



# Quanterix™

## THE SCIENCE OF PRECISION HEALTH

## TECHNOLOGY FAQ

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### WHAT IS SIMOA?

Quanterix' digital health solution, Simoa, is changing the way in which the biology of health and disease is studied by giving researchers the ability to closely examine critical biomarkers. It is powering quantitative measurements using first of its kind detection capabilities, providing much earlier disease detection, better prognoses and enhanced treatment methods to improve the quality of life and longevity of the population for generations to come. The technology is currently being used for applications in a majority of therapeutic areas, including oncology, neurology, cardiology, inflammation and infectious disease.

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### HOW DOES THE TECHNOLOGY WORK?

Simoa is a highly sensitive, automated solution that is revolutionizing new discoveries in the biology of health and disease. The Simoa science is based upon the isolation of individual immunocomplexes on paramagnetic beads using standard ELISA reagents. The main difference between Simoa and conventional immunoassays lies in the ability to trap single molecules in femtoliter-sized wells, allowing for a "digital" readout of each individual bead to determine if it is bound to the target analyte or not. The digital nature of the technique allows an average of 1000 times sensitivity increase over conventional assays with CVs less than 10 percent.

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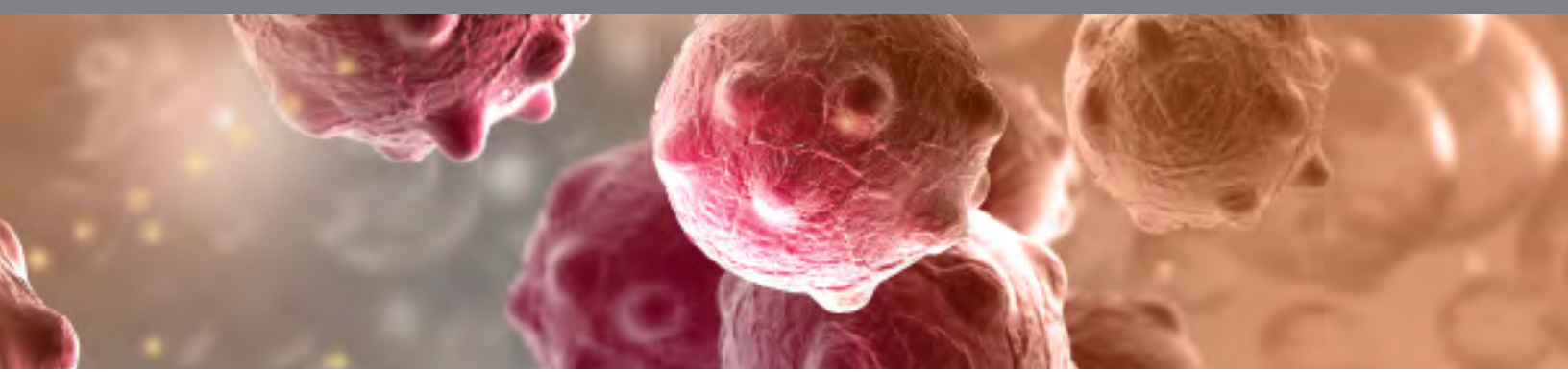
### HOW LONG DOES IT TAKE BEFORE USERS BEGIN TO SEE RESULTS?

Incubation time for analyte capture and detector binding is typically about 30 minutes, with five minutes for labeling by the streptavidin  $\beta$ -galactosidase (SBG) conjugate.

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### IS SIMOA AVAILABLE INTERNATIONALLY?

Yes. Quanterix works directly with field sales and support organizations located in North America, Europe and through distributors or sales agents in Japan and Asia-Pacific regions.



## DO I HAVE TO BUY A SIMOA INSTRUMENT IN ORDER TO USE THE TECHNOLOGY?

Researchers can utilize the unprecedented capabilities and offerings that Simoa provides without first having to make an investment in the technology through the Simoa Accelerator Lab. The lab is an innovation center for biomarker research, custom assay development and clinical sample testing. With nearly 300 completed projects and over 25,000 samples tested for researchers from over a dozen countries in Europe, the Middle East and Africa – to name a few – the state-of-the-art facility provides easy access to the revolutionary Simoa technology. Researchers, academics and private investigators can work side-by-side with Quanterix scientists to test specimens with existing Simoa assays, or develop and optimize new assays. They can also ship samples to Quanterix directly for quick evaluation by the company's team of scientists and utilize the growing network of CROs who also use the Simoa technology for sample testing.

