

SYDPATH CENTRAL LABORATORY			
Standardised Analyte / Test	Instrument /Reagent /Supplier	Methodology	Comments
Hematology			
Haemoglobin	CellDyne 4000 / Abbott	Cyanmethaemoglobin	
Red Cell Count	CellDyne 4000 / Abbott	Electrical Impedance	Routine FBC's also run on Coulter LH which is available for Clinical Trials if required.
Haematocrit	CellDyne 4000 / Abbott	Calculated	
MCV	CellDyne 4000 / Abbott	Electrical Impedance	
MCH	CellDyne 4000 / Abbott	Electrical Impedance	
MCHC	CellDyne 4000 / Abbott	Electrical Impedance	
White Cell Count	CellDyne 4000 / Abbott	Optical scatter/flourescence	Some FBC's for Central Lab Trials run on Bayer Advia 120 for standardisation purposes
Neutrophils (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Lymphocytes (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Monocytes (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Eosinophils (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Basophils (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Neutrophils (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Lymphocytes (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Monocytes (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Eosinophils (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Basophils (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Platelets	CellDyne 4000 / Abbott	Electrical Impedance	
Reticulocytes (%)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Reticulocytes (Abs)	CellDyne 4000 / Abbott	Optical scatter/flourescence	
Coagulation			
PT Patient	Bayer STA-R	Coagulometry	
PT INR	Bayer STA-R	Calculated	
APTT	Bayer STA-R	Coagulometry	
Fibrinogen	Bayer STA-R	Coagulometry	
Chemistry			
Sodium	Roche Modular P	Roche Indirect Ion Selective Electrode (ISE)	Olympus 2700 also used for Central Lab trials, correlated to Modular P. We use Olympus, Roche and some Trace reagents on the 2700.
Potassium	Roche Modular P	Roche Indirect Ion Selective Electrode (ISE)	
Chloride	Roche Modular P	Roche Indirect Ion Selective Electrode (ISE)	
Bicarbonate	Roche Modular P	Roche Colorimetric PEP Carboxylase	
BUN (Urea)	Roche Modular P	Roche Kinetic Urease	
Creatinine	Roche Modular P	Roche Alkaline picrate rate blanked and	
Uric Acid	Roche Modular P	Roche Uricase/Peroxidase	
Creat Clear (Est)		Calculated (Cockcroft and Gault)	
Creatinine Clearance	Roche Modular P	Roche Alkaline Picrate	
Protein (Total)	Roche Modular P	Roche Biuret End Point	
Albumin	Roche Modular P	Roche Bromocresol Green (BCG)	
Globulins		Calculated	
Bilirubin (Total)	Roche Modular P	Roche DPD	
Bilirubin (Conj)	Roche Modular P	Roche Jendrassik method	
Bilirubin (Unconj)		Calculated	
AST	Roche Modular P	Roche tris buffered NADH rate reaction - no P5P	
ALT	Roche Modular P	Roche tris buffered NADH rate reaction - no P5P	
GGT	Roche Modular P	Roche Glycylglycine buffered γ -Glutamyl-3-	

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AP (Alk Phos)	Roche Modular P	Roche AMP buffered pNPP rate reaction	
LD	Roche Modular P	Roche Tris buffered lactate to pyruvate rate	
Glucose (Random)	Roche Modular P	Roche Hexokinase	
Glucose (Fasting)	Roche Modular P	Roche Hexokinase	
Calcium	Roche Modular P	Roche Cresolphthalein Complexone	
Phosphate	Roche Modular P	Roche Phosphomolybdate complex	
Magnesium	Roche Modular P	Roche Magon/Xylidyl Blue	
CK	Roche Modular P	Roche Imidazole buffered NADPH rate reaction	
CK-MB	Roche Modular P	Bayer Chemiluminescence Immunoassay	
Amylase	Roche Modular P	Roche HEPES buffered ethylidene blocked pNPP	
