

Protocol for Non-destructive silver-staining of protein gels for mass spectrometry

1. Fix: 3 x 1h or over night

Ethanol 30%	(300ml)
Acetic Acid 10%	(100ml)
Distilled water	(ad 1l)

3. Sensitize: 45min

Potassium tetrathionate 0,3%(w/v)	(3g)
Potassium acetate 0.5 M(w/v)	(49,07g)
Ethanol 30 %(v/v)	(300ml)
Distilled water	(ad 1l)

4. Wash: 6 x 10min

Distilled water 1l

5. Incubate with silver nitrate: 1 – 2h

silver nitrate solution 0,2%(w/v)	(2g)
Distilled water	(ad 1l)

5. Rinse: 15 sec

Distilled water	(500ml)
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6. Develop: 10 – 40 min

Potassium carbonate	(30g)
Sodium thiosulfate- pentahydrate [10%]	(125µl)
Formalin [37%]	(300µl)
Distilled water	(ad 1l)

when sufficient staining is obtained

7. Stop: 45min

TRIS	(40g)
Acetic acid	(20ml)
Distilled water	(ad1l)

8. Wash: 2 x 30min

Distilled water 1l

Use reagent-grade chemicals! Do not touch gel with fingers! Always use gloves! Conductivity of deionized or distilled water should not exceed 2µS!