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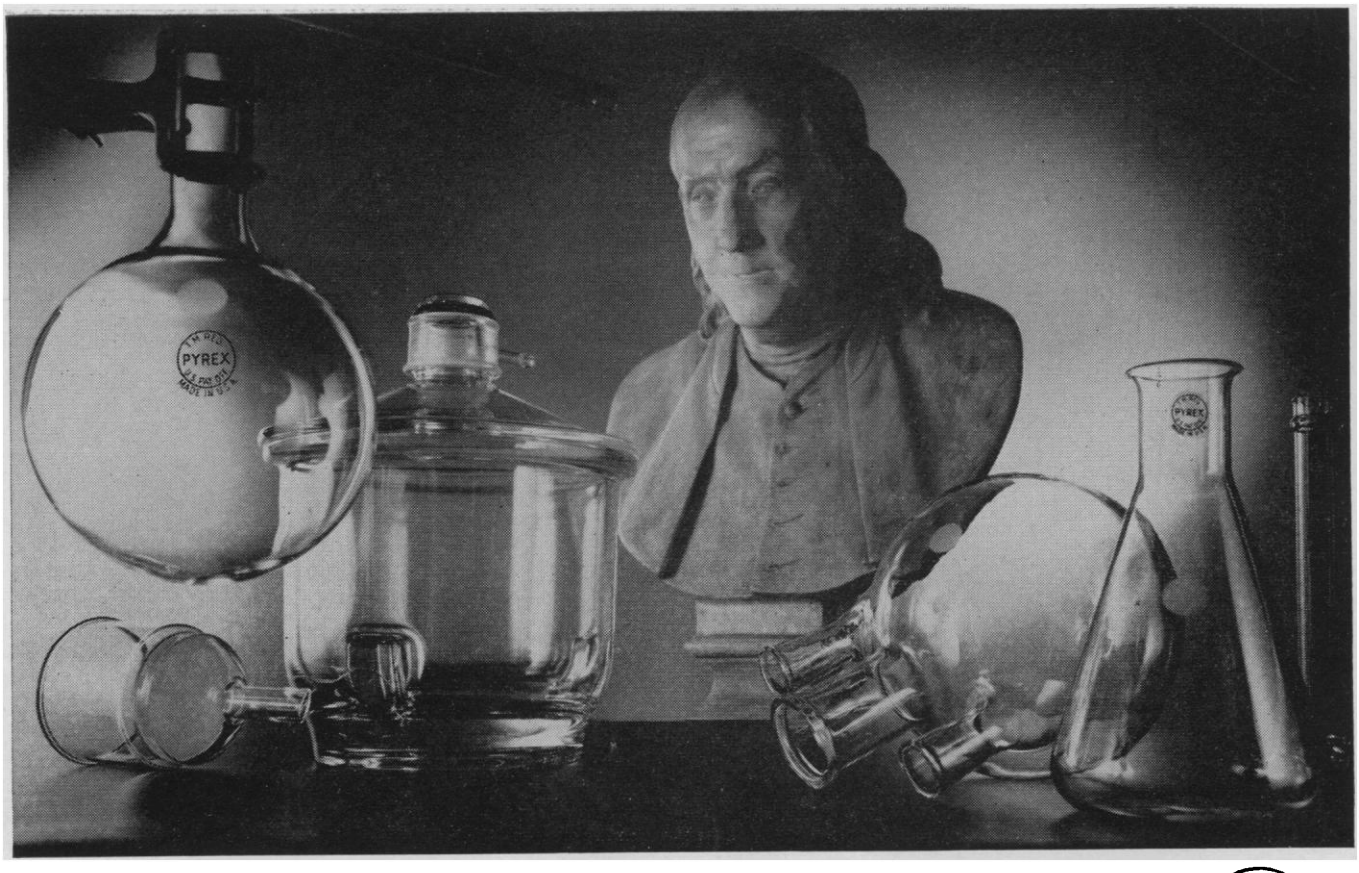


Would Ben Franklin have settled for less than PYREX®?

Dr. Franklin had a simple but effective method for wringing the last drop of buying power out of a budget dollar.

He wrote down all the advantages and disadvantages of taking a certain action. With all the facts in front of him, he was sure to make the right decision.

Should Dr. Franklin be buying labware today, his list on PYREX brand might well look like this:

Advantages of PYREX labware

1. **Less, much less, breakage.** Shows heavier construction, especially at joints, lips, and other stress points. Next two properties save breakage too.

2. **Takes heat, sudden temperature changes.** I can subject this glassware to sudden temperature changes without damaging it. Its coefficient of expansion is only 0.0000033 per ° C. between 0° and 300° C.

3. **Chemically stable.** PYREX brand labware resists almost all common acids and alkalies.

