Kodak reports to laboratories on:
Ektar lenses for 70mm cameras...setting the valves in a chemical plant...
a new idea in photographic emulsion making

The new lenses
It is conceivable that these three lenses are going to usher in a new phase in camera design. Whether they will or not depends on the eagerness with which designers attack the problem of 70mm film.

Kodak Ektar Lens, 2½-inch f/4.5
back focal length............. 52.63 mm
length........................ 23.00 mm
to corners of 70mm frame... 70˚
distortion 23.1˚ from axis..... +.065 mm
distortion 33.5˚ from axis.... +.254 mm

Kodak Ektar Lens, 4-inch f/2.8
back focal length............. 73.81 mm
length........................ 41.69 mm
to corners of 70mm frame... 70˚
distortion 18˚ from axis...... +.18 mm
distortion 22˚ from axis..... +.28 mm

Kodak Ektar Lens, 8-inch f/4
back focal length............. 153.98 mm
length........................ 77.15 mm
to corners of 70mm frame... 70˚
distortion 7.5˚ from axis..... +.035 mm
distortion 12˚ from axis..... +.144 mm

Image quality of these lenses is good, very good indeed—so extraordinarily good that the 70mm negatives are probably fairly close for over-all detail content to big negatives made by many an acceptable lens of considerably longer focal length. Rarely has a designer so freely been given his head, and rarely has one tried so hard and succeeded so well in working out a series of lenses with the sharpest imagery for one fixed picture area.

Since we are also a manufacturer of film, you might think that we wouldn't have wanted him to try so hard to make 70mm film do the work of wider film. However, we decided long ago that that kind of thinking was no way to get ahead in the business world.

Sorry, we're not in a position to sell you one of these lenses. We are prepared to enter into negotiations for the manufacture of quantities of them to individual mounting specifications. Address inquiries to Eastman Kodak Company, Special Products Sales Division, Rochester 4, N. Y. Have you ever thought of us as a contract shop for optics?

Isobutyraldehyde
A chemical plant is a fancy plumbing job animated by an idea. We have one at Longview, Texas, animated by this idea:

\[ \text{CH}_3\text{CH} = \text{CH}_2 + \text{CO} + \text{H}_2 \rightarrow \text{CH}_3\text{CH}=\text{CHCHO} + (\text{CH}_3)\text{CHCHO} \]

In words, natural gas, refinery by-product propane, and steam are turned into butyraldehyde, normal or iso. (This is known as the Oxo Process.)

Right now the valves are set for a certain ratio of normal to iso. We have a very strong and ever-growing internal demand for compounds that start from n-butyraldehyde. The isobutyraldehyde, perhaps reduced to isobutyl alcohol or oxidized to isobutyric acid, leaves our hands at an earlier stage in its career. The iso aldehyde, alcohol, and acid are all points of departure for a great variety of interesting reactions. Most of these are of more industrial importance to other companies than to us. We should like to make certain that all of their voices have been heard before deciding that our setting of the valves is economically correct.

One of the principal ways the chemical industry grows is through the posing of questions like this. A reaction becomes practical that was impractical before because one of the reactants is more abundant than it had been. Somebody is likely to make money as a result. The key is communication.

If you can see enough connection with your problems to send for a free copy of "The Chemistry of Isobutyraldehyde and Its Derivatives," the first stone in a landslide of events may be rolling now. Write Eastman Chemical Products, Inc., Chemicals Division, Kingsport, Tenn. (Subsidiary of Eastman Kodak Company).

Royal Pan
Once in a while the orderly flow of progress in photographic technology makes a gush, and then you have something as important as a basic advance in emulsion making. It’s fairly rare.

What has happened is that at long last we have found some stretch in the chains that lock graininess and light sensitivity in mutual bondage. We can make an emulsion that gives less graininess without yielding sensitivity, or we can have sensitivity without paying in graininess. The latter seemed the better choice for the first commercial application, which we call Kodak Royal Pan Film.

Its graininess is perhaps even a little less than that of the highly satisfactory Kodak Super Panchro-Press Film, Type B (fastest Kodak film hitherto offered the press photographer, a connoisseur of emulsion speed), but at the practical gamma of 0.7 it has twice the speed. Exposure Index is 200 for daylight, 160 for tungsten. Its characteristic curve combines the best features of Kodak Super-XX Panchromatic Sheet Film and Kodak Super Panchro-Press Film, Type B. There is more exposure latitude, more development latitude, more detail in the dark areas, more detail in the light areas, less need for dodging in printing.

If your work, business, or hobby has been crying out for faster sheet film, all you need do now is send someone out to the nearest Kodak dealer for some Kodak Royal Pan Film. There might be several press photographers at the counter ahead of him.
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Edited by Edgar J. Boell


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