Waters
THE SCIENCE OF WHAT'S POSSIBLE.™

2707 AUTOSAMPLER

Automated, precise, and reproducible injections

IDEALLY SUITED FOR MODULAR LC SYSTEMS

The Waters® 2707 Autosampler is a versatile, compact sample management system that makes highly precise and reproducible injections of samples into your LC or LC/MS system. Perfect for automated, routine LC requirements, this easy-to-use and rugged autosampler meets a wide variety of sampling needs in pharmaceutical, chemical, and environmental laboratories. And with Empower™ control, the gold standard in chromatography data software, you can be confident that you'll streamline and automate your laboratory workflow and produce meaningful results.

The modular design of the 2707 makes it the ideal autosampler when purchased as part of a new HPLC system or as a replacement for an existing autosampler.

The 2707 delivers:

- Reduced carryover between injections
- Maximized injection repeatability and accuracy
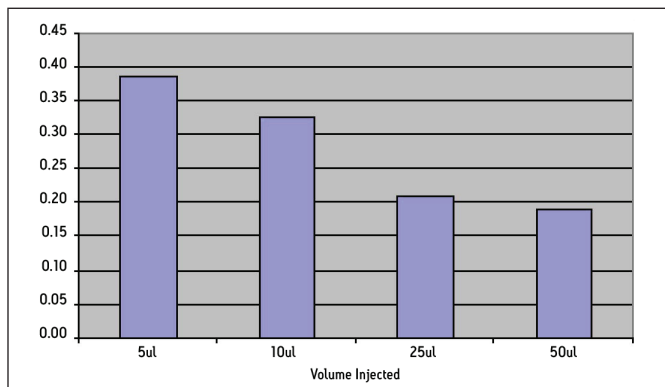- Flexible and easy-to-use operability

The 2707 Autosampler.

PRECISE RESULTS

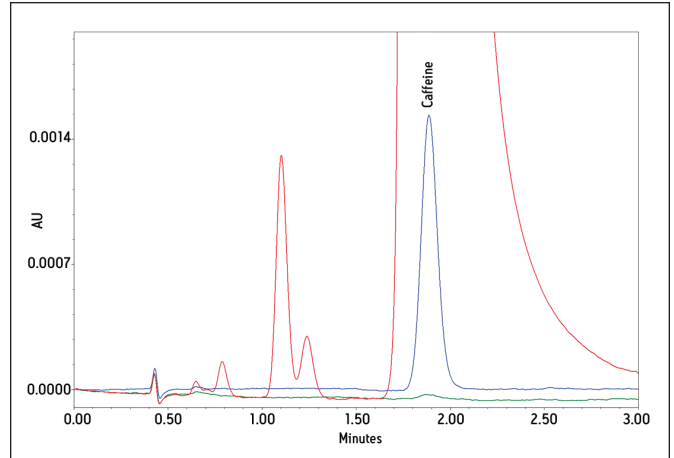#### High precision and reproducibility in all applications

Pressure-assisted sample acquisition ensures highly reproducible injections, especially when using highly viscous samples. Its fixed-loop injector is designed to deliver the best performance whether you have a large volume of sample, are sample-limited, or need to preserve a highly valuable sample.

Injection precision – Average results from nine units (six injections per unit).

Minimal carryover between injections for improved results

Good carry over performance is one of the most important aspects when choosing an autosampler. By minimizing the potential for cross-contamination between samples, the 2707 delivers more robust analyses and more consistent and accurate results. The programmable needle wash of the 2707 allows the operator to keep carryover between peaks to an absolute minimum.
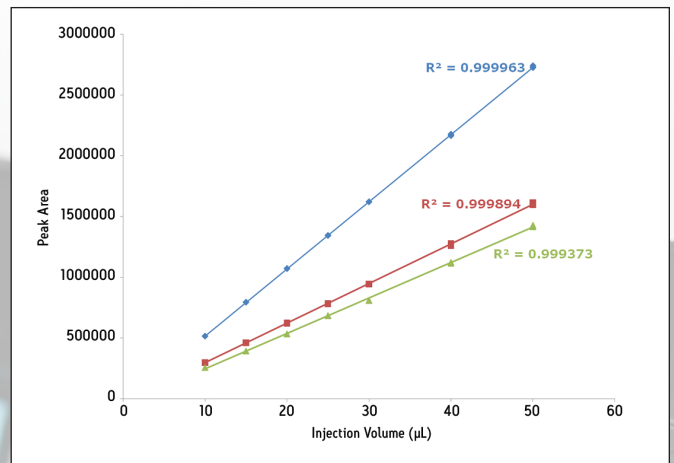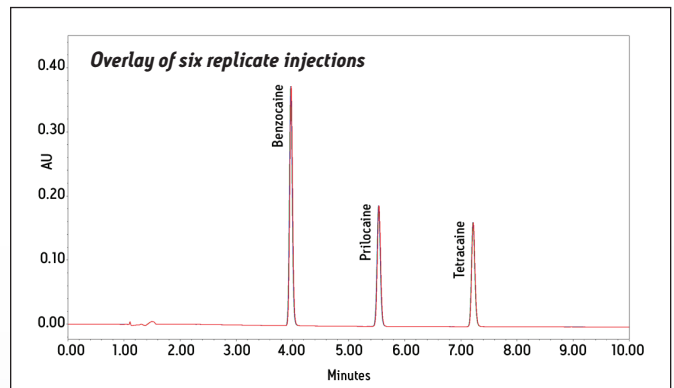