4. **No contamination.** Contains no elements of the magnesia-lime-zinc group. No heavy metals. Low alkali content. Result: No contamination of contents even over long storage periods.

5. **Complete line.** Having all glassware made of exactly the same glass gives me better test control. I can get all the different glassware I'll ever need with this PYREX®.

Disadvantages

1. On some items PYREX brand labware costs a bit more. However, in terms of value and breakage, I can actually save money over the long run.

2. Some reagents—hot HF, for example—do affect this (as well as other) glasses. But it's perfectly adequate for about 99.9% of my work.

Conclusion: Dollar for dollar, I'll get more for my money if I look for this trademark PYREX® whenever I buy glassware.

Try it yourself. Make your own "advantage-disadvantage" list on PYREX brand labware. Might make your dollars work harder too.

Might be easier if you use our Standard Labware Catalog LP36 and our Special Apparatus Catalog CA-2. Send for copies.

CORNING GLASS WORKS
75-1 Crystal Street, Corning, N. Y.
Corning means research in Glass

PYREX® **laboratory ware**
. . . the tested tool of modern research

Before you "marry" ANY microscope...

. . . check these important "For better or for worse" features . . . bearing in mind that your day-after-day relationship will probably endure for years . . . for life, if you choose Bausch & Lomb.

FOR BETTER with B&L

Easiest to manipulate! Controls conveniently grouped in easy "straight-line" order . . . relaxed hand-at-rest position.

100% illumination, whether visual, camera or projection. Fast interchange of binocular and monocular bodies—for *full* light transmittance.

Most precise focus! Dynoptic ball-and-roller bearing design achieves—and *holds*—razor's edge focus.

Rigid, fixed stage. Body, *not stage*, is focused—no focus loss during specimen orientation. Free access to substage controls.

Standard functional design—internationally accepted operation for optical and mechanical efficiency.

FOR WORSE with others

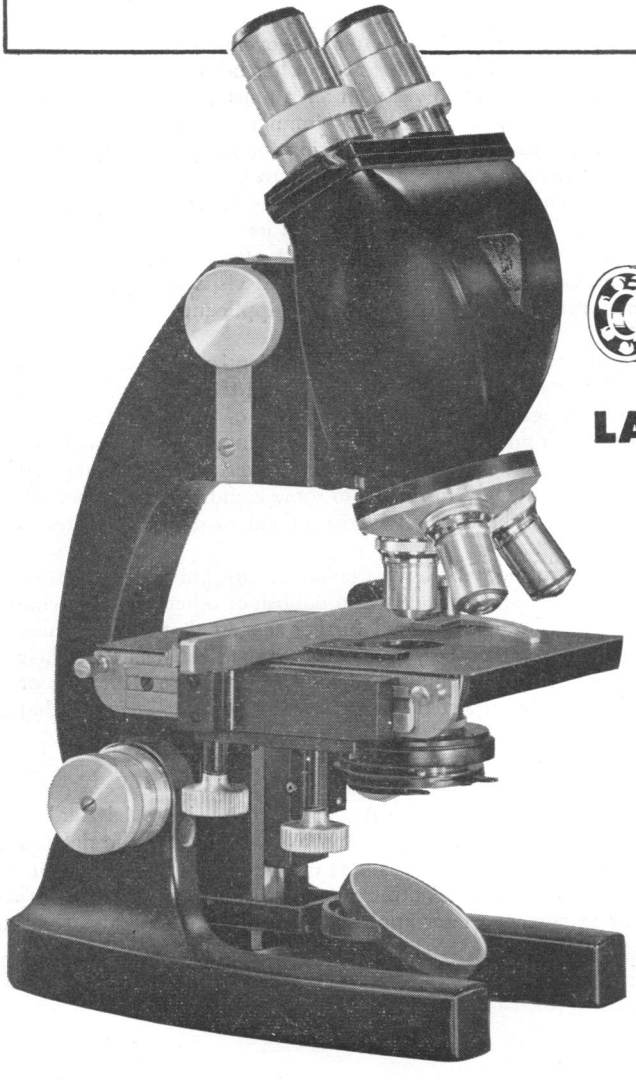
Awkward crowding of focusing, stage and illuminating controls.

Light is split between visual and accessory outlets —only *partial* light for camera or projection.

Lost motion and inherent inaccuracy from micrometer screw focusing.

Movable stage, easily pressed or jarred out of focus. Lowering stage pinches fingers on control knobs.

New operating habits to learn—complex designs require non-standard techniques.



