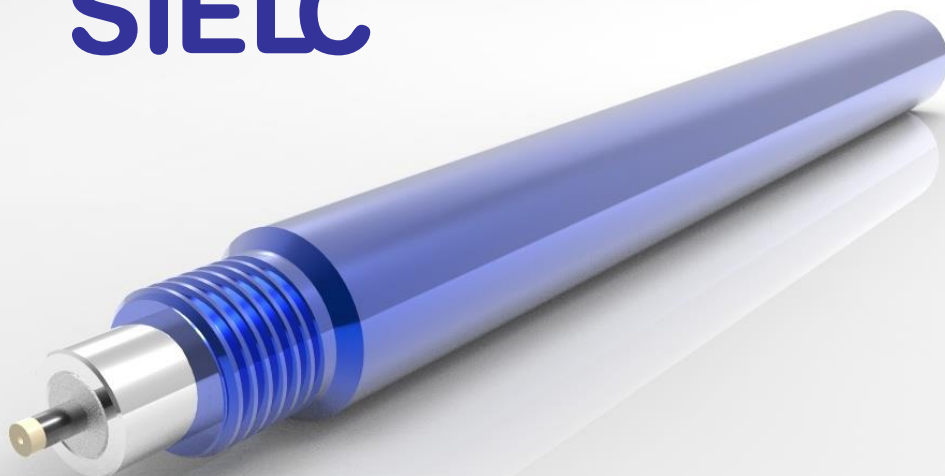


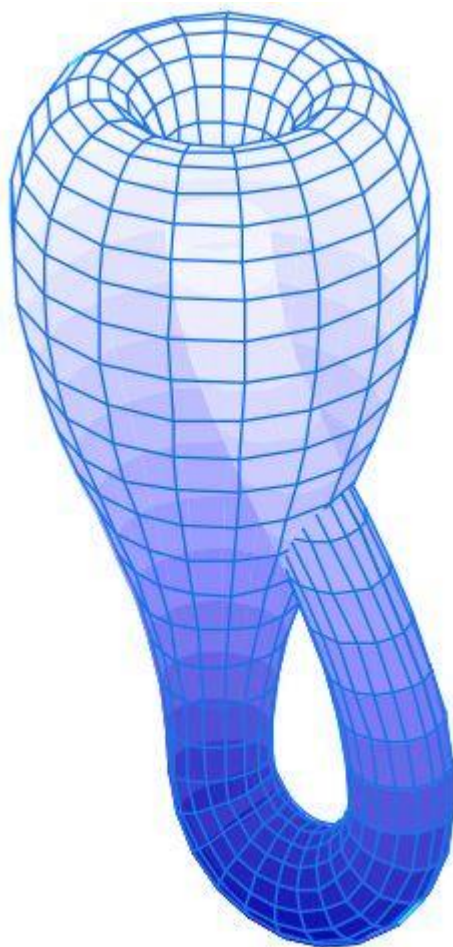
**SIELC Technologies, Inc.**  
Wheeling, IL 60090 USA  
P. 847-229-2629 F. 847-655-6079  
mail@sielc.com www.sielc.com

**SIELC**



**NEWCROM<sup>®</sup>**

**HPLC COLUMNS OF THE FUTURE**



# HPLC COLUMN OF THE FUTURE

## SIELC introduces a new single ended column design

For as long as people have done HPLC they have used the same column format, the same method of connecting the column to the HPLC, and they have experienced the same problems:



- Clogging at the tube-column junction
- Leakage around the high pressure solvent connections
- Installation problems with tubing to achieve zero dead volume
- Sorting through many available high pressure fittings
- Selecting the proper tube length and ID

To address these issues a new column design was developed. This column and corresponding adapter entirely eliminate the need for any high-pressure fittings or tubing as well as minimizing all possible dead volumes. Furthermore, if a leak ever occurs in the high-pressure column inlet, the mobile phase is contained within the column adapter (no external leakage).

You need to install a column adapter once on your HPLC. Then without any tools you can install a column which never leaks, it is easy to replace and can be changed in seconds. The column hardware was designed specifically to be used with any HPLC instrument. It can be installed in most column heaters as well.

## A new single ended column guard system

If your method requires a guard column then use our special guard-column adapter. It is a single piece of hardware which combines a column and a guard all in one convenient assembly.

