



LGC - Science for a safer world

proficiency testing • reference materials

regulatory testing • genomic solutions • bioanalysis • measurement accuracy • forensic testing



www.lgcgroup.com

Science for a safer world

Brazil • Bulgaria • China • Czech Republic • Finland • France • Germany • Hungary • India • Ireland • Italy • Netherlands
Poland • Romania • Russia • South Africa • Spain • Sweden • Turkey • United Kingdom • USA

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or any retrieval system, without the written permission of the copyright holder. © LGC Limited, 2014. All rights reserved. 3574/CB/0514

We are LGC

We own the biggest genotyping lab in the world and the biggest bioanalytical lab in Europe, giving us critical mass to support our customers' requirements.

We have 4 sites accredited to ISO Guide 34 for the production of reference materials. These sites, in the UK, Europe and the US, produce high quality materials to support our customers' quality control in the laboratory.

We support the development of drought-resistant crops with our genomics capabilities.

We offer the most comprehensive range of reference materials available - in total over 100,000 products for analytical laboratories to choose from, ensuring the safety of many everyday and essential products.

We are the world's largest private provider of forensic services, helping the criminal justice system through expert analysis of biological, chemical and physical samples.

Our Government Chemist function advises policy makers to ensure there is enforceable and effective regulation to protect consumers.

We host two laboratory groups for the MHRA. One tests medicinal samples, taken from the market, to ensure their quality, safety and, where appropriate, compliance with their licensing requirements. The other is the British Pharmacopoeia Commission Laboratory, responsible for work in support of the publication of the British Pharmacopoeia and maintenance of the British Pharmacopoeia Chemical Reference Standards.

We operate over 40 proficiency testing schemes; over 9,000 laboratories from over 150 countries are able to monitor the quality of measurements in their laboratories by taking part.

We played a key part in the BSE eradication programme, testing over 3.6 million cattle in the UK between 2001 and 2013.

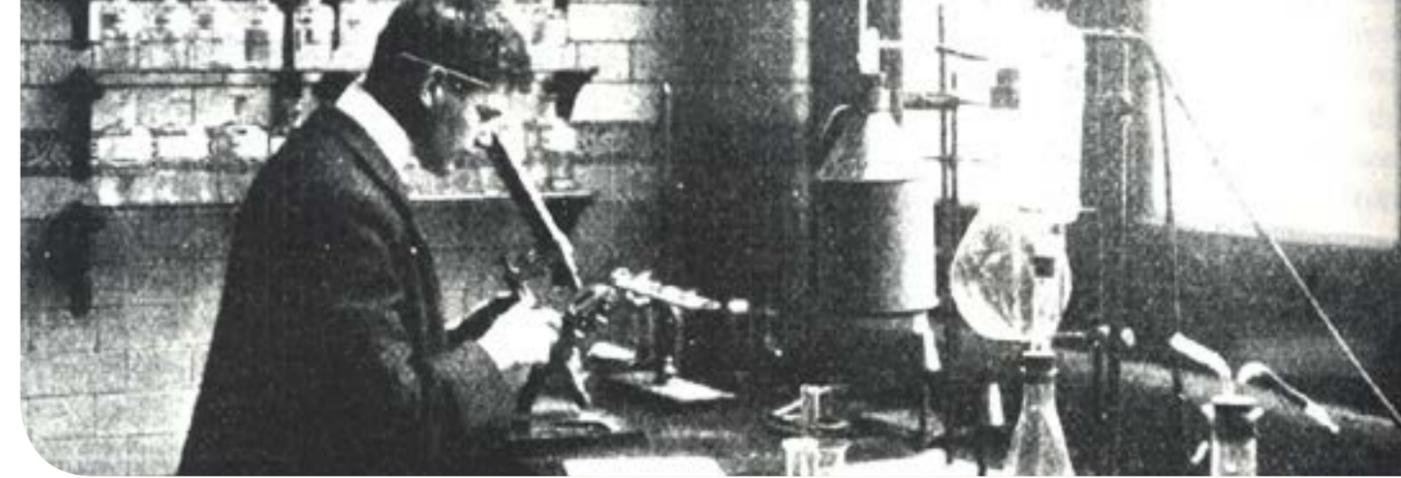
We are the designated UK National Measurement Institute for chemical and bioanalytical measurement, offering unparalleled expertise on matters relating to standards, regulation and global measurement challenges.

We test over 6,000 products and supplements each year, ensuring nutrients for athletes are safe.

Our measurement accuracy is such that we can identify banned substances in a ratio of one teaspoonful in an Olympic-sized swimming pool, helping us support safer and cleaner sport.

We have over 15 years' experience in delivering analytical quality training programmes, helping organisations work more safely, more efficiently and gain valuable accreditations.