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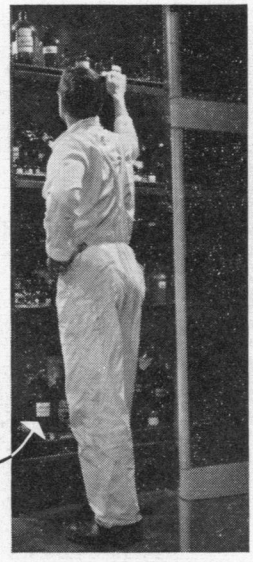
Kodak reports to laboratories on:

brightening up an old determination . . . what's available in microreproduction

This bottle has for many years supplied the world's biochemists with their *1-Amino-2-naphthol-4-sulfonic Acid* (Eastman 360, "ANS") for the Fiske and SubbaRow **determination of PO_4^{---} and phosphatase.** From now on, we don't think it's going to be filled and emptied so often. We think the play is going to be taken away from it by this bottle of *N-Phenyl-p-phenylenediamine Monohydrochloride* (Eastman 2043, "semidine" hydrochloride). We are glad.



Both of these compounds work by reducing phosphomolybdic acid to a blue pigment which is reputed to be a mixture of molybdenum oxides. The phosphomolybdic acid is the result of an affinity between molybdate and phosphate ions. This is the basis of the usual method of measuring either total organic phosphorus, phosphate ion itself, or that biological touchstone phosphatase (in terms of the phosphate released under standard conditions from a glycerophosphate substrate).

The trouble with good old ANS is that it gives precious little blue color to measure unless you are working with amounts of phosphorus up in micrograms, and what little color you get is an evanescent thing. Furthermore, we are in a position to reveal that the soul can be tried in the course of purifying 1-amino-2-naphthol-4-sulfonic acid, preventing it from turning a nasty purple with the mere passage of the days, and politely answering irate letters from clinical chemists bothered by strange precipitates.

Now it is written somewhere that both benzidine (H_2N-C$_6$H$_4$-C$_6$H$_4$-NH_2) and diphenyline (C$_6$H$_5$-NH-C$_6$H$_3$(NH_2)-NH_2) can also do the job of reducing phosphomolybdate to those blue oxides. Prof. Robert L. Dryer of the State University of Iowa has been kind enough to inform us that he and his associates looked into this and found neither does it very satisfactorily, except for one sample of diphenyline they tried. When a highly purified diphenyline failed to work as well as that one lucky sample, they laid down their cuvettes and reflected.

The idea that diphenyline is diphenyline is obviously only a convenient idealization. In pitiless chemical reality, you know that when you set out to make diphenyline, you wind up with a little unreacted starting material, a lot of diphenyline, a little benzidine perhaps, a touch of "semidine" (C$_6$H$_5$-NH-C$_6$H$_4$-NH_2). So they bought some Eastman 2043 (in which case "semidine" was what they were paying for), just to see if this could have been what made that one sample of diphenyline work so well. It was. Apparently it not only reduces phosphomolybdate to a nice blue pigment but the oxidized reagent is itself brightly and conveniently blue as well.

We will happily supply an enthusiastic abstract of procedures, also our latest "List No. 40" of some 3500 Eastman Organic Chemicals. Write Distillation Products Industries, *Eastman Organic Chemicals Department, Rochester 3, N. Y. (Division of Eastman Kodak Company).*

Fear not the paper mountains

How most efficiently to store and retrieve records of fact, feeling, fancy, or thought set down by one human being for another to read at a subsequent time—this core problem we employ dozens of men to ponder. (A few of their schemes are already in the hands of the fellows with the screwdrivers and square-wave generators.) For the present, those who fear the paper mountains must trust in microfilm and the microprint card (the latter for objectors against a return of literature to the scroll format).

Recordak Corporation, our subsidiary with offices at 415 Madison Avenue, New York 17, and branch offices in many other places, is the pioneer in working out routines for record-keeping through microfilm. Other organizations sell and service our Kodagraph apparatus for making or viewing microfilms in less specialized applications.

One such, University Microfilms, 313 North First Street, Ann Arbor, Mich., has set itself the task of microfilming a vast number of past and current periodicals from many fields and many nations. They couch their advertising argument in terms of a quadratic equation in *t*, the time during which a periodical file is stored, and then in 15 pages of close-set type list all the periodicals which they sell in microfilm form. Prices are comparable with the cost of merely binding paper editions. Of the Augean labors in law and librarianship that made the list possible they say little. Perhaps if you write them, they will send you a copy.

Another of our microfilming dealers, Micro Photo Inc., 4614 Prospect Avenue, Cleveland 3, Ohio, strives for eminence in the newspaper division of the microfilm domain. Their catalog, in addition to the New York *Herald Tribune*, the Las Vegas *Optic*, the Waukegan *Little Fort Porcupine* (March 12, 1845 through March 16, 1847), and some 800 other current and defunct titles, offers also the *Official Gazette of the U. S. Patent Office* in microfilm from 1930 to date.

For our own survey, "What's Available on Microprint Cards," write Eastman Kodak Company, Graphic Reproduction Division, Rochester 4, N. Y.

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
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