Schedule of Accreditation

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Portsmouth Hospitals University NHS Trust

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Testing performed at the above address only

Site activities performed away from the locations listed above:

Location details	Activity
Mortuary Department of Cellular Pathology Pathology Centre Queen Alexandra Hospital Portsmouth PO6 3LY	Mortuary Services Reception, body storage and release

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE	<u>Histopathological examination activities for the purposes of clinical diagnosis</u> <u>Histopathology</u> Preparation and examination to identify or exclude morphological & cytological abnormalities for the purpose of diagnosis	Macroscopic and Microscopic examination using in-house procedures (listed) in conjunction with manufacturer's instructions for the following methods (where relevant)
Formalin fixed tissues		<u>Macroanalysis and dissection</u> Manual method using: LEEC Downdraft Dissecting Bench SOP: HISCMAN001 <u>X-Ray evaluation</u> Evaluation of calcified areas using: Faxitron MX-20 specimen radiography unit and Velopex Extra-X Automatic X-Ray Film Processor SOP: HISPROL008 <u>Decalcification</u> Manual method using: SOP: HISPROL004 <u>Tissue Processing</u> Automated method using: Leica Peloris Tissue Processor SOP: HISPROL114 Leica ASP300/S Processor SOP: HISPROL079 <u>Embedding</u> Manual method using: Leica Embedding Station SOP: HISPROL020

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
Formalin fixed, paraffin embedded (FFPE) tissue		Microtomy Manual method using: Shandon Finesse ME microtome Leica RM2255 SOP: HISPROL022
FFPE tissue	Basophilic and eosinophilic tissue structures	Automated Haematoxylin and Eosin (H&E) staining and coverslipping Automated method using: Leica Autostainer XL Staining Machine SOP: HISPROL025 Dako Coverstainer SOP: HISPROL130
Fresh tissue Frozen tissue	Intraoperative analysis: Presence or absence of malignancy Clearance of margins Presence of Thyroid or Parathyroid tissue	Rapid frozen section Cryotomy and manual Haematoxylin & Eosin (H&E) staining method using: ThermoShandon Cryotome E or Lecia CM1900 Cryostat SOP: HISPROL087 and HISINS115
	Special stains	
FFPE tissue	Special staining to detect the following:	Manual methods using: SOP: HISPROL137 and the following stains:
	Acid & Neutral Mucins Polysaccharides including glycogen	Alcian Blue Alcian Blue Van Gieson Alcian Blue Periodic Acid Schiff with or without Diastase Periodic Acid Schiff with or without Diastase
	Amyloid	Congo Red
	Differentiates amyloid types	Congo Red with Bleach
	Haematopoietic cells	Giemsa
	Helicobacter Pylori	Giemsa (Modified)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Special stains (cont'd)	Manual methods (cont'd)
	Gram positive and negative bacteria	Gram
	Argyrophil cell granules	Grimelius
	Fungi	Grocott
	Melanin	Masson Fontana
	Muscle and Connective Tissue	Masson Trichrome
	Bleaching of melanin pigment	Acid Permanganate Melanin Bleach
	Basement Membranes and other polysaccharides	Methenamine Silver (Jones' Silver)
	Elastic fibres	Millers Elastic van Gieson
	Fibrin connective tissue	Martius Scarlet Blue
	Lipid	Oil Red O
	Copper associated protein, hepatitis infection / Elastic tissue	Orcein
	Haemosiderin	Perls
	Reticulin fibres Connective tissue	Gordon & Sweets' Reticulin van Gieson
	Calcium salts	von Kossa
	Acid fast bacilli including Mycobacterium leprae, atypical Mycobacteria	Wade Fite
	Spirochetes, Helicobacter pylori, Bartonella henselae and Bartonella quintana	Warthin Starry

