General information

The Antimicrobial Reference Laboratory (ARL) is part of the Department of Medical Microbiology of the North Bristol NHS Trust on the Southmead Hospital site. It provides a comprehensive antimicrobial assay service for the purposes of therapeutic monitoring and supporting consultative advice on technical aspects and clinical interpretation of antimicrobial assays.

Staff

ARL has the services of Consultant Medical Microbiologists, four Clinical Scientists and two Biomedical Scientists.

Contact telephone numbers and out-of-hours service

General Inquiries between 9 am and 5 pm Monday to Friday  
0117 323 5698/5654

International queries may be made via email to staff as indicated below

Out-of-hours assays can be arranged if there is a clinical need, but you should telephone and discuss your requirements with a Medical Microbiologist or Clinical Scientist beforehand. Advice can be given out-of-hours, in this case you should contact the Hospital switchboard (0117 950 5050) and ask them to contact the on-call Medical Microbiologist.

Samples can be assayed out-of-hours ONLY if prior agreement has been made.

Results and general inquiries 0117 323 5698/5654

Service Enquiries
Dr AM Lovering, Consultant Clinical Scientist 0117 323 4311  
andrew.lovering@nbt.nhs.uk
Prof AP MacGowan, Consultant Medical Microbiologist 0117 323 5652  
alasdair.macgowan@nbt.nhs.uk
Mr J Turner, Laboratory Manager & Billing Enquiries 0117 323 5658  
jonathan.turner@nbt.nhs.uk
Miss Nicola Childs, Quality Manager 0117 323 2501  
nicola.childs@nbt.nhs.uk

Financial Enquiries
Finance Dept (Financial information only) 0117 323 3921

Services

Antimicrobial assays
Clinical assays of serum drug concentrations are indicated in the following situations

- drugs with a known or suspected relationship between concentrations in blood and toxicity
- drugs with a known or suspected relationship between concentrations in blood and efficacy
- where there is pharmacokinetic variation such that concentrations in blood cannot be predicted
- to confirm oral absorption
- to test compliance
While only a few antimicrobials (for example aminoglycosides) require routine monitoring, estimation of serum concentrations can be of value with many more. Against each antimicrobial outlined below we have cited indications where our requesters have found these assays to be of clinical value.

The Antimicrobial Reference Laboratory routinely provides a wide range of antimicrobial assays. Some of these are routinely performed in large numbers and no advance warning is required if the sample is to arrive during a normal working day; others are performed less frequently and advance warning is essential if a same-day service is required (see Table).

In addition more specialist assays can be performed by prior arrangement. These include various β-lactams, metronidazole and fusidic acid. Advice can be obtained on, development of HPLC assays, problems with immunoassays and patient-related issues.

**MICs, MBCs and SBTs**

Minimum inhibitory concentrations (MICs) and minimum bactericidal concentrations (MBCs) and serum bactericidal titres (SBTs) can be performed on patients’ isolates and sera. Here advance warning is essential and such requests should be discussed initially with a member of staff.

Service users who require more information as to the range of services offered and their application should contact a Medical Microbiologist or Clinical Scientist.
<table>
<thead>
<tr>
<th>Class</th>
<th>Agent</th>
<th>See note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibacterials</td>
<td>Amikacin</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Benzylpenicillin</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Ceftazidime</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Chloramphenicol</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Ciprofloxacin, levofloxacin or ofloxacin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Colistin**</td>
<td>C**</td>
</tr>
<tr>
<td></td>
<td>Cycloserine</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Daptomycin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Ertapenem</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Flucloxacillin</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Gentamicin</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Linezolid</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Meropenem</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Moxifloxacin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Rifabutin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Rifampicin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Streptomycin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Sulphamethoxazole + trimethoprim</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Teicoplanin</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Tobramycin</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Vancomycin</td>
<td>A</td>
</tr>
<tr>
<td>Antifungals</td>
<td>Flucytosine</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Itraconazole</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Posaconazole</td>
<td>B</td>
</tr>
<tr>
<td>Antivirals</td>
<td>Aciclovir</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Ganciclovir</td>
<td>B</td>
</tr>
</tbody>
</table>

