



Microlute™ CP

Enhanced reproducibility

Greater selectivity & specificity of target analytes

Efficient sample clean-up & concentration system

porvair
sciences

Microlute™ CP takes SPE to a new level of performance by enhancing the reproducibility of analyte extraction and recovery from biological, environmental and chemical samples.

Unlike traditional loose-filled SPE methods, Microlute™ CP uses a hybrid structure, a solid interconnected network of evenly distributed pores combined with the retentive media. This design enhances the flow-through of samples to maximise interactions between analytes and the solid phase to deliver a reproducible SPE method that excels in performance, cleanliness and sensitivity.

Phases: RP, SCX, SAX, WCX, WAX

Formats: 96 well plates and cartridges

Bed Weight: 30mg/well or cartridge

Analysis: UHPLC, HPLC, GC, LCMS, GCMS

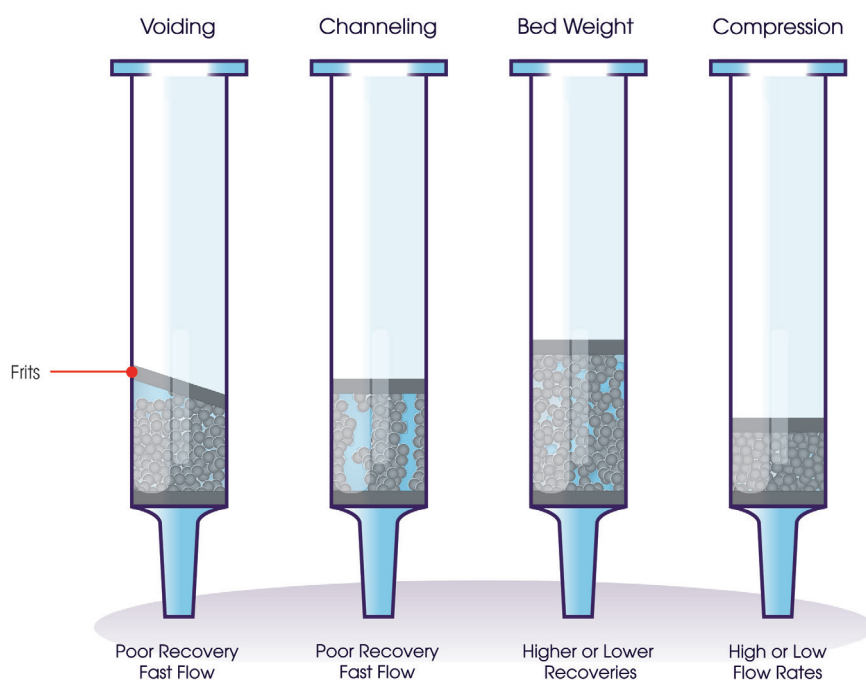
Applications: Drugs of abuse detection, metabolite analysis, food analysis



