



The result on VC paper looks completely different.

Paper Select Ivory VC developed in Separol HE:

Left negative (400ASA) with Heiland Controller time (memory selection: Select VC) +1.3 stops and gradation +0.4

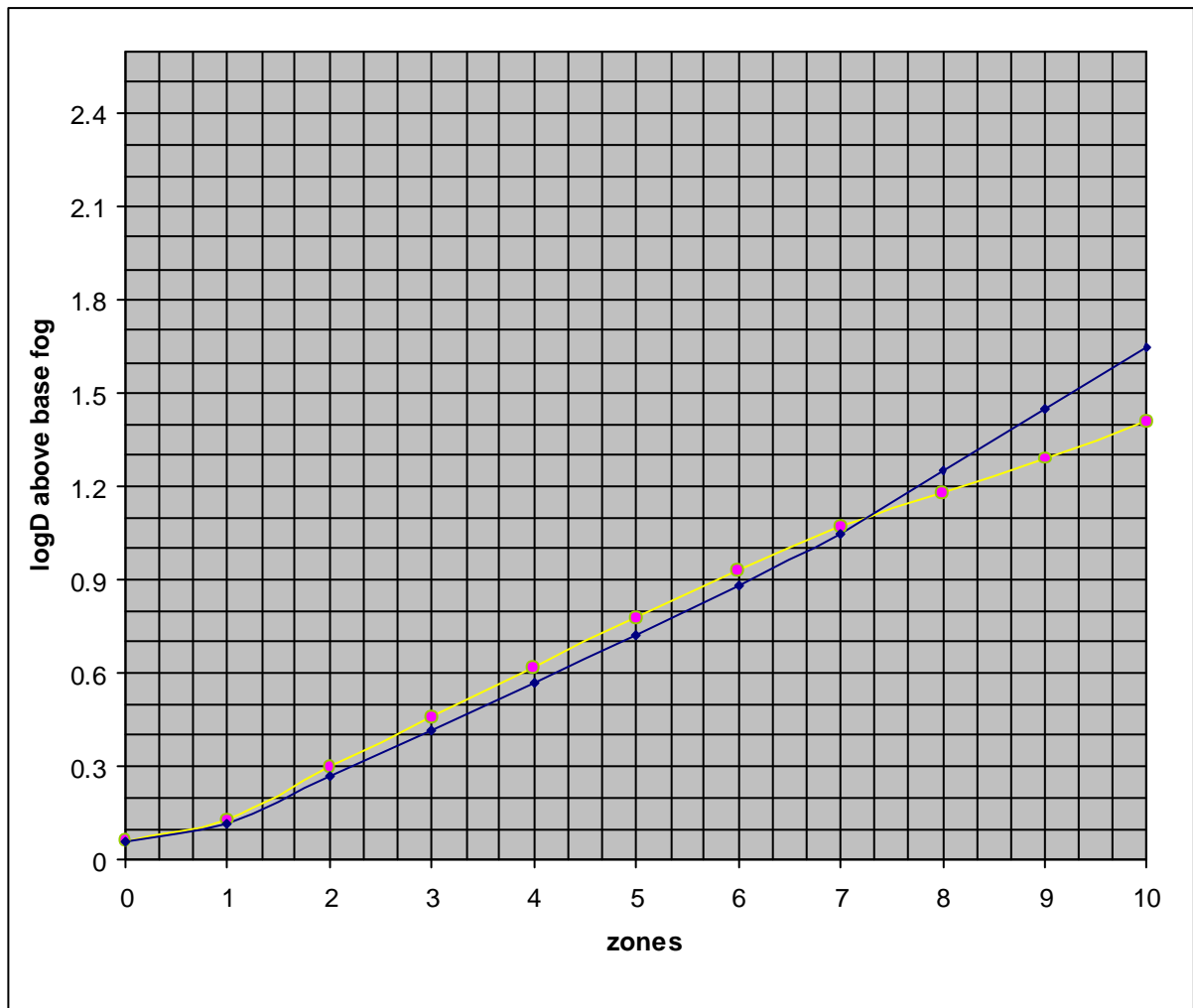
For comparison: Right negative without adjustment of the filtering but with a 40% increase of exposure time (+1.7 stops)

Developer Separol HE diluted 1+8 and developed for 3 minutes.