Note A: Advance warning not normally required
Note B: Advance warning only for Saturdays, and Public Holidays
Note C: 24 hour advance warning essential

**Colistin assays are currently a bioassay technique and our normal same-day turn-around time does not apply.**
Procedure for referral

- Give us advance warning by telephone where required (see Table). **If the sample is likely to arrive on a Saturday, Sunday, public holiday or out-of-hours then advance warning should ALWAYS be given for every antimicrobial.**
- Take appropriate blood samples (pre dose and 1 hour post dose for most agents but check relevant information for individual agents).
- Separate serum. **PLEASE DO NOT SEND WHOLE BLOOD.**
- Place serum in a watertight leak-proof screw-top tube **PLEASE DO NOT SEND TUBES WITH PUSH-ON TOPS.**
- Clearly identify high-risk samples.
- Heat inactivate the serum (see below) if necessary.
- Pack together with a copy of our request form, or your own laboratory request form and ensure this has your **address and telephone number.** Give the appropriate clinical information (see individual antimicrobials). This is especially important if clinical interpretation is required or with once-daily aminoglycoside dosing since high peak concentrations and low trough concentrations require the use of special laboratory protocols.
- Comply with safety requirements and ship using an appropriate carrier (see shipping requirements and individual antimicrobials).

**NOTE. First class post cannot be guaranteed to arrive the next day.**

Heat inactivation for high-risk samples

- Separate the serum and heat to 56°C for at least 45 minutes. But see individual agent information. Mark the request form “**Sample heat inactivated**”
- Ensure the samples are labeled as high-risk.

Specific requirements for individual antimicrobials

These are listed in alphabetical order on the pages that follow. **Please read the appropriate information carefully before sending samples as it may not be possible to assay samples that have been inappropriately handled.**

Shipping requirements

**Infectious** specimens **must** be packaged according to UN 3373 requirements as outlined below

<table>
<thead>
<tr>
<th>SAFETY NOTE: DO NOT PLACE DRY ICE (SOLID CO₂) INSIDE UN602 PACKS</th>
</tr>
</thead>
</table>

Infectious substances will only be transported in the UK by the Royal Mail in packaging, which meets the UN Class 6.2 specifications and the 602 packing requirements. This ensures that the packaging complies with strict performance tests including a 9 metre drop test and a puncture test and also bears a UK packaging specification label. The pack consists of three layers.
1. The **primary receptacle** containing the sample which must be watertight and leak-proof and wrapped in enough absorbent material to absorb all fluid in case of breakage.

2. The **secondary receptacle**. A durable watertight and leak-proof receptacle to protect the primary receptacle. Several wrapped primary receptacles may be placed in one secondary receptacle. Sufficient absorbent material must be used to cushion multiple primary receptacles.

3. The **outer package** which consists of a cardboard box usually measuring approximately 18x10x10 cm and bearing a warning label saying “**INFECTIOUS SUBSTANCE IN CASE OF DAMAGE OR LEAKAGE IMMEDIATELY NOTIFY PUBLIC HEALTH AUTHORITY**” and marked UN Class 6.2.

Whether all samples of serum sent for antibiotic assay are “infectious material” is open to debate. Clearly if there are viable viral, bacterial or fungal pathogens in the serum the sample must be considered “infectious”. Even if a sample has been heat treated to inactivate HIV etc it might reasonably be considered potentially infectious.

We can return packs to laboratories that subscribe to the Royal Mail Response Service or if pre-paid return labels are enclosed.

**Postal address for samples**

Samples should be securely packed conforming to current shipping regulations (see above) and sent together with the request form addressed as follows:

```
URGENT SAMPLE FOR “drugname” ASSAY
THE ANTIMICROBIAL REFERENCE LABORATORY
DEPARTMENT OF MEDICAL MICROBIOLOGY
LIME WALK BUILDING
SOUTHEAD HOSPITAL
WESTBURY--ON--TRYM
BRISTOL BS10 5NB
UK
```

*Note that leaking samples may not be processed*

**DX**

Alternatively, DX may be used to send us specimens in UN 602 packs that they supply. All DX subscribing laboratories may send us samples using the DX network. DX has advantages over First Class post, namely:

