Agilent Technologies

Providing Complete Automation Solutions

AGILENT HELPS SCIENTISTS INCREASE THE SPEED AND ACCURACY OF THEIR RESEARCH

Processing samples by hand limits throughput. One operator can process 10, maybe 20, samples at the same time. While these samples are going through the process, the operator can start another batch of 10 to 20. The trick is remembering which sample is at which stage of the process. Not easy. Not with the clock ticking.

When laboratories need to process a lot of different samples and track them with absolute certainty, Agilent's automation solutions enable them to quickly scale up throughput—and the company's automation equipment performs pipetting steps with the highest precision, over and over again, without error.

Preparing samples by hand requires patience, precision, mindfulness, and mind-numbing repetition. Scientists would rather be writing grants, authoring publications, or reading new research, but they can't even *think* about that while preparing samples by hand. Agilent helps them free up valuable time by providing ready protocols for more reagents than any other vendor. The company also provides application support for developing, optimizing, or troubleshooting protocols.

Agilent can automate workflows in genomics, proteomics, metabolomics, cell biology, drug and antibody screening, and toxicology applications. The company's offerings cover everything from the simple but time-consuming tasks of liquid handling, labeling, centrifuging, and sealing to far more complex biological, biopharmaceutical, and chemical analysis methods—providing complete sample-to-analysis automation.

Next-generation sequencing

Major genomic research centers, biopharmaceutical companies, and clinical research laboratories have chosen Agilent solutions to automate sample preparation. Why? Because the right hardware and software, combined with proven protocols, can accelerate success.

That success depends on getting the same answer over and over. In a word, reproducibility. Whether processing four samples or four thousand, labs get consistent results with Agilent's automated sample-prep solutions. The results are not only comparable to the results achieved while preparing the sample manually but the throughput is much higher.

Agilent has helped more than 100 genomics labs all around the world save time, reduce human error, and quickly scale up production with versatile, flexible, easy-to-master automation. In fact, some of the world's most prestigious genomics centers use Agilent automation solutions to prepare samples for sequencing, including BGI, the Broad Institute, and the Wellcome Trust Sanger Institute.

Liquid handling

The advantages of automated liquid handling are clear: speed, accuracy, reliability, and the chance to walk away. That is, the chance for researchers to do more of what they really want to do, from analyzing results to authoring new papers.

Agilent offers unmatched flexibility with two products—the versatile Bravo Automated Liquid Handling Platform and the even more advanced Encore Multispan Liquid Handling System, the only liquid handler to provide three-axis pipetting. What's more, the two can be combined into a single, seamless, high-throughput solution.

Agilent liquid-handling software makes it easy to re-create manual processes that involve multiple tasks and instruments. In fact, the software's 3-D simulator allows researchers to see what will happen before they engage the instruments. This gives novice users the opportunity to test complex protocols before performing any actual testing, so they don't waste expensive reagents.

End-to-end automation

While many automation providers can help a lab automate its existing workflow, Agilent stands out as a single provider with experience in robotics, liquid handling, software, and training that enables researchers to achieve effective and efficient automation, whether they are in drug discovery and development or clinical research.

Agilent's expertise in automation is a natural extension of its decades-long experience in manufacturing many of the world's best chromatographs, spectrometers, microarrays, and other analytical instruments. As a result, Agilent brings to its solutions a deeper understanding of researchers' varied needs and takes a more comprehensive approach to automation.

The bottom line: Agilent is the one technology company that can provide complete automated sample-preparation solutions for customer workflows, including liquid-handling robots, analytical instruments, software, and reagents, along with comprehensive service, support, and training. All of that translates into a customer experience that is unrivaled in the industry.

To learn more, visit Agilent's automation website.