Management of carryover in caffeine analysis using the 2707. Standard (blue trace) represents signal from a 0.05% carryover peak. The first blank injection (green trace) demonstrates that the caffeine carryover is much less than specification at 0.0007%.

Injection linearity

An autosampler with a wide linear injection volume range provides for more flexibility whether developing methods or performing routine laboratory measurements.
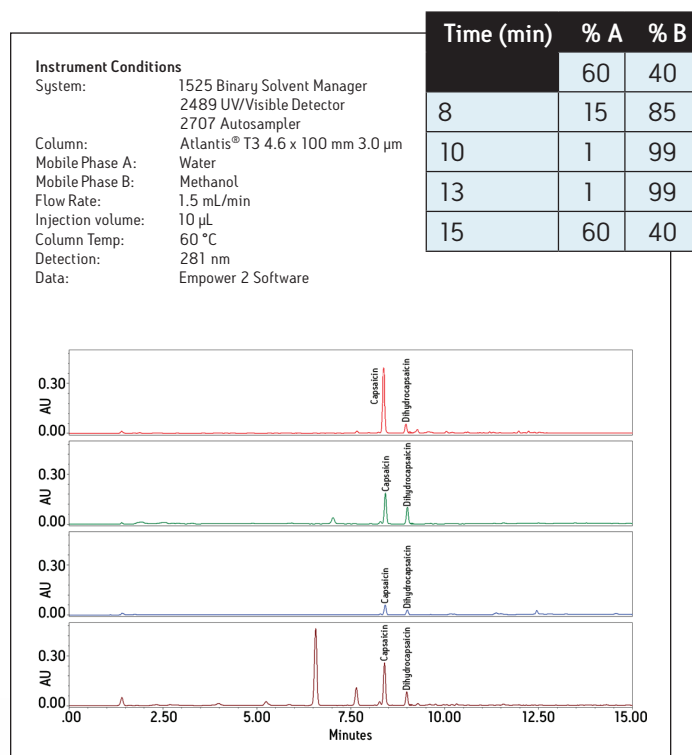
Assays that require variable injection volumes for samples and standards can be challenging for an autosampler. The superior injection volume linearity combined with the excellent injection repeatability of the 2707 Autosampler yields reliable quantitative results for these assays.

The highly repeatable and linear injection volume range of the 2707 is demonstrated with a series of anesthetics. Injection repeatability was less than 0.5% RSD across all injection volumes and the correlation co-efficient (R^2) for all the curves exceeded 0.999.

Repeatable quantification

No matter your application area, the 2707 Autosampler injector precisely, accurately, and linearly delivers your sample to your analytical column for the most reliable quantification results.

Instrument Conditions

System:	1525 Binary Solvent Manager	
	2489 UV/Visible Detector	
	2707 Autosampler	
Column:	Atlantis® T3 4.6 x 100 mm 3.0 µm	
Mobile Phase A:	Water	
Mobile Phase B:	Methanol	
Flow Rate:	1.5 mL/min	
Injection volume:	10 µL	
Column Temp:	60 °C	
Detection:	281 nm	
Data:	Empower 2 Software	

Time (min)	% A	% B
	60	40
8	15	85
10	1	99
13	1	99
15	60	40

Brand	Concentration Capsaicin (mg/mL)	Concentration Dihydrocapsaicin (mg/mL)
Habanero Hot Sauce A (4x Dilution)	0.479 (1.916)	0.122 (0.488)
Red Pepper Hot Sauce	0.228	0.037
Jalepeno Hot Sauce	0.069	0.039
Habanero Hot Sauce B	0.323	0.067

