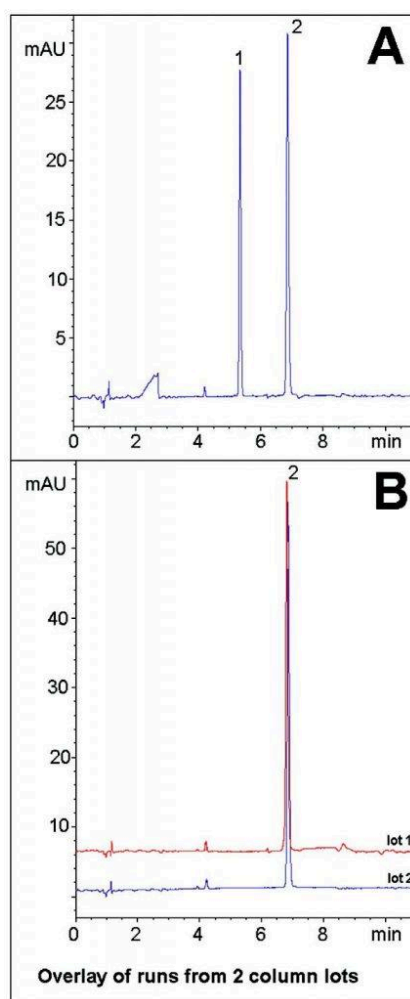


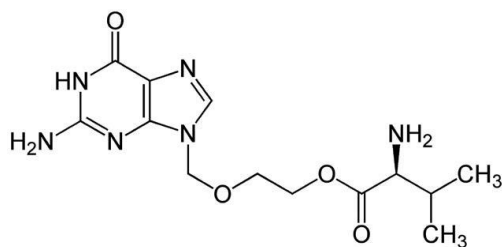
## Valaciclovir Analyzed with a Degradant by HPLC - AppNote

### Separation of Prodrug from a Degradant in Forced Degradation of Valtrex® Tablets

In this Application Note, the anti-viral Herpes drug Valaciclovir and its main acid degradant are well separated (*Figure A*). Valaciclovir is a prodrug and the degradant observed here is believed to be the active form, Acyclovir. Both compounds did not retain very strongly in Reversed Phase and the USP Method calls for a lengthy 40 minute Gradient with high water content for the Assay. The eight minute gradient provides sufficient Separation.

Data from two Column lots is shown below in the non-degraded extract (*Figure B*) to demonstrate the Method Reproducibility.





#### Peaks:

1. Degradant
2. Valaciclovir

### Method Conditions

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

**Catalog No.:** 70000-7.5P

**Dimensions:** 4.6 x 75mm

#### Mobile Phase:

A: DI Water with 0.1% Formic Acid (v/v)

B: Acetonitrile with 0.1% Formic Acid (v/v)

#### Gradient:

Time (minutes)	%B
0	95
1	95
6	40
7	40
8	95

**Post Time:** 3 minutes

**Injection vol.:** 1μL

**Flow rate:** 1.0mL / minute

**Detection:** UV @ 254nm

**Sample Preparation:** Stock Solution: 1000mg strength Valtrex Tablet was ground and added to 100mL volumetric flask containing 50mL 50:50 DI Water / Acetonitrile diluent. The solution was sonicated 10 minutes, diluted to mark, and mixed. A portion was filtered through a 0.45μm Nylon Syringe Filter (MICROSOLV Tech Corp.).

*Figure A:* Acid Degradation Extract: The Stock Solution was diluted 1:100 with 50:50 1N HCL / Acetonitrile mixture and heated at 85°C for 30 minutes.

*Figure B:* Non-Degraded Extract: The Stock Solution was diluted 1:100 with 50:50 Acetonitrile / DI Water.



Printed from the Chrom Resource Center  
Copyright 2025, All Rights Apply  
**MicroSolv Technology Corporation**  
9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900  
Fax: (910) 769-9435  
Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)  
Website: [www.mtc-usa.com](http://www.mtc-usa.com)