

# TurboVap® LV

## Building on Solid Foundations

TurboVap® is a second generation product which builds on the solid foundations of the historic TurboVap product line and incorporates many new customer driven features. It still features the highly efficient patented gas vortex shearing technology, which is synonymous with the TurboVap brand.



## New Vs. Old TurboVap® LV



TurboVap® LV 2017



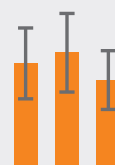
TurboVap® LV

This modern design features many new enhancements, including a well-lit glass tank for much greater visibility, removable/replaceable nozzles on the lid, on-the-fly nozzle adjustment, easily exchangeable manifolds to extend functionality, programmable evaporation flow gradients, easy access drain port and user friendly touch screen interface. The system can be vented from the bench or placed in a fume hood. Because the footprint is noticeably smaller on the modern unit, less space is required.

A novel and innovative feature of the new TurboVap® family is the Multi Rack that can be fully adjusted for a range of tube/vial sizes. By using the series of Multi Racks, the TurboVap LV will accommodate tube/vial sizes from 1.5 mL up to 60 mL. Two versions of the 48 position rack are available to accommodate most common glassware sizes. When used in the 24 position mode, the Multi Rack will accommodate 24 x I-Chem/ASE/EPA vials, 24 x 50 mL centrifuge tubes/Greiner or 24 x TurboVap II, 50 mL, 0.5 or 1.0 mL End Point Tubes.

In addition to the many user-friendly improvements, the new TurboVap LV outperforms its predecessor as well, providing faster Evaporation, higher analyte recoveries and lower RSD's. (Figures 1–3).

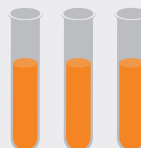
The new TurboVap LV is designed so that it can be easily and quickly converted between the functionality of the traditional LV and II instruments, as well as accommodate Extrahera Automation compatible racks.



