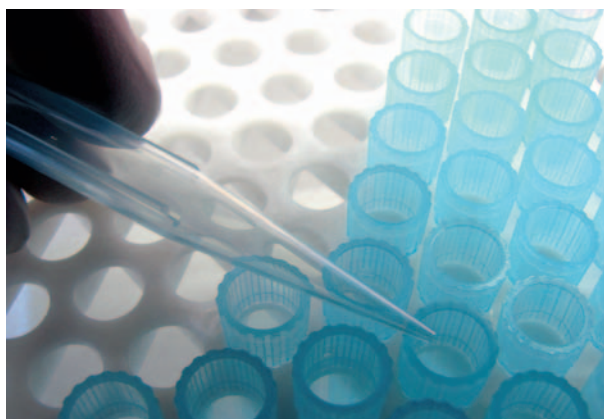


Thermo Scientific GENESYS 20

Unmatched simplicity and
reliability for routine analysis

The Thermo Scientific GENESYS 20 is a low-cost, easy-to-use, and reliable Visible spectrophotometer designed to meet the requirements of teaching and routine laboratories. A simple, 4-step measurement process and optional Thermo Scientific VISION/ite software make the GENESYS 20™ the most cost-effective, Visible spectrophotometer available.



For over 60 years, customers in world-renowned research institutions, industrial QA/QC laboratories, and teaching institutions have relied on Thermo Scientific spectrophotometers. Built on the ruggedness and reliability of the Thermo Scientific SPECTRONIC 20 instruments, the GENESYS 20 sets a new standard for ease-of-use and reliability.

System Benefits:

- Easy operation and reliable optical system ensure fast, accurate results
- Versatile accessories enhance sampling and increase productivity
- Small size saves valuable lab space
- Low cost to stretch your budget
- Multiple-purpose capabilities to measure a wide range of analytes

Designed for Reliability

With only four moving parts there is little potential maintenance. The optical design incorporates a grating monochromator providing a compact system and a wavelength range of 325 to 1100 nm.

Sampling Flexibility

A variety of sample holders and accessories offer measurement flexibility for teaching laboratories and routine use. These accessories enable fast, efficient measurements for many samples.

Compact, Low-cost Spectrophotometer with all the Essentials for Teaching and Routine Use

Intuitive Design Provides Maximum Ease-of-use

The built-in keyboard and 2-line, 20-character LCD readout displays data and simple instructions. Samples can be measured in just 4 quick steps:

1. Select wavelength
2. Select mode (Abs, %T, C)
3. Insert Blank and press 0 Abs/100%T
4. Insert sample and observe or print readings



The simple operation of the GENESYS 20 makes it ideal for students and technicians

More Bench Space

The compact design saves valuable bench space, leaving room for additional laboratory equipment. The built-in printer delivers a high-quality printout of data without increasing the system footprint. With its small footprint and low weight of only 10 pounds, the GENESYS 20 is easy to store when not in use, ideal for educational laboratories.

Low Cost of Ownership

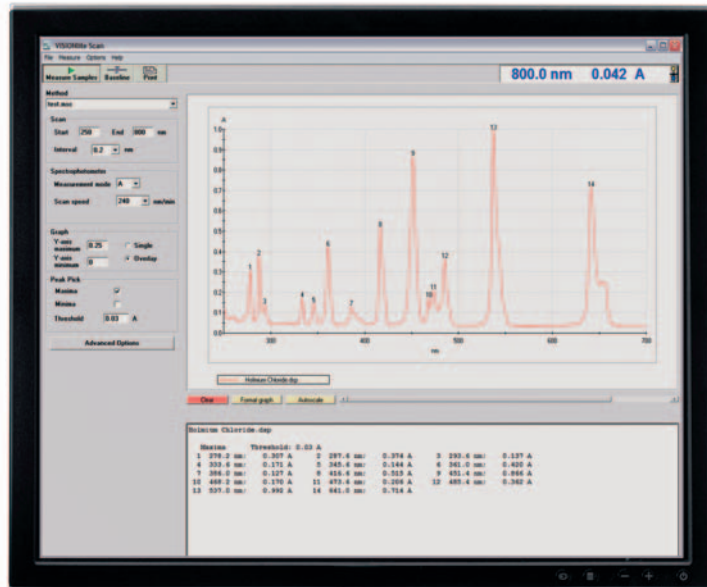
The GENESYS 20 is designed for routine use and maximum reliability. With very few moving parts, the GENESYS 20 provides a robust system you can count on for years of trouble-free operation.

