Instructions for Handling Test Materials and Recording Results
Round 77

The instructions for all of the samples available within this round of QUARTZ are contained within this document. Please ensure the correct sample instructions are followed.

Sample matrix

The blood is obtained from the Welsh Blood Transfusion Service and is pre-screened.

Nevertheless, it is recommended that laboratory personnel treat the samples with the care and attention normally exercised in handling clinical specimens.

Note: All test materials provided are intended for use as proficiency testing materials only and are not to be used for any other purposes.

Please see Appendix A for information regarding specific specimens

For liquid samples: Sample Storage
Store at 4°C for up to 3 days. Store at -20°C on arrival if testing is to be delayed > 3 days.

Submission of Results
- All results should be submitted using PORTAL
- Please go to https://www.lgcpt.com/portal
- Login using your Lab ID, username and password.

A PORTAL user guide can be downloaded from the help section.

If you need any help at all please do not hesitate to contact our support team using the details below or your local LGC representative.

Tel: +44(0)161 762 2500
Email: quartz@lgcgroup.com
APPENDIX A

Sample 1: Identification Sample

Case Scenario
The deceased was arrested following a call to a disturbance at a hotel where he had been exhibiting bizarre behaviour (including banging his head against a wall). A search of his hotel room identified drug taking paraphernalia and a number of unidentified tablets.

You are asked to analyse the blood sample that was taken from the deceased and determine whether he may have been affected by drugs at the time of his death.

The drugs present may include:

- Anaesthetics (e.g. ketamine),
- Antidepressants (e.g. amitriptyline, dothiepin, citalopram),
- Anticholinergics (e.g. procyclidine),
- Anticonvulsants (e.g. carbamazepine, phenytoin, pregabalin),
- Antihistamines (e.g. cyclizine, chlorpheniramine),
- Antipsychotics (e.g. olanzapine, quetiapine),
- Cardiovascular drugs (e.g. atenolol, flecainide),
- Erectile dysfunction (e.g. sildenafil),
- Opioid analgesics (e.g. morphine, methadone, oxycodone, tramadol),
- Non Steroidal Anti-Inflammatory Analgesics (e.g. salicylate, paracetamol, etoricoxib), benzodiazepines (e.g. diazepam, alprazolam, temazepam, flunitrazepam),
- Hypnotic drugs (e.g. zaleplon, zolpidem, zopiclone),
- Stimulants (e.g. cocaine, piperazines, amphetamines, APB, cathinones),
- Cannabinoids,
- Barbiturates,
- Carboxyhaemoglobin.

The sample will always contain at least one drug from the most commonly encountered drugs in forensic toxicology casework.
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Sample 2: Quantification Sample
Case Scenario

The suspect is a 19 year old male. It is alleged that he assaulted another male and was arrested shortly afterwards (within the hour). It is suspected that he may have been affected by drugs at the time of the incident.

Further information has been provided stating the individual was prescribed medication for schizophrenia. It is also suspected that he may have ingested MDA.

Analyses requested:
You are asked to analyse the blood sample provided for the presence Amisulpride, Dosulepin (Dothiepin), Nordosulepin (Nordothiepin), and MDA, and provide an interpretation of the results.
Units: µg/L.

Please Note:

The Quantification drugs should be quantified accurately regardless of the “case study”. Interpretations should be based on results and the “case study”.

Please provide full reference details if you refer to published information in your interpretation of the results. This will assist the Advisory Group and other participants.

Please note that the units for report submission has been amended to µg/L for this sample.

Sample 3: Known Drug Blood Quantification
The test material provided contains known concentrations of the following drugs of abuse:

- Citalopram
- Codeine
- Amitriptyline
- Tramadol

Report the concentration of these drugs as mg/L to 3 decimal places.
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Sample 6: New Psychoactive Substance (NPS) Blood Quantification Sample
The test material provided contains known concentrations of the following drugs:

- Methoxyacetylfentanyl
- MDPHP

Report the concentrations of these drugs as µg/L to 2 decimal places.

In addition, another two drugs are present in this sample. Please determine their identification by choosing them from the choice provided and then selecting “Detected”. The concentration detected may also be entered.

Sample 7: Synthetic Cannabinoid Blood Sample: Qualitative
Screen the sample for synthetic cannabinoids and submit the result for the substance detected from the choice provided. Quantitative results can be submitted, however this is not mandatory.

Sample 8: Identification of toxicology drugs/metabolites – Urine specimen
Case Scenario
A urine sample was obtained from an individual who had been suspected of taking illicit drugs and was part of a urine screening programme. Please analyse the specimen and report your findings.

Please test the urine sample for a range of drugs.

The drugs present may include:

- Anaesthetics (e.g. ketamine),
- Antidepressants (e.g. amitriptyline, dothiepin, citalopram),
- Anticholinergics (e.g. procyclidine),
- Anticonvulsants (e.g. carbamazepine, phenytoin, pregabalin),
- Antihistamines (e.g. cyclizine, chlorpheniramine),
- Antipsychotics (e.g. olanzapine, quetiapine),
- Cardiovascular drugs (e.g. atenolol, flecainide),
- Erectile dysfunction (e.g. sildenaifil),
- Opioid analgesics (e.g. morphine, methadone, oxycodone, tramadol),
- Non Steroidal Anti-Inflammatory Analgesics (e.g. salicylate, paracetamol, etoricoxib),
- Benzodiazepines (e.g. diazepam, alprazolam, temazepam, flunitrazepam),
- Hypnotic drugs (e.g. zaleplon, zolpidem, zopiclone),
- Stimulants (e.g. cocaine, piperrazines, amphetamines, APB, cathinones),
- Cannabinoids,
- Barbiturates,
- Carboxyhaemoglobin.
Sample 9: NPS/ Synthetic Cannabinoid Blood Sample: Qualitative in urine
Screen the sample for synthetic cannabinoids and NPS drugs and submit the result for the substance(s) detected from the choice provided. Up to two substances may be present.

Quantitative results can be submitted, however this is not mandatory.