- Pick up after 5 p.m.
- Next day delivery before 9 a.m.
- Recycling of UN 602 packages.
DX address for samples

URGENT SAMPLE FOR “INSERT drug name here” ASSAY
THE REGIONAL ANTIMICROBIAL REFERENCE LABORATORY
SOUTHMEAD HOSPITAL (OLD PATHOLOGY BLOCK)

DX 6121302
WESTBURY-ON-TRYM
90 BS

Note that leaking samples may not be processed

Communications

For some assays (marked C in the Table) 24 hours advance warning is essential to guarantee the results can be communicated back to requesters on the day of receipt of the sample. For others (marked A or B in the Table) this is not usually necessary. However for those assays marked B if there is a requirement for assays to be done on Saturdays, Sundays, public and statutory holidays, or outside normal working hours, then advance warning is essential.

The results of all assays are telephoned or (by arrangement, see below) faxed to requesting laboratories as soon as they are available. Requesters should ensure that samples likely to arrive at weekends, during holiday periods or outside normal working hours are accompanied by an appropriate contact name and current telephone number. Results on Saturdays may not be available until after 12 noon and it may be necessary for us to contact the on-call Microbiologist. It would be useful to have the hospital ward name/number for all patients in case it proves impossible to contact the Microbiologist.

Follow-up paper reports of telephoned or faxed results are computer-generated, laser-printed and sent by Royal Mail. These may arrive two or more days after the sample has been assayed. The telephoned/faxed result given to the Microbiologist should be the result that is passed on to clinical colleagues since the paper report, which is a confirmatory report, may arrive too late to be of clinical value.

Faxing results

Departments wishing to receive their initial results by fax rather than voice should contact us. Once we have been supplied with a fax number we can transmit all subsequent requests on a customised form headed “URGENT ANTIBIOTIC ASSAY RESULT TO <name of requesting department>“. Faxed returns will include, antibiotic, result(s) in mg/L, patient name, patient DOB, date of sample, type of sample, requester laboratory number, Southmead laboratory number.
Risk groups and therapeutic ranges for antibacterials

We recommend that in most situations paired pre (trough) and post (peak) dose samples are sent to us. Our test pricing structure reflects this. For many antimicrobials the pre-dose sample may have more clinical relevance than the post-dose sample but it may be difficult to interpret a pre-dose level in isolation. For example a pre-dose streptomycin level of <1 mg/L in association with a post-dose level of 22 mg/L could be considered “normal”. However taken in isolation the pre-dose level could mean that the streptomycin dosage was too low (or streptomycin had not been given!). Similarly a once-daily-gentamicin trough of <1 mg/L does not confirm that a correct once-daily dosage has been given, it merely confirms that there is no accumulation of gentamicin. A study found 29% of patients supposedly on once-daily gentamicin had a peak of <5 mg/L (Abstracts of 5th ICTDM & CT (1997), Therapeutic Drug Monitoring 19 (5), Abstract 90).

So-called “random” or “time unspecified” levels are difficult, and may be impossible, to interpret unless they are overtly above the normal peak concentration. “Random” levels taken to determine whether another dose should be given are strictly pre-dose levels. The Tables below and overleaf give a guide to the types of patients who should have levels measured and typical (normal) levels that might be expected in patients on appropriate dosage regimens.

<table>
<thead>
<tr>
<th>Agent</th>
<th>Risk group</th>
<th>Expected levels (Guide-lines) (mg/L)</th>
<th>Re-assay interval* (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminoglycosides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gentamicin Tobramycin</td>
<td>All patients on 2nd-4th dose; earlier if changing renal function or other risk factors.</td>
<td>Gm- pneumonia Pre &lt;2, Post &gt;7 Infective endocarditis (IE)a Pre &lt;1, Post 3-5 Most other infections Pre &lt;2, Post &gt;5</td>
<td>3-7</td>
</tr>
<tr>
<td>(BD or TDS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gentamicin (Once-daily)</td>
<td>Pre &lt;1, Post &gt;10 or 8 h post (4.5 mg/kg) 1.5-6 or follow Hartford nomogram (but note this is for 7 mg/kg)</td>
<td></td>
<td>6-8</td>
</tr>
<tr>
<td>Amikacin (BD or TDS)</td>
<td>Pre &lt;10, Post &gt;20</td>
<td></td>
<td>3-7</td>
</tr>
<tr>
<td>Amikacin (Once-daily)</td>
<td>Pre &lt;5, Post &gt;50</td>
<td></td>
<td>6-8</td>
</tr>
<tr>
<td>Streptomycin</td>
<td>All patients after 4th-6th dose.</td>
<td>Pre &lt;5, Post 15-40</td>
<td>7-28</td>
</tr>
</tbody>
</table>

