

# 3E6

Processing Kit

Kit de développement

Entwicklungs-Kit

M-958967

**FUJI HUNT**  
PHOTOGRAPHIC CHEMICALS

 **FUJIFILM**

# 3E6

## Processing Kit

3E6 is a three bath plus Stabiliser process compatible with all slide films designed for the E-6 process. It consists of a First Developer, a Colour Developer, a Bleach-Fix and a Stabiliser. The 5 litre kit will make 5 litres working strength of each bath, (which is enough to process 50 films 135-36 exposure).

Packs to make 15 litres each of First Developer, Colour Developer and Bleach-Fix are also available. These can be used with our standard Pro-6 Stabiliser packs of 6 x 20 litre.

### Mixing recommendations

- Always mix the solutions with water at 30-40°C.
- Only mix the volume recommended by the processor manufacturer. If splitting the two part concentrate solutions (Colour developer and Bleach-Fix) be careful to split them into two equal parts.
- If you intend to use the kit over a long period of time, it is recommended that you split the concentrates into several smaller bottles to avoid air oxidation due to partially empty bottles.

### Solution capacity<sup>1</sup>

As the solution is gradually exhausted during each developing sequence, the processing times will have to be slightly increased to compensate (see Table #1).

As a general guideline, the capacity of the 5 litre working solution is :

50 films 135-36	or
70 films 135-24	or
50 films 120	or
25 films 220	or
200 films 5" x 4"	

<sup>1</sup>The capacity is only indicative and can vary greatly, depending on working conditions, storage, type and brand of film, etc....

### Temperature control and timing

As for any E-6 process, the temperature and the processing time are critical factors. They should be very closely monitored. Any drift will have an impact on the final result. Be sure to keep a constant temperature during each step of processing.

For drumprocessing (automatically or done by hand) it is advisable to check, particularly for both Developers, the temperature at the beginning (just before pouring in the chemistry) and at the end (just before discharging it) of a processing sequence in order to calculate the average temperature (which should be 38.0°C) and to correct it by increasing or decreasing the starting temperature. All the times given take into account the draining time of the tank. This is normally 10 seconds and should be included in the processing sequence.

## Agitation

Agitation is also an important factor for the final result. In the case of manual processing try to be consistent. With drum-processing (done by hand), as soon as the developing tank is filled with a solution, tap its bottom a few times to prevent air bubbles being trapped on the surface of the film. Agitate continuously during

the first 15 seconds, then return the tank back into the hot water bath.

Turn the tank upside down twice every 30 seconds for the remaining time.

With handprocessing, agitate continuously during the first 15 seconds and then 5 seconds every 30 seconds for the remaining time.

## Processing time (Table #1)

300 ml	1st film	2nd film	3rd film	
1200 ml	1-4 films	5-8 films	9-12 films	
5000 ml	1-17 films	18-34 films	35-50 films	Temperature
Preheating <sup>1</sup>	5'00"	5'00"	5'00"	38 °C
First Developer <sup>2</sup>	6'30"	7'00"	7'30"	38° ± 0,5°C
Wash	2'30"	2'30"	2'30"	33° - 39°C
Colour Developer	6'00"	6'30"	7'00"	38° ± 0,5°C
Wash	2'30"	2'30"	2'30"	33° - 39°C
Bleach-Fix	6'00"	6'30"	7'00"	33° - 39°C
Wash	4'00"	4'00"	4'00"	33° - 39°C
Stabiliser	1'00"	1'15"	1'30"	33° - 39°C

<sup>1</sup>Necessary for drumprocessing.

<sup>2</sup>Developing time depends on the type of developing system and may have to be adjusted to match requirements. Once this has been done, keep the values for future work.

## Additional notes

- Preheating means warming up the developing tank (with the films inside) from the outside in a tempered-water bath.
- Be sure, the water-bath has reached its preset temperature, before starting with preheating.
- Maintain total darkness during First developer and First wash. The next processing steps can be done outside the developing tank.
- Washes should use running water.

If not, replace by 30 second step washes. In this case, agitate continuously and drain the tank completely after each step.

- Do not agitate in the Stabiliser. Perform this step outside the developing tank. Avoid any contamination of the tank and spiral with Stabiliser.
- To dry the film, hang it in a dust free atmosphere and do not exceed a drying temperature of 60°C.

## Push and Pull process

When processing under or overexposed films, the First developer time must be increased or decreased. All other steps remain unchanged. For the right processing time, see the table below.

