



Sustainability Innovation's New Frontier

Today, sustainability is starting to transform laboratories and change the way researchers and scientists approach products, technologies, processes, and supply chains.

The key to progress, is innovation.



But going green can be challenging, especially in a scientific world

At a time of unprecedented scientific opportunity driven by advances in technology across engineering, physics, bioagriculture, and biomedicine, among others, it's no surprise that laboratories, at the forefront of scientific acceleration, face unique challenges when it comes to achieving **sustainability goals**.

- The **average laboratory** consumes more energy per square foot than:¹



A hospital ^{2,3}

Or



Commercial and institutional buildings such as offices and retail complexes ^{2,3}

- The U.S. Environmental Protection Agency estimates that **reducing laboratory energy use by 30%** would reduce US national energy consumption by:



84 trillion Btus of saved energy³

Or



1.3 million cars off highways³

What matters most in laboratories

85%

of laboratories surveyed in a global lab manager's survey have **sustainability goals** in place⁴

Over half have sustainability goals in place when designing workflows



Other important 'green' factors identified when setting sustainability goals



Reducing water consumption



Reducing energy consumption



Reducing waste



Improving recycling

...all while optimizing workflow, increasing productivity, lowering costs and ensuring green purchasing decisions as well as making the lab a safer, healthier environment to work in.

Sustainability through innovation

Whether our innovations are helping customers **keep food supplies safe, reduce air or water pollution, find alternative energy sources or fight cancer and other diseases**, our goal is to **make a difference**.

Our customers' challenges, including environmental considerations, are the **drivers for our innovation**, which stems from careful consideration of everything from our suppliers and materials to product innovations and careful packaging. Below are Agilent innovations and initiatives that have the potential to:^{*}



Ensure adequate recycling

- Smarter packaging
- Instrument trade-in



Advance green purchasing

- Smarter packaging
- Energy and water management
- Innovative technology
- Certified pre-owned instruments



Reduce energy consumption

- Intuvo 9000 GC
- 5800/5900 ICP-OES
- 8700 LDIR
- Cary 3500 UV-Vis
- TwisTorr 305 turbo pumps



Reduce emissions

- 5800/5900 ICP-OES



Reduce hazardous waste

- IDP dry scroll pumps
- InfinityLab SFC Solutions
- InfinityLab Stay Safe caps
- OneNeb nebulizer technology
- InfinityLab Poroshell 120 Columns



Reduce non-hazardous waste

- InfinityLab Stay Safe caps
- Cary 630 FTIR
- 8900 ICP-QQQ
- TRS100



Reduce water consumption

- 4210 MP-AES



Reduce gas consumption

- Intuvo High Efficiency GC columns
- 8700 LDIR
- 990 Micro GC
- 8890 GC

Embedding sustainability into our organisation



At Agilent, we are committed to **delivering trusted answers that improve lives**. Working towards sustainability is an integral part of how we conduct business and respond to the greatest challenges of our customers in their quest to move boundaries in scientific research and discovery.

It is our responsibility to understand our impact on the environment and to commit to continuous innovation toward sustainability for ourselves, our customers and our planet.

You can learn more about Agilent's sustainability efforts in our corporate citizenship report at <https://www.agilent.com/environment/environment.shtml>

* The results of reduction in water and energy consumption, hazardous waste and emissions and improvement in recycling depend upon current volumes and output levels

1. Laboratories for the 21st Century, Updated 2017 – Labs21 Benchmarking Tool. <http://labs21benchmarking.lbl.gov/>
 2. Energy Information Administration (EIA) Commercial Buildings Energy Consumption Survey (CBECS). <https://www.eia.gov/consumption/commercial/about.php>
 3. International Institute for Sustainable Laboratories. Laboratories for the 21st Century. Toolkit. http://www.i2sl.org/documents/toolkit/lowenergy_508.pdf
 4. Understanding Key Challenges and Pain Points in the Global Laboratory Market Survey 2017. Agilent data on file