The developing times indicated on my data sheet have been determined with two minutes of prior rinsing. Without pre-rinsing the developing times have to be decreased by 15 to 20 seconds. Aside from a few exceptions (like Delta 400 or Adox CHS 50), prior rinsing is not mandatory. If N-development is carried out by the SLIMT method, you don't need to determine the N-time anew.

When developing in a tank in a dilution of 1+1+100 agitate permanently for the first minute. After that, agitate for two times every 30 seconds by tipping over the tank for a complete 180° – so that the tank is upside down – and back. Then rotate the tank a little bit around its axis and give it the second 180° inversion. It is not important how much you accelerate the tank, but to create a uniform movement for all developing processes to come.

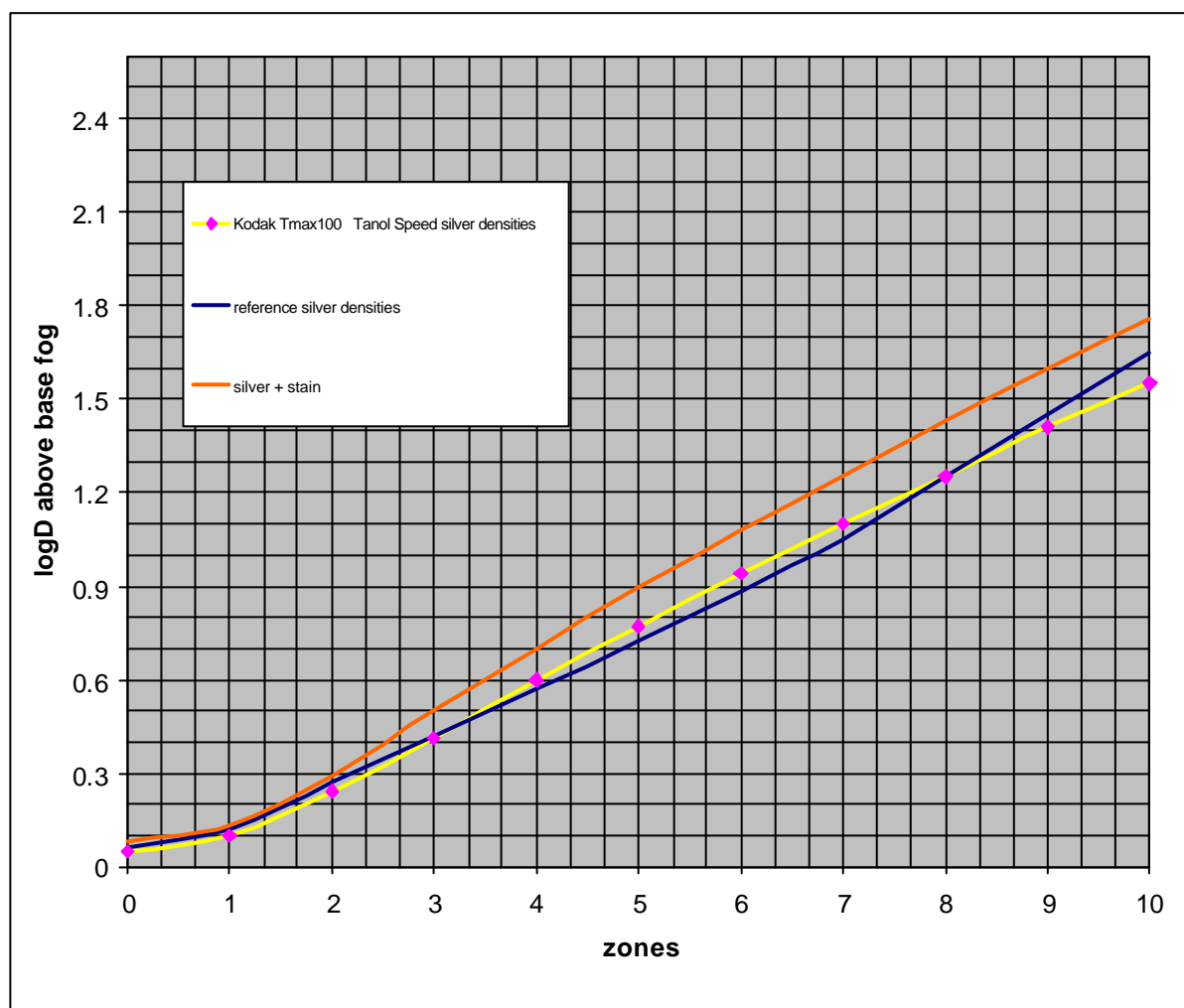
In a dilution of 1+1+130 more agitation is necessary, 3 to 6 inversions. There are two reasons for this. Developer in a higher dilution oxidises more quickly, so that you need a faster flow of "unexhausted" solution to prevent streaks of uneven development. In the highlights higher amounts of silver salt have to be reduced, so that the activity of the developer decreases more quickly in those areas. Without a constant flow of fresh solution, this would lead to a (mostly unwanted) loss of contrast



Tmax100 @125ASA developed in Tanol Speed 1+1+130 for 15½ minutes with 3 inversions every 30 seconds.

