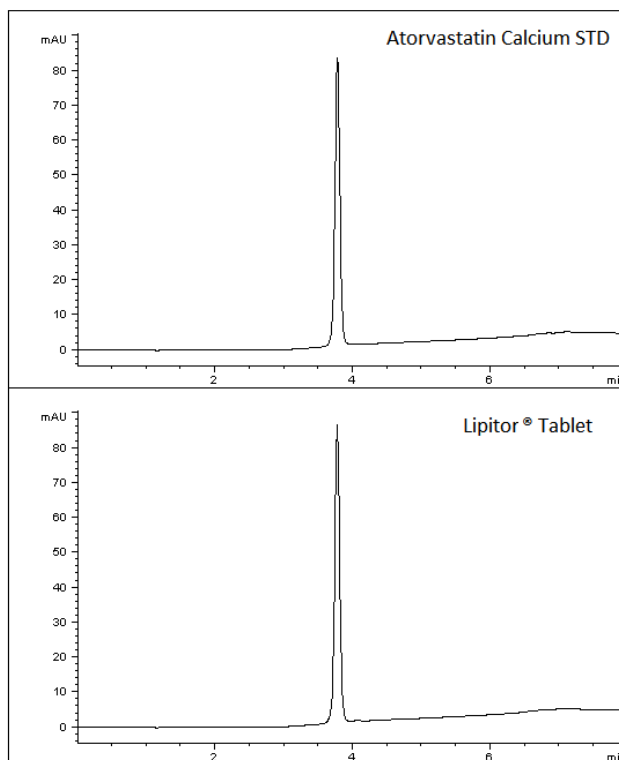


## Atorvastatin Tablets Analyzed with HPLC – AppNote

### A Robust Method for Analysis of a Hypercholesterolemia Medication

A robust and reproducible Method has been developed for this Cholesterol medication. A commercially available Drug Product was used as well as a reference Standard. The data below illustrates how the Standards and Drug Product share excellent peak shape using this easy Method.



 **Peak**

1. Top Chromatogram – Atorvastatin Calcium Standard

2. Bottom Chromatogram – Atorvastatin API from Tablets – Generic

### Method Conditions

**Column:** Cogent Phenyl Hydride™, 4µm, 100Å

**Catalog No.:** 69020-10P

**Dimensions:** 4.6mm x 100mm

**Mobile Phase:**

A: DI Water with 0.1% Formic Acid

B: Acetonitrile with 0.1% Formic Acid

Time (minutes)	%B
0	50
1	50
5	85

6	85
7	50
8	50

**Injection vol.:** 2µL

**Flow rate:** 1.0mL / minute

**Detection:** UV @ 254nm

**Diluent:** 50:50 DI Water / Acetonitrile with 0.1% Formic Acid

**Standard Preparation:** Atorvastatin Calcium standard prepared as 0.1mg / mL standard solution in diluent.

**Sample Preparation:** 20mg strength tablet (Atorvastatin Calcium) was added to a 10mL volumetric flask with a portion of Diluent. The solution was sonicated 10 minutes and diluted to mark with Diluent. It was then filtered through a 0.45µm Nylon Syringe Filter (MicroSolv Technology Corp.). The filtrate was diluted to final concentration of 0.1mg / mL.

**t<sub>0</sub>:** 1.2 Minutes

**K:** 2.15

**%RSD of 5 injections:** <0.1%

**Notes:** Atorvastatin can treat high cholesterol and triglyceride levels. This may reduce the risk of angina, stroke, heart attack, and heart and blood vessel problems. Atorvastatin is a specific inhibitor of HMGCR (HMG-CoA reductase). HMGCR is the enzyme that catalyzes the conversion of HMG-CoA to Mevalonate, an early step in Cholesterol Biosynthesis. Atorvastatin is used in the treatment of Hypercholesterolemia. Marketed by Pfizer as Lipitor® this AppNote used a generic version.

**Notes:** Calculation for Capacity Factor - Relative Retention  $k = (t_R - t_0) / t_0$



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