

SPS 3 autosampler

Agilent's fastest ever spectroscopy autosampler

Technical Overview

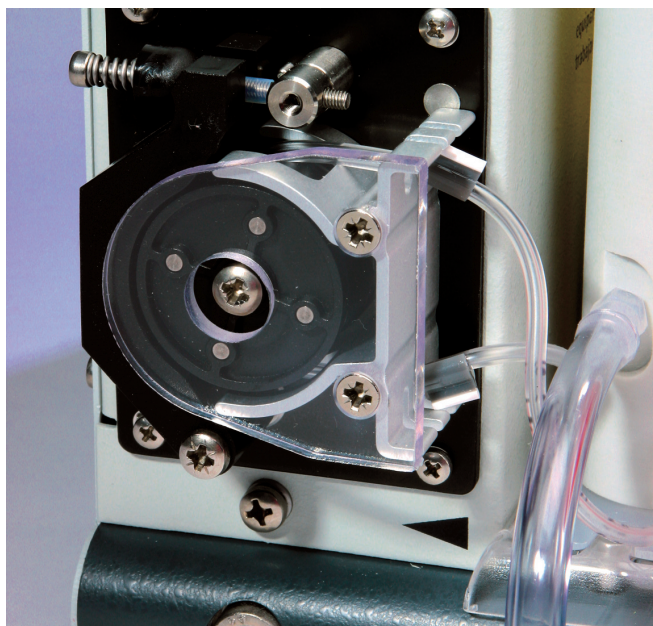


The SPS 3 Sample Preparation System, Agilent's fastest ever spectroscopy autosampler, meets the diverse requirements of high-throughput analytical laboratories. It offers a range of productivity boosting features to decrease analysis times. Customize the SPS 3 with additional options to further improve the quality of analytical results and reduce running costs.



Benefits include

- Fastest ever sample-to-sample speed provided by the novel arm movement
- Compatible with Agilent's full range of AA, ICP-OES and UV-Vis-NIR spectroscopy products
- Unlimited sample capacity with the ability to exchange sample racks during analysis
- Reduce cross contamination and rinse usage with the on-demand, flow through rinse station
- Compatible with a range of universal sample racks
- Contamination-free liquid flow path, with inert probe options utilizing metal-free transfer lines
- Provides variable speed settings for samples of different viscosities
- Avoids settling or separation prior to analysis with the optional diluter, which enables sample pre-mixing (not available for UV-Vis-NIR)
- Eliminates tedious and error-prone manual dilutions with the optional diluter and Roboprep software, which provides off-line solution preparation
- Eliminates manual dilution and re-analysis of over-range samples with on-line, over range sample dilution capability using the optional diluter (not supported with UV-Vis-NIR)
- Prevents sample contamination from airborne particles and removes corrosive or toxic fumes during sampling with the optional environmental enclosure



An integrated peristaltic pump provides an on-demand flow through rinse, which conserves rinse solution and minimizes sample contamination and carry-over.

Want to use your own racks? (AA only)

Simply define the location of the rack on the sampler and the layout of tubes in the rack. With a software wizard to guide you through the process, it's easy to take advantage of the flexibility of the SPS 3.

Flexible rack configuration

The SPS 3 is compatible with a wide range of low-cost, commercially available sample racks, providing flexibility in sample handling and accommodating tubes from 90 x 13 mm to 21 x 30 mm. Sample racks are constructed from chemically resistant polypropylene. You can also choose 11- or 6-position standard racks, allowing operation with small or large standard volumes.

Add the diluter for online over-range dilutions (not available for UV-Vis-NIR)

Power your sample preparation system with the addition of Agilent's high-precision optional diluter. Free your laboratory staff for other tasks and reduce pipetting errors by using Agilent's on-line over-range sample dilution. The precision syringe-based design incorporates a sample holding loop to prevent sample from ever entering the syringe.

The SPS 3 and diluter typically delivers < 1% dilution error and reproducibility is better than 1%. If your samples are prone to settling or separation, you can set the SPS 3 to pre-mix samples before analysis to improve accuracy.

