CORPORACIÓN AUTÓNOMA REGIONAL DEL CAUCA

PROPUESTA

INNOVATEKS.A.

Cotización Espectrofotómetro UV-VIS, modelo Genesys 50, marca Thermo Scientific



Señores:

CORPORACION AUTONOMA REGIONAL DEL CAUCA C.R.C

Atn.: Sr. Diego Zuluaga Vera

Laboratorio Ambiental

Popayán

Asunto: Cotización espectrofotómetro UV-VIS, modelo Genesys 50 con software, marca Thermo Scientific

Referencia: TEK-Q-1467-25

Fecha: Julio 03 de 2025

Apreciados Señores:

Reciban un cordial saludo del equipo de trabajo Innovatek.

En un mundo dinámico donde la productividad y la calidad tienen gran incidencia en cada labor realizada, Innovatek se compromete a contribuir al desarrollo tecnológico de su Organización, combinando un portafolio de productos y servicios de alta calidad, un completo equipo de profesionales en las áreas de Química e Ingeniería y teniendo como insignia nuestros valores corporativos, a continuación nos permitimos presentar la siguiente propuesta:

NUESTRA OFERTA

ITEM	CANT.	REFERENCIA	DESCRIPCIÓN
1	1	840-298000	GENESYS 50 UV-Vis with USA Power Cable
2	1	1UV10	Celda en cuarzo, cuadrada con tapa de 10mm
3	1	840-312300	VISIONlite 5.4 Software + Cable for GENESYS 40-180
4	1	869-175600	VISIONlite ColorCalc 5.6
5	1	PC-5	Computador de escritorio I5

VALOR SUB TOTAL	$ $58,924,369.75
IVA 19%	$ $11,195,630.25
VALOR TOTAL	$ $70,120,000.00

Moneda: Pesos Colombianos

Validez de la Oferta: Agosto 03 de 2025

ESPECIFICACIONES TÉCNICAS

ITEM	REFERENCIA	DESCRIPCIÓN
1	840-298000	GENESYS 50 UV-Vis Realice mediciones de rutina para control de calidad (QC) o para enseñanza de química, con los espectrofotómetros GENESYS™ 50 UV-Visible y GENESYS 40 Vis de Thermo Scientific. Ofrecidos en una única configuraión de celda, estos instruemtnos están diseñados con una superficie inclinada para evitar derrames, y un compartimiento de muestreo lavable para una fácil limpieza. Un monitor touchscreen de 7 pulgadas, software de control local (no se necesita un pc), y una red pronta para wi-fi, hacen de los espectrofotómetros GENESYS™ 50 UV-Visible y GENESYS 40 Vis, la opción ideal para propósitos de muestreo. El GENESYS 50 es un espectrofotometro UV-VISde haz dual con una configuración de celda que cumple con todas las especificaciones para aplicaciones de control de calidad críticas así como mediciones químicas precisas. El espectrofotómetro de haz dual GENESYS 40 es una versión regional de espectro visible en esta clase de instrument. Ambos presentan resolución de datos de 0.2 nm a 5 nm. Características: Pantalla touchscreen de 7 pugadas de alta resolución con interfaz de usuario Control local para velocidad y confiabilidad Capacidad de trabajo en red (Wi-Fi listo) Gran compartimiento de muestras con acceso frontal Diseño óptico: Rayo dual. Ancho de banda espectral: 2 nm Fuente de luz (Vida útil típica): Lámpara de xenón, más de 5 años de vida util Detector: Fotodiodo de silicio Rango de longitud de onda: 190 - 1000 nm Exactitud longitud de onda: ±0.5 nm Repetibilidad longitud de onda: menor ±0.2 nm Velocidad de escaneo longitud de onda: lento, medio y rápido hasta 1600 nm/min Resolución de datos longitud de onda: 0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm Rango fotométrico: -2A a +3.5A Display fotométrico: -3A a +5A Exactitud fotométrica: ±0.002A a 0.5A, ±0.004A a 1.0A, ±0.008A a 2.0A Repetibilidad fotométrica: ±0.001A a 1A Ruido fotométrico: ≤0.00020A a 0A en 260 y 500 nm, ≤0.00030A a 1A en 260 y 500 nm, ≤0.00040A a 2A en 260 y 500 nm Deriva fotométrica: menor a 0.0005A/Hr Luz difusa: menor a 1.0%T 198 nm (KCl) , menor 0.05%T a 220 nm (NaI), menor a 0.03%T a 340 nm (NaNO2) Línea base: ±0.002A Display: 7 pulgadas táctil de color, alta definición, 800 × 1280 pixeles Teclador: Táctil

