

Diafine two-bath film developer

Diafine is usable over a wide temperature range with one developing time for all films. Fast, medium and slow films can now be developed simultaneously without adjustment in developing time. All films with exception of a few extremely slow emulsions are automatically developed to normal contrast. Time and temperature have no practical effect if the minimum recommendations are observed.

Diafine film developer is unsurpassed in its ability to produce greatest effective film speed, ultra-fine grain, maximum acutance and highest resolution. It is a characteristic of Diafine film developer to permit the widest latitude of exposure without the necessity of time-temperature compensation.

PREPARATION

Diafine is supplied in dry powder form to make two separate solutions (A & B). The two powders contained in a carton of Diafine are to be prepared and used separately.

Dissolve the contents of the smaller can (solution A) in water (75 to 85°F) to make the volume specified on the carton. Dissolve the contents of the larger can to make an equal amount of solution B. Label the storage containers clearly. For maximum consistency and stability, we recommend the use of distilled water. As with an photographic developer, all storage and processing equipment must be clean.

In use, the solutions will become discolored and

a slight precipitate may form which in no way will affect the working properties of Diafine. The precipitate may be removed if desired by filtering.

TIME and TEMPERATURE

Diafine may be used within a temperature range of 70 to 85°F with a minimum time of 3 minutes in each solution. Increased developing times will have no practical effect on the results. It is recommended that you do not exceed 5 minutes in either solution.

DEVELOPING PROCEDURE

Do Not Pre-Soak Films

Any type of tank or tray may be used.

1. **Immerse film** in Solution A for at least 3 minutes, agitating very gently for the first 5 seconds and for 5 seconds at 1 minute intervals. Avoid excessive agitation as this may cause some loss of shadow detail.
2. **Drain, but do not rinse.**
3. Immerse film in Solution B for at least 3 minutes, agitating gently for the first 5 seconds and for 5 seconds at 1 minute intervals. Avoid excessive agitation.
4. Drain and rinse in plain water for about 30 seconds. (We do not recommend the use of an acid stop bath).
5. Fix, wash and dry in the usual manner.

Optimum results are obtained if all solutions, including the wash, are maintained at the same temperature. Care must be exercised to prevent any amount of Solution B from entering Solution A.

REPLENISHMENT

Diafine does not require replenishment. It is an extremely stable formula and has an unusually long work life, if normal precautions are taken against contamination.

When necessary, the level of the solutions can be maintained by the addition of fresh Diafine. Add *equal amounts* of fresh A and B to their respective working solutions. Since the introduction of dry film into Solution A decreases the volume of A more rapidly than that of B, some of the B will have to be discarded before adding the fresh B solution.

CONTRAST CONTROL

Because Diafine is a true two-bath developer, each film type is developed to a fixed degree of contrast, and changes in the developing times will have no practical effect on the final results. The chart listings will produce negatives of normal density and contrast (gamma 0.65 to 0.75) at the recommended exposure indexes.

Some control of high contrast subjects is possible by lowering the exposure index. Because Diafine has the property of limiting highlight development, increased exposures result in higher shadow densities without highlight "blocking", thus effectively extending the tonal range. Diafine can accommodate as much as a two stop increase over the recommended indexes, without serious loss of quality. The increase in contrast in flat subject matter is not possible with Diafine.

Diafine

Film	ASA	35mm	Roll	Sheet	Temp °C	Temp °F
APX 100	200	3+3			20	68
APX 100	250		3+3		20	68
Ektapan	400			3+3	20	68
FP4+	200			3+3	20	68
FP4+	250	3+3	3+3		20	68
Fomapan 100	200			3+3	20	68
HP5+	640			3+3	20	68
HP5+	800	3+3	3+3		20	68
Neopan 100 Acros	200	5+5			22	71.6
Neopan 400	640	3+3			20	68
Neopan 1600	2400	3+3			20	68
Pan F+	80	3+3			20	68
Pan F+	100		3+3		20	68
Plus-X [PX]	400	3+3	3+3	3+3	20	68
TMax 100 [TMX]	80	4.5+4	4.5+4		22	71.6
TMax 100 [TMX]	160	3+3		3+3	20	68
TMax 100 [TMX]	200		3+3		20	68
TMax 400	500	3+3			20	68
TMax 400	640		3+3	3+3	20	68
TMax P3200 [TMZ]	1250	3+3			20	68
Tri-X Pan [TX]	1600	3+3	3+3		20	68
Tri-X Pan Pro [TXP/TXT]	1000		3+3		20	68
Tri-X Pan Pro [TXP/TXT]	1200			3+3	20	68

ACU-1 film developer

ACU-1 is a maximum acutance, ultrafine grain film developer, combining optimum quality, with great effective speed. ACU-1's higher speed ratings permit the use of slower films with superior resolving power and finer grain in situations that previously required high speed films. ACU-1 is a developer designed for those who prefer to work with a "one-time" use preparation with convenient dilution ratios.

