation.

17 MARCH 1967

Du Pont reg. trademark



POSITIONS WANTED

Biochemist, Ph.D., 29. Two years' postdoctoral experience in enzymology and genetics. Interested in appointment at university, research institution, or pharmaceutical company. Box 355, SCIENCE.

Biochemical Physiologist, M.D. 1961, M.S., 1962. Postdoctoral experience in the field of muscle bio-chemistry, teaching experience, publications; NIH and MDAA grant awardee; muscle biochemistry, muscular dystrophy, and related fields, research and teaching position desired. Available Septem-ber 1967. Box 352, SCIENCE. 3/24, 31; 4/7

Biologist, Ph.D. Computer oriented. To develop departmental or other computer facility, have own research program. Box 332, SCIENCE 3/17

Biologist M.S. plus year of oceanography with 7 years of teaching experience desires teaching and/or research position in aquatic biology. Box 376, SCIENCE. X

Biologist, Ph.D. Genetics, botany, general biology, postdoctoral work. Five years' university teaching experience, including charge of mass-media teach-ing. Seek academic post in West Coast college. Box 356, SCIENCE. X

Biophysicist, Chemist, Ph.D., M.D. Broad back-ground in chemistry, physics, physiology. Numer-ous publications. Areas of experience include bio-logic mechanisms, isotope techniques, fractiona-tion procedures, interdisciplinary problems. Seeks position as senior faculty member in university or industrial research. Box 357, SCIENCE. 3/24

Cell Biologist. Embryology, molecular biology, electron microscopy, tissue culture. Desires posi-tion in university or college with research. South-west, West, Far West. Teaching experience, publi-cations. Box 358, SCIENCE.

Cytologist-Plant Physiologist, Ph.D. Teaching ex-perience, postdoctoral research, prefer teaching/ research position. Box 359, SCIENCE. X

Embryologist, Ph.D. Histology minor. Ten years' experience research and teaching. Publications. Desires to relocate. Wishes academic teaching/research position. New England or Western states. Box 360, SCIENCE. X

Entomology, Ph.D. Insect physiology and toxicol-ogy. Three years' postdoctoral research. Desires research, academic, industrial position. Box 361, SCIENCE. X

Geneticist, Ph.D., 1959. Biology teacher. Many research publications in fungal genetics, molecu-lar biology, and plant pathology. Seeks teaching and research position. Box 362, SCIENCE. X

Medical Writing, rewriting, editing, literature searches. More than 15 years' experience. Ex-cellent references. Free-lance. Box 363, SCIENCE.

Microbiologist-Biochemist, Ph.D. Widely exper-ienced in industrial fermentations; approaching re-tirement age, but desires to remain active. Desires research and/or teaching position with an aca-demic or research institute. Objective of research and teaching of main importance. Midwest pre-ferred. Box 364, SCIENCE. X

Neuroanatomist, Ph.D., M.D. Extensive academic research, administrative experience and teaching. Presently at a top Eastern school. Desires to relocate. Box 365, SCIENCE. X

Organic Chemist. Ph.D. Experience includes mechanism research, organic fluorine chemistry, and biochemical synthesis. Desires teaching with research opportunities or research position. Box 366, SCIENCE. X

Pharmacologist, D.V.M., Ph.D. Extensive teach-ing, research background in medicine, compara-tive pharmacology; administrative experience. De-sires academic or industrial position. Box 367, SCIENCE. 3/24

Pharmacologist, M.S. Seeks administrative posi-tion in industry or contract research house. Four years' industrial experience at the bench and in report writing. Seeks growth potential. Box X

Physicist, Ph.D. Administration, research, or teaching. Academic and industrial experience. Grants and publications. Box 369, SCIENCE. X

Plant Biochemist-Physiologist, Ph.D. Sceks teach-ing and research or research position. Experi-enced in photosynthesis, radiobiology, ultrastruc-ture, and instrumentation. Available August, Box 374, SCIENCE. X

tem-X Senior Physiologist-Biochemist. Requests porary appointment. Box 370, SCIENCE.

