

The
Nexus of
speed and
sensitivity.



revvity



EnVision® Nexus™ multimode plate reader



Our fastest, most sensitive plate reader ever

Operating on a brand-new innovative platform, our **EnVision® Nexus™ multimode plate reader** fast tracks your research, delivering the speed and accuracy you need for your most demanding applications. Combined with a lineup of exciting enhancements, this system elevates your science to the next level.

For more than twenty years, our EnVision plate reader has been the proven leader in high-throughput screening – and the EnVision Nexus is the next generation of superior detection. This multimode plate reader continues to deliver optimal results from our Alpha, HTRF®, LANCE®, DELFIA®, and luminescence assay technologies.

The EnVision Nexus is powered by our new intuitive Kaleido™ software. Not only is it easy to use, but it also provides tools to ensure 21 CFR Part 11 compliance for integration into regulated environments.

With lightning speed and superior sensitivity, the EnVision Nexus provides next-generation technology for your next-level breakthroughs.





Detection technologies for today – and tomorrow

The EnVision Nexus microplate reader gives you robust performance and reliable data, time after time. With exceptional speed, ultrahigh throughput, and maximum sensitivity across all detection technologies, the EnVision Nexus is the new standard for high-throughput screening.

Depending on your speed and sensitivity needs, the EnVision Nexus platform supports standard and advanced detection technologies with excellent dynamic range, kinetic and scanning measurements, and bottom reading. And it accepts all standard microplates, including 24-, 48-, 96-, 384-, and 1536-well formats.

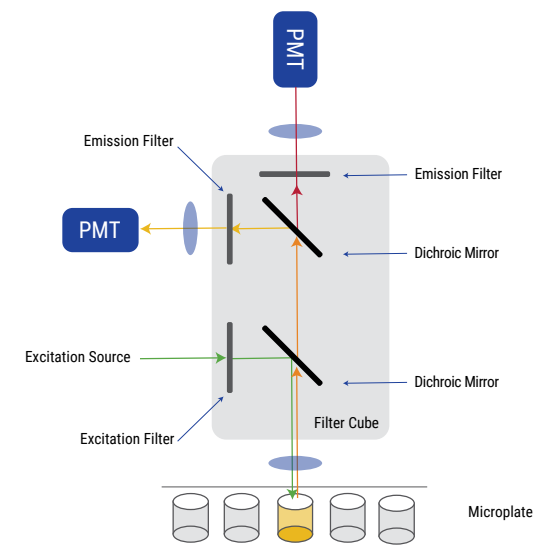
A broad selection of proven technologies

The EnVision Nexus system's configuration reads all traditional detection technologies, including:

- Absorbance
- Fluorescence intensity (including FRET)
- Luminescence (including BRET)
- Time-resolved fluorescence (TRF) and TR-FRET
- Fluorescence polarization (FP)

Plus, we offer optional advanced technologies, including:

- Alpha (Enhanced or HTS)
- TRF Laser
- Ultrasensitive Luminescence



The dual-detector design allows for simultaneous detection of FRET, BRET, TR-FRET, or FP signals for ultimate speed.



