



Tetenal Baryt Sepia, developed in SE 15 Polychrome Kit, once pure, once Tetenal Gold Toner, 90 sec.

*Photo: Herbert Dehn*

## Creative toning techniques

# LOST IN THE WAVES OF COLORS

THOSE WHO THINK THAT BLACK AND WHITE ONLY EXISTS OF AN INFINITE BANDWIDTH OF FINE DIFFERENTIATED GREY TONES BETWEEN THE TWO EXTREME ENDS OF THE TONE SCALE WERE THOUGHT OTHERWISE ON THE LAST ISSUE.

IN THIS SECOND PART WE ARE TOPPING THAT - IT GETS EVEN MORE COLORED.

**PAPERS** producing coloured picture tones, with special developers at strong overexposure, were introduced in the first part of our series. The basics of this technique was described in the issue 1/2001. Now we shall explain the after-treatment. We saw that this procedure makes silver prints extremely susceptible to tonings. This is always valid independent from the first through development obtained picture tone. You may ask now: Why shall one use this expensive printing technique if you still must tone afterwards anyway?



**Paper Fomabrom, Developer SE15 Polychrome Kit,  
Toner Kodak Rapid Selenium Toner 1+4  
Left 90 sec., right 60 sec., bottom 40 sec.**

*Photo: Uschi Becker*

The examples shown here should answer this question!

At same or similarly coordinated developers and the same degree of overexposure differences of picture tones caused by the papers emulsion. Some paper brands already seem very coloured after the development, others seem quite inconspicuous.

By Fomabrom and Wephota Baryt Brillant for example, after fixing, the brightness is missing. Lights and middle tones are slack and of a cool plain yellow tone.

### Selenium Toning

By using the economical and easy to handle selenium toning, luminous picture tones at different dilutions and toning times can be created. At first the yellow lights disappear at dilutions of 1+4 to 1+10 within some seconds, the print gets cooler and reddish-ochre while the toning procedure. A deep reddish brown is reached after two to three minutes. If the toning time is extended further the tone becomes cooler again and changes from aubergine colour to bluish nuances.





**Paper SELECT Shedlight, two bath development**  
 The print was overexposed by four f/stops in order to cause a red chalk tone in the strongly diluted second developer (Sienna 1+30 with ammoniumchloride). The first developer (Lith 1+7 with bromide brake) was started only shortly until the lith typical blackening was reached. With selenium the originally reddish yellow tone changed.

*Photo: Wolfgang Moersch*

**Small picture on the right:**  
**Paper SELECT Sepia VC**  
 The light of the Toskana should also be visible on the print. An ideal subject for the Polychrome technique.  
 Just so much Litheffect around the deep shadows and for structuring the roofs and façades. The Sienna brought the rest in a discreet working coordination without ammoniumchloride and a quite short selenium toning to enhance the shades (1+4 10sec.)

*Photo: Stefan Krüger*

Fomatone and our Select Sepia VC are already luminously colored without toning, especially by high contents of ammonia salts in the second developer. Selenium is also helpful here on the one hand to move the reddish yellow tones to more denser or cooler nuances or if toned very shortly to increase the maximum blackness. Both emulsions can be taken by suitable developer coordination to produce a third colour besides various lights and shade tones in the picture. A green or turquoise green tone of high intensity arises in the transition to the "Lith" shades. In a short and highly concentrated selenium toning only the deepest shades react first. Blackness increases in density, the shade colour tends to magenta. If the toning is stopped



here, the green colour of the next zone remains unchanged. The next zone is attacked by the toner at a dilution of 1+5 after 15-20 seconds. Green turns to crimson while toning progresses, and turns the shades to blue-violet. The lights are reached after about two minutes, the process seems to become faster and faster now. Highest attention is demanded now because one can easily exaggerate the whole thing. Up to a definite point the densities increase and then decrease again in the shades. The first homogeneous blackening turns into a grainy, rusty brown. It is not easy to interrupt a 1+5 selenium toning. Therefore prefer an earlier stop and wash both layer and rear side with a cotton ball under running water, and only then into a washaid or watering.

### Fog dancing

Independent of the used paper selenium tonings change the picture tone more strongly with the Polychrome technique to intensive violet or bluish nuances, the higher the pH value of the second developer is adjusted through Ammoniumchlorid. Unfortunately, all papers react on this with the formation of a more or less strong dichroic fog. This fog could but be removed before the toning with strongly diluted farmer's reducer, however, better would be not to let it be visible at all. A hardly perceptible fog is in fact advantageous, if extremely



coloured picture tones are desired. Rely on your nose, the developer can have a weak ammonia smell. At over-dosage of ammoniumchloride or carbonate fog formation can be suppressed by adding drop by drop starter of the Lith developer. At the following picture example the fog was partially removed with Farmer's reducer.