17 MARCH 1967

POSITIONS WANTED

Professor from California, extraordinary teacher, biology, physiology. Thirteen years' experience, few publications. Offer me research and teaching freshman. Recommendations, vita. Dr. Charles E. Smith, Biology, San Jose State College, San Jose, California 95114. 3/17, 24, 31; 4/7

Vertebrate Zoologist. Ph.D., age 29, postdoc-torate, teaching experience. Seeks research/teach-ing position. Publications. Box 371, SCIENCE

Veterinarian with extensive experience in large primate colony and research desires challenging position combining laboratory animal medicine and research. Box 342, SCIENCE. 3/17

Virologist, Ph.D. Publications. Desires teaching/ research or research position at medical or veteri-nary school or government laboratory. Box 372, SCIENCE. 3/24

Zoologist, 38, M.D., Ph.D. Teaching and research experience. Desires academic position that in-cludes teaching and/or student health work. Box 373, SCIENCE. X

POSITIONS OPEN

INVITATION TO PROFESSIONAL CAREERS (a) Biochemistry Director, supv lab, teach techs; conduct research; large univ hosp w academic rank; to \$25,000; E. (b) Physiologist/Biochemist supv many research projects & techs; \$10,000 up; fine lab large med school; MidW. (c) Chief Toxi-cologist drug, chemical evaluations; heavy respon-sibility; \$20,000 up; research labs; E. (d) Virol-ogist oncogenic studies, leading radiation lab; high salary; MidW. (e) Biochemist/Physiologist teach, research appoint; \$12,000-\$15,000; speciality col-lege; Calif. (f) Anatomist Dept Chief; supv senile diseases research; new gerontology inst, univ affil; \$10,000-\$15,000; E. (g) Psychologist mental health center; \$16,000; SE. R.S.V.P. WOODWARD MED. PERS, BUREAU, 185 N. WABASH, CHICAGO 60601. X

LAB . . .

LAB... CHIEF CHEMIST CLINICAL CHEMISTRY SUPERVISOR Ph.D. preferred. M.S. or equiv. considered. Organize & direct Chemistry Div. of 400-bed teaching hospital. Opportunity for career growth. Liberal Education Benefit. Send resume to: Box S 236, 125 W 41 St., NYC 36. An Equal Opportunity Employer

CHEMISTS Biochemistry, Clinical CROBIOLOGISTS M **Bacteriology**, Virology

The National Communicable Disease Center of the Public Health Service offers ex-citing and challenging careers for Ph.D. scientists in the Career Federal Service. Excellent salaries and generous benefits apply. For more detailed information about the Center and these positions, write to: Jimmy L. Pedigo, Chief Recruitment & Placement, Personnel Management, National Communicable Disease Center, Atlanta, Ga. 30333 An Equal Opportunity Employer

VIROLOGIST AND IMMUNOLOGIST Two microbiologists, as noted above, are required on April 1, 1967, by the DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY, MED-ICAL COLLEGE, UNIVERSITY OF MANI-TOBA, BANNATYNE AND EMILY STREETS, WINNIPEG 3, MANITOBA, CANADA. The virologist should have a particular interest in basic aspects of medical virology. The immunol-ogist should be competent in immunochemistry. The department has an active research program and is responsible for teaching medical and dental undergraduate students and graduate students. These new members will be able to prosecute their own interests in research and will be respon-sible for some teaching, chiefly of graduate students.

Applicants should indicate their paritcular inter-ests and submit curriculum vitae to Dr. J. C. Wilt, Professor and Head of the Department, at the above address, as soon as possible.

POSITIONS OPEN

CHEMIST: M.S. or experienced B.S. Experienced in clinical biochemical procedures and modern analytical methodologies. Opportunities for academic advancement. Please write to: Hipolite V. Nino, Ph.D., Clinical Biochemistry Laboratory, North Carolina Memorial Hospital, University of North Carolina, Chapel Hill, North Carolina 17514.

Clinical Chemist, M.S. or equivalent, to super-vise chemistry laboratory in a 523-bed teaching hospital. Strong interest in development work preferred, attractive salary. Apply: Sam Frankel, Ph.D., Director, Division of Biochemistry, De-partment of Laboratory Medicine, Jewish Hospi-tal, 216 S. Kingshighway, St. Louis, Mo. 63110.

