

# APPLICATIONS



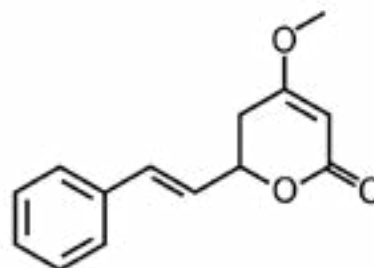
## Chiral Separation of Kavain using a Lux<sup>®</sup> 3 μm i-Amylose-1 Column

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### Overview

Kavain, an extract of the kava plant, has been studied for anti-convulsive and anti-anxiety properties. The mechanisms behind its physiological activity are still unknown, and it remains an important focus for drug discovery against various cellular targets. As interest in its therapeutic properties grows, it is important for researchers to have a simple procedure for analysis that displays baseline resolution of the chiral components. A fast and effective HPLC method was developed to separate the enantiomers of Kavain using a Lux i-Amylose-1 chiral column. This versatile chiral selector bonded to a highly robust solid support efficiently separates these structurally similar compounds while maintaining rapid analysis time.

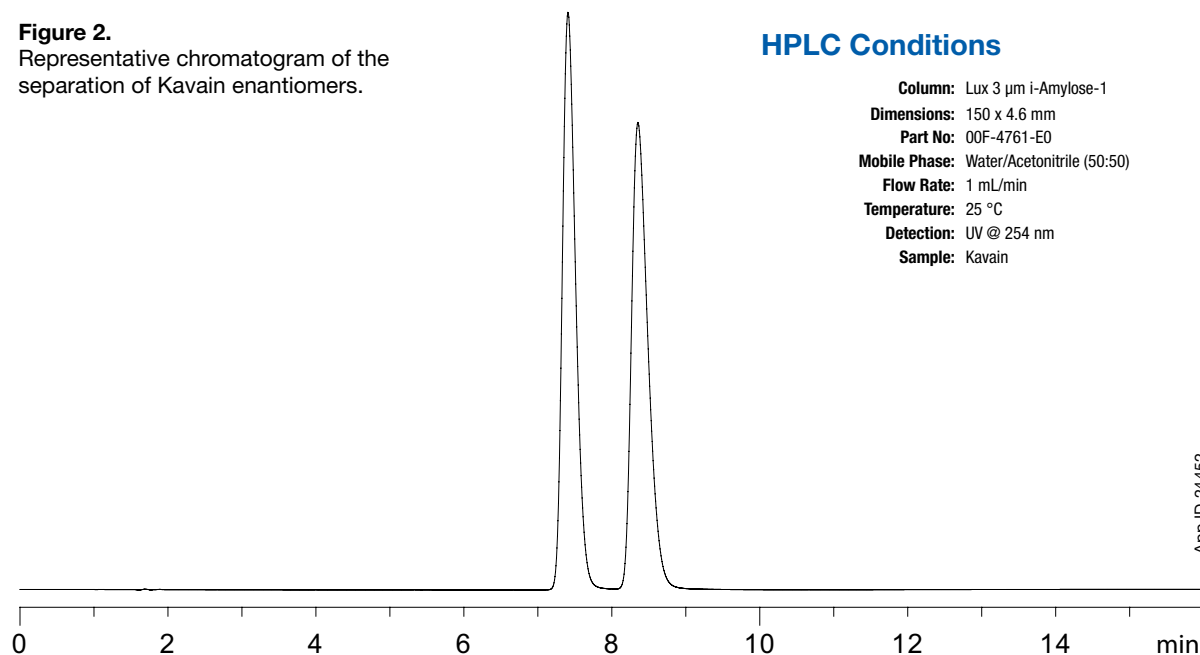
**Figure 1.**  
Chemical structure of Kavain.



