



THE Essential

CHROMATOGRAPHY & SPECTROSCOPY

CATALOG

20¹¹₁₂
EDITION

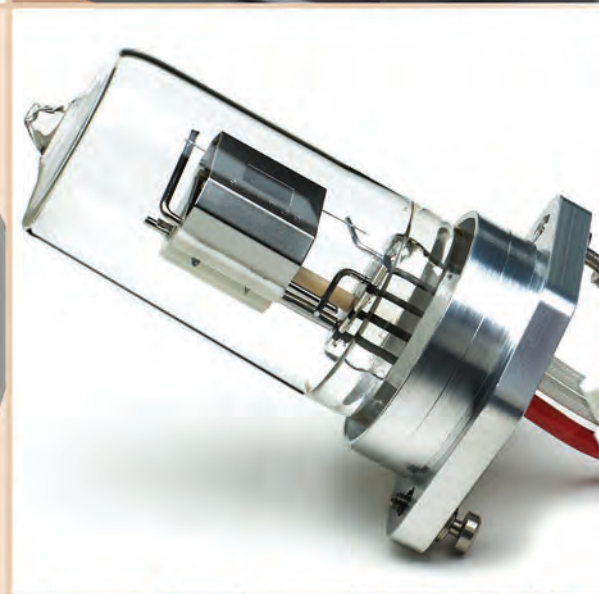
MOLECULAR SPECTROSCOPY
PAGES 1224-1253

The Measure of Confidence



Agilent Technologies

MOLECULAR SPECTROSCOPY



In this Chapter

Agilent 8453 UV-Vis Supplies

- 1226** Cells and Cell Accessories
- 1232** Tubing and Fittings
- 1233** Instrument Parts and Supplies
- 1235** Dissolution Testing Supplies
- 1236** UV-Vis Standards & Reagents

Agilent Cary UV-Vis & UV-Vis-NIR Supplies

- 1238** Cuvettes and Flow Cells
- 1244** Fiber Optic Probes
- 1246** Polarizer and Depolarizer
- 1247** Lamps and Detectors
- 1248** Tubing and Reference Materials

Agilent Cary Eclipse Fluorescence Supplies

- 1249** Fast Filter Accessory
- 1250** Cuvettes and Flow Cells
- 1251** Microplates
- 1252** Fiber Optic Probes and Couplers
- 1252** Lamps
- 1253** Standards and Reference Materials



■ AGILENT 8453 UV-VIS SUPPLIES



8453A UV-Visible Spectrophotometer

The genuine Agilent cells, tubing, fittings and supplies in this section have been tested with the Agilent 8453 for reliable and repeatable results.

Agilent UV-Vis cells and supplies are manufactured in an ISO 9001-certified environment. Additionally, every Agilent UV-Vis cell includes a certificate of analysis, so you can be confident that it will conform to stringent protocols such as NIST, GLP, GMP and NAMAS. This section will help you identify the cells that fit your unique applications. You will also learn how to enhance your lab's productivity by choosing the correct spectrophotometer equipment, tubing, fittings, and dissolution testing supplies.

Cells

Macro Cells

The macro cell, which is defined by DIN 58963 as a rectangular cell with an inner width greater than 5 mm, has emerged as the standard for photometry. The most widely used macro cell is a rectangular cell with outer dimensions of 45 x 12.5 mm (height x width). The length of the cell is dependent on the desired path length.



Macro cell with PTFE lid

Macro Cells with PTFE Lid

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
1	45 x 12.5 x 3.5	44.5 x 9.5	350	5063-6546	5061-3384
2	45 x 12.5 x 4.5	44.5 x 9.5	700	5063-6547	5061-3385
5	45 x 12.5 x 7.5	44.5 x 9.5	1750	5063-6548	5061-3386
10	45 x 12.5 x 12.5	44.5 x 9.5	3500	5063-6549	5061-3387
10	45 x 12.5 x 12.5	44.5 x 9.5	3500	5063-6550*	1000-0544*
20	45 x 12.5 x 22.5	44.5 x 9.5	7000	5063-6551	5063-6553
50	45 x 12.5 x 52.5	44.5 x 9.5	17500	5063-6552	5063-6554

*Matched pair



Macro cell with PTFE stopper

Macro Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
5	48 x 12.5 x 7.5	42 x 9.5	1750		5063-6557
10	48 x 12.5 x 12.5	42 x 9.5	3500	5063-6556	5062-2477

Spacers are required for cells with an outer depth of less than 12.5 mm to hold them securely in the cell holder.

Semi-micro Cells

Semi-micro and micro cells have an inner width of 4 mm to 2 mm. The thickness of the base is 9 mm. All semi-micro and micro cells are for use with spectrophotometers having a beam height of 15 mm.

For applications with a wavelength range of interest in the visible range, use our low cost Agilent optical quality glass cells, made from exceptionally pure raw materials. Quartz glass gives transmission values of >80% between 200 nm and 2500 nm for an empty cell. Optical glass gives transmission values of >80% between 320 nm and 2500 nm for an empty cell.