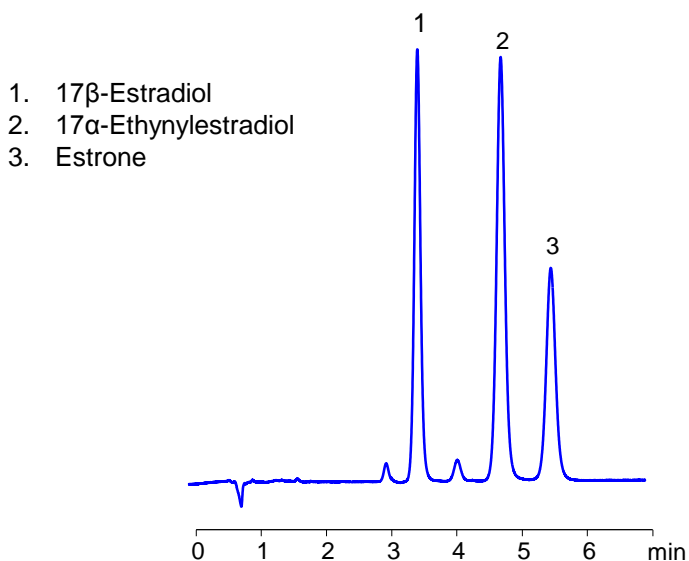
- Special guard column with an inlet and outlet at one end allows you to replace the guard without disconnecting the column from your HPLC system.
- The finger-tightening installation is entirely tool free.
- Compact design allows you to install a column with guard into any column heater.



A column with a new outer design and with new chemistry inside.

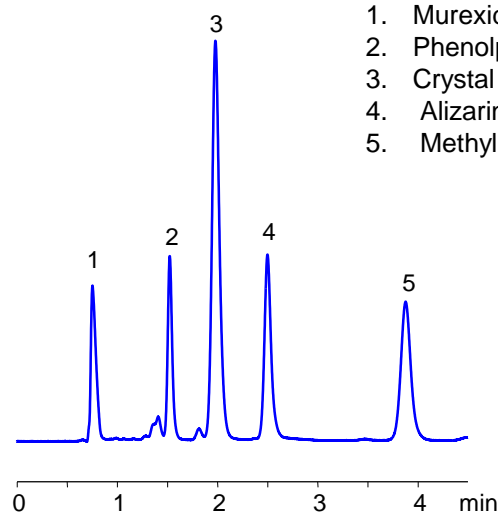
Newcrom R1 takes full advantage of new chemistry with advanced proprietary end-capping.

Available in 5  $\mu$ m and 3  $\mu$ m particle size with diameter 2.1, 3.2, and 4.6 mm and length 50, 100, and 150 mm.



1. 17 $\beta$ -Estradiol
2. 17 $\alpha$ -Ethinylestradiol
3. Estrone

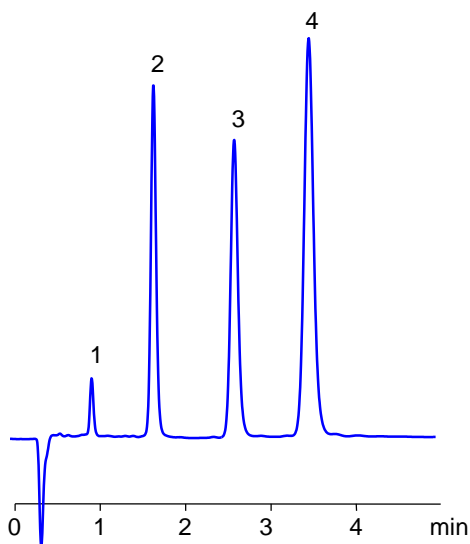
1. Murexide
2. Phenolphthalein
3. Crystal violet lactone
4. Alizarin
5. Methyl red



