

NORTHUMBRIA HEALTHCARE NHS TRUST

PATHOLOGY

Toxicology

Toxicology Users Handbook

This Handbook supersedes all previous versions. It is intended as a handbook for organisations external to Northumbria Healthcare NHS FT.
Users within the Trust should refer to the Clinical Chemistry Handbook

REFERENCE & VERSION No.	LH-CCH-TOX-W-001 v2
REPLACES DOCUMENT No.	LH-CCH-TOX-W-001 v1
LOCATION OF COPIES	Q-Pulse – master copy Copies sent out to referring organisations. List held in Toxicology Reception (LH-CCH-TOX-W-001a)

Contents

Introduction	2
Contact details	3
Laboratory Opening Hours	3
Request forms and specimen containers.....	4
Ethylene glycol / methanol testing requirements	4
Urine drug screen requirements.....	4
Urine drug employment screen requirements	4
Ad-hoc drug screen requirements.....	4
Post mortem requirements.....	4
Other samples.	4
High Risk Specimens	5
Report turnaround time	5
Add on tests	5
Revisions	5

Introduction

The Toxicology Service is part of the Clinical Chemistry Department at Northumbria Healthcare NHS Foundation Trust.

The analytical laboratory is provided at Wansbeck General Hospital, with ethylene glycol analysis provided at the Northumbria Specialist Emergency Care hospital.

Our aim is to provide a specialist toxicology service primarily to the NHS in North East England and North Cumbria and to non-NHS institutions such as HM Coroners and private companies.

Both laboratories are accredited to [ISO:15189 by UKAS](#) and take part in the training of Biomedical and Clinical Scientists and Medical Staff.

Dr Nigel Brown (Consultant Clinical Scientist, Toxicology), Dr Stewart Pattman (Consultant Chemical Pathologist) Dr Roy Talbot (Consultant Clinical Biochemist) and Elizabeth Robinson (Principal Biochemist) are available to provide advice on appropriate investigations and interpretation of results. Out of normal working hours they may be contacted via the hospital switchboard for advice over urgent clinical matters.

The quality of the service is continuously monitored by internal quality control procedures and participation in National External Quality Assessment Schemes for the range of analytes provided (when available). In addition the department regularly participates in clinical audit and is involved in research studies in the areas of Novel Psychoactive Drugs and Fetal Spectrum Alcohol Disorders.

[Dr Nigel Brown is currently chair of the Toxicology Specialist Advisory Panel for the Royal College of Pathologists.](#)

Contact details

Toxicology Laboratory:

Phone: 01670 529714 (internal extension 33714)

e-mail: nhc-tr.toxicologyenquiries@nhs.net. This has a secure link to the following e-mail systems: @gcsx.gov.uk, @pnn.police.uk, @cjsn.net.

The full list of secure and non-secure connections is available on the intranet from the Secure E-Mail Matrix issued by the Information Governance Department in the Trust.

Hospital Switchboard: 0344 811 8111

Senior Staff

Consultant Clinical Scientist (Toxicology)

Dr Nigel Brown BSc, MSc, PhD, FIBMS, FRCPath, MRSC
Telephone 01670 5293714 (Ext 33714), work mobile 07554 555052
Nigel.brown1@nhs.net, nhc-tr.toxicologyenquiries@nhs.net

Consultant Chemical Pathologist / Head of Department

Dr. Stewart Pattman. BSc. MBChB (Edinburgh), MCRP, FRCPath
Telephone 0191 293 2546, secretary 0191 293 2546
Stewart.pattman@nhct.nhs.uk

Consultant Clinical Biochemist

Dr Roy Talbot, BSc, MSc, PhD, FRCPath
Telephone 0191 607 2235, 01670 5923710 or via switchboard
Roy.Talbot@nhct.nhs.uk

Clinical Scientist

Elizabeth Robinson. BSc, MSc
Telephone 01670 5923710, 0191 607 2235 or via switchboard
Elizabeth.Robinson3@nhct.nhs.uk

Senior Biomedical Scientist (Toxicology)

Leanne Nixon BSc MSc
Telephone 01670 529714
nhc-tr.toxicologyenquiries@nhs.net

Laboratory Opening Hours

The laboratory at Wansbeck Hospital is open between 08:30 and 17:00 Monday to Friday for the receipt of routine samples. For urgent drug screens this can be extended to 18:00 subject to staff availability.

The laboratory at the Northumbria Hospital is open 24/7 but urgent ethylene glycol / methanol requests should only be sent to this laboratory after discussion with the Toxicologist or Duty Biochemist

Request forms and specimen containers

For samples originating within Northumbria Healthcare NHSFT please use the Sunquest ICE ordering system.

For samples originating outside the trust, any request form is acceptable as long as it provides unambiguous identification of the sample(s).

For chain of custody drug screening requests (which includes employment screening) kits are available containing tubes with self-locking lids.

Ethylene glycol / methanol testing requirements

These are available from the service, please contact if required.

Urine drug screen requirements

A minimum of 2 mL of urine should be provided in a plain tube. The request form should list known prescribed drugs as well as the reason for screening.

Urine drug employment screen requirements

A minimum of 2 mL of urine should be provided in 2 tubes with self-locking lids (supplied by the department)

Ad-hoc drug screen requirements

The service is able to screen blood and other fluids (including suspected drug substances) and tablets / powders. Please contact service to discuss before sending. Blood samples should ideally be EDTA whole blood (without serum separator gel).

Post mortem requirements

A minimum of 2mL of each fluid should be sent (0.5 mL for eyefluid), ideally preserved with fluoride oxalate. Eyefluid in a plain tube can be sent for electrolyte analysis. If fluids unavailable tissue may be sent – for liver send about 1 cm³ taken from a site as far as possible from the stomach to avoid contamination. Muscle is acceptable if no other tissue is available.

Other samples.

It is possible to perform clinical drug screens on serum / whole blood. Please contact the service for details.

The department holds a licence to possess controlled drugs and can analyse drug powders / tablets etc to assist in clinical or post mortem analysis.

High Risk Specimens

High-risk groups can include patients suffering from, or thought to be suffering from, Hepatitis, HIV, TB, E coli 0157 and other notifiable diseases. Intra-venous drug users and patients who've had recent foreign travel with unexplained high pyrexia should also be treated as high risk.

Request forms and samples MUST be labelled with "Danger of Infection" labels, placed in a Bio-hazard bag and transported to the laboratory with care. To protect all healthcare workers, requests for investigations on high risk samples should be the minimum required for diagnosis and good patient management. Great care must be taken when obtaining specimens, and equipment such as needles and blades must be immediately disposed of safely, in approved sharps boxes. Should a spillage of blood, fluids or tissue occur, this should be made safe and dis-posed of appropriately.

Given the general infection risk associated with drug abuse, all samples are considered to be potentially infective and are treated as such in the laboratory.

Report turnaround time

Basic drug screens will be turned round in 1 – 2 days. More complex screens may take a week with interim results available from the department. Results are available on WebICE as well as printed reports.

Ethylene glycol results will be available within 4 hours of receipt. Methanol results will be available as soon as possible depending on clinical need and staff availability.

Post mortem requests will be turned round within 15 working days. If delays are anticipated (for example due to the need to order a drug compound), the Coroner and Pathologist will be informed.

Add on tests

All drug screening samples are held in the laboratory for 3 months for additional analyses if required.

Samples from HM Coroner are held until no longer required or for 2 years.

Revisions

Version	Date	Changes
1	Oct 2016	New document
2	Oct 2018	Addition of Roy Talbot, UKAS instead of CPA, NWB role