

High Quality, Precision Cells for Fluorescence



High quality Macro cells for all applications

Standard rectangular macro cells are the most frequently-used type of spectroscopy cell for routine liquids analysis. Each cell has a standard inside width of 9.5 mm and a base thickness of 1.5 mm. All macro cells contain two clear windows.

For full details of the properties of Quartz SUPRASIL and Special Optical Glass see page 14.

Macro with PTFE Lid or with PTFE Stopper

Material	Qty.	Light Path	Outside Dim. H x W x D mm	Inside Width	Base Thickness	Cell Volume	Windows	Part No.
with PTFE Lid								
Special Optical Glass	2	10 x 10 mm	45 x 12.5 x 12.5	10 mm	1.25 mm	3.5 mL	4	B0631104
Quartz SUPRASIL®	2	10 x 10 mm	45 x 12.5 x 12.5	10 mm	1.25 mm	3.5 mL	4	B0631107
with PTFE Stopper								
Special Optical Glass	2	10 x 10 mm	46 x 12.5 x 12.5	10 mm	1.25 mm	3.5 mL	4	B0631110
Quartz SUPRASIL	2	10 x 10 mm	46 x 12.5 x 12.5	10 mm	1.25 mm	3.5 mL	4	B0631113

Semi-micro with PTFE Lid or PTFE Stopper

Semi-micro cells have the same outside dimensions as the Macro cells but the cell walls have been thickened slightly, limiting the interior sample chamber width to 4 mm. This reduces the sample requirements by 60%. Each cell has a base thickness of 3.2 mm and each package contains two cells with two clear windows each.

Material	Qty.	Light Path	Outside Dim. H x W x D mm	Inside Width	Base Thickness	Cell Volume	Windows	Part No.
with PTFE Lid								
Special Optical Glass	2	10 x 4 mm	45 x 12.5 x 12.5	4 mm	1.25 mm	1.4 mL	4	B0631115
Quartz SUPRASIL	2	10 x 4 mm	45 x 12.5 x 12.5	4 mm	1.25 mm	1.4 mL	4	B0631116
with PTFE Stopper								
Special Optical Glass	2	10 x 4 mm	46 x 12.5 x 12.5	4 mm	1.25 mm	1.4 mL	4	B0631117
Quartz SUPRASIL	2	10 x 4 mm	46 x 12.5 x 12.5	4 mm	1.25 mm	1.4 mL	4	B0631118

Fluorescence Cells for Magnetic Stirrers

Material	Qty.	Light Path	Outside Dim. H x W x D mm	Inside Width	Base Thickness	Cell Volume	Windows	Part No.
Macro/Semi-micro								
Quartz SUPRASIL	1	4 x 4 mm	45 x 12.5 x 12.5	4 mm	4.5 mm	500 µL	4	B0631132
Magnetic Stirrer Fleas	6							04978499

Micro and Ultra-micro cells for sensitive analysis on small sample quantities

Micro cells have the same outside dimension as the Macro cells but the cell walls have been thickened, limiting the interior sample chamber width to 2 mm. This reduces the sample requirements by 80%.

Each Micro cell has a standard light path of 10 mm and each package contains two cells with two clear windows each. All Micro cells listed have black sidewalls and base.

Micro Cells without Lid

Material	Qty.	Light Path	Outside Dim. H x W x D mm	Inside Dim. H x W x D mm	Base Thickness	Cell Volume	Windows	Remarks	Part No.
Quartz SUPRASIL*	2	5 x 5 mm	33.5 x 7.5 x 7.5	32.25 x 5 x 5	1.25 mm	600 µL	5		B0631123
Quartz SUPRASIL	2	5 x 5 mm	46 x 7.5 x 7.5	38.75 x 5 x 5	1.25 mm	850 µL	5	w/ PTFE Stopper NS 5	B0631142
Micro Cell Adapter	4								L2250139

*Requires Microcell Adapter (L2250139). Microcuvette Adapter allows 5 mm pathlength microcells to be used in any of the cuvette holders. (pkg. 4)

Ultra-micro Cells with PTFE Stopper

Ultra-micro cells use a narrower sample chamber, raising it directly into the center of the light path and masking it with black quartz. This design optimizes the use of smaller sample volumes. All Ultra-micro cells contain one cell and two clear windows.