**Figure 2.**  
Representative chromatogram of the separation of Kavain enantiomers.

### HPLC Conditions

**Column:** Lux 3 μm i-Amylose-1  
**Dimensions:** 150 x 4.6 mm  
**Part No:** 00F-4761-E0  
**Mobile Phase:** Water/Acetonitrile (50:50)  
**Flow Rate:** 1 mL/min  
**Temperature:** 25 °C  
**Detection:** UV @ 254 nm  
**Sample:** Kavain



App ID 24452



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## Lux<sup>®</sup> Chiral Column Ordering Information

| 3 µm Minibore, MidBore™, and Analytical Columns (mm) |             |             |             |             |             |             |             | SecurityGuard™ Cartridges (mm) 10/pk |            |            |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------------------|------------|------------|
| Phases   | 50 x 2.0    | 150 x 2.0   | 100 x 3.0   | 150 x 3.0   | 50 x 4.6    | 100 x 4.6   | 150 x 4.6   | 250 x 4.6                            | 4 x 2.0*   | 4 x 3.0*   |
| i-Amylose-1  | 00B-4761-B0 | 00F-4761-B0 | 00D-4761-Y0 | 00F-4761-Y0 | 00B-4761-E0 | 00D-4761-E0 | 00F-4761-E0 | 00G-4761-E0                          | AJO-8640   | AJO-8641   |
|  |             |             |             |             |             |             |             | for ID:                              | 2.0–3.0 mm | 3.2–8.0 mm |

| 5 µm Minibore and Analytical Columns (mm) |             |             |             |             | SecurityGuard™ Cartridges (mm) 10/pk |                          |
|---|-------------|-------------|-------------|-------------|--------------------------------------|--------------------------|
| Phases                                    | 50 x 4.6    | 100 x 4.6   | 150 x 4.6   | 250 x 4.6   | 4 x 2.0*                             | 4 x 3.0*                 |
| i-Amylose-1                               | 00B-4762-E0 | 00D-4762-E0 | 00F-4762-E0 | 00G-4762-E0 | AJO-8640                             | AJO-8641                 |
|   |             |             |             |             | for ID:                              | 2.0–3.0 mm    3.2–8.0 mm |

| 5 µm Semi-Prep Columns (mm) |             | SecurityGuard™ Cartridges (mm) 3/pk |
|-----------------------------|-------------|-------------------------------------|
| Phases                      | 250 x 10.0  | 10 x 10.0 <sup>‡</sup>              |
| i-Amylose-1                 | 00G-4762-N0 | AJO-8642                            |
|                             |             | for ID: 9–16 mm                     |

- \* SecurityGuard Analytical Cartridges require holder, Part No.: KJO-4282
- ‡ Semi-Prep SecurityGuard Cartridges require holder, Part No.: AJO-9281
- \*\* HPLC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8223
- SFC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8617
- ◆ HPLC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8277
- SFC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8618

| 5 µm Axia™ Packed Preparative Columns (mm) |                |                |                |                | SecurityGuard™ Cartridges (mm) ea |                      |
|--|----------------|----------------|----------------|----------------|-----------------------------------|----------------------|
| Phases                                     | 150 x 21.2     | 250 x 21.2     | 250 x 30       | 250 x 50       | 15 x 21.2**                       | 15 x 30.0*           |
| i-Amylose-1                                | 00F-4762-P0-AX | 00G-4762-P0-AX | 00G-4762-U0-AX | 00G-4762-V0-AX | AJO-8634                          | AJO-8635             |
|  |                |                |                |                | for ID:                           | 18–29 mm    30–49 mm |



If Lux analytical columns ( $\leq 4.6$  mm ID) do not provide at least an equivalent or better chiral separation as compared to a competing column of the same particle size, similar phase and dimensions, return the column with comparative data within 45 days for a FULL REFUND.

### Terms and Conditions

Subject to Phenomenex Standard Terms and Conditions which may be viewed at [www.phenomenex.com/TermsAndConditions](http://www.phenomenex.com/TermsAndConditions).

### Trademarks

Lux is a registered trademark, Axia, MidBore, and SecurityGuard are trademarks of Phenomenex.

### Disclaimer

Comparative separations may not be representative of all applications.

Axia column and packing technology is patented by Phenomenex. U.S. Patent No. 7, 674, 383.

SecurityGuard is patented by Phenomenex. U.S. Patent No. 6, 162, 362. *CAUTION: this patent only applies to the analytical-sized guard cartridge holder, and does not apply to SemiPrep, PREP or ULTRA holders, or to any cartridges.*

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