

# DISCOVERY BEGINS WITH MEASUREMENT



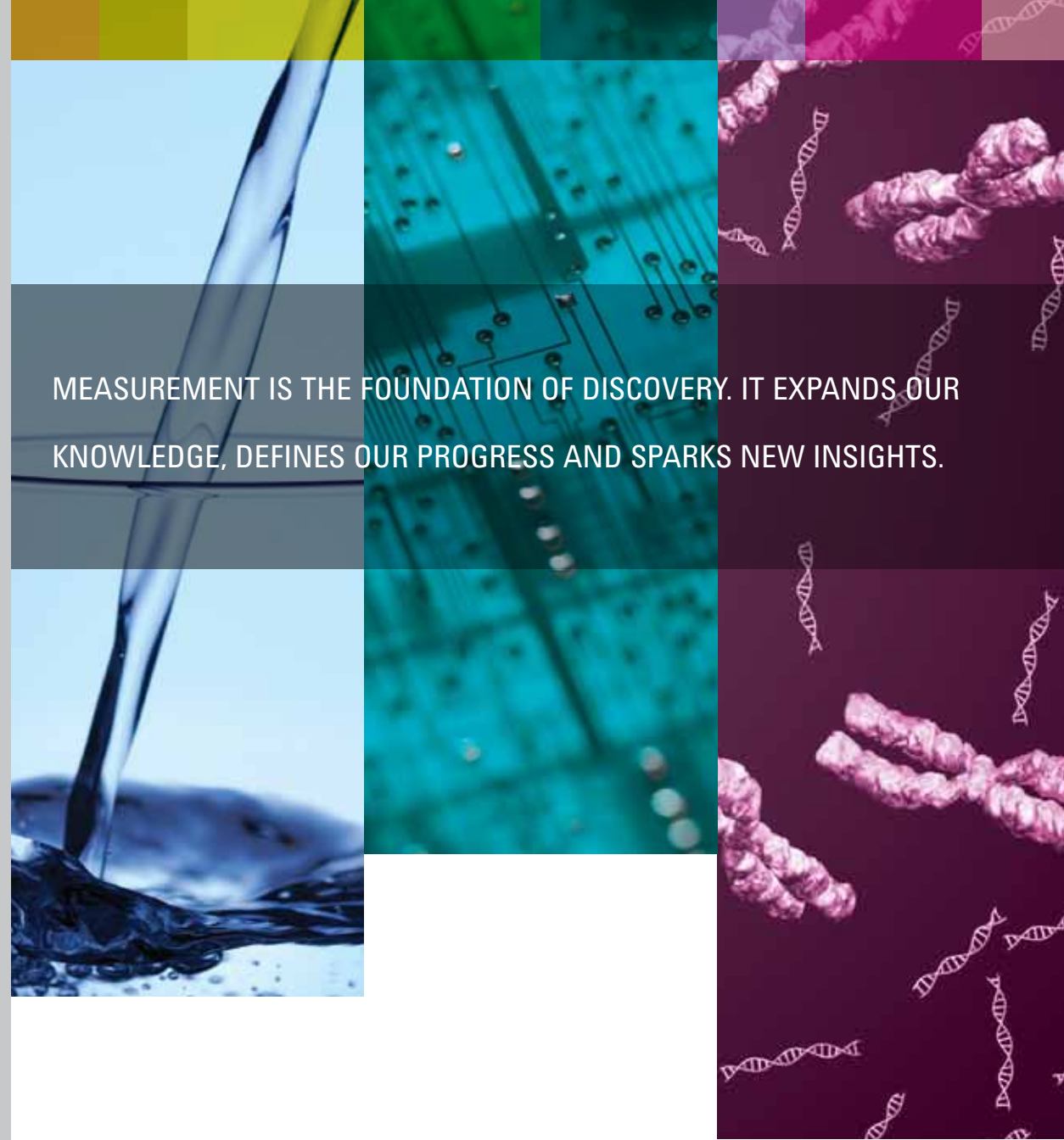
**Agilent Technologies**

# MEASURE AND KNOW

Measurement touches virtually every aspect of our daily lives: the quality of our air, water and food; the performance of our smartphones; and the effectiveness of our pharmaceuticals.

Few people think about the precise measurements needed to make our world a better place to live. But scientists and engineers do. And they use a vast array of instruments to achieve this high level of precision, down to nanometers, picoseconds and parts per trillion.

