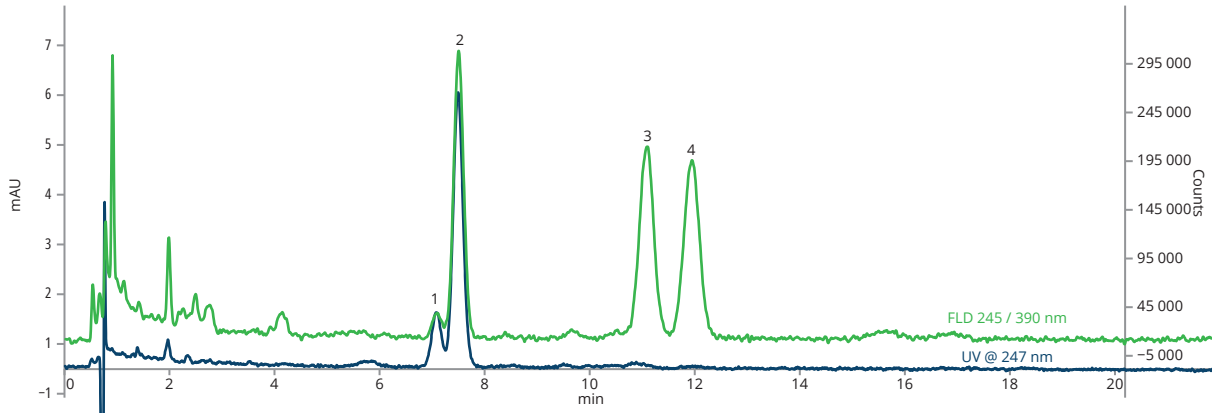
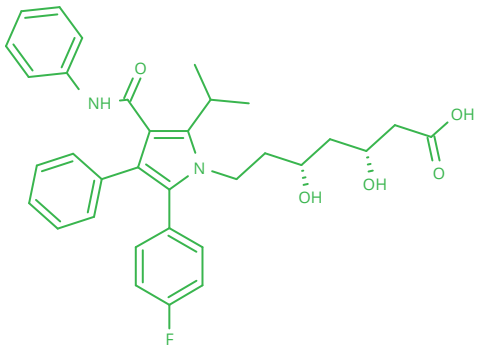
Atorvastatin and photodegradation products

The HPLC method with UV and FLD detection has been optimized for the evaluation of photochemical degradation kinetics of atorvastatin in aqueous solutions under light conditions relevant to natural waters. Knowledge of the relative proportion of atorvastatin and its degradation products in water solution is needed for the further study of a potential toxic effect of atorvastatin itself and of the mixture of products of atorvastatin photochemical degradation in a water environment.

Substance	Atorvastatin, CAS number 134523-00-5
Synonym	Atorvastatin acid



Atorvastatin and degradation products monitoring



Atorvastatin

Atorvastatin and photodegradation products

Column	Arion® Plus C18, 5.0 µm
Dimensions	150 mm × 3.0 mm
Part number	ARI-5720-LK30
Mobile phase	0.1% formic acid in Milli-Q water/ACN 55/45 (v/v) Isocratic elution
Flow rate	1.0 ml/min
Temperature	30 °C
Detection	UV @247 nm, FLD @245/390 nm
Injection volume	5 µl
Analytes	**1. Degradation product 1** **2. Atorvastatin** **3. Degradation product 2** **4. Degradation product 3**

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The application has been developed by University of South Bohemia in České budějovice.