



Forensic and clinical products and services

Reference standards • Forensic and clinical toxicology • Stable isotopes • Metabolites • TDM • Steroids • Natural products





About LGC Standards

LGC Standards is a leading supplier and manufacturer of reference materials for clinical and forensic laboratories. Our extensive range of products enables superior accuracy in measurement science, and compliance with international regulations. LGC's production facilities in Europe have a wide scope of

capabilities from sourcing and synthesis through to characterisation and certification of materials to ISO Guide 34 standards. This experience developed over many years combined with our accreditation portfolio gives confidence in the quality and robustness of our reference materials.

The LoGiCal[®] choice

LoGiCal is a range of reference materials from LGC, manufactured in-house to the highest quality standards and certification levels at LGC's production facilities in Europe. The range offers scientists a choice of solutions and powders prepared according to the principles of ISO Guide 34, with the solutions being fully ISO Guide 34 certified. Each is supplied with its own detailed certificate of analysis.

For more information please visit www.lgcstandards.com



Proficiency testing

LGC Standards is accredited to ISO/IEC 17043 for the provision of external quality assurance (EQA), or proficiency testing (PT) schemes. We have over thirty years international experience in provision of PT services to laboratories undertaking forensic, clinical, chemical,

microbiological, and physical measurements.

As part of a comprehensive quality assurance programme, PT is an independent means of assuring the quality of analytical results, as described in ISO/IEC 17025 and ISO 15189.

Forensic toxicology and clinical schemes

- **Drugs of Abuse in Hair (DAH)*:** human segmented hair for analysis of amfetamines & stimulants, benzodiazepines, cannabinoids, cocaine and metabolites, opiates
 - **Drugs of Abuse in Urine (DAU):** lyophilised urine for analysis of amfetamines & stimulants, cannabinoids, cocaine and metabolites, minor tranquillizers, non- opiate narcotics, opiates and may include other drugs of interest
 - **Drugs of Abuse in Oral Fluid (DOF):** liquid human oral fluid for analysis of amfetamines & stimulants, cannabinoids, cocaine and metabolites, minor tranquillizers, non- opiate narcotics, opiates and may include other drugs of interest
 - **QUARTZ:** forensic toxicology scheme containing whole blood samples spiked with drugs and metabolites for both identification and quantification (including ethanol). The Alcohol
- Technical Defence (ATD)* case scenario enables practitioners to demonstrate on-going competency in performing back-calculations.
- **Toxicology (TOX):** samples for analysis of single analytes or combinations of ethanol, paracetamol, salicylate, carboxyhaemoglobin, toxic alcohols, GHB and other named drug samples.
 - **Therapeutic Drug Monitoring (TDM):** lyophilised material (serum/urine) containing therapeutic drug and metabolite combinations at a range of concentrations. Drugs types include anti-epileptic, psychoactive, cardiac, treatment of substance disorders, smoking related drugs, and antibiotics.
 - **ASI-Immunosuppressants*:** samples for analysis of ciclosporin, tacrolimus, sirolimus, everolimus and mycophenolate.

**currently not included in our scope of accreditation*

Reference materials for forensic and clinical toxicology

LGC Standards is a single source of reference materials and services for measurement and quality control in forensic and clinical laboratories. This has culminated in a unique offering which, for the first time brings together a comprehensive range of relevant drugs, metabolites, internal standards, matrix materials and proficiency testing schemes under a single umbrella.

Our extensive range includes:

- traditional drugs of abuse and metabolites, alcohols and new psychoactive substances
- rare and difficult to source drugs and metabolites
- stable isotopic labeled internal standards (SILIS)
- premade solutions for easy dilution and laboratory use
- powders in a variety of pack sizes
- independent sources of reference materials for calibration and control
- blank, incurred and spiked CE marked matrix materials (blood, serum, urine, hair)
- steroids/sports drugs
- therapeutic drug monitoring materials
- trace elements
- proficiency testing schemes

We also have a highly experienced team of technical experts in many countries to support your daily work with reference materials.



High purity solvents, acids and mobile phase additives

High performance liquid chromatography (HPLC) demands high quality solvents to allow reproducible separations. The basic requirements include a high UV-transmission factor, low particle levels, slight acidity and alkalinity coupled with low levels of water and other non-volatile components.

LGC Standards Optigrade® solvents combine:

- the highest specification for UV (190-350 nm)
- low gradient shift
- minimal peak impurities
- lowest ionic background for MS detection
- within and between batch consistency

Ultra HPLC (UHPLC) can provide significant increases in resolution, speed and sensitivity, compared to conventional HPLC. To ensure these benefits are realised, solvents of superior quality are needed for optimum performance of the instrument and columns.

Additionally, our Optigrade® solvents for UHPLC and MS:

- are micro filtered at 0.1 µm
- have a maximum residue content of 1ppm following evaporation
- are packed under inert gas for improved shelf life
- are provided with SDS and certificate of analysis

Also available are selected additives for mobile phase preparation, and several blends of water and acetonitrile with formic acid, acetic acid and trifluoroacetic acid.



For further information, or if you require substances or materials not currently listed please contact one of our local sales offices:

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