For more than 70 years, Agilent Technologies has been the world's premier measurement company. Our singular focus on measurement helps scientists and engineers address their toughest challenges with precision and confidence. With the help of our products and services, they are better able to deliver the breakthroughs that make a measurable difference in the world.



Measurement ensures the quality of the world around us—from our food and water, to our air and soil, to the fuel that powers our vehicles.

Measurement is the first step in innovation. It is behind the design and manufacture of every electronic and consumer product today.

Measurement is the key to unlocking the genetic causes of disease and developing the therapeutics to treat it.

MEASUREMENT IS THE FOUNDATION OF DISCOVERY. IT EXPANDS OUR KNOWLEDGE, DEFINES OUR PROGRESS AND SPARKS NEW INSIGHTS.

WE MAKE SCIENTIFIC INSTRUMENTS—INCLUDING OSCILLOSCOPES, CHROMATOGRAPHS, SPECTROMETERS, SIGNAL SOURCES, SIGNAL AND NETWORK ANALYZERS, ATOMIC FORCE MICROSCOPES AND NUCLEAR MAGNETIC RESONANCE SPECTROMETERS—AS WELL AS COMPLETE SOLUTIONS TO ADDRESS A WIDE RANGE OF MEASUREMENT CHALLENGES.

# MEASURE WITH AGILENT



Scientists use our products to test food safety. Investigators use them to examine crime-scene evidence. Researchers use them to study diseases and develop new drugs. And engineers use them to design and test smartphones, satellites, semiconductors and surveillance systems for homeland security.

We've been providing innovative measurement solutions since 1939, when Bill Hewlett and David Packard started their business in a now-famous garage in Palo Alto, California—a business devoted to accurate measurements, a business that became known as Agilent Technologies in 1999.

Today, we have the technology, talent and global reach to help our customers succeed. And we continue to top the industry in R&D investments so that Agilent scientists and engineers can keep pushing the frontiers of technology to measure the unmeasured.

It's a quest with infinite possibilities. Every wave of technology and innovation is ultimately succeeded by another, and Agilent's scientists and engineers are dedicated to recognizing and catching the next waves. With even more complex challenges ahead—in human health, the environment and

communications—we stand ready to help our customers discover what they need to know.

In more than 100 countries—wherever there's a need for measurement and testing—Agilent is at the forefront. No other company offers Agilent's breadth and depth of measurement tools and expertise across chemistry, biology and electronics.

Agilent's lab-on-a-chip technology provides a fast and reliable method for determining the authenticity of seafood.

Agilent enables agricultural scientists to quickly and accurately screen for more than 500 pesticides.

Agilent's gas chromatography solutions are used in crude oil, natural gas and refining... as well as in specialty chemicals and alternative fuels.

AGILENT HAS PROVIDED MEASUREMENT SOLUTIONS TO THE APPLIED CHEMICAL INDUSTRY SINCE 1965. WE REVOLUTIONIZED THE GAS CHROMATOGRAPHY MARKET WITH THE WORLD'S MOST POPULAR GC.

# CHEMICAL ANALYSIS

AGILENT PRODUCTS ADDRESS THE WORLD'S MEASUREMENT NEEDS IN FOOD SAFETY, AIR AND WATER QUALITY, AND ENERGY BY DETECTING TRACE LEVELS OF SUBSTANCES WITH HIGH LEVELS OF ACCURACY.

Our gas and liquid chromatographs separate mixtures into their individual components. Our mass spectrometry products provide critical information about sample components; identify unknown compounds; and determine, down to parts per trillion, the presence of those compounds in any sample. Our vacuum-technologies products enable research in high-energy physics and materials as well as provide critical technologies to mass spectrometry and electron microscopy suppliers.

From farm to fork, Agilent is there. Food producers and processors use our systems to test for pesticide residues in fruits and vegetables, biological toxins in nuts and grains, antibiotics and steroids in meat and dairy products, and melamine in milk.

Our instruments can tell one fish fillet from another—a real red snapper, for example, from a less expensive tilapia—thwarting food fraud through DNA testing.

Environmental labs around the world use our products and services to help provide safe, clean drinking water to millions of people and to measure pollutants and greenhouse gases in the air we breathe.

The energy industry uses our solutions as well—to discover and refine petroleum, to confirm the quality and composition of gasoline, and to develop renewable biofuels and electrochemical fuel cells.

