

# Supel<sup>™</sup> Swift HLB SPE cartridges - Solid Phase Extraction Made Easier

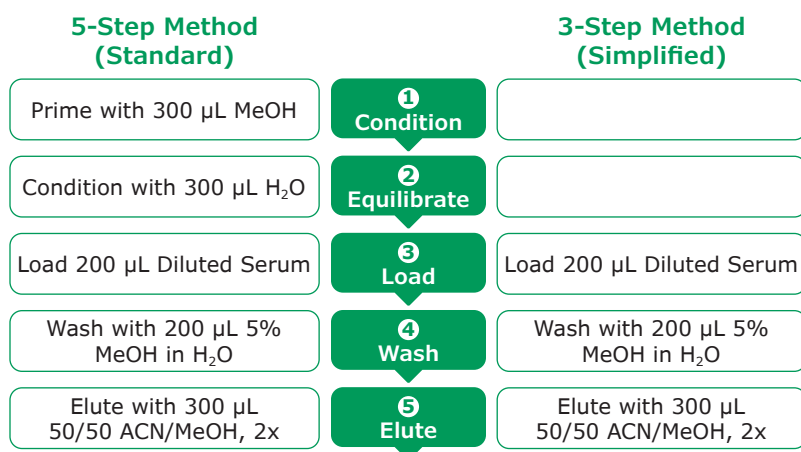
Enhance your sampling technique for accurate and precise LC-MS analysis

*Supel<sup>™</sup> Swift HLB SPE* is a polymeric stationary phase for solid phase extraction prior to instrumental analysis. It has both hydrophilic and lipophilic functional groups for the extraction of a broad range of compounds from aqueous samples. It retains analytes having different polarities and Log P values due to its hydrophilic and lipophilic balance (HLB) property. Benefits of *Supel<sup>™</sup> Swift HLB SPE* cartridges include:

- Suitable to the generic methodology
- Wide applicability
- Ideal for LC-MS and other workflows

## The possibility of 3-step SPE

*Supel<sup>™</sup> Swift HLB SPE cartridges* can reduce the number of steps in the solid phase extraction of your analyte from 5 to 3. You can directly load your sample onto the *Supel<sup>™</sup> Swift HLB SPE cartridge* bed and potentially eliminate the need for cumbersome pre-conditioning steps. This feature of the *Supel<sup>™</sup> Swift HLB SPE cartridges* reduces the number of errors in sample processing and simplifies sample preparation.



**Figure 1.** General processing of samples (serum 1:1 diluted) with *Supel<sup>™</sup> Swift HLB cartridges* (30 mg/1 mL) using a 5-step method and a 3-step method

## Superior flow rates

Flow rates are critical to SPE success during the load and elute step of SPE. *Supel™ Swift HLB SPE cartridge* has an optimized sorbent design to provide fast and efficient flow rates. It shows 20% faster flow rates than another broadly marketed fast-flow HLB cartridge in the SPE of diluted plasma (**Table 1**).

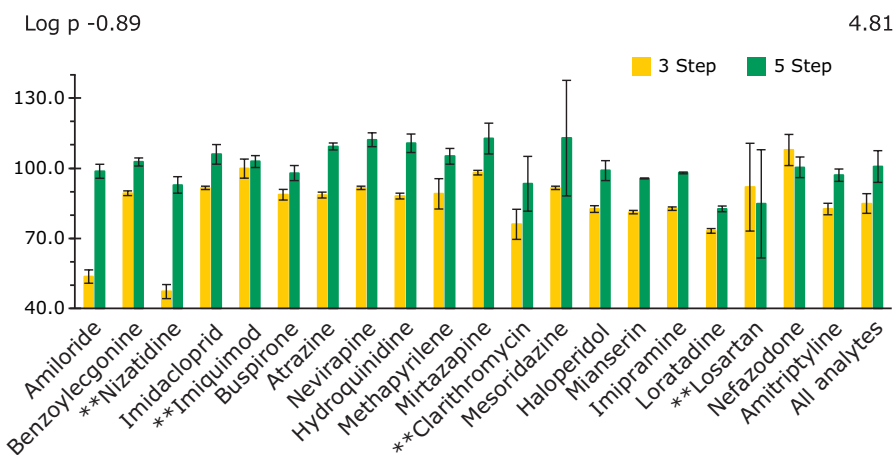
**Table 1.** Flow/processing time comparison vs another commercially available fast-flow HLB sorbent (n=3 cartridges) at same vacuum conditions

	Supel™ Swift HLB SPE cartridge	Commercially Available Fast-Flow HLB product	Difference
Processing time (seconds)	36	45	-20%
RSD	2.6	3.2	
RSD%	7.2%	7.1%	

## Excellent recovery for a wide range of compounds having different polarities and Log P values

*Supel™ Swift HLB SPE cartridges* offers good recovery for a wide range of compounds and polarities. **Figure 2** presents absolute recoveries of compounds ranging in log P from -0.9 to 4.8 using *Supel™ Swift HLB SPE cartridges* with both the 3-Step and 5-Step methods from plasma.

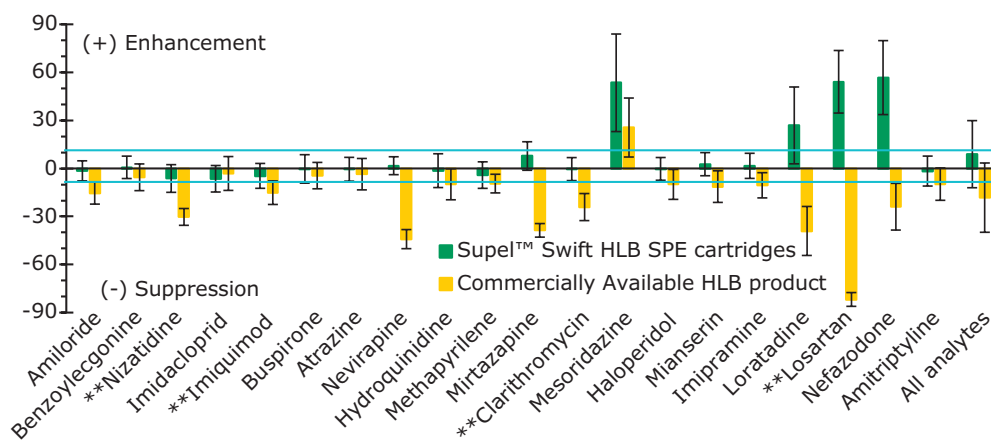
All-in-all, the 5-Step method shows better recoveries as compared to the 3-Step process. In the 5-Step process, all twenty analytes had recoveries between 80% and 120%. However, eighty percent of the analytes still showed recoveries in the 80% to 120% range by the 3-Step process.



**Figure 2:** Summary of Recovery for the 3- and 5-Step Process using *Supel™ Swift HLB SPE cartridges*. Analytes are ordered by increasing log P values.

## Reduced ion suppression/enhancement for better LC-MS analysis

Samples processed with *Supel™ Swift HLB SPE cartridges* show minimal ionization impact across the compound testing range. The exceptional performance of *Supel™ Swift HLB SPE cartridges* for signal suppression or enhancement was in stark contrast to another HLB cartridge on the market, which exhibited signal suppression/enhancement of more than 10% for most of the analytes tested.



**Figure 3.** Signal suppression or enhancement effects for *Supel™ Swift HLB SPE cartridges* and another commercially available HLB product using the 5-Step method. Analytes are arranged in order of their increasing log P values.

\*\* Analytes did not have an internal standard.

See our complete offering of *Supel™ Swift HLB SPE Products* at:

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