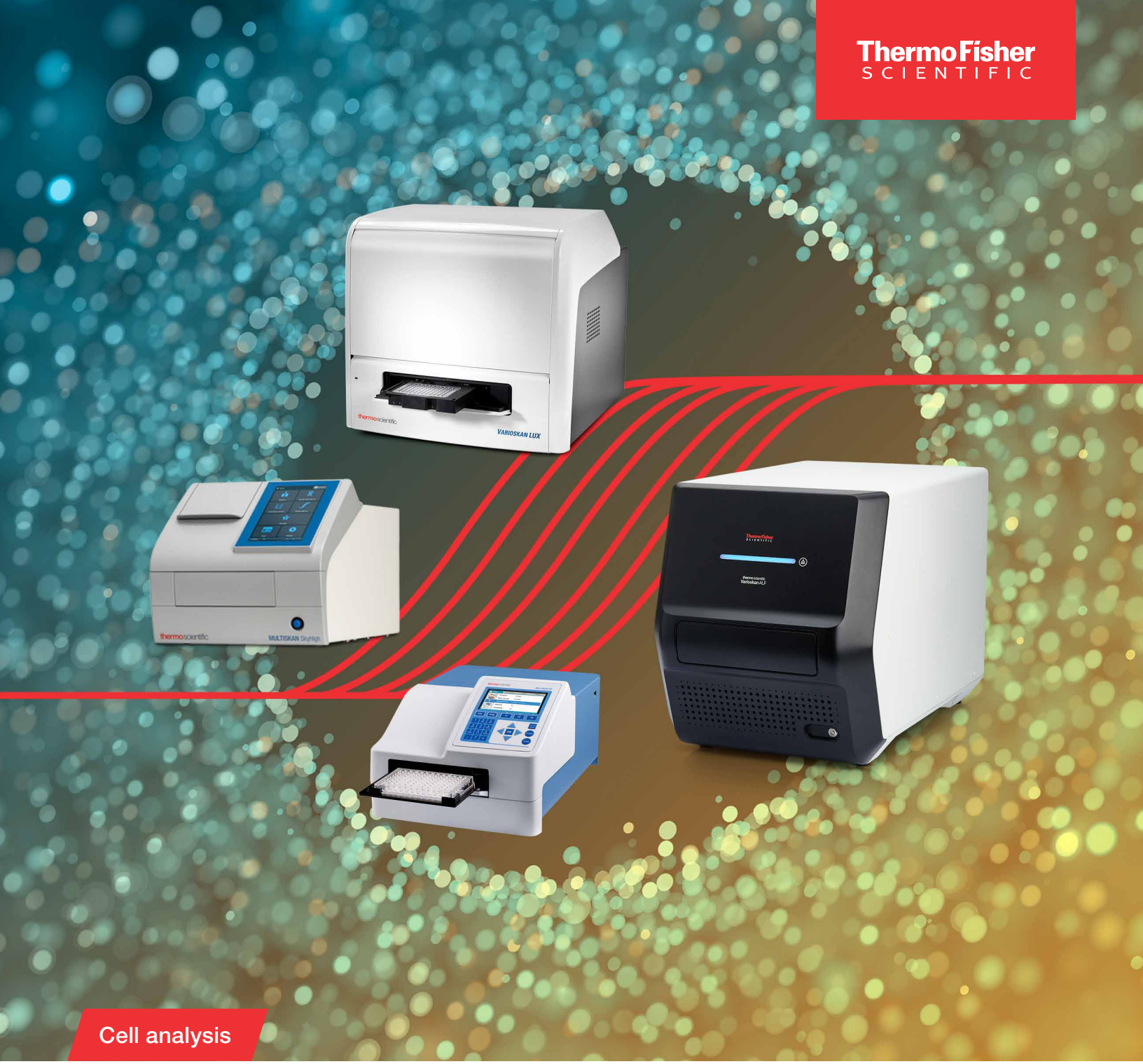


Cell analysis

Guide to microplate readers

A one-stop solution for your microplate detection needs

thermo scientific

Choose the microplate reader that best suits your research needs

Thermo Scientific™ microplate readers provide flexibility, performance, and ease of use for a variety of microplate assays. Whether you need to measure fluorescence, absorbance, luminescence, or time-resolved fluorescence (TRF), or you use PerkinElmer™ AlphaScreen™ assays, we can offer a microplate reader solution to help meet the requirements of your specific workflow. With a portfolio of dedicated modular and upgradable multimode readers, we also offer solutions that can fit your current budget and help meet the future needs of your laboratory.

