

# Processing Black & White Film

## Equipment:

Film tank with cover, Reel, Film cassette opener, Scissors

## In Dark Room or changing bag:

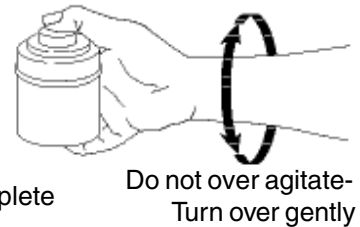
Open film cassette. Pull out film. Trim end square with scissors. Load film on reel. Put reel in tank and cover.

## Developing Film Steps:

**Chemicals needed: Developer, Stop Bath, Fixer, Perma-Wash wetting agent (photo flo)**

**Developer time is very important - stop and fix can safely go longer than recommended time**

- 1) Make sure all chemicals are up to the same temperature
- 2) Measure developer temperature, determine developing time from data sheet\*
- 3) Pre soak the film for one minute by filling the tank with plain water through small opening
- 4) Empty pre-soak - pour in **Developer** - start timer
- 5) Cap small opening, Rap tank to dislodge bubbles, agitate gently for 30 sec.
- 6) Agitate every 30 sec till completion of time (Gently turn tank over 2 times)
- 7) 30 seconds before developing time is completed - empty tank
- 8) Fill with **Stop Bath**, Cap, agitate for 30 sec. Empty Stop Bath in container (save)
- 9) Pour in **Fixer**, cap, agitate continuously 30 sec. then 5 sec every minute till complete  
(time varies depending on fixer and type of film T-Max takes longer to fix)



Fix: Tri-X & HP5 for 5 minutes Delta 400, T-Max and Arista EDU for at least 10 minutes

## Now it is safe to expose film to light

Check your film for proper fixing. If there is a strong purple color, re-fix for a few more minutes.

- 10) Rinse in water one minute
- 11) agitate in **Hypo clearing agent** one minute
- 12) Wash in water for 3 minutes
- 13) soak in **Photo-flo** (wetting agent) for 30 sec. Three drops of photo-flo in film tank of clean water.
- 14) Remove film from reel, drain
- 15) Hang to dry
- 16) Use light table (not dirty counter tops) to examine and cut film. Cut in 5 or 6 frame lengths to fit your film sleeve.  
Do not cut in single frame length-
- 17) Store film in plastic film sleeves.

**Identify your film with your name, and date and roll number.**

Log film in written record.

Treat your film very carefully. Keep it clean.

**Tri-X & HP5 400 Film Development Time in Minutes**

Developer	65°F	68°F	70°F	72°F	75°F
<b>Sprint 1:9</b>	<b>12</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>6:30</b>

**KODAK T-MAX & Delta 400 Professional Film**

Development Time in Minutes

Developer	65°F	68°F	70°F	72°F	75°F
<b>Sprint 1:9</b>	<b>14</b>	<b>11:30</b>	<b>11</b>	<b>9:15</b>	<b>7:30</b>

### Lessons learned the hard way:

Have all chemicals ready before you get your film wet. You can't stop & start over if once you start.  
Make sure you have the correct chemicals. Developer looks a lot like fixer. Use labels to mark them, test if in doubt.