

Ziehl-Neelsen (for acid-fast bacteria), Kit

Reference: AP0508



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INTENDED USE AND PRESENTATION:

For *in vitro* diagnostic use.

AP0508. 100 Tests.

APPLICATIONS:

The Ziehl-Neelsen (for acid-fast bacteria), kit was designed to show pathogenic mycobacteria (especially Koch's bacillus) in histologic sections, sputum smears and culture smears.

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 Ziehl-Neelsen (for acid-fast bacteria) kit is composed by:

Reagent	Name	Volume	Storage
A	Carbolfuchsin solution	30 mL	15-25 °C
B	Alcohol acid solution	30 mL	15-25 °C
C	Sulphuric acid solution	30 mL	15-25 °C
D	Methylene blue solution	30 mL	15-25 °C

METHODS AND PROCEDURE:

Principles of the method: Acid resistance is a particular dyeing feature of mycobacteria. Once they have been stained with carbolfuchsin they have the capacity to remain red even if they undergo strong decolorizations. Acid resistance is usually ascribed to the special composition of mycobacteria's cell walls, which are very rich in lipids.

Specimen: Paraffin-embedded tissue samples should be used.

Procedure time: 35 minutes.

Staining procedure:

- 1) Deparaffinize and hydrate for paraffin section.
- 2) Put the slide in distilled water.
- 3) Incubate with **Reagent A** in humid chamber at 56-60 °C for 30 minutes.
- 4) Rinse in distilled water.
- 5) Differentiate with **Reagent B**.
- 6) Quickly pass through the **Reagent C** until discoloration section.
- 7) Wash in tap water for 3 minutes.
- 8) Counterstain with **Reagent D** for 1 minute.
- 9) Rinse in distilled water.
- 10) Dehydrate in alcohols of increasing clear in xylene and mount preparation.

See our web site at www.gennova-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:

Koch's bacillus and other acid resistant elements	Rose-red
Nucleus	Blue

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:

Store at 15-25 °C until the expiration date printed on product label. 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.

Genova 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



Catalog number



Batch code



In Vitro diagnostic medical device



Temperature limitation



Expiration date



Test number



Manufacturer



See instruction for use



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circumstances is Genova 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 Genova 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:

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

BIBLIOGRAPHY:

Berg JW. Acid-fastness as a histochemical test J Histo-chem Cytochem 1953; 1: 436-441.
Berg JW. Chemistry of acid-fastness Proc Soc Exp Biol Med 1953; 84: 196-198.
Lillie RD. Acetic methylene blue counterstain in staining tissue in acid fast bacilli. Stain Technol 1944; 19-45.

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