Versatile Accessories Boost Productivity

The GENESYS 20 sample compartment is designed to handle a wide range of test tubes, cuvettes, vials, and a solid sample holder accessory. The standard cell holder provided with the instrument is compatible with 10 mm cuvettes and 10 mm test tubes. To save time and increase productivity, there is no need to change holders when switching between test tubes and rectangular cuvettes.

Optional sample accessory holders are available to accommodate:

- 1.0" diameter test tubes which allow measurement of lower concentration samples without reducing sample volume.
- COD test tubes, such as those used in the HACH COD kit, eliminate the need to transfer your reacted sample to another cell.



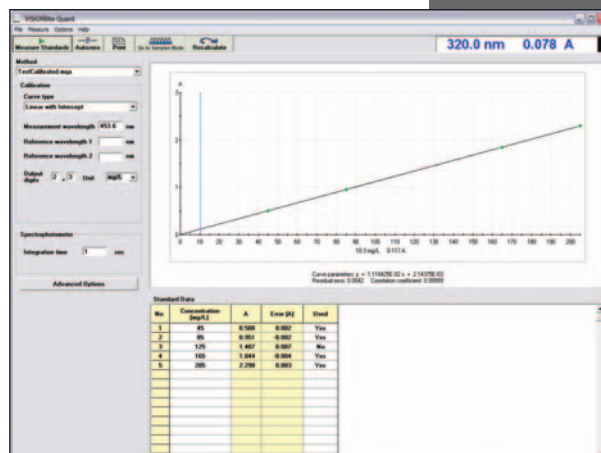
- Cylindrical or rectangular long pathlength cells up to 50 mm provide enhanced sensitivity for low concentration samples.
- Solid sample holder accessory for measurement of glass or plastic samples in either Absorbance or % Transmittance mode.
- Short pathlength cells are available for both rectangular and cylindrical designs. Short pathlength cylindrical cells fit automatically in the cylindrical cell holder. These are ideal for measuring high concentration or highly absorbing samples without dilution.

Additional Flexibility with PC Control Application Programs

There are a range of PC-control application programs available for the GENESYS 20 series instruments:

- The standard PC-control software, *VISION/ite™*, consists of applications for wavelength scanning, fixed multi-wavelength analysis, quantitative analysis, and kinetics.
- For food and beverage customers, EnzLab, an analyzer software application for enzymatic food analysis is available.
- Industrial liquid color and transmission color measurements can be performed using the *VISION/ite ColorCalc* software.
- Luminous transmittance of glass or plastic materials is available from the *VISION/ite MaterialsCalc* software.

Each of these application packages completely controls the GENESYS 20 spectrophotometer.



The Quant application of the VISION/*lite* software automates sample concentration measurements based on either a standard curve or an entered calibration factor. Standard curve graphs, tabular data and calibration curve fitting parameters are viewed on one screen. Use up to 20 standards and 4 different curve fitting options to measure your most demanding samples.

Accessories for Your Sample

The design of the GENESYS 20 cell holders means no tools are required to change from one accessory to another. Simply click the accessory holder in place, and you are ready to go.



