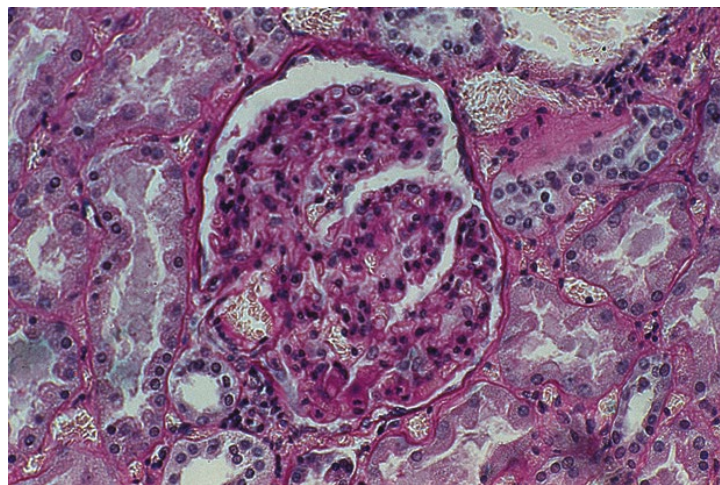




P.A.S. – PERIODIC ACID SCHIFF

Hotchkiss – Mc Manus



Kidney

CODE	DESCRIPTION	TESTS NUMBER
04-130802/L	P.A.S.	N.A.

IVD

In Vitro Diagnostic – medical device
EMDN: W01030799
IVD in **Class A**, Reg. UE 2017/746
UDI-DI: 08033976231217
Basic UDI: 080339762W01030799Y5



Manufacturer: Bio-Optica Milano S.p.A.

Product for the preparation of cyto-histological samples for optical microscopy.
To demonstrate normal and pathologic tissue components characterized by adjacent glycolic or aminohydroxylic groups for histological sections (method 1) and for Haematology and cytology (method 2).

PRINCIPLE

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 alpha-ketones are oxidized as well, but they are not converted to aldehydes. During oxidation 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 two contiguous aldehydic groups into an insoluble stained compound similar to basic fuchsin. Three conditions are necessary for these reactions to take place:

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

METHOD

- 1) Bring section to distilled water.
- 2) Immerse sections in the reagent A: leave to act 10 minutes.
- 3) Wash in distilled water.
- 4) Immerse sections in the reagent B: leave to act 20 minutes.
- 5) Wash in distilled water.
- 6) Immerse sections in the reagent C: leave to act 2 minutes.
- 7) Drain the slide and without washing immerse in the reagent D: leave to act 2 minutes. Rinse in distilled water.
- 8) Immerse sections in the reagent E: 3 minutes.
- 9) Wash in running tap water for 5 minutes.
- 10) Dehydrate through ascending alcohols. Clear in xylene and mount.

METHOD FOR STAINER

METHOD FOR HISTOLOGICAL SECTIONS

- 1) Bring section to distilled water
- 2) Reagent A: 10 minutes
- 3) Distilled water: 30 seconds
- 4) Reagent B: 20 minutes
- 5) Distilled water: 30 seconds
- 6) Reagent C: 2 minutes, dripping time: 15 seconds
- 7) Reagent D: 2 minutes
- 8) Distilled water: 30 seconds
- 9) Reagent E: 3 minutes
- 10) Running tap water: 5 minutes
- 11) Dehydrate through ascending alcohols, clear and mount.

Technical details

Method specifications	Procedure time	50 minutes	
	Complementary equipment	Not requested	
	Results	Positive P.A.S. substances:	Magenta red
		Nuclei:	Blue
Components	A) Periodic acid solution	1000 ml	
	B) Schiff reagent Hotchkiss McManus	1000 ml	
	C) Potassium metabisulphite solution	1000 ml	
	D) Fixative solution	1000 ml	
	E) Mayer's Hemalum	1000 ml	
Storage	Storage	Store the preparation at 2 - 8°C. Keep the containers tightly closed.	
	Storage temperature	2 - 8°C	
	Stability	After the first opening, the product is reusable until the expiry date, if correctly stored.	
	Validity	1 year	
Warning	Product classification	<p>After use put the container of the reagent A and B at 2-8°C. The colour of the reagent D may be pink, but it does not affect the functionality. The product is intended for professional laboratory use for healthcare professionals. Carefully read the information on the label (danger symbols, risk and safety phrases) and always consult the safety data sheet. Do not use if the primary container is damaged. In the event of a serious accident, we recommended that you immediately inform Bio-Optica Milano S.p.A and the competent authorities.</p>	
	Disposal	Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.	

REVISION n°	REASON	REVISION DATE
001	Regulation adjustment UE 2017/746 - IVDR	16/05/2022