



GIG  
CYMRU  
NHS  
WALES

Bwrdd Iechyd Prifysgol  
Caerdydd a'r Fro  
Cardiff and Vale  
University Health Board

## ACUTE CHEMISTRY TEST REPERTOIRE

Department of Medical Biochemistry and Immunology  
University Hospital of Wales  
Heath Park  
Cardiff  
CF14 4XW

University Hospital Llandough  
Penlan Road  
Llandough  
CF64 2XX

Acute chemistry section open Monday - Friday 9:00 to 17:00

For laboratory general enquiries Tel: 02921 842800

Scientific/ Technical Advice: Mark Saunders (Lead Biomedical Scientist ABS) [mark.saunders@wales.nhs.uk](mailto:mark.saunders@wales.nhs.uk)

Clinical Advice: Duty Biochemist Tel – 02921 848334 (direct line) / 02921 847747, bleep 5452

Dr Soha Zouwail (Consultant Chemical Pathologist – UHW) [soha.zouwail@wales.nhs.uk](mailto:soha.zouwail@wales.nhs.uk)

Dr Dev Datta (Consultant Chemical Pathologist – Llandough) [dev.datta@wales.nhs.uk](mailto:dev.datta@wales.nhs.uk)

Assay	Sample requirements	Sample handling / Transport	Methodology	Reference Range	Turnaround Time (maximum working days)	EQA	Clinical Utility
ACE	1 ml serum/plasma	Store at 4°C and transport at room temp	Trinity Biotech – Enzymatic colorimetric	8-52 IU/L	7	WEQAS	Sarcoidosis
AFP	1 ml serum	Store at 4°C and transport at room temp	Abbott Alinity Immunoassay	Age specific – see report	1	UKNEQAS	tumour marker
Apolipoprotein A1	1 ml serum	Can be stored at 2-8°C for 3 days and can be transported at this temperature. Send frozen if longer than 3 days	Abbott Alinity immuno-turbidimetric	sex/ age specific – see report	7	UKNEQAS	Cardiovascular risk factor
Apolipoprotein B	1 ml serum	Can be stored at 2-8°C for 3 days and can be transported at this temperature. Send frozen if longer than 3 days	Abbott Alinity immuno-turbidimetric	sex/ age specific – see report	7	UKNEQAS	Cardiovascular risk factor
Bile Acids	1 ml serum	Store at 4°C and transport at 4°C	Abbott Clinical Chemistry – Enzyme cycling	<11 umol/L	1	WEQAS	obstetric cholestasis
B-HCG	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells. Transport at RT	Abbott Alinity Immunoassay	Adults (non-pregnant) <5 U/L	1	UKNEQAS	tumour marker
CEA	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells. Transport at RT	Abbott Alinity Immunoassay	<5 ug/L	1	UKNEQAS	tumour marker
Ca 125	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells. Transport at RT	Abbott Alinity Immunoassay	<35 kU/L	1	UKNEQAS	tumour marker

Assay	Sample requirements	Sample handling / Transport	Methodology	Reference Range	Turnaround Time (maximum working days)	EQA	Clinical Utility
Ca 15-3	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells. Transport at RT	Abbott Alinity Immunoassay	<32 kU/L	1	UKNEQAS	tumour marker
Ca 19-9	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells. Transport at RT	Abbott Alinity Immunoassay	<37 kU/L	1	UKNEQAS	tumour marker
Enhanced Liver Fibrosis (ELF)	0.5 mL Serum	Freeze serum on receipt and send aliquot via first-class post from Monday-Thursday.	Siemens Centaur Immunoassay	<b>ELF score</b> <7.7 7.7-<9.8 ≥9.8 <b>Severity of Liver Fibrosis</b> None to mild Moderate Severe	10	UKNEQAS	Liver fibrosis marker
Ethanol	0.5 ml Serum/Plasma	Store at 4°C and transport at room temp	Abbott Alinity Enzymatic colorimetric	N/A	1	UKNEQAS	Alcohol
Lp(a)	1 ml serum/ plasma	Store at 4°C and transport at 4°C	Randox immuno turbidimetric	Cardiovascular risk conferred by Lp(a) (nmol/L): <90 – minor 90-200 – moderate 200-400 – high >400 – very high	7	UKNEQAS	Cardiovascular risk factor
Methotrexate	1 ml serum/plasma (Lithium heparin)	Store at 4°C and transport at room temp	Abbott Alinity Immunoassay	<i>Therapeutic ranges vary depending on treatment protocol and therefore not quoted</i>	1	UKNEQAS	Therapeutic drugs
NT pro BNP	1 ml serum	Remove from clot, RBCs or separator gel before storing at 4°C and transport at room temp	Alere NT-proBNP Abbott Alinity Immunoassay	<400 ng/L – heart failure unlikely 400–2000 ng/L – consider cardiac referral >2000 ng/L – consider urgent cardiac referral	1	UKNEQAS	Cardiac markers

Assay	Sample requirements	Sample handling / Transport	Methodology	Reference Range	Turnaround Time (maximum working days)	EQA	Clinical Utility
Paracetamol / Acetaminophen	0.5 ml Serum/Plasma	Store at 4°C and transport at room temp	Abbott Alinity Enzymatic colorimetric	N/A	1	WEQAS	Analgesic drug
PSA	1 ml serum	If analysis is delayed >24hrs remove serum from gel/cells and freeze at -20°C and transport frozen	Abbott Alinity Immunoassay	sex/ age specific – see report	1	UKNEQAS	tumour marker
Salicylate	0.5 ml Serum/Plasma	Store at 4°C and transport at room temp	Abbott Alinity Enzymatic colorimetric	Therapeutic range 100-300mg/L	1	WEQAS	Analgesic drug
hs-Troponin I	1 ml serum	Store at 4°C and transport at 4°C if within 24 hours of collection. If longer than 24 hours, store and send frozen/chilled.	Abbott Alinity Immunoassay	Male ≤34 ng/L Female ≤16 ng/L	1	UKNEQAS	Myocardial infarction, acute coronary syndrome

\*Please contact the department for current prices