

## Rapid Mixed-Mode SPE Method Development Using the Oasis® $\mu$ Elution Sorbent Selection Plate

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Ce document est une note d'application et ne contient pas de section détaillée concernant l'expérimentation.

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### Abstract

This application demonstrates the fast and simple mixed-mode (MM) solid phase extraction (SPE) method development using the Oasis Method Development  $\mu$ Elution Plate, which contains 4 sorbent chemistries (MCX, WAX, WCX, MAX), facilitating rapid screening in one experiment with only 2 protocols for the pharmaceuticals, abrocitinib, and enzalutamide.

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### Experimental

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| Pharmaceutical drug trade name | Active pharmaceutical ingredient | Molecular weight (g/mol) | LogP | pKa   | pKb   |
|--------------------------------|----------------------------------|--------------------------|------|-------|-------|
| Xtandi®                        | Enzalutamide                     | 464.44                   | 3.75 | 13.05 | -1.60 |
| CIBINQO®                       | Abrocitinib                      | 323.41                   | 0.93 | 11.47 | 6.45  |

Table 1. Physiochemical properties of enzalutamide and abrocitinib pharmaceuticals.

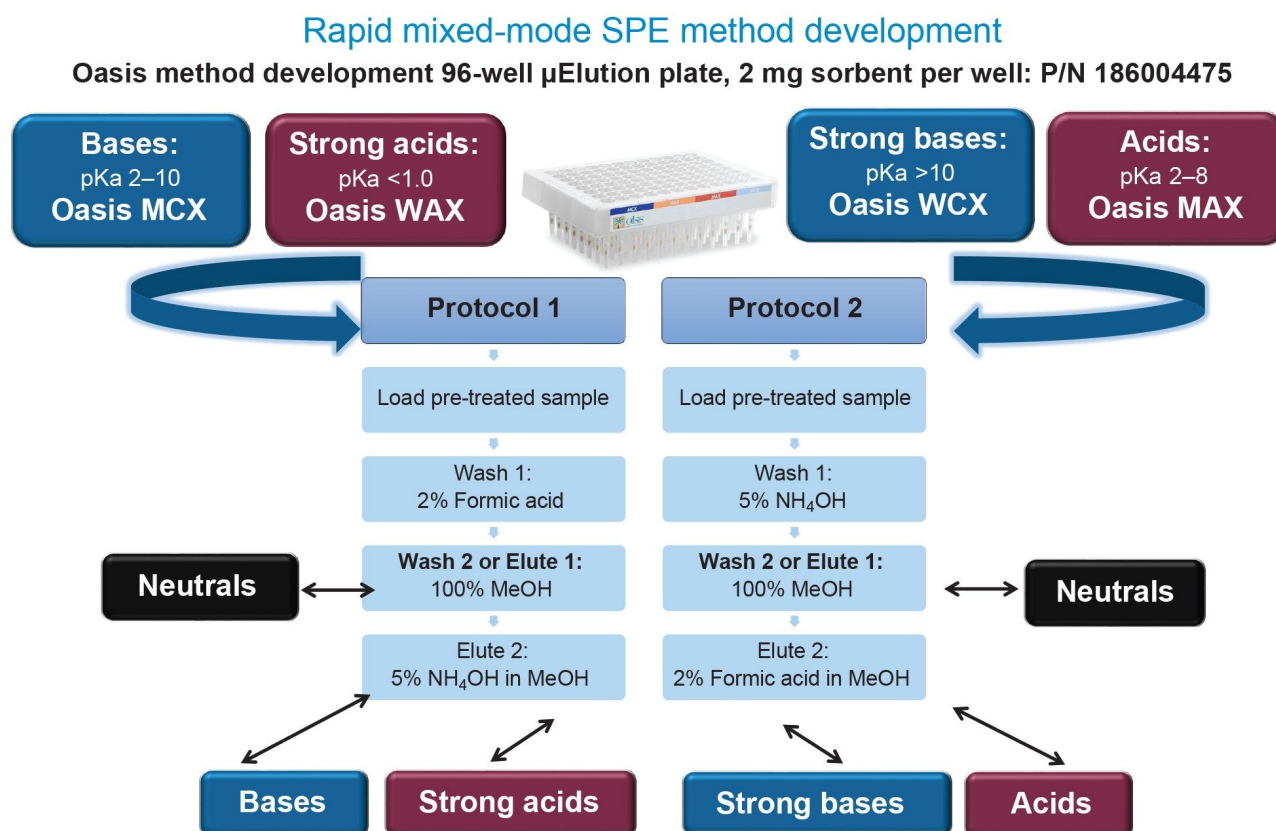