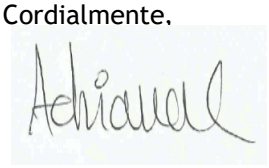
		Compartimiento de muestra: Carrusel de 1 posición, removible, lavable, con ajuste magnético. Conectividad: USB-A frontal soporta memoria para almacenamiento de métodos y datos Lenguajes: Inglés, español, alemán, francés, italiano, portugués, ruso, japonés, chino, koreano, tailandés Dimensiones (L × W × H): 35.5 × 38.5 × 19.5 cm Peso: 7,5 kg Alimentación: 100–240 volts, 50–60 Hz. Conversor externo AC a DC.
2	1UV10	Celda en cuarzo, cuadrada con tapa de 10mm •(190-2500nm) •Paso óptico: 10mm Cantidad: 1 Presentación: Caja x 1
3	840-312300	VISIONlite 5.4 Software + Cable for GENESYS 40-180
4	869-175600	VISIONlite ColorCalc 5.6
5	PC-5	Computador procesador intel Core i5 de novena generación, (Si tiene disco de estado sólido,el disco de estado sólido, no mayor de 250 GB y con respaldo de HDD),memoria RAM 4 Gigas, Disco duro HDD de 1 TB, Sistema operativo Windows 10 , Office 2016 con licencia

CONDICIONES COMERCIALES:

Moneda:	Pesos Colombianos
Modalidad de entrega:	DDP: Instalaciones del usuario.
Validez de la cotización:	Agosto 03 de 2025
Forma de pago:	De acuerdo a lo establecido en el pliego de condiciones
Plazo de entrega:	6 - 8 semanas después de recibida su orden de compra Los tiempos de entrega pueden variar de acuerdo a despacho de fábrica.
Garantía:	Doce (12) meses a partir de la instalación a satisfacción del equipo o catorce (14) meses desde la confirmación de recepción o aviso de llegada, según ocurra primero.Incluye mano de obra y repuestos por defectos de fabricación. No cubre danos por agentes externos.
Visitas de mantenimiento:	Se realizaran 1 visitas de revisión técnica preventivas y las revisiones correctivas requeridas.
Instalación y calificación:	Se llevará a cabo por personal profesional de *Innovatek S.A.S.*, una vez las condiciones de instalación sean óptimas. El instrumento se entregará instalado y operativo de acuerdo a los protocolos del fabricante.
Capacitación:	Será dado por personal profesional de *Innovatek S.A.S.* y, cubrirá los principales aspectos teóricos de la técnica, instrucciones de operación de los equipos y del software e instrucciones sobre el mantenimiento preventivo de los instrumentos.

Observaciones: La TRM se liquidará a la fecha de la facturación

Cordialmente.



ADRIANA CIRO.
Ejecutiva de Ventas
Cel: 311 863 46 04

CONTACTENOS:
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thermoscientific



Thermo Scientific GENESYS Vis and UV-Vis Spectrophotometers

Legendary reliability. Unrivaled usability.

ThermoFisher SCIENTIFIC

GENESYS—developed for users, designed for results

Built on the foundation of 60 years of spectroscopy experience, the next generation Thermo Scientific™ GENESYS™ family of Vis/UV-Vis spectrophotometers provides exceptional performance with a contemporary design.

- Start taking measurements immediately with the simple-to-use, high-resolution, color-display start menu
- Exchange samples with ease with large, accessible sample compartment
- Save your data fast any way you want it with multiple data-export options

There is a GENESYS spectrophotometer you can count on to provide accurate, reproducible results for your application requirements.



Outstanding features to help you meet your teaching, quality

For teaching labs, research labs and industrial QC requiring robust construction, ease-of-use and software capability.