No more time-consuming solution preparation

The Agilent SPS 3 with optional diluter is also a powerful tool for automated sample preparation, offering set-and-forget convenience. With the RoboPrep dilution utility you can use the system for off-line sample dilution, reagent addition, and preparation of multi-element standards, including standard additions. Simply provide a rack of the required reagents and bulk standards, and the SPS 3 will do the rest. The SPS 3 diluter also provides full programming flexibility over dilution parameters, including syringe speed and mix settings, enabling dilution of more viscous samples. In fact, whatever your application, with the SPS 3 and optional diluter you can dilute or prepare samples unattended — even overnight.

Specifications

The SPS 3 is compatible with a wide range of commercially available, autoclavable, laboratory racks or customizable sample racks. The SPS 3 is also compatible with an optional environmental enclosure, preventing contamination of samples from airborne contaminants and/or removing any corrosive or toxic fumes during sampling. The SPS 3 uses RS-232 communications for controlling the PC. An RS-232 interconnecting cable is supplied.

High throughput SPS 3 autosampler

High throughput autosampler with fast X, Z, theta arm movement. The SPS 3 has the capacity for up to three sample racks and one standard rack (up to two standard racks for ICP-OES). Racks may be exchanged during analysis for unlimited sample capacity. The SPS 3 is supplied with two standard racks suitable for use with either 11 x 16 mm OD test tubes or 6 x 29 mm OD centrifuge tubes, and 3 x 60 position sample racks suitable for use with 16 mm OD test tubes. Any sample rack can also be used for standards.

The SPS 3 includes a built-in peristaltic pump for flow through rinsing with variable speed control. Compatible with on-line diluter (extra purchase option) for pre-mixing of samples prior to sampling, or on-line over-range sample dilution. Optional software for off-line sample dilution and preparation of multi-element standards and reagent addition.

Options	AA	ICP-OES	UV-Vis
Diluter (on-line)	•	•	
Custom racks	•		
Off-line dilution with RoboPrep	•	•	
AutoReturn			•
Purge extraction enclosure	•	•	•

Ordering information

Description	Part number
SPS 3 high throughput sample preparation system	10082200
SPS 3 sample preparation system with diluter	10082300
Cary SPS 3 high throughput sample preparation system	10083700
SPS 3 is supplied complete with: <ul style="list-style-type: none"> • Serial (RS-232) cable • 0.8 mm ID PTFE sleeved probe (1.0 mm ID for the SPS 3 with diluter) • 2 x standard racks • 16 mm OD x 125 mm height tubes (2 bags of 125 tubes) • 3 x Bel-Art rack (60 position x 16 mm OD) and 6 x rack overlays (for 16 mm OD tubes) Note: Additional racks required should be ordered separately.	
Options for the SPS 3	
Roboprep off-line dilution utility (not UV-Vis-NIR)	8510217100
Dust cover with purging/extraction facilities	910245400
Purge kit for dust cover	9910120200
Exhaust port connection to suit 50 mm (2 in) ducting	9910130600
Sample racks and overlays:	
90 position x 13 mm OD (7 mL)	6610026400
60 position x 16 mm OD (13 mL)	6610025400
40 position x 20 mm OD (25 mL)	6610025500
24 position x 25 mm OD (38 mL)	6610026500
21 position x 30 mm OD (50 mL)	6610026600
Rack overlay for 40 position rack, 18 mm OD	6610026000
Rack overlay for 60 position rack, 16 mm OD	6610026100
Probe options — a range of chemically inert probes are available to suit your sample matrix	
0.8 mm ID PTFE sleeved probe for use with AA instruments (without diluter)	9910111900
1.0 mm ID PTFE sleeved probe for use with diluter	9910112000
1.3 mm ID inert probe, PTFE sleeved	9910130900

www.agilent.com/chem

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2011

Published October 5, 2011

Publication number: 5990-8347EN

The Measure of Confidence



Agilent Technologies