Our drug-testing equipment is used to confirm that athletes compete fairly in the Olympics, the World Cup, the Tour de France and other major sporting events.



## FOCUS AREAS

ENERGY AND FUELS

ENVIRONMENT

FOOD SAFETY

FORENSICS AND DRUG TESTING

MATERIALS

Agilent offers products across the entire pharmaceutical value chain, from basic research to drug manufacturing.

Our tools are used to research the genetic, proteomic and metabolomic causes of cancer, heart disease, autism and muscular dystrophy.

We can produce the longest high-quality nucleic acid (DNA/RNA) strands in the world on a glass microscope slide.

AGILENT HAS PROVIDED MEASUREMENT SOLUTIONS FOR THE LIFE SCIENCE INDUSTRY SINCE 1973. OUR INNOVATIONS ARE DRIVING NEW UNDERSTANDINGS OF LIVING SYSTEMS IN BIOTECHNOLOGY, GENOMICS, PROTEOMICS, AND CELLULAR AND SYSTEMS BIOLOGY.

# LIFE SCIENCES



RESEARCHERS USE AGILENT TOOLS TO UNCOVER THE POSSIBLE CAUSES OF CANCER, HEART DISEASE, AUTISM AND A MULTITUDE OF OTHER DISEASES—AND TO DEVELOP DRUGS THAT HELP TREAT THEM.

With our liquid and gas chromatographs, mass spectrometers, nuclear magnetic resonance spectrometers, X-ray crystallography instruments and microarrays, researchers characterize proteins and nucleic acids in search of disease markers and to develop breakthrough therapeutics.

With our target enrichment platform, scientists sequence only the genomic regions that interest them. And with our informatics tools, they can glean key insights from large population studies involving genomics, cellular processes and disease conditions.

Researchers use our robotics and liquid-handling products to automate a wide range of workflows, from compound management and high-throughput screening in early drug discovery to a variety of target ID and validation applications, including sample preparation for DNA sequencing, genotyping and protein biomarker analysis.

With our software and services, Agilent helps life-science labs optimize, automate and streamline procedures to increase speed-to-results and increase confidence in those results.

Pharmaceutical companies use our equipment to monitor therapeutics for quality and integrity. Throughout the pharmaceutical value chain—in basic research and disease discovery, in drug development and clinical trials, in manufacturing and quality control—you'll find Agilent solutions.

In fact, providing measurement solutions for biochemistry, the pharmaceutical industry, and the academic research community is the fastest-growing part of our business.

## FOCUS AREAS

ACADEMIA AND GOVERNMENT

BIOTECHNOLOGY

PHARMACEUTICAL MANUFACTURING AND QUALITY CONTROL

PHARMACEUTICAL RESEARCH AND DISCOVERY

Handset designers use Agilent test equipment to develop the latest in smartphone capabilities.

Our manufacturing test solutions deliver calibration and verification testing capabilities for original design manufacturers and contract manufacturers.

We provide test and development solutions for a variety of cable, satellite, terrestrial and mobile digital video standards.

AGILENT HAS PROVIDED SOLUTIONS FOR ELECTRONIC TEST AND MEASUREMENT SINCE 1939. WE PIONEERED THE MARKETS FOR MANY OF TODAY'S ELECTRONIC TEST INSTRUMENTS, ENABLING THE DIGITAL AND WIRELESS REVOLUTIONS NOW UNDER WAY.

# ELECTRONIC MEASUREMENT

SOPHISTICATED ELECTRONICS DRIVE OUR INTERCONNECTED WORLD. MORE OFTEN THAN NOT, THESE PRODUCTS AND SYSTEMS ARE DESIGNED, PROTOTYPED, TESTED AND MANUFACTURED USING AGILENT ELECTRONIC MEASUREMENT SOLUTIONS.

Our instruments help wireless equipment manufacturers improve the overall quality of the user experience. More than half of the cell phones made and sold each year are designed and tested with Agilent products.

In aerospace and defense, our products design and test state-of-the-art electronic systems, such as sophisticated avionics, radar, communication systems, satellite, surveillance and GPS.

Agilent products are used across the development lifecycle of computers and semiconductors, from parametric test of semiconductor wafers, to functional and production test of printed circuits boards, to the final test of computer systems to ensure proper performance. Designers of high-speed digital devices use our products to push performance limits of the latest electronics while ensuring conformance and interoperability with industry standards.

