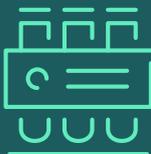


# Cartridge development

Paraytec



## Expertise and domain knowledge

- Microfluidics
- Low-cost consumable design
- Reagent integration
- Point of Care Diagnostics
- Human Factors and Human Centred Design



### Our client asked:

Paraytec has developed a rapid and highly sensitive COVID-19 test using its ParaySelect technology and expertise in particle detection. This technology is also being applied to bacteria classification in Sepsis management. Paraytec asked Sagentia Innovation to develop a consumable cartridge suitable for use at Point of Care enabling a 'sample-in results out' workflow.

### The project story:

The optical reader technology was mature, and the assay steps could be run at the laboratory bench by skilled laboratory staff. Paraytec needed a cartridge to integrate the assay into a low-cost cartridge that could be used in a decentralised setting.

We worked with the assay team to optimise the assay workflow to enable a cartridge with a small number of components and simple instrument interfaces. This enables a low-cost per test capable of detecting individual cells and viral particles.

### Contact us

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### Results: deliverables and outcomes

Our team developed:

- A low-cost cartridge design including separate dry and liquid reagents for storage stability
- Prototypes which were supplied to Paraytec for performance testing
- Concepts for optical and fluidic integration in the instrument

**“We chose Sagentia Innovation due to their specialist knowledge of the diagnostics market and associated technologies. They worked alongside Paraytec to develop a low-cost cartridge design, prototypes and concepts for optical and fluidic integration in the instrument.”**

Viv Hallam, Executive Director