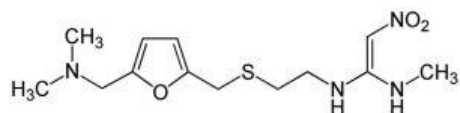
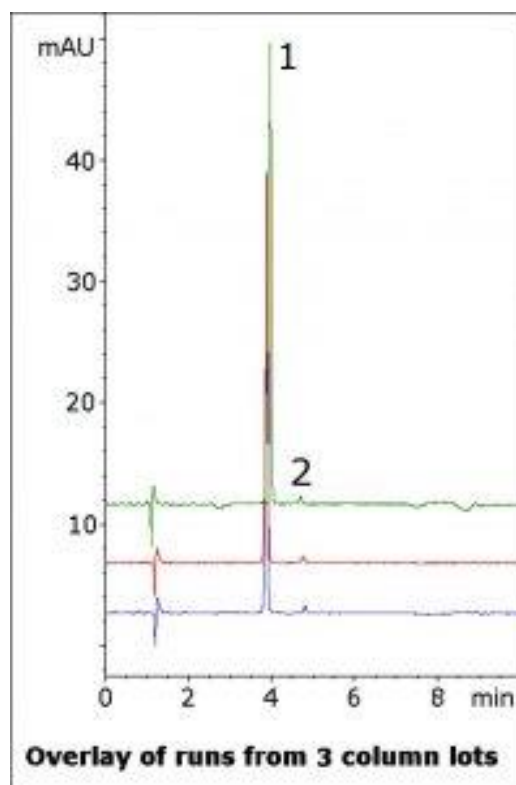


## Ranitidine Tablet Analyzed by HPLC - AppNote

### Excellent Peak Shape of API From an OTC Tablet

Ranitidine has several amine functional groups that can contribute to significant tailing with Reversed Phase Methods. Data shown below uses an extract from a tablet formulation, illustrating how good Peak shape can be obtained. In addition, three Column lots were used to demonstrate the robustness and precision of this Method.



#### Peaks:

1. Ranitidine
2. Matrix Component

### 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% Trifluoroacetic acid (v/v)

B: Acetonitrile / 0.1% Trifluoroacetic acid (v/v)

**Gradient:**

Time (minutes)	%B
0	95
1	95
6	50
7	95

**Post Time:** 3 minutes

**Injection vol.:** 2µL

**Flow rate:** 1.0mL / minute

**Detection:** UV @ 313nm

**Sample Preparation:** 150mg strength Ranitidine HCl tablet was ground and weighed in a 50mL 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.). The filtrate was diluted 1:100 for injections.

**t<sub>0</sub>:** 0.9 minutes

**Note:** Ranitidine is an acid reducer that is available over-the-counter. It works as a histamine H2-receptor antagonist, in contrast to other acid reducers such as omeprazole which are proton pump inhibitors. It is sold under the trade name Zantac®.



**Attachment**

**No 217 Ranitidine Tablet Analyzed by HPLC pdf** 0.4 Mb [Download File](#)

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)