GENESYS 30 Visible Spectrophotometer

Modern power meets traditional simplicity

- The gold standard in basic spectrophotometers
- Large sample compartment supports the use of cuvettes and test tubes
- Removable, washable compartment liner for easy clean-up
- Ideal solution when OD600 is your primary need



GENESYS 40 Vis/50 UV-Vis Spectrophotometers

Advanced usability, modern functionality

- 7-inch, high-resolution touchscreen interface
- Local control increases speed and reliability for routine analysis
- Large sample compartment with front access simplifies sample handling
- Wi-Fi ready—save data and methods, print results from on-board control

Choose the instrument that's right for you

Instrument	Spectral region	Optics	Display
GENESYS 30	Vis	Single Beam	5-inch color screen
GENESYS 40	Vis	Dual Beam	7-inch touchscreen
GENESYS 50	UV-Vis		
GENESYS 140	Vis	Dual Beam	7-inch touchscreen, tiltable
GENESYS 150	UV-Vis		
BioMate 160	UV-Vis	Dual Beam	7-inch touchscreen, tiltable
GENESYS 180	UV-Vis	Double Beam	7-inch touchscreen, tiltable

**8-cell changer comes standard with the GENESYS 180* ***Three-year warranty available upon instrument registration*

control and research UV-Vis needs

For advanced teaching labs, R&D, research and life science applications requiring higher throughput or temperature control.

For laboratories requiring double beam with a reference cell position.



GENESYS 140 Vis/150 UV-Vis Spectrophotometers

Elite performance, enhanced capabilities

- Tiltable 7-inch, high-resolution touchscreen tablet to avoid glare
- Compatible with automated cell changers, Peltier, sipper and fiber optic probe accessory options
- Wi-Fi ready—save data and methods, print results from local control



Thermo Scientific™ BioMate™ 160 UV-Vis Spectrophotometer

Life science enabled

- Includes Life Science Application Software package
- Software includes pre-programmed life science methods such as Nucleic Acid A260; Protein A280 and A205; Protein Colorimetric assays and OD600
- Extend your capabilities with a microcell holder or Peltier thermostatted cell holder or cell changer option



GENESYS 180 UV-Vis Spectrophotometer

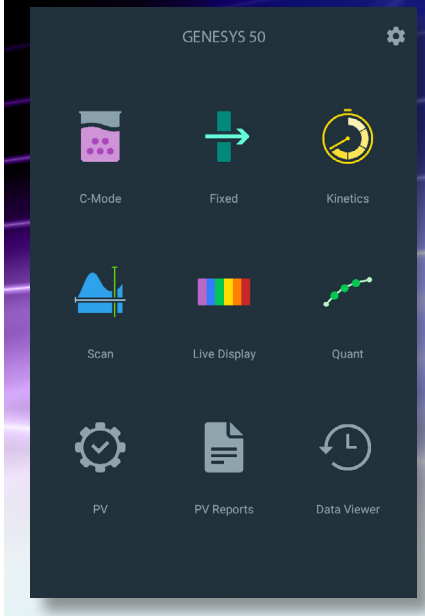
High-throughput ready

- Double-beam optics
- Ideal solution when a reference beam is required, such as for kinetics
- 8-cell changer standard
- Make measurements outside the sample compartment without cuvettes using fiber optic coupler and probe

Supports test tubes	Removable and washable sample compartment	4 and 8-cell changer compatible	Sipper, Peltier, fiber probe compatible	A-T-C	Scanning	Quant, fixed, live display, OD600	Kinetics	Thermo Scientific™ VISION*lite*™ software compatible	Wi-Fi ready	Snap-on printer available	Warranty
✓	✓	Single only		✓	✓	✓		✓		✓	2 years**
✓	✓	Single only		✓	✓	✓	✓	✓	✓	✓	2 years**
		✓	✓	✓	✓	✓	✓	✓	✓	✓	2 years**
		✓	✓	✓	✓	✓	✓	✓	✓	✓	2 years**
		✓*	✓	✓	✓	✓	✓	✓	✓	✓	2 years**

Walk-up convenience

Simple-to-use, touchscreen user interface features the methods and applications most important to you.



