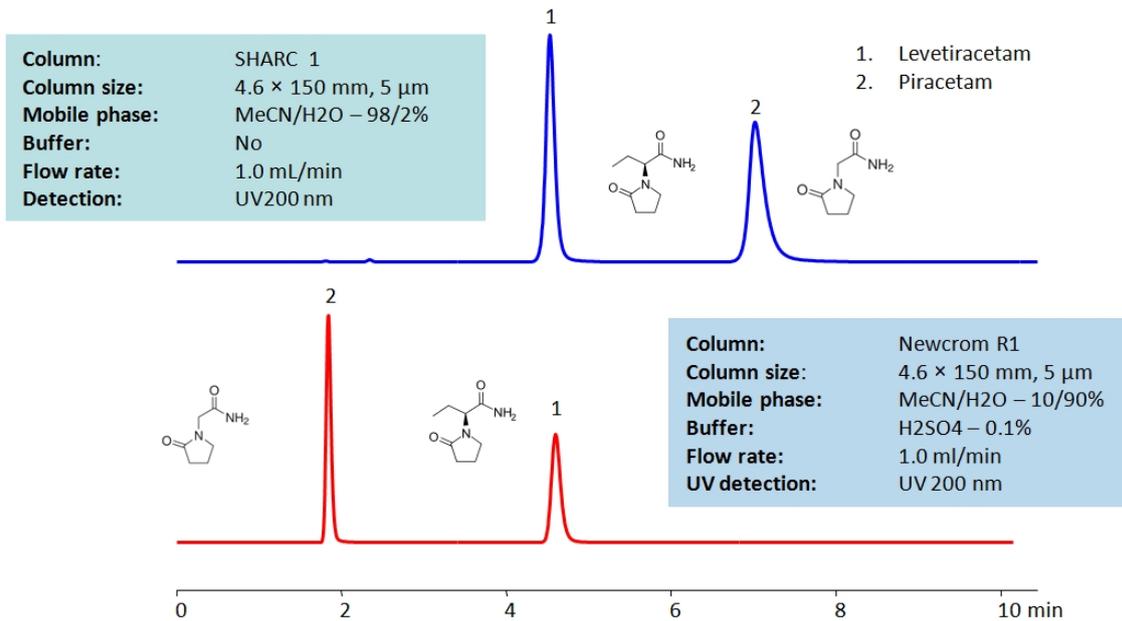


## HPLC Method for Simultaneous Analysis of Piracetam and Levetiracetam in Pharmaceuticals



### High Performance Liquid Chromatography (HPLC) Method for Analysis of Piracetam and Levetiracetam

Piracetam has been marketed as a treatment for myoclonus, vertigo, dyslexia, and sickle cell anemia. It is approved for use across many European countries, but is not approved by the FDA in the United States. Its chemical formula is C<sub>6</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>.

Levetiracetam, on the other hand, is an FDA Approved common treatment for generalized epilepsy and the prevention of seizures. It is currently unknown how exactly levetiracetam works as a treatment as it does not exhibit pharmacologic actions similar to other anticonvulsants. Its chemical formula is C<sub>8</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>.

These racetams can be detected in the low UV regime. There are two effective methods for retaining, separating, and analyzing these compounds. The first uses a SHARC1 hydrogen-bonding column and a mobile phase consisting of acetonitrile (MeCN) and water without a buffer. The second uses Newcrom R1 mixed-mode column and a mobile phase consisting of acetonitrile (MeCN) and water with a sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) buffer. Either analysis method can be UV detected at 200 nm with high resolution.

## Method Parameters

<b>Column</b>	Newcrom R1, 4.6x150 mm, 5 µm, 100 Å
<b>Mobile Phase</b>	MeCN/H2O -10/90%
<b>Buffer</b>	H2SO4 – 0.1%
<b>Flow Rate</b>	1.0 mL/min
<b>Detection</b>	UV 200 nm

Quelle: <https://sielc.com/hplc-separation-of-piracetam-and-levetiracetam>