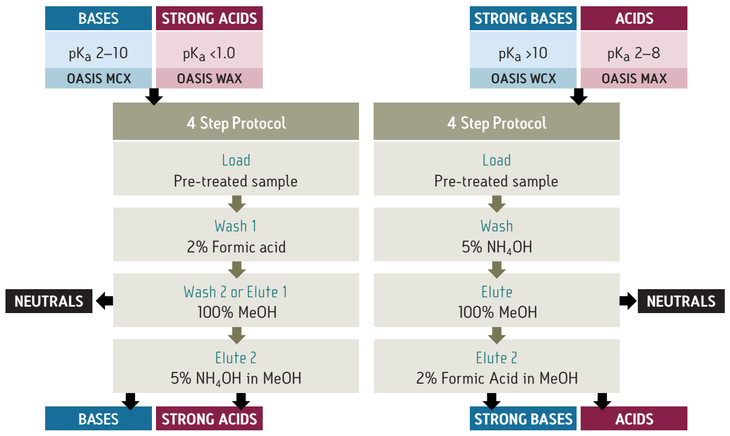
The Fastest, Simplest, and Cleanest Approach to SPE Method Development

OASIS™
SAMPLE EXTRACTION PRODUCTS

Oasis µElution 2x4 Method

- Characterize your analyte (polarity, pK_a, particle size)
- Apply designated protocol
- Analyze chromatograms and SPE recoveries

Oasis 2 x 4 Method Development Protocol



Wide Selectivity Range

The Oasis™ Sorbent Selection Tools enable the rapid development of SPE-LC-MS-MS methods. Both sorbent selection tools include all Oasis sorbents, allowing you the ability to extract the analyte of interest.



Part No.	Description	Particle Size
186004475	Oasis µElution™ Sorbent Selection Plate, 96-well	30 µm
186003249	Oasis Sorbent Selection Plate, 10 mg/96-well	30 µm
186003463	Oasis Sorbent Selection Kit, 30 mg/1 cc cartridge	30 µm

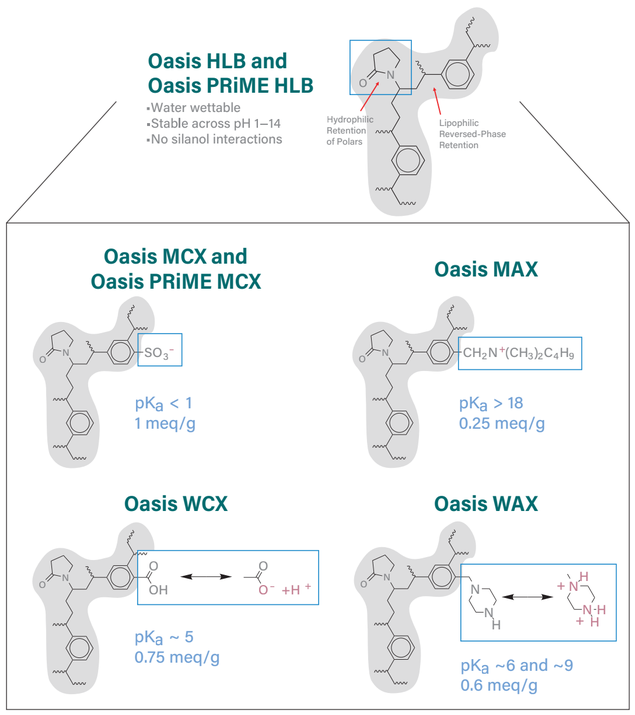
Otto™
SPECIALIST

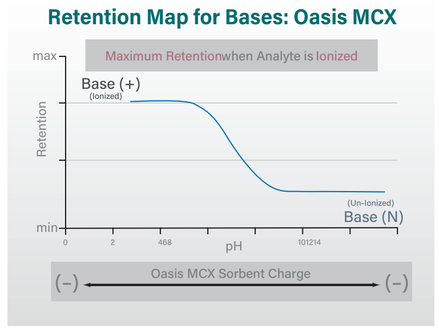
Process any of the SPE devices with the Otto SPEcialist Positive Pressure Manifold for even better results.