Semi-micro cell with PTFE lid



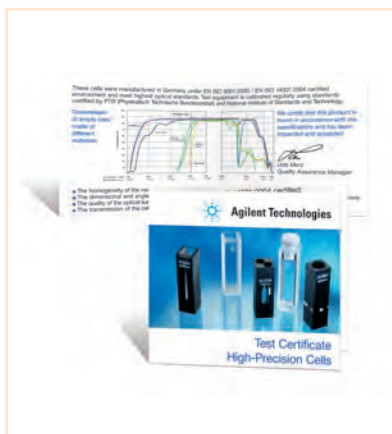
Semi-micro cell with PTFE stopper

Semi-micro Cells with PTFE Lid

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (μL)	Part No. Glass	Part No. Quartz
10	45 x 12.5 x 12.5	41.8 x 2	700	5063-6558	5061-3391
		36 x 4	1000		5063-6559

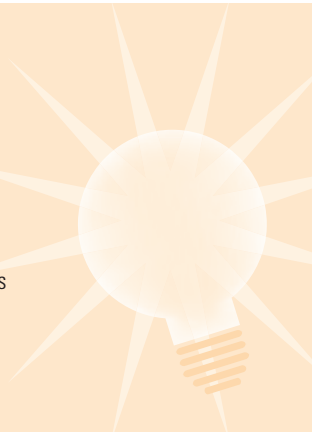
Semi-micro Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (μL)	Part No. Glass	Part No. Quartz
10	46 x 12.5 x 12.5	37 x 4	1000	5063-6560	5063-6561



Agilent high-precision cells are tested to meet the highest optical standards. Every Agilent cell comes with a test certificate, ensuring that the following areas have been tested and are within specifications:

- Homogeneity of the raw material
- Dimensional and angle tolerances of the component parts
- Flatness of the optical surfaces
- Transmission of the cells



Ultra-micro Cells

Ultra-micro cells are specifically designed for use in the μL range (down to 50 μL). They fit into any standard cell holder and have the advantage of requiring much smaller sample volumes than standard cells. The cells are constructed so that filling and emptying can be easily accomplished with commonly available pipette tips. Ultra-micro cells with Eppendorf pipette filling/emptying are designed to handle extremely small volumes. When only a minimum amount of sample is available, these cells provide a filling volume only slightly larger than the measuring chamber volume.



Ultra-micro cell with PTFE stopper



Ultra-micro cell with eppendorf filling

Ultra-micro Cells with PTFE Stopper

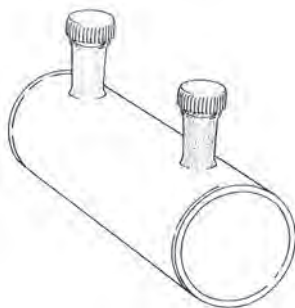
Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (μL)	Filling Volume (μL)	Part No. Quartz
2	45 x 12.5 x 12.5	2.5 x 2	15	10	20	5062-2497
10	45 x 12.5 x 12.5	2.5 x 2	15	50	70	5062-2496

Ultra-micro Cells with Eppendorf Pipette Filling/Emptying

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (μL)	Filling Volume (μL)	Part No. Quartz
0.1	40 x 12.5 x 12.5	1 x 5	15	0.5	5	5063-6562
1	40 x 12.5 x 12.5	1 x 5	15	5.0	10	5063-6563
5	40 x 12.5 x 12.5	0.8 round	15	2.5	5	5063-6564
10	40 x 12.5 x 12.5	0.8 round	15	5.0	10	5063-6565

Cylindrical Cells

A cylindrical cell is a cell with plane-parallel optical surfaces whose inner volume is cylindrical in shape, and has a longitudinal axis parallel to the direction of the radiation beam.



Cylindrical cell with PTFE stoppers

Cylindrical Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (μL)	Part No. Glass	Part No. Quartz
100	102.5 x 22	19	28000	5063-6566	5061-3392

Flow-through Cells

Until recently, flow-through cells had measuring chambers that were either rectangular or circular in shape. These shapes were dictated by limitations in the manufacturing process and did not offer the best geometry for clean flushing and reduction of contamination. Agilent has developed oval aperture cells that combine low volume with excellent flow characteristics. These oval flow cells are strongly recommended for automated analyses such as dissolution testing. Black quartz is used in the vicinity of the aperture to ensure that no light passes through the side walls of the cell.



Round aperture flow cell



Rectangular aperture flow cell



Oval aperture flow cell

Flow-through Cells with Round Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (μL)	Part No. Quartz
10	35 x 12.5 x 12.5	2	15	30	0100-1224
10	35 x 12.5 x 12.5	3	15	80	0100-1225

Flow-through Cells with Rectangular Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (μL)	Part No. Quartz
0.1	35 x 12.5 x 12.5	17.5 x 3.5	15	6.2	5188-8003
0.2	35 x 12.5 x 12.5	17.5 x 3.5	15	12.4	5188-8004
0.5	35 x 12.5 x 12.5	17.5 x 3.5	15	31	5188-8005
1	35 x 12.5 x 12.5	17.5 x 3.5	15	62	5061-3396
2	35 x 12.5 x 12.5	17.5 x 3.5	15	124	5061-3397
5	35 x 12.5 x 12.5	17.5 x 3.5	15	230	5065-9918
10	35 x 12.5 x 12.5	11 x 3.5	15	390	5061-3398
10	35 x 12.5 x 12.5	8 x 2	15	160	5062-2476

Flow-through Cells with Oval Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (μL)	Part No. Quartz
1	39 x 12.5 x 12.5	8 x 3	15	40	5063-6570
1	40 x 12.5 x 12.5	8 x 3	15	40	5065-9907
2	39 x 12.5 x 12.5	8 x 3	15	80	5063-6571
5	39 x 12.5 x 12.5	8 x 3	15	200	5063-6572
10	39 x 12.5 x 12.5	8 x 3	15	430	5063-6573

Note: Flow-through cells do not include tubing/fittings.