We are the first company in the life sciences industry to have our apprenticeship scheme accredited by the Royal Society of Chemistry.



Our history

From 1842...

LGC dates from 1842 when the Laboratory of the Board of Excise was founded in the City of London to regulate the adulteration of tobacco, which was prohibited under the 1842 Pure Tobacco Act.

Work to protect government revenue continued to be the Board's main occupation until 1875 when the laboratory was appointed 'referee analyst' under the new Sale of Food and Drugs Act. This was a landmark in legislation as it was specifically designed to protect the industry and the consumer rather than the revenue by ensuring, for example, that milk had not been watered down.

... to the 21st century

LGC was founded in 1996, with the privatisation of the Laboratory of the Government Chemist. Today, LGC is owned by management and employees and funds-managed by the investment group Bridgepoint.

To this day, LGC hosts the unique function of the Government Chemist, providing expert opinion based on independent chemical and bioanalytical measurement to help avoid or resolve disputes pertaining to food, agriculture, health and pharmaceuticals. We advise the government and the wider community, on matters relating to analytical science.

Over the years, LGC has grown its research and analytical capabilities across the world, becoming an international leader in measurement and testing solutions to the life sciences market.





LGC - a safer world in a variety of markets

We operate across a wide range of markets which underpin the safety, health and security of the public

Our employees

Our employees set us apart from our competition. Their in-depth knowledge and expertise across a breadth of scientific areas enable our business to provide high calibre solutions for our customers.

We encourage our employees to set the bar high and challenge them to look continuously for ways to exceed our customers' expectations. It is through their infectious energy to do their best every day that we constantly challenge today's science to create tomorrow's innovations. Whether a scientist or not, everyone at LGC is passionate about our science and its impact on our world. The diversity of skills, knowledge and behaviours, as well as our international pool of talents, allow us to have a greater understanding of our markets and respond quickly to our customers' requirements.

We believe that everyone at LGC has a voice and welcome regular feedback from our employees. Open and transparent communication is the cornerstone of aligning our employees to the future direction of LGC.

Recognising our employees is very important and we regularly endorse commitment, loyalty and exceptional performance. Similarly, growing and developing their capabilities and supporting them to reach their full potential is one of our key priorities.

Their commitment and dedication to continuously improving what we do and how we do it is embedded in our workplace values: Passion, Curiosity, Integrity, Brilliance and Respect, ensuring our science helps to make a safer world.



Pharmaceuticals

Today's challenges in drug development put increasing emphasis on generating safe and effective information quickly and reliably.

We have one of the world's most extensive bioanalytical facilities and a team of scientists dedicated to providing high quality data on time to help customers make critical decisions on the safety and efficacy of their molecule.

Supported by the latest technologies for bioanalytical, chemical and physical property characterisation, our team offers customers in-depth expertise spanning all types of medicines.

Our state-of-the-art, ISO Guide 34 accredited facility produces 750 new impurity reference

materials per year. These are primarily used to ensure the quality and safety of the final product.

We offer:

- Contract analytical research and testing services
- Quality control solutions and reference materials, including over 3,000 pharmaceutical impurities
- Genetic analysis products and services such as genotyping for pharmacogenetics.

Our products and services support all stages of the drug development pipeline from discovery to commercial manufacture. We support the development of all medicines, from traditional small molecules to therapeutic proteins, antibodies and other biopharmaceuticals.



Our people

Pharmaceuticals

Food

The safety and sustainability of the food we eat is paramount. We have a long history of using scientific expertise to support customers throughout the food chain. This enables informed decision making at every step, from research and development to quality and safety.

We work with producers, manufacturers, retailers and regulators, to provide:

- Analytical research products and services
- Advice and guidance
- Quality control solutions, including an extensive range of reference materials and proficiency testing schemes.

Our products and services promote innovation, safeguard quality and help monitor authenticity throughout all stages of the food supply chain.



We have an extensive range of reference materials to support food analysis. These range from our own produced materials to detect pesticide residues, to extensive ranges of food and food matrix materials from the world's leading institutes and commercial producers.

Our food and beverage proficiency testing schemes span a huge variety of samples, ranging from wine, dairy, meat, chocolate to beer and sugar. Laboratories who participate in our schemes are able to monitor and improve the quality of their measurements.

We are the trusted service partner for analytical laboratories across the world. We share our customers' passion and enthusiasm to maximise production of safe food.

Agricultural biotechnology

The global population increases by 80 million each year. At the same time, the area of arable land per person continues to shrink. Modern agriculture is facing its greatest challenge – to feed the world's population. More emphasis is being placed right at the start of the food production process, where science plays a greater part than ever to ensure higher yields and quality of raw materials.

We support most major plant breeders by accelerating their marker-assisted selection process, thus getting traits to the market faster and helping them to feed the world.

