

# Fast Silver Staining Protocol Used by the Price Lab

(Source: The Red Book Bulletin, Supplement 11)

Soaks and washes (250 ml) are carried out in a clean glass tray (scrubbed with 409).

## **Protocol:**

**1** Soak gel 10 min in **fixing solution**.

Wash gel in water twice for 5 min each.

**2** Soak gel 1 min in **0.02% Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>**.

Wash gel in water twice for 20 sec.

**3** Soak gel 10 min in **0.1% AgNO<sub>3</sub>**.

Rinse with water and again with a small volume of developing solution.

**4** Soak gel in fresh **developing solution** (add formalin fresh) until band intensities are adequate (~1-3 min). Development continues a little after adding citric acid (next step), so do not overdevelop here.

**5** Add 12.5 ml of **2.3 M citric acid** (or 6 g solid citric acid).

Continue shaking for 10 min.

Wash gel 10 min in water, then soak in water for 30 minutes or longer before drying.

## **Solutions:**

	<u><b>Final</b></u>	<u><b>Stock</b></u>	<u><b>250 ml</b></u>
<b>1</b>	<b>Fixing solution</b>		
	40% methanol	100%	100 ml
	13.5% formalin	100%*	33.75 ml
<b>2</b>	<b>Sodium thiosulfate</b>		
	0.02% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	dry	0.05 g
<b>3</b>	<b>Silver nitrate</b>		
	0.1% AgNO <sub>3</sub>	dry	0.25 g
<b>4</b>	<b>Developing solution</b>		
	3% sodium carbonate	dry	7.5 g
	0.05% formalin	100%*	125 µl
	0.000016% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	0.02%	200 µl
<b>5</b>	<b>Citric acid</b>		
	2.3 M citric acid	dry	6 g/12.5 ml

\*Note: Formalin is a commercial solution of 37% formaldehyde.