

Two developer formulae are listed below. Factors discussed in above comparative study are all incorporated in these formulae to ensure excellent results. Another important feature of these two formulae is that they do not use [hydroquinone](#). Hydroquinone is a very common developing agent but it has proven [toxicity](#) to laboratory animals (although existing data on human toxicity is somewhat mixed), fishes and other aquatic life. The recommended formulae below replace hydroquinone with [ascorbic acid](#) (vitamin C) which also has excellent developing property.

I recommend one neutral tone standard print developer, and one slow working warm tone print developer.

#### **DS-14, DS-15 print developers**

	DS-14	DS-15
Metol	--	0.5g
Dimezone S	0.2g	--
ascorbic acid	6.0g	4.0g
sodium sulfite, anhydrous	12.0g	5.0g
sodium carbonate, monohydrate	30.0g	8.0g
triethanolamine, 99%	5.0ml	2.0ml
salicylic acid	0.5g	0.2g
potassium bromide	1.0g	3.0g
water to make	1.0 liter	1.0 liter
target pH	10.4 ± 0.2	10.0 ± 0.2

Both developers are specified for use without dilution. If desired, 5 times the amount specified for each ingredients can be dissolved in one liter of water, and this stock solution may be diluted 1+4 immediately before use.

DS-14 is an excellent standard print developer. It is a modern formulation using safer alternatives to hydroquinone, and it performs like classic standard print developers. This developer is recommended for users who use Kodak Dektol, Kodak D-72, AGFA Neutol Plus (discontinued), Ilford Multigrade Developer, and other standard print developers.

DS-14 is suitable for processing in tray, tank and [Nova slot processors](#), and standard developing time is 1.5 to 2 minutes. DS-14 can be replenished by top-off method. Use DS-14 itself, minus potassium bromide, as the replenisher. If colder tone is desired, 0.05g to 0.3g benzotriazole can be added to DS-14.

DS-15 is suitable for tray processing, and processing time varies with paper stock. The bromide in DS-15 can be increased or decreased for desired result.

In DS-14, Dimezone S may be substituted with Dimezone, Phenidone B, or Phenidone in decreasing order of desirability. However, preparation of concentrate may face solubility challenge with Dimezone or Phenidone B. Phenidone or Phenidone A provides equal image quality, but with inferior solution keeping property. One work-around is to prepare the concentrate with any of these Phenidone derivatives, and add Phenidone or Dimezone immediately before use.