5247 Color Film

Type 5247 has a carbon jet backing that must be removed during the Water Wash Step. This is easily done by removing film from reel...hold under running water between thumb and forefinger backing side up...gently rub off with thumb. A photo sponge may be used if you desire. DO NOT RUB EMULSION SURFACE. Initially, your wash water will run black...this is normal. Continue washing until backing is completely removed. Make certain any loose particles are washed free from emulsion surface. If necessary, extend wash time. Because of the backing material and the by-products it liberates, ONE SHOT PROCESSING IS RECOMMENDED. DO NOT PROCESS TYPE 5247 IN SAME SOLUTIONS WITH OTHER FILMS.

Trouble Shooting

PROBLEM	PROBABLE CAUSE	REMEDY
Thin negatives	• Low development temperature • Under exposure in camera • Developer exhausted	Reread and follow all instructions carefully on temperature control, solution, capacity, etc.
Negatives appear more magenta than more normal with higher density near sprocket holes	• Developer too warm • Overly vigorous agitation in conventional tank	Maintain temperature control. Use only agitation methods prescribed.
Black “dirt” specks on negatives which print as white spots.	• Improperly washed 5247 film	Remove ALL carbon jet backing during final rinse.
Negatives look OK but prints ar a bit too flat.	• Too little development	Increase development time.
Negatives look OK but loss of highlight and shadow detail.	• Too much development	Decrease development time.

Safety Notes

WARNING This kit contains chemicals that may be hazardous if misused. Always wear safety glasses, rubber gloves and protective clothing, such as a lab coat or plastic apron, when working with chemicals. While the hazard rating of this kit is low, caution should be exercised. Do not allow children to use this kit without adult supervision.

DEVELOPER PART A

Contains: Potassium Carbonate. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

DEVELOPER PART B

Contains: Hydroxylamine Sulfate. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

DEVELOPER PART C

Contains: 4-amino-3-methyl-N-(ß-hydroxyethyl)-aniline sulfate. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

BLIX PART A

Contains: Ammonium Thiosulfate. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

BLIX PART B

Contains: Acetic Acid. May cause burns. Avoid skin contact. In case of contact, flush with water and wash with a non-alkaline soap. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, DO NOT INDUCE VOMITING. Contact a physician immediately!**

BLIX PART C

Contains: Ethylenediamine Tetraacetic Acid EDTA. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

STABILIZER

Contains: Hexamine. May cause irritation. Avoid skin contact. In case of contact, flush with water. *DO NOT ALLOW EYE CONTACT*. In case of eye contact, flush with water for 15 minutes and contact a physician immediately! *DO NOT TAKE INTERNALLY*. **If swallowed, INDUCE VOMITING. Contact a physician immediately!**

MSDS (Material Safety Data Sheets) for this kit are available by written request.

ARISTA 41

C-41 PROCESSING

Instructions for Quart and Gallon Kits

You may use this kit to process any Kodacolor/Vericolor™, or C-41 compatible film. It will also process Chromogenic B&W films. These instructions will show you how to process the film and how to reuse the chemicals for extended life.

WARNING

This kit contains chemicals that may be harmful if misused. Do not allow children to use this kit without adult supervision. Read all safety notes before proceeding.

EQUIPMENT NOT INCLUDED IN YOUR KIT

- A stop watch or a darkroom timer.
- A processing tank and reels or a rotary-tube type processor.
- Three empty chemical containers.
- A graduate.
- An accurate thermometer.
- A film squeegee or a soft sponge.
- Temperature control equipment or a large tub to hold warm water.

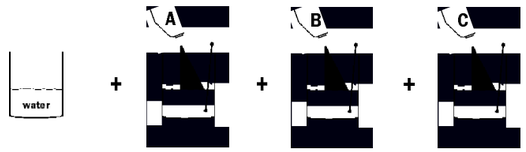
Rev 1/04
FORM 090 2202

Mixing Chemicals †

Developer

- Place the recommended amount of water* into a clean glass or plastic container.
- While stirring, add the contents of the bottle marked **Developer Part A**. Stir well.
- While stirring, add the contents of the bottle marked **Developer Part B**. Stir well.
- While stirring, add the contents of the bottle marked **Developer Part C**. Stir well.