* Assuming initial results are within the expected range

<table>
<thead>
<tr>
<th>Agent</th>
<th>Risk group</th>
<th>Expected levels (Guide-lines) (mg/L)</th>
<th>Re-assay interval* (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Glycopeptides/Lipopeptides</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vancomycin</td>
<td>All patients on &gt;2-4 days therapy. Patients receiving other nephrotoxic drugs. Assay at 2nd-4th dose.</td>
<td>Pre dose 5-15&lt;sup&gt;a,b&lt;/sup&gt; OR Steady state during continuous infusion 15-25&lt;sup&gt;c,d&lt;/sup&gt;</td>
<td>6-8</td>
</tr>
<tr>
<td>Teicoplanin</td>
<td>Severe <em>Staph. aureus</em> infection including IE. Other severe infection.</td>
<td><em>Staph. aureus</em></td>
<td>6-8</td>
</tr>
<tr>
<td></td>
<td>Pre ≥20 but &lt;60</td>
<td>Other infections</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre ≥10 but &lt;60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daptomycin</td>
<td>Patients with CPK elevation or on doses &gt;6 mg/kg and with treatment duration &gt;7d</td>
<td>Pre dose &lt;20 mg/L&lt;sup&gt;e&lt;/sup&gt;</td>
<td>6-8</td>
</tr>
</tbody>
</table>

<sup>a</sup> Assuming initial results are within the expected range  
<sup>f</sup> Bhavnani et al. 2010. Clinical Infectious Diseases 50: 1568-74.

<table>
<thead>
<tr>
<th>Agent</th>
<th>Risk group</th>
<th>Expected levels (Guide-lines) (mg/L)</th>
<th>Re-assay interval* (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other agents</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aciclovir</td>
<td>Patients with renal impairment or on high dose therapy</td>
<td>There are too many dose regimens used to give single guideline ranges and interpretation of levels needs to be patient specific</td>
<td>6-8</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>All patients but especially neonates.</td>
<td>Pre &lt;10, Post (2h) 10-25</td>
<td>5-7</td>
</tr>
<tr>
<td>Co-trimoxazole (sulphamethoxazole + trimethoprim)</td>
<td>High-dosage therapy (PCP) or renal impairment.</td>
<td>Sulphamethoxazole: Pre &lt;100, Post 120-150 but &lt;200 Trimethoprim: Pre 5-7, Post 5-10 but &lt;20</td>
<td>6-8</td>
</tr>
</tbody>
</table>
## Other agents

