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Pinhole & "Alt" Processes: which film ? a first approach Jacques Kevers

This article does not pretend to impose any "truth" on everyone, nor does it attempt to go around the issue. In 3-4 pages, that would be mission impossible. It is above all a question of evoking a few lines of thought I explored myself, and which I hope to further investigate.

Why film ?

I prefer to avoid, as much as possible, using digital methods: scans, digital negatives, etc... : going from shooting on film to a digital transparency just to come back to an old process for the final print does not seem very coherent to me... This is only for me, of course, and is not a criticism towards those who choose to use computer tools.

I know that digital negatives have significant advantages: transparencies are available everywhere, the possibilities of manipulating the negative are almost infinite... But nobody should underestimate the costs (ink, printer, transparencies), nor the necessary learning curve.

I am interested in pinhole photography: playful, somewhat unpredictable, with a "different" aesthetic and relatively cheap, it is perfect for an "experimental" practice. But I find that the use of photographic paper as a sensitive surface has some disadvantages, the main one being that contact printing from a paper negative is likely to affect the rendering of the positive, which is also limited to the size of the negative: unless one is carrying very bulky "boxes" (one negative per box...), one will hardly go beyond the A4 format. So, I am stuck with film...

Which films ?

There are of course many of them, with their own characteristics, each adapted to a specific use. The ideal would obviously be to find a film that is suitable for pinhole photography as well as for making large negatives for old processes.

For my pinhole photography, I use cans, because I am looking for the kind of deformations that a curved sensitive surface gives. I also want to obtain a wide range of gray values, which means a moderate contrast.

I gave up on *panchromatic films in 35mm cartridges or 120 rollfilms*, because I would have to design a reliable film feed system that would be beyond my DIY skills. I leave that to artists/craftsmen like René Smets and his [fabulous cameras](#). These films are not a possible alternative for large negatives either, of course.

Panchromatic sheet film also poses a problem: without a filmholder (excluded because of the rounded bottom of the pinhole camera), they would have to be loaded in complete darkness, which makes it difficult to position them precisely: I want my films to go almost all the way around the box, but in this case I would be at risk to inadvertently cover the pinhole. Without a suitable developing tank, they would also have to be processed in complete darkness. Moreover, panchromatic sheet film is relatively expensive, which would seriously hamper "experimental" shooting.

The ideal solution would obviously be an *orthochromatic continuous-tone film*: it can be manipulated under darkroom safelight, and gives a wide tonal scale. Its insensitivity to red will distort the grey values of a landscape, for example, but that suits me since I am looking for a "different" aesthetic anyway. Let's not forget that a photographer like Léonard Misonne only used orthochromatic films...



The problem is that while these emulsions were common in Misonne's time, they have all but disappeared by now. The last one to be commonly used until a few years ago (until around 2010), was Bergerger BPF18.

The film that would have best met my expectations is certainly the Agfa-Gevaert Gevatone N 31 P, a continuous tone, variable contrast film coated on a 0.10mm polyester base, that could be handled under light red darkroom safelight. Long gone, alas...

As far as I know, there's hardly only Ilford Ortho Plus left. A good film, but for large formats, you have to wait for the annual special order, and hope that the format you're interested in will generate enough demand for Ilford to decide the start of a production run. Plus, it's expensive. For a 13x18cm sheet, you are likely to pay a little more than 3€...

In September 2019, Bergerger released a new film, available only as sheet or roll: the PrintFilm, an emulsion specially designed for internegatives. Not quite orthochromatic, it is nearly only sensitive to blue, it can be processed under red safelight, ... and it is continuous-tone! The contrast seems easily manageable by acting on the development. On the other hand, its sensitivity is low : 3 ISO. The film is too recent to have much feedback, but seems promising. Easily available on the brand's website, it is not really cheap, but less expensive than Ilford: just a little more than 2€ per 13x18cm (5x7") sheet.



Keep an eye on it...



An interesting lead then, but still a bit expensive. Another possibility remains: graphic "lith" film. This kind of film is in principle intended for reproduction, or scientific applications. They are normally very high-contrast, with an almost non-existent tonal scale. By playing with exposure and development, it is theoretically possible to get continuous tones.