Flexible computer control

Optional VISION*lite* software offers complete control from a Microsoft® Windows® computer providing applications for:

- Scanning
- Quantitative analysis
- Kinetics
- Fixed wavelength measurements

GENESYS instrument specifications

Description		GENESYS 30	GENESYS 40	GENESYS 140	GENESYS 50	GENESYS 150	BioMate 160	GENESYS 180
Optical Design		Single Beam	Dual Beam					Double Beam
Spectral Bandwidth		5 nm	2 nm					
Light source (Typical Lifetime)		Tungsten-Halogen (>1000 hours)	Xenon Flash Lamp (>5 years typical, 3 years guaranteed)					
Detector		Silicon Photodiode	Dual Silicon Photodiodes					
Wavelength	Range	325–1100 nm	190–1100 nm					
	Accuracy	±2 nm	±0.5 nm					
	Repeatability	<±1 nm	<±0.2 nm					
	Scan Speed	Automatic—up to 1200 nm/min	Automatic— up to 1800 nm/min		Slow, medium and fast (up to 1600 nm/min)			
	Data Resolution	1 nm	0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm					0.1 nm, 0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm
Photometric	Range	–3A to +3A	–3A to +3.5A		–2A to +3.5A			
	Display	–3A to +3A, 0 to 200 000 %T, 0 to 9 999 999 C	–3A to +5A					
	Accuracy	±0.002A (0–0.3A) 0.5% of ABS reading (0.301A – 2.5A)	±0.002A at 0.5A ±0.004A at 1.0A ±0.008A at 2.0A					
	Repeatability[1]	±0.002 A	±0.001A at 1A					
	Noise[2]	≤0.001A at 0A ≤0.001A at 1A ≤0.002A at 2A	≤0.00020A at 0A at 260 and 500 nm ≤0.00030A at 1A at 260 and 500 nm ≤0.00040A at 2A at 260 and 500 nm					
	Drift[3]	<0.002A/Hr	<0.0010A/Hr		<0.0005A/Hr			
Stray Light		<0.1%T at 340 nm and 400 nm	<0.05%T at 340 nm and 400 nm		< 1.0%T 198 nm (KCl) , <0.05%T at 220 nm (NaI), <0.03%T at 340 nm ($NaNO_2$)			
Baseline Flatness		<0.003A	±0.005A		±0.002A			
Display		5-inch diagonal, 32-bit color display, 800 × 480 pixels	7-inch color touchscreen, fixed, high definition, 800 × 1280 pixels	7-inch color touchscreen, tiltable, high definition, 800 × 1280 pixels	7-inch color touchscreen, fixed, high definition, 800 × 1280 pixels	7-inch color touchscreen, tiltable, high definition, 800 × 1280 pixels		
Keypad		Tactile rubber 23 keys with numeric keypad	Touchscreen					
Sample Compartment		• Accessible from top, front or side • All platforms can accommodate 100 mm cells • Available accessory for test-tubes up to 25 mm diameter and 150 mm height • Removable, washable sample compartment liner with magnetic placement and hold-down	Accommodates (optional): • 8-position cell changer • 4-position cell changer (long path cells) • Peltier thermostatted cell holder (20–60 °C) • Sipper accessory		• Accessible from top, front or side • Able to accommodate cells up to 100 mm pathlength • Available accessory for test-tubes up to 25 mm diameter and 150 mm height • Removable, washable sample compartment liner with magnetic placement and hold-down	Accommodates (optional): • 8-position cell changer • 4-position cell changer (long path cells) • Peltier thermostatted cell holder (20–60 °C) • Sipper accessory • Fiber optic probe coupler		• 8-position cell changer (standard) Also accommodates (optional): • 4-position cell changer (long path cells) • Peltier thermostatted cell holder (20–60 °C) • Sipper accessory • Fiber optic probe coupler
Printer		Snap-on printer available						
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; export data to PC via USB	• Single USB-A supports flash memory devices for method and data storage • Duplex USB-A supports connection to a Windows computer running optional remote control software, keyboard, mouse • Export data to network or PC via Ethernet or Wi-Fi • Print via USB, Ethernet or Wi-Fi					
Languages		English (Available soon: Spanish, German, French, Italian, Portuguese, Russian, Chinese, Japanese, Korean, Thai)						
Dimensions		35.5 × 38.5 × 19.5 cm (L × W × H)						
Weight		7.5 kg						
Power Requirements		External AC to DC converter. Voltage and Frequency (Hz) selected automatically, 100–240 volts, 50–60 Hz.						
Warranty		2 years standard with 1 year extension upon registration of the instrument with Thermo Fisher Scientific within 6 months of purchase						