We work with scientists and producers to provide:

- Analytical research and testing services
- Genomics reagents and instrumentation products and services for genotyping, sequencing, PCR and DNA extraction
- Quality control solutions and reference materials.

We are a key partner to our customers' research and development projects, from the early stages of research (marker-assisted selection and breeding programmes) to final seed or fertiliser testing.



We have been a trusted partner to governments and regulatory agencies, providing novel, customised solutions for highly complex chemical and bioanalytical measurement challenges for over 160 years.

Government

Our portfolio of services has been steadily increasing for over 20 years and now helps improve public health, consumer protection, health research and provision of evidence for policy formulation and evaluation.

LGC statutory roles

We are unique in hosting a number of national roles for UK Government including the Government Chemist function. We are also the designated National Measurement Institute (NMI) for chemical and bioanalytical measurement and a National Reference Laboratory in a range of key areas, including genetically modified organisms and feed additives.

National Measurement Institute

As the designated NMI for chemical and bioanalytical measurement, LGC performs the research at the forefront of measurement science that produces the definitive methodologies plus the high-quality reference standards to meet the measurement needs of government and industry, thereby supporting the scientific innovation that helps improve our quality of life. Our NMI role defines our credibility at the forefront of science and innovation and allows us to offer unparalleled

expertise on matters relating to policy, regulation and global measurement challenges.

Government Chemist

In our Government Chemist function, our team of internationally-recognised science leaders employ the latest measurement technologies to resolve potentially costly disputes between regulators and businesses, thereby protecting the public and enabling fair and proper regulation in sectors where accurate, definitive chemical and biochemical measurement is critical.

Testing and management services

Our complete portfolio of government services extends far beyond our statutory role to include a very broad range of established, high-regarded testing and management services, including grant management, bespoke test development, contract research, routine testing and government-owned testing.



Security

We provide a broad range of chemical, bioanalytical and forensic services to the public sector.

We are the world's largest private forensic services provider, serving police forces across England and Wales as well as national law enforcement agencies.

We developed our own ParaDNA® technology, enabling police forces to identify whether samples collected at a crime scene contain human DNA, within 75 minutes. Quickly identifying and targeting the right samples allows DNA screening results to complement submissions policies and could save significant time and cost in the investigative process.

We support forensic laboratories undertaking drugs of abuse and toxicological analysis by providing a wide range of reference materials. We are regularly first to offer standards for new psychoactive substances, enabling law enforcement to keep on top of market trends.



Our services to the security market:

- | | |
|------------------|----------------------|
| DNA analysis | Digital crime |
| Drugs of abuse | Questioned documents |
| Toxicology | Biology |
| Sexual offences | Coroner's toxicology |
| Firearms | Cold case review |
| Marks and traces | |



Sports

We are one of the world's leading independent drug surveillance laboratories, providing unrivalled and internationally-trusted expertise in all aspects of doping control for sports.



We provide an extensive range of reference materials to support laboratories undertaking drug surveillance.



We have over 50 years' experience working with professionals in animal sports, whether in horseracing and equestrian sports or greyhound racing. We provide animal feed testing and sample management; we also offer veterinary services, giving vets and purchasers confidence that bloodstock and pre-purchase examinations are accurate. We are a long-term collaborator with the Veterinary Defence Service.

In addition to providing ISO 17025 accredited supplement testing services, we work with athletes to deliver leading-edge research using bioanalytical and clinical techniques to analyse biomarkers of fitness and nutrition.



Academia and hospital research

LGC supports researchers and clinicians across the globe with a wide variety of products and services, including DNA extraction, sequencing and genotyping for some of the smallest labs as well as some of the largest and most prestigious cohort studies in the world.

We assist European researchers in the development of new medicine to treat diseases such as various forms of cancer with the distribution of ATCC cell lines in Europe.

Other sectors

We work in many other industries, including industrial and clinical sectors, where our analytical services, training courses, regulatory advice, reference materials and proficiency testing schemes support our customers' requirements.





Our quality

Quality is at the heart of everything we do. LGC's comprehensive quality system supports and enhances business excellence and ensures we provide our customers with the level of service and the quality of products they expect.

Confirmed by third-party independent assessment, LGC's customers can rely on the quality of service provided through:

- Certification to ISO 9001 for business processes
- Accreditation to ISO 17025 for laboratory testing and calibration services, and ILAC G19 for forensic activities
- Compliance with current Good Manufacturing Practice for pharmaceutical studies
- Accreditation to ISO 17043 for the operation and management of proficiency testing schemes
- Compliance with Good Laboratory Practice (GLP), Good Clinical Practice (GCP) and current Good Manufacturing Practice (cGMP) for pharmaceutical studies
- An unparalleled breadth of ISO Guide 34 accredited reference material production facilities, at four sites across the UK, the US and Germany.