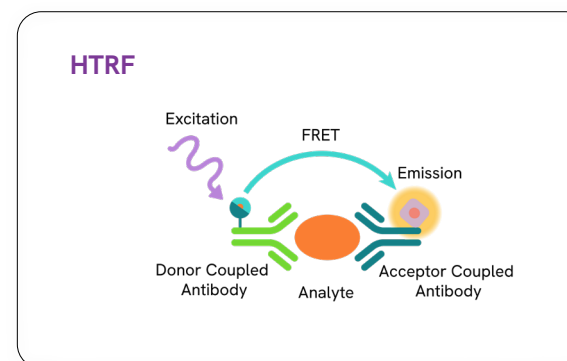
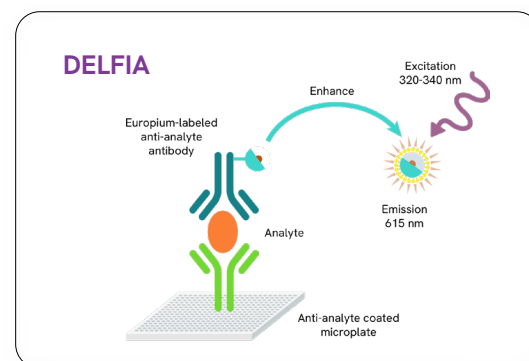
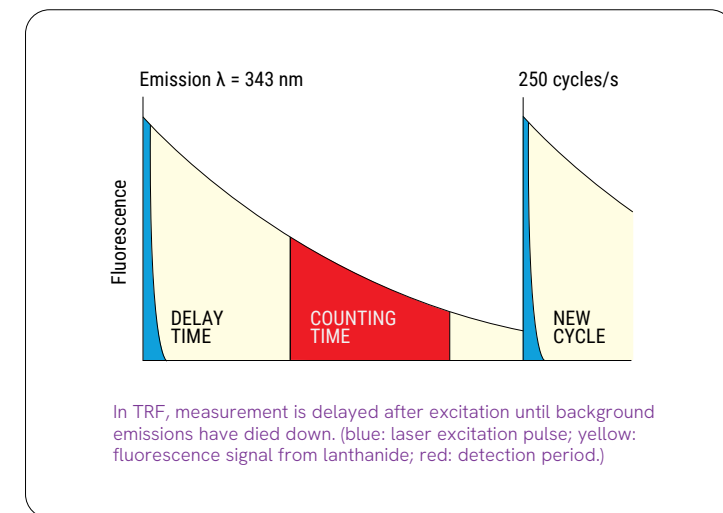
Advance your detection – and your discovery

Ultimate performance technologies in TRF

In addition to the standard TRF module, the EnVision Nexus system is available with a dedicated, low-maintenance, solid-state laser for TRF excitation. Its short, high-energy pulses significantly improve signal-to-noise ratio and overall assay performance. Additionally, high-pulse frequency combined with dual detection delivers exceptionally fast measurement times.

How it works

TRF assays use lanthanide chelates or cryptates that have long fluorescence lifetimes. The detected signal consists of either the excited lanthanides, as in DELFIA assays, or the fluorophores excited by TR-FRET, as in HTRF or LANCE assays.



Applications

- Biomarker detection
- Protein kinase
- Cytokine
- GPCR
- Epigenetics
- Protein-protein interactions



Innovative measurement technologies in Alpha

Our proprietary Alpha platform lets you detect virtually any molecule, from large endogenous protein complexes to small peptides. The bead-based proximity assay technology eliminates time-consuming ELISA wash steps, extends the dynamic range, and improves sensitivity.

Alpha detection modules

Two different modules are available for the EnVision Nexus reader, each with a dedicated excitation laser:

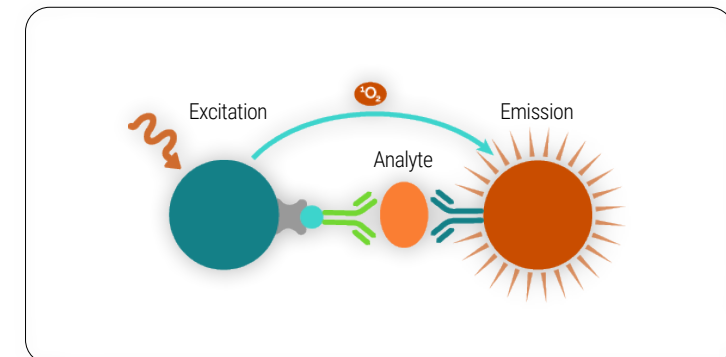
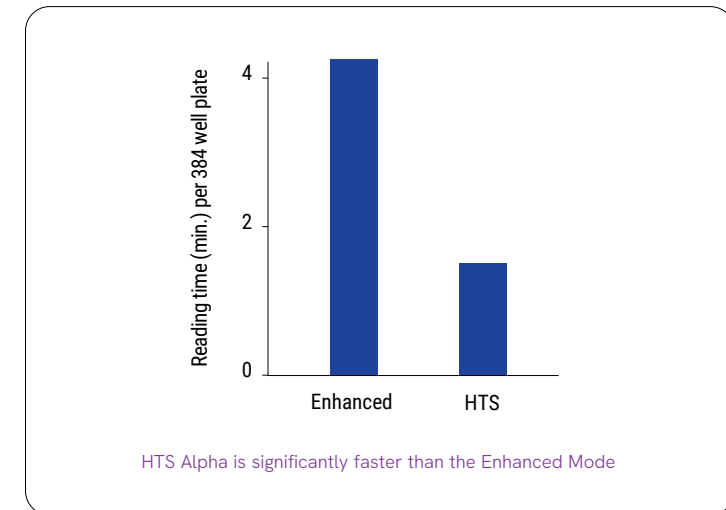
- Specially designed to reduce crosstalk, the **Enhanced Alpha** detection module delivers the speed necessary for using AlphaPlex technology.
- With its superior optical design, the **HTS Alpha** detection module is in close proximity to the plate for minimal signal loss and more than two times the speed of the enhanced module.