Lipase	Roche Modular P	Roche Enzymatic method	
Triglycerides	Roche Modular P	Roche Enzymatic method (Lipase, Glycerol	
Cholesterol	Roche Modular P	Roche Cholesterol Oxidase	
HDL	Roche Modular P	WAKO Direct Homogenous assay	
LDL		Calculated	
LDL (Assayed)	Roche Modular P	Roche Homogenous enzymatic method	
VLDL (Calc)		Calculated	
GTT (fasting)	Roche Modular P	Roche Hexokinase	
GTT (30 min)	Roche Modular P	Roche Hexokinase	
GTT (60 min)	Roche Modular P	Roche Hexokinase	
GTT (90 min)	Roche Modular P	Roche Hexokinase	
GTT (120 min)	Roche Modular P	Roche Hexokinase	
GTT (180 min)	Roche Modular P	Roche Hexokinase	
Apo B	Roche Modular P	Roche Immunoturbidimetry	
hs-CRP	Roche Modular P	Roche Immunoturbidimetry	
a1-acid glycoprot	Roche Modular P	Roche Immunoturbidimetry	
Osmolality (Serum)	Advanced 3300	Freezing point osmometry	
HbA1c	Bio-Rad Variant	Biorad affinity HPLC	
Vit B12	Advia Centaur / Advia Centaur XP	Bayer Chemiluminescence Immunoassay	
Folate	Advia Centaur / Advia Centaur XP	Bayer Chemiluminescence Immunoassay	Centaur XP commissioned
Folate (RBC)	Advia Centaur / Advia Centaur XP	Bayer Chemiluminescence Immunoassay	March 07
PSA	Advia Centaur / Advia Centaur XP / (AxSym)	Bayer Chemiluminescence Immunoassay	
Therapeutic Drugs			
Digoxin	Centaur	Bayer Chemiluminescence Immunoassay	
Cyclosporin	Waters Micromass	LCMSMS	
Sirolimus	Waters Micromass	LCMSMS	
Everolimus	Waters Micromass	LCMSMS	
Tacrolimus	Waters Micromass	LCMSMS	
Voriconazole	Shimadzu	HPLC	
Posaconazole	Shimadzu	HPLC	
Itraconazole	Shimadzu	HPLC	
Fluconazole	Shimadzu	HPLC	
Atazanavir	Shimadzu	HPLC	
Lopinavir	Shimadzu	HPLC	
Efavirenz	Shimadzu	HPLC	
Mycophenolic Acid	Shimadzu	HPLC	
Amiodarone	Shimadzu	HPLC	

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Urine drug screens	Olympus/Toxi-Lab	Microgenics immunoassay/TLC	
Phenytoin	Abbott AxSym	MEIA Immunoassay	
Gentamicin	Abbott Axsym	MEI immunoassay	
Iron Studies			
Iron	Roche Modular P	Roche Colorimetric method	
Transferrin	Roche Modular P	Roche Immunoturbidimetry	
Iron Saturation		Calculated	
TIBC		Calculated	
Ferritin	Roche Modular P	Roche Immunoturbidimetry	
Endocrinology			
T4	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
T4 (Free)	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
T3	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
T3 (Free)	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
TSH	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
FSH	AxSym / Immulite/ Advia Centaur / Advia Centaur XP	Chemiluminescence Immunoassay	
LH	AxSym / Immulite/ Advia Centaur / Advia Centaur XP	Chemiluminescence Immunoassay	
DHEAS	Immulate	Chemiluminescence Immunoassay	
Estradiol (E2)	DiaSorin RIA	Manual Radioimmunoassay	
Prolactin	Advia Centaur / Advia Centaur XP	Chemiluminescence Immunoassay	
Testosterone (Total)	MP Biomedicals RIA / Immulite	Chemiluminescence Immunoassay	
Testosterone (Free)	DPC Kit (Coat-a-count)	DPC Radio Immunoassay (RIA)	
Insulin	Advia Centaur / Advia Centaur XP	Chemiluminescence Immunoassay	
C-Peptide	Advia Centaur / Advia Centaur XP	Chemiluminescence Immunoassay	
Growth Hormone (hGH)	Immulate	Chemiluminescence Immunoassay	
Progesterone	Immulate	Chemiluminescence Immunoassay	
Parathyroid Hormone	Immulate/Advia Centaur	Chemiluminescence Immunoassay	
Pregnancy (serum HCG)	Advia Centaur / Advia Centaur XP / (AxSym)	Chemiluminescence Immunoassay	
25-Hydroxy Vitamin D	DiaSorin RIA	Manual Radioimmunoassay	
