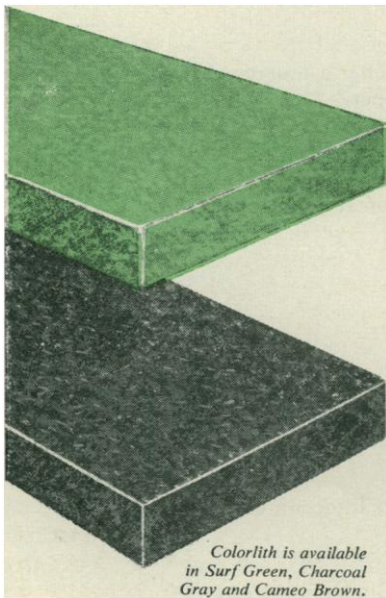
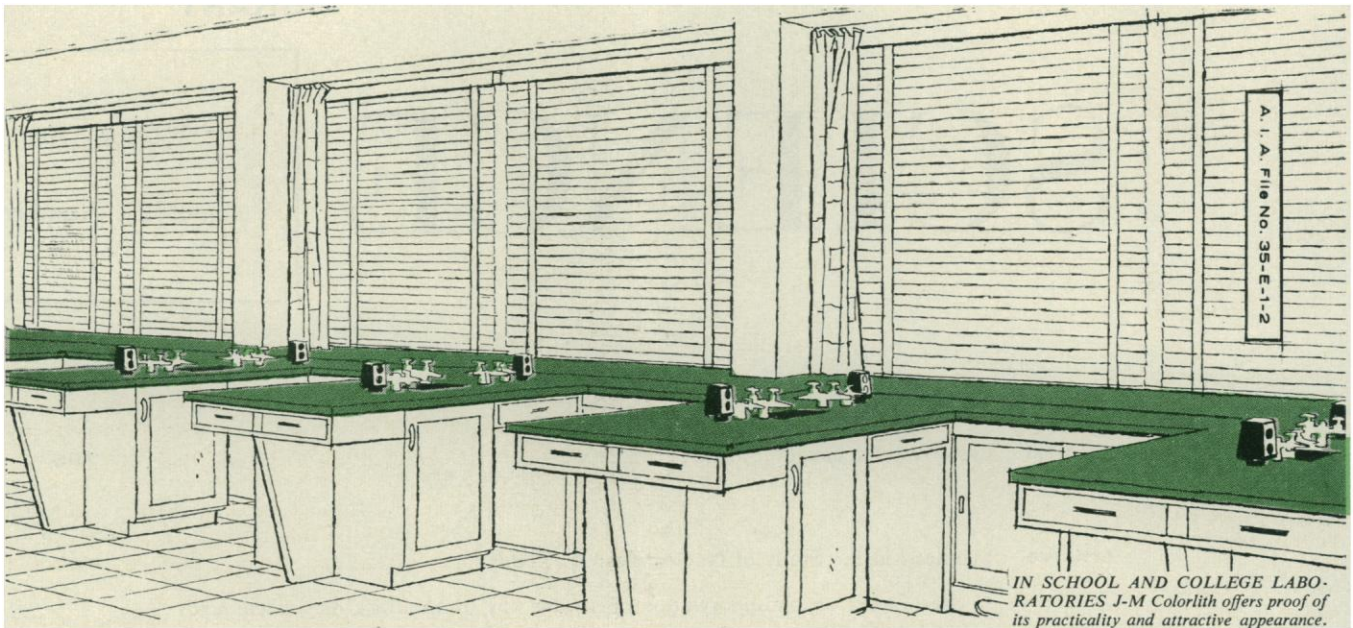