**Water Temperature: 120ºF (49ºC)*



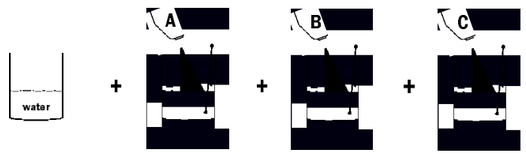
To make:

1 Quart	20 oz. (591 ml)*	8 oz. (237 ml)	2 oz. (59 ml)	2 oz. (59 ml)
1 Gallon	80 oz. (2.37 liters)	32 oz. (946 ml)	8 oz. (237 ml)	8 oz. (237 ml)

Blix

- Place the recommended amount of water* into a clean glass or plastic container.
- While stirring, add the contents of the bottle marked **Blix Part A**. Stir well.
- While stirring, add the contents of the bottle marked **Blix Part B**. Stir well.
- While stirring, add the contents of the bottle marked **Blix Part C**. Stir well.
- The final volume may vary slightly with no adverse effects in processing.

**Water Temperature: 125ºF (51.7ºC)*

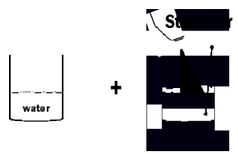


To make:

1 Quart	18 oz. (532 ml)	8 oz. (237 ml)	2 oz. (59 ml)	4 oz. (118 ml)
1 Gallon	72 oz. (2.13 liters)	32 oz. (946 ml)	8 oz. (236 ml)	16 oz. (473 ml)

* Water temperature listed will bring room temperature concentrates to (72ºF) to 101.5ºF for working solution.

Stabilizer



To make:

1 Quart	30 oz. (887 ml)	2 oz. (59 ml)
1 Gallon	120 oz. (3.55 liters)	8 oz. (237 ml)

† Final volumes may vary slightly with no adverse effects in processing.

Mixing Notes

- Smaller amounts of the final working chemical solutions can be mixed, but careful attention must be paid to the mixing ratios.
- Use water at the temperature you want to use to develop your film. This allows for shorter warm-up time.
- Stir continuously while mixing.
- Keep everything very clean. A few drops of Blix, soap or other contaminates can destroy the developers.
- Mark your containers clearly. This will prevent confusion and processing out of order.
- Use safety glasses and rubber gloves while working with chemicals. Also wear a lab coat or other protective clothing. ***Do not allow children to use this kit without adult supervision.***

PROCESSING STEPS FOR HAND TANK OR DIP & DUNK

For processing with a Unicolor® or Paterson® type plastic tank or Nikkor® stainless steel tank with inversion agitation *or* open tank with lift rod agitation. *Both types of tanks should be placed in tempered water baths in order to maintain consistent solution temperatures.*

		TIME	TEMP	AGITATION
Step 1	**Pre-Soak**	1 min	102ºF	None
Step 2	**Developer**	3.5 min	102ºF	Continuous for first 10 sec., then 4 lifts or 4 inversion cycles* every 30 sec. thereafter
Step 3	**Blix**	6.5 min.	95ºF - 105ºF	Same as above
THE REMAINING STEPS CAN BE DONE IN ROOM LIGHT WITH THE TANK LID OFF				
Step 4	**Wash**	3 min.	95ºF - 105ºF	Running water
Step 5	**Stabilizer**	½ to 1 min.	Room	Agitate for first 15 sec.
Step 6	**Dry**	n/a	< 140ºF	n/a

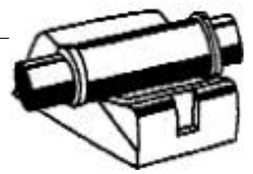
* 1 inversion cycle = 1 back and forth motion as shown in the graphic at the right

PROCESSING STEPS FOR ROTARY-TUBE

For use with Unicolor® type film drum.

	75ºF	80ºF	85ºF	90ºF	95ºF	104ºF
Step 1 Pre-Soak	Completely fill film drum with water. 60 sec.	60 sec.	60 sec.	60 sec.	60 sec.	60 sec.
Step 2 Developer	17.5 min.	14.25 min.	10.25 min.	8 min.	5.75 min.	3.5 min.
Step 3 Blix	8 min.	8 min.	8 min.	8 min.	7 min.	6.5 min.
The remaining steps can be done in room light with the tank lid off.						
Step 4 Wash	Fill and empty the tank at least seven times, minimum time required: 3 minutes.					
Step 5 Stabilizer	Stabilize for 30 seconds to 1 minute at room temperature. Agitate for the first 15 seconds.					
Step 6 Dry	Not over 140ºF.					

