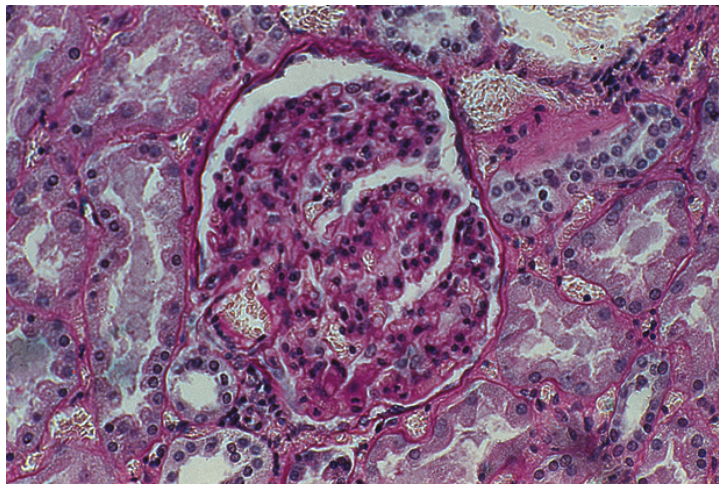


## **P.A.S. – PERIODIC ACID SCHIFF**


*Hotchkiss – Mc Manus*



*Kidney*

CODE	DESCRIPTION	TESTS NUMBER
04-130802	P.A.S.	100

**IVD** In Vitro Diagnostic – medical device

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

Date of issue: 11/07/2018  
Rev. 02

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 and for Haematology and cytology.

### 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 -SO<sub>3</sub>H group blocks reactive glycolic groups.

### METHOD

#### METHOD FOR HISTOLOGICAL SECTIONS

- 1) Bring section to distilled water.
- 2) Put on the section 10 drops of reagent A: leave to act 10 minutes.
- 3) Wash in distilled water.
- 4) Put on the section 10 drops of reagent B: leave to act 20 minutes.
- 5) Wash in distilled water.
- 6) Put on the section 10 drops of reagent C: leave to act 2 minutes.
- 7) Drain the slide and without washing add 10 drops of reagent D: leave to act 2 minutes. Rinse in distilled water.
- 8) Put on the section 10 drops of 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 HEMATOLOGY AND CYTOLOGY

- 1) Bring section to distilled water.
- 2) Put on the smear 10 drops of reagent A: leave to act 10 minutes.
- 3) Wash in distilled water.
- 4) Put on the smear 10 drops of reagent B: leave to act 15 minutes.
- 5) Wash in distilled water.
- 6) Put on the smear 10 drops of reagent C: leave to act 2 minutes.
- 7) Drain the slide and without washing add 10 drops of reagent D: leave to act 2 minutes. Rinse in distilled water
- 8) Put on the smear 10 drops of reagent E: 3 minutes.
- 9) Wash in running tap water for 5 minutes.
- 10) Dehydrate through ascending alcohols. Clear in xylene mount.

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### 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	30 ml	
	B) Schiff reagent Hotchkiss McManus	30 ml	
	C) Potassium metabisulphite solution	30 ml	
	D) Fixative solution	30 ml	
	E) Mayer's Hemalum	30 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 usable until the expiry date, if correctly stored.	
	Validity	1 year	
Warning	Product classification	<p>The product must be used exclusively by specialized technical operators. The product is classified as hazardous.</p> <p>Read with attention the information written on the label (dangerous symbols, risks and safety phrases). Consult always the safety data sheet where the information about the risks of the preparation, precautionary measures during use, first aid and disposal are available.</p> <p>Do not use if primary packaging is damaged.</p>	
	Disposal	Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.	

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