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Special stains (cont'd)	Manual methods (cont'd)
FFPE tissue	Acid Alcohol fast bacilli (AAFB) including Mycobacterium tuberculosis	Ziehl–Neelsen
	Immunohistochemistry	
FFPE tissue	Immunohistochemistry to detect the following:	Automated methods using: Leica Bond System Leica Autostainer XL DAKO Coverstainer SOP: HISPROL101 and the following antibodies:
	Liver Diseases, Embryonic cells in normal tissues and germ tumours	α-Fetoprotein
	Leiomyomas, Smooth muscle cells, myoepithelial cells	Actin smooth muscle
	Normal/neoplastic tissue epithelial in origin	Cytokeratin Multi (AE1/AE3)
	β CATENIN Protein	β-Catenin
	Follicular lymphoma Adenocarcinoma	BCL2 Oncoprotein Ber-EP4
	C1q complement component, Renal disease, systemic lupus erythematosus (SLE)	C1q
	C3c fragment of complement, Renal disease	C3c
	Human complement split product C4d, Renal transplant rejection	C4d

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Luminal cells of the fallopian tube, Ovarian carcinoma	CA125
	Medullary thryroid carcinoma / Parafollicular (C-Cells)	Calcitonin
	Smooth muscle, myoepithelial cells, Leiomyoma	Caldesmon
	Myoepithelial cells, smooth muscle, leiomyosarcomas	Calponin
	Mesothelial cells, malignant mesothelioma	Calretinin
	Low molecular weight cytokeratin marker	CAM 5.2
	Differentiation between renal cell tumours	Carbonic Anhydrase IX
	Carcinoembryonic antigen, adenocarcinoma	Carcinoembrionic Antigen
	Reed sternberg cells, hodgkins disease	CD15
	Mic2 gene products, small blue round tumours	CD99
	Immature B-cells, follicular dendritic cells, lymphoma	CD10
	Mast cells and GIST	CD117
	Plasma cells	CD138
	B-cell marker, lymphoma	CD20
	Mature B-cells, follicular dendritic cells, lymphoma	CD21

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Follicular dendritic cells, lymphoma	CD23
	T-cell marker, lymphoma	CD3
	RS Cells, lymphoma	CD30
	Endothelial cells	CD31
	Endothelial Marker	CD34
	T-helper cells, lymphomas	CD4
	Leukocyte common antigen, lymphoma	CD45
	T-cells, Lymphoma	CD5
	Neural cell adhesion molecule, neuroendocrine cells	CD56
	Macrophages, stimulated T cells, lymphomas	CD68 PGM1
	B-Cell marker, lymphoma	CD79a
	Intestinal epithelial, invasive colorectal carcinoma	CDX2
	Neuroendocrine neoplasia	Chromogranin A
	Differentiation between mesothelioma and carcinoma	Claudin 4
	Cytomegalovirus (CMV) infected tissue	CMV
	Squamous, basal epithelia	Cytokeratin 14
	Epithelial cells, metastatic breast carcinoma in nodes	Cytokeratin 19
	Gastrointestinal epithelia, colonic carcinoma	Cytokeratin 20

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Squamous, basal epithelia, mesothelioma	Cytokeratin 5
	Glandular, transitional epithelia, gynaecological tumours, lung carcinoma	Cytokeratin 7
	Vascular smooth muscle, leiomyomas, leiomyosarcomas, rhabodomyosarcomas	Desmin
	Lymphovascular invasion	D240
	Gastro Intestinal Stromal tumours (GIST)	DOG-1
	Mammary duct epithelia, invasive breast carcinoma	E-Cadherin
	Epithelial cells, mesothelial cells	EMA
	Oestrogen Receptor, ER positive breast carcinoma	ER
	Fibrohistocytic Tumour, dermatofibroma	Factor XIIIa
	Differentiation of carcinoma	GATA3
	Gross Cystic Disease Fluid Protein, breast tumours	GCDFP 15
	Hepatocellular carcinoma	Glypican 3
	Mesothelial cells	HBME-1
	Trophoblastic elements, e.g. in germ cell tumours	β-hCG
	Differential diagnosis of hepatocellular tumours	Hepatocyte

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Human Epidermal growth factor Receptor 2 (HER2)	Using test kit: Leica Bond Oracle HER2 IHC System SOP: HISPROL095
	Melanosomes, melanoma	HMB45
	High molecular weight cytokeratins	HMCK
	Immunoglobulin A, renal nephropathy	IgA
	IgG4 disease	IgG4
	Immunoglobulin G, renal glomerular nephritis	IgG Poly
	Immunoglobulin M, renal nephropathy	IgM
	Leydig, Sertoli cells	Inhibin
	Immunoglobulin Kappa light chains, plasma cells, renal disease	Kappa
	Proliferation marker	Ki67
	Immunoglobulin Lambda light chains, plasma cells, renal disease	Lambda
	Melanocytes, malignant melanoma	Melan A
	Mismatch repair protein, Lynch syndrome	MLH-1
	Broad range cytokeratin, epithelial cells	MNF116