Cell Accessories



Spacer for 2 mm cell, 5061-3389



Spacer for 5 mm cell, 5061-3390



Magnetic stirring bar, 9301-1161



Cell cleaning solution, 5062-8529



Lens cleaning paper, lint free, 9300-0761



Cell tray, 5063-6577

Spacers*

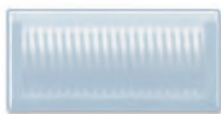
Description	Part No.
Spacer for 1 mm cell	5061-3388
Spacer for 2 mm cell	5061-3389
Spacer for 5 mm cell	5061-3390

*Spacers are required to hold cells with an outer depth of less than 12.5 mm in the cell holder.

Miscellaneous

Description	Unit	Part No.
Magnetic stirring bar*	2/pk	9301-1161
Cell cleaning solution	1 L	5062-8529
Lens cleaning paper, lint free	50/pk	9300-0761
Tray for 16 cells	10 mm	5063-6577

*For use with Agilent 89054A cell-stirring multicell transport and Agilent 89090A Peltier temperature controller. Stirring bars are used with cells having internal dimensions of 10 x 10 mm (W x D) and cell holders with magnetic stirring capability.



Union, 5022-2155



Cell fittings (black), 5022-2156



Conical adapter kit, 5022-2157



PTFE nuts, 5022-2158



PEEK fittings and ferrules, 5042-1337

8453 Tubings and Fittings

Description	Unit	Part No.
PTFE tubing, 1.6 mm OD	10 m	5041-2191
Pump tubing, 2.06 mm ID	12/pk	5041-2166
Pump tubing, 1.3 mm ID	12/pk	5041-2184
Pump tubing, 2.8 mm ID	12/pk	5041-2185
Tefzel ferrules and stainless steel lock rings, 1/16 in.	10/pk	5022-2154
Union, 1/4-28 thread, polypropylene	10/pk	5022-2155
Cell fittings, black (4 short and 4 long)	8/pk	5022-2156
Conical adapter kit	2/pk	5022-2157
PTFE nuts for 1/16 in. OD tubing	10/pk	5022-2158
Tubing, heat exchanger, FEP	12 cm	5042-1336
1/16 in. PEEK fittings and ferrules for 8-port valve	10/pk	5042-1337
Mounting tool for flangeless nut		0100-1710

8453 Instrument Parts and Supplies



Deuterium lamp assembly, 2140-0605



Tungsten lamp assembly, G1103-60001



Deuterium lamp assembly, 08452-60104



Standard cell holder, 08451-60104



Long path-length cell holder, 89076C



Thermostatable cell holder, 89054A



Cell stirring module, 89055A

Spectrophotometer Lamps

Description	Part No.
Deuterium lamp assembly, 8453	2140-0605
Long life Deuterium lamp	2140-0813
Tungsten lamp assembly	G1103-60001
Deuterium lamp assembly, 8452	08452-60104

Cell Holders

Description	Part No.
Standard cell holder	08451-60104
Long path-length cell holder	89076C
Thermostatable cell holder	89054A
Cell stirring module for thermostatable cell holder	89055A
Magnetic stirring bar for use with 10 x 10 mm (W x D) cells, 2/pk	9301-1161



Optical filter kit, G1120-68707



Stirring module kit, G1120-60006



Tubing, heat exchanger, FEP, 5042-1336



Needle, beveled edge for G1811A, G1811-23200



Autosampler tubing and fittings kit, 5042-1334



Sipper tubing kit, 5042-1333



Cassette, fixed pressure, 5041-2167



Cassette, variable pressure, 5042-1356

G1120A 8-Position Multicell Transport Supplies

Description	Part No.
Optical filter kit Set of three optical filters to prevent photosensitive samples from being irradiated by UV light (265 and 295 nm cut-off and UV roll-off filter)	G1120-68707
Stirring module kit Stirrer is driven by circulating water from water bath (not included)	G1120-60006
Magnetic stirring bar for use with 10 x 10 mm (W x D) cells, 2/pk	9301-1161
Multicell transport adjustment tool	89075-23800
Plastic cover kit	G1120-68708

89090A Peltier Temperature Controller Supplies

Description	Part No.
Union, cell holder	5021-1870
Flow cell, 10 mm, 8 x 2 mm aperture, 160 µL	5062-2476
Quartz cuvette, 10 mm, with PTFE stopper	5062-2477
Tubing, heat exchanger, FEP	5042-1336
Magnetic stirring bar	9301-1161

