

Combination Toners

These toners are similar but not identical to Kodak Poly Toner or the original version of Agfa Viradon. All three are made up by combining Kodak Brown Toner (KBT) and Kodak Rapid Selenium Toner (KRST). The first formula was originally published as a concentrate to be diluted 1 part stock to 3 parts water. However, I am giving it as a working solution which makes solution of the carbonate easier.

No.1

Water	500.0 ml
KBT	80.0 ml
KRST	20.0 ml
Sodium Carbonate, monohydrated	40.0 grams
Water to make	1.0 liter

Use full strength.

The original article does not specify the hydration of the carbonate, however, I've mixed it with monohydrated carbonate which worked well.

Source: "Modern Photography" magazine, Dec, 1953, p.87 attributed to Kodak.

The following two formulas are from a Kodak booklet "Professional Printing with Kodak Photographic Materials" First Edition, 1953 printing, p.37

Hue No.1 is described as "rich red-brown", hue No.2 is described as "a warm brown."

Hue No. 1

KRST	17.0 ml
KBT	75.0 ml
Kodalk	30.0 grams
Water to make	1.0 liter

Use full strength

To replenish add 30.0 ml of KRST 1:5 per each 10 8x10 prints toned.

Hue No.2

KRST	2.0 ml
KBT	100.0 ml
Kodalk	8.0 grams
Water to make	1.0 liter

Use full strength

To replenish add 30.0 ml of KRST 1:20 for each 10 8x10 prints toned.

Hue 2 tends to reduce the image slightly so prints to be toned should be printed slightly darker

than desired for the final image.

Kodalk is Sodium Metaborate, octahydrate. Probably Sodium Carbonate would also work. These toners work very quickly, about 1 to 3 minutes for the magazine formula and Hue No.1 and about 7 minutes for Hue No.2 at room temperature.

After toning prints should be directly immersed in a 10% solution of Sodium Sulfite or stock strength Kodak Hypo Clearing Agent. This will act as a stop bath for the toner, preventing after toning and staining in the wash. About one minute is enough. RC prints should be washed for 4 minutes. Single weight fiber prints should be washed for about 10 minutes, double weight fiber prints for about 20 minutes.

This toner has a moderately strong odor of both Ammonia and of Hydrogen sulfide (rotten eggs) when working.

R. Knoppow 4 August 2005