### First Development times of Fuji reversal films

Professional films	- 1/2	N	+ 1/2	+ 1	+ 2
RTP 64T	5'30"	6'30"	7'30"	8'30"	12'00"
RVP Velvia 50	5'30"	6'30"	7'30"	8'30"	12'00"
RAP Astia 100	5'30"	6'30"	7'30"	8'30"	12'00"
RDPII Provia 100	5'30"	6'30"	7'30"	8'30"	12'00"
RHP Provia 400	5'30"	6'30"	7'30"	8'30"	12'00"

High Speed film	- 1/2	N	+ 1/2	+ 1	+ 2
RSP Provia 1600	NR	NR	NR	9'30"	13'00"
				800 iso	1600 iso

Amateur films	- 1/2	N	+ 1/2	+ 1	+ 2
RA Sensia II 100	5'30"	6'30"	7'30"	8'30"	12'00"
RM Sensia II 200	5'30"	6'30"	7'30"	8'30"	12'00"
RH Sensia II 400	5'30"	6'30"	7'30"	8'30"	12'00"

NR = Not recommended

## Storage

- Always store chemicals in a cool and well ventilated room.
- Avoid air oxidation of opened concentrates and mixed solutions.
- Unopened Concentrates will keep maximum 18 months under normal storage conditions (temperatures of between 15 and 25°C).
- Opened Concentrates will last 3 months if kept in closed air tight bottles with a minimum of air space.
- Unused working strength Developers will last 4 weeks if kept in closed air tight bottles with a minimum of air space.
- Partially used Developers will last 2 weeks if kept in closed air tight bottles with a minimum of air space.
- Bleach-fix and Stabiliser solutions will last 3 months if kept in closed air tight bottles with a minimum of air space.

## Correcting the Colour Balance

There are circumstances in which the colour balance of some makes of films can vary. It is possible to adjust this by adding a certain amount of diluted Sodium Hydroxide or Sulphuric Acid. See the table below for recommended conditions.

### Changing the Colour balance of the Colour Developer

Film Manufacturer	Current Colour Balance, deviation is looking:	Addition of Acid or Hydroxide Solution per Litre Colour Developer	Resulting Colour Balance is changing towards:
Fuji	Red	2,0 ml Hydroxide solution	Cyan, 0,05 density or 05 CC values
	Cyan	2,0 ml Acid solution	Red, 0,05 density or 05 CC values
Agfa	Red	2,0 ml Hydroxide solution	Cyan, 0,05 density or 05 CC values
	Cyan	3,0 ml Acid solution	Red, 0,05 density or 05 CC values
Kodak	Blue	1,0 ml Hydroxide solution	Yellow, ,05 density or 05 CC values
	Yellow	1,0 ml Acid Solution	Blue, 0,05 density or 05 CC values

### Preparation of Sodium Hydroxide (5N NaOH)

Water 500 ml (cold!)  
Sodium Hydroxide (tablets) 200 gr  
Water to make 1000 ml

Fill a two litre beaker with 500 ml cold(!) water. While stirring, slowly add the 200 gr Sodium Hydroxide tablets. Guard against boiling and splattering. Cool this solution to room temperature. Dilute with water to 1 litre. Stir to mix.

**Always take water first, then add the hydroxide slowly.**

### Preparation of Sulphuric Acid (5N H<sub>2</sub>SO<sub>4</sub>)

Water 800 ml (cold!)  
Sulphuric Acid (98%) 140 ml  
Water to make 1000 ml

Fill a two litre beaker with 800 ml cold (!) water. While stirring, slowly add the 140 ml of Sulphuric Acid. Guard against boiling and splattering. Cool this solution to room temperature. Dilute with water to 1 litre. Stir to mix.

**Always take water first, then add the acid slowly.**

**Safety instructions : Always use safety glasses and gloves !**

## Preparation of solutions

### First Developer

Water	3E6 First Developer	To make
800 ml	+ 200 ml	1 litre

### Colour Developer

Water	3E6 Colour Developer Part A	3E6 Colour Developer Part B	To make
600 ml	+ 200 ml	+ 200 ml	1 litre

### Bleach-Fix

Water	3E6 Bleach-Fix Part A	3E6 Bleach-Fix Part B	To make
600 ml	+ 200 ml	+ 200 ml	1 litre

### Stabiliser

Water	3E6 Stabiliser	To make
950 ml	+ 50 ml	1 litre

## Safety information

All photographic processing solutions can exert harmful effects when brought into contact with human tissue to a greater or lesser extent depending on the nature of the solution and its concentration. All users of such solutions should exercise the greatest care to avoid the chemicals contacting the skin, eyes or other parts of the body. Always wear solution resistant gloves and effective eye protection.

In case of accidental contact with processing solutions wash the affected part with plenty of clean cold running water. Wash with an acidic soap and rinse thoroughly with water. Consult a medical doctor. Some photographic solutions produce irritating

vapours therefore thorough ventilation is essential. Do not inhale air above processing solutions.

Always read the hazard information on the packs of solution concentrate before attempting to handle the solution.