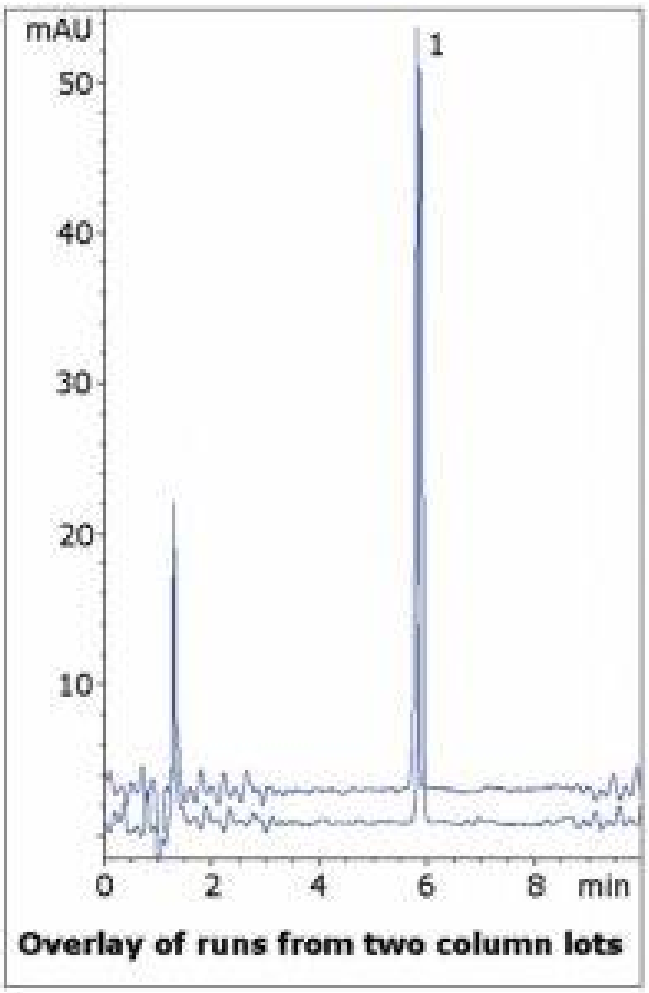
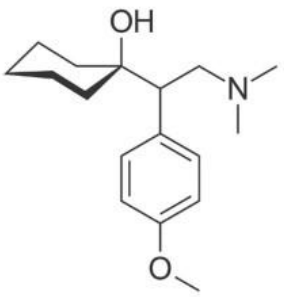
Effexor Capsule Analyzed by HPLC- AppNote

Reducing Tailing for Venlafaxine with HPLC

The USP assay Method for Venlafaxine capsules uses Triethylamine and Phosphoric Acid in the Mobile Phase, both of which are incompatible with LC-MS. The system suitability for Venlafaxine tailing factor is 2.0, indicating the compound has a tendency for tailing. Here a sharp symmetrical peak is observed using Formic Acid. Data from two Column lots is shown to illustrate reproducibility.



Overlay of runs from two column lots



Peak:

Venlafaxine

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å
Catalog No.: 70000-7.5P
Dimensions: 4.6 x 75mm
Mobile Phase:
A: DI Water / 0.1% Formic Acid (v/v)
B: Acetonitrile / 0.1% Formic Acid (v/v)
Gradient:

Time *(minutes)*	%B
0	95
1	95
6	50
7	95

Post Time: 3 minutes
Injection vol.: 1µL
Flow rate: 1.0mL / minute
Detection: UV @ 226nm
Sample Preparation: 75mg strength Effexor® Extended Release capsule contents were added to a 25mL volumetric flask. A portion of 50/50 Solvent A / Solvent B diluent was added and the flask was sonicated 10 minutes. It was then diluted to mark and mixed. A portion was filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.) and diluted 1:50.
t_0: 0.9 minutes

Note: *Venlafaxine is a serotonin-norepinephrine reuptake inhibitor used to treat various depressive and anxiety disorders. It is currently marketed by Pfizer as Effexor®. It is a phenethylamine and shares structural similarities with other compounds in this class, such as amphetamine, methamphetamine, and MDMA.*

COGENT HPLC Columns™

Attachment

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