Suggestions for Contributors to *Science*

These suggestions, if followed by authors, will serve to expedite the reviewing and processing of articles and to reduce appreciably the costs of processing and printing.

Every article, communication, or book review is accepted with the understanding that it has not been published or accepted for publication elsewhere. (Occasionally an important article is reprinted from another periodical, usually one not readily available to readers of *Science,* but this is always done by special arrangement with the author.)

An article should receive a thorough review before submission, if possible by someone other than the author. If a manuscript is returned to an author for a thorough revision, the revision date will be regarded as the "Received" date for the article.

The manuscript should be submitted in duplicate. For the first copy, use a good grade of 8.5- by 11-in. nontransparent paper. *All copy, including quotations, footnotes, tables, literature references, and legends for figures, should be double spaced.* Leave margins of at least 1.5 in. at the sides and at the top and bottom.

Acceptable lengths for articles. See *Science* **119**, 3A (Jan. 29, 1954).

Illustrations. A brief legend should be provided for every diagram and photograph. It should *not* be incorporated in the figure. All legends are set in type by the printer and, hence, should be gathered together on a separate sheet.

On the margin or back of each illustration, write in pencil the number of the figure, name of the author, and abbreviated title of the article. All illustrations should be packed carefully with cardboard to avoid damage in mailing. Cracks and marks made by paper clips or pressure of writing ruin photographs for reproduction.

Line drawings should be made with India ink on heavy white drawing paper or blue tracing cloth. A good size for a drawing is twice that desired for the printed figure, with all lettering and line thicknesses similarly enlarged. One-column-width illustrations are reproduced 3 in. wide; full-page-width illustrations, 6⅛ in. wide.

Diagrams containing little detail should be planned so that the printed figure can be made one column wide or less. For presenting apparatus, particularly if it is complicated, a line drawing is usually better than a photograph.

If a graph is drawn on coordinate paper, the paper must be blue lined. Lines that are to be reproduced should be ruled over in black and made thinner than the lines of the curves and those of the frame.

Photographs should have a glossy finish. For satisfactory reproduction, a print must be unblurred and must show sharp contrast between light and dark areas.

Tables. Each table should be typed on a separate sheet and should be provided with a title. Tables should be numbered consecutively with Arabic numerals.

References and notes. To improve readability and reduce printing and processing costs, the following changes in style are now in effect with all newly received manuscripts.

The only footnotes are to be those appended to the title of the article, to the author's name, or to tables. All other explanatory notes, together with literature references, are to be numbered consecutively and placed at the end of the article, under the heading "References and Notes." These and other changes in style are illustrated by the following example:

References and Notes

1. R. S. Adams and C. E. Watson, *J. Biol. Chem.* **147**, 460 (1943).
2. Dicumarol is the trademark for. . . .
3. S. H. Aston, *An Introduction to Biochemistry* (Street & Smith, New York, ed. 3, 1948), p. 36.
4. White's determination of this factor involves. . . .

We hope that readers will not be too impatient if mixtures of style occur in the next several issues. Articles already in type will not be altered.

SCIENCE, founded in 1880, is published each Friday by the American Association for the Advancement of Science at Business Press, Lancaster, Pa. Entered at the Lancaster, Pa., Post Office as second class matter under the Act of March 3, 1879.

All correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D. C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors.

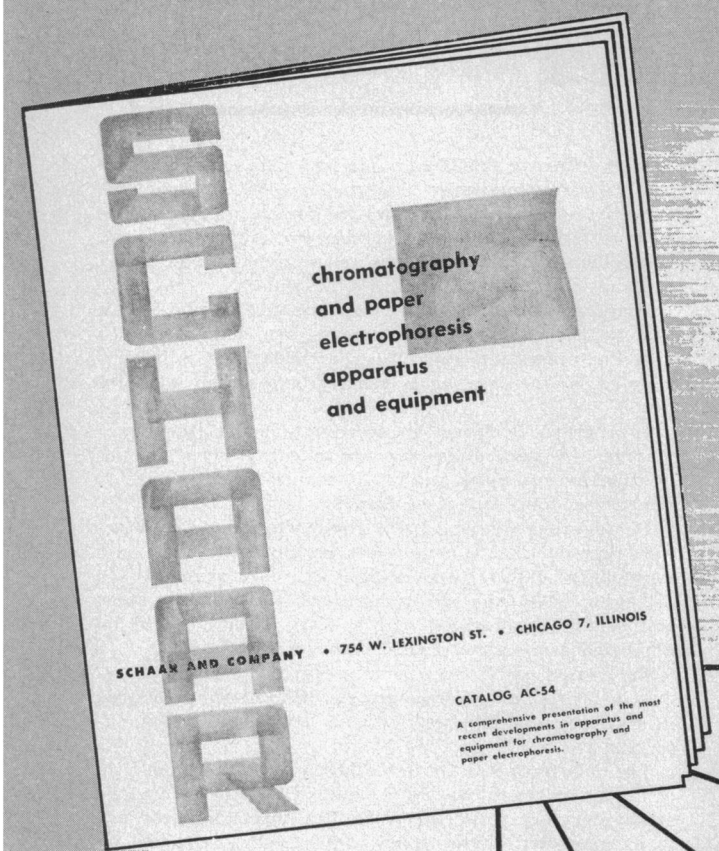
Change of address: The notification should reach us four weeks in advance. If possible, please furnish an address stencil label from a recent issue. Be sure to give both old and new addresses, including postal zone numbers, if any.