Our corporate social responsibility - a safer world in all that we do

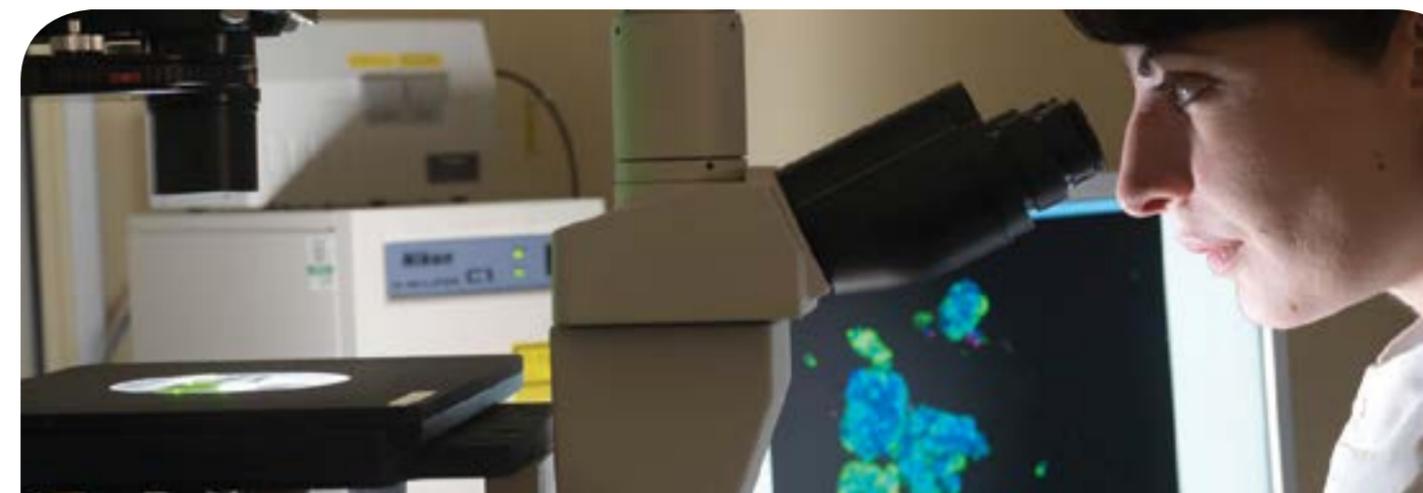
We strongly believe in sustainable development that meets today's needs, without compromising the ability of future generations to meet their own needs. We acknowledge the importance of delivering a reliable and continuous service to our customers, which will contribute to a better quality of life and a safe and protected environment.

A safer world for future generations will be achieved with the continuous development of science, improvement to the environment and the involvement of our stakeholders.

Our science: We have worked towards a safer world since 1842. To this day, we innovate and apply science across a variety of markets to ensure the safety and integrity of products. For example, supporting the safe development and use of pharmaceutical products; working with customers for the development of drought-resistant crops; supporting research in the medical field; helping food producers with the integrity of the food we buy; supporting police forces in identifying suspects.

Our environment: We help our customers respect the environment and reduce waste by providing accurate measurement and good quality control. It is, however, equally important that our own activities do not have a negative impact on the environment. We operate a variety of recycling schemes for office and laboratory waste. We hold ISO 14001 certification for our Environmental Management System.

Our stakeholders: Every year we select one charity which we support across the Group through a number of fund-raising activities. We also contribute to our local communities through open days to promote science awareness, encouraging children of all ages to see our science in action.



Investment

The world evolves at a faster pace than ever and LGC's agility allows us to remain at the forefront of this evolution. Our investments focus on our existing businesses as well as new technology and new ventures, with the ultimate objective being to support our customers' requirements.

Investment in our existing business: Many of the markets we work in and the customers we work with, require constant adaptation and re-invention of business processes and systems. With seven police forces, we recently established a purpose-designed managed service centre in Wakefield. In this brand new centre, we bring our expertise closer to the customer, enabling faster turnaround and increased efficiency.

Investment in new technology: Whether investing in new equipment to adapt our services or developing new equipment for our customers, new technology is a significant part of our investment portfolio. Our innovation team concentrates on identifying and developing tomorrow's innovations, based on our understanding of our customers' challenges.

For example, we developed the ParaDNA® technology, which indicates whether samples collected at a crime scene contain human DNA in only 75 minutes. It enables police forces to gain vital information in a minimum amount of time. Our genomics division has developed its own products and software, which we use for our own requirements as well as to sell to our customers.

Investment in new ventures: LGC has a history of growing organically and by acquisition. Recent acquisitions allow us to offer laboratory services to pharmaceutical customers across all stages of their research and development cycle. We have also signed agreements in key business areas enabling us to share our expertise effectively in new markets.

