MODIFIED STAT WARTHIN-STARRY STAIN KIT PROCEDURE

Item# KTWST

(Revised 04/19/11)

<table>
<thead>
<tr>
<th>KIT COMPONENTS</th>
<th>INCLUDED:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ml SPIROCHETE SENSITIZER™</td>
<td>45 ml 0.1% HYDROQUINONE, Acidulated</td>
</tr>
<tr>
<td>75 ml 4% GELATIN, Acidulated</td>
<td>30 ml 2% SILVER NITRATE, Acidulated</td>
</tr>
<tr>
<td>100 ml 0.5% SILVER NITRATE, Acidulated</td>
<td></td>
</tr>
</tbody>
</table>

**PRINCIPLE:** This kit demonstrates Helicobacter pylori, Spirochetes, Legionella pneumophila and Cat Scratch Fever bacteria.

**SPECIMEN:** Any well fixed paraffin embedded tissue cut at 4 microns.

**QUALITY CONTROL:** American MasterTech Recommended Control Slides: Helicobacter Pylori, CSH0125P; Spirochete, CSS0125P

**PRODUCT NOTE:** Store all kit components at 2º to 10º C.

**SOLUTIONS:**

<table>
<thead>
<tr>
<th>Reducing Solution: Prepare at Step 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% GELATIN, Acidulated ..................</td>
</tr>
<tr>
<td>2% SILVER NITRATE, Acidulated ..........</td>
</tr>
<tr>
<td>0.1% HYDROQUINONE, Acidulated ..........</td>
</tr>
</tbody>
</table>

Warm 4% GELATIN, Acidulated to liquify. Prepare reducing solution in an unused plastic 5 Slide Mailer or Slide Jar. Mix components thoroughly or uneven staining will result!

**PROCEDURE:**

1. Deparaffinize slide using Xylene or a Xylene Substitute and hydrate through alcohols to Distilled water.
2. For spirochete staining only, place slide in room temperature SPIROCHETE SENSITIZER™ for 5 minutes, then rinse slide thoroughly in Distilled water. **NOTE:** For all other listed bacteria, Step 2 may be omitted. If SPIROCHETE SENSITIZER™ is used, it will not affect correct demonstration of Helicobacter pylori, Legionella pneumophila or Cat Scratch Fever bacteria.
3. Put 20 ml of 0.5% SILVER NITRATE, Acidulated in an unused plastic Slide Jar (available from A.M.T.S.).
4. Place the container of 0.5% SILVER NITRATE, Acidulated in a waterbath at 65° to 70°C for 5 minutes.
5. Place slide into the hot 0.5% SILVER NITRATE, Acidulated, agitate slide thoroughly and incubate for 3 to 5 minutes.
6. Transfer slide from the 0.5% SILVER NITRATE, Acidulated into the Reducing Solution. Place container into a 65° to 70°C waterbath, agitating frequently until the section is brown. (This step may take 1 to 5 minutes). **NOTE:** If slide is not agitated frequently during this step, uneven staining can occur!
7. Rinse slide carefully in hot Tap water for 2 minutes.
8. Dehydrate slide through 3 changes of fresh Absolute Alcohol.
9. Clear slide through 3 changes of fresh Xylene or Xylene Substitute.
10. Coverslip slide immediately using a permanent mounting media.

**RESULTS:**

Helicobacter pylori, Legionella pneumophila,
Spirochetes, Cat Scratch Fever bacteria: **DARK BROWN, GRAY, OR BLACK**
Background: **YELLOW TO BROWN**

**REFERENCE:** Kerr DA: Improved Warthin-Starry method for tissue sections; Am J Clin Pathol; 1938, 8: 63 - 67.

**ALTERNATE PROCEDURE NOTE:** Warthin-Starry Kit Procedure for Microwave Oven is on opposite side.

Copyright © 1994-2013 American MasterTech Scientific Incorporated. All rights reserved.
No part of these pages may be used for any purpose other than personal use. Therefore, reproduction, modification, storage in a retrieval system or retransmission, in any form or by any means, for reasons other than personal use, is strictly prohibited without prior written permission.
WARTHIN-STARRY STAIN KIT PROCEDURE FOR MICROWAVE OVENS

(Revised 04/19/11)

PRINCIPLE: This kit demonstrates Helicobacter pylori, Spirochetes, Legionella pneumophila and Cat Scratch Fever bacteria.

SPECIMEN: Any well fixed paraffin embedded tissue cut at 4 microns.

QUALITY CONTROL: American MasterTech Recommended Control Slides:
Helicobacter Pylori, CSH0125P; Spirochete, CSS0125P

PRODUCT NOTE: Store all kit components at 2º to 10º C.

SOLUTIONS:
Reducing Solution: Prepare at Step 7
4% GELATIN, Acidulated ..........................................................12.5 ml
2% SILVER NITRATE, Acidulated ..................................................20 to 30 drops
0.1% HYDROQUINONE, Acidulated ...............................................7.5 ml
Warm 4% GELATIN, Acidulated to liqify. Prepare reducing solution in an unused plastic 5 Slide Mailer or Slide Jar. Mix components thoroughly or uneven staining will result!

TECHNICAL SPECIFICATIONS: A 500 watt microwave oven was used to develop this procedure.

PROCEDURE:
1. Deparaffinize slide using Xylene or a Xylene Substitute and hydrate through alcohols to Distilled water.
2. For spirochete staining, place slide in room temperature SPIROCHETE SENSITIZER™ for 5 minutes, then rinse slide thoroughly in Distilled water. NOTE: For all other listed bacteria, Step 2 may be omitted. If SPIROCHETE SENSITIZER™ is used, it will not affect correct demonstration of Helicobacter pylori, Legionella pneumophila or Cat Scratch Fever bacteria.
3. Put 20 ml of 0.5% SILVER NITRATE, Acidulated into an unused plastic Slide Jar (available from A.M.T.S.).
4. Put 20 ml of Tap water into a coplin jar, then place Slide Jar into the coplin jar.
5. Place the coplin jar in a microwave oven and heat for 30 seconds at full power.
6. Place slide into the 0.5% SILVER NITRATE, Acidulated. Cap Slide Jar tightly and invert several times to equalize solution temperature, then return Slide Jar to coplin jar and incubate for 5 minutes.
7. Remove Slide Jar from coplin jar and replace with Slide Jar containing the Reducing Solution and heat for 20 seconds at full power. Remove coplin jar from microwave and transfer slide into the Reducing Solution. Agitate slide thoroughly and incubate for 2 to 5 minutes; remove slide when section is brown.
8. Rinse slide carefully in hot Tap water for 2 minutes.
9. Dehydrate slide through 3 changes of fresh Absolute Alcohol.
10. Clear slide through 3 changes of fresh Xylene or Xylene Substitute.
11. Coverslip slide immediately using a permanent mounting media.

RESULTS:
Helicobacter pylori, Legionella pneumophilia: DARK BROWN, GRAY OR BLACK
Spirochetes, Cat Scratch Fever bacteria: YELLOW TO BROWN


Copyright © 1994-2013 American MasterTech Scientific Incorporated. All rights reserved.
No part of these pages may be used for any purpose other than personal use. Therefore, reproduction, modification, storage in a retrieval system or retransmission, in any form or by any means, for reasons other than personal use, is strictly prohibited without prior written permission.