Annual subscriptions: $7.50; foreign postage, outside the Pan-American Union, $1.00; Canadian postage, 50¢. Single copies 25¢. Special rates to members of the AAAS.

SCIENCE is indexed in the *Reader's Guide to Periodical Literature.*

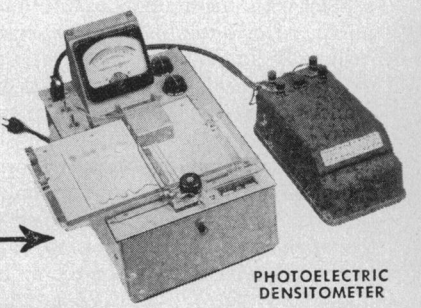
The AAAS also publishes THE SCIENTIFIC MONTHLY. Subscription and advertising rates will be furnished on request.

Presenting The New SCHAAR Catalog for
CHROMATOGRAPHY and PAPER ELECTROPHORESIS

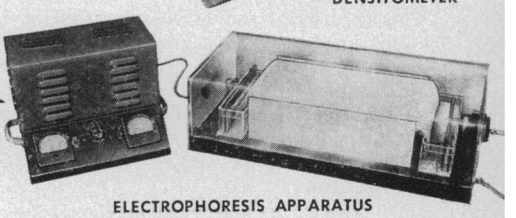


Keeping pace with the growing use of chromatographic analysis as an important research tool, Schaar and Company is ready to serve you with a complete range of the finest equipment and accessories used in the chromatographic method. We are proud to present this catalog to you, and feel sure it will prove an invaluable aid.

FOR YOUR COPY WRITE FOR CATALOG AC-54

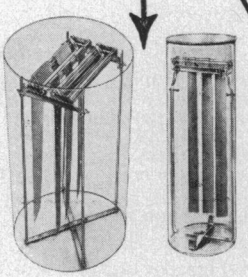


PHOTOELECTRIC DENSITOMETER

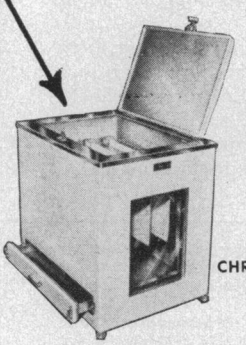


ELECTROPHORESIS APPARATUS

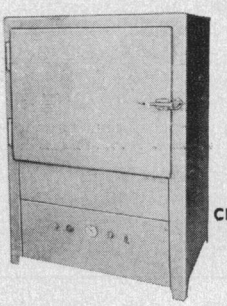
- CELLULOSE POWDERS
- STAINLESS STEEL CLIPS
- DISC CHAMBERS
- FILTER PAPERS
- "PYREX" JARS
- ULTRA-VIOLET LAMPS
- ULTRA-MICRO PIPETTES
- SOLVENT ASSEMBLIES
- INDICATOR SPRAY BOTTLE
- SUPPORT RACKS
- CHROMATOGRAPHIC TUBES



COMPLETE CHROMATOGRAPHY JAR SET-UPS



CHROMATOGRAPHIC CABINET



CHROMATOGRAPHY DRYING OVEN

SINCE 1909 SCHAAR CHICAGO

SCHAAR and COMPANY

Complete Laboratory Equipment

754 W. Lexington St., Chicago 7, Illinois

What's New in Microscopy?

UNITRON Phase Microscopes, of course!