## WHAT IS THE RECOMMENDED SAMPLE SIZE TO USE FOR BEST RESULTS?

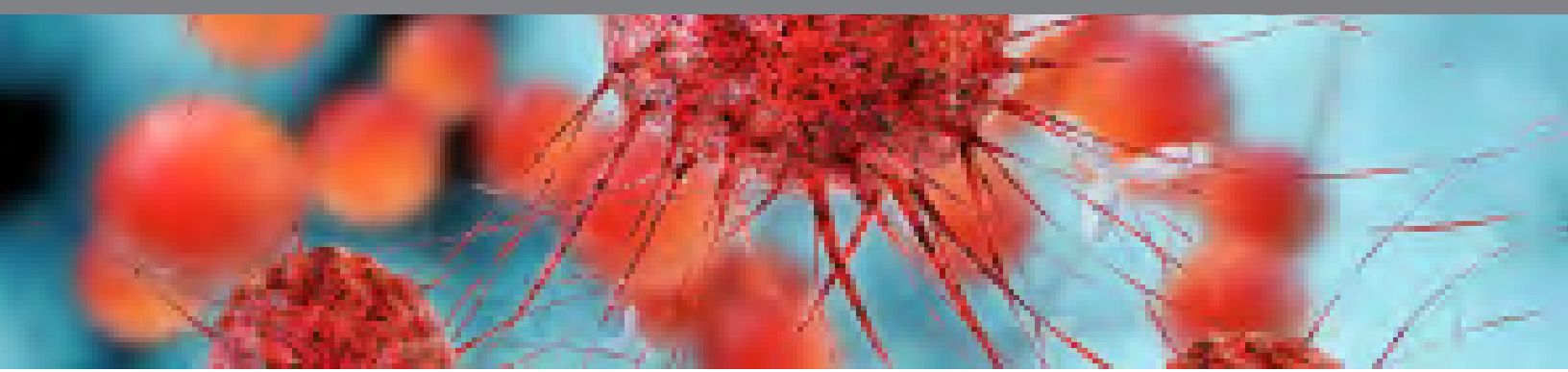
Simoa allows researchers to measure far smaller samples than ever before, as its exquisite sensitivity provides the flexibility to dilute samples and still accurately measure the marker of interest. The heart of the instrument is imaging capability that allows researchers to measure single molecules on multi-colored, microscopic beads that are isolated in microwells. These images allow researchers to view hundreds of thousands of microwells at micron-resolution in multiple wavelengths over multiple arrays. By doing so, it allows researchers to measure very low concentrations of different types of analyte molecules in several different samples.

## WHAT COMMERCIAL ASSAY KITS ARE AVAILABLE FOR USE?

Assay kits are available for a range of uses, in the following therapeutic categories: **oncology, neurology, cardiology, inflammation** and **infectious disease**.

## WHAT IS A HOME BREW KIT AND HOW DOES IT DIFFER FROM COMMERCIAL KITS?

Quanterix' unique homebrew capabilities provides the flexibility for researchers to develop custom Simoa assays. Using simple, well-established chemistry, researchers can explore significant unmet needs in life science research using digital biomarker analysis technology. Quanterix also provides the option of developing multiplex homebrew assays to minimize the sample volume required to measure multiple analytes in a single test, providing full kits that include the beads, reagents and training required to develop these custom homebrew assays.



## DOES SIMOA OFFER MULTIPLEXING OPTIONS?

Multiplex detection of biomarkers has emerged as a key component of clinical measurements in biomedicine, especially in the pharmacodynamics and pharmacokinetic characterizations of candidate drug therapies. Immunoassays with high analytical sensitivity offer the potential to provide quantitative information on the clinical state of all diseased and healthy subjects, and to directly quantify the biochemical impact of candidate therapies on the protein target.

**Simoa technology offers multiplexing options up to a 10-plex on a variety of analyte panels with sensitivity that's comparable to single-plex assays, while also maintaining excellent precisions across a broad dynamic range.** With these multiplex measurements, researchers have the ability to understand biochemically complex physiological states and responses to those states after administration of a drug, using a single sample. The limited availability, and often limited quantities of these clinical or pre-clinical samples, makes Simoa's multiplexing capabilities attractive from a sample utilization perspective as well as a cost perspective, as it also saves money spent on consumables.

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## WHAT KIND OF CONSUMABLES DOES THE SIMOA ANALYZER REQUIRE? WHAT ARE THOSE CONSUMABLES COMPRISED OF?

Simoa's consumable portfolio consists of disk kits and reagents:

Disk Kits include proprietary disks unique to the Simoa systems, cuvettes and disposable tips.

Reagents include all components required to run an enzyme based immunoassay (i.e., paramagnetic beads, detector reagent, enzyme reagent and enzyme substrate).