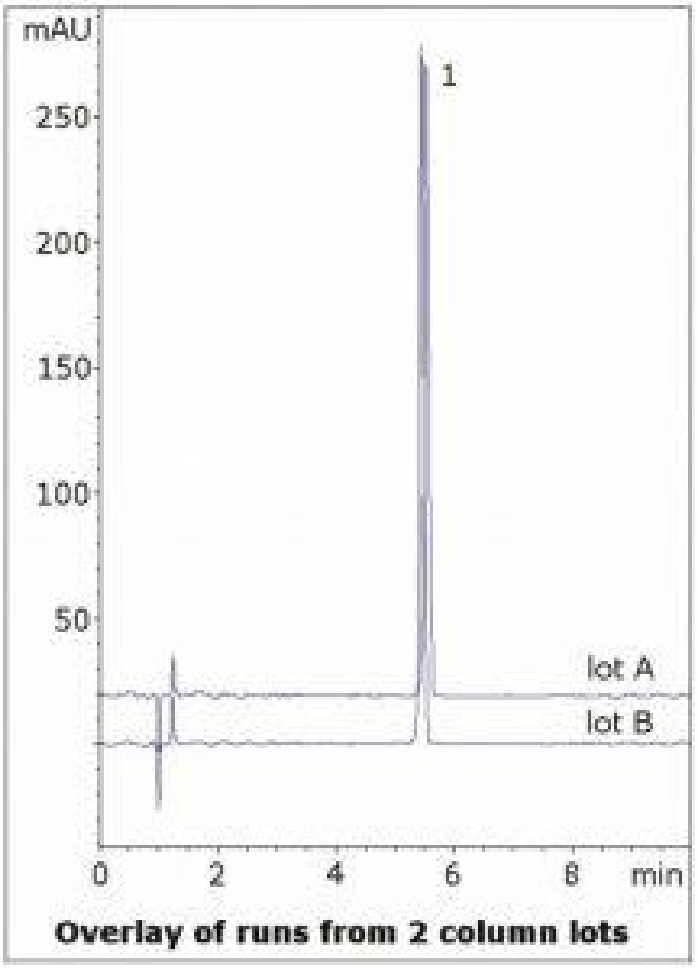
# Tizanidine HCl Tablet Analyzed by HPLC - AppNote

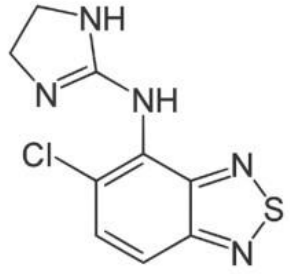
## Separation Method for Tizanidine Compatible with LC-MS

Tizanidine has numerous amine functional groups and can be a challenge for analysis by HPLC. The USP method uses Phosphate in the Mobile Phase which is not compatible with LC-MS. This Method however uses Formic Acid as the Mobile Phase additive and produces a sharp, symmetrical peak.

The USP system suitability for the tailing factor is not more than 1.6, and the Peak obtained has a value of 1.1. Data from two Column lots is shown in the figure, demonstrating Robustness of this Method.



**Overlay of runs from 2 column lots**



## Peak:

Tizanidine HCl

## Method Conditions

**Column:** Cogent Diamond Hydride™, 4µm, 100Å
**Catalog No.:** 70000-7.5P
**Dimensions:** 4.6 x 75mm
**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.:** 1µL
**Flow rate:** 1.0mL / minute
**Detection:** UV @ 230nm
**Sample Preparation:** 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.).
**$t_0$:** 0.9 minutes

***Note:*** *Tizanidine is a centrally acting a2-adrenergic 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**

**No 232 Tizanidine HCL Tablet Analyzed by HPLC pdf** 0.6 Mb Download File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