



## LGC pharmaceutical outsourcing services

Our extensive experience in reference materials production, synthetic & analytical chemistry plus global supply-chain capabilities mean we can offer a complete menu of bespoke services to meet all your pharmaceutical outsourcing needs. From custom impurity or API reference material production through to provision of your working standards, LGC can help.



Accredited quality



Expert team



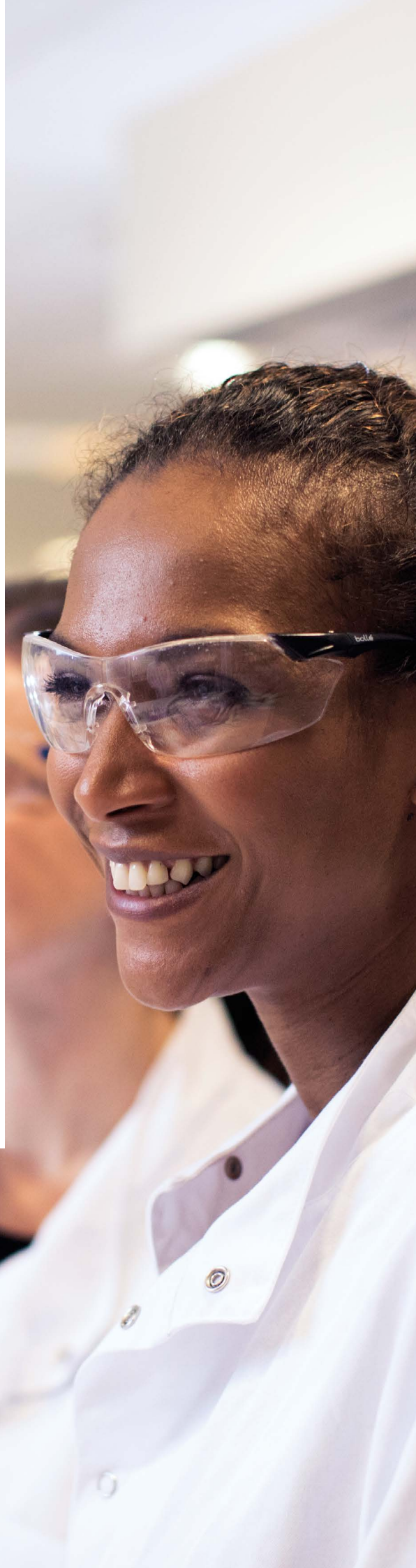
Manufacturing & outsourcing experience



Local presence & strong supply chain

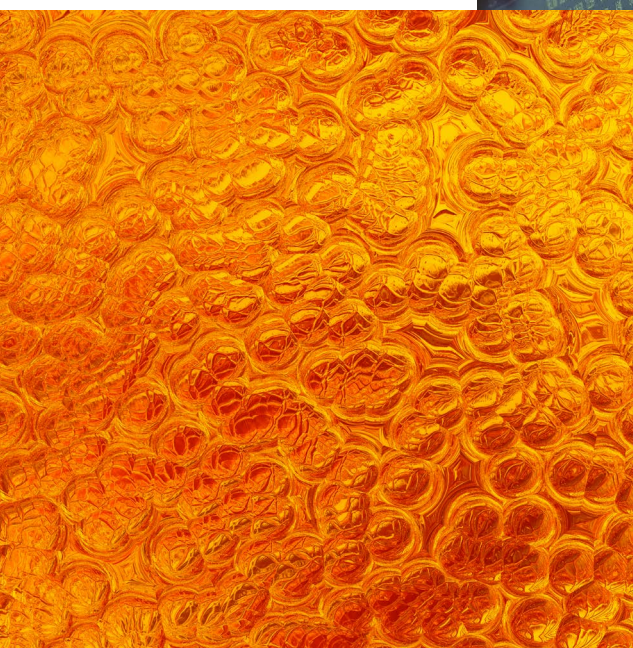


Professional packaging & labelling



## Why do businesses trust us to be their pharmaceutical outsourcing partner?

- Internationally recognised & aligned quality level, with reference standard production up to ISO 17034
- Highly qualified and skilled synthesis team ready to meet your challenges: multistep organic synthesis, isotopic labelled compounds, chiral compounds, mg to multigram, rare substances, purification
- Vast experience in reference material manufacture and in outsourcing provision, with easily scalable processes
- Flexible and dynamic – able to adjust quickly to changing customer needs and build suitable lean processes to meet customer requirements
- Supply-chain excellence and long experience distributing sensitive materials. Local presence in 20 countries and five continents







## Sourcing & synthesis

- Highly qualified and experienced staff
- Multistep organic synthesis, isotopic labelled compounds, chiral compounds, rare substances
- Supply of full set of substances for API families, full characterisation of resulting APIs and impurities
- High throughput purification, separations on daily routine under normal and reversed phase conditions
- Global network of suppliers for raw materials and APIs
- Dedicated resources for sourcing products, including controlled substances



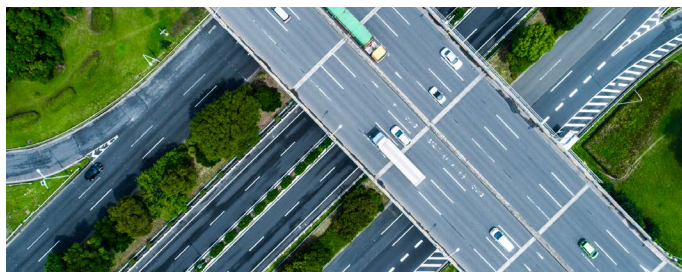
## Quality control analytical services

- Full characterisation by accredited methods
- Identity:  $^1\text{H}$ -NMR and  $^{13}\text{C}$ -NMR, IR-Spectroscopy, MS, GC/MS, LCMS, High Resolution MS, melting point, elemental analysis
- Assay: q-NMR, HPLC, GC/MS, titration, 100% mass balance, C-titration by elemental analysis (CHN)
- Purity: water determination by Karl Fischer titration, loss on drying (LOD), residual solvents by q-NMR, organic impurities by HPLC, GC/MS, LCMS, DSC, inorganic impurities by sulfated ash, elemental analysis (CHN)



## Bottling, labelling & storage

- Professional bottling & labelling: manual dispensing, semi-automatic dispensing, ampoulation, pharmaceutical-grade vials, freeze-drying, controlled-atmosphere packaging, automated capping
- Labelling according to GHS: barcoding capabilities, potential to use client's labels
- Stability and homogeneity testing
- Controlled storage conditions in purpose-built warehousing: storage at RT, 5°C, -18°C, -78°C, separate space for controlled substances, restricted access, dedicated client spaces, back-up generator, monitoring system
- Ongoing quality control testing



## Distribution

- Products centrally classified in ERP system and assessed for controls: legislation checked for 20+ countries plus UN, EU, CWC and Montreal Protocol
- Compliance specialists in the UK, USA, Germany, China and Poland
- Customs tariff codes generated
- Transportation hazards assessed for land, sea and air
- Safety data sheets generated in-house, fully GHS compliant: capacity to generate 1600 per month, available in 11 languages



**Get in touch today to discover how we can help support your pharmaceutical quality.**

**LGC. Science for a safer world.**

Mikromol™ trc

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