For the general-purpose electronics market, our instruments have far-reaching applications, from testing alternative sources of energy, to automotive electronics, to power management, to introducing future engineers and scientists in academia to fundamental electronic principles.

Electronic measurement is where we first established our reputation for quality and precision, a legacy we've built upon for more than 70 years. As electronics technologies evolve, Agilent stays one step ahead, anticipating our customers' test and measurement needs.



## FOCUS AREAS

AEROSPACE/DEFENSE

COMMUNICATIONS

INDUSTRIAL, COMPUTER, SEMICONDUCTOR

AGILENT IS ONE OF ONLY A FEW HIGH-TECH COMPANIES THAT MAINTAIN CENTRALIZED, INTERNAL RESEARCH LABORATORIES. WE CONDUCT RESEARCH THAT ANTICIPATES CUSTOMER NEEDS AND PRODUCES REAL BREAKTHROUGHS—THE KIND THAT POWER GROWTH.



## INVESTING IN COMMUNITIES

AT AGILENT, WE CONTRIBUTE TIME, EXPERTISE AND FUNDS TO IMPROVE LIVES AROUND THE WORLD.

More than 20 percent of Agilent employees volunteer regularly in their communities. For example, Agilent After School is a hands-on science program for children ages 9 to 13. Fully funded by Agilent and implemented by our employee volunteers worldwide, it reaches some 40,000 students annually. The Clean Air Challenge, a multi-disciplinary curriculum, helps educators in the United States, China and India teach young students about reducing air pollution.

We are also committed to ensuring that our own operations are environmentally responsible. That is why we are setting up solar power and rainwater-harvesting systems on our campuses, recycling waste generated by our facilities, and eliminating the use of hazardous substances in our products.

Volunteerism and civic engagement are ingrained in our culture. Over many years, we have developed the belief that connecting people is the richest part of discovery.

Each year Agilent Technologies, through our employees and company foundation, dedicates thousands of hours and donates millions of dollars to educational, environmental and human services organizations that enrich our communities.

We are champions of science education. We collaborate with schools and universities, offering our skills, expertise and time. Through our grants, we act as a catalyst to improve scientific inquiry and teaching so knowledge can multiply.

## INSTRUMENTAL TO THE FUTURE



Year after year, we invest more in research than most of our competitors do. The result: Innovations from Agilent Research Laboratories represent 10-fold, 100-fold, and even 1,000-fold improvements in performance and ease of use compared with previous solutions.

By collaborating with the leading researchers in academic and government labs, we produce solutions to the problems our customers will face next, helping them measure what could not be measured before.

Many of today's most challenging issues reside at the intersection of technical disciplines.

So, while most of our competitors focus on one area of technology—electronics or chemical analysis or life sciences—our expertise lies in all three. We are in the best position to find measurement techniques at these intersections.

Capitalizing on this unique position, Agilent uses its breadth of knowledge and culture of collaboration to identify and enable synergies across these diverse disciplines.

Agilent Research Laboratories provides the indispensable spark of insight.





**AGILENT OFFERS THE BROADEST RANGE OF MEASUREMENT SOLUTIONS IN THE INDUSTRY. FROM DETECTING AND MEASURING THE WORLD'S PHYSICAL PROPERTIES TO TRANSLATING INCREASINGLY COMPLEX DATA INTO ACTIONABLE DECISIONS, WE ENABLE OUR CUSTOMERS TO ADDRESS THEIR TOUGHEST MEASUREMENT CHALLENGES WITH CONFIDENCE.**

**CHEMICAL ANALYSIS**

A microscopic view of several orange liquid droplets of varying sizes, some in sharp focus and others blurred in the background, set against a warm, orange-toned background.

**LIFE SCIENCES**

A 3D molecular model showing a complex network of atoms and bonds. The atoms are represented by small spheres in shades of purple and pink, connected by thin lines. The model is set against a dark background with glowing blue and purple light trails.

**ELECTRONIC MEASUREMENT**

A network of fiber optic cables, with numerous bright white light points at the ends of the cables, creating a starburst effect. The background is a deep teal color with soft, out-of-focus light trails.

**RESEARCH**

Abstract light trails in shades of blue and purple, with some bright white points, suggesting a high-speed or digital environment.

**Agilent Technologies, Inc.**  
**[www.agilent.com](http://www.agilent.com)**

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