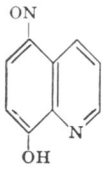
Kodak reports to laboratories on:

a reagent that didn't work for metals but spot-tests phenols . . . a movie projector that brightens up at sound speed . . . an old technique for color photomicrography of colorless objects

5-Nitroso-oxine on the spot



5-Nitroso-8-quinolinol has been tried and found wanting as a chelating reagent for metals. Unnitrosated *8-Quinolinol*, better known as "oxine" or Eastman 794, has been long known as an effective metal precipitant but notoriously non-specific. The nitrosation succeeds in preventing precipitation of Al, Ga, In, and Mg but also removes the assurance of quantitative precipitation of the commoner metals. You can read all about it in a richly learned but discouraged paper appearing in *The Analyst* for April '55.

Still we do not despair of selling our *5-Nitroso-8-quinolinol* (Eastman 7097), for on page 133, Volume II, of Feigl's great "Qualitative Analysis by Spot Tests" (4th edition) it says that if one drop of a 1% solution of this compound in concentrated sulfuric acid is dropped onto a dried drop of alkaline test solution and then gently warmed, the following quantities of phenols reveal themselves by forming indophenols of the following hues:

dark brown: 1γ phenol
red-violet: 2γ resorcinol
black: 7γ pyrogallol
greenish-black: 4γ pyrocatechol
green-yellow: 5γ o-nitrophenol
dark brown: 5γ o-cresol
violet: 5γ xylenol
dark brown: 10γ α-naphthol
(1γ = 1 microgram)

This is typical Feigl analysis—exquisite, low-budget, and compact enough to be worked in a phone booth.

We hope everybody buys the book from Elsevier Press, Inc. (2330 Holcombe Blvd., Houston 25, Texas) and the reagents from our stock of some 3500 organic chemicals. Distillation Products Industries, Eastman Organic Chemicals Department, Rochester 3, N. Y. (Division of Eastman Kodak Company).

Invention

Unless you are getting a projector for personal movies only, it's a pity not to get a sound projector so that you can take advantage of the wealth of sound-and-color films available today from all sorts of sources on all sorts of subjects. It used to be that projectors capable of showing both silent and sound 16mm movies would waste 40% of their light at the 24-frames-per-second sound speed. At the standard 16-frames-per-second speed of 16mm silent movies, three interruptions of the light per cycle are required in order to exceed the critical frequency of 40 at which, under the average brightness and visual field in projection situations, the perception of flicker vanishes. But at 24 frames/sec, two interruptions of the shorter cycle achieve the same rate. The third blade of the shutter then does nothing but waste light that the projector might well use in fighting the high natural light levels so generously provided by modern architectural design.

Now we have come along with a three-bladed shutter which, thanks to centrifugal force, presents two blades when and only when whirling at sound speed. "Greatest invention since the stem-winding watch," one of our younger and more enthusiastic ad men proclaims it.

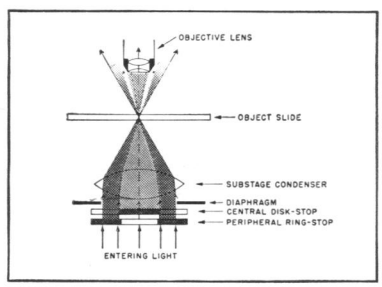
Called the Super-40 Shutter, *it is one of the features that make the three new models of* Kodascope Pageant Sound Projectors *the best movie projection buys which your Kodak Audio-Visual Dealer can show you. Eastman Kodak Company, Cine-Kodak Division, Rochester 4, N. Y., can put you in touch with him if you like.*

Quekett, 1897

Dental chap came in with a live hamster for help in photographing its molars, and when that was done, he asked what's new in photomicrography. We told him about Julius Rheinberg's papers in the *Journal of the Quekett Microscopical Club* for April and November, 1897. Some beautiful Ektachrome photomicrographs of tooth structure have come out of this.

Wratten-Rheinberg is an adaptation of dark-field microscope illumination to introduce color differentiation in colorless objects by means of light rather than stains. It is accomplished by microscope substage filters obtainable at all of $3.75 each from a Kodak dealer, who can order in *Kodak Wratten Rheinberg Differential Color Filters* even though he hasn't heard of them before.

Seven of them are central disk-stops, which consist respectively of a blue (No. 49), green (No. 63), red (No. 70), purple (No. 35), greenish-blue (No. 45A), black (Neutral Density 4), or white matte (thin paper) 15-mm center in a thin 33-mm glass disk. Four of them are peripheral ring-stops with clear 15-mm centers surrounded by 9-mm-wide rings of red (No. 29), blue-green (No. 64), orange (No. 21), or blue (No. 38A). A central and a peripheral disk-stop are placed in tandem in the filter ring of the regular substage condenser, which is focused on the object. Then



one sees things like a red paramecium swimming in a green pool, or vice versa as fancy and good seeing may dictate. Of course, this doesn't work with high-powered objectives that take all the available aperture of the condenser to fill them, in which case you had better look into phase microscopy after all.

There is one more string to the Wratten-Rheinberg bow, however—the luxury model *Sector Stop* for $9.50. It's a peripheral, with alternate 90° sectors of red and blue. Used with the black central disk-stop and lined up with a transversely striated object like a textile, it can make warp red and woof blue.

