



# Discovery DSC-MCAX (Mixed-Mode Cation Exchange) SPE Products

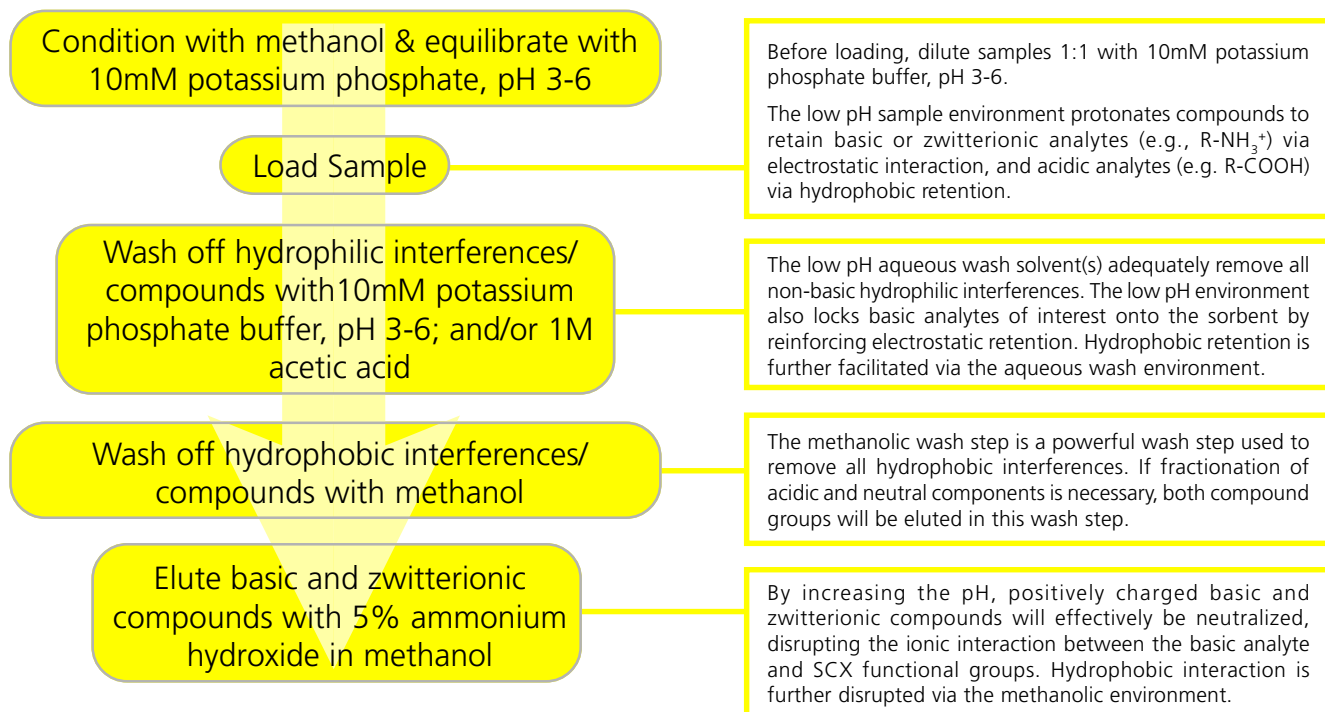
**Base Silica:** Irregular shaped, acid washed; 50µm particle size, 70Å pore diameter, 480m<sup>2</sup>/g specific surface area, 0.9cm<sup>3</sup>/g

Discovery DSC-MCAX SPE was developed, tested and quality controlled for pharmaceutical and clinical applications. The technology utilizes the dual mechanisms of both hydrophobic (reversed-phase) and electrostatic (ion-exchange) interaction to retain, basic, acidic, neutral and zwitterionic compounds from aqueous sample matrices. The packed bed contains both **octyl (C8)** and **benzene sulfonic acid (SCX)** bondings to offer one of the most selective SPE systems available.

## Use Discovery DSC-MCAX SPE to:

- Achieve superior selectivity/sample clean-up when isolating basic/zwitterionic compounds.
- Experience greater and more reproducible recoveries of pharmaceutical compounds from biological samples
- Fractionate basic/zwitterionic compounds from acidic and neutral compounds.
- Adjust the protocol to permanently retain unwanted basic/ zwitterionic compounds while eluting acidic and neutral compounds of interest.