An Explanation

While UNITRON phase Microscopes are new, this report on them is not. It is a repetition of what was said in the recent Convention issue of Science. The interest shown in that report was so great, and the requests for catalogs so numerous, that we feel it is worth repeating.

Phase microscopy in the news

Our Phase Microscope Exhibit at the AAAS Meeting received an unexpected bit of advance assistance with the announcement in November that Dr. F. Zernike was awarded the 1953 Nobel Prize in physics for his development of the phase microscope. As a result of this announcement, many who attended the Boston Meeting knew more about phase microscopy than would otherwise have been the case. The phase microscope is so relatively new, and the conventional phase instruments so expensive, that real familiarity with this latest development has been largely limited to an inner circle of zoologists for whom the phase microscope is an absolute necessity. This is an unfortunate situation since phase microscopy has an equally wide application in large areas of industrial research, in routine medical and laboratory testing, and in the student laboratory.

Phase microscopy in a nutshell

Briefly stated, the phase microscope permits the examination of thin, transparent specimens whose structural details vary only slightly in thickness, absorption, and refractive index from their surrounding medium. With the ordinary "bright field" microscope, such specimens must be stained in order to introduce contrast and detail. Aside from requiring skill and laborious preparation, staining techniques produce a physical distortion of the object and involve the death of living specimens. For the zoologist the importance of the phase microscope lies in its ability to show activities in the *living* cell.

Busy booth

The microscopes on display in our booth at the AAAS Meeting ranged from UNITRON Student Models to the large UNITRON Universal Camera Microscope. The constant stream of visitors showed greatest interest in trying for themselves the new UNITRON Phase Microscopes. Two microscopes of each model were placed side by side with one instrument functioning as a phase microscope and the other as a conventional bright field type. The *unstained* specimen viewed was the same in both cases—*somatic chromosomes of Trillium kamtschaticum,* if you're interested. Observers were astounded by the difference between the two images. The demonstration was actually *too* successful; the image under bright field was so washed out in appearance that we were frequently challenged to prove that we really had a specimen on the slide. It took but a moment to change the microscope from bright field to phase contrast, and the observer from a state of scepticism to one of admiration.

Phase contrast for the amateur

To those acquainted with the cost of conventional phase microscopes and unacquainted with the new UNITRON Phase Microscopes, it will seem that the word "wealthy" has been omitted from the above section heading. But it's true—we have a *complete* student phase microscope with 3 objectives and 2 eyepieces, magnifying 32-600X, available for as little as $99. We are rather proud of the report on this instrument given by Professor Julian Corrington in the February issue of *Nature Magazine.* In his column, "Under the Microscope", he states:

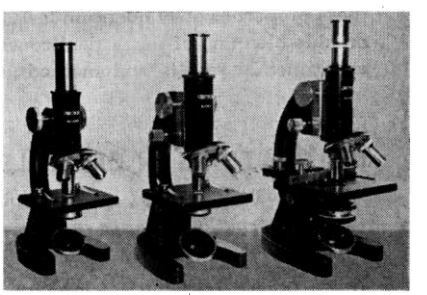
"Our first reaction on reading advertising material describing phase-contrast microscopes in the lower price brackets was one of scepticism . . . However, we were willing to be shown, and ordered a UNITRON research phase-contrast model MPE, at $265 and found it completely satisfactory. Being further intrigued by the seemingly-impossible claims of this organization for their $99 model MPEA, we explored further and have been using this incredibly cheap instrument on cultures of living amoeba and paramecium, as well as on other materials, both fresh and stained. The results have been remarkable. Living protozoa are seen as never possible by ordinary bright-field; cellular details, as trichocysts, cilia, gullet, membranelles, appear as clearly or more so than on stained slides, and are seen in action in the living animal . . . Now, for the first time, this equipment, the most important development in light microscopy since oil-immersion objectives, is within the reach of the amateur, the high school, and the college freshman laboratory."

Research model within your budget

The advanced worker who needs oil immersion will be more interested in our research model MPE, which gives magnifications from 50-1500X. This comes complete *with* 3 objectives, 3 eyepieces, mechanical stage, etc. and *without* focusing telescope and substage turret changer. Readers who have used phase microscopes will recognize the "without" items as the curse of the conventional phase instrument in which it is necessary to align phase diaphragms with every change of objective. In UNITRON Model MPE, changing objectives merely involves adjusting the height of the substage condenser as indicated by a scale on the microscope stand. Furthermore, as the height of the condenser is varied, there is a *continuous* transition from bright field to phase contrast. The intermediate positions offer useful types of contrasts which contribute toward a complete picture of the specimen. The price of this complete instrument is only $265—less than *half* the cost of the *accessories* needed to adapt an equivalent bright field microscope for phase work.

