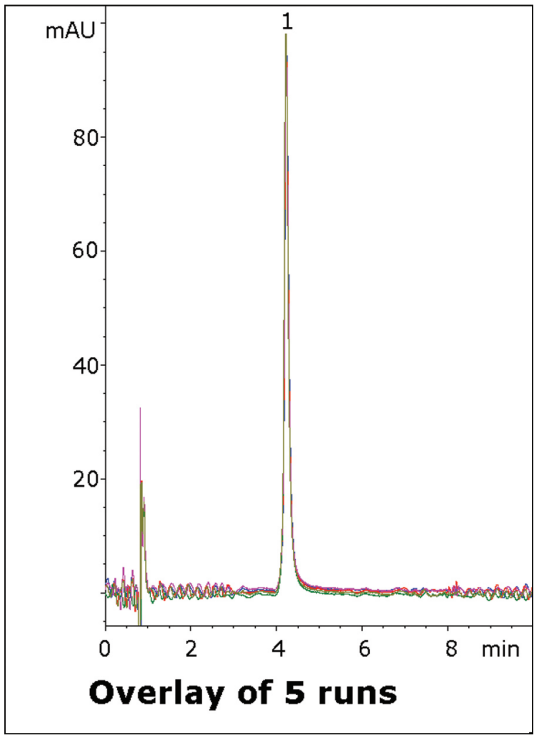
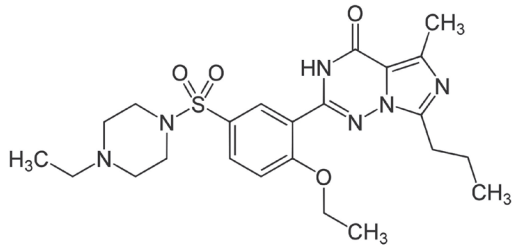
Vardenafil (Levitra®)

LC-MS compatible assay method





Vardenafil

Note: Vardenafil is used to treat erectile dysfunction and acts by inhibition of phosphodiesterase type 5 (PDE5). It is sold under trade names Levitra® and Staxyn®.

Method Conditions

Column: **Cogent UDA™**, 4µm, 100Å

Catalog No.: 40031-7.5P

Dimensions: 4.6 x 75 mm

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

Gradient:

time (min.)	%B
0	90
1	90
6	40
7	90

Post Time: 3 min

Injection vol.: 2µL

Flow rate: 1.0 mL/min

Detection: UV 210 nm

Sample: 20mg strength Levitra® tablet was ground and 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. Then it was diluted to mark and mixed. A portion was filtered through a 0.45µm nylon syringe filter (MicroSolv Tech Corp.).

Peak: 1. Vardenafil

t_0: 0.7 min

Discussion

Vardenafil in a tablet formulation can be readily assayed with this LC-MS compatible gradient method. The peak tailing factor was close to unity. The compound has several amine groups which can produce tailing with ordinary HPLC columns that have a number of surface silanols. The MS-compatible mobile phase means that the method can be adapted to more complex samples such as plasma. Five runs are shown in the figure to illustrate the repeatability of the data.

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