<table>
<thead>
<tr>
<th>Agent</th>
<th>Risk group</th>
<th>Expected levels (Guide-lines) (mg/L)</th>
<th>Re-assay interval* (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colistin</td>
<td>Patients on IV treatment</td>
<td>Pre 2-6 mg/L, Post 5-15 mg/L</td>
<td>14-28</td>
</tr>
<tr>
<td>Flucytosine</td>
<td>All patients, especially in changing renal function, bone marrow suppression, those receiving amphotericin B or suspected non-compliance. Measure 3-5 days after starting therapy</td>
<td>Pre 30-40 mg/L&lt;br&gt;Post 70-80mg/L but &lt;100 mg/L&lt;sup&gt;a&lt;/sup&gt; &lt;br&gt;Pre dose concentrations &lt;25 mg/L have been associated with treatment failure and emergence of resistance. Post dose concentrations &gt;100 mg/L have been associated with toxicity.</td>
<td>4-8</td>
</tr>
<tr>
<td>Ganciclovir</td>
<td>Young children, renal impairment or unstable renal function</td>
<td>Pre 0.5-1.0mg/L&lt;sup&gt;b&lt;/sup&gt; &lt;br&gt;Post 7-9 mg/L (ganciclovir) &lt;br&gt;Post 5-7 mg/L (valganciclovir)</td>
<td>4-8</td>
</tr>
<tr>
<td>Itraconazole</td>
<td>Routine in 1&lt;sup&gt;st&lt;/sup&gt; week of therapy, lack of clinical response, gastrointestinal dysfunction, co-medication. Measure 4-7 days after starting therapy</td>
<td>By HPLC assay&lt;sup&gt;c&lt;/sup&gt; &lt;br&gt;Prophylaxis pre 0.5-2.0 mg/L &lt;br&gt;Therapy pre 1.0-2.0mg/L &lt;br&gt;NB. These guidelines are different to those achieved by bio-assay.</td>
<td>4-8</td>
</tr>
<tr>
<td>Posaconazole</td>
<td>Lack of clinical response, gastrointestinal dysfunction, therapy with proton pump inhibitors, co-medication. Measure 4-7 days after starting therapy</td>
<td>By HPLC assay&lt;sup&gt;c&lt;/sup&gt; &lt;br&gt;Prophylaxis and Therapy Pre 0.5-1.5 mg/L</td>
<td>4-8</td>
</tr>
</tbody>
</table>

- Assuming initial results are within the expected range
<table>
<thead>
<tr>
<th>Agent</th>
<th>Risk group</th>
<th>Expected levels (Guide-lines) (mg/L)</th>
<th>Re-assay interval* (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifampicin</td>
<td>Patients with poor clinical progression</td>
<td>Pre &lt;0.5mg/L Post &lt;4mg/L sub-therapeutic Post 4-8mg/L usually adequate Post 8-15mg/L ideal</td>
<td>Depending on levels &amp; patient progression</td>
</tr>
<tr>
<td>Rifabutin</td>
<td>Patients who fail to respond to treatment. Patients on agents with P450 interactions</td>
<td>Pre &lt;0.1mg/L Post 0.3-0.6mg/L</td>
<td>Depending on levels &amp; patient progression</td>
</tr>
<tr>
<td>Levofoxacin</td>
<td>Patients being treated for MDR TB.</td>
<td>Pre 0.5-2 mg/L Post 8-12 mg/L</td>
<td>Depending on levels &amp; patient progression</td>
</tr>
<tr>
<td>Cycloserine</td>
<td>All patients after 4th-6th dose.</td>
<td>Pre 10-20mg/L Post (3-4h) 20-35mg/L</td>
<td>10-30</td>
</tr>
<tr>
<td>Moxifloxacin</td>
<td>Patients being treated for MDR TB.</td>
<td>Pre 0.3-0.7 mg/L, Post 3-5 mg/L</td>
<td>Depending on levels &amp; patient progression</td>
</tr>
<tr>
<td>Linezolidb</td>
<td>Patients being treated for MDR TB.</td>
<td>Pre &lt;5mg/L Post 12-24mg/L</td>
<td>Depending on levels &amp; patient progression</td>
</tr>
</tbody>
</table>

* Assuming initial results are within the expected range

a Assuming that patients are on standard (usually daily) therapy, for patients on intermittent therapy please call to discuss expected levels as these will vary depending on dosing regimen used.


### Training courses

Every year, in association with The University of the West of England (UWE), the Bristol Centre for Antimicrobial Research and Evaluation (BCARE) and the UK NEQAS for Antibiotic Assays we run a residential antibiotic-testing course. This covers, over 4 days, technical and clinical aspects relating to susceptibility testing and assays. Please write to Dr Karen Bowker, Antimicrobial Reference Laboratory, Department of Medical Microbiology, Lime Walk Building Southmead Hospital, Westbury-on-Trym, Bristol BS10 5NB for further details.

