

Warthin-Starry (for spirochetes), Kit

Reference: AP0271



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INTENDED USE AND PRESENTATION:

For *in vitro* diagnostic use.

AP0271. 100 Tests.

APPLICATIONS:

The Warthin-Starry (for spirochetes) kit was designed to show spirochetes in histological sections.

The interpretation of the stain results is the full responsibility of the user. Any experimental result must be confirmed by a medically established diagnostic product or procedure.

PRODUCT COMPOSITION:

The Warthin-Starry (for spirochetes) kit is composed by:

Reagent	Name	Volume	Storage
A	Spirochete sensitizer solution	30 mL	15-25 °C
B	Silver nitrate solution (0.5%)	30 mL	2-8 °C
C	Gelatin	30 mL	2-8 °C
D	Silver nitrate solution (2%)	30 mL	2-8 °C
E	Hydroquinone solution	30 mL	2-8 °C

METHODS AND PROCEDURE:

Principles of the method: The argyrophilic reaction is based on the capacity of bacteria cell wall to reduce the silver on its metallic state, binding them in a visible form.

Cautions:

-It is necessary to use excellent distilled water.

-Do not use poly-lysine coated slides.

-Avoid the use of metallic object.

Fixation: neutral buffered formaline. Avoid chromate fixative.

Section: paraffin 4 to 6 µm.

Development solution: mix just before using.

Specimen: Paraffin-embedded tissue samples should be used.

Procedure time: 20 minutes.

Staining procedure:

1) Deparaffinize and hydrate for paraffin section.

2) For spirochete staining only, put 2-5 drops of **Reagent A** for 5 minutes (omit this step for other listed bacteria). Note: use of **Reagent A** will not affect staining of *Helicobacter pylori* or *Legionella pneumophila*.

3) Preparing a thermoregulated bath with a tube or Coplin jar with **Reagent B** and heated to 65 °C. Introducing section and maintaining that temperature for 5 minutes.

4) Prepare the development solution mixing 2.5 mL of **Reagent C**, 5 drops of **Reagent D** and 1.5 mL of **Reagent E**. Incubate in a thermoregulated bath with a tube or Coplin jar with this solution at 65 °C until tissue section is brown (approximately 1-5 minutes).

5) Rinse slide carefully in hot tap water for 2 minutes.

6) Dehydrate in alcohols of increasing, clear in xylene and mount preparation.

See our web site at www.genova-europe.com for detailed protocols ancillary reagents and support products.

EXPECTED RESULTS:

During the reaction of the different solutions of the kit with the tissue sections, resulting in the following stains:

Background	Yellow-brown
Spirochetes and others microorganism	Black

REQUIRED MATERIALS BUT NOT SUPPLIED:

All reagents, materials, and laboratory equipment for this procedure are not provided with this kit. This includes adhesive slides and cover slips, positive and negative control tissues, xylene or adequate substitute, ethanol, distilled H₂O, pipettes, Coplin jars, glass jars, moist chamber, histological baths, mounting materials, and microscope.

Buffered solutions for and other auxiliary reagents are available from Genova Scientific.

STORAGE AND STABILITY:

After reception, storage the reagent according to temperature indicated on product label until the expiration date printed. Note that



Catalog number



Batch code



In Vitro diagnostic medical device



Temperature limitation



Expiration date



Test number



Manufacturer



See instruction for use



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some reagents need to be storage 2-8 °C and other to room temperature. Do not use after the expiration date. Keep the containers tightly closed. After the first opening, the product is usable until the expiry date stated on label of intact product. Waste from solutions must be disposed under the procedure of hazardous substance. If the product is stored under different conditions from those stipulated in these technical indications, the new conditions must be verified by the user.

Gennova Scientific guarantees that the product will maintain all of the described characteristics from the production date until the expiration date, as long as the product is stored and used as recommended. No other guarantees are provided. Under no circumstances is Gennova Scientific obliged to cover damages caused by use of this reagent.

TROUBLESHOOTING:

If unusual staining is observed or any other deviations from the expected results, please read these instructions carefully, and if this does not solve the problem, please contact Gennova Scientific's technical support department or your local distributor.

PRECAUTIONS:

Use only by qualified personnel. Read with attention the information written on the label (dangerous symbols, risks and safety phrases). Consult always the safety data sheet (MSDS) where the information about the risks of the preparation, precautionary measures during use, first aid and disposal are available. Use proper protective equipment in order to avoid contact with reagents and samples in the eyes, skin, and mucosal tissues. MSDS is available upon request.

PERFORMANCE CHARACTERISTICS:

Gennova Scientific has performed studies to evaluate the functioning of this product, concluding that the product is both specific and sensitive for recommended use.

BIBLIOGRAPHY:

Bancroft JD, Stevens A. Theory and Practice of Histological Techniques, 4th edition, Churchill Livingstone Inc., New York, New York, 1996
Luna LG. Manual of Histologic Staining Methods of the AFIP, 3rd edition, McGraw-Hill Book Company, New York, New York, 1968
Warthin AS and Starry AC. A More Rapid and Improved Method of Demonstrating Spirochetes in Tissues (Warthin and Starry's Coverglass Method). American Journal of Syphilis, Gonorrhea and Venereal Diseases, 1920; 4:97

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