Biochemist, M.D. and/or Ph.D. for a 523-bed teaching hospital affiliated with adjacent Wash-ington University Medical School to join two Ph.D. Biochemists. Excellent facilities and growth potential, attractive salary, part-time responsibil-ity in either clinical chemistry or endocrinology laboratory, strong research interest. Apply: Wil-liam E. Stehbens, M.D., Ph.D., Pathologist-in-Chief and Director, Department of Laboratory Medicine, Jewish Hospital, 216 S. Kingshighway, St. Louis, Missouri 63110.

COMPUTER APPLICATIONS

A new position has been established by a leading scientific instrument company for a computer applications coordinator.

This man will play a leading role in planning and implementing marketing and sales efforts in life science research computer applications.

He will recommend software and share in the responsibility of training company personnel in computer applications.

He will recommend product development, consistent with the needs and opportunities in the life science research market.

Applicants should have a knowledge of programming for scientific applications, and one to three years applicable experience in an educational, research, or corporate environment. Interest in scientific product applications and in progressing to increasingly responsible positions in marketing management is desirable.

Box 378, SCIENCE

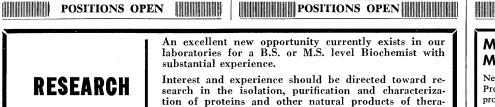
FACULTY POSITION: Position in Biology starting September, 1967. Ph.D. preferred. Interest in General Science, Microbiology desirable. Salary and rank depending upon qualifications. Write: Director, University of Hawaii, Hilo, Hawaii.

MEDICAL TECHNOLOGIST

Unusual and excellent opportunity for an experienced, versatile, competent, and ambitious person with managerial ability. Enclose Curriculum Vitae.

> Physicians Clinical Laboratory 425 East Washington Street Ann Arbor, Michigan

SCIENCE EDITOR/WRITER. To edit, help re-vise, and occasionally rewrite journal article manuscripts, monographs, etc., and to write semi-popular science articles. Applicants should have some background in physical science, and excel-lent language skills. We are a non-profit basic re-search organization, supported by the National Science Foundation, devoted to advancement of some of the most challenging areas in the at-mospheric sciences. Write Personnel Department, National Center for Atmospheric Research, Boul-der, Colo. 80302. An Equal Opportunity Employer



tion of proteins and other natural products of therapeutic importance.

To learn more about this position, send a brief de-scription of your professional background or call J. R. Grover collect (815) 932-6771. Our representatives will also be at the Federation meetings.

ARMOUR PHARMACEUTICAL COMPANY

P.O. BOX 511

BIOCHEMIST

An Equal Opportunity Employer

KANKAKEE, ILL.

RUSSIAN TRANSLATORS

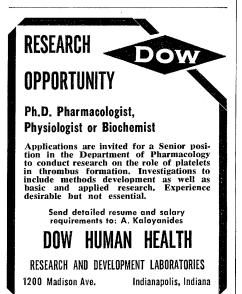
Scientists, graduate research students, and junior lecturers in all branches of science and technology.

Immediate openings for qualified candidates who have English as a native language, a good command of Russian and who are actively participating in their field of interest.

Our expanding translation activities reflect work in the forefront of research. Steady employment is assured all suitable applicants.

Please contact Translations Editor, The Faraday Press, Inc., 84 Fifth Avenue, New York, N. Y. 10011.

Two positions in GEOGRAPHY. Rank and salary depend upon qualifications. Openings for physical geography and human geography. Will consider M.A. C. W. Dierickx, ITCCN, 5500 N. St. Louis, Chicago, III. 60625.



An equal opportunity employer

UNIVERSITY OF OTTAWA-Department of Chemistry Applications are invited for two ASSISTANT PROFES UNIVERSITY OF OTTAWA-Department of Chemistry Applications are invited for two ASSISTANT PROFES-SORSHIPS, one in the field of ORGANIC CHEMISTRY and one in INORGANIC CHEMISTRY. It is intended to appoint candidates who would, respectively, develop active programmes of research in these two fields. Salary in the range of \$9,000-\$10,000 with a contribution to-wards moving expenses. Medical insurance and pension benefits included. Applications, with a curriculum vitae, list of publica-tions and the names of two referees, should be sent as soon as possible to Professor B. E. Conway, Chairman, Department of Chemistry, University of Ottawa, Ottawa 2, Ontario, Canada.