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**Individual antimicrobials are listed alphabetically on pages that follow**
ACICLOVIR

Indications
Requesters have found these assays to be of value in patients with renal failure and/or on ECMO, in cases of suspected neurotoxicity, or suspected poor absorption and in some patients receiving valaciclovir.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples, clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning is given.
A written confirmation report will be sent by post.
**AMIKACIN**

**Indications**
Requesters have found these assays to be of value in all patients treated for >48 hours.

**Advance warning**
Not usually required (but see page 3).

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample for either iv/im administration.
For further information on sample timings during once daily administration, please refer to the section on therapeutic ranges at the start of this guide.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples; especially important with once-daily dosing
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday and by 10 am on a Saturday.
A written confirmation report will be sent by post.
BENZYL PENICILLIN (PENICILLIN G)

Indications
Requesters have found these assays to be of value in cases of suspected neurotoxicity and patients with renal impairment and/or receiving high doses.

Advance warning
Please telephone at least one day in advance of the sample.

Special Requirements
*Samples should NOT be sent by post since the drug is liable to degradation*
Send by courier, frozen or on ice

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
Telephone for advice if HIV positive.
Samples should NOT be sent by post since the drug is liable to degradation
Send by courier, frozen or on ice

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv/im administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
CEFTAZIDIME

Indications
Requesters have found these assays to be of value in children and adults treated with continuous infusion and/or with severe sepsis and/or with pathogens of reduced susceptibility to ceftazidime.

Advance warning
Please telephone at least one day in advance of the sample.

Special Requirements
*Samples should NOT be sent by post since the drug is liable to degradation*
Send by courier, frozen or on ice

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
Please telephone for advice if HIV positive.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
**CHLORAMPHENICOL**

**Indications**
Requesters have found these assays to be of value in all neonates and occasionally in children or adults.

**Advance warning**
Not usually required (but see page 3).

**Special Requirements**
Chloramphenicol is degraded by light; please ensure the samples are protected from direct sunlight.

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 μL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken 2h after the end of either iv administration or oral administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary. It would be useful to be informed of any ß-lactam therapy.
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday. Samples can only be assayed on a Saturday by prior arrangement.
A written confirmation report will be sent by post.
**CIPROFLOXACIN**

**Indications**
Requesters have found these assays to be of value in monitoring compliance and/or anti-mycobacterial therapy and/or patients with renal failure and/or pathogens of reduced sensitivity. Also to confirm oral absorption.

**Advance warning**
Not usually required (but see page 3).

**Special Requirements**
Ciprofloxacin is degraded by light; please ensure the samples are protected from direct sunlight.

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
**COLISTIN**

**Indications**
Requesters have found these assays to be of value in cystic fibrosis patients treated with intravenous colistin.

**Advance warning**
Please telephone at least one day in advance of the sample.

**Special Requirements**
Colistin assays are performed by bioassay and it is impossible to process samples without information about the other antimicrobial agents the patient is receiving.

**Sample required**
1-2 mL of separated serum.
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration. We do not normally recommend the assay of samples following nebulised administration; please discuss if you are considering assay in patients receiving nebulised colistin.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples;
Clinical summary
Other medications (important, esp. **ALL OTHER ANTIBACTERIAL AGENTS**)  
Address for report
Phone (fax if preferred) number for report
Contact name  
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.  
Leaking samples may not be processed.

**Target turn-round time**
It is not possible to quote a normal turn-round time for this bioassay but results will, if possible, be telephoned within three-four days depending on the day of receipt.  
A written confirmation report will be sent by post.
THIS ASSAY IS NOT AVAILABLE AT WEEKENDS OR PUBLIC HOLIDAYS
CYCLOSERINE

Indications
Requesters have found these assays to be of value in all patients receiving this drug as part of anti-TB therapy.

Advance warning
Not usually required (but see page 3).

Sample required
1-2 mL of separated serum (but as little as 100 µL can be processed)
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 3-4h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important, esp. pyrazinamide)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will usually be telephoned within three days depending on the day of receipt.
A written confirmation report will be sent by post.
DAPTOMYCIN

Indications
Requesters have found these assays to be of value in patients with difficult infections and/or impaired renal function.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday.
A written confirmation report will be sent by post.
**ERTAPENEM**

**Indications**
Requesters have found these assays to be of value in patients with difficult infections, continuous infusion, and/or impaired renal function.