Autosampler Supplies

Description	Part No.
Needle, beveled edge for G1811A	G1811-23200
Test tubes, 12 x 100 mm, 250/pk	5022-6531
Autosampler tubing and fittings kit	5042-1334

Sipper Supplies

Description	Part No.
Sipper tubing kit	5042-1333
Flow cell, 10 mm, 80 µL	0100-1225
Cassette, fixed pressure	5041-2167
Cassette, variable pressure	5042-1356

8453 Dissolution Testing Supplies



Multicell tubing kit, 5042-1330



Valve tubing kit, 5042-1331



Dissolution probes kit, 5042-1332



PEEK fittings and ferrules, 5042-1337



8 port valve for dissolution system, 5063-6575



Dissolution filters for 1/8 in. probe, 5181-1246

Dissolution Testing Supplies for 8453A

Description	Part No.
Multicell system tubing kit	5042-1330
Valve tubing kit for one bath	5042-1331
Dissolution probes kit, 0.9 mm ID, tubes with fittings	5042-1332
1/16 in. PEEK fittings and ferrules for 8-port valve, 10/pk	5042-1337
8-port valve for dissolution system	5063-6575
Rotor seal for 5063-6575 valve (UV-Vis) dissolution system	5067-1539
Dissolution filters for 1/8 in. probe, 45 µm pore size, 1000/pk	5181-1246



OQ/PV chemical standards kit I, 5063-6503



OQ/PV chemical standards kit II, 5063-6521

8453 Standards & Reagents

Our chemical standards and accessory kits provide an inexpensive and time-saving solution for operational qualification and performance verification (OQ/PV) of UV-Vis spectrophotometers. The kits are designed for analysts who need to conform closely to both quality and regulatory requirements when performing UV-Vis measurements.

The chemical kits can be used with any UV-Vis spectrophotometer and consist of pre-prepared solutions in sealed ampoules. The solutions are traceable to NIST standards and specified by the European Pharmacopeia (EP) and include holmium oxide for wavelength accuracy measurement; potassium dichromate for photometric accuracy measurement; sodium nitrite, sodium iodide and potassium chloride for stray light measurements at 340, 220 and 198 nm; and toluene in hexane for resolution measurement. Each standard includes a Certificate of Analysis for traceability.



OO/PV hardware kit, 5063-6523



Tubing kit for UV-Vis OO/PV test, 5063-6522

Caffeine OO/PV sample for dissolution test,
5042-6476

Multicell transport adjustment tool, 89075-23800

Certified Calibration Standards and Accessory Kits

Description	Part No.
OO/PV Chemical Standards Kit I (for photometric accuracy, stray light and resolution measurements) Contains 10 ampoules 10 mL each of 2 dichromate, 2 sulfuric acid, 1 sodium nitrite, 1 sodium iodide, 1 potassium chloride, 1 toluene in hexane, 2 hexane	5063-6503
OO/PV Chemical Standards Kit II (for wavelength accuracy) Contains three ampoules 10 mL each of 2 perchloric acid, 1 holmium oxide in perchloric acid	5063-6521
OO/PV Hardware Kit Contains two flow cells, cell passivating fluid, tubing kit, MCT adjustment tool, temperature sensor support, syringes and OO/PV manual	5063-6523
Tubing Kit for UV-Vis OO/PV Test Contains tubings, fittings and adapter to flush flow cell	5063-6522
Caffeine OO/PV sample for dissolution test, 150 mg/L caffeine in water, 500 mL	5042-6476
Multicell transport adjustment tool	89075-23800

Checkout Samples

Description	Part No.
Test sample for UV-Vis (caffeine solution, 10 µg/mL in water)	5063-6524

■ AGILENT CARY UV-VIS & UV-VIS-NIR SUPPLIES



Cary UV-Vis-NIR 4000 Spectrophotometer

Agilent's Cary UV-Vis and UV-Vis-NIR spectrophotometers are synonymous with excellence and high performance. Our range of consumables for these products includes cuvettes, flow cells, fiber optic probes, lamps and detectors.

Cary Cuvettes and Flow Cells



Cary UV-Vis-NIR 5000 Spectrophotometer

Agilent has a wide variety of high quality cells for UV-Vis-NIR spectrophotometers.

Cell Shapes

Cylindrical Cells

For use when sample volume is not a limitation and when very short to long path lengths are needed. All cylindrical cells can be used with the cylindrical cell holder or the thermostatted cylindrical cell holder. Cylindrical cells are available as standard cells, long path length cells for extra sensitivity when measuring low concentrations, and microcells, suitable for concentrated samples, or to overcome solvent absorbance (e.g. water in the NIR or low UV regions).

Rectangular Cells

Rectangular cells are the most commonly used cell type and vary in shape from square to longer rectangles, depending on the cell path length. We offer standard cells, semi-micro cells with about 40% of the volume of a standard cell of the same path length, microcells with about 20% of the volume of a standard cell, submicro and ultra-micro cells that have microliter volumes, and disposable cells. Semi-micro cells can be used with all Cary 1, 3, 4, 5 multicell holders and with all standard single cell holders. In addition, they can be used with the Temperature Probe Accessory for cell temperature monitoring.