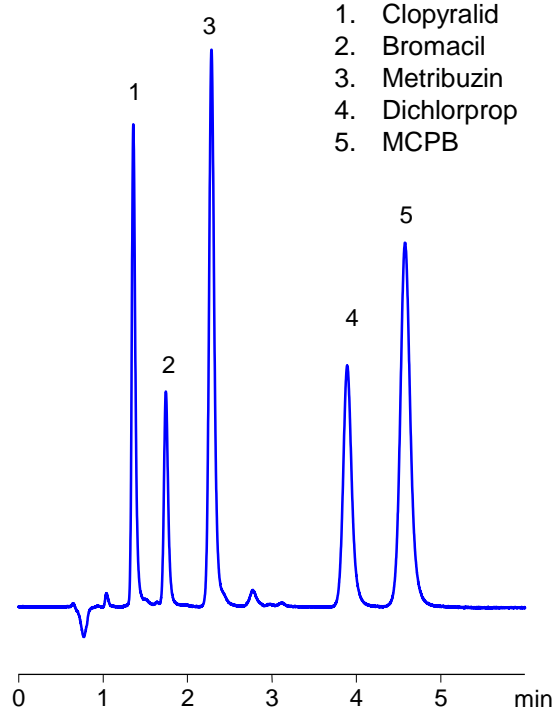
**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 5  $\mu$ m  
**Mobile phase:** MeCN/Water/H3PO4 – 45/55/0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 230 nm

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 5  $\mu$ m  
**Mobile phase:** MeCN/Water/H3PO4– 55/45/0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 300 nm

1. CBC (Cannanbichromene)
2. CBD (Cannabidiol )
3. CBN (Cannabinol)
4. THC (Tetrahydrocannabinol )



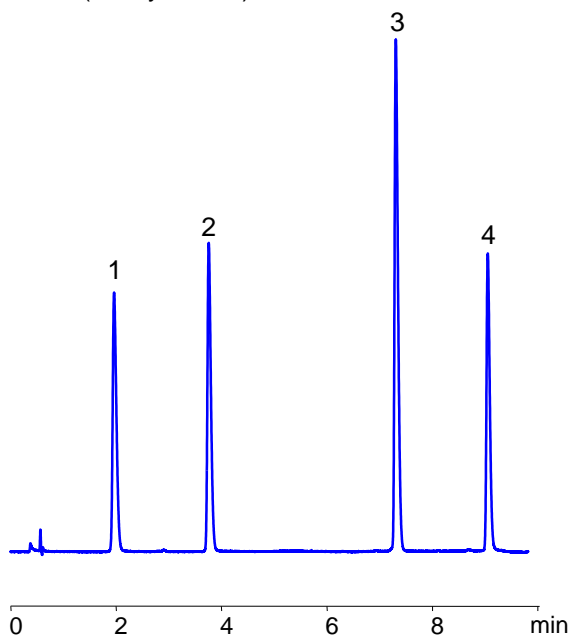
1. Clopyralid
2. Bromacil
3. Metribuzin
4. Dichlorprop
5. MCPB



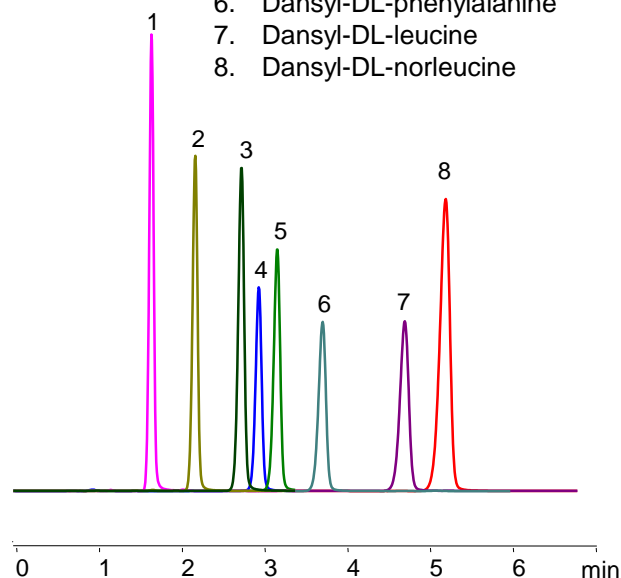
**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 5  $\mu$ m  
**Mobile phase:** MeCN/Water/H3PO4 – 80/20/0.2%  
**Flow rate:** 1 mL/min  
**Detection:** UV 210 nm

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 5  $\mu$ m  
**Mobile phase:** MeCN/Water/H3PO4 – 60/40/0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 210 nm

