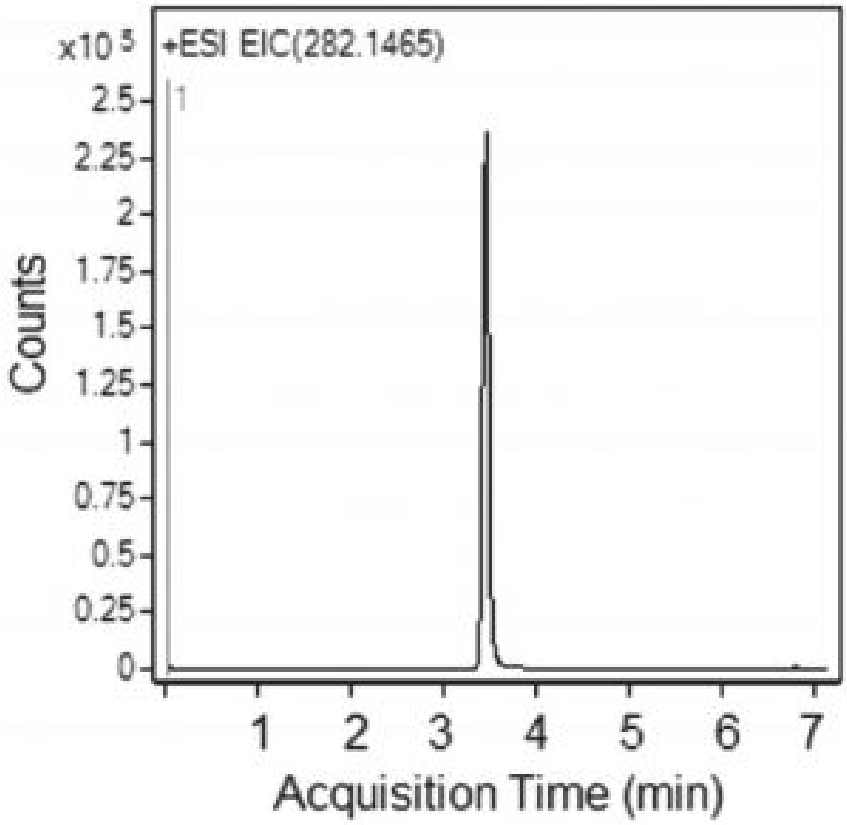
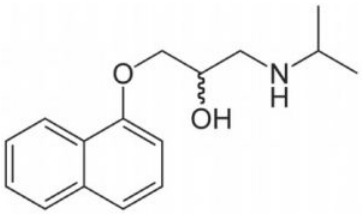
Propranolol in urine analyzed by LCMS – AppNote

Excellent peak shape for basic compound

The developed method permitted analysis of Propranolol in urine after simple sample preparation. The analysis is performed at a high concentration of Acetonitrile *(Acetone may be used as well)*. The peak shape obtained for this basic compound was excellent. The method could be easily applied to analysis of Propranolol in blood samples after appropriate sample treatment.





Peak:

Propranolol 260.1645 m/z [M+H]+

Method Conditions

Column: Cogent Diamond Hydride 2.o™, 2.2µm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 50mm

Mobile Phase:

A: DI Water / 0.1% Formic Acid (v/v)

B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time *(minutes)*	%B
0	90
4	30
6	30
7	90

Post time: 3 minutes

Injection vol.: 1 µL

Flow rate: 0.4 mL / minute

Detection: ESI – POS – Agilent 6210 MSD TOF Mass Spectrometer

Sample Preparation: A urine specimen from a volunteer taking Propranolol was collected in 10mL of 6.0 mol/L Hydrochloric Acid over a 24 hr. period. 400 µL of Acetonitrile was added to 100 µL of urine, and the sample was centrifuged (3000 g). Next, 20 µL of the supernatant was mixed with 10 µL of 50% Acetonitrile / 50% DI Water / 0.1% Formic Acid. The sample was filtered using a MicroSolv Tech Corp. Filter and injected into the LC–MS.

t_0: 0.3 minutes

Note: *Propranolol is a non-selective beta adrenergic receptor blocker used in treatment of hypertension, angina pectoris, cardiac arrhythmia, and sometimes as a doping agent in sports. It is also used as a preventive drug in migraine.*

Attachment

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