

C-41 FILM DEVELOPMENT · QUICK REFERENCE

Bellini 3-bath kit (developer · bleach · fixer) | Job aid for SOP-FILM-002 Rev B | ★ = critical control point

BEFORE YOU START

- ☐ Gloves and safety glasses on
- ☐ Sous-vide set to **39.0 °C**; all bottles in bath
- ☐ ★ Developer at **38.0 °C ± 0.2** on the **independent thermometer** (not the display)
- ☐ Bleach and fixer at **32-38 °C**
- ☐ ★ Check roll count, find time in table →
- ☐ Pre-measure: **290 mL** per 35mm reel · **500 mL** per 120 reel
- ☐ Changing bag checked for light leaks

★ DEVELOPER TIME @ 38.0 °C

Rolls 1-3 **3:15**

Rolls 4-6 **3:30**

Rolls 7-9 **3:45**

Rolls 10-12 **4:00**

Off-spec: 13-15 = 4:15, +15 s per 3 rolls

STOP AND DO NOT PROCESS IF...

- ✗ Developer is outside **38.0 °C ± 0.2** on the thermometer
- ✗ The developer is **fully exhausted**
- ✗ A bottle is unlabeled or you are unsure which chemical is which
- ✗ Gloves or glasses are not on
- ✗ Hands are wet near the sous-vide or outlet

Stop, fix the condition, then restart from the setup checklist.

PROCESS SEQUENCE



QUICK TROUBLESHOOTING (inspect dry negatives on a light source)

YOU SEE	LIKELY CAUSE	DO THIS
Thin, faint edge markings	Low temp, short time, or exhausted developer	Hold · check temp, table, roll #
Dense, strong color cast	Developer too hot or too long	Hold · check temp and time
Clear film, no edge markings	Developer skipped or wrong bottle first	Hold · check order and labels
Dark, dull, or muddy	Incomplete bleach	Re-bleach → re-fix → wash → stabilize
Milky or opaque areas	Incomplete fix	Re-fix → wash → stabilize
Streaks near sprocket holes	Inconsistent agitation	Hold · retrain agitation
Water spots, residue	Stabilizer skipped or mis-mixed	Re-wash → re-stabilize

WASTE AND CLEANUP

- **Never** pour bleach, fixer, or developer down the drain. Used bleach and fixer contain dissolved silver.
- Bleach + fixer may share one labeled "**contains silver**" container. Keep **developer separate**.
- Take waste to the local **household hazardous waste** facility.
- Rinse the tank, reels, and cylinders after every run.
- Log the run: film, roll #, measured temp, dev time, result.