*1. Measured at 1.0A at 546 nm 2. RMS at 500 nm. 60 consecutive measurements. 3. At 500 nm after warmup. 2hrs GENESYS 30, 1hr all others. *** Visit www.thermofisher.com/connect for details*

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

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Not all products are available in all countries. Please consult your local sales representative for details. **BR52989_E 03/18M**

Thermo Scientific VISION*lite* 5 Software

For Visible and UV-Visible spectrophotometers

Thermo Scientific™ VISION*lite*™ 5 Software enhances the capabilities of our stand-alone Visible and UV-Visible spectrophotometers. The software lets you use your spectrophotometer to its fullest potential, displaying and reporting experimental and analytical results with ease.

VISION*lite* 5 Software offers intuitive operation ideal for routine analysis and educational environments. The software can interface with these Thermo Scientific UV-Vis Spectrophotomers:

- SPECTRONIC 200
- GENESYS 30
- GENESYS 40-180
- BioMate 160
- Evolution 201
- Evolution 220
- Evolution 260 Bio

Training users to make measurements with VISION*lite* 5 is simple. Controls and parameter details are always visible, inviting walk-up use for both new users and experienced analysts. Select the appropriate module and perform:

- Wavelength scans
- Kinetics experiments
- Single or multiple fixed wavelength measurements
- Quantitative analyses
- Instrument performance verification

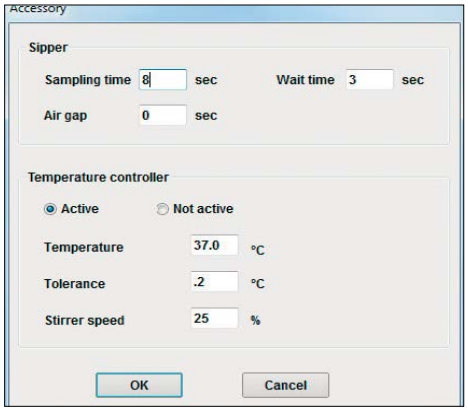
Accessory control

Whether your experiment requires automation to enhance sample throughput or thermostatting to preserve precious biological samples, VISION*lite* 5 provides full control of the required accessories.

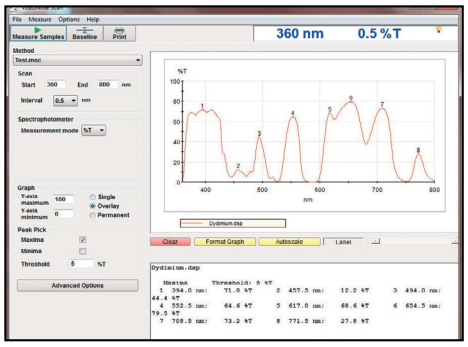
Automate your sample handling with multi-cell changer accessories for GENESYS, Biomate and Evolution products.*

A sipper and flow cell free your technicians from the task of pouring each sample into an individual cuvette, increasing efficiency, reducing error and minimizing handling of toxics or corrosives in high throughput laboratories. The Integrated Sipper System for the GENESYS, BioMate, and the Smart Sipper System for the Evolution are fully controlled by VISION*lite* 5.

Adding the Peltier Thermostatted Single Cell Holder for the GENESYS or BioMate gives you control of the cuvette temperature to a precision of 0.1 °C for optimum performance in biological, enzymatic or kinetics experiments.