CHIEF MICROBIOLOGY

400 Bed Expanding General Hospital Offers Excellent Opportunity For a Clinically Oriented Microbiologist, Outstanding Research Facilitles and Opportunity for Re-search, Will Direct and Supervise Staff of Four Micro-biologists in Bacteriology, Mycology and Parasitology. Th.D. preferred with Starting Salary of \$13,500. Full Benefit Program, Send Resume to Dr. H. L. Wolin, The Brookdale Hospital Center, Brookdale Plaza, Brook-lyn, N.Y. 11212.

Opportunity for Just-Graduated or Young Ph.D. to work on Steroid Hydroxylations in Adrenal Glands. Physiology-biochemistry background preferred. Inquiries to Dr. Peron, Director of Steroid Training Program, Worcester Foundation for Experimental Biology, Shrewsbury, Mass.

A Fair Employment Practices Employer

PLANT BIOCHEMISTRY Graduate Research Assistantships, enzyme isolation, protein metabolism, M.S. and Ph.D. programs. David Racusen, Hills Bldg., University of Vermont, Burlington, Vt. 05401.

Predoctoral Traineeships in Biochemistry are available at the University of Kentucky to quali-fied applicants who are U.S. citizens. Stipends for first-year Trainees are \$2,400 plus tuition, plus a \$500 allowance for each dependent. The department is well equipped and the research in-terests of the staff are diverse. Inquiries should be addressed to Dr. George W. Schwert, Chair-man, Department of Biochemistry, Medical Center, University of Kentucky, Lexington, Kentucky 40506.

Research Assistant or Graduate Assistant. An excellent opportunity to pursue an advanced degree in physiology or bioengineering while working in environmental physiology research. Write for details to: Dr. Rodney Rhoades, Center for Air En-vironment Studies, 301 Engineering Unit "C," The Pennsylvania State University, University Park, Pa. 16802.

POSITIONS OPEN

MEDICAL ELECTRONICS MARKETING

New position open for a Medical Electronics Product Manager to head our rapidly growing program. Responsibilities include planning and coordinating Medical Electronics product development, promotion, and worldwide mar-keting. Position is Chicago-based, with growth-oriented instrument subsidiary of a major pharmaceutical company. Moderate travel. Applicants should have one to five years applicable experience. High promotability. Salary open. An equal opportunity employer.

Box 375, SCIENCE

RADIATION BIOLOGY—Two appointments starting Sep-tember 15, 1967. To teach general and advanced courses, and direct research in an expanding graduate-level pro-gram. Program located in new OSU Radiation Center, Require Ph.D. with broad background in field. Salary and rank commensurate with qualifications and experience.

GENERAL BIOLOGY—One appointment starting Sep-tember 15, 1967, Require Ph.D. with background in De-velopmental Biology, Radiation Biology, History of Biol-ogy, or other interdisciplinary areas of Biology. Involves participating in teaching General Biology course and up-per division-graduate courses in area of specialization, plus directing graduate research. Salary and rank com-mensurate with qualifications and experience. Send resume to: Dr. Denald G. Humphrey, Chairman, Department of General Science, Oregon State University, Corvalis, Oregon 97331.

COURSES

SUMMER COURSE IN TISSUE CULTURE

SUMMER COURSE IN TISSUE CULTURE The University of Saskatchewan, Saskatoon, Canada, will sponsor a special summer course in tissue culture from August 16 to September 16, 1967, with S. Fedoroff and J. F. Morgan as course coordinators. Laboratory work, discussions, seminars and lec-tures will cover the basic principles of mam-malian and plant tissue culture and the applica-tion of these techniques to cell physiology, cytol-ogy, biochemistry, virology, genetics and oncol-ogy, biochemistry, virology, genetics and oncol-ogy, biochemistry, virology, genetics and oncol-ogy. The course is intended primarily for individuals with doctor's or master's degrees but other applicants will be considered depending on available space. The fee for the course will be \$140. University residence accommodation will be available at \$7.00 per day, including meals. Applications should be submitted by March 31, 1967.

Inquiries should be directed to Adult Educa-tion Service, Extension Division, University of Saskatchewan, Saskatoon, Canada.