Thermo Scientific plate readers have a number of features to help you save time and maximize productivity, including:

- Autocalibration
- Easy export in Microsoft™ Excel™ format
- Automation readiness with robot compatibility
- No limit to the number of computers on which intuitive Thermo Scientific™ SkanIt™ Software can be installed
- Ready-to-use protocols available in our extensive online protocol library

For more information, go to **thermofisher.com/platereaders**

Consideration	Multiskan FC photometer	Multiskan SkyHigh spectrophotometer	Varioskan ALF multimode reader	Varioskan LUX multimode reader
Applications	Absorbance, turbidimetry		Absorbance, turbidimetry, luminescence, fluorescence	Absorbance, turbidimetry, fluorescence Optional: TRF, luminescence, AlphaScreen assay readout
Wavelength range	340–850 nm	200–1,000 nm	Absorbance: 200–1,000 nm Excitation: 200–710 nm Emission: 210–720 nm	Absorbance: 200–1,000 nm Fluorescence excitation: 200–822 Fluorescence emission: 270–840 nm Luminescence: 360–670 nm (spectral scanning 270–840 nm) TRF excitation: fixed to 334 nm (spectral scanning 200–840 nm) TRF emission: 400–670 nm (spectral scanning 270–840 nm) AlphaScreen assay excitation: fixed to 680 nm AlphaScreen assay emission: 400–660 nm
Wavelength selection	Filters	Monochromator	Monochromator for UV/Vis absorbance Filters for fluorescence intensity Filters for luminescence (when necessary)	Monochromator for UV/Vis absorbance and fluorescence intensity Filters for luminescence (when necessary), TRF, AlphaScreen assays
Plate format	96 wells (384 wells optional)	µDrop and µDrop Duo Plates, 6- to 48-well plates,* 96- and 384-well plates	µDrop and µDrop Duo Plates, 6- to 384-well plates	6–1,536 wells (fluorometry, TRF, luminometry, AlphaScreen assays) µDrop and µDrop Duo Plates, 6–384 wells (absorbance)
Incubation	Optional	Yes	Yes	Yes
Shaking	Yes	Yes	Yes	Yes
Reagent dispensers	No	No	No	Optional (up to two)
Top/bottom reading	NA	NA	Top	Top (standard) Bottom (optional)†
Cuvettes	No	Optional	No	With µDrop plate
Gas control module	No	No	No	Optional
Robot compatibility	Yes	Yes	Yes	Yes
21 CFR Part 11 compliance	Yes	Yes	Yes	Yes
				

* Maximum plate height with lid is 19.5 mm. † Instruments with bottom-reading capabilities feature multiple read locations per well.

A range of microplate readers to enable maximum flexibility and performance

To measure absorbance

Thermo Scientific™ Multiskan™ FC Microplate Photometer

A robust and reliable filter-based instrument that can be used for a wide variety of research and routine applications. It can be used as a stand-alone instrument or under PC control with intuitive SkanIt Software.

- Use for a wide variety of applications, including ELISAs, endotoxin assays, cytotoxicity assays, and growth curves
- Shake and incubate at up to 50°C for temperature-sensitive assays
- Proven performance and reliable day-to-day results through optical design and self-diagnostics

thermofisher.com/multiskanfc

Thermo Scientific™ Multiskan™ SkyHigh Microplate Spectrophotometer

The Multiskan SkyHigh Microplate Spectrophotometer is easy to use for any photometric or turbidimetric research application, particularly nucleic acid and protein analysis. It offers an optional, easy-to-use graphic touchscreen and multiple connectivity options (USB, computer, or cloud). Key highlights:

- Allows kinetic, spectral, and endpoint measurements for a variety of applications
- Separate optimized measurement modes for absorbance and turbidimetric measurements
- Fast reading speed that is essential for kinetic applications
- Available in three different configurations: 1) touchscreen, 2) cuvette and touchscreen, and 3) operated only with SkanIt Software (PC)
- Reads Thermo Scientific™ µDrop™ and µDrop™ Duo plates for microvolume analysis of DNA, RNA, and protein
- Models with touchscreens have an easy-to-use interface for stand-alone use and include ready-made protocols for UV-based nucleic acid and protein quantification as well as colorimetric protein quantification
- Fast operation: full spectrum (200–1,000 nm) of a sample well is obtained in less than 10 seconds, and a full 96-well microplate is read in 6 seconds
- Access to the Thermo Fisher™ Connect Platform or Microsoft™ OneDrive™ cloud-based tools allows you to securely store, access, share, and manage data remotely (touchscreen models)

thermofisher.com/multiskanskyhigh

For multimode readouts

Thermo Scientific™ Varioskan™ ALF Multimode Microplate Reader

A versatile, entry-level multimode microplate reader for a variety of UV/Vis absorbance, fluorescence, and luminescence microplate assays. In addition to being fast, flexible, and easy to use, the Varioskan ALF multimode reader also features:

- Multiple detection modes: absorbance, turbidimetry, luminescence, and fluorescence
- Top reading to enable basic microplate reader applications, including nucleic acid and protein quantification, bacterial growth curves, ELISA, and cell viability
- Versatile plate types including 6- to 384-well plates and µDrop plates
- Linear, orbital, and double orbital shaking
- Incubation at ambient temperatures from +4°C to 45°C
- User interface with intuitive SkanIt Software to simplify and speed up assay setup and data analysis and transfer, offering a visual workflow and the most ready-to-use microplate reader protocols available
- A plug-and-play solution that gives you full control of your microplate reader assays

thermofisher.com/varioskanalf

Thermo Scientific™ Varioskan™ LUX Multimode Microplate Reader

Designed to suit a wide variety of needs, the Varioskan LUX Multimode Microplate Reader has a flexible range of measurement modes. The instrument simplifies measurement setup with automatic dynamic range selection, and its smart safety controls help you avoid experimental errors. The Varioskan LUX multimode reader raises the bar for reliability and ease, and features:

- Five detection modes: absorbance, fluorescence, luminescence, TRF, and AlphaScreen modules
- Five measurement modes: endpoint, kinetic, spectral, multipoint, and kinetic-spectral
- Spectral scanning with 1 nm increments for assay scanning
- Simultaneous dispensing and measurement of fast reactions right from the start
- Integrated gas module for control of CO_2 and O_2
- Wavelength selection with:
  - Monochromators in absorbance and fluorescence intensity
  - Filters in AlphaScreen assays and TRF
  - Luminescence without wavelength selection or optionally with filters

thermofisher.com/varioskanlux

Software for readout

SkanIt Software

The intuitive interface of the updated SkanIt Software can guide you through the measurement process to help you get the results you need. With SkanIt Software, you have full control over the instrument settings for all of your Thermo Scientific microplate readers.

SkanIt Software is available in two editions. The Research Edition is for scientists working in life science research, and the Drug Discovery Edition has features to help you comply with FDA 21 CFR Part 11 requirements.

SkanIt Software makes microplate reading easy

SkanIt Software provides excellent usability and flexibility, even for the most challenging microplate assays. This software offers visual workflow setup and effortless data reduction and export. Here are some of SkanIt Software's key features:

- Capable of endpoint, kinetic, spectral scanning, and bottom reading with a multipoint option, as well as kinetic-spectral measurements
- An extensive cloud-based library of ready-made protocols is available
- The intuitive user interface simplifies measurement setup
- The Invitrogen™ Fluorescence SpectraViewer tool enables easy assay setup
- The virtual pipette tool makes it easy to define sample-to-plate layout
- Produces user-customizable graphs
- Built-in calculations for fast, accurate data analysis, including:
  - Parallel line analysis
  - Enzyme kinetics (K_m and V_{max})
  - Z-factor
  - Linear and logistic curve fitting with extrapolation
- Single-click data export to Excel program
- Manually or automatically export data in .xlsx, .pdf, .xml, and .txt file formats
- Robotic automation interface is available for high-throughput needs
- Open license software allows unlimited installation on multiple computers
- No annual fee is required to use the software