Material	Qty.	Light Path	Center Height	Outside Dim. H x W x D mm	Aperture	Chamber Volume	Filling Volume	Windows	Part No.
Quartz SUPRASIL	1	10 x 2 mm	15 mm	45 x 12.5 x 12.5	5 x 2 mm	100 µL	120 µL	3	B0631124

Flow-through Cells for Fluorescence Spectroscopy

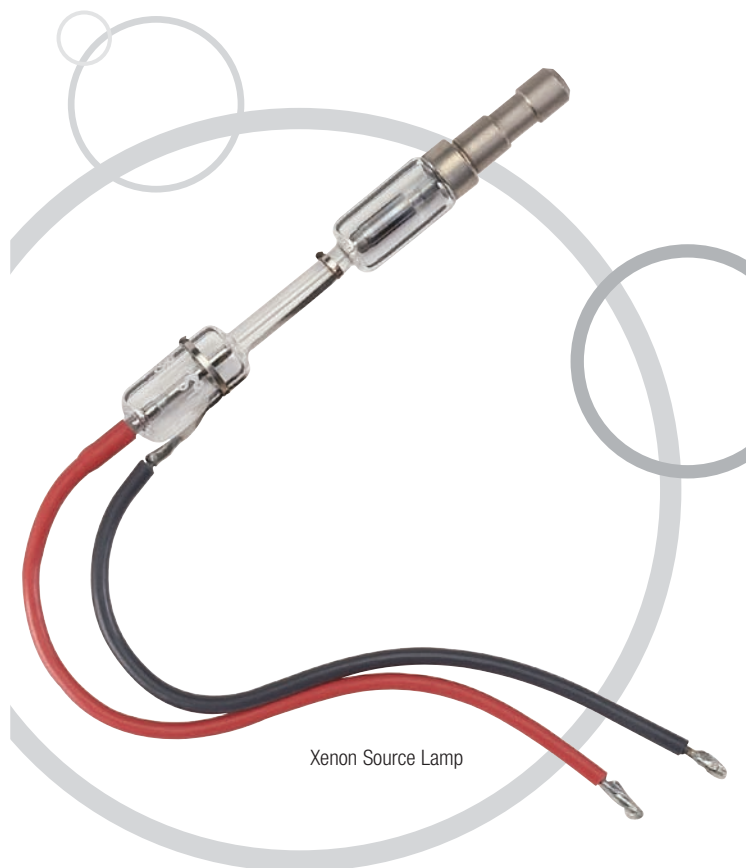
Flow-through cells are used for measuring samples with continuous flow or with Sippers where individual samples are aspirated into the cell. All cells have center heights of 15 mm. Each package contains one cell with two clear windows. The cells listed below are Compact with two screw connectors, M6x1 and 500 mm length FEP tubing – 1.9 mm o.d., 1.1 mm i.d.

Material	Qty.	Light Path	Outside Dimension	Inside Width H x W x D mm	Base Thickness	Cell Volume	Windows	Part No.	
Macro Inlet/Outlet Tubes on Top									
Quartz SUPRASIL	1	10 x 6.5 mm	15 mm	45 x 12.5 x 12.5	11 x 6.5 mm	750 µL	3	B0631126	
Semi-micro Inlet/Outlet Tubes on Top									
Quartz SUPRASIL	1	10 x 4 mm	15 mm	45 x 12.5 x 12.5	11 x 4 mm	450 µL	3	B0631127	
Quartz SUPRASIL*	1	3 x 3 mm	15 mm	35 x 12.5 x 12.5	11 x 3 mm	100 µL	3	B0631133	

*Compact with two (2) screw connectors and FEB tubing.



High-sensitivity, ultra-stable Xenon Source Lamps



Xenon Source Lamp



Set of six Luminescence Sample Blocks.

Xenon Source Lamps for LS30/40/45/50/50B/55

PerkinElmer Fluorescence Spectrometers use pulsed Xenon discharge lamps, which are not only very reliable and stable, but also provide remarkable sensitivity with a peak intensity exceeding 1 KW.

To maintain optimum stability and sensitivity of your instrument, installation of a new lamp by a PerkinElmer service engineer is recommended. Additionally, Xenon lamp quartz envelopes are under pressure, requiring eye protection and extreme caution in handling.

Description	Part No.
Xenon Source Lamp for LS30/40/45/50/50B/55	L2251157
Festoon Lamp for the LS Series*	04969486

**The Festoon Lamp is used along with the Xenon Lamp to maintain even triggering and stability.*

Checking Your Fluorescence Spectrometer

Checking the Day-to-Day Reproducibility of your Fluorescence Spectrometer

For day-to-day checks on reproducibility and wavelength calibration a set of six PMMA (polymethyl-methacrylate) blocks can be used. These have emission characteristics in the following wavelength ranges:

Wavelength Range (nm)	
1	300 – 400 (anthracene/naphthalene)
2	420 – 600 (ovalene)
3	300 – 400 (p-terphenyl)
4	400 – 600 (tetraphenyl/butadiene)
5	600 – 640 (europium)
6	540 – 640 (rhodamine B)

For checking instrument sensitivity, a 10 mm sealed cell contains high-purity water, which acts as a constant sample to reproducibly measure signal-to-noise using the Raman band.