MOUNTS WANTED



The Market Place

BOOKS . SERVICES . SUPPLIES . EQUIPMENT

SUPPLIES AND EQUIPMENT

SPRAGUE-DAWLEY, INC. Pioneers in the development of the STANDARD LABORATORY RAT. P.O. Box 4220 Madison, Wisconsin CE 3-5318

SCIENCE, VOL. 155

The hope of doing each other some good prompts these advertisements

Mr. Fudge, the manganese man

Pressure is building up these days on Thomas S. Fudge, a sales executive of Eastman Chemical Products, Inc. (Subsidiary of Eastman Kodak Company). By 1975 his success in responding to it should be apparent from a map of the United States that plots the extent and severity of manganese deficiency in American soil. Tom Fudge is expected to make the Mn-deficient acreage shrink and shrink.

Manganese is the one and only trace element in soil that directly concerns Mr. Fudge. Zinc, copper, vanadium, and other trace elements are also important to agriculture but not in a business way important to Tom Fudge. Only manganese.

Will alleviation of manganese deficiency vastly improve the quality of human life in this land? It is probably too much to expect.

What, then, is putting the pressure on Mr. Fudge? You will find that the answer is quite difficult to believe, but here it is anyway: *the success of* KODAK INSTAMATIC[®] Cameras.

In point of fact, these cameras have made picture-taking so simple and rewarding that there has been a vast upsurge in the number of pictures taken and consequently in the demand for photofinishing service, for photographic developer, and ultimately for the hydroquinone that goes into most of it. We make hydroquinone by a process in which manganese dioxide enters and manganese sulfate comes out. Manganese sulfate is therefore coming out pretty fast at present. Would you have us dump it somewhere? You wouldn't like that one bit, and neither would weparticularly since our hydroquinone plant takes the same insoluble MnO₂ that some people try to use in fertilizer and changes it to a fully soluble source of those Mn^{++} ions without which, for example, citrus groves on impoverished soil languish in chlorosis.

And that is why, when Tom Fudge of Eastman Chemical Products, Inc., Kingsport, Tenn. 37662, goes about insisting on the importance of the trademark TECMANGAM in soil improvement he is performing a reasonable, beneficial, and highly unusual role. It comes in 50-lb bags. Ask Tom for pertinent experiment station literature.

Adventure in TLC

In the interests of further extending TLC on precoated scissorable media, our French affiliate Kodak-Pathé has sent us a modest quantity of a new EASTMAN CHROMAGRAM Sheet to let Americans try. Our colleagues at Vincennes have produced a thin, microporous layer of polyamide with a structure that eludes

the optical microscope but is shown by electron microscopy to be a sponge of filaments and membranes with globular chambers and connecting canals. In the large it looks about as chalky white as the now familiar silica gel- or aluminacoated CHROMAGRAM Sheet, but in chromatographic behavior it differs greatly from them and from glass plates coated with polyamide powder. Whether different means better depends on what you are trying to do. Those who discover its great worth will have no cause to share glory, for they will have done it with little help from us, beyond a hint that the medium seems particularly promising for the separation of phenolic compounds, low-MW aromatic nitro compounds, and 2,4-dinitrophenylhydrazones of aldehydes and ketones.

The material on the poly(ethylene terephthalate) support is a sorbent for partition chromatography. It requires no activation. A liquid stationary phase of water, aqueous buffer solution, a complexing solution, or dimethylformamide can be introduced before spotting. This leads to the possibility of combining partition TLC in one dimension with electrophoresis in the other.

The very special feature appears when

after migration the coating is exposed to ethanol vapor. The porous polymeric structure thereupon collapses and becomesastrong, strippable transparent film – transparent



down to $240m\mu$ for transmission spectrophotometry.



There are a few more facts we can and should send you about the new material, but not many more. The facts are of little value without a box of the sheet: \$25.30 for twenty sheets, 20 x 20cm. Please specify Type K541 V for this adventure. (EASTMAN CHROMAGRAM Developing Apparatus is priced \$35.50.) From Distillation Products Industries, Rochester, N.Y. 14603 (Division of Eastman Kodak Company).

Prices subject to change without notice.