### Gold toning

The gold toner delivers a far spectrum between red chalk and blue tones. All desired picture tones are reproducible with a little experience. It's difficulty lies in the fact that gold toners even continue toning during watering. Meaning that the print should not stay in the toner until the desired tone is reached, but taken out earlier and quickly be watered. Unlike the selenium toner the gold toner affects all densities simultaneously. The shades will at first be intensified, lights more brightness and more reddish and move about to very pleasant violet nuances up to deep blue tones. If a strong toning is planned, the print should, because of the enormous density increase be exposed brighter as usual. To avoid stain formation and spare the not quite cheap toner you must water thoroughly before toning.

A paper not discussed till now is Tetenal Baryt Sepia. It seems to live



a wallflower existence although for years now on the photographic paper market. However one who has seen it flourishing, will hardly be able to escape its blaze of colors! Of course this applies to the Lithprinting technique and combination of Lith+ coloured development introduced here. Although available only in one gradation this emulsion beats with it's enormous variability all well-known papers to me. For zone system freaks and densitometry fetish's this might sound unbelievable but the examples shown here are printed from platinum printing negatives with density extents of 2 log.D!

### Polysulfide toning

The popular sulfured two bath development with bleaching and toning

**Large picture:**  
A strong fog arose due to too high ammoniumchloride content at high pH value on the lights. Both the picture margins and parts of the picture were worked on with thinned Farmer's reducer. In comparison with the untreated small example the effect of the fog on the toning result gets visible. Almost the complete background and parts of the subject got "de-fogged" so that with the following selenium toning various colors resulted in density alike zones.

*Photo: Rudolph Hillebrand*



**Paper Tetenal Baryt Sepia,  
Developer SE15 Polychrome Kit  
First developer Lith:  
600 ml water, 40 ml A, 40 ml B,  
5 ml C, 20 ml D  
Second developer of Sienna:  
600 ml water, 30 ml developer  
concentrate, 30 ml ammonium-  
chloride solution 20%  
10 ml carbonat solution 30%,  
3 ml kaliumbromide solution 1%**

**Exposure-and developing times  
at the three examples are identi-  
cal: 8 seconds (contact)  
First developer 4½ minutes,  
stop bath 20 seconds, pre wash  
1 minute  
Second developer 1½ minutes  
Untoned on the right below, on  
the right above Tetenal Gold  
Toner 1½ minutes  
Large picture on the left: Gold  
toner 3 minutes.**

*Photo: Wolfgang Moersch*

doesn't cause any improvement with the Polychrome technique because of no significant changes on the picture tone. Different results are obtained with the one bath sulphur toning, better called the Polysulfite toning. Toner formulares for example of Kodak are known since decades but Agfa Viradon is the only canned Polysulfide toner on the market. Because of his unpleasant smell this sulphur toner was banished from my laboratory till a work of my valued colleague Frank Widmann made me curious. Viradon, like every other sulphur toner, is made for transferring metallic silvers to silver sulfide connections. The colour of silver sulphur is yellowish up to a



reddish brown. The toning time is desicive for the degree of change of tone. Not like that on Frank Widmanns works. Beside the known typical brown tone a soft luminous green colour arose in a sharply to be restricted zone of middle blackening. A puzzle which gave me no peace. If such a tone can be reproduced on definite paper/developer combinations in connection with high toner dilutions, it should be possible to use this phenomenon also for wider tone value ranges. After extensive systematic series of tests the first results are published here. It was stated that a colored development resulting in reddish tones followed by a Agfa Viradon polysulfide-toning favors



or makes it even first possible, that green, blue or violet colors emerge.

*Wolfgang Moersch*

### Distributors

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Paper Tetenal Baryt Sepia SE15 Polychrome Kit: same developer coordination as on Orchid, also here contact of platinum printing negative  
Developing times: First developer both 5 minutes, second developer at the untuned print 3 minutes On the toned 2 minutes once pure, once selenium toned (Amaloco T60) 1+6, 90 sec.

*Photo: Picho*



Example Polysulfide-toning (Agfa Viradon)  
A Select Sepia VC SE15 Polychrome Kit untuned  
B toned with Agfa Viradon 1+1500, 30 seconds  
At first with the Viradon toning the picture tone changes into crimson red or violet then gets during the watering a deep blue tone over the whole tone value range. After more than 20 minutes washing this intensive tone drops off, green shade and yellow lights are afterwards the result.

*Photo: Serhan Sözmen*