

**Thermo Scientific**  
**Multiskan® Spectrum**



**UV/Vis microplate and cuvette spectrophotometer**  
**Everything for photometry in one instrument**

## Thermo Scientific Multiskan Spectrum – UV/Vis microplate and cuvette spectrophotometer

Thermo Scientific Multiskan Spectrum spectrophotometer offers a high number of capabilities in one instrument. It provides unlimited wavelength selection, measurement at low UV to visible wavelengths and both cuvette and microplate reading capabilities. Moreover, SkanIt Software allows easy assay set-up and powerful data handling.

### Multiskan Spectrum offers you

- Unlimited wavelength selection for easy swapping from one assay to another
- Both, cuvette and microplate reading capability
- Measurement at low uv to visible wavelengths
- Shaking and incubation up to 45° C for temperature critical applications
- Compatibility with robot systems for automation
- Easy assay setup with Thermo Scientific SkanIt Software

### Flexibility for your work with both cuvette and microplate reading in one instrument

The Thermo Scientific Multiskan Spectrum is truly two instruments in one, combining both cuvette reading capabilities and advanced microplate reading in one convenient, compact instrument. You can easily take quick absorbance measurements in a cuvette between the cycles of a microplate enzyme kinetics experiment. Additionally, you can use the cuvette port to optimize enzyme kinetics conditions before transferring kinetic protocols to microplate format. You can also scan the absorbance spectrum of a new dye in a cuvette to determine the optimum wavelength for microplate assays.

### Flexible sample formats from cuvette to screening assays

For maximum flexibility, Multiskan Spectrum accepts all microplate formats from 6- to 384-wells, as well as cuvettes from standard to ultramicro capacities in glass, plastic, or quartz. Multiple photometric readings per well can be taken on large volume cell culture plates.

### Unlimited wavelength selection for easy swapping of assays

The built-in monochromator makes it simple to select any wavelength from 200 nm to 1000 nm in 1 nm steps without ever changing a filter. Sample absorbances can be scanned over the whole spectrum either in microplates or cuvettes.

### Two cuvette ports for simplified measurements

For better long-term stability, the cuvette reader is dual beam, with both sample and reference beams. This feature enables scanning of the sample spectrum with simultaneous subtraction of the blank spectrum. Additionally, in kinetic assays the blank is automatically subtracted from the sample absorbance at each measurement.



### Incubator for controlled assay conditions

For temperature sensitive assays, e.g. enzyme assays, both the microplate chamber and the cuvette holders are temperature controlled up to 45° C.

### Logical assay setup using SkanIt Software

Our powerful SkanIt Software allows easy assay optimization, flexible data handling and convenient report formatting. The unique steplist feature makes assay setup highly visual and flexible, and the workflow logical and easy to follow.

There are two editions of SkanIt Software available: a Research Edition for scientists working in life science research, and a Drug Discovery Edition offering features needed for compliance with the FDA's 21 CFR Part 11, for the drug discovery industry.

### Results quickly and easily for efficiency

With its high optical performance, low UV measurement range and versatile plate formats, Multiskan Spectrum suits well applications where accuracy and flexibility are

essential. As compared to other techniques, Multiskan Spectrum can read the native absorbances of DNA, RNA and proteins without the need of sample derivatization. Multiskan Spectrum can perform both quantitation and purity assessments of nucleic acids in microplate format. With the pathlength correction function, the results obtained using the microplate can be directly compared with data from any spectrophotometer.

### Specially designed for automation

SkanIt Software has a special remote control interface for automation use, which enables easy integration with robotics and HIS/LIMS systems. The plate carrier allows both portrait and landscape gripping of the plate.

### IQ/OQ/PQ package for variable performance

An instrument qualification IQ/OQ/PQ package is available for the Multiskan Spectrum. It includes a step-by-step guide, checklists and signed documents for the instrument qualification process. The spectrophotometric verification plate is used for the optical performance qualification.



### Typical applications of Multiskan Spectrum

- Nucleic acid analysis
- Enzyme assays
- Protein analysis
- Kinetic assays
- Cytotoxicity/Proliferation assays
- Apoptosis assays
- ELISA assays

Technical specifications	
<b>Performance</b>	
Wavelength range	200 - 1000 nm
Read-out range	0 - 4 Abs
Linearity	0 - 3 Abs, $\pm 2\%$ at 450 nm
Accuracy	$\pm 1.0\%$ or $\pm 0.005$ Abs (0 - 2 Abs) $\pm 2.0$ Abs (2 - 3 Abs)
Precision	SD < 0.005 Abs or CV < 1% (0 - 2 Abs) CV < 2% (2 - 3 Abs)
Optical bandpass	2 nm
Wavelength accuracy	$\pm 1$ nm
Stray light	< 0.02% at 230 nm
<b>General specifications</b>	
Microplate types	6-, 12-, 24-, 48-, 96- and 384-well plates
Cuvette types	Two cuvettes for sample and reference From standard to ultramicro; glass, plastic or quartz
Wavelength selection	Tunable monochromator, 200 - 1000 nm in increments of 1 nm
Light source	10 W Xenon flash lamp
Detectors	Photodiodes
Incubator temperature range	Ambient (+25°C) +4°C to 45°C
Shaker	Plate: linear Cuvette: magnetic stirrer
Mains input	100 - 240 V (50/60 Hz) autoranging
Power consumption	200 VA
Dimensions	397 mm (W) x 217 mm (H) x 450 mm (D) [15.6" (W) x 8.5" (H) x 17.7" (D)]
Weight	12.5 kg (27.5 lbs.)

Ordering information	
51118600	Multiskan Spectrum with cuvette, 100 - 240 V, 50/60 Hz, SkanIt Software Drug Discovery Edition
51118650	Multiskan Spectrum with cuvette, 100 - 240 V, 50/60 Hz, SkanIt Software Research Edition
51118700	Multiskan Spectrum without cuvette, 100 - 240 V, 50/60 Hz, SkanIt Software Drug Discovery Edition
51118750	Multiskan Spectrum without cuvette, 100 - 240 V, 50/60 Hz, SkanIt Software Research Edition
5187030	SkanIt Software for Multiskan Spectrum, Research Edition
5187040	SkanIt Software for Multiskan Spectrum, Drug Discovery Edition
N03394	Spectrophotometric verification plate

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