sagentia

Module optimisation and development

for clinical diagnostics instrument

a **science group** company

A global diagnostics company wanted to develop their next instrument. They asked Sagentia to perform proof of concept studies and product development for some of the key modules within their instrument. The project allowed the client to meet tight deadlines and to improve the performance and repeatability of the instrument.

Challenge ¬

The client wanted to work with an external partner to enable them to bring their launch timeline forward and in particular they needed someone that could combine theoretical modelling, product design, prototyping and testing. They chose Sagentia due to our combined fundamental science, technology and product development capabilities

Approach ¬

The first stage of the project involved mathematical modelling and applied physics, optimising and redesigning the fluidics and magnetics in their instrument to enable them to improve the efficiency and reduce variability.

We validated our mathematical model through proof-of-principle and analytical testing and demonstrated that we had improved both the signal strength and co-efficient of variation. Through detailed understanding of the scientific principles influencing the system, we provided a sound basis for further design.

Working seamlessly with the client's project team, we then undertook detailed design and prototyping of two of the instrument's modules to enable the client to carry out systems integration and testing in their own labs. The project was conducted to ISO 13485 and rigorous documentation was developed, compatible with the client's quality management system. Following analytical testing by the client the system will move forward into prototypes for production.

Benefits ¬

By working with Sagentia, the client has met tight timelines and is now able to meet their target market launch for the system. The project has also resulted in improved system performance in terms of reliability, repeatability and reduced variability.

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