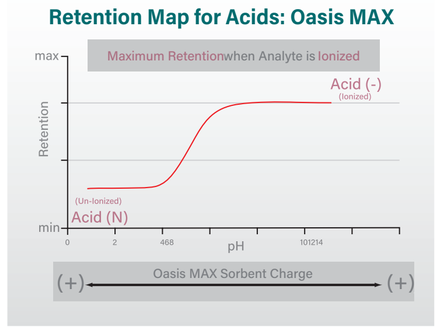
Learn more at
waters.com/otto

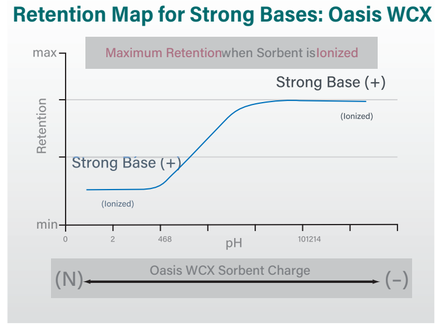


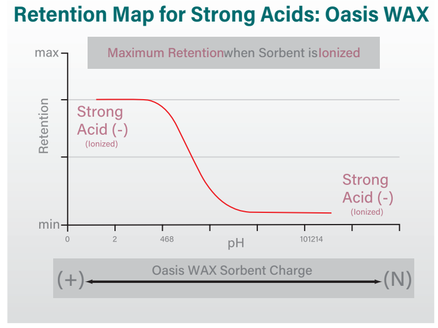
Oasis Family of Mixed-Mode Sorbents: Reversed-Phase Retention and Ion-Exchange











Recommended volumes for Oasis SPE devices

	Cartridge			96-Well Plate				µElution Plate
Cartridge Size/Sorbent Mass (mg)	30.0	60.0	150.0	5.0	10.0	30.0	60.0	2.0
Maximum Capacity Mass (mg)	1.0–5.0	2.0–10.0	5–25.0	0.15–1.0	0.35–2.0	1.0–5.0	2.0–10.0	0.03–0.05
Condition/Equilibration (mL)	1.0	2.0	4.0	0.5	0.5	0.5–1.0	0.5–2.0	0.2
Sample Volume	0.5	1.0	2.5	0.25	0.5	1.0	1.0–2.0	0.375
Diluted Load (mL)	1.0	2.0	5.0	0.5	1.0	2.0	2.0	0.75
Wash (mL)	1.0	2.0	4.0	0.5	0.5	0.5–1.0	1.0–2	0.2
Elute (mL)	1.0	2.0	4.0	0.075–0.15	0.15–0.25	0.4–1.0	0.8–2.0	0.025–0.075

Major industries using SPE

Sample Types	Typical Analytes	Typical Sample Size
Pharmaceutical: plasma, urine	Drugs, metabolites	0.1–2 mL
Forensic: urine, tissue extracts	Drugs of abuse	1–25 mL
Environmental: water, soil, air	Organic pollutants	10 mL–1 L; 1 g–100 g
Agrochemical: water, soil, tissue, plasma, urine	Residues, metabolites	1 mL–1 L; 1 g–100 g
Food: beverages	Nutrients, residues	1–100 mL; 1 g–100 g

Device choice based on sample size

Sample Size	Typical Analytes
Under 1 mL	5 mg (µElution plate)
0.5–10 mL	1 cc, 30 mg (cartridge or 96-well plate)
10–100 mL	3 cc, 60 mg
100–500 mL	6 cc, 200 mg or 6 cc, 500 mg (LP)
500–1000 mL	6 cc, 500 mg (LP) or 12 cc, 1g (LP)

Sorbent selection amount for Oasis vs. C18 Silica

C_{18} Silica-based Sorbent Amount per Cartridge or Well	Oasis Sorbent Amount per Cartridge or Well
50 mg	10 mg
100 mg	30 mg
200 mg	60 mg
500 mg	150–200 mg
1000 mg	200–500 mg

Selecting elution solvents by relative strength

Solvent	Solvent Type	Relative Elution Strength*	Comments
Methanol	Proton donor	1.0	Low toxicity
Acetonitrile	Dipole-dipole	3.1	Low viscosity
Tetrahydrofuran	Dipole-dipole	3.7	Check for peroxides before concentrating
IPA	Proton donor	8.3	High viscosity
Acetone	Dipole-dipole	8.8	Least toxic, high UV cutoff
Ethyl Acetate	Dipole-dipole	High	Least soluble in water
Methylene Chloride	Dipole-dipole	High	Very low solubility in water

**High Purity Guide, Burdick & Jackson Laboratories, Inc. Solvent Properties of Common Liquids; L.R. Snyder, J. Chromatogr. 92, 223 (1974); J. Chromatogr. Sci., 16, 223 (1978).*

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