

PAS-Periodic Acid Schiff (Hotchkiss-McManus), Kit

Reference: AP0403



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INTENDED USE AND PRESENTATION:

For *in vitro* diagnostic use.

AP0403. 100 Tests.

APPLICATIONS:

The PAS-Periodic Acid Schiff (Hotchkiss-McManus), kit was designed to demonstrate normal and pathologic tissue components characterized by adjacent glycolic or aminohydroxylic groups for histological sections and for hematology and cytology.

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 PAS-Periodic Acid Schiff (Modified Lillie's) kit is composed by:

Reagent	Name	Volume	Storage
A	Periodic acid solution	30 mL	2-8 °C
B	Schiff's solution	30 mL	2-8 °C
C	Hematoxylyn, Mayer's	30 mL	18-25 °C
D	Bluing reagent	30 mL	18-25 °C

METHODS AND PROCEDURE:

Principles of the method: Periodic acid oxidizes selectively the following groups: 1,2 glycolic; primary aminic (1-hydroxy-2-aminic); secondary aminic (1-hydroxy-2-alkylaminic); 1-hydroxy-2-ketonic. Some methoxyl derivatives and alphaketones are oxidized as well, but they are not converted to aldehydes. During oxidating process the links between carbon atoms in 1,2 position break and consequently aldehydic groups are formed. In the following reaction, sulphurous fuchsin in Schiff reagent changes these 2 contiguous aldehydic groups into a insoluble stained compound similar to basic fuchsin. Three conditions are necessary for these reactions to take place: 1) hydroxylic groups must be free, 2) the compounds which form after oxidation must not spread in the tissue, 3) there must be enough aldehydic groups in the compounds for a histochemical survey.

Only macromolecules such as glycans and mucins are able to meet these demands. Periodic acid has been chosen as oxidizer because it arrests oxidation at aldehydic phase. Acid glycans do not react, except for monosulphuric heparin, since the presence of -SO₃H group blocks reactive glycolic groups.

Specimen: Paraffin-embedded tissue samples should be used.

Procedure time: 25 minutes.

Staining procedure:

- 1) Deparaffinize and hydrate for paraffin section.
- 2) Put the slide in distilled water.
- 3) If sections are Zenker-fixed, remove mercuric chloride crystals using iodine and clear with sodium thiosulfate. Rinse in running tap water.
- 4) Put 2-5 drops of Reagent A for 5 minutes (10 minutes for kidney, skin and diastase digested liver sections).
- 5) Rinse in distilled water.
- 6) Put 2-5 drops of Reagent B for 15 minutes (30 minutes for kidney, skin and diastase digested liver sections).
- 7) Wash in hot running tap water and rinse in distilled water.
- 8) Put 2-5 drops of Reagent C for 1 minute.
- 9) Wash with running tap water for 2 minutes.
- 10) Put 2-5 drops of Reagent D for 10 seconds.
- 11) Rinse in distilled water.
- 12) Dehydrate in alcohols of increasing clear in xylene and mount.

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:

Glycogeno, mucin and some basement membranes	Red to purple
Fungi	Red to purple
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



Catalog number



Batch code



In Vitro diagnostic medical device



Temperature limitation



Expiration date



Test number



Manufacturer



See instruction for use



Gennova Scientific, S.L.
C/ Johann Gutenberg, 4F. Pol. Ind.
El Caamo I • 41300 San Jose
de La Rinconada • Sevilla, SPAIN
Telefono: +34 954 150767
Fax: +34 955 266494

info@gennovalab.com
www.gennova-europe.com

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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 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.

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 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:

Culling CFA, Allison RT, Barr WT.: Cellular Pathology Technique, 4 Edition. Butterworths, pages 216-220, 1985.

Sheenan, D.C., Hrapchak, B. B. Theory and Practice of Histotechnology, 2 Edition. CV Mosby, Columbus, OH. Pages 164-167, 1980.

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In Vitro diagnostic medical device



Temperature limitation



Expiration date



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Manufacturer



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Genova Scientific, S.L.
C/ Johann Gutenberg, 4F. Pol. Ind.
El Cafamo I • 41300 San Jose
de La Rinconada • Sevilla, SPAIN
Telefono: +34 954 150767
Fax: +34 955 266494

info@gennovalab.com
www.gennova-europe.com