

# Precision Dilutor: Improved Accuracy, Better Speed

## The PDS200 Dilutor System:

- Automates the preparation of working standards from a stock standard,
- Estimates the concentration of off-scale samples,
- Performs the required dilution,
- And re-runs the sample automatically — without operator intervention!



Lachat's PDS200 Precision AutoDiluter

### TIME SAVINGS WITH IMPROVED ACCURACY, REDUCED MANUAL DILUTIONS, AND QUALITY CONTROL

Lachat's precision autodiluter, the PDS200, used with the QuikChem 8500© Series Instruments, shines with numerous advantages:

- Uses a single, rather than dual piston system, decreasing the time per dilution.
- Improves accuracy—the PDS200 performs dilutions over the range of 1.6- to 4000-fold within 10% accuracy.
- Eliminates carryover issues.
- Easy to access tubing connections.
- Easy to clean and maintain.

### MECHANICAL ADVANCES IMPROVE SPEED

The use of a single rather than dual piston system improves speed. The PDS200 has a single piston that is used in single mode for dilutions up to 100-fold, and in serial mode for dilutions above 100-fold. This change, to controlling the movement of only a single piston in the design of the PDS200, provides a 12% speed increase in single mode and a 16% increase in serial mode, without sacrificing accuracy or precision.

### PRECISION EXCEEDS EXPECTATIONS

Carryover is no longer an issue with the PDS200. This allows for precision of less than 2.5% RSD and accuracy within 10% residual at 4000-fold dilutions. The table below shows the accuracy of the PDS200 at several dilution levels.

Summary of Performance Obtained with the PDS200\*

Range in Dilutions	Accuracy Achieved (Absolute Error) for the Range Covered
1.6-100	0-4.5%
100-800	0.3-5.9%
800-4000	0.5-7.9%

\* %errors calculated for groups of 5-10 replicates of each dilution. Absolute errors across modes are combined in this table. Three diluters were tested.#

## Specifications\*

**Range:**  
1.6-4000 fold Dilutions

**Dimensions:**  
9 x 21 x 20.5 cm (3.5 x 8.25 x 8")

**Accuracy:**  
<1-% error

**Construction:**  
Corrosion-resistant, powder-coated, polyester-painted aluminum exterior

**Sample Processing Time:**  
Approx. 2.4x cycle period for 1.6 to 100 fold dilutions (Single Dilutions)  
Approx. 4.6 x cycle period for > 100 fold Dilutions ( serial dilutions)

**Power Requirements:**  
100-230V, 50/60 Hz, 24 Vdc (2.2 Amp) output

**Sample Volume Requirements:**  
Minimum of 2 µL per dilution (for 4000-fold)  
To maximum of 5 mL/Dilution (for 1.6 – fold).

**Compliance:**  
CE certified indicating compliance to the European EMC directories.

The performance specifications listed here were based on internal testing; results may vary based on individual lab conditions and techniques.

\*Subject to change

## How To Order

**A89103** PDS200 Autodilutor, 115V **A89203** PDS200 Autodilutor, 220V

**5015900** Serial Cable, PDS200 - Dilutor to Sampler

**21936** Sample Line Assembly - ASX-500/Dilutor; Tubing, pump tube and fittings from port 6 of the instrument valve to port B of the solenoid valve.

**89020** Tubing Kit, PDS200; includes dual sample probe

**29915** Dual Probe Assembly, with Tubing and Fittings - ASX-500 Sampler/Dilutor

**85020** Diluent Line Filter Assembly; Port E on dilutor to diluent

**29940** DI Water Line Tubing Assembly; Port A on solenoid valve to DI water

**2952500** Power Supply, PDS200

**31196** Power Cord, 250V 10A

**20026** Power Cord, 125V 10A

## For Technical Assistance, Price Information and Ordering

### In the U.S.A.

Call toll-free (800) 247-7613.

### Outside the U.S.A.

Contact the LACHAT office or distributor serving you.

### On the Worldwide Web

[www.lachatinstruments.com](http://www.lachatinstruments.com) or [www.hach.com](http://www.hach.com)

E-mail for Support

[techhelp@hach.com](mailto:techhelp@hach.com)

E-mail for Sales

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### Local Distributor:

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