How it works

Alpha technology is a bead-based proximity assay. When an acceptor bead is in close vicinity through binding to the target, a cascade of chemical reactions is set in motion, creating an amplified signal.

Applications

- Biomarker detection
- Protein kinase
- Cytokine
- GPCR
- Epigenetics
- Protein-protein interactions





Breakthrough measurement technologies in luminescence

Working with precious cells like primary and stem cells, or suffering from low sample signals, presents a unique set of challenges.

Included in the base unit, our **Standard Luminescence** is ideal for BRET and bottom-read assays. It's great for combining different readout technologies in one experiment.

The **Enhanced Luminescence** detection module uses a special aperture to reduce crosstalk, increasing the amount of signal detected by 10 times more than the standard luminescence mode.

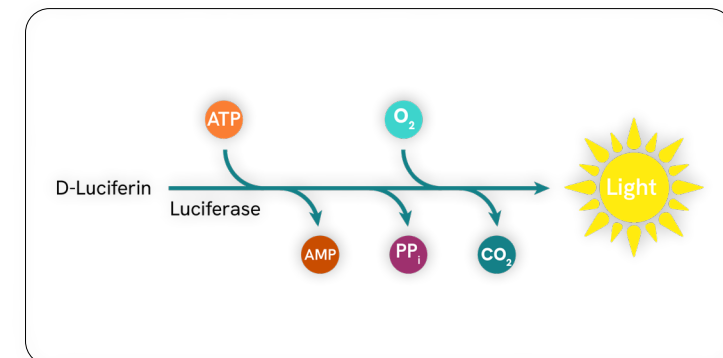
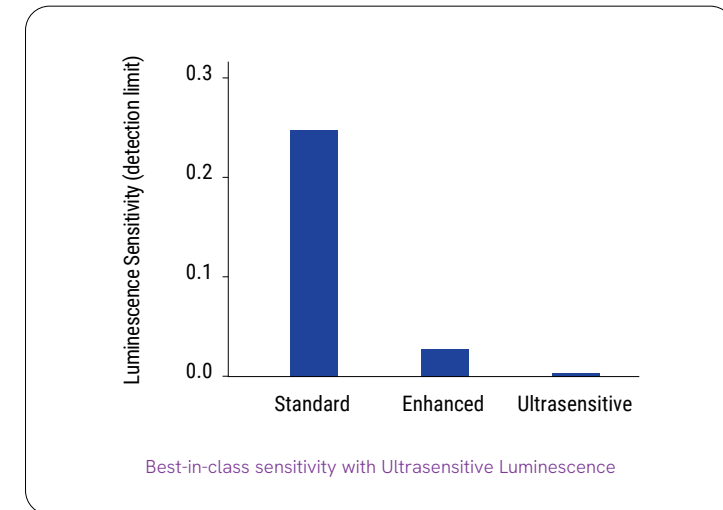
Boosting sensitivity by 25 times compared to the enhanced mode, the optional **Ultrasensitive Luminescence** brings the detector closer to the sample, giving you more information from every cell. The time per 384-well plate decreases to less than two minutes – not only freeing up the instrument, but also minimizing drift effects.