You see a typical curve for a development in this dilution, with a bellying up in the mid tones. The shadow densities are a bit too high and the highlights a bit too low. This flattening of the contrast is not necessarily wanted.

To get closer to the nominal curve in the highlights, you have to increase development time or agitation. Doing this, the shadows increase slightly further above the nominal curve. If you simultaneously set the film speed to 160ASA, zone I stays slightly below 0.12 logD, but the ascent of the curve is still steep enough to allow separation of the shadows.

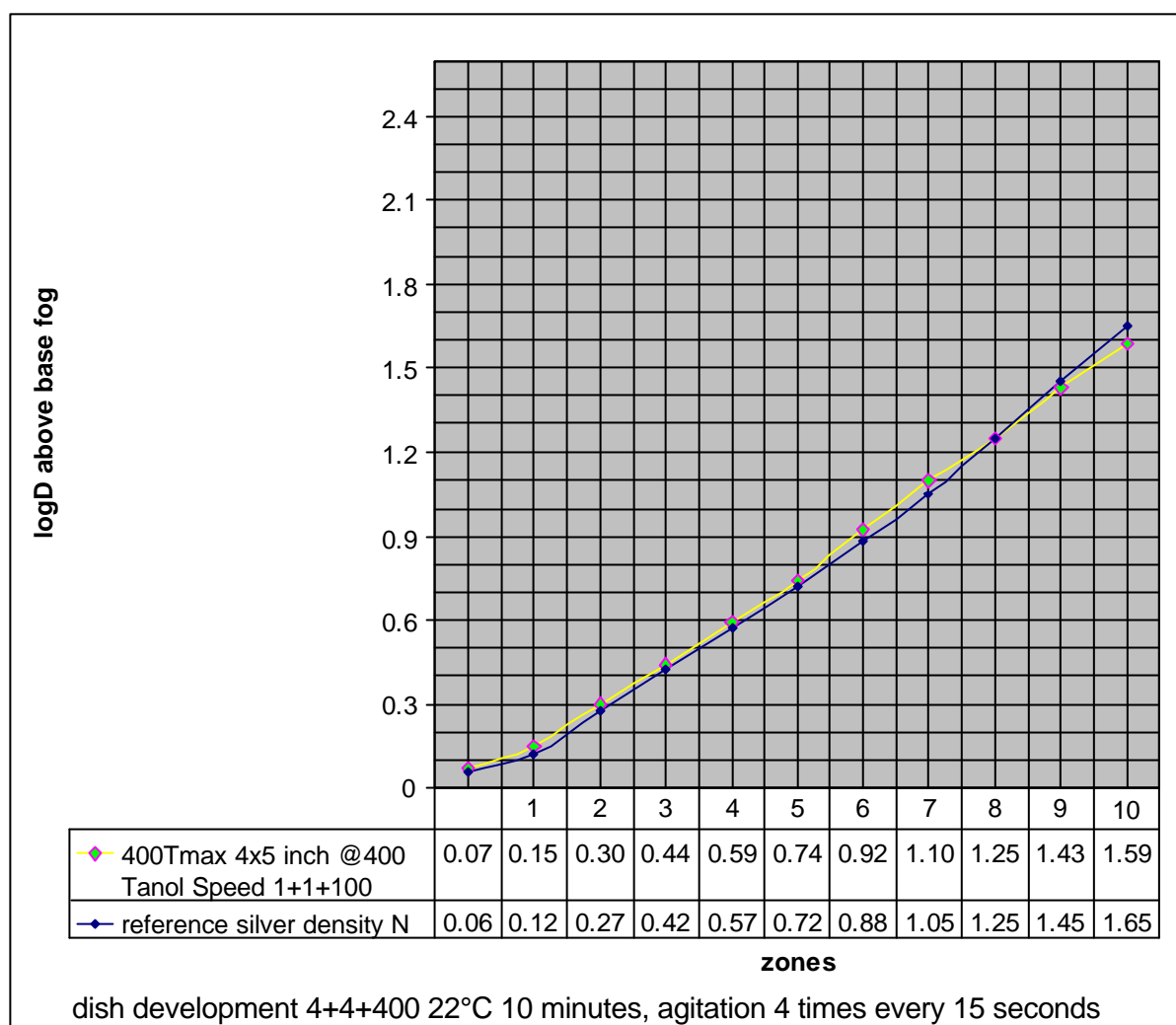


Tmax100 @160ASA developed in Tanol Speed 1+1+130 for 17½ minutes with 4 inversions every 30 seconds.