Reduced  
RSD



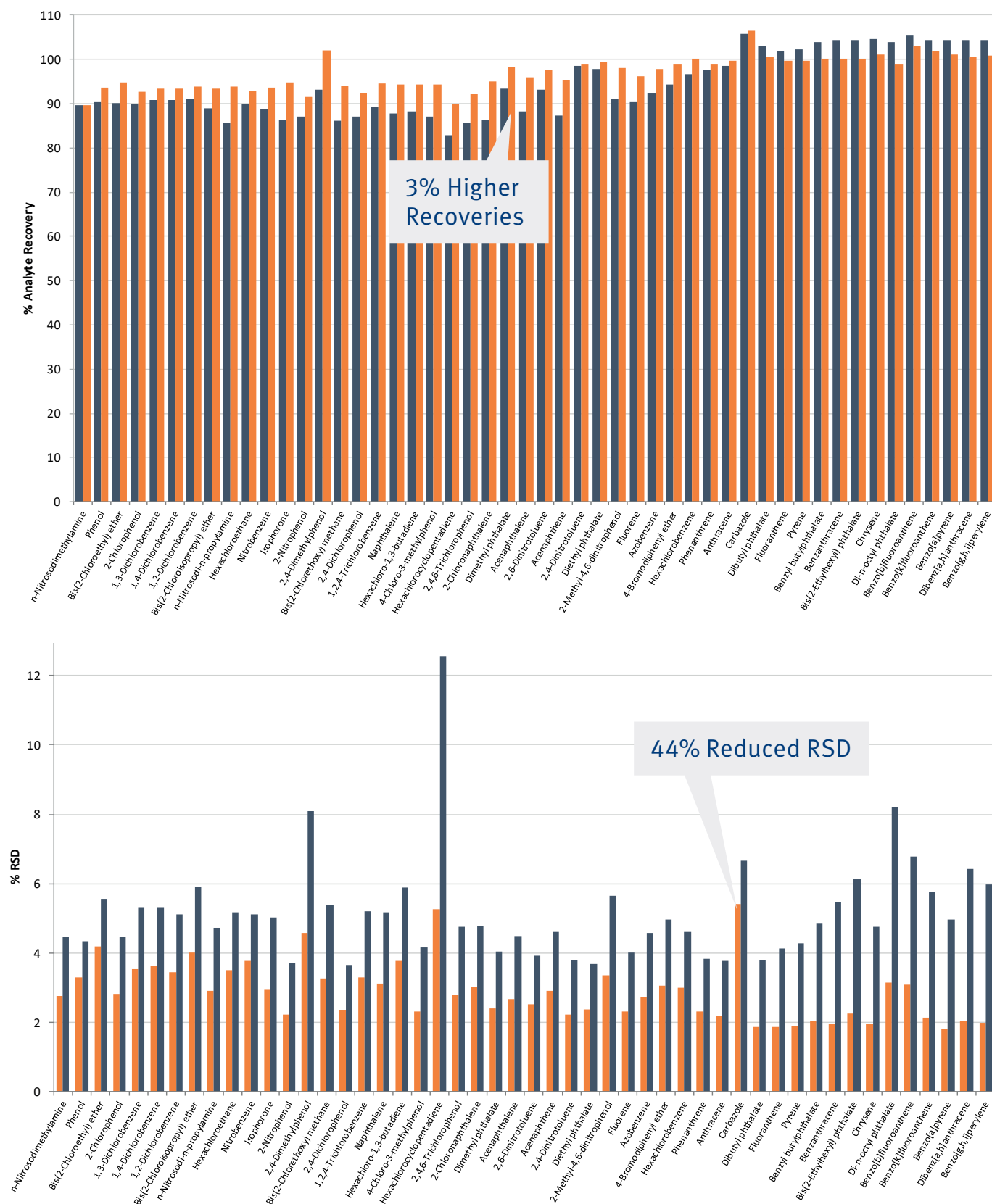
Faster  
Evaporation



Improved  
Recovery

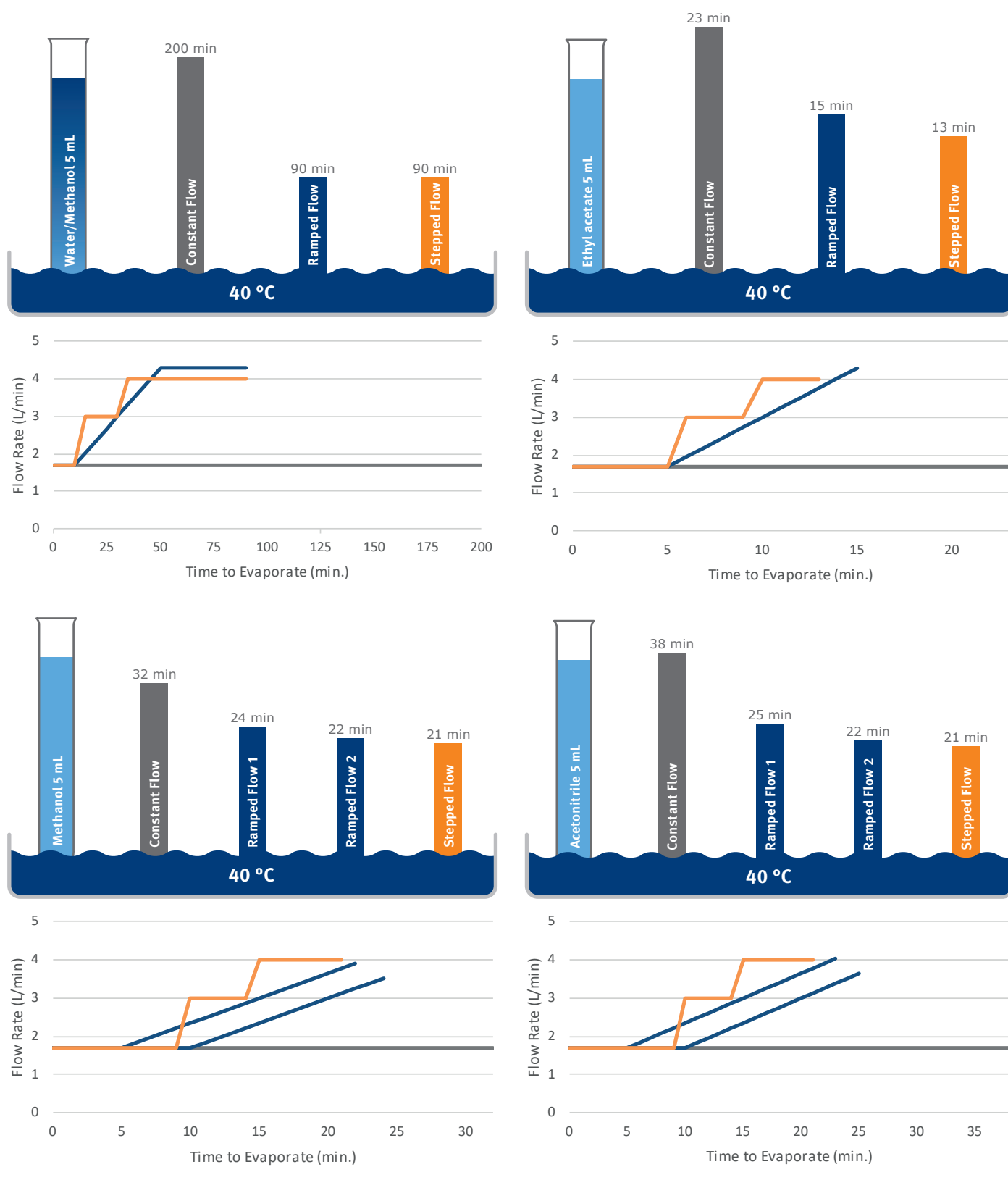
For demanding applications involving the use of aggressive acids and bases we offer an upgraded version of the standard instrument which features a PTFE coated manifold and treated nozzles. This system is resistant to the following substances.