thermofisher.com/skanit

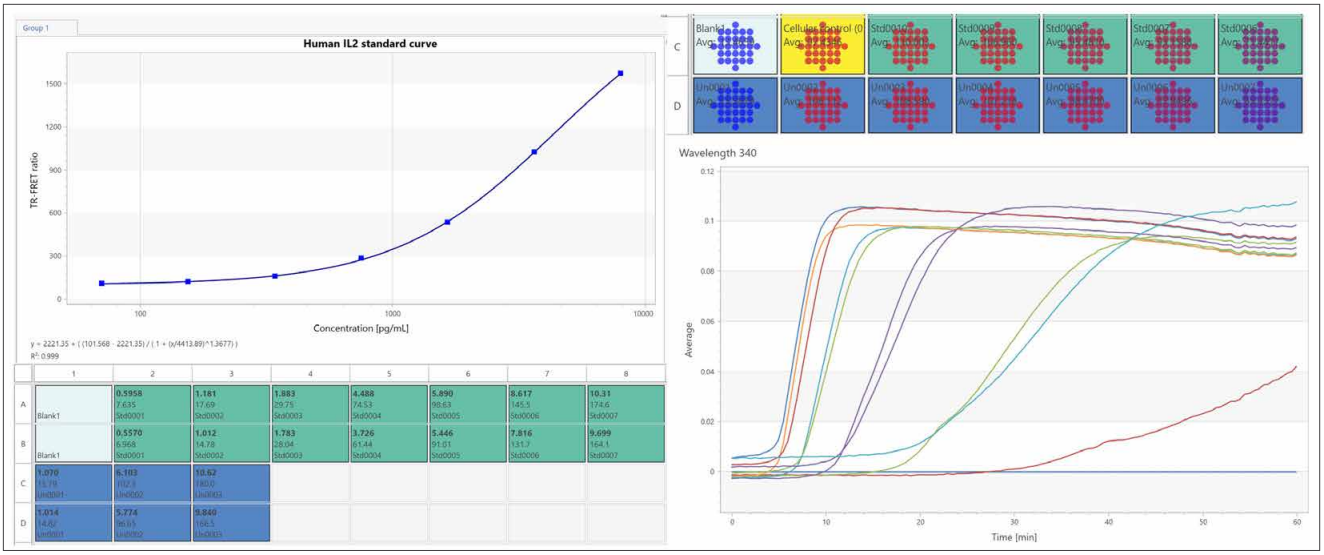


Figure 1. Results displayed in different data formats.

Applications

Cell viability and cell proliferation

Cell viability can be detected through various cellular features, such as membrane integrity, enzyme activity, or metabolic activity. Viability assays are used to evaluate the response to internal or external stimuli, such as the cytotoxic effects from drug screenings.

Microplate assays provide information on entire cell populations rather than tracking the behavior of individual cells. We offer assays for whole cells and assays performed on disrupted cells or cell lysates.

The analysis of cell proliferation is crucial for cell growth and differentiation studies, as well as cancer research, and is often used to evaluate both compound toxicity and inhibition of tumor cell growth during drug development. Proliferation measurements in microplate assays are typically based on average DNA content or cellular metabolism, or quantification of DNA synthesis.

Microplate assays for cell viability

Microplate assays for cell proliferation

Nucleic acid quantification

Accurate and precise nucleic acid quantification is critical for cellular and molecular biology labs that work with precious, rare, or difficult-to-process samples. This step helps to ensure the success of many downstream experiments including PCR, next-generation sequencing, transfection, reverse transcription, northern blot analysis, and cDNA library preparation.

Invitrogen™ Quant-iT™ assay kits utilize fluorophores that fluoresce upon binding to DNA or RNA; the fluorescence intensity of the resulting complex is proportional to the amount of the target molecule in the sample.

thermofisher.com/quantit

thermofisher.com/naq

Protein quantitation

Quantitating protein samples is an important step before gel electrophoresis or western blot analysis, and for measuring bound versus free protein levels in protein binding assays. The choice of assay format is often based on other components in the sample mixture. Thermo Scientific™ Pierce™ protein quantitation assays provide exceptional accuracy, compatibility, and broad applicability that enable most laboratory protein samples to be quantitated with ease.

thermofisher.com/proteinassays

Enzyme-linked immunosorbent assays

Enzyme-linked immunosorbent assays (ELISAs) are an important tool for the quantitative analysis of specific proteins from a wide variety of samples. We offer more than 2,000 highly referenced ELISAs to detect cytokines, phosphoproteins, oncogenes, and a wide variety of biomarkers. Most assays are available in a variety of formats including precoated, bulk, and matched pairs to help maximize your time and budget.

thermofisher.com/elisa

Endotoxin quantitation

Endotoxins are frequent contaminants of protein solutions derived from bioproduction and are toxic to cells grown in tissue culture. Since endotoxins are pyrogenic (fever-inducing) in mammals, it is extremely important to identify, monitor, and eliminate their presence in biological samples.

thermofisher.com/endotoxin

The pairing of the Varioskan LUX multimode reader with Thermo Scientific™ assay kits and reagents helps users to elucidate even the most intricate biological questions with minimal efforts needed for optimizing instrument settings or assay conditions. In particular, the Varioskan LUX multimode reader offers excellent capabilities to interrogate cellular viability and cellular functions in 2D as well as 3D models.

Cell viability readouts can be performed on complex 3D cell structures using the Varioskan LUX multimode reader. For example, exposure of A549 lung 3D spheroids to gambogic acid (GA) results in a concentration- and time-dependent cytotoxicity that is easily measurable on the Varioskan LUX multimode reader using the Invitrogen™ CyQUANT™ Direct Cell Proliferation Assay. This assay allows for not only effective quantitation using microplate readers, but also simultaneous imaging of cell death using imaging platforms such as the Thermo Scientific™ CellInsight™ CX7 HCA platform or the Invitrogen™ EVOS™ M7000 Imaging System.

