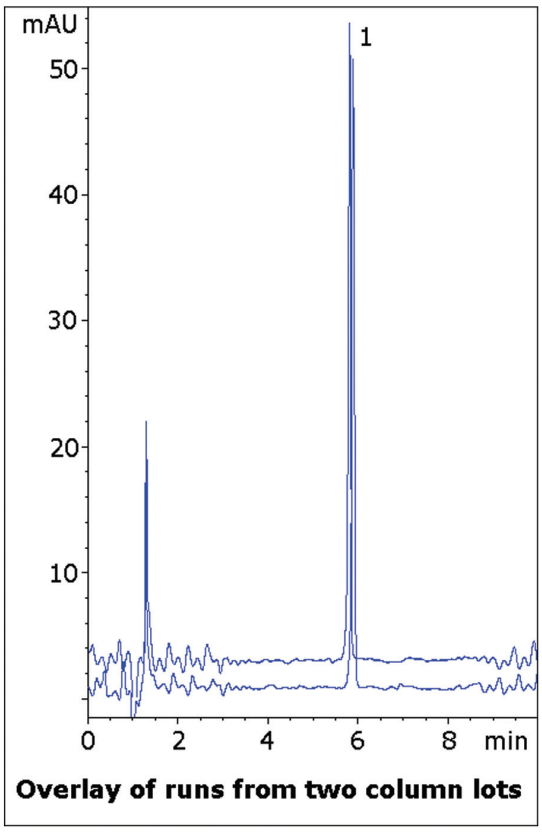
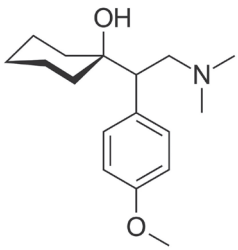
Effexor® (Venlafaxine) Capsule

LC-MS compatible method for phenethylamine compound



Overlay of runs from two column lots



Venlafaxine

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.

Method Conditions

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

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

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

Gradient:

time (min.)	%B
0	95
1	95
6	50
7	95

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 1.0 mL/min

Detection: UV 226 nm

Sample: 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 min. 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.

Peak: 1. Venlafaxine

t_0: 0.9 min

Discussion

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.

MANUFACTURED BY:
MICROSOLV TECHNOLOGY CORPORATION
9158 Industrial Blvd NE
Leland, NC 28451
p: 1.732.380.8900
f: 1.910.769.9435
customers@mtc-usa.com
www.Cogent-HPLC.com