Figure 1. Representative Oasis 2x4 Mixed-Mode (MM) SPE method development protocol used with the, Oasis Method Development 96-well  $\mu$ Elution Plate. This simple, logical approach provides rapid evaluation of for MM sorbent chemistries (MCX, WAX, WCX, and MAX) for a diversity of analytes (acids, bases, and neutrals), which takes the complexity out of MM SPE method development.

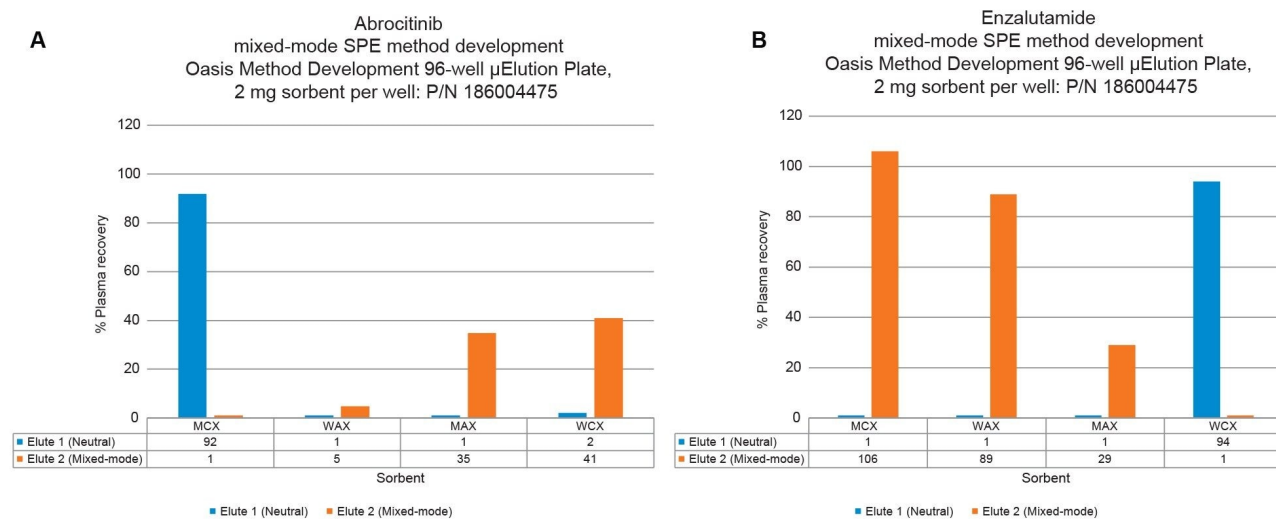


Figure 2. Demonstration of Oasis mixed-mode SPE bioanalytical extraction performance of abrocitinib (Panel A), and enzalutamide (Panel B) using the Oasis 2x4 Mixed-Mode (MM) SPE method development protocol and Oasis Method Development 96-well  $\mu$ Elution Plate. Best abrocitinib recovery (92%) was found in the neutral fraction (Elute 1) using the MCX sorbent, while best enzalutamide recovery (106%) was found using the MCX sorbent and the mixed-mode fraction (Elute 2).

## Results and Discussion

The Oasis Method Development  $\mu$ Elution Plate and starting protocols provide quick and easy mixed-mode SPE method development in one experiment, facilitating high analyte recovery, and selectivity (low matrix effects) from plasma.

## Ordering Information

| Description                                                                 | P/N       |
|-----------------------------------------------------------------------------|-----------|
| Oasis Method Development 96-well $\mu$ Elution Plate, 2 mg Sorbent per Well | 186004475 |
| 96-well Sample Collection Plate, 700 $\mu$ L Round well                     | 186005837 |
| Polypropylene Cap Mat Round Well for 96-well Plate                          | 186002483 |

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