COD Vial Holder



Cylindrical Long Pathlength Cell Holder



Rectangular Long Pathlength Cell Holder



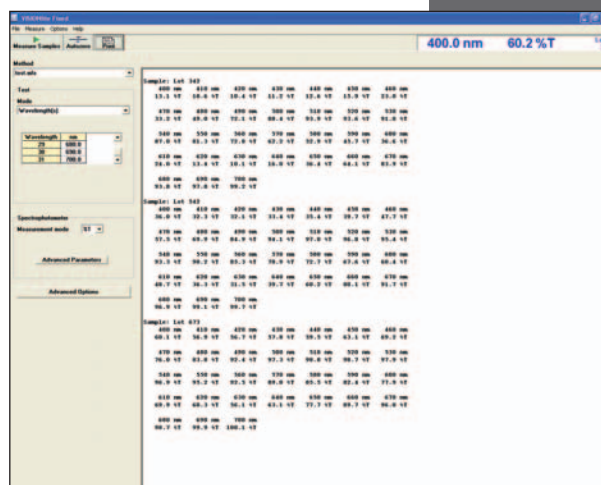
Single Cell Holder



Test Tube Holder



Solid Sample Holder



The fixed wavelength analysis application of the VISION*lite* software performs measurements at one to 31 wavelengths. More advanced features allow reference wavelength correction, wavelength addition, subtraction, multiplication and division, and correction factors for more complex analyses. The VISION*lite* software allows you to import or export data in CSV or ASCII format.

Product Specifications

GENESYS 20 Spectrophotometer

Part Number 4001 & 4004 Series

Optical Design	Single beam
Spectral Bandwidth	≤ 8 nm
Light Source (Typical Service Life)	Tungsten-Halogen (1000 hours)
Detector	Silicon Photodiode
Wavelength	
Range	325 to 1100 nm
Accuracy	± 2.0 nm
Photometric	
Range	-0.1- 2.5A; 125%T, 0-1999C
Readout	Absorbance, % Transmittance, Concentration
Accuracy	± 0.003A from 0.0 to 0.3A 1.0% from 0.301A to 2.5A, NIST 930D filters
Noise	≤ 0.001A at 0A ≤ 0.004A at 2A, 500 nm
Drift	0.003A/hour
Stray Light	< 0.1%T at 340 nm and 400 nm
Display	20-character, 2-line LCD
Keypad	Sealed Membrane Keypad
Standard Interfaces	RS-232C and Centronics ports
Languages	Software, printouts and operator's manual: English, French, German, Spanish, Italian (user selectable)
Power Requirements	Selected automatically; 100-240 Volts
Dimensions	30 cm W x 33 cm D x 19 cm H (12" W x 13" D x 7" H)
Weight	4.5 kg (10 lbs)
Warranty	1 Year

Ordering Information

Description	Part Number
GENESYS 20, 120 V (US line cord)	4001-000
GENESYS 20 with Printer, 120 V (US line cord)	4004-000
GENESYS 20, 240 V (Euro CE line cord)	4001-03
GENESYS 20 with Printer, 240 V (Euro CE line cord)	4004-03
GENESYS 20, 240 V (UK CE line cord)	4001-04
GENESYS 20 with Printer, 240 V (UK CE line cord)	4004-04

Optional Software and Accessories

Application Software	Part Number
VISION/ite	335993-000
EnzLab Enzymatic Food Analysis Software	10041001
VISION/ite ColorCalc Basic	869-124300
VISION/ite ColorCalc Advanced	869-124400
VISION/ite MaterialsCalc	869-124500

Sample Holders	Part Number
Single Cell Holder	4010-000
Cylindrical Cell Holder (up to 50 mm)	4011-000
Rectangular Cell Holder (up to 50 mm)	4012-000
COD Vial Cell Holder	4014-000
1" Test Tube Holder (1" pathlength up to 104 mm tall)	4015-000
Solid Sample Holder (up to 8 mm thick)	4028-000

Miscellaneous	Part Number
Serial RS232C Cable for PC Connection	335942-000
Absorption Spectroscopy Wall Chart (24" x 36")	333114-000

©2008, 2009 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.
Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

www.thermo.com/uv-vis

PS51495_E 02/09M

Africa-Other +27 11 570 1840	Denmark +45 70 23 62 60	India +91 22 6742 9434	South Africa +27 11 570 1840
Australia +61 2 8844 9500	Europe-Other +43 1 333 50 34 0	Italy +39 02 950 591	Spain +34 914 845 965
Austria +43 1 333 50 34 0	Finland/Norway/Sweden	Japan +81 45 453 9100	Switzerland +41 61 716 77 00
Belgium +32 2 482 30 30	+46 8 556 468 00	Latin America +1 608 276 5659	UK +44 1442 233555
Canada +1 800 530 8447	France +33 1 60 92 48 00	Middle East +43 1 333 50 34 0	USA +1 800 532 4752
China +86 10 8419 3588	Germany +49 6103 408 1014	Netherlands +31 76 579 55 55	www.thermo.com

Thermo
SCIENTIFIC