Easily control your spectrophotometer accessories



Simple, intuitive controls for scanning

New in VISION*lite* 5 Software

Thermo Scientific™ SPECTRONIC™ 200
- Double the data resolution: 0.5 nm readout compared to 1 nm in local control
- Zoom in the absorbance axis as well as the wavelength axis

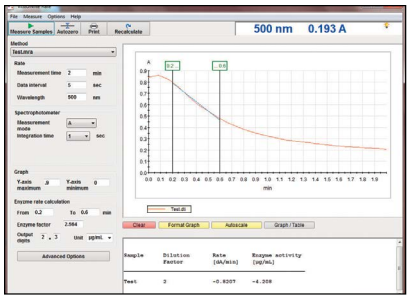
Thermo Scientific™ GENESYS™ 30
- Add kinetics capabilities and more sophisticated multiwavelength measurements

Thermo Scientific™ GENESYS™ 40-180, Thermo Scientific™ BioMate™ 160
- More sophisticated over-lay and zoom
- Larger display and wider selection of data processing tools

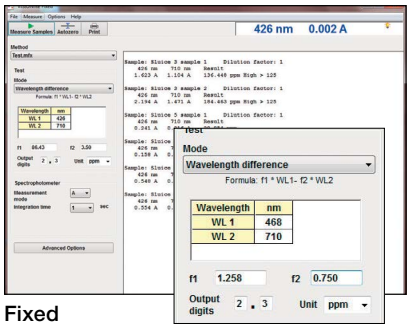
Thermo Scientific™ Evolution 201, 220, and 260 Bio
- Simplified controls for everyday users

ThermoFisher SCIENTIFIC

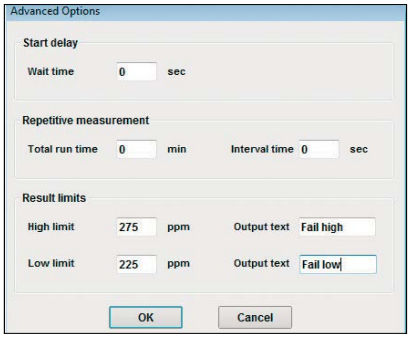
* Refer to product catalog for details



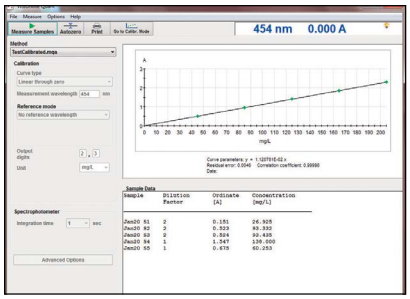
Rate Application



Fixed Application



VISION*lite* 5 will apply QC Pass/Fail criteria automatically and print the error condition with the sample report.



Quant Application

Scan – high resolution spectra in seconds

Scanning with VISION*lite* 5 offers several advantages over the same measurement on a local control system.

- Peak pick to identify and label wavelength peaks or valleys
- Overlay spectra for visual comparison
- Import, save or export data in native or CSV format for easy archiving and reporting
- Auto scaling of data plus simple zoom controls for detailed examination of spectra

Rate – measurement of reaction kinetics

Add capability beyond the local control for SPECTRONIC 200 and GENESYS 30. The Rate application enables you to determine kinetic parameters by measuring the absorbance at a specific wavelength over time.

- Measure multi-cell kinetics in parallel or serial mode
- Automatic enzyme activity calculation
- Automatic data storage plus import or export your data in CSV format
- Measure up to 100 samples in a single data set

Fixed – monitor concentration using factor methods

Program your standard methods to run with automatic calculation of the reportable result in the correct unit.

- Measure at one or multiple wavelengths
- Apply factors and equations to your data to generate results directly
- Addition, subtraction, ratio and baseline correction options
- Display results with units from a menu or define your own custom unit
- Run standard bio-tests using the pre-programmed protein and DNA methods
- Save or print results as a report, or export data in CSV format to use in a template

Quant – determination of sample concentration based on standards

Prepare a series of standards to define a calibration curve, apply up to a cubic fit to your data, then measure samples and report concentrations based on your calibration.

- More standards and non-linear curve fitting options offer greater confidence and accuracy than can be accomplished under local control on SPECTRONIC 200 and GENESYS 30
- Choose from 11 pre-programmed reporting units or define your own
- Apply dilution factors in software to allow you to keep data for all your samples in range without doing off-line calculations
- Automatic data saving for peace of mind
- Save or print your results as a report, or export data in CSV format to use in your own template

Performance verification

Being able to document that your instrument is giving valid data can be crucial in quality control environments. Select from the range of available Performance Verification tests that is customized to your instrument's specifications. VISION*lite* 5 will prompt you to present the correct reference materials in order, and then print a complete report for your compliance file.

