

Thermo Scientific
GENESYS 30 Visible Spectrophotometer



Legendary Reliability Unrivaed Usability

Colorimetry Workhorse, Lab Ready, Simple Controls

Thermo
SCIENTIFIC
A Thermo Fisher Scientific Brand

Designed for Users, Designed for Results

The Thermo Scientific™ GENESYS™ 30 is the most thoughtfully designed spectrophotometer available today. Its high resolution color display, large sample compartment, and data export options meet modern expectations for students, educators and lab technicians. The GENESYS 30 blends the simplicity to satisfy novice students with the capabilities that labs need for accurate quantitative analysis.

System Benefits:

- Large sample compartment with front access simplifies sample handling
- High resolution color display
- Outstanding durability in challenging environments thanks to:
 - Waterproof screen
 - Sealed, rubberized keypad
 - Removable, washable sample compartment
 - Sloping surfaces that shed spills
 - Chemical resistant PC-ABS covers
- 3A linear measurement range for concentrated solutions
- Multi-point quant offers higher measurement confidence
- Traditional monochromator paired with advanced electronics delivers outstanding stability
- Scan mode for spectral analysis and interpretation
- Data any way you want it - excellent snap-on thermal printer or USB data export
- Expanded capabilities with optional VISION/ite software
- 2-year warranty

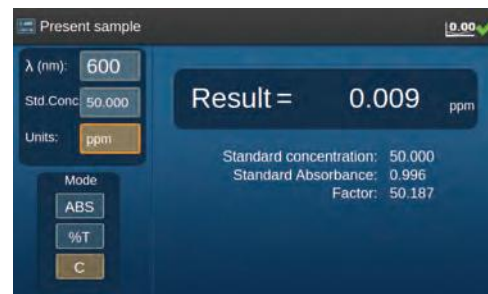


Optional Test Tube Accessory

Modern Power meets Traditional Simplicity

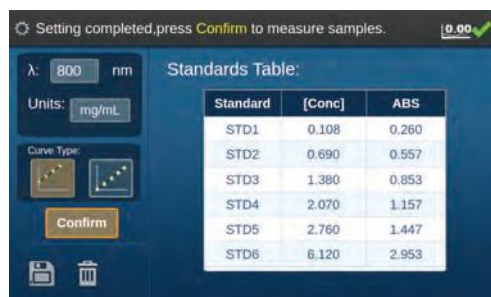
Live Display and Concentration Mode

Replicate the familiar display of absorbance or transmittance, and single standard concentration measurements of prior generation instruments in the GENESYS 30 Live Display mode. All your parameters are set and kept in view on a single screen as the calculated concentration updates every two seconds.



Fixed Mode

Apply a factor to an absorbance measurement at one wavelength, or measure at two wavelengths with two factors and perform addition, subtraction or division of the values. Display results for up ten samples then print, save or clear your data before going on to the next sample series.



Quantitative Analysis with up to Six Standards

Go beyond the basic spectrophotometer by recording and storing up to six standards to calibrate your method. Choose a linear fit with an intercept or forced through zero. Name and save your method on the instrument or back it up to a USB memory device. All data are recorded with an index number (S1 – S10) and a time stamp. The result table accommodates up to ten samples for you to print or save before going on to the next sample series or analysis.

Go negative!

Some methods call for blanking the instrument on a dark standard and reading absorbance in the negative range. Most single beam instruments cannot measure below -0.3A. GENESYS 30 uses advanced signal processing to deliver stable, reliable results down to -3A.





Modern Convenience

The GENESYS 30 gives you complete confidence in your results with outstanding stability and accuracy.

Simple to Sophisticated:

The GENESYS 30 has the flexibility to perform routine analysis one minute and complex analytical methods the next. The custom Analyzer mode enables you to build your formula with up to six wavelengths, six factors, standard arithmetic operators and absorbance values raised to the 2nd or 3rd power. Use the included Windows® application to design your method. Transfer the method to your GENESYS 30 and run it with the touch of a button. Analyzer mode shows your method name and a continuous display of your results. Technicians can write the result down or print it with a time stamp using the printer accessory.

Smarter by Design:

GENESYS 30 offers the convenient SmartStart™ feature that has delighted GENESYS 10S users since its introduction. The SmartStart menu gives you direct access to your 12 favorite methods. Allowing you to work smarter, not harder.