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Mismatch repair protein, Lynch syndrome	MSH-2
	Mismatch repair protein, Lynch syndrome	MSH-6
	Neuroendocrine marker, carcinoid tumours	NSE
	Mismatch repair protein, Lynch syndrome	PMS2
	Germ cell tumours	OCT 3/4
	Basal cells in benign prostate, squamous epithelial cells, squamous cell carcinoma	p63
	HPV, oral SCC, cervical carcinoma	P16
	Basal cells of squamous epithelia and squamous cell carcinoma	P40
	Neoplastic prostate glands, prostate carcinoma	p504S
	Tumour suppressor gene	p53

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
	Kidney, ovarian and thyroid cancer	PAX 8
	Membranous nephropathy	PLA2R
	Placental Alkaline Phosphatase, Molar pregnancies, choriocarcinoma	Placental Alkaline Phosphatase
	Polyoma virus, renal transplant rejection	Polyoma
	Progesterone Receptor, breast cancer	Progesterone Receptors
	Prostatic Acid Phosphatase, prostate	Prostate-specific Acid Phosphatase
	Prostate epithelium, prostate specific antigen	Prostatic Specific Antigen

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue (cont'd)	Immunohistochemistry (cont'd)	Automated methods (cont'd)
	Melanoma, neuroendocrine	S100
	Melanocytic marker	SOX10
	Myoepithelial cells in the breast / identification of smooth muscle neoplasm.	Smooth Muscle Myosin
	Neuroendocrine marker	Synaptophysin
	Lumen of thyroid follicles, thyroid tumours	Thyroglobulin
	Thyroid Transcription factor-1, adenocarcinoma of lung and thyroid	TTF-1
	Mesenchymal Marker, sarcomas	Vimentin
	Wilms tumour gene product, ovarian serous carcinoma	WT1

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd) Microscopy (qualitative analysis)	Documented in-house procedures
Slides prepared in-house from sample types listed above	Morphological assessment and interpretation/diagnosis	In-house procedures: SOP: HISRMAN001 using microscopes: Leica DMLB Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
Skin Biopsies (non-FFPE)	Skin Immunofluorescence	Cryotomy Thermo Shandon Cryotome E or Leica CM1900 Cryostat SOP: HISPROL030
Skin Biopsies (non-FFPE)	Detection of Immunoglobulin: IgA IgG C3c	Manual FITC Staining SOP : HISPROL030 using FITC antibodies: IgA FITC IgG FITC C3c FITC

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd) FITC Microscopy (qualitative analysis)	Documented in-house procedures
Slides prepared in-house from sample types listed above	Morphological assessment and interpretation/diagnosis	In-house procedures: SOP: HISRMAN001 using microscopes: Leica DMLB Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
Renal Biopsies	Renal Biopsies	
Formalin fixed tissue		Sample Preparation In-house procedures: SOP: HISPROL024 using: Zeiss Stemi DV4 Stereo Microscope Tissue Processing In-house procedures: SOP: HISPROL024 using: Leica Peloris or ASP300/S Tissue Processor Embedding Manual method using: Leica Embedding Station SOP: HISPROL020
FFPE tissue		Microtomy Manual method using: Leica RM2255 SOP: HISPROL022

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
FFPE tissue	Basophilic and eosinophilic tissue structures	Automated or manual Haematoxylin and Eosin (H&E) staining Automated method using: Leica Autostainer XL Staining Machine SOP: HISPROL025 Dako Coverstainer SOP: HISPROL130 Manual H&E staining using method: HISINS115
	Immunohistochemistry	
FFPE tissue	Detection of Immunoglobulin: C3 C1Q C4d CMV Ig A Ig G poly Ig M Polyoma	Automated methods using: Leica Bond System Leica Autostainer XL DAKO Coverstainer SOP: HISPROL101 using antibodies: C3 C1Q C4d CMV Ig A Ig G poly Ig M Polyoma

