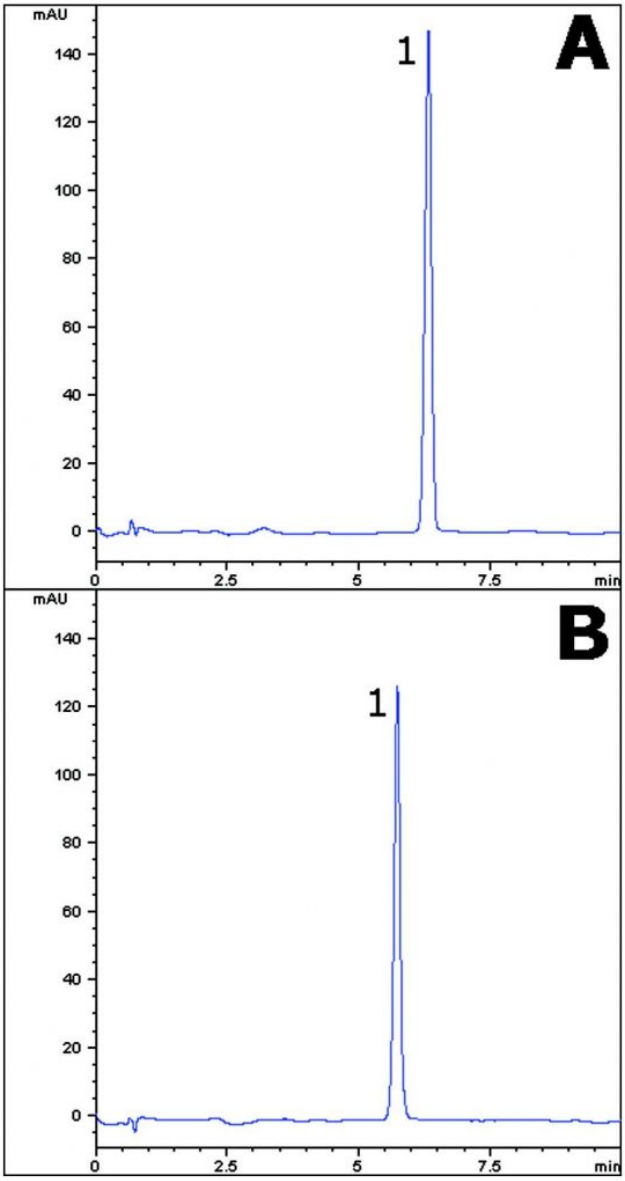
Tizanidine HCl HPLC Method transferred to near UHPLC – AppNote

Use of near UHPLC column for improved results

This challenging compound has several amine groups and can be problematic to analyze by HPLC. Here a good peak shape is obtained using the Cogent Diamond Hydride 2.o Column. The efficiency is higher on the 2.2µm phase compared to a standard 4µm Column, leading to increased sensitivity. The method conditions are compatible with LCMS as well.



Tizanidine

Peak:

Tizanidine HCl

Method Conditions

Columns:

Fig. A: Cogent Diamond Hydride 2.o™, 120Å

Fig. B: Cogent Diamond Hydride™, 4µm, 100Å

Catalog Nos.:

Fig. A: 70200-05P-2;

Fig. B: 70000-05P-2

Dimensions:

Fig. A: 2.1 x 50 mm

Fig. B: 2.1 x 50 mm

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	40
7	95

Post time: 3 minutes

Injection vol.: 0.2 µL

Flow rate: 0.3mL/minutes

Detection: UV @ 230 nm

Sample: 4mg strength Tizanidine HCl tablet was ground and weighed in a 10mL 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 filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).

t_0: 0.6 minutes

Note: *Tizanidine is a centrally acting A2-Adren- Ergic agonist used to treat spasms, cramping, tightness of muscles,*

and related conditions. It is available under the trade name Zanaflex® as well as generic versions.

COGENT HPLC Columns™

Attachment

Tizanidine HCl Method Transfer pdf Download File