Disposable Polystyrene Cells

Disposable polystyrene cells are useable from 340 to 800 nm, are economical, can be used with magnetic stirrers, but cannot be used at elevated temperatures. Cells sold as matched pairs are used for most UV-Vis-NIR routine analyses. Matched pairs ensure these cells will give a similar absorbance or transmission reading when empty or filled with water. Long path length cells are ideal for use when extra sensitivity is needed for low concentration samples. These cells must be used with the long path length rectangular cell holder.

Cell Materials

Cells are available in four materials. Select the cell material depending on the wavelength range of your measurements.

Material	Wavelength (nm)
Far UV Quartz	170 to 2700
Infrasil NIR Quartz	220 to 3800
Glass	334 to 2500
Polystyrene (disposable)	340 to 800

Cell Volumes

Standard Cells

Standard cells have about the same wall thickness on all sides, and are used for most UV-Vis-NIR measurements. They require the largest sample size for a given path length.

Semi-micro Cells

Semi-micro cells have thicker side walls to reduce the volume to about 40% of the volume of a standard cell of the same path length. These cells are useful when only small sample volumes are available for testing. Cells that are black self-masking are listed with their aperture size. The aperture is located at the correct Z-height for Agilent Cary UV-Vis and UV-Vis spectrophotometers. Semi-micro cells can be used with Cary 1, 3, 4, 5 multicell holders and with all standard single cell holders. They can also be used with the Temperature Probe Accessory for cell temperature monitoring. The semi-micro cell, with a stirring well for a magnetic stirring bar, is suitable for all Cary 1, 3, 4, 5 series Peltier thermostatted multicell and single cell holders.

Microcells

Microcells have thicker sidewalls to reduce the volume to about 20% of the volume of a standard cell of the same path length. These cells are useful when limited sample volumes are available for testing.

Submicro Cells

Submicro cells have volumes in the 10 to 135 μL range, and are ideal when sample volumes are very limited, for highly concentrated samples, or for highly absorbing solvents. These quartz cells offer low volume, short path length and excellent heat transfer. They are ideal for temperature-controlled work, and all except the 1 mm path length cell can be used with the Temperature Probe. Cells that are black self-masking are listed with their aperture size.

Cary 50 Cells

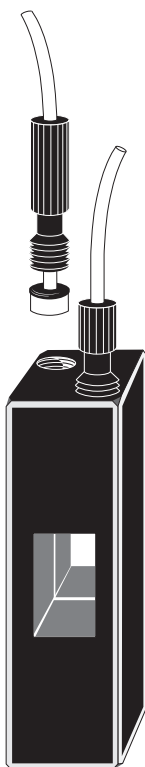
Description	Cell Type	Cell Material	Volume (μL)	Path Length (mm)	Sample Chamber Width (mm)	Aperture (mm)	Part No.
Submicro cell, black wall	Rectangular	Far UV quartz	135	10	2.0	2.0	6610021100
Submicro cell, black wall	Rectangular	Far UV quartz	40	10	2.0	2.0	6610019500

Cells with an aperture value are self-masking with a 20 mm Z dimension to match Cary spectrophotometers.

Disposable Cells

Description	Cell Type	Cell Material	Volume (mL)	Path Length (mm)	Sample Chamber Width (mm)	Unit	Part No.
Standard cell	Rectangular	Polystyrene	3.5	10	10	500/pk	6610018800
Microcell	Rectangular	Polystyrene	1.5	10	4	500/pk	6610018700

Wavelength range 340 to 800 nm



Cary 50 flow cell

Magnetic Stirrer Bars

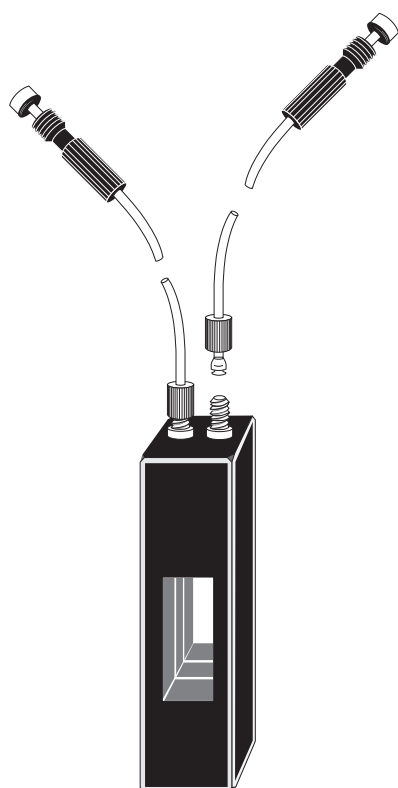
Description	Part No.
Magnetic stirrer bar, PTFE, star type	7418000400
Magnetic stirrer bars, 7 x 2 mm, 10/pk	6610018900

Cylindrical Cells

Description	Cell Material	Volume (mL)	Path Length (mm)	Sample Chamber Width (mm)	Part No.
Standard cell, two ports, matched pair	Far UV Quartz	28.2	100	19	6610002300
	Far UV Quartz	14.1	50	19	6610002200
Standard cell, one port	Far UV Quartz	2.8	10	19	6618000600

