

Usage procedure for:

# Warthin-Starry Stain Kit, Modified Stat

**Avantik Kit Item #: RS4572-125 | RS4572-250 | RS4572-500**



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## **Solutions Provided in Stain Kit:**

Spirochete Sensitizing Solution  
Silver Nitrate (Acidulated), 0.5%  
Silver Nitrate (Acidulated), 2%  
Gelatin Solution (Acidulated), 4%  
Hydroquinone Solution (Acidulated)

Prepare Reducing Solution (just before use): in a new plastic 5 slide mailer or slide jar. It is important to mix the solution thoroughly or uneven staining will occur. \*If Gelatin Solution is solidified, gently warm to liquefy.

## **Reducing Solution**

Silver Nitrate (Acidulated), 2%:	2mL
Gelatin Solution (Acidulated), 4%:	13mL
Hydroquinone Solution (Acidulated):	5mL

## **Conventional Procedure**

1. Deparaffinize and hydrate sections through alcohol to distilled water.
2. For spirochete staining only: Place slides in room temperature **Spirochete Sensitizing Solution** for **5 minutes** and rinse thoroughly in distilled water.
3. Fill an unused plastic 5 slide mailer or jar with 20mL of **Silver Nitrate (Acidulated), 0.5%** and preheat in a 70°C waterbath for 5 minutes.
4. Place slides in hot **Silver Nitrate (Acidulated), 0.5%** for **5 minutes** with frequent agitation.
5. Transfer slides directly into premade **Reducing Solution** and place the container in a 70°C waterbath for **1-5 minutes** until sections turn brown. Agitate slides frequently during this process or uneven staining will occur.
6. Carefully rinse slides in hot tap water for 2 minutes.
7. Dehydrate in 3 changes of 100% alcohol.
8. Clear and mount with appropriate mounting medium.

**Microwave Procedure** (a 500 watt microwave was used for this procedure, your times may vary)

1. Deparaffinize and hydrate sections through alcohol to distilled water.
2. For spirochete staining only: Place slides in room temperature **Spirochete Sensitizing Solution** for **5 minutes** and rinse thoroughly in distilled water.
3. Fill an unused plastic 5 slide mailer or jar with 20mL of **Silver Nitrate (Acidulated), 0.5%** and microwave at full power for 30 seconds. Approximate temperature should be 65°-75°C.
4. Place slides in hot **Silver Nitrate (Acidulated), 0.5%** for **5 minutes** with frequent agitation.
5. Microwave premade **Reducing Solution** at full power for 20 seconds.
6. Transfer slides directly into hot **Reducing Solution** for **2-5 minutes** until section turn brown. Agitate slides frequently during this process or uneven staining will occur.

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7. Carefully rinse slides in hot tap water for 2 minutes.
8. Dehydrate in 3 changes of 100% alcohol.
9. Clear and mount with appropriate mounting medium.

### Results:

Spirochetes/Other Bacteria:	Dark Brown to Black
Background:	Pale Yellow to Light Brown

### Kit Components:

Avantik Item Numbers:

**Spirochete Sensitizing Solution:** RS4456-250 (250 mL) | RS4456-500 (500 mL)

**Silver Nitrate (Acidulated), 0.5%:** RS4445-250 (250 mL) | RS4445-500 (500 mL)

**Silver Nitrate (Acidulated), 2%:** RS4448-250 (250 mL) | RS4448-500 (500 mL)

**Gelatin Solution (Acidulated), 4%:** RS4407-250 (250 mL) | RS4407-500 (500 mL)

**Hydroquinone Solution (Acidulated):** RS4417-250 (250 mL) | RS4417-500 (500 mL)