Sex Hormone Binding Globulin (SHBG)	Immulate	Chemiluminescence Immunoassay	
Immunology			
CRP	Roche Modular P	Roche Immunoturbidimetry	
Haptoglobin	Dade Prospec	Nephelometry	
RF	Dade Prospec	Nephelometry	
IGG	Dade Prospec	Nephelometry	
IgG Subclasses	Dade Prospec	Nephelometry	
IGA	Dade Prospec	Nephelometry	
IGM	Dade Prospec	Nephelometry	
C3	Dade Prospec	Nephelometry	
C4	Dade Prospec	Nephelometry	
AAT	Dade Prospec	Nephelometry	
Ceruloplasmin	Dade Prospec	Nephelometry	
Prealbumin	Dade Prospec	Nephelometry	
B2 Microglobulin (B2M)	Dade Prospec	Nephelometry	
Antinuclear antibodies	Diagnostic Solutions / Immunoconcepts	Indirect Immunofluorescence	

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Anti-Neutrophil Cytoplasmic antibody	In Vitro / The Binding Site	Indirect Immunofluorescence	
Gastric Parietal cell antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Mitochondrial antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Smooth muscle antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Endomysial antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Skin antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Adrenal Antibody	Integrated Sciences / Inova	Indirect Immunofluorescence	
Glomerular Basement Membrane ab.	ESL Biosciences / Euroimmun	Indirect Immunofluorescence	
B2GPI	Immunodiagnosics / Orgentec	ELISA	
Cardiolipin antibody	Vital Diagnostics / Medical Innovations	ELISA	
CCP antibody	Integrated Sciences / Inova	ELISA	
ENA	Diagnostic Solutions / Immunoconcepts	Indirect EIA	
Gliadin	Integrated Sciences / Inova	ELISA	
PR3 and MPO	Immunodiagnosics / Orgentec	ELISA	
EPG / UEPG / immunofixation	Dade / Sebia	gel electrophoresis	
CSF Oligoclonal bands	Dade / Sebia	gel electrophoresis	
dsDNA	Immunodiagnosics / Amerlex	RIA	
Tissue Transglutaminase (tTG)	Vital Diagnostics / Aeskulisa	ELISA	
Thyroid antibodies	Bayer / Serodia	Indirect agglutination	
total IGE	ALS / ImmunoCAP 100	ImmunoCAP method	
specific IGE	ALS / ImmunoCAP 100	ImmunoCAP method	
IgD	In Vitro / The Binding Site	Radial immunodiffusion (RID)	
Urinalysis			
Sp. Gravity (SG)	Roche UriLux	Roche Urine Chemistry strips	
pH	Roche UriLux	Roche Urine Chemistry strips	
Glucose	Roche UriLux	Roche Urine Chemistry strips	
Protein (Total)	Roche UriLux	Roche Urine Chemistry strips	
Ketones	Roche UriLux	Roche Urine Chemistry strips	
Bilirubin	Roche UriLux	Roche Urine Chemistry strips	
Urobilinogen	Roche UriLux	Roche Urine Chemistry strips	
Hemoglobin	Roche UriLux	Roche Urine Chemistry strips	
Leucocyte Esterase	Roche UriLux	Roche Urine Chemistry strips	
Nitrite	Roche UriLux	Roche Urine Chemistry strips	
Microscopy			
WBC	n/a	Microscopy	
RBC	n/a	Microscopy	
Hyaline Casts	n/a	Microscopy	
Granular Casts	n/a	Microscopy	
Waxy Casts	n/a	Microscopy	
WBC Casts	n/a	Microscopy	
RBC Casts	n/a	Microscopy	
Epithelial Cells	n/a	Microscopy	
Crystals	n/a	Microscopy	
Mucous Threads	n/a	Microscopy	
Bacteria	n/a	Microscopy	
Yeast	n/a	Microscopy	

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Urine Chemistry			
Protein (24h)	Roche Modular P	Calculated	Olympus AU2700
Microalbumin (24h)	Roche Modular P	Roche Immunoturbidimetry	Olympus AU2700
Microalb/Creat	Roche Modular P	Calculated	Olympus AU2700
Creatinine (24h)	Roche Modular P	Calculated	Olympus AU2700
Sodium (24h)	Roche Modular P	Calculated	Olympus AU2700
Potassium (24h)	Roche Modular P	Calculated	Olympus AU2700
Calcium (24h)	Roche Modular P	Calculated	Olympus AU2700
Phosphate (24h)	Roche Modular P	Calculated	Olympus AU2700