Description	Part No.
Luminescence Sample Blocks (Set of 6)	52019600
Sealed Water Sample	L2251293

Red-sensitive Photomultiplier for the LS50B/45/55

The Red-sensitive Photomultiplier is a useful addition to the LS-series spectrometers to extend the detection range out to 800 nm. The full detection range is 200 – 800 nm.

Requires installation by a PerkinElmer service engineer.

Part No.
09972337

Simple, accurate temperature control for all applications

Ideal for Polarization Studies, Protein Folding and DNA Melting.



Biokinetics Accessory for LS50/45/55

Biokinetics Accessory

The Biokinetics Accessory consists of a magnetically stirred single-cell holder with a built-in temperature sensor (0 – 100 °C) event marker. Thermostatable by an external water-bath (not included).

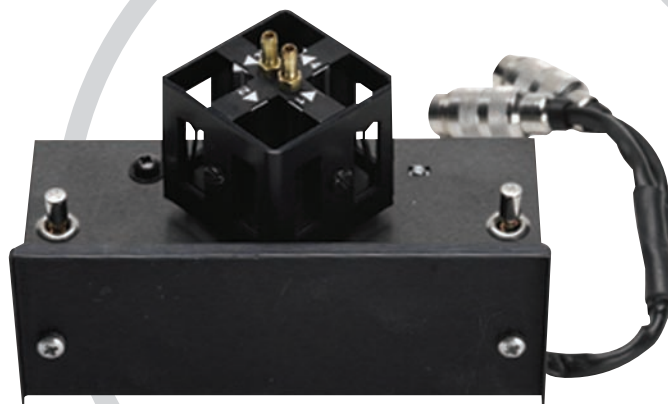
Includes 6 Stirrer Fleas. Requires Accessory PCB Kit (L2250162) for use with LS-45.

Description	Part No.
For LS50/45/55	L2250145

Single-position Peltier Accessory

For analyses where more rapid heating and cooling is required, a single-cell, water-cooled Peltier accessory is available. Operation between 0 – 100 °C with a resolution of 0.1 °C makes it the ideal choice for a wide variety of applications, for example, thermal denaturation of proteins. Temperature control is via keypad or the optional TempScan software.

Description	Part No.
For LS50/45/55	
Single-cell Peltier Accessory	L2250150
TempScan Software	L225B009
<i>Requires a source of liquid cooling, such as a water-circulator. Requires Accessory PCB Kit (L2250162) for use with LS-45.</i>	



Four-position Thermostatted Automatic Cell Changer

Changes in temperature affect fluorescence intensity. A simple, inexpensive and accurate way to control sample temperature is to use a thermostatable cell holder through which water from an external water-bath can be circulated. For temperature ramping studies and experiments where more rapid heating and cooling is required, a single-cell Peltier-thermostatted accessory is available.

Four-position Thermostatted Automatic Cell Changer

The Four-position Cell Changer accommodates four square, 10 mm pathlength cells or four micro-cells with adapters.

Description	Part No.
For LS50B/55	L2250134
<i>Requires, but does not include, 4 Adapters (L2250139) to work with micro cells. Includes 6 Stirrer Fleas.</i>	

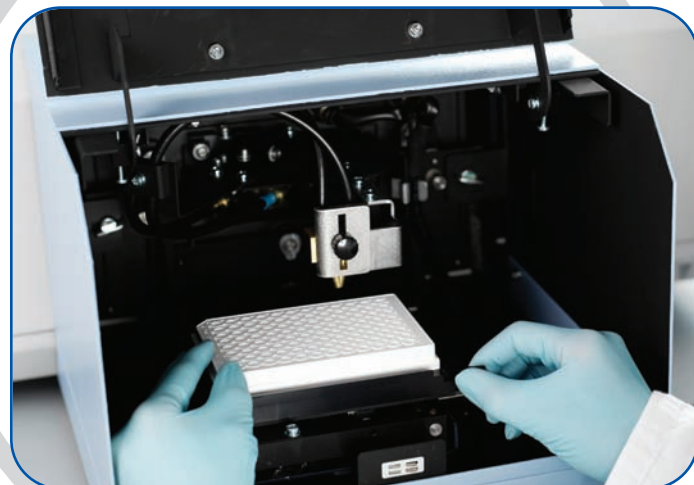
Single-position Thermostatted Cell Holder

Water-thermostatted cell holder for a 10 mm pathlength cell. This cell holder is included as standard with the LS-45 and LS-55.

