

ASAP-4-Cary



Automated Sample Processing for Cary 60

Automation for Cary 60 Photometer

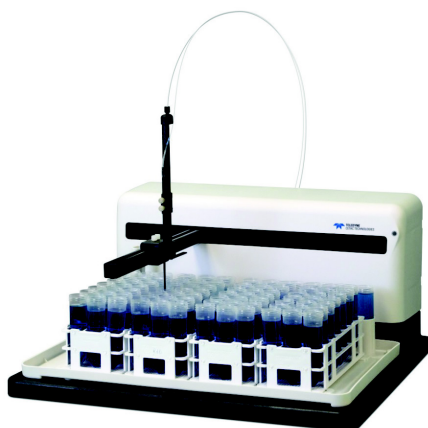
- stand-alone measurement of up to 240 samples in one run
- for the Cary WinUV applications Scan, Advanced Reads & Concentration
- sample pickup by Agilent's OD sipper or by autosampler pump
- saving of time and money



Photometer Cary 60 with Flow Cell



or



Sample Station PS-C560
with 4 Sample Racks



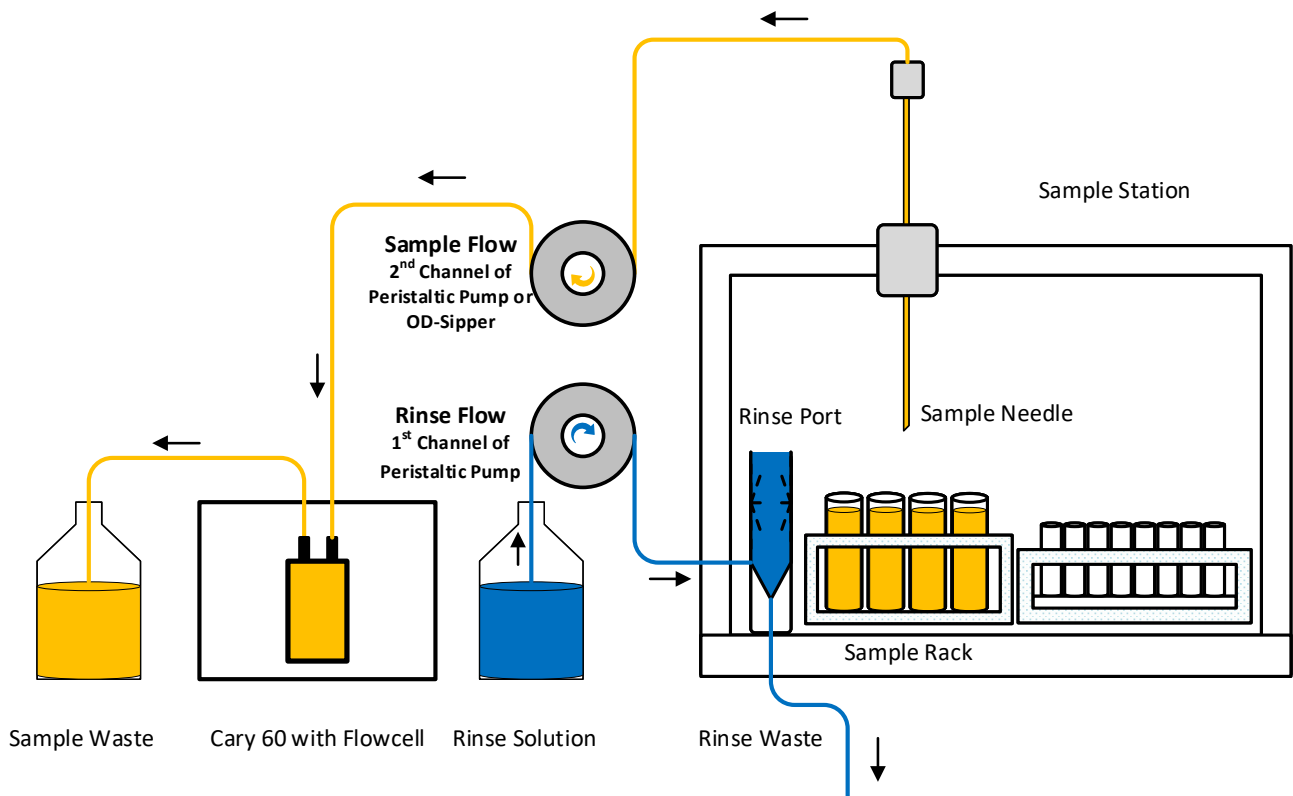
Sample Station PS-C280
with 2 Sample Racks



