

ISOLUTE® SLE+

48-Well Supported Liquid Extraction Plate

Extract a Diverse Range of Analytes from up to 1 mL of Aqueous Sample Using a Simple Load-Wait-Elute Procedure



ISOLUTE® SLE+ is now available in high volume 48-well plate format, with capacity for up to 1 mL of aqueous sample, such as urine or plasma, per well. Ideal for high throughput applications where extra sample capacity is required, ISOLUTE SLE+ 1 mL capacity plates can help you to achieve higher sensitivity and lower detection limits.

Methods can be easily transferred from the 1 mL sample capacity individual column format, as protocols use the same solvents and volumes. To scale methods from lower capacity 96-well plate formats, simply follow the guidelines in the ISOLUTE SLE+ User Guide.

Recommended Extraction Workflow

- » Pre-treat sample as required (including internal standard addition, if used)
- » Ensure a 48-well collection plate (5 mL well volume) is in place
- » Load up to 1 mL of pre-treated sample into each of the 48 wells
- » Apply a pulse of vacuum or positive pressure to initiate sample load
- » Wait 5 minutes for sample to completely absorb and form extraction layer
- » Apply water immiscible extraction solvent (5 x 1 mL) and allow to flow under gravity
- » Apply a pulse of vacuum to complete elution
- » Evaporate to dryness and reconstitute as required

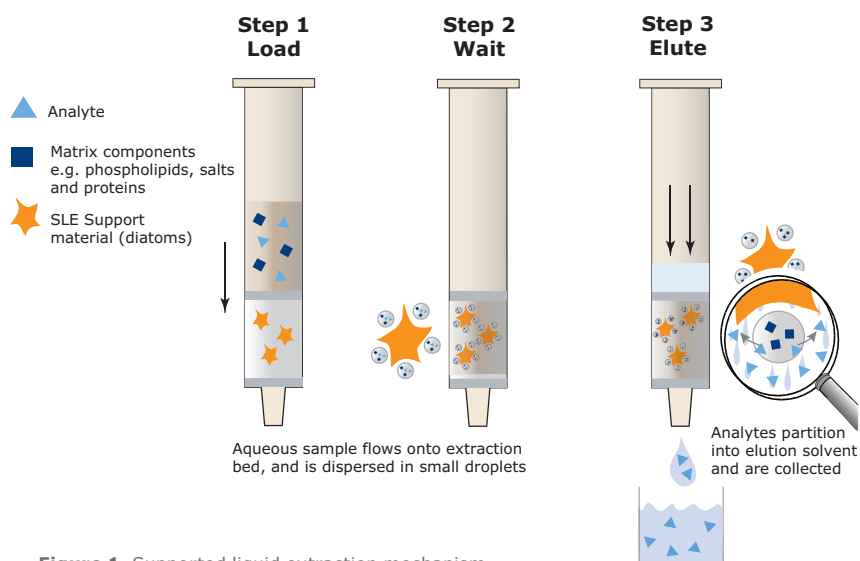


Figure 1. Supported liquid extraction mechanism.

Table 1. Typical procedure for extraction of acidic drugs (NSAIDs) and basic drugs (beta-blockers) from biological fluids using ISOLUTE® SLE+ 1 mL Supported Liquid Extraction plates.

	NSAIDS	Beta Blockers
Sample Pre-treatment	Dilute sample with 1% formic acid (1:1, v/v). Mix.	Dilute sample with 0.5M NH ₄ OH (1:1, v/v). Mix.
Load	Load sample (1 mL). Apply a pulse of vacuum or pressure to initiate flow.	Load sample (1 mL). Apply a pulse of vacuum or pressure to initiate flow.
Wait	Wait 5 mins for sample to completely absorb.	Wait 5 mins for sample to completely absorb.
Elute	Apply MTBE (5 x 1 mL). Apply vacuum or pressure for 10–30 s to complete elution.	Apply dichloromethane: isopropanol (95:5, v/v, 5 x 1 mL). Apply vacuum or pressure for 10–30 s to complete elution.
Post-extraction	Evaporate to dryness and reconstitute in mobile phase prior to LC-MS/MS analysis.	Evaporate to dryness and reconstitute in mobile phase prior to LC-MS/MS analysis.

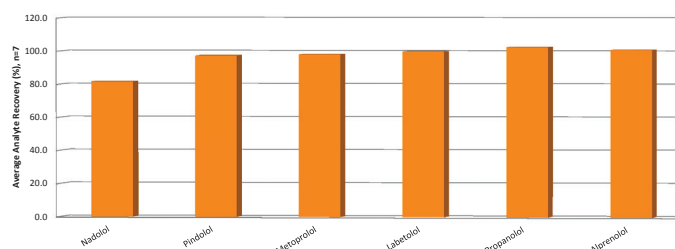


Figure 2. Average recovery (n=7) of beta-blockers from urine. Analytes were spiked into blank matrix at a concentration of 0.5 ng/mL, and extracted using the protocol shown in **Table 1**.

Processing

ISOLUTE® SLE+ 1 mL capacity 48-well plates can be processed using vacuum or positive pressure, and processing is easily automated.

Ordering Information

Part Number	Description	Quantity
Extraction Products		
820-1000-Q01	ISOLUTE® SLE+ Supported Liquid Extraction Plate, 48 well	1
121-5210	Collection plate, 48-well, 5 mL	20
Sample Processing Manifolds and Evaporation Products		
121-9600	Biotage® VacMaster™-96 Sample Processing Manifold	1
PPM-96	Biotage® PRESSURE+ Positive Pressure Manifold, 96 Position	1
SD-9600-DHS-NA	Biotage® SPE Dry 96 Sample Concentrator System, 100/110V	1
SD-9600-DHS-EU	Biotage® SPE Dry 96 Sample Concentrator System, 220/240V	1
SD2-9600-DHS-NA	Biotage® SPE Dry 96 Dual Concentrator System, 100/110V	1
C103263	TurboVap® 96, 100/120V	1
C103264	TurboVap® 96, 220/240V	1
C103198	TurboVap® LV, 100/120V	1
C103199	TurboVap® LV, 220/240V	1

For full details on method development, including pre-treatment and extraction solvent options, plus a wealth of practical hints and tips, see the ISOLUTE® SLE+ User Guide (download for free from www.biotage.com)

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