Further details

There are four UNITRON Phase



Models (even a portable model), and our catalog sheet illustrates and describes them all. This informative literature also gives information on the *four contrasts* which are available, as well as details on applications of the phase microscope. If you are interested in the theoretical principles involved in the optical design of the new UNITRON Phase Microscopes, and the resulting advantages over the conventional phase microscopes, we'll be glad to include a technical bulletin on the subject. All of this literature is yours for the asking. We shall probably take advantage of the opportunity to enclose literature on some of our other new instruments, so if you are interested in microscopy, we think you will find it worth while to write for further information.

UNITED SCIENTIFIC CO.

204-6 MILK ST. • DEPT. TP. • BOSTON 9, MASS.

Meetings & Conferences

April

25–29. American Assoc. for the Advancement of Science, Southwestern Division, Lubbock, Tex. (F. E. E. Germann, Dept. of Chemistry, Univ. of Colorado, Boulder.)

29–30. Eastern States Health Education Conf., New York, N.Y. (I. Galdston, 2 E. 103 St., New York 29.)

29–30. Symposium of Recent Advances in the Study of Venereal Diseases, 6th annual, Washington, D. C. (J. K. Shafer, Public Health Service Division of Venereal Diseases, Washington 25, D. C.)

29–1. American Mathematical Soc., Chicago, Ill. (J. W. T. Youngs, Univ. of Indiana, Bloomington.)

29–1. American Physical Soc., Washington, D. C. (K. K. Darrow, Columbia Univ., New York 27, N. Y.)

29–1. Midwestern Psychological Assoc., Columbus, Ohio. (L. J. Cronbach, 1007 S. Wright, Champaign, Ill.)

30–1. Minnesota Academy of Science, annual, Northfield, Minn. (S. P. Miller, University of Minnesota, Minneapolis.)

30–1. South Dakota Acad. of Science, annual, Rapid City, S. Dak. (A. L. Haines, Chemistry Dept., Univ. of South Dakota, Vermillion.)

May

2–6. Electrochemical Soc., spring, Chicago, Ill. (H. B. Linford, Columbia Univ., New York 27.)

2–7. Soc. of American Bacteriologists, annual, Pittsburgh, Pa. (F. S. Cheever, P.O. Box 1912, Pittsburgh 30.)

3–5. American Geophysical Union, 35th annual, Washington, D.C. (J. Adkins, Office of Naval Research, Washington 25.)

3–6. Air Pollution Control Assoc., Chattanooga, Tenn. (H. C. Ballman, 4400 5 Ave., Pittsburgh 13, Pa.)

3–7. American Psychiatric Assoc., annual, St. Louis, Mo. (R. F. Gayle, Jr., Professional Bldg., Richmond 19, Va.)

3–7. Soc. of Motion Picture and Television Engineers, semiannual, Washington, D.C. (Sec., 342 Madison Ave., New York 17.)

3–8. International Conf. on Complete Gasification of Coal, Liége, Belgium. (J. Venter, 7 Blvd., Frére-Orban, Liége.)

4. World Health Assembly, 7th, Geneva, Switzerland. (WHO, Palais des Nations, Geneva.)

4–6. Electronic Components Symposium, Washington, D.C. (F. B. Haynes, Glenn L. Martin Co., Baltimore 3, Md.)

5–7. American Inst. of Electrical Engineers, northeastern district, Schenectady, N.Y. (H. H. Henline, 33 W. 39 St., New York 8.)

5–7. Forest Products Research Soc., annual, Grand Rapids, Mich. (F. J. Rovsek, Box 2010, University Station, Madison 5, Wis.)

5–8. National Conf. on Health in Colleges, 4th, New York, N.Y. (Sec., American College Health Assoc., 1790 Broadway, New York 19.)

6–8. American Philosophical Assoc., Urbana, Ill. (M. C. Nahm, Bryn Mawr College, Bryn Mawr, Pa.)

7–8. North Carolina Academy of Science, Greenville, N.C. (J. A. Yarbrough, Meredith College, Raleigh.)

8–16. International Cong. of Thalassotherapy, Dubrovnik, Yugoslavia. (C. Plavsic, Zeleni Venac 1, Belgrade, Yugoslavia.)

(See the March 19th issue for summer meeting lists.)