There are several films of this type. The Wephota FO5 is one of them. Until a few years ago, it was easily available in different formats, up to 30x40cm. This is no longer the case nowadays (there are still some 4x5" available). The [website of the distributor](#) is rudimentary at least...

Another interesting possibility is the Arista Ortho Litho 3.0. This film is sold by the American distributor [Freestyle](#). Its presentation is quite appealing: a film for reproduction allowing to get continuous

tones with diluted paper developer, high resolution, anti-scratch and anti-Newton protection, sensitivity from 0.5 to 6 ISO... In any case, its price is interesting: a box of 100 5x7" films is sold at \$52.99 (about 47.5€). Of course, you have to add the shipping costs, and possible customs duties, VAT, etc. A box of 25 5x7" sheet, announced at \$13.99 finally costed me \$27.49 (about 22€): this remains interesting. The shipment was not subject to customs/VAT fees, which could have changed things, of course...

A tour on the photographic forums discussing these matters and some reading of a few articles from specialized magazines, however, taught me that while using the film for high-contrast results is no problem, using it for shooting with a wide tonal range in mind is another matter .

While waiting for the arrival of the Arista, I started with a first try of an old X-ray film, the Agfa Curix HT1.000G, out of date since 1998, to "get my hands on it". This allowed me to notice two thin vertical and parallel white lines on all my negatives, which did not appear on paper negatives made with the same "box". (see opposite). After having ruled out several hypotheses about the box, I came to the conclusion that the film edges, located very close to the pinhole, were reflecting the light on the film surface. I tinkered with mat black paper to make some "film holders" that are hiding the vertical edges... Problem solved.



Processing



The first results with the Arista (left), exposed with ISO 5-6 Exposure Indexes (E.I.) and initially processed in highly diluted paper developer, and later in Rodinal 1+100, did not give very conclusive results: although the mid greys were relatively well rendered, the shadows and highlights were still cruelly lacking detail.

Other solutions had to be found. I started by reducing the E.I. to 3 ISO. Then I played with various developers.

I finally adopted a developer that is simple to make, and which is a variant of the LC-1 developer proposed by Dave Soemarmo in the very interesting article "Lith film for continuous tone" in the "World Journal of Post Factory Photography" n°2 (October 1998). This developer, called D-23LC in a discussion on the [Photrio forum](#), is derived from the D-23 formula, a do-it-yourself recipe giving interesting compensating effects.

<p><u>The D-23LC formula :</u></p>	<p>Demineralized water.....750ml Métol*.....1,5 gr Sodium sulphite.....12,0 gr Demin. water, to make.....1 litre</p>	<p><i>(*)first add a pinch of sulphite before dissolving the metol, to avoid oxidation.</i></p>
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Processing: in a tray, with undiluted developer and "stand development": gentle agitation for 40 seconds, then don't touch any more for 35 minutes. Cover the tray to keep the film away from "safe" darkroom light..



The results were rather encouraging :

The tonal range is much wider, both in shadows and highlights, and even the sky (often "empty" when using orthochromatic films) contains details.

There are other alternatives to achieve this kind of results, such as using a PMK developer or pre-flashing the negative amongst



other possibilities, but I wanted to keep the procedure as simple as possible..

Those wanting to go even a step further, could try to reduce the sensitivity of the film to e.g. 1 ISO, but in that case using Berger's PrintFilm might be more interesting, provided its supposed qualities are confirmed.

If a speed higher than ISO 3 would be useful or necessary, then in my opinion there would only remain the option of the Ilford Ortho Plus (announced ISO 80 in daylight) or that of panchromatic sheet film, whose price and/or disadvantages would then have to be accepted...

I would appreciate hearing reactions or experiences from other photographers having dealt with these matters !



Pinhole + Arista Ortho Litho 3.0 5x7" . Exposure 9 min.

Stand development 35 min. in D-23LC

The "shadows" on the path are passers-by who stopped to ask what I was doing... ☺

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