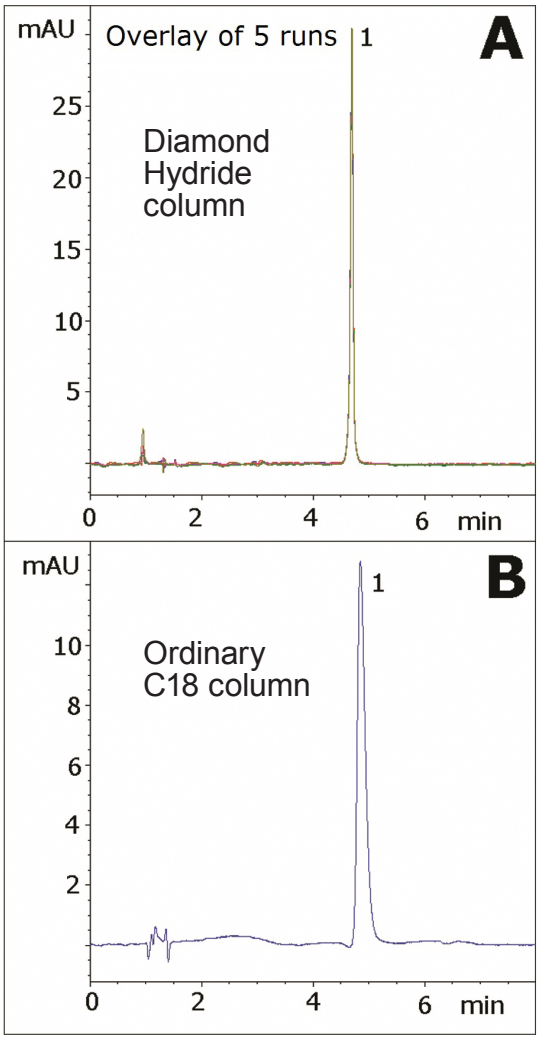
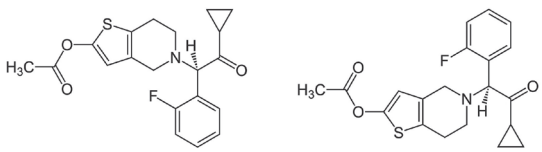
Prasugrel

Comparison to ordinary C18 column





Prasugrel

Note: Prasugrel is a platelet inhibitor which was approved by the US Food and Drug Administration in 2009 for the reduction of thrombotic cardiovascular events. It is marketed as Effient®.

Method Conditions

Column: **Cogent Diamond Hydride™**, 4µm, 100Å

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

Solvent: A: DI H_2O / 0.1% formic acid (v/v)
B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:

time (min.)	%B
0	97
1	97
5	60
6	97

Post Time: 2 min

Injection vol.: 1µL

Flow rate: 1.0mL/min

Detection: 254 nm

Figures: Fig. A: Diamond Hydride column (4.6 x 75mm)
Fig. B: Type B silica based C18 column (4.6 x 100mm)

Sample: 0.1 mg/mL prasugrel in methanol diluent

Peak: 1. Prasugrel

t_0: 0.9 min

Discussion

Prasugrel has a tertiary amine and therefore tails in many reversed phase methods and conventional HPLC columns. Figure A shows how a sharp and symmetrical peak can be easily obtained with the Cogent Diamond Hydride column using an MS-compatible mobile phase. Figure B shows the peak that was obtained using a reversed phase gradient (30–60%B over 5 minutes) using the same mobile phase solvents and a type B silica based C18 column. Here the effects of residual silanols on the type B silica based column lead to peak tailing.

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