## Recommended Generic Protocol:

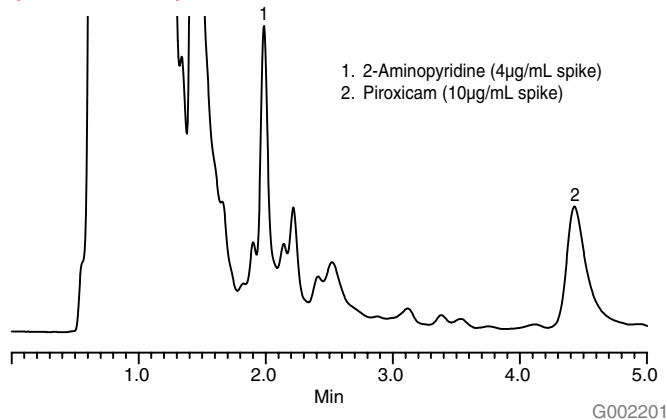


## Here's the Proof:

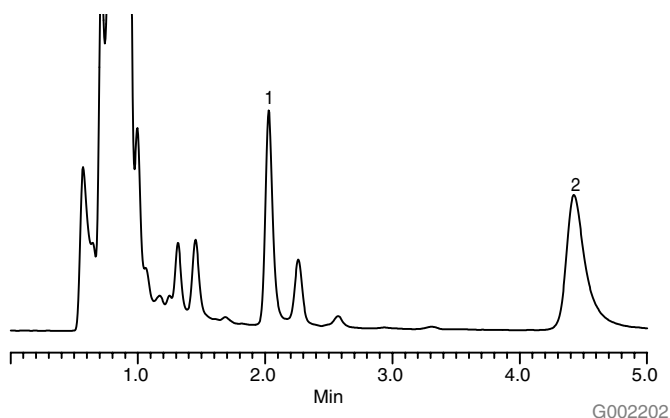
Competitor Comparison of 2-Aminopyridine and Piroxicam from Human Urine

SPE Tube: Discovery DSC-MCAX, 100mg/3mL  
 HPLC Column: Discovery HS F5, 15cm x 4.6mm, 5µm particle size  
 Mobile Phase: 10mM potassium phosphate, pH 6:MeCN (85:15)  
 Flow Rate: 2mL/min  
 Temp.: 25°C  
 Det.: UV, 220nm  
 Inj. Vol.: 10µL

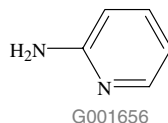
### Spiked Urine Samples Before DSC-MCAX



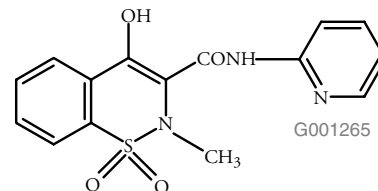
### Spiked Urine Samples After DSC-MCAX



### 2-Aminopyridine



### Piroxicam



### Efficiency of Absolute Recovery (n=4)

|                      | % Recovery ± RSD |            |
|----------------------|------------------|------------|
|                      | 2-Aminopyridine  | Piroxicam  |
| Discovery DSC-MCAX   | 102 ± 3.5%       | 101 ± 1.2% |
| Leading Competitor A | 30 ± 52.5%       | 98 ± 3.2%  |
| Leading Competitor B | 36 ± 24.2%       | 83 ± 4.3%  |

## Ordering Information

| Description                                 | Qty./Pk | Cat. No. |
|---|---------|----------|
| <b>Discovery DSC-MCAX</b>                   |         |          |
| 50mg/1mL                                    | 108     | 52781-U  |
| 100mg/1mL                                   | 108     | 52782-U  |
| 100mg/3mL                                   | 54      | 52783-U  |
| 300mg/3mL                                   | 54      | 52784-U  |
| 300mg/6mL                                   | 30      | 52786-U  |
| 1g/6mL                                      | 30      | 52788-U  |
| <b>Discovery DSC-MCAX SPE 96-Well Plate</b> |         |          |
| 25mg/well                                   | 1 ea.   | 575639-U |
| 50mg/well                                   | 1 ea.   | 575640-U |
| 100mg/well                                  | 1 ea.   | 575641-U |

### Trademark

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