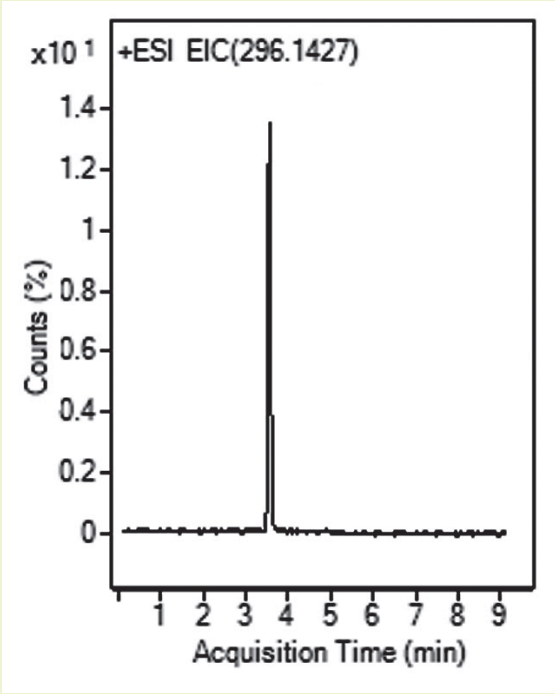
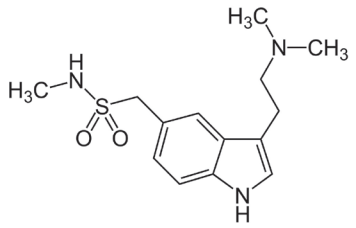
Sumatriptan (Imitrex®) Tablets by LC-MS

Analysis using 2.0™ column





Sumatriptan

Note: Migraine is a common disorder, with symptoms of unilateral headache accompanied by nausea and/or vomiting. Sumatriptan is a recent antimigraine drug sold under the trade name Imitrex®. It belongs to a class of drugs called selective serotonin receptor agonists.

Method Conditions

Column: **Cogent Diamond Hydride 2.0™**, 2.2µm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 50 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
4	30
6	30
7	90

Post time: 3 min

Injection vol.: 1 microL

Flow rate: 0.4mL/min

Detection: ESI – POS - Agilent 6210 MSD TOF mass spectrometer

Sample: Six 25 mg strength tablets of Imitrex® were crushed and a portion containing 40 mg of the API was weighed out. The powder was suspended in an A:B (1:1) solvent mixture, vortexed, and filtered through a disposable 0.45µm filter (MicroSolv Tech Corp.). Sample for injection was diluted to final concentration of 0.0005 µg/mL.

Peak: Sumatriptan 296.1427 m/z $[M+NH3]^+$

t_0: 0.9 min

Discussion

The presented method for analysis of this challenging compound has several advantages over those found in the literature. Analysis is performed using a higher concentration of organic solvent, which is much more suitable for electrospray MS detection. The Cogent Diamond Hydride 2.0 column used in this analysis provided extremely robust and repeatable (%RSD 0.1 and lower) results.

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