

**TESTA Analytical Solutions**

Speciality Development  
Services

# TESTA Analytical **Solutions:** Speciality Development Services

In the field of Liquid Chromatography, a considerable proportion of established applications can be served by well-established technologies including several types of UV-Visible, Refractive Index and increasingly Mass Spectrometry detectors.

As such these technologies provide great tools for general purpose Liquid Chromatography systems. Consequently, most HPLC system suppliers focus on development of their version of these standard detectors. However, focusing on larger volume applications often makes it difficult for these suppliers to develop in-house specialist detectors for niche, emergent or challenging Liquid Chromatography applications.

A well trusted way of solving this conundrum is for Liquid Chromatography system suppliers to partner with third party experts capable of developing and supplying a targeted high-performance solution for lower volume applications served by specialty detectors.

A successful speciality chromatography detector development needs a partner who can understand the specific chromatographic needs of the target application and transform these needs into a high-quality tailored solution. Drawing upon decades of chromatographic expertise and knowledge, TESTA Analytical Solution has proven itself as a highly effective speciality Liquid Chromatography detector development and supply partner to a growing number of analytical and process instrumentation companies worldwide. Below we detail a typical design and development process.

## Assessment Phase

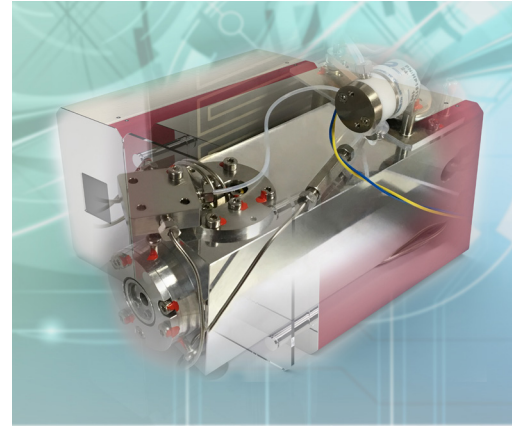


Any new product development project starts with assessing requirements and needs. This goes far beyond the pure technical development to fulfil the application. It also includes all aspects of a long-term partnership including discussion on expected volumes, target unit cost, response time requirements, training of support personnel and development of informative, detailed service documentation. In short, our approach is to supply a complete solution, not just a new detector system. During the assessment phase, we

collaborate closely with the client through all steps of the process to create a transparent and clear picture of the required development and the role TESTA Analytical will fulfil within the partnership.

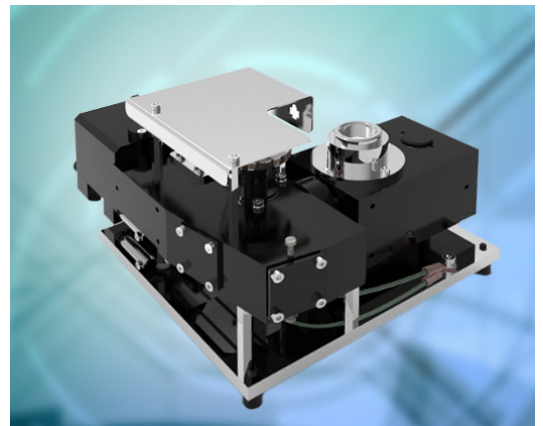
## Design Phase

Once the assessment phase is complete, our experienced engineering team evaluates possible technological solutions for the target application based on our current proprietary Liquid Chromatography detector portfolio. Adapting a current detector system, to provide an optimized solution for your application, will always be our first choice as it offers a lower cost and faster route to market solution. If this strategy is not able to deliver a suitable solution, then a plan is drawn-up to design a new Liquid Chromatography detector product able to provide an optimized solution for the target application. In both scenarios, feasibility of the proposed solution is carefully evaluated before a proposal is developed. At this stage of the development project we discuss the proposed technical solution with the client, desired modifications implemented following a transparent iterative process until a final technical solution is agreed to optimally fit the project needs. Under no circumstances will the TESTA Analytical team support a solution we do not believe to be appropriate for the given task and may lead to client disappointment later in the process.



## Prototyping Phase

With the design of the proposed Liquid Chromatography detector agreed, we start the prototyping development phase. This phase is often split into different tasks, aiming to evaluate each part of the new product for its fitness to fulfil specifications and functionality. We strongly believe that product quality, as one of the major objectives of a speciality detector development partnership, must be designed in from beginning. This includes creation of detailed quality management processes which underpin reliable production of a high-quality final product. All product development processes at TESTA Analytical are documented according to mutual understanding of good quality management, the documentation surpasses many standards required by international regulations. Rapid prototyping capabilities allow TESTA Analytical to deliver short turnaround times from the design phase to a final representative prototype of the product. The prototyping phase will also include gaining any required certification like CE marking or compliance to regulations like ROHS, REACH or laws on radiation safety.



## Product Release Phase

Once all tests on the prototypes are complete and all agreed changes completed the new device is fully tested again. At this point, the new speciality detector design is frozen. Freezing of the design, avoids untested development changes, and makes sure that the client obtains every time a chromatography detector with the same high quality and top performance over the whole lifetime of the product. This ensures that sales documentation, specifications, service documentation and personnel training, will always be appropriate for the given task and that no change in the process will be required to be made on-the-fly.

## Our Goal is Your Full Satisfaction

The aim of TESTA Analytical is to establish a successful partnership that provides a stable, target application solving product, not being part of a never-ending development project.

The above multi-phase process might sound complicated and time consuming. However, please be assured it is not. TESTA Analytical has well established, tested processes for each phase of a speciality detector development project. These well proven processes help reduce the time and therefore cost required for completion of a design and development project, thus offering our clients the clear advantage of being able to plan when to launch the new product.

## Why Choose TESTA Analytical?

You now know how we organize speciality chromatography detector design and development projects. However, you might ask 'Why is TESTA Analytical the most suitable partner for design and development of specialty Liquid Chromatography detectors.

Our suitability and success are based on our over three decades of experience of developing chromatography detectors for specific, often challenging tasks and applications.

Our growing portfolio of proprietary, high performance Liquid Chromatography detectors includes Differential Refractive Index (DRI), UV and Viscometer detectors plus real-time flow monitoring devices. Our speciality product development experience and expertise also extend to Light Scattering instrumentation and even to HPLC pumps and check valves specifically designed to operate with the most challenging solvents.

Our proven speciality detector project competence covers development of electronic hardware and firmware, optics, and mechanical engineering. In short, all the critical components of a new product are designed in house at TESTA Analytical.

This gives us full control on the supply chain and thus the quality of the final product. TESTA Analytical maintains and is committed to enhancing its extremely agile team of experienced and committed engineers and scientists. This combined with our independent development of new innovative detector technologies makes us the ideal speciality detector design and development partner for your next project.



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