Rectangular Cells

Description	Cell Material	Volume (mL)	Path Length (mm)	Sample		Part No.
				Chamber Width (mm)		
Standard cell, open top	Glass	35	100	9.5		6610016300
Standard cell, open top	Far UV quartz	35	100	9.5		6610016000
Standard cell, open top	Glass	17.5	50	9.5		6610016400
Standard cell, open top	Far UV quartz	17.5	50	9.5		6610016100
Standard cell, open top	Far UV quartz	7	20	10		6610016200
Standard cell, disposable	Polystyrene	3.5	10	10		6610018800
Standard cell, open top, matched pair	Infracil NIR quartz (1 pair)	3.5	10	10		6618000100
Standard cell, open top, matched pair	Glass (1 pair)	3.5	10	10		6610008800
Standard cell, stoppered, matched pair	Far UV quartz (1 pair)	3	10	10		6610001100
Standard cell, open top, matched pair	Far UV quartz	3	10	10		6610000800
Semimicro cell, black wall	Far UV quartz	1.4	10	4		6610001800
Semimicro cell, for magnetic stirrer bars, black wall	Far UV quartz	1.3	10	4		6610015400
Semimicro cell, matched pair, black wall	Far UV quartz (1 pair)	0.9	10	4		6610012700
Semimicro cell, matched pair, black wall	Far UV quartz (1 pair)	450	5	4		6610019800
Semimicro cell, matched pair, black wall	Far UV quartz (1 pair)	180	2	4		6610019700
Semimicro cell, matched pair, black wall	Far UV quartz (1 pair)	90	1	4		6610019600
Submicro Cell, low headspace thermal melt, black wall with 2.0 mm aperture	Far UV quartz	80	10	2		6610024100
Submicro cell, low headspace thermal melt, black wall	Far UV quartz	40	5	2		6610024000
Submicro cell, stoppered, black wall	Far UV quartz	50	10	2.5		6610010400
Submicro cell	Far UV quartz	10	10	1		6610013800
Ultramicro cell, low headspace thermal melt, black wall	Far UV quartz	8	1	1		6610023900



Cary 100/300 flow cell

Flow Cells

Flow cells allow the sample to pass through the cell and are connected to the sample source via tubing. Long path length flow cells are useful for low concentration samples and require the long path length rectangular cell holder. They can be used with a Cary 1, 3, 100, 300 series Routine Sampler Accessory or a Cary 50 series Sipper. Submicro flow cells are suitable for use with the Cary 1, 3, 100, 300 series Routine Sampler Accessory.

Flow Cells

Use With	Volume (μL)	Path Length (mm)	Part No.
Cary 50	113	1	6610019900
	227	2	6610020000
	568	5	6610020100
	715	10	6610020200
Cary 1, 3, 100 and 300	113	1	6610014100
	227	2	6610014200
	715	10	6610015200
All	80	10	6610008900
	390	10	6610012600
All	1	50	6610010000
	2.1	100	6610010100

Made from far UV quartz and for use with single cell or multicell holders

Cell Holders and Bases

Description	Use With	Part No.
Cell base	Cary 50	110648190
Cell holder base	Cary 400 and 500	10048100
Cell holder base	Cary 4000 to 6000i	110716190
Standard cell holder, 10 mm Supplied as standard with Cary 100/300 and Cary 5000/6000i	All Cary	110260190
Standard cell holder, 10 mm, with Z-height adjustment from 0-20 mm Supplied as standard with Cary 4000	All except Cary 50	110721900
Cary 50 cell holder, spare	Cary 50	110645090

Cary Fiber Optic Probes

Fiber Optic Probes

Use With	Description	Part No.
Cary 50	Fiber optic dip probe, stainless steel, body only Requires stainless steel tip	7910035700
	Fiber optic dip probe, stainless steel, fixed 10 mm path tip	7910036400
	Fiber optic dip probe, stainless steel, replaceable 10 mm path tip	7910036500
	Fiber optic dip probe, Torlon, body only Requires Torlon tip	7910032600
	Fiber optic dip probe, Torlon, fixed 10 mm path length	7910029900
	Fiber optic dip probe, Torlon, replaceable 10 mm path tip	7910035100
	Fiber optic dip probe, quartz, fixed 10 mm path length	7910030300
	Fiber optic micro probe, 3.5 mm diameter, fixed 10 mm path length	7910035600
	Fiber optic remote read probe, stainless steel, replaceable 10 mm path tip	7910030200
	Cary 100/300	Probe, quartz, 10 mm path length
Probe, quartz, long body		7910032100
UV-Vis reflectance probe and probe holder		7910036200
Absorbance dip probe with switch, stainless steel, 10 mm path		9910085000
Absorbance dip probe with switch and coupler, stainless steel, 10 mm path		9910085100
Transmission probe and holder		9910076700
Cary 4000/5000/6000i	UV-Vis reflectance probe	7910035500
	UV-Vis reflectance probe, 2 m	9910069300
	UV-Vis absorption probe, stainless steel, 2.5 m, 10 mm path length	9910069400
	UV-Vis transmission probe and holder, 2 x 3 m fibers	9910069600
	UV-Vis & Vis-NIR transmission probes and holder kit, 4 x 3 m fibers	9910076500
	UV-Vis-NIR transmission probe and holder, 2 x 3 m fibers	9910076400
Cary 5000/6000i	UV-Vis-NIR absorption probe, stainless steel, 2.5 m, 10 mm path length	9910069500