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
	Microscopy (qualitative analysis)	
Slides prepared in-house from sample types listed above	Morphological assessment and interpretation/diagnosis	In-house procedures: SOP: HISRMAN001 using microscopes: Leica DMLB Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
	Electron Microscopy: preparation of sample and interpretation of micrograph	
Renal Biopsies (non-FFPE)	Preparation of Resin Blocks for Electron Microscopy	Sample Preparation In-house procedures: SOP: HISPROL024 using: Zeiss Stemi DV4 Stereo Microscope
Renal Biopsies (non-FFPE)		Tissue Processing Processing by manual method: SOP: HISPROL041 Embedding Resin block embedding by manual method for referred electron microscopy: SOP: HISPROL041

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Histopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
Resin blocks	Cutting Semi-thin Sections for Electron Microscopy	Microtomy Preparation of semi-thin sections by manual method for referred electron microscopy using: Glass Knife manufacture by in-house procedure: SOP: HISPROL042 Jung Ultracut E SOP: HISPROL043
Resin blocks	Staining Semi-thin Sections for determining if Electron Microscopy is required	Staining Manual method using: Toluidine Blue SOP: HISPROL043 using microscopes: Leica DMLB Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
Electron Micrograph produced by accredited referral laboratory on specimen types specified above	Morphological assessment and interpretation/diagnosis	Qualitative analysis In-house procedures: SOP: HISRMAN001

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Cytopathological examination activities for the purposes of clinical diagnosis Diagnostic Cytopathology	Documented in-house procedures in conjunction with manufacturers instructions
Body fluid: Urine Joint fluid Serous effusions Endoscopic brushings EUS / EBUS in fluid Fine needle aspirates Needle washings Bronchial washings and lavages CSF Intraocular sample	Preparation and examination of cellular material in order to identify or exclude morphological and cytological abnormalities	Preparation/centrifugation In-house procedures: SOP: CYTPROL058 in conjunction with manufacturer's instructions using: Thermo Shandon Cytospin 4 IEC Centra CLS centrifuge Hologic T2000 processor
Slides prepared in-house from sample types listed above	Staining to identify or exclude morphological and cytological abnormalities	Papanicolaou staining Automated using in-house procedures: SOP: CYTPROL082 in conjunction with manufacturer's instructions using: Leica / Jung Autostainer XL
Slides prepared in-house from sample types listed above	Staining to identify or exclude morphological and cytological abnormalities	May - Grünwald Giemsa staining Automated using in-house procedures: SOP: CYTPROL082 in conjunction with manufacturer's instructions using: Leica / Jung Autostainer XL

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	Cytopathological examination activities for the purposes of clinical diagnosis (cont'd)	Documented in-house procedures
	Microscopy (qualitative analysis)	
Slides prepared in-house from sample types listed above	Morphological assessment and interpretation/diagnosis	In-house procedures: SOP: CYTPROL091 SOP: CYTRMAN001 using microscopes: Leica DMLB Leica DM2500 Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMLS Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
	Joint Crystals	
Joint fluid	Preparation and examination to identify Joint Crystals	Sample preparation: Temporary (wet) & permanent preparations Wet preparation for immediate crystal analysis (polarising microscopy) Permanent preparation for cellular analysis SOP: CYTPROL158

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE (cont'd)	<u>Cytopathological examination activities for the purposes of clinical diagnosis (cont'd)</u> <u>Microscopy (qualitative analysis)</u>	Documented in-house procedures
Slides prepared in-house from sample types listed above	Assessment of cellularity and the presence or absence of crystals Crystals are then further identified as urates (gout) or pyrophosphates (pseudogout)	Polarised light microscopy using in-house procedures: SOP: CYTPROL091 SOP: CYTPROL158 SOP: CYTRMAN001 using microscopes: Leica DMLB Leica DM2500 Leica DM1000LED Leica DM2000LED Leica DM3000LED Leica DM4000B Leica DMLS Leica DMRB Olympus BX41 Olympus BX50 Olympus BX51 Olympus BX53 Nikon Eclipse E400 Zeiss Axioskop-2
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