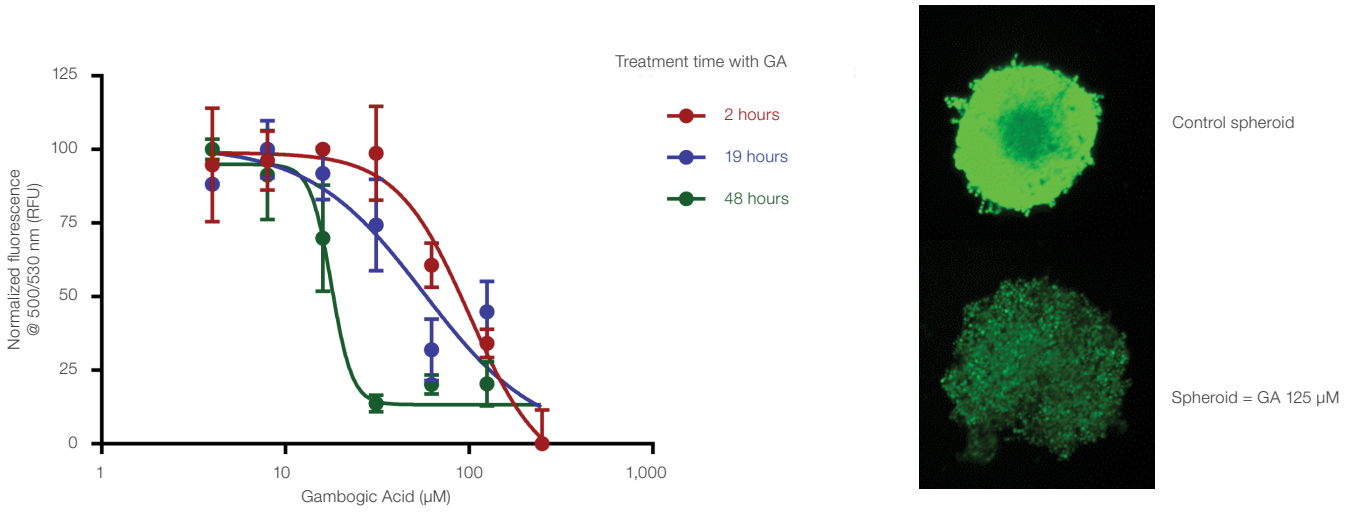


Figure 2. Measurement of A549 lung spheroid viability using the Varioskan LUX multimode reader (left) and visualization of viable cells using the CellInsight CX7 HCA platform (right). Spheroids were grown for 19 hours in Thermo Scientific™ Nunclon™ Sphera™ 96-well plates, treated with different concentrations of GA for up to 48 hours, and then stained with the CyQUANT Direct Cell Proliferation Assay. Green fluorescence associated with living cells with high DNA content was measured using bottom optics in the Varioskan LUX multimode reader (12 nm excitation bandwidth) and excitation/emission of 508/527 nm.

Microplates

Thermo Scientific™ Nunc™ cell culture plates

Choose from a wide selection of surface modifications and formats for a variety of 2D and 3D cell-based assays.

Thermo Scientific™ Nunc™ black and white polystyrene plates

Get optimal performance with minimal background and crosstalk between wells for maximum signal detection.

Thermo Scientific™ Nunc™ Edge™ plates

Minimize evaporation concerns for live cell assays with long incubations.

To find the Nunc plate that best suits your needs, go to **thermofisher.com/cellcultureplates**

Multiskan FC Microplate Photometer

The Multiskan FC Microplate Photometer builds on over 40 years of experience within the Multiskan product brand, and contains evolved features for enhanced usability. The Multiskan FC device has a 340–850 nm wavelength range, enabling a wide variety of applications from enzyme kinetic studies to Lowry assays. The instrument provides fast and accurate measurements that make possible a complete reading of a 96-well plate in less than 7 seconds.

The optical design of the Multiskan FC photometer, in combination with the auto-calibration procedure that is performed during each measurement, helps ensure stable day-to-day and year-to-year performance and reliability.

The Multiskan FC device is equipped with an eight-position filter wheel with three standard filters (405, 450, and 620 nm). Additional filters are available upon request. Additional features include:

- Proven performance and reliable day-to-day results through optical design and self-diagnostics
- Multiple language options to ensure excellent usability
- Robot-friendly plate carrier for both 96- and 384-well plates

thermofisher.com/multiskanfc

Wellwash and Wellwash Versa microplate washers

Reliable and easy-to-use Thermo Scientific™ Wellwash™ microplate strip washers provide secure washing performance for routine and research ELISA applications.

