

Cell for Capillary Electrophoresis

Solutions Absorbance

The CUV-CCE Electrophoresis Sample Cell is an optical fixture for measuring the absorbance of solutions in chromatography or capillary electrophoresis systems. The cell's design -- light projects through the sides of the silica tubing -- eliminates pressure limits commonly associated with tubing breakdown in electrophoresis systems.



Excellent Chemical Resistance

The CUV-CCE cell, fixtures and fittings are made of robust PEEK material. The cell, which can be purchased separately as CUV-CCE-CROSS, has a through-hole of 0.51 mm and comes with 10-32 coned female threads and four fittings. Two fibers (included) face each other across the sample tubing. To complete the system, we recommend a spectrometer and a DH2000-BAL Light Source (see page 122).

Fibers & Tubing Sleeves Included

The CUV-CCE comes with two 300- μ m solarization-resistant fibers and tubing sleeves to connect tubing to the threaded ports. You can also purchase the CUV-CCE-CROSS tubing sleeves separately. Other sleeve sizes are available.

Specifications

Dimensions:	28.6 mm x 28.6 mm (cross); 50.8 mm x 50.8 mm (cross with fittings)
Weight:	9.4 g
Cell material:	PEEK polymer
Fixtures & fittings material:	PEEK polymer
Threads:	10-32
Through-hole:	0.51 mm
Fittings:	(4) F-300 double-winged nuts with F-142 ferrule
Swept volume:	0.721 μ L
Tubing sleeve diameter:	0.41 mm inner diameter, 1.57 mm outer diameter
Tubing sleeve length:	31.8 mm
Tubing size accommodated:	350-390 μ m outer diameter
Pressure rating (tubing):	6,000 psi (414 bar)

Positive Displacement Pump



Displaces Volumes from 1 μ L

The PUMP-IT-1000 Positive Displacement Pump Kit is a pulsed pump that displaces from 1 μ L to 250 μ L of fluid with each pump or cycle. The amount of fluid displaced with each cycle is set via software. The amount pumped is precise to 0.3% with repeatability of better than 0.5%. The pump provides a ripple-free and bubble-free flow. For accurate mixing and/or dilution of fluids, the pump has upper and lower limits that can be set mechanically and via the software (included), which also allows you to select the displacement amount and the speed of the displacement.

Applications

The PUMP-IT-1000 Kit is useful for those wanting to automate the delivery of reagents into accurate flow setups. Typical applications include blood chemistry, blood analysis, particle sizing, in vitro diagnostics and biopharmaceutical analysis. The PUMP-IT-1000 comes with everything needed for a flow setup; you can also purchase the pump separately (PUMP-IT-PUMP).

Specifications

Volume:	250 μ L full scale; 0.028 μ L volume per full step
Throughput:	>60% (based on 400 μ m optical fiber)
Actuator:	5 VDC, 0.49 amp/phase, 10.2 ohm/phase, 9.6 mHz/phase
Accuracy:	<0.5% repeatability; <0.3% precision
Pump head:	Acrylic (custom options include polycarbonate and PEEK)
Pump piston:	PEEK (custom options include stainless steel, ceramic and glass)
Pump body:	Aluminum (custom options include stainless steel and acrylic)
Dimensions (in cm):	Pump: 3.50 x 3.50 x 16.94; Controller: 11.93 x 11.93 x 6.35
Controller:	Unipolar/Bipolar dual stepper motor control PCB, 7.5 VAC, 1 A
Baud rate:	2400 or 9600 baud serial connection
AC adapter:	7.5 VAC, 1 A
Tubing:	10 feet of Tygon tubing
Nylon fittings:	10 female Luer fittings, 1/4 hex to 10-32 thread; 10 1/16" ID elbow fittings; 10 male Luer fittings, 1/4 hex to 10-32 thread; 10 Luer plugs and 10 caps; 10 1/16" ID barbed fittings with 10-32 thread; and 10 1/16" ID barbed tee fittings



The PUMP-IT-1000 Kit comes with the Positive Displacement Pump, a 250- μ L sample bottle, 10 feet of tubing, various nylon fittings, controller box and power supply, RS-232 cable and software.