

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<sup>lite</sup> 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.

Present sample 0.00

$\lambda$  (nm):

Std. Conc:

Units:

Mode

Result = **0.009** ppm

Standard concentration: 50.000  
Standard Absorbance: 0.996  
Factor: 50.187

Setting completed, press **Confirm** to measure samples. 0.00

$\lambda$ :  nm

Units:

Curve Type:

Standards Table:

Standard	[Conc]	ABS
STD1	0.108	0.260
STD2	0.690	0.557
STD3	1.380	0.853
STD4	2.070	1.157
STD5	2.760	1.447
STD6	6.120	2.953

## 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  $\lambda_{\max}$ .

## 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<sup>lite</sup> Software

For users who need the power of computerized data analysis, optional Thermo Scientific™ VISION<sup>lite</sup>™ 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<sup>lite</sup> 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<sup>lite</sup>'s well organized report templates.

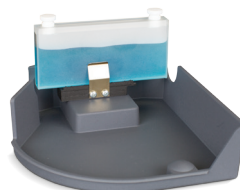
## GENESYS 30 Accessories



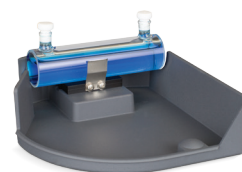
**840-277500**  
**Test-Tube holder**



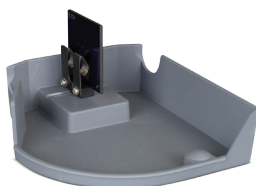
**840-277600**  
**Tall Test-Tube Cap**



**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 <sup>1</sup>	± 0.002 A
Noise <sup>2</sup>	≤0.001A at 0A ≤0.001A at 1A ≤0.002A at 2A
Drift <sup>3</sup>	<0.002A/Hr
Stray Light <sup>4</sup>	<0.1%T at 340nm and 400nm
Baseline Flatness <sup>5</sup>	<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

<sup>1</sup> Measured at 1.0 A @546nm

<sup>2</sup> RMS at 500nm. 60 consecutive measurements

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

<sup>4</sup> Measured using glass cutoff filters or NaNO<sub>2</sub> at 340nm

<sup>5</sup> 325nm – 1000nm smoothed

## 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

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 <sup>lite</sup> 5 Software	834-091300
VISION <sup>lite</sup> 5 Software 6-user license	699-129900
VISION <sup>lite</sup> 5 Software 12-user license	699-130000

[www.thermofisher.com](http://www.thermofisher.com)

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