UV-Vis-NIR transmission probe and holder,
9910076400



Dip probe coupler, 210159300



Fiber optic coupler, 210159400



Replaceable tip, Fiber optic coupler, 9910076600

Accessories and Maintenance Supplies

Use With	Description	Part No.
Cary 50	Dip probe coupler	210159300
	Fiber optic coupler	210159400
	Replaceable tip, stainless steel, 2 mm path length	7910036000
	Replaceable tip, stainless steel, 5 mm path length	7910035900
	Replaceable tip, stainless steel, 10 mm path length	7910035800
	Replaceable tip, stainless steel, 40 mm path length	7910036100
	Replaceable tip, Torlon, 2 mm path length	7910032800
	Replaceable tip, Torlon, 5 mm path length	7910032900
	Replaceable tip, Torlon, 10 mm path length	7910033000
	Replaceable tip, Torlon, 20 mm path length	7910034600
	Replaceable tip, Torlon, 40 mm path length	7910034500
Cary 100/300	Fiber optic coupler	10056200
	Replaceable tip, stainless steel, 10 mm path length	9910076600
Cary 4000 to 6000i	UV-Vis-NIR fiber optic coupler (FiberMate accy)	7910049200
All Cary	Fiber optic alignment loop	7910027200
	Fiber optic probe light shield	7910028900
	UV-Vis reflectance probe holder, spare	9910068500

Cary Polarizer and Depolarizer



Glan-Taylor calcite prism polarizer, 210131600



Depolarizer, 1/4 wave scrambler, 210131700

The polarizer is used to transmit only one polarized component of an incident light beam. Cary polarizers are mounted in a stainless steel slide (5 x 7.5 cm) with Vernier scale and dial. A depolarizer is used to transmit the polarized component of an incident light beam with minimum degree of plane polarization, converting any plane polarization to a mixture of polarizations.

Polarizer and Depolarizer

Description	Use With	Part No.
Glan-Taylor calcite prism polarizer	Cary 1, 3, 4, 5, 100, 300, 400 to 500i, 4000 to 6000i	210131600
Depolarizer, 1/4 wave scrambler		210131700
Glan-Thompson calcite prism polarizer	Cary 1, 3, 4, 5, 100, 300, 400 to 500i, 4000 to 6000i	190029100

Cary Lamps and Detectors

Agilent offers high quality lamps and detectors that produce top level performance for your Cary spectrophotometer.

Source Lamps

Description	Use With	Part No.
D2 UV lamp	All except Cary 50	5610021800
Xenon lamp module	Cary 50	110639690
Visible source lamp	Cary 100/300	5610021700
UV source lamp, less than 190 nm	Cary 400	5610135500
D2 UV lamp	Cary 4000 to 6000i	110713990
Visible QI lamp	Cary 4000 to 6000i	5610013900

Detector Supplies

Description	Part No.
Photomultiplier tube R928, 185-900 nm	5618000200
Photomultiplier tube R955, 160-900 nm	5610024100
External detector mount, Cary 50	190036500

Cary Tubing and Reference Materials

Tubing

Description	Part No.
Silicon tubing, 3/16 in. ID x 5/16 in. OD, per m Tubing only, no connectors	2410023800
Peristaltic pump tubing replacement kit, 1.0 mm ID	3710045100
Peristaltic pump tubing replacement kit, 1.5 mm ID	3710045000
Dissolution tubing spares kit, Cary 50	6610020500
Dissolution tubing spares kit, Cary 100/300	6610020600
Peristaltic pump tubing replacement kit	9910052900
Silicon tubing, 1 mm ID, per m For connecting nebulizer capillary to SPS probe	3710026400
Spare inlet/outlet tubing	3710044600



Photometric linearity neutral density filter kit,
9910056100

Optical Filters

Description	Part No.
Attenuator filter kit with neutral density screens and blue filter	9910047700
Holmium oxide filter	118020790
Holmium oxide/didymium glass filter kit	10030200
Photometric linearity neutral density filter kit	9910056100

Standards

Description	Part No.
Calibrated color standard, 2 in. OD, 4 per set	9910084300
Calibrated solution standards kit	9910085200
Certified diffuse reflectance wavelength and wave number standard	9910081100
Certified diffuse reflectance wavelength standard	9910080900
Certified reference standard 1404 for USP certification	190034200
Certified reference standard, full certification Includes 190034200 and 9910085200	190034300
Specular reflectance standard, 1 in. OD	190012800

■ AGILENT CARY ECLIPSE FLUORESCENCE SUPPLIES



Cary Eclipse Fluorescence Spectrophotometer

Agilent's fluorescence spectrophotometers are augmented by a wide range of accessories and supplies, including a fast filter accessory, 96- and 384-well microplates, and fiber optic probes and couplers.

Fast Filter Accessory

The fast filter accessory for the Cary Eclipse is the ideal solution for investigating rapid intracellular ion movements into and out of cells (signal transduction) using ratiometric fluorescent probes. A pair of bandpass filters appropriate to the fluorophore under investigation must be mounted in the fast filter accessory. Agilent offers filter pairs appropriate for measurement of the calcium binding dyes Fura-2 and Indo-1.