Sheet film

I recommend developing sheet film in a dish. This is the only way to ensure homogenous development across all areas of the film. A big size film demands for a lot of agitation. When developing in a tank the inversions cause turbulences on the edges of the sheet film. This results in higher densities in those areas. Developing with the emulsion side down seems to me the only logically correct way, but if you fear this to cause scratches, you may as well develop the print emulsion side up. Most important here is to cause enough agitation in the dish by abrupt movement. With this developer, gently swinging the dish does not lead to the wanted effect of carrying exhausted developer and its oxidation products away from the emulsion. If the dish is tilted and dropped, the film shoots up and down in the dish with every movement. The sound of the film hitting against the inner walls of the dish is a sign for "correct" agitation. You have to find your own cycle of agitation here. Slightly lifting all 4 corners of the dish is only twaddle.

Start a cycle of agitation every 15 seconds of clock time. Note: Not the interval between the agitation cycles, but one agitation cycle plus interval is 15 seconds long! To avoid turbulences and to achieve uniform waves in one direction, I tilt the dish 4 times from the short side in one cycle and 4 times from the long side in the next cycle, and so on!

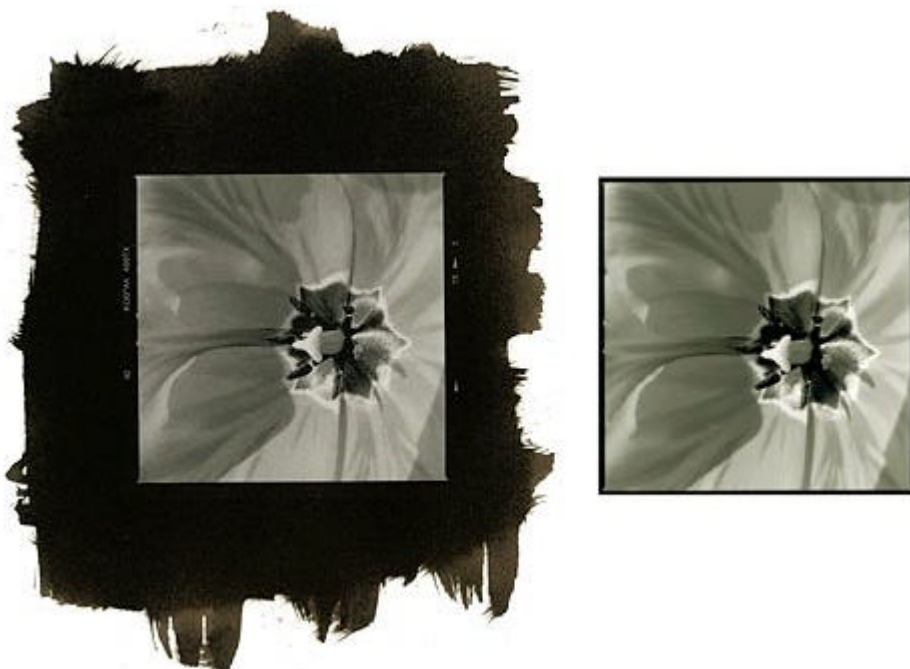


Ruck Zuck Edeldruck - alternative techniques in no time at all

As mentioned earlier, negatives developed in pyrogallol or Tanol are suitable for alternative techniques and processes that require a high range of contrast, such as platinotype, kallitype, or cyanotype.



