

Instructions for Handling Test Materials and Recording Results Round 85

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://portal.lgcstandards.com>
- 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: ptcustomerservices@lgcgroup.com

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APPENDIX A

Sample 1: Identification Sample Case Scenario

A 25-year-old woman met a man on a night out. He invited her to a party and they started to walk across town to the address. On the way, he offered her a cigarette which she accepted. Shortly afterwards, she started to feel funny, light-headed and had difficulty in standing. She remembers nothing else until she awoke in a local park to find that her lower clothing had been removed and her purse and mobile phone were missing. She had been taking medication for depression and analgesic medication for a sore back. A blood sample was taken from her approximately 15 hours after she regained consciousness.

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

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 body of a male was discovered in a room at a hostel. He was suspected of being a drug user and there was evidence of various substances having been used.

Analyses requested:

You are asked to analyse the blood sample provided for the presence of Etizolam (mg/L), Pregabalin (mg/L), Diazepam (mg/L) and Benzoylcegonine (mg/L), and provide an interpretation of the results.

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:

Flualprazolam
Mexedrone

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

A 35 year old female has supplied a urine specimen for drug analysis as she is required to provide evidence that she is not using/abusing drugs.

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. 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),
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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.