



THERAPEUTIC DRUG MONITORING TEST REPERTOIRE

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

Therapeutic Drug Monitoring (TDM section) open Monday to Friday 08:45 to 17:15

For laboratory enquiries please contact:

Asia Ahmed (Senior Biomedical Scientist)
Tel: 02921 848372
E-mail: Asia.Ahmed@wales.nhs.uk

For clinical advice contact:

Sarah Tennant (Clinical Biochemist)
Tel: 02921 848334
E-mail: Sarah.Tennant@wales.nhs.uk

FOR URGENT REQUESTS PLEASE CONTACT THE LABORATORY

Samples will be processed as soon as it is feasible to do so.

It may be possible to process small sample volumes but advisable to contact laboratory for advice.

Please provide clinical details, particularly current patient medication, and collection times of sample on all request forms

| Assay | Sample Requirement (ml) | Sample Handling / Transport | Methodology | Reference Range | Turnaround Time (maximum working days) | EQA | Clinical Utility |
|---------------|----------------------------|---|--------------------|---|--|-----------------------------------|--|
| Amikacin | 1 mL serum | 2 - 8°C 7 days | PETINIA | Interpretation provided on report | 1 | UK NEQAS | Antibiotic |
| Carbamazepine | Trough 1 mL serum | 2 - 8°C 48 hours -20°C 7 days | PETINIA | 4 – 12 mg/L | 1 | UK NEQAS | Anti-convulsant |
| Ciclosporin | Trough 2 mL whole blood | 2 - 8°C 7 days | CMIA | None quoted | 1 | LGC Standards proficiency testing | Immunosuppression |
| Digoxin | Trough 1 mL serum | 2 - 8°C 48 hours | PETINIA | 0.5 – 2.0 ug/L | 1 | UK NEQAS | Atrial fibrillation, cardiac failure |
| Gentamicin | 1 mL serum/plasma (Li Hep) | 2 - 8°C 7 days and transport frozen if longer than 7 days. Can be stored at - 20°C for 4 weeks. | CEDIA | Interpretation provided on report | 1 | UK NEQAS | Antibiotic |
| Lithium | Trough 1 mL serum | 24 hours Room Temp | Colorimetric | 0.4 - 1.0 mmol/L | 1 | UK NEQAS | Mood stabilisation in bipolar disorder |
| Methotrexate | 1 mL serum/plasma (Li Hep) | 2 - 8°C 2 days and transport at room temp or freeze if longer than 2 days | CMIA | Therapeutic ranges vary depending on treatment protocol | 1 | UKNEQAS | Antineoplastic |
| Phenobarbital | Trough 1 mL serum | 7 days Room Temp | PETINIA | 10 – 40 mg/L | 1 | UK NEQAS | Anti-convulsant |
| Phenytoin | Trough 1 mL serum | 48 hours Room Temp 2-8°C 1 month | Enzyme Immunoassay | 5 – 20 mg/L | 1 | UK NEQAS | Anti-convulsant |
| Sirolimus | 2 mL whole blood | 2 - 8°C 7 days | CMIA | None quoted | 5 | LGC Standards proficiency testing | Immunosuppression |

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|--------------|------------------|----------------------------------|--------------------|-----------------------------------|---|-----------------------------------|-------------------|
| Tacrolimus | 2 mL whole blood | 2 - 8°C 7 days | CMIA | None quoted | 1 | LGC Standards proficiency testing | Immunosuppression |
| Tobramycin | 1 mL serum | 2 - 8°C 7 days | PETINIA | Interpretation provided on report | 1 | UK NEQAS | Antibiotic |
| Theophylline | Trough 1ml serum | 2-8°C 3 months | Enzyme Immunoassay | 10 – 20 mg/L | 1 | UK NEQAS | Bronchodilation |
| Valproate | Trough 1ml serum | 2 - 8°C 48 hours -20°C 7 days | PETINIA | None quoted | 1 | UK NEQAS | Anti-convulsant |
| Vancomycin | 1 mL serum | 2 - 8°C 7 days | PETINIA | Interpretation provided on report | 1 | UK NEQAS | Antibiotic |

*** For current prices please contact the department**