Fast Filter Accessory

Description	Part No.
Fast filter accessory for Cary Eclipse	10077400
Fura-2 filters for Ca ²⁺ measurements (340 and 380 nm bandpass filters, 20 nm SBW) Requires fast filter accessory	7910043800
Indo-1 filters for Ca ²⁺ measurements (405 and 495 nm bandpass filters, 20 nm SBW) Requires fast filter accessory	7910043900

Cuvettes and Flow Cells

Ideal for use when you have only a small amount of sample, microcell cuvettes have the optimum Z-height (the distance between the base of the cell and the center of the light beam) for the Cary Eclipse fluorescence spectrophotometer.

Cuvettes and Flow Cells

Cell Type	Description	Cell Material	Volume	Path Length (mm)	Part No.
Flow Cell	Flow cell, 2 x 2 mm emission window	Far UV quartz	40 μ L	10	6610023700
	Flow cell, 2 x 2 mm emission window	Far UV quartz	40 μ L	10	9910105100
Rectangular	Fluorescence cell, open top, pair	Far UV quartz	3.5 mL	10	6610000900
	Fluorescence cell, stoppered, pair	Far UV quartz	3.5 mL	10	6610001200
	Fluorescence cell, anaerobic	Far UV quartz	3 mL	10	6610021400
	Fluorescence cell, two sides mirrored	Far UV quartz	3 mL	10	6610023500
	Submicro cell, 4 x 10 mm window	Far UV quartz	400 μ L	10	6610021500
	Submicro cell, 2 x 2 mm window	Far UV quartz	40 μ L	10	6610021600
	Submicro cell, low head space, stoppered	Far UV quartz	40 μ L	10	6610024200
Triangular	Microcell, stoppered, square base	Far UV quartz	1.7 mL	10	6610021200
	Microcell, open top, square base	Far UV quartz	1.7 mL	10	6610021300

Cell Holder and Base

Description	Part No.
Cell holder, fluorescence	110664700
Cell holder base, fluorescence	210167200

Use with Cary Eclipse

Microplates

Our microplates are available in white for best overall well-to-well reproducibility, or black for the lowest background signal levels. Both types have high binding surfaces that bind medium and large biomolecules (greater than 10 kDa) that have hydrophobic and/or ionic groups. These microplates are recommended for the Cary Eclipse Microplate Reader Accessory.

96-well Microplates

Surface Treatment	Sterile	Color	Unit	Part No.
High binding	No	White	10/pk	6610022400
High binding	No	Black	10/pk	6610022500
High binding	No	White	100/pk	6610022800
High binding	No	Black	100/pk	6610022900
Untreated	Yes	White	10/pk	6610022300

384-well Microplates

Surface Treatment	Sterile	Color	Unit	Part No.
High binding	No	White	10/pk	6610022600
High binding	No	Black	10/pk	6610022700
High binding	No	White	100/pk	6610023000
High binding	No	Black	100/pk	6610023100

Base Plate for Custom Accessories

This base plate incorporates locating holes and the Cary Eclipse rapid lockdown mechanism common to most Eclipse accessories. It can be used to mount custom accessories in the Eclipse sample compartment.

Base Plate for Custom Accessories

Description	Part No.
Base plate for custom accessories, fluorescence	210167490

Fiber Optic Probes and Couplers

Fiber Optic Probes and Couplers

Description	Part No.
Fiber optic dip probe coupler accessory, fluorescence	10076800
Fiber optic coupler accessory, fluorescence	10076700
Fiber optic dip probe, fluorescence	7910043100
Fiber optic remote read 2 m probe, fluorescence	7910043000

Lamps

The lamp module contains the long life xenon flash lamp, Schwarzschild collector focusing optics and electronics within a metal enclosure. This allows safe and easy replacement of the lamp.

Lamps

Description	Part No.
Xenon flash lamp module	110666090

Standards and Reference Materials

Standards and Reference Materials

Description	Part No.
Water filled fluorescence cuvette, sealed	6610021800
Diffuser, spare	110674800
Neutral density attenuator 1.5 Abs, spare	110677500
Rhodamine B in polymer block	6610021900
Europium in polymer block	6610022200
Rhodamine B, concentrated solution sealed in triangular cuvette	6610021700
Holmium perchlorate 4% in perchloric acid, sealed in a quartz cuvette Wavelength accuracy standard	6610022100
Cell holder for holmium perchlorate cuvette	110678600
Required for Cary Eclipse wavelength accuracy test using holmium perchlorate solution	
Fluorescence samples, set of six hydrocarbons in polymer blocks Four have broad fluorescence bands for 300-700 nm, and two have sharp emission bands for wavelength calibration and bandpass checking; includes Rhodamine B in PMMA block (P/N 6610021900)	6610010300
Fluorescence demonstration kit Includes europium in PMMA, ovalene in PMMA, a sealed water cuvette, and a 10 x 10 mm fluorescence cuvette	9910101900



This information is subject to change without notice.
© Agilent Technologies, Inc. 2011