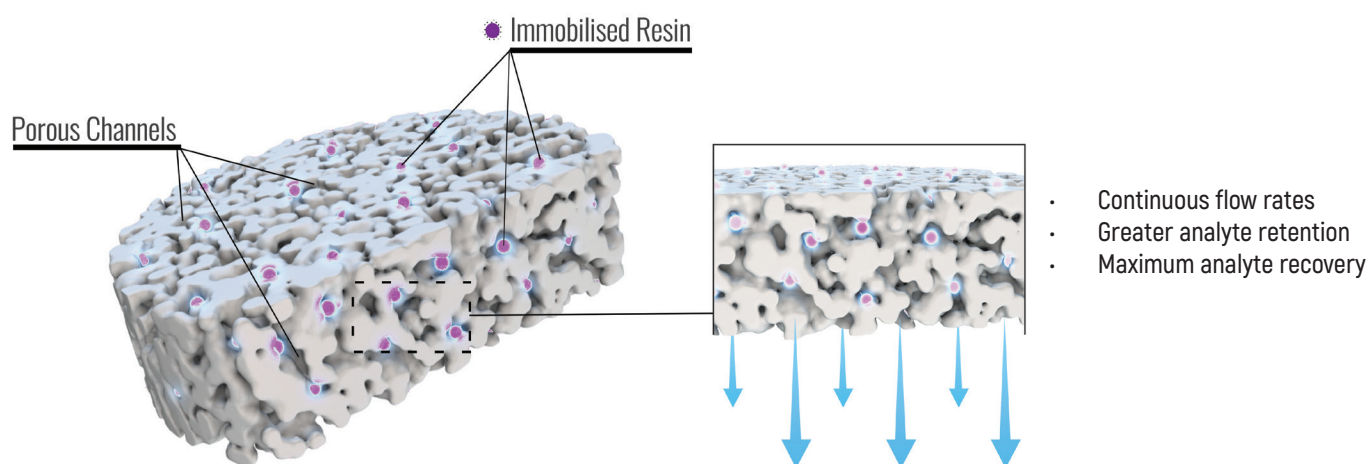
Enhanced Reproducibility

The goal of any SPE or sample preparation method development is to get the best analyte recovery, while minimising the concentration of contaminating compounds reaching the final analysis sample. Importantly, the reproducibility of the method, sample-to-sample, day-to-day, week-to-week is critical for greater confidence that your results are more precise. Microlute™ CP has technology has a leading design that reduces the variability seen in standard SPE product ranges and guarantees the highest level of sample reproducibility available.

Variabilities in Traditional Loose-packed Methods



Microlute™ Hybrid Technology



A Solid Start to SPE

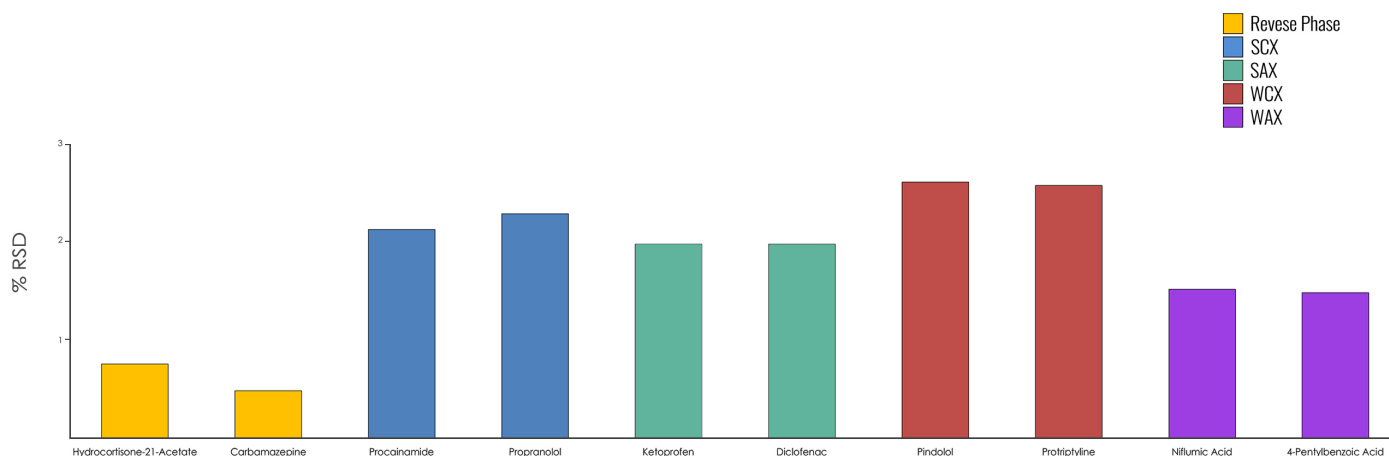
The Microlute™ CP hybrid technology is composed of a solid interconnected network of evenly distributed pores immobilised with chromatographic media within the structure. This results in the formation of a chemically active porous filter or frit, a unique structure that overcomes common inconsistencies and variabilities often associated with loose-packed methods.

The porous properties of Microlute™ CP allows for consistent and controlled flow of samples throughout the filter leading to enhanced retention and recovery of precious analytes without any risk of material breakthrough. Meanwhile, the single solid structure eliminates the requirements of 'extra' frits for media support which can further disrupt flow rates and lead to unwanted material breakthrough. The synergy between structure and performance leads to a new method of SPE that promises quality performance with the added benefit of true reproducibility and reliability.