How it works

Luminescence assays enable the study of transcriptional gene expression, virus life cycles, and cell viability. Our luciferase-based luminescence assays include reporter gene, ATP monitoring assays, and kinase activity assays.

Applications

- Cytotoxicity and cell proliferase
- Reporter gene
- Kinase activity





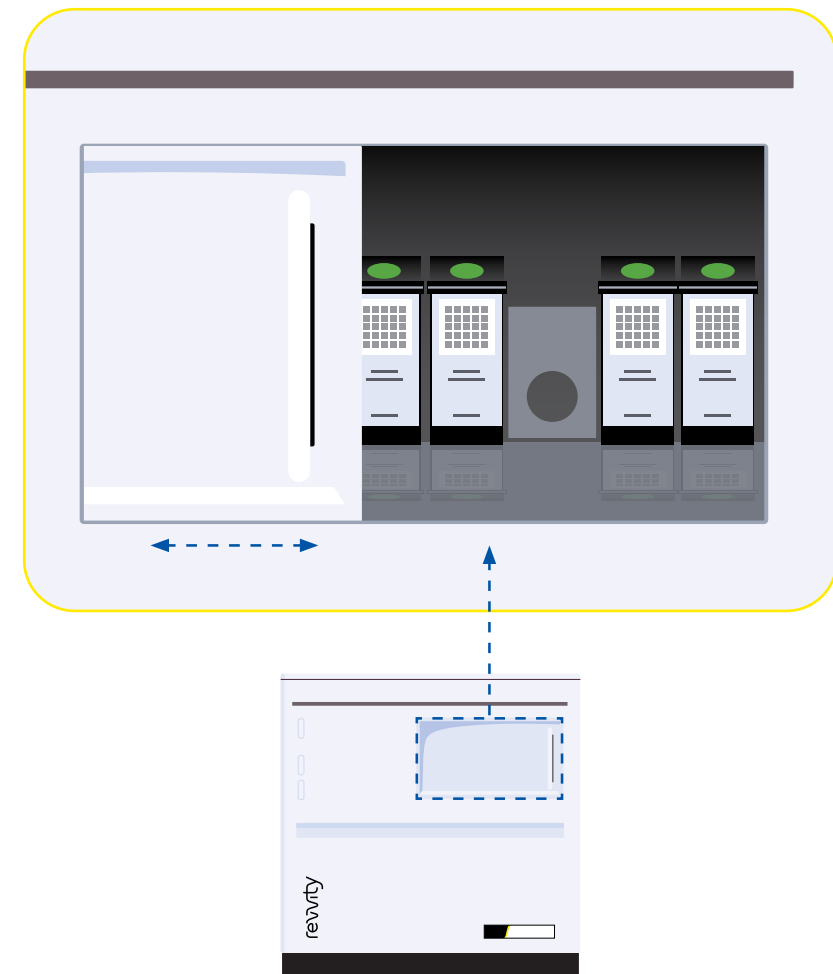
Filter modules optimized for your assays

The Nexus comes with filter-based technology for absorbance, fluorescence, luminescence, TRF, and fluorescence polarization.

We've combined filters and optics into a single module optimized for your assays. These new filter modules are held in exact position magnetically and can be exchanged without tools, making them simple to install and replace. We've integrated these filter modules with Kaleido, so as soon as you load a new module, the software recognizes it.

Benefits

- Choose from more than 40 filter modules across both standard and advanced technologies
- Simplify workflow with multiple filters inside the instrument
- Run any assay in software with a quick module selection





Accessories to optimize assay performance

Complement the EnVision Nexus system's unmatched speed with a variety of accessories that broaden the scope of your analysis, including time-course measurements, enzyme assays, and many other cell-based assays.