Snap on Printer:

Fast and clear printing when you need it. Add printing capability to your instrument. The snap-on thermal printer installs in moments.

Quick and Simple Lamp Replacement:

No need to remove the cover, just loosen two screws, slide out the old lamp fitting and slide a new one back in. Everything is pre-aligned, just let the new lamp warm up and go back to work.



At Home in the Instructional Laboratory

GENESYS spectrophotometers are core teaching instruments in chemistry and biology laboratories around the world. The Thermo Scientific™ GENESYS™ 30 allows students and teachers to focus on examining scientific data and learning scientific concepts instead of learning instrumentation.

Easy to Teach, Easy to Learn

Clearly labeled, uniquely colored keys simplify instrument operation. New users require little or no training.

Get Working – Faster!

Large, color digital screen and numeric keypad help you set up methods faster. Simplified software interface gives users maximum control and efficiency.

Designed for Today, Built for Tomorrow – Inside and Out!

On the inside, GENESYS 30 uses advanced optics, electronics and signal processing to deliver superior measurement performance for its class. On the outside, GENESYS 30 presents a tough exterior built to last for years in the most demanding environments.

- Resistant to spills
- Removable and washable sample compartment
- The sample compartment lid
 - stays where you put it - open or closed
 - has a magnetic latch to hold it closed during measurements
 - is customer-replaceable should it get broken through abuse



Simple and Familiar

Open the Live Display application with a single button-press to monitor the absorbance or transmittance live – just like a GENESYS 20 or SPECTRONIC 20. The spectrum indicator shows the color of light being absorbed.

Special support for OD 600 and test-tube measurements

For measurements in test-tubes, the test-tube holder accessory accommodates 100mm x 13mm test-tubes with the lid closed. Or add the tall test-tube adaptor to use larger diameter, taller tubes (up to 150mm, 6 inches) with the lid open. Special OD600 mode for cell growth measurements. Select it from the Home menu and go! No method setup required.

Scanning: Simple and Fast

Find peaks in the spectrum of your sample by scanning across the spectrum in any range from 325nm to 1100nm with 1nm precision and noise-free peaks up to 3A. Use the cursor and zoom controls to identify λ_{\max} .

Data you can use

- Print your scan and stick it into a lab notebook using the printer accessory and optional self-stick printer paper.
- Save the data points of your scan to a USB memory device and load the data into a spreadsheet or graphing program for optimal reporting.



Extend Your
Capabilities

VISION*lite* Software

For users who need the power of computerized data analysis, optional Thermo Scientific™ VISION*lite*™ software pairs a simple user interface with a wider range of options for experiment design and data analysis.

Scan Application:

- Automated peak pick and label
- Overlay spectra and print the results

Kinetics Application:

- Data intervals as low as 1 second
- Enzyme rate calculation with factor

Quantitative Analysis:

- Up to 100 standards
- Linear, quadratic or cubic data fits

Performance Verification:

- Full suite of tests to verify performance of your instrument
- Pre-loaded pass/fail limits specific to your instrument

Running your instrument from VISION*lite* means having unlimited storage of methods and data on your computer's hard drive. You can also copy and paste data into other applications seamlessly and print out your results in VISION*lite*'s well organized report templates.

GENESYS 30 Accessories



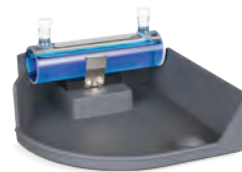
840-277500
Test-Tube holder



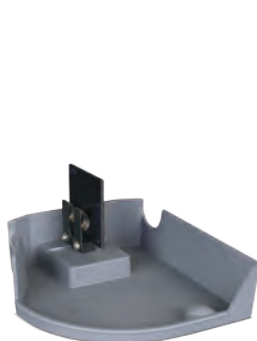
840-277600
Tall Test-Tube Cap



840-277700
Long Path
Rectangular Cell Holder



840-277800
5-100mm Path
Cylindrical Cell Holder



840-278100
Film/Filter Holder



840-278200
Accessory Kit For Hose Entry/Exit



840-278000
Printer Accessory

Performance Verified!