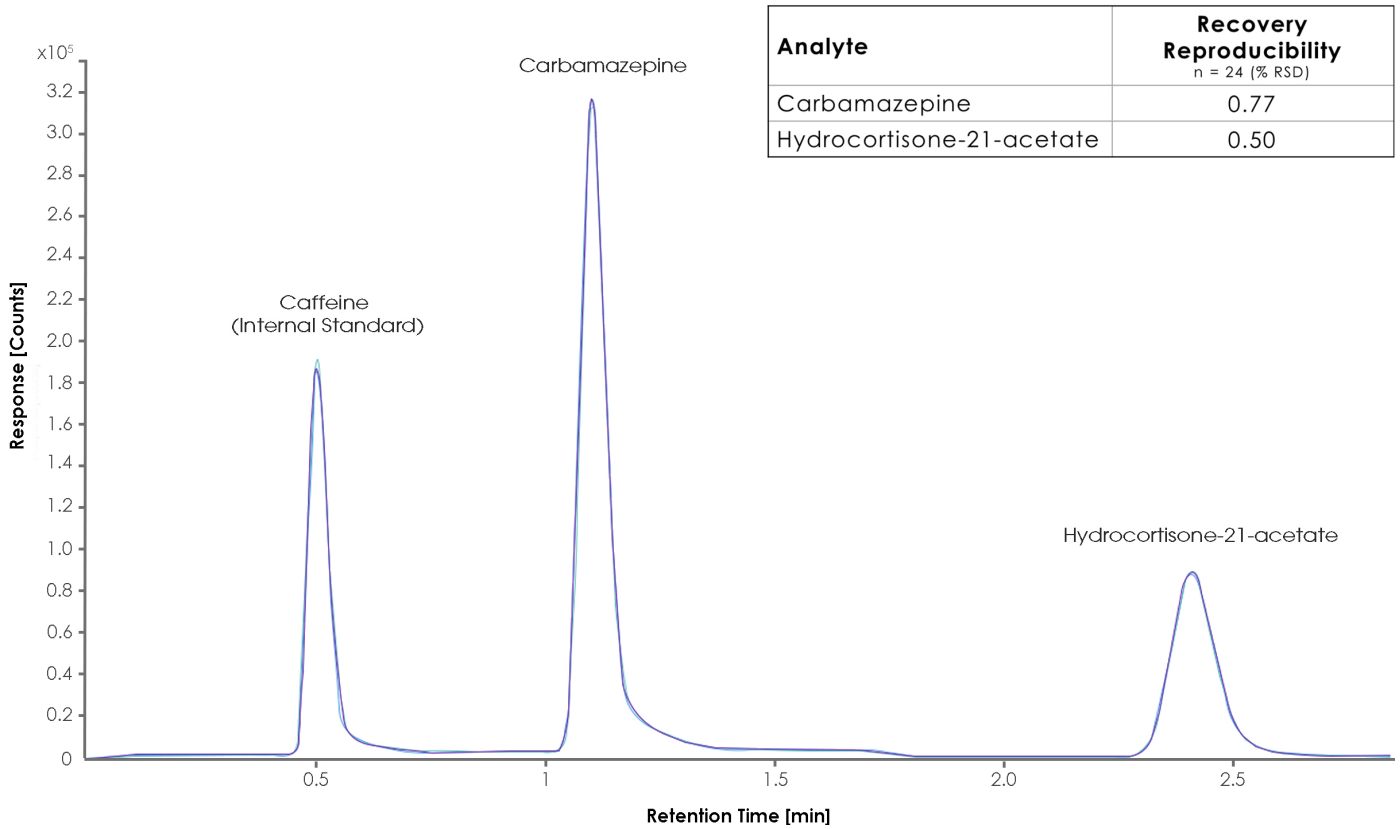
Market Leading Reproducibility

<4% RSD for greater confidence in results

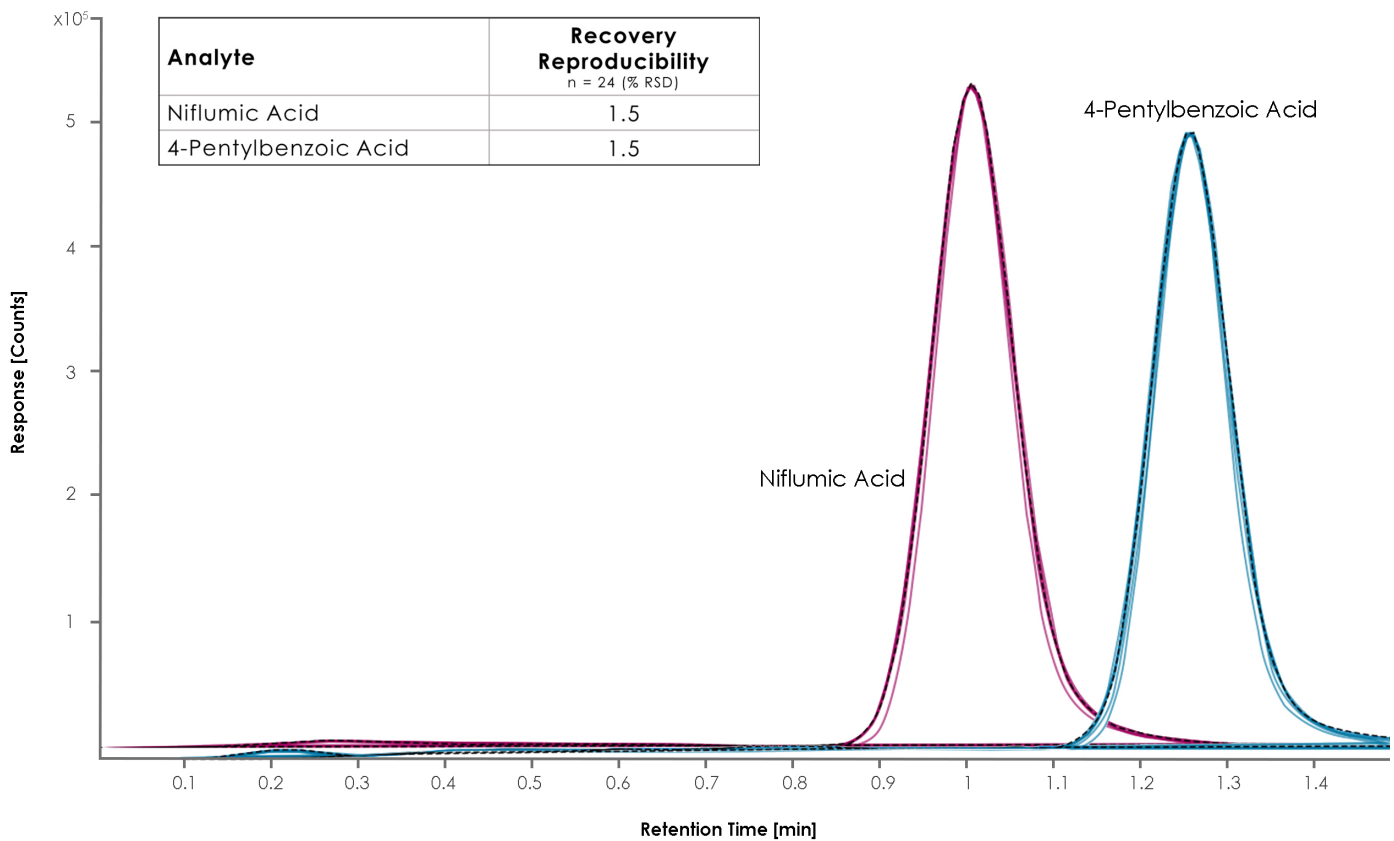
Consistent analyte recovery from samples, from well-to-well and batch-to-batch first time and every time. High-throughput studies will benefit from a reproducible, high performing sample preparation workflow.