Optional user interface languages

- Chinese
- English
- French
- German
- Italian
- Korean
- Portuguese
- Russian
- Spanish

Ordering information	Part number
VISION*lite* 5 Software. Includes software and operator's manual (English and German)	834-091300
VISION*lite* 5 Software and special cable to connect to GENESYS 40-180 and BioMate 160	840-312300
Interface cable for GENESYS 40-180 and BioMate 160	840-312200
Standard USB Cable (SPECTRONIC 200 and GENESYS 30	085-820200

* Ask your Thermo Fisher Scientific equipment distributor about additional application specific software for our spectrophotometers: VISION*lite* ColorCalc – Software for color determination.

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

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VISION*lite* ColorCalc Software

Perform color calculations according to common standards with liquid and solid samples

Use your Thermo Scientific™ GENESYS™ 40-180, BioMate 160, or Evolution™ Series Spectrophotometer to calculate L*a*b*, XYZ, APHA and other popular color scales (Table 1). Choose from a range of illuminants and calculate color difference (ΔE) between samples.

Thermo Scientific VISION*lite*™ ColorCalc Software is a powerful stand-alone software package allowing full instrument and accessory control. VISION*lite* ColorCalc Software is designed to perform numerous color calculations for a variety of applications including waste water analysis, grading of natural or mineral oils, wine production, and pharmaceutical manufacturing. The software records the required transmission or reflectance spectrum and automatically performs calculations using the recorded data. It can also perform calculations using data acquired by Thermo Scientific VISION*lite* or INSIGHT™ Pro Software.

Easy setup and operation

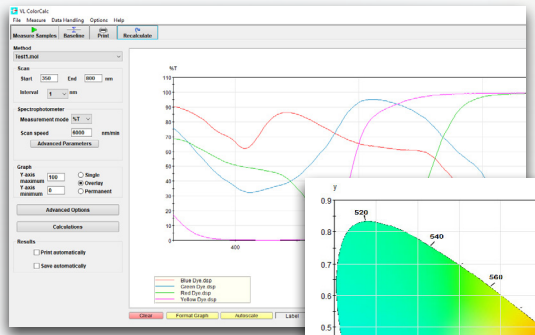
The VISION*lite* ColorCalc interface is easy to configure and operate. Simply set up the scan method, select the calculations you wish to perform from the Calculations menu, and run the method. The software controls the instrument and accessories and automatically performs the calculations on the data upon completion of the scan. Results can be automatically printed or saved. All of the method and calculation parameters are stored with each data file, ensuring complete records and enabling future data evaluation with a few mouse clicks (Figure 1).

Full spectrum color scales and data reporting

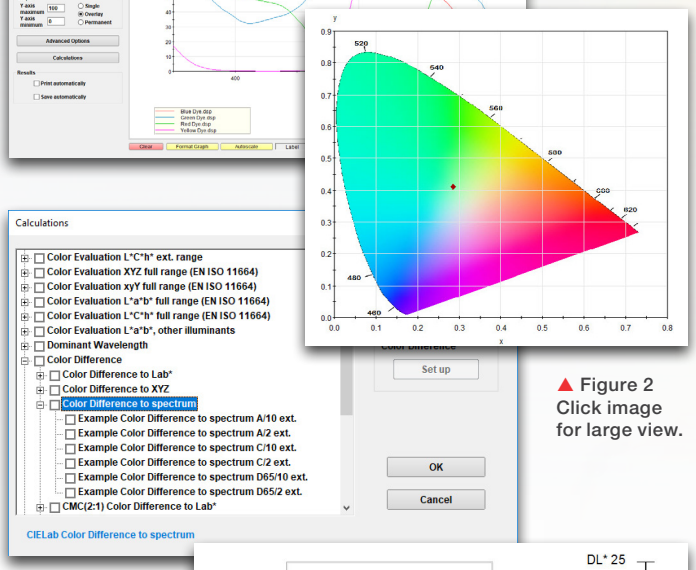
VISION*lite* ColorCalc records the required spectra in transmittance or reflectance and calculates color values for the scales and illuminants shown in (Table 2). 2° and 10° observer angles are available for all scales. Data is reported numerically in a table and can also be presented visually as a color graph for tristimulus color (Figure 2).