Do you need to document that your instrument is performing to specification? Order a set of SPECTRONIC™ Standards Certified Reference Materials, calibrated in our ISO 17025 certified calibration laboratory. The SPECTRONIC Standards 2 kit contains all the standards and filters you need to measure and document your instrument's performance. GENESYS 30 gives you confidence in your results.

Genesys 30 Spectrophotometer

Specifications

| | |
|-------------------------------------|---|
| Optical Design | Single Beam |
| Spectral Bandwidth | 5nm |
| Light source (Typical Service Life) | Tungsten-Halogen (>1000 Hrs) |
| Detector | Silicon Photodiode |
| Wavelength | |
| Range | 325nm – 1100nm |
| Accuracy | ± 2nm |
| Repeatability | < ±1nm |
| Scan speed | Automatic – up to 1200nm/min |
| Data resolution | 1nm |
| Photometric | |
| Range | -3A to +3A |
| Display | -3A to +3A, 0 to 200 000 %T, 0 to 9 999 999 C |
| Accuracy | ±0.002A (0 - 0.3A) 0.5% of ABS reading (0.301A - 2.5A) |
| Repeatability ¹ | ± 0.002 A |
| Noise ² | ≤0.001A at 0A ≤0.001A at 1A ≤0.002A at 2A |
| Drift ³ | <0.002A/Hr |
| Stray Light ⁴ | <0.1%T at 340nm and 400nm |
| Baseline Flatness ⁵ | <0.003A |
| Display | 5" diagonal, 32 bit color display, 800 x 480 pixels |
| Keypad | Tactile rubber 23 keys with numeric keypad |
| Sample compartment | Accessible from top, front or side Able to accommodate cells up to 100mm pathlength Available accessory for test-tubes up to 25mm diameter and 150mm height Removable, washable sample compartment liner with magnetic placement and hold-down |
| Printer | Thermal printer accessory with 80mm width paper |
| Connectivity | USB-A on front face supports flash memory devices for method and data storage USB-B on side supports connection to a Windows™ computer running optional remote control software. |
| Languages | English, Spanish, German, French, Italian, Portuguese, Russian, Chinese, Japanese, Korean, Thai, Arabic |
| Dimensions | 35.5cm x 38.5cm x 19.5cm (L x W x H) |
| Weight | 7.5 kg |
| Power Requirements | External AC to DC converter. Voltage and Hz selected automatically, 100-240 volts, 50-60Hz. |
| Warranty | 2 years standard with one year extension upon registration of the instrument with Thermo Fisher Scientific within 6 months of purchase |

¹ Measured at 1.0 A @546nm

² RMS at 500nm. 60 consecutive measurements

³ At 500nm after 2hr warmup. Typical <0.004A/hr after 1hr warmup

⁴ Measured using glass cutoff filters or NaNO₂ at 340nm

⁵ 325nm – 1000nm smoothed

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USA +1 800 532 4752

Ordering Information

| Description: | Part Number: |
|------------------------------------|--------------|
| GENESYS 30 with US line cord | 840-277000 |
| GENESYS 30 with Europlug line cord | 840-277300 |
| GENESYS 30 with UK line cord | 840-277400 |
| GENESYS 30 with India line cord | 840-277200 |

Optional Accessories and Software

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|--|------------|
| Printer Accessory for GENESYS 30 | 840-278000 |
| Standard printer paper for GENESYS 30 | 840-278300 |
| Self stick printer paper | 840-259800 |
| Test-tube holder for GENESYS 30 | 840-277500 |
| Tall test-tube cap for GENESYS 30 | 840-277600 |
| Long path rectangular cell holder for GENESYS 30 | 840-277700 |
| 5-100mm path cylindrical cell holder for GENESYS 30 | 840-277800 |
| Film/filter holder for GENESYS 30 | 840-278100 |
| Accessory kit for hose entry/exit | 840-278200 |
| Thermostatted 10mm cell holder (no baseplate) | 335079-000 |
| Pre-aligned replacement lamp assembly for GENESYS 30 | 840-278700 |
| SPECTRONIC Standards 2 kit | 840-253100 |
| Photometric accuracy and linearity test kit | 840-253000 |
| Holmium and didymium wavelength standards | 840-253200 |
| VISION <i>lite</i> 5 Software | 834-091300 |
| VISION <i>lite</i> 5 Software 6-user license | 699-129900 |
| VISION <i>lite</i> 5 Software 12-user license | 699-130000 |