

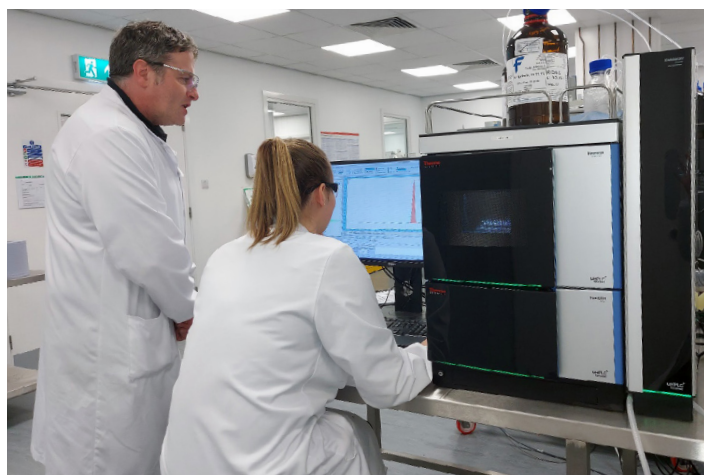
# Accelerating science through innovation

## Broughton Nicotine Services

Broughton Nicotine Services is a privately-owned global Contract Research Organization (CRO) serving clients in the reduced risk nicotine delivery industry. They offer fully integrated end-to-end services to deliver regulatory projects for US Premarket Tobacco Product Applications (PMTA), EU Medicinal Product Applications (MAA) and EU Tobacco Product Directive (TPD) notifications.

“Our business culture is to continuously invest in new science and innovations. By partnering with Broughton Nicotine Services, our clients will know they have access to some of the most experienced electronic nicotine delivery system (ENDS) project managers and scientific professionals in the world, combined with regulatory-compliant CRO laboratory facilities. We are committed to helping our clients develop safer nicotine delivery products.”

– Chris Allen, Chief Scientific Officer



With the constantly evolving global regulatory landscape, clients are attracted to Broughton Nicotine Services due to their ability to keep up to date with regulatory requirements, manage all aspects of project delivery, and apply an agile approach to ensure project deadlines are met.

Broughton offers a wide array of services into the nicotine delivery industry including;

- Full service regulatory project delivery
- Scientific and regulatory consultancy
- Analytical testing including Harmful and Potentially Harmful Constituent (HPHC) testing
- Stability studies and storage
- Toxicology services
- Extractables and leachables
- Product stewardship services



“With Chromeleon CDS all our applications are supported by a single, compliant software package. Easy to use in routine operation and designed to support efficiency for high throughput laboratory.”

– Yvonne Macleod,  
Laboratory Manager

### Compliant services enabled by advanced technologies

In order to supply the best services possible, Broughton utilizes a number of state-of-the-art technologies able to meet the analytical needs of their clients. Ultra-high-performance liquid chromatography (UHPLC) technology is employed at the front end to a myriad of detection techniques. Thermo Scientific™ Ultimate 3000™ HPLC systems have historically provided a stable platform for their liquid separations. Broughton are now building on their UHPLC offerings with multiple Thermo Scientific™ Vanquish™ UHPLC platforms, providing robust and reliable separations, and showing excellent performance with very little maintenance required between preventive maintenance visits.

A range of Thermo Scientific mass spectrometers (MS) are utilized providing flexibility for a variety of analyses. As an example, the Thermo Scientific™ TSQ Altis™ triple quadrupole mass spectrometer system is used for analyses needing detection of ultra-trace levels, leveraging its high sensitivity.

To ensure a comprehensive set of analytical tools are available, Broughton also employs a number of gas chromatography (GC) instruments coupled to flame ionization detection (FID), single quadrupole, and triple quadrupole mass spectrometers (MS). Furthermore, they utilize a variety of sample introduction techniques including head space, split/splitless (SSL), and programmed temperature vaporizer (PVT) inlets. HPLC-UV detection is also utilized in some main component assays. The ability to control both Thermo Scientific and other vendors instruments under one software ensures simple and compliant operation of all systems within a single platform.

Thermo Scientific™ Vanquish™ Flex™ UHPLC system coupled with the TSQ Altis triple quadrupole mass spectrometer





“The sensitivity and versatility of the Thermo Scientific instruments have enabled us to quickly and positively identify the offending contaminants and eradicate many of them at source through better practices in the laboratories.”

– Roland Cox,  
Equipment Maintenance Manager

### Flexible laboratory software for multi vendor instrumentation

From Thermo Scientific HPLC, LC-MS, GC-MS, and Ion Chromatography systems to other vendors' HPLCs, Broughton Nicotine Services use Thermo Scientific™ Chromeleon™ 7 Chromatography Data System (CDS) software to seamlessly acquire and process all resulting data under compliant conditions. Chromeleon CDS is the only CDS providing full control of chromatography instrumentation from multiple vendors, as well as support for multiple workflows such as quantitative mass spectrometry including high resolution accurate mass (HRAM) MS. Chromeleon software offers all the mentioned versatility and more whilst using the same intuitive user interface and offering the highest levels of regulatory compliance. Features and benefits of Chromeleon CDS include;

- Full control of liquid chromatography (LC), ion-chromatography (IC) and gas chromatography (GC) instruments—comprehensive, reliable control for over 540 different instrument modules from over 21 manufacturers: offering control of the whole lab using a single software.

- Integrated control of mass spectrometry instruments—streamlining chromatographic and MS quantitation workflows.
- Advanced data integrity and compliance features—from instrument control, electronic signatures and version controlled data capture to ensure absolute regulatory compliance and data integrity adherence.
- Flexible reporting—fully customizable spreadsheet-based Report Designer reduces errors using a familiar interface simplifying the creation of user-defined report templates and eliminating data export to external spreadsheets.
- A library of tested methods can be accessed and downloaded straight to Chromeleon CDS. The Thermo Scientific™ AppsLab Library of Analytical Applications is a fully searchable online, analytical method repository with detailed application information, chromatograms and related compound information.



#### AppsLab Library

A comprehensive repository for application methods, data sets, and application notes



#### Chromeleon CDS software

Offers enterprise instrument control, data processing, and ability to address regulatory requirements



“We are committed to our clients and understand that to fulfill our mission we must deliver a unique service. To do this we recognize the importance of listening to our clients and anticipating their future needs.”

– Kerry Child,  
Laboratory Manager

## Broughton Nicotine Services

Working within regulated industries is an exciting and challenging market to build enduring partnerships; we believe that by working together, we can discover, develop, and deliver the best value for our customers.

Our Team Commitment—To ensure that our Vision and Mission are adhered to, we must make firm commitments to Our Clients, Our People and Our Community.

We are bound by a common vision and team culture to delight our clients. We have an undeterred competitive spirit that focuses on our clients success. Our commitment is absolute, we will not settle for less. We combine a culture of quality with smart thinking and hard work to deliver better, faster and more efficient analytical solutions.

Single platform instrument control, along with highly robust systems from Thermo Fisher Scientific enable us to achieve these commitments to our clients with increased confidence of the speed and quality of our committed deliverables.

Find out more at [thermofisher.com/broughton](https://thermofisher.com/broughton)

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