Analysis of the two most potent capsaicinoids in commercial hot sauces. The accurate quantification of these active components provided by the 2707 Autosampler yields greater batch-to-batch consistency.
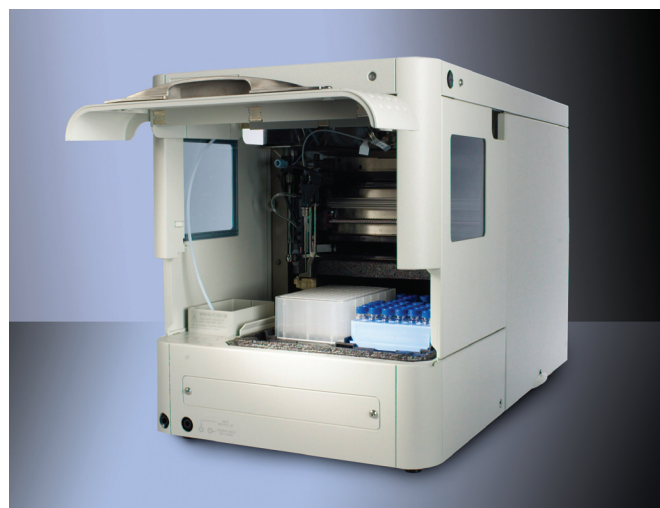
EASY TO USE AND MAINTAIN

Versatile sampling formats

Use plates or vials alone, or in combination, for varied sampling formats.

The 2707 accepts two of any of the following (singly or in combination):
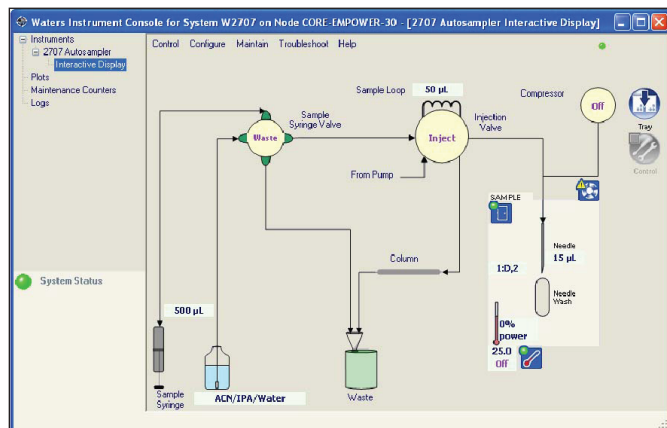
- 96- and 384-well microtiter plates
- 48-position plate holder for 2-mL vials
- 12-position plate holder for 10-mL vials

The 2707 Autosampler provides easy access to samples and injector components for simplified routine maintenance.
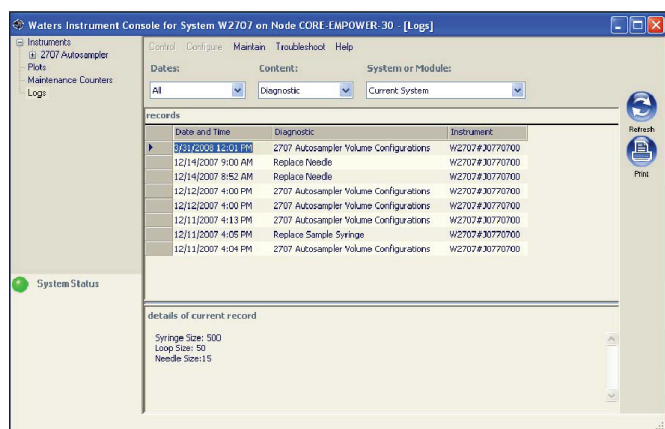
Customizable instrument console software

The 2707 Autosampler is equipped with a customizable instrument console compatible with Empower Software, which enables users to easily stay in control. Instrument setup, status monitoring, and diagnostics are easily accessible through the software's intuitive, easy-to-learn interface.

Instrument console – 2707 Autosampler's interactive display.

Simple maintenance and user-installable options

Easy access to all fluidic components makes routine maintenance a snap - reducing time and cost, and keeps the system in peak operating condition. In addition, most of the available options, such as the Preparative Injection and Biocompatible kits, are easily installed by the operator, so that they can be converted into the configuration that best fits your laboratory's current needs.

The console software dynamically tracks changes to the configuration of the 2707 Autosampler to facilitate data interpretation and maintenance.

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