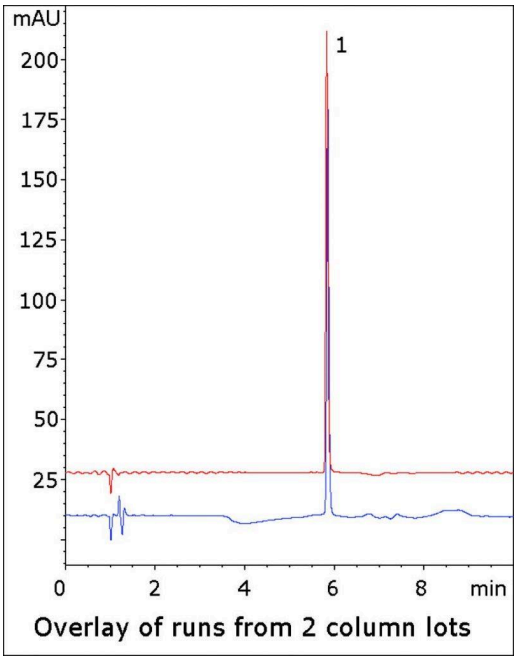
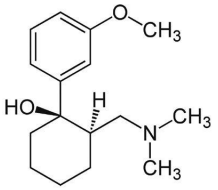
Tramadol Tablet Analyzed with HPLC - AppNote

An API with a Tertiary Amine – Easy & Efficient Method for Analysis

This Method for the Analysis of Tramadol Tablets, produces an Efficient Peak Shape for the API. The Peak is highly Symmetrical, which is often difficult to obtain for compounds with a tertiary amine. *Tramadol has chiral centers but this Method does not address that challenge.*





Peak: Tramadol

Method Conditions

Column: Cogent Bidentate C8™, 4 µm, 100 Å
Catalog No.: 40008-75P
Dimensions: 4.6 x 75 mm

Mobile Phase:

- A: DI Water with 0.1% (v/v) Trifluoroacetic Acid (TFA) v/v
- B: Acetonitrile with 0.1% (v/v) Trifluoroacetic Acid (TFA) v/v

Gradient:

Time ***(minutes)***	**%B**

0	10
2	10
6	50
7	10

Post Time: 3 minutes
Injection vol.: 1 µL
Flow rate: 1.0 mL / minute
Detection: UV @ 228 nm

Sample Preparation: 50 mg strength Tramadol Tablet was ground and added to a 10 mL volumetric flask. 5 mL of 50:50 Solvent A / Solvent B diluent was added and the flask was sonicated 10 minutes. Then a portion was filtered with a 0.45 µm Nylon Syringe Filter (MICROSOLV Tech Corp.). It was then diluted 1:5 for injection.

t_0 : 0.9 minutes

Note: *Tramadol is an analgesic used to treat moderate to moderately severe pain. It can be used in both human and veterinary applications. It is sold under various formulation types and brand names, including Ryzolt®, Ultracet®, and Ultram®.*

COGENT HPLC Columns™

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