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Ibuprofen Assay Method Reproducibility with HPLC – AppNote

Extremely Precise, Assay Method

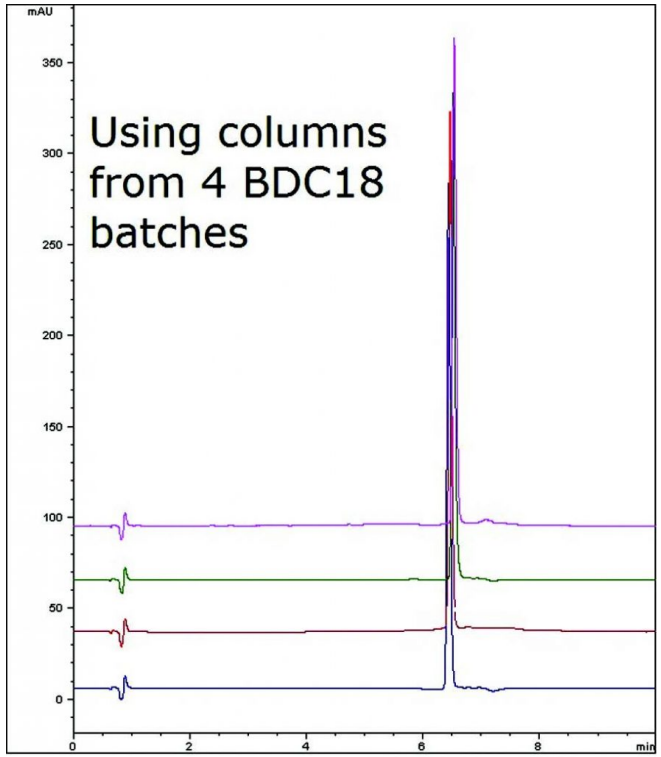
This Assay Method for a common Ibuprofen formulation demonstrates Reproducibility and Robustness as the Figure below shows an overlay of four Chromatograms with different Columns lots *(%RSD < 1)*.

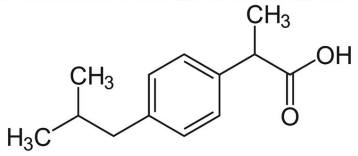
An important aspect of Column Selection for a Method is that the Retention behavior is consistent across numerous manufacturing batches. This is especially crucial once a Method has been validated and is in routine use.

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Peak:

Ibuprofen

Method Conditions

Column: Cogent Bidentate C18™, *(BDC18),* 4µm, 100Å
Catalog No.: 40018-75P
Dimensions: 4.6 x 75mm
Mobile Phase:
A: DI Water with 0.1% Formic Acid
B: Acetonitrile with 0.1% Formic Acid
Gradient:

Time *(minutes)*	%B
0	30
2	30
6	70
7	30

Post Time: 3 minutes
Injection vol.: 10µL

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Flow rate: 1.0mL / minute
Detection: UV @ 254nm
Sample Preparation: 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 minutes and diluted to mark. Then a portion was filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).
t_0: 0.9 minutes

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.*

COGENT HPLC Columns™

Attachment

No 195 Ibuprofen Analyzed with HPLC pdf 0.3 Mb Download File