2-Channel Peristaltic Pump

Operating Principle

The automated processing of sample sequences in a Cary 60 system is realized by a software-controlled sample station with integrated peristaltic pump. Settings and execution are performed within an extension of the Cary WinUV software. Liquid samples are filled in tubes and placed in racks on the sample station. A sample needle moves sequentially to each position and transfers the liquid medium via a peristaltic pump into a flow-cell in the Cary 60 compartment. Then the signal is automatically collected. The sample needle can be washed between two samples in a rinse port to avoid contamination or carry over. During the run there is no interaction required from the end-user which enables free resources for other tasks.



The samples (within vials or tubes) are placed in autosampler racks.

Different rack sizes could be mixed up. The setup of the vial positions, the sequence and the parameters for the photometer is made within the Cary WinUV software.

For every sample of the sequence, the autosampler moves to the right position, picks up the liquid and transfers it into the flow-thru cell of the Cary photometer. The sample needle could be washed at the rinsing port after every step.

At the end of the sequence the needle returns to the HOME position and an report is generated.

Software

The 3 modules of the ASAP-4-Cary software are based on the Agilent Cary WinUV software. The photometer specific parameters are entered via the familiar Cary WinUV interface. The parameters for the automated sample addition by the sampler are set via special user dialogs, which can be called up in the additional tab „ADL“ of the Cary WinUV.



Scan: Recording of spectra with intervals in the range of 190 - 1100 nm, possibility of base-line correction

AdvancedReads: Measurement of the sample at one or several wavelengths, possibility for auto-zero to a reference (blank) and processing of a sample list

Concentration: Concentration or content determination of samples via a previously calculated calibration curve from measured standards in different concentrations, processing of one list each for samples and standards

Implementation

Functions for setup and actions of the sample station respectively the peristaltic pump are stored in a library (DLL).

HOOK-ADL-macros, which are executed automatically at certain events within the process chain of the sequence in the Cary WinUV software, call the above mentioned functions.

HOOKs used by application are:

Scan: Online, Pre-Setup, Pre-Sequence, Pre-Scan, Post-Scan, Post-Sequence,

Shut-Down

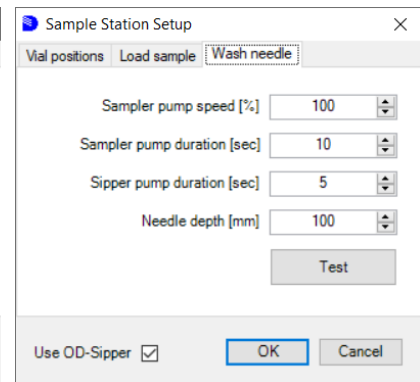
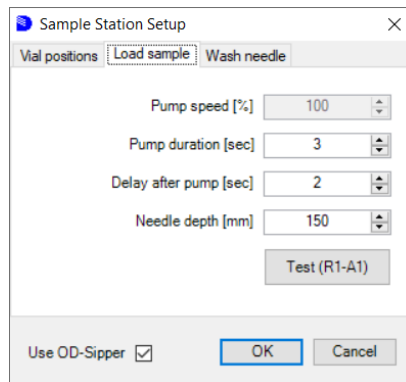
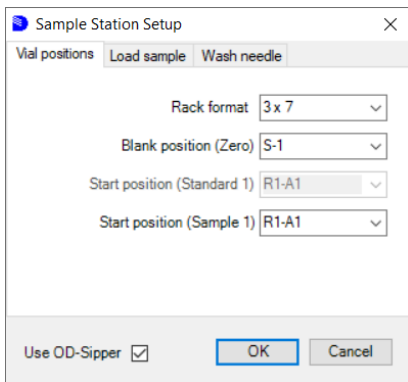
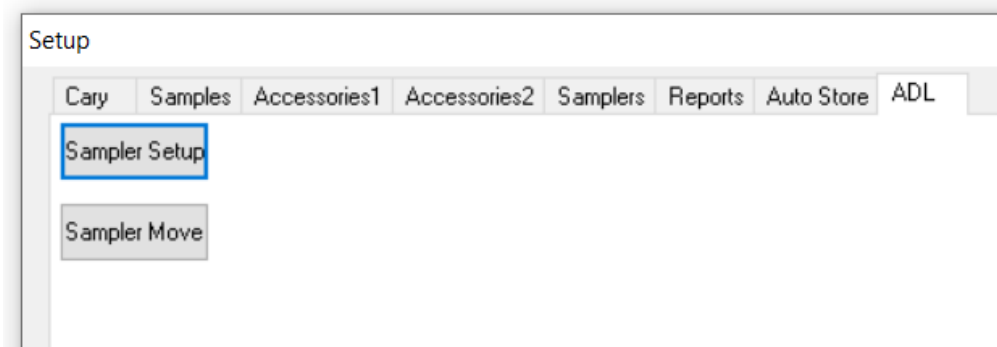
Advanced Reads: Online, Pre-Setup, Pre-Sequence, User-Load, Post-Read, Post-Sequence,

Shut-Down

Concentration: Online, User-Setup, Pre-Sequence, Pre-Standard-Sequence, Pre-Sample-Sequence, User-Load, Post-Sequence, Shut-Down

Software

Setup



Reports

Advanced Reads Report

Report time: 7/9/2021 9:46:13 AM
 Method:
 Batch name: C:\Users\jdegenhard\Desktop\Helma-1.BAB
 Application: Advanced Reads 5.0.0.999
 Operator:

Instrument Settings

Instrument: Cary 60
 Instrument version no.: 2.00
 Wavelength (nm): 635.00, 590.00, 465.00, 440.00
 Ordinate Mode: Abs
 Ave Time (sec): 0.5000
 Replicates: 1
 Sample averaging: OFF

Zero Report

Read	Abs (635.0 nm)	Abs (590.0 nm)	Abs (465.0 nm)	Abs (440.0 nm)
Zero	-0.0497	-0.0506	-0.0428	-0.0402

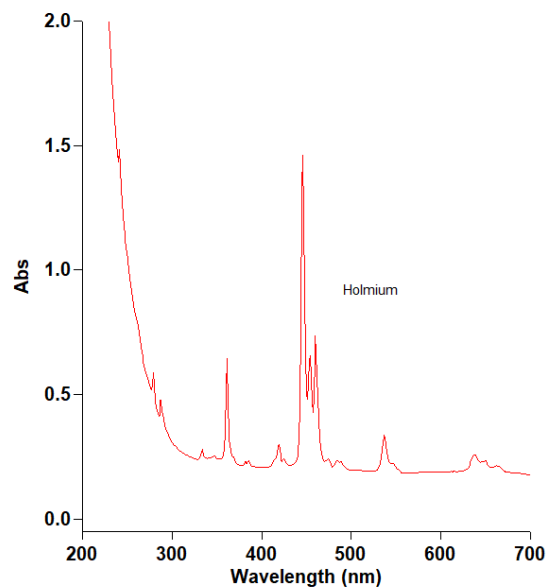
Analysis

Collection time: 7/9/2021 9:46:13 AM

Sample	F	Abs(635.0)	Abs(590.0)	Abs(465.0)	Abs(440.0)
F 0		0.0000	0.0001	0.0001	0.0001
F 2		0.2409	0.2415	0.2313	0.2643
F 3		0.5096	0.5094	0.4557	0.4969
F 4		0.9384	0.9696	0.9104	0.9857