SCIENCE

11 April 1958

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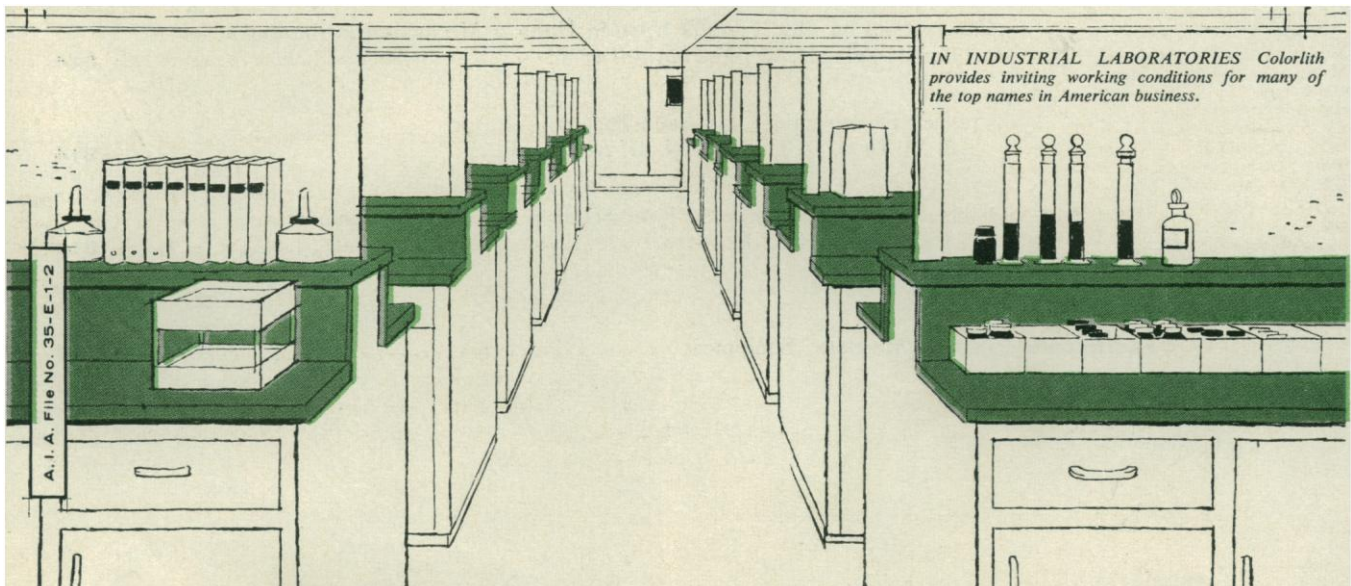
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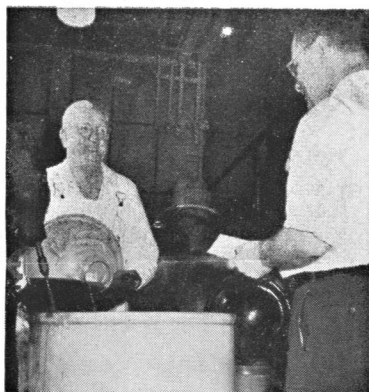
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Kodak reports on:

Mr. Brethen and Lecture Assistant Sandmeyer . . . big deal over 0.009 roentgen . . . color films for sophisticates

Craftsmanship



After this one, Mike Brethen's pay checks will have to follow him around in his retirement. He joined us right out of the Army in 1919 and wound up no less a craftsman than the old fellow who gets \$65 for a pair of shoes. Rather than on a last or lathe, Mike's craftsmanship has been expressed over a big stoneware crock of acid with ice floating in it as sodium nitrite diazotizes an aromatic amine, after which he adds the resultant diazonium salt to the cuprous salt of whatever halide is required and gets an oily layer containing his aromatic halide. A Swiss chemistry lecture assistant named Sandmeyer proposed this eight years before Mr. Brethen's birth. Since many full-grown adult organic chemists despair of professional advancement from doing Professor Sandmeyer's reactions over and over again, a clear field was left Mr. Brethen to specialize in doing it very well.

On his last day at work he sat down and figured out he had run exactly 50 different versions of the Sandmeyer, counting the displacement of diazonium by iodine, which needs no copper.

Take *m*-Dibromobenzene. What could be simpler? Yet the other day we had a request for it from a man who is so eminent that organic chemists everywhere know his surname only as the designation for a certain green textbook 4½ inches thick. He couldn't find *m*-Dibromobenzene on the market, and he apparently thought it wise to let an expert make it, so the job fell to

Mike Brethen. Now, therefore, it becomes Eastman 7276.

Mike's pupils and our other craftsmen are hard at work keeping some 3600 stock bottles of Eastman Organic Chemicals filled. The job is never ending. We hope the orders are too. Distillation Products Industries, Eastman Organic Chemicals Department, Rochester 3, N. Y. (Division of Eastman Kodak Company).

A modest contribution

Man comes home from work and his wife asks him what kind of a day he's had. "Same old yackety yak," he reports. "Heap-big all-afternoon powwow over the fact that whereas it used to take 0.019 roentgens of radium gamma radiation to produce a density of .05, they have now made x-ray film that takes 0.010 roentgens of gamma radiation to produce a density of .05. Cauliflower tonight again?"

Eastman Kodak Company is pleased to announce that significant progress has been made in its continuing program of improving the sensitivity of film to ionizing radiation. One result of this program is that physicians are enabled to obtain required diagnostic information from *Kodak No-Screen Medical X-ray Film* with fully 50% less exposure of the patient to x-rays.

Another result, of interest to those engaged in industrial radiography and in the atomic energy field, is that the film badges worn to check on their body exposure to radiation can now be made capable of at least 50% more sensitivity than previously.