Single concept



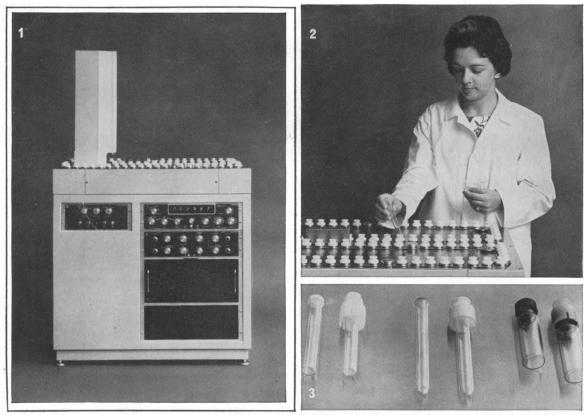
This, in some educators' jargon, is a singleconcept film. From the armamentarium of up-to-date primary and secondary school techniques, we commend it to the attention of those who feel moved to scrutinize for reasonableness the traditional practices governing lab sections for college freshmen and sophomores.

A single-concept film is not supposed to be a very fancy affair. It is nothing at all like a movie that costs \$60,000 to produce. It might run no more than 8 feet long, or it might run as long as 50 feet-whatever is required to show what needs to be shown and no more. The student consults it as he would a page in a lab manual. If he consulted it before performing an assigned lab exercise, just watching the film a few times could take the place of the part of the exercise that answers the questions already answered long ago by the founding fathers of the science. He could then use the precious actual lab time to answer some more profound questions that you might propound.

Now is the right time for college teachers or any teachers, for that matter—to start thinking about what they would like to have happen in single-concept films. New standard formats are shaping up so that the same old tiresome operating problems need not be solved over and over again. We have worked out a cartridge design that other manufacturers can adopt. The new and higher-quality super 8 films that you will buy or make can be easily loaded into it for instant use on special study-type projectors, easily kept track of in school, and easily unloaded for showing on any of the vast number of super 8 projectors already waiting in private homes.

We have been out talking to publishers. We tell them our ideas about hardware, about how to bring films into existence and before the eyes and ears of the students at the lowest possible cost. We beg to be told where we are wrong, for we are not teachers.

To join the dialogue as a purveyor of curriculum materials, as an educator, or as a professor who would never be happy with material not of your own creation, address some questions to Eastman Kodak Company, Motion Picture and Education Division, Rochester, N. Y. 14650.



1. Model 4222 Dual-Channel System. 2. Convenient, foolproof sample loading. 3. Sample changer accepts three sizes of sample bottles.

NEW AUTOMATIC COUNTING SYSTEMS FOR 100 GAMMA SAMPLES

For counting large numbers of gamma samples, one of Nuclear-Chicago's four new BIOSPANTM Gamma Counting Systems will fill your exact requirements with unprecedented reliability and convenience.

These automatic systems can significantly reduce your work load and deliver accurate, reproducible data in minimum time. Consider their superiorities and benefits:

Performance-proved sample changer—Can be programmed to count selected groups of samples and to repeat-count every sample for verification of statistical accuracy. New solid-state programming logic increases reliability and minimizes service requirements.

Simple, versatile sample loading —Systems accommodate standard test tubes and small- or largevolume capped bottles—all in a single counting run, if desired, and without special adapters.

Two individually adjustable counting channels—For analysis of dual-labelled or intermixed samples or both in a single counting run. Systems available with printing calculator for automatic determination of counts per minute in each channel and of isotope count-ratios,

Low, constant background— Special shielding and detector mounting techniques make background variation statistically negligible for most isotopes throughout a counting run. Automatic background subtraction further increases statistical accuracy for low-count samples.

Printed readout of all sample data—Sample number, time, and count recorded for every sample. Sample numbers on changer are synchronized with sample number readout.

Select according to your needs— Four new models are available in the 4200 Series of Gamma Counting Systems. Choose either the single- or dual-channel system, each with 2- or 3-inch diameter Nal(TI) crystals.

To determine which of these systems best meets your specific counting needs, please consult your Nuclear-Chicago sales engineer or write directly to us.





349 East Howard Avenue, Des Plaines, Illinois 60018, U.S.A./Donker Curtiusstraat 7, Amsterdam W, The Netherlands.