Slow though the Wratten-Rheinberg technique may be in gaining momentum, we look forward to the avalanche.

Questions about it should go to Eastman Kodak Company, Medical Division, Rochester 4, N. Y.

Prices quoted are subject to change without notice.

This is one of a series of reports on the many products and services with which the Eastman Kodak Company and its divisions are . . . *serving laboratories everywhere*

Kodak
TRADE-MARK

(*Continued from page 476*)

24–1. International Council for the Exploration of the Sea, annual, Copenhagen, Denmark. (General Secretary of Council, Charlottenlund Castle, Charlottenlund, Denmark.)

25–30. American Ornithologists' Union, Boston, Mass. (H. F. Mayfield, 2557 Portsmouth Ave., Toledo 13, Ohio.)

27–28. New Mexico Acad. of Science, Albuquerque. (C. C. Hoff, Dept. of Biology, Univ. of New Mexico, Albuquerque.)

27–29. American Ceramic Soc., 8th Pacific Coast Regional, Seattle, Wash. (C. S. Pearce, 4055 N. High St., Columbus 14, Ohio.)

27–29. Electron Microscope Soc. of America, University Park, Pa. (Miss J. R. Cooper, General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.)

27–29. Gerontological Soc., Baltimore, Md. (N. W. Shock, Baltimore City Hospitals, Baltimore 24.)

27–29. Pharmaceutical Industry: Rensselaer Polytechnic Inst. Industrial Council, 5th annual, Troy, N.Y. (F. Tifft, News Bureau, Rensselaer Polytechnic Inst., Troy.)

28–29. Conf. on Rare Earths in Biochemical and Medical Research, Oak Ridge, Tenn. (G. C. Kyker, Oak Ridge Inst. of Nuclear Studies, P.O. Box 117, Oak Ridge.

28–30. American Soc. for Aesthetics, Chicago, Ill. (J. F. White, Western Reserve Univ., Cleveland 6, Ohio.)

30–1. West Virginia Science Fair Work Conf., Weston. (D. E. Large, Science Fair Program, P.O. Box 117, Oak Ridge, Tenn.)

31–1. East Coast Conf. on Aeronautical and Navigational Electronics of Inst. of Radio Engineers, Baltimore, Md. (G. R. White, Bendix Radio Div., Bendix Aviation Corp., Towson 4, Md.)

31–5. Conf. on Solar Energy, Scientific Basis, Tucson, Ariz. (31–1 Oct.); World Symposium on Applied Solar Energy, Phoenix, Ariz. (1–5 Nov.). (M. L. Kastens, Stanford Research Inst., Stanford, Calif.)

November

1–3. Enzymes: Units of Biological Structure and Function, International Symposium, Detroit, Mich. (C. E. Rupe, Henry Ford Hospital, Detroit 2.)

1–5. World Symposium on Applied Solar Energy, Phoenix, Ariz. (M. L. Kastens, Stanford Research Inst., Stanford, Calif.)

2–4. American Documentation Inst., annual, Philadelphia, Pa. (S. Rosenborg, Library of Congress, Washington 25.)

2–4. Society of Rheology, annual, New York. (W. R. Willets, Titanium Pigment Corp., 99 Hudson St., New York 13.)

2–4. Symposium on Antibiotics, 3rd annual, Washington, D.C. (H. Welch, Div. of Antibiotics, Food and Drug Admin., U.S. Dept. of Health, Education, and Welfare, Washington 25.)

2–5. American Soc. of Tropical Medicine and Hygiene, Boston, Mass. (J. E. Larsh, Jr., School of Public Health, Univ. of North Carolina, Chapel Hill.)

3. American Federation for Clinical Research, Midwestern, Chicago, Ill. (R. J. Glaser, Barnes Hospital, 600 S. Kingshighway, St. Louis 10, Mo.)

4–5. Kentucky Academy of Science, Frankfort, Ky. (Mary E. Wharton, Georgetown College, Georgetown, Ky.)

5. Committee for the Scientific Study of Religion, Cambridge, Mass. (R. V. McCann, Andover Hall, Harvard Univ., Cambridge 38.)

6–7. American Soc. for the Study of Arteriosclerosis, 9th annual, Chicago, Ill. (O. J. Pollak, P.O. Box 228, Dover, Del.)

6–13. International Cong. of Allergology, Rio de Janeiro, Brazil. (F. Alves, Avenida Rio Branco 277, 7° andar, Rio de Janeiro.)

7–9. Assoc. of Military Surgeons of the United States 62nd annual, Washington, D.C. (AMSUS, 1726 Eye St., NW, Washington 6.)

7–9. Eastern Joint Computer Conf., AIEE, IRE, ACM, Boston, Mass. (I. Travis, Burroughs Res. Center, Paoli, Pa.)

7–9. Geological Soc. of America, annual, New Orleans, La. (H. R. Aldrich, 419 W. 117 St., New York 27.)

7–9. Mineralogical Soc. of America, New Orleans, La. (C. S. Hurlbut, Jr., 12 Geological Museum, Oxford St., Cambridge 38, Mass.)

(*See 19 Aug. issue for comprehensive list*)