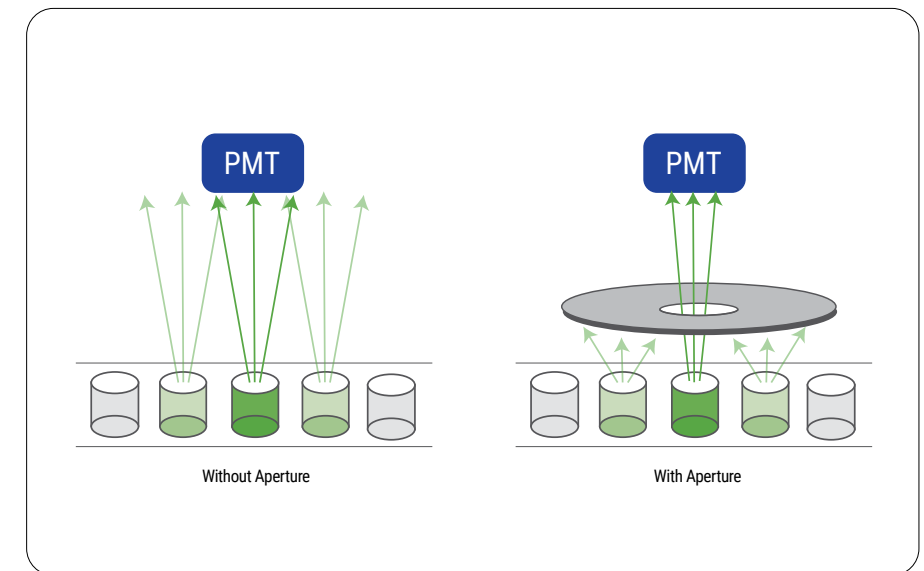
Built-in temperature control

The EnVision Nexus platform has a uniquely isolated measurement chamber that allows the plate temperature to be precision controlled using Kaleido software. The Maintain Ambient Temperature feature minimizes temperature gradient and stabilizes the assay. Additional benefits include:

- Temperature range (Heating) 15-65 °C, at least 5 °C higher than the ambient temperature
- Temperature range (Maintain Ambient Temperature) 20-25 °C

Specialized aperture

Helping to reduce crosstalk on both Luminescence and Alpha measurements, the specialized aperture featured on the EnVision Nexus system enhances sensitivity and gives you confidence in your results.





Extend your lab's capabilities

Walkaway convenience

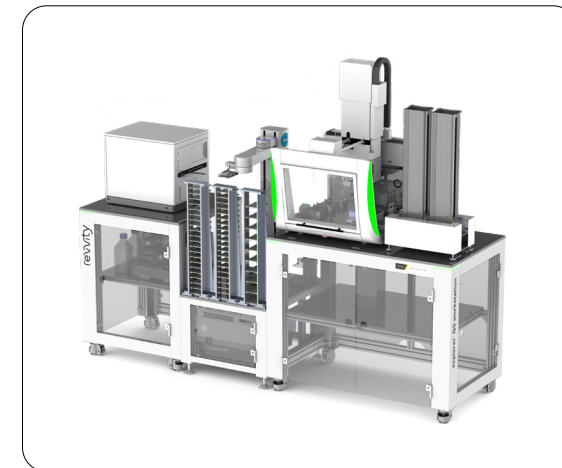
For highest throughput applications, the EnVision Nexus plate reader can be equipped with plate stackers or can be easily integrated into a fully automated workflow.