Results Flags Legend

R = Repeat reading



Specifications

Number of rack positions	PS-C280: 2 PS-C560: 4
Standard rack types	Rack 1: No. of samples 6x15 - 13 mm diameter Rack 2: No. of samples 5x12 - 16 mm diameter Rack 3: No. of samples 4x10 - 20 mm diameter Rack 4: No. of samples 3x8 - 25 mm diameter Rack 5: No. of samples 3x7 - 30 mm diameter
Integrated peristaltic pump (optional)	2 channels (1st channel for rinse port, 2nd channel for sample pick-up) speed adjustable
Dimension	PS-C280: H: 620 mm / W: 355 mm / D: 550 mm PS-C560: H: 620 mm / W: 580 mm / D: 550 mm
X-Y-Z positions (max.)	PS-C280: X: 220 mm / Y: 300 mm / Z: 150 mm PS-C560: X: 420 mm / Y: 300 mm / Z: 150 mm
Weight	PS-C280: 8.1 kg PS-C560: 11.7 kg
Material with liquid contact	PTFE, PCTFE, FEP, borosilicate glass
Rinsing port	for rinsing the needle from the inside and outside (only in combination with integrated peristaltic pump)
Interfaces	RS232, USB
Power supply	PS-C280: 100-240 VAC, 37-63 Hz, 1.9 A (external power supply) PS-C560: 100-240 VAC, 37-63 Hz, 1.9 A (external power supply)

Special Solutions

ADL is a macro language within the Cary WinUV software and allows to quickly realize individual tasks that go beyond the standard applications in the Cary WinUV package.

It uses SAX-Basic as programming language to access the functions of the photometer and to control and integrate peripheral components. The familiar user interface with graphics, reports and data structure is retained.

- extended, individual measurement procedure
- additional, individual calculations and evaluation
- specification of additional parameters
- acquisition of additional information
- control and integration of accessories and peripheral devices
- user guidance according to an operating procedure (SOP)
- data exchange with other systems
- user-defined report and documentation

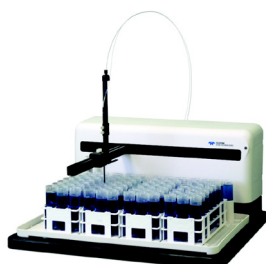
ADL projects are available for the Cary 60, 100, 300, 4000, and 5000 models and the Cary Eclipse.

Order information

Part no.	Description
810930	ASAP-4-Cary : Automated Sample Processing Software for Cary WinUV software modules Scan, Advanced Reads & Concentration
810924	Sample station PSC-280 with 2 rack positions
810925	Sample station PSC-560 with 4 rack positions
810923-026	2-Channel Pump Motor Kit
810930-001	ASAP-4-Cary : connecting cable USB to RS232 for PS-C280/560
810930-002	ASAP-4-Cary : connecting cable USB to RS232 for Agilent OD Sipper
810923-031	Fitting and adapter kit for sample path - inlet & outlet peristaltic pump (1/16" OD capillary & 1/8" ID tubing) /(material: ETFE, PEEK, Delrin)
810923-028	2-channel peristaltic pump tubing set / ID 2mm(equivalent to PharMed)
810923-029	2-channel peristaltic pump tubing set / ID 2mm(equivalent to Tygon)
810923-030	2-channel peristaltic pump tubing set / ID 2mm(equivalent to Viton)
810923-010	Rack PP blue 6x15 Samples / Vial diameter 13 mm
810923-011	Rack PP blue 5x12 Samples / Vial diameter 16 mm
810923-012	Rack PP blue 4x10 Samples / Vial diameter 20 mm
810923-013	Rack PP blue 3x8 Samples / Vial diameter 25 mm
810923-014	Rack PP blue 3x7 Samples / Vial diameter 30 mm
810923-015	Rack PP white 6x15 Samples / Vial diameter 13 mm
810923-016	Rack PP white 5x12 Samples / Vial diameter 16 mm
810923-017	Rack PP white 4x10 Samples / Vial diameter 20 mm
810923-018	Rack PP white 3x8 Samples / Vial diameter 25 mm
810923-019	Rack PP white 3x7 Samples / Vial diameter 30 mm



810924



810925



810923-026



810923-031