- » Trifluoroacetic acid (TFA) 2%
- » Trichloroacetic acid (TCA) 2%
- » Formic acid 5%
- » Acetic acid 5%
- » Butyric acid 5%
- » Phosphoric acid 5%
- » Hydrochloric acid 0.1 M
- » Nitric acid 0.1 M
- » Ammonium Hydroxide 5%
- » Triethylamine (TEA) 5%

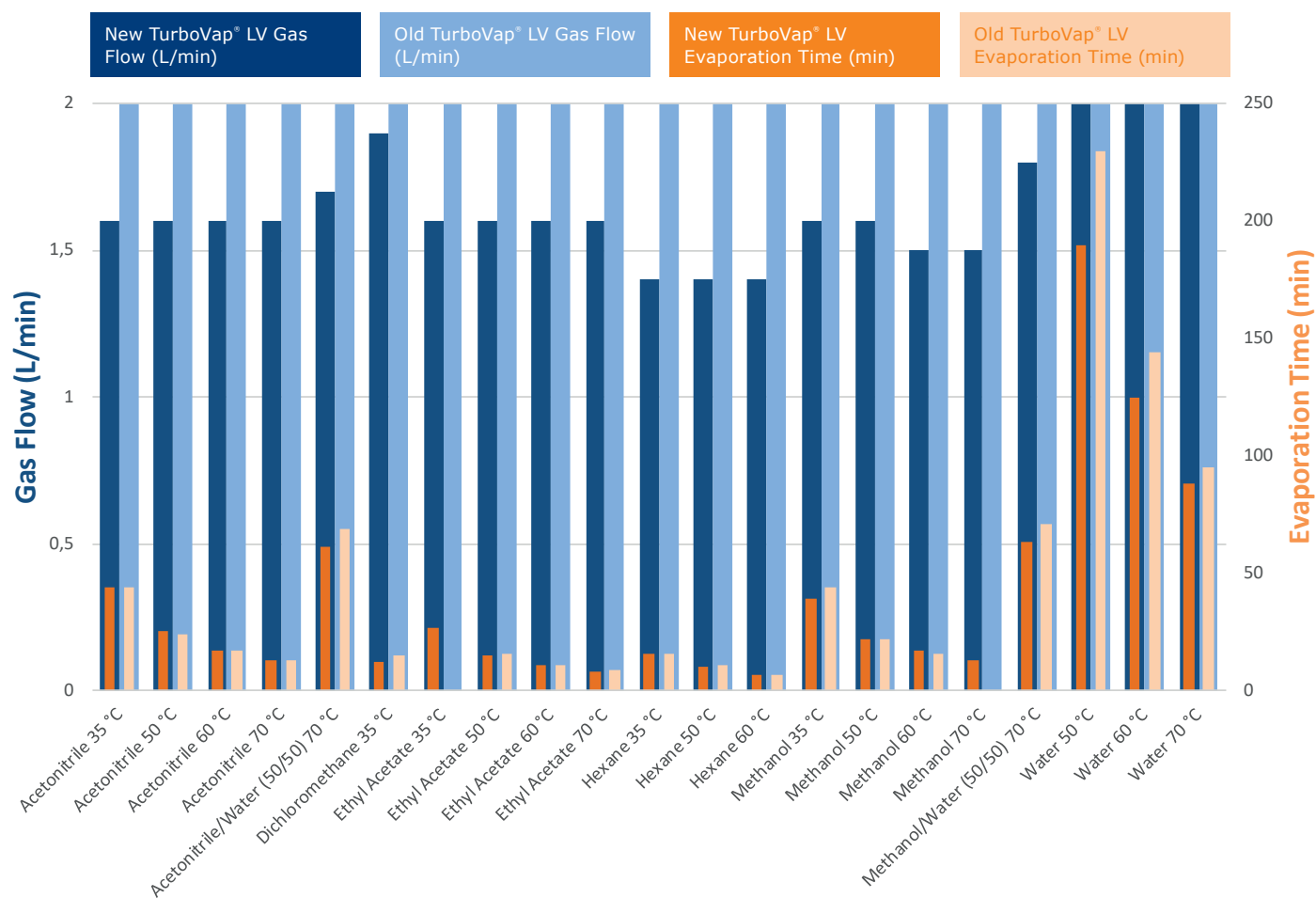


**Figure 1.** Recovery and RSD values on TurboVap® LV for different analytes using 13 x 100 mm tubes on a 48 tube Multi Rack. Starting Volume: 5 mL; Solvent: dichloromethane; Gas Flow: 1.8 L/min (10 psi on old TurboVap); Analyte Spike Amount: 10 µg; Final Extract Volume: ~ 0.5 mL.

■ New TurboVap® LV  
■ Old TurboVap® LV



**Figure 2.** Approximate evaporation times for different solvents and evaporation modes using TurboVap® LV at 40 °C. The corresponding evaporation methods are outlined below each figure.



**Figure 3.** Comparison of evaporation times on the new vs. old TurboVap® LV. All evaporations (n=8 for each solvent/condition) were performed with 10 mL of solvent in a 16x100 mm tubes (P/N C40708).

■ New TurboVap® LV Evaporation Time (min)  
■ Old TurboVap® LV Evaporation Time (min)  
■ New TurboVap® LV Gas Flow (L/min)  
■ Old TurboVap® LV Gas Flow (L/min)

## Ordering Information

Part Number	Description
<b>415000</b>	TurboVap LV (includes 415408 manifold, but no rack). Rack must be ordered separately.
<b>416200</b>	TurboVap LV - PTFE Coated Manifold (Rack must be ordered separately)
<b>415408SP</b>	TurboVap LV Manifold (48 Nozzles)
<b>416129SP</b>	TurboVap LV Manifold (48 Nozzles) - PTFE Coated (for upgrade of 415000)
<b>415489</b>	TurboVap LV Multi Rack (48 Positions, 10-16 mm Mini Vials)
<b>414964</b>	TurboVap LV Multi Rack (48 Positions, 10-20 mm Tubes)
<b>415129</b>	TurboVap LV Multi Rack (24 Positions, 21-32 mm Tubes)

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Part Number: PPS440.V.2

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