Plate stackers

- Plate stackers available for 20 or 50 plates
- Interchangeable magazines increase capacity and throughput
- Grip-fed restacking function maintains the order of plates

Complete workflow solutions

- A range of automated systems available to meet a diverse array of throughput needs across a variety of workflows including the explorer G3 workstation
- Compatible also with a wide range of third-party automation systems

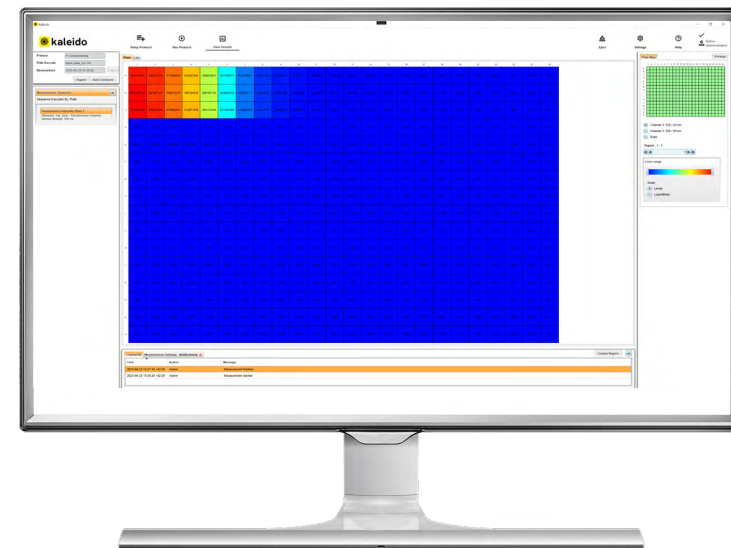




Powerful software for enhanced performance

Utilize all the performance and versatility the EnVision Nexus platform has to offer. The **Kaleido control software** features an intuitive interface with preset user-specific protocols, making the system setup fast and easy.

Our Kaleido software provides everything you need to execute your measurements in one place. Protocols and results are stored in a database, and example protocols are included as a starting point for users to create their own application-specific protocols. Result files can be exported in multiple formats for seamless integration with data analysis tools.



Facilitate compliance for regulated environments

Our Enhanced Security mode provides technological controls and features that support 21 CFR Part 11 compliance with access levels, data security, and a comprehensive audit trail of user actions.



Full data analysis and reporting

For data analysis calculations, the optional **MyAssays® Desktop Pro analysis software** integrates seamlessly with the Kaleido software.

Download preconfigured protocols from an online database that can be easily integrated into your lab's workflow. These protocols cover all popular applications – HTRF, LANCE, DELFIA, ATPlite™, and Alpha. Or you can create custom protocols and edit or extend selected preconfigured protocols.

MyAssays® Desktop Pro provides exceptional tools for:

- Preconfigured data analysis for popular assays available for download
- Data importation
- Data visualization (3D view, heatmap, kinetic overlay, spectral plot)
- Data analysis (including advanced curve fitting)
- Reporting (Excel objects and templates for Microsoft® Word®)
- Exporting to popular formats such as XLSX, PDF, DOCX, HTML
- Ensuring data integrity with seamless integration to Enhanced Security software





Reagents and microplates made for your analysis

Achieve your research goals faster with the right reagents and microplates. Our vast portfolio of products delivers the quality results you need based on your applications.

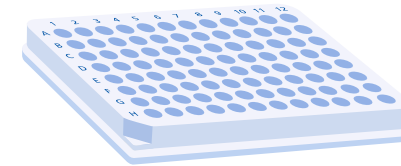


Reagents

Our industry-leading reagents and assays include:

- ELISA-alternative Alpha technology
- HTRF, LANCE, and LANCE[®] Ultra[™] TR-FRET
- DELFIA TRF
- lites luminescence assays
- Reporter gene luminescence assays
- AequoScreen luminescence assays

And if you can't find what you need, our team of specialists can develop custom assay solutions for you.



Microplates

Whether your analysis requires fluorescence, luminescence, or absorbance assays, we offer a wide range of microplates, including the highly versatile OptiPlate[™], shallow well ProxiPlate[™], 1/2 Area Plate for low volume assays, and AlphaPlate[™] to minimize crosstalk in Alpha and luminescence technology.

