

# SHINWA EXPRESS

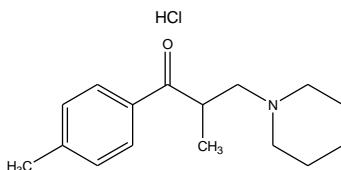
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## Analysis of tolperisone hydrochloride using the ULTRON ES-OVM (3 µm)

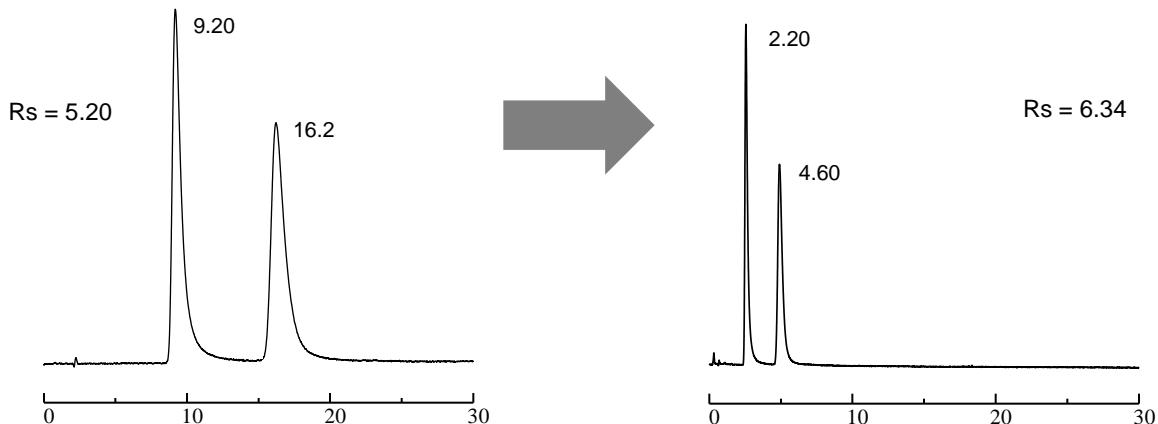
Shown below are comparative analyses of tolperisone hydrochloride performed using ULTRON ES-OVM 5 µm (150 x 4.6 mm I.D.) and ULTRON ES-OVM 3 µm (100 x 3.0 mm I.D.) columns.

### Faster analyses



① ULTRON ES-OVM (5 µm)  
150 x 4.6 mm I.D.

② ULTRON ES-OVM (3 µm)  
100 x 3.0 mm I.D.



\*Resolution values will differ depending on the specifications of the system used.

Column: ULTRON ES-OVM (5 µm)/ULTRON ES-OVM (3 µm)  
Column size: 150 x 4.6 mm I.D./100 x 3.0 mm I.D.  
Column temp.: 25°C  
Mobile phase: 20 mM KH<sub>2</sub>PO<sub>4</sub> + 20 mM K<sub>2</sub>HPO<sub>4</sub> (pH 5.5)/C<sub>2</sub>H<sub>5</sub>OH = 95/5  
Flow rate: 1.0 mL/min

Detection: UV-257 nm  
Sample: Tolperisone hydrochloride 200 mg/L (in ethanol)  
Injection vol.: 2.0 µL (ES-OVM, 5 µm 150 x 4.6 mm I.D.)  
0.5 µL (ES-OVM, 3 µm 100 x 3.0 mm I.D.)

Features of the ULTRON ES-OVM (3µm) (compared to the 5 µm column)

- Maximum operating pressure of 30 MPa.
- Can be used in LC/MS systems as well.
- Employs a 3 µm packing material for higher peak resolution and theoretical plate numbers.
- Enables significant reductions in analysis times while maintaining high theoretical plate numbers.
- Enables further improvements in performance with optimization of LC system tubing and flow cells.
- 9 column length and inner diameter combinations available.



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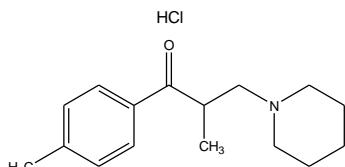
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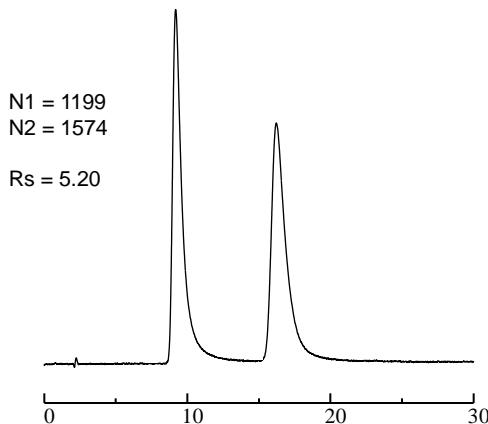
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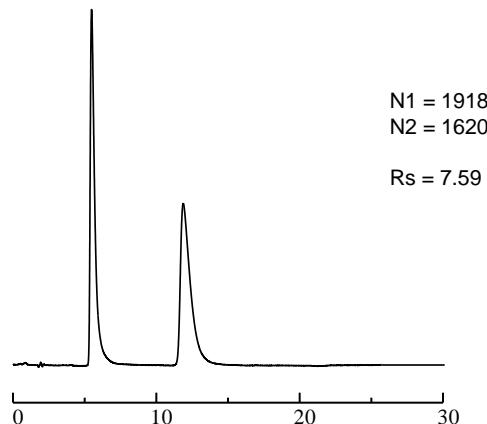
**■ Greater analytical performance (high resolution)**



① ULTRON ES-OVM (5 µm)  
150 x 4.6 mm I.D.



② ULTRON ES-OVM-3 (3 µm)  
100 x 3.0 mm I.D.



\* Theoretical plate numbers and resolution values will differ depending on the specifications of the system used.

Column: ULTRON ES-OVM (5 µm)/ULTRON ES-OVM (3 µm)

Column size: 150 x 4.6 mm I.D./100 x 3.0 mm I.D.

Column temp.: 25°C

Mobile phase: 20 mM KH<sub>2</sub>PO<sub>4</sub> + 20 mM K<sub>2</sub>HPO<sub>4</sub> (pH 5.5)/C<sub>2</sub>H<sub>5</sub>OH  
= 95/5

Flow rate: 1.0 mL/min (ES-OVM, 5 µm 150 x 4.6 mm I.D.)  
0.28 mL/min (ES-OVM, 3 µm 100 x 3.0 mm I.D.)

Detection: UV-257 nm

Sample: Tolperisone hydrochloride 200 mg/L (in ethanol)  
Injection vol.: 2.0 µL (ES-OVM, 5 µm 150 x 4.6 mm I.D.)  
0.5 µL (ES-OVM, 3 µm 100 x 3.0 mm I.D.)

## ULTRON ES-OVM (3 µm) line-up

Application	Semi-micro LC	Semi-micro LC Conventional LC	Conventional LC
Column dimensions Length x I.D. (mm)	50 x 2.1	50 x 3.0	50 x 4.6
	100 x 2.1	100 x 3.0	100 x 4.6
	150 x 2.1	150 x 3.0	150 x 4.6



Please feel free to contact us with questions related to analyses.  
Column screening services are also available.

Please be aware that specifications are subject to change without prior notification.