Osmolality (Urine)	Advanced 3300	Freezing point osmometry	Olympus AU2700
Urine Drug Screen			
Cocaine	Roche-Microgenics/DRI	Roche KIMS/EIA	
Amphetamines	Roche-Microgenics/DRI	Roche KIMS/EIA	
Barbiturates	Roche-Microgenics/DRI	Roche KIMS/EIA	
Benzodiazepines	Roche-Microgenics/DRI	Roche KIMS/EIA	
Cannabinoids	Roche-Microgenics/DRI	Roche KIMS/EIA	
Opiates	Roche-Microgenics/DRI	Roche KIMS/EIA	
Phencyclidine	Roche-Microgenics/DRI	Roche KIMS/EIA	
Propoxyphene	Roche-Microgenics/DRI	Roche KIMS/EIA	
Methadone	Roche-Microgenics/DRI	Roche KIMS/EIA	
Methaqualone	Roche-Microgenics/DRI	Microgenics/DRI CEDIA/EIA	
Miscellaneous			
Urine Pregnancy (qualitative, kit)	Hybritek - ICON	EIA	
Flow Cytometry			
T cell subsets for HIV monitoring	FACS Canto II (Becton Dickinson)	* CD45 vs side scatter gating strategy in all tubes	Commissioned November 2006 Previous platform FACS Calibur (existing central/global studies will complete on this platform; existing "local" studies will switch to new platform)
Oncology phenotyping on peripheral blood, bone marrow, solid tissue, fluids such as CSF, PF		* Up to eight colour analysis for all routine panels	
Stem cell enumeration by CD34 positivity		* Intracellular techniques used to immunophenotype immature cell lines and determine clonality in plasmacytoid cells	
Cytokine Quantitation by Flow Cytometric Bead Assay		* Current validated range includes IL-2, IL-6, IL-10, IL-12, IP-10, TNF-a, IFN-g * Other bead assays will be validated upon request	
HIV & Hepatitis Serology			
HIV-1/HIV-2 Antibody/Antigen combo	Architect - Abbott Diagnostics	CMIA	
HIV-1 Western blot	BioRad	Immunoblot	
HIV-1 / HIV-2 antibody (Combo)	Architect - Abbott Diagnostics	CMIA	
HIV antibody assay (EIA)	Biorad Genscreen	EIA	

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HIV-1 p24 Antigen	Biorad	EIA	
HIV rapid incubation antibody	Multispot HIV1/2/Biorad	EIA	
Detuned HIV antibody (incidence)	Biomerieux	EIA	
BED HIV antibody (incidence)	Calypte	EIA	
HTLV-1/2 Antibody	Murex	EIA	
Hep B & C serology (per Ag or Ab)	Architect/AxSYM - Abbott Diagnostics	CMIA/MEIA	
HBsAg (cadaveric)	VIDAS Biomerieux	ELFA	
Hepatitis A serology	VIDAS Biomerieux	ELFA	
Hepatitis B Core Antibody (cadaveric)	Biorad Monolisa anti-HBc PLUS	EIA	
Syphilis	Architect	CMIA	
<i>Molecular Diagnostics</i>			
HIV RNA quantification (viral load)	COBAS/Ampliprep/TaqMan/Roche	PCR	
HIV RNA quantification (viral load)	branched DNA/Bayer	signal amplification (bdNA)	
HIV RNA quantification (viral load)	Biomerieux	NASBA	
HIV RNA qualitative PCR	Ampliscreen/COBAS/Roche	PCR	
HIV genotypic drug resistance profile	Trugene/Bayer	DNA sequencing	
HIV proviral DNA	Amplicor/Roche Diagnostics	PCR	
Hepatitis C quantitation (viral load)	COBAS/Ampliprep/TaqMan/Roche	PCR	
Hepatitis C qualitative	COBAS/Ampliprep/TaqMan/Roche	PCR	
Hepatitis C qualitative	Ampliscreen/COBAS/Roche	PCR	
Hepatitis C genotyping	LiPA/Bayer	Probe hybridization	
Hepatitis B DNA quantification (Viral load)	COBAS/Ampliprep/TaqMan/Roche	PCR	
Herpes simplex DNA	Lightcycler/Roche Diagnostics/ARTUS	real time PCR	
Varicella Zoster DNA	Lightcycler/ARTUS	real time PCR	
Cytomegalovirus DNA quantification (viral load)	COBAS/Roche Diagnostics	PCR	
Cytomegalovirus pp67 mRNA	Biomerieux	NASBA	
Neisseria gonorrhoeae DNA	ProbeTecET/Becton Dickenson	Strand displacement amplification	
Neisseria gonorrhoeae DNA confirmation	in-house/porA pseudogene/Lightcycler	real time PCR	
Chlamydia trachomatis DNA	ProbeTecET/Becton Dickenson	Strand displacement amplification	