Reproducibility of Recovering Analytes using Microlute™ CP RP

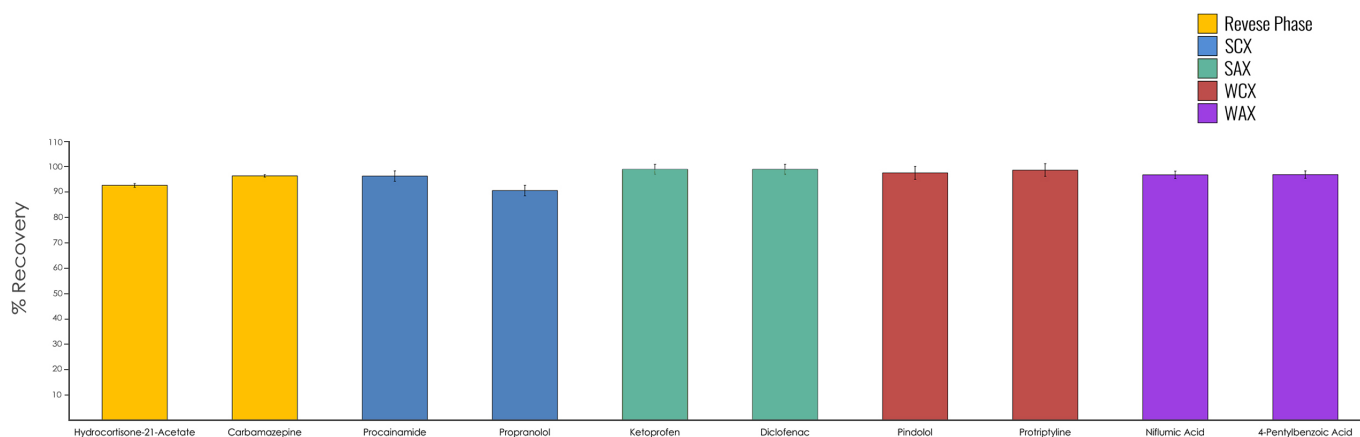


Reproducibility of Recovering Compounds using Microlute™ CP WAX



High Recovery of Analytes

> 90% Recovery for Acidic, Basic & Neutral Analytes



Greater Selectivity and Specificity

SPE method development uses a range of different chemistries to either retain analytes of interest or the contamination that needs to be removed. In extensive tests to establish the composite technology, comparisons were made that showed retention selectivity, loading capacity and specificity of the media remains unchanged during the manufacturing process. The Microlute™ CP SPE range offers improved reproducibility, without compromising chromatographic performance. This also simplifies method transfer from existing methods.

Reverse Phase

The Microlute™ CP RP is a polymer based phase that is ideal for retention of neutral compounds through hydrophobic interaction with some retention of polars. It is an ideal first start phase for many applications or where there is a wide range of compounds present.



Strong Cation Exchange

Microlute™ CP SCX uses a sulphonic acid functional group on a polymeric base with a pKa of <1. This provides a wide pH range for cationic exchange with basic compounds and retention of neutral compounds through the base polymer.



Strong Anion Exchange

The Microlute™ CP SAX uses a quarternary ammonium chemistry on a polymeric base with a pKa >18. Ideal for the capture of acidic analytes through anion exchange. As with the SCX, the polymer base offers a secondary retention of neutral compounds.



Weak Cation Exchange

Weak cation exchange is used to retain strongly basic compounds which are always ionised at any pH. The Microlute™ CP WCX uses a carboxylic acid ligand with a pKa ~4.5 which allows ionisation and neutralisation of the resin to allow retention and controlled release of the strong basic compounds. This is combined with the polymeric base to allow a degree of neutral compound retention.



Weak Anion exchange

Weak anion exchange is used to retain strongly acidic compounds which are always ionised at any pH. The Microlute™ CP WAX uses a tertiary amine ligand on the polymer base with a pKa ~8.5 which allows ionisation and neutralisation of the resin to allow retention and controlled release of the strong acidic compounds. This is combined with the polymeric base to allow a degree of neutral compound retention.



Ordering Information

Product #	Description	Format	Qty
P-PRP030P-001	30 mg RP	96 well plate	1
P-SCX030P-001	30 mg SCX	96 well plate	1
P-SAX030P-001	30 mg SAX	96 well plate	1
P-WCX030P-001	30 mg WCX	96 well plate	1
P-WAX030P-001	30 mg WAX	96 well plate	1
P-PRP0303-050	30 mg PRP	3ml cartridge	50
P-SCX0303-050	30 mg SCX	3ml cartridge	50
P-SAX0303-050	30 mg SAX	3ml cartridge	50
P-WCX0303-050	30 mg WCX	3ml cartridge	50
P-WAX0303-050	30 mg WAX	3ml cartridge	50

Contact Information

Microlute™ is available worldwide through our global distribution network.
Get in touch to place your order, find out more or if you have a technical question about our products.

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About Us

Porvair Sciences, and sister company, JG Finneran, design, develop and manufacture high-quality microplates and glass vials for analytical and life science laboratory applications.

The combined portfolio includes unique products to support the sample prep workflow, from cartridges and plates using our composite technology, manifolds and evaporators for sample concentration, through to sample handling & storage with our extensive range of deep well plates, vials and closures.

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