

Sample Preparation Product

InertSep Micro Elution SPE Plate

Speed Up SPE. Reduce Solvent. Improve Recovery.



**Speed Up
Your Workflow**



Introduction of Micro Elution SPE Plate

Streamlined Workflow, Consistent Results

InertSep Micro Elution SPE Plate is a compact format developed as a new standard in solid-phase extraction (SPE). With specially designed elongated wells and a high sorbent bed, it delivers excellent extraction performance using only 2 mg of sorbent.

The elution volume is as low as 25–150 μL , eliminating the need for a dry-down step and enabling high recovery and sensitivity even for thermally labile compounds.

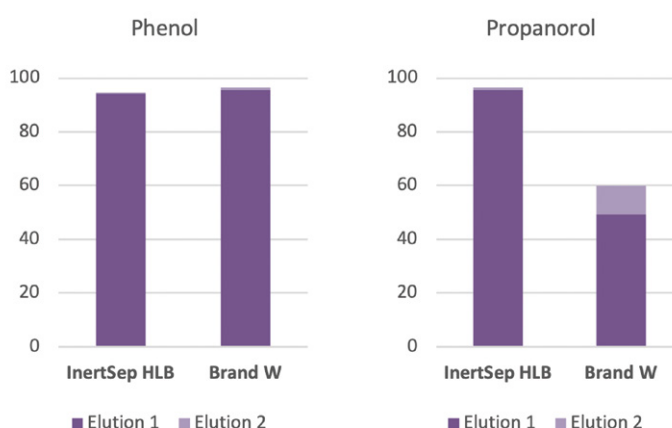
It is the ideal SPE solution for the extraction of biological samples, small molecules, and peptides.

- No dry-down required: Typical elution volume is 50 μL , eliminating the need for drying and reconstitution
- Increasing detection sensitivity by MS even small amount samples
- Low sample volume compatibility: Works with as little as 10–100 μL
- Up to 70% reduction in solvent consumption
- Significant reduction in sample preparation time
- Extensive lineup available: For hydrophobic, hydrophilic and ionic compounds

Superior Recovery with InertSep HLB Micro Elution Plate

Thanks to its strong retention capability and sharp elution behavior, the InertSep HLB 2 mg microelution plate achieves high recovery even with minimal elution volume.

The uniquely engineered low-dead-volume 96-well housing enhances analyte concentration and minimizes loss—delivering especially high recovery for compounds like Propranolol compared to conventional HLB products.



General Method

The following procedures represent general solid-phase extraction (SPE) methods using InertSep sorbents, adapted for application with the InertSep Micro Elution Plate. Each method provides a standard workflow consisting of conditioning, equilibration, sample loading, washing, and elution.

Due to the micro-elution format, reagent volumes are typically in the range of 50–400 µL, enabling efficient processing of small-volume biological samples while minimizing solvent consumption. These methods are designed for general guidance and may require optimization depending on sample matrix, target analytes, and detection system.

By applying the appropriate InertSep chemistry—HLB for extensive hydrophilic and hydrophobic compounds, MCX and WCX for basic compounds, MAX and WAX for acidic compounds—the Micro Elution Plate offers high recovery, reproducibility, and compatibility with LC–MS/MS workflows.

InertSep HLB (Hydrophilic-Lipophilic Balance)

Step	Condition
Conditioning	100 µL Methanol
Equilibration	100 µL Water (or 10-20 mM buffer, pH 3-7)
Load	200-400 µL sample (aqueous, adjust with 0.1% Formic Acid or Acetic Acid if needed)
Wash 1	200 µL Water
Wash 2	200 µL 5-10% Methanol in Water
Elution	50 µL x 2 of Methanol or Acetonitrile • Acidic analytes: 0.5-2% Formic Acid in Methanol/Acetonitrile • Basic analytes: 1-2% Ammonium Hydroxide in Methanol/Acetonitrile

InertSep MCX (Mixed-Mode Cation Exchange, strong)

Step	Condition
Conditioning	100 µL Methanol
Equilibration	100 µL Water
Load	200-400 µL sample in acidic aqueous phase (0.1-1% Formic Acid or Acetic Acid , pH 1-3)
Wash 1	200 µL Water
Wash 2	200 µL Methanol (neutrals/hydrophobics removed, bases remain bound)
Elution	50 µL x 2 of 2-5% Ammonium Hydroxide in Methanol • Optional fractionation: first elute neutrals with 100-150 µL Methanol, then elute bases with Ammonium Hydroxide/Methanol

InertSep WCX (Mixed-Mode Cation Exchange, weak)

Step	Condition
Conditioning	100 µL Methanol
Equilibration	100 µL Water
Load	200-400 µL sample in pH 6-8 buffer (e.g., 10-20 mM Ammonium Acetate)
Wash 1	200 µL Water
Wash 2	200 µL Methanol
Elution	50 µL x 2 of 2% Formic Acid in Methanol • Alternative: 1-2% Acetic Acid in Methanol

InertSep MAX (Mixed-Mode Anion Exchange, strong)

Step	Condition
Conditioning	100 µL Methanol
Equilibration	100 µL Water
Load	200-400 µL sample in basic aqueous phase (0.1-1% Ammonium Hydroxide or 10-50 mM Ammonium Bicarbonate , pH 8-10)
Wash 1	200 µL Water
Wash 2	200 µL Methanol
Elution	50 µL x 2 of 2% Formic Acid in Methanol • Optional fractionation: elute neutrals with 100-150 µL Methanol, then acids with acidified Methanol

InertSep WAX (Mixed-Mode Anion Exchange, weak)

Step	Condition
Conditioning	100 µL Methanol
Equilibration	100 µL Water
Load	200-400 µL sample in basic aqueous phase (0.1-1% Ammonium Hydroxide , pH 8-10)
Wash 1	200 µL Water
Wash 2	200 µL Methanol
Elution	50 µL x 2 of 2-5% Ammonium Hydroxide in Methanol • Alternative: Ammonium Hydroxide in Methanol/Acetonitrile (1:1)

Ordering Information

InertSep Micro SPE Plate

Sorbent	Base Gel	Functional Group	Size	Qty.	Cat. No.
HLB	N-Vinylmonomer-SDB	—	2 mg/ 400 µL	EA	5010-66820
MCX	SDB	Sulfonic acid	2 mg/ 400 µL	EA	5010-66821
MAX	SDB	Quaternary ammonium	2 mg/ 400 µL	EA	5010-66823
WCX	SDB	Carboxylic acid	2 mg/ 400 µL	EA	5010-66822
WAX	SDB	Diethyl amine	2 mg/ 400 µL	EA	5010-66824

Vacuum Manifold

Description	Application	Qty.	Cat. No.
Mini Vacuum Manifold Kit 12C	Cartridge	1/pk	5010-50150
Vacuum Manifold Kit for 96 Well Plate	for 96WP	1/pk	5010-50155
Vacuum Controller	Common	1/pk	5010-33071



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