kallitype - no toning - of a PMK negative

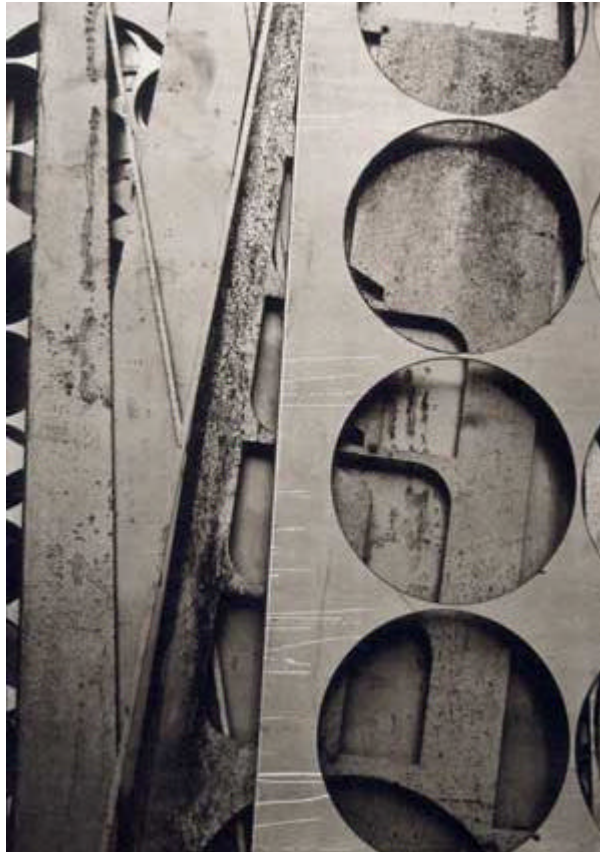


platinotype and silver print of the same negative, Tmax400 Tanol



Friedrich Saller

cyanotype of an original pyro negative size 8x10 inch



Jens Knigge platinotype of an original 13x18 negative developed in Tanol

If you want to make a copy of a negative on a larger negative format, you can also develop in Tanol to achieve the range of contrast required for the alternative printing techniques.

Orthochromatic film with a carrier as clear as possible is especially suitable for this purpose.



Gerhard Fuhs

cyanotype, print size 20x20cm copied from a roll film negative

Tanol or Tanol Speed?

Counterquestion: For which purpose? Any combination that you have under control is better than constant trying with new developers (however good they may be). Tanol has been in shops for a couple of years now and there may only be one reason to change to the Speed version. Gaining film speed can be an argument, but one third of a stop is not making the difference. As against other staining developers and traditional fine grain developers with reduced film speed, gaining one stop or more is not to be disdained, as long as other important characteristics are met, like sharpness, resolution and grain.

My given data should only be used as a starting point for your own attempts. Usually, users prove them to be true, but some results deviate upwards as well as downwards. If you want to have reliability in your process, you have to do some calibration work, unless the first attempt is already an exact hit. You cannot really count on once determined film speeds to be correct for all times. Small differences in film speed from one batch to another cannot be ruled out even with the biggest manufacturers.

Calibration may seem to be a mystery for most users, so that they don't even try. Yet there is help on the web – even for users without a profound knowledge of the background.

For everyone who never dared to try I recommend visiting Norbert Hein! Too easy – just download the Excel file for film testing, read his text and start.

<http://norberthein.de/tools/toolsidx.htm>

Your evaluation will come to higher film speeds than I indicated on my data sheets. The ISO norm is to blame – or me, because I ignore it in the foot of the curve. My nominal curve begins a bit higher.

Hand or processor?

My development times were determined processing by hand using a tank inversion method.

Those times can also be used for the **Heiland TAS-Processor**, if you agitate by hand for the first half minute. Especially the first seconds are crucial for a homogenous development!

It may only be a few seconds that elapse while the tank is fitted after filling and before the machine starts, but they can be enough for the bubbles on the uppermost reel to start an impeding effect. For instance, if a development time of 12 minutes is specified, switch the processor to 11½ minutes. I use speed 3 on the processor. Take the rotation cycles from hand development as stated above.

Rotation tank development with **JOBBO ATL** can only be recommended when using Tanol Speed or better Finol. Because of its more vigorous agitation, development times have to be shortened accordingly.

Temperature

Although it may raise eyebrows, I don't want to follow the usual recommendation to use 20°C as a standard.

In summer cooling down all solutions is a hassle and with my developers there is no reason to miss out on the advantages of higher temperatures.

Even if the temperature of the developer is 4°C higher than the surrounding temperature, it cannot drop off as much as to result in underdevelopment, especially not, if you bring the tank to temperature by prior rinsing.

I would draw an upper limit at 26°C. Some films can still cope with temperatures between 28 and 30°C, but the resulting (too) short development times probably prevent any reproducible outcome.