Description	Part No.
For LS50B/45/55	L2250140



A **powerful** range of accessories that **increase** your applications **capabilities**



Fluorescence Well-plate Reader

Well-plate Reader Accessory for LS50B/55

The Well-plate Reader Accessory allows you to switch from a cuvette-based system to a well-plate reader in seconds. The accessory is front-mounted, providing easy access to standard well-plates.

Features and Benefits

- Measures in fluorescence, phosphorescence, bioluminescence and chemiluminescence modes
- Fiberoptic light feed for permanent alignment and high performance
- Standard or far-UV fiberoptics
- Easily removes and installs for switching between plate and cuvette measurements
- Can create programs for single end-point and kinetics analysis
- Optional plug-in software module allows the user to collect multiple spectra per well
- Measures up to 96 well plates

Description	Part No.
For work above 260 nm Excitation, 340 nm Emission	L2250035
For work above 260 nm Excitation and Emission	L2250042

*Installation by a PerkinElmer service engineer is required.
Includes one pack of white Microplates (L2251692).*

Ideal for DNA Quantitation, Enzyme-linked Assays, Protein Measurements, Fluorescent ELISAs, Cell Viability Testing and Drug and Steroid Testing.

Liquid Sipper Accessory

The Liquid Sipper Accessory is ideal for the automation of liquid sampling, providing productivity improvements and sample-handling convenience. The accessory consists of a 16 microliter volume flowcell and a peristaltic pump controlled by the instrument software, which automatically transfers samples from the vessel to the cuvette.

Description	Part No.
For LS50B/55	L2250135

*Includes Flowcell, Peristaltic Pump, 0.4 mm FEP Inlet Tube and 0.7 mm FEP Outlet Tube.
Requires installation by a PerkinElmer service engineer.*



Liquid Sipper Accessory

LC Flow Cell Accessory

The LC Flow Cell Accessory allows you to detect trace components eluted from a liquid chromatograph. Fluorescence can be monitored continuously at selected excitation and emission wavelengths, simply by replacing the standard cell holder with an LC flow cell.

Description	Part No.
For LS50B/45/55	L2250138

*Includes Flowcell, Peristaltic Pump, 0.4 mm FEP Inlet Tube and 0.7 mm FEP Outlet Tube.
Requires installation by a PerkinElmer service engineer.*

High-sensitivity Alternative to a Dedicated LC Fluorescence Detector.

Sampling accessories for your application needs



Remote Fiber-optic Accessory

Remote Fiber-optic Accessory

The Remote Fiber-optic Accessory allows you to make the measurement at the sample, without needing to take the sample to the instrument. Includes bifurcated synthetic fused-silica fiber-optics (1 m in length), which operate over the range 280 – 800 nm, and transfer-optics which mount in the spectrometer. This accessory is ideal for remote, non-destructive testing of fluorescent papers and fabrics, or remote sampling of hazardous materials.

Description

For LS50B/45/55

Part No.

L2250144

Ideal for Studies of Polymer Stability and the Properties of Optical Brighteners.

Front-surface Accessory



Front-surface Accessory*

For Measurements on Solids, Powders and Viscous or Opaque Liquids

The simple-to-use Front-surface Accessory extends your measurement capabilities to a wide variety of solid and semi-solid samples, including powders, paper, plastic films, cloth samples, TLC plates, gels and turbid liquids. The accessory can be used with the LS-50B/45/55 spectrometers.

Features and Benefits

- Used for fluorescence and phosphorescence measurements
- Sample can be placed in the accessory directly or held in the synthetic fused silica window powder holder
- Ultra-small volumes or viscous samples can be sandwiched between the two windows
- Opaque and turbid samples can be measured in small cuvettes (under 10 mm)

Part No.

52123130

*Includes Powder Sample Holder (52123164).

Total Emission Accessory

The Total Emission Accessory enhances the sensitivity of the fluorescence detection for samples with weak emission, and is recommended for bioluminescence and chemiluminescence experiments. The accessory uses a plane mirror that swings into place in front of the emission monochromator so that the total fluorescence of the sample can be measured.

The use of cut-off emission filters is recommended to reduce emission from other wavelengths. Five software-controlled emission filters are supplied with the LS55 spectrometers.

Description

For LS50B/55

Requires installation by a PerkinElmer service engineer.

Part No.

L2250101