The Thermo Scientific™ Wellwash™ Microplate Washer is the basic model for washing 96-well plates. It is intended for use when only a few similar assays are run routinely. The Thermo Scientific™ Wellwash™ Versa Microplate Washer is the advanced model for 96-well plates that can also wash cells and 384-well plates, offering the enhanced flexibility needed for research use.

Unpressurized bottles are safe and secure to use. The automatic rinse and prime features prevent clogging of the liquid transfer system. The liquid level sensors in both the wash and the waste bottle help ensure safe performance. The low residual volumes of Wellwash washers provide optimal washing performance and reliable assay results. Additional attributes of the system include:

- Fast and simple instrument setup and use with color-coded tube fittings and liquid-level sensor cables
- Easy setup of wash protocols through color screening and the visual user interface
- Internal software available in several languages
- USB port for transferring protocols between several washer units
- Sweep mode for extremely low residual volume needs

Multiskan SkyHigh Microplate Spectrophotometer

The Multiskan SkyHigh Microplate Spectrophotometer is easy to use for any photometric or turbidimetric research application, particularly nucleic acid and protein analyses. The versatile SkanIt Software and user interface, optimized for touchscreen use, offers refined photometry in life science research and brings versatility to academic, biotech, and pharmaceutical laboratories. The system also offers multiple connectivity options (USB, computer, or cloud).

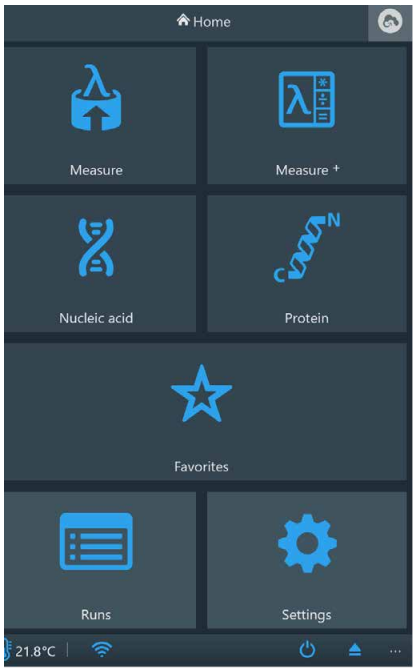
The Multiskan SkyHigh device is available in three different configurations: 1) touchscreen, 2) cuvette and touchscreen, and 3) operated only with SkanIt Software (PC). Models with touchscreens have an easy-to-use interface for stand-alone use and include ready-made protocols for UV-based nucleic acid and protein quantification as well as colorimetric protein quantification.

Access to the Connect Platform or OneDrive cloud-based tools allows you to securely store, access, share, and manage data remotely (touchscreen models). Additionally, the intuitive SkanIt PC Software is powerful enough to address even the most challenging applications. Multiple languages are available whether the instrument is operated via the touchscreen or SkanIt Software.

With the Multiskan SkyHigh Microplate Spectrophotometer, you can switch between assays, measuring photometric signals from 200 to 1,000 nm. Instead of filters, this instrument uses a monochromator system with a proven optical design that helps ensure excellent sensitivity and unparalleled results. A full spectral scan can be run in just 10 seconds at 1 nm increments. The narrow measurement bandwidth helps ensure excellent spectral resolution.

Additional features include:

- Kinetic, spectral, and endpoint measurements for a variety of applications
- Separate optimized measurement modes for absorbance and turbidimetric measurements
- Reads µDrop and µDrop Duo plates for microvolume analysis of DNA, RNA, and protein
- Fast operation: full spectrum (200–1,000 nm) of a sample well is obtained in less than 10 seconds, and a full 96-well microplate is read in 6 seconds
- Compatible with 96- and 384-well microplates with and without lids or cuvettes, and plates with 6–48 wells without lids
- Performs onboard shaking and incubation for temperature-critical or cell-based assays
- Automation compatibility for integration with SkanIt Software automation interface
- Models with a touchscreen have ready-to-use built-in protocols for nucleic acid and protein quantification



thermofisher.com/multiskanskyhigh

Varioskan ALF Multimode Microplate Reader

The Varioskan ALF multimode reader is a versatile, entry-level multimode microplate reader designed for most common absorbance, turbidimetric, fluorescence, and luminescence microplate assays. Its photometric optical design is based on a xenon flash lamp and monochromator for enabling continuous wavelength selection from UV through the visible range up to 1,000 nm. The broad wavelength ranges enable many common assays including nucleic acid and protein quantification, bacterial growth curves, ELISA, and cell viability.

