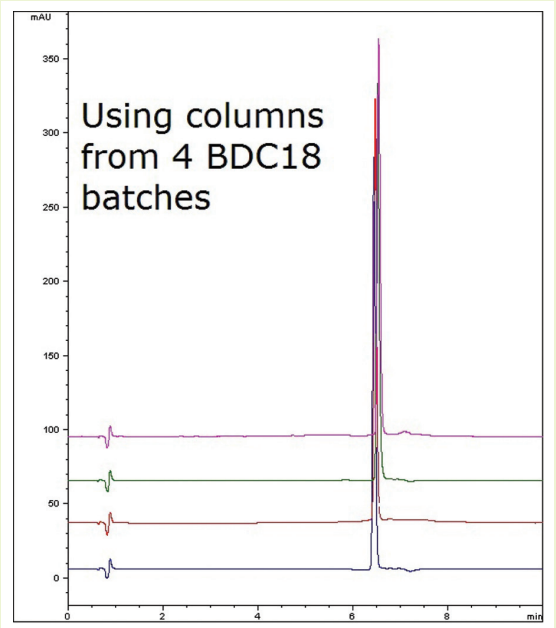
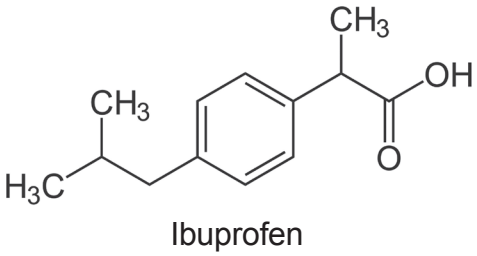
Ibuprofen

Simple assay method





Ibuprofen

Note: Ibuprofen is a nonsteroidal anti-inflammatory drug (NSAID) commonly used for its analgesic effects. It is marketed under a variety of trade names such as Advil and Motrin®. In addition, it is often included in combination formulations as well.

Method Conditions

Column: **Cogent Bidentate C18™**, 4µm, 100Å

Catalog No.: 40018-75P

Dimensions: 4.6 x 75 mm

Mobile Phase: A: DI H_2O / 0.1% formic acid
B: Acetonitrile / 0.1% formic acid

Gradient:

time (min.)	%B
0	30
2	30
6	70
7	30

Post Time: 3 min

Injection vol.: 10µL

Flow rate: 1.0 mL/min

Detection: UV 254 nm

Sample: 200mg strength Advil® tablet was ground and added to a 50mL volumetric flask with a diluent of 1/1 solvent A / solvent B. It was sonicated 10 min and diluted to mark. Then a portion was filtered with a 0.45µm nylon syringe filter (MicroSolv Tech Corp.).

Peak: 1. Ibuprofen

t_0: 0.9 min

Discussion

This gradient assay method for a common ibuprofen formulation demonstrates the lot-to-lot reproducibility of the Cogent Bidentate C18 material. The figure shows an overlay of injections using four columns of different material lots (%RSD < 1). An important aspect of column selection for a method is that the retention behavior is consistent across numerous stationary phase batches. This is especially crucial once the method has been validated and is in routine use.

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