**Advance warning**
Please telephone at least one day in advance of the sample.

**Special Requirements**
Samples should NOT be sent by post since the drug is liable to degradation
Send by courier, frozen or on ice.

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday.
A written confirmation report will be sent by post.
FLUCLOXACILLIN

Indications
Requesters have found these assays to be of value in patients transferring from iv to oral therapy, cases of suspected neurotoxicity, and patients with severe sepsis and renal failure.

Advance warning
Please telephone at least one day in advance of the sample.

Special Requirements
Samples should NOT be sent by post since the drug is liable to degradation
Send by courier, frozen or on ice

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
Telephone for advice if HIV positive.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv/im administration or 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
**FLUCYTOSINE**

**Indications**
Requesters have found these assays to be of value in all patients treated for >48 hours.

**Advance warning**
Not usually required (but see page 3).

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
GANCICLOVIR

Indications
Requesters have found these assays to be of value in patients with renal failure and to monitor oral absorption, particularly in patients receiving valganciclovir.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning is given.
A written confirmation report will be sent by post.
GENTAMICIN

Indications
Requesters have found these assays to be of value in all patients treated for >48 hours.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv/im administration.
For further information on sample timings during once daily administration, please refer to the section on therapeutic ranges at the start of this guide.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples; especially important with once-daily dosing
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday and by 10.00 am on a Saturday.
A written confirmation report will be sent by post.
ITRACONAZOLE

Indications
Requesters have found these assays to be of value in all patients whether on prophylaxis or treatment.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 2h after oral administration or 1h post iv infusion.
For further information on sample timings during once daily administration, please refer to the section on therapeutic ranges at the start of this guide.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples;
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday.
A written confirmation report will be sent by post.
**LINEZOLID**

**Indications**
Requestors have found these assays to be of value in liver failure (Childs-Pugh type C), to confirm absorption, with unusual therapeutic interventions (i.e.: continuous infusion or patients supported by ECMO), and in situations where there may be significant pharmacokinetic variability (i.e.: ICU patients). More recently, users have found these assays to be of value in patients being treated for tuberculosis.

**Advance warning**
Not usually required (but see page 3).

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL). The sample must be heat-treated before dispatch if HIV positive. Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations. Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday.
A written confirmation report will be sent by post.
**MEROPENEM**

**Indications**
Requesters have found these assays to be of value in patients with difficult infections, continuous infusion, and/or impaired renal function.

**Advance warning**
Please telephone at least one day in advance of the sample.

**Special Requirements**
Samples should NOT be sent by post since the drug is liable to degradation
Send by courier, frozen or on ice.

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday.
A written confirmation report will be sent by post.
MOXIFLOXACIN

Indications
Requesters have found these assays to be of value in patients with renal or hepatic failure and/or to confirm oral absorption.

Advance warning
Not usually required (but see page 3).

Special Requirements
Moxifloxacin is degraded by light; please ensure the samples are protected from direct sunlight.

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable volume is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples sent by post must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
OFLOXACIN/LEVOFLOXACIN

Indications
Requesters have found these assays to be of value in monitoring compliance and/or patients with renal failure and/or pathogens of reduced sensitivity. Also to confirm oral absorption.

Advance warning
Not usually required (but see page 3).

Special Requirements
These drugs are degraded by light; please ensure the samples are protected from direct sunlight.

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples sent by post must be sealed and packed to conform with current regulations. Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
POSACONAZOLE

Indications
Requesters have found these assays to be of value in patients with gastrointestinal dysfunction, therapy with proton pump inhibitors to confirm optimal oral absorption.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 2h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples sent by post must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
RIFABUTIN

Indications
Requesters have found these assays to be of value in patients receiving agents that have known drug interactions with rifabutin (such as clarithromycin, a number of antifungal agents and many of the antiviral agents used to treat HIV infection) and in cases of suspected toxicity.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and three post dose samples, taken 1h, 2h and 4h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current postal regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
RIFAMPICIN

Indications
Requesters have found these assays to be of value in testing compliance or oral absorption or in cases of unexpected therapeutic failure.

Advance warning
Not usually required (but see page 3).