While it is realized that the end of the effort to reduce human exposure to radiation is nowhere in sight, it is felt that even modest technological advances in this direction serve the interests of general welfare.

For cumulative monitoring of occupational exposure to x-rays and gamma rays, the enhanced sensitivity is now available in *Kodak Personal Monitoring Film, Type 1*. Maximum sensitivity is attained for radiation quality of approximately 50 kvcp. Approximately 30 times the same roentgen value is required to produce equivalent densities with radium gamma rays.

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Full information about these monitoring films is obtainable from Eastman Kodak Company, Special Sensitized Products Division, Rochester 4, N. Y.

L is for long, S is for short

The broad purpose here is to elevate your level of photographic accomplishment. You are a photographic sophisticate. For reasons that you don't feel necessary to defend, you use a sheet-film camera.

We have news for you of a refinement in the kind of color film that can be printed to gorgeous big *Type C* color prints for dry mounting or to any number of even more brilliant color transparencies, large or small. The reference is to *Kodak Ektacolor Film*. Now it comes in *Type L* for long exposures and *Type S* for short exposures.

If you were naive you would ask, "Why should I pick long exposures if I can have short exposures?" But you don't ask that.

You know that while high film sensitivity is the aim, nevertheless the departure from a strict reciprocity between the effects of illumination and exposure time is different between the three emulsion layers of a color film, leading hitherto, to color imbalance unless the exposure time is kept within narrow prescribed limits. You therefore experience a feeling of release when we tell you that the barriers on both sides have fallen: *Type L* is balanced for exposure times from 1/5 second to 60 seconds, such as encountered in photomicrography and photomacrography; *Type S* is good down to the briefest flash of a gas discharge lamp.

In case you have a friend who fails to grasp your explanation of the preceding paragraph and who has questions about this Type C - Type L - Type S business, tell him to write to Eastman Kodak Company, Professional Goods Division, Rochester 4, N. Y.

This is another advertisement where Eastman Kodak Company probes at random for mutual interests and occasionally a little revenue from those whose work has something to do with science

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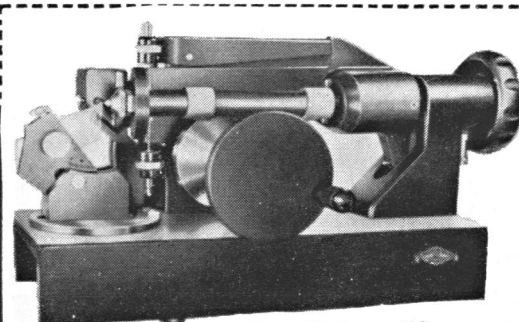
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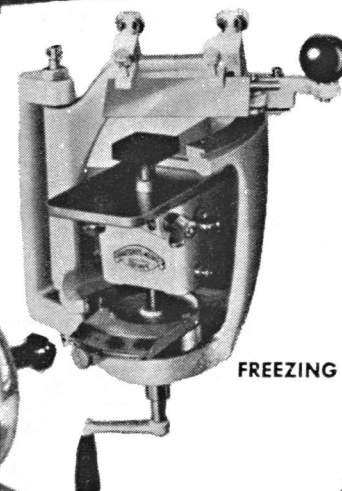
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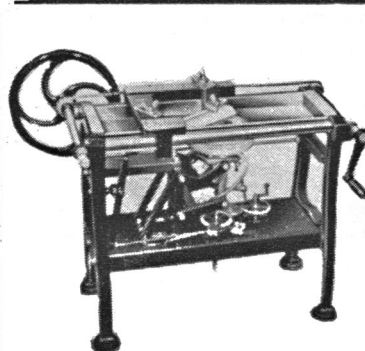
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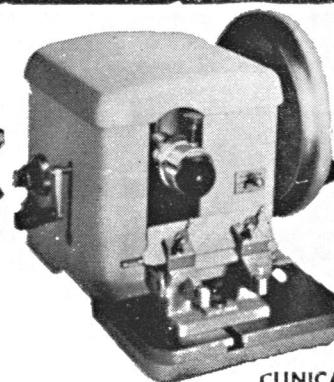
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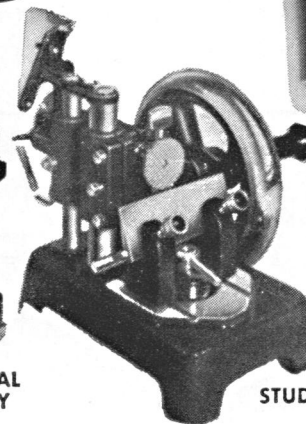
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