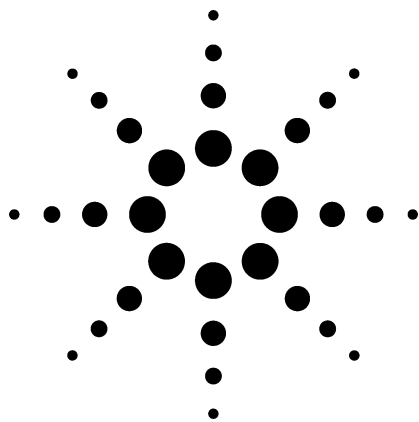


Agilent 6850 Automatic Liquid Sampler Model Number G2880A



Specifications

Gas Chromatography

July 2000

Product Description

The Agilent 6850 Automatic Liquid Sampler (ALS) is specifically designed for the 6850 GC. It provides:

- Simple installation or removal without tools
- Power and communications integrated with 6850 GC
- Automatic syringe alignment with inlet. No mechanical adjustments required.
- Electronic motor actuation with position feedback and control
- Sample capacity
 - 27 2-mL vials
 - 22 4-mL vials using optional turret accessory
- Sample sequencing: random access using 6850 hand-held controller, Agilent ChemStation or Agilent Cerity Networked Data System.

Physical Specifications

Height (cm)	47
Width (cm)	21
Depth (cm)	23
Weight (kg)	4.0

Safety and Support

- Injector will not operate if not mounted on GC or if injector door is left open.
- Error messages on GC show the source of any operating failure.
- Flash memory allows product firmware enhancements to be uploaded via 6850 handheld controller.
- In the event of any instrument failures, Agilent's industry leading *Express Exchange*¹ service can minimize downtime by shipping replacement sampler within hours.

¹ Not available in all countries.

Sample Injection

The Agilent 6850 ALS provides a wide range of injection capabilities:

Syringe sizes	5, 10, 25, 50, and 100 μ L	
Injection volume selection	2%, 10%, 20%, 30%, 40%, or 50% of syringe volume ²	
Syringe rinse solvents	Solvent A: two 4 mL bottles	Solvent B: two 4 mL bottles

² Control of syringe plunger includes the use of physical "hard-stops" to set injection volume. This maximizes the area repeatability of chromatographic analysis.



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Injection Parameter Control

Parameter	Range	Benefits
Variable sampling depth	-2 to +30 mm above default position	Accesses very small sample volumes Accesses a specific layer in a two-phase sample Avoids aspirating sample particulates
Pre-injection syringe rinsing and post-injection syringe rinsing	0–15 rinses using solvent A and/or solvent B	Minimizes sample carryover Pre-injection rinse wets the syringe without consuming sample
Sample prewashes	0–15 prewashes	Additional way to minimize sample carryover
Viscosity delay, top of plunger stroke	0–7 seconds	Improves sampling accuracy of viscous samples
Pre-injection sample pumps	0–15 pumps	Ensures accurate and reproducible sample volume Removes bubbles
Minimum sample injection volume (single injection)	0.1 μL (5- μL syringe)	Prevents overloading the column when using concentrated samples, on-column injections, or small-diameter columns
Maximum sample injection volume	50 μL (100- μL syringe)	Supports ambient headspace analysis using gas tight syringe
Injection plunger speed (see injection flow rate table)	Fast/Slow	Fast plunger minimizes needle discrimination in vaporizing inlets Slow plunger mimics manual techniques
Pre-injection dwell time	0–1 minute	Automatically fills needle with 1 μL of air after sampling Automates “hot needle” injection technique
Post-injection dwell time	0–1 minute	Mimics manual injection
Injections per vial	1–99 injections	For replicating sample analysis

Injection Rates

Injection flow rates are dependent on the syringe used and the plunger speed setting.

Note that “slow” plunger speed is equal to the “slow” speed on the Agilent 7673 or 7683 autoinjectors.

Injection Flow Rates ($\mu\text{L}/\text{min}$)

Syringe Size (μL)	Plunger Parameter	
	Fast	Slow
5	3,000	150
10	6,000	300
25	15,000	750
50	30,000	1,500
100	60,000	3,000

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