

# Manual processing guidelines

## Extraoral radiographs

	Develop*		Rinse†		Fix		Wash	
KODAK Extraoral Films	KODAK GBX Developer and Replenisher		Fresh running water		KODAK GBX Fixer and Replenisher		Clean running water (approx 8 volume changes per hour)	
Ektavision T-Mat G T-Mat L T-Mat H	72°F (22 C) 80°F (26.5°C)	7 min 4 min	60-85°F (15.5-29.5°C)	30 sec	60-85°F (15.5-29.5°C)	2-4 min	60-85°F (15.5-29.5°C)	5 min
X-Omat duplicating	68°F (20°C) 80°F (26.5°C)	5 min 2 min	60-85°F (15.5-29.5°C)	30 sec	60-85°F (15.5-29.5°C)	2-4 min	60-85°F (15.5-29.5°C)	5 min
XDBF	68°F (20°C)	7 min	60-85°F	30 sec	60-85°F	2-4 min	60-85°F	5 min

## Intraoral radiographs

	Develop*		Rinse†		Fix		Wash	
KODAK Extraoral Films	KODAK GBX Developer and Replenisher		Fresh running water		KODAK GBX Fixer and Replenisher		Clean running water (approx 8 volume changes per hour)	
InSight dental film and Ultra-Speed dental film	68°F (20°C) 70°F (21°C) 72°F (22°C) 76°F (24.5°C) 80°F (26.5°C)	5 min 4½ min 4 min 3 min 2½ min	60-85°F (15.5-29.5°C)	30 sec agitate continuously	60-85°F (15.5-29.5°C)	2-4 min or twice the clearing time, intermittent agitation	60-85°F (15.5-29.5°C)	10 min

## Manual processing procedure

1. Prepare developer and fixer solutions according to directions on the containers.
2. Use an accurate thermometer to determine the temperature of the developer solution for the selected film.
3. Carefully attach films to the film hangers.
4. Set the timer according to the chart for the developer temperature.
- \*5. Immerse the film (attached to film hanger) quickly into the developer solution, dislodging air bubbles by vigorously moving the film hanger in the solution for 5 seconds.
- \*6. Do not agitate film during development.
7. Remove the hanger from the developer when the timer sounds. Drain the excess developer into the water bath; do not drain it back into the developer tank.
- †8. Immerse the hanger rapidly into the water rinse tank. Agitate continuously during the water rinse procedure.
9. Place the hanger in the fixer solution. Intermittent agitation (5 seconds every 30 seconds) should be used throughout the fixing procedure. Excess fixer should be drained into the water bath rather than back into the fixer tank.
10. Place the hanger in the wash tank; wash in clean running water.
11. Dry at room temperature in a dust-free area or suitable drying cabinet, temperature not to exceed 120°F (49°C).
12. Replenishment: add 8 ounces of replenisher (236 mL) per one gallon (3.8 L) of developer and fixer working solutions each day even if no film is processed in the chemicals.

# Automatic processing guidelines

## Extraoral radiographs

All KODAK Extraoral Films	Cycle*	Dev temp
Automatic dental processor using Kodak Readymatic dental chemicals or Kodak RP X-Omat chemicals	5 min	83°F (28.3°C)

\* If you cannot identify your processor's cycle time, refer to the equipment manufacturer for more information.

Processing times and temperature will vary based on processor. These values are only guidelines.

## Intraoral radiographs

All KODAK Intraoral Films	Cycle*	Dev temp
Automatic dental processing using Kodak Readypro, or Kodak Readymatic chemicals	5 mint (28.3°C)	83°F
	6½ mint	Room temp 68-72°F (20-22°C)

## Replenishment rates

If your intraoral film processor does not have automatic replenishment, Kodak recommends 8 ounces (236 mL) of replenisher be added to each working solution daily, even if no film is processed. This is based on an average daily run of 20-30 intraoral films per day. You should increase the amount of daily replenisher solution at the rate of 0.25 fluid ounces (7 mL) per additional film processed. E.g., 50 intraoral films per day would require that 5 additional ounces (148 mL) be added to the daily 8 ounces for a total of 13 ounces (38 mL). All replenished solutions should be changed every 3-4 weeks under normal conditions. (Normal use is defined as 30 intraoral films per day.) Manufacturers of automatic non-roller type processors recommend that all solutions be changed every two weeks.

For more information, call **1-800-933-8031** or visit: **[www.kodakdental.com](http://www.kodakdental.com)**