1. MIT (3-Iodo-L-tyrosine)
2. DIT (3,5-Diiodo-L-tyrosine dihydrate)
3. T2 (3,5-Diiodo-L-thyronine)
4. T3 (Liothyronine)

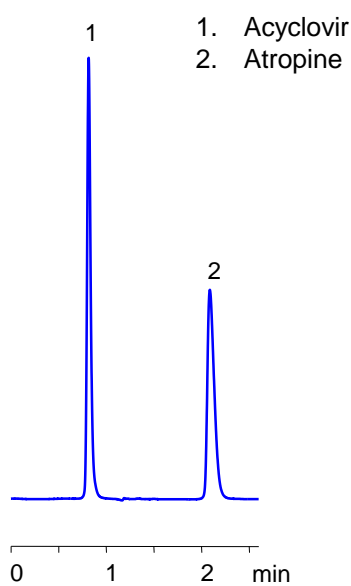


1. Dansyl-y-amino-n-butyric acid
2. Dansyl-DL- $\alpha$ -amino-n-butyric acid
3. Dansyl-DL-methionine
4. Dansyl-DL-norvaline
5. Dansyl-DL-tryptophan
6. Dansyl-DL-phenylalanine
7. Dansyl-DL-leucine
8. Dansyl-DL-norleucine

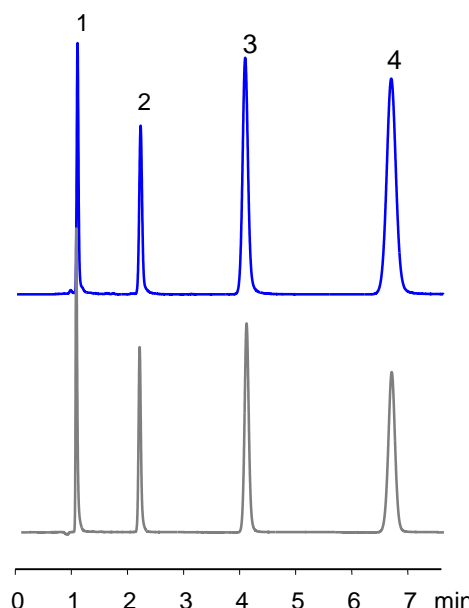


**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 5  $\mu$ m  
**Mobile phase:** MeCN Gradient 10-40%/10 min  
 H<sub>3</sub>PO<sub>4</sub> – 0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3  $\mu$ m  
**Mobile phase:** MeCN/Water /H<sub>3</sub>PO<sub>4</sub> –  
 40/60/0.1%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm



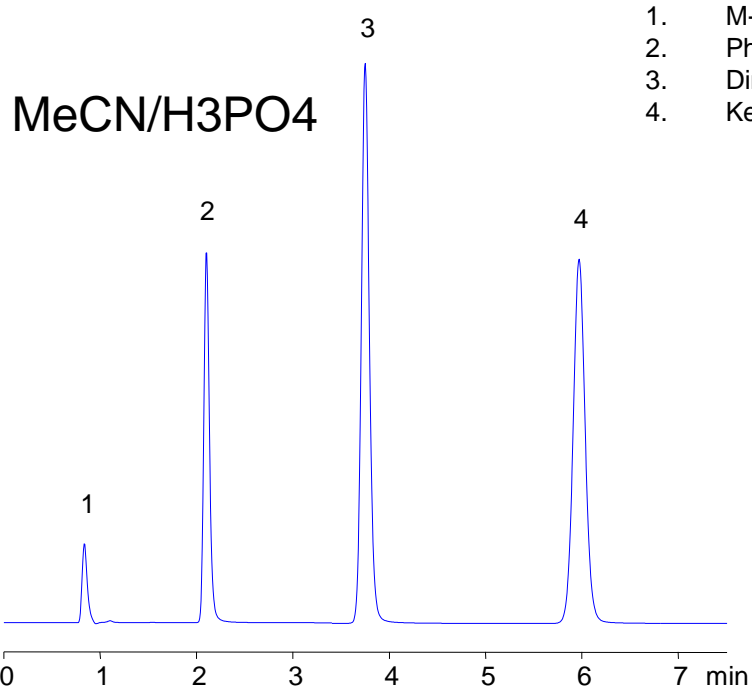
1. Acyclovir
2. Atropine



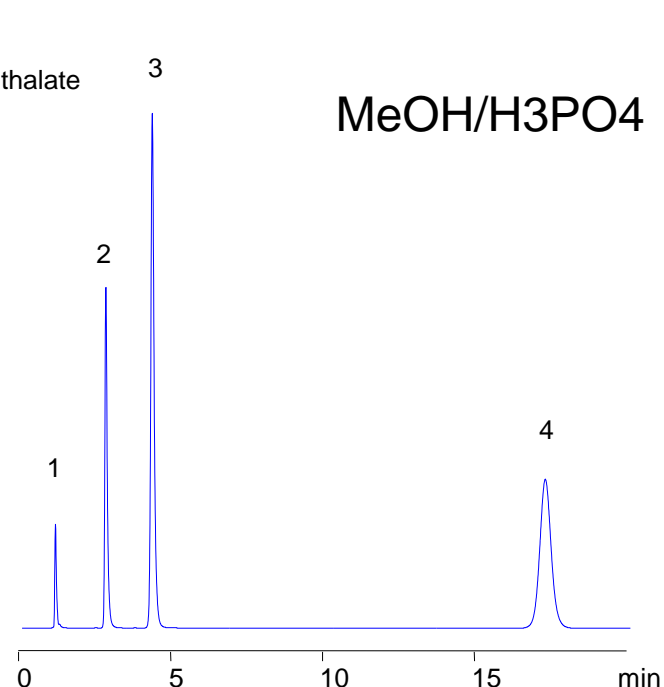
	Plates	
	5 $\mu$ m	3 $\mu$ m
1. Caffeic Acid	5583	6386
2. Phenol	8644	11979
3. Dimethylphthalate	8426	12848
4. Ketoprofen	7552	13295

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3  $\mu$ m  
**Mobile phase:** MeCN/Water/H<sub>3</sub>PO<sub>4</sub> – 20/80/0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 210 nm

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm  
**Mobile phase:** MeCN/Water/H<sub>3</sub>PO<sub>4</sub>– 40/60/0.2%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm

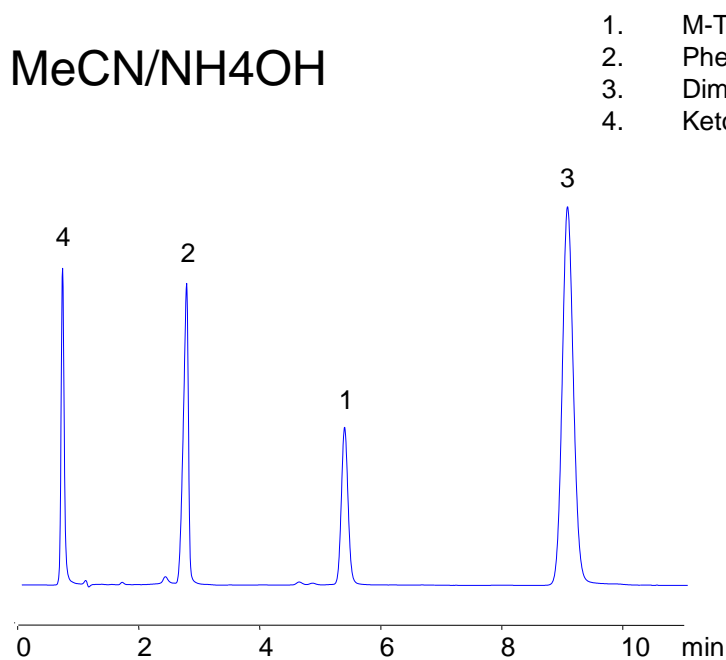


1. M-Toluidine
2. Phenol
3. Dimethyl phthalate
4. Ketoprofen

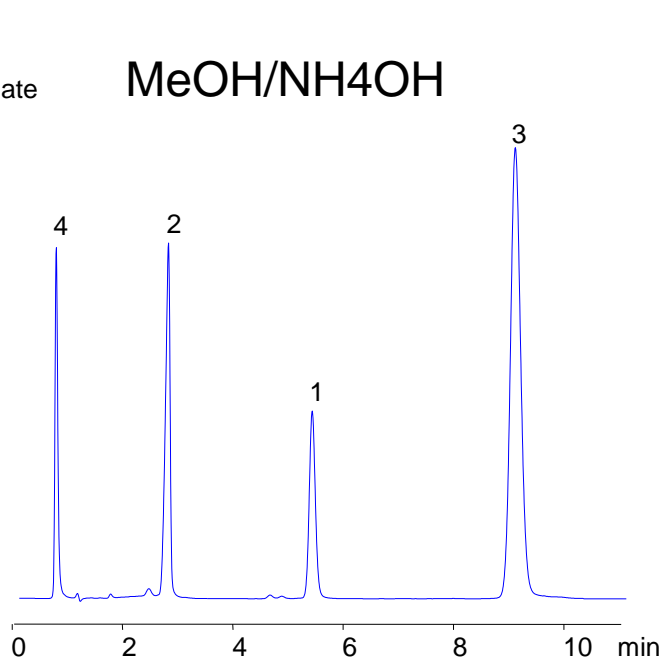


**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3 µm  
**Mobile phase:** MeCN/H2O/H3PO4 – 40/60/0.1%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm

**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3 µm  
**Mobile phase:** MeOH/Water /H3PO4 – 50/50/0.1%  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm



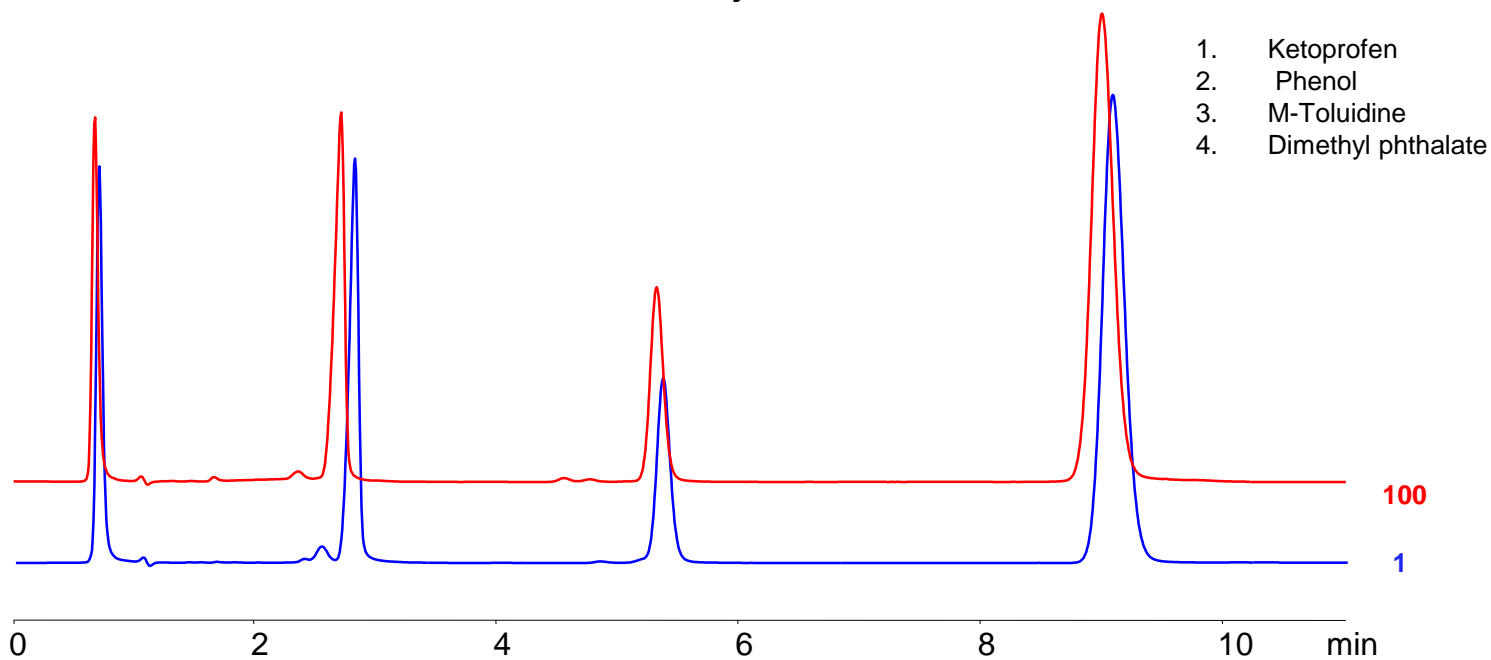
1. M-Toluidine
2. Phenol
3. Dimethyl phthalate
4. Ketoprofen



**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3 µm  
**Mobile phase:** MeOH/H2O – 30/70 %  
 NH4OH- 20 mM pH 10.6  
**Flow rate:** 0.5 mL/min