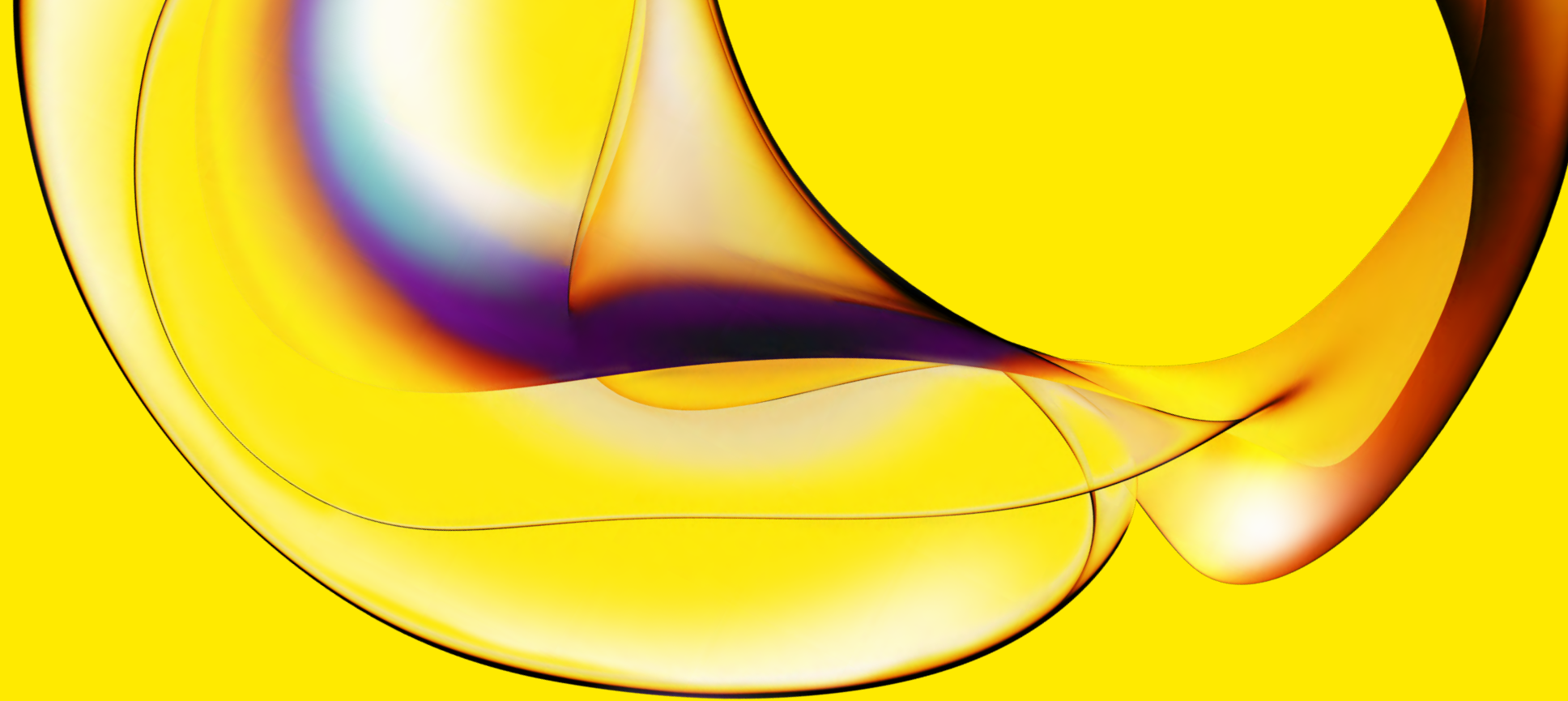


Service and support tailored to your needs

Your applications are as individual as you are. That's why we take a consultative approach to every engagement with you. Our global service and support teams comprise dedicated lab- and field-based application specialists who collaborate with you to overcome the unique challenges your applications bring.

Plus, for additional peace of mind, we offer IQ/OQ testing for instruments, including the EnVision Nexus plate reader.





www.revivity.com

revivity

Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA
www.revivity.com

For a complete listing of our global offices, visit www.revivity.com
Copyright ©2023, Revvity, Inc. All rights reserved.

1131252