Preparation: Prepare the concentrated "stock solution" by dissolving completely the full contents of the can in 1 quart of water (70 to 90°F). We recommend the use of distilled water wherever the mineral content or alkalinity of the tap water is high. ACU-1 concentrate, either dry or in solution, may assume a slight coloration which in no way will affect its chemical properties.

Storage: ACU-1 "stock solution" will retain its full strength for approximately one year if normal precautions are taken against contamination and oxidation. All storage and processing equipment must be clean. All equipment suspected of contamination should be soaked for eight hours in a solution of approximately one ounce of sodium sulfite per gallon of warm water, and then thoroughly rinsed. To minimize oxidation, ACU-1 should be stored in full, tightly capped amber glass or polyethylene bottles. For infrequent use, we recommend that the concentrate be stored in

several small bottles to assure longer life.

Recommended Exposure Indices: The high speed ratings listed on the chart are the normal exposures indices for ACU-1. The recommended exposure/development values are calculated for optimum quality negatives, and are not the result of "pushing". Alteration of these values, variations of personal technique excepted, will result in negatives of less than ACU-1's best quality.

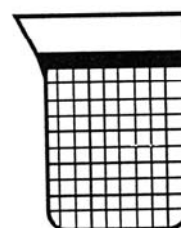
Developing Times: The listed times for development will produce negatives of ideal contrast for printing in modern condenser enlargers. For cold light and diffusion type enlargers, development may be increased by 25%. Contrast may be varied to suit individual requirements by varying the development times $\pm 25\%$ from normal.

Developing Procedure: Dilute the concentrate with water as specified on the chart. Two convenient dilutions of 1:10 and 1:5 are employed. Do not alter the dilutions. Use the diluted "working solution" within four hours after preparation and discard after use.

Agitation: The developing times listed on the chart are based on gentle agitation for the first 10 seconds after immersion, followed by gentle agitation for 5 seconds every 30 seconds thereafter.

The recommended procedure for gentle agitation with stainless steel tanks is to invert the tank twice during a 5 second interval. With the type of tank in which agitation is accomplished by rotating reels, turn the reels about a quarter of a turn backwards and forwards at the rate of 2 such cycles in a 5 second interval.

Excessive agitation is to be avoided since it results in greatly increased contrast, with little or no speed gain. Less than recommended agitation promotes the possibility of irregular development, low contrast, and loss of speed. constant agitation cannot be compensated for by decreasing development.



1:10
86cc or 3 oz. ACU-1
concentrate balance
water to make
946cc (1 quart)



1:5
157cc or 5½ oz. ACU-1
concentrate balance
water to make
946cc (1 quart)

ACU-1

Film	ASA	Dilute	35mm	Roll	Sheet	Temp °C	Temp °F
APX 100	200	1+10		8		21	69.8
APX 100	320	1+10	12		12	21	69.8
Delta 100 Pro	100	1+10	8	8	8	21	69.8
FP4+	100	1+10	9	9		21	69.8
FP4+	200	1+10			11	21	69.8
HP5+	400	1+5			10.5	21	69.8
HP5+	800	1+5		10.5		21	69.8
HP5+	800	1+10	10			21	69.8
Neopan 400	400	1+5	5.75	5.75		20	68
Neopan 400	800	1+10	12.75	12.75		21	69.8
Neopan 1600	1600	1+5	5.75			21	69.8
Neopan 1600	2400	1+10	14.5			21	69.8
Pan F+	50	1+10		7		21	69.8
Pan F+	64	1+10	6.5			21	69.8
Plus-X [125PX]	125	1+10		9		20	68
Plus-X [PX]	250	1+10	9	5.5	9	21	69.8
Recording Film	1600	1+10	22			24	75.2
Recording Film	3200	1+10	27			24	75.2
TMax 100 [TMX]	160	1+10	12	10.25	12	21	69.8
TMax 400	1000	1+10	12		12	21	69.8
TMax 400	1200	1+10		11.25		21	69.8
TMax P3200 [TMZ]	3200	1+10	18.75			21	69.8
TMax P3200 [TMZ]	6400	1+10	22.5			21	69.8
Tri-X Pan [TX]	1000	1+5	10	14		21	69.8
Tri-X Pan Pro [TXP/TXT]	6500	1+5		9	9	21	69.8