Special Requirements
Please note that rifampicin binds to glass and plastics and therefore there may be a significant loss of drug if a small volume of serum is dispatched in a relatively large container. Please try and fill the container to 2/3 -3/4 its capacity.

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample taken 1h after iv administration or three post dose samples, taken 1h, 2h and 4h after oral administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current postal regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
STREPTOMYCIN

Indications
Requesters have found these assays to be of value in all patients treated for >48 hours.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv/im administration.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday. Streptomycin can only be assayed on Saturdays by prior arrangement.
A written confirmation report will be sent by post.
**SULPHAMETHOXAZOLE (IN CO-TRIMOXAZOLE)**

*see also* trimethoprim

**Indications**
Requesters have found these assays to be of value in patients with renal failure and/or high-dose co-trimoxazole therapy. Also in monitoring absorption in neutropenic patients.

**Advance warning**
Not usually required (but see page 3).

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive. Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Other medications (important)
Address for report, phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform to current regulations.
Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received.
A written confirmation report will be sent by post.
TEICOPLANIN

Indications
While not indicated in all patients, therapeutic drug monitoring may be of value in severe sepsis, MRSA infection, deep-seated staphylococcal infection, bone and joint infection, iv drug mis-users, infective endocarditis, unexpected therapeutic failure, and elderly or renally impaired patients.

Advance warning
Not usually required (but see page 3).

Special Requirements
Please note that teicoplanin binds to glass and plastics and therefore there may be a significant loss of drug if a small volume of serum is dispatched in a relatively large container. Please try and fill the container to 2/3 -3/4 its capacity.

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday. Teicoplanin can only be assayed on a Saturday by prior arrangement.
A written confirmation report will be sent by post.
TOBRAMYCIN

Indications
Requesters have found these assays to be of value in all patients treated for >48 hours and particularly in patients with cystic fibrosis who are receiving tobramycin once a day.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample and a post dose sample, taken 1h after the end of iv/im administration.
For further information on sample timings during once daily administration, please refer to the section on therapeutic ranges at the start of this guide.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday and by 10.00 am on a Saturday.
A written confirmation report will be sent by post.
TRIMETHOPRIM (IN CO-TRIMOXAZOLE)

see also sulphamethoxazole

**Indications**
Requesters have found these assays to be of value in patients with renal failure and/or high-dose co-trimoxazole therapy. Also in monitoring absorption in neutropenic patients.

**Advance warning**
Not usually required (but see page 3).

**Sample required**
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).

**The sample must be heat-treated before dispatch if HIV positive.**
Samples may be sent by post.

**Timing of samples**
We recommend a pre dose sample and a post dose sample, taken either 1h after the end of iv administration or 2h after oral administration.

**Information required**
Patient name, sex and age
Dosage and frequency and timing of samples. **Please make it clear if the patient is receiving trimethoprim alone.**
Clinical summary
Other medications (important)
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

**Other information**
Samples must be sealed and packed to conform with current regulations. Leaking samples may not be processed.

**Target turn-round time**
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday only if advance warning was received. A written confirmation report will be sent by post.
VANCOMYCIN

Indications
Some requesters have found these assays to be of value in all patient groups treated for >48 hours while others consider them of value only in clinically defined sub-groups of patients.

Advance warning
Not usually required (but see page 3).

Sample required
Approx. 1-2 mL of separated serum (if sample size is a problem the minimum acceptable is 100 µL).
The sample must be heat-treated before dispatch if HIV positive.
Samples may be sent by post.

Timing of samples
We recommend a pre dose sample.
For further information, please refer to the section on therapeutic ranges at the start of this guide.

Information required
Patient name, sex and age
Dosage and frequency and timing of samples; peak should be taken 1 hour after the end of the infusion to ensure the distribution phase has been completed.
Clinical summary
Address for report
Phone (fax if preferred) number for report
Contact name
Appropriate hazard warnings

Other information
Samples must be sealed and packed to conform with current regulations.
Leaking samples may not be processed.

Target turn-round time
Results will be telephoned on the day of receipt for samples received between 9 am and 3 pm Monday to Friday and by 10.00 am on a Saturday.
A written confirmation report will be sent by post.

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