Color difference calculation

Color difference calculations (ΔE, δL*, δa*, δb*, δC*, δh*) can be performed relative to specified tristimulus (XYZ) and CIE (L*a*b*) color values or relative to a measured spectrum (Figure 3). Difference calculation results are presented numerically and can also be displayed visually as coordinate axes depicting the extents of delta L* and delta a*, b* in L*a*b* colorspace (Figure 4).

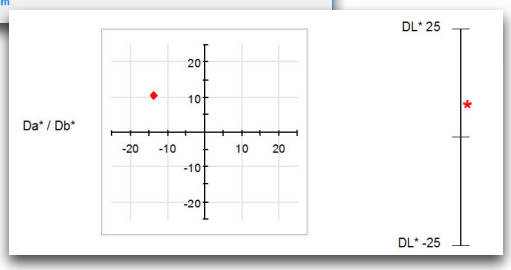


◀ Figure 1
Click image for large view.



▲ Figure 2
Click image for large view.

▲ Figure 3
Click image for large view.



▶ Figure 4
Click image for large view.

thermo scientific

Application-specific color scales: Pt-Co/APHA, whiteness, EP color, wine, etc.

The software automates testing according to common color scales. See Table 3 for details.

- Yellowness measurement according to ASTM D1209—the scale variously known as Pt-Co, APHA, or Hazen. Pre-programmed methods are included for use with 1 cm, 5 cm and 10 cm cuvettes so that all data is reported on a common scale. Longer cuvettes are necessary to obtain good data at low Pt-Co values.
- Yellow—red/brown color scales used in the analysis of oils (Gardner, Saybolt and Iodine color)
- A suite of yellowness and whiteness calculations primarily defined in ASTM E313.
- EP (European Pharmacopoeia) color checks are extensively supported (74 distinct calculations)
- Wine color

Sample thickness transformation

When characterizing transparent materials such as bulk glass during processing, it may be necessary to report results that are corrected to scale to a standard sample thickness. The sample thickness recalculation of a spectrum allows correction for actual sample thickness and front surface reflection effects based upon a single value, the material's refractive index, or a full surface reflectance spectrum.

Mathematical calculations and customization

VISION*lite* ColorCalc Software has the ability to perform configurable or custom calculations and to store and present your custom-configured methods on the calculations menu for easy recall and use. The calculations menu can also be customized to show only the tests that you wish to display. Our technical support team can assist in simple customization tasks and more sophisticated calculations can be implemented via a purchased customer special.

Current models	
GENESYS 40 and 50	Evolution 201
GENESYS 140 and 150	Evolution 220
GENESYS 180	Evolution 260 Bio
BioMate 160	Evolution 350

Table 1. Compatible Thermo Scientific UV-Vis Spectrophotometers.

Colorspaces	Illuminants
XYZ	A, C, D65
xyY	A, C, D65
L*C*h*	A, C, D65
L*a*b*	A, C, D50, D55, D65, D75, F2, F7, F11
L a b (Hunter)	C, D65

Table 2. Colorspaces and illuminants supported for full spectrum color measurement

Scale or standard calculation	Tests and references
Dominant wavelength	Determines the wavelength of a sample's pure spectral color
Yellowness	ASTM D1925, ASTM E313
Whiteness	CIE 1982, Ganz, ASTM E313
Tint	ASTM E313
Pharm. Eur. Color	Color comparison for EP reference solutions
Pt-Co/APHA/Hazen	ASTM D1209, ISO 6271. 1cm, 5cm and 10cm cells
Gardner	ASTM D1544, ISO 4630
Saybolt	ASTM D156, ASTM D6045
Iodine	ASTM D1981, DIN 6162
ASTM	ASTM D6045, ASTM D1500
Wine color	14 different calculations including • Color intensity glories • Color tonality Sudraud • Color intensity red (direct and haze corrected) • Polymeric color ratio • ABS at 420nm, 520 nm and 620 nm • Peak ABS 510 nm-540 nm • Color percentage yellow, red and blue

Table 3. Application specific color scales and calculations supported

Ordering information

Description	Part number
VISION*lite* ColorCalc Software	869-175600
Interface cable for GENESYS 40-180 and BioMate 160	840-312200

Learn more at **thermofisher.com/visionlite**

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