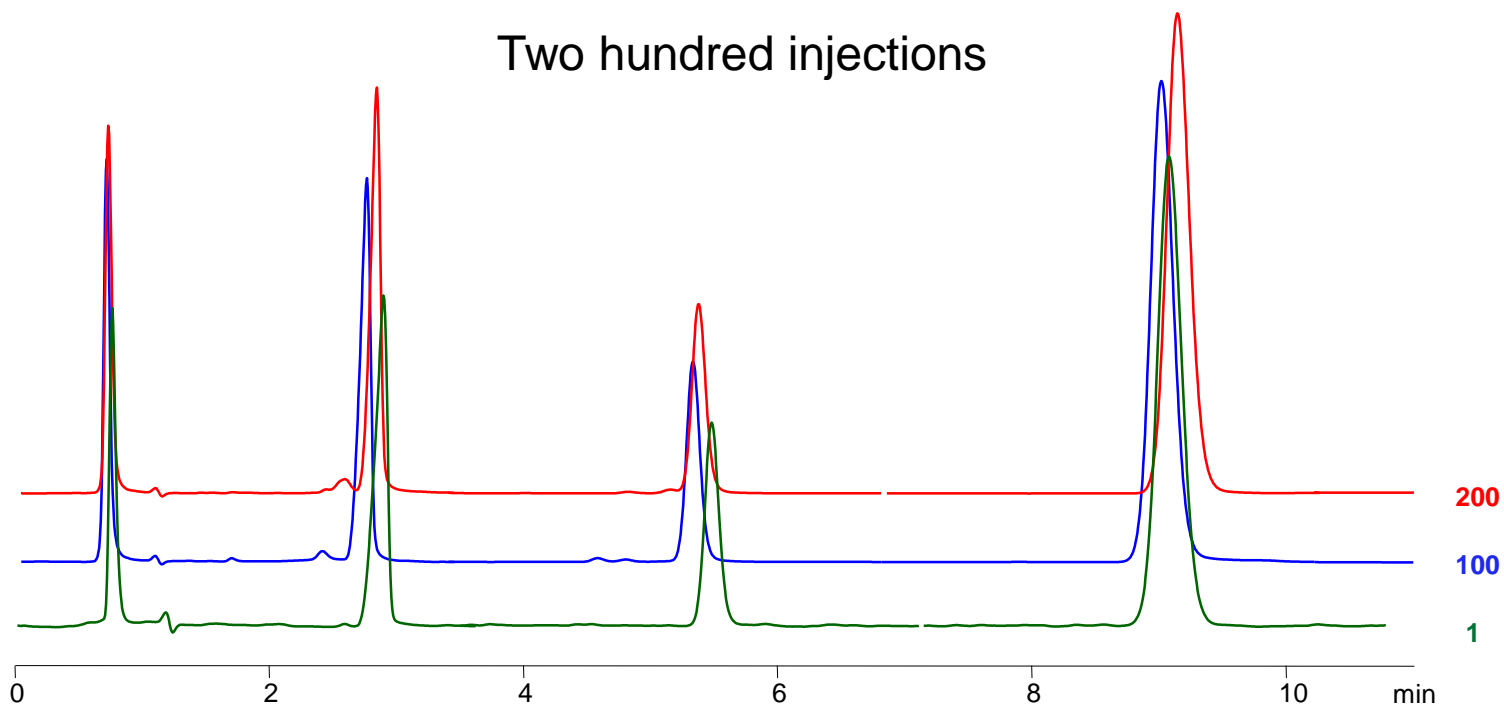
**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3 µm  
**Mobile phase:** MeOH/Water– 30/70 %  
 NH4OH- 20 mM pH 10.3  
**Flow rate:** 0.5 mL/min

### One hundred injections



**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3  $\mu$ m  
**Mobile phase:** MeOH/H<sub>2</sub>O 30/70 % (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> – 20mM pH- 8.3  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm

### Two hundred injections



**Column:** Newcrom R1  
**Column Size:** 3.2x100 mm, 3  $\mu$ m  
**Mobile phase:** MeCN/H<sub>2</sub>O 30/70 % (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> – 20mM pH-8.3  
**Flow rate:** 0.5 mL/min  
**Detection:** UV 270 nm