* Recommended time and temperature.



Chemical Reuse

Using a volume of chemicals once will not destroy its ability to develop film. However, extra time must be added to the processing to compensate for the weaker Developer. Whenever the Developer is reused, add 8% to the development time. For example, you just developed two rolls of film at 104ºF. You have several more rolls to process. To process the next two rolls at 104ºF, multiply 3.5 (the development time at 104ºF) by 1.08. 3.5 x 1.08 = 3.78, so you process the next two rolls at 104ºF for 3.75 minutes. The time for the next two rolls is calculated in a similar manner, except the development time must be increased by 15% above the original developer time. 3.5 x 1.15 = 4.025 or 4 minutes. *Use the above formula for the Developer ONLY.* Reusing the Blix *does not* affect the processing time. Best results are obtained when chemicals are used only once.

Solution Capacities

The solution capacities given in the chart below show how many films we recommend you can reliably process in various quantities of working solutions. If you feel you are interested in extracting more capacity from the solutions, please read the statements under the heading, "More Chemistry Capacity."

FILM SIZE	110 (20 exp.)	126	135 (24 exp.)	135 (36 exp.)	120	220	4 x 5 (sheet)	8 x 10 (sheet)
Rolls or sheets/ 960 ml (32 oz.)	36	16	12	8	8	4	32	8
Rolls or sheets/ 480 ml (16 oz.)	18	8	6	4	4	2	16	4
Rolls or sheets/ 240 ml (8 oz.)	9	4	3	2	2	1	8	2

MORE CHEMISTRY CAPACITY

One is always concerned about chemistry life and capacity, quality of results and economy when processing multiple rolls in a batch of chemistry. From the consumer's viewpoint it must often seem that chemistry manufacturers are somewhat arbitrary about the number of films which can be processed before the chemistry must be discarded. This stems from the manufacturer not knowing - only guessing - four essential things: how many films will be processed in freshly mixed chemistry; in what manner and how long will the chemistry be stored before processing again; what contaminants have entered the system from either the water supply or from unintentional chemical intermixing; and how far can the results deviate from ideal before the user deems them unacceptable. If you will recognize at the outset that all developers start on an inexorable downhill exhaustion path the moment they are mixed, and exhaust faster in the presence of air, contaminants and high temperature, and suffer superimposed stepwise exhaustion with each use, we can offer some observations on extended chemical capacity:

- If you accept the role as the final arbiter of acceptable results, it is easily possible to process 25%, 50%, or even more rolls of film than those listed in the capacity charts so long as all processing takes place within several days after mixing the chemicals. There is only one rule in this exercise: you process film until you no longer like the results. The safeguard in this procedure is that results generally will not plummet precipitously from "good" to "bad" but rather will change gradually.
- If you again take full responsibility for quality of results, it is possible to process more film and over a much longer timespan. This procedure is somewhat risky unless you process some film every day or so to monitor chemistry performance. Otherwise, partially used working solutions left untouched for a week or more might have changed so significantly that you would suffer a dramatic decline in results. If you choose to operate under these conditions, our best advice would be to process a small piece of test film, and on the basis of these results, decide whether or not to commit valuable pictures to the chemistry.

Push Processing

All color negative films suitable for the C-41 process can be underexposed and processed for higher than normal film speeds by extending the development time (push processing). As a rule, pushing should be done only when necessary (i.e. when higher film speed is needed) because negative quality does suffer somewhat. When pushing is required, start with the highest speed film available. In other words, pushing an ASA 100 film two stops to ASA 400 offers no benefit since an ASA 400 film is already available.

When Exposure Change Is:	ASA Speed:	Increase Development Time:
2 stops under	4x normal	1.75x (i.e. 3.5 min. x 1.75 = 6.13 min.)
1 stop under	2x normal	1.30x (i.e. 3.5 min. x 1.30 = 4.55 min.)

Chromogenic B&W Films

When exposing these films in the range of ASA 100 - 400, use the standard development times given in the time/temperature chart. When exposing these films at ASA 800, increase development time by 40% and, when exposing at ASA 1600, increase development time by 80%. For different times and temperatures consult the film instruction sheet.