



Instructions for Handling Test Materials and Recording Results Round 75

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



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APPENDIX A

Sample 1: Identification Sample

Case Scenario

The deceased was known to police and drug treatment services, having been in prison for the 1 year previous. He was recently released 1 week before he died. On the day of his death a witness saw him leave in a taxi from his home address, arriving back home 2 hours later. The witness spoke to him while he was getting out of the taxi and the deceased stated that he had got a tenner bag (of heroin) and some pills and asked if the witness wanted to join him. The two proceeded to the deceased's flat and split the tenner bag. The witness injected himself with the heroin and when he awoke he saw the deceased lying on the sofa, not breathing. He administered narkan and phoned the ambulance. When the paramedics arrived it was clear the deceased had been dead a number of hours. There was injecting equipment and two different looking pills on the coffee table.

You are asked to analyse the blood sample that was taken from the child and determine whether the symptoms may have been due to 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),
- 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

During the evening of Friday 28th September 2018, an incident occurred in a Public House where several men became ill, suffering extreme drowsiness and vomiting. Some became unconscious and were taken to hospital. CCTV footage from the Public House showed a man pouring a liquid into a number of drinks in an apparently random and untargeted manner. One of the men affected during the incident had a blood sample taken from him at hospital approximately 3 hours after he became unconscious and this blood sample was later provided to the police for analysis. This man was also taking an antidepressant. The police suspect that the liquid poured into the drinks was GBL.

Analyses requested:

You are asked to analyse the blood sample provided for the presence GHB, Citalopram, Norcitalopram and Ethanol, and provide an interpretation of the results. Please note the sample will contain methanol so if this would interfere with your ethanol analysis please comment on the effects of ethanol consumption in conjunction with the other findings, rather than analysing for ethanol.

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

Please note the result entry requirements have changed for this sample.

The test material provided contains known concentrations of the following drugs:

Diclazepam
PMMA

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 taken post mortem from a male who had been found deceased at home. The man was an epileptic who was known to be an occasional drug user.

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),
- Cannabinoids,
- Barbiturates,



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- 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.