In the Varioskan ALF multimode reader, fluorescence and luminescence measurements are performed with filter-based optics for optimal specificity and sensitivity. The system comes with three preinstalled excitation and emission filter sets suitable for many common fluorometric applications like Invitrogen™ Quant-IT™ DNA quantitation assays, and Invitrogen™ PrestoBlue™ and alamarBlue™ cell viability assays. Additionally, five open filter positions are available for customized fluorometric and luminometric measurements. Filter slots are easy to access from the instrument side, and no additional tools are required for filter exchange. Also, commonly used FRET and BRET assays are easy to set up and perform thanks to the unique, filter-based optics design of the Varioskan ALF multimode reader.

The automatic gain adjustment feature selects the ideal fluorometric or luminometric reading range for your instrument based on signal intensity in the well, eliminating the need to manually adjust measurement parameters. The results are consistent no matter what signals are measured.

Additional features include:

- Kinetic and endpoint measurements for a variety of applications
- Spectral scanning for photometric measurements
- Separate optimized measurement modes for absorbance and turbidimetric measurements
- A self-diagnostics system that includes a set of initialization tests and adjustments ensuring instrument readiness
- Compatible with 6- to 384-well microplates, with and without lids
- Reads µDrop and µDrop Duo plates for microvolume analysis of DNA, RNA, and proteins
- Performs onboard shaking and incubation for temperature-critical assays
- Operated through SkanIt Software
  - Unlimited installation on multiple computers, no annual fee required
  - Includes an extensive cloud-based library of ready-made protocols
  - Two editions available—Research Edition for life sciences, Drug Discovery Edition with features for compliance with 21 CFR Part 11
  - Multiple user-interface languages available
  - Automation compatibility for integration with automation interface
- Thermo Scientific™ verification plates provide comprehensive and traceable validation of the instrument's optical performance; for more information, see **microplate reader accessories**

thermofisher.com/varioskanalf

Varioskan LUX Multimode Microplate Reader

Designed specifically for bioscience researchers with a wide variety of needs and assay requirements, the Varioskan LUX microplate reader comes equipped with a range of measurement technologies, including absorbance and fluorescence intensity with optional and upgradable modules for luminescence, TRF, and AlphaScreen assays.

The Varioskan LUX instrument supports the following measurement technologies:

- Absorbance (UV-Vis, including pathlength correction)
- Fluorescence intensity (including FRET)
- Luminescence (direct and filtered, including BRET)
- AlphaScreen and PerkinElmer™ AlphaLISA™ assays
- TRF (including TR-FRET, hTRF)

The instrument selects the measurement wavelength using filters or monochromators, depending on the technology.

- Monochromators in absorbance and fluorescence intensity
- Filters in AlphaScreen assays and TRF
- Luminescence without wavelength selection or optionally with filters

The instrument also allows spectral scanning for ultimate flexibility for identifying the optimal measurement wavelength for any assay.

Reagent dispensers

Varioskan LUX microplate readers can be equipped with up to two onboard dispensers, allowing for easy and accurate reagent addition. It supports simultaneous dispensing and measurement, enabling follow-up of kinetic reactions directly from the reaction onset, which is essential for flash-type luminescence reactions and Ca^{2+} studies.

The ability to add reagents in any order or in any phase of the kinetic assay allows execution of sequential multistep assays such as ATP and reporter gene assays.

Accurate temperatures with CO_2 and O_2 control

With a built-in incubator for temperature control up to 45°C, the Varioskan LUX device is well suited for temperature-critical applications, including certain enzyme assays and cell-based applications. The optional integrated gas module is designed to control CO_2 and O_2 concentrations precisely and simultaneously to help reduce time and labor for cell-based assays.

Automatic dynamic range selection

The Varioskan LUX microplate reader's automatic gain adjustment feature selects the ideal reading range for your instrument based on signal intensity in the well, eliminating the need to manually adjust measurement parameters.

The result is a consistent, reliable assay with optimal measurement settings no matter what signals are measured.

Instrument self-diagnostics, autocalibration, and built-in smart safety controls

At every start-up, a self-diagnostics system performs a complete set of initialization tests and adjustments to help ensure the instrument is ready for operation. The instrument also calibrates itself automatically at the beginning and during each run to help provide consistent results from assay to assay.

