

Method Procedure

Document I	Number:	SASoM/METHOD/118.v1
Title:	Histology –	Periodic acid-Schiff Staining
Version:	v1	
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Effective from:	28/04/2020	
Valid to:	27/04/2022	

SOP History		
Number	Date	Reason for Change
v1	28/04/20	Original

1.0 Purpose -

This SOP describes the current procedure for carrying out Periodic acid-Schiff Staining on FFPE sections in Laboratory 248/249 at the St Andrews School of Medicine (SASoM).

2.0 Scope -

This SOP applies to all staff in the SASoM carrying out Periodic acid-Schiff Staining on FFPE sections in Laboratory 248 at the St Andrews School of Medicine (SASoM).

3.0 Responsibilities -

All staff performing Periodic acid-Schiff Staining on FFPE sections in this manner are responsible for ensuring that the methods are followed in accordance with this SOP.

All staff must have read and signed the relevant risk assessment documents before performing this procedure.



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4.0 Procedure –

The Periodic acid-Schiff staining method is used for the visualisation of lymphocytes and mucopolysaccharides (glycogen) in tissues such as liver, cardiac and skeletal muscle on formalin-fixed, paraffin-embedded tissue sections (but may be used for frozen sections as well). The glycogen / mucin will be stained purple and the nuclei will be stained blue.

Control Tissue: Kidney, Intestine, Liver.

Solutions and Reagents

Make up 1% Periodic Acid solution as follows: Add 1g of Periodic Acid to 100mL of DW

Make up working solution of Schiff's Reagent as follows: Dilute 1 part Schiff's Reagent (#1090330500-500ML) with 4 parts distilled water

De-wax & Re-hydrate

Always allow any excess fluid to drain from the slide rack before proceeding to the next solution.

5 minutes

5 minutes

5 minutes

2 minutes

2 minutes

- 1. Dewax-Xylene 1
- 2. Dewax-Xylene 2
- 3. Dewax-Xylene 3
- 4. Rehydration-100% Alcohol
- 5. Rehydration-100% Alcohol
- 6. Rehydration-80% Alcohol
- 7. Rehydration-50% Alcohol
- 8. Wash in running water
- 2 minutes 2 minutes
- water 2 minutes

Staining

- 1. After hydration in water, place the slides in 1% Periodic Acid for 5mins
- 2. Wash well in Tap water.
- 3. Wash Well in Distilled Water.
- 4. Place the slides in (diluted) Schiff's reagent for 10min.
- 5. Wash well in running (warm) water for 5min.
- 6. Counterstain lightly in haematoxylin for 2min.
- 7. Allow the slides to 'blue up' in Scott's tap water substitute for 1min.
- 8. Wash in water.
- 9. Dehydrate, clear and mount.

5.0 Personal protection –

A Howie coat must be worn at all times. Gloves as specified in the appropriate COSHH RA.



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6.0 Spillages –

Always clean up any spills immediately after use, only you know what you have spilt and are aware of its hazard. Spillages should be mopped up with paper towel, disinfected with 70% ethanol and finally washed with detergent.

7.0 Training –

All staff should undergo training in this technique before performing the procedure.

8.0 Related documents –

8.1 Risk assessments – RA20229 (Histology - Martius, Masson's and Periodic acid-Schiff Staining)

9.0 Approval and sign off -

Author:

Name:	Peter Mullen
Position:	Research Fellow

Signature:	Date:
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Management Approval:

Name:	Peter Mullen	
Position:	SOP Administrator	

Signature: Date:

QA release by:

Name:	Alex MacLellan	
Position:	QA Manager	
Signature:		Date:

STANDARD OPERATING PROCEDURE

Please sign below to indicate you have read this S.O.P and understand the procedures involved.

NAME	POSITION HELD	SIGNATURE	DATE
	X		