The Varioskan LUX device also uses advanced technology to avoid costly mistakes that can harm the instrument or waste precious time and reagents. With smart safety features, you get clear and timely alerts, anticipating mistakes before they occur. The smart safety features include:

- A plate check to help ensure that measurement or dispensing is not accidentally started without a microplate
- Prime and volume checks to help ensure that the dispenser is primed and volumes are correctly set
- Position sensors to verify that the dispensing heads are correctly placed
- A shaker check that controls the shaking speed and force based on plate format to help prevent accidental spillage

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Accessories

µDrop and µDrop Duo plates

µDrop plates provide a quick and easy measurement of microliter-scale nucleic acid and protein sample measurements down to volumes of 2 µL. The fixed path length of the plate allows straightforward calculations of nucleic acid concentrations of the samples.

Ready-made sessions are available on the touchscreen user interface of the Multiskan SkyHigh device and in SkanIt Software. These characteristics make µDrop plates an ideal tool for photometric DNA or RNA quantitation and purity analysis.

- Analyze up to 16 or 32 samples simultaneously (for µDrop or µDrop Duo plates, respectively)
- Quick and easy to wipe off samples in serial measurements
- Contains a dedicated holder for cuvette measurements

Verification plates

Thermo Scientific™ Multiskan™ Verification Plates and the Thermo Scientific™ Spectrophotometric Verification Plate allow you to verify parameters such as photometric accuracy, precision, and linearity, as well as wavelength accuracy and stray light radiation in a repeatable, robust, and easy format. The Multiskan Verification Plate is for use with filter-based instruments like the Multiskan FC photometer. The Thermo Scientific™ Lumiwell Luminometric Verification Plate is designed to be an independent relative light unit reference for luminometry with Thermo Scientific™ luminescence microplate readers. The Spectrophotometric Verification Plate is for use with monochromator-based instruments like Multiskan SkyHigh and Varioskan LUX devices. Additional features include:

- National Physical Laboratory (NPL) traceable reference material
- Ready-made protocol and performance calculations

We recommend recalibrating the verification plates regularly. The frequency of calibration is dependent on use and laboratory procedures. However, the recalibration should be performed at least every two years.

Microplate reader accessories

Ordering information

Description	Cat. No.
Multiskan FC Microplate Photometer	
Multiskan FC Microplate Photometer	51119000
Multiskan FC Microplate Photometer with incubator	51119100
Multiskan SkyHigh Microplate Spectrophotometer	
Multiskan SkyHigh Microplate Spectrophotometer	A51119500C
Multiskan SkyHigh Microplate Spectrophotometer with touchscreen	A51119600C
Multiskan SkyHigh Microplate Spectrophotometer with touchscreen and cuvette	A51119700C
Multiskan SkyHigh Microplate Spectrophotometer with touchscreen and µDrop Plate	A51119600DPC
Multiskan SkyHigh Microplate Spectrophotometer with touchscreen, cuvette, and µDrop Plate	A51119700DPC
Varioskan ALF Multimode Microplate Reader	
Varioskan ALF Multimode Microplate Reader	VA000010C
Varioskan LUX Multimode Microplate Reader	
Varioskan LUX Multimode Microplate Reader with fluorescence (top) and absorbance	VL0000D0
Varioskan LUX Multimode Microplate Reader with fluorescence (top), absorbance, and luminescence	VL0L00D0
Varioskan LUX Multimode Microplate Reader with fluorescence (top), absorbance, luminescence, and TRF	VL0L0TD0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom) and absorbance	VLB000D0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, and luminescence	VLBL00D0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and gas module	VLBL00GD0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and TRF	VLBL0TD0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, TRF, and gas module	VLBL0TGD0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, and TRF	VLBLATD0

Description	Cat. No.
Varioskan LUX Multimode Microplate Reader, continued	
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, TRF, and gas module	VLBLATGD0
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, and luminescence; 1 dispenser	VLBL00D1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and gas module; 1 dispenser	VLBL00GD1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and TRF; 1 dispenser	VLBL0TD1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, TRF, and gas module; 1 dispenser	VLBL0TGD1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, and TRF; 1 dispenser	VLBLATD1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, TRF, and gas module; 1 dispenser	VLBLATGD1
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, and luminescence; 2 dispensers	VLBL00D2
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and gas module; 2 dispensers	VLBL00GD2
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, and TRF; 2 dispensers	VLBL0TD2
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, TRF, and gas module; 2 dispensers	VLBL0TGD2
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, and TRF; 2 dispensers	VLBLATD2
Varioskan LUX Multimode Microplate Reader with fluorescence (top and bottom), absorbance, luminescence, AlphaScreen assays, TRF, and gas module; 2 dispensers	VLBLATGD2

Find out more at **thermofisher.com/platereaders**